

## SPEAKER SERIES by Electrơoice

new, popular-priced
hi-fi speakersperfect for use in pairs for superb stereo sound


## Model LS-12 Full-Range 12" Speaker

## ONLY ${ }^{\$} 19^{50}$

An incomparable value, the new Wolverine LS-12 12" speaker is so reasonably priced, you can purchase two of these precisely built units for stereo use, at less than you would pay for other single speakers. Features Radax construction, with two cones dividing sound-larger cone for maximum bass, smaller cone for efficient high-frequency performance. Response is velvet-smooth from 30 to $13,000 \mathrm{cps}$. Power handling capacity is 20 watts; handles 40 -watt peaks. Rugged die-cast frame, $31 / 2^{\prime \prime}$ deep. Quickly and easily installed in walls, doors, etc. Impedance, 8 ohms. Shpg. wt., $51 / 4 \mathrm{lbs}$. 82 DX 850. NET
$\$ 19.50$
MODEL LS-8 FULL-RANGE 8" SPEAKER. For use in smaller music installations. Has same fine construction and specs as the LS-12, but is $8^{\prime \prime}$ in diameter and provides response of 50 to $13,000 \mathrm{cps}$. Shpg. wt., $41 / 2 \mathrm{lbs}$.
82 D 851. NET
\$18.00

## Choose from Three Magrificent Custom-Styled Speaker Systems


+


Cut-away view clearly shows the outstanding design of E-V Wolverine speakers. Check the:Heavy - Duty Die-Cast FrameEfficient, Slug-Type Magnet
(3) Edgewise-Wound Voice Coil
(4) Durable Fiberglas Coil Form
(5) Linear, Long-Throw Voice Coil
(6) Radax Construction-2 Cones
(7) Low-Silhouette Frame, Only $31 / 2^{\prime \prime}$ Deep-Easy to Mount

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(A) WOLVERINE "LINDON"' SHELF-TYPE ENCLOSURE WITH LS-8 $8{ }^{\prime \prime}$ SPEAKER
Direct radiator, shelf-type speaker system for smaller music installations, or for use in pairs in stereo music systems. Has pre-cut ports to permit adding the HF-1 high-frequency driver kit, at right. HWD, $11 \times 231 / 2 \times 10^{\prime \prime}$. Specify mahogany, blonde or walnut woodgrained finish. Shpg. wt., $201 / 2 \mathrm{lbs}$.
82 DU 860C. NET
. $\$ 52.50$
(B) WOLVERINE "LORAINE" FOLDED-HORN ENCLOSURE WITH LS-12 $12^{\prime \prime}$ SPEAKER
A true corner horn enclosure, the Loraine speaker system employs a corner of the room to reinforce and extend bass range. Has pre-cut ports for adding the HF-1 highfrequency driver kit and MF-1 mid-range driver-horn kit, listed at right. HWD, $27 \times 20 x$ 14". Specify mahogany, blonde or walnut wood-grained finish. Wt., $281 / 2 \mathrm{lbs}$. 82 DU 859C. NET
$\$ 67.50$
C WOLVERINE "LANCASTER"' ALONG-THE-WALL ENCLOSURE WITH LS-12 12" SPEAKER
Handsome and versatile, direct radiator speaker system. New, controlled baffle for extended bass response. Has pre-cut ports for HF-1 and MF-1 "step-up" kits listed at right. With two cleat legs. HWD, $25 \times 20 \times 14^{\prime \prime}$. Specify mahogany, blonde or walnut woodgrained finish. Shpg. wt. 29½ lbs.
82 DU 858C. NET
$\$ 67.50$
MODEL LK-1 ACCESSORY LEG KIT. Set of 4 ; illustrated in inset above. Wt., 4 lbs. 82 D 857C. NET


EXPAND YOUR SPEAKER SYSTEM TO TWO OR THREE-WAY OPERATION
MODEL HF-1 HIGH FREQUENCY D KIT. For all Wolverine speaker systems listed at left. Extends high-frequency performance to beyond audibility, with silksmooth definition. Consists of TW35 VHF driver, CR35 crossover-luvel eontro, alit hard-
ware and wiring. Includes instructions for ware and wiring.
simple, installation. Shpg. wt., 3 lbs. 82 D 853. NET
$\$ 20.00$

## (E MODEL MF-1 MID-RANGE KIT. For

 E Wolverine Loraine or Lancaster speaker systems, after HF-1 kit is installed. Spreads mid-range sound evenly throughout listening area-completes a 3 -way system. Provides increased output in the vital "presence"' range, and smooth, peak-free response. Consists of MR10 matched treble driver/horn and CR10 crossover/level-control, all hardware and wiring. Shpg. wt. . 5 lbs.82 DX 852 . NET. .................
. $\$ 25.00$

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WORLD'S LAREEST STOCKS AT YOUR COMMAND. At Allied you make your selections from the world's largest stocks of quality parts and equipment for industrial electronics, high-fidelity, television, radio, public address and virtually every other type of electronic application. Our modern building on a full city block, provides 187,000 square feet of floor space. More than 2000 feet of conveyor belts and nearly $11 / 2$ miles of pneumatic tubing carry transactions and merchandise on a rapid order-filling schedule. Over 32,000 separate stock items from all leading manufacturers are constantly in stock. One order to Allied will cover all your needs.


PERSONAL HELP \& TECHINICAL CONSULTING SERVICE
Our greatest satisfaction comes from giving you personal service. Your orders and letters are intelligently handled by people who take a genuine interest in your needs. You are invited to consult with our technical experts for guidance in your selection of merchandise. For friendly service, for guaranteed quality and value, make your selections from this catalog-recognized everywhere as the most widely used Electronics Supply Guide.


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Allied's combination of the world's largest stocks, most modern facilities and skilled, interested people to handle your orders, assures you of fast, dependable service. Personal inspection and a final check before your order is carefully packed, insure accuracy. You save time, money and effort when you use this catalog for Everything in Electronics. Whether you order by mail or phone, you can always depend on Allied to serve you fastest and best.

## AIIIED is Americai Atigh Fideling Center

## BUY WITH CONFIDENCE

Allied has been the leading source of quality music system components since the very beginning of High Fidelity. All of the hi-fi products we offer you, from our tremendous stock of systems and components in every price range, are quality-checked in our labs, and performance-checked on our Auditioner for instant, side-by-side comparison. Make your selection from the pages that follow and get the finest in hi-fi-your complete satisfaction is absolutely guaranteed.

WE SELL MORE HI-FI EQUIPMENT THAN ANYONE ELSE IN THE WORLD


## world's largest selection

 of systems and componentsThis catalog presents everything in high-fidelity-amplifiers, tuners, speakers and speaker enclosures, record changers, turntables, cartridges, tape recorders, latest stereophonic equipment, etc. The famous names, the dependable standard brands, and the hard-to-get acces-sories-all are included here in a wide range of prices, always in stock, ready for prompt shipment to you.

## lowest money-saving prices on the best in high-fidelity

Allied offers the lowest prevailing market prices on all of the leading quality high-fidelity components, with special savings on our matched radio-phono and phono systems, and on Allied's own, widely acclaimed Knight products. You can always be sure of maximum possible value for your hi-fi dollar, regardless of the size of your budget, when you do business with Allied.

## easiest-pay terms to fit your budget

Allied's Easy Payment Plan has been broadened to let you get the equipment you want and start enjoying high-fidelity right now, even if you don't have all of the ready cash. You pay only $10 \%$ down on hi-fi systems or any components priced at $\$ 20.00$ or more-complete the balance in easy monthly payments. For details on our Easy Payment Plan, see page 444.

## expert consulting service

Our audio specialists are glad to answer any question on high fidelity. Should you desire any assistance in choosing a music system of balanced, custom hi-fi components to fit your taste and your budget, feel free to write to Allied's Audio Division-your inquiry will bring a prompt and detailed reply. Thousands of satisfied customers have taken advantage of this free, personal and friendly consulting service.

## ALUED brings you STEREO - the new realimm in Hi-Fi

Stereo is the most exciting advance in home entertainment since hi-fi began. This new dimension in sound brings you the clearest, most realistic reproduction of music you have ever heard.

You get a sense of presence and direction that is almost startling... and a depth and realism that will make you feel as though you were actually present at the performance. It's breathtaking!

## THIS IS STEREO:

Originally developed for widescreen movies, stereo employs two microphones to make two simultaneous recordings-one from each side of the performing group. For stereo playback, you need equipment that can play back both of these two stereo recordings at the same time-a stereo cartridge that feeds both channels of sound into two amplifiers (or a dual-section amplifier), which then feed both channels into two speakers. Thus stereo provides a channel of sound for each part of the performing group, with reproduction so vividly real, that it becomes virtually indistinguishable from the original performance

## here's what makes STEREO a wonderful reality!



THE STEREO RECORD. Stereo records employ the familiar Vshaped record groove, but each wall of the " $V$ " bears one of the two recordings in the form of tiny ridges on its surface. Standardized and used throughout the record-making industry, this new disc-cutting system is known as the Westrex method.

THE STEREO PHONO CARTRIDGE. Actually two cartridges in one, with a single needle. The two channels of sound on the groove walls of the stereo record are electrically separated by the two cartridge elements... then fed to left and right channel amplifiers $\ldots$ and finally, to left and right channel speakers. Fully compatible, stereo cartridges also play conventional LP records monaurally.

STEREO BROADCASTING. Stereo records and tapes, (and live performances in stereo), may be simultaneously broadcast over an FM and AM station, FM and TV station, or two FM stations. To enjoy the stereo effect, both channels must be received separately, and the sound fed through two amplifiers and two speakers.


A hi-fi system is composed of a record changer and cartridge, amplifier, and speaker in an enclosure. As the changer spins the record, the needle in the cartridge traces the record grooves. The cartridge converts side-to-side needle movements into small voltages which are fed into the amplifier. The amplifier "builds up" these voltages into sufficient energy to operate the speaker. The speaker then converts this energy into sound waves which are radiated from its cone.

## mader it easul for you to own and erion Hi-Fi

WHATEVER YOUR CHOICE, YOU SAVE MOST AT ALLIED. Our complete stocks enable you to fill all of your hi-fi needs from one convenient source. Expert personal help, intelligent service and the full resources that have made us America's $\mathrm{Hi}-\mathrm{Fi}$ center enable us to provide you with the music system best suited to your taste and budget-at lowest prevailing prices.


## 1. OWN STEREO . . . THE ULTIMATE IN HIGH-FIDELITY

Our staff of audio experts has compiled a fabulous array of stereophonic hi-fi record playing systems, in a wide range of prices. All you need do is make a few simple connections-place your speakers for best acoustic effect-then play a stereo record. The room will be literally filled with the splendor of stereophonic sound. Stereo music systems are compatible, and can be used for monaural operation with conventional sound sources.

## 2. ENJOY HI-FI NOW . . . ADD STEREO LATER

No fear of obsolescence with any Allied hi-fi phono system! Even hi-fi systems not fully equipped for stereo include a stereo cartridge which plays stereo as well as conventional LP's monaurally. When you decide to convert to stereo, just add another amplifier and speaker system.

## 3. CONVERT YOUR PRESENT SYSTEM TO STEREO

It's easy-start by installing a stereo cartridge in your record changer, player or turntable. Add a second amplifier and speaker system-that's all there is to it. Make it a point to check Allied's large selection of "add-on" systems and components for conversion to stereo.

# the ALLIED SYSTEM PLAN saves you money... 

IT'S THE EASIEST WAY TO BUY THE BEST IN HI-FI

On pages 6 through 31, we present an outstanding selection of Allied High-Fidelity Systems-the famous, ready-to-play systems that give you the most for your hi-fi dollar. Each of these systems is a best buy in its price range-and each has been carefully selected by Allied's staff of audio experts.

Whatever system you choose, you will discover the pleasure of enjoying music with all the exciting realism of the original performance. And whatever your taste or budget, there's a balanced, perfectly matched Allied High-Fidelity Music System walting for you. Check our "bonus" features below.

yOU SAVE MOST ON A COMPLETE SYSTEM

Every system is priced to save you money over the total price of the same individual components if purchased separately. The amount you save is clearly indicated in our descriptions-you can actually save up to $\$ 120.00$ when you buy a complete system!

## YOU GET BALANCED, MATCHED COMPONENTS

System components are always selected on the basis of comparable quality and carefully evaluated by comparative listening tests on our renowned Auditioner
 Control Console-your assurance of peak high-fidelity performance.

YOU GET A MUSIC SYSTEM THAT'S EASIEST TO CONNECT


Plug the record changer connectors into the amplifier-they're color-coded-you can't make a wrong connection.


No technical knowledge is required. Simply match the colors on receptacles to the colors on cables and plugs-you can't go wrong!

Connect the speaker (or speakers) to the amplifier-speaker cable and amplifier terminals are color-coded too, for easy matching.

FULL INSTRUCTIONS


To help you get the most enjoyment from the hi-fi system of your choice, an easy-to-follow booklet containing valuable tips is included.

Plug the amplifier into an $A C$ outlet-and thrill to magnificent music from your Allied $\mathrm{Hi}-\mathrm{Fi}$ System.

EVERY SYSTEM IS COMPLETE


You get everything you need in one shipment-nothing else to buyall cables are included.

YOU GET PRE-SET STYLUS PRESSURE
The stylus pressure of the turntable or record changer arm is always carefully pre-set by Allied's technicians to assure optimum performance-no adjustments to make when you receive your high-fidelity system.

## YOU GET A FREE RECORD CHANGER COVER

Made of durable vinylite plastic, this valuable accessory protects your record changer or player from the harmful effects of dust and moisture. You get this cover free with any Allied hi-fi system you purchase.


## 3 EASY WAYS TO MAKE YOUR ALLIED SYSTEM PLAN SELECTION

Select an Allied-recommended music system from among the many excellent systems that are listed on pages 6 through 31. Savings are greatest in this listing, and you're almost certain to find a music system that will satisfy your personal taste.

Select an Allied-recommended music system and take advantage of the substitution privilege. You may replace any one component used in any Allied hi-fi system, with another one of your own selection; just add or subtract the difference in catalog price.

Write to us for a price quotation on a music system made up of components of your own choice. See pages 32-96make a list of the units you prefer-send a letter to our Audio Division asking for a special System Plan price quotation. You'll get a prompt reply.
featuring top-quality knight STEREO COMPONENTS

krighe
O COMPONENTS

Enjoy the splendor of stereo sound in your own homeat lowest possible cost-with new Knight stereo hi-fi systems. Each of the systems below is a superb value, selected for its ability to provide exciting 3-dimensional sound. You get all connecting cables-easy instructions -and a full one-year guarantee on each of the "Best Buy" Knight "Bantam" stereo components.

## YOUR BEST

BUYS IN
STEREO
Collaro
TSC. 740 4-Speed
Changer with Base
E-V 26MDST

> Here's the kind of value that only Allied can offer . . . and the performance-per-dollar that only knight Hi-fi components can deliver


## Low-Cost "Bantam" Stereo Hi-Fi Systems

AS LOW AS - Centralized Control Facilities<br>4. 滕 50 - Superb Stereo-At Lowest Cost<br><br>Save up to $\$ 49.34$ - Play Stereo \& Monaural LP Records

PHONO SYSTEM. Just place one of the new stereo recordings on the record changer-and you're ready for magnificent stereophonic sound. Even improves the quality of your present monaural record performance! Matched components, selected by Allied's experts, are your assurance of top value and top quality-and you save $\$ 41.34$ over the total cost of the individual components purchased separately. Check these outstanding units: new Knight KN-720 "Bantam" 20-Watt Stereo Amplifier; Collaro TSC-740 4-Speed Record Changer with Base; new Electro-Voice 26MDST Ceramic Stereo Cartridge, mounted in plug-in head, with .0007" Diamond and .003" Sapphire Needles; two new Knight KN-808 $8^{\prime \prime}$ Speakers installed in two new Argos TSE-1 Enclosures.
The KN-720 amplifier offers two 10 -watt channels for stereo use, or full 20 -watt output for monaural use. Changer base in mahogany or limed oak; speaker enclosures in mahogany or limed oak leatherette-specify choice when ordering. System is supplied with all cables and connectors-color-coded and ready for hookup. For $110-120$ v., 60 cycle AC. Shpg. wt., 75 lbs.
36 HF 500. Only $\$ 15.95$ Down. NET.
. 159.50
FM-AM-PHONO SYSTEM. Save $\$ 49.34$ I Includes all of the components listed above, plus the new Knight KN-130 "Bantam" Stereo FM-AM Basic Tuner. 88 lbs. 36 HF 501. Only $\$ 23.10$ Down. NET.
231.00

## WITH ALTERNATE SPEAKER SYSTEM

PHONO SYSTEM. Save $\$ 41.60$ ! Includes: new Knight KN-720 "Bantam" 20-Watt Stereo Amplifier; Collaro TSC740 4-Speed Record Changer with Base; new ElectroVoice 26MDST Ceramic Stereo Cartridge, in Plug-In Head, with $.0007^{\prime \prime}$ Diamond and $.003^{\prime \prime}$ Sapphire Needles; and two new Electro-Voice LS-12 12" "Wolverine" Speakers installed in two Knight KN-1270 Enclosures. Changer base and speaker enclosures in mahogany, limed oak or walnut wood-grained finish-specify choice. For 110-120 v., 60 cycle AC. Shpg. wt., 127 lbs.
36 HF 502. Only $\$ 19.90$ Down. NET. .
. 199.00
FM-AM-PHONO SYSTEM. Save $\$ 48.851$ As above, but with the new Knight KN-130 Stereo FM-AM Tuner. 142 lbs. 36 HF 503. Only $\$ 27.13$ Down. NET.


Capture the full beauty and realism of stereo sound from new stereo records, -discover new vividness in your monaural LP collection, with these fabulous "Metropolitan" stereo systems. Designed around new Knight stereo components, these systems are carefully selected to bring you the most for your hi-fi dollar, through Allied's System Plan savings. These are the components: new Knight KN-720 "Bantam" 20-Watt Stereo Amplifier; Garrard RC121-I! 4-Speed Record Changer with Base; new G.E. GC-7 Magnetic Stereo Cartridge installed in Plug-In Head, with single, .0007" Diamond Needle; two Knight KN-800 12" 3-Way Speakers installed in Knight KN-1270 Enclosures; color-coded cables and instructions.
The KN-720 amplifier offers full stereo control and dual 10 -watt output. The Garrard RC121-II is renowned for its smooth operation. G.E.'s stereo cartridge will play LP's as well as stereo discs (see page 17 for $78-\mathrm{rpm}$ accessory cartridge). The two KN-800 speakers installed in the KN-1270 enclosures provide dazzling stereophonic sound. Changer base and speaker enclosures in mahogany, limed oak or walnut wood-grained finishes-specify choice when ordering. For $110-120$ volt, 60 cycle AC.

PHONO SYSTEM. Save $\$ 42.98$ ! Includes all of the components listed above. Shpg. wt., 138 lbs.
36 HF 504. $\$ 24.95$ Dozon. NET 249.50

FM-AM-PHONO SYSTEM. Save $\$ 50.98$ ! All components above, plus Knight KN-130 Stereo FM-AM Tuner. 151 lbs. 36 HF 505. \$32.10 Down. . NET 32I.00

## WITH ALTERNATE SPEAKER SYSTEM

PHONO SYSTEM ONLY. Includes all components in Phono System above, but with two new Knight KN-2000 Speaker Systems, in place of two KN800 speakers and KN-1270 enclosures. Specify mahogany, limed oak or walnut. Wt., 124 lbs. 36 HF 506. Save $\$ 53.08$. NET. 265.50

FM-AM-PHONO SYSTEM. Includes all of the components of the Phono System described at left, with the addition of the new Knight KN-130 "Bantam" Stereo FM-AM Basic Tuner. Specify changer base and enclosure finishes. Shpg. wt., 137 lbs. 36 HF 507. Save $\$ 61.08$. NET. 337.00

OPTIONAL STEREO TUNER


New KN-130 "Bantam" Stereo FM-AM Basic Tuner-for Sensitive FM, AM or Stereo FM-AM Reception

## ALTERNATE SPEAKER SYSTEM



Two New Knight KN-2000 3-Way Speaker Systems


## allied's deluxe STEREO music systems

LUXURY PERFORMANCE AT SUBSTANTIAL SAVINGS


New Knight KN-734 Deluxe 34-Watt Stereo Amplifier


## OPTIONAL STEREO FM-AM TUNER



ALTERNATE SPEAKER CHOICE


Two New Knight KN-812 Deluxe 12", 3-Way Speakers


PHONO SYSTEM. Enjoy magnificent stereo or monaural musical reproduction with this versatile hi-fi system, priced to save you $\$ 31.53$ on the total cost of the individual components. Carefully selected by our own audio experts, this balanced array of components fully recreates the dazzling sounds available on new stereo records. Includes: new Knight KN-734 34-Watt Stereo Amplifier; Garrard RC121-II 4-Speed Record Changer with Base; new G.E. GC-7 Magnetic Stereo Cartridge installed in Plug-In Head, with single .0007" Diamond Needle; two Knight KN-800 12" Speakers installed in two Knight KN1260 Enclosures; all interconnecting cables and instructions.

The new Knight KN-734 stereo amplifier offers excellent stereo and monaural controls; delivers 17 watts output per channel on stereo and 34-watt monaural output. G.E.'s new cartridge plays stereo and monaural LP records (see page 17 for accessory plug-in head with $78-\mathrm{rpm}$ cartridge installed). The beautiful KN-1260 enclosures are finished in selected hardwood veneer panels-together with the Knight 3-way speakers, they provide rich stereo sound. Changer base and speaker enclosures in mahogany, limed oak or walnut-specify choice when ordering. For operation from $110-120$ volt, 60 cycle AC. Shpg. wt., 139 lbs.
36 HF 508. Only $\$ 34.95$ Down. NET. .
349.50

FM-AM-PHONO SYSTEM. Save $\$ 45.53$. All components above, with the addition of the new Knight KN-1 20 Deluxe Stereo FM-AM Tuner. Shpg. wt., 160 lbs.
36 HF 509. Only \$46.60 Down. NET..
466.00

## WITH ALTERNATE SPEAKERS

PHONO SYSTEM. Save $\$ 32.63$. Includes all components described in the Phono System above (No. 36 HF 508), but with two new Knight KN-812 Deluxe 12" Speakers in place of the KN- 800 speakers. 183 lbs.
36 HF 510. Only $\$ 39.85$ Down. NET.
398.50

FM-AM-PHONO SYSTEM. Save $\$ 45.63 /$ As above, but with the new Knight KN-120 Deluxe Stereo FM-AM Tuner. 214 lbs. 36 HF 511 . Only $\$ 51.50$ Down. NET.
515.00

See Pages 34-35 for Complete Descriptions of New Knight Deluxe Stereo Amplifier and Deluxe Stereo FM-AM Tuner; Knight speakers are described on pages 56 and 57.

## FEATURING PRECISELY DESIGNED

* 

Skillfully engineered to Allied's rigid specifications, highly advanced Knight stereo hi-fi components offer you the best in musical reproduction at moderate cost. For your complete protection, all Knight hi-fi components are unconditionally guaranteed for one full year.


Super-Deluxe 34-Watt Stereo Music Systems

AS LOW AS

Save Up to $\$ \mathbf{5 3 . 6 3}$

- Superb Stereophonic Performance
- Finest Knight Stereo Units
- Deluxe Garrard Record Changer
- New G.E. Stereo Cartridge
- Matched 12", 3-Way Speakers in Knight Enclosures
PHONO SYSTEM. Allied presents a brilliant array of hi-fi components in this choice stereophonic systemand you save $\$ 40.53$ on the total cost of components purchased separately! Open the magic door to wondrous stereo sound from records with these deluxe units; system is ready for use as soon as you plug together the color-coded cables and connectors. Includes: new Knight KN-734 Deluxe 34-Watt Stereo Amplifier; Garrard RC88-4 4-Speed Record Changer with Base; new G.E. GC-7 Magnetic Stereo Cartridge installed in Garrard PlugIn Head, with Single, .0007" Diamond Stylus; two Knight KN800 12", 3-Way Speakers installed in two Knight KN-1215 "Dual-Duct" Enclosures; color-coded cables and plugs, and complete instructions.

A full set of dual controls is featured in the Knight KN734 amplifier-stereo or monaural sound can be regulated to suit personal listening tastes and room acoustics. G.E.'s new GC-7 cartridge plays stereo and monaural LP records (see page 17 for accessory plug-in head with $78-\mathrm{rpm}$ cartridge installed). The $\mathrm{KN}-1215$ enclosures, with KN -800 speakers, offer excellent stereo reproduction. Changer base and speaker enclosures available in mahogany, limed oak or walnut-specify your choice when ordering. System operates from $110-120$ volts, 60 cycle AC. Shpg. wt., 216 lbs.
36 HF 512 . Only $\$ 39.95$ Down. NET.
399.50

FM-AM-PHONO SYSTEM. Save $\$ 53.63$ ! All components above, with the addition of the new Knight KN- 120 Deluxe Stereo FM-AM Tuner. Shpg. wt., 242 lbs.
36 HF 513. Only $\$ 51.60$ Down. NET.
516.00

## WITH ALTERNATE SPEAKERS

PHONO SYSTEM. Save $\$ 40.631$ Includes all of the components described in the Super-Deluxe Phono System above (No. 36 HF 512), but with two Knight KN-810 15", 3 -Way Speakers in place of the KN-800 speakers. Shpg. wt., 227 lbs.
36 HF 514. Only $\$ 41.95$ Down. NET
419.50

FM-AM-PHONO SYSTEM. Save $\$ 53.63$ l As above, but with the addition of the new Knight KN-120 Deluxe Stereo FM-AM Tuner. Shpg. wt., 248 lbs.
36 HF 515. Only \$53.60 Down. NET.
536.00


Our Finest knight Stereo Music Systems

AS LOW AS
$\$ 46350$
Save Up to $\$ 45.06$

- Outstanding Stereo Reproduction
- Premium-Quality Components
- Features Full Set of Controls
- Top Stereo Cartridge
- Matched Speakers \& Enclosures

PHONO SYSTEM. Brilliant stereo reproduction and incomparable value highlight this array of perfectly matched components-priced to save you $\$ 31.96$. System includes: new Knight KN-700A Stereo Preamp Control Center; Knight KN-1515 30-Watt Stereo Basic Amplifier; Garrard RC88-4 4-Speed Record Changer with Base; new Pickering 371 Magnetic Stereo Cartridge mounted in Garrard Plug-In Head, with Single .0007" Diamond Needle for LP Records; two Knight KN-810 15" Speakers installed in two new Knight KN-1215 "DualDuct" Enclosures.

The KN-700A stereo preamp is masterfully designed to provide complete stereo control flexibility. KN-1515 amplifier offers two 15 -watt channels, instantly switchable to full 30 -watt output for monaural use. Pickering's splendid new stereo cartridge plays stereo and monaural LP records (see page 17 for accessory Garrard plug-in head with $78-\mathrm{rpm}$ cartridge). Delightful stereo sound is provided by the $\mathrm{KN}-810$ speakers in the $\mathrm{KN}-1215$ enclosures. Changer base and enclosures in mahogany, limed oak or walnut-specify choice. For operation from $110-120$ v., 60 cycle AC. Shpg. wt., 243 lbs.
36 HF 516. Only $\$ 46.95$ Down. NET. .
469.50

FM-AM-PHONO SYSTEM. Save $\$ 44.961$ All components above, with the addition of the new Knight KN-120 Deluxe Stereo FM-AM Tuner. Shpg. wt., 264 lbs.
36 HF 517 Only $\$ 58.60$ Down. NET. .
586.00

## WITH ALTERNATE SPEAKERS

PHONO SYSTEM. Save $\$ 32.061$ All of the components in the Phono System above, (No. 36 HF 516) but with two Knight KN-815 Deluxe 15" 3-Way Speakers in place of the KN-810 speakers. Shpg. wt., 289 lbs.
36 HF 518. Only $\$ 53.85$ Down. NET.
538.50

FM-AM-PHONO SYSTEM. Save $\$ 45.061$ As above, but also includes the new Knight KN-120 Deluxe Stereo FM-AM Tuner. Shpg. wt., 310 lbs.
36 HF 519. Only $\$ 65.50$ Down. NET.
655.00

## Stereo Phono System For Custom Installation

$\$ 3950$ For installation in your own equipment Save \$28.71 cabinet, enclosures, etc. Supplied less speaker enclosures and record changer base. Includes: new Knight KN-700A Stereo Preamp; Knight KN-1515 30-Watt Stereo Basic Amplifier; Garrard RC88-4 Record Changer; new Pickering 371 Magnetic Stereo Cartridge in Garrard Plug-In Head, with Single $.0007^{\prime \prime}$ Diamond LP Needle (see page 17 for accessory 78 -rpm cartridge); Mounting Board for RC88-4 Changer; and two Knight KN-815 15" Speakers. For 110120 v., 60 cycle AC. Shpg. wt., 132 lbs.
36 HF 520 . Only $\$ 39.95$ Down. NET.
399.50

FM-AM-PHONO SYSTEM. Save $\$ 41.711$ As above, but with new Knight KN-120 Deluxe Stereo FM-AM Tuner. Shpg. wt., 153 lbs.
36 HF 521 . Only $\$ 51.60$ Down. NET.

## ALLIED'S "BEST BUY" STEREC TAPE PLAYBACK SYSTEMS

For stereo tape enthusiasts-two versatile stereo tape playback systems at moderate cost. Both of the tape decks featured in these systems are of such high quality and established reputation, that Allied employs them in its own stereo tape auditioning studio. Both are simple to operate and of reliable, precision construction. Additionally, both of these popular components can be used for monaural tape playback as well as stereophonic playback. Don't overlook these remarkable values-Allied System Plan savings are substantial!


## Stereo Tape System With Pentron Tape Deck

- Versatile \& Popular Tape Deck Unit
- New Knight Stereo Amplifier

Save \$33.79

- Matched Knight Speakers \& Enclosures
- With All Cables \& 7" Take-Up Reel

Perfectly matched stereo tape playback system-offers everything you need for breathtaking stereo sound from recorded tapes. You save $\$ 33.79$ on the already low cost of the top-value components in this system! System includes: new Knight KN-720 20-Watt Stereo Amplifier; Pentron TM-4X Stereo Tape Deck; two Knight KN-800 12", 3-Way Speakers installed in two Knight KN-1 270 Bass Reflex Enclosures; and all interconnecting cables, plus 7" take-up reel.

The KN-720 amplifier features a complete set of stereo controls and delivers 10 -watt output per channel or full 20-watt output for monaural use. Pentron's TM-4X stereo tape deck can be used for stereo and monaural playback. Plays new 4-track tapes. Fast forward and fast rewind, play, record and neutral position are all set by a single, easy-to-use control knob. It employs a 4 pole, shaded-pole induction motor for smooth, highly efficient operation. Two speeds- $33 / 4$ and $71 / 2^{\prime \prime}$ per second. Accommodates reels up to $7^{\prime \prime}$ in size. The two Knight KN-800 speakers in KN-1270 enclosures provide stereo sound with jewel-like clarity. Enclosures in mahogany, limed oak or walnut wood-grained finish-specify choice when ordering. System operates from 110-120 v., 60 cycle AC. Shpg. wt., 135 lbs.
36 HF 523. Only $\$ 29.95$ Down. NET.
299.50

## Stereo Tape System With Bell Tape Deck

Save $\$ 39.44$

- Deluxe Components Used Throughout
- Brilliant Knight Stereo Amplifier
- High-Quality Bell Tape Deck Unit
- Two New Knight Speaker Systems

You'll enjoy splendid stereo tape reproduction with this magnificent array of components. Carefully selected by our own audio experts, this fine system includes: new Knight KN-734 Deluxe 34-Watt Stereo Amplifier; Bell T-213 Stereo Tape Deck with Base; two new Knight KN-2000 "Soft Suspension" Speaker Systems.

The beautifully styled KN-734 amplifier features a complete set of stereo controls, 17 watts output per channel, or 34 watts output for monaural use. Bell's T-213 Tape deck features monaural and stereo playback; three 4pole motors; $712^{\prime \prime}$ and $334^{\prime \prime}$-per-second speeds; tape footage counter; tape lifter for removing tape from heads during stop and high speeds; and excellent highfidelity specifications. The two compact KN-2000 speaker systems are new "soft-suspension" 3-way systems within sealed enclosures-reproduction is remarkably clean from units this small in size. Enclosures in mahogany, limed oak or walnut hardwood veneers-specify choice when ordering. System operates from 110-120 v., 60 cycle AC. Shpg. wt., 139 lbs.
36 HF 522. Only $\$ 40.95$ Down. NET.
409.50



New Knight KN-734 Deluxe 34-Watt Stereo Amplifier

Bell T-213
Stereo-Monaural Tape Deck with Base



OPTIONAL FM, AND FM-AM TUNERS


New Knight KN-140 Basic FM Tuner -a Classic in Compact Styling


New Knight KN-130 "Bantam" Stereo FM-AM Tuner-Offers Splendid Reception

# Superb "Metropolitan" Hi-Fi Phono Sysfem 



## EASY TO CONVERT TO STEREO

The "Metropolitan" Phono System is equipped with a new G.E. stereo magnetic cartridge. It plays microgroove records and new stereo records, monaurally. Later on, add another amplifier and speaker to play stereo records stereophonically.

PHONO SYSTEM. Here's a good way to get started in stereo-choose this top-economy phono system now, at a savings of $\$ 21.53$. Later on you can add another amplifier and speaker system for stereo sound from stereo records. Carefully selected by Allied's hi-fi experts, this balanced system brings you true hi-fi sound and reliable performance at a price to fit any budget.
Complete system includes: the Knight KN-510 "Mini-Fi" 10-Watt Amplifier; Garrard RC121-II 4-Speed Record Changer with Base; new G.E. GC-7 Stereo Magnetic Cartridge installed in plug-in head, with Single .0007" Diamond Needle; Knight KN-800 12", 3-Way Speaker installed in Knight KN-1270 Bass Reflex Enclosure; colorcoded cables and complete instructions.

The highly popular "Mini-Fi" amplifier offers exceptionally clean reproduction; Garrard's precision-made changer handles records gently while providing smooth operation. G.E.'s new stereo cartridge plays microgroove LP and stereo records, monaurally. When you convert to stereo, your changer and cartridge will be ready to provide you with fabulous stereophonic sound from stereo records. (See page 17 for accessory Garrard plug-in head with $78-\mathrm{rpm}$ cartridge installed). The Knight speaker and enclosure combination is widely recognized as an unusual hi-fi value and delivers rich, balanced sound. Changer base and enclosure in mahogany, limed oak and walnut wood-grained finish-specify choice when ordering. System operates from 110-120 volt, 60 cycle AC. Shpg. wt., 81 lbs.
36 HF 524 Save \$21.53. NET
159.50

## Radio-Phono Music Systems

FM-PHONO SYSTEM. Save $\$ 26.48$ I Includes all of the components listed in the Phono System above, plus the new Knight KN-140 Basic FM Tuner. No larger than a standard-size book, this beautifully styled and skillfully engineered tuner offers excellent FM reception; automatic frequency control for "lock-in" tuning; and other fine features. (See page 41 for complete description). Shpg. wt., 89 lbs.
36 HF 526. Only \$20.45 Down. NET.
204.50

FM-AM PHONO SYSTEM. Save $\$ 29.53$ l Includes all of the components listed in the Phono System above, plus the new Knight KN-130 Bantam Stereo FM-AM Tuner. This custom-quality tuner offers you stereo FM-AM reception, FM or AM reception, automatic frequency control on FM, deluxe styling, etc. (See page 38 for complete description). Shpg. wt., 94 lbs.
36 HF 525. Only $\$ 23.10$ Down. NET
231.00


## Lowest-Cost "Space-Saver" Hi-Fi Phono System

## ONLY - Ultra-Compact Units-Lowest Cost

©

- Stereo Cartridge-Diamond Needle
- Imported Collaro Record Changer

You Save \$34.77 - High-Performance Speaker System

Here's a beautifully performing hi-fi system-at a remarkably low price and System Plan savings of $\$ 34.77$ ! You'll be delighted with the authentic hi-fi sound this system provides. Includes: Knight KN-510 "Mini-Fi" 10Watt Amplifier, Collaro TSC-740 4-Speed Changer with Base; new Electro-Voice 26MDST Ceramic Stereo Cartridge installed in plug-in head, and with $.0007^{\prime \prime}$ Diamond and $.003^{\prime \prime}$ Sapphire Needles; new Knight KN-808 Full-Range $8^{\prime \prime}$ Speaker installed in the Argos TSE-1 Shelf-Type Ducted Enclosure. E-V's cartridge plays stereo, microgroove LP and $78-\mathrm{rpm}$ records, monaurally-later, you can add another amplifier and speaker for wondrous stereo sound from stereo records. Changer base in mahogany or limed oak wood-grained finish; enclosure in mahogany or limed oak leatherette-specify choice when ordering. System operates from $110-120$ v., 60 cycle AC. Shpg. wt., 49 lbs.
36 HF 527. Only \$10.00 Down. NET.
99.95

FM-PHONO SYSTEM. Save $\$ 39.721$ As above, with new Knight KN-140 Basic FM Tuner. Shpg. wt., 57 lbs.
36 HF 528. Only $\$ 14.50$ Down. NET.
144.95

## Economy "Space-Saver" Hi-Fi Phono System

| ONLY | - System Occupies Minimum Space <br> - Highly Esteemed "Mini-Fi" Amplifier <br> - Stereo Cartridge-Diamond Needle |
| :---: | :--- |
| - Top-Rated 4-Speed Record Changer |  |
| You Save $\$ 36.00$ | - Outstanding Speaker System |

Pocket exceptional savings of $\$ 36.00$ on this expertselected hi-fi phono system! Components are perfectly matched-just connect and start playing records. Includes: Knight KN-510 "Mini-Fi" 10 -Watt Amplifier; Garrard RC121-II Record Changer with Base; new ElectroVoice 26MDST Ceramic Stereo cartridge installed in plug-in head, with $.0007^{\prime \prime}$ Diamond and $.003^{\prime \prime}$ Sapphire Needles; new Knight KN-808 Full-Range $\mathbf{8}^{\prime \prime}$ Speaker installed in the Knight KN-1270 Enclosure; cables and instructions.
E-V's new stereo cartridge plays stereo, microgroove LP and 78 -rpm records, monaurally-later, just add another amplifier and speaker to this system, and you're all ready for stereo sound from stereo records. The KN808 speaker employs a specially suspended cone for amazing sound. Changer base and enclosure in mahogany, limed oak or walnut wood-grained finishes-specify choice. For $110-120$ v., 60 cycle AC. 66 lbs.
36 HF 529. Only \$10.95 Down. NET. .
. 109.50
PHONO SYSTEM WITH E-V SPEAKER. Save $\$ 40.931$ As above, but with Electro-Voice SP12-B $12^{\prime \prime}$ Speaker in place of the Knight KN-808 speaker. Shpg. wt., 81 lbs. 36 HF 530. Only $\$ 12.95$ Down. NET............. 129.50

## SPECIAL-VALUE KMight HI-FI PHONO SYSTEMS...BUY NOW...

EACH SYSTEM INCLUDES DUAL-PURPOSE AMPLIFIER AND STEREO CARTRIDGE . . .

Each of the special-value Knight hi-fi phono systems listed on these two pages employs latest components to bring you matchless reproduction of music from records-the cleanest, most realistic sound you have ever heard!

Each system features a dual-section amplifier of latest design. You employ the output of both channels for magnificent monaural sound now-add only a speaker to the system whenever you're ready for stereo sound.


## knight "Bantam" 20-WatH System

ONLY $\$ 20900$

You Save $\$ 25.08$

- "Bantam" 20-Watt Stereo Amplifier
- G.E. Cartridge-Diamond Needle
- Garrard Changer with Base
- New Knight Speaker System
- Color-Coded Connecting Cables

A compact, beautifully balanced system-ready to provide you with outstanding reproduction of music from records. You save $\$ 25.08$ over total cost of components -and your satisfaction is absolutely guaranteed! System includes: new Knight KN-720 20-Watt "Bantam" Stereo Amplifier; Garrard RC121-II 4-Speed Record Changer with Base; new G.E. GC-7 Stereo Magnetic Cartridge installed in Garrard plug-in head, and with Single .0007" Diamond Needle; new Knight KN-2000 high-performance 3-Way Speaker System in Shelf-Type Enclosure.

The KN-720 stereo amplifier features two 10 -watt channels to provide full 20-watt output for monaural use. Controls are more than adequate for any sound source; styling is attractive. G.E.'s new cartridge plays all stereo and microgroove LP records (can be mixed), monaurally. (See page 17 for accessory plug-in head with $78-\mathrm{rpm}$ cartridge installed). The new KN-2000 3-way speaker system will astonish you with its sparkling reproduction from a unit this small. Changer base and enclosure in mahogany, limed oak or walnut-specify choice when ordering. System operates from 110-120 volt, 60 cycle AC. Shpg. wt., 79 lbs.
36 HF 531. Only $\$ 20.90$ Down. NET.
209.00

Top-Value knight "Bantam" 20-Watt System

ONLY
42330
You Save \$23.63

- "Bantam" 20-W att Stereo Amplifier
- G.E. Cartridge-Diamond Needle
- Garrard Changer with Base
- Knight 12" 3-Way Speaker Installed in "Ducted Port" Enclosure
You'll enjoy listening to authentic hi-fi reproduction from records with this super-value phono system. Selected by Allied's audio experts, this first-rate combination of components saves you $\$ 23.63$. System includes: new Knight KN-720 "Bantam" 20-Watt Stereo Amplifier; Garrard RC88-4 4-Speed Record Changer with Base; new G.E. GC-7 Stereo Magnetic Cartridge installed in Garrard plug-in head, and with Single .0007" Diamond Needle; Knight KN-800 12", 3-Way Speaker installed in the Knight KN-1260 "Ducted Port" Enclosure; all cables, plastic changer cover and complete instructions.

The KN-720 stereo amplifier is the latest version of the famous "Bantam" units and it offers complete control versatility for either monaural or stereo use. It has inputs for accommodating an FM-AM tuner, tape deck, etc. G.E.'s new stereo cartridge plays stereo and microgroove LP records (can be mixed), monaurally. (See page 17 for accessory plug-in head with 78 -rpm cartridge installed). The $\mathrm{KN}-800$ speaker and $\mathrm{KN}-1260$ enclosure offer rich, natural sound. Enclosure styling is suitable to any room decor. Changer base and enclosure in mahogany, limed oak or walnut-specify choice when ordering. For 110-120 v., 60 cycle AC. Shpg. wt., 83 lbs. 36 HF 532. Only $\$ 22.95$ Down. NET.
229.50

One Substitution Allowed in Allied H-Fi Systems

## CONVERT TO STEREO ANYTIME!

## FOR SUPERB HIGH-FIDELTY SOUND

Choose one of these Allied Special-Value phono systems for perfectly balanced reproduction from records and lifelike, hi-fi sound. Savings are biggest-components are perfectly matched-and at your convenience, add a second speaker to any of these systems for stereo sound.

## Deluxe knight 34-Watt Phono System

ONLY - Deluxe 34-Watt Stereo Amplifier <br>Save \$18.06<br>- Pickering Cartridge \& Diamond<br>- Garrard Changer with Base<br>- Popular Knight 12" Speaker Installed in Corner Horn Enclosure

Thrilling sound from records-forward-looking designand smooth, dependable operation. This highly efficient, 34-watt system features deluxe components throughout -at a savings of $\$ 18.06$. System includes: new Knight KN-734 34-Watt Stereo Amplifier; Garrard RC88-4 4-Speed Record Changer with Base; new Pickering 371 Stereo Magnetic Cartridge installed in Garrard plug-in head, and with Single .0007" Diamond Needle; Knight KN-800 3-Way, 12" Speaker installed in the Knight KN-1250 Corner Horn Enclosure; all cables and instructions.

The versatile Knight KN-734 stereo amplifier provides 17 -watt output per channel for full 34 -watt output in monaural use, with full set of controls. Pickering's 371 cartridge is a model of precise design and outstanding performance. Plays new stereo and microgroove LP records monaurally. (See page 17 for accessory plug-in head with $78-\mathrm{rpm}$ cartridge installed). The Knight speaker in KN-1250 enclosure offers brilliant sound. Changer base and speaker enclosure available in mahogany, limed oak or walnut-specify your choice when ordering. System operates from 110-120 v., 60 cycle AC. Shpg. wt., 104 lbs.
36 HF 533. Only $\$ 30.90$ Down. NET
309.00
knight 34-Watt System With Deluxe Speaker


- Deluxe 34-Watt Stereo Amplifier
- New G.E. Cartridge-Diamond Needle
- Garrard RC88-4 Changer with Base
- Deluxe Knight $12^{\prime \prime}$ Speaker Installed in Highly Attractive Enclosure
A splendid hi-fi phono system that features matched components, designed to bring you top performance from your records. Additionally, this first-rate combination of deluxe components brings you Allied System Plan savings of $\$ 18.73$ over cost of components purchased separately. System includes: new Knight KN-734 34-W att Stereo Amplifier; Garrard RC88-4 Record Changer with Base; new G.E. GC-7 Stereo Magnetic Cartridge installed in Garrard plug-in head, with Single $.0007^{\prime \prime}$ Diamond Needle; Knight KN-812 Deluxe 12", 3-Way Speaker installed in the new Knight KN-1215 "Dual-Duct" Enclosure; all cables and instructions.

Knight's finest stereo amplifier, the KN-734, is the "heart" of this excellent system. Its two 17 -watt channels provide full 34 -watt monaural output. G.E.'s new stereo cartridge plays all stereo and microgroove LP records monaurally. (See page 17 for accessory plug-in head with $78-\mathrm{rpm}$ cartridge installed). The $\mathrm{KN}-812$ speaker in the "Dual-Duct" enclosure provides excellent sound across the entire audio range. Enclosure styling is smart and distinctive. Changer base and speaker enclosure in mahogany, limed oak or walnut-specify choice when ordering. System operates from 110-120 v., 60 cycle AC. Shpg. wt., 158 lbs.
36 HF 535. Only \$33.15 Down. NET.
Allied is Headquarters for High-Fidelity Equipment



Add dazzling stereo to your present hi-fi system with this complete 10 -watt "addon" system-priced to fit any budget.

Low-Cost knight "Add-On" Stereo System


You Save \$17.61

- Knight KN-510 10-W att Amplifer
- Knight KN-808 8" Hi-FI Speaker
- Argos TSE-1 Speaker Enclosure
- E-V 26 MDST Stereo Cartridge
- Pickup Arm Conversion Kit

Add this exceptionally low-cost "add-on" package to your hi-fi system for thrilling stereo sound. Allied's price saves you $\$ 17.61$ on the total cost of components. E-V's stereo cartridge has diamond LP needle and sapphire for 78's. Arm conversion kit is 91 S 592 , below right. Enclosure has attractive leatherette finish. Specify mahogany or blonde. Wt., 31 lbs . 36 HF 655 . Only $\$ 7.45$ Down. NET.

SYSTEM WITH CHANGER. As above, but includes stereowired Collaro TSC-740 4 -speed changer and base. Specify choice of finish. Shpg. wt., 50 lbs. Save $\$ 25.72$. 36 HF 656. Only \$10.90 Down. NET.


Thrill to the wonders of stereo by adding this economical, beautifully performing package to your present hi-fi system.

## Economical knight Stereo "Add-On" System



You Save \$14.46

- Knight KN-510 10-W att Amplifer
- Knight KN-800 12" Speaker
- Knight KN-1270 Enclosure
- G.E. GC-7 Stereo Cartridge
- Pickup Arm Conversion Kit

Convert your hi-fi system for dazzling stereo with this economical "add-on" package-at savings of \$14.46 over the total cost of components. G.E.'s stereo cartridge has diamond LP needle. See page 17 for 78 rpm cartridge. Arm conversion kit is 91 S 592, below. Bass reflex enclosure has a wood-grained finish. Specify mahogany, limed oak or walnut. Shpg. wt., 63 lbs.
36 HF 657 . Only $\$ 12.45$ Down. NET.
. 124.50
SYSTEM WITH CHANGER. As above, but includes stereowired Garrard RC121/II 4-speed changer and base. Specify finish. Shpg. wt., 81 lbs. Save $\$ 21.08$.
36 HF 654. Only $\$ 16.00$ Down. NET.
159.95

## IMPORTANT NOTES ON STEREO "ADD-ON" HI-FI SYSTEMS

A COMPLETE STEREO conversion kit for your present changer is supplied with each Allied-recommended stereo "add-on" package. Kit (at right) is easily in-stalled-no soldering required.

ALL RECORD CHANGERS listed in stereo "add-on" systems are completely pre-wired for stereo-even the stereo cartridge is installed, ready to play.

ALL LP RECORDS can be played on a system with stereo cartridge. An accessory cartridge and needle for 78's (see p. 17) is required for systems with Pickering or G.E. stereo cartridges.

## LAB-TRONICS CONVERSION ACCESSORIES FOR STEREO




SM-6


SM-7

MODEL SM-7 STEREO-MONAURALREVERSE SWITCH. For stereo systems which do not have a stereo preamp. Provides instant switching from monaural to stereo-plus channel reversing. $11 / 2 \times 2 \times 22^{\prime \prime}$. Wt., 1 lb .
91 S 588. NET.
.2 .06
MODEL SM-6 STEREO-MONAURAL SWITCH. As above, but without the channel reverse feature. Wt., 1 lb . 91 S 587. NET.
1.76

MODEL TS-9 PHASING SWITCH. For phasing speakers. $11 / 2 \times 2 \times 2$ ". 1 lb . 91 S 591. NET.


UNIVERSAL STEREO CONVERSION KIT. Stereo conversion kit for converting changers (other than Garrard) for stereo. See page 17 for listings covering Garrard changers. Supplied with add-on systems which do not include stereo-wired changers.
Kit consists of pickup arm cable for 3 or 4 terminal cartridges, stereomonaural switch, output cables with molded-on plugs, accessory clips and detailed instructions. Requires no soldering. Less cartridge. 1 lb .
91 S 592. NET.
4.09

ENJOY ALL THAT HIGH-FIDELITY HAS TO OFFER. Stereo is the most exciting advance in home entertainment since hi-fi began-it brings you the clearest, most realistic music reproduction you have ever heard.


## Knight

 KN. 800 $2^{\prime \prime}$ Speaker

Versatility keynotes this moderately priced stereo "add-on" package-ideal for converting your present hi-fi system.

Versatile knight Stereo "Add-On" System<br>ONLY<br>- KN-734 34-W att Stereo Amplifier<br>- KN-800 12" 3-Way Hi-Fi Speaker<br>- KN-1.260 Ducted-Port Enclosure<br>You Save \$19.51 - G.E. GC-7 Stereo Cartridge

Add exciting stereo to your hi-fi system-save \$19.51 on the total cost of components. Use the KN-734 as a 34 -watt stereo channel with your present amplifier as the second channel-the built-in stereo preamp of the KN-734 provides centralized control of both channels. Speaker enclosure is finished in hand-rubbed veneers. With 91 S 592 conversion kit for your changer. Specify mahogany, limed oak or walnut. Shpg. wt., 74 lbs. 36 HF 653. Only $\$ 22.90$ Down. NET
229.00

SYSTEM WITH CHANGER. As above, but includes stereowired Garrard RC88-4 4 -speed changer and base. Specify enclosure finish. Shpg. wt., 85 lbs. Save \$23.18.
36 HF 652. Only $\$ 27.95$ Down. NET
279.50

IT'S EASY TO ADD STEREO. Convert your high-fidelity system for playing stereo by adding an Allied "Add-On" package. With only a few simple connections, you'll be all set for dazzling 3 -dimensional sound.


Superior performance and up-to-the-minute styling highlights this deluxe "add-on" package-graces any decorative scheme.

Deluxe knight Stereo "Add-On" System ONLY<br>- KN-734 34-W att Stereo Amplifler - KN-810 $15^{\prime \prime}$ 3-Way Hi-Fi Speaker<br>- KN-1215 Dual Ducted-Port Enclosure<br>You Save $\$ 32.01$ - G.E. GC-7 Stereo Cartridge

An ultra-deluxe "add-on" package-yours at savings of $\$ 32.01$. Use the KN-734 as a 34 -watt stereo channel with your present amplifier as the second channel-the built-in stereo preamp of the KN-734 provides centralized control of both channels. Sparkling performance is delivered by the $15^{\prime \prime} 3$-way speaker. With 91 S 592 changer conversion kit. Speaker enclosure in mahogany, limed oak or walnut-specify. Shpg. wt., 117 lbs . 36 HF 651. Only $\$ 24.95$ Down. NET.
249.50

SYSTEM WITH CHANGER. As above, but includes stereowired Garrard RC88-4 4 -speed changer and base. Specify enclosure finish. Shpg. wt., 128 lbs. Save $\$ 36.18$.
36 HF 650 . Only $\$ 29.95$ Down. NET.
299.50

## GARRARD CONVERSION KITS



MODEL SCK-1. Complete conversion kit for modernizing most Garrard changers for stereo. Converts the following models: RC121, RC88, RC98 and T Mk. II. Kit consists of plug-in head, female connector, pickup arm cable, terminal block, output cables, hardware and detailed instructions. No soldering required. Less cartridge. Shpg. wt., $3 / 4 \mathrm{lb}$.
79 R 248. NET.
4.85

MODEL SCK-2. Complete conversion kit as described above, but for the Garrard RC121-II changer. Less cartridge. Shpg. wt., $3 / 4 \mathrm{lb}$.
79 R 249. NET.
4.85

## ACCESSORY CARTRIDGES IN PLUG-IN HEADS

GARRARD-G.E. G.E. GC-7 stereo cartridge with diamond LP needle in Garrard head-ready to plug in and use. No. 1 fits Garrard RC121, RC88, RC98 and T Mk II; No. 2, RC121-II, 4HF. Shpg. wt., 9 oz.
69 SC 998. No. 1. NET.
23.47

69 SC 999. No. 2. NET. . . . . . . . . . . . . . . . . . . . . . . . . . . . . 23.47
GARRARD-PICKERING. Pickering 371 stereo cartridge with diamond LP needle in Garrard head-ready to plug in and use. Fits tone arm of Garrard Models RC88 and RC98 changers. Shpg. wt., 9 oz.
64 RC 899. No. 1. NET.
29.85

GARRARD-G.E. G.E. 4G-040 cartridge with $.003^{\prime \prime}$ sapphire needle (78-rpm) in Garrard head. No. 1 fits RC121, RC88, RC98 and TMk II; No. 2, RC121-II, 4HF. Wt., 9 oz.
69 SC 981. No. 1. NET.
7.89 69 SC 982. No. 2. NET . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . 7.89

COLLARO-G.E. G.E. 4G-040 cartridge with $.003^{\prime \prime}$ sapphire needle (78-rpm) in Collaro head. For Collaro TSC-740 and TSC-840. Shpg. wt., 9 oz.
69 SC 983. NET
8.34


RECOMMENDED STEREO CONVERSION SYSTEMS . . .

## JUST ADD TO YOUR PRESENT HI-FI SYSTEM

If you now have a monaural hi-fi system, you may easily convert it for playing stereo discs by adding a stereo cartridge to your changer or turntable, plus another amplifier and speaker for reproducing the second sound channel.

## YOU SAVE WITH AN ALLIED "ADD-ON" SYSTEM

 All Allied "Add-On" systems-either with components recommended by our experts or selected by you-are top values. You pocket giant savings over the total cost of the components if purchased separately.

Bogen AC210
Stereo
G.E. GC. 7 Stereo Cartridge

E-V LS-12 $12^{\prime \prime}$ Speaker
18
"Add-On" System with H-K AX2O Amplifier
ONLY Add this system to your present hi-fi
$\$ 179^{50}$
You Save \$32.03 phono system for dazzling stereo sound -at savings of $\$ 32.03$. System includes: Harman-Kardon AX20 20-Watt Amplifler with built-in Stereo Preamplifier and Case; G.E. GC-7 Stereo Cartridge with Diamond LP Needle; Universal Stereo Conversion Kit (see page 16); University "Tiny Mlte" Speaker Enclosure; University UXC-122 12" Speaker Installed. With this system, you can use your present amplifier as a basic unit-the versatile AX20 becomes a complete control center. Enclosure is available in fine furniture veneers, hand-rubbed to a lustrous finish. Specify mahogany, blonde or walnut when ordering. Shpg. wt., 53 lbs .
36 HF 736. Only $\$ 17.95$ Down. NET. .
179.50

SYSTEM AS ABOVE, WITH Changer. Save $\$ 34.10$. With stereo-wired Garrard RC121-II 4 -speed changer and base. Cartridge is installed in changer. Specify finishes. Shpg. wt., 71 lbs.
36 HF 737. Only $\$ 21.95$ Down. NET. .
219.50

## "Add-On" System with H-K A224 Amplifier

ONLY Use your present hi-fi system with these
$\$ 189^{50}$
You Save \$32.01 add on" stereo components for wonderful stereo sound-the system price saves you $\$ 32.01$. Includes: Harman-Kardon A224 24-Watt Amplifier with built-in Stereo Preamplifler and Case; G.E. GC-7 Stereo Cartridge with Diamond LP Needle; Universal Stereo Conversion Kit (see page 16); Jensen BL-812 Speaker Enclosure; Jensen DX-120 12" 2-Element Speaker. Your present amplifier serves as a basic unit with this system-centralized control is provided by the A224. Speaker enclosure is finished in beautiful hand-rubbed veneers. Available in choice of mahogany or walnut-please specify when ordering. Shpg. wt., 56 lbs.
36 HF 738. Only $\$ 18.95$ Down. NET.
$\ldots$
189.50

SySTEM AS ABOVE, WIth Changer. Save $\$ 34.08$. With stereo-wired Garrard RC121-II 4 -speed changer and base. Cartridge is installed in changer. Specify finishes. Shpg. wt., 74 lbs .
36 HF 739. Only \$22.95 Down. NET.....
229.50
"Add-On" System with Bogen AC210 Amplifier ONLY Combine your present hi-fi phono sys\$ 450 You Save $\$ 40.51$ \$40.51. Includes: Bogen AC210 20-W att Amplifier with Stereo Preamp; G.E. Stereo Cartridge with Diamond LP Needle; Universal Stereo Conversion Kit (see page 16); E-V "Lancaster" Speaker Enclosure; E-V LS-12 12" Speaker. Use your present amplifier as a basic unit-all the controls for stereo are on the AC210. E-V's space-sparing enclosure, with speaker installed, has a beautiful wood-grained finish. Specify mahogany, blonde or walnut. Shpg. wt., 45 lbs .
36 HF 740. Only $\$ 15.45$ Down. NET.
154.50

SYSTEM AS ABOVE, WITH ChANGER. Save $\$ 42.58$. With stereo-wired Garrard RC121-II 4 -speed changer and base. Cartridge is installed in changer. Specify finishes. Shpg. wt., 53 lbs .
36 HF 741. Only $\$ 19.45$ Down. NET.
194.50

## "Add-On" System with Scott 130 Stereo Preamp

## ONLY


You Save \$61.29

Realize the full possibilities of lifelike stereo reproduction by combining your present high-fidelity system and this superb "add-on" system-at savings of \$61.29. System includes: Scott 130 Stereo Preamp with Case; Scott 250 40-W att Basic Amplifier; Pickering 371 Stereo Cartridge with Diamond LP Needle; Universal Stereo Conversion Kit (see page 16); Stephens 1217 Speaker Enclosure with the 120FR 12" FullRange Speaker Installed. Use your present amplifier as a basic unit-the highly versatile 130 preamp has a full set of controls for any music source. Beautiful enclosure in hand-rubbed veneers. Specify mahogany or walnut when ordering. Shpg. wt., 119 lbs. 36 HF 742. Only $\$ 44.00$ Down. NET
440.00 SYSTEM AS ABOVE, WITH CHANGER. Save \$65.46. With stereo-wired Garrard RC88-4 4-speed changer and base. Cartridge is installed in changer. Specify enclosure finish. Shpg. wt., 139 lbs.
36 HF 743. Only \$49.00 Down. NET.
490.00

## "Add-On" System vith Pilot 210 Preamp

ONLY

You Save \$43.44 price, you pocket savings of $\$ 43.44$ over total cost of components. System includes: Pilot 210 Stereo Preamp; Pilot SA-232 32-W att Basic Stereo Amplifler; Pickering 371 Stereo Cartridge with Diamond LP Needle; Universal Stereo Conversion Kit (see page 16); Jensen CN100 3-W ay Speaker System. Your present amplifier serves as a basic unitthe 210 preamp has fully integrated stereo controls. Jensen's speaker system has a lustrous, hand-rubbed veneered finish to complement any decor. Speaker enclosure in mahogany or walnut-specify when ordering. Shpg. wt., 102 lbs.
36 HF 744. Only $\$ 31.90$ Down. NET. . . . . . . . . . . 319.00
SYSTEM AS ABOVE, WITH CHANGER. Save \$47.61. Same as system described above, but with stereo-wired Garrard $\mathrm{RC} 88-44$-speed record, changer and base. Cartridge is installed in changer. Specify enclosure finish when ordering. Shpg. wt., 122 lbs
36 HF 745. Only $\$ 36.90$ Dozon. NET.
369.00

## "Add-On" System with Fisher C400 Preamp

ONLY Everything you need for adding thrilling stereophonic sound to your hi-fi system-at savings of $\$ 48.31$. System includes: Fisher C400 Stereo Preamp with Case; Fisher 100 30-Watt Basic Amplifier; Expand your present hi-fi phono system with this perfectly matched "add-on" system and vividly recreate the wondrous realism of stereophonic sound-in your own home. At Allied's special

You Save \$48.31 Pickering Stereo Cartridge with Diamond LP Needle; Universal Stereo Conversion Kit (see page 16); Electro-Voice "Marquis" Enclosure with the 12TRX-B 12" 3-Way Speaker Installed. Simply use your present amplifier as a basic unit-the C400 preamp has a full set of stereo controls. Finished in lustrous, hand-rubbed veneers, the beautiful "Marquis" enclosure is perfectly suited for any decorative interior. Enclosure is available in mahogany, limed oak or walnut-please specify your choice when ordering. Shpg. wt., 103 lbs. 36 HF 746 . Only $\$ 41.90$ Down. NET.
419.00

SYSTEM AS ABOVE, WITH Changer. Save \$52.48. With stereo-wired Garrard RC88-4 4-speed changer and base. Cartridge is installed in changer. Specify enclosure finish. Shpg. wt., 123 lbs.
36 HF 747. Only $\$ 46.90$ Down. NET
469.00

WRITE FOR SYSTEM PLAN PRICES. If you wish to select a high-fidelity system with components of your own choosing, simply list the make and model number of

each component, and write for Allied's special system price. You'll realize king-size savingsplus all the Allied System Plan extras.

## ALLIED-RECOMMENDED HI-FI MUSIC SYSTEMS FEATURING

0

COMPLETE STEREO SYSTEMS



H-K A224
Stereo Amplifier


G.E. GC-7 Stereo Cartridge



H-K A224 24-W att Stereo Amplifier With Case. . . . $\$ 106.95$ Garrard RC88-4 4-Speed Changer \& Base....... 58.26
G.E. GC-7 Stereo Cartridge-Diamond LP Needle. 23.47

Two E-V "Marquis" Speaker Enclosures. . . . . . . . . . 129.36
Two E-V 12 TRX-B 12" 3-W ay Speakers. . . . . . . . 123.48
TOTAL REGULAR CATALOG PRICE.
$\frac{1}{\$ 441.52}$
ALLIED SYSTEM PRICE.
$\frac{369.00}{72.52}$

S YSTEM PRICE


Bring thrilling stereo performances into your home with this complete money-saving stereo phono system. The versatile 24watt amplifier becomes two 12watt amplifiers at the flick of a switch. E-V's enclosures have hand-rubbed, fine furniture veneers-add a touch of elegance to any room. For 110-120 v., 60 cycle AC. Specify mahogany, limed oak or walnut. Shpg. wt., 170 lbs.
36 HF 711. Only $\$ 36.90$ Down. NET. $\qquad$ 369.00

FM-AM-PHONO SYSTEM: Save $\$ 83.97$. As above, but includes H-K T224 "Duet" FM-AM tuner. Specify finish of enclosure when ordering. Shpg. wt., 183 lbs.
36 HF 712. Only $\$ 47.25$ Down. NET.
472.50

## Stereo Phono System with A250 Amplifier <br> H-K A250 50-W att Stereo Amplifier With Case. . . $\$ 192.45$ <br> Garrard RCl21-II 4-Speed Changer \& Base...... 46.16 <br> G.E. GC-7 Stereo Cartridge-Diamond LP Needle. 23.47 <br> Two Jensen TR10 Speaker Systems. . . . . . . . . . . . . 229.00 <br> TOTAL REGULAR CATALOG PRICE. ........... $\$ 491.08$ <br> ALLIED SYSTEM PRICE. <br> YOU SAVE. <br> $\$ \frac{425.00}{66.08}$

SYSTEM PRICE


Hear the finest in musical entertainment come to life through the magic of stereo-re-created at your command! This complete stereo phono system has been carefully selected by our own audio experts-at a special Allied price that saves you $\$ 66.08$ over the cost of components if purchased separately. Features the A250 amplifier-a versatile unit that delivers 25 watts per channel for stereo reproduction, or 50 watts monaurally. Space-sparing in design, the speaker systems have fine, hand-rubbed veneers and blend harmoniously with any furnishing mode. The stereo cartridge will play any microgroove record-see page 17 for plug-in head with $78-\mathrm{rpm}$ accessory cartridge installed. As in all Allied phono systems, a plastic record changer cover and color-coded cables are included. For $110-120$ v., 60 cycle AC. Specify mahogany or walnut. Shpg. wt., 151 lbs.
36 HF 713 . Only $\$ 42.50$ Down. NET.
425.00

## harman kardon COMPONENTS


\$48.50 Down of $\$ 42.71$. Features a fully integrated FM-AM tunerpreamp and a powerful, dual 25 -watt stereo basic amplifier. Enclosures, with speakers installed, have beautifully finished hand-rubbed veneers. For 110-120 v., 60 cycle AC. Specify mahogany, limed oak or walnut. Shpg. wt., 155 lbs.
36 HF 715. Only $\$ 48.50$ Down. NET.
485.00

## Phono System with AX20 Preamp-Amplifier

H-K AX20 20-Watt Stereo Amplifier With Case. . . . $\$ 108.90$
Collaro TSC-740 4-Speed Changer \& Base. . . . . . . 46.60
G.E. GC-7 Stereo Cartridge-Diamond LP Needle . . 23.47

E-V "Empire" Speaker Enclosure . . . . . . . . . . . . . . . . . 97.02
E-V SP15-B 15" "Radax" Speaker. 42.14

TOTAL REGULAR CATALOG PRICE \$318.13
ALLIED SYSTEM PRICE. 259.00

YOU SAVE.
$\$ 59.13$

SYSTEM PRICE

## \$25.90 Down

 em plays microg records and new stereo discs monaurally-add a basic amplifier and another speaker to play stereo discs stereophonically. Finished in handrubbed, fine furniture veneers, the enclosure is expertly designed to grace the most dignified of settings. Includes all the Allied extras-color-coded cable, changer cover, etc. For $110-120$ v., 60 cycle AC. Specify mahogany, limed oak or walnut. Shpg. wt., 111 lbs.36 HF 714. Only \$25.90 Down. NET.
259.00


MONEY-SAVING HI-FI SYSTEMS FEATURING HARMAN-KARDON COMPONENTS
You can convert these systems to stereo at any time-iust add another amplifier and speaker system.



# FEATURING <br> Boget COMPONENTS 

## Low-Cost Stereo Phono System Featuring AC210 "Challenger" Amplifier

Bogen AC210 Stereo/ Monaural Amplifler. . . . . . . \$ 99.95 Webcor 1942-1 4-Speed Changer on Base; with

Ceramic Stereo Cartridge and Sapphire Needles. . 43.00
2—University "Tiny Mite" Enclosures.... . . . . . . . . . . . 75.46
2—University UXC-122 12" 2-Way Speakers........ . 74.68
TOTAL REGULAR CATALOG PRICE. . . . . . . . . . . . $\$ 293.09$
ALLIED SYSTEM PRICE. 229.95

YOU SAVE..................... . . $\$ 63.14$
SYSTEM PRICE Save $\$ 63.14$ on this complete, budget-

32997
\$23.00 Down sparing stereo system. Compact, handrubbed veneered enclosures. For 110120 v., 60 cycle AC. Specify mahogany, blonde or walnut. Shpg. wt., 91 lbs.
36 HF 703. Only $\$ 23.00$ Down. NET.
229.95

FM-AM-PHONO STEREO SYSTEM. Save $\$ 82.64$. As above, but includes the Bogen TC200 stereo tuner. Specify enclosure finish when ordering. Shpg. wt., 108 lbs.
36 HF 704. Only $\$ 34.00$ Down. NET.
339.95

Hi-Fi System with AC10 "Challenger" Amplifier
Bogen ACl0 "Challenger" 10-W att Amplifler. . . . . $\$ 55.00$
Collaro TSC-740 4-Speed Changer \& Base. . . . . . . . . 46.60
G.E. GC-7 Stereo Cartridge-Diamond LP Needle.. . 23.47

Stephens 816 Speaker Enclosure. . . . . . . . . . . . . . . . . 48.00
Stephens 80FR $8^{\prime \prime}$ Full-Range Speaker Installed. . . . . . 31.50
TOTAL REGULAR CATALOG PRICE. . . . . . . . . . . . $\$ 2 \overline{04.57}$
ALLIED SYSTEM PRICE.
YOU SAVE
159.50
$\$ 45.07$
SYSTEM PRICE Space sparing, economical hi-fi phono

\$15.95 Down system-at savings of $\$ 45.07$. Plays microgroove records and new stereo discs monaurally-add another amplifier and speaker to play stereo discs stereophonically. Compact enclosure is finished in hand-rubbed veneers. For 110-120 v., 60 cycle AC. Specify mahogany or walnut. Wt., 128 lbs.
36 HF 705. Only $\$ 15.95$ Down. NET....... . . . . . . . . 159.50
FM-AM-PHONO SYSTEM. Save \$62.12. As above, but includes Bogen TC100 FM-AM tuner. Specify enclosure finish when ordering. Shpg. wt., 141 lbs. 36 HF 706. Only $\$ 23.00$ Down. NET. $\qquad$ . 229.95



| Amplifier | Changer | Cartridge | Speaker System | Finishes | Lbs. | Stock No. | NET EACH |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | Garrard RC88-4 With Base | Pickering 371 Stereo |  | Specify Mahogany or Walnut Veneer | 125 | 36 HF 707 | $\begin{gathered} 329.95 \\ \text { SAYE } \\ \text { BJ.16 } \end{gathered}$ |
|  | Garrard RC121-II With Base | G.E. GC-7 Stereo |  | Specify Mahogany, Blonde, or Walnut Grained Finish | 64 | 36 HF 708 | $\begin{gathered} 194.50 \\ \text { SAVE } \\ 50 . \operatorname{tat} \end{gathered}$ |
|  <br> AC210 With Case | Collaro TSC-740 With Base | G.E. GC-7 Stereo | Single University UXC-1 23 Debonaire" | Specify <br> Mahogany, Blonde or Walnut Veneer | 78 | 36 HF 709 | $\begin{gathered} 229.95 \\ S A V E \\ 64.53 \end{gathered}$ |
|  | Garrard RC88-4 With Base | G.E. GC-7 <br> Stereo |  | Specify Mahogany, Limed Oak or Walnut Veneer | 107 | 36 HF 710 | $\begin{gathered} 279.95 \\ \text { SAVE } \\ \$ 9.02 \end{gathered}$ |



MONEY SAVING HI-FI SYSTEMS



#### Abstract

Top-Value Hi-Fi Stereo Phono System Featuring the Bell 3030 Stereo Amplifier Bell 3030 Stereo Monaural Amplifier. . . . . . . . . . . $\$ 169.95$ Garrard RC88-4 4-Speed Changer and Base..... 58.26 G.E. GC-7 Stereo Cartridge-Diamond LP Needle. 23.47 2-Jensen CN100 3-Way Speaker Systems....... 299.00 TOTAL REGULAR CATALOG PRICE. . . . . . . . . . . $\overline{\$ 550.68}$ ALLIED SYSTEM PRICE. . . . . . . . . . . . . . . . . . . . . . $\frac{469.00}{81.68}$

YOU SAVE $\$ 81.68$


## SYSTEM PRICE



Perfectly balanced, thrilling stereo reproduction from records is yours with this outstanding phono system - and you save $\$ 81.68$ over the cost of individual components. Features the Bell 3030 amplifier, an expertly engineered unit that serves as two 15 -watt amplifiers or one 30 -watt amplifier-on one compact chassis.
The beautifully styled enclosures, with speakers installed, are constructed of hand-rubbed, fine furniture veneers to complement any interior motif. Space sparing in design, this versatile system will also accommodate a tuner and a tape recorder.
Complete with all the Allied system extras-colorcoded cables, plastic changer cover, instructions, etc. See page 17 for accessory 78 rpm cartridge. For $110-$ 120 v., 60 cycle AC. Specify choice of mahogany or walnut finish when ordering. Shpg. wt., 172 lbs.
36 HF 719. Only $\$ 46.90$ Down. NET.
469.00

Phono System Featuring Bell 2325 Amplifier
Bell 2325 20-Watt Amplifier... . . . . . . . . . . . . . . . $\$ 109.95$
Garrard RC121-II 4-Speed Changer \& Base. . . . . . 46.16
G.E. GC-7 Stereo Cartridge-Diamond LP Needle. 23.47

Electro-Voice" Aristocrat" Enclosure.. . . . . . . . . . . . 70.56
Electro-Voice 12TRX-B 12" 3-W ay Speaker. . . . . . . 64.68 tOTAL REGULAR CATALOG PRICE. . . . . . . . . . . $\overline{\$ 314.82}$ ALLIED SYSTEM PRICE. . . . . . . . . . . . . . . . . . . . . . 269.00

YOU SAVE
. $\$ 45.82$

SYSTEM PRICE
 disc monaurally-add another amplifier and speaker to play stereo discs stereophonically.
The performance of this system fulfills the exacting demands of the perceptive music lover, and the graceful styling blends beautifully with the finest decors. System includes cables, changer cover, etc. See page 17 for accessory 78 rpm cartridge. For 110-120 v., 60 cycle AC. In mahogany, limed oak or walnut-specify when ordering. Shpg. wt., 101 lbs.
36 HF 720. Only \$26.90 Down. NET...
269.00

Featuring perfectly matched components, this handsome hi-fi phono system brings you sparkling sound from records - at savings of $\$ 45.82$. Plays microgroove records and new stereo

## Phono System Featuring Bell 2315 Amplifier

Bell 2315 12-Watt Amplifier. . . . . . . . . . . . . . . . . . $\$ 69.55$
Garrard RC121-II 4-Speed Changer \& Base....... 46.16 G.E. GC-7 Stereo Cartridge-Diamond LP Needle .. 23.47 Stephens 1217 Enclosure \& 120FR 12" Speaker.... 147.50 TOTAL REGULAR CATALOG PRICE . . . . . . . . . . . . . $\$ \mathbf{\$ 8 6 . 6 8}$
ALLIED SYSTEM PRICE. . . . . . . . . . . . . . . . . . . . . . 249.00
YOU SAVE.
\$37.68
SYSTEM PRICE Save $\$ 37.68$ on this budget-priced hi-fi music system. Enclosure has hand-rubbed furniture veneers. For $110-120$ v., 60 cycle AC.

\$24.90 Down Specify mahogany or walnut finish. Shpg. wt., 106 lbs.

36 HF 721. Only $\$ 24.90$ Down. NET. . . . . . . . . . . 249.00
FM-AM-PHONO SYSTEM. Save $\$ 48.18$ ! As above, but with Bell 2520 FM-AM tuner. Specify mahogany or walnut Anish. Shpg. wt., 120 lbs.
36 HF 724. Only \$33.35 Down. NET.
333.50

| Phono System Featuring Bell 2215 | Amplifier |
| :---: | :---: |
| Bell $221510-\mathrm{W}$ att Amplifier. | \$ 55.00 |
| Collaro TSC-740 4 -Speed Changer \& Base | . 60 |
| G.E. GC-7 Stereo Cartridge-Diamond LP Needil | . 47 |
| E-V "Lindon" Speaker Enclosure | . 50 |
| E-V Wolverine LS-8 8" Full-Range Speak | 0 |
| TOTAL REGULAR CATALOG PRICE | 17 |
| SYST | 149.50 |
| YOU SAVE | 28. |

SYSTEM PRICE Enjoy excellent hi-fi with this space-sparing phono systemyou'll save $\$ 28.07$. Plays microgroove records and new stereo discs monaurally-add another amplifier and speaker to play stereo discs stereophonically. Enclosure is sturdily constructed and has wood-grained finish. System includes free extras-color-coded cable, changer dust cover, etc. See page 17 for accessory 78 rpm cartridge. For operation from 110-120 v., 60 cyce AC. Specify mahogany, blonde or walnut finish. Shpg. wt., 50 lbs.
36 HF 722. Only $\$ 14.95$ Down. NET. .
149.50

## Phono System With Bell 3030 Stereo Amplifier JUST ADD ANOTHER SPEAKER FOR STEREO

Bell 3030 30-W att Stereo Amplifier. . . . . . . . . . . . $\$ 169.95$ Garrard RC88-4 4-Speed Changer \& Base......... 58.26 G.E. GC-7 Stereo Cartridge-Diamond LP Needle . . 23.47 Jensen TR-10 3-Way Speaker System.
114.50

| TOTAL REGULAR CATALOG PRICE. | \$366.18 |
| :---: | :---: |
| Allied System Price. | 325.00 |
| YOU SAVE | 41 |

SYSTEM PRICE Superiority of performance and compactness of design keynote this perfectly matched hi-fi phono system-at giant savings of

## \$32.50 Down

 $\$ 41.18$. Plays microgroove records and new stereo discs mon-aurally-simply add another speaker to play stereo discs stereophonically. Amplifier serves as two 15 -watt amplifiers or one 30 -watt amplifier-on one compact chassis. Speaker enclosure has hand-rubbed, selected veneers. For $110-120$ volts, 60 cycle AC. Specify mahogany or walnut. Shpg. wt., 88 lbs.36 HF 723. Only $\$ 32.50$ Down. NET
325.00

WRITE FOR SYSTEM PLAN PRICES. If you wish to select a high-fidelity system with components of your own choosing simply list the make and model number of


Collaro TSC-740
Changer \& Base

each component, and write for Allied's special system price. You'll realize king-size savingsplus all the Allied system plan extras.


## ALLIED RECOMMENDED HI-FI SYSTEMS featuring Djolot components

STEREO SYSTEM AT BIG SAVINGS!<br>Phono System With Pilot 245 Stereo Amplifier<br>Pilot 245 28-W att Stereo Amplifier \& Case. . . . . . \$189.50<br>Garrard RC88-4 4-Speed Changer \& Base....... 58.26<br>Pickering 371 Stereo Cartridge-Diamond Needle 29.85<br>2—University "Debonaire" Enclosures. . . . . . . . . . . . 23.48<br>2—University UXC-123 12" Speakers............. 125.44<br>TOTAL REGULAR CATALOG PRICE.............. . $\$ 526.53$<br>ALLIED SYSTEM PRICE. . . . . . . . . . . . . . . . . . . . 469.00<br>YOU SAVE.<br>\$ 57.53

SYSTEM PRICE Complete stereo/monaural control facil$\$ 46900$ ities-14-watt output per channel-or full 28 -watt output for monaural use is yours with this fine system. Pickering's 371 stereo cartridge in Gar-

\$46.90 Down rard plug-in head, has $.0007^{\prime \prime}$ diamond needle for playing stereo and monaural LP records. (See page 17 for accessory plug-in head with $78-\mathrm{rpm}$ cartridge.) Changer base and speaker enclosures in mahogany, blonde or walnut-specify choice when ordering. For 110-120 v., 60 cycle AC. Shpg. wt., 158 lbs.

36 HF 725. Only $\$ 46.90$ Down. NET.
469.00

FM-AM-PHONO STEREO SYSTEM. Save $\$ 66.53$ ! As above, with Pilot 670 Stereo FM-AM Tuner. 178 lbs.
36 HF 726. Only $\$ 63.95$ Down. NET.
639.50

Phono System With Pilot AA-920 Amplifier


SYSTEM PRICE G.E.'s new stereo cartridge employs

# $\$ 26500$ 

\$26.50 Down single $.0007^{\prime \prime}$ diamond stylus for stereo and monaural records. (See page 17 for accessory plug-in head with 78 -rpm cartridge.) Changer base and enclosure in mahogany, limed oak or walnut-specify choice. For $110-$ 120 v., 60 cycle AC. Shpg. wt., 98 lbs. 36 HF 727. Only $\$ 26.50$ Down. NET.
265.00

FM-AM-PHONO SYSTEM. Save $\$ 50.37$ ! As above, but with Pilot FA-540 FM-AM Basic Tuner. Wt., 113 lbs. 36 HF 728. Only $\$ 36.35$ Down. NET.
363.50

MORE MONEY-SAVING SYSTEMS FEATURING PILOT HI-FI COMPONENTS

| Amplifier | Changer | Cartridge | Speaker System | Finishes | Shpg. Wt | Stock No. | NET PRICE |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 245 28-Watt Stereo with Case |  | G.E. GC-7 <br> Stereo Diamond |  | Changer base and enclosure in mahogany and walnut -specify choice | 146 lbs . | 36 HF 729 | $\begin{gathered} \$ 430.00 \\ \text { SAVE } \\ \$ 60.23 \end{gathered}$ |
| AA-920 20-Watt - with Case |  | G.E. GC-7 <br> Stereo <br> Diamond | Electro-Voice "Lancaster" with E-V LS12 "Wolverine" 12" Speaker | Changer base and enclosure in mahogany, limed oak and walnut woodgrain finishes -specify choice | 73 lbs. | 36 HF730 | $\begin{gathered} \$ 224.50 \\ \text { SAVE } \\ \$ 24.23 \end{gathered}$ |
| AA-903B 14-Watt with Case |  | G.E. GC-7 <br> Stereo Diamond | Wellcor 5812 with University UXC-122 12" Speaker | Changer base and enclosure in mahogany, limed oak and walnut -specify choice | 79 lbs . | 36 HF731 | $\begin{gathered} \$ 209.00 \\ \text { SAVE } \\ \$ 24.67 \end{gathered}$ |

# ALLIED-RECOMMENDED STEREO HI-FI SYSTEMS 

FEATURING H.H.SCOTT


## Stereo Phono System With Scott Amplifier

Scott 299 40-W att Stereo Amplifler \& Case. . . . . . \$219.90
Garrard RC88-4 4-Speed Changer \& Base....... 58.26
Pickering 371 Stereo Cartridge-Diamond Needle 29.85
2-Stephens B100 Enclosures. . . . . . . . . . . . . . . . . . 179.00
2—Stephens 150CX $15^{\prime \prime}$ Speakers.
total regular catalog price ALLIED SYSTEM PRICE

YOU SAVE.
259.00
\$746.01
646.00

SYSTEM PRICE For magnificent stereo sound from new stereo records! Scott's 299 offers $20-$ watt output per channel; 40 -watt output for monaural use. Pickering's 371 plays stereo and monaural LP records.

## \$64.60 Down

 (See page 17 for accessory plug-in head with $78-\mathrm{rpm}$ cartridge). Amplifler case, changer base and speaker enclosures in mahogany or walnut-specify choice. For 110-120 v., 60 cycle AC. Shpg. wt., 254 lbs.36 HF 732. Only \$64.60 Down. NET
646.00
featuring FISHER


## Stereo Phono System With Fisher Amplifier

Fisher X-101 40-Watt Stereo Amplifter \& Case.... \$214.45 Garrard RC88-4 4-Speed Changer \& Base. ...... . 58.26
Pickering 371 Stereo Cartridge-Diamond Needle 29.85 2—Jensen CN-100 3-Way Speaker Systems...... 299.00
TOTAL REGULAR CATALOG PRICE............... $\$ 601.56$
ALLIED SYSTEM PRICE
YOU SAVE.
525.00
$\$ 76.56$

SYSTEM PRICE Jensen's CN-100 speaker systems deliver splendid stereo sound from new stereo records; employ $12^{\prime \prime}$ woofer, $8^{\prime \prime}$ mid-range unit and tweeter. The X-101 amplifier provides 20 -watt output per channel, or 40 -watt output for monaural use. (See page 17 for 78 -rpm cartridge.) Amplifier case, changer base and enclosures in mahogany or walnut-specify choice. For 110120 v., 60 cycle AC. Shpg. wt., 186 lbs.
36 HF 733. Only \$52.50 Down. NET.
525.00


| Amplifier | Changer | Cartridge | Speaker System | Finishes | Shpg. Wt. | Stock No. | NET PRICE |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  | Pickering 371 Stereo Diamond |  | Amplifier case, changer base and enclosure in mahogany, blonde or walnut -specify choice | 154 lbs. | 36 HF 748 | $\begin{gathered} \$ 369.00 \\ \$ A V E \\ \$ 63.47 \end{gathered}$ |
|  | Garrard RC88 with Base | G.E. GC. 7 <br> Stereo Diamond | E-V "Marquis" with 12TRX-B $12^{\prime \prime}$ Speaker | Amplifier case, changer base and enclosure in mahogany, limed oak or walnut -specify choice | 106 lbs . | 36 HF 734 | $\begin{gathered} \$ 299.00 \\ \text { SAVE } \\ \$ 39.05 \end{gathered}$ |
| Fisher X-101 Stereo with Case | Garrard RC88 with Base | G.E. GC-7 <br> Stereo Diamond | Jensen TR-10 "Tri-Ette" 3.Way Speaker System | Amplifier case, changer base and enclosure in mahogany or walnut -specify choice | 100 lbs. | 36 HF 735 | $\begin{gathered} \$ 369.00 \\ \text { SAVE } \\ \$ 41.68 \end{gathered}$ |

> SAVE TWO WAYS!

## SAVE WITH THESE DOHT-YOURSELF MUSIC SYSTEMS

You save more-in two important ways-when you choose an Allied-recommended "Do-It-Yourself" highfidelity stereo system. You save by buying at Allied's special system price; and you pocket big, additional savings by assembling the kit components yourself!

## Lowest Cost STEREO System

| ONLY | - British-Made 4-Speed Changer |
| :---: | :--- |
| - Stereo Cartridge-Diamond Needle |  |
| - Versatile Stereo Control Unit |  |
| - Two Powerful 12-Watt Amplifiers |  |
| You Save $\$ 21.06$ | - Two Space-Saving Speaker Systems |

It's easy to bring thrilling stereo reproduction into your home when you "do-it-yourself"-this exceptionally low-cost system saves you $\$ 21.06$ on the cost of components, and you gain extra savings by assembling the amplifiers and stereo adapter yourself! There's no easier or more exciting way to become the owner of a stereo music system-and the quality of performance will amaze and delight you.
Stereo system includes: 2-Knight-Kit 12-Watt Amplifier Kits with Covers; Knight-Kit Stereo Control Kit; Collaro TSC-740 4-Speed Stereo Changer; Changer Base in choice of finish; G.E. GC-7 Stereo Cartridge with Diamond LP Needle; 2—Knight KN-808 8" Full-Range Speakers; 2Argos TSE-1 Shelf-Type Speaker Enclosures in your choice of flnish; a free plastic record changer cover; and colorcoded connecting cables.
The flexibility of control and application of this supervalue system would be difficult to approach in a system of assembled units selling for much more than this low price. The stereo control provides single-knob volume control of both amplifiers. Collaro's 4 -speed changer offers ultra-smooth, quiet operation. Wide-range, full fidelity response is yours with the Knight speakers. The bookshelf-type enclosures are ideal for limited-space applications. Changer base in mahogany, limed oak or walnut; enclosures in mahogany or blonde leatherettespecify. For operation from 110-125 v., 60 cycle AC. Shpg. wt., 128 lbs.
$36^{\circ} \mathrm{HF}$ 604. Only $\$ 15.90$ Down. NET.
159.00

## Low-Cost STEREO "Add-On" System



You Save \$8.35

- Top-Performing 12-W att Amplifier - Convenient Stereo Control Unit
- Turnover Ceramic Stereo Cartridge
- Diamond and Sapphire Styli
- Wide-Range 2-Way Speaker System

There's no need to wait for breathtaking stereo-combine your present hi-fi phono system with this topeconomy "add-on" package now, and enjoy two-way savings. You save $\$ 8.35$ on the cost of components, and you realize added savings by assembling the kits. The realism of stereo opens the way to a new world of musical enjoyment-and the price is remarkably low when you use Allied's money-saving system plan.
System includes: Knight-Kit 12-Watt Amplifier Kit with Cover; Knight-Kit Stereo Control Kit; E-V 26MDST Turnover Ceramic Stereo Cartridge with Diamond Needle for LP's and Sapphire Needle for 78's; and Knight-Kit TwoWay High-Fidelity Speaker System Kit.
Full, one knob centralized control is provided by the stereo control unit. Pre-fnished enclosure kit is available in your choice of mahogany, blonde or walnut-specify finish when ordering. For operation from 110-125 volts, 60 cycle AC. Shpg. wt., 57 lbs .
36 HF 607. Only $\$ 9.75$ Down. NET.
9750

## FEATURING QUALITY

The Knight-Kits featured in these systems are customengineered to deliver flawless high-fidelity reproduction. A combination of highest-quality parts and expert design keynote each component. See pages 244, 245 and 251 for detailed proof of performance.

## Deluxe STEREO Phono System

## ONLY - Versatile Stereo Preamplifier

- Super-Power Stereo Amplifier
- World-Famous 4-Speed Changer
- Stereo Cartridge-Diamond Needle

You Save \$28.51

- Top-Performing Speaker Systems

A superb stereo music system of truly exceptional quality can be yours for far less than you thought possiblewhen you choose this ultra-deluxe system that saves money for you in two ways. First, Allied's system price is $\$ 28.51$ less than the total price of the individual components; second, you gain tremendous additional savings by doing the easy assembly! This outstanding array of Allied-selected components will recreate-in your own home-the startling realism of full-dimensional stereophonic sound.
Complete stereo system includes: Knight-Kit Stereo Preamp Kit; Knight-Kit 60-Watt Stereo Basic Amplifier Kit; Garrard RC88-4 4-Speed Changer and Base; Pickering 371 Stereo Cartridge with Diamond LP Needle; 2-Knight KN1260K Ducted-Port Speaker Enclosure Kits; 2—Knight KN800 12" 3-Way High-Fidelity Speakers; and free Plastic Record Changer Cover.
Every advanced feature has been incorporated in this superlative "do-it-yourself" stereo system. The separate stereo preamp and 60 -watt stereo basic amplifier provide unusual flexibility, as well as superior performance; the perfectly matched speaker systems will reproduce the full majesty of a large orchestra with impressive fidelity. Pickering's stereo cartridge is mounted in plug-in head, ready to reproduce stereo and monaural LP records. Changer base and enclosures in mahogany, limed oak or walnut-specify. For 110-125 v., 60 cycle AC. Shpg. wt., 164 lbs.
36 HF 605. Only \$36.95 Down. NET.
369.50

## Deluxe Convertible Phono System

## ONLY <br> - Enjoy Brilliant Hi-Fi Response

- Just Add Another Speaker and Amplifter for Thrilling Stereo
- Highly Versatile Stereo Preamp

You Save \$20.23 - Top Performing-No Obsolescence
Enjoy outstanding hi-fi now-and by simply adding another amplifier and speaker, you can thrill to stereo! This extremely flexible, obsolescence-proof system plays conventional LP's and stereo records monaurally, and incorporates every feature necessary for smooth conversion to stereo. Its exceptional array of top-performing components offers two-way savings-you save \$20.23 on the total cost of individual units-and you pocket giant savings by doing the easy assembly yourself.
System includes: Knight-Kit Stereo Preamp Kit; Garrard RC88-4 4-Speed Changer with Base; G.E. GC-7 Stereo Cartridge with Diamond LP Needle; Knight-Kit 25-Watt Basic Amplifier Kit; Knight KN-1260K Speaker Enclosure Kit; Knight KN-812 12" 3-Way Deluxe Hi-Fi Speaker; and free Plastic Record Changer Cover.
Changer base and speaker enclosure in choice of mahogany, limed oak or walnut-specify when ordering. For $110-125$ volts, 60 cycle AC. 135 lbs.
36 HF 606. Only $\$ 27.45$ Down. NET.
274.50

HI-FI COMPONENTS

deluxe STEREO


IN MONEY-SAVING DO-IT-YOURSELF FORM



## QUALITY knight-kit components

The unquestioned leaders in kits for music lovers, Knight-Kit hi-fi components offer you attractive styling and first-rate professional performance. For best savings, check all 4 pages of hi-fi systems featuring Knight-Kits.

## EASY TO ASSEMBLE

Knight-Kits are famous for their clear, detailed instruction booklets. No other electronic kits are as easy to assemble-even if you have had no previous experience with electronic equipment. Anyone can do it!


## Low-Cost Do-lt-Yourself Hi-Fi Phono System

| ONLY | - New Knight-Kit 12-Watt Amplifler |
| :---: | :--- |
| - Collaro4-Speed Changer \& Base |  |
| - New G.E.Cartridge-Diamond Needle |  |
| Save \$14.42 | - Knight-Kit Speaker System with |
| Woofer, Tweeter, Level Control |  |

It's remarkably easy to own a top-quality hi-fi phono system when you "do-it-yourself." You save by buying at Allied's special system price; you pocket additional savings by assembling the kit components yourself. This low-cost system actually saves you $\$ 14.42$ ! Includes: New Knight-Kit 12-Watt Amplifier with Cover; Collaro TSC-740 4-Speed Record Changer with Base; new G.E. GC-7 Stereo Magnetic Cartridge; Knight-Kit 2-Way Speaker System Kit; free plastic changer cover.

The new Knight-Kit 12-watt amplifier offers excellent response characteristics and its inputs accommodate a tuner to provide you with another source of music. Collaro's TSC-740 changer provides smooth recordchanging action. G.E.'s new stereo cartridge, installed in plug-in head and with $.0007^{\prime \prime}$ diamond needle, plays stereo and monaural LP records, monaurally-for stereo, just add another amplifier and speaker. (See page 17 for accessory plug-in head with $78-\mathrm{rpm}$ cartridge). The Knight-Kit 2-way speaker system kit, with pre-finished panels, features $12^{\text {f }}$ woofer, compression-type tweeter and level control for beautifully balanced, hi-fi sound. Changer base and enclosure in mahogany, blonde or wal-nut-specify choice. For $110-125$ v., 60 cycle AC. Shpg. wt., 70 lbs .
36 HF 602. Only $\$ 12.95$ Down. NET
129.50

| Deluxe Do-It-Yourself Hi-Fi Phono System |  |
| :---: | :---: |
| ONLY | - Knight-Kit 30-Watt Hi-Fi Amplifier |
| - Top-Rated Garrard Changer \& Base |  |

A splendid array of deluxe high-fidelity components, at a savings of $\$ 20.01$ ! System includes: Knight-Kit 30 Watt Amplifier Kit; Garrard RC88-4 4-Speed Record Changer and Base; new Pickering 371 Stereo Magnetic Cartridge; Knight KN-810 3-Way 15" Speaker; new Knight KN-1215K "Dual-Ducted Port" Enclosure Kit; free plastic changer cover. Knight-Kit 30 -watt amplifier features linear-deluxe Williamson-type circuit for superb repro-duction- 3 printed circuit boards greatly simplify assembly. The brilliantly engineered Garrard changer is world-famous for its highly dependable operation. Pickering's new stereo cartridge, installed in plug-in head, employs $.0007^{\prime \prime}$ diamond needle. Plays stereo and monaural LP records, monaurally-for stereo, just add another amplifier and speaker. (See page 17 for accessory plug-in head with $78-\mathrm{rpm}$ cartridge). The Knight $\mathrm{KN}-810$ 15" speaker in the KN-1215K "dual-ducted port'' enclosure combines beauty with impressive reproduction of sound. Changer base and enclosure kit in mahogany, limed oak or walnut-specify choice. For 110125 v., 60 cycle AC. Shpg. wt., 142 lbs. 36 HF 603. Only $\$ 24.95$ Down. NET
249.50

For Complete Descriptions of Knight-Kits, See Pages 241-273

\author{

- Knight-Kit 18-W att Amplifier Kit
 mond Needle <br> - New E-V 12 " "Wolverine" Speaker - Knight "Ducted Port" Enclosure
}

Selected by Allied's experts for the exceptional quality of its components, this system saves you $\$ 16.08$ ! You'll he amplifier and enclosure kits easy to buildyo:'ll enjoy outstanding performance from the completed system. Includes: Knight-Kit 18-Watt Amplifier Kit; Garrard RC121-ll Changer with Base; new G.E. GC-7 Siereo Magnetic Cartridge; new Electro-Voice LS12 12" "Wolverine" Speaker; Knight KN-1260K "Ducted Port" Enclosure Kit; free plastic changer cover. The versatile 18 -watt amplifier offers distortion-free response. G.E.'s new stereo cartridge, installed in plug-in head and with $.0007^{\prime \prime}$ diamond needle, plays new stereo and monaural LP records, monaurally-for stereo, just add another amplifier and speaker. (See page 17 for accessory plug-in head with 78-rpm cartridge.) E-V's new LS12 speaker and the Knight KN-1260K "ducted port" speaker enclosure, provide clean, wide-range sound. Changer base and enclosure kit in mahogany, limed oak or walnut-specify choice. For 110-125 v., 60 cycle AC. 79 lbs . 36 HF 601. Only $\$ 14.95$ Down. NET...
149.50

## Popular Do-lt-Yourself Hi-Fi Phono System <br> ONLY <br> G <br> Save \$17.13 <br> - Knight-Kit 18-Watt Amplifler Kit <br> - Top Garrard Changer with Base <br> - G.E. Stereo Cartridge-with Diamond Needle <br> - Famous Knight 3-Way $12^{\prime \prime}$ Speaker <br> - Knight Corner Enclosure Kit

An excellent 18 -watt phono system, featuring components of superior design throughout-at a savings of $\$ 17.13$ ! You save by assembling the amplifier and enclosure kits yourself-you save by purchasing components in system form. System includes: Knight-Kit 18 Watt Amplifler Kit; Garrard RC88-4 4-Speed Changer with Base; new G.E. GC-7 Stereo Magnetic Cartridge; Knight KN-800 3-Way 12" Speaker; Knight KN-1250K Corner Enclosure Kit; free plastic changer cover. The KnightKit 18-watt amplifier, one of our most popular units, offers superb music reproduction. G.E.'s GC-7 cartridge, installed in plug-in head and with $.0007^{\prime \prime}$ diamond needle, plays new stereo and monaural LP records, mon-aurally-for stereo, just add another amplifier and speaker. (See page 17 for accessory plug-in head with $78-\mathrm{rpm}$ cartridge.) The highly rated KN-800 speaker and $\mathrm{KN}-1250 \mathrm{~K}$ enclosure team up to provide sparkling sound. Changer base and enclosure kit in mahogany, limed oak or walnut-specify choice. For $110-125$ v., 60 cycle AC. Shpg. wt., 97 lbs.
36 HF 600 . Only $\$ 19.90$ Down. NET. . . . . . . . . . . . 199.00


## ADD A QUALITY Knight-kit tuner to your phono system

A KNIGHT-KIT FM-AM TUNER KIT.
You'll spend hours listening to this easy-to-build FM-AM tuner. Tune in all the wonderful sound of genuine high-fidelity FM programming-plus clearest AM reception. Turn to page 249
(B) for complete description. Shpg. wt., 12 lbs .
83 YX 787. NET. . . . . . . . . 49.95

B KNIGHT-KIT BASIC FM TUNER KIT. Beautifully styled and easy to build, this fine tuner is one of our "best sellers". Automatic frequency control for "lock-in" tuning of FM stations, printed circuit, etc. Turn to page 250 for complete description. Wt., 12 libs.
83 YX 751 NET .
38.95


## with knight ouality

Add immeasurably to your enjoyment of music in its newest, most dazzling form-stereophonic sound-with low-cost Knight stereo components. These remarkably capable and inexpensive units are created and designed by Allied to bring you highest quality at moderate cost. Their many new design features, fresh styling and top performance make them the year's outstanding values in high-fidelity. For brilliant musical re= production from any stereophonic or monaural source-records, tapes or radio broadcasts-choose new Knight stereo components.


KN-720
Guaranteed For One Full Year

## FEATURE-PACKED knight

## New knight KN-720 "Bantam" 20-Watt Stereo Amplifier

?
\$8.00 Down

NET - Two 10-Watt Stereo Channels; 20-Watt Monaural Output

- Full Set of Controls and Inputs For Accommodating Any Stereo or Monaural Sound Source
- Wide-Range Stereo Balance Control for Perfect Stereo Sound Under Most Acoustic Conditions, In Any Room - DC on Filaments of Preamp Tubes

The new Knight KN-720 "Bantam" 20-Watt Stereo Amplifier offers exceptional versatility-provides 20 -watt operation into one speaker system used monaurally-or 10 watts into each of two speaker systems for stereophonic use. In addition to this, its preamplifier control section features master volume, balance, stereo reverse, scratch and rumble filters, plus input-paralleling feature. Complete control facilities of the preamp section will enable you to regulate stereo sound with unsurpassable ease! It's perfect for use with newest stereo records, stereo tapes or stereo radio broadcasts.
A convenient slide switch provides instant switching between stereo and monaural operation. Wide-range balance control permits you to use your stereo music system in any room, even where one of the speakers cannot be placed for optimum stereo effect, and still get perfect stereophonic sound. Size of the room is no longer critical-makes any room an ideal stereo concert hall! Two tape recorder outputs permit "off-theair" stereo tape recordings. Hum is reduced to inaudible levels by DC operation of all preamp tube filaments.
SPECIFICATIONS: Power Output: 10 watts per channel; 20 watts for monaural use. Sensitivity (for 10 watt output): Tape Head, 3 mv ; Mag. Phono, 4 mv; Aux. and Tuner, 0.5 v ; Ceramic Phono, 150 mv . Frequency Response: $\pm 1 \mathrm{db}, 20$ to $20,000 \mathrm{cps}$. Distortion: harmonic, $1 \%$ at 1000 cycles measured at 10 watt output; $1 \mathrm{M}, 3 \%$ maximum. Hum ©ै Noise: 70 db below full output each channel. Inputs (per channel): NARTB Tape Head; Magnetic Phono, Ceramic (or Crystal) Phono, Tuner, Auxiliary. Output Impedances: 4, 8 and 16 ohms per channel; two tape recorder outputs. Controls: Selector (Tape Pre, RIAA, EUR, LP, Tuner, Aux); Balance/Stereo-Monaural switch; Master Volume; Bass; Treble/ On-Off. Four slide-switches: Input Paralleling; Stereo Reverse; Rumble Filter; Scratch Filter. Tubes: 4-6V6GT, 4-12AX7, 12AU7, EZ81/ 6CA4 rectifier. Attractively styled case in rich leather-tone finish; brushed brass panel with black trim. Size, $35 / 2 \times 141 / 4 \times 11^{\prime \prime}$. U.L. Approved. For 110-120 volt, $50-60$ cycle AC. Shpg. wt., 15 lbs.

## AT A RECORD LOW PRICE

## WIDE-RANGE BALANCE CONTROL

In large rooms or small rooms-you'll get perfect stereo sound "spread" with this wide-range balance control. Eliminates "holes" and "dead spots" in the stereophonic effect.


## FOR STEREO OR MONAURAL USE

Use the KN-720 as a 10 -watt-per-channel stereo amolifier or 20 -watt monaural amplifier. Input-paralleling switch permits instant switching from stereo to monaural operation.


TOP FLEXIBILITY
You can use your Knight KN. 720 "Bantam"" amplifier with a stereo record changer, stereo tape deck, or for stereo FM-AM broadcost reception-plus regular monaural sound sources.


BEAUTIFUL STYIING. The "Bantam" amplifler features a rlch, leather-tone brown finish, with front panel styled in brushed brass and glistening black trim. Its case and color styling are a perfect match to the Knight KN- 130 "Bantam" Stereo FMAM Tuner, described on page 38. Both of these high-quality components can be used as the "heart" of a stereophonic music system of exceptional qualify and performance, at unusually low cost.
 What 3 Man

ALLIED'S EXCLUSIVE Knight ${ }^{\text {® }}$ DELUXE
THE FINEST. OF NEW STEREO COMPONENTS . . AT MODERATE COST. Allied-world leader in hi-fi-presents its new, deluxe Knight stereo components. Designed expressly for those who wish to own the finest in music reproduction equipment, Knight components incorporate features not available on any other units-at any price! For highest quality and top performance at low cost, Knight leads the field.


SUPER-VALUE
STEREO AMPLIFIER
MOST FOR YOUR MONEY
STEREO OR MONAURAL USE
Special output transformers permit use of the $\mathrm{KN}-734$ as
a stereo amplifier with two 17 -watt channels; or as a monaural 34-watt amplifier. The simple changeover takes only a minute.

5 PAIRS OF INPUTS
Conveniently switched from the front panel, 5 pairs of inputs accommodate any stereo or monaural signalTape Head, Magnetic Cartridge, Ceramic or Crystal Cartridge, Tuner and Aux.


WIDE-RANGE BALANCE CONTROL


MATCHES ANY CARTRIDGE
Variable input loading feature for various magnetic phono cartridges. Assures flat response and maximum
fidelity, regardless of the type of stereo or monaural magnetic cartridge used.


REMOTE CONTROL FACILITY. The KN-734 is equipped with an input jack for accepting the KNR Stereo Remote Control unit, (described on page 36). Permits remote control of stereo balance, volume, etc.

GUARANTEED FOR ONE FULL YEAR
KN-734

NEW knight KN-734 Deluxe 34-Watt Stereo Amplifier


Amazingly versatile, the Knight KN-734 amplifier may be used in three ways: 1) It may be used as a stereo amplifier delivering 17 watts from each of its two sections; 2) it may be used as a powerful 34 -watt monaural amplifier; 3) if you now own a monaural hi-fi amplifier, you may use the KN-734 as a 34 -watt amplifier for one stereo channel, and your original amplifier for the second channel-the built-in preamp in the KN-734 provides centralized control of both amplifiers.
A perfect match to the new KN-120 Stereo Tuner on page 35, it offers many exclusive features and remarkable flexibility. Features include: inputs and controls for any stereo or monaural source; highly effective rumble and scratch filters; provision for adding the Knight KNR Remote Control Unit; headphone jack for private binaural listening; Mode switch to permit mixing channels, listening to channels individually, etc.; balance control; and many more. Two sets of tape output jacks permit stereo or monaural recording, with or without the action of the amplifier's tone and volume controls.
SPECIFICATIONS. Output: 17 watts per channel; 34 watts for single stereo channel or monaural. Response: $\pm 1 \mathrm{db}, 30-20,000 \mathrm{cps}$. Distortion (Harmonic and $I M$ ): less than $2 \%$ at rated output. Hum ©o Noise: 80 db below full output. 10 Inputs ( 5 pairs): Tape Head, Magnetic Phono, Ceramic or Crystal Phono, Tuner, Auxiliary. Sensitivity (for rated out$p u t):$ Auxiliary, Ceramic and Tuner inputs, 0.4 v.; Magnetic Phono, 5.0 mv ; Tape Head, 4.5 mv . Output Impedances: 4, 8, 16 and 32 ohms per channel. Controls: Selector (Tape Head, Mag Phono, Ceramic Phono, Tuner, Aux); Balance; Off-On/Master Volume; Mode (Stereo, Reverse Channels, Monaural A, B or Mixed); concentric Bass and Treble (separate for each channel); Rumble Filter; Scratch Filter; 4-pos. Loudness Control. DC on preamp filaments. Four EL84 output tubes. Beige vinyl plastic, bonded to metal case; heavy-gauge anodized aluminum panel in gold and beige. $43 / 8 \times 153 / 4 \times 131 / \mathrm{s}^{\prime \prime}$. U.L. Approved. For $110-120$ v., $50-$ 60 cycle AC. Shpg. wt., 35 lbs.
92 SU 422. NET. . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . 129.50
BINAURAL HEADPHONES. The KN-734 has a jack for plugging in binaural headphones (see pages 420,421 for a number of excellent sets).
exclusive new features . . . beautiful styling. Built to Allied's rigid specifications and thoroughly laboratory-checked, deluxe Knight stereo components offer you "something extra" in unique, new features and distinctive appearance. Highly advanced circuitry provides performance well beyond the ordinary. Deluxe units feature beige vinyl plastic bonded to metal case, plus anodized two-tone front panel for lasting beauty.

## EXCLUSIVE FEATURE!



DYNANAC
SIDEBAND
REGULATION
A wonderful new circuit development that reduces distortion caused by overmodulation at the FM station. Provides reception that is clean and silk-smooth, against a background of velvety silencel

## 



KN-120

## New knight KN-120 Deluxe Stereo Basic FM-AM Tuner

NET
$\$ 12.95$ Down

- For Stereo FM-AM Reception \& FM or AM Separately

A splendid example of brilliant engineering and up-to-the-minute design! For FM-AM stereo broadcast reception, and FM or AM reception separately. Features exclusive Dynamic Sideband Regulation ror phenomenally clean FM reception-regulates incoming FM signals and reduces distortion originating at the broadcasting station. For pin-point tuning accuracy, the KN-120 uses two new cathode-ray indicator tubes on FM and AM. Four cathode follower output jacks - two unaffected by volume and tone controls for convenient tape recording of FM, AM or stereo broadcasts; two with level controls. Dual flywheel tuning; panel mounting without accessories. Every KN-120 undergoes visual sweep alignment at the factory - the most reliable and accurate production method possible. Beige leather-grain vinyl plastic is bonded to the case; anodized aluminum front panel in beige and gold.
$F M$ Section. Tuned RF stage, two limiters and a discriminator, AFC. Sensitivity: $21 / 2 \mu \mathrm{v}$ for 20 db quieting. Less than $0.25 \%$ IM distortion at , $30 \%$ modulation for RF inputs over $20 \mu \mathrm{v} . A M$ Section. Tuned RF stage. Sensitivity: $4 \mu \mathrm{v}$ for 20 db signal-to-noise ratio. $10-\mathrm{kc}$ whistle filter; 3-position AM bandwidth switch. Controls: AM Tuning;FM Tuning; Selector (FM, FM-AM Stereo, AM); AM Bandwidth Selector (Sharp, Medium, Broad) ; Off-On; AFC Off-On; Dynamic Sideband Regulation Off-On. 12 tubes; 2-EM84/6FG6 tuning indicators; EZ80 rectifier. 43/8x153/4x $131 / \mathrm{s}^{\prime \prime}$. U.L. Approved. For 110-120 v., 50-60 cycle AC. 21 lbs . 92 SU 423. NET.
129.50

## \$A Vet Deluxe Stereo Amplifier and Tuner Combination Offer

KN-734 \& KN-120 Two of the finest stereo components available-at
\$2 4 \&
You Save \$15.00 savings of $\$ 15.00$ ! Add only a stereo speaker system ( 2 speakers), for reception of stereo FM-AM broadcasts; add stereo speaker system and record changer with stereo cartridge for dazzling stereo reproduction from new stereophonic records. Styling of both Knight units is impeccable! Shpg. wt., 56 lbs.
36 SU 804-2. Only \$24.40 Down on This Combination Offer. NET. 244.00
YOUR BEST BUY IN AN FM-AM

NEW TUNING INDICATOR TUBES


Newest EM84/6FG6 "tuning eye" tubes are used for precise FM and AM tuning. A beam of blue light opens in the center when you're "off" station-closes to hairline width when you're "on" station.

SEPARATE FM AND AM CONTROLS


True stereo designl Separate, weighted flywheel tuning for $F M$ and $A M$; separate tuning indicators; and separate output level controls.
$x=$ It's like having two fine tuners in one compact case!

## SWESP-ALIGNED AT FACTORY



Since alignment is a critical factor in the quality of FM reception, every KN-120 tuner is visually sweepaligned at the factoryan extremely accurate procedure.

Perfectly matched to each other, both the KN - 120 Tuner and KN-734 Amplifier cases employ bonded-to-metal vinyl finishes.



Enjoy the splendor of stereophonic musical entertainment in your own home for far less than you thought possible-with deluxe Knight stereo components. These superb units are your finest values . . . by any standard of comparison!



5 Stereo channels. Inputs for: stereo tape deck; stereo magnetic or ceramic cartridges; stereo FM-AM tuner; and auxiliary.

LOUDNESS COMPENSATION
Four-position leveraction switch provides correct tonal balance at moderate and low volume levels.


MA TCHES ANY CARTRIDGE
Control at rear for adjusting magnetic phono input imped-ance-assures maximum fidelity with any magnetic cartridge.

GUARANTEED FOR
ONE FULL YEAR
KN-700A

NEW knight KN-700A Deluxe Stereo Preamp Control Center

$$
\begin{array}{cl}
\text { NET } & \begin{array}{l}
\text { - Separate Tone Controls For Each Channel } \\
\text { - Instant Fingertip Switching of Entire System to Stere } \\
\text { or Monaural, Left to Right Channels }
\end{array} \\
\text { - Master Volume and Balance Controls }
\end{array}
$$

Make the new and extremely versatile KN-700A Stereo Preamp Control Center the "brain" of your stereo music ensemble. Offers complete control over stereo tapes, records and FM-AM broadcasts, plus any monaural sound source. A fingertip lever instantly switches your music system to stereo or monaural operation, and reverses left and right channels. Features 10 inputs ( 5 pairs), each selected from the front panel! Wide-range Balance control makes any room ideal for stereo listening. Variable input loading assures optimum fidelity with any magnetic cartridge. Color styling of the KN-700A features beige leathergrain finish in vinyl plastic, bonded to the metal case; gold and beige, anodized aluminum panel. Check the money-saving combination offers, featuring the Knight KN-700A Stereo Preamp Control Center and other Knight amplifiers, on the following page.

SPECIFICATIONS: Response: $\pm 1.0 \mathrm{db}, 20$ to $20,000 \mathrm{cps}$. Hum Level: 55 db below full output on tape channels; 60 db below output on magnetic; 80 db below output on auxiliary. Sensitivity: Mag input, 2.5 mv for 1 -volt output; Tape Head inputs, 2.2 mv for 1-volt output. 10 Inputs ( 2 each): Tape Head, Magnetic Phono, Ceramic Phono, Tuner and Auxiliary. Outputs ( 3 pairs): Tape (without Tone and Volume); Tape (with Tone and Volume); Amplifier (cathode follower). Controls: Selector (Tape Head, Magnetic RIAA, Ceramic RIAA, Tuner, Aux); separate Bass and Treble for each channel; Master Volume; Balance; Rumble Filter; Scratch Filter; 4-pos. Loudness; Function (Stereo, Reverse, Monaural A, Monaural B). Tuner Level and Magnetic Input Loading controls on rear. 2 jacks for KNR remote control unit, below. $43 / 8 \times 153 / 4 \times 81 / 2^{\prime \prime}$. U.L. Approved. For 110-120 v., 60 cycle AC. Wt., 13 lbs.
92 SU 424. NET.
89.95

NEW knight KNR Stereo Remote Control Unit


Plugs into rear panel of the KN-700A, above. Features convenient, remote control over volume, balance and mode of operation. Controls: Balance-Volume (single concentric knob); Channel Reverse; Function (Monaural, Stereo). Case in brown; white and gold panelfinished to match the KN-700A. Supplied with $20-\mathrm{ft}$. remote control cable. HWD: $23 / 8 \times 51 / 8 \times 11 / 4^{\prime \prime}$. Shpg. wt., $21 / 2$ lbs.
92 S 426. NET.
14.95

For Stereo Systems Using Knight Components, See Pages 6-11; 16, 17

## FINEST QUALITY AT LOWEST COST

Knight high-fidelity components offer music lovers the ultimate in dependability and value. They are created by Allied and precisionbuilt to rigid specifications to give you maximum value for your hi-fi dollar. Unconditionally guaranteed for one full year.

## DAZZUNG STEREO SOUND

Full-range stereo records and tapes are here today for your enjoyment. Recording companies are turning out cascades of delightful new sounds, and radio stations are beginning. to have regularly scheduled stereo FM-AM broadcasts. Enjoy all that high-fidelity has to offer nowwith latest Knight stereo components.


## knight KN-632 32-Wath Basic Amplifier

NET - Top Performance with Power to Spare<br>- Response, 20-40,000 cps $\pm 0.5 \mathrm{db}$<br>- Output Tube Bias and Balance Controls<br>- Variable Damping Control<br>\$7.45 Down<br>- High-Quality Potted Transformers

Built to precision standards, the Knight 32-watt basic amplifier offers just the features you want-at a price that saves you many dollars. Its specifications mean genuine high fidelity-distortion at 32 watts is less than $1 / 2$ of $1 \%$. Most important, in everyday music listening at ordinary room volume, the response of the $\mathrm{KN}-632$ gives you music reproduction with diamondlike clarity. When needed, its ample reserve of power may be depended upon to provide music at concert-hall levels, with equal fidelity. Use two for deluxe stereo sound. It is provided with such refinements as variable damping, output tube bias control, output tube balance control, and a level control; it is safely fused for circuit protection. Finished in gold and satin black.
SPECIFICATIONS: Response: $\pm 0.5 \mathrm{db}, 20$ to $40,000 \mathrm{cps}$ at 32 watts output. Harmonic Distortion: Less than $0.5 \%$ at mid-frequencies at 32 watts output-never exceeds $1.5 \%$ from $20-20,000 \mathrm{cps}$. I.M. Distortion: Less than $2 \%$ at 32 watts output. Sensitivity: 0.4 volts input required for 32 watts output. Hum Level: -75 db . Input Impedance: 100,000 ohms. Output Impedances: 4, 8 , 16 ohms. $77 / 8 \times 143 / 4 \times 51 / 2^{\prime \prime}$. U.L. Approved. For $110^{-}$ 120 volts, 60 cycles AC. Shpg. wt., 25 lbs.
92 SU 404. NET
74.50
knight KN-1515 Stereo Basic Amplifier NET

- Advanced, Single-Chassis Design
- Use It as 30-Watt Monaural Amplifier
- Use It as Two 15-W att Amplifiers
- Convert It to Stereo or Monaural Use
\$7.45 Down
by Simply Flicking a Switch
One of the most advanced amplifiers available today, the Knight KN-1515 is a model of expert engineering. Every convenience has been incorporated into its construction to make it as versatile, and as simple to operate, as possible. A superb 30 -watt basic amplifier for use with one speaker, its dual design lets you convert it for use in stereo systems by simply flicking a switch. It then becomes two 15 -watt basic amplifiers, with individual gain controls, on a single chassis. When used with the new Knight KN-700A Stereo Preamp Control Center described on page 36, it will handle any stereo sound source-records, tapes, etc.

Output: 30 watts monaural; 15 watts per channel on stereo. Response: $\pm 0.5 \mathrm{db}, 20$ to $20,000 \mathrm{cps}$. Distortion: harmonic, $0.5 \%$ at mid-frequencies at 15 -watt outputnever exceeds $11 / 2 \%, 20-20,000 \mathrm{cps} ; 1 \mathrm{M}$, less than $2 \%$. Output Impedances (each section): 4, 8, 16, 32 ohms. Controls: Left Channel Gain Control; Stereo-Monaural Slide Switch; Right Channel Gain Control. Four EL84 output tubes. Gold finished metal cage. HWD: $6 \times 13 \mathrm{~s} / \mathrm{x}$ x $81 / 2^{\prime \prime}$. U.L. Approved. For $110-120$ v., 60 cycle AC. Shpg. wt., 21 lbs.
92 SU 414. NET.
74.50



## REMARKABLE VALUE STEREO TUNER AN ALLIED EXCLUSIVE

COAXIAL TUNING CONTROLS


Convenient, three-way tun-ing-either FM separately, AM separately, or FM-AM stereo tuning-from dual concentric knobs. Provides an extra measure of convenience in operation.

## SENSITIVE FM CIRCUIT



Highly efficient limiter-dis. criminator FM circuitry. Of fers good noise rejection and excellent sensitivity for clear reception of weak or distant FM stations.

AFC FOR "LOCK-IN" TUNING
As you dial near an FM sta-
 tion, the automatic frequency control (AFC) takes over and automatically "locks in" the station. AFC-off for tuning weak stations.


KN-130
GUARANTEED FOR ONE FULL YEAR

## NEW knight KN-130 "Bantam" Stereo FM-AM Tuner

## NET <br> $\$ 79^{50}$

\$7.95 Down

- Matches Knight KN-720 "Bantam" Stereo Amplifler
- Easy-to-Use Dual Concentric Knobs for FM Tuning, AM Tuning, or Stereo FM-AM Broadcast Reception
- Dual Outputs for Stereo/Monaural Tape Recording
- Automatic Frequency Control for Effortless FM Tuning
- Trim and Compact "Space Saver" Styling

Newest version of the famous, top-value Knight "Bantam" tunersready for sparkling stereo FM-AM broadcast reception, FM reception only, or AM reception only. The new KN-130 "Bantam"'Stereo FM-AM Basic Tuner is a highly capable unit, employing efficient circuitry and all of the features necessary for thoroughly enjoyable FM-AM broadcast reception. A single, convenient concentric knob provides separate FM and AM tuning, or FM-AM together for receiving stereophonic FM-AM music broadcasts. Dual high-impedance outputs permit stereo or monaural tape recording of program material. Automatic frequency control on FM for accurate tuning-FM stations "lock in" whenever their dial setting is approached. AFC-off position allows tuning in weak or distant stations. The "Bantam" is attractively color-styled in brown leathertone finish, with brushed brass panel and ebony trim. Blends with any room decor.
$F M$ Sensitivity: 4 microvolts for 20 db of quieting. AM Sensitivity: 10 microvolts for 20 db signal-to-noise ratio. $F M$ Bandwidth: $180 \mathrm{kc} . F M$ Response: $\pm 0.5 \mathrm{db}$ from 20-20,000 cps. Controls: Selector (On-Off, FM, Stereo, AM) ; dual concentric knobs for FM and AM Tuning; AFC Off-On. High-Impedance Outputs: two for FM; two for AM. 8 tubes; selenium rectifier. Includes two 36" audio cables, built-in AM loopstick antenna, and FM antenna. Size, $33 / 8 \times 113 / 8 x 9^{\prime \prime}$. U.L. Approved. For $110-$ 120 v., 50-60 cycle AC. Shpg. wt., 13 lbs.
92 SU 421. NET.
79.50

## SAVE!"Bantam" Stereo Amplifier \& Tuner Combination Offer

 BOTH FOR ONLY Take advantage of this excellent opportunity , to get started in stereo with the new Knight "Bantam" twins$\$ 14945$
You Save \$10.00 -the KN-130 Stereo FM-AM tuner and the KN-720 20-Watt Stereo Amplifier-at a savings of $\$ 10.00$ ! You need add only a stereo speaker system (2 speakers) for reception of stereo FM-AM broadcasts; add speaker system and stereo record changer for superb 3-dimensional sound from new stereophonic records. Both units match each other in size, appearance and color styling-both offer excellent high-fidelity performance! Shpg. wt., 28 lbs.
36 SU 805-2. Only $\$ 14.95$ Down. BOTH FOR.
149.45

See Pages 6-7 for New Stereo Systems Featuring "Bantam" Units

## BEAUTIFUL "SPACE-SAVER" CUSTOM STYLING

Unusually neat in appearance, Knight high-fidelity components are styled to take their place in any room. . . and to blend harmoniously with any decor. Compact styling permits placing anywhere.

## 

A rare value . . . presented by Allied to enable discriminating music lovers to own and enjoy a brilliant high-fidelity FM-AM tuner . . . at modest cost. One of Allied's most popular components, the performance of the KN-110 will delight you! It's unconditionally guaranteed for one full year . . . and is also covered by Allied's 15 -day trial with money-back guarantee.


## knight KN-IIO Deluxe Basic FM-AM Hi-Fi Tuner <br> NET - Deluxe Styling and Custom-Quality Throughout <br>  <br> - Tuned RF Stage on FM and AM for High Sensitivity <br> - AFC Automatically "Locks-In" FM Stations <br> - Tuning Meter Simplifles Tuning on FM and AM <br> \$9.95 Down - Dual Limiters in FM Circuit for Maximum Noise Rejection <br> - Precision 11-Tube Circuit of Advanced Design

True high-fidelity FM reception, plus all the broadcast quality of AM transmissions are yours with this splendid Knight Deluxe FM-AM Basic Tuner. The KN-110 can be used with any high-fidelity amplifier having volume and tone controls. Reception is excitingly clear-you'll find yourself listening to the wonderful array of musical programs available on the air today for hours at a time! The precision tuning meter and AFCautomatic frequency control-make accurate tuning easy; there's no drifting off station, no irritating distortion; simply the cleanest, clearest broadcast reception this side of the transmitter! The selector switch offers FM tuning without AFC for tuning weak or distant stations adjacent to strong stations. In overall quality and attractive styling-in performance and dependability of operation-in real value that gives you the most for your hi-fi dollar-it's the year's outstanding buy!
DELUXE FEATURES. Includes: precision, 3-gang tuning capacitor; separate tuned RF stages for both FM and AM for high sensitivity; FM discriminator with dual limiters; $10-\mathrm{kc}$ whistle filter on AM; adjustable AM loopstick antenna for best AM reception; tuner logging scale to permit quick and easy location of favorite stations; cathode follower with two outputs-one with level control for connection to amplifier, one constant level output for making "off-the-air" tape recordings. Tuning meter provides extremely accurate and easy tuning of both FM and AM stations. Needle of the tuning meter gives a clear visual indication when the station of your choice is properly tuned in to the peak signal point. Handsome, illuminated dial face is set off by the gleaming brushed brass panel and base in black trim. The case itself is finished in distinctive, "leather-tone" brown.
SPECIFICATIONS: Sensitivity: FM, $21 / 2$ microvolts for $20 \mathrm{db}, 4$ microvolts for 30 db quieting; AM, 5 microvolts for 20 db signal-to-noise ratio. IF Bandwidth (FM): 200 kc . Controls: Function Selector (Off, AM, FMAFC, FM, TV) and Tuning. Distortion: Less than $2 \%$ at 1.5 v . output. $11^{\circ}$ tubes, plus rectifier. Size, $4 \times 131 / 2 \times 10^{\prime \prime}$. Brown leather-tone finish case; brushed brass panel and black trim. The KN-110 is provided with a built-in ferrite AM antenna, FM indoor folded dipole antenna, and $36^{\prime \prime}$ output cable. U.L. Approved. For operation from 110-120 v., 50-60 cycle AC. Shpg. wt. 17 lbs.

## GET MORE FOR YOUR MONEY WITH THIS TOP-QUALITY TUNER

## PRECISION TUNING METER

For precise, distortionless tuning on both FM and AM , there is an accurate tuning meter. With this feature, even weak stations are easy to tune in "right on the nose". (Especially useful when tuning FM stations with AFC offll


## SIMPLE FUNCTION SELECTION

Clearly marked selector switch turns set on and chooses AM, FM with AFC lautomatic frequency con. troll, FM without AFC-for tuning distant stations or weak stations close to strong stations-and TV position.


## AM LOOPSTICK ANTENNA

Fully adjustable, sensitive AM loopstick antenna, hingemounted on the rear of chassis. Rotates for best recep. tion of AM signal from any tion of AM signal from any direction. Makes it easier
than ever to get top-notch AM broadcast quality.


## EXTRA FEATURES

- Cathode Follower Output-Use It Up To 200 Ft. From Amplifier - Can Be Custom-Installed in Cabinet - "Space-Saver" Styling-Can Be Placed Practically Anywhere

Typifying the excellence of Knight high-fidelity engineering, the toprated KN-110 FM-AM tuner offers top performance at low cost.

## EXCEPTIONAL BUYS IN EKETGETR HI-FI

OUR MOST POPULAR ECONOMY-PRICED AMPLIFIER. Thousands of "Mini-Fi" amplifiers are in use throughout the country today. One of our finest values for genuine high-fidelity reproduction of sound. it's a top-rated, "Best Buy."

EXCEPTIONAL
AMPLIFIER BUY


## CHECK THE FEATURES:

## CAN BE USED FOR STEREO

Never obsolete, two Mini-Fi's can be used with the Knight Adapter below, for stereo with centralized control.


5 VERSATILE INPUTS
For all accessory items - NARTB tape head playback; magnetic, ceramic or crystal cartridge; tuner; etc.


## RUMBLE FILTER

A deluxe feature of the "Mini-Fi" amplifier. Highly effective in filtering out low-frequency mechanical noises orig-
 inating in the turntable. Switch on rear panel permits turning filter on or off.

## NEW knight KN-750

Stereo Adapter Unit
ONLY


For use with two Mini-Fi's (or other pair of 10 or 12 watt amplifiers with identical controls), in stereophonic music systems. Provides centralized control of balance, volume, channel switching and mode of operation. Controls: Balance; Volume; Phasing; Reverse; Stereo-Monaural switch. $33 / 4 \times 6 \times 31 / 2^{\prime \prime} .13 / 4 \mathrm{lbs}$.
92 S 427. NET
14.95

## Knight KN-510 "Mini-Fi" 10-Watt Amplifier

NET - True Hi-Fi Performance \& Control Flexibility

- Excellent for Budget-Priced Music Systems
- Employs Newest Circuitry and Latest Tube Types

4. Employs Newest Circuitry and Latest Tube Types
\$4.00 Down - Newest Color Styling-Blends With Any Decor

- Perfect for Use in Pairs for Stereo Systems

Allied's own Knight KN-510 "Mini-Fi" 10-watt amplifier exemplifies high-fidelity "know-how" at its best. Remarkably low in cost, and one of the finest units of its type-thousands of "Mini-Fi's" are currently in use in hi-fi music systems. Its top-notch circuitry is blended with ease of operation-compactness-attractive styling and finish-and safe, reliable construction. Has inputs for NARTB-equalized tape head playback; FM or FM-AM radio tuner; magnetic, crystal or ceramic phono cartridge; etc. Bass and treble controls allow you to suit music to your personal listening tastes and room acoustics. Handsomely finished in brown, with white and gold front panel; styled to blend with any type of room decor, furniture or cabinetry. Clearly marked, smoothaction controls; pressure-formed steel case. Although the "Mini-Fi" is small in size, it's a king-size value!
Rated Output: 10 watts; 20-watt peaks. Distortion (at rated output): Harmonic, less than $2 \%$; IM, less than $3 \%$. Response: $\pm 1 \mathrm{db}, 20$ to 20,000 cps at rated output. Hum: 65 db below 10 watts. Sensitivity: Magnetic phono, 8 millivolts for 10 watts; Tape head, 4 millivolts for 10 watts. 5 Inputs: Tape Head, Magnetic Phono, Crystal-Ceramic Phono, Tuner, Auxiliary; Controls: Equalizer-Selector (Tape, Magnetic Phono, RIAA, Eur, Radio, Aux); Volume; Bass; Treble; Off-On. Rumble filter on rear panel. Output Impedances: 4, 8 and 16 ohms, plus high-impedance for recording. Tubes: ECC83, 6CQ8, 2-6V6GT; EZ80 rectifier. 35/8" high (including feet), $111 / 2^{\prime \prime}$ wide, $9^{\prime \prime}$ deep. U.L. Approved. For $110-120$ v., 60 cycle AC. Shpg. wt., 10 lbs.

92 SX 409. NET.
39.95

## SAVE! "Mini-Fi" Amplifier \& KN-130 Tuner Combination



BOTH ONLY
SGETG4:
Save $\$ 10.00$
Two first-quality components-at combination savings of $\$ 10.00$ ! Includes: Knight KN-510 "MiniFi" Amplifier and the new KN-130 FMAM Tuner. Add only a speaker system and a changer to have a complete hifi system. Wt., 23 lbs.
36 SU 803-2. Both Units, Only . . 109.45

TOP QUALITY FOR LESS-CREATED BY ALLIED
ONE OF THE "BEST-VALUE" FM TUNERS IN THE MARKET. A beautiful example of neat, careful design, the new Knight KN-140 Basic FM Tuner offers you an array of fine features. For thoroughly enjoyable hi-fi reception at an economy price it's the perfect choice.

tunimg


GUARANTEED FOR ONE fuLL YeAR

# NEW Knight KN-140 Basic FM Tuner-A Rare Buy! 

ONLY

- Actual Size: $21 / 4^{\prime \prime}$ High, 9 " Wide, $75 / 8^{\prime \prime}$ Deep!
+ 
- Tunes the Full FM Band-88 to 108 Mc
- Automatic Frequency Control "Locks In" Stations
- Tape Recorder Output for "Off-the-Air" Recordings
- Weighted Flywheel Tuning; Illuminated Dial Scale
- Attractive, "Leather-Tone" \& Brass Styling

The new Knight KN-140 Basic FM Tuner is a perfect example of painstaking design, truly skillful engineering and compactness. It provides excellent reception with its built-in, line cord antenna-with a simple dipole antenna (or other external FM antenna), its performance easily equals tuners costing up to twice its modest price!

Ultra-compact in size, you can use the KN-140 anywhere you would ordinarily place a book; table top, shelf, mantel, etc. Ideal for use as the extra tuner in den, study, rumpus room-makes a wonderful gift! Can be used to play through hi-fi systems. TV sets, tape recorders, table-model AM radios, and similar units having input jacks. Automatic frequency control (AFC) for effortless tuning-FM stations "lock in" when their dial setting is approached. AFC can be turned off to permit tuning weak stations. Illuminated dial scale and weighted tuning flywheel for ease in station selection. Soft brown "leather-tone" finish, with gleaming brushed brass panel, complements any home decorative motif. Unconditionally guaranteed by Allied for one full year.

SPECIFICATIONS. Sensitivity: $5 \mu \mathrm{v}$ for 20 db of quieting. Audio Output: Approximately 0.5 volt. Hum and Noise: -40 db . IF Bandwidth: 180 kc . Controls: Tuning; Off-On-AFC. 2 high-impedance outputs. Groundedgrid RF amplifier; ratio detector. Includes built-in, line cord antenna and 3 -ft. output cable. Size, $21 / 4^{\prime \prime}$ high, $9^{\prime \prime}$ wide, $75 / 8^{\prime \prime}$ deep. U.L. Approved. For $110-120$ v., $50-60$ cycle AC. Shpg. wt., $71 / 2 \mathrm{lbs}$. 92 SX 425. NET.
49.95

## Efyer "Mini-Fi" Amplifier \& KN-140 FM Tuner Combination

## BOTH ONLY

Includes: Knight KN-510 "Mini-Fi" 10 Watt Amplifier and

## SAVE $\$ 8.00$

 new KN-140 Basic FM Tuner. Add only a speaker system to this matched pair of components for the wealth of fine music available over FM stations. Shpg. wt., 18 lbs. 36 SU 800-2. Both Units, Only . 81.90

## A MARVEL OF COMPACT PRECISION ENGINEERING


built like a fine camera
The KN-140 is so well-planned and so carefully designed, that it has the look and feel of a fine camera. Its compact layout of parts and extremely neat wiring, make it a model of simplicity and functional design.


## AFC FEATURE

"Locks-in" the station of your choice -defeat switch aids in tuning weak stations.


## FLYWHEEL TUNING

For smooth tuning across the dial-a "plus" feature for accurate station selection.

Check Our Complete Selection of Knight Hi-Fi Components. For the best in musical reproduction at moderate cost, watch for the Knight name on high-fidelity products. These splendid components are fully described on pages 32-41: complete music systems employing Knight units can be found on pages $6-17$. Unconditionally guaranteed by Allied for one full year, top-value Knight components give you the most for your hi-fi dollar.


NEW 299 DELUXE 40-WATT STEREO AMPLIFIER

##  <br> Less Case

Skillfully engineered and unusually versatile, the Model 299 offers dual 20 -watt power sec tions, dual preamps and latest stereo features. Use it for stereo discs or stereo tapes; for stereo FM-AM broadcasts; for reproduction of monaural records or any other monaural sound source through both amplifier sections to utilize the combined power output of both channels. Separate bass and treble controls for each channel permit adjustment to compensate for differences in speaker system response. High gain stereo cartridge input accommodates cartridges with very low output; phase-reversal switch corrects for reversed phasing on stereo discs and tapes; 2-channel balance control; etc.

Response: 20 to $30,000 \mathrm{cps}$. Output (per section): 20 watts; 40 watts peak. Harmonic Distortion: less than $0.8 \%$. Hum: 80 db below maximum output. Inputs: 2-low-level magnetic (including one for tape deck); 3-high-level magnetic (Tuner, Tape, TV); provision for using mike. Outputs: 4,8 and 16 -ohm speaker taps for each channel; tape recorder. Controls: Function Selector (Balance A, Balance B, Stereo, Reverse Stereo, Monaural Records, Channel A, Channel B); separate Bass and Treble for each channel; Balance; Loudness; Loudness-Volume; Scratch Filter; Rumble Filter; Channel A and Channel B Magnetic Inputs 1 and 2; On-Off; Phase Reversal Switch; Input Selector Switch (Orig. Col, Orig. AES, Eur78 , RIAA, NARTB Tape, Tuner, Extra). Gold panel, $43 / 8 \times 15 \times 12^{\prime \prime}$ Less case; see page 43. For operation from 105-125 v., $50-60$ cycle AC. Shpg. wt., 35 lbs.
91 SU 657. NET
199.95

## NEW 130 DELUXE STEREO PREAMPLIFIER

## \$16995

Less Case

One of the most advanced preamps available. Incorporates many important engineering advances for stereo reproduction of the highest quality. Has provisions for playing stereo records, stereo tapes, stereo FM-AM broadcasts, or stereo material from any source. Permits connecting both a stereo tape deck and stereo phono cartridge with front-panel selection of either. Center channel output is provided to permit using a third amplifier and speaker for absolute optimum realism in playback. Separate stereo level controls on all inputs adjust the level of both channels simultaneously. Unique, highly convenient indicator lights instantly tell mode of operation.

Output: $21 / 2$ v.; maximum, 10 v. Response: 19 to $35,000 \mathrm{cps}$. Harmonic Distortion: less than $0.15 \%$ at rated output. Hum: -80 db Outputs: Channel A, Channel B, Center Channel. Controls: Stereo Selector (Balance A, Balance B, Monaural Records, Stereo, Reverse Stereo, Channel A, Channel B); Channel A and B Bass and Treble controls (with crossover position); Stereo Balance; Loudness with Loudness-Volume switch; Input Selector (Eur-78, Orig Lon, Orig AES, RIAA, Orig Col, NARTB Tape, Tuner, Extra); Pickup Selector (1, 2); Tape Monitor; Scratch Filter; Rumble Filter; Phase Reverse; On-Off. Stereo Tape Recorder Controls: Main Recorder Output; Playback (Monitor); front-panel Tape Monitor switch; NARTB Tape Playback. Gold panel, $43 / 4 \times 151 / 4 \times 121 / 2^{\prime \prime}$. Less case; see table on page 43. For operation from $105-125$ v., $50-60$ cycle AC. Shpg. wt., 15 lbs.
91 SU 658. NET


330-C


135


## 330-C BASIC FM-AM STEREO TUNER

Superbly designed, highly sensitive tuner. Has complete and separate AM and FM sections for reception of stereo broadcasts. Signal strength meter for simple, accurate tuning. $F M$ Section: $2 \mu \mathrm{v}$ sensitivity for 20 db quieting; $1 \mu \mathrm{v}$ with 72 -ohm antenna. Wide-band design; $2-\mathrm{mc}$ detector; automatic gain control. 80 db rejection of spurious response from cross modulation by strong local signals permits using this tuner in any location, even close to FM transmitters. AM Section: $1 \mu \mathrm{v}$ sensitivity for usable audio output; new, extremely effective deaudio output; new, extremely effective de-
tector; 10 - kc whistle filter; 4 v . audio output tector; 10 -kc whistle filter; 4 V . audio output
for $100 \%$ modulation. Controls: FM vernier and quick tuning; AM vernier and quick tuning; Off-On; Selector (FM, AM Wide Range, AM Normal, AM Distance). Separate output jacks for feeding stereo amplifier system or tape recorder.
11 tubes; 2 diodes; 6 X 5 rectifier. $43 / 4 \times 151 / 4 \times$ $121 / 2^{\prime \prime}$. Less case; see page 43 . For $105-125$ v., $50-60$ cycle AC. 17 lbs.

94 SU 584. NET.
224.95

NEW 135 STEREO-DAPTOR CONTROL Converts monaural systems to stereo. Permits simultaneous control over two amplifiers from a central point. Any amplifier, in any of the following groups, may be used with a second amplifier in the same group. Group I: Scott 99-A, B, C, D; 209; 210-F; $120-\mathrm{A}, \mathrm{B} ; 210-\mathrm{C}$. Group II: $\operatorname{Scott} 121-\mathrm{A}, \mathrm{B}$, C; 210-D, E. Group III: Any hi-fi system with separate preamps and basic amplifiers. Group IV: Two identical amplifiers having tape monitoring facilities. Controls: Master Volume for adjusting volume levels of both channels together; Loudness-Volume Switch; Function Selector (Stereo, Reverse Stereo, Monaural Records, Monaural Channel A, Monaural Channel B) ; Tape Monitor Switch; Master On-Off Switch.
Includes four $2-\mathrm{ft}$. shielded cables for all necessary connections to Scott units. Less necessary connections to sco page 43 . Size (HWD): $51 / 2 \times 7 \times 51 / 8^{\prime \prime}$. Shpg. wt., 3 lbs.
915631 . NET

210-F DYNAURAL 36-WATT AMPLIFIER
A widely approved, top-quality amplifier. Converts to stereo use with the 135 StereoDaptor plus any other Scott amplifier listed in Group I at left, below.
Has front-panel tape monitor and playback switch; new Dynamic Noise Suppressor with continuous adjustment for rumble and hiss suppression; cool-running "cycle-flow'" circuitry; sub-sonic filter; etc. Output: 36 watts. Response: 19 to $35,000 \mathrm{cps}$. Harmonic Distortion: $0.5 \%$. Hum: -80 db . Controls: Selector-Equalizer (Orig Lon, RIAA Orig Col, NARTB Tape and 3 special curves for $78-\mathrm{rpm}$ records including Col, RCA-Lon, Eur, plus Tuner, Tape, TV); Pickup Selector (1, 2); Dynamic Noise Suppressor (low and high-frequency controls); Bass; Treble; Loudness; LoudnessVolume; Speaker Selector; On-Off; Distortion Filter; Tape Monitor. 4, 8 and 16 ohms. $43 / 4 \times 151 / 4 \times 121 / 2^{\prime \prime}$. Less case; see page 43 . For 105-125 v., 50-60 cycle AC. 27 lbs. 94 SU 583. NET
189.95

NEW 250 40-WATT BASIC AMPLIFIER
An excellent, laboratory-quality 40-watt basic amplifier. Provides clean and undistorted, 40-watt power output on music waveforms. Instantaneous peak power, 80 watts. Long-time continuous maximum output, 35 watts. Less than $0.5 \%$ harmonic distortion; less than $0.1 \%$ first-order intermodulation distortion. Negligible distortion at lower output levels.
Response: from 12 to $60,000 \mathrm{cps}$ with controlled cut-off characteristics beyond. Hum: 85 db below full rated output. Controls: Input Level, Hum Balance, DC and AC Balance. Self-balancing phase inverter automatically balances output circuit. Two input circuits of 0.2 and 0.5 megohms, require 0.5 and 1.5 volts input respectively, for full output. Output Impedance: 4 to 24 ohms. Two 6CA7 output tubes. With case. Size, $61 / 2 \times 13 \times 11^{\prime \prime}$. For $105-125 \mathrm{v} ., 50-60$ cycle AC. Shpg. wt., 22 lbs.
91 SU 677. NET
129.95


300


209

## 300 FM-AM BASIC TUNER



Less Case

Outstanding in performance and workmanship this FM-AM basic tun er conforms to Scott's traditional standards of excellence in design Features absolute freedom from noise, drift and distortion. FM Section: Silver-plated front end for maximum sensitivity; $3 \mu \mathrm{v}$ sensitivity on 300 -ohm input for 20 db of quieting; 150 kc IF passband assures reception of weak stations without distortion; 2 mc detector bandwidth and temperaturecompensated oscillator for drift-free tuning; automatic gain control; 2 stages of full limiting; steep IF response for maximum selectivity. AM Section: tuned RF stage; 2 selectivity positions; 10 kc whistle filter Controls: Selector (FM, AM Normal, AM Wide Range); Tuning. Flywheel tuning and "precision-ray" tuning indicator. Outputs. Main, Tape Recorder, Multiplex. Advanced 8-tube circuit employs 2-6U8, 3-6AU6. 6BE6, 12AU7, 6BR5; 2 crystal diodes; 6 X 4 rectifier. Size, $5 \times 151 / 2 \times 121 / 2^{\prime \prime}$. Less case, below. For operation from 105-125 volts, $50-60$ cycle AC. Shpg. wt., 14 lbs. 94 SU 589. NET


99-D

99-D DELUXE 22-WATT AMPLIFIER
\$10995
Less Case

Many important features make the 99-D an exceptional choice for the hi-fi music ensemble. Unusually versatile, it offers a wide array of features, such as: "Quik-Set" control settings; speaker switch for selecting either of two speakers or both speakers at once; tape recording monitor-playback switch for use with 3-head recorders; tape recorder output and monitoring jacks; input selector switch for two magnetic pickups-allows connecting both a record changer and turntable and selecting either; etc. Output: 22 watts; 44-watt peaks. Response: Flat from 20 to $30,000 \mathrm{cps}$. Harmonic Distortion: Less than $0.8 \%$. Hum: -80 db . Output Impedances: 4,8 and 16 ohms. Controls: Selector-Equalizer (Eur 78, Orig Lon, Orig AES, RIAA-NARTB-RCA Ortho, Orig Col, NARTB Tape, Tuner, Tape); Mag 1 or 2 ; Rumble Filter; Scratch Filter; Volume-Loudness; Loudness; Input Level; Bass; Treble; OffOn. $43 / 8 \times 15 \times 12^{\prime \prime}$. Less case; see below. For operation from 105-125 v., 50-60 cycle AC. Shpg. wt., 20 lbs.
94 SU 582. NET
109.95

NEW 209 DELUXE 36-WATT AMPLIFIER

## $\$ 13995$

Less Case

Superb design and traditional excellence characterize the 209 deluxe amplifier. Has provision for use with the 135 Stereo-Daptor described on page 42. Features: ample powerreserve; unique, new Acoustic Level control for optimum adjustment to any room conditions and speaker efficiencies; high sensitivity for excellent operation with tape re corder heads and cartridges having very low output; special DC bias supply for pre amp and output tubes to assure minimum distortion at full power output; complete tape recorder facilities; etc. Output: 36 watts. Response: 19 to $35,000 \mathrm{cps}$. Harmonic Distortion: less than $0.5 \%$. Hum: -80 db Controls: Selector-Equalizer (Eur 78, Orig Controls: Selector-Equalizer (Eur Lon, Orig AES, RIAA, Orig Col, NARTB Lon, Orig AES, RIAA, Orig Col, NARTB
Tape. Tuner, Tape, TV); Bass; Treble; Loudness; Loudness-Volume; Speaker Selector; Scratch Filter; Rumble Filter Acoustic Level; Monaural/Stereo-Daptor Tape Monitor. 4, 8 and 16 ohms. $51 / 8 \times 151 / 2^{x}$ $121 / 4^{\prime \prime}$. Less case, below. For 105-125 v. $50-60$ cycle AC. Wt., 25 lbs.
91 SU 633. NET.
139.95

## 311-C BASIC FM TUNER

Moderately priced FM tuner featuring silver-plated front end for high sensitivity. Insures outstanding reception in even the weakest of signal areas. Employs Scott's famous wide-band circuitry for near-perfect station separation-co-channel and adjacent channel interference is practically eliminated. Temperature-compensated circuit is absolutely free from drift. RF stages of the circuit are heavily silver-plated for maximum efficiency. Low-impedance output permits the use of connecting cables up to 70 ft . in length; tuner may be placed wherever convenient. The 311-C basic FM tuner is attractively styled to match other Scott high-fidelity components.
Includes: automatic gain control; signal strength meter; illuminated lucite dial with coarse or fine tuning. Wide-band circuitry consists of 150 -kc IF passband, 2 mc detector bandwidth; 2 stages of full limiting; 80 db rejection of spurious response. Separate tape recorder and multiplex output. Sensitivity: $2 \mu \mathrm{v}$ for 20 db of quieting; $1 \mu \mathrm{v}$ with matched 72 -ohm antenna. Max. Audio Output: 4 v . for 75 kc deviation. Controls: OffOn/Level; Tuning. 6 tubes; 2 diodes; 6X4 rectifier. Size, $43 / 4 \times 131 / 4 \times 93 / 4^{\prime \prime}$. Less case; see listing in table below. For operation from 105-125 volts, 50-60 cycle AC. Shpg. wt., 15 lbs.
94 SU 586. NET
124.95

## 310-B BASIC FM TUNER

Frequently used in professional broadcast monitors, the $310-\mathrm{B}$ basic FM tuner fulfills the most exacting hi-fi requirements. Wideband circuit design, heavy silver plating in the RF and mixer sections, and three stages of full limiting provide noise-free reception of weakest signals. Three IF stages and wide-band detector insure maximum selectivity and virtual elimination of adjacent channel and co-channel interference; provide exceptional rejection of ignition noise and cross modulation. Extremely effective automatic gain control circuit prevents distortion on strong local signals and makes manual control of sensitivity unnecessary. Absolutely free of drift.
Temperature-compensated. Has $150-\mathrm{kc}$ IF passband and 2 mc limiters and detector; 3 stages of full limiting. Interstation Noise Suppressor eliminates FM "hiss". Signal strength meter. Low-impedance output permits use of long leads. Tape recorder output. mits use of long leads. Tape recorder output. Sensitivity: $11 / 2 \mu \mathrm{~V}$ on 300 -ohm input with
20 db of quieting. 85 db rejection of cross modulation. Max. Audio Output: 4 v. for $75-\mathrm{kc}$ deviation. Controls: Tuning, Fine Tuning, Level, Noise Suppressor. Employs 9 tubes; 3 diodes; 6 X5 rectifier. Size, 43/4x $131 / 4 \times 93 / 4^{\prime \prime}$. Less case; see listing below. For operation from 105-125 v., 50-60 cycle AC. Shpg. wt., 14 lbs.
94 SU 587. NET
174.95


311-C


310-B

## CASES FOR SCOTT UNITS

Trim and attractive, these cases permit the use of Scott components in tabletop, shelf and bookcase installations. Two types of cases are available: *handrubbed wood in mahogany, blonde or walnut finishes; tsteel case with imitawalnut innishes; tsteel case with imita-
tion-leather finish. All cases have venti-tion-leather finish. All cases have venti-
lating louvers to allow circulation of air. Av. shpg. wt., $11 / 2$ lbs., except Types E, EW, EWB and EWW, $1 / 2 \mathrm{lb}$.

| No. | Type | HWD | Finish | For: | EACH |
| :---: | :---: | :---: | :---: | :---: | :---: |
| $945 \times 577$ | C $\dagger$ | $43 / 4 \times 151 / 2 \times 12^{\prime \prime}$ | Leather | 99-D,210-F,300,330-C,299,209,130 | 9.95 |
| $945 \times 578$ | D $\dagger$ | $43 / 4 \times 131 / 4 \times 101 / 2^{\prime \prime}$ | Leather | 310-B,311-C | 9.95 |
| 915632 | E $\dagger$ | $51 / 2 \times 7 \times 51 / 8^{\prime \prime}$ | Leather | 135 Stereo-Daptor | 4.95 |
| $945 \times 580$ | CW* | $51 / 8 \times 151 / 2 \times 121 / 4^{\prime \prime}$ | Mahog. | 99-D, 210-F, 300, 330-C, 299, 209,130 | 19.95 |
| $945 \times 590$ | DW* | $51 / 8 \times 131 / 8 \times 91 / 2^{\prime \prime}$ | Mahog. | 310-B,311-C | 19.95 |
| $945 \times 581$ | CWB* | $51 / 8 \times 151 / 2 \times 121 / 4^{\prime \prime}$ | Blonde | 99-D, 210-F, 300,330-C, 299,209,130 | 19.95 |
| 94 Sx 591 | DWB* | $51 / 8 \times 131 / 8 \times 91 / 2^{\prime \prime}$ | Blonde | 310-B,311-C | 19.95 |
| $915 \times 678$ | CWW* | $51 / 8 \times 151 / 2 \times 121 / 4^{\prime \prime}$ | Walnut | 99-D, 210-F,300,330-C, 299, 209,130 | 19.95 |
| $915 \times 679$ | DWW* | $51 / 8 \times 131 / 8 \times 91 / 2^{\prime \prime}$ | Walnut | 310-B,311-C | 19.95 |
| 915675 | EW* | $51 / 2 \times 7 \times 51 / 8{ }^{\prime \prime}$ | Mahog. | 135 Stereo-Daptor | 11.95 |
| 915676 | EWB* | $51 / 2 \times 7 \times 51 / 8^{\prime \prime}$ | Blơnde | 135 Stereo-Daptor | 11.95 |
| 915680 | EWW* | $51 / 2 \times 7 \times 51 / 8^{\prime \prime}$ | Walnut | 135 Stereo-Daptor | 11.95 |




## Harman-Kardon's Perfectly Matched Stereo Components

## A-224 "TRIO" STEREO AMPLIFIER

Engineered for outstanding stereo reproduction,

NET
 the A-224 actually consists of three excellent instruments in one handsome and compact unit. It is a complete stereo preamplifier with two separate 12 watt amplifier sections; a complete 24 -watt monaural amplifier; and a 24 -watt amplifier which serves as

10.00 Downangle stereo channel. plus a complete stereo preamp which may be used to convert any existing monaural amplifier to serve as the second stereo channel. Versatile facilities of this deluxe unit include: separate bass and treble controls; balance control; mode switch (for choosing stereo or monaural operation); speaker selector switch for choosing regular speaker, or both together; contour control; tape output for recording applications. and rumble filter. A special feature of the A-224 is a switch located on top of chassis which permits paralleling of amplifier sections to provide 24 -watt monaural output. Operating the A-224 either stereophonically or monaurally, is simplicity itself

Output: 12 watts per channel. Distortion: harmonic, less than $1 \%$ at rated output; IM, less than $2 \%$. Response: $\pm 1 / 2 \mathrm{db}, 15-30,000$ cps at 1 watt. Hum: -80 db . Output Imp.: 8, 16 and 32 ohms per channel ( 4,8 and 16 ohms when speaker terminals are strapped for monaural operation). Tape Output Level: 1 v. each channel, unaffected by tone and volume controls. Controls: Treble/On-Off; Bass; Loudness; Balance; Mode (Stereo Normal, Stereo Reverse, Monaural Right, Monaural Left); Selector (Tape Lo/Phono Lo, Phono Hi, Tuner, Aux/Tape Hi); Rumble Filter; Contour; 2 Speaker Selector switches. Rear Panel Controls: Equalization Switches (left and right channel); Output Tube Balance (left and right channel); Low Level and High Level Hum Adjust. Four EL84 output tubes. Copper panel; less cage, below. $43 / 8 \times 1313 / 16 \times 111 / 2^{\prime \prime}$. For $110-120 \mathrm{v}$., 50-60 cycle AC. Shpg. wt., 18 lbs.
91 SU 643. NET.
99.95

91 SX 652. Cage for Above. Black finish. Wt., 3 lbs. NET . . 7.00

## T-224 "DUET" STEREO FM-AM BASIC TUNER

Companion unit to the A-224 "Trio" amplifier, the "Duet" offers superb performance either as a monaural or a stereo tuner. Incorporates separate AM and FM channels for receiving stereo broadcasts. Jack at rear of chassis makes it readily adaptable for multiplex operation. Simple effective indexing scale (by means of movable tabs that slide across the dial face), permit easy
$\$ 11.50$ Down tabs that slide across the dial face), permit easy dentification of five pairs of stereo FM-AM stations. Trim appearance and brushed copper

FM Section. Low-noise front end consisting of grounded-grid RF amplifier plus grid-fed triode mixer assure an extremely high signal-to-noise ratio. Armstrong circuit with pentode limiter, wide-band Foster-Seeley discriminator and automatic frequency control. Provides outstanding FM reception in all signal areas. Sensitivity: $21 / 2$ microvolts for 20 db of quieting. Selectivity: 240 kc bandwidth, 6 db down. Distortion: less than $1 / 2 \%$ IM at $30 \%$ modulation; less than $3 \%$ at $100 \%$ modulation. 3 Outputs: FM-AM Monaural and FM Stereo. AM Stereo, FM Multiplex. Antenna Input Impedance: 300 ohms. Output Level: $11 / 2$ volts for $100 \%$ modulation; $1 / 2$ volt for $30 \%$ modulation.

AM Section. Low-noise, high-gain RF pentode followed by pentagrid converter, wide-band IF stage and high-perveance crystal detector with quick-action AVC (automatic volume control). Built-in low-noise ferrite loopstick antenna. Sensitivity: 10 microvolts. Selectivity: 10 kc bandwidth, 6 db down. Image Rejection: 55 db. Front Panel Controls: FM Tuning; Selector (Off-On, FM, AM, Stereo); AM Tuning. Weighted flywheel tuning control. Tubes: 2-ECC85, 3-6AU6, 6AL5, 6AT8, 6BA6; selenium rectifier. Size (HWD), $43 / 8 \times 1313 / 16 \times 121 / 4^{\prime \prime}$. Includes perforated, black metal cage; brushed copper panel. For operation from 110-120 v., $50-60$ cycle AC. Shpg. wt., 13 lbs.
91 SU 644. NET.
114.95

## Deluxe Harman-Kardon Stereo Components



A-250 "Epic" Stereo Amplifier
 COMPLE STAL SYSTMS. For an outstanding selection of complete stereophonic high-fidelity systems featuring the Harman-Kardon components described above, see pages 20 and 21. These expertly selected systems are priced to bring you exceptional value, and carefully matched to deliver superb performance.

## A-250 "EPIC" STEREO AMPLIFIER

New, highly advance $d$ stereo amplifier. Of fers: two 25 -watt channels for stereo use; 50 -watt output for monaural use; or conversion system for use with existing monaural music systems. Exclusive H-K circuitry employs both positive and negative feedback for maximum stability.
Four 6L6GB audio output tubes; DC on preamp tube filaments. Output: 25 watts per channel. Distortion: harmonic, less than $1 \%$; IM, less than $2 \%$. Response: $\pm 1 / 2 \mathrm{db}$, $15-30,000 \mathrm{cps}$ at 1 watt. Output Impedances: 4, 8, 16, 32 ohms per channel. Hum: - 85 db. Controls: Treble/Off-On; Bass; Louddb. Controls: Treble/Oft-On; Bass; Loud-
ness; Balance; Mode (Stereo Normal, Stereo Reverse. Monaural Right, Monaural Left); Selector (Aux 1, Aux 2, Tuner, Phono, Tape Head); Rumble Filter; Scratch Filter; Contour; 2 Speaker Selector Switches; Equalization Selector (RIAA, Eur, NARTB Tape). $43 / 4 \times 157 / 8 \times 137 / 8^{\prime \prime}$. Less cage. For 110-120 v., $50-60$ cycles AC. 35 lbs . 91 SU 645. NET
Cage for Above. Shpg. wt., 3 lbs.
91 SX 646. NET.
179.95
12.50

## HK-250 DUAL 25-WATT STEREO BASIC AMPLIFIER

Not illustrated. A superb new unit that incorporates two 25 -watt basic amplifier sections on one chassis. Circuitry is identical to the output stages of the new A-250 stereo amplifier-employs four 6L6GB audio output tubes. The HK-250 is perfect for use with the TP-200; add only 2 speakers to have a highly flexible stereo or monaural music system of magnificent quality.

## TP-200 "CONCERTO" FM-AM TUNER

Brilliant new FM-AM stereo tuner with complete preamplifier control section for any monaural or stereo sound source. Tuner portion of the TP-200 includes separate FM and AM sections for reception of stereo or monaural FM and AM broadcasts; has jack for addition of an FM multiplex adapter. Unique stereo indexer permits quick identification of 6 pairs of AM and FM stereo stations. Dual cathode-follower outputs. Brushed copper and black styling. FM Section. Sensitivity: $21 / 2 \mu \mathrm{v}$ for 20 db of quieting. Selectivity: 240 kc bandwidth, 6 db down. Hum: 60 db below $100 \%$ modulation. AM Section. Sensitivity: $10 \mu \mathrm{v}$. Selectivity: 10 kc bandwidth, 6 db down. Front Panel Controls: FM Tuning; Treble/On-Off; Bass; Loudness; Balance; Mode (Stereo Normal, Stereo Reverse, Monaural Left, Monaural Right); Function (AM, FM, AM/FM Stereo, Multiplex, Phono, Tape, Aux); AM Tuning; Scratch Filter; Rumble Filter; Contour; Equalization. With case, $43 / 4 \times 151 / 4 \mathrm{x}$ $13^{\prime \prime}$. For operation from $110-120 \mathrm{v} ., 50-60$ cycle AC. Shpg. wt., 20 lbs. 91 SU 647. NET
189.95

Output: 25 watts per channel; 50 watts for monaural use. Response: $\pm 1 / 2 \mathrm{db}, 15-30,000$ cps at 1 watt. Distortion: Harmonic, less than $1 \% ; I M$, less than $2 \%$. Output Impedances: 4, 8, 16, 32 ohms per channel. Hum: -95 db . Two output tube balance controls. With cage, $6 \times 15 \times 6^{\prime \prime}$. For $110-120 \mathrm{v} ., 50-60$ cycle AC. Shpg. wt., 30 lbs.
91 SU 651 . NET.
99.95


## FA-10 "SONATA" FM TUNER-AMPLIFIER

## $\$ 144.95$

\$11.50 Down
An exciting, new 3-in-1 unit that offers a sensitive FM tuner, 10 -watt amplifier and equalized tape and record preamp control section-on one chassis. Requires only a speaker system for outstanding FM reception-add a record player and tape deck whenever convenient, to form a complete home music system. The versatile FA-10 provides all important hi-fi controls and functions. Tuner employs a new broadband Foster-Seeley discriminator with limiter and automatic frequency control. Has RIAA-equalized magnetic phono input and NARTB-equalized tape head input. Enclosure features traditional Harman-Kardon copper and black styling -sleek and beautiful.

FM Specs. Armstrong circuit with limiter and wide-band discriminator; low noise front end consisting of tuned triode, grounded-grid amplifier and triode mixer. Sensitivity: $2.5 \mu \mathrm{~V}$ for 20 db of quieting. Selectivity: 200 kc bandwidth, 6 db down. Hum: 60 db below $100 \%$ modulation. Audio Specs. Uses 2EL84 output tubes. Output: 10 watts at less than $1 \%$ harmonic, and less than $2 \%$ IM distortion. Response: $\pm 1 / 2 \mathrm{db}, 15-$ $30,000 \mathrm{cps}$ at 2 watts. Output Impedances: 8 and 16 ohms. Controls: Function (Tape Head. Phono-RIAA, FM, Aux); Loudness/ On-Off; Tuning; Treble; Bass; Contour.
 With cage, $4932 \times 133 / 4 \times 11$. For 110
$50-60$ cycle AC. Shpg. wt., 18 lbs . $50-60$ cycle AC.
114.95

## AX-20 "ADD-ON" STEREO AMPLIFIER

Perfect for converting existing monaural Pi-f systems to stereo use The AX-20 is a dual stereo preamplifier, with 20 -watt amplifier, on one compact chassis. Provides complete stereo control facilities, including control over existing monaural amplifier of any type and manufacture. Requires only one simple connection to the present amplifier, which may be located as far as 20 ft . away. Requires only the addition of another basic amplifier for stereo use.
Output: 20 watts. Response: $\pm 1 / 2 \mathrm{db}, 15$ to 30.000 cps at 1 watt. Distortion: harmonic, less than $1 \% ; \mathrm{IM}$, less than $2 \%$ Output Impedances: 8 and 16 ohms. Hum: -90 db . Controls: Treble/Off-On; Bass; Loudness; Balance; Mode; Function (Tape Head, Phono, Tuner, Aux); Rumble Filter Contour; Speaker Selection Switch; Equal ization. Less cage, below. $4 \times 121 / 2 \times 111 / 2^{\prime \prime}$ For 110-120 v., $50-60$ cycle AC. 18 lbs.

## 91 SU 654. NET.

99.95

91 SX 669. Cage for Above. 3 lbs. NET 8.95

## HK-20 20-WATT BASIC AMPLIFIER

Not illus. Top-quality basic amplifier employing the output circuitry of the AX-20 above. Two HK-20's are ideal for use as the heart of a stereo system; use one HK-20 with the AX-20 for a stereo system of excellent quality, with complete control facilities. Has same specifications as the AX-20. Tubes: 2-EL84, ECC83/12AX7; EZ81 rectifier. With cage. Size, $5 \times 10 \times 4^{\prime \prime}$ EZ81 rectifier. With cage. Size, $5 \times 10 x 4^{\prime \prime}$.
For operation from $110-120$ v., $50-60$ cycle AC. Shpg. wt., 14 lbs.
91 SX 653 . NET.
59.95


## F-10 "TEMPO" BASIC FM TUNER

NET Modestly priced, basic FM $\$ 695$ tuner that sets new stand ards of performance, craftsmanship and styling. Incorporates an Armstrong circuit with limiter and new
$\$ 7.00$ Down broadband Foster-seeley discriminator Employs an extremely quiet front end consisting of a tuned triode, grounded-grid amplifier and triode mixer.

Distortion is remarkably low and capture ratio is excellent. Automatic frequency con trol provides 'lock-in'" tuning of FM sta-tions-no drifting. Flywheel weighted tuning mechanism for smooth and easy station selection. Edge-illuminated tuning dial with logging scale. Complete with black enclosure; front panel styled in striking brushed copper. The neat, eye-catching appearance of the F-10 adds a smart touch to any interior decorative scheme.

Sensitivity: $2.5 \mu \mathrm{v}$ for 20 db of quieting. Selectivity: 200 kc bandwidth. 6 db down. Dis criminator Peak-to-Peak Separation: 600 kc . Distortion: Less than $1 \%$ harmonic and IM at $30 \%$ modulation. Hum: 60 db below $100 \%$ modulation. Output Level: $11 / 2 \mathrm{v}$. for $100 \%$ modulation; $1 / 2 \mathrm{v}$. for $30 \%$ modulation. Controls: On-Off; Tuning. High-im pedance output. Tubes: 2-ECC85, 36AU6, 6AL5; selenium rectifier. 300-ohm antenna input. Size, $4 \times 121 / 16 \times 61 / 8^{\prime \prime}$. For operation from $110-120$ v., $50-60$ cycle AC . eration from 110 Shpg. wt.. 10 lbs
$915 \times 606$. NET
69.95

TX-20 "SERENADE" BASIC FM-AM TUNER
New, advanced FM-AM basic tuner with many excellent features. FM section em ploys a pentode limiter, wide-band FosterSeeley discriminator and automatic frequency control. AM circuit is superhet with automatic volume control. FM Sensitivity: $2 \mu \mathrm{v}$ for 20 db of quieting. AM Sensitivity: $10 \mu \mathrm{v}$. Controls: FM-AM Tuning; Function Selector (Off-On, FM-AFC, FM, AM). 3 Outputs: 2-FM/AM Monaural (cathode follower); and FM multiplex. 8 tubes; selenium rectifier. With copper and black cage Size. $41 / 4 \times 1211 / 16 \times 81 / 16^{\prime \prime}$. For $110-120$ v., $50-60$ cycle AC. Shpg. wt.. 11 lbs .
91 SU 670 . NET.
99.95

## T-250 "ODE" BASIC FM-AM TUNER

Magnificent new FM-AM tuner of exceptional sensitivity and advanced design. Has provision for accommodating FM multiplex adapters; new bar-type tuning indicator skillfully engineered, FM-AM circuitry. FM Sensitivity: $0.95 \mu \mathrm{v}$ for 20 db of quieting. Less cage, below. $43 / 4 \times 153 / 16 \times 13^{\prime \prime}$. For 110 120 v., $50-60$ cycle AC. Wt., 13 lbs.

## 91 SU 648. NET

149.95

## F-250 "LYRIC" BASIC FM TUNER

Not illustrated. Same size and FM circuit as the Model T- 250 above, but without AM circuitry. Less cage. below. Wt., 13 lbs. 91 SU 649. NET
129.95

MODEL TC-50 METAL CAGE. For T-250 and F-250 tuners above. Brushed copper with black panel. Shpg. wt., 3 lbs.
91 SX 650 . NET
2.50

## A-10 "ALLEGRO" 10-WATT AMPLIFIER

NET Embodies every important

## $\$ 4.995$

 characteristic of a fine highfidelity amplifier, at unusually low cost. Perfect for use in pairs for stereo music installations. Frequency re-\$5.00 Down stallations. Frequency response and hum specifications to accommocontrols are flexible enough to accommodate accessory hi-fi equipment that is commonly used in home music systems. Has RIAA-equalized magnetic phono input and NARTB-equalized tape head input. Fullrange bass and treble controls allow adjustment of tonal balance to suit individual tastes and room acoustics. The "Allegro" is styled to match the "Tempo" tuner. Enclosure is black; panel is handsomely finished in brushed copper.

Circuit features 2-EL84 output tubes, pentode connected, for clean and undistorted audio reproduction. Frequency Response: $\pm 1 / 2 \mathrm{db}, 15$ to $30,000 \mathrm{cps}$ at 2 watts; $\pm \mathrm{db}$, 45 to $20,000 \mathrm{cps}$ at 10 watts. Rated Out put: 10 watts; 20 -watt peaks. Distortion: harmonic, less than $1 \%$ IM, less than $2 \%$. Output Impedances: 8 and 16 ohms. Hum: 80 db below full rated output. Controls: Loudness/Off-On; Bass; Treble; Function Selector (Tuner/Aux, RIAA-Phono, and NARTB-equalized Tape Head).

Tape output jack on rear of chassis, unaffected by tone controls. Tubes: 2-12AX7, 2-EL84; EZ80 rectifier. Size, $4 \times 121 / 16 \times 61 / 8^{\prime \prime}$. For operation from $110-120 \mathrm{v}$., $50-60$ cycle AC. Shpg. wt., 11 lbs
91 SX 608 . NET
49.95


AX-20 "Add-On" Stereo Amplifier


TX-20 Basic FM-AM Tuner


T-250 Basic FM-AM Tuner


NEW FA-690 STEREO TUNER/PREAMP NET Deluxe, remarkably versatile stereo compo-


## \$26.95 Down

 nent. The FA-690 combines a stereo FM-AM tuner with a dual preamp section containing every conceivable stereo or monaural control facility! FM Tuner Features. Low-noise, dual-triode cascode RF amplifier; wide-band FM detector with drift-free oscillator; 3 IF stages; 2 limiters. Sensitivity: $1 \mu \mathrm{v}$ for 20 db quieting. Interstation noise muting with control for muting defeat; center-of-channel tuning meter insures precise station tuning. FM multiplex output jack for FM-FM stereo broadcast reception (with external demodulator). Built-in, line cord FM antenna.AM Tuner Features. High-gain pentode RF amplifier; 2 steep-skirted IF stages with amplifier; 2 steep-skirted 1 F stages wis tle filter. Sensitivity: $2 \mu \mathrm{v}$. Separate AM tuning meter. Built-in, ferrite core antenna. Preamplifier Features. Two identical sections for stereo operation. 8 inputs- 4 per channel. Unique phono shut-off switch permits automatic shut-off of system after playing of last record. Controls: Automatic Shutoff/Off-On; FM Muting Off-On; Bass (LP, NAB, RIAA, AES) ; Treble (LP, NAB, RIAA, AES) ; Master Volume; Balance; Mode (Stereo Reverse, Stereo Normal, Monaural Channel A, Monaural Channel Monaural Channel A, Monaural Channel B); AM Bandwidth (Narrow, Broad) Se-
lector (Mic, Tape Head, Phono, FM-AM, Multiplex, Tape Rec.). 18 tubes; 5 diodes; EZ81 rectifier. $5 \times 145 / 8 \times 11^{\prime \prime}$. For $105-120 \mathrm{v}$., 60 cycle AC. Shpg. wt., 22 lbs. 91 SU 682. NET.
269.50


NEW SP-210 STEREO PREAMPLIFIER
NET Features two identical preamp sections for the ulti-

## $\$ 89^{50}$

\$8.95 Down control. Matched companion to the Pilot SA-232 and
SA- 260 stereo basic amplifiers listed below; can also be powered by the Model P-10 power supply, below. Features unique, 3 -position power switch with position for automatic shut-off of equipment after last record has played. A Quadri-Volume control, consisting of 4 volume controls on a single knob permits syn chronized attenuation of both channels. Extremely well-filtered DC filament supply for all tubes-reduces hum to an absolute minimum. Feedback tone control circuits for low distortion. Has 12 inputs, 6 per channel, for all accessory equipment. Two outputsaudio and tape. Tape recording output is low-impedance to permit use of long cable lengthis. Separate bass and treble controls are calibrated for RIAA, LP, NAB and AES phono equalization curves. Also has NAR-TB-equalized tape head inputs.

Response: $\pm 1 \mathrm{db}, 20$ to $20,000 \mathrm{cps}$. Output: amplifier, 1 volt; tape, 110 millivolts. Harmonic Distortion: $0.2 \%$ at maximum sensitivity. Hum $\mathcal{O}^{\circ}$ Noise: 80 db below 1 volt. Output Impedance: 500 ohms (cathode follower). $5 \times 145 / 8 \times 107 / 16^{\prime \prime}$. Obtains operating voltages from SA-232 or SA-260 amplifiers, or from Model P10 power supply (listed below). Shpg. wt., 12 lbs.
91 SU 642 . NET.
89.50

MODEL P-10 POWER SUPPLY. For above. $4 \times 4 \times 71 / 2^{\prime \prime}$. For $105-120$ v., 60 cycle AC. 6 lbs. 91 S 641 . NET.
19.50


FA-680 Stereo Tuner


SP-216 Stereo Preamp

## NEW SP-216 STEREO PREAMPLIFIER

Provides complete stereophonic or monaural audio control. Outstanding features include: two illuminated $V U$ meters for indicating tape recording output level, or relative level of signal at audio output jacks to balance both channels of a stereo system. Automatic shut-off position on power switch turns off entire bystem after last record plays. Dual mike inputs for stereo recording; stereo or monaural operation from all inputs. Individual record level controls, independent of volume or tone controls, permit silent recording. DC on all audio tube heaters for hum-free operation.

Output: 1 volt; 5 v . maximum (can be set to tape recorder requirements by calibrated rear control). Response: $\pm 1 \mathrm{db}, 20$ to $20,000 \mathrm{cps}$. Harmonic Distortion: $0.2 \%$ for 1 volt output. Hum ©゚ Noise: 80 db below 1 v . Output Impedance: 500 ohms, cathode follower. $43 / 4 \times 149 / 16 \times 105 / 32^{\prime \prime}$. For $105-120 \mathrm{v}$. 60 cycle AC. Shpg. wt., 17 lbs.
91 SU 635. NET
189.50

NEW SA-232 STEREO BASIC AMPLIFIER
Employs two basic amplifier sections. Output: 16 watts per channel; 32 watts for monaural use. Frequency Response: 20 to $20,000 \mathrm{cps}$. Distortion: harmonic, $1 \%$; IM, $1.5 \%$. Hum: 90 db below rated output. Output Impedances: 8 and 16 ohms per channel. Four EL84 output tubes. Matches Pilot SP-210, SP-216 preamps. $51 / 2 \times 131 / 2 x$ $5^{\prime \prime}$. For operation from $105-120 \mathrm{v} ., 60$ cycle AC. Shpg. wt., 20 lbs.
91 SU 638. NET....
89.50

NEW SA-260 STEREO BASIC AMPLIFIER
(Not illustrated)-similar to the SA-232. Matches SP-210 or SP-216 preamps. Individual bias and balance controls Output: 30 watts per channel; on stereo; 60 watts total. Response: 20 to 20,000 cps. Distortion: harmonic, $1 / 2 \%$; IM, $1 \%$. Hum: 90 db below rated output. Output Impedances: 8 and 16 ohms. Four EL34/6CA7 output tubes. $53 / 4 \times 153 / 4 \times 71 / 4^{\prime \prime}$. For $105-120 \mathrm{v} ., 60$ cycle AC. Shpg. wt., 35 lbs.
91 SU 639. NET.
129.50


NEW FA-670 BASIC FM-AM TUNER NET

\$17.95 Down

An excellent basic tuner featuring a new, skilfuly designed circuit for outstanding reception of FM-AM broadcasts. FM Section. Low-noise cascode RF amplifier; wide-band $F M$ detector ( 1000 kc ), driftfree oscillator; 3 high-gain IF stages and 2 limiters. Interstation muting switch with defeat position-completely eliminates noises when tuning between stations. Cen-ter-of-channel tuning meter. FM multiplex output jack; built-in line cord antenna. Sensitivity: $1 \mu \mathrm{v}$ for 20 db of quieting. AM Section. High-gain pentode RF amplifier; 2 broadband IF stages; germanium diode detector for maximum detection efficiency and lowest distortion. Temperaturecompensated oscillator assures freedom from drift. AM tuning indicator. $10-\mathrm{kc}$ interstation whistle filter. Built-in ferrite core AM antenna.Sensitivity : $2 \mu \mathrm{v}$. Additional Features. Flywheel tuning for fast, easy station selection. Cathode follower output to permit use of long cable lengths. Illuminated dial scales and tuning meter. Output level control. 10 tubes; 4 diodes (including matched pair of FM detector crystals); EZ81 rectifier. Size, $5 \times 145 / 8 \times 107 / 16^{\prime \prime}$. For $105-$ 120 v., 60 cycle AC. Wt., 20 lbs.
91 SU 636. NET.
179.50

NEW FM-660 BASIC FM TUNER. Not illustrat-ed-similar to the FA-670 above. Has same FM circuitry, features and specifications of the FA-670. 8 tubes; 3 diodes; EZ81 rectifier. Size, $5 \times 145 / 8 \times 107 / 16^{\prime \prime}$. For 105-120 v., 60 cycle AC. Shpg. wt., 18 lbs.
91 SU 637. \$14.95 Down. NET. . 149.50

## FA-540 BASIC FM-AM TUNER

NET

## $\$ 10950$

\$10.95 Down
A compact basic FMAM tuner featuring distinctive appearance and quality performance. An ideal companion unit for the AA-920 (at right) or any other hi-fi amplifier having volume and tone controls. Unit is housed in a beautifully styled metal case in burgundy and brushed brass.

Hum Level: 70 db below 1.0 volt. Maximum Audio Output: 5 volts. Output Impedance: 500 ohms (cathode follower). Controls: Selector (Off-On, Aux, AM, FM with AFC, FM without AFC); Tuning. FM Features: Automatic frequency control (AFC) for simple, drift-free tuning, with disabling switch for tuning weak stations adjacent to strong stations; temperature-compensated oscillator for maximum stability of tuning; oscillator for maximum amplifier stage for excellent sensituned RF amplifier stage for excellent sensiantenna. FM Sensitivity: $\mathbf{3 . 0}$ microvolts for 20 db of quieting. AM Features: Tuned RF amplifier stage; $10-\mathrm{kc}$ whistle filter; efficient built-in ceramic powdered-iron antenna; AM Sensitivity: 3 microvolts.
A cathode follower output permits installation of the FA-540 up to 100 feet from the amplifier without deterioration of signal quality. Flywheel tuning for smooth, precise station selection, plus "Beacon" tuning eye provide pin-point accuracy. Illuminated slide-rule dial. A switched input is provided for crystal or ceramic phono or TV sound. 7 tubes, plus EM81 tuning eye and 6X4 rectifier. Size, $43 / 4 \times 13 \times 83 / 4^{\prime \prime}$. For $105-120$ volts, 60 cycle AC. Wt., 14 lbs.
94 SU 369. NET.
. 109.50

## AA-920 20-WATT AMPLIFIER

NET

\$9.95 Down
High-performance 20-watt amplifier with exceptionally high gain, stability, and freedom from distortion. A built-in preamplifier provides complete control flexibility, including equalization for playback of recorded tapes directly from the tape head. An excellent choice for use with the FA-540 tuner at left or any high-quality basic tuner. The output transformer of the AA-920 employs interleaved windings, to minimize leakage inductance and resultant loss of high-frequency response. Tube filaments in the preamplifier section are operated on direct current to assure extremely low hum level. In addition to tape head equalization, an output jack is provided to feed a tape recorder; a full array of imputs accommodates any possible signal source. Burgundy and brushed brass cabinet.
Power Output: Rated, 20 watts; 40 watts peak. Response: $\pm 1 \mathrm{db}$ from 20 to 20,000 cps. Hum and Noise Level: 80 db below full output. Distortion: Less than $1 \%$ harmonic at 20 watts; $1.5 \%$ IM at 20 watts. Speaker Output Impedances: 4, 8 and 16 ohmis. Inputs: Radio, Aux, Tape Amp-470,000 ohms; Magnetic Phono, adjustable from 6800 to 100,000 ohms. Tape Head, 100,000 ohms. 6L6GB output tubes.
Controls: On-Off/Volume; Loudness (Aural Compensation); Selector (LP, AES, RIAA, NARTB, Tape Head, Radio, Aux, Tape Amp); Treble; Bass; 3-position Scratch Filter; 3-position Rumble Filter. $43 / 4^{\prime \prime}$ high, $131 / 4^{\prime \prime}$ wide, $9^{\prime \prime}$ deep. For 105-120 volts, 60 cycle AC. Shpg. wt., 22 lbs.
94 SU 371. NET.
99.50


## AA-410A BASIC AMPLIFIER

The AA-410A is an excellent example of skillful high-fidelity engineering. A perfect companion unit for any high-quality tuner or preamp-equalizer with a full set of controls. Ideal for use in pairs in stereophonic systems. Truly a remarkable value, this fine unit features an up-to-the-minute 20 -watt circuit and a deluxe output transformer with interleaved windings.
Rated Output: 20 watts. Frequency Response: $\pm 0.1 \mathrm{db}$, from 20 to $20,000 \mathrm{cps}$ at rated output. Harmonic Distortion: Less than $1 \%$ at full rated output of 20 watts. Intermodulation Distortion: Less than $1.5 \%$ at modulation output ( 60 and $3000 \mathrm{cps}, 4: 1$ ). Hum and Noise Level: 90 db below rated output. Negative Feedback: 14 db . Speaker Output Impedances: 4,8 and 16 ohms. 6L6GB out put tubes. Transformers are sealed and finished in black enamel $53 / 4^{\prime \prime}$ high, $4^{\prime \prime}$ deep, $141 / 4^{\prime \prime}$ wide. Chassis has removable feet. For operation from $105-120$ volts, 60 cycle AC. Shpg. wt., 19 lbs.
94 SU 367 . $\$ 5.95$ Dow
79.95


FM-530-A

## FM-530A BASIC FM TUNER

An FM tuner of high quality, specially designed for use with an amplifier having a full set of controls. Many features of the FM-530A are usually found only in much more expensive tuners. Scale, calibrations are large and clear; "Beacon" tuning eye, in conjunction with AFC, makes tuning as simple and stable as the electronic art permits. Noise level, hum and distortion are well below the threshold of audibility.
Sensitivity: 3.0 microvolts for 20 db of quieting; tuned RF stage. Hum Level. 70 db below 1.0 volt. Maximum Audio Output: 5 volts. Distortion: Less than $0.2 \%$ at 1 volt output. Output Impedance: 500 ohms (cathode follower). Selectivity: 6 db down at 200 kc . Controls: Selector (Off-On, Aux, FM-AFC, FM without AFC); Tuning. 7 tubes, plus EM81 tuning eye and 6X4 rectifier. Panel is finished in brushed brass and deep burgundy. Size, $43 / 4 \times 13 \times 83 / 4^{\prime \prime}$. For operation from 105-120 v., 60 cycle AC. Shpg. wt., 14 lbs.
94 SU 368. $\$ 8.95$ Down. NET.
89.50


## MODEL 3030 30-WATT STEREO AMPLIFIER

 NET\$16.66 Down

- Versatile Hi-fl Control Center

Beautifully styled, versatile 30 -watt hi-fi amplifier that becomes two 15 -watt amplifiers for stereo at the flick of a switch. Complete with two fully integrated preamps-all on one compact chassis. Accommodates all program sources, stereo or monaural. Combines smart, low-silhouette styling with excellent performance. "Magic touch" control combines on-off switch with loudness control. With the push-pull switch pre-set to the loudness position you prefer, simply push knob to shut off, or pull to start your system playingno need to readjust volume each time you turn on amplifier.
Phono inputs are equalized to RIAA curve on both channels for stereo records; has three equalization positions on the left channel for regular monaural discs. Tape input is equalized to NARTB curve for playback direct from tape head. Saddle-tan finish.
Power Output: 15 watts each channel; 30 watts total. Frequency Response: $\pm 0.5 \mathrm{db}, 20-20,000 \mathrm{cps}$. Distortion: harmonic, less than $0.5 \%$. Hum: 79 db below 15 watts. Dual Inputs (5): Tape Head, Magnetic and Ceramic Phono, Tuner, Auxiliary. Controls: 6-position selector switch-Tape, EUR, RIAA, LP, Tuner, Auxiliary; Noise Filter-Off, Hi, Lo, Both; Balance Control combined with Monaural switch; Off-On/Loudness control switch; Level Control with Stereo Reverse; Bass $+15 \mathrm{db}-20 \mathrm{db}$ at 50 cps ); Treble ( $+12 \mathrm{db}-$ 16 db at $10,000 \mathrm{cps}$ ); Rear Chassis-Tuner Set Level. Output Parallel Switch, Hum Balance Control. Dual Outputs (4): 4, 8, 16 ohms and high impedance for recording. Tubes (11): 46 V 6 GT , $6-\mathrm{ECC} 83 / 12 \mathrm{AX} 7$, 1 - EZ81/6CA4. $41 / 2^{\times 16 \times 11^{\prime \prime}}$ For $110-120$ v., 60 cycle AC. Shpg. wt., 22 lbs.
91 SU 656. NET.
166.55

## MODEL 2325 20-WATT HI-FI AMPLIFIER

## NET



- Single-Dial "Magic Touch" Control
- 3-Position Speaker Selector Switch
- Latest Low-Silhovette Styling
- Rumble and Scratch Filter Switches

Exceptionally well designed 20 -watt amplifier with controls. Its unusual reserve power-handling capacity and highly flexible controls make it an excellent choice for use with other custom components. Includes the ultra-convenient "Magic Touch" control. After setting the loudness control to the desired volume, all you need do is pull the knob to start the music playing, and push it to stop-no need to adjust the volume when using the system at another time! Additional features include: 3-position speaker selector switch which allows you to play either speaker, or both together, in hi-fi ensembles using two speaker systems; separate rumble and scratch filter switches. Space-sparing design permits installation anywhere. Low-silhouette enclosure is attractively finished in saddle tan.
Power Output: 20 watts; handles 40 -watt peaks. Frequency Response: $\pm 0.3 \mathrm{db}, 20$ to $20,000 \mathrm{cps}$. Distortion: Harmonic, less than $0.3 \%$; IM, less than $0.5 \%$. Hum: 75 db below 20 watts. 7 Inputs: 2-lowlevel Magnetic or Tape Head, Crystal or Ceramic Phono, high-level Magnetic, Radio Tuner, TV, Auxiliary. Controls: "Magic Touch" Off-On/Loudness; Rumble Filter; Scratch Filter; 3-pos. Speaker Selector; Bass; Treble; Level; 8-pos. Selector-Equalizer (Tape, 78, RIAA, LP, EUR, Radio Tuner, TV, Aux); Phono/Tape input selector (low-level Mag, Tape or Ceramic/Crystal; low-level Mag, highlevel Mag. or Tape). Tuner input has Level control. Hum balance adjustment. Output Impedances: 4, 8 and 16 ohms; high-impedance for tape recording. 2 separate outputs for speakers to be switched. Tubes: 3-ECC83, 12AV6, 2-6L6GB; 5U4GB rectifier. Size, 43/8x $16 \times 11^{\prime \prime}$. For $110-120$ v., 60 cycle AC. Shpg. wt., 24 lbs.
94 SU 737. NET.
107.75

## MODEL 2360 50-WATT HI-FI AMPLIFIER



Model 2360
NET

## $\$ 15675$

\$15.68 Down
Tape Head Cryst
Versatile 50 -watt hi-fi amplifier with controls. Meets the most exacting requirements of the audio perfectionist. Has all the deluxe features of the Model 2325 described above, plus extremely high power-handling capacity (handles 100 -watt peaks!). Low-silhouette styling; saddle-tan finish. Power Output: 50 watts. Frequency Response: $\pm 0.5 \mathrm{db}, 20$ to $20,000 \mathrm{cps}$. Distortion: Harmonic, less than $0.5 \%$; IM, less than $1 \%$. Hum: 75 db below rated output. 7 Inputs: 2 -low-level Magnetic or Contro "' Crystal or Ceramic Phono, high-level Magnetic, Radio Tuner, TV Auxiliary. Controls: "Magic Touch" Off-On/Loudness; Rumble Filter; Scratch Filter; 3-pos. Speaker Selector switch; Bass; Treble; Level; Selector-Equalizer (Tape, 78, RIAA, LP, EUR, Radio, TV, Aux). Phono/Tape input selector, etc. Output Impedances: 8 and 16 ohms; high-impedance for tape recording. Tubes: 2-ECC83, 12AV6, 6 AN8, 2-6CA7; GZ34 rectifier. Size, $51 / \mathrm{sx16} \mathrm{\times 11}{ }^{\prime \prime}$. For $110-120 \mathrm{v}$., 60 cycle AC. Shpg. wt., 35 lbs . 94 SU 738. NET.
.156 .75


Model 2521

## NEW MODEL 2521 TUNER-AMPLIFIER

## NET <br> 

\$14.70 Down
\$14.70 Down
Sensitivity: FM, 3.5
A sensitive FM-AM tuner, flexible preamplifier, and a 15 -watt amplifier on a single chassis. Combines smart, low-silhouette design with excellent performance. Features: Armstrong FM circuit; Foster-Seeley discriminator; AFC on FM; built-in line cord antenna for FM; built-in ferrite antenna for AM; speaker selector switch and rumble filter on rear chassis; shielded construction and grounded grid RF stage; multi-
plex outlet for "all-FM" stereo broadcasts; electronic tuning bar ; etc. plex outlet for "all-FM" stereo broadcasts; electronic tuning bar ; etc. Sensortion. Response: $\neq 0.5 \mathrm{db}, 20-20,000 \mathrm{cps}$. Inputs: : Tape Head, Magnetic Phono, Crystal or Ceramic Phono, Aux. Outputs: 4,8, 16 ohms and Hi-Z for recording. Controls: Bass and Treble. Off-On/Volume, Selector (FM, FM-AFC, AM, Tape, EUR, RIAA, Aux., Tuner). Loudness Compensation Switch. 12 tubes and rectifier. Saddle tan finish. $43 / 8 \times 16 \times 121 / 8^{\prime \prime}$. For $110-120 \mathrm{v} ., 60$ cycle AC. Shpg. wt., 21 lbs.
91 SU 672. NET.
.146 .95

## NEW MODEL 2215 "PACEMAKER" 10-WATT AMPLIFIER



Model 2215

NET

\$5.39 Down Head, Tuner, Aux. Controls: Selector (Tape, EUR, RIAA, Tuner, Aux.); tape recorder. Tubes: $2-6 \mathrm{~V} 6 \mathrm{GT}, 6 \mathrm{CQ8}$, ECC83; 6X5GT rectifier. Handsome saddle-tan finish. $35 / 8 \times 111 / 2 \times 9^{\prime \prime}$. For $110-120$ volts, 60 cycle AC. Shpg. wt., 10 lbs. 91 SX 671 . NET.


MODEL 2315 12-WATT HI-FI AMPLIFIER

NET<br>- Compact in Size-Fits Anywhere<br>\$6855<br>- Convenient "Magic Touch" Control<br>- 3 Positions of Record Equalization<br>\$6.86 Down

Ulta-cth Down
Utra-compact 12 -watt amplifier with controls. Perfect for the moderately priced home music system. "Magic Touch" switch combined with loudness controls gives unexcelled convenience. Permits turning amplifier on or off without disturbing loudness setting.
Only $4^{\prime \prime}$ high, the Model 2315 can be placed on a table, shelf, mantel, bookcase, etc. A continuous strip of light along the control panel functions as a pilot light and illuminates controls in the dark. Handsomely styled in rich, saddle-tan finish, the 2315 blends gracefully with any interior decorative scheme. Other features include: builtin preamplifier with three positions of record equalization and equalized tape head input; inputs for all associated hi-fi equipmentsimply plug in your record player, tape recorder or tuner and connect to speaker system; provides complete control versatility.
Power Output: 12 watts; handles 20-watt peaks. Frequency Response: $\pm 0.5 \mathrm{db}, 20$ to 20,000 cps. Distortion: Harmonic, less than $0.5 \%$; IM, less than $3 \%$. Hum: 75 db below 12 watts. 6 Inputs: $2-$ low-level Magnetic or Tape Head, Crystal or Ceramic Phono, high-level Magnetic, Radio Tuner, Auxiliary. Controls: "Magic Touch" Off-On/ Loudness; Bass; Treble; Level; Selector-Equalizer (Tape, RIAA, 78, EUR, Radio, Aux); Phono/Tape input selector (Low-level Mag, Tape and Ceramic/Crystal; low-level Mag, Tape or high-level Mag). Rumble filter switch. Hum balance adjustment. Output Impedances: 4, 8, 16 ohms and recording. Tubes: $2-6 \mathrm{~V} 6 \mathrm{GT}, 3-\mathrm{ECC} 33 / 12 \mathrm{AX} 7$; 5Y3GT rectifier. Two convenience AC outlets. Size, $4 \times 131 / 2 \times 9^{\prime \prime}$. For $\mathbf{1 1 0 - 1 2 0}$ volts, 60 cycle AC. Shpg. wt., 15 lbs.
94 SX 736. NET.
68.55


## NEW MODEL 2520 HI-FI FM-AM BASIC TUNER

NET

- AFC "Locks-In" FM Stations
$\begin{array}{ll}\text { \$9310 } & \begin{array}{l}\text { - Convenient "Floating Touch" Tuning } \\ \text { - Armstrong Circuit with Dual Limiters }\end{array} \\ \text { \$9.31 Down } & \text { - Space-Sparing Low-Silhouette Design }\end{array}$
Excellent features, superb styling, and true high-fidelity FM reception, plus full-range AM broadcast listening are yours with this well-designed tuner. Superior FM sensitivity is provided through the use of Armstrong circuit with dual limiters and a Foster-Seeley discriminator. "Floating Touch" tuning control makes selection of the desired station remarkably easy. Dual output jacks are provided for feeding a tape recorder or other device simultaneously while listening to the tuner. Automatic frequency control circuit assures drift-free reception and also contributes to ease of tuning. The tuner automatically locks to the station and stays there.
A switch is provided for turning the AFC off for tuning a weak signal adjacent to a strong one. A convenient $0-100$ logging scale is provided to help you make an accurate log of stations on either the FM or AM band. Retuning to your favorite stations is made easy when you keep a record of their exact location as indicated on the logging scale. Handsomely styled in rich, saddle-tan finish. the 2520 blends gracefully with any interior decorative mode. Ideal choice for a moderately priced high-fidelity music system.
Sensitivity: FM, 3.5 microvolts for 20 db quieting; AM, 20 microvolts for 20 db signal-to-noise ratio. Selectivity: FM, 6 db down at 200 $\mathrm{kc} ; \mathrm{AM}, 6 \mathrm{db}$ at 11.7 kc . Frequency Response: $\mathrm{FM}, 20-20.000 \mathrm{cps} \pm 1$ $\mathrm{db} ;$ AM, $20-5000 \mathrm{cps} 3 \mathrm{db}$. Power Output: 2 volts at $30 \%$ modulation. Controls: Selector (Off. AM, FM with AFC, FM without AFC), Tuning. 7 tubes plus rectifier. Size, $41 / 2 \times 13 \times 101 / 2^{\prime \prime}$. With antennas for Tuning. FM . For $110-120 \mathrm{v},. 60 \mathrm{cycle}$ AC. 14 lbs .
94 SU 735. NET.
93.10


## Some Facts About sTEREO.

It's easy to choose the equipment you need for your hi-fi system. There are three kinds of systems that can be made up from components in this catalog: a monaural, or standard system, easily convertible to stereo; an "add-on" package to convert your present high-fidelity system to stereo; and a complete stereo system.


HI-FI MONAURAL PHONO SYSTEM. The standard, or conventional, high-fidelity system consists of a record changer with cartridge (or turntable-
 arm-cartridge combination), amplifier with controls and speaker system. Choose a stereo cartridge for the changer-it will play regular LP records perfectly, and save time and expense when you decide to convert to stereophonic reproduction.

HI-FI STEREO "ADD-ON" SYSTEM. An "add-on" package converts your present
 high-fidelity system from monaural to stereophonic reproduction. The package includes a stereo cartridge, a second amplifier and a second speaker system. Installation of any new stereo cartridge in your present record changer or turntable arm requires a small amount of rewiring in the pickup arm-simple instructions for making this change are supplied.

COMPLETE HI-FI STEREO SYSTEM. A complete stereo system has a record changer with stereo cartridge, a stereo amplifier and two speaker systems. Professional-type installations often use a separate stereo preamplifier with two basic amplifiers, as well as a turntable-arm-cartridge combination. Stereo tape decks and stereo tuners are additional sources for breathtaking stereo sound.


X-101 Stereo Amplifler

## Superb NEW Stereophonic Components

## NET <br> 

NEW X-101 STEREO AMPLIFIER
\$18.95 Down
Masterfully designed, dual 20 -watt stereo amplifier and preamp-equalizer. Offers controls and inputs for any stereo or monaural sound source. Stereo chan- nels can be used in parallel or individually for monaural operation. Recording jacks are provided on both channels, for stereo or monaural recording, without interrupting normal listening. Record-monitor jack on one channel. Output: 20 watts per channel; 40-watt peaks. Response: 20-20,000 cps. Distortion: harmonic, $0.7 \%$ at rated output; IM. $2 \%$ at rated output. Hum - 80 db.

12 Inputs (2 each): LP-78-RIAA 1; RIAA 2; Tape; Tuner; Aux 1; Aux 2. Output Impedances: 4,8 and 16 ohms each channel. Controls: Selector (LP, 78, RIAA 1, RIAA 2., Tape, Tuner, Aux 1, Aux 2); Output Selector (Stereo Reverse, Stereo, Channel A plus B, Channel B plus A); On-Off/Master Volume: Channel Balance; Rumble, Filter; Loudness Control; Bass; Treble; 4 Input Level adjustments. Four EL84/6BQ5 output tubes. Less cabinet, below. $413 / 16 \times 133 / 8 \times$ put tubes. Less cabinet, below. ${ }^{413 / 16 \times 133 / 8 \mathrm{x}} \mathrm{I}{ }^{\prime \prime}$. For operation from $105-125 \mathrm{v} ., 50-60$ cycle AC. Shpg. wt. 30 lbs.
91 SU 684 . NET.
189.50


## NEW 400-C STEREO PREAMPLIFIER

NEW 101-R STEREO FM-AM TUNER NET

New stereo FM-AM tuner $\$ 22950$ of superior quality and der sign, and remarkable versatility. Independent FM \$22.95 Down and AM channels permit either stereo or monaural operation. FM Section: Gold-cascode highgain, low noise RF stage, four IF stages, two limiter stages, automatic gain control, and automatic interstation noise-muting. Offers maximum sensitivity and stability. Separate "Micro-Ray" tuning indicator; "tune" and "listen" switch positions. Sensitivity: $1.6 \mu \mathrm{~V}$ for 20 db of quieting. Low-impedance audio output stage.

AM Section: Tuned RF stage, temperaturecompensated converter stage, two IF stages, delayed automatic gain control circuit; $10-\mathrm{kc}$ sharp cut-off filter. Separate "MicroRay" tuning indicator. Sensitivity: $31 / 2 \mu \mathrm{~V}$ for $1 / 2-\mathrm{v}$. output. Froni Panel Controls: FM Selector (FM-Off, Tune, Listen); FM Tuning; AM Selector (On-Off, AM-Off, Broad, Sharp); AM Tuning. 7 output jacks. 14 tubes, 2 germanium diodes; EZ81/6CA4 rectifier. Less cabinet, below. $413 / 16 \times 151 / 8 x$ rectifier. Less cabinet, below.
$13^{\prime \prime}$. For operation from $105-125 \mathrm{v}$., $50-60$ cycle AC. Shpg. wt., 20 lbs .
91 SU 683. NET.
229.50

NET

## $\$ 690$

\$16.95 Down 16.95 Down bility. Provides 16 input combination of stereo on rear apron for any cations four output jand monaural applicontrols, give you unsurpassed versatility controls, give you unsurpassed versatility.
Provides correct equalization for all stereo and monaural tape and disc recordings.
16 Inputs (8 pairs): Eur-LP-RIAA 1; RIAA 2; Tape; Mic; Monitor; Tuner; Aux 1; Aux 2. 4 Outputs ( 2 pairs): Main (for 2 amplifierspeaker systems in stereo, monaural or crossover operation); and Recorder (for crossover operation); and Recorder (for
stereo or monaural recording). 9 Controls: Input Selector (with jeweled indicator lamps); Equalization Selector (Eur, LP, RIAA 1, RIAA 2, Tape, Mic); Output Selector (Stereo Reverse, Stereo, Channel A plus B, Channel A only, Channel B plus A, Crossover) ; Master Volume/On-Off; Channel Balance; Loudness Contour; Rumble Filter; Bass; Treble; and four Input Level Filter; Bass; Treble; and four Input Level 25,000 cps. Distortion: less than $0.15 \%$ for 2 -v. output; less than $0.3 \%$ for $5-\mathrm{v}$. output. Hum © Noise: absolutely inaudible-better than 85 db for high-level inputs. 6 tubes: EZ80/6V4 rectifier, plus selenium rectifier. Less cabinet, below. $4^{13 / 16 \times 151 / 8 \times 9^{\prime \prime} \text {. For op- }}$ eration from 105-125 v., 50-60 cycle AC. Shpg. wt., 10 lbs .
91 SU 625. NET.
169.50

## NEW 30-C MONAURAL PREAMPLIFIER-EQUALIZER

Carefully designed preamp-equalizer featuring Fisher's traditionally excellent performance and styling. Provides complete control facilities for monaural hi-fi systems-two 30-C preamps can be used as master stereo control in stereo music systems. Low-impedance audio output stage permits use of cable lengths up to 30 ft . Response: uniform from 20 to 20,000 cps. Distortion: $0.22 \%$ for $2-\mathrm{v}$. output; $0.3 \%$ for $3-\mathrm{v}$. output. Hum \& Noise: 72 db down for high-level tuner and auxiliary inputs; 60 db down for low-level inputs. Gain: 53 db for magnetic phono; 56 db for tape playback head; 54 db for mike; 19 db for high-level tuner and auxiliary inputs. 6 Inputs: RIAA-equalized Phono; NARTB-equalized Tape Head; Mic; Tuner; Aux 1 for high-level source; Aux 2 for Ceramic Phono. 2 Outputs: Amplifier; Tape Recorder (also has provision for tape monitoring). Controls: Selector (RIAA, Tape, Mic Tuner, Aux 1, Aux 2); Volume; Rumble Filter/Loudness contour; Bass; Treble/On-Off. Two input level adjustments; hum balance control. Tubes: EF86/6267, 7025, ECC81/ 12AT7; selenium rectifier. Less cabinet, below. $25 / 8 \times 121 / 4 \times 8^{\prime \prime}$. For $105-125$ v., $50-60$ cycle AC. Shpg. wt., 8 lbs.
91 SX 685 . NET.
59.50

## NEW PR-66 STEREO PREAMPLIFIER

Low-cost, dual-channel preamp with RIAAequalization for low-level stereo phono cartridges. No controls; for remote installation. Includes equalization for two stereo tape heads or microphones. Compact size permits mounting in virtually any manner. Has 2 phono input jacks; 2 output jacks. Low-impedance output. With mtg. hardware and output cables. HWD, $51 / 2 \times 8 \times 17 / 8^{\prime \prime}$. For 105-125 v., 50-60 cycle AC. 4 lbs . 91 S 686. NET.
29.95

## PR-6 LOW-COST PREAMPLIFIER

A self-powered unit of excellent quality and moderate cost. RIAA-equalized for phono; NARTB-equalized for tape head playback. Accommodates any low-level magnetic cartridge, basic tape player mechanism or microphone. Circuit employs two high-gain triode stages. Exclusive feedback design permits the use of long output leads. Size. $35 / 8 \times 33 / 4 \times 35 / 8^{\prime \prime}$. For $105-125$ v., $50-60$ cycle AC. Shpg. wt., $11 / 2 \mathrm{lbs}$.
98 S 528. NET.
12.95

## WOOD CABINETS FOR FISHER COMPONENTS

Hand-crafted, hand-rubbed hardwood cabinets for Fisher instruments. Designed to grace any room interior. Beautifully styled in the classic tradition, these fine furniture cabinets are the product of the same skilled workmanship that goes into the music reproducing instruments listed on both of these pages. Perfectly complement the distinctive, brushed brass panels of Fisher's high-fidelity components. Available in three finishes to cover most traditional or modern decors-mahogany, blonde and walnut. Specify choice of finish.

| Stock No. | Model | For | Size | Wt. | N |
| :---: | :---: | :---: | :---: | :---: | :---: |
| $915 \times 687 \mathrm{C}$ | TA5 | TA-500 Tuner-Amplifier | $91 / 8 \times 1411 / 32 \times 1315 / 16^{\prime \prime}$ | 5 lbs. | 22.95 |
| $915 \times 688 \mathrm{C}$ | RT9 | $90-\mathrm{R}$ and $90-\mathrm{T}$ Tuners | $161 / 4 \times 11 \times 81 / 4^{\prime \prime}$ | 8 lbs. | 22.95 |
| $915 \times 689 \mathrm{c}$ | FM9 | FM-90X Tuner | $91 / 8 \times 14^{11 / 32 \times 10^{\prime \prime}}$ | $41 / 2 \mathrm{lbs}$. | 19.95 |
| $915 \times 690 \mathrm{C}$ | 4 C | 400-C Stereo Preamplifler | 153/4x91/16x57/8" | $7{ }^{1 / 2}$ lbs. | 17.95 |
| $915 \times 691 \mathrm{c}$ | 10R | 101-R Stereo Tuner | 151/16 $\times 121 / 2 \times 6^{\prime \prime}$ | 8 lbs. | 22.50 |
| $915 \times 692 \mathrm{c}$ | 10X | X-101 Stereo Amplifier | $13.15 / 16 \times 121 / 2 \times 6^{\prime \prime}$ | 8 lbs. | 24.95 |
| $915 \times 693 \mathrm{C}$ | 3 C | 30-C Monaural Preamplifier | $12^{13 / 16 \times 171 / 8 \times 31 / 4 "}$ | lbs. | 12.95 |



## TA-500 FM-AM TUNER-AMPLIFIER

NET


A modern classic in deign and elegant styling

## \$24.95 Down

 Combines a highly sensitive FM-AM tuner, powerful 30 -watt amplifier and master audio control on one compact chassis! FM Section: Dual triode, cascode circuit with tuned RF stage and 3 IF stages followed by a wideband detector for maximum capture ratio. Highly sensitive; operates on signals as low as 1 microvolt. AM Section: Tuned RF stage; diode detector circuit for minimum distortion. Sensitivity is better than 3 mi crovolts for full output. Professional meter for micro-accurate tuning on FM and AM.Audio Section: 4 high-impedance inputs; low-impedance tape recorder output; phono and tape head preamp-equalizer. Response is $\pm 1 \mathrm{db}, 16$ to 32,000 cps. Harmonic distortion is less than $0.5 \%$ at 30 watts; IM, less than $1 \%$. Hum and Noise, -80 db . Controls: Tuning; Off-On; Volume-Loudness; Bass; Treble; Selector-Equalizer (AM, FM, AES, RIAA, LP, NAB, Tape, Aux 1, Aux 2). Output Impedances: 4, 8 and 16 ohms. 12 tubes; 2 rectifiers; 2 crystal diodes. $63 / 8 \times 133 / 8 \times 133 / 8^{\prime \prime}$. Less cabinet; see page 50 . For operation from $105-125 \mathrm{v}$., $50-60$ cycle AC. Shpg. wt., 26 lbs.
98 SU 506. NET
249.50


90-T FM-AM Tuner

## FM-90X "GOLD CASCODE" BASIC FM TUNER

Precisely designed for the most exacting FM listener, the FM-90X is easily one of the finest FM tuners available. Employs a unique gold-cascode RF amplifier tube and highly specialized circuitry to reach the theoretical limits of sensitivity- $1 / 2$ microvolt! Two tuning meters assure extremely accurate tuning even by an unskilled user-and the exceptional stability of its circuitry eliminates any retuning resulting from warm-up drift. Outstanding features: Exclusive gold-cascode RF amplifier; silver-shielded front end with dual-triode, cascode-tuned RF stage; 4 IF stages; full, wide-band detector for maximum capture ratio; balanced antenna inputs for maximum signal transfer; variable interstation noise suppressor; etc. Sensitivity: Full limiting on signals as low as $1 / 2 \mu \mathrm{v} ; 3 / 4 \mu \mathrm{v}$ for 20 db of quieting; $11 / 4 \mu \mathrm{v}$ for 30 db .3 Outputs: Main, Recorder, Multiplex. 2 Controls: Variable Interstation Muting/Off-On; Station Selector. 2 Meters: Signal-strength, for orienting antenna; Tuning for center-of-channel. Includes FM folded dipole antenna. 8 tubes: 4 germanium diodes: 6X4 rectifier. Size, $61 / 8 \times 1313 / 32 \times 8^{3} / 8^{\prime \prime}$. Less cabinet; see page 50 . For operation from $105-125 \mathrm{v}$. $50-60$ cycle AC. Shpg. wt., 15 lbs. 99 SU 186. NET.
169.50

## 90-R FM-AM BASIC TUNER

A triumph of engineering excellence, the $90-\mathrm{R}$ offers the critical listener the ultimate in FM-AM reception. Among the many design highlights that contribute to its dazzling performance are: "Micro-Ray" tuning indicator for pin-point FM-AM tuning accuracy; pushbutton interstation muting on FM; pushbutton-controlled selectivity on AM; low-impedance output to permit use up to 100 ft . away from amplifier without impairing signal; etc. FM Section: Gold cascode RF amplifier stage: silver-plated front end; dual dynamic limit ers; wide-band ratio detector. Sensitivity, $0.85 \mu \mathrm{v}$ for 20 db of quieting. $A M$ Section: Sensitivity better than $3 \mu \mathrm{v}$ for rated output; switch-selected choice of built-in ferrite loop antenna or external antenna; two IF amplifier stages with 3 -position pushbutton selected bandwidth; 10 -kc whistle filter; special antenna input circuit for maximum signal-to-noise ratio. Controls: Selector (FM, AM) ; AM Tuning, FM Tuning; On-Off; Level Set control 12 tubes; 6 crystal diodes; 6 V 4 rectifier. Size, $7 \times 151 / 8 \times 10^{7} / 8^{\prime \prime}$. Less cabinet; see page 50. For 105-125 v., $50-60$ cycle AC. Shpg. wt., 21 lbs. 94 SU 341 . NET.
199.50

## NEW "200" 60-WATT BASIC AMPLIFIER

Tremendous reserve power, dependable performance and clean, undistorted reproduction with this new amplifier- 60 -watt output, with 160 -watt peaks, is more than ample even for normally overwhelming orchestral passages! Drives even the lowest efficiency speaker system without overload, clipping or distortion. Advanced features include: Z-Matic variable damping with damping factor range from 0.1 to 10 -more than sufficient for every known make of speaker system; special 70.7 -volt output for multiple speaker systems; choke input filter system; separate bias voltage supply with dual-triode vacuum tube bias voltage regulator. Output: 60 watts; 160 -watt peaks. Response: $\pm 1 / 2 \mathrm{db}, 20$ to 20,000 cps. Distortion: harmonic, less than $0.3 \%$ at full rated output; IM, less than $0.5 \%$. Hum ©ं Noise: - 90 db . Output Impedances: 4, 8 and 16 ohms; plus $70.7-\mathrm{v}$. output. Controls: Z-Matic Damping; Input Level; Bias; Speaker Impedance; Phase Inverter Balance. Two EL34/6CA7 output tubes. $83 / 4 \times 141 / 4 \times 121 / 2^{\prime \prime}$. For $105-125$ v., $50-60$ cycle AC. Shpg. wt., 50 lbs. 92 SU 416 . NET.
179.50

## Burefl quality stereo components



## Deluxe Stereo Pair

## NEW DB230 STEREO AMPLIFIER

Deluxe stereo amplifier-preamplifier for controlling all stereo sources-tapes, records, FM-AM radio broadcasts, etc. Rated at 30 watts per channel, the DB230 delivers an output of 60 watts for monaural sound sources, with 120 -watt peaks! Deluxe features include: feedback tone control circuits for low distortion; premium-type 7025 audio tubes used in critical circuit stages; stereo phasing switch for eliminating "hole-inmiddle effect during stereo use; full array of controls; etc.

Response: $\pm 1 / 2 \mathrm{db}, 20-20,000 \mathrm{cps}$. Distortion: Harmonic, less than $1 \%$ at rated output; IM, less than $2 \%$. Hum: - 85 db .10 Inputs ( 5 per channel): Magnetic Phono; Ceramic-Crystal Phono: Tape; Tuner; Auxiliary. Controls: Input Selector (Tape, US78, RIAA. Tuner, Auxiliary); Bass; Treble; Loudness; Hi and Lo Filters; Stereo-Monaural switch: Channel 1 Tape Preamp OffOn; Channel 2 Tape Preamp On-Off; BalOn; Channel 2 Tape Preamp On-Off; Bal-
ance; Volume; Power Off-On; Phasing; ance; Volume; Power Off-On; Phasing;
Cartridge (Stereo-Monaural). Output Impedances: 4, 8, 16 and 32 ohms per channel. Four 60W5 output tubes. Less cage; takes CEG type on page 53 . Size, $53 / 4 \times 15 \times 135 / 8^{\prime \prime}$. For operation from 110-120 v., 50-60 cycle AC. Shpg. wt., 39 lbs.
91 SU 659. NET
169.50

NEW ST-662 FM-AM STEREO TUNER
An ideal companion unit to the Model DB230 amplifier at left. Excellent sensitivity and high selectivity assure clear reception of stereo and monaural FM-AM broadcasts. Separate tuning eye indicators for FM and AM allow pin-point tuning. Automatic frequency control on FM assures utmost ease in tuning. Can be momentarily switched off to permit tuning of weak or distant stations. Automatic volume control on both FM and AM. Slide switch on rear of chassis permits convenient use of the Mode ST-662 stereo tuner in monaural high fidelity music systems.

Sensilivity: FM, $21 / 2$ microvolts for 30 db of quieting; AM, (with built-in loopstick antenna), 100 microvolts for 20 db signal o-noise ratio. Audio Output: 1 volt cathode ollower. Controls: Tuning; Selector Off-On Stereo, AM, FM, AFC out). Outputs: AM FM, Monaural, Multiplex. Tubes: 6AB4, 2 -12АТ7, 3-6AU6, 2-6BA6, 6BE6, 2EM840 tuning eye indicators; 2-matched 1N542 crystal diodes; 1N541 crystal di ode; EZ80 rectifier. Includes line-cord antenna for $\mathbf{F M}$; loopstick antenna for AM $43 / 4 \times 15 \times 121 / 4^{\prime \prime}$. Less cage; takes BEG type on page 53 . For $110-120 \mathrm{v} ., 50-60$ cycle AC Shpg. wt., 19 lbs .
91 SU 660. NET
189.50

"Challenger" Stereo Components

## NEW AC210 STEREO AMPLIFIER

Outstanding performance, more features and glamorous color styling-are yours with this skillfully designed stereo amplifierpreamplifier. Features dual 10 -watt amplifier sections for any stereo sound source tapes. records or FM-AM broadcasts-and can be used as a complete 20 -watt monaural amplifier. The AC210 can also be used as the second 20 -watt channel of a stereo sys-tem-its complete set of stereo controls permits use with any existing monaural basic mits use with any existing monaural basic amplifier! Speaker phasing switch allows. perfect stereo sound "spread"-no "holes" and-black color styling.

Oulput: 10 watts per channel for stereo; 20 watts for monaural use. Response: $\pm 1 \mathrm{db}$, 20 to 20.000 cps. Harmonic Distortion: less than $1 \%$ at rated output. Hum ${ }^{\circ}$ Noise: -80 db .10 inputs ( 5 per channel): Magnetic Phono, Ceramic-Crystal Phono, Tape, Tuner, Auxiliary. Outputs: Channel 1 Speaker, Channel 2 Speaker, Channel 1 Tape, Channel 2 Tape. Controls: Selector (Tape, Phono, Radio Tuner, Aux) ; Bass; Treble; Off-On/ Volume: Balance; Scratch Filter: Rumble Filter; Stereo-Monaural switch (Channel 1. Channel 2, Stereo Normal, Stereo Invert); Speaker Phasing. Ottput Impedances: 4, 8, 16 and 32 ohms per channel. With case. $43 / 8 \times 151 / 8 \times 11^{\prime \prime} .4-6 A Q 5$ output. For operation from 110-120 v., 50-60 cycle AC. Shpg. wt., $121 / 2 \mathrm{lbs}$.
91 SU 661 . NET
99.95

NEW TC200 STEREO FM-AM TUNER
Wonderful three-way listening with Bogen's TC200 "Challenger" Stereo FM-AM Tun er! Provides exceptional FM reception, AM reception, and new stereophonic listening from stereo FM-AM broadcasts. Matches the AC210 amplifier in performance and in color styling-together they form a high-fidelity stereo team of excellent quality.
FEATURES. Highly sensitive circuit offers clear reception of weak and distant stations. Excellent selectivity eliminates interference from adjoining stations. Automatic frequency control on FM greatly aids in "lockingn'" FM station of your choice. Automatic volume control on FM and AM prevents volume control on FM and AM prevents eatures use of crystal diodes for freedom rom hum and distortion.
Sensitivity: FM, 3 microvolts for 30 db of quieting; AM. (with loopstick antenna). 100 microvolts for 20 db signal-to-noise ratio. Controls: Tuning; Off-On; AM OffOn; FM Off-AFC Out-FM On. Audio Output: 1 volt. FM and AM. Outputs: AM, FM, Multiplex. Tubes: 6AB4, 12AT7, 6BE6, 2-6BA6, 2-6AU6; 2-matched 1N542 crystal diodes; 1 N541 crystal diode; EZ80 rectifier. Built-in line cord antenna for FM ; rectifier. Built-in line cord antenna for FM ; AM ferrite loopstick antenna. Provision for adding external AM $^{\prime \prime}$ and FM antennas.
Size, $43 / 8 \times 151 / 8 \times 11^{\prime \prime}$. With case; color-styled in gold-and-black. For 110-120 v., 50-60 cycle AC. Wt., $161 / 2$ lbs.
91 SU 662. NET
129.50


## NEW DB212 STEREO AMPLIFIER

Moderateiy priced stereo ampiiñer-preamplifier unit. Serves as two 12 -watt amplifiers for use with any stereo sound source; or as single 24 -watt amplifier for monaural use Handsome and versatile the DB212 has many excellent features, including a speake phasing switch for eliminating "hole-inmiddle' effect during stereo use

Output: 24 watts (2-12-watt channels). Response: $\pm 1 \mathrm{db}, 20-20,000 \mathrm{cps}$. Harmoni Distortion: $0.5 \%$ at rated output. Noise \& Hum: -80 db . Controls: Selector (Tape Phono, Radio Tumer Aux); Function : Chanel 1, Chanel 2 Channels and 2; Stereophonic: Normal, Inverted); Volume; Bass; Treble; Hi-Filter; Lo Filter 2-pos. Speaker Phasing; Off-On. NARTB tape and RIAA-phono equalization. Ouiput Impedances: 4, 8 and 16 ohms per channel. Four 6 V6 output tubes. Size, $43 / 4 \times 15 \times 121 / 4$ Less cage; takes BEG type on page 53. For operation from 110-120 v., 50-60 cycle AC Shpg. wt., 20 lbs. 91 SU 613 . NET.
115.00


## NEW ST10-AG "ADD-ON"

## STEREO ADAPTER-AMPLIFIER

Designed to convert your present monaural hi-fi system into a 2 -channel stereophonic system. Add only another speaker and stereo sound source. The new ST10-AG, successor to the ST-10, has inputs for accepting any stereo signal-records, tapes or FM AM broadcasts. Incorporates a 2-channel preamp and 10 -watt amplifier, with simultaneous volume control over both channels Response: $\pm 1 \mathrm{db}, 20$ to $20,000 \mathrm{cps}$. Distor tion: $1 \%$ at 10 watts output. Two 6AQ5 out Size, $61 / 2 \times 53 / 4 \times 12^{\prime \prime}$. With cage. For $110-120$ ., 50-60 cycle AC. Shpg. wt., 12 lbs 91 SX 663. NET.
59.50


NEW STA-1 STEREO ADAPTER
An easy-to-use, low-cost adapter that permits single-knob control of the Volume and Balance in stereo systems using two amplifiers. For use only with new Bogen amplifiers and Models DB130 and PR100A. The STA-1 permits listening to either stereo or monaural sound; balances the output of two speakers; switches speakers from one amplifier to the other. Controls: Stereo-Monauplifier to the other. Conirols: Stereo-Monaural switch; Normal-Reverse switch; single
Volume-Balance control (concentric knob). Includes cables. With case. Size, $43 / 4 \times 31 / 2 \times$ $5^{\prime \prime}$. Shpg. wt., $21 / 2$ lbs.
91 SX 614 . NET
16.00


## NEW DB125 A MPLIFIER

An outstanding 25 -watt amplifier, featuring complete control facilities, newest circuitry, and deluxe styling. Has variable damping control, 3-position speaker selector switch, controlled positive feed-back circuit for extremely low distortion, etc. Output: 25 watts. Response: $\pm 1 / 2 \mathrm{db}, 20-20,000 \mathrm{cps}$. Distortion: harmonic, less than $0.3 \%$ : IM, less than $1 \%$. Hum \%' Noise: -80 db . Controls: Selector (Tape, 78, Old, RIAA, Radio, Aux) ; Bass; Treble; Off-On/Volume; Loudness; Lo Filter; Hi Filter; Speaker (A, AB, B). Chassis Controls: Damping Off-On; Stereo Adapter Off-On; Balance. Bias and Hum adjustments. Oulput Impedances: 4, 8 and 16 ohms; tape output. 2-6973's in output. Less cage; takes AEC type below. $43 / 4 \times 12 \mathrm{x}$ $12^{\prime \prime}$. For operation from $110-120 \mathrm{v}$., 50-60 cycle AC. Shpg. wt., 18 lbs.
91 SU 664. NET.
99.50

## NEW DB114 AMPLIFIER

Not illustrated-similar to DB125 above. Has stereo input for adding STA-1 adapter. Oulput: 14 watts. Distortion: Harmonic, less than $0.5 \%$; IM, less than $1 \%$. Response: $\pm 1 / 2 \mathrm{db}, 20-20,000 \mathrm{cps}$. Controls: Selector (Tape, 78, RIAA, Radio, Aux); Bass; Treble; Off-On/Volume; Loudness; Rumble Filter; 3-pos. Speaker Selector. Output Impedance: 4, 8, 16 ohms. 2-6V6GT output. $43 / 4 \times 12 \times 121 / 4^{\prime \prime}$. Less cage; takes AEG type below. For $110-120$ v., $50-60$ cycle AC. Shpg. wt., 16 lbs.
91 SX 629. NET
69.50


NEW FM51 BASIC FM TUNER
Exceptionally fine basic FM tuner. Has automatic frequency control to "lock in" stations, and temperature compensated oscillator to prevent drifting. AFC defeat switch permits tuning weak stations adjacent to strong ones. Tuning-eye simplifies tuning. Sensitivity: $21 / 2 \mu \mathrm{v}$ for 30 db quieting. Output: 1 v. Controls: Tuning; Off-On (with AFC)-On (AFC out). 6 tubes, rectifier; tuning eye; $2-1$ N542 diodes. $43 / 4 \times 12 \mathrm{x}$ $121 / 4^{\prime \prime}$. With built-in line cord antenna. Less cage, takes AEG below. For 110-120 v., 5060 cycle AC. Shpg. wt., 14 lbs. 91 SU 667. NET
104.50


NEW AM91 BASIC AM TUNER
Has 3 tuned RF circuits; built-in antenna; $10-\mathrm{kc}$ filter; etc. 4 tubes plus rectifier and tuning eye. Size, $43 / 4 \times 12 \times 121 / 4^{\prime \prime}$. Less cage; takes AEG type listed at right. For operation from $110-120$ volts. $50-60$ cycle AC. Shpg. wt.. 14 lbs.
91 SU 668. NET
91.50


Deluxe FM-AM Basic Tuner \& 35-Watt Amplifier

## NEW T661 BASIC FM-AM TUNER

Deluxe styling and truly outstanding performance are skillfully blended in the makeup of this splendid tuner. FM section has extremely sensitive and selective circuitry employing Foster-Seeley discriminator and dual limiter; low-noise front section consists of tuned RF mixer and two IF stages. Temperature-compensated oscillator prevents drifting off station. Automatic frequency control for "lock-in", tuning, with defeat position for tuning in weak or distant stations. AM section offers a $10-\mathrm{kc}$ whistle filter; automatic volume control; special-design, built-in ferrite loopstick antenna; and cathode follower output. Unique FM-AM tuning indicator.

Sensitivity: FM, $21 / 2$ microvolts for 30 db of quieting; AM, 5 microvolts for 20 db signal-to-noise ratio. Selectivity: FM, 180 $\mathrm{kc}, 3 \mathrm{db}$ down; AM, $10 \mathrm{kc}, 3 \mathrm{db}$ down. Audio Output: 1 volt. Controls: Selector (OnOff, AM, FM, AFC Out); Tuning. 9 tubes; 2 matched 1N542 crystal diodes; 6X4 rectifier. Built-in FM and AM antennas. $43 / 4 \times 12 \times 121 / 4^{\prime \prime}$. Less cage; takes AEG type. below. For $110-120$ v., $50-60$ cycle AC. Shpg. wt., 16 lbs .
91 SU 665. NET
129.50


## TOP-RATED DB130-A AMPLIFIER

This 35 -watt amplifier offers exceptional versatility plus full-toned, perfectly-balanced reproduction. Extremely uniform output, low distortion and high power handling capacity assure faithful sound reproduction. Loudness contour selector for correct tonal balance even at very low listening levels. Variable damping control provides cleaner bass response by precisely coupling amplifier to speaker system.

Output: 35 watts with $1.5 \%$ IM distortion. Harmonic Distortion: $0.3 \%$. Response: $\pm 0.5 \mathrm{db}, 15-30,000 \mathrm{cps}$. Hum: (Below rated output): Magnetic Inputs, -60 db ; other inputs, -80 db . Output Impedance: 4, 8 and 16 ohms. Inputs: High-level Magnetic Phono, Low-level Magnetic Phono: Tuner; Phono, Low-level Magnetic Phono: Tuner;
Tape; Tape Monitor; Auxiliary Crystal Phono. Controls: On-Off; Loudness-Contour; Bass; Treble; Selector (Phono, Radio, Tape, Aux.); 7-pos. Equalizer (Eur 78, U.S. 78, AES, RIAA, COL-LP, NAB, POP); 3-pos. Low Filter; 3-pos. High Filter Gain; 3-pos. Speaker Selector. Size, 43/4 15 x $121 / 4^{\prime \prime} .2-6 A V 5 G A / G T$ in output. Less BEG cage, below. For $110-120$ v., 60 cycle AC. Shpg. wt., 24 lbs.
91 SU 666 . NET.
124.50


## Low-Cost "Challenger" Matched Components

## NEW AC10 AMPLIFIER

True high-fidelity performance and control flexibility at low cost. One of the best buys in budget-priced hi-fi components, the AC 10 "Challenger" 10 -watt amplifier offers many fine features. Separate bass and treble controls; loudness-contour selector for choosing the most suitable volume levels without loss of high or low frequencies; instant selection of popular tape and record equalization positions; and excellent response with low distortion and noise levels. Use two AC10's and STA-1 adapter (see page 52), for stereo use. Metal cabinet is handsomely styled in black, with contrasting black and gold panel.

Output: 10 watts; 20 -watt peaks. Response: $\pm 1 \mathrm{db}, 20-20,000 \mathrm{cps}$. Distortion: $1 \%$ at rated output. Hum $\mathfrak{\rho}$ Noise: -75 db .5 In puts: Tuner, Magnetic Phono, Crystal Phono, Tape, Auxiliary. Controls: Rumble Filter; Loudness; Selector-Equalizer (Tape, 78, RIAA, Phono, Tuner Aux.); Volume-On-Off; Bass; Treble. Output Impedances: 4,8 and 16 ohms. 2-6AQ5 output. Size, $41 / 4$ $\times 121 / 8 \times 83 / 4^{\prime \prime}$. With cage. For $110-120$ v., $50-$ 60 cycle AC. Shpg. wt., 10 lbs. 91 SX 621. NET.
55.00

## NEW TC100 BASIC FM-AM TUNER

A perfect companion to the AC10 amplifier in styling, price and performance, the TC 100 tuner features circuitry using a carefully matched pair of crystal diodes for freedom from hum and distortion. FM section employs an Armstrong circuit with limiter, and Foster-Seeley discriminator: AM section is a superhet circuit with automatic volume control. Automatic frequency control on FM pin-points and holds the desired station-automatically finds the optimum signal of an FM station as you dial in its vicinity. Other features are: illuminated dial with hairline indicator; flywheel tuning control for effortless, accurate tuning; black-and-gold color styling to match the AC10 amplifier; etc.

Sensitivity: FM, $31 / 2$ microvolts for 30 db quieting; AM, 5 microvolts for 20 db signal-to-noise ratio. Controls: On-Off; AM-F M; AFC Out; Tuning. Audio Output: Amplifier and Tape, 1 volt. Built-in FM and AM antennas. 6 tubes; matched pair of 1 N542 crystal diodes; 6X4 rectifier. 41/4×121/8x $83 / 4^{\prime \prime}$. With cage. For $110-120$ v.. $50-60$ cycle AC. Shpg. wt., 13 lbs.
91 SU 622. NET.
87.50

## METAL CAGES FOR BOGEN COMPONENTS

91 SX 630. Type AEG. $43 / 4 \times 12 \times 121 / 4^{\prime \prime}$. For AM91, FM51, T661, DB125, DB114. NET . 6.00
91 SX 617. Type BEG. $43 / 4 \times 15 \times 121 / 4^{\prime \prime}$. For DB130-A, ST662, DB212. NET........... 7.50
91 SX 618. Type CEG. $53 / 4 \times 15 \times 135 / 8^{\prime \prime}$. For DB230. NET.

C. 85 "ADD-ON" Stereo Preamp


MR-55 FM-AM Tuner


MC-30 30. Watt Amplifier


MC-60 60-Watt Amplifier

## NEW C-8S "ADD-ON" STEREO PREAMP

NET
New audio control unit that offers unusual flexibility of

$\$ 9900$
$\$ 9.90$ Down equalization and tone compensation. For use with hifi systems that employ a separate preamplifier. The offers bass and treble er gain, balance and sinnel; provides ter gain, balance and stereo mode controls. Controls: 5-pos. Rumble Filter; Record Compensator with 10 slide switches; 5 -pos. Aural Compensator; Selector (Tape, Tuner, Tape Head, Phono 1, Phono 2); Bass; Treble; Stereo Mode Selector (Stereo, Stereo Reverse, Left Channel, Right Channel, Monaural-through both amplifiers and speakers); Stereo Balance:Off-On/ Master Gain. Size, $31 / 2 \times 10 \times 71 / 2^{\prime \prime}$. Less cabinet (listed below). Takes operating power from MC-30 or MC-60 basic amplifiers. Shpg. wt., 9 lbs.
91 SU 694. NET
99.00

## MODEL C-8 PREAMPLIFIER

Not illustrated. Same as the C-8S, but less stereo features. Takes operating voltages from MC-30, MC-60 basic amplifiers. Less cabinet, below. Shpg. wt., $71 / 2$ lbs. 93 SU 889. NET
88.50

WOOD CABINETS FOR C-8S AND C-8 UNITS. Size, $43 / 4 \times 119 / 16 \times 73 / 4^{\prime \prime}$. Shpg. wt., $11 / 4$ lbs. 93 SX 898. Mahogany. NET 93 SX 709. Blonde. EACH
10.00

## NEW MR-55 BASIC FM-AM TUNER

 NET
## $\$ 24900$

$\$ 24.90$ Down
For the audio connoisseur. Two years in the making, the MR-55 sets new standards in distor-tion-free FM-AM reception. AM Section. Sensitivity: $11 / 2 \mu \mathrm{v}$. Disortion: less than $1 \%$ at $100 \%$ modulation Exceptionally strong automatic volume control; less than 4 db audio output change with input changes from 10 to 100,000 microvolts. 3 positions of AM sensitivity 3 positions of bandwidth. Front end has 21 kc constant bandwidth, band pass input. Whistle filter.

FM Section. Sensitivity: $3 \mu \mathrm{v}$ at $100 \%$ modulation for a total of less than $3 \%$ total noise and distortion. Capture ratio: 1 to 0.8. 4 IF amplifiers. IF band-width: 200 kc ; flat on top. 2 limiters; $2-\mathrm{mc}$ limiter and detector bandwidth. Ultrasonic muting. Distortion-free automatic frequency control with separate detector; completely variable. Hum: 70 db below full signal. Controls: Off/FM AFC; AM Sensitivity; Off-On/Volume; FM ListenTune; AM Broad-Medium-Sharp; Phono. $43 / 4 \times 143 / 4 \times 12^{\prime \prime}$. Less cabinet. below. For 110 120 v., 50-60 cycle AC. $271 / 2$ lbs. 91 SU 619. NET.
249.00

WOOD CABINETS FOR MR-55. Shpg. wt., 5 lbs. In choice of mahogany, blonde or walnutspecify finish when ordering.
91 SX 695C. NET EACH.

## MC-30 30-WATT BASIC AMPLIFIER

Offers flawless audio reproduction. Special circuit employs "unity coupling"' for greater power output without distortion. For use with C-8S or C-8 preamps listed at left, or any other quality preamp or tuner with full set of controls. Only 0.5 v . input is required for full 30 watt output. Response: $\pm 0.1 \mathrm{db}, 20$ to $30,000 \mathrm{cps}$. Distortion: Harmonic, less than $1 / 3 \%$ at 30 watts; IM, less than $0.5 \%$. Hum \&o Noise: - 90 db . Output Impedances: 4, 8, 16, 600 ohms and 70.7 v. 2-1614's in output. Black and chrome styling. $8 \times 13 \times 8^{\prime \prime}$. For $110-120$ v., 50-60 cycle AC. Shpg. wt., 36 lbs. 93 SU 895. \$14.35 Down. NET. . 143.50

## MC-60 60-WATT BASIC AMPLIFIER

Offers exceptional reserve power capacity -provides extremely faithful reproduction of the entire audio range. Perfect for use with C-8S or C-8 preamps listed at left, or other preamplifiers with full set of controls. Output: 60 watts continuous. Response: $\pm 0.1 \mathrm{db}, 20$ to $30,000 \mathrm{cps}$ at 60 -watt output. Distortion: harmonic, less than $0.3 \%$ at 60 -watt output; IM, less than $0.5 \%$. Hum ${ }^{\circ}$ Noise: 90 db or more below rated output. Output Impedances: 4, 8, 16, 600 ohms and 70.7 v . Input Impedance: $1 / 2$ meg for $1 / 2$-volt input and 0.13 meg for $21 / 2$-volt input. Tubes: 2-12AX7, 12AU7, 12BH7, 2- 6550 output tubes; 2-5U4GA rectifiers. Chrome and black styling. Size $8 \times 141 / 4 \times 10^{\prime \prime}$. For $110-120$ v., $50-60$ cycle AC. 44 lbs 93 SU 899. \$19.85 Down. NET. . 198.50


## AUDIO CONSOLETTE PREAMP

Superbly designed unit. Employs depositedcarbon resistors, silvered mica capacitors, terminal board construction, etc. Spectacularly low distortion and noise. Hum: Inaudible, full gain. Response: $\pm 1 \mathrm{db}, 20-$ $60,000 \mathrm{cps} . I M: 12 \mathrm{v}$. RMS, $0.5 \%$. 7 Inputs: 3-low-lev. Mike, low or med.-lev. Mag.; 4-high-lev. for Tuner, Tape, TV, Extra. Cathode follower output. Tape output affected by record equalizers only. Controls: 6 -pos. Input Selector; Tape-Playback or Monitor; 6-pos. Bass; 7 -pos. Treble; Loudness; Bass and Treble Tone; HF Filter; OnOff. Less cabinet. $45 / 8 \times 141 / 2 \times 6^{\prime \prime}$. For $110-120$ v., $50-60$ cycle AC. 13 lbs .

91 SU 605. \$15.30 Down. NET. . 153.00 WOOD CABINET FOR ABOVE. Available in mahogany, blonde or walnut veneers-specify choice when ordering. Shpg.wt., 3 lbs. 91 SX 699C. NET EACH

## 40-WATT BASIC AMPLIFIER

MODEL 2A. Deluxe, 40-watt ultra-linear amplifier. Switch permits 20-watt triode operation to protect low-power speaker systems. Built-in meter and switch for Bias, DC Balance, AC Balance. Variable damping. Hum: -90 db . Response: $\pm 1 \mathrm{db}, 15-$ 45,000 cps. Distortion: Harmonic, under $0.5 \%$ to $10 \mathrm{kc} ; I M, 0.5 \%$ at 40 watts. Impedances: 4, 8, 16 ohms. $61 / 2 \times 15 \times 91 / 2^{\prime \prime}$. For $110-120$ v., 50-60 cycle AC. 46 lbs.
99 SU 006. $\$ 19.80$ Down. NET. . I98.00

## 30-WATT BASIC AMPLIFIER

MODEL 5A. Same as above, but 30 -watt output and some exterior changes. Ideal for use in pairs in stereo systems. or with Marantz electronic crossover. $73 / 8 \times 151 / 4 \times 6^{\prime \prime}$. Less cage, below. Shpg. wt., 35 lbs.
92 SU $810 . \$ 14.70$ Down. NET . 147.00 92 S 811 . Cage for above, 1 lb . NET. . 7.50

Distortion-free unit separates audio from preamp for systems using an amplifier for each frequency range. Basically a 2 -channel unit-may be cascaded for further separation. Has level and crossover ( 12 pos.) controls for both bass and treble channels. $I M$ : less than $0.1 \%$ @ 2 v. out. Power supply, $25 / 8 \times 31 / 2 \times 6^{\prime \prime}$. Less cabinet. 8 lbs.
93 SU 532. $\$ 9.00$ Down. NET. ... 90.00
WOOD CABINETS FOR ABOVE.Specify choice of mahogany, blonde or walnut. 2 lbs.
92 SX 813C. NET EACH
15.00

## NEW STEREO CONTROL UNIT

Has Master Selector for stereo/monaural control of all inputs. Use with preamps having tape monitor facility. Master Volume control, etc. $35 / 8 \times 91 / 2 \times 41 / 2^{\prime \prime} .7$ lbs. 92 S 812 . $\$ 4.50$ Down. NET.
45.00

## S-4000 "ADD-ON" STEREO AMPLIFIER

Converts any monaural high-fidelity system o stereo operation, with complete stereo monaural control facilities. Can be used with basic amplifier, or any other amplifier Features dual switching, single preamp and ingle 20 -watt amplifier section. Controls in clude dual-loudness, stereo normal/reverse switch and phase-inversion switch. Mode seector (stereo, stereo reverse, monaural 1 monaural 2, monaural 1 and 2), also operates group of indicator lights. All other con trols are identical to the S-1000 II 36-wat amplifier below. Output: 20 watts; 40 -wat peaks. $I M$ Distortion: less than $11 / 2 \%$ at full rated output. Response: $\pm 11 / 2 \mathrm{db}, 20$ $20,000 \mathrm{cps}$ at full output. Hum ơ Noise: 80 db below rated output. RIAA phono input; NARTB tape head input; 3 high-level in puts. Less case, at right below. $4 \times 14 \times 101 / 2^{\prime \prime}$ For operation from 110-120 v., 60 cycle AC. Shpg. wt., 23 lbs.
91 SU 873. \$10.95 Down. NET. . . 109.50

## S-1000 II 36-WATT AMPLIFIER

A fine example of functional styling and complete control flexibility, the S-1000 II meets every requirement of the hi-fi music over. Employs inverse feedback circuitry and special output transformer to attain undistorted power output (below $1 / 2 \%$ at 36 watts)! Output: 36 watts; 72 -watt peaks Response: $\pm 1 / 2 \mathrm{db}, 20$ to $20,000 \mathrm{cps}$ at 36 watts. Hum oo Noise: Volume control, -90 db ; radio input, -80 db ; Phono, -60 db . 6 Inputs: 2-Magnetic Phono, Tape Head or Mike, 4-Tuner, Tape Recorder, TV, etc. 11 Controls: Push-button switches for Presence, Scratch Filter, Rumble Filter and Phono Level; slide switches for Tape Monior and Loudness In-Out; Selector (Tape Phono, A, B, C); Equalization (LP, Lon RIAA-AES, Eur, Tape, Mic); Bass; Treble and Off-On Loudness. Four EL84 output tubes. $4 \times 14 \times 101 / 2^{\prime \prime}$. Less case, right. For $110-120$ v., 60 cycle AC. 23 lbs. 94 SU $331 \$ 10.95$ Down. NET. . 109.50


S-2000 FM-AM Tuner

## S-2000 FM-AM BASIC TUNER

Features highly sensitive circuitry, auto matic frequency control on FM, "feather ray'' tuning eye for pin-point FM-AM station selection and directable rod AM antenna. FM Section: Unusual sensitivity of $0.95 \mu \mathrm{v}$ for 20 db quieting. Circuit employs triode mixer, IF amplifier, 3 cascaded limiters, Foster-Seeley balanced discriminator and cascode RF amplifier. AM Section: $2 u \mathrm{v}$ sensitivity for 0.5 v . output. Superhet circuit, 2 tuned RF circuits, pentagrid mixer, double-tuned IF stage with switched coupling and low-distortion diode detector. 10 kc whistle filter. Controls: Off-On-FM-AM Tuning; slide switch for AM Wide, AM Nar row; slide switch for FM-AFC On-and-Off Cathode follower output; FM multiplex output. 10 tubes; 6X4 rectifier, 6BR5/EM80 tuning eye. $4 \times 14 \times 101 / 2^{\prime \prime}$. Less case, right. For $110-120$ v., 60 cycle AC. 18 lbs . 94 SU 332. $\$ 13.95$ Down. NET
. 139.50

## NEW S-1060 60-WATT AMPLIFIER

(Not illustrated) Exactly matches the S-1000 II 36-watt amplifier in size, appearance and control features. Highly efficient operation -employs six 7189 audio output tubes operating from a silicon rectifier power supply Consumes less power (only 110 watts), than many 20 -watt amplifiers. Other features in clude "tube-saver" time delay switch in power supply; DC preamp tube filament supply for elimination of hum; and output tube balance control. (See the S-1000 II at left for listing of controls.) Output: 60 watts; 120 -watt peaks. Response: $\pm 11 / 2 \mathrm{db} .20$ to $20,000 \mathrm{cps}$ at 60 -watt outpuit. IM Distortion less than $11 / 2 \%$ at full 60 -watt output. Hum © Noise: 80 db below 60 watts. Inputs: Phono, Tape Head, 3-High-Level, Tape Monitor. Output Impedances: 4, 8 and 16 ohms; cathode follower for recording. Less case; see right. For operation from 110-120 v., 60 cycle AC. Shpg. wt., 23 lbs.

91 SU 674. \$14.95 Down. NET. . . 149.50


## S-3000 BASIC FM TUNER

A skilfully designed, highly recommended unit that features the same, extremely sensitive $F M$ circuit employed in the S-2000 tuner; styling matches the S-1000 II

Less case amplifier. Outstanding sensitivity makes FM reception practical beyond 100 miles Highly stable coil design, delayed automatic gain control and Foster-Seeley discriminator, preceded by 3 limiters, assures distortion-free reception. Automatic frequency control for drift-free tuning; disabling switch permits tuning in weak, distant stations. Balanced antenna input transformer feeds cascode RF amplifierreduces noise during reception of distant stations and minimizes interference. Has "feather-ray" tuning eye.

Sensitivity: 0.95 microvolt for 20 db quieting. Controls: Off-On; AFC Off-On; Tuning; Sensitivity (Local-Distance). Cathode follower audio output; FM multiplex output 9 tubes; 6BR5/EM80 tuning eye; 6X4 rectifier. $4 \times 14 \times 101 / 2^{\prime \prime}$. Less case, below. For $110-120$ v., 60 cycle AC. Wt. 16 lbs.
94 SU 333. $\$ 9.95$ Down. NET..... 99.50
METAL CASES FOR SHERWOOD UNITS Fit all Sherwood units listed on this page. Type B. Black "flextone". Shpg. wt., 3 lbs. 94 SX 334. NET
5.00

Type C. Mahogany leatherette with classic gold tooling. Shpg. wt., 3 lbs .
94 SX 335. NET
10.00

## Madison-Fielding Stereo Components

MODEL 330 STEREO FM-AM TUNER

# 320 40-WATT STEREO AMPLIFIER 

Two sensitive tuners on

## NET <br> 

Less case pact chassis Can be used individu ally for AM or FM re ception, or by turning a switch, provides stereophonic reception of stereo FM-AM broadcasts. Features exclusive "Dual Stereoscopic" tuning indicaor tube-provides professional-type visual center-of-channel tuning for both AM and FM signals simultaneously. Includes FM multiplex output jack for this type of reception (FM-FM stereo)
$F M$ Section. Sensitivity: $2 u v$ for 20 db quieting. IF Bandwidth: 355 kc at 3 db points, 420 kc at 6 db points. Highly stable circuit; automatic frequency control for drift-free operation. AM Section. Sensitivity: $3 \mu \mathrm{~V}$. Circuit employs AVC; separate tuned RF stage for maximum selectivity. Controls: AM Tuning; FM Tuning; Selector (AM, FM, Stereo); On-Off. Dual level conrols. Two cathode follower outputs. 10 tubes. Size, $61 / 2 \times 15 \times 121 / 2^{\prime \prime}$. Less case, below. For $110-120$ v., 50-60 cycle AC. 25 lbs. 91 SU 609. $\$ 15.00$ Down. NET' . 150.00

## NET <br> s $170^{\circ 0}$ <br> Less case

Brilliantly engineered unit featuring two 20 watt channels; 40 -wat output for monaura use. Highly versatile the 320 is suited for any stereo or monaural use has full set of controls and inputs. Can be used as an electronic crossover in 2-way speaker systems, using one channel to drive the woofer, the other to drive the tweeter. Includes "stereoscopic dual magic eye.'
Output: 20 watts per channel; 40 watts monaural. Response: $\pm 1 / 2 \mathrm{db}, 20$ to $20,000 \mathrm{cps}$ Hum ©o Noise: less than 75 db at full out put. Controls: 2-Equalization (RIAA, LP EUR, AES, Tape Head) ; 2-Volume/Loud ness; 2-Bass, 2-Treble; On-Off; Master Volume; Selector (Monaural Preamp, Monaural Tuner, Monaural Tape, Stereo Pre amp, Stereo Tuner. Stereo Tape). Inputs (each channel): 2-high-level; 2-low-level. Output Impedances: 4.8 and 16 ohms per channel; tape recorder monitor. $4-6 \mathrm{BQ} 5 \mathrm{~A}$ output tubes. $61 / 2 \times 15 \times 121 / 2^{\prime \prime}$. For $110-120$ v., $50-60$ cycle AC. Wt., 25 lbs .

91 SU $610 . \$ 17.00$ Down. NET . I70.00 WOOD CASE FOR 330 AND 320 UNITS. Styled in beautiful walnut veneer to match the front panels of above components. Shpg. wt., 4 lbs . 91 SX 611 . Only $\$ 2.00$ Down. NET



#### Abstract

SUPERB SOUND AT LOW COST Knight means dependability and economyand you can be sure of both of these qualities when you purchase Allied's widely acclaimed, $12^{\prime \prime}$ and $15^{\prime \prime}$, 3 -way speakers. You'll get the most in truly fine speaker performance for each dollar of their cost. Every part of these speakers is made to Allied's exacting specifications to assure you of optimum high-fidelity sound. An instant success when they were initially introduced, Knight 3-way speakers are excellent values, recommended for use in any moderate-cost hi-fi music system.


FULL FREQUENCY RANGE


Woofer Mid-Range Tweeter
Full-range sound to 15,000 cycles is smoothly dispersed by 3 radiating elements.

LEVEL RESPONSE


Uniform response, smooth across entire audio range-for tireless listening.

## COMPRESSION-TYPE TWEETER



Horn-loaded, compression-type tweeter provides smooth reproduction of high frequencies.

## Popular knight 12" and 15" 3-Way Precision Speakers

## AS LOW AS \$4495 <br> \$4.50 Down

- 3 Independent Radiating Elements for Uniform Response
- Full $13 / 4$-Pound Alnico V Magnet with High Flux Density
- Genuine Compression-Type Horn-Loaded Tweeter
- Built-in Electrical Crossover; L-Pad Tweeter Control

Allied's own 3-way, high-fidelity speakers are carefully designed and manufactured to strictest audio specifications-and brought to you at an outstandingly low price. Featuring 3 -way design, a large woofer cone is used for low-frequency reproduction; a specially constructed conical radiator is employed for clean mid-frequencies; and a built-in compression-type tweeter is used to reproduce highest frequencies with unusual clarity. Recommended for use in almost any type of speaker enclosure, the moderate cost of Knight 3 -way speakers makes them perfect for use in pairs in stereophonic music installations-sound is genuinely impressive!

High-frequency level control permits you to adjust response to satisfy personal listening tastes and to match room acoustics. The L-pad tweeter level control is wired to the tweeter on a $30^{\prime \prime}$ cable, complete with calibrated dial and control knob. You connect amplifier output wires to binding posts on the speaker frame-no soldering necessary. The Alnico $V$ woofer magnet used to drive bass and mid-range cones, weighs a full $13 / 4$ pounds for solid bass response. Heavy speaker frame prevents rattling and distortion. Mechanical first crossover is at 2000 cps ; a built-in electrical crossover network smooths the transition from mid-range to tweeter at 4000 cps . Power handling capacity of each speaker, 25 watts. Impedance, 16 ohms. Unconditionally guaranteed for one full year.
MODEL KN-800 12" SPEAKER. Response, 35 to $15,000 \mathrm{cps}$. Resonant frequency, 50 cps . Diameter, $121 / \mathrm{lb}^{\prime \prime}$; depth, $8^{\prime \prime}$. Shpg. wt., 12 lbs.
81 DX 839. Only $\$ 4.50$ Down. NET.
44.95

MODEL KN-810 $15^{\prime \prime}$ SPEAKER. Response, 30 to $15,000 \mathrm{cps}$. Resonant frequency, 40 cps. Diameter, $151 / \mathrm{s}^{\prime \prime}$; depth, $9^{\prime \prime}$. Shpg. wt., 15 lbs. 81 DX 840 . Only $\$ 5.50$ Down. NET.


[^0]
## NEW knight Wide-Range 8" High-Fidelity Speaker

Manufactured to Allied's specifications by skilled British
ONLY $\$ 995$ craftsmen, the precisely built KN - $8088^{\prime \prime}$ speaker features carefully designed, high-compliance hyperbolic cone to attain extremely smooth, distortion-free response. Chemically treated, "soft suspension" around the outer edge of the cone permits greater cone excursions for excellent bass reproduction-handles loud orchestral passages with astonishing fidelity! The small size of the KN -808 makes it perfect for use in a wide variety of small enclosures; ideal for use in pairs in stereo music systems. Frequency range, 40 to $12,000 \mathrm{cps}$. Power handling capacity, 15 watts. Cone resonance, 55 cps . Alcomax 3 magnet material (similar to Alnico V). Magnet wt., $71 / 2 \mathrm{oz}$. Impedance, 16 ohms. Depth, $33 / 4^{\prime \prime}$. Rigid, vibration-free speaker frame with binding post terminals for quick, easy connection of amplifier leads. Shpg. wt., 3 lbs.
82 D 808. NET.

## NEW knight DeluXe HIGH-FIDELITY SPEAKERS



NEW knight Deluxe $12^{\prime \prime}$ and $15^{\prime \prime}$ High-Fidelity Speakers AS LOW AS - Massive Magnet Structures-Rigid Die-Cast Frames \$ 50 - Compression-Type Exponential Tweeter Provides Sparkling Response Well Past the Limits of Audibility

- Genuine L-C Crossover-Clean Separation of Lows \& Highs \$6.95 Down - Vacuum-Formed Woofer Cone; High-Compliance Suspension Remarkable values by any standard of comparison, these new Knight deluxe $12^{\prime \prime}$ and $15^{\prime \prime}$ speakers combine high-fidelity design of the highest order with outstanding workmanship. Carefully built to Allied's specifications by British craftsmen, each speaker features three elements for ultra-smooth bass, mid-range and treble reproduction. Woofer has virtually free cone suspension due to its resilient, chemically treated edge. Mid-frequency radiator cone is mounted in center of woofer. Compression-type tweeter with exponential horn for wide-angle high-frequency dispersion $\left(180^{\circ}\right)$, provides silk-smooth treble to inaudibility. Flawless reproduction is yours with either of these fine speakers-each is guaranteed for one full yearl
Extra-heavy cast metal frames keep aluminum voice coil permanently centered. Massive magnet structures assure high concentration of magnetic flux in voice coil gap for distortion-free reproduction of even the most powerful bass passages. Magnet material is the highly efficient Alcomax III (similar to Alnico V). High-frequency L-pad level control on $30^{\prime \prime}$ cable for adjusting tweeter response to suit personal listening tastes. Mechanical mid-frequency crossover effects smooth transistion at 2000 cps . L-C type, 5000 -cps electrical crossover provides 12 db attenuation per octave. Depth, $73 \mathrm{~s}^{\prime \prime}$. Impedance, 16 ohms .
MODEL KN-812 12" SPEAKER. Frequency response, 30 to 20,000 cps. Magnet weight, $31 / 2$ lbs.; provides high flux density. Resonant frequency, 35 cps , Power handling capacity, 35 watts. Shpg. wt., 34 lbs.
82 DU 812. Only $\$ 6.95$ Down. NET.
69.50

MODEL KN-815 $15^{\prime \prime}$ SPEAKER. Frequency response, 25 to $20,000 \mathrm{cps}$. Magnet weight, $61 / 4 \mathrm{lbs}$.; provides high flux density. Resonant frequency, 25 cps . Power handling capacity, 50 watts. Shpg. wt., 36 lbs .
82 DU 815. Only $\$ 8.95$ Down. NET.
89.50

## SAVE . . Buy knight Speakers in Pairs For Stereo

Take advantage of this opportunity to purchase Knight hi-fi speakers in pairs. Excellent values at their regular low cost, Allied makes it possible for you to pocket extra savings when you buy them in pairs. Uniformity of characteristics and response makes them perfect for use in stereophonic music systems-provide highly realistic reproduction of sound.

| Stock No. | Description | Shpg. Wt., Lbs. | $\begin{aligned} & \text { TWO } \\ & \text { FOR: } \end{aligned}$ | $\begin{aligned} & Y \text { You } \\ & \text { Save } \end{aligned}$ |
| :---: | :---: | :---: | :---: | :---: |
| 91 DU 938-2 | 2-KN-800 12" Speakers | 24 | 79.90 | 10.00 |
| 91 DU 911-2 | 2-KN-810 15" Speakers | 30 | 94.90 | 15.00 |
| 79 DZ 280-2 | 2-KN-812 12" Speakers | 68 | 124.00 | 15.00 |
| 79 DZ 281-2 | 2-KN-815 15" Speakers | 72 | 164.00 | 15.00 |
| 79 D 279-2 | 2-KN-808 8' Speakers | 6 | 15.90 | 4.00 |
| 79 DZ 282C2 | 2-KN-2000 Speaker Systemsspecify mahogany, limed oak or walnut veneer | 90 | 159.00 | 10.00 |

THE BEST HI-FI SPEAKER VALUES ANYWHERE!

CHECK THESE NEW dESIGN FEATURES


Heavy magnets (31/2 \& $61 / 4 \mathrm{lbs}$.), assure high concentration of magnetic flux in voice coil gap.

Vacuum-formed woofer cone with chemically treated edge-suspension for 25/35-cps resonance.

Heavy, die-cast frame assures permanent alignment of voice coil, free of vibration.

Compression-type tweeter features phasecorrection chamber for cleanest high-frequency response.


A true custom-quality feature. The double-section, L-C type crossover network ( 5000 cps), provides 12 db attenuation per octave. Assures perfect separation of lows and highs to woofer and tweeter. Includes wired-in, L-pad highfrequency level control

knight KN-2000 3-Way High-Compliance Speaker System
NET

- $12^{\prime \prime}$ High Compliance Woofer With Long Throw Voice Coil
\$8450
\$8.45 Down - $8^{\prime \prime}$ Sealed-Back Mid-Range Speaker and Compression Tweeter - L-C Crossover Network and High Frequency Level Control

Superbly designed, ultra-compact 3-way high-compliance speaker system at surprisingly low cost. Consists of a hermetically sealed bookshelf-type enclosure, $12^{\prime \prime}$ high-compliance woofer, $8^{\prime \prime}$ mid-range unit, and high-frequency tweeter assembly-completely wired and assembled. In addition, this novel speaker system contains an L-C crossover network and an L-pad high-frequency level control. Brilliantly engineered to perform beautifully in either a low-boy or high-boy position. Perfect choice for limited-space applications-ideal for use in pairs for stereo reproduction.
The $12^{\prime \prime}$ high-compliance woofer has a long-throw voice coil which permits $1^{\prime \prime}$ linear excursions for exceptional bass response; features virtually freecone suspension. Features a $11 / 4 \mathrm{lb}$., high efficiency Indox V ceramic magnet for high flux density. An $8^{\prime \prime}$ mid-range, cone-type speaker is self-enclosed in a metal casing. The high-frequency assembly consists of a compression driver with integral exponential horn for wide-angle dispersion. An encased L-C crossover network ( 6 db per octave) has crossover points at both 800 cps and 3500 cps . L-pad control provides treble balance. Complete system has a frequency response of $40-19,000 \mathrm{cps}$.
Enclosure is constructed of $3 / 4^{1 \prime}$ wood, finished on four sides in hand-rubbed, fine furniture veneers. Natural beige, plastic grille cloth. System handles 20 watts; 40 watt peaks. 16 ohms . HWD: $137 / 8 \times 263 / 8 \times 123 / 4^{\prime \prime}$. The enclosure and components of this fine system are not available separately. Specify mahogany, limed oak or walnut. Shpg. wt., 45 lbs.
79 DU 258C. NET
84.50


* $\begin{array}{r}\text { Ultra-compact, tightly } \\ \text { sealed, acoustically }\end{array}$ damped enclosure. Finished on four sides in hand-rubbed furniture veneers.
 in metal casing.
$12^{\prime \prime}$ high-compliance woofer-has long-throw, edge-wound ribbon voice coil for rich bass response.

Compression high-frequency driver with integral exponential horn and wide-angle dispersion.


## Assembled knight KN-1270 Reflex Enclosure

NET - Delivers Smooth High-Fidelity Response
$\begin{array}{ll}\$ 2650 & \text { - Sturdy } 5 / \mathbf{3}^{\prime \prime} \text { Selected Plywood Construction } \\ \text { - Compactly Designed for Limited-Space Use } \\ \$ 2.65 \text { Down } & \text { - Choice of } 3 \text { Handsome Wood-Grained Finishes }\end{array}$
Extremely attractive, low-cost, factory-assembled bass-reflex enclosure for $12^{\prime \prime}$ speakers. Delivers remarkably smooth bass reproduction. Compact-perfect for use in limited-space applications; ideal for use in pairs in economical stereo systems. Only $24 \times 191 / 4 \times$ $133 /^{\prime \prime}$. Choice of three wood-grained finishes. Specify mahogany, limed oak or walnut. Shpg. wt., 40 lbs .
79 DU 270C. NET.
26.50

82 D 298. Reducing Ring. For mtg. $8^{\prime \prime}$ spkr. 1 lb . NET.
COMBINATION SAVINGS. Specify mahogany, limed oak or walnut.

| Stock No. | Description | Lbs. | Save | NET |
| :---: | :---: | :---: | :---: | :---: |
| 79 DZ 271C | KN-1270/KN-800 Speaker Installed | 52 | $\$ 7.00$ | 64.45 |
| 79 DU 272C | KN-1270/KN-808 Speaker Installed | 47 | $\$ 3.00$ | 33.45 |

## knight ENCLOSURES, KITS AND SPEAKER SYSTEMS

Knight speaker enclosures and speaker systems, in kit form or factory assembled, provide you with a combination of expert craftsmanship and superb styling-at lowest cost.


## SPEAKER SYSTEM KITS

Pocket big savings of $\$ 8.00$ on ducted-port speaker system kits featuring superior Knight components. See pages 56 and 57 for complete descriptions of Knight high-fidelity speakers. Specify choice of mahogany, limed oak or walnut when ordering.
KN-1260K WITH KN-800 12" 3-WAY SPEAKER. 52 lbs . 79 DZ 262C2. Only $\$ 7.35$ Down. NET.
73.45

KN-1260K WITH KN-812 12" 3-WAY SPEAKER. 74 lbs. 79 DZ 269C2. Only $\$ 9.80$ Down. NET.
98.00

## NEW knight KN-1260K Ducted-Port Pre-Finished Speaker Enclosure Kit

Easy-to-assemble, pre-finished enclosure

NET

\$3.65 Down kit for $12^{\prime \prime}$ speakers. Employs ductedport design for performance equal to conventional bass reflex enclosures of much greater size. Its many features include: tight tongue-and-groove joints; non-resonant panels for superior acoustical characteristics; hand-rubbed, satin-lacquered fine furniture veneers; removable tweeter adapter board; smart, contemporary styling; precision-worked parts that fit together securely. Quickly assembled with a screwdriver. With all parts. Size, $32 \times 17^{1 / 2} \times 15^{\prime \prime}$. Specify mahogany, limed oak or walnut. Shpg. wt., 35 lbs .

79 DU 261 C . NET
36.50

MODEL KN-1260. Speaker enclosure described above, but factory assembled. Specify choice of mahogany, limed oak or walnut when ordering. Shpg. wt., 35 lbs.
79 DZ 260C. Only $\$ 4.65$ Down. NET
46.50

SPEAKER SYSTEM. Save $\$ 8.00$ on this combination. Consists of factory-assembled KN-1260 enclosure and Knight KN-800 12" 3-way speaker installed. Specify mahogany, limed oak or walnut. Shpg. wt., 47 lbs .
79 DZ 268C. Only $\$ 8.35$ Down. NET.
83.45

Assembly is a marvel of simplicity. All prefinished panels fit together quickly and easily. The grille cloth comes pre-fitted and attached. A screwdriver is all you need!
\$4.95 Down - Choice of Three Beautiful Hand-Rubbed Furniture Veneers
An exceptionally fine value in a pre-finished speaker enclosure kit. Ideal for use with either a $12^{\prime \prime}$ or $15^{\prime \prime}$ speaker; has rectangular cutout with adapter board for any tweeter (two can be mounted). Perfect for placement in any corner. Features rigid construction to eliminate resonance. Two brush-brass trim strips are attached. A recessed base is provided. Plastic Saran grille cloth is attached and speaker bolts are in place-only a screwdriver is required for easy assembly. Includes all parts, hardware and instructions. $331 / 2 \times 223 / 4 \times 151 / 4^{\prime \prime}$. Specify mahogany, limed oak or walnut veneer when ordering. Shpg. wt., 45 lbs .
79 DU 251C. NET
49.50

MODEL KN-1250 SPEAKER ENCLOSURE. As above, but factory-assembled. Less speaker. Specify finish. Shpg. wt., 45 lbs.
79 dZ 250C. Only $\$ 6.45$ Down. NET.
64.50

SPEAKER SYSTEMS. Enclosure kit with 3-way speaker-at added savings. KN-800, $12^{\prime \prime}$; KN-810, $15^{\prime \prime}$. Available in choice of mahogany, limed oak or walnut-specify when ordering.

| Stock No. | Description |  | Lbs. | Save |
| :---: | :---: | :---: | :---: | :---: |
| 79 DZ 273C2 | KN-800 Spkr. \& KN-1250K Encl. Kit | 57 | $\$ 6.00$ | 88.45 |
| 79 DZ 274C2 | KN-810 Spkr. \& KN-1250K Encl. Kit | 60 | 6.00 | 98.45 | NEW knight Matching Speaker and Equipment Cabinets

- Assembled or Easy-To-Build Kit Form
- Choice of Three Hand-Rubbed Veneers
- Expertly Designed by Master Craftsmen
- Complements Any Contemporary Motif
- Rigid Tongue-and-Groove Construction
- Takes $12^{\prime \prime}$ or $15^{\prime \prime}$ Speaker


KN-1215
Assembles quickly-a screwdriver is all you need

AS LOW AS A striking example of distinctive styling and superb craftsmanship, the KN-1215 enclosure will accommodate any $12^{\prime \prime}$ or $15^{\prime \prime}$ speaker. Also available in easy-to-assemble, pre-finished kit form-a screwdriver is all you need! Employs dual ducted-port design for exceptionally smooth, low distortion bass response. Rigidly constructed-features extra-dense, vibration-resistant $3 / 4^{\prime \prime}$ panels for optimum performance. Has unusually attractive appearancelustrous, hand-rubbed, fine furniture veneers; beautiful, bouclé-weave grille cloth; and ultra-smart tapered legs with brass ferrules to accent room decor. Complete with adapter board for mounting of tweeter components.


## Deluxe Hi-Fi Components Cabinet

AS LOW AS Attractively styled to blend with the


Kit Model decor of any room, the Knight KN-1400 equipment cabinet is available fully assembled or in pre-finished kit form. Combines versatility with functional design; houses all components of a music system-record changer on base (compartment B), tuner and amplifier (A); records (C)-everything except the speaker! Rigidly constructed of beautifully matched panels with highly durable finish.
Features include: exceptionally rigid construction; durable, tongue-and-groove joints; carefully selected woods; smartly tapered legs with brass ferrules; easy-grip, brass door handles; vented rear panel to permit free flow of air; lustrous, hand-rubbed furniture finish in choice of three handsome veneers; and three compartments protected by full-length doors employing smooth-action, magnetic latches.
Size of compartments: A- $6 \times 321 / 2 \times 145 / 8^{\prime \prime} ; B-13 \times 181 / 4 x$ $145 / 8^{\prime \prime}$; and C- $13 \times 135 / 8 \times 14^{5 / 8^{\prime \prime}}$. Overall size of cabinet: HWD, 27x33 $1 / 2 \times 16^{\prime \prime}$. In mahogany, limed oak or walnut -specify when ordering. Shpg. wt., 65 lbs.
79 DZ 267 C . KN-1400K Cabinet Kit. NET.
79 DZ 266C. KN-1400 Assembled Cabinet. NET
69.50


Introducing Electro-Voice's "Wolverine" series of moderately-priced hi-fi speaker enclosures, systems and speaker components. Top-quality features of speakers include: heavy-duty, die-cast frame to maintain precision centering of voice coil; Radax design for wide-range reproduction; edgewise-wound voice coil for high efficiency; moisture-proofed. fungi-resistant cone for dependable service. Tastefully styled, custom-crafted enclosures are manufactured from fully cured, selected woods.

## "LINDON" ENCLOSURE

Ultra-compact, smartly styled speaker enclosure. Only $11^{\prime \prime}$ high, $231 / 2^{\prime \prime}$ wide and $10^{\prime \prime}$ deep-perfect for mounting on a bookshelf or record shelf. Direct radiator design provides excellent basis response. Ideal for use with E-V LS-8 $8^{\prime \prime}$ speaker and HF-1 highfrequency kit below. Features pre-cut mounting board for quick, easy installation of speaker and high-frequency kit. Finished on four sides to permit placement anywhere. Choice of three wood-grained finishes to complement any decorating motif. Use two for stereo-ideal where space is limited. Specify mahogany, blonde, or walnut when ordering. Shpg. wt., 16 lbs. 82 DU 856C. NET
34.50

## "LORAINE" ENCLOSURE

Folded-horn corner enclosure featuring compact design, handsome styling. and ready adaptability to present or future speaker components. Ideal for use with LS-12 12". speaker, plus MF-1 and HF-1 mid-range and treble components listed below. Includes adapter to permit mounting of $8^{\prime \prime}$. speaker. Has pre-cut mounting ports for easy installation of tweeters. Sturdy plywood construction. Available in choice of three wood-grained finishes. Overall size: $27^{\prime \prime}$ high, $20^{\prime \prime}$ wide and $14^{\prime \prime}$ deep. Specify mahogany, blonde or walnut finish when ordering. Shpg. wt., 23 lbs.
82 DU 855C. NET
48.00

## "LANCASTER" ENCLOSURE

Attractively styled, space-sparing enclosure for lowboy or highboy use. Ideal for along-the-wall placement. Delivers impressive per formance when used with Electro-Voice's LS-12 12" speaker, plus HF-1 and MF-1 components listed below. Includes adapter to permit use with $8^{\prime \prime}$ speaker. Features direct radiator, controlled baffle for exdirect radiator, controlled baffle for extended bass. Also has snap-in speaker
mounting board and pre-cut ports for easy installation of speakers. Sturdy plywood construction; handsome wood-grained fin ish. Ideally suited for use in pairs in stereo high-fidelity systems where space limitations are present. Complete with removable, runner-type legs. Accepts LK-1 leg kit below. Size (HWD): $25 \times 20 \times 14^{\prime \prime}$. In choice of mahogany, blonde or walnutspecify when ordering. Wt., 24 lbs . 82 DU 854C. NET
48.00

## LK-1 LEG KIT

Set of four legs for optional use with "Lancaster,"' above. Slim, gracefully tapered styling complements handsome appearance of enclosure. Legs are pre-drilled for quick, simple installation. Kit includes completely finished legs, all necessary hardware and instructions for mounting. In choice of three finishes. In choice of mahogany, blonde or walnut finish-specify when ordering. 21" high. Shpg. wt., 4 lbs.
82 D 857 C. NET PER SET
8.00
.

## Full-Range Speakers, Tweeters and Crossover Kits

LS-12 12" SPEAKER. Moderately-priced 12" high-fidelity speaker. Provides very clean, smooth frequency response over the range of 30 to 13,000 cps. Ideal for use with "Lancaster" and "Loraine", fisted above. Has features found in more expensive speakers. A heavy-duty, die-cast frame maintains precision alignment of critical parts. Radax construction (separate radiator cone for treble) provides crisp, full-range sound. Edgewise-wound voice coil for high efficiency. Additional features include a reinforced fiberglas voice-coil form and fungiresistant cone material.
Power handling capacity, 20 watts. Cone resonance, 40 cps. Impedance, 8 ohms. $121 / 4^{\prime \prime}$ diameter, $31 / 2^{\prime \prime}$ deep. Requires $11^{\prime \prime}$ baffle opening. Shpg. wt., $51 / 4 \mathrm{lbs}$.
82 DX 850 . NET
19.50

LS-8 $8^{\prime \prime}$ SPEAKER. Excellent full-range $8^{\prime \prime}$ high-fidelity speaker. Has same quality features as the LS-12 above. Ideal for use with all enclosures listed above. Also excellent for limited-space hi-fi systems or for use as hi-fi system extension speaker. Frequency response, $50-13,000 \mathrm{cps}$. Cone resonance, 55 cps. Power handling capacity, 20 watts Voice coil impedance, 8 ohms. Size: $83 / 8 \mathrm{x}$ $31 / 2^{\prime \prime}$. Requires $71 / 8^{\prime \prime}$ baffle opening for $31 / 2^{\prime \prime}$. Requires $71 / 8^{\prime \prime}$ baffle o
mounting. Shpg. wt., $41 / 2$ lbs. 82 D 851. NET.

MF-1 MID-RANGE KIT. Excellent mid-range components for use in high-fidelity 3 -way peaker systems. Can also be used as a tweeter in 2-way speaker systems. Consists of the efficient MR-10 horn and the CR-10 crossover network with level control.
Ideally suited for installation in "Lancaster" and "Loraine" speaker systems and enclosures listed above. Provides remarkably smooth response from 1000 to $15,000 \mathrm{cps}$
Power handling capacity, 20 watts; peak capacity, up to 40 watts. Wide-angle dispersion, $180^{\circ}$. Impedance, 8 ohms. Horn size, $4^{\prime \prime}$ long by $101 / 2^{\prime \prime}$ wide. Crossover size, $31 / 4 \times 3 \times 21 / 2^{\prime \prime}$. Shpg. wt., 5 lbs. 82 DX 852. NET
25.00

HF-1 HIGH-FREQUENCY KIT. Quality highfrequency components at moderate cost Consists of Model TW-35 wide-angle, horntype tweeter and Model CR-35 3500-cycle crossover network with level control.
Perfect for use in 2 -way or 3 -way speaker systems. Delivers outstanding results with other "Wolverine" speaker components; fits all enclosures listed above. Provides crisp, clear treble response from 3500 to $18,000 \mathrm{cps}$.
Capacity, 50 watts ( 100 watts peak). Dis persion, $180^{\circ}$. Imp., 8 ohms. $51 / 4 \times 2 \times 23 / 4^{\prime \prime}$ Crossover, $31 / 4 \times 3 \times 21 / 2^{\prime \prime}$. Wt., 3 lbs. 82 D 853. NET.
20.00

## Speaker Systems

"LANCASTER" AND LS-12. Smartly styled, space-sparing speaker system. Includes enclosure described at left and full-range $12^{\prime \prime}$ speaker, below. Comes complete with speaker installed. Choice of 3 wood-grained finishes to blend with any surroundings. Specify mahogany, blonde, or walnut. Shpg. wt., $291 / 2$ lbs. 82 DU 858 C . NET.
67.50
"LORAINE" AND LS-12. Excellent speaker system for corner placement. Includes enclosure (left) and $12^{\prime \prime}$ speaker (below). Supplied complete with speaker installed. Available in choice of three handsome wood-grained finishes. Specify choice of mahogany, blonde or walnut Shpg. wt., $281 / 2 \mathrm{lbs}$.
82 DU 859 C . NET
67.50
"UINDON" AND LS-8. Ultra-compact seaker system featuring enclosure described at left and $8^{\prime \prime}$ speaker below. With speaker installed. Avail able in 3 lustrous, wood-grained finishes to match any decorative mode Specify mahogany, blonde or walnut. Shpg. wt., 201/2 lbs.
82 DU 860C. NET.
52.50



# HI-FI SPEAKERS \& WOOFERS 

## TRX 3-Way Hi-Fi Speakers

Employ three concentrically mounted sections-Super Sonax VHF,driver, Radax propagator, and large bass cone with double power Indox $V$ ceramic magnet, for a superb standard of high-fidelity performance. Deliver vibrant bass, full-bodied mid-range response and ultraclean treble. TRX speakers have a well-established reputation for extraordinary reproduction.
Feature concentric mounting of all elements for wide-angle dispersion; adjustable high-frequency level control for precise regulation of tweeter; electrical crossover network for automatically dividing audio between woofer and tweeter sections of TRX 3-way speaker.
Provide $18 \%$ more efficiency and lower transient distortion through use of a specially designed edgewise-wound voice coil. Excellent for use in custom high-fidelity installations or for modernization of existing systems. All TRX speakers have a 16 -ohm impedance.

MODEL 15 TRXB. Moderate cost high-fidelity $15^{\prime \prime}$ speaker employing $13 / 8 \mathrm{lb}$. double power Indox $V$ ceramic magnet. Total flux: 100,000 maxwells. Features 3-way concentric-mounted sections consisting of a Radax-type speaker with "Whizzer" high-frequency propagator, T35B "Super Sonax" VHF tweeter, and HF level control. Response, $\pm 31 / 2 \mathrm{db}, 30-18,000 \mathrm{cps}$ (in Regency or Empire Enclosure). Power handling capacity, 20 watts. Resonance, $38-48 \mathrm{cps}$. Impedance, 16 ohms. $75 / 8^{\prime \prime}$ depth. Shpg. wt., 17 lbs.
81 DX761. NET
77.42

MODEL 12 TRXB. 3 -way speaker as above, but $12^{\prime \prime}$. Has $13 / 8 \mathrm{lb}$. double power Indox $V$ ceramic magnet (total flux: 100,000 maxwells), Radax-type speaker, T35B tweeter, and brilliance control. Power handling capacity, 20 watts. Frequency response (in Aristocrat enclosure). $\pm 31 / 2 \mathrm{db}, 35-18,000 \mathrm{cps}$. $61 / 16^{\prime \prime}$ depth. Impedance, 16 ohms. Shpg. wt., 14 lbs.
81 DX 239. NET
64.68

MODEL 15TRX. E-V's finest, custom-engineered 3-way speaker. Uses extra-large $53 / 4-1 \mathrm{~b}$. double power Indox V ceramic magnet. Total flux: 244,000 maxwells. Consists of Radax-type $15^{\prime \prime}$ speaker with "Whizzer" high-frequency propagator; T35 "Super-Sonax" very-high-frequency tweeter; X36 K crossover network; and the AT37 HF level control. Uses $21 / 2^{\prime \prime}$ aluminum voice coil. Response, $\pm 31 / 2$ $\mathrm{db}, 30-19,000 \mathrm{cps}$ (in Regency or Empire enclosure). 35-45 cps. 30 watts. $91 / 8^{\prime \prime}$ depth. 16 ohms. Shpg. wt., 43 lbs.
81 DU 235. NET
146.02

MODEL 12 TRX. As above, but $12^{\prime \prime}$. Has $31 / 2 \mathrm{lb}$. double power Indox V ceramic magnet. Total flux: $\mathbf{1 7 6 , 0 0 0}$ maxwells. Radax-type speaker, T35 tweeter, X 36 crossover network, and AT37 HF control. Frequency response, $\pm 31 / 2 \mathrm{db}, 30-19,000 \mathrm{cps}$ (in Aristocrat enclosure). Power handling capacity, 25 watts. Depth, $8^{\prime \prime}$. Impedance, 16 ohms. Shpg. wt., 30 lbs.
81 DU 236. NET.
122.50

## Top-Quality Radax Coaxial Hi-Fi Speakers

Electro-Voice's radax principle provides highly efficient and economical method of using two concentrically mounted cones operating from single voice coil. Built-in mechanical crossover from low-frequency cone to high-frequency propagator permits design of each cone for optimum response.

MODEL SP15. Deluxe 15" Radax speaker with $21 / 2^{\prime \prime}$ aluminum voice coil. Provides exceptionally fine bass, mid-range and treble reproduction. Ideal for home music systems. 51/4-1b. double power Indox V ceramic magnet (total flux: 244,000 maxwells) provides good damping, superb transient response and remarkably distinct bass. Resonance of bass cone, $35-45$ cps., Bass cone is directly coupled to "Whizzer" HF radiator. Insures $100^{\circ}$ treble dispersion. Frequency response, $\pm 5 \mathrm{db}, 30-13,000 \mathrm{cps}$. Rated, 30 watts. 16 ohms. Crossover, 3000 cps . Requires $131 / 2^{\prime \prime}$ dia. baffle opening; $9^{\prime \prime}$ depth behind mtg. panel. Shpg. wt., 38 lbs.
81 DU 280. NET.
87.22

MODEL SP15-B. $15^{\prime \prime}$ Radax speaker similar to above, except for smaller 1 lb . magnet and 20 -watt power capacity. Total flux: 100,000 maxwells. Response characteristics $-30-13,000$ cps. Seamless molded type bass cone directly coupled to "Whizzer" HF radiator. Insures very wide dispersion -extends treble 2 full octaves. Crossover, 3500 cps , Resonance, $38-48 \mathrm{cps}$. Impedance 16 ohms. Requires $131 / 2^{\prime \prime}$ baffle opening; $75 / 8^{\prime \prime}$ depth behind mounting panel. Shpg. wt., 15 lbs.
81 DX 760 . NET.
42.14

MODEL SP12. Popular, moderately-priced $12^{\prime \prime}$ speaker with 3000 cps crossover. Bass cone resonance, 35-45 cps. Uses "Whizzer" high-frequency, wide-dispersion radiator for extended treble. $100^{\circ}$ dispersion. Has highly extended treble. $100^{\circ}$ dispersion. Tas highy 176,000 maxwells. Response, $\pm 5 \mathrm{db}, 30-$ $13,000 \mathrm{cps} .2^{\prime \prime}$ aluminum voice coil. Rated, 25 watts. Impedance, 16 ohms. $73 / 4^{\prime \prime}$ depth. Shpg. wt., 23 lbs.
81 DU 279. NET.
64.68

MODEL SP12B. $12^{\prime \prime}$ speaker as above, but $1-1 \mathrm{~b}$. ceramic magnet. Flux: 100,000 maxwells. Considered a "best buy" by many hifi publications. Capacity, 20 watts. Resonance, $40-50 \mathrm{cps}$. Response, $\pm 5 \mathrm{db}, 30-13$,000 cps. 16 ohms impedance. Crossover, 3500 cps. $6^{\prime \prime}$ depth. Wt., 12 lbs.
81 DX 278. NET.
34.30

MODEL SP8B. $8^{\prime \prime}$ version of above. Excellent for limited space hi-fi applications. Low cone resonance of $65-75 \mathrm{cps}$ and "Whizzer"' high-frequency propagator provide good balance. 1-1b. magnet. Total flux: 100,000 baxwells. Capacity, 20 watts. Response, $\pm 5 \mathrm{db}, 50-13,000 \mathrm{cps}$. Crossover frequency, 4000 cps .16 ohms impedance. $45 / 8^{\prime \prime}$ depth. Shpg. wt., 9 lbs.
81 D 277. NET.
28.91

## Low-Frequency Woofers

Featured in Electro-Voice speaker systems; all have unusually low cone resonance. Can also be used as woofers in custom 2 and 3way sound systems. Cones employed are treated for moisture and fungus resistance. 12 WK and 15 WK woofers are recommended for " $K$ " horn and phase-loaded systems only; require sealed cavity behind the driver. *Have 3.2 ohms DC resistance; all others, 16 ohms impedance. Double-power Indox $V$ ceramic magnets, texcept Alnico $V$ magnets. \$Magnet weight in lbs.

| Stock No. | Mfr's Type | Mag. Wt. 8 | Res. <br> Freq. | Watts | Lbs. | $\begin{gathered} \text { NET } \\ \text { EACH } \end{gathered}$ |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 81 DX 397 | 12BW | 1 | 40-50 | 20 | 12 | 34.30 |
| 81 DU 285 | †12W | 3 | 35-45 | 22 | 23 | 64.68 |
| $\begin{aligned} & 82 \text { DU } 801 \\ & 81 \text { DX } 762 \end{aligned}$ | $\begin{array}{r} \dagger * 12 W K \\ 15 \mathrm{BW} \end{array}$ | $\begin{aligned} & 3 \\ & 1 \end{aligned}$ | $\begin{aligned} & 30-40 \\ & 38-48 \end{aligned}$ | $20$ | $\begin{aligned} & 23 \\ & 15 \end{aligned}$ | $\begin{aligned} & 64.68 \\ & 42.14 \end{aligned}$ |
| $\begin{aligned} & 81 \text { DU } 286 \\ & 81 \text { DU } 428 \end{aligned}$ | $\begin{gathered} 15 \mathrm{~W} \\ * 15 \mathrm{WK} \end{gathered}$ | $51 / 4$ $51 / 4$ | $\left\|\begin{array}{c} 25-35 \\ 29 \end{array}\right\|$ | $\begin{aligned} & 30 \\ & 30 \end{aligned}$ | $\begin{aligned} & 38 \\ & 38 \end{aligned}$ | 87.22 87.22 |

## MID-RANGE AND HIGH-FREQUENCY COMPONENTS

## High-Frequency Tweeters

MODEL T35 "SUPER-SONAX" VERY-HIGH FREQUENCY TWEETER. Delivers remarkably clean, extended high-frequency response3500 to 19,000 cps. Adds at least one more octave of highs. Features wide-angle $\left(180^{\circ}\right)$ dispersion horn; cutoff, 1500 cps. Uses molded-phenolic impregnated, linen diaphragm. Use with X36 crossover and AT37 level control. For systems rated at 20 watts or over. Crossover, 3500 cps. Impedance, 16 ohms. Horn size; $51 / 4^{\prime \prime}$ long by $2^{\prime \prime}$ wide. Pot size, $21 / 4^{\prime \prime}$ diameter, $31 / 4^{\prime \prime}$ deep overall. Less Model AT37 level control and Model X36 crossover network (listed below). Shpg. wt., 3 lbs.
81 D 434. NET
34.30

MODEL T35B VhF TWEETER. Same as Model T35 above but for systems with speakers rated under 20 watts. Has molded-phenolic impregnated, linen diaphragm. Dispersion, $180^{\circ}$; cutoff, 1500 cps . Impedance, 16 ohms . X36 crossover network required (see listing, below). Pot size, $21 / 4^{\prime \prime}$ diameter; $3^{\prime \prime}$ depth overall. Shpg. wt., 3 lbs.
81 D 432. NET

## Mid-Range Horns, Drivers and Crossover Networks

MODEL TIOA HIGH-FREQUENCY DRIVER. For ultra-clean, extended response. Use with 8 HD or 6 HD HF diffraction horn and crossover network. $\pm 5 \mathrm{db} .400-13,000 \mathrm{cps}$. 25 watts. 16 ohms. 12 -oz. magnet. $51 / 4^{\prime \prime}$ dia., $33 / 4^{\prime \prime}$ deep. Throat, 7/8". 7 lbs.
81 D 424 . NET
41.65

MODEL T25A HIGH-FREQUENCY DRIVER. Phenolic-impregnated, linen diaphragm for added strength. Use with 8 HD or 6 HD horn, plus crossover network. Response, $\pm 5 \mathrm{db}, 400-13,000$ cps. 30 watts. 16 ohms. 1-1b. magnet. $51 / 4^{\prime \prime}$ dia. $43 / 4^{\prime \prime}$ deep. Throat dia., $7 / 8^{\prime \prime}$. Shpg. wt., 9 lbs.
81 D 288. NET.
56.84

MODEL T250 HIGH-FREQUENCY DRIVER. For maximum efficiency systems. Use with 8 HD or 6 HD HF horn and crossover network. $400-13,000 \mathrm{cps} .35$ watts. 16 ohms. $51 / 4^{\prime \prime}$ dia., $51 / 4^{\prime \prime}$ deep. Throat, $7 / 8^{\prime \prime} .9$ lbs.

## 82 DX 800. NET.

.79 .38
MODEL AT37 LEVEL CONTROL. 16 -ohm L-pad, for adjustment of mid-range and tweeter output. Mahogany finish. 6 oz .
81 D 437. NET
3.82

MODEL AT37B LEVEL CONTROL. As above, but for blonde cabinets.
81 D 838. NET. .
3.82

MODEL T350 VERY-HIGH FREQUENCY DRIVER. Ideal for use in deluxe multi-way speaker systems having extended bass range. Provides extended treble response beyond audibility. Employs diffraction horn principle with special Avedon Sonophase throat design tor $180^{\circ}$ dispersion pattern. Capacity, 50 watts; handles 100 -watt peaks. Impedance, 16 ohms. Frequency response: $\pm 2 \mathrm{db}$, 2000 to $21,000 \mathrm{cps}$. Magnet wt., 1 lb . Rec2000 to $21,000 \mathrm{cps}$. Magnet wt , 1 lb . Rec-
ommended crossover, 3500 cps . Horn is $71 / 2^{\prime \prime}$ ommended crossover, 3500 cps . Horn is $71 / 8^{\prime \prime}$ wide. Pot dia., $31 / 2^{\prime \prime}$. Overall depth, $41 / 2^{\prime \prime}$. Shpg. wt., 8 Ibs. 82 DX 337. NET. .
58.80

MODEL T3500 "IONOVAC" IONIZED AIR, VERY-HIGH FREQUENCY TWEETER. Employs ionized air for dazzling reproduction of treble frequencies. Frequency response: $\pm 2 \mathrm{db}, 2000$ to 40,000 cps. Recommended crossover, 3500 cps. Dispersion pattern. $180^{\circ}$. Power capacity, 50 watts; handles 100-watt peaks. 16 ohms. Driver assembly, $9 \times 31 / 2 \times 7^{\prime \prime} ;$ electronic unit, $51 / 2 \times 5 \times 131 / 2^{\prime \prime}$. Baffle opening, $11 / 2 \times 6^{\prime \prime} .15$ lbs.
147.00

MODEL 8HD DIFFRACTION HORN. For use with T10A, T25A or T250 drivers. 600 cycle cutoff, 800 cycle crossover frequency. Rugged, die-cast construction. Size, $15 \times 41 / 2 \mathrm{x}$ 81/4". Shpg. wt., 4 lbs.
81 D 429. NET.
MODEL 6HD DiFFRACTION HORN. Popular horn for T10A, T25A or T250 drivers. Utilizes 400 cps cutoff, 600 cps crossover. Constructed of fiberglass. Size, $20 \times 31 / 2 \times 121 / 2^{\prime \prime}$. Shpg. wt., 6 lbs.
81 DX 491. NET
CROSSOVER NETWORKS. Attenuation, 12 db per octave in $1 / 2$-section types; 6 db in $1 / 4$-section types. Impedance, 16 ohms. All crossover networks are half-section types. except X825, $1 / 4 ;$ X2635, $1 / 4$ and $1 / 2$.

| Stock No. | Mfr's Type | Crossover | Wt., Lbs. | $\begin{aligned} & \text { NET } \\ & \text { EACH } \end{aligned}$ |
| :---: | :---: | :---: | :---: | :---: |
| 820802 | $\times 325$ | 300 | 4 | 31.36 |
| 81 D 415 | X825 | 800 | 3 | 18.62 |
| 81 D 293 | X8 | 800 | 6 | 31.34 |
| 81 D 416 | X6 | 600 | 6 | 38.22 |
| 81 D289 | X336 | 300-3500 | 9 | 38.22 |
| 810436 | $\times 36$ | 3500 | 3 | 9.31 |
| 81 D 404 | X2635 | $200-600-$ | 10 | 50 |

17.64
21.56


## Mid-Bass and Treble Driver-Horn Assemblies

MODEL MT30. Consists of 828 HF coaxial driver, treble horn, mid-bass horn sections and angle throat. Use with high-efficiency speakers and phase-loaded systems. Response, $200-10,000 \mathrm{cps}$ (in recommended 200 -cycle horn). 30 watts. 16 ohms. $3 / 4-1 \mathrm{~b}$. magnet. $211 / 2^{\prime \prime}$ long. $61 / 2^{\prime \prime}$ high. 10 lbs. 82 DX 339. NET
42.14

MODEL MT30B. As above, but has 828 HFB driver. 20 watts. $1 / 2 \mathrm{lb}$. magnet. For use with medium-efficiency speakers and systems. Shpg. wt., 10 lbs.
82 DX 340 . NET
34.30

MODEL 118 MID-BASS DUAL-DRIVER ASSEMBLY. A mid-bass, dual-driver assembly for use in the Patrician and other deluxe speak er systems. Expertly engineered to deliver exceptionally smooth reproduction in the mid frequencies. Includes two Model 828 HF drivers, two mid-bass horn sections, and all mounting accessories. Response when used in recommended 200-cycle horn, 150 to 1000 cps . Power handling capacity, 30 watts; $60-$ watt peaks. Impedance, 16 ohms. Size, $211 / 2^{\prime \prime}$ long, $61 / 2^{\prime \prime}$ high for clearance. Shpg. wt., 15 lbs.
82 DX 341 . NET.
76.44


|  |  | MID-RANG | AND | IGH-FREQUE | COMPONE | S |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Stock No. | Type | Description of Components |  |  |  |  | Lbs. | NET |
| 81 D 835 | BB1 | For 2 -way systems (LF driver with treble driver), and coaxial speakers having 1-2-1b. magnets. Includes T35B VHF driver, X36 crossover, AT37 level control, wiring harness. <br> For 2 -way systems (LF driver with treble driver), and coaxial speakers having 3-1b. magnets or greater. Includes T35 VHF driver, X36 crossover, AT37 level control, wiring harness. <br> For existing LF drivers and coaxial speakers having 1-2-1b. magnets. Includes TIOA driver, 8HD horn, X 825 crossover, AT37 level control, wiring harness. <br> For existing LF drivers and coaxial speakers having 3-1b. magnets or greater. Includes T25A driver, 8 HD horn, X 8 crossover, AT37 level control, wiring harness. |  |  |  |  | 5 | 6.26 |
| 81 D 858 | BB2 |  |  |  |  |  | 5 | 49.00 |
| 81 DU 834 | BB3 |  |  |  |  |  | 11 | 84.28 |
| 81 DU 859 | BB4 |  |  |  |  |  | 13 | 111.72 |
| 82 D 342 | BB5 | Adds very high frequencies with wide dispersion. For systems having extended bass ranges such as Patrician IV, Georgian 600, Cardinal IV, Centurion IVE, etc. Includes T350 UHF driver, X36 crossover, AT37 level control, wiring harness. <br> For mid-bass and treble frequencies from 200 to $10,000 \mathrm{cps}$. Ideal for use with deluxe fullrange drivers having $3-1 \mathrm{lb}$. magnets or more, such as SP12, SP15, 12TRX, 15TRX and high-efficiency systems. Plans for simple plywood horn extension are provided. Includes MT30 driver-horn assembly, X325 crossover, AT37 level control, wiring harness. 18WK driver; 118 assembly; T250 HF driver, with 6HD horn; T350 driver; X2635 crossover; 3-AT37 controls. Full-range system as used in Patrician. |  |  |  |  | 13 | 73.50 |
| 82 DU 345 | BB8 |  |  |  |  |  |  |  |
| 82 DZ 804 | 103E |  |  |  |  |  |  |  |


"Patrician 600"


When you choose Electro-Voice, you choose equipment incorporating the expert engineering and fine craftsmanship that have become famous throughout the world. The name Electro-Voice signifies quality and peerless performance to the discriminating audiophile. Every unit with the well-known E-V symbol will give you top value. Listed here are some of the most outstanding speaker systems available. Each of these incorporates the most advanced design principles, and is superbly styled to complement the finest of furniture.

## "Patrician" Speaker Systems

Famous as one of the most distinguished of speaker systems, the "Patrician" by Elec-tro-Voice is offered in a choice of two cabinet styles-traditional "Patrician IV'" and contemporary "Patrician 600 ". Both employ the superior 103 E speaker package (see page 63 for full description of package). Beautifully hand-crafted corner enclosures
are of Klipsch-licensed indirect radiator design; each is carefully assembled from se lected hardwood veneers and inlays, and exquisitely finished. Power handling capacity is 35 watts, 70 -watt peaks. Impedance: 16 ohms. Supplied with components in16 ohms. Supplied with components in-
stalled.Shipped F.O.B. Chicago or Dowagiac. Mich., whichever is nearer.

| Size <br> (HWD) | Shpg. Wt., <br> Lbs. | NET <br> EACH |
| :---: | :---: | :---: |
|  | 390 | 973.14 |
| $62 \times 39 \times 29^{\prime \prime}$ | 390 | 998.62 |
|  | 390 | 998.62 |
|  |  | 335 |
|  | $381 / 2 \times 38 \times 30^{\prime \prime}$ | 335 |
|  | 335 | 843.16 |
|  |  | 843.78 |

## Speaker System

The luxurious cabinetry of this corner enclosure is skillfully combined with the most advanced audio engineering to give you a superior, integrated 4-way speaker system. In striking contemporary styling, the magnificent "Georgian 600 " utilizes the famous nificent "Georgian 600 utilizes the famous
Klipsch-licensed "K"-type folded horn for excellent reproduction. Contains an outstanding speaker package for full, faithful reproduction.

Includes the 15 WK special low-frequency speaker, crossing over at 300 cps through speaker, 336 network to the MT30 mid-bass horn assembly; high frequencies are covered
by the T350 Ultra-Sonax tweeter, an ad-vanced-design speaker employing an unusually effective horn design. Included are two AT37 controls for separate adjustment of mid-range and high frequency levels to best suit room acoustics. Rated 35 watts program material, 70 -watt peaks. Impedance: 16 ohms. Supplied with all components installed. Size (HWD), $481 / 2 \times 281 / 2 \times 253 / 4^{\prime \prime}$. Shpg. wt., 225 lbs. Shipped F.O.B. Chicago or Dowagiac, Mich., whichever is nearer.
82 DZ 312. Mahogany. NET..... 480.20 82 DZ 313. Limed Oak. NET...... 489.02 82 DZ 314. Walnut. NET. . . . . . . . 489.02

## "Centurion IVE" Speaker System

A complete 4-way speaker system of extraordinary quality-incorporates all design features of the famous "Georgian 600 ", but on a smaller scale. Styled in a rich traditional motif and carefully finished for exemplary, appearance. Employs the Klipsch " K " folded horn, with E-V's deluxe 12 -inch in-direct-radiator speaker package.

A 12 Wh woofer provides excellent bass response from $30-300 \mathrm{cps}$. X 336 crossover feeds an MT30 coaxial mid-bass and treble assembly with acoustical crossover at 1000
cps. 3500 cps section of X336 feeds T35 tweeter to beyond audibility. Includes two AT37 level controls for presence and brilli-. ance. Rated 30 watts program material, 60 watts peak. Impedance: 16 ohms. All components installed. Size (HWD), 42x29x $221 / 2^{\prime \prime}$. Shpg. wt., 142 lbs. Shipped F.O.B. Chicago or Dowagiac, Mich., whichever is nearer.
81 DZ 982. Mahogany. NET.
357.70

81 DZ 983. Limed Oak. NET.
365.54

81 DZ 984. Walnut. NET.
365.54

## "Cardinal IV" Speaker System

Outstanding speaker ensemble for rounding out the deluxe high-fidelity music system. Bold, clean lines and fine furniture finish complement any decorative mode. Has same top-performance 4 -way speaker components as used in the "Georgian 600" system described above; enclosure is similar acoustically to the "Georgian 600 ". Utilizes the walls of the room as an extension of the folded horn, in place of built-on rear panels.

Rated 35 watts program material, 70-watt peaks. Impedance: 16 ohms. Systems are supplied with all components installed. Size (HWD), $453 / 4 \times 263 / 4 \times 23^{\prime \prime}$. Shpg. wt., 183 lbs . Shipped F.O.B. Chicago or Dowagiac, Mich.. whichever is nearer.
82 DZ 315. Mahogany. NET......416.50
82 DZ 316. Limed Oak. NET......424.34
82 DZ 317. Walnut. NET. . . . . . . 424.34

## NEW Space-Saving "STEREON" Speaker Systems

New, space-sparing. dollar-saving method of stereo reproduction uses your present speaker system, plus a 'Stereon' for full, breathtaking stereophonic sound. Takes advantage of the fact that no stereo effect exists when listening to tones below 300 cps by directing all bass from both channels to your standard monaural speaker system. your standard monaural speaker system.
Upper range of one channel follows the bass into this sytem, high range of other channel is fed to the "Stereon". Since it does not have to reproduce low frequencies, the "Stereon" is a compact, inconspicuous unit that can be placed anywhere in your room.
"STEREON IA". Employs MT30B, T35B and 2-AT37 level controls. For normal-eff-
ciency speaker system, such as one with SP15B. Must be used with XX3 control filter, below. $25 \times 71 / 2 \times 171 / 2^{\prime \prime}$. Specify mahogany, limed oak or walnut. $33^{\circ}$ lbs.
79 DU 301 C . NET.
97.51
"STEREON III". Similar to above, but for high-efficiency system, such as one with an SP15. Has MT30. T35 and 2-AT37 level controls. Must be used with XX3, below. Specify finish. Shpg. wt., 37 lbs.
79 DU 302C. NET.
126.91

XX3 "STEREON" CONTROL FILTER. Distributes audio to single or multiple "Stereon" system. Input impedance: 8 ohms, each channel. $51 / 2 \times 43 / 4 \times 51 / 4^{\prime \prime}$. Shpg. wt., 8 lbs. 79 D 322. NET.
29.40
"Regency" Speaker Systems and Enclosures
"REGENCY III." Complete 3 -way high-fidelity speaker system combining the advantages of folded-horn performance with flexibility of placement. Klipsch-licensed horn design with "built-in"' corner allows it to be used against a flat wall or in a corner. In lowboy motif, this highly efficient enclosure enhances any decorative scheme. Speaker components include $15 \mathrm{~W} 15^{\prime \prime}$ woofer, T25A HF driver with 8HD horn, T35 VHF driver. X8 and X36 crossovers, and 2-AT37 controls. Impedance: 16 ohms. Rated 30
watts, 60 -watt peaks. Size (HWD), 295/8x $331 / 2 \times 19^{\prime \prime}$. Shpg. wt., 135 lbs.
"REGENCY-15TRX." "Regency" enclosure with popular 15TRX 3-way speaker installed. Provides optimum results when placed either in a corner or against a wall of the room. Offers smooth, extended bass response with clear highs to $15,000 \mathrm{cps} .138 \mathrm{lbs}$.

ENCLOSURE ONLY. Takes $12^{\prime \prime}$ or $15^{\prime \prime}$ speaker, or 2 or 3 -way system. Shpg. wt.. 87 lbs.


## NEW "Marquis" Speaker Systems and Enclosures

"MARQUIS IA." Enjoy outstanding highfidelity reproduction with this along-thewall counterpart of the popular Aristocrat Carefully constructed of selected hardwood veneers, expertly finished. Has vertical porting slots for bass response extended down to 40 cps . 3 -way system components include 12 BW woofer, T10A high-frequency driver with 8 HD diffraction horn, T35B tweeter, X825 and X36 crossovers, and 2Type AT37 level controls. Impedance: 16
ohms. Rated 20 watts program material, 40-watt peaks. Size (HWD), $295 / 8 \times 19 \times 141 / 2^{\prime \prime}$. Shpg. wt., 85 lbs.
"MARQUIS-12TRX8." "Marquis" enclosure with the well-known 12TRXB three-way speaker. Provides sharp, clean response to beyond audibility. Includes brilliance control. Shpg. wt., 64 lbs.
ENCLOSURE ONLY. Takes $12^{\prime \prime}$ speaker, or 2 or 3 -way sy stem. Shpg. wt., 50 lbs.

| Finish ${ }^{\prime}$ | ENCLOSURE ONLY |  |  | "MARQUIS-12TRXB" |  |  | "MARQUIS IA" |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | Stock No. |  | NET EACH | Stock No. |  | NET EACH | Stock No. |  | NET EACH |  |
| Mahogany | 79 | DZ 310 | 61.74 | 79 | Dz 316 | 126.42 |  | DZ 313 |  | 6.38 |
| Limed Oak |  | Dz 311 | 67.62 |  | Dz 317 | 132.30 |  | DZ 314 |  | 2.26 |
| Walnut | 79 | D2 312 | 67.62 | 79 | D2 318 | 132.30 |  | D2 315 |  | 2.26 |

## "Baronet" Speaker Systems and Enclosures

"BARONET III," Top-performance speaker system in folded-horn corner enclosure. Its performance equals that of many larger units. Makes use of floor and walls of room to effectively extend the horn. Includes SP8B $8^{\prime \prime}$ Radax speaker, T35B tweeter, X36 crossover and AT37 level control. Impedance: 16 ohms. Rated 20 watts, 40 -watt peaks. $227 / 8 \times 141 / 2 \times 133 / 4^{\prime \prime}$. Shpg. wt., 33 lbs.
"BARONET-SP8B." Compact "Baronet" en closure with an SP8B $8^{\prime \prime}$ speaker. Provides excellent reproduction-bass response extends down to 35 cps . Shpg. wt., 29 lbs .
ENCLOSURE ONLY. Takes either an $8^{\prime \prime}$ speaker or 2 -way system. Available in 3 handsome finishes to match the decorative scheme of any surrounding. Wt., 20 Ibs.

| Finish | ENCLOSURE ONLY |  |  | "BARONET-SP88" |  |  | "BARONET III" |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | Stock No. |  | NET EACH | Stock No. |  | NET EACH | Stock No. |  | NET EACH |
| Mahogany | 81 | DU 418 | 44.10 | 81 | DU 754 | 73.01 | 81 | DZ 872 | 09.27 |
| Limed Oak |  | DU 419 | 48.02 |  | DU 755 | 76.93 |  | D2 873 | 113.19 |
| Walnut | 81 | DU 861 | 48.02 | 81 | DU 866 | 76.93 | 81 | DZ 874 | 113.19 |

'EMPIRE-SP15B." Here's an excellent starter system, easily expanded; consists of SP15B $15^{\prime \prime}$ Radax speaker installed in Empire enclosure. Other components may be added gradually to expand this system to the 2 or 3-way type. Rear of speaker is coupled to folded horn; "Whizzer" element effectively distributes high frequencies. Wt., 71 lbs.

ENCLOSURE ONLY. Takes $12^{\prime \prime}$ or $15^{\prime \prime}$ speaker, or 2 or 3 -way system. Available in 3 handsome finishes. Shpg. wt., 56 lbs.
"MPRESP15B"

| Finish | ENCLOSURE ONLY |  |  | "EMPIRE-SP15B" |  |  | "EMPIRE IA" |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | Stock No. |  | NET EACH | Stock No. |  | NET EACH | Stock No. |  | NET EACH |
| Mahogany | 81 | DZ 769 | 97.02 | 81 | D2 832 | 139.16 | 81 | DZ 765 | 269.50 |
| Limed Oak | 81 | DZ 770 | 106.82 | 81 | DZ 833 | 143.08 | 81 | DZ 766 | 276.36 |
| Walnut | 81 | DZ 863 | 106.82 | 81 | DZ 867 | 143.08 | 82 | DZ 328 | 276.36 |

## "Aristocrat" Speaker Systems and Enclosures

"ARISTOCRAT III." Deluxe 3-way system in compact "Aristocrat" folded-horn corner enclosure. Selected speaker components provide unusually fine music reproduction. Speaker components are $12 \mathrm{~W} 12^{\prime \prime}$ bass woofer; T 25 A HF driver with 8 HD diffraction horn; T35 Super-Sonax tweeter; X8 and X36 crossovers and 2 -AT37 level controls. Imp., 16 ohms. Rated; 25 watts, 50 -watt peaks. $295 / 8 \times 19 \times 165 / 16^{\prime \prime}$. Shpg. wt., 74 lbs.
"ARISTOCRAT-12TRXB." Top-quality sys-
tem using the highly popular $12 T R X B 12 "$ tem using the highly popular $12 \mathrm{TRXB} 12^{\prime \prime}$ 3-way speaker; adjustable high-irequency control for matching of system to individua room acoustics. Covers entire audible range. Shipg. wt., 58 lbs.

ENCLOSURE ONLY. Takes $12^{\prime \prime}$ speaker, or 2 or 3 -way system. Available in 3 handsome finishes. Shpg. wt., 44 lbs.

| Finish | ENCLOSURE ONLY |  |  | "ARISTOCRAT-12TRXB" |  |  | "ARISTOCRAT III" |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | Stock No. |  | NET EACH | Stock No. |  | NET EACH | Stock No. |  | NET EACH |
| Mahogany | 81 | DZ 295 | 70.56 | 81 | DZ 756 | 135.24 | 81 | DZ 439 | 305.58 |
| Limed Oak | 81 | DZ 296 | 77.42 | 81 | DZ 757 | 142.10 | 81 | DZ 442 | 312.62 |
| Walnut | 81 | DZ 862 | 77.42 | 81 | DZ 865 | 142.10 | 82 | DZ 329 | 312.62 |

"REGENCY III
$\frac{\text { Stock No. }}{81} \frac{\text { DET EACH }}{385}$

| 81 | DZ | 496 | 38.14 |
| :--- | :--- | :--- | :--- |
| 81 | DZ | 497 | 394.94 |
| 82 | DZ 327 | 394.94 |  |

## "Empire" Speaker Systems and Enclosures

Size: $295 / 8 \times 32 \times 16^{\prime \prime}$. Shpg. wt., 90 lbs.
"EMPIRE IA." 3-way system in tastefully designed Empire lowboy enclosufe. Compact, dighy efficient folded-horn design provides authentic reproduction of bass frequencies; may be used against wall or in a corner. Components in system include 15 BW bass woofer; T10A HF driver with 8 HD diffraction horn; T35B VHF tweeter with X825 and X36 crossovers and 2-AT37 level controls. Hand-rubbed veneers. Impedance: 16 ohms. Rated 20 watts, 40 -watt peaks.


## THE "CARLTON IV"

Deluxe 4-way speaker system installed in a distinctively styled, contemporary enclosure. Low-boy design harmonizes beautifully with any modern furnishing mode.

Indirect-radiator 4 -way components are phase-loaded to provide nearly a full octave of added bass. Can be placed anywhere along a wall for sound reproduction approaching the quality of the original performance.
Employs these outstanding components: 15 WK 15 " " K ", type low-frequency driver, crossing over at 300 cps through X336 net-

SPEAKER SYSTEM
work to MT30 mid-bass horn assembly. Mechanical crossover at 1000 cps .

Model T350 VHF driver takes over at 3500 cps to provide treble response to $21,000 \mathrm{cps}$. Includes two AT37 level controls for "presence" and "brilliance" adjustment. Components are factory-installed and checked. Available in three lustrous, hand-rubbed veneers. Size: $331 / 2^{\prime \prime}$ high, $261 / 4^{\prime \prime}$ wide, $191 / 2^{\prime \prime}$ deep. Shpg. wt., 130 lbs.
82 DZ 390. Mahogany. NET.... . . 351.82
82 DZ 391. Limed Oak. NET. . . . . . 356.72
82 DZ 392. Walnut. NET.......... 356.72

## "DUCHESS IVE" ENCLOSURE AND SPEAKER SYSTEM

"DUCHESS" SPEAKER ENCLOSURE ONLY. Conveniently compact and with many of the fine touches that distinguish top-quality cabinetry, the "Duchess" provides complete versatility. You can install any $12^{\prime \prime}$ or $15^{\prime \prime}$ extended-range speaker by itself; then later, add other components to form a 2 or 3 -way direct-radiator system. Easily accepts E-V's phase-loaded, 4 -way speaker system components without the need for cabinet modification. Provided with adapter boards to allow convenient installation of components. Overall size, $295 / 8 \times 25 \times 19^{\prime \prime}$ deep. Smartly styled to blend beautifully with the decor of any surrounding, the "Duchess"
enclosure is available in three attractive finishes. Complete with four gracefully tapered legs. Shpg. wt., 65 lbs.
82 DZ 402. Mahogany. NET.
94.08
82 DZ 403. Limed Oak. NET. . . . . . . 98.00
82 DZ 404. Wainut. NET.
98.00
"DUCHESS IVE." 4-way speaker system installed in enclosure, above. Includes the $12 \mathrm{WK}, \mathrm{BB} 8$ and BB2 (see pages 62 and 63). Shpg. wt., 104 lbs .

79 DZ 307. Mahogany. NET..... . 286.16 79 DZ 308. Limed Oak. NET. . . . . . 291.06 79 DZ 309. Walnut. NET. . . . . . . . . 291.06

## NEW "CONTEMPO" EQUIPMENT CABINET

A functionally-styled, beautifully-finished, two compartment cabinet designed to accommodate high fidelity components. The smartly styled "Contempo" will complement any modern decorating scheme with its long, low lines and highly attractive finish. Matches the "Empire," "Centurion" and other Electro-Voice speaker enclosures.

Two lift lids provide quick accessibility to the record changer or turntable, tuner, amplifier and other controlling units. Each of the two compartments has ample space for all equipment.

Record changer compartment has adjustable mounting board that can be set either $3^{\prime \prime}$ or $6^{\prime \prime}$ below the bottom of the lid; dimensions are $181 / 8^{\prime \prime}$ wide x $17^{\prime \prime}$ deep. Tuner/ amplifier section has mounting board $13 / 8^{\prime \prime}$ below lid-components mount vertically so that controls face up for maximum convenience. Dimensions are $14^{\prime \prime}$ high $x 181 / 8^{\prime \prime}$ wide x $17^{\prime \prime}$ deep. Overall cabinet size is $295 / 8 \times 381 / 4 \times 191 / 4^{\prime \prime}$ deep. Tapered legs are $295 / 8 \times 381 / 4 \times 191 / 4$ deep. Tapered legs are
$155 / 8^{\prime \prime}$ long. Available in choice of handsome finishes-mahogany, limed oak, or walnutspecify when ordering. Shpg. wt., 72 lbs. 79 DZ 300.C. NET.
117.60

## "VISCOUNT" EQUIPMENT CABINET

The "Viscount" is a deluxe, highly functional equipment cabinet of enduring beauty, expertly crafted to blend with the very finest of room furnishings. Thick, top-quality hardwood is used throughout to achieve a high point in appearance and ruggedness of construction. Smart, contemporary styling complements the "Duchess," "Empire" and other E-V speaker enclosures.

Features a lift-lid and tilt-out front for convenient system operation. A tuner and amplifier can be installed on the tilt-out front panel for ready accessibility to all controls.

Record changer/turntable mounting board dimensions are $24^{\prime \prime}$ wide x $17^{\prime \prime}$ deep. Mounting board is adjustable, and may be set at positions of either $31 / 2^{\prime \prime}$ or $6^{\prime \prime}$ from the bottom of the lid. Tuner/amplifier mounting board is $81 / 2^{\prime \prime}$ deep $\times 22^{\prime \prime}$ wide, tuner/ampliboard is $81 / 2^{\prime \prime}$ deep $\times 22^{\prime \prime}$ wide, tuner/ampli-
fier section size is $141 / 2^{\prime \prime}$ high $\times 22^{\prime \prime}$ wide $x$ $17^{\prime \prime}$ deep. Overall cabinet size is $341 / 2 \times 26 x$ $191 / 2^{\prime \prime}$ deep. Cleat-type legs are $3^{\prime \prime}$ high. Shpg. wt., 80 lbs .
82 DZ 405. Mahogany. NET.
146.02

82 DZ 406. Limed Oak. NET...... . 152.88
82 DZ 407. Walnut. NET. . . . . . . . 152.88

## NEW "CORONET IA" ENCLOSURE AND SPEAKER SYSTEM

"CORONET" SPEAKER ENCLOSURE ONLY. Diminutive "Coronet" is a dramatic accomplishment of balanced reproduction in compact, space-saving form. Smooth, clean de sign is accented by brushed brass trim; complements any furnishing mode. Ideal for use in pairs for economical, high-quality stereo.

May be used with an $8^{\prime \prime}$ full-range speaker or 2 -way system for excellent, distortionfree sound. Rear port extends bass response below 100 cycles for superb small-speaker reproduction. Outstanding performance from 70 cps to beyond audibility. Enclosure
top resists burns and stains. Overall size, $25 \times 91 / 2 \times 173 / 8^{\prime \prime}$ deep. Available in mahogany, limed oak or walnut finish-specify when ordering. Shpg. wt., $191 / 2$ lbs.
79 DU $303-C$. NET.
34.79
"CORONET IA." Complete 2-way speaker system installed in the enclosure described at left. Includes the popular SP8-B $8^{\prime \prime} \mathrm{Ra}-$ dax"' speaker and BB1 high-frequency package (pages 62 and 63). Available in mahogany, limed oak or walnut finishes-specify when ordering. Shpg. wt., 38 lbs.
79 DU 304-C. NET .
99.96

## NEW "REGAL" SPEAKER SYSTEMS

The extremely compact enclosure employed in the "Regal" speaker systems is an outstanding achievement in the design of modern furniture. Its simple yet striking styling will provide the perfect accent to your room decor. The "Regal" enclosure is made throughout of selected woods, and its bold lines are richly brought out by a lustrous hand-rubbed finish.
The speaker components in both systems have been carefully chosen to provide extended response and dynamic range in the limited volume of the enclosures, with a minimum sacrifice in efficiency.

Size of the systems is $131 / 2 \times 24 \times 131 / 2^{\prime \prime}$ (HWD). Available in mahogany, limed oak or walnut finishes-specify when ordering.
"REGAL IA." Two-way system. Has 12" woofer, compression tweeter, LC crossover and level control. Shpg. wt., 30 lbs . 79 DU 305-C. NET.
100.94
"REGAL III." Three-way system. Has 12" woofer, mid-range and high-frequency compression tweeters, 2-LC crossovers and presence and brilliance controls. Specify finish. Shpg. wt., 32 lbs.
79 DU 306-C. NET.
144.55

# ELECTRO-VOICE ENCLOSURE KITS AND ACCESSORIES 

"Baronet"

"Centurion"


## Attractively Styled Speaker Enclosure Kits

Complete kits for assembling the famous Electro-Voice highfidelity speaker enclosures. All you need are a few simple tools to quickly assemble any of these distinctively styled enclosures. Each one of these economical kits includes a full set of clearly written, step-by-step instructions. All lumber parts are cut to exact size on the same precision factory machinery which is used to manufacture completed Electro-Voice cabinets. Exterior surfaces are made of selected clear-grained korina, ready for finishing in the color of your choice. Finishing kits, for obtaining a professional furniture finish, are listed on page 92 . Grille cloth, glue, screws and nails are included with every speaker enclosure kit; less metal trim (listed below).

The low-cost Baronet delivers excellent performance where space is limited. The Aristocrat is an economical enclosure that will extend the bass range of a speaker by one full octave. Rear loading is incorporated in the distinctive Empire for top audio efficiency in a corner or against a wall. The outstanding Regency combines the advantages of folded-horn performance with flexibility of placement. Featuring exclusive Electro-Voice " $W$ " single-path indirect radiator, the gracefully styled Centurion has a sealed cavity behind the $15^{\prime \prime}$ speaker position to provide superior transient response, subdue cone excursions and lower distortion. The chart at the bottom of the page lists speaker components suggested for installation in these enclosures.

| ENCLOSURE | Stock No. | Model No. | Type of Enciosure | Takes: | Assembled Size (HWD) | $\begin{aligned} & \text { Wt., } \\ & \text { Lbs. } \end{aligned}$ | $\begin{aligned} & \text { NET } \\ & \text { EACH } \end{aligned}$ |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Centurion | 79 D2 319 | KD3 | K-type indirect radiator folded corner horn | $15^{\prime \prime}$ speaker, or, 2, 3, or 4-way system | $42 \times 26^{3 / 4} \times 23^{1 / 22^{\prime \prime}}$ | 64 | 85.26 |
| Regency | 81 D2 786 | KD4 | Folded horn (corner or wall) | $12^{\prime \prime}$ or $15^{\prime \prime}$ speaker, or 2 or 3-way system | $295 / 8 \times 32 \times 19^{\prime \prime}$ | 55 | 71.54 |
| Empire | 81 DZ 787 | KD5 | Indirect folded horn (corner or wall) | $12^{\prime \prime}$ or $15^{\prime \prime}$ speaker, or 2 or 3-way system | 295/8×32 $\times 16^{\prime \prime}$ | 45 | 49.98 |
| Aristocrat | 81 DU 788 | KD6 | Folded corner horn | $12^{\prime \prime}$ speaker, or 2 or 3 -way system | $295 / 8 \times 19 \times 153 / 4{ }^{\prime \prime}$ | 36 | 38.22 |
| Baronet | 79 DU 320 | KD7 | Folded corner horn | $8^{\prime \prime}$ speaker or 2-way system | $251 / 2 \times 16 \times 12^{\prime \prime}$ | 16 | 25.48 |

## DECORATIVE TRIM AND GRILLE KITS FOR E-V ENCLOSURES

Custom, metal trim and grille sets for Electro-Voice Centurion, Regen cy and Aristocrat speaker enclosure kits. Designed to add a distinctive, professional touch to your completed enclosure kit. Each set gracefully complements the enclosure for which it is recommended. Metal pieces are attractively finished in brushed and lacquered antique brass. Grille sizes in descriptions indicate exposed area after installation.
MODEL AK4. Trim kit designed for Centurionstyle exterior. Consists of two decorative handles and modern crossbar grille. Grille is cut to $8^{\prime \prime}$ by $25^{\prime \prime}$ dimensions, handles are $5^{\prime \prime}$ long and $3 / 4^{\prime \prime}$ wide. Attractively finished in brushed and lacquered antique brass. Shpg. wt., 3 lbs.
81 DX 797. NET
8.82

MODEL AK5. Trim kit styled for the Regency KD4 enclosure kit. Consists of lacquered antique-brass finish crossbar grille. Size is $24^{\prime \prime}$ by $291 / 2^{\prime \prime}$. Shpg. wt., 3 lbs.
81 DX 798. NET.
5.88

MODEL AK6. Similar to Model AK5 described above, but for use with the Model KD6 Aristocrat enclosure kit. Size is $24^{\prime \prime}$ by $16^{\prime \prime}$. Shpg. wt., 3 lbs.
81 DX 799. NET
4.70

COMPLETE E-V SPEAKER ENCLOSURE PLANS
Easy-to-follow instruction booklets containing complete plans and list of materials necessary to build any of the Electro-Voice speaker enclosures.
The instruction booklets are each divided into five sections. (1) description of the specific enclosure and system, plus performance to be expected; (2) selection of materials, layout and cutting to size; (3) assembling the enclosure; (4) installation of speakers; (5) built-in systems which become part of house. Full construction details include tips on selecting lumber, layout and sawing of parts, and recommended Electro-Voice speakers and other components for your finished enclosure. Also include drawings, photos and hints to simplify building. (These booklets are identical to those supplied with the Electro-Voice enclosure kits listed above.) Postpaid in U.S.A.

| Stock <br> No. | PIan | For | NET <br> EACH |  |
| :--- | :--- | :--- | :--- | ---: |
| 38 | K 138 | IB1 | Patrician horn | 1.47 |
| 38 | K 139 | IB2 | Georgian horn | 1.47 |
| 38 | K 140 | IB3 | Centurion | .98 |
| 38 | K 141 | IB4 | Regency | .98 |
| 38 | K 142 | IB5 | Empire | .98 |
| 38 | K 143 | IB6 | Aristocrat | .98 |
| 38 | K 144 | IB7 | Baronet | .73 |

## POPULAR E-V <br> INTERIOR ASSEMBLY KITS

MODEL KDI "PATRICIAN IV." (Not illustrated.) E-V's famous " $K$ " horn with augment ed bass section. Scaled up approximately $30 \%$ to deliver an added full octave of bass Low in cost, the KD1 kit offers all the ad vantages of the Patrician enclosure (listed on page 64) in a built-in corner installation. Takes an $18^{\prime \prime}$ speaker, or 2,3 or 4 -way system. Specifically designed for use with the 103E 4-way speaker package listed on page 63. Kit includes all parts and easy-to-follow instructions. All lumber parts are precutglue, screws and nails are included. Size of interior assembly is $577 / 8 \times 341 / 2 \times 267 / 8^{\prime \prime}$ HWD. Shpg. wt., 150 lbs.
81 DZ 783. NET
115.64

MODEL KD2A "GEORGIAN." Duplicates the " K " horn interior assembly of the popular Georgian enclosure (page 64). Delivers the exceptional performance of the Georgian in a built-in corner installation. Takes a 15" speaker, or a 2,3 or 4 -way system. Specifcally designed for use with "Georgian 600 " component group (page 64). Kit includes glue screws, nails, instructions. $251 / 2 \times 16 x$ $12^{\prime \prime}$ HWD. Shpg. wt., 94 lbs .
79 DZ 321 . NET
67.62

> FINISHING KITS. Kits for finishing the enclosures at the top of this page are listed on p. 92 .

## Recommended Speaker Components For E-V Enclosures

The following chart lists the Electro-Voice components which are suitable for installation in E-V speaker enclosures and enclosure kits in this catalog. Each set of components has been selected to deliver optimum audio performance when
installed in the enclosures for which they are recommended The components are described on pages 62 and 63 . (In addition to the enclosure kits on this page, fully assembled and finished speaker enclosures are listed on pages 61 and 65 .)

| Enclosure | Recommended Components |  |  |
| :--- | :---: | :---: | :---: |
| Baronet, KD7 Kit | Woofer | Mid-Range Package | High-Frequency Package |
| Aristocrat, Marquis, KD6 Kit | SP8B | BB1 |  |
| Regency, Empire, KD4 Kit, KD5 Kit | BBW | BB3 | BB1 |
| Duchess, Centurion, KD3 Kit | 15 BW | BB3 | BB1 |

HIGH FIDELITY SPEAKERS

Top-quality hi-ff speakers, fomous for their authentic reproduction of sound


## 3-Way Diffaxial Series

UNIVERSITY'S DIFFAXIAL DESIGN. Most of the speakers listed below employ University's famous Diffaxial design. This feature assures outstanding tonal balance by providing exceptionally smooth, wide-angle dispersion of treble frequencies. These frequencies are normally projected straight ahead by the loudspeaker; as a result, they are not heard at the proper volume at all points in the room. However, University's Diffaxial speakers overcome this problem by using a special diffusing-type cone (Diffusicone) at the apex of the main cone. The Diffusicone disperses the treble frequencies to provide extremely even distribution throughout the listening area.
MODEL 315-C SUPER 15". DIFFAXIAL. The greatly improved version of earlier 315. Woofer cone features high excursion, dual spider piston and anti-breakup, low-resonance diaphragm, for rich natural bass. Multi-element Diffusicone mid-range section, crosses over at 1000 cps. Treble is covered by heavy-duty T-50 Hypersonic driver and axially mounted, wide-angle tweeter horn. Response is 25 cps to inaudibility. 2 balance controls for mid-range and treble adjustment. Magnet wt., $61 / 2 \mathrm{lbs}$. and treble adjustment. Magnet wt., $61 / 2 \mathrm{lbs}$. Capacity, 50 watts. Impedanc
$12^{\prime \prime}$ deep. Shpg. wt., $341 / 2$ lbs.
81 DU 947. NET.
152.88

MODEL 6303 15" DIFFAXIAL. Excellent 3way performance is achieved by using the Diffusicone design and coaxially mounted, high-efficiency tweeter. Moderately priced, the 6303 is a fine choice for a custom home music system. Three reproducing elements ( $15^{\prime \prime}$ cone, Diffusicone element and supertweeter), provide brilliant high-fidelity sound. Frequency response extends from 30 cps to beyond audibility.

Mechanical crossover at 1000 cps ; electrical crossover network at 5000 cps . Includes brilliance control on 3 -ft. cable with brass plate and knob. $2-\mathrm{lb}$. Alnico V permanent magnet. Power capacity, 30 watts. Impedance. 8-16 ohms. $151 / 2^{\prime \prime}$ diameter; $10^{\prime \prime}$ deep. Shpg. wt., 12 lbs.
95 DU 538. NET
81.34

MÓDEL 312 12" DIFFAXIAL. Brilliant $12^{\prime \prime}$ Diffaxial speaker for exceptional, widerange reproduction. Has $12^{\prime \prime}$ woofer, Diffusicone mid-range unit, and HF-206 supertweeter. Built-in electrical crossover network at 5000 cps . Response, 40 cps to beyond audibility. 25 watts power handling capacity. Employs $2-1 \mathrm{~b}$. Alnico V permanent capacity. Employs 2-1b. Alnico $V$ permanent magnet. Impedance, 8 liance control. $36^{\prime \prime}$ cable. Size, $121 / 8^{\prime \prime}$ dia. x $8^{\prime \prime}$ liance control. $36^{\prime \prime}$ cable.
deep. Shpg. wt., 11 lbs .
95 DX 188. NET
68.60

MODEL UXC-123 $12^{\prime \prime}$ DIFFAXIAL. Unusually low in cost, the UXC-123 employs a Diffusicone element and reciprocating-flare super-tweeter, mounted through the center axis of the woofer, to attain true, wide-angle dispersion. Built-in brilliance control for adjustment to room acoustics. Mechanical crossover at 1000 cps ; electrical crossover at $5000 \mathrm{cps} . \quad 11 / 4-\mathrm{lb}$. Alnico V permanent magnet. Power handling capacity, 25 watts. Impedance, 8-16 ohms. Frequency response extends from 45 to 17,500 cycles. Size, $121 / 8^{\prime \prime}$ diameter; $81 / 4^{\prime \prime}$ deep. Brilliance control comes complete with mounting plate and knob, pre-wired to $3-\mathrm{ft}$. cable. Shpg. wt., 9 lbs.
95 DX 585. NET
62.72

MODEL $3088^{\prime \prime}$ DIFFAXIAL. A very compact. highly efficient Diffaxial speaker. Designed specifically for the smaller hi-fi installation, the 308 is perfect for use where space is at a premium and quality reproduction is desired. Features special-design $8^{\prime \prime}$ woofer for excellent bass response. Has Diffusicone mid-range unit, compression type tweeter and built-in $5000-\mathrm{cps}$ electrical crossover Frequency response, $50-15,000 \mathrm{cps}$. Magnet wt., $11 / 4 \mathrm{lbs}$. Impedance $8-16$ ohms. Power handling capacity, 25 watts. $87 / 32^{\prime \prime}$ diameter; $61 / 4^{\prime \prime}$ deep. Shpg. wt., 5 lbs.
95 D 189. NET.





## 2-Way Diffaxial Series

MODEL DIFFUSICONE-15 $15^{\prime \prime}$ DIFFAXIAL. LOWcost, 2-way, Diffaxial $15^{\prime \prime}$ speaker. Diffusicone element assures wide-angle dispersion of treble frequencies. Dual horn-loading at the apex of the cone extends mid- and high-frequency response, crossing over mechanically at 1000 cps . Rich, clear bass, without boominess, is provided by the sturdily constructed $15^{\prime \prime}$ woofer with specially molded cone. A $11 / 2-1 \mathrm{~b}$. Alnico V magnet also contributes to the excellent bass response. Frequency response from 30 to 14,000 cycles. Power capacity, 30 watts. Impedance, $8-16$ ohms, $151 / 2^{\prime \prime}$ dia.; $71 / 8^{\prime \prime}$ deep. Shpg. wt., $81 / 4 \mathrm{lbs}$.
95 DX 539. NET.
44.10

MODEL DIFFUSICONE-12 $12^{\prime \prime}$ EXTENDEDRANGE DIFFA XIAL. $12^{\prime \prime}$ version of above. For the low-cost high-fidelity system. Smooth, wide-angle dispersion achieved by patented University diffusicone element. Power hanUniversity diffusicone element. Power handing capacity, 30 watts. Frequency re-
sponse, 40 to 14,000 cps. Impedance, $8-16$ ohms. 24 oz. Alnico V magnet. Depth $41 / 2^{\prime \prime}$; $121 / 4^{\prime \prime}$ diameter. Shpg. wt., 6 lbs .
95 DX 182. NET
36.26

MODEL UXC-122 $12^{\prime \prime}$ DIFFAXIAL. Low-priced $12^{\prime \prime}$ Diffaxial speaker. Employs Diffusicone high-frequency element with a 1000 -cycle mechanical crossover. Coaxial horn-loading at apex of cone extends mid and treble reat apex of cone extends mid and treble re-
sponse. Low frequencies are reproduced by specially molded, one-piece woofer diaphragm. Delivers excellent reproduction across entire audio range. Response, 45 to 13.000 cps . Capacity, 25 watts. Impedance, $8-16$ ohms. Size, $121 / 8^{\prime \prime}$ diameter; $43 / 8^{\prime \prime}$ depth. Employs 1-lb. Alnico $V$ permanent magnet. Shpg. wt., $51 / 4 \mathrm{lbs}$.
95 DX 584 . NET
32.34

MODEL DIFFUSICONE-8 $8^{\prime \prime}$ DIFFAXIAL. Lowcost, 2-way $8^{\prime \prime}$ speaker. Highly suitable for the smaller hi-fi installation, or where space is at a premium. Wide-angle dispersion is achieved by dual coaxial horn acting as radial projector, plus aperture diffraction, Diffusicone element provides better-thanaverage reproduction. Response, 70 to 13,000 cps. Magnet wt., 1 lb . Capacity, 25 watts. Impedance, $8-16$ ohms. $8^{7 / s s^{\prime \prime}}$ diameter. Depth. $33 / 8^{\prime \prime}$. Shpg.' wt., $31 / 4 \mathrm{lbs}$. 95 D 183. NET
25.48

## 12" Coaxial Speaker

MODEL 6201. Highly popular, top-quality $12^{\prime \prime}$ hi-fi speaker. True coaxial operation is provided by a compression-type tweeter and 2500 -cycle electrical crossover network. Tweeter is axially mounted through the center of the woofer. " $W$ "' shape, $11 / 2-\mathrm{lb}$. center of the woofer.
Alnico $V$ magnet and 1 -piece molded woofer diaphragm provide exceptionally smooth low-frequency transient response. Includes brilliance control with 3 -ft. cable. Excellent frequency response -45 to $15,000 \mathrm{cps}$. Capacity, 25 watts. Impedance, 8-16 ohms. $83 / 8^{\prime \prime}$ depth. Shpg. wt., $101 / 4$ lbs.
95 DX 176. NET
50.96

## 12" Extended-Range Speaker

MODEL 6200. Economy-priced $12^{\prime \prime}$ speaker. Special, shallow design for flush mounting in ceilings, walls, etc. Excellent for highfidelity use, radio-phono replacement, public address, etc. Employs duraluminum dome at cone apex. Frequency response, 45-10,000 cps . Impedance, 8-16 ohms. Power handling capacity. 30 watts. $121 / 8^{\prime \prime}$ diameter. Only $4^{\prime \prime}$ deep. Shpg. wt., $51 / 4 \mathrm{lbs}$.
95 DX 180. NET
25.48

## WOOFERS, TWEETERS, DRIVERS \& CROSSOVERS

## Low-Frequency Woofers

MODEL C15W $15^{\prime \prime}$ WOOFER. Features spe-cial-design voice coil permitting greater cone excursion for deep bass. Dual spider piston and $6-1 \mathrm{~b}$. magnet assure remarkably clean response from below 25 to 1500 cps . Power handling capacity, 50 watts. Dual impedance voice coil assembly permits use in any system of 4 to 20 ohms. Depth, $101 / 2^{\prime \prime}$. Shpg. wt., $263 / 4 \mathrm{lbs}$.
95 DU 185. NET.
83.30

MODEL C63W $15^{\prime \prime}$ WOOFER. Employs unique, built-in low-pass filter. Permits adjusting treble cut-off point at 700,2500 or 5000 cps to suit crossover requirements of most tweeters. $11 / 2-1 \mathrm{~b}$. magnet. Response, 30 to 6000 cps . Capacity, 30 watts. Includes brilliance control. Impedance, 8 ohms. Depth, $10^{\prime \prime}$. Shpg. wt., 10 lbs .
81 DX 563. NET.
48.02

See Page 71 for University

## Tweeters, Horns and Drivers

MODEL HF-206 HYPERSONIC TWEETER. Provides crisp, clear highs. Extends high-frequency response far beyond audible range. Employs improved die-cast aluminum wideangle, "reciprocating flare" horn for uniform $120^{\circ}$ horizontal and $50^{\circ}$ vertical dispersion. Driver mechanism handles 25 to 50 watts of program material. Response, 3500 watts of program material. Response, 3500
cps to inaudibility. Requires $\mathrm{N}-1$ or $\mathrm{N}-2 \mathrm{~B}$ crossover network. Impedance, 8 ohms. $6 \times 35 / 16 \times 69 / 16^{\prime \prime}$. Shpg. wt., $31 / 2$ lbs.
95 D 190. NET
32.34

MODEL T-30 MID-RANGE AND HIGH-FREQUENCY DRIVER. For use with Cobreflex or H-600 horns. Provides mid-range in 3 and 4 -way systems, or serves as tweeter in 2 -way systems. Requires N-2A crossover network. Response, 200 to $15,000 \mathrm{cps}$. Capacity, 50 watts in multi-speaker systems. Impedance, 8 ohms. $13 / 8^{\prime \prime}-18$ throat $; 31 / 2^{\prime \prime}$. diameter; $33 / 4^{\prime \prime}$ deep. Wt., $23 / 4$ lbs. 81 D 589. NET.
29.40

MODEL T- 50 HYPERSONIC DRIVER. Heavyduty driver unit for use with the H-600 horn. Provides response from 600 cps to beyond audibility. Requires N-2A crossover network. Capacity, 50 watts in multispeaker systems. Imp., 8 ohms. $13 / 8^{\prime \prime}-18$ throat; $41 / 4^{\prime \prime}$ dia.; $418^{\prime \prime}$ deep. Wt., 5 lbs.
81 D948. NET.
48.51

MODEL CObREFLEX HORN. Perfect for use as a mid-range horn, in 3 -way speaker systems when used with the T-30 driver unit. Its $27^{\prime \prime}$ exponentially flared air column permits crossover as low as 350 cps . Twinflare design for uniform wide-angle dispersion; $120^{\circ}$ horizontal and $60^{\circ}$ vertical. Aluminum die casting. $13 / 8^{\prime \prime}-18$ throat. $101 / 4 \mathrm{x}$ $181 / 2 \times 91 / 4^{\prime \prime}$. Shpg. wt., $101 / 4$ lbs. 95 DX 184 . NET.
22.54

MODEL C12W 12" WOOFER. Features built in low-pass filter for adjustment of response to 700,2500 or 5000 cps -suits crossover requirements of most tweeters. Frequency response, 40 to 6000 cps . Power handling capacity, 30 watts. Employs $11 / 2-1 \mathrm{~b}$. magnet. Voice coil impedance, 8 ohms. $61 / 2^{\prime \prime}$ deep. Shpg. wt., $71 / 4 \mathrm{lbs}$.
95 DX 191. NET.
35.28

MODEL C8W $8^{\prime \prime}$ WOOFER. Perfect for use in assembling a high-quality speaker system for use where space is limited. May be used as a low-cost, mid-range speaker in threeway systems. Suitable for crossover up to 5000 cps . Response, 50 to 5000 cps when properly baffled. Power handling capacity, 25 watts. Impedance, 8 ohms. $41 / 4^{\prime \prime}$ deep. Shpg. wt., 3 lbs.
95 D 192. NET.
13.23

MODEL 4401 TWEETER. A quality tweeter at low cost. Sturdy, one-piece die-cast horn using "reciprocating flare" principle for $120^{\circ}$ horizontal and $50^{\circ}$ vertical dispersion. Employs efficient driver mechanism and lightweight duralumin voice coil suspension in hermetically sealed unit. Response, 2000 to $15,000 \mathrm{cps}$. Requires $\mathrm{N}-1$ or N-2B crossover networks. Capacity, 25 watts. Impedance, 8 ohms. Size, $23 / 4 \times 6 x-$ 65/15". Shpg. wt., 2 lbs.
95 D 167. NET
17.64

MODEL UXT-5 SUPER TWEETER. A compact, super-tweeter assembly. Unusually smooth response at 5000 cps crossover point, or above. Employs efficient compression driver unit coupled to "reciprocating flare" horn, for uniform wide-angle response. Recommended for use with either the N-1 high-pass filter or N-2B crossover network. Response from 4500 to $17,500 \mathrm{cps} .120^{\circ}$ horizontal and $50^{\circ}$ vertical dispersion. Capacity; 25 watts in 2 -way systems, 50 watts in 3 -way systems. Impedance, 8 ohms. $41 / 4 \times 21 / 2 \times 4^{\prime \prime}$. Shpg. wt., $13 / 4 \mathrm{lbs}$.
81 D 564. NET
20.58

MODEL H-600 MID-RANGE AND HIGH FREQUENCY HORN. Excellent, top-rated 600cycle cutoff, wide-angle horn. One-piece, die-cast design. Recommended for use with $\mathrm{N}-2 \mathrm{~A}$ crossover network and the Model T-30 or T-50 driver units. Offers outstanding performance at low cost. Combines "reciprocating flare" principle with hemispherical deflection for uniform sound patterns ical deflection for uniform sound patterns
throughout the audio range from 600 cps to throughout the audio range from 600 cps to
beyond audibility. Accepts driver unit with standard-size $13 / 8^{\prime \prime}-18$ throat. $73 / 4 \times 81 / 4 \times 43 / 4^{\prime \prime}$. Shpg. wt., $21 / 2$ lbs.
81 DX 949. NET.
17.64

## Crossover Networks and Level Control

MODEL N-1 ADJUSTABLE HIGH-PASS FILTER. Adjustable high-pass filter with built-in brillance control. For dividing audio between woofer and tweeter in 2 -way systems. Crossover and impedance combinations: 2500. 5000 and $10,000 \mathrm{cps}$ at 8 ohms; 1250 2500 and 5000 at 16 ohms; also 5000 and $10,000 \mathrm{cps}$ at 4 ohms. For use with N-2A crossover in 3 -way systems. Fits panels to crossover in 3 -way systems. Fits p
$1^{\prime \prime} .35 / 8 \times 31 / 4 \times 3^{\prime \prime}$. Shpg. wt., $13 / 4 \mathrm{lbs}$. 95 D 193. NET.
MODEL N-2A CROSSOVER NETWORK解 any combination of speakers, in a great variety of voice coil impedances and crossover points. Can be used with N-1 or N-2B for 3 -way speaker systems. $6 \mathrm{db}, 2$-way network. May be used in pairs as 12 db network or singly as 12 db low or high-pass filter. Crossover: 300 or 700 cps at either 8 or 16 ohms; 700 cps at 4 ohms. Less brilliance control; use AP-8 below. Size, 35/8x $31 / 4 \times 3^{\prime \prime}$. Shpg. wt., $21 / 4$ lbs.
95 D 194. NET
17.64

MODEL AP- 8 LEVEL CONTROL. Highly efficient attenuator pad for balancing sound according to room acoustics and personal taste. Perfect for use with N-2A and N-2B networks. Attractive escutcheon marked "presence" on one side, and "brilliance" on other side. Fits panels to $1^{\prime \prime}$ in thickness. Impedance: $8-16 \mathrm{ohms}$. Shpg. wt., 7 oz . 95 D 132. NET.
3.87

MODEL N-2B CROSSOVER NETWORK. For use with any combination of speakers. in varied voice coil impedances and popular crossover points. Can be used with the N-2A for 3 -way speaker systems. $6 \mathrm{db}, 2$-way network. Used in pairs as 12 db network, or singly as 12 db low or high-pass filter. Crossovers; 1250, 2500 and 5000 cps at 8 ohms; 2500 or 5000 cps at $16 \mathrm{ohms} ; 2500 \mathrm{cps}$ at 4 ohms. Less brilliance control; use AP-8 below. $35 / 8 \times 31 / 4 \times 3$ ". $21 / 4 \mathrm{lbs}$.
95 D 195 . NET.
13.72

MODEL N-3 "ACOUSTIC BATON" 3-WAY CROSSOVER NET WORK. Adjustable network for 3 -way speaker systems. Connections for either 350 or 700 cps crossover between midrange and woofer. Tweeter crossover is 5000 cps . Built-in presence and brilliance controls. Adjustable for vertical or horizontal mounting. Fits panels up to $1^{\prime \prime}$ in thickness. Impedance, 8 ohms. Size, $7 \times 5 \times 3^{\prime \prime}$. Shpg. wt., $51 / 2 \mathrm{lbs}$.
95 D 196. NET.
27.44

See Page 71 for University Speaker Packages


## SPEAKER ENCLOSURES AND SYSTEMS



Smartly styled, high-fidelity lowboy enclosure and complete lowboy speaker systems. Only $253 / 8 \times 273 / 8 \times 16^{\prime \prime}$ (including legs), these units are ideal for use in small rooms. Enclosure can house $12^{\prime \prime}$ or $15^{\prime \prime}$ speakers, plus a variety of mid-range and high-frequency tweeter units for full-range hi-fi reproduction. Versatile styling and rich, hand-rubbed finish complement any room interior-blend well with both traditional and modern decor.
The complete, carefully matched "Debonaire" systems, listed below, deliver clean, extended high-fidelity sound. The separate "Debonaire" enclosure, also listed, is excellent for use with the University speaker packages at the bottom of page 71 Its baffle board has removable cut-outs for easy installation of speaker components.

| Stock No. | Mir's <br> Type | Description | Finish | $\left\lvert\, \begin{gathered} \text { Wt. } \\ \text { Lbs. } \end{gathered}\right.$ | $\begin{aligned} & \text { NET } \\ & \text { EACH } \end{aligned}$ |
| :---: | :---: | :---: | :---: | :---: | :---: |
| 82 $D Z$ 433 <br> 82 $D Z$ 434 <br> 82 $D Z$ 435 | EN-1215 | (Debonaireenclosurefor usewith 12 " or $15^{\prime \prime}$ speaker. Complete with provi-sionsformid-rangeand tweeter units | Mahogany Blonde Walnut | 56 | $\begin{aligned} & 61.74 \\ & 67.62 \\ & 67.62 \end{aligned}$ |
| $\begin{aligned} & 82 D Z 436 \\ & 82 D Z 437 \\ & 82 \quad D Z 438 \\ & \hline \end{aligned}$ | S-3 | Debonaire enclosure with $\mathrm{C}-12 \mathrm{~W}$ $12^{\prime \prime}$ woofer, H-600 mid-range horn/ T-30 driver \& UXT-5 super tweeter | $\begin{aligned} & \text { Mahogany } \\ & \text { Blonde } \\ & \text { Walnut } \\ & \hline \end{aligned}$ | 68 | $\begin{aligned} & 192.08 \\ & 95.02 \\ & 195.02 \\ & \hline \end{aligned}$ |
| $\begin{array}{lll} 82 & D Z & 439 \\ 82 & D Z & 440 \\ 82 & D Z & 441 \end{array}$ | S-4 | Debonaire enclosure with Diffusi-cone-15 two-way $15^{\prime \prime}$ speaker and H-600 mid-range horn/T50 Hypersonic driver | Mahogany Blonde Walnut | $\}^{71}$ | $\begin{aligned} & 193.55 \\ & 96.49 \\ & 196.49 \end{aligned}$ |
| $\begin{array}{lll} \hline 82 & D Z & 442 \\ 82 & D Z & 443 \\ 82 & D Z & 444 \end{array}$ | $\left\{\begin{array}{l} \text { EN-1215 } \\ \text { With } \\ \text { UXC-123 } \end{array}\right.$ | Debonaire enclosure with UXC-123 $12^{\prime \prime}$ diffaxial speaker. Speaker has completely wired brilliance control. | Mahogany Blonde Walnut | 65 | $\begin{array}{r} 124.46 \\ 130.34 \\ 130.34 \end{array}$ |

## "Tiny-Mite" Speaker Enclosures and Systems


"Tiny-Mite"


TM-812 "TINY-MITE" ENCLOSURE. An unusually effective "cornerless-corner" enclosure, occupying little more than one square foot of floor space, yet providing powerful bass response. For use with any $12^{\prime \prime}$ or $8^{\prime \prime}$ speaker; baffle board is cut for $12^{\prime \prime}$ speaker, with optional adapter board cut for $8^{\prime \prime}$ speaker. Construction is of heavy $3 / 4^{\prime \prime}$ wood, braced to eliminate any trace of vibration or rattling. Specially designed interior horn construction operates independently of room placement; enclosure may be used in a corner against a side wall, on a shelf, etc., without impairment of tonal quality. Surfaces are beautifully finished; precision workmanship throughout. Available in choice of mahogany, blonde, or walnut finish. Grille cloth has attractive pattern, selected to harmonize with wood finishes. Overall size. $211 / 4^{\prime \prime}$ high, $151 / 2^{\prime \prime}$ wide, $121 / 2^{\prime \prime}$ deep. Shpg. wt., 26 lbs.
95 DU 104. Mahogany. NET . . . . . . 42.63
95 DU 107. Blonde. NET.
45.57

81 DU 81 8. Walnut. NET.

## "Companio nette" 2-Way Speaker System

Tastefully styled 2 -way high-fidelity speaker system. Provides excellent tonal reproduction. Specially designed for use in limit-ed-space applications as a shelf enclosure; may also be used as an extension speaker to bring music from your central hi-fi system to another part of the house.

Enclosure employs the "distributed port" phase-inversion principle for smooth, peak free bass response. Complete system consists of handsomely finished cabinet plus C. $8 \mathrm{~W} 88^{\prime \prime}$ woofer, 4401 wide-angle tweeter and 2000 -cycle crossover network. All components are installed-and ready to use. Frequency response of system extends from Frequency response
$\mathbf{5 0}$ to 15,000 cycles.

## "Kwikit" 12 " and 15 " Speaker Enclosure Kits

Enclosures of superior acoustic design in kit form. Complete with attractive front panel trim and grille cloth. Selected wood panels are cut exactly to size, of $3 / 4^{\prime \prime}$ fully cured lumber, ready for furniture finishing. Precision-made parts assure positive airtight construction for maximum enclosure efficiency. Design combines direct speaker radiation, reflex principle and rear horn loading construction, to produce uniform response in all parts of the listening area.

Self-contained folded horn extends to front of enclosure, projecting low frequencies out into the room. "Kwikits" are independent of room placement, and may be used against a flat wall, in a corner, or above floor against a flat wall, in a corner, or above floor
level. Heavy wood panels provide high rigidity. Exterior and interior parts fit snugly together; smooth, professional finishing is

S-3TM SYSTEM. Combination of 3 -way Model 308 University "Diffaxial" 8 " speaker and highly efficient "Tiny-Mite" enclosure listed at left. Speaker is installed, wired and ready to use. Convenient terminal strip on rear of enclosure permits quick, exceptionally easy hook-up to amplifier without opening enclosure. Shpg. wt., 31 lbs.
81 DU 897. Mahogany. NET.
83.30

81 DU 898. Blonde. NET. 86.24

81 DU 899. Walnut. NET
86.24
"TINY-MITE" WITH UXC-122 INSTALLED. Highly effective system using $12^{\prime \prime}$ UXC-122 "Diffaxial" speaker. Delivers music reproduction comparable to considerably larger systems. Exceptionally compact; may be used anywhere in room with excellent results, since self-contained horn in enclosure is independent of walls and floor for operation. Shpg. wt., 31 lbs.
81 DU 568. Mahogany. NET.
75.07

81 DU 569. Blonde. NET
77.91
77.91

Only $10^{\prime \prime}$ high, $10^{\prime \prime}$ deep and $24^{\prime \prime}$ longperfect for mounting on a book or record shelf. Sturdily constructed to prevent cabinet vibration; handles program material of up to 25 watts. May be mounted on wrought iron legs (available at most hardware stores) as an independent, free-standing unit if deas an independent, free-standing unit if de-
sired. Matching grille cloth has attractive sired. Matching grille cloth has
swirl pattern. Shpg. wt., 21 lbs .
MAHOGANY FINISH.
81 DU 583. NET.
60.76

BLONDE FINISH.
81 DU 584. NET.
62.72

WALNUT FINISH.
81 DU 816 . NET
62.72
assured by absence of protruding edges or irregularities in edges of panels. KEN-12 has baffie board for $12^{\prime \prime}$ wide-range speaker or woofer; pre-cut for University H-600 horn and T-30 or T-50 driver; and 4401, UXT-5 or HF-206 tweeter. KEN-15 accepts a $15^{\prime \prime}$ (or $12^{\prime \prime}$ speaker with adapter below), and same mid-range and highbelowe, and same mid-range and high-
frequency components as KEN-12. With grille cloth.
KEN-12.291/2x211/2x151/2". Wt. 45 lbs. 81 DU 828. NET.
KEN-15. $351 / 4 \times 29 \times 181 / 2^{\prime \prime}$. Wt. 68 lbs . 81 DZ 829. NET.
58.31

ADAPTER BOARD. Permits mounting $12^{\prime \prime}$ speaker in KEN-15. Wt., $11 / 2 \mathrm{lbs}$.
82 DX 299. NET.
1.19

# SPEAKER SYSTEMS AND HIGH COMPLIANCE WOOFERS 

## 2-Way Speaker Systems

MODEL S-10L-LOWBOY. Two-way, highfidelity speaker system in handsome shelftype enclosure. Ideally suited for use where minimum upright space is available. Tubular duct provides phase-inverting action for highly realistic audio reproduction. For amplifiers delivering 15 watts or more.

Complete system includes: C-12HC 12" high-compliance woofer (described below), special-design UL/HC wide-angle tweeter, HC crossover network, and highly efficient Program Distortion Filter. Impedance, 8
ohms. Enclosure is constructed of $3 / 4^{\prime \prime}$-thick selected woods. Available in choice of mahogany, blonde or walnut - hand-rubbed to a lustrous, natural grain finish. Attractive grille cloth harmonizes with wood finish to blend beautifully with furnishings of room. Supplied with $11 / 2^{\prime \prime}$ removable base. Overall size (less base) is only $14 \times 25 \times 141 / 2^{\prime \prime}$. Shpg. wt., 51 lbs.

MODEL S-10H_HIGHBOY. Speaker system as described above, but for use where minimum width is available. $25 \times 14 \times 141 / 2^{\prime \prime}$.

| S-10L Lowboy |  |  | S-1 OH Highboy |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: |
| Stock No. | Finish | NET | Stock No. | Finish | NET |
| 82 DZ 418 | Mahogany | 136.22 | 82 DZ 445 | Mahogany | 136.22 |
| 82 DZ 419 | Blonde | 140.14 | 82 DZ 446 | Blonde | 140.14 |
| 82 DZ 420 | Walnut | $140.14^{\prime}$ | 82 DZ 447 | Walnut | 140.14 |

## 3-Way Speaker Systems

MODEL S-11H-HIGHBOY. Three-way, highfidelity speaker system in width-sparing consolette enclosure. Though small in size the $\mathrm{S}-11 \mathrm{H}$ provides remarkably rich and distinct bass reproduction. Employs same acoustic principle as described above, for superb, satin-smooth sound.

System includes: C-15HC $15^{\prime \prime}$ high-compliance woofer (described below), Diffusi-cone- $88^{\prime \prime}$ mid-range speaker, UL/HC Hypersonic tweeter, HC-3 crossover with balance control, and Program Distortion Fil-
ter. For amplifiers delivering 10 watts or more. Imp., 8 ohms. Enclosure is styled to complement the decor of any room. Available in choice of handsome finishes: mahogany, blonde or walnut. Attractive grille cloth blends beautifully with quality finish of enclosure. Supplied with $11 / 2^{\prime \prime}$ removable base. Size (less $11 / 2^{\prime \prime}$ base), $267 / 8 \times 191 / 2 \times 171 / 2^{\prime \prime}$. Shpg. wt., 80 lbs.

MODEL S-11L-LOWBOY. Speaker system as described above, but for use where minimum upright space is available. $191 / 2 \times 267 / 8 \times 171 / 2^{\prime \prime}$.

| S-11H Highboy |  |  | S-11L Lowboy |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: |
| Stock No. | Finish | NET | Stock No. | Finish | NET |
| 82 DZ 421 | Mahogany | 240.10 | 82 DZ 448 | Mahogany | 240.10 |
| 82 DZ 422 | Blonde | 244.02 | 82 DZ 449 | Blonde | 244.02 |
| 82 DZ 423 | Walnut | 244.02 | 82 DZ 461 | Walnut | 244.02 |

## $\mathbf{C - 1 2 H C}$ and $\mathbf{C - 1 5 H C}$ High-Compliance Woofers

Moderately priced, high-compliance woofers designed for ultra-linear response. Deliver rich, remarkably clean reproduction throughout the lower frequency range. Have unusually low cone resonance.

Feature Hiflux Uniferrox-7 magnet material in a specially constructed suspension struc ture-assures positive transient control during maximum excursions. Dual-impedance voice coil permits use in any system of 4 to 8 ohms or 10 to 20 ohms.

For maximum fidelity, the $\mathrm{C}-12 \mathrm{HC}$ and the $\mathrm{C}-15 \mathrm{HC}$ speakers should be used in properly designed enclosures. Recommended enclosure plans are supplied with each unit.

MODEL C-12HC $12^{\prime \prime}$ SPEAKER. High-compliance, $12^{\prime \prime}$ woofer providing excellent performance when used with amplifiers delivering 15 watts or more. Delivers clean response below 2500 cycles. Resonance, 18 cps. Depth, $51 / 2^{\prime \prime}$. Shpg. wt., $81 / 2 \mathrm{lbs}$. 81 DX 811. NET.
48.51

MODEL C-15HC $15^{\prime \prime}$ SPEAKER. Deluxe, highefficiency $15^{\prime \prime}$ woofer. Delivers outstanding reproduction of audio frequencies below 800 cycles. Recommended for use in high-fidelity systems employing amplifiers which are capable of delivering output of 10 watts or more. Cone resonance, only 15 cps . Depth, $81 / 8^{\prime \prime}$. Shpg. wt., $243 / 4 \mathrm{lbs}$.
81 DU 812 . NET
87.71


## University 2-Way, 3-Way, Mid-Range and High-Frequency Speaker Packages

Carefully matched combinations of speaker components, available in a variety of sizes. Include "add-on" groups of components for modernizing existing installations, and complete sets of components. Especially suited to custom installation in walls or doors. or in specially designed enclosures. Each set includes all necessary drivers and horns, connecting wires, balance controls as indicated, and full instructions for quick, simplified installation.

Each full-range speaker component package offers superior cover age of the audible range, when properly baffled. High-frequency and mid-range packages add new brilliance to older high-fidelity systems. Crossover networks are furnished as required, eliminating any necessity for further matching of components. May be used with all high-quality amplifiers and other playback equipment. Binding post and screw terminals for easy installation; no soldering.

| Stock No. | Mfr's Type | Description | W., Lbs. | $\begin{aligned} & \mathrm{NET} \\ & \text { EACH } \\ & \hline \end{aligned}$ |
| :---: | :---: | :---: | :---: | :---: |
| 95 D 109 | UN-1 | High-Frequency Components Package; HF-206 tweeter, N2B, AP8 | 7 | 49.93 |
| 81 DX 995 | UN-2 | Mid-Range Components Package; T-30 mid-range driver H-600 reciprocating-flare horn, N2A crossover network, AP8 balance control. | 8 | 68.55 |
| 81 DU 996 | UN-3 | Mid- and High-Frequency Components Package; T-30 mid-range driver, H-600 horn, HF-206 super-tweeter, N3 crossover network with controls. | 15 | 106.82 |
| 81 DX 997 | UN-4 | $8^{\prime \prime}$ Two-Way Components Package; C8W woofer, 4401 tweeter, N1 crossover network with balance control. | 8 | 41.16 |
| 81 DU 998 | UN-5 | 12" Three-Way Components Package; C12W woofer, H-600 horn, T-30 driver, HF-206 super-tweeter, N3 crossover with controls. | $211 / 2$ | 142.10 |
| 81 DU 999 | UN-6 | 15" Three-Way Components Package; C15W woofer, H-600 horn, T-30 driver, HF-206 super-tweeter, N3 crossover with controls. | 391/2 | 190.12 |



## HIGH-FIDELITY SPEAKER SYSTEMS AND ENCLOSURES

Top-quality, research-engineered speaker enclosures and systems-selected by Allied's audio experts to give you maximum value. Each of the enclosures is available in mahogany, blonde or walnut to blend harmoniously with the decorative scheme of any room. Unfinished enclosures for "do-it-yourselfers" are also offered. Each speaker system has components installed and ready to use. Whether you live in a small apartment or spacious home, you'll find a system ideal for your specific needs.

## EN-12 FOLDED HORN ENCLOSURES AND COMPLETE SPEAKER SYSTEMS

EN-12 ENCLOSURE. Popular, beautifully styled "cornerless corner" horn-loaded enclosure. May be used against a wall or in a corner, with equal effectiveness. Combines the best features of rear horn-loading, phase inversion, and direct radiator design. Speaker mounting board has pre-cut openings and adapter board to allow progressive expansion of speaker system.
Openings permit easy installation of midrange and high-frequency tweeters. Interior panels are strongly braced for maximum rigidity, to eliminate rattling and "buzzing" at high-amplitude low-frequency signals. For any $12^{\prime \prime}$ extended-range speaker; or multiple speaker systems using $12^{\prime \prime}$ woofer H-600 horn with T-30 mid-range or T-50 mid- and high-range driver, and 4401 UXT-5 or HF-206 tweeters. $30^{\prime \prime}$ high, $211 / 2^{\prime \prime}$ wide and $153 / 4^{\prime \prime}$ deep. Choice of 3 handsome finishes. Shpg. wt., 60 lbs .

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31 DZ 822. Mahogany. NET
74.48
81 DZ 823. Blonde. NET........... 77.91
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77.91

EN-12 WITH UXC-123 INSTALLED. $12^{\prime \prime}$ Univer sity "Diffaxial" speaker with reciprocating flare super-tweeter. Reproduces entire musi cal range with excellent fidelity. Built-in brilliance control permits exact adjustment to room acoustics. Frequency response, 45 to 17,500 cycles. Power handling capacity 25 watts. Impedance, 8 - 16 ohms. In 3 finishes. Shipg. wt., 69 lbs.
81 DZ 820. Mahogany. NET . . . . . 137.20 81 DZ 821. Blonde. NET. . . . . . . . . . . 140.63 81DZ 887. Walnut. NET.............. 140.63
S-5 "SENIOR" 3-WAY ISYSTEM. For highest quality performance where space is limited Consists of folded horn enclosure described at left. with C12W woofer, H-600/T-30 mid-range combination, and UXT- 5 super tweeter, for superb reproduction. Handles up to 30 watts of integrated program mater ial. Shpg. wt., 72 lbs.
81 DZ 893. Mahogany. NET
196.00
81 DZ 894. Blonde. NET........... 200.90
81 DZ 895. Wainut. NET
200.90

## UNIVERSITY EN-15 SPEAKER ENCLOSURE AND SYSTEM

EN-15 ENCLOSURE. Improved version of an advanced design folded-horn enclosure. For use with $12^{\prime \prime}$ or $15^{\prime \prime}$ speaker. Mounting board is pre-cut for $15^{\prime \prime}$ speaker, with re movable adapter cut for $12^{\prime \prime}$ speaker. For mid-range it accommodates an $8^{\prime \prime}$ speaker or the H-600 horn with T-30 driver; for treble, the 4401, UXT-5 or HF-206 tweeter, or the H-600 horn with the T- 50 driver.
Internal construction is similar to EN-12, above. Projects maximum available output of speaker at low frequencies, without screening or blocking radiation of highs. Designed to eliminate resonances. Choice of 3 finishes. $37 \times 29 \times 20^{\prime \prime}$. Shpg. wt., 98 lbs .

81 DZ 91 4. Mahogany. NET. .... 122.50
81 DZ 915. Blonde. NET........... . 132.30
81 DZ 817. Walnut. NET. . . . . . . . . 132.30

S-6 "MASTER" 3-WAY SYSTEM. Provides exceptionally fine music reproduction and occupies relatively small space; tonal range exceeds the limits of human hearing. System includes EN- 15 enclosure, C15W $15^{\prime \prime}$ woofer, T-30 driver unit with H-600 horn for midrange, and HF-206 Hypersonic tweeter for excellent high-frequency reproduction
N-3 "Acoustic Baton" crossover network with Presence and Brilliance controls permits exact matching of speaker system response to room acoustics. System handles up to 50 watts of program material. May be placed in a corner, or against a wall. 37 x $29 \times 20^{\prime \prime}$. Shpg. wt., 128 lbs .
81 DZ 824. Mahogany. NET.
303.80
81 DZ 825. Blonde. NET.
313.60
81 DZ 841 . Walnut. NET
313.60

## NEW UNIVERSITY "TROUBADOUR" SPEAKER ENCLOSURE \& SYSTEM

EN-15LH ENCLOSURE. Solidly built, smartly styled lowboy enclosure featuring horn loaded construction. Ideally suited for use with $12^{\prime \prime}$ or $15^{\prime \prime}$ speaker. Mounting board accommodates woofer; H-600 mid-range horn with T-30 or T-50 driver; 4401, UXT-5 or HF-206 tweeter.

Expertly designed, the "Troubadour"' can be placed either in a corner or against a wall. Carefully finished in accordance with the highest standards of furniture manufac ture. Choice of 3 finishes. Size: $29^{\prime \prime}$ high, $34^{\prime \prime}$ wide. $19^{\prime \prime}$ deep. Shpg. wt., $841 / 2 \mathrm{lbs}$

> 82 DZ 427. Mahogany. NET.
> 136.71
> 141.61
> 141.61

S-12 "TROUBADOUR" 3-WAY SYSTEM. SUperb 3 -way $15^{\prime \prime}$ speaker system housed in the highly efficient enclosure described at left. Includes C-15 $15^{\prime \prime}$ woofer, T-30 driver unit with $\mathrm{H}-600$ wide-angle horn for midrange, and HF-206 Hypersonic tweeter for superior high-frequency reproduction.

N-3 "Acoustic Baton" crossover network has Brilliance and Presence controls to permit precise adjustment of musical balance to match room acoustics. Offered in choice of 3 handsome finishes. Size, $29 \times 34 \times 19^{\prime \prime}$. Shpg. wt., 118 lbs.

82 DZ 430. Mahogany. NET.... 336.63
82 DZ 431. Blonde. NET..
341.53

82 DZ 432. Walnut. NET.
341.53

## UNIVERSITY "CLASSIC" 3-WAY SPEAKER SYSTEMS

S-8 "CLASSIC". One of the finest speaker systems available, in smart lowboy design enclosure. System includes C15W 15" woofer; Cobreflex-2 mid-range horn with T-30 driver unit; HF-206 super-tweeter.

Also N-3 "Acoustic Baton" crossover network; has Presence and Brilliance controls for balancing sound of speaker system to acoustics of room in which it is placed. Enclosure is a highly efficient folded exponential horn, front-loading the $15^{\prime \prime}$ woofer for direct projection of bass frequencies toward the listener. Offered in 3 finishes. $341 / 2 x$ $401 / 2 \times 251 / 2^{\prime \prime}$. Shpg. wt., 230 lbs .

81 DZ 826. Mahogany.) NET
81 DZ 827. Blonde.
81 DZ 842. Walnut.
411.60

S-9 UTILTY "CLASSIC" SYSTEM. High-quality 3 -way speaker components as at left, completely installed and wired inside utility enclosure which is the same as interior assembly of the EN-CB. Does not include base, frame, grille, or other exterior cabinetry. Constructed of $3 / 4^{\prime \prime}$ white birch veneer plywood. May be installed behind partition, in wall. etc. Takes furniture finish. Supplied with speaker components mounted and connected. Self-contained folded horn permits placement anywhere in room. $40 \times 30 \times 24^{\prime \prime}$. Wt., 170 lbs.
81 DZ 904. NET.
313.60

EN-CB UTILITY "CLASSIC" ENCLOSURE ONLY. Assembled, unfinished enclosure. less speakers. Shpg. wt., 135 lbs .
81 DZ 905. NET
II7. 60


Place enclosure wherever you please "Stereo Director" ro rates for optimum sound at your favor ite listening position.


## NEW "STEREO DIRECTOR" Speaker System s

DS-100 DUAL 3-WAY SYSTEM. Two complete speaker systems in one enclosure-for outstanding stereophonic sound. Carefully engineered and constructed for rich, full bass. crisp treble and sparkling highs. A complete stereo reproducer in one gracefully styled contemporary cabinet.
Each of the two 3 -way sections in this system consists of a "Stereo Director" unit and a 12 " "Flexair" woofer. High-frequency "directors" can be easily rotated from open rear shelf to aim audio at the desired listening area. Besides its top performance as a stereo system, the DS-100 provides excellent, extended-coverage monaural sound. Speakers used (KT-233 kit) are on page 75 .
Crossover frequencies are 600 and 4000 cps . Response is 20 to $15,000 \mathrm{cps}$. Impedance, (each channel): 16 ohms. Power capacity (each channel): 30 watts. Size (HWD), $311 / 2 \times 52 \times 181 / 4^{\prime \prime}$. Shpg. wt., 125 lbs.
79 DZ 141. Mahogany. NET
79 DZ 142. Walnut. EACH ... 369.50

SS-200 "CUSTOM" SINGLE 4-WAY SYSTEMFinest of the quality Jensen "systems for stereo." Here is a truly deluxe speaker system that offers a new high in realistic audio reproduction. Beautiful "Flair-Line" styling incorporates clean, tasteful cabinet lines to complement any furnishing mode.
Used in pairs, "Custom" systems will deliver thrilling, life-like stereophonic sound. Advanced-design "Stereo Directors" provide complete flexibility of placement-put your systems in desired positions and rotate the "directors" for optimum stereo effect over any listening area. Convenient lift lids allow easy access to "directors.
Speakers used (KT-44 kit) are described on page 75. Crossover frequencies are 200, 400 and 4000 cps . Response is 16 cps to beyond audibility. Impedance: 16 ohms. Power handling capacity: 40 watts. Size (HWD), handling capacity: 40 watts. Size
$361 / 2 \times 321 / 4 \times 23^{\prime \prime}$. Shpg. wt., 132 lbs.
79 DZ 106. Mahogany. NET
79 DZ 107. Walnut. EACH . . 439.50
SS-100 SINGLE 3-WAY SYSTEM. An ideal unit if you wish to start with an exceptionally fine monaural speaker system and add another for stereo later. Equal in performance to one of the sections of the DS-100 (described above). Employs "Stereo Director"--an important advance in audio design that eliminates the need for careful positioning of the enclosure for best stereo over a given area. Two SS-100 systems will deliver perfect reproduction even when placed along adjacent walls. Size (HWD), $311 / 2 \times 21 \times 18^{1 / 4} 4^{\prime \prime}$. Shpg. wt., 56 lbs . 79 DZ 108. Mahogany, 79 DZ 109. Walnut. NET EACH.
179.95

## NEW Monaural Speaker Systems

TP-250 "TRI-PLEX II" 3-WAY SYSTEM. An outstanding speaker system styled in sleek "Flair-Line" lowboy cabinetry. Provides a high standard of audio fidelity-can be used for monaural reproduction, or as one side of a stereo system. Speakers employed (KT-34 kit) are described on page 75. Crossover points at 600 and 4000 cps . Response: 16 cps to beyond audibility. Impedance: 16 ohms. Capacity: 40 watts. Size (HWD), $301 / 2 \times 341 / 2 \times 183 / 4^{\text {in }}$. Shpg. wt., 107 lbs .
79 DZ 110 . Mahogany. NET
79 DZ 111. Walnut. EACH . . 294.50
BF-200 CABINET. "Bass-Superflex" enclosure used in TP-250. Shpg. wt., 70 lbs.
79 DZ 118 . Mahogany. NET
79 DZ 119. Walnut. EACH.... 129.75

CN-100 3-WAY SYSTEM. Provides performance completely beyond its cost and size. Employs KT-33 speaker kit (p. 75). 2015.000 cps. 16 ohms. 30 watts, 60 watts peak. Size, $311 / 2 \times 21 \times 181 / 4^{\prime \prime}$. Shpg. wt., 61 lbs . 79 DZ 112 . Mahogany. NET
79 DZ 113. Walnut. EACH.
149.50

MODEL BF-100 ENCLOSURE. Same as enclosure of CN- 100 system. Has tube-loaded port for extended bass. Takes $12^{\prime \prime}$ speaker, or 2 or 3 -way systems. Shpg. wt., 41 lbs. 79 DZ 104. Mahogany. NET
79 DZ 105. Walnut. EACH
69.50

MODEL BF-100/H-222. Above enclosure with H-222 (p. 74) installed. Shpg. wt., 54 lbs. 79 DZ 102. Mahogany. NET 79 DZ 103. Walnut. EACH
132.00

TR-10 "TRI-ETTE" 3-WAY SYSTEM. Diminutive speaker system of exceptional quality-performs on a par with much larger units. Unique "Flair-Line" styling and the rich beauty of natural woods combine to complement any decor. May be placed either on its side or end Has thick fiberglas lining. Speakers used (KT-33 kit) are described on page 75. 25-15,000 cps. 16 ohms. 30 watts, 60 watts peak. $137 / 8 \times 25 \times 113 / 4^{\prime \prime}$. Less base, below. 45 lbs . 79 DU 114. Mahogany. 79 DU 115. Walnut. NET EACH

Il4.50
ST-945 BASE. Complements appearance of "Tri-ette". 2" high. Shpg. wt., 5 lbs.
79 DX 116. Mahogany. 79 DX 117. Walnut. NET EACH.
5.45

## Quality Enclosure and Speaker System

MODEL BL-812 ENCLOSURE ONLY. Clean-cu lines and classic styling characterize the BL-812 enclosure. Superior performance is attained through use of the unique "BassUltraflex" acoustic design. Compact size makes it perfect for use where a larger enclosure cannot be installed. Accommodates any $8^{\prime \prime}$ or $12^{\prime \prime}$ speaker-also has cutouts to permit installation of Jensen 2 way system kits. Fine hardwood veneers.
$241 / 4 \times 19 \times 123 / 8^{\prime \prime}$. Shpg. wt., 26 lbs
82 DU 362. Mahogany. NET
82 DU 364. Walnut. EACH.
59.50

MODEL BL-812/DX-120. Quality "Duax" speaker installed in the BL-812 enclosure. With balance control. Shpg. wt., 31 lbs. 79 DU 100. Mahogany. NET
79 DU 101. Walnut. EACH.

SS-200
$\mathrm{CN}-100$

TR-10
With Base



## Triaxial Speakers

MODEL G-610A 15" TRIAXIAL. An outstanding 3-way speaker. Has three elements, electrically and acoustically independent, built into a single unit, each designed for peak performance in its portion of the audio spectrum. Response, 25 cps to beyond audible range. Employs heavy woofer and two compression driver horn-loaded elements for pression driver horn-loaded elements for mid-frequency and high-irequency channels.
Includes dual crossover network with wired balance controls. Crossovers at 600 and 4000 cps. Capacity, 40 watts. Impedance, 16 ohms. Magnet weight, $61 / 2 \mathrm{lbs}$. Depth, $103 / 4^{\prime \prime}$ Shpg. wt., 46 lbs.
82 DU 170. NET.
252.75

MODEL G-600 $15^{\prime \prime}$ TRIAX. Embodying the same operating principles as the G-610A, the $G-600$ is a low-cost version with somewhat lighter construction. Highly efficient wooter employs a $31 / 2 \mathrm{lb}$. magnet. Response. 30 cps to beyond audible range. Boremounted compression driver for mid-fremounted compression driver for mid-fre-
quencies, has separate horn for $900-4000$ cps range. New super-tweeter handles range from 4000 cps through the upper limits of audability. Has dual crossover network with wired balance controls. Capacity, 35 watts. Impedance, 16 ohms. Depth, $111 / 16^{\prime \prime}$. Shpg. wt., 33 lbs
82 DU 350 . NET.
134.50


NEW MODEL H-223F $12^{\prime \prime}$ COAX SPEAKER WITH "FIEXAIR" WOOFER. A top-quality true 2 -way coaxial speaker. Employs Jensen's new "Flexair" woofer for exceptional low-frequency response (to 20 cycles tional 10 -frequency response (to 20 cycles
in BF-100 enclosure). Woofer cone with special damped suspension, is capable of extremely high movement without distortion, even in small enclosures.
Features L-C crossover at 2000 cps to new, concentrically mounted, reflexed compression driver tweeter. Extends audio range to $15,000 \mathrm{cps}$. Provides crystal-clear treble reproduction. Power handling capacity, 30 reproduction. Fower handing capacity, 30
watts. Impedance, 16 ohms. Baffle opening, $10^{3} / 4^{\prime \prime}$. Depth, $73 / 4^{\prime \prime}$. Complete with wired-in balance control. Shpg. wt., 13 lbs . 79 DX 128 . NET.
.72 .50
MODEL K-80 $8^{\prime \prime}$ COAXIAL SPEAKER. A low cost coax speaker that features electrically and acoustically independent woofer and tweeter units. Perfect for use wherever a small hi-fi speaker with excellent performance is needed. Electrical crossover from woofer cone at 3000 cycles, to high-frequency diffraction plate. Offers smooth, wide-angle high-frequency response. Magnet wt., $1 / 2 \mathrm{lb}$. Power handling capacity, 12 watts. Impedance, 16 ohms. Frequency response, 50 to $14,000 \mathrm{cps}$. Shpg. wt., 4 lbs. 82 D 354. NET.

## Unax \& Duax Speakers-

UNAX SINGLE-ELEMENT SPEAKERS. Maximum performance at minimum cost with these low-cost, single-cone UX-series speakers. Excellent for use as hi-fi extension speakers, or as "starter" speakers in minimum-budget music systems. Cone is specially designed so that its center section provides excellent treble response, while the entire cone reproduces lows without "boominess". Viscous edge damping. Both of the UX speakers listed below Both of the U.X speakers isted below
emagnets weighing $1 / 2 \mathrm{lb}$. Impedance, (both units), 8 ohms.
MODEL UX-80 $8^{\prime \prime}$ SPEAKER. Frequency response, 50 to $12,000 \mathrm{cps}$. Power handling capacity, 12 watts. Shpg. wt., 4 lbs. 82 D 357. NET.
14.50

MODEL UX-120. $12^{\prime \prime}$ SPEAKER. Frequency response, 40 to 12.000 cps. Power handling capacity, 14 watts. Shpg. wt., $51 / 2 \mathrm{lbs}$. 82 DX 358 . NET.
17.95

MODEL DX-120 DUAX 2-ELEMENT 12" SPEAKER. Better sound at lower cost-with this budget-priced speaker featuring two carefully coordinated cones. driven by the same voice coil. Both cones operate together up to a "mechanical crossover" at 4000 cps ; the smaller high-frequency radiator cone is effective above 4000 cps. This type of speaker attains a wider frequency range than single-cone speakers of the same size. Can be expanded into a 2 -way speaker system by adding the Model RP-103A com-pression-type tweeter described on page 75 .

Resonance, $48-50 \mathrm{cps}$. Frequency response, 40 to $13,000 \mathrm{cps}$. Power handling capacity, 20 watts. Employs magnet weighing 11 b . Impedance, 16 ohms. Depth, $73 / 4^{\prime \prime}$. Shpg. wt., $71 / 2 \mathrm{lbs}$.
82 DX 355. NET.
27.50

MODEL K-210 $12^{\prime \prime}$ COAXIAL SPEAKER. Econ-omy-priced, $12^{\prime \prime}$ coax speaker. Its low cost. and truly excellent audio reproduction make it ideal for use as a replacement unit in TV sets and radio consoles employing older, single-cone $12^{\prime \prime}$ speakers. Offers the same single-cone 12 speakers. Offers the same
fine construction as the $K-80$ unit at left, fine construction as the $K-80$ unit at left,
but includes provision for easily adding the ST-901 high-frequency balance control described on page 75 . Features directradiator tweeter unit and built-in electrical crossover network. Frequency response, 45 to $14,000 \mathrm{cps}$. Power handling capacity, 14 watts. Impedance, 8 ohms. Magnet wt., watts. Impedance, 8
$1 / 2 \mathrm{lb}$. Shpg. wt., 7 lbs .
82 DX 062 . NET.
27.50

MODEL H-222 $12^{\prime \prime}$ COAXIAL SPEAKER. Highly popular $12^{\prime \prime}$ coaxial speaker. Provides unusual clarity of sound and wide range. Com-pression-driver tweeter is loaded by a 6-cell Hypex horn; insures maximum efficiency and wide-angle dispersion of high frequencies from 2000 to $15,000 \mathrm{cps}$. Features imcles from 2000 to 15,000 cps. Features im-
proved, two channel electrical crossover network. Crossover frequency, 2000 cps. Tweeter horn passes through the core of a heavy-duty $13 / 4 \mathrm{lb}$. magnet. Woofer covers 30 to 2000 cps . Includes high-frequency balance control. Capacity, 25 watts. Impedance, 16 ohms. Shpg. wt., 13 lbs.
82 DX 068. NET.
62.50

## "P" Series \& Flexair Woofers

"p"-SERIES WOOFERS. Low-frequency units, for use in 2 and 3 -way speaker systems. Impedance of both units, 16 ohms.
MODEL PI 5-LL $15^{\prime \prime}$ WOOFER. Provides smooth, bass range up to 600 cycles ( 2000 cps in 2 -way systems). Frequency response is 30 to 2000 cps in bass-ultraflex enclosures, bass reflex enclosures. etc. Capacity, 35 watts. Employs $31 / 2-1 \mathrm{~b}$. magnet. Viscous, edge-damped diaphragm. Resonance 35-37 cps. Depth, $83 / \mathrm{s}^{\prime \prime}$. Shpg. wt., 18 lbs .
82 DX 365 . NET.
56.80

MODEL P12-NL $12^{\prime \prime}$ WOOFER. Ruggedly built, $12^{\prime \prime}$ low-frequency unit, specially designed for use in two-way speaker systems Frequency response, 30 to 2000 cps . Viscous, edge-damped diaphragm. Power handling capacity, 25 watts. Employs $13 / 4-1 \mathrm{~b}$. magnet. Resonance, 55 cps . Depth, $7^{\prime \prime}$ Shpg. wt.. 10 lbs.
82 DX 366. NET.
36.50

NEW "FLEXAIR" WOOFERS. Designed to extend bass response to the very bottom of the audio range- 16 to 20 cycles. Special damping permits superlow resonances, high linearity and large cone movement.
MODEL P15-LF $15^{\prime \prime}$ WOOFER. Has frequency range (in Jensen Bass-Superflex enclosure). $16-2000 \mathrm{cps}$. Special damped suspensions permit double-peak excursions of $1^{\prime \prime}$ without distortion. Free-air resonance. $16 \mathrm{cps} . \mathrm{Ca}-$ pacity, 40 watts. Impedance, 16 ohms. Shpg. wt., $181 / 4 \mathrm{lbs}$.
79 DX 129. NET.
69.75

MODEL P12-NF $12^{\prime \prime}$ WOOFER. Frequency range (in Jensen Bass Superflex enclosure). $20-2000 \mathrm{cps}$. Free-air resonance. 20 cps . Capacity, 30 watts. Impedance, 16 ohms. Shpg. wt., $83 / 4$ lbs.
79 DX 130. NET.
42.00


NEW MODEL P8-UM $8^{\prime \prime}$ MID-RANGE SPEAKER. A low-cost; $8^{\prime \prime}$ direct-radiator, mid-range speaker. For reproducing the 600 to 4000 cps range. Employs closed housing for isolation; has DP-Alnico- 5 magnet. For speaker systems up to 30 watts. Depth, $41 / 2^{\prime \prime}$. Impedance, 16 ohms. Shpg. wt., 3 lbs.
79 D 131. NET
7.50

NEW MODEL P8-RM $8^{\prime \prime}$ MID-RANGE SPEAKER. An $8^{\prime \prime}$. direct-radiator, mid-range speaker for uniform output in the 200 to 4000 cps range. Ideal for mid-range use in 3 -way systems and upper low-frequency range in 4 -way systems. Employs closed housing for isolation; has $1 / 2-1 b$. DP-Alnico-5 magnet. For systems up to 40 watts. Depth, $4^{13} / 16^{\prime \prime}$. Imp., 16 ohms. Wt., 4 lbs.
79 D 132. NET
12.50

NEW MODEL RP-41 MID-RANGE HORN UNIT. A compression-driver, horn-loaded unit for highly efficient. uniform coverage of the 400 to 4000 cps range. Ideal for mid-frequency range in 3 -way and 4 -way speaker systems. Multiple-fold, re-entrant design eliminates extreme horn depth that is normally required. Spun aluminum outer shell. Capacity (with 400 or 600 -cycle crossover), 40 watts. Impedance, 16 ohms. Overall diameter, $10^{3} / 16^{\prime \prime}$. Depth, $71 / 4^{\prime \prime}$. Baffle cutout, $81 / 2^{\prime \prime}$ in dia. Shpg. wt., $51 / 2$ ibs. 79 DX 133 . NET.
42.50

NEW MODEL RP-103A COMPRESSION TWEETER. New, compression-driver, hornloaded high-frequency unit for tweeter use in 2 -way and 3 -way speaker systems. For use with 2000 and 4000 cycle crossover networks. Frequency range, 2,000 to 15,000 cps. Power rating (with suitable crossover network), 30 watts. Impedance, 16 ohms. Die-cast horn flanged for panel mtg.; cutout $2 \times 6^{\prime \prime}$. $3 \times 71 / 2 \times 69 / 16^{\prime \prime}$. Wt., $31 / 4$ lbs. 79 D 134. NET
16.50

## Jensen Speaker Component Kit Packages

For mounting into your own enclosure, installation in walls, closets, etc.; or in the BL-812 enclosure. The BL-812 houses any kit except $\mathrm{KT}-31$ and $\mathrm{KT}-32$, and the new $\mathrm{KT}-233$ and KT-244 stereo kits. The modified P15-LL woofer and M-1131 equalizer used in the KT-31 are of special design and not sold separately. Include building plans, mtg. brackets and wiring.

| Stock No. | Model | Description |
| :---: | :---: | :---: |
| 82 DU 377 | KT-21 | 2-Way Concerto |
| 82 DX 378 | KT-22 | 2-Way Concerto |
| 79 DX 125 | KT-24 | 2-Way Spkr. Kit |
| 82 DU 376 | KT-31 | 3-Way Imperial |
| 82 DU 382 | KT-32 | 3-Way Triplex |
| 79 DU 120 | KT-33 | 3-Way Spkr. Kit |
| 79 DU 124 | KT-34 | 3-Way Triplex II |
| 79 DU 122 | KT-44 | 4-Way Spkr. Kit |
| 79 DZ 121 | KT-233 | Stereo TWINkit |
| 79 DZ 123 | KT-244 | Stereo TWINkit |

[^1]MODEL RP-201 MID-RANGE UNIT. Reproduces the range from 600 to 4000 cps as the midchannel unit in a 3 -way speaker system. Compression-type, driver unit is loaded by a cast-aluminum Hypex horn. Has cloth-base, plastic diaphragm for internal damping. Angle of coverage, $115^{\circ}$. Capacity, 35 watts. For use with A-61 network, at right. Impedance, 16 ohms. Size: $43 / 4 \times 111 / 2 \times 14^{\prime \prime}$. Shpg. wt., 9 lbs.
82 DX 367 . NET
42.60

MODEL RP-102 TWEETER. Advanced-design, high-frequency unit for use in 2 -way speaker systems crossing over at 2000 cps. Response, with A-204 crossover network, 2000 to $15,000 \mathrm{cps}$. Cast aluminum 6-cell Hypex horn, with cloth-base plastic diaphragm for internal damping. Capacity, 30 watts Impedance, 16 ohms. Size, $4^{\prime \prime}$ high, $77 / 8^{\prime \prime}$ wide, $91 / 4^{\prime \prime}$ deep. Shpg. wt., $61 / 2 \mathrm{lbs}$.
82 DX 368 NET
28.35

NEW MODEL RP-302A SUPER TWEETER. Jensen's latest and finest unit. Compressiondriver, horn-loaded ultra-high-frequency tweeter for the frequency range above 4000 cps to inaudibility. For use in 3 -way and 4 -way speaker systems. Power rating (with suitable crossover network), 40 watts. Impedance, 16 ohms. O.D., $23 / 4^{\prime \prime} ; 33 / 4^{\prime \prime}$ long With mtg. plate. Wt., $21 / 4 \mathrm{lbs}$.
79 D 135. NET.
35.00

BALANCE CONTROLS. Adjustable, wirewound L-pads, with bar knob and round brass escutcheon. Mount in $111 / 16^{\prime \prime}$ hole. Have $36^{\prime \prime}$ leads. Impedance, 16 ohms. Power capacity, 35 watts. Shpg. wt., 12 oz . MODEL ST-917. For mid-frequencies.
82 D 372. NET.
5.25

MODEL ST-901. For high-frequencies. 25 watt capacity in 2 -way speaker systems.
82 D 371 . NET..................... 5.00

ST-917


RP-102
ST-946


NEW BALANCE CONTROLS. For recessed mounting in $111 / 16^{\prime \prime}$ hole. Have $21 / 2^{\prime \prime}$ square escutcheon plate and bar knob. Impedance, both units, 16 ohms. Wt., $1 / 2 \mathrm{ib}$.
NEW MODEL ST-946. For adjusting output of tweeter in 2 -way and 3-way systems with power rating up to 30 watts.
79 D 136 . NET
3.50

NEW MODEL ST-947. For mid and high-frequency units in 3 -way and 4 -way speaker systems with power rating up to 40 watts. 79 D 137. NET.
4.50

MODEL A-61 CROSSOVER NETWORK. Twochannel, 600 -cycle type. Impedance, 16 ohms. $51 / 4 \times 63 / 4 \times 43 / 4^{\prime \prime}$. $51 / 4$ Ibs.
82 D 373. NET.
19.75

MODEL A-204 CROSSOVER NETWORK. Twochannel, 2000 -cycle type. 16 ohms. $41 / 2 x$ $41 / 2 \times 35 / 8^{\prime \prime}$. Wt.. 3 lbs.
82 D 374 . NET
13.00

MODEL A- 402 CROSSOVER NETWORK. As above, but crossover point is 4000 cps .3 lbs. 82 D 375. NET.
10.90

NEW MODEL A-640 3-WAY CROSSOVER NETWORK. For 3 -way systems. Crossover frequencies, 600 and 4000 cps . Cutoff slope, $12 \mathrm{db} /$ octave. Power rating, 40 watts. 16 ohms. $51 / 4 \times 7 \times 45 / 8^{\prime \prime}$. Wt., 6 lbs.
79 D 139. NET.
32.00

NEW MODEL A-645 3-WAY CROSSOVER NETWORK. For 3 -way systems. Crossover frequencies, 600 and 4000 cps. Power rating. 30 watts. 16 ohms. $2 \times 4 \times 51 / 4^{\prime \prime} .21 / 2$ lbs.
79 D 138. NET
.15 .00
NEW MODEL A-2440 4-WAY CROSSOVER NETWORK. For 4 -way systems. Crossovers: 200, 400 and 4000 cps. Power rating, 40 watts. 16 ohms. $51 / 4 \times 7 \times 45 / 8^{\prime \prime}$. Wt. $61 / 4$ lbs. 79 D 140. NET
42.00

## NEW Stereo Director Chassis



NEW MODEL DC-3 STEREO DIRECTOR CHASSIS. For mounting mid and high-frequency units of the KT- 33 speaker components package. Forms a Stereo Director assembly as used in the Model SS-100 3-way system (see page 73). Wt.. 4 lbs. 79 DX 126. NET.
9.50

NEW MODEL DC-4 STEREO DIRECTOR CHASSIS. For mounting low, mid and highfrequency units of the KT-44 speaker components package. Forms a Stereo Director assembly as used in the Model SS-200 4 way system (see page 73). 10 lbs .
79 DX 127. NET
15.95


## JAMES B. LANSING HIGH-FIDELITY SPEAKERS

"Every note, a perfect quote"-with James B. Lansing Signature speakers. These famous high-fidelity speakers have gained an international reputation for their ability to reproduce sound with magnificent range and clarity. Precisely constructed throughout, they feature a $4^{\prime \prime}$ aluminum voice coil and hydraulically formed, $4^{\prime \prime}$ duraluminum center dome. The dural dome stiffens the piston assembly for crisp, clean bass and silk-smooth, extended highs, completely free from spurious sound effects. Curvilinear cone design makes possible a shallow piston assembly. which in turn, permits a better distribution of highs than a deep cone. JBL speakers reproduce verbatim, every sound recorded on the finest transcriptions.

## Fuii Range Speakers

DI30 15" SPEAKER. Heavy-duty, precision built speaker. Provides remarkably distinct bass and extremely smooth, extended treble when used alone. Can also be used as a woofer in two or three-way systems. Response $\pm 5 \mathrm{db}, 30$ to $17,000 \mathrm{cps}$. Capacity, 25 watts. Voice coil diameter, $4^{\prime \prime}$. Magnet weight 4 lbs . Free cone resonance, 37 cps . weight 4 libs. Free cone resonance, 37 cps . $51 / 2^{\prime \prime}$. Shpg. wt., 23 lbs .
82 DU 125. NET
84.00

D131 $12^{\prime \prime}$ SPEAKER. One of the finest $12^{\prime \prime}$ hi-fi speakers available. Excellent for use alone, or as a woofer in 2 or 3 -way systems. Combines excellent design and construction to assure superb reproduction of sound. Response, 30 to $17,000 \mathrm{cps}$. Capacity, 20 watts. Magnet weight, 4 lbs. Free cone resonance, 39 cps . Voice coil diameter. $4^{\prime \prime}$. Impedance, 16 ohms. Depth, $5^{\prime \prime}$. Shpg.wt., 21 lbs . 82 DU 129. NET.
78.00

D123 $12^{\prime \prime}$ SPEAKER. An extended-range $12^{\prime \prime}$ speaker with ultra-shallow frame design. Only $35 / 8^{\prime \prime}$ deep, it's perfect for custom in-the-wall mounting, or compact cabinet installation. Response, $\pm 5 \mathrm{db}, 30$ to 15,000 cps. Voice coil diameter, $3^{\prime \prime}$. Capacity, 20 watts. Free cone resonance, 35 cps . Impedance, 16 ohms. Magnet weight, $13 / 4 \mathrm{lbs}$. Shpg. wt., 12 lbs.
82 DX 112. NET
59.40

D208 $8^{\prime \prime}$ SPEAKER. Same excellent features as the D130 and D131, but for smaller in stallations. Response, 40 to $13,000 \mathrm{cps}$. Capacity, 12 watts. Free cone resonance. 55 cps. $2^{\prime \prime}$ voice coil, Impedance, 8 ohms. 1 lb . magnet. Depth, $27 / 8^{\prime \prime}$. Wt., 6 lbs.
82 D 126. NET.
29.70

D216. $8^{\prime \prime}$ SPEAKER. Same as D208, but has 16 ohms impedance.
82 D 113. NET.
29.70

## Woofer, Tweeters and Crossover Networks

130A $15^{\prime \prime}$ WOOFER. Superb $15^{\prime \prime}$ low-frequency speaker designed to provide clean, distinct reproduction of audio frequencies below 1500 cps . Highly efficient, the 130A reproduces all bass and mid-range frequencies falling in this range with remarkable fidelity. Matched for use with the Model fidelity. Matched for use with the Model
175 DLH high-frequency, driver-horn-lens assembly. Unique magnet design virtually eliminates stray magnetic fields adjacent to the magnetic pot structure. Rigid, cast aluminum frame. Response, $\pm 5 \mathrm{db}, 30$ to 1500 cps . Voice coil diameter, $4^{\prime \prime}$. Capacity, 25 watts. Free cone resonance, 36 cps . Magnet weight, 4 lbs . Voice coil impedance, 16 ohms. Depth, $51 / 2^{\prime \prime}$. Shpg. wt., 23 lbs 82 DU 200. NET.
81.00

075 "RING RADIATOR" HIGH-FREQUENCY TWEETER. Advanced-design, high-frequency driver for reinforcing the performance of extended-range speakers from 2500 cps to. the limit of audibility. Adds "brilliance" to Jim Lansing D130, D131, D123 and D208 speakers when used with the Model N2600 dividing network. May also be used with N2400 crossover; converts 2 -way system to 3 -way when used with the N7000 crossover at right. Renowned for its remarkable presence and exceptional handling of transients, the precisely constructed 075 employs a unique diaphragm structure of hydraulically formed aluminum. Power handling capacity, 20 watts. Voice coil, $13 / 4^{\prime \prime}$. Dispersion, $90^{\circ}$. Voice coil impedance, 16 ohms. Baffle hole diameter, $33 / 16^{\prime \prime}$; length, 31/4". Shpg. wt., 8 lbs. 82 D 118 . NET
59.40

175DLH HIGH - FREQUENCY DRIVER - HORN LENS ASSEMBLY. Provides highly precise reproduction above 1200 cps ; unequalled transient response. Combines a high-frequency driver and an exponential horn, with a true acoustic lens. Consists of 14 separate elements arranged to form a double concave "lens"-refracts sound evenly over a solid $90^{\circ}$ angle to all points in the listening area with equal intensity. Perfectly matched to the Jim Lansing Series 130, low-frequency speakers; designed for use with the N1200 dividing network. Power handling capacity, 25 watts. Voice coil impedance, 16 ohms. Horn throat diameter, $1^{\prime \prime}$. Mounting hole diameter, $53 / 8^{\prime \prime}$; overall length,. $111 / 2^{\prime \prime}$. Shpg. wt., 12 lbs
82 D.130. NET.
124.50

CROSSOVER NETWORKS. All have nominal impedance of 16 ohms, except N 2600 which has switch selection of 16 or 32 ohms at both LF and HF terminals.
N2600. For use with 075 tweeter and D130. D131, D123 and D208 speakers. Crossover, $2500 \mathrm{cps} .43 / 4 \times 6 \times 31 / 2^{\prime \prime}$. Wt., $33 / 4 \mathrm{lbs}$.
82 D 199. NET
24.60

N2400. As above, but less dual-impedance feature. Shpg. wt., $31 / 2$ lbs.
82 D 239. NET
22.50

N7000. For use with 075 tweeter. Crossover, $7000 \mathrm{cps} .31 / 4 \times 31 / 4 \times 23 / 4^{\prime \prime}$. Wt., 3 lbs .
82 D 837. NET.
20.40

N1200. For use with 175-DLH driver-hornlens assembly and 130 A woofer. Crossover, $1200 \mathrm{cps} .43 / 4 \times 6 \times 61 / 4^{\prime \prime}$. Shpg. wt.. 9 lbs
82 D 131. NET
35.25

## New Tweeter System and 2-Way Speaker System

C41 "ANGELUS" TWEETER SYSTEM. Smartly styled and highly functional high-frequency system. Compact enclosure houses the 075 "Ring Radiator" tweeter and N2400 crossover network. The combination of these 2 excellent components enables the user to extend the treble range of an existing speaker system to well beyond the limits of audibility-without the need for altering present enclosure. Provides ultra-smooth high-frequency response. As an added advantage, the Angelus tweeter system can be oriented toward the listening area for optimum high-frequency coverage. Made of selected hardwood veneers, hand-rubbed to a lustrous finish. Blend beautifully with any room decor. Impedance, 16 ohms. $63 / 4 "$ high, $14^{\prime \prime}$ wide, $43 / 4^{\prime \prime}$ deep. Wt., 17 lbs.
82 DX 840. Mahogany. NET.
105.30

82 DX 842. Walnut. NET...... 107.40

D42020 "BEL-AIRE" 2-WAY SPEAKER SYSTEM. For discriminating users who demand the highest possible quality from a speaker system of ultra-compact size. The distinctively styled "Bel-Aire" is perfect for use in pairs in stereo installations. Combines extremely attractive styling with careful attention to acoustic principles. Employs a special acoustic principles. Employs a special
design, extended-range $8^{\prime \prime}$ speaker; 075 "Ring Radiator" tweeter with level control; and N 2400 crossover network.
Enclosure features acoustically damped reflex principle for crystal-clear reproduction across the entire audio range. Frequency response extends from 40 to $20,000 \mathrm{cps}$. Power handling capacity. 12 watts. Impedance, 16 ohms. $111 / 2^{\prime \prime}$ high, $24^{\prime \prime}$ wide, $12^{\prime \prime}$ deep. Shpg. wt., 35 lbs .
82 DU 233. Mahogany. NET. . . . 166.20 82 DU 235. Walnut. NET.
170.40

"HARTSFIELD" D30085 SPEAKER SYSTEM. Impressive folded horn corner enclosure speaker system of remarkable fidelity. Employs 150-4C low-frequency driver, 375 high-frequency driver, rectangular exponential horn, N 500 H dividing network, plus the "serpentine" acoustical lens-horn assembly. Capacity, 60 watts. 16 ohms. HWD $453 / 4^{\prime \prime}, 47^{\prime \prime}$ $241 / 2^{\prime \prime} .250$ lbs. Shipped F.O.B. Chicago or Los Angeles, whichever is nearer. 82 DZ 211 . Mahogany. NET. . 855.00 82 DZ 213. Light Walnut. NET. .. 885.00

C34 ENCLOSURE ONLY. Rear-loaded, corner horn. Does not require corner placement. Contains a $6-\mathrm{ft}$. exponential folded horn that delivers an extra octave of beautifully defined bass. HWD: $393 / 4 \times 233 / 4 \times 221 / 4^{\prime \prime}$. Shpg. wt., 90 lbs. Shipped F.O.B. Chicago or Los Angeles, whichever is nearer.
82 DZ 204. Mahogany. NET....|51.00
82 DZ 206. Light Walnut. NET. . . . 166.00
D34001 COMPLETE SPEAKER SYSTEM. Includes $130 \mathrm{~A} 15^{\prime \prime}$ woofer, 175 DLH driver-horn-lens assembly. N1200 crossover, installed in C34 enclosure. Capacity, 25 watts. 16 ohms. 135 lbs. Shipped F.O.B. Chicago or Los Angeles, whichever is nearer.
82 DZ 214 . Mahogany. NET.
391.75 82 DZ 215 . Light Walnut. NET.... 406.75
"HARKNESS" C40 ENCLOSURE ONLY. Solidly built, rear-loading horn enclosure in contemporary low-boy design. Can be placed anywhere. Contains built-in, 6 -ft. exponential horn, with mouth area of four square feet. Removable $5^{\prime \prime}$ legs. HWD: $283 / 4 \times 377 / 8 x$ $20^{\prime \prime} .90$ lbs. Shipped F.O.B. Chicago or Los Angeles, whichever is nearer.
82 DZ 201. Mahogany. NET. . . . I5I. 00 82 DZ 203. Light Walnut. NET... . 166.00

D40001 COMPLETE SPEAKER SYSTEM. Includes $130 \mathrm{~A} 15^{\prime \prime}$ woofer, 175 DLH driver-horn-lens assembly, N1200 crossover, installed in C40 enclosure: Capacity, 25 watts. 16 ohms. 135 lbs. Shipped F.O.B. Chicago or Los Angeles, whichever is nearer. 81 DZ 919 . Mahogany. NET... 391.75 82 DZ 217 . Light Walnut. NET... . 406.75

ENCLOSURES \& SYSTEMS


C37 ENCLOSURE ONLY. Attractively styled, low-boy bass reflex enclosure. Engineered to deliver full-range response when used with recommended Jim Lansing components, below. Accommodates $12^{\prime \prime}$ or $15^{\prime \prime}$ woofer. Its modern styling blends happily with any room decor. $301 / 4^{\prime \prime}$ high, $36^{\prime \prime}$ wide, $16^{\prime \prime}$ deep. Shpg. wt., 69 lbs
82 DZ 116 . Mahogany. NET.... II5.00 82 DZ 169. Light Walnut. NET... . 123.00

D37030 COMPLETE SPEAKER SYSTEM. Includes D130 as 15 " woofer, 075 "ring radiator'' tweeter, and N2600 dividing network with level control, mounted in the C37 reflex enclosure. Shpg. wt., 100 lbs .
82 DZ 222. Mahogany. NET. . 283.00
82 DZ 220. Light Walnut. NET
.291 .00
NEW C36 ENCLOSURE ONLY. Simple, gracefully styled bass reflex enclosure. For small rooms and apartments; use in pairs for stereo. Takes $8^{\prime \prime}, 12^{\prime \prime}$ or $15^{\prime \prime}$ woofer. HWD: 291/2x 193/8x157/8". Shpg. wt., 47 lbs.
82 DZ 844. Mahogany. NET . . . 63.00
82 DZ 846. Light Walnut. NET...... 69.00
D36002 COMPLETE SPEAKER SYSTEM. Includes, D123 12" speaker; 075 "Ring Radiator" tweeter; and N2600 crossover in the C36 enclosure. Power capacity. 20 watts. Impedance, 16 ohms. Shpg. wt., 68 lbs.
82 DZ 847. Mahogany. NET.. 206.40 82 DZ 849. Light Walnut. NET. . . . . 212.40

C38 ENCLOSURE ONLY. Space-saving, lowboy bass reflex enclosure. Smart styling and rich, hand-rubbed finish complement any room interior. Takes $8^{\prime \prime}, 12^{\prime \prime}$ or $15^{\prime \prime}$ woofer. Compact size allows it to be used almost anywhere. $26^{\prime \prime}$ high, $233 / 4^{\prime \prime}$ wide, $157 / 8^{\prime \prime}$ deep. Shpg. wt., 47 lbs.
82 DZ 114. Mahogany. NET..... 63.00 82 DZ 168. Light Walnut. NET . . . . . 69.00

D38002 COMPLETE SPEAKER SYSTEM. Includes Model D123 as $12^{\prime \prime}$ woofer, 075 "ring radiator" tweeter, and N2600 dividing network with level control, mounted in the C38 enclosure. Shpg. wt., 68 lbs.
82 DZ 108. Mahogany. NET... 206.40 82 DZ 210 . Light Walnut. NET..... 212.40

JIM ANSING


## James B. Lansing Speaker System Kits for Custom Installation

Choice of six carefully matched speaker component kits, for installing in your own custom cabinetry or enclosure, or for building into walls or closets. The precisely designed JBL components provide superb reproduction. Each kit has a basic
speaker, a matching tweeter and a crossover network except JL-6, tweeter and crossover only. Kits include mounting hardware and complete instructions for quick, easy installation. For detailed description of all components, see page 76 .

| Stock No. | Model No. | Type of System | Description of Components | Wt., Lbs. | NET |
| :---: | :---: | :---: | :---: | :---: | :---: |
| 82 DX 835 | JL-1 | 2-way, $8^{\prime \prime}$ system | D216 $8^{\prime \prime}$ speaker, 075 tweeter. N2400 crossover network | 12 | 111.60 |
| 82 DU 838 | JL-2 | 2 -way, $12^{\prime \prime}$ system | D123 12" speaker, 075 tweeter. N2600 crossover network | 19 | 143.40 |
| 82 DZ 839 | JL-3 | 2-way, 15" system | D130 15" speaker, 075 tweeter, N2600 crossover network | 30 | 168.00 |
| 82 DZ 834 | JL-4 | 2-way, $15^{\prime \prime}$ system | 130A $15^{\prime \prime}$ speaker, 175 DLH high-frequency driver-horn lens assembly, N1200 crossover network | 44 | 240.75 |
| 82 DZ 836 | JL-5 | 3-way, $15^{\prime \prime}$ system | $130 \mathrm{~A} 15^{\prime \prime}$ speaker, 175 DLH high-frequency driver-horn lens assembly, N1200 crossover network, 075 tweeter, N7000 crossover network | 55 | 320.55 |
| 82 D× 843 | JL-6 | Hi-freq. "add-on" | 075 tweeter and N7000 crossover network | 7 | 79.80 |



## UPRIGHT BASS-PLANE SYSTEM

816/80FR. Economically priced high-fidelity speaker system designed to deliver clear, extended bass response. Features the attractively finished Model 816 bass reflex enclosure with the high-compliance, internally air-damped 80FR $8^{\prime \prime}$ speaker installed. May be used in a corner or against any wall without impairment of tonal quality.
Tastefully styled, the enclosure is constructed of genuine hardwood to eliminate vibration or rattling. The speaker employs advanced-design, free-cone suspension for exceptionally clean reproduction. Response of system extends from $40-15,000 \mathrm{cps}$.
In choice of mahogany or walnut furniture veneer. Handles up to 25 watts program material; 50 watts peak. 16 ohms. Magnet weight, 4 lbs. HWD: $241 / 2 \times 153 / 4 \times 113 / 4^{\prime \prime}$. Shpg. wt., 49 lbs.
79 DU 381. Mahogany. ) NET
79 DU 382. Walnut. EACH
79.50

## SERIES 100 SPEAKER SYSTEMS

A-100/120CX. Combination of Model 120 CX coaxial $12^{\prime \prime}$ speaker (includes built-in 5 KT "Toroid" tweeter) and highly efficient Model A-100 enclosure. Speaker is installed, wired and ready to use. Delivers clean response from $30-25,000 \mathrm{cps}$. Available in choice of mahogany or walnut. Size: HWD, 331/4x 233/4×173/4". Shpg. wt., 110 lbs.
79 DZ 377. Mahogany.) NET
79 DZ 378. Walnut. $\}_{\text {EACH . } 162.00}^{\text {Nef }}$
B-100/150CX. Superb 2-way $15^{\prime \prime}$ speaker system consisting of Model B-100 bass reflex enclosure and Model 150 CX coaxial speaker. Free-cone construction combines with built-in 5KT "Toroid" tweeter to deliver remarkably smooth response over the entire range from $20-25,000 \mathrm{cps}$. System comes completely wired, ready to play. Size: HWD, $331 / 4 \times 311 / 4 \times 173 / 4^{\prime \prime}$. Shpg. wt., 120 lbs.
79 DZ 379. Mahogany. ) NET
79 DZ 380. Walnut. ${ }^{\text {EACH }} 219.00$


## LOW-BOY BASS-PLANE SYSTEM

1217/I20FR. Optimum performance and attractive low-boy styling with this speaker system. Conisists of the Model 1217 enclosure and Model 120FR 12" high-fidelity speaker. Completely wired and ready to play, this system is ideal for placement along any wall or in a corner for rich, crystal-clear tonal response from 30 to 15,000 cps.
The high-compliance speaker is expertly designed to eliminate distortion and improve transient response. Features free-cone suspension for exceptional clarity.
Constructed of carefully selected, high qual ity hardwood, the enclosure assures superb reproduction, unmarred by cabinet resonance. Available in handsome mahogany or walnut to enhance the decor of any room. Handles 30 watts; 60 watt peaks. Imp., 16 ohms. Magnet weight, $91 / 2 \mathrm{lbs}$. Size: HWD, $251 / 2 \times 291 / 2 \times 113 / 4^{\prime \prime}$. Shpg. wt., 72 lbs .
79 DZ 383. Mahogany. INET
79 DZ 384. Wainut. ${ }_{\text {EACH . . } 147.50}$


FREE-CONE FULL-RANGE SPEAKERS
8OFR $8^{\prime \prime}$ HIGH-FIDELITY SPEAKER. High-compliance, internally air-damped $8^{\prime \prime}$ speaker. Delivers clean, full-range sound from $40-$ $15,000 \mathrm{cps}$. Capacity: 25 watts; 50 watts peak. $2^{\prime \prime}$ diameter, edge-wound aluminum voice coil. Maxwells, 80,000 . Impedance, 16 ohms. Shpg. wt., $61 / 2$ lbs.
82 DX 290. NET
31.50

I20FR $12^{\prime \prime}$ HIGH-FIDELITY SPEAKER. Similar to above, but handles 30 watts. Response, $30-$ $15,000 \mathrm{cps}$. 130,000 maxwells. Voice coil dia., $21 / 2^{\prime \prime}$. Shpg. wt., 15 lbs.
82 DX 291. NET
60.00

I50FR $15^{\prime \prime}$ HIGH-FIDELITY SPEAKER. Similar to above, but handles 35 watts. Response. 20-14,000 cps. Maxwells, 180,000 . Voice coil dia., $3^{\prime \prime}$. Shpg. wt., 25 lbs.
79 DU 385. NET
87.00


FREE-CONE COAXIAL SPEAKERS
$120 \mathrm{CX} 12^{\prime \prime}$ HIGH-FIDELITY SPEAKER. Excellent $12^{\prime \prime}$ coaxial speaker featuring free-cone suspension for remarkably clean response from 30 to 25,000 cycles. Consists of woofer and built-in 5 KT "Toroid" tweeter-complete with brilliance control network for crystal-clear reproduction. Voice coil dia., $21 / 2^{\prime \prime}$. Dispersion, $100^{\circ}$. Maxwells, 130,000 . Power handling capacity, 30 watts. Shpg. wt., 20 lbs . 79 DU 389. NET.
97.50

I50CX $15^{\prime \prime}$ HI-FI SPEAKER. Superior performance over the entire audio spectrum from 20 to 25,000 cycles with this $15^{\prime \prime}$ coaxial speaker featuring free-cone suspension. Has built-in 5KT "Toroid"' tweeter with brilliance control network. Voice coil dia., $3^{\prime \prime}$. Capacity, 35 watts. $100^{\circ}$ dispersion. Maxwells, 180,000 . Shpg. wt., 30 lbs.
79 DU 390. NET.
129.50

## HIGH-FIDELITY WOOFERS AND TWEETER

I20W $12^{\prime \prime}$ WOOFER. Free-cone woofer delivering smooth response from $30-5000 \mathrm{cps}$. Has 24-oz. magnet. Capacity: 30 watts program; 60 peak. 15 lbs.
79 DU 386. NET
60.00

150W $15^{\prime \prime}$ WOOFER. As above, but $20-3500$ cps response. 180,000 maxwells. Capacity: 35 watts; 70 peak. 25 lbs.
79 DU 387. NET.

SKT "TOROID" TWEETER. Very efficient, lowdistortion tweeter for crystal-clear treble response from 5000 to $25,000 \mathrm{cps}$. Ideal for use in 2 or 3 -way speaker systems. Features built-in high-pass filter and adjustable brilliance control network-permits exact tonal quality desired. Requires $2^{13 / 16^{\prime \prime}}$ dia. mtg . hole. Mtg. flange, $4^{\prime \prime}$ diameter. $41 / 8^{\prime \prime}$ long. Shpg. wt., 4 lbs.
79 D 388. NET.
49.50


## A1-406 ENCLOSURE

Delivers exceptional performance whether used in corners or placed against wall. Ideal for use with G.E. A1-401. S1201A, S1203A or other 12 " speakers. Features "distributed port" design to achieve highly effective damping and loading of speaker at low frequencies. Beautiful hand-rubbed veneers blend into any furnishing scheme. Back and sides are constructed of sturdy, carefully selected plywood; front is covered with a woven lumite cloth. $1^{\prime \prime}$ acoustic lining. Available in choice of mahogany or blonde oak. Size: $311 / 4^{\prime \prime}$ high, $255 / 8^{\prime \prime}$ wide, and $181 / 4^{\prime \prime}$ deep. Complete with mounting bolts for speaker. Shpg.wt., 49 lbs.
81 DZ 725. A1-406M. Mahogany. 81 DZ 726. A1-406B. Blonde Oak. NET EACH.
63.66

"STEREO CLASSIC" SPEAKER SYSTEM
Attractively styled 2 -way speaker system designed for limited-space applications as a shelf enclosure. Ideally suited for monaural or stereo music systems. Features remarkably clean, extended bass response. Components installed are $6^{\prime \prime}$ high-compliance woofer, $23 / 4^{\prime \prime}$ tweeter and crossover network. Handles program material of up to 20 watts. Response, $50-15,000 \mathrm{cps}$. Impedance, 8 ohms. Size (HWD): 9x175/8x $83 / \mathrm{s}^{\prime \prime}$. Shpg. wt., 16 lbs.
79 DU 200. LH-6-M. Mahogany.
79 DU 201. LH-6-B. Blonde Oak. NET EACH
56.35

LK-6 "STEREO CLASSIC" SPEAKER COMPONENTS. Above, less enclosure. 4 lbs. 79 DX 202. NET.
29.35


## "STEREO CLASSIC" HI-FI CABINET

A beautifully designed equipment cabinet featuring top-quality construction and exceptional versatility. Has two compart ments behind dual doors and two recordstorage compartments behind two sliding panel doors. Record-changer compartment is $141 / 2 \times 20 \times 16^{\prime}$; tuner and amplifier compartment (complete with wood shelf for desired positioning) is $141 / 2 \times 171 / 2 \times 16^{\prime \prime}\left(149 / 16^{\prime \prime}\right.$ behind front panel supplied for custom mounting); each record-storage compartment is $61 / 2 \times 183 / 4 \times 147 / 8^{\prime \prime}$. With self-leveling, glide type legs with brass ferrules. $31 \times 393 / 4 \times$ $173 / 8^{\prime \prime}$. Wt., 70 lbs .
79 DZ 203. EQ-1. Mahogany.
79 DZ 204. EQ-2. Blonde Oak. NET EACH. .
107.75


MODEL A1-403 $12^{\prime \prime}$ WOOFER. Efficient $12^{\prime \prime}$ woofer-improves reproduction below 1500 cycles in a 2 or 3 -way speaker system. Has an electro-mechanical filter; requires no crossover network with A1-404 tweeter (below). Crossover, 1500 cycles. Response, $40-$ 1500 cycles. Capacity, 25 watts. Imp., 8 ohms. Wt., 61/2 lbs.
81 DX 843. NET. .
32.29

MODEL A1-404. TWEETER. Compact tweeter with $100^{\circ}$ dispersion. Matched for use with above or similar woofers in 2-way speaker systems. Response, $1500-15,000 \mathrm{cps}$. Capacity, 25 watts. Imp., 8 ohms. $43 / 8 \times 21 / 2^{\prime \prime}$. Shpg. wt., $21 / 2$ lbs.
81 D 855. NET.
18.57

MODEL A1-421 CROSSOVER NET WORK. (Not illustrated.) Provides 1500 cycle crossover when used with any 8 -ohm tweeter and 8 -ohm woofer. (Not required with A1-403. above.) Impedance, 8 ohms. Capacity, 25 watts. $6 \times 4 \times 4^{\prime \prime}$. Shpg.wt., 3 lbs. 81 D 856 . NET
13.67


MODEL S-1201-A $12^{\prime \prime}$ SPEAKER. This unusually popular $12^{\prime \prime}$ speaker has been highly recommended by nationally known consumer research organizations. Provides very clean, smooth frequency response over the range of 50 to $13,000 \mathrm{cps}$. Non-warping alumi-num-base voice coil. Power handling capacity, 25 watts. Cone resonance, 70 cps .14 .5 oz. magnet. Imp., 8 ohms. Plastic magnet cover. Shpg. wt., 7 lbs.
81 DX 510 . NET.
24.45

MODEL S-1203-A SPEAKER. Same as Model S-1201-A described above, but has 9 oz . magnet. Shpg. wt., 6 lbs.
81 DX 513. NET.
19.55

MODEL 850-D SPEAKER. An unusually fine, low-cost $8^{\prime \prime}$ speaker for replacement use in radios and TV sets. Also ideal for limitedspace hi-fi systems. Response, $50-12,000 \mathrm{cps}$. Aluminum-base voice coil. 6.8 oz . magnet. Capacity, 15 watts. Impedance, 8 ohms. Shpg. wt., 3 lbs,
81 D 518 . NET.
10.73

MODEL A1-401 12" "GOLDEN CO-AX" CO AXIAL SPEAKER. Highly popular, top-quality $12^{\prime \prime}$ hi-fi speaker at moderate cost. Ideal for high-fidelity installations and modernization of older systems. Combines a $12^{\prime \prime}$ woofer, $23 / 4^{\prime \prime}$ tweeter (with pressure equalizer to reduce distortion) and built-in mechanicalelectrical crossover network into one easy-to-install unit.
Advanced design-provides remarkably smooth, extended response and wide dispersion. Unique slotted baffle plate serves as tweeter baffle and minimizes interference between tweeter and woofer units. In addition, the baffle plate has a highly attractive golden finish that provides a luxurious grille effect when custom mounted.
Crossover frequency, 1500 cycles. Frequency response, 40 to 15,000 cycles. Power handling capacity, 25 watts. Impedance, 8 ohms. Total magnet weight of 21.3 oz . Depth $61 / 8^{\prime \prime}$. Shpg. wt., 9 lbs.
81 DX 519 . NET.

MODEL B-207A COAXIAL SPEAKER. This brilliant speaker uses a dual tweeter, the B-200X, mounted inside the B-199A 12" woofer. Designed specifically for infinite baffling, it provides true-pitch bass and clean transients. Frequency response extends from 40 to $16,000 \mathrm{cps}$. With built-in crossover filter ( 6 db per octave). Cone resonance, below 40 cycles. Power handling capacity. 15 watts; 30 -watt peaks. Impedance, 8 ohms . Sturdy, cast-aluminum frame fits either $12^{\prime \prime}$ or $15^{\prime \prime}$ cutouts. Depth behind panel, $7^{\prime \prime}$. Shpg. wt., 15 lbs. 81 DU 742 . NET.
83.85
peaker Components
B-209 $6^{\prime \prime}$ SPEAKER. Wt., 7 lbs .
81 D 743. NET.
48.00

B-199A $12^{\prime \prime}$ SPEAKER. Wt., 8 lbs.
49.50

81 DX 745. NET
HWD:
N-10102 CROSSOVER NETWORK. $51 / 2 \times 8 \times 6^{\prime \prime}$. Shpg. wt., 5 lbs.
81 D 952. NET.
27.50

E-300 SPEAKER ENCLOSURE. HWD: $301 / 2 x$ $24 \times 17^{\prime \prime}$. Shpg. wt., 50 lbs.
81 DZ 094. Mahogany. NET
81 DZ 095. Birch.
81 DZ 096. Walnut.
,
) ЕАСН. 75.00
49.25




TETRAXIOM 575 15" 4-WAY SPEAKER

## NET <br> ${ }^{522785}$

\$22.79 Down

An outstanding 4 -way speaker, custom-engineered to deliver superb reproduction. Has four electrically and acoustically independent elements built into a single unit. Response, 20 cps to beyond audible range. Employs heavy woofer, horn-loaded Midax mid-range unit and 2 Trebax highfrequency horns. Includes dual crossover network with wired balance controls. Crossovers at 950 and 5000 cps . Capacity, 50 watts. Total flux, 308,000 maxwells. Voice coil dia.: $3^{\prime \prime}$ for woofer, $11 / 2^{\prime \prime}$ for Midax, $1^{\prime \prime}$ for Trebax horns. Impedance, 16 ohms. Depth, $11^{\prime \prime}$. Shpg. wt., 50 lbs .
79 DZ 158. NET.
227.85

TETRAXIOM 355. As above, but has a capacity of 40 watts and a total flux of 240,000 maxwells. Shpg. wt., 45 lbs.
79 DU 159. $\$ 19.26$ Down. NET.
192.57

## CROSSOVER NETWORKS

Top-performing crossover networks for use in Goodmans 2 and 3-way speaker systems. Imp., 16 ohms.
XL-5000V. 5000 cps crossover with level control. Wt., 3 lbs. 79 D 168. NET
13.23

XL-950V. 950 cps crossover with level control. Wt., $41 / 2 \mathrm{lbs}$.
79 D 169. NET
26.95

X0-950/5000. Crossovers at 950 and
5000 cps. Wt., $71 / 2 \mathrm{lbs}$.
79 D 170. NET.
27.44

## TRIAXIOM 3-WAY HI-FI SPEAKERS

Expertly designed $12^{\prime \prime}$ and $15^{\prime \prime} 3$-way speakers delivering smooth response from 20 to 20,000 cycles. Feature plastic terminated, precision controlled, free-edge cone suspension for vibrant bass; concentric mounting of woofer, mid-range unit, and high-frequency Trebax horn for wide-angle dispersion; highly efficient magnet systems for minimum distortion and superior transient response. Mechanical crossover at 2000 cps . Variable control permits high-frequency adjustment. Voice coil diameters for woofer and mid-range, $3^{\prime \prime}$; for Trebax horn, $1^{\prime \prime}$. Resonance: 35 cps for $12^{\prime \prime}$ speakers; 25 cps for $15^{\prime \prime}$. Impedance, 16 ohms.
MODEL $21212^{\prime \prime}$ SPEAKER. Capacity, 25 watts. Total flux, 178,000 maxwells. Magnet wt., $13 / 4$ lbs. Depth, $7^{\prime}$. Wt., 20 lbs.
79 DX 160 . Only \$6.81 Down. NET. 68.11 MODEL $31212^{\prime \prime}$ SPEAKER. Capacity, 35 watts. Total flux, 240,000 maxwells. Magnet wt., $31 / 2 \mathrm{lbs}$. Depth, $83 / 4^{\prime \prime}$. Wt., 31 lbs.
79 DU 161: Only $\$ 9.07$ Down. NET 90.65 MODEL $61515^{\prime \prime}$ SPEAKER. Capacity, 50 watts. Total flux, 308,000 maxwells. Magnet wt., 6 lbs. Depth, $10^{\prime \prime}$. Wt., 46 lbs . 79 DU $162 . \$ 14.41$ Down. NET. . 144.06

## AXIETTE II-8 $8^{\prime \prime}$ HI-FI SPEAKER

Highly efficient, wide-range $8^{\prime \prime}$ speaker at moderate cost. Delivers clean, remarkably smooth response over the entire audio spectrum from 30 to $18,000 \mathrm{cps}$. Features hyperbolic free edge cone suspension and heavyduty, die-cast frame construction for optimum performance. Capacity, 15 watts. Resonance, 55 to 65 cps . Requires $7^{\prime \prime}$ baffle hole diameter. Depth, $4^{\prime \prime}$. Impedance, 16 ohms. Shpg. wt., 5 lbs.
79D 163. Only \$2.65 Down. NET. 26.46

AUDIOM 12" AND 15" SPEAKERS
Advanced-design $12^{\prime \prime}$ and $15^{\prime \prime}$ woofers delivering exceptionally smooth bass and midrange response from 20 to 5000 cps . Perfect choice for 2, 3 and 4 -way stereo and monaural speaker systems requiring crossovers at $200,400,600,750,950,1200,2500$ or 5000 cycles. Virtually free edge cone suspension and die-cast frames. Imp., 16 ohms.
AUDIOM $65012^{\prime \prime}$ SPEAKER. Voice coil diameter, $3^{\prime \prime}$. Total flux, 240,000 maxwells. Power capacity, 35 watts. Resonance, 30 to 35 cps . Shpg. wt., 24 lbs.
79 DU 164 . Only $\$ 6.81$ Down. NET. .68.II AUDIOM 850 15" SPEAKER. Voice coil diameter, $3^{\prime \prime}$. Total flux, 240,000 maxwells. Power capacity, 40 watts. Resonance, 25 cps . Shpg. wt., 27 lbs.
79DU 165 . Only $\$ 7.64$ Down. NET 76.44

## TREBAX 50 HI-FI TWEETER

Economically priced, high-frequency pressure driver with built-in elliptical horn for crystal-clear response from 2500 cps to the limit of audibility. Will handle 50 watts in two or three-way speaker systems with a recommended crossover of 5000 cycles. Employs a $1^{\prime \prime}$ aluminum voice coil and diaphragm in a self-aligning assembly with an air chamber and phase equalizer. Impedance, 16 ohms. Depth, $4^{\prime \prime}$. Wt., 5 lbs. 79 D 166 . Only $\$ 3.19$ Down.. . NET 31.85

## MIDAX H950 MID-RANGE TWEETER

Beautifully performing compression-type driver and horn. Handles 50 watts in 2 or 3 way speaker systems. Response, $400-13,000$ cps. Recommended crossover: 950 cps in 2-way systems; 5000 cps in 3-way systems. 16 ohms. Depth, $121 / 2^{\prime \prime} .13$ lbs. 79 DX 1 67. Only 84.75 Down. NET 47.53

## Acoustic Research High-Fidelity Speaker Systems AR-2 SPEAKER SYSTEM <br> AR-1 SPEAKER SYSTEM

NET
 Low-cost woofer-tweeter hi-fi systems. Mounted in a sealed, fiberglas-filled cabinet of braced $3 / 4^{\prime \prime}$
\$9.60 Down hardwood veneer. Employs the sealed-in air of cabinet as a pneumatic spring for the speaker cone during large excusions on very low bass notes. Requires 10 clean watts. Features $10^{\prime \prime}$ woofer and tweeter assembly composed of two 5" tweeters. Does not require a separate tweeter. Response (at 10 watts): $\pm 5 \mathrm{db}$, ate tweeter. Response (at 10 watts): 16 db .
$42-14,000 \mathrm{cps}$, down 10 db at 30 and 16,000 cps. Dispersion: $90^{\circ}$ horizontal. Harmonic Distortion (at 10 watts): under $2 \%$ to 60 cps .; under $3 \%$ to 50 cps . Impedance: 8 ohms.
Slightly smaller than the Model AR-1$131 / 2 \times 24 \times 11^{\prime \prime}$. Shpg. wt., 35 lbs.
82 DU 038. Mahogany. Net.
96.00

82 DU 039. Blonde Birch. NET . . . . . . 96.00
82 DU 255. Walnut. NET. . . . . . . 102.00

Radically different system featuring airdamped, $12^{\prime \prime}$ woofer, plus $8^{\prime \prime}$ mid-range and high-frequency unit and crossover network. Employs the same specially developed acoustic suspension and pneumatic damping operation as the Model AR-2 described at eration as the Model AR-2 described at
left-does not use conventional elastic suspension. Frequency Response: $\pm 11 / 2 \mathrm{db}$, 38 to $1000 \mathrm{cps} ; \pm 5 \mathrm{db}, 30$ to $13,000 \mathrm{cps}$. Impedance: 4 ohms. Amplifier Power Requirements: 20 clean watts for moderate level in an average room; at least 30 watts for high levels and large rooms. Size: 14x $25 \times 11^{3 / 8^{\prime \prime}}$. Shpg. wt., 55 lbs . 82 DZ 033. Mahogany. NET.
185.00

82 DZ 034. Blonde Birch. NET ..... 185.00 82 DZ 253. Walnut, NET.
194.00 AR-IW. As above, but less $8^{\prime \prime}$ mid-range and treble unit. Shpg. wt., 47 lbs.
82 DZ 043. Mahogany. NET. .
145.00

82 DZ 044. Blonde Birch. NET.
145.00

82 DZ 254. Walnut. NET.......... 154.00


RC88-4

RC88-4 "TRIUMPH" CHANGER
NET
Deluxe British-made changer combining latest design refinements with, traditionally precise Garrard craftsmanship. Wired for stereo and monaural

Plays $162 / 3,331 / 3,45$ and 78 rpm records. Automatic operation is quick and gentle; smooth-acting slide switch converts changer to manual operation instantly. Weighted turntable is covered by protective rubber pad; idler-wheel drive disengages when changer is off. Heavy-duty 4-pole motor and oversize traction wheel for silent, hum-free operation. Minimum mtg. space: $151 / 2^{\prime \prime} \mathrm{W}, 1314^{\prime \prime} \mathrm{D}, 37 \mathrm{~g}^{\prime \prime}$ below and $53 / 4^{\prime \prime}$ above mounting board. With 2 plug-in heads, automatic spindle, spindle for manual play, $45-\mathrm{rpm}$ manual spindle adapter, line cord and plug, output cable and phono plug. Less cartridges and $45-\mathrm{rpm}$ automatic spindle. For $100-130$ v., or $200-250 \mathrm{v}$., 60 cycle AC. Shpg. wt., 16 lbs.
89 RX 500. $\$ 5.34$ Down. NET
53.41

RC88/GC-7. As above, but with new G.E. GC-7 magnetic stereo cartridge. Less extra plug-in head. Shpg. wt., 16 lbs.
89 RX 501. $\$ 7.69$ Down. NET.... 76.88

## RC98-4 "CROWN" CHANGER

Luxury version of RC88-4. Has all features listed above, plus speed compensation control. With $45-\mathrm{rpm}$ automatic spindle. Less cartridges. Shpg. wt., 17 lbs .
89 RX 502. \$6.62 Down. NET.
66.15

89 RX 503. RC98/GC-7. Above, with G.E. GC-7 stereo cartridge. NET........ 89.62

## Complete Garrard Accessories

 WOOD BASES. In mahogany, limed oak or wolnut wood-grained finish. 4 lbs.BASE FOR RC88-4, RC98-4. $31 / 4 \times 153 / 4 \times 131 / 4$ " 89 RX 600C. Specify Finish. EACH. 4.85 BASE FOR RC1 $21 / 11.33 / 4 \times 141 / 8 \times 123 / 4$ ".
89 RX 601 C . Specify Finish. EACH. . 4.51 BASE FOR 4HF. $41 / 2 \times 171 / 2 \times 143 / 4^{\prime \prime}$.
89 RX 603C. Specify Finish. EACH. 4.95 BASE FOR $301.63 / 8 \times 21 \times 163 / 4$ ".
89 RX 604C. Specify Finish. EACH. 21.75
BASE FOR T Mk $11.33 / 4 \times 143 / 4 \times 123 / 4^{\prime \prime}$.
89 RX 602C. Specify Finish. EACH... 4.51 WOOD MOUNTING BOARDS. Unfinished mounting boards drilled and cut for mounting Garrard units. Shpg. wt., $11 / 2$ lbs.

| Stock No. | For | EACH |
| :---: | :--- | :--- |
| 95 RX 666 | RC88-4,RC98-4 | 1.50 |
| 94 RX 496 | RC121/II | 1.50 |
| 96 RX 913 | 301 | 4.95 |
| 94 RX 956 | T Mk II | 1.50 |
| 89 RX 605 | 4 HF | 1.50 |

45-RPM AUTOMATIC SPINDLES. For automatic changing of $45-\mathrm{rpm}$ records with large center holes. Shpg. wt., 10 oz.
95 R 664. For RC88-4.
NET
94 R 594. For RC121/II.
ACH 3.72
EXTRA PLUG-IN HEAD. Wired for stereo. Less cartridge. Slhpg. wt., 6 oz.
89 R 550. For Garrard RC88-4, RC98-4 and T Mk II. NET.
89 R 551. For RC121/II, 4HF. NET
. 1.47

## RC121/II "RENOWN" CHANGER

## NET


\$4.17 Down

Latest version of Garrard's highly popular economy model, which has many of the RC88-4's fine features; excellent for budget high-fidelity systems or for replacement or modernization purposes. Completely wired for both stereo and monaural reproduction. Full manual operation, plus positive automatic intermix of $12^{\prime \prime}, 10^{\prime \prime}$ and $7^{\prime \prime}$ records of the same speed. Action of changing mechanism is smooth and easy; records slip onto rubber-matted turntable silently and without "jamming", even if oversize.
Arm height and stylus pressure are easily adjusted from top of changer. Min. mounting space: $141 / 2^{\prime \prime} \mathrm{W}, 13^{\prime \prime} \mathrm{D}$; requires $43 / 4^{\prime \prime}$ above and $31 / s^{\prime \prime}$ below mounting board. Supplied with plug-in head, line cord and plug, and output cable with phono plug. Less cartridges and $45-\mathrm{rpm}$ automatic spindle. For operation from $100-130$ volts, or 200 For operation from 100-130 lbs.
250 volts, 60 cycle AC. 14 bs.
250 volts, 60 cycle AC. 14
41.65

RC121/II/GC-7. Same as changer described above, but with G.E. Type GC-7 magnetic stereo cartridge installed. Cartridge has a diamond LP needle. See page 17 for accessory plug-in head with 78 rpm cartridge installed. Shpg. wt., 14 lbs.
89 RX 505. $\$ 6.51$ Down. NET.
65.12


301 "PROFESSIONAL" TURNTABLE

NET

\$8.72 Down

The finest product of Garrard craftsmanship, this turntable meets the most rigorous standards for professional instruments of its kind. Each turntable is supplied with a full report of its factory test. Operates at $331 / 3$, 45 and 78 rpm speeds. With strobe card. An integral lubrication system forces additional lubricant, under pressure, into mechanism at the flick of a knob. A resistorcapacitor network prevents shutoff noise from being transmitted through the system and amplified; a shutoff brake prevents "free-wheeling" of turntable after it is switched off. Dynamically-balanced, pre-cision-machined turntable of cast aluminum is entirely non-magnetic. Less than $0.2 \%$ wow; flutter is less than $.05 \%$. Vibrationproof mounting on special springs.
Size, $16 \times 133 / 4^{\prime \prime}$; requires $21 / 2^{\prime \prime}$ above, $31 / 2^{\prime \prime}$ below mounting board. For operation from $100-130$ or $200-250 \mathrm{v} ., 60$ cycle AC. Shpg. wt., 20 lbs.
96 RZ 91 2. $\$ 8.72$ Down. NET.
87.22

## NEW 4HF MANUAL PLAYER

NET

## $\$ 5831$ <br> 

## \$5.83 Down

 \$5.83 Down and monaural discs. Plays $162,331 / 3,45$ and 78 rpm recordings. Its quality features include: variable "plus" or "minus" speed adjustment on each of the four speeds; automatic "start-stop" built into tone arm-lift tone arm to start, replace on rest to stop; center spindle housing with pressure lubricating system; heavy duty turntable; push-button control for auto-trip mechanism; and "TPA/ 12 inspired"' transcription tone arm with plug-in shell. accommodates all records up to $16^{\prime \prime}$.Handsomely finished in black, white and chrome to blend with any custom installation. Min. mounting space: $171 / 4^{\prime \prime} \mathrm{W}, 131 / 4^{\prime \prime}$ $\mathrm{D}, 31 / 2^{\prime \prime}$ above and $33 / \mathrm{s}^{\prime \prime}$ below mtg . board. Less cartridge. For $110-130$ or $200-250$ volts, 60 cycle AC. Shipg. wt., 15 lbs .
89 RX 508. $\$ 5.83$ Down. NET..
.58.31
4HF/GC-7. Same as player described above, but with G.E. Type GC-7 magnetic stereo cartridge installed. Cartridge has a diamond LP needle. See page 17 for accessory plug-in head with 78 rpm cartridge installed. Shpg. wt., 14 lbs.
89 RX 509. \$8.18 Down. NET. . . . . 81.78

T Mk II "CREST" MANUAL PLAYER NET

\$3.19 Down
A deluxe manual record player with $12^{\prime \prime}$ turntable and transcription tone arm mounted on a single arm mounted on a single unit plate. Factory-wired to reproduce both stereo
 nto tone arm-lift tone arm to start, re-


A famous Garrard manual player now including these outstanding featuresplays $162 / 3,331 / 3,45$ and 78 rpm recordings; completely wired for both號
:
$\square$


$\square$

stereo and monaural reproduction; heavy, rubber-padded steel turntable; accurate-tracking pickup arm; safety arm rest and lock for maximum ease of portability.
Offers record-reproducing features of the changers above, at nominal cost. 4-pole motor is exceptionally smooth and quiet; dependable beltless drive. Motor starts when arm is lifted-shuts off at end of record. Min. mounting space: $143 / 4^{\prime \prime} \mathrm{W}$. $121 / 2^{\prime \prime} \mathrm{D}, 3^{\prime \prime}$ above and $21 / 16^{\prime \prime}$ below mounting board. Less cartridge. With 2 plug-in heads (1. when purchased with cartridge installed). For $100-130$ or $\mathbf{2 0 0 - 2 5 0}$ v., 60 cycle AC. Shpg, wt., 14 lbs.
89 RX 506. \$3.19 Down. NET...
31.85

T Mk II/GC-7. As above, but with G.E. GC-7 magnetic stereo cartridge. 14 lbs.
89 RX 507. 85.53 Down. NET...
55.32

## "Imperial" Series



## "Imperial" Series I931 4-Speed Diskchangers

AS LOW AS Latest version of the world-famous "Imperial" Diskchangernow completely wired for both stereo and monaural reproduction. Feature precision workmanship. four playing speeds. and ultra-convenient operation. "Magic Mind" allows intermix of $331 / 3$ and $45-\mathrm{rpm}$ records in $7^{\prime \prime}, 10^{\prime \prime}$ and $12^{\prime \prime}$ sizes-it \$4.41 Down changes records and selects $331 / 3$ or 45 rpm speed automaticalOther feature ly. Also intermixes 10 and after last record; powerful 4-pole motor; top-of-arm stylus pressure adjustment; illuminated speed selector; $91 / 2^{\prime \prime}$ rubber-matted turntable; manual tone arm handle. Attractive golden beige and brown finish. Mounting space: 1411/1" wide, $131 / 2^{\prime \prime}$ deep; $51 / 2^{\prime \prime}$ above, $4^{\prime \prime}$ below board. With two $36^{\prime \prime}$ phono cables, AC cord and plug. Less base, below. For $110-120$ volts, 60 cycle AC. $111 / 2 \mathrm{lbs}$. TR1931-21. Has G.E. GC-7 magnetic stereo cartridge-diamond LP needle. See page 84 for accessory 78 -rpm needle.
89 RX 513 . Only \$6.25 Down. NET
62.47

TR1931-1. Has ceramic, turnover stereo cartridge (.0007" diamond stylus for stereo and monaural LP's and $.003^{\prime \prime}$ sapphire stylus for standard). 89 RX 514. Only \$5.70 Doum. NET
56.97

TR1931-27. Less cartridge, but with two plug-in heads. Accommodate any conventional cartridges. See pages $84,86,88$, and 89 for cartridge listings. 89 RX 51 2. Only $\$ 4.41$ Down. NET
44.10

"Custom" 1941 and 1942 Series 4-Speed Diskchangers
 turntable speed. Additional features include: stereo-monaural switch; adjustable stylus pressure; automatic shut-off after last record; $8^{\prime \prime}$ rubber-matted, dynamically balanced turntable. Four speeds played are $331 / 3,45$ and 78 rpm -plus $16^{2} / 3 \mathrm{rpm}$ for "Talking Book" records. TR1941-1 and TS1942-1 have 2-pole motor; TS1942-21 and TR1941-21 have 4-pole motor. All units have handsome golden beige and brown finish. Size, with base, $9 \times 143 / 4 \mathrm{x}$ $131 / 4^{\prime \prime}$. Minimum mounting space of models without base; $14^{11} 116^{\prime \prime}$ wide, $131 / 2^{\prime \prime}$ deep; require $5^{1 / 2^{\prime \prime}}$ above, $4^{\prime \prime}$ below mounting board. See accessories listed below. Supplied with two $36^{\prime \prime}$ audio cables and AC line cord and plug. For $110-120$ volts, 60 cycle AC.
TS1942-1. Has ceramic, turnover stereo cartridge with sapphire styli (.0007" stereo and monaural LP's and $.003^{\prime \prime}$ for 78 's). On metal base. Wt., 15 lbs . 89 RX 515 . Only $\$ 4.30$ Down. NET
43.00

TS1942-21. As above, but has 4-pole motor and includes G.E. CL-7 magnetic stereo cartridge. Has $.0007^{\prime \prime}$ sapphire needle for stereo and monaural LP's. Shpg. wt., 15 lbs .
89 RX 517. Only $\$ 5.04$ Down. NET
50.35

TR1941-1. Same as Model TS1942-1, above, less base. Shpg. wt., $101 / 2 \mathrm{lbs}$.
89 RX 516. Only $\$ 3.67$ Down. NET
36.71

TR1941-21. Same as Model TS1942-21, above, less base. Shpg. wt., $101 / 2 \mathrm{lbs}$.
89 RX 518 . Only \$4.41 Down. NET.

## WEBCOR DISKCHANGER ACCESSORIES

METAL BASE. Highly attractive and durable metal base for Webcor record changers. Finished in rich-looking brown to harmonize beautifully with golden beige and brown finish of "Imperial" and "Custom" series Diskchangers listed above. Excellent for table-top or shelf use; underside of record changer is effectively sealed against dust. Mounting of changer is quick and easy. Shpg. wt., 4 lbs.
89 RX 606. NET
5.68

PRE-CUT MOUNTING BOARD. Pre-cut, heavy plywood mounting board for Webcor "Imperial" and "Custom"' series record changers. Ideal for custom installing changers, or to replace old mounting boards when modernizing existing high-fidelity systems. Board is unfinished; may be stained or finished to match color of cabinet. Has pre-drilled holes for easy installation. Overall size, $153 / 4 \times 131 / 4$ x $1 / 2^{\prime \prime}$. Shpg. wt., 3 lbs .
95 RX 767 . NET
1.96

AUTOMATIC 45-RPM SPINDLE. Automatically changes $45-\mathrm{rpm}$ records without need for individual spider adapters in each record. Easily slips over center spindle of Webcor changers for conversion to fully automatic $45-\mathrm{rpm}$ changing action. Wt., 8 oz .
89 R 552. NET
2.94

45-RPM SPIDER INSERTS. Lightweight metal inserts, easily snapped into place in large center-hole of $45-\mathrm{rpm}$ records. Small centerhole in adapter permits use of $45 \cdot \mathrm{rpm}$ records on any conventional turntable which will operate at 45 rpm speed, but which does not have large spindle. Shpg wt., package of 10, 6 oz .
96 R 47 1. Pkg. of 10 , NET
$46 c$
EXTRA PLUG-IN HEAD. Plug-in head for Model TR1931-27 record changer. Accommodates most stereo and monaural cartridges. Less cartridge. Shpg. wt., 6 oz .78 c 89 R 553. NET.



## "CORONATION" TSC-740 CHANGER

Quality 4-speed changer, wired for stereo or monaural use. For automatic record changing, stack $7^{\prime \prime}, 10^{\prime \prime}$, and $12^{\prime \prime}$ records in order of decreasing size-"Sensi-magic" feature determines record size before setting record down. Features: two-piece transcriptiontype arm; 4-pole motor; choice of $16^{2} / 3,331 / 3$, 45 and 78 rpm speeds; automatic shut-off after last record; heavy, rim-weighted turntable; "muting switch", and "pop-filter". 2 -tone finish. $12 \times 131 / 2^{\prime \prime}$; requires $5^{\prime \prime}$ above, $21 / 4^{\prime \prime}$ below mounting board. Less cartridge; less base. For $110-120$ volts, 60 cycle AC. Shpg. wt., 15 lbs.
89 RX 521 . Only $\$+.17$ Down. NET. 41.65
TSC-740-GC-7. As above, with G.E. GC-7 stereo cartridge (diamond LP needle)
89 RX 522. Only 86.51 Down. NET. . 65.12

## COLLARO ACCESSORIES

BASES. $153 / 4 \times 131 / 4 \times 4^{\prime \prime}$. Av. wt., 3 lbs . Specify mahogany, limed oak or walnut finish.

## 89 RX 607 C. For Changers. 89 RX 608 . Fer <br> $\left.\begin{array}{l}89 \text { RX } 608 \mathrm{C} \text {. For TP-59. } \\ 89 \text { RX } 609 \mathrm{C} \text {. For 4TR200 }\end{array}\right\}$ EA... 4.95

UNFINISHED MOUNTING BOARDS. $153 / 4 \mathrm{x}$ $131 / 4 \mathrm{x}^{1 / 2 \prime}$. Shpg. wt., $11 / 2$ lbs.
91 RX 556. For Changers. (NET
89 RX 610. For TP-59.
89 RX 611 . For 4 TR200. $\}$ EA..... I. 50
45-RPM SPINDLE. For changers, $11 / 2$ lbs.
93 R 483. NET
3.23

EXTRA PLUG-IN HEAD. For TSC-740, TSC840, TP-59. 6 oz.
89 R 555. NET.
1.92


## "CONTINENTAL" TSC-840 CHANGER

Deluxe 4-speed record changer for stereo or monaural reproduction. Features rapid loading of $7^{\prime \prime}, 10^{\prime \prime}$, and $12^{\prime \prime}$ records-and permits them to be intermixed! Has newly designed two-piece transcription-type arm free of audio spectrum resonances. Other free of audio spectrum resonances. Other
features include: Less than $0.25 \%$ flutter; features include: Less than $0.25 \%$ flutter; $45,331 / 3$, and $16^{2} / 3 \mathrm{rpm}$; rim-weighted, balanced fly-wheel action; extra heavy-duty 4 -pole, shaded-pole motor; manual switch for turntable operation; "muting switch"; "pop filter", automatic shut-off; removable rubber mat; automatic idler disengagement. Attractive two-tone finish. Size, $12^{\prime \prime}$ ment. Attractive two-tone finish. Size, $12^{\prime \prime}$
wide by $131 / 2^{\prime \prime}$ deep. Requires $5^{\prime \prime}$ above, $2^{3} / 4^{\prime \prime}$ below the mounting board. Supplied less cartridge and less base. For operation from $110-120$ v., 60 cycle AC. Wt., 15 lbs.
89 RX 523. Only \$4.85 Down. NET. 48.51
TSC-840-GC-7. As above, with G.E. GC-7 stereo cartridge (diamond LP needle) 89 RX 524. Only $\$ 7.20$ Down. NET. 71.98

## "CONQUEST" TSC-640 CHANGER

(Not Illus.) Economy-priced 4 -speed record changer wired for stereo or monaural use. Similar to TSC-740, but has one-piece tran-scription-type tone arm. Will accept all standard hi-fi cartridges. Two-tone finish $12 \times 131 / 2^{\prime \prime}$; requires $5^{\prime \prime}$ above, $23 / 4^{\prime \prime}$ below mtg. board. Less cartridge and base. For 110-120 v.. 60 cycle AC. Shpg. wt., 15 lbs.

89 RX 519 . Only \$3.77 Down. NET 37.73
TSC-640-GC-7. As above, but with G.E. GC-7 stereo cartridge (diamond LP needle).
89 RX 520. Only \$6.12 Down. NET 61.20


## MODEL TP-59 TURNTABLE WITH ARM

Low-cost, 4-speed manual player for stereo or monaural use. Plays $162 / 3,331 / 3,45$ and $78-\mathrm{rpm}$ records. Features include: heavy, $12^{\prime \prime}$ rubber-covered turntable; 4-pole dynamically balanced motor; transcriptiontype tone arm with plug-in shell; automatic type tone arm with plug-in shell; automatic
start and stop mechanism. Accepts all standard stereo and monaural hi-fi cartridges. Size: $131 / 2 \times 12^{\prime \prime} ; 3^{\prime \prime}$ above, $31 / 2^{\prime \prime}$ below mounting board. Less cartridge. For operation from 110-120 v., 60 cycle AC. Shpg. wt., 15 lbs.
89 RX 525 . Only $\$ 2.89$ Down. NET 28.91

## MODEL 4 TR 200 TURNTABLE

Moderately priced, professional-quality 12" turntable. Features a non-magnetic, rubbermatted turntable weighing $81 / 2 \mathrm{lbs}$. Precision machined and engineered for extremely low levels of wow and flutter. Plays all four speeds- $162 / 3,331 / 3,45$ and 78 rpm . Has heavy-duty 4 -pole motor and 4 -idler drive system. Speed change switch has "Off" position between each speed-stops motor during speed change. Attractive black panel. Size, $121 / 2 \times 121 / 2^{\prime \prime} ; 3^{\prime \prime}$ above, $31 / 2^{\prime \prime}$ below mtg. board. For $110-120$ v., 60 cycle AC. Shpg. wt., 12 lbs.
89RX 526. Only \$4.85 Down. NET 48.51

## New V-M "Voice of Music" Hi-Fi Record Changers

Outstanding 4-speed record changers offering quality construction and many advanced features. Have stereo-monaural switch for full-range and best fidelity when playing monaural records through your stereo or monaural hi-fi system. Modern styling matches any decorative scheme; economically priced to suit any budget.

## MODEL 1226 RECORD CHANGER

Low-cost 4-speed changer for stereo or monaural reproduction. Features: stereo-monaural switch; 4-pole motor; one-piece tone arm with ceramic stereo turnover cartridge (sapphire LP and sapphire standard styli); handsome black and white with gold trim styling; automatic shut-off after last record; Tri-O-Matic spindle; etc. $83 / 4 \times 133 / 4 \mathrm{x}$ $1233 \mathrm{~g}^{\prime \prime}$. With base and AC cord. For $110-120$ v., 60 cycle AC. Shpg. wt., $141 / 4 \mathrm{lbs}$.

89 RX 528 . Only \$4.48 Down. NET 44.80
MODEL 1201. As above, but less base. $85 / 16 \mathrm{x}$ $133 / 4 \times 123 / 8^{\prime \prime}$. Shpg. wt., $101 / 4 \mathrm{lbs}$.
89 RX 527. Only $\$ 4.00$ Down. NET 40.00

## V-M ACCESSORIES

45-RPM SPINDLE. Shpg. wt., 8 oz .
96 R 329. NET
FIBER SPIDERS. Shpg. wt., 3 oz .
96 R 244. NET PER PKG. OF 12.
MOUNTING BOARD. $157 / 8 \times 157 / 8^{\prime \prime} .3 \mathrm{lbs}$.
95 RX 511 . NET
1.20

METAL BASE. Shpg. wt., 3 lbs.
95 RX 510 . NET.
4.15

EXTRA PLUG-IN-HEAD. Wt., 6 oz.
89 R 556. NET

## MODEL 1202 RECORD CHANGER

Basic 4-speed hi-fi record changer for magnetic pickup. Completely wired for stereo or monaural use. Features include a convenient stereo-monaural switch. Engineered for low levels of wow and flutter.
Plays $331 / 3,45$ and 78 rpm records automatically; Also includes $162 / 3 \mathrm{rpm}$ "talking book" speed. Individual records of any speed may also be played manually. Capacity: $12-10^{\prime \prime}$, $10-12^{\prime \prime}$ or $14-7^{\prime \prime}$ records. Has convenient, positive intermix feature of $10-12^{\prime \prime}$ and $10^{\prime \prime}$ records of the same speed. Exclusive Tri-O-Matic spindle gently lowers records to record shelf. Autogently lowers records to record shelf. Auto-
matic shutoff; pickup arm comes to rest and motor shuts off after last record is played. Mechanism is completely jam-proof. Idler disengages in "off" position. Constantspeed 4 -pole motor provides quiet operation. Rubber turntable mat prevents record slippage. Styled in black and white with gold trim. $85 / 16 \times 133 / 4 \times 123 / 8^{\prime \prime}$. With one plugin shell. Less base, cartridge and AC cord. For $110-120 \mathrm{v} ., 60$ cycle AC. $101 / 4 \mathrm{lbs}$. 89 RX 529. Only \$4.00 Down. NET 40.00 MODEL 1228. As above, with base. Size, $83 / 4 \times 1.33 / 4 \times 123 / 8^{\prime \prime}$. Wt., $141 / 4$ lbs.
$55 \mathrm{c} \quad 89$ RX 530 . Only $\$ 4.48$ Down. NET. . 44.80



## NEW TM-2G 12" PICKUP ARM

Professional-quality pickup arm for optimum performance with stereophonic recordings. Expert engineering also makes it ideal ings. Expert engineering also makes it ideal for critical monaural use. Accommo
all G.E. stereo and VR II cartridges.
Outstanding feature of the TM-2G is its superior static balance. Maintains constant lateral equilibrium even if the turntable is not level-only lateral motion is that imparted by the record grooves. Shock-resistant arm incorporates microball bearings for reduced travel friction-lightweight construction assures minimum inertia. Has a struction assures minimum inertia. Has a
unique two-step tracking force adjustment -arm is balanced to zero force, then precisely adjusted to any force from 0 to 6 grams for accurate tracking.
Includes arm rest and removable cartridge head. Length from post: forward, $9^{7 \prime}$; backward, $31 / 2^{\prime \prime}$. Height adjustable, $3 / 8^{-21 / 4^{\prime \prime}}$. Has 4 -terminal board with ground. Plays records up to $12^{\prime \prime}$. Shpg. wt., $11 / 2$ lbs.

## 79 R 704. NET

29.35

## G. E. MODERNIZATION ASSEMBLIES <br> \& STYLI FOR RPX SERIES

## REPLACEMENT "CLIP-IN-TIP" STYLI

For stylus replacement in single or tripleplay RPX "Clip-In-Tip" cartridges. 2 oz.

| Stock No. | Mfr's Type | Stylus | Radius |
| :---: | :---: | :---: | :---: |
| $\begin{aligned} & 65 R C 992 \\ & 65 R C 993 \\ & 650 \end{aligned}$ $65 \text { RC } 994$ | $\begin{aligned} & \text { RPJ-01D } \\ & \text { RPJ-02D } \\ & \text { RPJ-03D } \end{aligned}$ | $\begin{aligned} & \text { Diamond } \\ & \text { Diamond } \\ & \text { Diamond } \end{aligned}$ | $\begin{aligned} & .001^{\circ} \\ & .0025^{\prime \prime} \\ & .003^{\prime \prime} \end{aligned}$ |
| NET EACH . . . . . . . . . . . . . . . . . . . . . . 9.75 |  |  |  |
| $\begin{aligned} & 65 R 995 \\ & 65 \text { R } 996 \\ & 65 R 997 \end{aligned}$ | RPJ-01S RPJ-02S RPJ-03S | Sapphire Sapphire Sapphire | $\begin{aligned} & .001^{\prime \prime} \\ & .0025^{\prime \prime} \\ & .003^{\prime \prime} \end{aligned}$ |
| NET EACH . . . . . . . . . . . . . . . . . . . . . . . 1.96 |  |  |  |

## STYLI MODERNIZATION ASSEMBLIES

For converting G.E. triple-play cartridge types RPX-050, -052, 053, -047 to "Clip-In-Tip". Once installed, only the tips need be replaced when worn. " $S$ "'-Sapphire; "D"-Diamond. Shpg. wt., 2 oz .

| Stock No. | Type | Stylus Tips | NET |
| :---: | :---: | :---: | :---: |
| R 988 | RPJ-010A | S-.001 ${ }^{\prime \prime}$ S-.003 ${ }^{\prime \prime}$ |  |
| 65 RC | RPI-012A | D-.001" D-.003" | 19.5 |
| 65 RC 989 | RPJ-013A | D-.001" S-.003" | 11.7 |
| 5 | RPJ-007A | S-.001 ${ }^{\text {² }}$ S-. $0025^{\prime \prime}$ |  |
| 65 RC 990 | RPJ-011A | D-.001 ${ }^{\prime \prime}$ D-.0025* | 19.5 |

## SINGIE-TIPPED REPLACEMENT STYLI

 Replacement single-tipped styli for G.E.cartridge types RPX-040, -041, -061, and -063. (These cartridges cannot be converted for use with "Clip-In-Tip" styli.) Shpg. wt., 2 oz.

| Stock No. | Mfr's Type | Stylus | Radius |
| :---: | :---: | :---: | :---: |
| $\begin{aligned} & \hline 65 R 281 \\ & 65 R 261 \\ & 65 R 295 \end{aligned}$ | $\begin{aligned} & \text { RPJ-005 } \\ & \text { RPJJ 006 } \\ & \text { RPJ-001 } \end{aligned}$ | Sapphire Sapphire Sapphire | $\begin{aligned} & .001^{\prime \prime} \\ & .0025^{\prime \prime} \\ & .003^{\prime \prime} \end{aligned}$ |
| NET EACH . . . . . . . . . . . . . . . . . . . . . . 2.06 |  |  |  |
| $99 R C 815$ $99 R C 817$ $99 R C 816$ | $\begin{aligned} & \hline \text { RPJ-004 } \\ & \text { RPJ-002 } \\ & \text { RPJ-003 } \end{aligned}$ | Diamond Diamond Diamond | $\begin{aligned} & .001^{\prime \prime} \\ & .0025^{\prime \prime} \\ & .003^{\prime \prime} \end{aligned}$ |

NET EACH.
10.29

RKP-009B REPLACEMENT PARTS KIT. For triple-play cartridges. Includes washers, spring and knobs. Shpg. wt., 4 oz.
72 R 744. NET
29c
RQB-001 STYLUS BRUSH. Soft bristle brush for cleaning stylus assemblies. Reduces distortion, saves records. 2 oz .
.10c

AI-203 "TRANSISTUBE" PREAMP. Allows using mike or any magnetic cartridge with amplifiers not having necessary inputs. Extremely ow hum, noise and microphonic levels. Uses 12AX7 and NPN transistor. RIAA cartridge equalization. Includes gain control. Has 3 input impedances, 2 sensitivity positions. 10 mv sensitivity for 1 v . output. $33 / 4 \times 33 / 4 \times 6^{\prime \prime}$. With $2-\mathrm{ft}$. cable. For $110-120$ v., $50-60$ cycle AC. Shpg. wt., $31 / 2$ lbs. 81 S 857. NET
21.51

UPX-003B PREAMP. Permits use of mike or magnetic cartridge with amplifiers not equipped with preamps. 32 db gain with 18 db bass boost (at 50 cps ) on "Phono"; flat (30-15,000 cps) on "Mike." With 2-ft. output cable and 6SC7. $35 / 8 \times 35 / 8 \times 33 / 4^{\prime \prime}$. For 110 120 v., 60 cycle AC. $11 / 2$ lbs.
93 S 749. NET
10.55

A1-903 RUMBLE FILTER. Effectively filters out turntable rumble and vibration, and subaudio surges that might damage speaker. Cutoff of $12 \mathrm{db} /$ octave below 50 cps . Insert between pickup and preamp. With $19^{\prime \prime}$ output cable. $2 \times 23 / 8 \times 31 / 2^{\prime \prime} .10 \mathrm{oz}$.
8.33

65 R 972 . NET.

"RONDINE JR." MODEL L-34 NET

Dual-speed, low-priced $331 / 3$

\$5995\$6.00 Down and $45-\mathrm{rpm} 12^{\prime \prime}$ turntable designed to professional specifications. Ideal for high-fidelity installations as well average recording level for minimum rumble. Incorporates a quiet, vibration free, constant-speed 4-pole induction motor. Idler disengages in off position to prevent flat spots on idler wheel. Has precision ground and hand-lapped shaft which turns on heavy ball-thrust bearing. Lathe-turned cast aluminum turntable is lab-tested for perfect balance. Includes a ribbed rubber turntable mat and permanently affixed strobe disc. Rigid, pressed-steel chassis finished in silvertone aluminum. Size, $15 \times 12^{\prime \prime}$. Requires $13 / 8^{\prime \prime}$ clearance above and $5^{\prime \prime}$ below motor panel. For $110-120$ volts, 60 cycle AC. Shpg. wt., 15 lbs.
96 RX 686 . NET.
59.95

## "RONDINE JR." MODEL L-37

Employs same quality engineering as Model L-34 described above, but with $331 / 3$ and $78-\mathrm{rpm}$ speeds. Shpg. wt., 15 lbs.
96 RX 694. NET.
59.95

NEW "RONDINE" K33 TURNTABLE KIT

> 30-Minute Assembly
> Rek-O-Kut Quality
> Amazing Value

Now you can assemble a quality $331 / 3-\mathrm{rpm}$ turntable in just 30 minutes with a few simple tools. Has a heavy-duty 4 -pole induction motor built to Rek-O-Kut specifications. Driven by a specially woven endless belt with thickness held to micro-tolerances. Belt tension adjustable for control of noise level. Solid cast-aluminum turntable is lathe-turned, and tapered for easy record handling. Has a permanently affixed strobe disc. Noise level is 47 db below average recording level. Finished in charcoal gray and two-tone aluminum. Turntable gray and two-tone aluminum. Turntable requires clearance above. For $110-120$ volts, 60 cycle AC. Shpg. wt., 15 lbs.
89 RX 536. NET.
39.95

UNFINISHED BASE FOR K33. Pre-cut. Size, $6 \times 161 / 2 \times 17^{\prime \prime}$. Shpg. wt., 5 lbs.
89 RX 61 4. NET. .
.15 .90


## "RONDINE DELUXE" MODEL B-12H

NET
$\$ 295$\$13.00 Down

Precision-engineered, professional-quality three-speed $12^{\prime \prime}$ turntable. Employs superior craftsmanship through-out-all critical parts are case-hardened and ground to a micro-finish. Single knob selects from speeds of $331 / 3$. Off, 45 , Off, or 78 rpm. Incorporates a custom-built, self-lubricating, hysteresis-synchronous motor. Solid cast-aluminum turntable is latheturned and dynamically balanced. Turntable shaft is polished and hand-lapped in table shaft is polished and hand-iapped in the bearing well for a perfect fit. Noise level
is 57 db below average recording level. Idler is disengaged when speed selector is in an "Off" position. Turntable has built-in 45rpm hub adapter that retracts when not in use. Size, $173 / 4 \times 16^{\prime \prime}$. Requires $3^{\prime \prime}$ clearance above and $61 / 2^{\prime \prime}$ below motor panel. For operation from $110-120$ volts, 60 cycle AC. eration irom 110
96 RU 687. NET
129.95

## NEW "RONDINE" MODEL B-12GH

As above, except has noise level 53 db below average recording level.
89 RU 534. NET.
99.95

## NEW "RONDINE" MODEL N33H

NET

## \$6995

\$7.00 Down
Quality $331 / 3-\mathrm{rpm} 12^{\prime \prime}$ turntable precision-built to Rek-O-Kut standards. Designed to provide outstanding performance in any music system. Motor is a self-lubricating hysteresis-synchronous unit of modern design-has a special winding to reduce coasting of turntable.

Table is driven by specially woven fabric belt to minimize vibration-belt thickness is carefully controlled to micro-tolerances. Belt tension is adjustable for least noise. Turntable is of solid, lathe-turned cast alu-minum-tapered for easy handling of records. Noise level is 53 db below average recording level. Includes a ribbed rubber turntable mat to assure maximum traction.

Permanently affixed strobe disc permits a quick, accurate check of speed of turntable rotation. Attractively finished in charcoal gray and two-tone aluminum. Size of aluminum chassis deck is $157 / 8 \times 15^{\prime \prime}$. Turntable requires a clearance of $5^{\prime \prime}$ below the motor panel and a clearance of $2^{\prime \prime}$ above. For operation from $110-120$ volts, 60 cycle AC. Shpg. wt., 15 lbs.
89 RX 535. NET.
69.95

## STEREO-MONAURAL TONE ARMS

An outstanding pair of pickup arms for stereo-monaural operation. Employ strong, lightweight tubular aluminum construction. Special pivot with double set of ball bearings assures virtually friction-free horizontal motion and excellent stability. Arm is suspended in a gimbal by a cross-shaft with five $1-\mathrm{mm}$ chrome-steel balls at either end. Acoustical division into two sections prevents audible resonance. Height and tracking force are accurately adjustable. Take 3 and 4-terminal stereo cartridges. With one head. Shpg. wt., 2 lbs.
72 RX $750 . \mathrm{S}^{2} 120.12^{\prime \prime} \mathrm{arm}$. NET. 27.95 72 RX 751 . S-160. $16^{\prime \prime}$ arm. NET . . 30.95

PS-20 EXTRA PLUG-IN HEAD. 4-cond. 6 oz. 72 R 752. NET.
5.95

STEREO CONVERSION KITS. Quickly and easily convert your Rek-O-Kut monaural arm for use with stereo cartridge. Tools included. Shpg. wt., 2 lbs.
72 R 716 . SC-12. For A-120. NET. . 17.95
72 R 717. SC-16. For A-160. NET. . . 19.95

## REK-O-KUT TURNTABLE BASES

Here's a selection of beautifully designed bases for mounting Rek-O-Kut turntables. Constructed in the tradition of fine furniture from selected $3 / 4^{\prime \prime}$. walnut or natural blonde korina veneers. Rounded corners are made with mitered, interlocked joints for added firmness. Complete with four shock mounts to insulate the table from vibration. All bases are for $12^{\prime \prime}$ arms, except *16". Av. shpg. wt., 13 lbs.

| Stock No. | Finish | For | HWD | NET |
| :---: | :---: | :---: | :---: | :---: |
| 95 RX 716 | Walnut | B-12H, | $6 \times 165 / 8 \times 17^{\prime \prime}$ | 23.90 |
| 95 RX 717 | Blonde | B-12GH |  | 28.95 |
| 95 RX 634 | Walnut | L-34, | $41 / 2 \times 165 / 8 \times 17^{\prime \prime}$ | 26.95 |
| 95 RX 635 | Blonde | L- |  | 28.95 |
| 89 RX 612 89 RX 613 | Walnut | N 33 H | $6 \times 165 / 8 \times 17^{\prime \prime}$ | $19.95$ |
| 89 RX 613 | Blonde | N33 | 6x16\% $\times 1$ | $28.95$ |
| 94 RU 925 | Walnut | ${ }^{*} \mathrm{~B}-12 \mathrm{H}$ | $6 \times 171 / 2 \times 21^{\prime \prime}$ | 32.95 |
| 94 RU 926 | Biond | *B-12GH |  | 35.95 |

## WELLCOR BASES FOR REK-O-KUT TURNTABLES

Expertly designed turntable bases for use with either a $12^{\prime \prime}$ or $16^{\prime \prime}$ pickup arm. Made of selected $3 / 4^{\prime \prime}$ hardwoods and fine furniture veneers, hand-rubbed to a lustrous finish. Motor board "floats" on sponge rubber. Mitered joints provide extra rigidity. Mitered joints provide extra rigidity. niture; are adjustable to permit leveling.

Size (HWD). $63 / 8 \times 21 \times 163 / 4^{\prime \prime}$. Completely pre-assembled. Series B bases are for B-12H and B-12GH turntables. Series $L$ are for L-34 and L-37 turntables. Available in mahogany, limed oak or walnut finishes-specify when ordering. Shpg. wt., 13 lbs.
93 RX 489C. Series B. NET.
21.75

93 RX 488C. Series L. NET. . . . . . . . 21.75

REK-O-KUT TURNTABLE NOW AVAILABLE IN KIT FORM!



NEW MODEL 371 STEREO CARTRIDGE

- For Stereo \& Monaural Discs
- Standard $1 / 2^{\prime \prime}$ Mtg. Centers
- Precise Miniature Design

Traditional Pickering quality and excellence of design is embodied in the new Model 371 stereo cartridge. Fully compatible, the 371 offers outstanding performance on all stereo records, as well as on conventional microwill fit all record changers, manual players and transcription turntables employing pickuparms with standard $1 / 2^{\prime \prime} \mathrm{mtg}$. centers. Has two balanced signal outputs for connection to the low magnetic input of a stereo preamplifier (may be connected in parallel preamplifier). Output level is adequate for all preamps and there is no need to employ a transformer or other "gain" stage device. excellent inter-channel isolation with negligible crosstalk.
Frequency response is flat within 2 db over the entire stereo recording range, with complete absence of spurious resonance. Recommended load resistance for flat response, 27,000 to 47,000 ohms, each channel. Interchannel isolation, 20 db . Recommended tracking force, 4 to 6 grams. With single, precision-polished .0007 " diamond stylus in-
stalled in "T-Guard" stylus assembly. Shpg. wt., 2 oz.
94 RC 751 . NET................. . . 29.85
371 CARTRIDGE IN PLUG-IN HEAD. For Garrard RC88-4, $98-4$ changers and TM-II players. Shpg. wt., 5 oz.
29.85


Model 370.10 "Fluxvalve" Monaural Cartridge


MODEL 370-1D MONA URAL CARTRIDGE
For playing all microgroove, monaural records. Originally developed for professional applications, the Model $370-1 \mathrm{D}$ is a superior magnetic cartridge with extremely wide response. Fits all hi-fi changers and all lightweight pickup arms. Its exceptional compliance and minimum mass assure extremely high tracking accuracy, and minimum record and stylus wear.
Hermetically sealed, the 370-1D features Pickering's exclusive "T-Guard" stylus aswhich eliminates fumbling and possible damage to the stylus. Its practical " T " shape provides a firm grip for safe, quick and easy stylus change. Supplied with $.001^{\prime \prime}$ the styli listed in the table below. Frequency response from 10 to $30,000 \mathrm{cps}$. Output is 25 millivolts; tracking pressure from 2 to 6 of recording. Shpg. wt., 3 oz . 99 RC 236. NET. 29.85

REPLACEMENT STYLI
FOR "FLUXVALVE" 371, 370, 350 AND 194 CARTRIDGES. Ingeniously mounted styli, on specially formed plastic inserts. Easily and
quickly changed without tools or disassemquickly changed without tools or disassemperformance. Shpg. wt., 2 oz.

| Stock No. | Type | Tip | NET |
| :---: | :---: | :---: | :---: |
| 99 RC 849 | D3510 | $.000^{\prime \prime}$ Diamond | 18.00 |
| 99 RC 8996 | D3527 | $.007^{\prime \prime}$ Diamond | 18.00 |
| 99 RC 897 | S3527 | $.0027^{\prime \prime}$ Sapphire | 6.00 |
| 99 RC 799 | D3505 | $.005^{\prime \prime}$ Diamond | 24.00 |
| 94 RC 734 | D3707C | $.0007^{\prime \prime}$ Diamond | 18.00 |

NEW 800 "GYROPOISE" TURNTABLE
Unique new turntable, developed specifically for stereo and monaural microgroove records. Features one speed- $331 / 3 \mathrm{rpm}$.
Completely eliminates vertical rumblerevolves in magnetic suspension, with precise accuracy, on a bearing of air. No mechanical linkage whatsoever; no vertical bearingl Flutter and wow are virtually eliminated through use of unique, super-cushion
idler. Noise: better than 65 db below referider. Noise: better than 65 db below refer-
ence level. Speed Accuracy: $\pm 0.2 \%$ total speed variation. Employs a built-in precision leveling adjustment with indicator. Foam rubber turntable mat; takes records to $12^{\prime \prime}$ in size. Fully synchronous motor. Panel size, $131 / 2 \times 13^{1 / 2} ; 15 / /^{\prime \prime}$ above panel, $3^{\prime \prime}$ below panel. Complete ' 800 ' chassis includes $3-\mathrm{lb}$. turntable and turntable mechanism. v., 60 cycle AC. Shpg. wt., $131 / 2$ lbs. 89 RX 532. NET. $\square$ 59.85 WOOD BASES FOR " 800 " TURNTABLE. HWD: $53 / 8 \times 143 / 4 \times 143 / 4^{\prime \prime}$. Specify mahogany, blonde or walnut finish. Wt., $51 / 2$ lbs. 12.00 NEW MODEL 196 UNIPOISE ARM WITH STEREO "FLUXVALVE" CARTRIDGE. Employs a single, friction-free pivot bearing for almost
infinite compliance. Precisely traces the delicate groove of a stereo record. For use with all high-quality turntables. Mounts on motorboards measuring only $151 / 2 \times 151 / 2^{\prime \prime}$. Length of arm, $113 / 4^{\prime \prime}$. Single thumbscrew and bolt installation. Convenient stylus Includes arm rest with sable brush for keeping stylus tip free of dust. Has $.0007^{\prime \prime}$ diamond stylus. Shpg. wt., $3 / 4 \mathrm{lb}$. 94 RX 752. NET.
59.85

FAIRCHILD HIGH-FIDELITY COMPONENTS
SERIES 412 TURNTABLES
NEW MODEL 232 STEREO CARTRIDGE MODEL 412-1 $331 / 3$-RPM TURNTABLE. Offers superlative specifications. Uses time-proven
double-belt drive and self-lubricating hys-double-belt drive and self-lubricating hys-
teresis-synchronous motor providing true teresis-ssinchronous motor providing true dynamically balanced turntable rests on rotating ball-thrust bearing in nylon seat. Advanced motor suspension system eliminates all traces of vibration. Exceeds NARTB specifications. Precision-made
throughout. Less base, below. For $110-120$ v... 60 cycle AC. Shpg. wt., 30 lbs. 99 RU 205. NET.
99.50 NEW MODEL 412-2-331/3 \& 45-RPM TURNTABLE. Not illustrated-similar to above. Employs double belt drive and self-lubricating, hysteresis-synchronous motor. Has built-in $45-\mathrm{rpm}$ spindle adapter-pulls up for $45-\mathrm{rpm}$ records, pushes down when not
in use. Single knob selects either of two in useds, $331 / 3$ or 45 rpm . Speed regulation is maintained within $\pm 0.15 \%$ regardless of variations in power line voltage and frequency. Rumble, wow and flutter is $100 \%$ lower than NARTB standards. Less base,
below. For operation from $110-120$ v., 60 below. For operation from 110-120 v., 60
cycle AC. Shpg. wt., 30 lbs. 91 RU 569 NET. 30 lbs.

I29.50 HARDWOOD BASES FOR FAIRCHILD TURNTABLES. Shock-mounted; vibration-free. 71/2 x211/4x141/2": Specify mahogany, blonde or walnut finish. Shpg. wt., 15 lbs.
31.50

Deluxe new, rotating coil stereo cartridge. Offers flawless reproduction from stereo records and conventional midron stylus. records. Has single, $.0006^{\text {ren }}$ diamond stylus. curacy. Low-impedance output assures minimum hum pickup. Excellent inter-channel separation. Output, 5 millivolts per channel. $1 / 2^{\prime \prime}$ or $7 / 16^{\prime \prime}$ mounting centers. 4 oz .
79 RC 211 . NET.
49.50

NEW MODEL 282 STEREO PICKUP ARM Designed especially for the 232 stereo cartridge above; also accepts other standard
size stereo or monaural cartridges. Takes size stereo or monaural cartridges. Takes records to 12 . Features convenient, plug-in tached before inserting it into arm. Two independent shielded output cables prevent inter-action. With arm rest and fingertip lift lever. Black and silver. Less cartridge. Shpg. wt., 6 lbs.
72 RX 873. NET.
42.50

MODEL 225A "MICRADJUST" CARTRIDGE. Professional type, moving coil cartridge. For monaural use only. Has exceptionally good tracking ability. Offers outstanding reproduction. Mounts in all changer and transcription arms-only $11 / 8 x^{3 / 4} x^{7 / 16^{\prime \prime}}$ in size. Response: $\pm 2 \mathrm{db}, 20-20,000 \mathrm{cps}$. Output, 5
millivolts. Impedance, 200 ohms. With $.001^{\prime \prime}$ millivolts. Impedance, 200 ohms.
diamond stylus. Shpg. wt., 4 oz . 65 RC 007. NET.
37.50

THORENS


## NEW MODEL CD-43 CHANGER

Carefully engineered, Swiss made, 3 -speed record changer. Pickup arm is wired for stereo use; unit is supplied with two audio output cables. Unique gear-driven turntable features direct-drive, 4 -pole inductiontype motor. 4 controls: Record Size Selector; Start-Stop; Repeat; Reject and PauseTimer. Base size: $12 \times 15^{\prime \prime}$. Requires $31 / 4^{\prime \prime}$ below mtg. board; $6^{\prime \prime}$ above. With mtg. template, 2 phono cables, 2 plug-in heads. Less cartridge, base. AC-line cord and $45-\mathrm{rpm}$ spindle. No adapter needed for 50 cycle operation. For $100-120 \mathrm{v}$. and 200-250 v., 50-60 cycle AC. Shpg. wt., 25 lbs.
93 RU 333. NET.
78.35

NEW MODEL CB-33N MANUAL PLAYER. Not illus. Low-cost, 3 -speed manual player with many deluxe features. Wired for stereo use. Direct-drive, 4-pole motor; automatic shutoff; etc. $15 \times 12^{\prime \prime}$; requires $31 / 4^{\prime \prime}$ below mtg. off, etc. $15 \times 12$, requires base. With 2 plug-in heads, 2 output cables, mtg. template. For 110-120 v . and $200-250$ v., $50-60$ cycle AC. 17 lbs. 93 RX 334. NET.
47.04

## NEW MODEL TD-124 TURNTABLE

Professional-quality, 4 -speed turntable on rigid base plate. Built-in wood panel allows mounting any $12^{\prime \prime}$ or $16^{\prime \prime}$ pickup arm. Highly accurate, built-in turntable level-4 leveling screws accessible from top of unit; new eddy current brake for effective speed adjustment without rumble; illuminated strobe; speed adjustable $\pm 3 \%$; single On-Off and speed control; extremely low noise level. Instantaneous cueing. Base plate. $151 / 2 \mathrm{x}$ $127 / 8^{\prime \prime}$; depth required, $23 / 4^{\prime \prime}$. Less arm and base. With AC cord and pickup arm cable. For 100-120 v., 125-150 v., or 200-250 v., 5060 cycle AC. Shpg. wt., 32 lbs.
94 RU 722 . NET.
97.75

NEW MODEL TD-134 4-SPEED MANUAL PLAYER. Not illus. Features newly designed pickup arm-accepts all popular makes of stereo and monaural cartridges. Base plate, $141 / 2 \times 113 / 4^{\prime \prime}$; requires $31 / 4^{\prime \prime}$ below mtg. base. Less base and cartridge. With AC cord and Less base and cartridge. With AC cord and
output cable. For $110-120$ v., and $200-250$ v., $50-60$ cycle AC. 17 lbs.

93 RU 335. NET.
58.75

THORENS ACCESSORIES. For all units described above.

|  | Stock No. | For | Description | Wr. | NET |
| :---: | :---: | :---: | :---: | :---: | :---: |
| 96 | R 829 | CD-43 | Automatic $45-\mathrm{rpm}$ spindle | 1 lb . | 5.83 |
| 96 | RX 808 | CD-43, CB-33N | Wood base (mahogany) | 5 lbs. | 5.88 |
| 96 | R×809 | CD-43, CB-33N | Wood base (blonde) | 5 lbs. | 5.88 |
| 96 | RX823 | CD-43, CB-33N | Unfinished mounting board | 3 lbs. | 2.94 |
| 89 | R 554 | CD-43, CB-33N | Extra plug-in head | 3 oz . | 1.47 |
| 93 | RX 396 | TD-124 | Wood base (mahogany) | 5 lbs . | 9.00 |
| 93 | RX 397 | TD-124 | Wood base (blonde) | 5 lbs. | 9.00 |
| 93 | RX 336 | TD-134 | Wood base (mahogany) | 5 lbs . | 9.00 |
| 93 | R× 337 | TD-134 | Wood base (blonde) | 5 lbs. | 9.00 |
| 93 | R× 487 | TD-124 | Unfinished mounting board | 3 lbs. | 4.50 |
| 93 | R× 338 | TD-134 | Unfinished mounting board | 3 lbs. | 4.50 |

## METZNER "STARLIGHT" TURNTABLES AND ACCESSORIES

NEW 672A TURNTABLE SYSTEM
System consists of the new Model 60A turntable, new Model 07 "Stereaunetic" pickup arm, and new Model 002 wood base styled in decorator blonde. Arm accommodates the monaural or stereo cartridge of your choice. The 60 A turntable features: variable speed control from 16 to 84 rpm ; stroboscope speed indicator; 4 -pole, shaded-pole motor; direct worm-gear drive; retracting center hub for $45-\mathrm{rpm}$ records; massive, machined cast aluminum turntable with cork pad. Rumble: 52 db below NAB reference level. Wow © Flutter: less than $0.18 \%$ RMS. The 07 "Stereaunetic" arm has wrist-action head. Less cartridge. For 110-120 v., 60 cycle AC. Shpg. wt., 24 lbs.
72 RU 819 . NET.
102.50

NEW MODEL 60A TURNTABLE ONLY. Described in system above. Less base and arm. $113 / 4 \mathrm{x}$ $131 / 4^{\prime \prime}$; requires $11 / 2^{\prime \prime}$ above, $4^{\prime \prime}$ below mtg. board. For $110-120$ v., 60 cycle AC. 14 lbs. 72 RX 830. NET.
64.50

NEW 07 "STEREAUNETIC" ARM
Wired for new stereo and all monaural cartridges. Wrist-action head, counter-balanced for vernier control of stylus pressure. Takes records to $16^{\prime \prime}$. Lateral pivot on precision ball bearings. Mounts in single $1 / 2^{\prime \prime}$ hole. Less cartridge. Shpg. wt., 2 lbs. 79 RX 210 . NET.

## NEW MODEL 80 TURNTABLE

Beautifully styled and modestly priced turntable. Plays any speed between 16 and 84 rpm; control knob is calibrated for instant selection of $16,33,45$ and $78-\mathrm{rpm}$ speeds. Built-in illuminated stroboscope for exact speed settings. Employs constant speed, 4pole, shaded-pole motor and worm-gear drive enclosed in die-cast housing. Sintered bronze motor bearings. Aluminum turntable has mass concentrated at outer rim for maximum stabilizing flywheel effect. Cork pad; retractable $45-\mathrm{rpm}$ center hub.

Rumble $\mathcal{E}_{0}$ Noise: better than 40 db below standard NAB reference level. Wow Eo Flutter: less than $0.25 \%$ RMS. Slide-type On-Off switch has built-in "click" filter to eliminate speaker "pop". HWD: $55 / 16 \times 12 \times 133 / 4$ ". Mounts in cutout $57 / \mathrm{B}^{\prime \prime}$ wide and $9^{\prime \prime}$ long; requires $37 / 8^{\prime \prime}$ below mounting board. Less base and pickup arm. For 110-120 v., 60 base and pickup arm. For
cycle AC. Shpg. wt., 12 lbs.
cycle AC. Shpg. w
72 RX 815 . NET.
49.50

## WOOD BASES FOR TURNTABLES

Pre-cut for Model 60A and 80 turntables. Specify mahogany, blonde or walnut finish. FOR MODEL $60 \mathrm{~A} .17 \times 153 / 4 \times 33 / 4^{\prime \prime} .7 \mathrm{lbs}$. 72 RX 831 C . NET. 15.00 FOR MODEL $80.171 / 4 \times 153 / 4 \times 33 / 4^{\prime \prime} .6 \mathrm{lbs}$. 72 RX 820C. NET.
12.00

NEW B50-16LCS. Latest version of the highly popular, B50 turntable series-wired for stereo use. Variable speed from 16 to 86 stereo use. Variable speed irom 16 to 86
rpm with notches for $162 / 3,331 / 3,45$ and 78 rpm speeds. Takes records up to $16^{\prime \prime}$. Heavyduty, 4-pole motor; weighted and balanced turntable. Die-cast pickup arm; takes any monaural or stereo cartridge. Minimum mtg. space: $15 \times 12^{\prime \prime} ; 4^{\prime \prime}$ above and $2^{\prime \prime}$ below mtg. board. With plug-in head, 2 audio output cables. Less cartridge and base (below). por operation from $110-120 \mathrm{v} ., 50-60 \mathrm{cycle}$. AC. Shpg. wt., 17 lbs.
89 RX 910 . NET.
40.40

NEW 850-16ZD. As above, but with new G.E. GC-7 magnetic stereo cartridge.

89 RX 911 . NET
64.35

NEW B21-LCS. Not illustrated-similar to above. Low-cost, 4 -speed manual player, wired for stereo use. Takes discs to $12^{\prime \prime}$. Each speed may be varied $\pm 5 \%$. 4-pole induction motor. With pickup arm and plugin head; less cartridge and base (below). For $110-120 \mathrm{v} ., 50-60 \mathrm{cycle}$ AC. 12 lbs .
89 RX 91 2. NET.
25.95

## BOGEN ACCESSORIES

EXTRA PLUG-IN HEAD. For all units above. 91 R 565. NET........................ . 2.75
WOOD BASE FOR B5O UNITS. In mahogany, blonde or walnut-specify choice. Wt., 5 lbs. 89 RX 902C. NET. . . . . . . . . . . . . . . 4.85
WOOD BASE FOR B2I-LCS. In mahogany, blonde or walnut-specify choice. Wt., 5 lbs. 89 RX 901 C. NET. . . . . . . . . . . . . . . 4.50 UNFIN. MTG. BOARD FOR B50 UNITS. 3 lbs . 89 RX 904. NET.... . . . . . . . . . . . . . . 1.50
UNFINISHED MTG. BOARD FOR B21-LCS. 3 lbs. 89 RX 903. NET.
1.50

## MHTZNNER



## 002 Base

80 Turntable

REK-O-KUT STEREO-MONAURAL ARMS
An outstanding pair of pickup arms. Special pivot with double set of ball bearings assures virtually friction-free horizontal motion and excellent stability. Acoustical sectioning prevents resonance. Height and tracking force accurately adjustable. Take monaural or 3 or 4 -terminal stereo carmonaural or 3 or 4 -terminal
tridge. With 1 head. $21 / 4 \mathrm{lbs}$.
72 RX 750 . S-120.12" $\operatorname{arm}$. NET
27.95 72 RX 751. S-160. $16^{\prime \prime}$ arm. NET
30.95

PS-20 EXTRA PLUG-IN HEAD. 4-cond. 4 oz. 72R752. NET
STEREO CONVERSION KITS. (Illus. on p. 85.) Quickly convert your Rek-O-Kut monaural arm for stereo. 2 lbs.
72 R 71 6. SC-12. For A-120. NET . . 17.95
72 R 717. SC-16. For A-160. NET

## LONDON-SCOTT STEREO-MONAURAL PICKUP ARM AND CARTRIDGE

MODEL 1000. An integrated combination of arm and magnetic cartridge, carefully made to uncompromised standards of design. Provides superior stereophonic and monaural reproduction; employs a single $.0005^{\prime \prime}$ polished diamond stylus. Tip mass of less than 1 milligram guarantees extremely precise tracking with minimum record wear.

Compliance of $3.5 \times 10^{-6}$ assures excellent fidelity. Frequency response is 20 to 18,000 cps. $\pm 2 \mathrm{db}$. Channel separation is better than 20 db . Tracking force, 3.5 grams . Output per channel. 4 mv at $5 \mathrm{~cm} / \mathrm{sec}$. Overall length, $121 / 2^{\prime \prime}$. Height adjustable from $13 / 8$ to $21 / 2^{\prime \prime}$. With arm rest. $11 / 2 \mathrm{lbs}$.
79 RX 707. \$9.00 Down. NET
89.95

## AUDAX STEREO PICKUP ARM KITS AND STEREO CONVERSION KIT

PICKUP ARMS. Here's a pair of quality stereo-monaural pickup arms in moneysaving kit form-all you need for assembly is a screwdriver. Employ simple one-piece construction with no loose parts. Precisionmade vertical and lateral pivot systems permit remarkably free arm motion. Arm channel structures change width between pivot and head to prevent audible resonance. Selector index permits adjustment of force for all popular cartridges. Include finger lifts. Have three wires. $21 / 2 \mathrm{lbs}$.
72 R 748. KTS-16. $16^{\prime \prime}$. NET
18.50

72 R 747. KTS-12. 12". NET.
15.50

KTS CONVERSION KIT. Converts KT-12 and KT-16 pickup arms for stereo. 1 lb . 72 R 749. NET.


## SHURE M3D STEREO CARTRIDGE

The new M3D "Professional Dynetic" magnetic cartridge is an excellent choice for realistic, undistorted stereophonic or monaural reproduction. Expertly engineered and precision made, it features extremely high compliance and low tracking force for minimum stylus and record wear. The M3D exhibits no magnetic attraction to steel turntables, and "needle talk" is negligible. Fits all arms (except "Studio Dynetic "'). Stylus is $.0007^{\prime \prime}$ diamond.

Channel separation; more than 20 db at 1000 cps . Vertical and lateral compliance: $4 \times 10^{-6} \mathrm{~cm} /$ dyne. Frequency response: 20 to $15,000 \mathrm{cps}, \pm 3 \mathrm{db}$. Recommended tracking force: 3 to 6 grams. Output: 5 mv . Mounts on standard $1 / 2^{\prime \prime}$ mounting centers. Has 4 output terminals. 3 oz .
79 RC 21 5. Only $\$ 4.41$ Down. NET 44.10


GARRARD TPA/12 STEREO PICKUP ARM
Completely new Garrard low-cost transcription arm for use with either stereophonic or monaural recordings up to $16^{\prime \prime}$ in diameter. Carefully engineered combination of static balance and spring loading provides maximum vertical freedom. Employs precision spring-loaded, cone-type, ball-bearing pivots for practically friction-free movement. Arm requires only a single mounting hole, and has a fixed length and tracking angle. Tracking force is easily adjustable. Takes any stereo cartridge. Attractively finished in gleaming chrome and white enamel. Shpg. wt., 2 lbs.
79 R 708. NET
19.1I

GRADO PICKUP ARM \& CARTRIDGE
PICKUP ARM. Superb new stereo-monaural pickup arm made of the finest walnut, with precision-machined aluminum fittings. Incorporates micrometer overhang adjustment for smallest possible tracking error. Tracking force adjustable from 0 to 13 grams. Overall length, $14^{\prime \prime}$. Adjustable height. 4 leads. $13 / 4 \mathrm{lbs}$.
72 RX 746 . Only $\$ 3.00$ Down. NET 29.95
STEREO CARTRIDGE. The ultimate in stereomonaural reproduction! This unexcelled magnetic cartridge provides smooth, clean output from 10 to $35,000 \mathrm{cps}$. Lateral compliance, $8 \times 10^{-8} \mathrm{~cm} /$ dyne. Tracking force, 2 grams. Stylus is .0007" diamond. Excellent channel separation. 6 mv output Excellent channel separation. 6 mv output
$10 \mathrm{~cm} / \mathrm{sec}$. Fits std. changers and arms. 4 terminals; fits $1 / 2^{\prime \prime}$ ctrs. 2 oz .
79 RC 214 . Only \$4.95 Down. NET 49.50

## RECOTON STEREO CARTRIDGE

MODEL 745-3SD TURNOVER. Here's a finequality turnover magnetic cartridge for both stereophonic and monaural use. Features high compliance, low tracking force and excellent channel separation. Frequency response, 20 to $15,000 \mathrm{cps}, \pm 2 \mathrm{db}$. Vertical and lateral compliance, $4 \times 10^{-6} \mathrm{~cm} /$ dyne. Channel separation, better than $20 . \mathrm{db}$. Tracking force, 3-6 grams. Output, 5 mv. Styli are $.003^{\prime \prime}$ sapphire and $.0007^{\prime \prime}$ diamond. Cartridge has 4 output terminals, mounts on standard $1 / 2$-inch mounting centers. Shpg. wt., 3 oz .
72 RC 718. Only $\$ 2.9+$ Down. NET 29.35
502-D. .0007" diamond repl. stylus. 2 oz. 72 RC 720. NET
10.73
494. .003" sapphire repl. stylus. 2 oz .

72 R 721 . NET
3.43

## The Stereo Cartridge and Your Music System

With the major companies in full production of stereophonic records and phono cartridges, you can enjoy music that has a new realism-a breathtaking quality of depth and direction-at moderate cost. You can begin with a monaural phono installation and later purchase an add-on system to convert to stereo, or you may wish to get a complete stereo system immediately. In either case, there are several points about cartridges to keep in mind.

## CARTRIDGES AND THE MONAURAL SYS-

 TEM. If you already own a monaural phono system or are planning to assemble one, and possibly add a second channel for stereo later, the use of a stereo phono cartridge is recommended. Its increased flexibility of stylus motion (compliance) and decreased tip radius will make monaural recordings sound far better and willassure reduced record wear. When used for this purpose, the cartridge output terminals are put in parallel to increase its response to lateral motion and eliminate its response to vertical motion. You will probably also want to use your monaural system with stereo records. and to prevent the extreme wear that would result if a monaural cartridge were used, a stereo cartridge must be employed. Output terminals are put in parallel for this mode of operation, too. SWITCHING. For best results when using a stereo cartridge with monaural records, a stereo-monaural switch should be employed (see unit on pg. 89). Allied's stereo "add-on" systems include one. CARTRIDGE TERMINALS. Either a 3 or 4terminal cartridge can be used with the standard AC-operated stereo system; but only the 4 -terminal type should be used with low-cost AC-DC units.


## SONOTONE STEREO TURNOVER

MODEL 8T4-SD.Outstanding new ceramic cartridge for both stereo and monaural operation. Features turntable rumble suppression, full frequency response, superior compliance and excellent channel separation. Unaffected by magnetic fields and changes of temperature or humidity; needs no preamplification. Stylus is a replaceable turnover type; . $0007^{\prime \prime}$ diamond and $.003^{\prime \prime}$ sapphire.

Frequency Response: 20 to $12,000 \mathrm{cps}$. gradual roll-off beyond. Channel separation: 20 db. 5 to 7 grams tracking force. Compliance: $2 \times 10^{-6} \mathrm{~cm} /$ dyne. 0.3 volts output. Has 4 terminals; mounts on $7 / 16^{\prime \prime}$ and $1 / 2^{\prime \prime}$ centers. Shpg. wt., 3 oz.
68 RC 208. NET
14.41

8T-SD. Replacement stylus for above. 2 oz . 68 R 209. NET


## RONETTE STEREO CARTRIDGES

MODEL BF-40 "BINOFLUID". Superior crystal cartridge for crisp stereo or monaural sound. Designed for minimum record wear. Has $.0007^{\prime \prime}$ diamond stylus (easily replaceable, use $.00075^{\prime \prime}$ stylus below). Channel separation: 24-28 db. Response: 20 to $15,000 \mathrm{cps}$. Tracking force: 4 to 8 grams ertical and lateral compliance: $3.5 \times 10^{-6}$ $\mathrm{cm} /$ dyne. Output: 0.35 V . Has 4 terminals; mounts on $1 / 2^{\prime \prime}$ centers. Wt., 3 oz .
68 RC 207. NET
18.23
'STEREO OV'. Turnover version of above. $00075^{\prime \prime}$ diamond, . $0025^{\prime \prime}$ sapphire. 68 RC 21 2. NET
DIAMOND STYLUS. . $00075^{\prime \prime}$ repl. 2 oz
68 R 213 . NET.
6.47

SAPPHIRE STYLUS. . $0025^{\prime \prime}$ repl. 2 oz.
68 R 214 . NET.
1.00

## LAB-TRONICS STEREO-MONAURAL SWITCH

MODEL SM- 6 . Here's a convenient switching network for the stereo system using two separate preamplifiers. Designed to be used with a stereo cartridge, the SM-6 has two positions-in one position it blends the two cartridge outputs or monaural operation of the system, while in the other position it separates the blended channels for stereo operation. Has 3 input terminals (one common) and an output for each preamp. $2 \times 2 \times 11 / 4^{\prime \prime}$. Shpg. wt., $1 / 2 \mathrm{lb}$.
91 S 587. NET
1.76


## GRAY TURNTABLE \& ARM

MODEL 33 H 12" TURNTABLE. Deluxe, preci sion-built $331 / 3-\mathrm{rpm}$ turntable for critical audio use. Incorporates a hysteresis-synchronous motor driving a one-inch castaluminum table. Nylon-belt drive assures best motor isolation. Has $1 / 8^{\prime \prime}$ steel base plate pre-drilled for Gray 212 pickup arm. plate pre-drilled for Gray 212 pickup arm. $16 \times 14^{3 / 8^{\prime \prime} ;}$; requires $11 / 4^{\prime \prime}$ above (using the
212 arm ), $3^{\prime \prime}$ below mounting board. For $212 \mathrm{arm}), 3^{\prime \prime}$ below mounting
$110-120 \mathrm{v} ., 60$ cycle AC. 18 lbs.
93 RX 386. Only \$8.00 Down. NET 79.95
BASES FOR ABOVE. Shpg. wt., 4 lbs.
93 RX 387. Mahogany. $\}$ NET
$\left.\begin{array}{l}\text { 93 RX 388. Limed Oak. } \\ 93 \text { RX 389. Walnut. }\end{array}\right\} \begin{aligned} & \text { NET } \\ & \text { EACH } 21.95\end{aligned}$
MODEL 212 PICKUP ARM. Incorporates "vis cous-damped" (fluid controlled) suspenion for faithful transcription-only the sylus vibrates, not the arm. Arm is microbalanced for maximum tracking stability. Tracking force adjustable, 0 to 15 grams. Damping "floats" arm down slowly if accidentally dropped. 4 leads for stereo cartridges. $13^{\prime \prime}$ long. Shpg. wt., 2 lbs. 99 RX 474. Only \$3.40 Down. NET 34.00
-

## PRESTO CUSTOM-QUALITY TURNTABLES

MODEL T-18A "PIROUETTE". Superior-per formance turntable for hi-fi and professional use. Accurate. close-tolerance machining throughout insures trouble-free operation, with extremely low levels of wow, flutter and rumble. Motor is a 4-pole, synchronous type with high starting torque. Turntable has a 5 -position speed control ( 45 , Off, $331 / 3$ Off, 78)-idlers are completely disengaged in "Off"' positions to prevent flat spots.
Heavy cast-aluminum table is carefully balanced for rumble-free operation-employs a single-ball support. Includes a $45-\mathrm{rpm}$ record adapter which conveniently retracts into the turntable when not in use. Idler wheels are interchangeable and easily re-placed-each idler is firmly mounted on the shift plate to prevent wobbling. Rumble level is 47 db below recording level; less than $0.2 \%$ wow and flutter. Panel is finished in attractive telephone black.
Overall size: $117 / 8 \times 141 / 4 \times 57 / 8^{\prime \prime}$. Requires $33 / 4^{\prime \prime}$ clearance below and $21 / 8^{\prime \prime}$ clearance above the panel. Mounts in an easily made $6 \times 81 / 4^{\prime \prime}$ rectangular cut-out. For $110-120$ volts, 60 cycle AC. Shpg. wt., 16 lbs.
96 RX 918 . NET
75.00

MODEL T-2 "PROMENADE". Low-cost. pro-fessional-quality $12^{\prime \prime}$ turntable. Has a heavyduty 4 -pole motor to insure minimum speed variation. Quickly changes from $331 / 3$ to 45 rpm with a flick of the shift lever. Wellbalanced aluminum turntable and simple but rugged drive system eliminate wow, flutter and rumble. Interchangeable idler wheels disengage in "Off" position.

Has a permanently affixed strobe disc. 45rpm adapter retracts into turntable when not in use. Includes individual speed-adjusting cams and precision-ground bearings. Rumble is 47 db below recording level; less than $0.2 \%$ wow and flutter
$117 / 8 \times 141 / 4 \times 57 / 8^{\prime \prime}$ overall. Requires $21 / 8^{\prime \prime}$ above and $33 / 4^{\prime \prime}$ below panel. For $110-120 \mathrm{v}$., 60 cycle AC. Shpg. wt., 15 lbs. 98 RX 598. NET
59.50

BASES FOR PRESTO TURNTABLES. Carefully designed mounting bases-excellent for shelf, cabinet or table. Wt.. 5 lbs.
95 RX 544. Mahogany. NET
24.90

95 RX 545. Blonde. NET.
24.90

95 RX 546. Unfinished. NET . . . . . . . 19.95

## ELECTRO-VOICE STEREO CARTRIDGES

MODEL 26 MDST. The new 26 MDST ceramic cartridge is expertly designed to provide full, faithful stereo or monaural reproduction. Features low distortion, excellent response, high channel separation and good compliance. 15 db rumble suppression permits use in any changer or turntable. Produces a velocity curve that allows it to plug into any magnetic input. Has turnover stylus, . $0007^{\prime \prime}$ diamond and $.003^{\prime \prime}$ sapphire. Response: 20 to 16,000 cps. Channel separation: 20 db . Distortion: less than $2 \%$ Tracking force: 6 grams. Output: 0.5 volts. Vertical and lateral compliance: $2 \times 10^{-6}$ $\mathrm{cm} /$ dyne. Mounts on $7 / 16^{\prime \prime}$ or $1 / 2^{\prime \prime}$ centers Shpg. wt., 3 oz.
72 RC 745. NET
22.05

MODEL 26DST. As above. but matches ceramic phono input
72 RC 799. NET.
22.05

MODEL 21 MD . Same as Model 26MDST but with $.0007^{\prime \prime}$ diamond stylus only.
72 RC 794. NET
19.11

MODEL 21D. As above. but matches ceramic phono input.
72 RC 867. NET
19.11

D1-1. . $0007^{\prime \prime}$ diamond repl. stylus. 2 oz. 72 RC 797. NET
9.70

S3-3. .003" sapphire repl. stylus. 2 oz
72R796. NET
2.06



## NEW MODEL BS BOOKSHELF SPEAKER ENCLOSURE

Distinctively styled high-fidelity speaker enclosure for use with any $8^{\prime \prime}$ speaker. Only $11^{\prime \prime}$ high, $24^{\prime \prime}$ long and $101 / 2^{\prime \prime}$ deep-perfect for bookshelf, table-top or other limited-space applications. Employs ducted-port design for performance equal to many enclosures of greater size. Quality constructed throughout with $3 / 4^{\prime \prime}$ plywood, lined with acoustical padding. Finished in hand-rubbed, fine furniture veneers. Has glistening brass trim to accent grille cloth. Complete with covered tweeter cut-outs. Shpg. wt., 16 lbs.
79 DX 37 1. Mahogany Finish. NET.
27.00

79 DX 372. Limed Oak Finish. NET
30.00

79 DX 373. Walnut Finish. NET.
30.00

NEW MODELS S8-12 AND S12-15 SPEAKER ENCLOSURES
Ducted-port speaker enclosures and kits. Feature: $3 / 4^{\prime \prime}$ plywood; hand-rubbed, fine furniture veneers; acoustical padding; $4^{\prime \prime}$ selfleveling legs. $\mathrm{S} 8-12 \mathrm{~K}$ and $\mathrm{S} 12-15 \mathrm{~K}$ kits, unfinished mahogany veneer.

| ock No. | Type | For Speaker | Finish | HWD | Lbs | EACH |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| D2 357 | S8-12 | $8^{\prime \prime}$ or $12^{\prime \prime}$ | Mahogany | $221 / 2 \times 191 / 4$ | 37 | 51.75 |
| 79 DZ 358 | S8-12 | $8^{\prime \prime}$ or $12^{\prime \prime}$ | Limed Oak | $221 / 2 \times 191 / 4 \times 16^{\prime \prime}$ | 37 | 57.00 |
| 79 DZ 359 | S8-12 | $8^{\prime \prime}$ or $12^{\prime \prime}$ | Walnut | $221 / 2 \times 191 / 4 \times 16^{\prime \prime}$ | 37 | 57.00 |
| 79 DU 360 | S8-12K | $8^{\prime \prime}$ or $12^{\prime \prime}$ | Unfinished | $221 / 2 \times 191 / 4 \times 16^{\prime \prime}$ | 37 | 45.00 |
| 79 DZ 361 | S12-15 | $12^{\prime \prime}$ or $15^{\prime \prime}$ | Ma | $28 \times 24 \times 21^{\prime \prime}$ | 55 | 72.00 |
| $79 . \mathrm{DZ} 362$ | S12-15 | $12^{\prime \prime}$ or $15^{\prime \prime}$ | Limed Oak | $28 \times 24 \times 21^{\prime \prime}$ | 55 | 9.50 |
| 79 DZ 363 | S12-15 | $12^{\prime \prime}$ or $15^{\prime \prime}$ | Waln | $28 \times 24 \times 21^{\prime \prime}$ | 5 | 79.50 |
| 79 DZ 364 | S12-15K | $12^{\prime \prime}$ or $15^{\prime \prime}$ | Unfinished | $28 \times 24 \times 21^{\prime \prime}$ | 55 |  |



## NEW MODEL CS12-15 SPEAKER ENCLOSURE

Handsomely finished enclosure for $12^{\prime \prime}$ or $15^{\prime \prime}$ speaker. Employs true bass reflex design for extended low-frequency response. Equally efficient in a corner or along any wall. Front panel is factory-fitted with removable adapter panel permitting use with either $12^{\prime \prime}$ or $15^{\prime \prime}$ speaker; base is removable to gain access to acoustically padded interior. Constructed of sturdy, $3 / 4^{\prime \prime}$ plywood; choice of hand-rubbed veneers. Has provision for addition of tweeters and horns. With $4^{\prime \prime}$ self-leveling legs. Size, $28 \times 24 \times 21^{\prime \prime}$. Shpg. wt., 49 lbs.
79 DZ 365. Mahogany Finish. NET
72.00

79 DZ 366. Limed Oak Finish. NET.
79.50

79 DZ 367. Walnut Finish. NET
79.50

## NEW MODEL C8-12 SPEAKER ENCLOSURE

Excellently designed ducted-port enclosure of rigid construction. Has speaker mounting board cut for any $12^{\prime \prime}$ speaker, with removable adapter for $8^{\prime \prime}$ speaker. Made of seasoned $3 / 4^{\prime \prime}$ plywood throughout, lined with acoustical padding to minimize distortion-causing medium and high-frequency reverberations. Over three cubic feet capacity-brings out full response of speaker. Attractively finished in choice of mahogany, limed oak or walnut to complement any furnishing mode. Smartly tapered $4^{\prime \prime}$ self-leveling legs are beautifully accented by lustrous brass ferrules. Complete with provision for adding tweeters and horns. $221 / 2 \times 193 / 4 \times 133 / 8^{\prime \prime}$. Wt.. 25 lbs.
79 DU 368. Mahogany Grained Finish. NET
33.75

79 DU 369. Limed Oak Grained Finish. NET
36.00

79 DU 370. Walnut Grained Finish. NET.
36.00


## NEW E1 EQUIPMENT CABINET

A beautiful and exceptionally versatile equipment cabinet, featuring top-quality construction and fresh contemporary styling. May be used in two ways: sturdy shelves are provided for placement of encased components, and board is also supplied for permanent, custom mounting.
Hand-rubbed, fine furniture veneers are strikingly accented by distinctive brass trim. Precision-fit, hinged doors have posi-tive-action magnetic latches. Smoothoperating hinged lid on record player compartment permits easy access.
Size of compartments: record changer or turntable compartment, $10 \times 207 / 8 \times 1711 / 16^{\prime \prime}$; tuner-amplifier compartment, $13 \times 207 / 8 \mathrm{x}$ 1711/16"; tape recorder compartment (complete with slide-out shelf), $101 / 2 \times 207 / 8 \times 1711 / 16^{\prime \prime}$ -plus a large, five-partitioned compartment for record storage. Matches enclosures listed above. $28 \times 44 \times 21^{\prime \prime} .135 \mathrm{lbs}$.
79 DZ 350. Mahogany. NET..... 157.50
79 DZ 351. Limed Oak. NET...... 172.50 79 DZ 352. Walnut. NET.


## NEW E2 EQUIPMENT CABINET

Tastefully styled equipment cabinet for any furnishing scheme. Features convenient slide-out drawer with adjustable slots for mounting of tuner, amplifier and preampcomplete with face panel. Distinctive, wraparound grille cloth across front of drawer matches enclosures listed above.
Rigidly constructed of selected plywood; handsomely finished in hand-rubbed, fine furniture veneers with subtle accents of gleaming brass trim. Size of top-loaded record changer compartment, $101 / 4 \times 221 / 4 \times$ $181 / 4^{\prime \prime}$; drawer, $13 \times 211 / 4 \times 16^{\prime \prime}$.
Available in choice of mahogany, limed oak or walnut. Supplied with $4^{\prime \prime}$ self-leveling egs. $28 \times 24 \times 21^{\prime \prime}$. Shpg. wt., 63 lbs.
79 DZ 353. Mahogany. NET. . ... . 130.50
79 DZ 354. Limed Oak. NET. . . . . . 141.00 79 DZ 355. Walnut. NET......... . 141.00
MODEL E2K EQUIPMENT CABINET KIT. As above, but in easy-to-assemble kit form. Unfinished mahogany veneer. Wt., 60 lbs. 79 DZ 356. NET ................ 103.50

NEW MODEL CAC EQUIPMENT CABINET
Expertly designed equipment cabinet for the budget-minded hi-fi enthusiast. Ideal for use where space is at a premium. Provides ample space for a record changer or tape deck plus an amplifier-in one compact, space-saving unit. Constructed of high quality woods in choice of mahogany, limed oak or walnut; wood grained finish. Features easy-action, all-position top lid for quick access to record changer or tape deck. Amplifier section has completely finished panel to permit custom mounting. Smartly tapered, $111 / 2^{\prime \prime}$ legs with lustrous brass ferrules add a distinctive touch to any decorating motif. An ideal companion-piece to the Model C8-12 speaker enclosure described above.
Shipped with legs unattached; easily set up in minutes. Size: $15^{\prime \prime}$ high by $17^{\prime \prime}$ wide by $171 / 2^{\prime \prime}$ deep. Overall height with legs, $261 / 2^{\prime \prime}$. Shpg, wt., 25 lbs .
79 DU 374. Mahogany. NET
28.50

79 DU 375. Limed Oak. Net
30.75

79 DU 376. Walnut. NET.

## LOW-COST UNFINISHED CABINETS

An excellent selection of fully assembled, budget-priced hi-fi equipment cabinets. Provide space for tuner, amplifier and record changer-plus plenty of room for records. Attractively styled and durably constructed. each cabinet is completely sanded-ready for painting or staining to match any decorative scheme.


NYLCO EQUIPMENT CABINET
A beautifully designed cabinet for highfidelity equipment, completely assembled sanded and ready for finishing. Made from solid, $3 / 4^{\prime \prime}$ unfinished redwood, this smartly styled cabinet makes an attractive addition to any decorative scheme. The large, roomy interior will accommodate amplifier, preamplifier, tuner and record changer-even a tape recorder. Has a sturdy shelf for easy placement of all components-plus ample room for record storage.
Features dual, factory-fitted sectional folding doors with easy-grip hand knobs. These full-length doors glide open on smoothaction grooves to provide easy access to cabinet's interior. Smartly tapered legs are supplied-may or may not be used to blend harmoniously with rest of furniture. Legs have gleaming brass ferrules to accent distinctive styling of cabinet.
Takes a handsome furniture finish-adds richness to any furnishing mode. Constructed of selected- top-quality materials through-out-made to exacting specifications. Interior dimensions: overall inside height is $223 / 4^{\prime \prime}$ and adjustable shelf may be set at 4 different levels; $34^{\prime \prime}$ wide. $14^{1 / 2^{\prime \prime}}$ deep. Overall size of cabinet: $153 / 4^{\prime \prime}$ deep, $351 / 2^{\prime \prime}$ wide; $31^{\prime \prime}$ high with legs, $26^{\prime \prime}$ high without legs. Shpg. wt., 43 lbs.
82 DZ 261. NET
82 DZ 261. NeT..


## NEW EQUIPMENT CABINET

Completely assembled, attractive cabinet for high-fidelity equipment. Made of clear Ponderosa pine, sanded satin smooth; may be painted, or stained and finished to match any type of furniture. Has plenty of room for installation of tuner, amplifier and record player or turntable-plus ample space for record storage. Anyone can easily custom-finish this excellent equipment cabinet in a minimum of time. The finished job will provide you with a bandsome pro-fessional-quality piece of furniture.
Features lift-top lid for easy access to record changer or turntable compartment. Tuneramplifier compartment, reached by convenient drop-lid panel, is supplied with face panel to permit custom mounting. Record storage compartment has sliding doors, covered by attractive grille cloth. May be used with or without legs, supplied.
Size of compartments: record changer compartment, $7^{\prime \prime}$ high, $161 / 2^{\prime \prime}$ wide, $151 / 4^{\prime \prime}$ deep; tuner-amplifier compartment, $7^{\prime \prime}$ high, 16 $1 / 2^{\prime \prime}$ wide, $1514^{\prime \prime}$ deep; record storage compartment, $151 / 4^{\prime \prime}$ high, $335 / 8^{\prime \prime}$ wide, $151 / 4^{\prime \prime}$ deep. Overall size of cabinet: $16 \times 35 \times 30^{\prime \prime}$ including legs. Shpg. wt., 39 lbs .
79 DZ 253. NET
33.30


## "ARISTO" EQUIPMENT CABINET

Deluxe equipment cabinet for high-fidelity components. Completely assembled, this unfinished cabinet combines smart styling with functional design. Constructed of clear Ponderosa pine, sanded velvet smoothmay be painted, or stained and finished to match the decor of any surroundings. Three large compartments provide plenty of mounting space for record changer or turntable, tuner and amplifier-plus ample space for the storage of records, albums, etc.
Its many fine furniture details include tooled drawer fronts, gleaming brass drawer pulls, and sliding doors at bottom with highly attractive tan plastic grille cloth. Record changer compartment has convenient slideout drawer. Tuner and/or amplifier compartment has easy-action fold-out door. Record storage compartment (holds 200 LP's) has easy-action sliding doors. Base is an integral part of cabinet.
Size of compartments: record changer compartment, $101 / 2^{\prime \prime}$ high, $16^{1 / 2^{\prime \prime}}$ wide. $151 / 4^{\prime \prime}$ deep; tuner-amplifier compartment, $101 / 2^{\prime \prime}$ high, $161 / 2^{\prime \prime}$ wide, $151 / 4^{\prime \prime}$ deep; record storage compartment, $133 / 4^{\prime \prime}$ high, $335 / 8^{\prime \prime}$ wide, $151 / 4^{\prime \prime}$ deep. Supplied with a factory-fitted face panel to permit custom mounting of tuner and amplifier. Overall size: HWD, $30 \times 35 \mathrm{x}$ $16^{\prime \prime}$. Shpg. wt., 43 lbs.
82 DZ 257. NET
32.50


## HALF-DOOR HI-FI CABINET

Handsome equipment cabinet with sliding louvered doors covering bottom half of cabinet only. Fully assembled, but unfinishedsanded, clear Ponderosa pine is ready for painting or staining to match motif of any interior. Offers more than adequate space for any combination of hi-fi components.
Interior of cabinet is divided into two spacious compartments. Top compartment is $91 / 4^{\prime \prime}$ high, $335 / 8^{\prime \prime}$ wide, $143 / 8^{\prime \prime}$ deep-perfect for housing record changer and tuner-amplifier. Bottom compartment is $121 / 2^{\prime \prime}$ high, $335 / 8^{\prime \prime}$ wide, $143 / 8^{\prime \prime}$ deep-ideal for the storage of records.
Constructed of top-quality materials and made to exacting specifications; ready for quick finishing. Recommended for use where space is at a premium. May be mounted on legs; see description at right. Less legs. $243 / 4 \times 353 / 8 \times 16^{\prime \prime}$. Shpg. wt., 47 lbs.
95 DZ 509. NET.

## LEGS AND BASE ACCESSORIES

reversible base. Sturdy base for use with half-door and full-length door cabinets described in right and left columns. Features modern design on one side, traditional styling on the other side. Size, $31 / 2 \times 353 / 8 \times 16^{\prime \prime}$ Shpg. wt., 3 lbs.
95 DX 536. NET
4.23

TWIN WROUGHT IRON LEGS. Complete with lustrous brass ferrules to enhance appearance. $51 / 4^{\prime \prime}$ high. Set of 4 . Wt., 5 lbs. 95 D 537. NET

MODERN ROUND-LEG BASE. Durably constructed, dual-leg base for use with unfinished equipment cabinets. Feature smartly tapered design, accented by lustrous brass ferrules. Perfectly spaced to provide excelterrules. Perfectly spaced to provide excel-
lent balance. Sanded; unfinished. Size, $51 / 4^{\prime \prime}$ high, $16^{\prime \prime}$ deep. Set of 2 . Wt.. 3 lbs .
95 DX 535 . NET.
3.38


## FULL-LENGTH DOOR CABINET

Tastefully designed unfinished cabinet with luxurious louvered sliding doors. An excellent unit for budget-priced and limitedspace high-fidelity installations. Houses all components of a music system (except the speaker) such as changer or turntable on base, tuner, amplifier, albums, etc.

Durably constructed of selected, clear Ponderosa pine, sanded satin smooth. Wood is richly textured and beautifully grainedready for fine furniture finishes. May be painted, or stained and finished to match any color scheme. Styling easily blends with any interior motif.
Interior is divided into two compartments; top compartment: $91 / 4 \times 335 / 8 \times 143 / 8^{\prime \prime}$; bottom compartment: $121 / 2 \times 335 / 8 \times 143 / 8^{\prime \prime}$. Overall size: $243 / 4 \times 353 / 8 \times 16^{\prime \prime}$. Less base (see description at left). Shpg, wt., 48 lbs.
95 DZ 508. NET
23.90

## ACOUSTONE Grille Cloth

A wide selection of grille cloth in highly attractive, color-fast patterns. Made of durable Saran plastic in an open weave to permit unrestricted passage of all frequencies. Can be stretched over large openings without sagging. Match any decorative motif, from contemporary to traditional. *Indicates matching woods: Mmahogany; B-blonde; W-walnut. Shpg. wt., per yard, 6 oz .

| Description | Type No. | Fig. | * | Stock No. |  | $\begin{gathered} \text { NET } \\ \text { Per Yd. } \end{gathered}$ |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  |  |  | In Lengths Over I Yd. | $36^{\prime \prime} \times 36^{\prime \prime}$ |  |
| Mahogany | 211 | A | M, B | $865 \times 994$ | $865 \times 976$ | 2.45 |
| Gold and Bronze | 213 | A | M, W, B | 86 SX 997 | $865 \times 979$ | 2.45 |
| Bronze-Reddish cast | 214 | A | M, B | 86 SX 995 | 86 S X 977 | 2.45 |
| Dk. Mahogany with Gold thread | 215M | A | M, B | $865 \times 999$ | 86 S $\times 982$ | 3.42 |
| Mahogany with Gold thread | 217M | A | M, B | 89 S $\times 050$ | $895 \times 059$ | 3.42 |
| Black and White; Gold thread | 413 M | A | W, B | 89 S $\times 051$ | $895 \times 060$ | 3.42 |
| Gold; slight Brown thread | 511 | A | M, W, B | 86 SX 996 | 86 SX 978 | 2.45 |
| Blonde; Gold \& Brown thread | 515M | A | W, B | 86 SX 998 | $865 \times 981$ | 3.42 |
| Soft Brown; Gold Squares | 711 M | A | W, B | $895 \times 052$ | $895 \times 061$ | 3.42 |
| Tan; slight Brown thread | 811 | A | W, B | $895 \times 053$ | 89 SX 062 | 2.45 |
| Brown \& Tan plaid; with Gold | 1214 M | A | M, B | $895 \times 054$ | 89 SX 063 | 3.42 |
| Dark Mahog. with Gold Cobweb | 300 | B | M, W, B | $895 \times 003$ | $865 \times 988$ | 4.15 |
| Black with Gold Cobweb | 453 | B | B | $895 \times 001$ | $865 \times 986$ | 4.15 |
| Mahogany Boucle | 290B | C | M, B | $895 \times 055$ | $895 \times 064$ | 4.15 |
| Tan \& Gold Boucle | 814BM | C | W, B | $895 \times 056$ | 89 S $\times 065$ | 4.15 |
| Brown-Tan-White Tweed | 805 | D | W, B | $895 \times 057$ | $895 \times 066$ | 4.15 |
| Solid Charcoal | 452 |  | B | $895 \times 000$ | $865 \times 980$ | 2.45 |
| Simulated Straw | 857 |  | W, B | 89 S 058 | $895 \times 067$ | 3.42 |



## NEW Solar Grille Cloth "CANE" GRILLE CLOTH

Highly attractive, natural cane effect, on brown plastic grille cloth backing. Available only in $36^{\prime \prime}$ width (minimum order, 1 yard). Shpg. wt., per yard, 6 oz.
89 SX 028. NET PER YARD.
2.89

89 SX 029. Over 1 yd., PER YARD.
2.89

## PANDANUS GRILLE CLOTH

(Not illus.) Imported natural-color, straw fabric. Very attractive. Especially suited for cabinets with modern motif. Available only in $27^{\prime \prime}$ widths (minimum order 1 yard). Shipg. wt., per yard, 6 oz .
86 SX 718 . NET PER YARD.
I. 59 86 SX 975 . To $101 / 2$ yds. PER YARD. 1.59

## "LUREX" GRILLE CLOTH

New, decorator-styled grille cloth. Employs blend of brown and tan shades, with gold and bronze Lurex thread for soft, flowing effect. Available in $36^{\prime \prime}$ width only (min. order, 1 yd.). Shpg. wt., per yard, 6 oz . 89 SX 048. NET PER YARD.
4.41

## Custom Installation Accessories



## CUSTOM CHANGER BASES

E WELLCOR MODEL W-1 UNCUT. Changer E] record box with blank top-can be cut to accommodate any make record changer or player. Made of smooth-sanded, ready-tofinish birch wood. Has top-quality, premounted steel ball-bearing phonograph slides. $31 / 2 \times 161 / 4 \times 141 / 2^{\prime \prime}$. Wt., 8 lbs.

## 93 RX 494. NET

7.75

PRE-CUT FOR WEBCOR CHANGERS. As above, but for Webcor Series 1600, 1800, 1900 changers.

## 95 RX 558. NET

7.75

PRE-CUT FOR GARRARD CHANGERS. Same size as above.
95 RX 543. For RC88-4, RC98-4.
93 RX 496. For RC121/MKII NET EACH
PRE-CUT FOR COLLARO CHANGERS. Same size as above. For all models.
93 RX 484. NET
7.75

## PHONO DRAWER SLIDES

STANDA RD DRA WER SLIDES. For installing record changers or turntables in cabinets. Heavy steel; with ball-bearings. Slides are $15^{\prime \prime}$ long with a normal travel extension of $11^{\prime \prime}$. Can be attached to bottom or sides of phono drawer or base. Brackets have slotted phono drawer or base. Brackets
holes to permit leveling. 4 lbs.

## 86 R 195 . NET.

I. 90

STANDARD DRAWER SLIDES. As above, but $13^{\prime \prime}$ long. Shpg. wt., 4 lbs.
86 R 194. NET.
1.90

HEAVY-DUTY DRAWER SLIDES. For deluxe installations. $18^{\prime \prime}$ long. Normal extension $16^{\prime \prime}$. Shpg. wt., 5 lbs . 86 R 199. NET.
3.50

## G-C DECORATIVE METAL GRILLE

G Heavy metal grille with brushed-brass finish. Adds decorative touch. Diamond pattern, $21 / 8 \times 7 / 8^{\prime \prime}$. Av. wt., 4 lbs.
86 SX 070. $12 \times 18^{\prime \prime}$. NET
1.76

86 SX $071.18 \times 24^{\prime \prime}$. NET
3.23

86 SU 072 . $24 \times 36^{\prime \prime}$. NET
6.14

86 SU $216.24 \times 48^{\prime \prime}$. NET
8.08

86 SU $217.36 \times 48^{\prime \prime}$. NET
11.47

## ELECTRO-VOICE FINISHING KITS

(1)
For applying quality finish. Contain stain, filler, sealer, shellac, high-gloss and satin varnishes, finishing paper, brushes and instructions. Shpg. wt., 6 lbs .
81 D 844. Model FK10. Walnut.
81 D 845. Model FK20. Mahogany.
81 D 846. Model FK30. Fruitwood.
81 D 847. Model FK40. Cherry.
81 D 848. Model FK50. Golden Oak.
81 D 849. Model FK60. Ebony.
Above Kits. NET EACH.

## FIBERGLAS ACOUSTIC INSULATION

Eliminates reverberation and distortionU. causing standing waves inside speaker enclosures. Supplied in $1^{\prime \prime}$ thickness and $16^{\prime \prime}$ width for convenient installation. Shpg. wt., 2 lbs.
89 SX 951 . 16-Ft. Length. NET
2.25

## SPEAKER REDUCER RINGS

K For using smaller speakers in larger en$\left\lfloor\right.$ closures. Made of $3 / 8^{\prime \prime}$ plywood and cut to exact size. With speaker mounting nuts, bolts and washers.
MODEL R/R $12 / 18$. For mounting $8^{\prime \prime}$ speaker in $12^{\prime \prime}$ speaker baffle or cabinet. 1 lb . 82 D 298. List, \$2.00. NET

89c
MODEL R/R $15 / 12$. For mounting $12^{\prime \prime}$ speaker in $15^{\prime \prime}$ speaker baffle or cabinet. $11 / 2 \mathrm{lbs}$. 82 DX 299. List, \$2.75. NET
1.19

## SPEAKER MOUNTING BOLTS

Carriage bolts for mounting speaker to $[1$ wood panel. Bolt head is flat-when countersunk will not show through grille cloth. Size $1 / 4 \times 2^{\prime \prime}$ long. With square nuts. 4 per pkg. Shpg. wt., 4 oz .44 N 202. NET PER PKG.
$13 c$

## LEVEL \& LEVELING SCREWS

(M) WELLCOR W-3. Precision, chrome-plated Mircular level indicator and four adjust able, rubber-tipped leveling screws. For use with any turntable installed on wood base. Shpg. wt., 5 oz.
95 R 555. NET.
I. 80

## HIGH-FIDELITY CABLES, CONNECTORS AND SWITCHES



## LAB-TRONICS MULTI-SPEAKER SWITCH

A MODEL L1601. For selecting any one of A 3 speakers, or any combination of them, from a single, convenient location. Can be used with multiple-speaker installations in the home, store, etc. Requires only three wires from the amplifier-common, 8 \& 16 ohm (for 16 ohm speakers) or common, 4 $\& 8 \mathrm{ohm}$ (for 8 ohm speakers). Has screw terminals, no soldering required. Wall plate is brushed brass. Fits in any regular outlet box. Mounting centers. $31 / 4^{\prime \prime}$. Size, $23 / 4 \times 41 / 2 \mathrm{x}$ $15 / \mathrm{g}^{\prime \prime}$. Shpg. wt., 8 oz.
94 S 450. NET
5.83

## LAB-TRONICS SPEAKER CONTROL

B. MODEL 1612. Mounted on wall or cabinet. Has T-pad mounted on brushed brass wall plate. Fits any standard outlet box. Rated 4 watts continuous, 15 watts peak audio. Black molded escutcheon and white knob. 16-ohm control will handle single 16 -ohm speaker or two 8 -ohm speakers wired in series. 8 -ohm control can be used for single 8 -ohm speaker, two 16 -ohm speakers wired in parallel or two 4 -ohm speakers connected in series. Wall plate mounting centers, $31 / 4^{\prime \prime}$. Screw terminals. Size, $23 / 4 \times 41 / 2 \times 15 / 8^{\prime \prime}$. Shpg. wt., 8 oz .
94 S 451. L-1612/8. 8 ohms.
94 S 452. L-1612/16. 16 ohms.
NET EACH.
9.55

## VIDAIRE SPEAKER FADER

E MODEL RF-10. For remote control of a E. speaker in a hi-fi set, radio or TV receiver. Can also be used at an external speaker for "on-the-spot" control. For 4-8 ohm speakers. Gold finished dial plate. With knob, brass screws and installation instructions. Size, $21 / 8 \times 21 / 8 \times 13 / 4^{\prime \prime}$. Shpg. wt., 8 oz.
94 S 473. NET
.1. 41

## ROFLEX SHEATHED CABLE

F For long speaker lines in indoor or outF) door applications. No. 14, 2-conductor solid. Thermoplastic insulated. Min. order 100 ft . Wt., $100 \mathrm{ft} ., 7 \mathrm{lbs}$.
47 W 549 . PER $100^{\prime}$.
6.47

## VIDAIRE REMOTE SPEAKER SWITCH

## C MODEL MS-6-FOR UP TO 6 SPEAKERS.

6 Highly versatile, remote speaker switch. Permits centralized control for as many as six remote speakers. Variety of uses-has six SPDT switches which provide 42 possible operating combinations-any combination of the six speakers can be clayed, or all can play simultaneously. played, or all can play simultaneously. address system for convenient operation. Designed for use with any size speaker and any speaker impedance. Gold-embossed brass plate blends with any surroundings. Size, $31 / 4 \times 23 / 3^{\prime \prime}$. Shpg. wt., 8 oz.

## 94 S 438. NET.

2.64
(D) MODEL RS-10-FOR 2 SPEAKERS. ConD. nects remote speaker to radio, TV or hi-fi set. Permits listening enjoyment in any room, porch or patio without "blasting' at source. Has 3 positions-turns on either speaker, or both. Brass plate is gold fin ished. With knob, and instructions. Size, $21 / 8 \times 21 / 8 \times 13 / 4^{\prime \prime}$. Shpg. wt., 8 oz .
94 S 474. NET.
.I. 17

## FM TWIN-LINE ANTENNA

(G)
Low cost, folded dipole type indoor antenna designed for FM reception. Elimi nates need for outdoor antenna in many locations. Perfect for use where concealed antenna would be desirable, or where out door antenna installation is not feasible. Simply place under rug, behind cabinet or in any other out-of-the-way location. Antenna consists of 300 ohm twin-line with 6 ft . lead-in wire. Shpg. wt., 6 oz.
92 C 019. NET.
I. 23

## LAB-TRONICS TUNER-PHONO SWITCH

 [H] MODEL DS-5. Low-cost, convenient ac(H) cessory for modernizing amplifiers without sufficient inputs. Ideal for TV sets with one jack; for feeding 2 cartridges to 1 input; or for feeding signal to amplifier or recorder. Has 2 phono plug receptacles; output cable with pin-plug. $2 \times 2 \times 1^{\prime \prime} .6 \mathrm{oz}$.91 S 578. NET
1.76

## Lab-Tronics Hi-Fi Connector Cables

Superior-quality audio connecting cables. Invaluable accessories for trouble-free installation of hi-fi music system components. *New stereo cables; have dual pins spaced $7 / 16^{\prime \prime}$ apart (standard); two conductors in a single shield. Cables are soldered prior to molding to assure noise-free connections. All are shielded, except Figs. N, W, X and Type P502. Av. shpg. wt., 5 oz .

| Stock No. | Type | Fig. | Description | NET |
| :---: | :---: | :---: | :---: | :---: |
| 99 S 855 | C101 | L | $18^{\prime \prime}$. Phono pin plug on each end | . 61 |
| 99 S 856 | C102 | L | 36". As above | . 70 |
| 99 S 857 | C103 | L | $72^{\prime \prime}$. As above | . 88 |
| 94 S 456 | C202 | M | $36^{\prime \prime}$. Phono pin plug and jack | . 79 |
| 945457 | C 203 | M | 72". As above | . 97 |
| 895957 | P7210 | N | 10'. Straight phone plug and alligator clips | 1.41 |
| 945470 | C106 | P | $36^{\prime \prime}$. Phono pin plug; other end stripped \& tinned | . 56 |
| 94 S 467 | C107 | P | $72^{\prime \prime}$. Phono pin plug; other end stripped \& tinned | . 73 |
| 89 S 956 | P6110 | W | $10^{\prime}$. Phono pin plug and spade lugs | . 88 |
| 89 S 952 | C4406 | R | $72^{\prime \prime}$. Phono pin plug and shielded phone plug | 1.18 |
| 895954 | C4610 | T | $10^{\prime}$. Shielded phone plug \& jack | 2.20 |
| 89 S 953 | C4006 | S | $72^{\prime \prime}$. Straight shld. phone plug; end stripped \& tinned | 1.03 |
| 895955 | P6210 | X | $10^{\prime}$. Phono pin plug and alligator clips | 1.12 |
| 945472 | P502 |  | 20'. 2-cond. speaker cable with spade lugs on each end | . 94 |
| 945458 | C400 |  | Double phono pin jack adapter | . 59 |
| 895958 | E803 | 2 | $36^{\prime \prime}$. Mike connector and phono pin plug | 1.03 |
| 89 S 959 | E806 | Z | $72^{\prime \prime}$. Mike connector and phono pin plug | 1.21 |
| 895960 | SP8403 | AA | *36". Stereo cable; stereo dual plug each end | 2.35 |
| 895961 | SP8410 | AA | ${ }^{10} 0^{\prime}$. Stereo cable; stereo dual plug each end | 2.65 |
| 89 S 962 | SP8003 | BB | * $36{ }^{\prime \prime}$. As above, but one end stripped \& tinned | 2.06 |
| 895963 | SP8010 | BB | *10'. As above, but one end stripped \& tinned | 2.35 |

## LAB-TRONICS ROBOT SWITCH

J MODEL AS-10. For use with record changers having automatic shut-off feature. Robot switch has two mounted, female 110 v. sockets. Changer plugs into one receptacle; amplifier into the other. When the changer shuts off after last record has played. the robot switch also shuts off the amplifier. Switch can be used to interlock any two AC-operated devices drawing up to 3 amps . Size, $5 \times 2 \times 1^{\prime \prime}$. With line cord and plug. For 110-120 v. AC only. Shpg. wt., 1 lb . 91 S 579. NET
5.14

## REMCON REMOTE SWITCH KIT

[K Enjoy the luxury of remote Off-On con4 trol of your hi-fi system from any room in the house. Kit consists of control unit (into which hi-fi system is plugged) and three switches with wall plates for standard AC wall boxes. Control unit handles up to 10 amps at 115 v . AC. Wiring to switches carries only 6 volts (supplied switches carries only 6 volts (supplied
by control unit). Parallel wiring-as many by control unit). Parallel wiring-as many instructions. For $110-120$ v., $50-60$ cycle AC. Shpg. wt., $11 / 2 \mathrm{lbs}$.
94 S 435. NET.
9.95

Accessories for Remcon Switch $100^{\prime} 3$-COND. CABLE. 2 lbs . 47 T 360. NET
TYPE S-1 EXTRA SWITCH. 4 oz .
94 S 436. NET
35 c
TYPE PL-1 EXTRA WALL PLATE. 4 oz.
94 S 437. NET
30 c



## PLASTIC CHANGER COVER

(A)UNIVERSAL MODEL. For all record changers. Protects record changer from harmful effects of dust, moisture, etc. Made of durable, high-quality plastic for dependable service. Shpg. wt., 6 oz .

## 94 R 495. NET

.98c
TURNTABLE MODEL. Fits all turntables. Cover size, $22 \times 161 / 4 \times 9^{\prime \prime}$.

## 95 R 649. NET.

I. 25

## STYLUS INSPECTION MICROSCOPE

Pocket-size stylus inspection microscope. For checking stylus tip to detect imperfections and signs of wear. Approximately 75 -power magnification. An easy-touse "must" item for the serious record collector. Has groove for convenient centering of stylus tip in microscope field. Has sturdy metal barrel; adjustable objective lens. Imported from Japan. Size, $33 / 4^{\prime \prime}$ long $\times 1 / 2^{\prime \prime}$ ported from Japan.dia. Shpg. wt., 8 oz.

## 65 RC 440. NET.

I. 95

## WALCO PLASTIC DISC COVERS

C
Protective sleeves for $10^{\prime \prime}$ and $12^{\prime \prime}$ records. Made of durable polyethylene plastic with thermoset seams to resist tearing. Prevent scratching of delicate record surfaces; seal out dust and moisture; end finger marking of records. Shpg. wt., 7 oz .
65 R 515 . Pkg. of $15,10^{\prime \prime}$ sleeves. 65 R $516 . \mathrm{Pkg}$. of $15,12^{\prime \prime}$ sleeves. NET PER PACKAGE

58c

## ESL "DUST BUG" RECORD BRUSH

New, lightweight plastic arm with nylon brush, pad-type dust collector, and vial of pad cleaning fluid. Arm is suction-cup mounted to base. Nylon bristles loosen dust and dirt in record grooves and pad picks up particles. Fluid cleans pad and dissipates static. Shpg. wt.. $1 / 2 \mathrm{lb}$.
94 R 529. For Changers. NET.
4.75

94 R 528. For Turntables. NET.
5.75

## WALCO CLIP-ON RECORD BRUSH

Soft camel's hair brush for mounting on pickup arm; brushes record ahead of stylus to remove dust from grooves. Selected, lightweight fibers will not scratch record surfaces. Saves stylus and records. Easy to attach-simply clip in place. Does not interfere with tone arm tracking or stylus pressure. Shpg. wt., 3 oz .
69 R 226. NET
49c

## "KLEENEEDLE" BRUSH

A
Automatic record changer needle brush. Brush is positioned to face upward. Whenever pickup arm is cycled, stylus is wiped over brush. Removes accumulations of dust, lint, etc., from stylus tip-minimizes distortion in record reproduction and re duces record and stylus wear. Base has ad hesive pad for easy mounting on any surface. Shpg. wt., 4 oz.
96 R 769. NET
98c

## WALCO ANTI-STATIC RECORD SPRAY

G Easy-to-use, anti-static record spray. Deposits thin anti-static film on record surface. Aids in preventing records from accumulating damaging and noise-producing dust and lint. In handy 6 oz . aerosol spray can. Shpg. wt., 7 oz .

## 65 R 525. NET

88c

## 4-SPEED STROBOSCOPIC CARD

H
Use with any 50 or 60 -cycle neon, argon or fluorescent lamp, or low-wattage incandescent lamp. Accurately checks $162 / 3$, $331 / 3,45$ or 78 rpm record speeds. Quickly tells you when equipment needs adjustment. Easy to use-simply place on record changer or turntable as with any record. Turntable is accurately revolving at desired speed when appropriate band of dots appears to be stationary. Shpg. wt., 2 oz.
69 R 915 . NET.
$20 c$

## ANTI-STATIC RECORD CLOTH

(1) 112 square inches of soft, chamois-like lintless fabric, impregnated with chemical compound. Keeps records free of noise producing dust and electrostatic charge. Easy to use-simply wipe record with light pressure. Shpg. wt., 4 oz.
69 R 235. NET
59c

## ACOUSTIC ISOLATION PAD

K Designed to minimize acoustic feedback, reduce excess noise and protect furniture finishes from heat. Place under record changer bases, tape recorders, amplifiers, etc., to absorb vibration. Made of highly resilient urethane foam. Size, $131 / 2 x$ $161 / 2^{\prime \prime}$. Shpg. wt., $3 / 4 \mathrm{lb}$.
69 R 234. NET.
1.00

## PROTECTIVE TURNTABLE MATS

(L)
12" Diameter. Low-priced, foam rubber record player mat. Fits any turntable or changer. Cushions record drop on automatic changers. $12^{\prime \prime}$ dia; $3 / 15^{\prime \prime}$ thick. 402
69 R 233. NET.
69c
93/4" Diameter. Shpg. wt., 4 oz.
69 R 280. NET

## NEW WEATHERS "DISCUSHION"

(M) MODEL P-684. Unique idea in record pads. Protects grooves from scratches, dust on turntable, etc. Has 3 circular ridges, in graduated heights, centered $7^{\prime \prime}, 10^{\prime \prime}$ and $12^{\prime \prime}$ from spindle hole. A $12^{\prime \prime}$ record rides on the outside ridge; $10^{\prime \prime}$ record on center ridge; $7^{\prime \prime}$ on inside ridge. Only rim of record touches ridge. Dia., $12^{\prime \prime} .5 \mathrm{oz}$. 93 R 710 . NET
2.98

## WALCO TURNTABLE LEVEL

(N For accurate levelling of turntables and (N) record changers; insures correct tracking of lead-in and changer trip grooves, and prevents excessive record and stylus wear. Gold-finish. Shpg. wt., 4 oz.
69 R 225. NET
59c

SELECTED RECORD CARE KITS


P NEW LEKTROSTAT RECORD CLEANING KIT. For thoroughly and safely removing grease, lint and dust from record grooves. Kit contains plastic bottle ( $11 / 4$ fluid oz.) of anti-static detergent fluid, and tufted wiping pad. Solution is applied to record; then wiped with pad. Shpg. wt., 5 oz.
64 R 866. NET
1.96

R] "BALANCED SOUND" KIT. Inexpensive and easy to use, this handy
kit contains a quick-reading stylus pressure gauge and a highly accurate turntable level. These two valuable phono accessories help preserve records-add to the life of styli-improve fidelity. Pressure gauge enables user to quickly determine correct pressure. Level shows slightest tilt in turntable. Shpg. wt.. 4 oz . 65 R 527. NET and cleaner; 2 pkgs. plastic disc covers (12-12" sleeves; 15-10" sleeves); needle brush for cleaning needle tip; and a very informative book, by K. A. Barleben, "Guide to the Care of Modern Recordbook, by K. A. Barlebe
ings." Shpg. wt., 2 lbs.
65 R 526. NET


QUALITY PHONOGRAPH ACCESSORIES

$7^{\prime \prime}, 10^{\prime \prime} \& 12^{\prime \prime}$ RECORD RACK
A LYRIC MODEL 41 LP-EP RECORD RACK (A) Handsomely styled, black and brassplated record rack for LP and EP records. Accommodates sixty $7^{\prime \prime}, 10^{\prime \prime}$ or $12^{\prime \prime}$ records. in jackets. Contemporary styling makes it a highly attractive room accessory, as well as a useful and protective record holder. Five convenient separators. Entire unit is just $11^{\prime \prime}$ long-ideal for use where only limited space is available. Has four rubber-tipped legs to prevent marring finish of floor or fegs to prevent marring hare. Durable all-stel construction. Shpg. wt., $21 / 2$ lbs.
96 R 348. NET.
3.45

## RECORD STORAGE AND CARRYING CASES

[B] $7^{7 \prime} \& 12^{\prime \prime}$ RECORD CASES. Smartly styled 6 record carrying cases for travel or home storage. Handsome, sturdy, and easy to carry. Perfect for owners of portable pub lic address music systems; for schoolroom lic address music systems; for schoolroom
use; etc. Extra-strong. light metal construcuse; etc. Extra-strong. light metal construc-
tion. $7^{\prime \prime}$ case holds 80 records, $12^{\prime \prime}$ case holds 36 records. Both cases have comfortable plastic carrying handles and brass plated draw-bolt locks.

Each is completely indexed with embossed dividers, convenient index card, and numbered identification stickers for quickly locating the record of your choice. Model 46-P $12^{\prime \prime}$ case has sponge rubber strips which provide additional record protection. Durable two-tone wrinkle finish in highly attractive green and gray.
MODEL 46-P-12" CASE. Wt., 7 lbs.
95 RX 894. NET.
4.90

MODEL 49-7" CASE. Shpg. wt., 4 lbs.
96 RX 849. NET

## STYLUS PRESSURE GAUGES

G Weathers stylus gauge. Simple-tooperate, accurate measure of stylus pressure. As the pickup arm tracks on a revolving record, hook the gauge under the arm and gently lift. As soon as sound from arm and gently lift. As soon the scale on the the revolving record ceases, the scale on the
gauge will indicate stylus force in grams. gauge will indicate stylus force in grams.
Calibrated from 0 to 10 grams for extreme accuracy. Shpg. wt., 5 oz .
69 R 232. NET
2.00
(H) NEW GRAY PG200 STYLUS PRESSURE H] GAUGE. Unique, "microbalance" pressure gauge. Uses laboratory-balance principle to achieve extreme accuracy from 1 to 10 grams. No springs or cams. Simply set correct weight for your cartridge (as recommended by mfr.) on the gauge. Then adjust counterweight on pickup arm until arm is in balance. Shpg. wt., 6 oz .
93 R 449. NET.
d Garrard stylus pressure gauge. A popular, easy-to-use pressure gauge. Accurately measures weight exerted by a stylus upon a record. Scientifically calibrated and marked in large, easy-to-read markings in one gram intervals to $15{ }^{\circ}$ grams. All moving parts are light-weight alloy, completely sealed for added protection. Red and ivory plastic case. Shpg. wt.. 5 oz .
96 R 504. NET
2.45

K CLARKSTAN STYLUS PRESSURE GAUGE. 4 Sensitive gauge featuring two scales. One scale is calibrated in grams from 0 to 28.4; other scale is calibrated from 1 to 4 ounces. Ruggedly built; has only one moving part; no linkage. Soft metal cups on spring for accepting all types of cartridges without damage to sensitive stylus tips. Shpg. wt., 5 oz. 85 R 029. NET.
1.76

## RECORD ALBUMS

0STANDARD. Protect your records with this low cost, sturdy 12-pocket album. Wine color fabrikoid cover. With record in. dex. Shpg. wt., $11 / 4$ lbs.
96 R $850.10^{\prime \prime}$ Size. EACH . . . . . . . . . 68 C 3 or More, EACH
.61 c
96 RX 851. 12" Size. EACH . . . . . . . . 85c
3 or More, EACH
$76 c$
SPANISH-GRAINED. Beautiful maroon leatherette cover. Records are held in 12 heavy Kraft-paper envelopes in binder. Gold stamped back. Complete with handy index. Shpg. wt., 2 lbs.
96 R 856. $10^{\prime \prime}$ Size. EACH . . . . . . . . . 90c 3 or More, EACH . . . . . . . . . . . . . . . . . . . 81 c
96 RX 857. 12" Size. EACH. ...... . 1.06 3 or More, EACH. ...................... FOR $7^{\prime \prime}$ RECORDS. Holds twelve $7^{\prime \prime}$ records, in individual flaps. Covers in attractive simulated leather with gold stamping. With record index. Shpg. wt., 1 lb .
96 R 845. Red.
96 R 846. Brown. EACH
45c
3 or More, EACH
41 c

## RECORD HOLDER

[D]FLAT-TOP RECORD HOLDER. Low-cost uniquely styled record holder. Accommodates sixty $7^{\prime \prime}, 10^{\prime \prime}$ or $12^{\prime \prime}$ records with or without jackets. Contemporary flat-top design in attractive brass finish complements any style of room decoration. Only $161 / 2^{\prime \prime}$ long-ideal for a large collection of records that must be stored in a limited space. Dividers are of heavy gauge steel construction with brass plating and clear lacquer coating. Plastic-tipped legs. Size, 161/2x8x $51 / 4^{\prime \prime}$. Shpg. wt., 3 lbs.
94 RX 942 . NET
2.25

## RECORD STORAGE CABINET

E UNIVERSAL WOODCRAFTERS, MODE RD-45. An extra-spacious phonograph table and record storage cabinet with sliding doors, at a remarkably low price. Strongly constructed of $5 / 8^{\prime \prime}$ plywood with $1 / 8^{\prime \prime}$ Duolux doors. Available in highly attractive mahogany or blond furniture veneers to blend with any decor. Top surface is large enough to easily accommodate almost any record player or tape recorder. Interior provides space for storing $7^{\prime \prime}, 10^{\prime \prime}$ and $12^{\prime \prime}$ records.
Has removable dividers for convenient record storage. Divider forms two large compartments which will hold about 100 LP albums. Gracefully tapered legs have solid brass ferrules and gold-flecked levelers. Cabinet stands $27^{\prime \prime}$ high. Top surface size $22^{\prime \prime}$ wide, $20^{\prime \prime}$ deep. Shipped with legs removed-legs quickly and easily fastened without tools. Steel bolts screw into steel sockets for exceptionally rigid, wobble-free support. Shpg. wt., 32 lbs.
92 RU 850. Mahogany. NET
92 RU 851. Blonde. EACH
18.50

MODEL CRD-45. Same cabinet as above, but with $3^{\prime \prime}$ plastic wheels. $26^{\prime \prime}$ high. Wt., 34 lbs. 92 RU 852. Mahogany. NET
92 RU 853. Blonde. EACH
19.95

TAPERED BRASS LEG KITS. New, seamless metal leg kits, in 4 handy lengths. For installing under do-it-yourself tables, cabinets, etc. Kits include 4 tapered legs, 4 duo-purpose brackets (for mounting legs in straight or angle position), and screws. Handsome brass finish.
79 D $196.35 / \mathrm{s}^{\prime \prime} \mathrm{Kit}$. Wt., 2 lbs . NET . . . 3.19 79 D $197.6^{\prime \prime} \mathrm{Kit} . \mathrm{Wt} ., 3 \mathrm{lbs}$. NET 3.39

79 DX $198.12^{\prime \prime}$ Kit. Wt., 4 lbs. NET. 3.98
79 DX $199.14^{\prime \prime}$ Kit. Wt., 5 lbs. NET. . 4.19



# (等 <br> WHARFEDALE SPEAKER SYSTEMS 



SFB/3 "CUSTOM" SPEAKER SYSTEM
NET Imported, skillfully de-
$\$ 195^{02}$
\$19.50 Down signed speaker system Employs a resonancefree baffle, sand-filled to effectively damp all vibration. Open design allows omni-directional sound-permits using the "custom" any-where-against a wall, in a corner, in the center of the room, etc. Provides magnificent performance when used in pairs for stereo. Three perfectly matched Wharfedale speakers provide frequency response from 30 to $20,000 \mathrm{cps}$. Has $12^{\prime \prime}$ woofer for bass; $10^{\prime \prime}$ speaker for mid-range; $3^{\prime \prime}$ tweeter for crisp, clean treble. Carefully selected, highest quality woods, handsomely finished to enhance the decor of any room. Available in mahogany, blonde or walnut finish specify your choice when ordering. Impedance, 15 ohms. Size (HWD), $31 \times 34 \times 12^{\prime \prime}$. Shpg. wt., 100 lbs.
79 DZ 155 C . NET
195.02

SFB/3 "DELUXE" SPEAKER SYSTEM NET A deluxe 3-way speaker \$24402 \$24.40 Down system with same speaker components as "Custom" system at left. A1so employs a sand-filled baffle to eliminate resonance. Provides clean, natural sound throughout the audio spectrum. Made of selected hardwoods, the enclosure is simply but elegantly styled. Can be placed anywhere in the room, since its open design provides omni-directional sound. Speaker components include Wharfedale's $12^{\prime \prime}$ low-frequency woofer, $10^{\prime \prime}$ midrange speaker and $3^{\prime \prime}$ tweeter-specifically designed to work together as a single unit in this particular enclosure. Exceptional smoothness and excellent response ( 30 to $20,000 \mathrm{cps}$ ), for full-range sound. In mahogany, blonde or walnut finish-specify choice. Impedance, 15 ohms. $311 / 2 \times 351 / 2 \mathrm{x}$ $13^{\prime \prime}$. Wt. 105 lbs.
79 DZ 156C. NET.

## W/AF/1 SPEAKER SYSTEM

Slender, gracefully styled speaker systemideal for use in pairs in stereo installations. Consists of the superb Wharfedale W10/FSB $10^{\prime \prime}$ speaker and $3^{\prime \prime}$ tweeter with level control, mounted in the unique "Acoustic Filter", enclosure. A patented design, the enclosure has two separate internal chambers, isolated from each other by a horizontal partition with five $1 / 16^{\prime \prime}$ slits. One chamber contains the woofer and tweeter-sound originating here is "filtered" through the slits and into the other chamber, which acts as an acoustic vent. As a result, reproduction is remarkably clean and free of cabinet resonances. In mahogany, limed oak or walnut finishspecify choice. Frequency response: 25 to $18,000 \mathrm{cps}$. Impedance, 15 ohms. HWD, 30 x $17 \times 12^{\prime \prime}$. Shpg. wt., 60 lbs.
79 DZ 157C. NET
141. 61

## NET <br> $\$ 7 / 461$

\$14.16 Down


RJ/SUPER 8 SYStTEM WITH $\mathbf{8}^{\prime \prime}$ WHARFEDALE SPEAKER
Two outstanding components, combined to provide a complete speaker system of compact size, attractive appearance and excellent performance. The shelf-type RJ-8 enclosure employs the Wharfedale8/FS/AL8 ${ }^{\prime \prime}$ full-rangespeakerfor rich, undistorted sound. Perfect for minimum space applications. Available in mahogany, blonde or walnut finish-specify choice when ordering. Impedance, 10 ohms. HWD, $11 \times 231 / 2 \times 10^{\prime \prime}$. Shpg. wt., 23 lbs.
79 DU 151 C. Only $\$ 5.95$ Down. NET.
59.50

UNFINISHED RJ/SUPER 8 SYSTEM. As above, but in unfinished birch hardwood. Sanded, ready for finishing.
79 DU 152. Only $\$ 5.05$ Down. NET.
50.50

RJ-8 ENCLOSURE ONLY. Unfinished; less speaker. 20 lbs ,
79 DU 150. Only $\$ 2.85$ Down. NET.
28.50

## RJ/12-F FLOOR-MODEL SPEAKER ENCLOSURE ONLY

Accommodates any $12^{\prime \prime}$ speaker. Compact in size, the RJ/12-F employs patented RJ internal design for unexcelled sound in an enclosure of this size. Stands on tapered legs, tipped with brass ferrules. Made of beautifully finished, selected hardwoods. in mahogany, blonde or walnut finish - specify choice. HWD, $20 \times 20 \times 16^{\prime \prime}$. Less speaker. Shpg. wt., 37 lbs .
79 DU 154 C. Only $\$ 5.60$ Down. NET.
56.00

MODEL RJ/12-S UNFINISHED DOUBLE-SHELF ENCLOSURE. For any $12^{\prime \prime}$ speaker. Fits into double-shelf space of a bookcase. Unfinished birch hardwood, sanded. $24 \times 21 \times 10^{\prime \prime}$. Less speaker. 32 lbs .
79 DU 153. Only $\$ 3.85$ Down. NET.


## NEW LEAK "STEREO POINT ONE" STEREO PREAMP

Superb new stereo preamp from this famous British manufacturer Accommodates any stereo or monaural input-has provisions for playing left channel alone, right channel alone, both channels com bined (from either left or right inputs), stereo and stereo channel reverse. Dual inputs for tape head, phono, tuner, microphone and extra. Controls: Function (Stereo, Stereo Channel Reverse, Left Input to both channels for monaural, Right Input to both channels for monaural, Stereo Pickup converted to monaural); dualganged Bass-operates on both channels simultaneously; dual ganged Treble; Master Volume; Balance; Rumble Filter. Dual outputs for stereo or monaural tape recording. Distortion: less than $0.01 \%$ for 125 mv output (drives any Leak amplifier to full output). Takes power from amplifiers, below. $101 / 2 \times 33 / 4 \times 5^{\prime \prime} .5 \mathrm{lbs}$. 91 SU 696. Only $\$ 10.73$ Down. NET
107.31

NEW LEAK "STEREO 50" 50-WATT STEREO BASIC AMPLIFIER
Output: 25 watts per channel; 50 -watt output for monaural use. Response: $\pm 0.5 \mathrm{db}, \mathbf{2 0 - 2 0 , 0 0 0} \mathrm{cps}$. Harmonic Distortion: $0.1 \%$ for 20-watt output at 1000 cps . Hum: -80 db . Output Impedances: 4. 8 and 16 ohms per channel. 4-EL34 output tubes. $17 \times 13 \times 9^{\prime \prime}$. For 100-125 v., 50-100 cycle AC. Shpg. wt. 30 lbs.
91 SU 697. Only $\$ 18.52$ Down. NET.
185.22
"STEREO 20" 24-WATT STEREO BASIC AMPLIFIER, Not illustrated-similar to above. Output: 12 watts per channel: 24 -watts monaural. Other specs as above. 4-EL84 tubes. $15 \times 11 \times 9^{\prime \prime} .18 \mathrm{lbs}$.
91 SU 698. Only \$14.60 Down. NET.
146.02


Accessory Speaker

ENJOY EXCITING NEW STEREOPHONIC SOUND WITH THESE LOW-COST STEREO PHONOGRAPHS


## DELUXE PORTABLE STEREO PHONOGRAPH

$\$ 650$ - BSR Changer With Stereo-Monaural Switch<br>Less<br>\section*{2nd Speaker}<br>- Built-In 6" Woofer and $3^{\prime \prime}$ Tweeter-

New, attractively styled portable phonograph. Plays new stereo and monaural LP records monaurally-by adding the accessory speaker unit below, you can enjoy the luxury of stereo sound from stereo records. Equipped with an input jack for quickly and easily plugging in accessory speaker system to form a true, stereo music system. Provides 5 -watt peak output per channel when used stereophonically-10-watt peak output for monaural use.
Four-speed changer plays $7^{\prime \prime}, 10^{\prime \prime}$ and $12^{\prime \prime}$ records at $162 / 3,331 / 3,45$ and $78-\mathrm{rpm}$ speeds. Intermix feature for $10^{\prime \prime}$ and $12^{\prime \prime}$ records of the same speed. An interchangeable needle is provided with the phonograph for playing $78-\mathrm{rpm}$ records. Shuts off automatically after last record is played. Rubber turntable mat protects delicate record grooves. Controls: Bass; Treble; Off-On/Loudness; switch for stereo operation when using accessory speaker unit. Lightweight pickup arm has stereo cartridge with sapphire needle. Built-in $6^{\prime \prime}$ woofer and $3^{\prime \prime}$ tweeter provide clean, balanced sound. Attractive luggagestyled wood case, covered in black-and-white, simulated leather fabric. HWD: $91 / 4 \times 15 \times 19^{\prime \prime}$. Includes $45-\mathrm{rpm}$ spindle and inter changeable sapphire needle for $78-\mathrm{rpm}$ records. For $110-120 \mathrm{v}$. 60 cycle AC. Shpg. wt., 27 lbs.
89 RU 454. \$6.85 Down. NET
68.50

ACCESSORY SPEAKER UNIT. Use with phonograph above to complete a stereo system. Employs $6^{\prime \prime}$ woofer and $3^{\prime \prime}$ tweeter identical to those in phono. Wood enclosure, covered in simulated leather fab ric. Styled in handsome black and white. Includes $15-\mathrm{ft}$. connecting cord and plug. HWD: $91 / 2 \times 15 \times 63 / 8^{\prime \prime}$. Shpg. wt., 8 lbs .
89 RX 455. NET

## $\$ 5995$ - V-M Changer With Stereo-Monaural Switch <br> - Includes Stereo Balance Control

2nd Speaker
New, advanced-design portable 4-speed phonograph. Plays newest stereo records, LP's and 78's monaurally-for thrilling stereo sound from newest stereo records, add the accessory speaker unit listed below. New V-M changer plays $7^{\prime \prime}, 10^{\prime \prime}$ and $12^{\prime \prime}$ records in $162 / 3$, $331 / 3,45$ and $78-\mathrm{rpm}$ speeds. Intermixes $10^{\prime \prime}$ and $12^{\prime \prime}$ records of the same speed; shuts off automatically after last record is played. Silent turntable drive mechanism assures constant speed with minimum wow; employs ball bearings for rumble-free performance.
Other features include: special-design amplifier with voltagedoubler circuit. Provides 4 -watt output per channel when being used stereophonically; or a peak of 8 watts for monaural use. Two built-in $51 / 4^{\prime \prime}$ speakers. New stereo balance control for balancing both channels for best stereo effect. New Astatic stereo cartridge with dual sapphire needles, mounted in die-cast aluminum pickup arm. Controls: Off-On/Volume, Treble, Bass, Stereo Balance, Stereo-Monaural switch. Attractive case is covered in washable, pyroxylin-coated leatherette, color-styled in brown and ivory. HWD: $93 / 4 \times 161 / 2 \times 201 / 2^{\prime \prime}$. Less accessory speaker unit and $45-\mathrm{rpm}$ spindle, below. For $110-120$ v., 60 cycle AC. Shpg. wt., 33 lbs. 89 RU 452. \$6.00 Down. NET
59.95

ACCESSORY SPEAKER UNIT. Use with above for stereo sound. Consists of two $514^{\prime \prime}$ speakers in a case that matches the phonograph. Includes $15-\mathrm{ft}$. cable and plug for inserting into phonograph. Size: $93 / 4 \times 161 / 2 \times 7$. Shpg. wt., 12 lbs.
89 RX 453. NET
12.95

45-RPM SPINDLE. Changes 45-rpm records automatically. Wt., 8 oz. 96 R 329. NET
2.31

## COMPLETE PORTABLE STEREOPHONIC PHONOCRAPH



NEW SINGLE-PLAY MONAURAL PHONOGRAPH

New, low-cost single-play portable monaural phonograph. Perfect for dens, recreation rooms, etc. Features $4^{\prime \prime}$ PM speaker for surprisingly "large" sound from a unit this small. Plays $7^{\prime \prime}, 10^{\prime \prime}$ and $12^{\prime \prime}$ records singly, at $331 / 3,45$ and $78-\mathrm{rpm}$ speeds. Retractable $45-\mathrm{rpm}$ spindle. Lightweight pickup arm has high-output turnover cartridge with dual sapphire needles. Locking clip, pickup arm rest. Controls: Tone; Off-On/Volume Speed Selector with motor "off" position. Durable wood cabinet covered with mallard green plastic pyroxylin. HWD: $53 / 4 \times 121 / 2 x$ $10^{\prime \prime}$. U.L. Approved. For $110-120$ v., 60 cycle AC. Shpg. wt.. 9 lbs.
89 RX 456. NET
19.95

## NET

\$6995
\$7.00 Down
New portable stereo phonograph that's all ready to set up and provide thrilling stereo sound from new stereo records! Features dual amplifier section (2 watts peak per channel), with each channel wired to its own set of speakers. The phonograph itself employs two $4^{\prime \prime}$ speakers; second set of $4^{\prime \prime}$ speakers is housed in the removable phonograph cover. $15-\mathrm{ft}$. cable on cover permits placement of second set of speakers for optimum stereo sound. Pickup arm has ceramic stereo cartridge with dual sapphire needles. Plays stereo records stereophonically-monaural LP records monaurally-and standard $78^{\circ} \mathrm{s}$. V-M changer features heavy-duty motor for constant speeds and rumble-free operation. Plays $7^{\prime \prime}, 10^{\prime \prime}$ and $12^{\prime \prime}$ records at $162 / 3,331 / 3$. 45 and $78-\mathrm{rpm}$ speeds. Intermixes $10^{\prime \prime}$ and
$12^{\prime \prime}$ records of the same speed. Stacks up 7" and $10^{\prime \prime}$ records (of the same speed) in any sequence-indexing of the tone arm is controlled automatically. Changer and amplifier both shut off automatically after last record has played. Ganged volume and tone recortrols for regulating sound of each channel from single control knob. Lid and phono cabinet of wood, covered in strikingly attractive, blue and charcoal gray plastic abric, with gold plastic trim. Lid snaps onto phono to form one carrying case Phono size: $9 \times 19 \times 19^{\prime \prime}$; lid size, $4 \times 19 \times 141 / 2^{\prime \prime}$ Less automatic $45-\mathrm{rpm}$ spindle, below. U.I Approved. For $110-120$ v., 60 cycle AC Shpg. wt., 30 lbs.
89 RU 451 . NET
69.95

45-RPM AUTOMATIC SPINDLE. Eliminates need for spiders. Wt., 8 oz .
96 R 329. NET.


## Convert to Stereo Records

If you now have a hi-fi system, you may easily convert it for playing stereo records by adding a stereo cartridge to your changer or turntable, plus another amplifier and speaker for the second sound channel. If you already have a stereo tape system, conversion is simple-all you need do is plug a changer or turntable equipped with a stereo cartridge, into the phono inputs.

## SAVE 20\% OFF LIST

New stereo records-at a big $20 \%$ savings off regular list price. Offer brilliantly realistic stereophonic sound-each record is a thrilling ad venture in 3 -dimensional music. All records are $12^{\prime \prime}, 33^{1 / 3} \mathrm{rpm}$ speed. Engineered and recorded with painstaking care, to highest audio standards. Note: Stereo records must be played with a stereo cartridge. When ordering stereo records, give Stock Number, Record Number and Record Title. Av, shpg. wt., 10 oz

## ABC PARAMOUNT

## Record Titie

Record No.
WALTZES OF STRAUSS IN HI-FI. The Valentino Orchestra. Blue Danube, etc
NOSTALGIA IN HI-FI. Burt Buhrman at the Organ. Blue Moon, Diane, Anniv. Waltz, etc. EMPIRE CITY SIX SALUTES THE COLLEGES. Washington \& Lee Swing, On Wisconsin, etc. MUSIC 10 break a SUB-LEASE. Don Costa's Free Loaders. Five Foot Two, Margie, etc. EYDIE GORME VAMPS THE ROARING 20'S. With Don Costa's Orchestra.
MORE COLLEGE DRINKING SONGS. Sung by the Blazers; mixed collegiate favorites.
HEAVENLY SOUNDS IN HI-FI. Ferrante and Teicher; duo-piano team. Stardust, etc. WORLD WAR II SONGS IN HI-FI. The Four Sergeants. The Marine Hymn, etc.
HI-FI IN AN ORIENTAL GARDEN. Authentic Oriental music and artists.
THE NEW BILLY TAYLOR TRIO. B. Taylor, piano; Earl May, bass; Eddle Thigpen, drums HI-FI PARADISE Roy Smeck. Moonlight Bay, Paradise, My Blue Heaven, etc. SOUTH PACIFIC IN JAZZ. Tony Scott Quartet swings South Pacific selections. 68 RR 416 . Specify Record No. and Title. NET EACH

## BEL CANTO

PLAIN VANILLA. The Dixieland music of Larry Fotine's Beale St. Buskers. ALOHA TO JAZZ. 5 selections by The Polynesians; 2 by Buddy Collette's Quintet. POLKA TIME. JAZZ ON THE BOUNCE. Side 1: Curtis Counce Quintet. Side 2: B. Colette Quintet IN
HARRY MARSHARD PLAYS RESORT FAVORITES. H. Marshard's Society Dance Orchestra
68 RR415. Specify Record No. and Title. NET EACH

## CONCERT-DISC

RE-PERCUSSION. The Percussive Art Ensemble, conducted by Richard Schory.
SOUND IN THE ROUND. VOLS. I AND II. Ping-pong game, air hammer, fireworks, etc. SELECTIONS FROM MY FAIR LADY \& GIGI. Radiant Velvet Strings; C. Giovannini. DANCING AND DREAMING. The Jay Norman Quiniet. Somebody Loves Me, Solamente, etc. NUTCRACKER SUITE. Symphony of the Air. Selections from this favorite work OPPOSITE SIDES OF THE MiKE. Big Mike Simpson \& His Band; Iempo Nuevo. SWINGIN' EASY. The Modernes. Five Foot Two, Besame Mucho, Foggy Day, etc. MUSIC OF JOHANN STRAUSS. Leonard Sorkin conducting the Sinfonietta.
FAVORITE SHOW TUNES. The Sorkin Strings play Surrey with the Fringe on Top, etc. SONGS OF STEPHEN FOSTER-SONGS OF AMERICA. The John Halloran Choir VIVALDI: CONCERTO GROSSO IN D MINOR/BACH: PRELUDEIN E MAJOR/ETC. Sorkin Symph. ORGAN CONCERT BY AUSTIN lovelace. Bach's Prelude and Fugue in A Minor, etc. MARIMBA TROPICALE! Jose Bethancourt and His Orchestra. La Comparsa, Inspiracion, etc.

68 RR418. Specify Record No. and Tille. NET EACH

## CONTEMPORARY

MUSIC TO LISTEN TO BARNEY KESSEL BY. B. Kessel, A. Previn, S. Manne, B. Collette
MY FAIR LADY. Shelly Manne \& His Friends. Modern jazz performances
PAL JOEY. Andre Previn, Shelly Manne, Red Mitchell. Jazz treatment of "Joey' tunes.
FIREHOUSE FIVE PLUS TWO GOES TO SEA. Peoria, Minnie the Mermaid, Over the Waves, etc
MENDELSSOHN: QUARTET IN E FLAT/GLINKA: QUARTET IN F. Westwood String Ouartet 68 RR 419. Specify Record No. and Tille. NET EACH.................................... . 4.76

## COOK

| MASTERPIECES OF THE THEATRE. Boston Recording Festival Orch. WIIlis Page, Cond. | 2064-SD |
| :--- | :--- |

RAIL DYNAMICS Locomolive and train sounds; right-of-way rainy night recording. 2070-SD
THE KING OF ORGANS. Bill Floyd at the Wurlitzer of Paramount theatre in N.Y.
68 RR 424. Specify Record No. and Title. NET EACH 2150-SD

COOK'S TOUR OF STEREO. Stereo demonsiration record; glant Mexican marimba, etc, 1 2004-SD
68 RR 423. Specify Record No, and Title. NET

## MERCURY

HAVANA IN HI-FI. Richard Hayman's Orchestra playing Rhapsodero, Cordoba, etc.
ET'S DANCE. David Carroll's Orchestra playing Let's Dance, My Sin, etc
AMERICA'S MOST DANCEABLE MUSIC Griff Williams and His Onch BEtra
AMERICA'S MOST DANCEABLE MUSIC. Griff Williams and His Orchestra
68 RR 427. Specify Record No. and Title. NET EACH

## OMEGA DISK

CHAMPAGNE MUSIC. Lloyd Mumm's Orchestra. Bubbles in the Wine, Louise, etc.
MARX MAKES BROADWAY. Dick Marx, piano; Buddy Collette, flute; etc. Show tunes.
DESTINATION MOON. Heinz Sandauer condicting Omega Orches. on a symphonic trip.
AZZ ROLLS ROYCE. Lighthouse All-Stars plus 10 on Bob cooper compositions.
ROLLING WITH BOLLiNG. Claude Boling's Big Band. St. Louis Blues, otc.
JUNGLE ECHOES. Chaino and His African Safarl. Wild percussion recording.
SYMPHONIE FANTASTIQUE. A thundering orchestral display. Cento Soli Orchestra.
CINEMA ITALIANO. Pola Chapell sings tunes from Italian films. Anna, La Strada, etc
HI-LO'S IN STEREO. With Frank Comstock's Orchestra. Top vocal group.
68 RR 426. Specify Record No. and Title. NET EACH
SOUNDS OUT OF THIS WORLD. Stereophonic demonstration record. .76 $\frac{4.76}{}$
URANIA
SAINT-SAENS: SYMPHONY NO. 3 IN C MINOR, OP. 78. Vienna Philharmusica Orch.

# SELECTION OF POPULAR HIGH-FIDELITY STEREO TAPES 

# SAVE $20 \%$ 

OFF LIST

Take advantage of this opportunity to enlarge your stereophonic tape collection-at a substantial $20 \%$ reduction from regular list price. You'll get dazzling stereo sound, rivaling the original performance in sheer beauty! All tapes listed here are recorded at $71 / 2^{\prime \prime}$ per second speed and are for playback on tape mechanisms employing in-line (stacked) tape heads. When ordering tapes, give the Stock Number, Tape Number and Tape Title. Av. shpg. wt., 12 oz.

BEL CANTO


## 限期! Stereo Tape and Record Catalog

Yours for the asking-Allied's complete catalog of stereo tapes and records. Over 600 stereo tapes and more than 200 stereo records are listed-all available for immediate delivery from stock. No matter what your taste in music may be, you're sure to find just the tape or record you want. Write for your copy today-ask for Stock No. 68 R 566.


Regular \$32.00 Value


ONLY
\$1596

- Silk, Satin \& Strings
- Big Beat With Mike
- Lighting the Torch
- Symphony of the Dance

An outstanding value for stereo fansl Con certape's package of 4 tapes (listed by title above), includes the Sorkin strings on smooth renditions of such standards as Jalousie, Laura, etc.; Mike Simpson's Big Band on Cherokee, One O'Clock Jump, etc.; the Jay Norman Quintet with vocalist Nancy Wright; and Leonard Sorkin conducting the Musical Arts Symphony Orchestra as they play Russian Sailor's Dance. Bizet's Minuette, etc. Shpg, wt., 2 lbs.
ette, etc. Shpg, wt., 2 lbs.
68 RR 600.4 Reel Pkg.. ONLY
15.96


Enter the thrilling world of great literature with Audio Book tecords -an outstanding selection of $162 / 3-\mathrm{rpm}$ recordings, including many especially for children. Each "book" is complete and unabridged, with readings performed by outstanding artists. All are on $7^{\prime \prime}$ discs with a $11 / 2^{\prime \prime}$ center hole, and each has up to one full hour of playing time. They require the use of a conventional microgroove stylus, and can be played on any $162 / 3-\mathrm{rpm}$ phonograph, or, with the adapter below, on any $331 / 3-\mathrm{rpm}$ unit. Indicate Stock No., Book No. and Title.

| Titie | Lbs. | BookNo. | Stock No. | NET |
| :---: | :---: | :---: | :---: | :---: |
| STORYTIME FAVORITES. 26 popular stories for children. Tenderly told by Jane Webb. (2 | 1/2 | C-301 | 68 RR 410 | 1.96 |
|  | 3/4 | $\mathrm{C}-300$ | 68 RR 403 |  |
| BIN HOOD, The fun in Sherwood Forest with Robin and | 3/4 | C-302. | 68 RR 403 |  |
| ILD'S GARDEN OFVERSES. 52 poems by Robert Louis Stevenson. Read by E |  | $\left\lvert\, \begin{aligned} & \mathrm{C}-303 \\ & \mathrm{C}-304 \end{aligned}\right.$ | 68 RR411 | 3.97 |
| IP VAN WINKLE and THE LEGEND OF SLEEPY HOLLOW. Told by Elinor Gene Hoffman. ( 1 rec.) | 1/4 | C-305 | 68 RR 404 | . 99 |
| THE KING OF THE GOLDEN RIVER and THE GREAT STONE FACE. Two ageless legends. (1 rec.) |  | C-306 | 68 R R 404 | 99 |
|  |  | C-307 |  |  |
| SEASURE ISLAND. Hans Conried in a vivid reading of this immortal yar |  | C-309 | RR 442 | 5.97 |
| 8 complete st |  | GL-60 | RR 405 | 3.28 |
|  |  |  |  | 3.28 3.28 |
| BENJAMINFRANKLIN. Complete and unabridged "Autobiography." Read by Michael Rye. | 2 | GL-603 | 68 RR 408 |  |
| ne Lockhart reads Stevenson's story of good and evil. (4 records) |  | GL-605 |  |  |
| ALPH WALDOEMERSON. Lew Ayres reads a prize collection of ess |  |  |  |  |
| Lonald Colman' |  | GL-607 |  |  |
| REAT ESSAYS. Marvin Miller reads 41 of the world's most popular essays. (8 records) |  | GL-608 |  |  |
| ALDEN. John Carradine reads the first 6 chapters from Thoreau's masterpiece. ( 6 records) | 11/2 | GL-610 | RR441 | 4.64 |
| ADVENTURES OF SHERLOCK HOLMES. 4 adventures masterfully read by Basil Rathbone. ( 5 records) |  | GL-611 |  |  |
| THE COMPLETE NEW TESTAMENT. Authorized King James version. ( 26 records).................. |  | R-901 | 68 RR 401 | 9.97 |
| HE OLD TESTAMENT, Gen., Judges, Ruth, Esther, Psa., Prov., Eccl., Sol., Isaiah. (26 recor | 6 | R-902 | RR 401 |  |
| OMPLETE NEW TESTAMENT; Catholic Editlon. Read by Rev. R. 1. Gannon, S.J. (3 | 71 | R-903 | RR 402 | 23.30 |
| TORIES FROM THE NEW TESTAMENT. 26 favorite stories read with charm. (2 records) |  | R-908 | RR 407 | 1.96 |
| STORIES FROM THE OLD TESTAMENT. 21 treasured stories especially for young peo | 1/2 | R-909 | 68 RR 407 | $1.96$ |

## TEST RECORDS

COOK 50NAB. $12^{\prime \prime}$. Checks the IM distortion in cartridges, amplifiers, speakers. No instruments needed-simply play record and listen. If distortion exceeds $2 \%$, code letter " N ", is heard. Under $2 \%$, " A " is heard. $331 / 3$ and 78 rpm . Wt. $10 \%$ \%z. 65 R 096. NET
4.98

CLARKSTAN $102 \mathrm{M} .12^{\prime \prime}$ ( 1 side) $331 / 3$-rpm. Use with oscilloscope for checking $331 / 3-\mathrm{rpm}$ equipment. Sweeps 70 to $10,000 \mathrm{cps} \pm 1$ $\mathrm{db}, 20$ times per second. Marker pulses at 1.3 .5 .7 and 10 kc . Curve is modified NARTB. Shpg. wt., 10 oz .
69 R 231. NET

## TEST TAPES

STEREOPHONY T50-S. Permits setting amplifiers for proper stereo balance. Complete with diagrams. $71 / 2 \mathrm{ips}$, inline. 12 oz . 68 RR 506. NET
1.98

LIVINGSTON LX-IE. For stereo (offset and inline), and dual and full-track monaural machines. Helps check speed, flutter, response, alignment, etc. $71 / 2$ ips. 12 oz.
68 RR 598. NET
7.96

WESTMINSTER SWB-AL-101. Tests your inline stereo tape machine completely. Includes musical selections. Unusually comprehensive instructions. $71 / 2 \mathrm{ips}$. Wt., 12 oz .
64 RR 886 . NET....................... . 9.56

## AUDIO BOOK SPEED ADAPTER

MODEL A-100. Permits playing any of the $162 / 3-\mathrm{rpm}$ Audio Book records on a conventional $331 / 3-\mathrm{rpm}$ turntable or record changer. No mechanical changes to the record player are necessary-just place the speedreducing adapter on the table.
The adapter consists of two discs connected through a speed reducer. Unit fits over the record spindle, with the lower disc resting on the turntable. When the bottom disc rotates at turntable speed, the top disc, which holds the record, rotates at $162 / 3$ rpm. Arm prevents rotation of speed reducing coupling. Shpg. wt., 1 lb .
68 R 400. NET.
I. 40


## MICRO PHONES

Nearly all tape decks are supplied less microphones, while most complete recorders include them. All of the Pentron recorders on the facing page and the Model 555-A Sterecorder on page 105 include microphones, while the other recorders and decks listed on the following pages are supplied less mikes. For fine-quality home recording with your tape recorder or recording system, the use of a dynamic microphone in the $\$ 40$ to $\$ 60$ price range is recommended. There are many different factors that must be taken into account in choosing a mike-see page 314 for helpful hints on selecting the proper one.


A tape deck is a basic tape transporting or tape handling device. It consists of a recording and playback head, and sometimes an erase head, and must be used with associated circuitry. A tape recorder is a complete unit consisting of a tape deck and all necessary recording circuits. Some tape recorders also include complete playback circuitry and built-in speakers, while others must be used along with separate playback amplifiers and speakers.

THE TAPE DECK IN YOUR HI-FI SYSTEM


PLAYBACK. If your hi-fi, amplifier has a "Tape Head" input, you will not need a preamplifier for playback with a tape deck. If, however, your amplifier has If, "Towever, your amplifier has cifically identified as a tape head input) you must have a preamp equalized for a tape head to use with the deck.

RECORD. In order to use a deck for recording, you must have a recording preamplifier. The preamp in your hi-fi system is not suitable, since it does not include a bias oscillator, which is necessary in recording.

## STEREOPHONIC RECORDING



For stereo recording, use one of the complete stereo recorders listed on the facing or following pages or choose a deck and two record/playback preamplifiers.

If you are planning to purchase a complete recorder, be sure that the description of it specifically states that the unit will make stereo recordings. A unit designated monaural-record/stereo-playback will not work. The Ampex 601-2, record/stereo-playback will not work. The Ampex $601-2$, Concertone 63 K , Pentron NL-4, Sterecord


New "Mercury" Stereo System Combination Offer
List, $\$ 254.95$


Only \$15.99 Down

A complete tape system for stereo or monaural playback and monaural recording-at $\$ 20.00$ combination savings. Consists of NL1-SX "Mercury" stereo recorder and PS-5 speaker-amplifier unit. Features provisions for playback of both 2 and 4-track stereo tapes and recording of 2-track monaural tapes. Has built-in 4 -watt amplifier, $6^{\prime \prime}$ speaker, preamp for second stereo channel, precision 4 -pole motor, automatic braking, and neon level indicator.
Response: $40-11,000 \mathrm{cps}$ at $71 / 2 \mathrm{ips} ; 40-7000$ cps at $33 / 4$ ips. Signal-to-Noise Ratio: 45 db. Inputs: Mike-Mag Phono, Tuner-Aux. Outputs: second stereo channel, external amplifier, external speaker. $14 \times 17 \times 11^{\prime \prime}$.

- Save $\$ 20.00$ on this Stereo Bonus Package
- Everything You Need to Play Stereo Tapes
- Make "Live" and "Off-The-Air" Recordings
- Comes Complete with Mike and Accessories



## New "Champion" Stereo System Combination

An outstanding combination for stereophonic listening-priced to save you $\$ 30.00$. Consists of the Model NL2-SX "Champion', portable tape recorder and the matching PS-5 speaker-amplifier; In addition to all the high-quality features of the "Mercury" stereo system above, the NL2-SX incorporates a two-way speaker system for extended frequency response; a "magic eye" recording level indicator to assure correct volume during recording; digital type tape timer to indicate exact footage of tape on take-up reel at all times. Has built-in 5 -watt amplifier plus preamp for second stereo channel.
Response: $40-13,000 \mathrm{cps}$ at $71 / 2 \mathrm{ips} ; 40-7000 \mathrm{cps}$ at $33 / 4 \mathrm{ips}$. Signal-to-Noise Ratio: 48 db . Flutter: under $0.4 \%$ at $71 / 2 \mathrm{ips}$. Inputs: Microphone or magnetic cartridge; tuner or aux. Outputs: second stereo channel; external amplifier; external speaker. $108 / 4 \times 14 \times 163 / 4^{\prime \prime}$.
In portable cabinet; with mike and reel of tape. For $110-120 \mathrm{v}$. 60 cycle AC. Shpg. wt., 33 lbs.
92 RU 721 -2. List, $\$ 314.95$. ONLY
199.90

91 RU 880. NL2-SX "Champion" Stereo Recorder Only. With microphone and reel of tape. Shpg. wt., 31 lbs.
91 RU 754. NL-2. As above; monaural only. 31 lbs.
189.95

91 RX 884. PS-5 Speaker-Amplifier Only. 12 lbs..

New "Aristocrat" Stereo System Combination
Pentron's finest portable stereo combination-priced to save you $\$ 30.00$. System consists of the NL3-SX "Aristocrat" recorder and PS-10 speaker-amplifier unit. The NL3-SX offers all the advantages of NL1-SX and NL2-SX, plus these deluxe features: powerful hi-fii 10 -watt amplifier with push-pull output; highly accurate pro-fessional-type VU meter for gauging record level; four top-quality hi-fi speakers ( $2-6^{\prime \prime}$ woofers, $6^{\prime \prime}$ mid-range, exponential tweeter double LC crossovers at 600 cps and 2000 cps ). Response: $40-15,000$ cps at $71 / 2$ ips; $40-7,500 \mathrm{cps}$ at $33 / 4 \mathrm{ips}$. Signal-to-Noise Ratio: 50 db . $171 / 8 \times 173 / 4 \times 11$. In handsome portable case with heavy-duty all-metal handle.
The PS-10 speaker-amplifier matches the attractive styling of the NL3-SX recorder. Offers superb hi-fi sound from its two-way speaker system ( $6^{\prime \prime}$ woofer, $6^{\prime \prime}$ tweeter, LC crossover) and deluxe 10 -watt push-pull high-fidelity amplifier. $98 / 4 \times 17^{1 / 15 \times 141 / 2^{\prime \prime}}$.
Includes mike and reel of tape. For operation from $110-120 \mathrm{v}$., 60 cycle AC. Shpg. wt., 63 lbs.
92 RU 722-2. List, $\$ 399.90$. ONLY
269.90

91 RU 881. NL3-SX "Aristocrat" Stereo Recorder Only. With microphone and reel of tape. Shpg. wt., 38 lbs.. . . . . . . . . . . . . . . 229.95
91 RU 756. NL-3. As above; monaural only. 38 lbs.. . . . . . 199.95
91 RU 885. PS-10 Speaker-Amplifier Only. 25 lbs... . . . . . . . . 69.95


## FEATURING TWO 10-WATT AMPLIFIER SECTIONS

## PLAYS AND RECORDS STEREO AND MONAURAL TAPES-PLAYS NEW 4-TRACK RECORDINGS

Remarkably versatile, the "Emperor II" tape recorder offers obsoles-cence-proof tape recording and playback operation. It plays and records dual-track monaural tape-it plays and records 2-track stereo tape; and it plays the latest 4-track stereo tapes. Choosing the desired mode of operation is simple-a convenient indexing knob selects the correct configuration of tape heads.

## NET

## $\$ 349{ }^{95}$

\$35.00 Down

NL-4 "EMPEROR II." Deluxe, dual-speed, inline tape recorder - records, plays and erases both 2-track monaural and 2 and 4 -track stereo tapes. Incorporates two 10 -watt amplifiers and two $4 \times 6^{\prime \prime}$ oval speakers that may be used for monitoring, or eliminating the stereo "center hole."
Features include micro-switch end-of-reel shut-off, automatic idler disengagement, instant automatic braking, digital index counter and sound cut-off in fast positions. Heavy-duty, dynamically balanced motor employs 4-pole, shaded-pole design. Has two "Magic Eye" recording level indicators and separate volume and tone controls. Response: $40-15,000 \mathrm{cps} @ 71 / 2 \mathrm{ips}, 40-10$, $000 \mathrm{cps} @ 33 / 4$ ips. Signal-to-Noise Ratio: 50 db . Flutter: under $0.3 \%$ @ $71 / 2$ ips. Equalization: NARTB playback @ $71 / 2 \mathrm{ips}$. 2 input jacks with switching accommodate
stereo or monaural magnetic phono, highimpedance mike and tuner inputs. Has four output jacks for two external amplifiers and two speakers.
$103 / 4 \times 171 / 16 \times 173 / 16^{\prime \prime}$ overall. For $110-120 \mathrm{v}$. 60 -cycle AC. With two custom-quality crystal microphones; less external speakers (below). Shpg. wt., 45 lbs.
91 RU 882. List, \$450.00. NET . 349.95 ES-2 SPEAKER SET. Two 3-way speaker systems for use with NL-4, at left. Each includes $6^{\prime \prime}$ woofer, $6^{\prime \prime}$ midrange, $4^{\prime \prime}$ tweeter and 2 LC crossovers. Systems lock together, face-to-face, forming an easy-to-carry, completely enclosed case. Match NL-4. With pletely enclosed case. Match NL-4. With Shpg. wt., 20 ibs.
91 RU 883. List, \$75.00. NET . . . . 59.95
RC-6 REMOTE PLAYBACK CONTROL. Has balancing control, channel-reverse switch, master volume control. $15^{\prime}$ cable. 1 lb . 91 R 886. List, \$15.00. NET.


BELL TAPE DECKS. High-quality tape decks featuring DC dynamic braking, three 4-pole motors, automatic tape shut-off, and operation without belts, pulleys, or clutches. Excellent overall specifications in both stereo and monaural models. All decks accept specially designed Bell P-100 or RP-120 preamplifiers (right), which attach to deck without altering any critical dimensions; ideal for custom installation, especially where record or stereo facilities are to be added later. For playback, hi-fi amplifiers are also required. Positive braking prevents even the thinnest tape from breaking when starting and stopping mechanism. Accepts up to $7^{\prime \prime}$ reels.
Specifications: Frequency Response: 40 to $10,000 \mathrm{cps} \pm 2 \mathrm{db} ; 30$ to $15,000 \mathrm{cps} \pm 4 \mathrm{db}$ (record and playback). Signal-to-Noise Ratio: Better than 50 db . Flutter: Less than $1 / 4$ of $1 \%$ at $71 / 2 \mathrm{ips}$. Overall Distortion: Less than $1 \%$ at maximum indicated recording level. Controls: Speed, Play, Rewind, Fast Forward, Stop; Off-On Switch. Stereo decks play inline tapes only. Speeds: $71 / 2$ and $33 / 4 \mathrm{ips}$.
Tape lifter removes tape from heads during stop and fast speeds. Footage counter operates from take-up reel, and does not introduce wow and flutter. Charcoal gray base plate with satin aluminum and embossed gold anodized trim. Size $15^{5} / 16 \times 13^{5} / 16^{\prime \prime}$; requires $51 / 4^{\prime \prime}$ below, $17 / 8^{\prime \prime}$ above mounting surface. For operation from $110-120$ volts, 60 cycle AC. Shpg. wt., 21 1bs.

| Stock No. | Model | Operation | $10 \%$ Down | NET |
| :--- | :--- | :--- | :---: | :---: |
| 91 RU 869 | T-210 | Monaural record, erase and playback | $\$ 10.78$ | 107.75 |
| 91 | RU 870 | T-211 | Stereo playback | 11.76 |
| 91 | 17.55 |  |  |  |
| 91 RU 871 | T-212 | Mon. record-playback; stereoplayback | 12.74 | 127.35 |
| 1 RU 872 | T-213 | Mon. and stereo record-playback | 14.70 | 146.95 |

MODEL T-218 RECORDER. Record stereo or monaural tapes with this hi-fi recorder-add two hi-fi amplifiers and two speakers for stereo playback. Includes: T-213 Tape Deck; 2-RP-120 Record-Playback Preamps; and Carrying Case. Less mike. $83 / 8 \times 171 / 4 \times 161 / 2^{\prime \prime}$. For 110-120 v., 60 cycle AC. Wt., 54 lbs.
91 RZ 873. Only \$30.38 Down. NET.
303.75

MODEL T-216. As above, but for monaural recording and stereo or monaural playback. Includes T-212 Tape Deck; 1-RP-120 and 1-P-100 Preamp; and Carrying Case. Shpg. wt., 54 lbs.
91 RZ 874. Only $\$ 25.48$ Down. NET
254.75

MODEL P-100 PLAYBACK PREAMP. Provides NARTB tape equalization and high-gain amplification, with less than $0.1 \%$ distortion at 1-volt output. 53 db gain at 1000 cycles; output from maximum-level tape recording, 2.3 volts, when used with Bell tape decks. For operation from $110-120$ v., 60 cycles AC. Shpg. wt., $53 / 4 \mathrm{lbs}$.
91 RX 768 . Only $\$ 3.92$ Down. NET
39.15

MODEL RP-120 RECORD-PLAYBACK PREAMP. NARTB record and playback equalization; attaches to Bell decks listed at left. 2 inputs: mike and high level (tuner, etc.); require 0.001 and 0.3 volts, respectively, for full recording level. Linear cathode-ray tube indicator for accurate monitoring of recording level. Blue pilot light indicates "playback"; red light for "record". For 110-120 v.. 60 cycles cates "playback"; red lig
AC. Shpg. wt., $91 / 4 \mathrm{lbs}$.
91 RX 769. Only $\$ 5.88$ Down. NET
58.75

CARRYING CASE. Professional-style carrying case for Bell tape decks and preamps. Covered with charcoal ray pyroxylin; contrasting trim. $83 / 8 \times 171 / 4 \times 161 / 2^{\prime \prime}$. Shpg. wt., 13 lbs.
91 RU 875. NET.


## NEW SERIES 75 TAPE DECKS

Carefully engineered transports fitted with precision record playback and erase heads. Feature "flutter-filter" belt drive. Ideal for addition of tape playback and/or recording facilities to hi-fi systems. Require $121 / 8 \times 834^{\prime \prime}$ area; $11 / 2^{\prime \prime}$ above, $31 / 2^{\prime \prime}$ below mtg. board.

SPECIFICATIONS: Frequency Response: $\pm 3 \mathrm{db}, 40-14,000 \mathrm{cps}$. Signal to-Noise Ratio: 55 db or better. Flutter: $0.2 \%$ average. Tape Speed: $71 / 2 \mathrm{ips}$; convertible to $33 / 4$ ips from underside of mounting plate Speed change knob on front of deck. Maximum Reel Size: $7^{\prime \prime}$. Playback Head Output: 2.5 millivolts. Gap Width: $0.00015^{\prime \prime}$. For operation from 110-120 volts, 60 cycle AC. Shpg. wt., 11 lbs.
MODEL FF75LP. Monaural playback.
91 RX 889. Only $\$ 7.15$ Down. NET
71.50

MODEL FF75ES. Stereo (inline) erase-record and playback. Features tape lifter and pressure pads.
91 RU 861. Only \$11.30 Down. NET . . . . . . . . . . . . . . . . . . . II3.00
MODEL FF75R-LP. Monaural erase-record. Features tape lifter and pressure pads.
91 RX 862. Only $\$ 7.85$ Down. NET
78.50

## NEW SERIES 85 TAPE DECKS

Expertly designed, deluxe transports. Feature: "flutter-filter" belt drive; two motors for fast forward and rewind; concentric control (inner ring selects fast forward or tast rewind-outer ring selects forward, stop or cue); footage counter; and tape lifters and pressure pads. Require $13 \times 91 / 2^{\prime \prime}$ area; $11 / 2^{\prime \prime}$ above, $31 / 2^{\prime \prime}$ below mtg. board.

SPECIFICATIONS: Frequency Response: $\pm 3 \mathrm{db}, 30-14,000 \mathrm{cps}$. Signal to-Noise: 50 db . Flutter: $0.2 \%$ average. Tape Speed: $71 / 2 \mathrm{ips}$ or $33 / 4$ ps; controlled by front panel knob. Maximum Reel Size: 7". For $110-120$ volts, 60 cycle AC. Shpg. wt., 12 lbs.

MODEL 85SR. Monaural erase-record, stereo playback. Has monaural dual-track erase and record-playback heads plus inline dual-track stereo heads for playback of stereo tapes.
91 RU 863 . Only $\$ 14.30$ Down. NET
143.00

MODEL 85ESQ. Monaural-stereo erase-record-playback. Has inline record-playback heads and independent dual-track erase heads; inline four-track heads are included for playback of four-track, $33 / 4$ ips tapes. Inline head provides 45 db interchannel cross-talk rejection. Requires two RP62's (below) for stereo recording.
91 RU 864. Only \$16.70 Down. NET
167.00

## CONSOLETTES AND ENCLOSURES FOR SERIES 75 AND 85

91 RX 865.400 Consolette. Metal base for any Viking Series 75 deck. Neutral tan finish. Shpg. wt., $61 / 2 \mathrm{lbs}$. NET.
14.00

99 RX 494. D396 Portable Case. For any Viking 75 series deck, 1 or 2 PB60F's or 1 RP-61B preamp. Pre-drilled. Wt., 13 lbs. NET. 24.50
91 RX 867. D397 Portable Case. For any Viking 75 series deck, 2 RP-61B's, or 1 RP-61 B and 2 PB60F preamps. Wt., 141 bs . NET 34.00 commodates one RP-61B. Tan finish. Shpg. wt., $43 / 4 \mathrm{lbs}$. NET. . 7.50


## HOW TO SELECT PROPER COMPONENTS

FOR MONAURAL PLAYBACK ONLY. If your hi-fi amplifier has a tape head input, you need either an FF75LP or $85 S R$ tape deck to add tape to your system. Otherwise, add a PB60 preamplifier also.
FOR MONAURAL RECORDING AND PLAYBACK. Use either an FF75LP or 85 SR tape deck and one RP-61B or RP62 recordplayback preamplifier with your present high-fidelity system.

FOR STEREO PLAYBACK ONLY. If your high-fidelity amplifier already has a tape head input, use the FF75ES or 85SR tape deck and a PB60F preamp: of course, two amplifiers and speaker systems are necessary for stereo. If you own a stereo preamp already you need add only the FF75ES or 85 SR tape deck. If your high fidelity system provides no tape preamplification, use the FF75ES or 85SR tape deck and two PB60F preamps. These components will also allow you to play monaural tapes.
FOR STEREO RECORDING AND PLAYBACK. Use the FF75ES or 85SR tape deck and two RP-61B or RP62 preamps. These components also record and play back monaurally. When making stereo recordings, use jumper cord supplied to synchronize preamplifiers.

NOTE ON STEREO SYSTEMS. All stereo systems require t wo complete and independent playback channels: dual preamplifiers equalized for tape playback, dual basic amplifiers and dual speaker systems. All of the new stereo anplifiers listed in this catalog include dual preamps and two power amplifiers on a single chassis.

IMPORTANT: Allied can supply all Viking tape recording equipment-tape decks, preamplifiers, consolettes, enclosures, accessories, etc. If you do not find a particular Viking component listed, consult our Technical Service Department for information as to specifications and price. Department for information as to speci
Be sure to list item by model and title.


## PREAMPS AND ACCESSORIES

MODEL PB60F PLAYBACK PREAMP. Two PB60F's and the FF75ES or 85SR deck are used in stereo playback system. Power switch on volume control; AC outlet for tape deck; and hum balancing adjustment. Response: $30-14,000 \mathrm{cps} . \pm 2 \mathrm{db}$. Variable equalization control. $65 / 8 \times 33 / 8 \times 21 / 8^{\prime \prime}$. For $110-120$ v., 60 cycle AC. Wt., 7 lbs.
99 R 1 82. Only $\$ 2.95$ Down. NET
29.50

MODEL RP-61B RECORD-PLA YBACK PREAMP. Playback characteristics are the same as those of PB60F, above; also provides fixed equalization during recording, erase bias oscillator and level monitoring indicator. Distortion at full recording level is less than $2 \% .121 / \mathrm{ex}$ $21 / 4 \times 63 / 4^{\prime \prime}$. For $110-120$ v., 60 cycles AC. Wt., $71 / 2 \mathrm{lbs}$.
91 R 733. Only 87.75 Down. NET
77.50

MODEL RP62 RECORD-PLAYBACK PREAMP. As above, but has brushed chrome panel to match Series 85 decks. Wt., $71 / 2$ lbs. 91 R 891. Only 87.75 Down. NET
77.50

MODEL RPGIVU RECORD-PLAYBACK PREAMP. Same as RP-61 B, above but with VU meter instead of electron ray. Output, 600 ohms. Matches either Viking dual-track and stereo heads or broadcast type full-track erase and record tracks. With $19^{\prime \prime}$ relay rack mount ing panel. For 110-120 v., 60 cycle AC. $71 / 2 \mathrm{lbs}$. 91 RU 868. Only $\$ 11.90$ Down. NET
119.00

D381A REEL RETAINERS. Molded rubber reel retainers for securing reels when deck is used in vertical position. Wt., 5 oz. 92 R 913 . NET PER PAIR
1.00

D305 DECK MOUNTING FLANGE. For custom mounting any Series 75 or Series 85 deck. Mounts flush with flange. Neutral tan. Size: $103 / 4 \times 141 /{ }^{\prime \prime}$. Shpg. wt., 8 oz.
91 RX 887 . NET
3.00


## MODEL 910 UNIVERSAL "A" STEREO RECORDER

 NET
## $\$ 495^{\circ 0}$ <br> - Reproduces 2 and 4-Track Stereo <br> \$49.50 DOWN

Stereo playback and monaural record tape deck-preamp offering latest engineering advancements in the tape recording field, plus renowned Ampex features and high-quality workmanship. Exceptionally versatile-has provisions for advanced-design 4-channel or 2 channel stereo playback plus monaural record and playback. In 4 -channel position, two tracks are played. When end of reel is reached, automatic shut-off functions. No need to rewind tapesimply turn reel over to play other two tracks. Each recorder is housed in an attractive two-tone gray portable case. Accurate footage counter and VU meter
SPECIFICATIONS: Tape Head: plays 4-track stereo tapes in "UP" position; 2 -track in "DOWN." Tape Speeds: $71 / 2$ and $33 / 4$ ips. Frequency Response: $30-15,000 \mathrm{cps}$ at $71 / 2 \mathrm{ips}$. Signal-to-Noise Ratio: 50 db . Reel Capacity: $7^{\prime \prime}$. 2 Inputs: high-impedance microphone; radio, TV or phono. Output: cathode follower. Controls: Selector (Off. Monitor, Single, Stereo); Listening Volume; Fast ForwardRewind; Record; Stop; Motor Switch; Recording Volume (Mic); Recording Volume (Tuner-Phono). Simultaneous record-monitor feature; push-button speed change; illuminated footage counter; automatic stop at end of reel. Input channels may be mixed with separate volume controls, for narration during recording. Less separate volume, controls, for narration during reco
mike. $9 \times 171 / 2 \times 15^{\prime \prime}$. For $110-120 \mathrm{v}$., 60 cycle AC .38 lbs. mike. $9 \times 171 / 2 \times 15^{\prime \prime}$. For $110-120$ v.., 60
91 RU 858 . Only $\$ 49.50$ Down. NET
495.00

MODEL 2010 MATCHING AMPLIFIER-SPEAKER. Ingeniously engineered single-case unit, providing substantially flat speaker output, 65 $10,000 \mathrm{cps}$. Styling of case matches recorder listed above; forms an ideal portable high-fidelity tape system when used with above, or when two are used with above for stereo. Amplifier Response: $\pm 0.5$ $\mathrm{db}, 20-20,000 \mathrm{cps}$. Noise Level: -70 db . Controls: Volume, Tone. Rated Output: 10 watts. Inputs: Tape, Tuner, Phono, TV. $8^{\prime \prime}$ PM speaker of special Ampex design. Auxiliary AC outlet. $9 \times 171 / 2 \times 15^{\prime \prime}$. For 110-120 v., 60 cycle AC. Shpg. wt., 35 lbs.
91 RU 859. Only $\$ 19.95$ Down. NET
199.50

## MODEL 601 BROADCAST QUALITY RECORDERS

 NET\$59500 \$59.50 DOWN<br>- Superb Fidelity-Precise Timing<br>- Direct Reading, llluminated Meter<br>- Eliminates Accidental Erasure

Combine compact design for practical portability with Ampex manufacturing precision. Features, include provision for low-impedance input and output. faster acceleration to playing speed, illuminating record safety button and case of rugged Samsonite. Separate record and playback amplifiers; direct-reading illuminated VU meter; simultaneous recording and playback.
SPECIFICATIONS: Speed: $71 / 2$ ips. Reel Size: $7^{\prime \prime}$ maximum. Response: $30-15,000 \mathrm{cps}$; Signal-to-Noise Ratio: Over 55 db for full-track; 50 db for half-track. Flutter and Wow: 0.17\%. Starting Time: less than 0.2 second. Fast Forward and Rewind: 90 seconds for full $7^{\prime \prime}$, reel. Power Drain: 61 watts. Less mike. Size, $8 \times 133 / 4 \times 16^{1 / 2^{\prime \prime}}$. For $110-120$ volts, 60 cycle AC. Shpg. wt., 35 lbs.
95 RZ 978 . Dual-Track. NET.
5.95 .00

95 RZ 979. Full-Track. NET.
595.00

95 RZ 982 . Dual-Track. For custom mounting. Size: $5 \times 121 / 2 \times 151 / 2^{\prime \prime}$. Less case. Shpg. wt., 31 lbs. NET.
95 RZ 983 . Full-Track. For custom mounting. Size: $5 \times 121 / 2 \times 151 / 2^{\prime \prime}$.
Less case. Shpg. wt., 31 Ibs. NET.
545.00

MODEL 601-2 STEREOPHONIC RECORDER. As above, but with stereo heads (in-line) dual preamps and meters. $8 \times 13 \times 241 / 2^{\prime \prime}$. With case. For $110-120$ volts, 60 cycle AC. Shpg. wt., 54 lbs.
91 RZ 775 . Only $\$ 99.50$ Down. NET
995.00

LOW-IMPEDANCE INPUT TRANSFORMER. Plug-in type for use with Series "600". Shpg. wt., 1/2 lb.
95 R 981 . NET.
22.95

MODEL 620P AMPLIFIER-SPEAKER. 10-watt amplifier and special $8^{\prime \prime}$ speaker. Two may be used with 601-2 for stereo. Speaker response $65-10,000 \mathrm{cps}$. Amplifier response, $\pm 0.5 \mathrm{db} .20-20,000 \mathrm{cps} .13 \times 16 \mathrm{x}$ $8^{\prime \prime}$. For $110-120$ v., 60 cycle AC. Shpg. wt., 28 lbs .
95 RU 980 . Only $\$ 18.95$ Down. NET.
189.50


## MAGNECORDETTE 101 Stereo Recorder

## $\$ 449{ }^{95}$

- Provides Professional-Quality Stereo Fidelity
- Dual Meters for Stereo Recording Balance
- Two Ampliflers Mounted on a Single Chassis
\$45.00 DOWN

Moderately-priced, portable unit for playing commercially-recorded tapes or for making and playing your own stereo or monaural tapes. Requires two amplifiers and speakers for stereo playback. Delivers profes-sional-quality stereo reproduction. Features include: dual record-playback preamplifiers mounted on one chassis; separate gain controls for each channel plus one master control for record and playback. Monauraltrol for record and playback. Monaural-
stereo switch and recording indicator located on transport panel. Perfectly matched with speaker-amplifiers, below.

## MAGNECORDETTE MODEL

Combination speaker-amplifier in a portable carrying case. Consists of an $8^{\prime \prime}$ full-range speaker mounted in a highly attractive case designed to match Model 101 (listed above) in appearance. Ideally suited for monaural playback-two required for stereo reproduction. Delivers remarkably clear response across the entire audio spectrum.

SPECIFICATIONS: Playback-Record Function: Stacked stereo; half-track monaural. Tape Speeds: $71 / 2$ and $33 / 4 \mathrm{ips}$. Frequency Response: $\pm 2 \mathrm{db}, 50-12,000 \mathrm{cps}$ at $71 / 2 \mathrm{ips}$; $\pm 2 \mathrm{db}, 50-6000 \mathrm{cps}$ at $33 / 4 \mathrm{ips}$. Reel Size: 5 and/or 7". 2 Inputs: accommodates mike. tuner, TV or phono. Preamp Output: cathode follower, each preamp. Two meters monitor channels. Complete with handsome gray and white case. Less speaker-amplifiers gray and white case. Less speaker-amplifiers
and mikes, $153 / 4 \times 173 / 4 \times 11 / 2^{\prime \prime}$. For $110-120$ v.. 60 cycle AC. Shpg. wt., 72 ibs.

91 RZ 856. \$45.00 Down. NET. . 449.95

## 110 SPEAKER-AMPLIFIER

SPECIFICATIONS: Frequency Response: 20$20,000 \mathrm{cps}$. Controls: Volume, Bass and Treble. Signal-to-Noise Level: 60 db . HandTreble. Signal-to-Noise Level: 60 db . Hand-
somely styled, durably constructed case is charcoal gray and oyster white. Luggagetype handle permits easy portability. 157/8x $17^{13 / 16 \times 11^{7 / 16^{\prime \prime}} \text {. Shpg. wt., } 30 \mathrm{lbs} . ~}$
91 RU 857. \$13.00 Down. NET. . 129.95


## NEW DK-555-A STERECORDER

Dual-speed stereo recording and playback unit for custom mounting. Has same rugged construction and outstanding features as Model 555-A described at right, but less portable case. dynamic microphones and monitor speaker. Handy, built-in grips on sides. $83 / 4 \times 151 / 8 \times 131 / 4^{\prime \prime}$. For $110-120 \mathrm{v} ., 60$ cycle AC. Shpg. wt., 40 lbs.
91 RU 790. $\$ 52.50$ Down. NET. . 525.00
MODEL CCS-555-A. Deluxe, precision-made, portable stereo recording and playback system. Consists of the Model 555-A described at right plus 2 Lansing D-123 $12^{\prime \prime}$ extended range speakers, individually mounted in 2 Lansing-designed enclosures. Handsome enclosures combine to form a matching portable case-perfect companion-piece for the tape transport. Size of speaker case: $111 / 8 \mathrm{x}$ $191 / 4 \times 151 / 4^{\prime \prime}$. For $110-120$ volts, 60 cycle AC. Shpg. wt., 72 lbs.
91 RZ 789-2. \$77.50 Down. NET 775.00

## NEW MODEL 555-A STERECORDER

## $\$ 50500$

Enjoy the fascination and excitement of recording and listening to your own stereophonic tapes with this precision-made, portable stereo recording and playback unit. The Sterecorder includes everything necessary for stereo recording. Selector switch allows instant change to either stereo recordplayback or monaural record-playback. Simply attach two high-fidelity speakers and hear breath-taking stereo sound from your own recordings or from the hundreds of recorded tapes now available. The entire record-playback unit is mounted in an attractive Tolex vinyl, luggage-type carrying case. Parts precision-made in Japan; assembled and tested in U.S.A.

## AMERICAN CONCERTONE

## NEW Stereo and Monaural Tape Equipment MODEL 63K RECORDER

NET<br>$\$ 755^{\circ 0}$

\$75.50 DOWN

- Records and Plays Back Both Stereo and Monaural
- Dual-Speed-71/2 and 15 ips-Push-Button Controls
- Handles Up To $101 / 2^{\prime \prime}$ Reels-Front Panel Torque Switch

Expertly constructed, dual-speed stereo tape recorder in handsome carrying case. Records and plays back both stereo and monaural tapes; handles up to $101 / 2^{\prime \prime}$ reels. Features include: push-button control; torque control switch; VU meter; two high-speed take-up motors; safety erase interlock; rugged die-cast front mounting; direct hysteresis synchronous drive; dual record amplifier and dual playback preamplifiers. Frequency Response: $\pm 2 \mathrm{db}, 50$ $12,000 \mathrm{cps}$ at $71 / 2 \mathrm{ips} ; \pm 2 \mathrm{db}, 50-15,000 \mathrm{cps}$ at 15 ips . Signal-to-Noise Ratio: 50 db at $71 / 2 \mathrm{ips}$; 50 db at $15 \mathrm{ips}$. Flutter and Wove: $0.15 \%$ RMS at $71 / 2 \mathrm{ips} ; 0.25 \%$ RMS at 15 ips .2 Inputs: highimpedance microphone; high-impedance line. Output: cathode follower. Phone jack permits monitoring. Less speakers (see Model 260, below) and mikes (see page 315 for guide to selection). $6 \times 141 / \mathrm{sx161/4}{ }^{\prime \prime}$. For operation from $110-120 \mathrm{v}$., 60 cycle AC. Shpg. wt., 45 lbs. 91 RU 794. NET
755.00

## MODEL 62K RECORDER

Similar to Model 63 K described above, but for monaural record-stereo playback. Consists of tape transport with single record amplifier and dual playback preamplifiers. With case. $6 \times 141 / \mathrm{s}^{2} 161 / 4^{\prime \prime}$. For $110-120 \mathrm{v}$., 60 cycle AC. Shpg. wt., 45 lbs. 91 RU 793. \$65.50 Down. NET. . 655.00

## MODEL 61K RECORDER

Similar to Model 63K described above, but for monaural record-monaural playback Consists of tape transport with one record and one playback preamplifier installed. With case. $6 \times 141 / 8 \times 161 / 4^{\prime \prime}$. For $110-120 \mathrm{v}$. 60 cycle AC. Shpg. wt., 45 lbs.
91 RU 792 . \$55.50 Down. NET. . 555.00

## TAPE DECK, SPEAKER-AMPLIFIER AND RECORDING ACCESSORIES

> MODEL 68 TAPE DECK. Professional-type dual-speed tape deck for custom mounting Plays stereo and monaural tapes at $71 / 2$ or $33 / 4$ ips. Features push-button controls, automatic cut-off switch, torque-control switch, output level control, etc. Handles up to $101 / 2^{\prime \prime}$ reels. Frequency Response: $\pm 2 \mathrm{db}$, $50-12,000 \mathrm{cps}$ at $71 / 2 \mathrm{ips} ; \pm 2 \mathrm{db}, 50-7500 \mathrm{cps}$ at $33 / 4$ ips. $6 \times 163 / 8 \times 141 / 8^{\prime \prime}$. With rack-mount adapter. Less mike. For 110-120 volts, 60 cycle AC. Shpg. wt., 38 lbs.
> 91 RU 795. $\$ 44.50$ Down. NET . . 445.00 MODEL 4B. Remote control with $12^{\prime}$ cable. For use with Series 60 . Wt. 5 lbs.

91 R 797. 85.25 Down. NET.
.52 .50

MODEL 260. Speaker and 17 -watt amplifier for Series 60 recorders. In case. $6 \times 141 / 8 x$ 161/4". Shpg. wt., 18 lbs.
91 RU 791.814 .95 Down. NET.... 149.50 91 R 798. Model 5B. 20' extension cable for Model 4B, left. 3 lbs . NET. . . . . . . 19.95 91 R 728. Model $10-B$. Low $Z$ input transformer. Wt., 3 lbs . NET
29.95

91 RX 796. Model 11-B. Rack mounting adapter. Shpg. wt., 6 lbs. NET. . . . . . 18.50 91 R 729. Model 12-B. Fitted canvas cover for Series 60 or 260 . Has pocket for tape and mikes. Wt., 1 lb . NET

SPECIFICATIONS: Frequency Response: $\pm 2$ $\mathrm{db}, 30-16,000 \mathrm{cps}$ at $71 / 2 \mathrm{ips} ; \pm 2 \mathrm{db}, 50-$ $12,000 \mathrm{cps}$ at $33 / 4 \mathrm{ips}$. Takes $7^{\prime \prime}$ reel. Inputs: 2 mike, 2 radio. Output Impedances (Dual): 4. 8, 16 ohms for speakers; also low-impedance cathode-follower for external amplifiers. Rated 8 watts (combined channels). Provisions for stereo or monaural off-the-air recordings. Instant stop lever; 2 VU meters; monitor speaker; recording indicator pilot light; safety lock recording button; etc. Case has room for tapes and mikes. Complete with 2 dynamic microphones. $101 / 2 \times 19$ $\mathrm{x} 157 / 8^{\prime \prime}$. Less speakers. For $110-120$ volts, 60 cycle AC. Shpg. wt., 48 lbs.
91 RU 788. NET.
595.00


## Knight TOP-QUALITY RECORDING TAPES

## knight Tapes

 Offer You Exceptional Quality at New Money Saving PricesFULL FREQUENCY RANGE. Every reel of Knight recording
 tape is manufactured to meet Navy specs W-T-0061 for uniform sensitivity plus full frequency response. In addition, Knight tape conforms to the highest standards of Allied's audio expertsyour assurance of optimum performance, superior quality and superb fidelity.

EXTRA STRENGTH. Knight tape meets every test for
 shock tensile and tensile strength as described by Navy specs W-T-0061. Each reel provides dependable service without stretching or breaking. Rigid manufacturing controls assure the high quality of each reel.
OXIDE COATING STAYS ON. Anchorage tests-covered by Navy specs W-T-0061prove the superiority of Knight recording tape. The oxide won't rub off or scrape off-your tape library retains its fldelity.


Knight recording tape meets Navy specs W-T-0061 for resistance to effects of moisture. This important feature guarantees perfectly flat contact of tape to head without "cup-ping"-response is superior.


1-Mil Mylar Tape


1-Mil Acetate Tape


11/2-Mil Acetate Tape


STANDARD TAPE- $11 / 2$-MIL ACETATE. Plastic reels except *NARTB aluminum ( $3^{\prime \prime}$ center opening). Av. shpg. wt., 8 oz.

| No. |  | Type | Footage | Reel | List | EACH | Lot Price |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 96 | R 562 | 151 | $150^{\prime}$ | $3^{\prime \prime}$ | $\$ 0.70$ | .46 | $.41 \dagger$ |
| 96 | R 561 | 351 | $300^{\prime}$ | $4^{\prime \prime}$ | 1.35 | .88 | $.79 \dagger$ |
| 96 | R 560 | 651 | $600^{\prime}$ | $5^{\prime \prime}$ | 2.25 | 1.47 | $1.32 \dagger$ |
| 96 | R 356 | 1251 | $1200^{\prime}$ | $7^{\prime \prime}$ | 3.50 | 2.29 | $2.06 \dagger$ |
| 96 | R 357 | $2551 \mathrm{R}^{\prime \prime}$ | $2500^{\prime}$ | $1012^{\prime \prime}$ | 10.90 | 7.12 | $6.41 \ddagger$ |

$\dagger$ TNET EACH, 10 or more. $\ddagger$ NET EACH, 5 or more.
"LONGER-RECORDING" TAPE-1-MIL ACETATE. $50 \%$ more recording time. Plastic reels except *NARTB alum. ( $3^{\prime \prime} \mathrm{ctr}$. opening). 8 oz .

| No. | Type | Footage | Reel | List | EACH | Lot Price |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 92 | R 935 | 941 | $900^{\prime}$ | $5^{\prime \prime}$ | $\$ 3.50$ | 2.29 |
| 92 | R 936 | 1841 | $1800^{\prime}$ | $7^{\prime \prime}$ | $5.06 \dagger$ |  |
| 92 | R 937 | 3641 R | $3600^{\prime}$ | $101 / 2^{\prime \prime}$ | 12.85 | 3.60 |

†NET EACH, 10 or more. $\ddagger$ NET EACH, 5 or more.
"LONGER-RECORDING" TAPE-1-MIL MYLAR. 50\% more recording time. Mylar base. On plastic reels except *NARTB aluminum reel ( $3^{\prime \prime}$ center opening). §Plastic reel in self-mailer carton. 12 oz.

| No. | Type | Footage | Reel | List | EACH | Lot Price |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 96 R 838 | 2618 | $225^{\prime}$ | $3^{\prime \prime}$ | $\$ 1.00$ | .66 | $.59 \dagger$ |
| 96 | R 955 | 961 | $900^{\prime}$ | $5^{\prime \prime}$ | 3.60 | 2.35 |
| 96 | $2.12 \dagger$ |  |  |  |  |  |
| 96 956 | 1861 | $1800^{\prime}$ | $7^{\prime \prime}$ | 6.20 | 4.05 | $3.65 \dagger$ |
| 96 | R 958 | $3661 \mathrm{R}^{*}$ | $3600^{\prime}$ | $101 / 2^{\prime \prime}$ | 14.40 | 9.80 |

†NET EACH, 10 or more. $\ddagger \mathrm{NET}$ EACH, 5 or more.


COLORED BASE TAPE-11/2-MIL ACETATE. Same high quality as acetate base (left). Plastic reels. Shpg. wt., 8 oz.

| No. | Green | No. | Blue | Footage | Reel | EACH | 10-Up, EA |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 96 R736 | 651G | $\overline{96 R 738}$ | 651 B | $60{ }^{\prime}$ | 5" | 1.47 | 1.32 |
| 96 R 737 | 1251G | 96 R 739 | 1251B | $1200{ }^{\prime}$ | $7{ }^{\prime \prime}$ | 2.29 | 2.06 |

LOW-PRINT TAPE. Minimizes print-through of signal while tape is in storage. ${ }^{*} 11 / 2$-mil acetate. $\dagger 11 / 2$-mil Mylar. Av. shpg. wt., 12 oz

|  | Stock No. | Mfr's Type | Footage | Reel Size | List | $\begin{aligned} & 1-4, \\ & \text { EAC' } \end{aligned}$ | $\begin{aligned} & 5-9! \\ & \text { EACH } \end{aligned}$ | $\begin{aligned} & \text { IO-UP, } \\ & \text { EACH } \end{aligned}$ |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 92 | R 931 | 1251-M* | $1200^{\prime}$ | $7^{\prime \prime}$ | \$4.30 | 2.80 | 2.80 | 2.53 |
| 92 | R 930 | 2551 R-M* | $2500^{\prime}$ | 101/2" | 12.50 | 8.16 | 7.35 | 7.35 |
| 92 | R 932 | 1271-M $\dagger$ | $1200^{\prime}$ | $7{ }^{\prime \prime}$ | 7.70 | 5.03 | 5.03 | 4.53 |
| 92 | 2 R 933 | 2571 R-M $\dagger$ | 2500' | 101/2" | 16.40 | 10.71 | 9.64 | 9.64 |

TEMPERED MYLAR TAPE. Has twice the strength of conventional $1 / 2$-mil tape. Plastic reel. Av. shpg. wt., 8 oz .

| Stock No. | Type | Reel | Length | List | I-9, EA. | O-Up, EA. |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 92 R 959 | 1231 T | $5^{\prime \prime}$ | $1200^{\prime}$ | $\$ 4.75$ | 3.11 | 2.79 |
| 92 R 960 | 2431 T | $7^{\prime \prime}$ | $2400^{\prime}$ | 8.75 | 5.71 | 5.14 |

TAPE RECORDER REELS. $101 / 2^{\prime \prime}$. With box. ${ }^{*} 3^{\prime \prime}$ center. Wt., 8 oz .

| No. | Type | Description | List | 1-4, EA. | 5-Up, EA. |
| :---: | :---: | :---: | :---: | :---: | :---: |
| 96 R 358 | 10RB | NARTB aluminum* |  |  |  |
| 96 R 997 | 10FS | Fiberglass, RETMA adapterless $5 / 16^{\prime \prime}$ center | \$4.00 | 2.62 | 2.35 |

MYLAR SELF-TIMING LEADER TAPE. 100 ft . of white Mylar leader tape. Spaced markings for timing. Shpg. wt., 5 oz.
92 R 938. List, $55 \&$ NET.
37c


TYPE 120-12 HIGH-OUTPUT TAPE-11/2-MIL ACETATE. 8 to 12 db higher output. $1200^{\prime}$. Plastic $7^{\prime \prime}$ reel. Shpg. wt., 12 oz.

## 92 R 999 12-UP, EACH <br> 3.24 1-11, NET EACH.

3.60

TYPE 41-1/2S SPLICING TAPE. Coated one side with non-run adhesive. $150^{\prime \prime}, 1 / 2^{\prime \prime}$ wide, on handy dispenser. Shpg. wt., 3 oz .
96 R 232. NET
LOW-PRINT TAPE-11/2-MIL ACETATE. Minimizes print-through during storage. $7^{\prime \prime}$ reel, $1200^{\prime} ; 101 / 2^{\prime \prime}$ reel, $2400^{\prime}$. Shpg. wt., 12 oz .

| Stock No. | Type | Reel Size | I-11, EA. | 12-Up, EA. |
| :---: | :---: | :---: | :---: | :---: |
| 92 R 917 | $131-12$ | $7^{\prime \prime}$ | 2.88 | 2.59 |
| 92 R 918 | $131-24 R$ | $101 / 2^{\prime \prime}$ | 8.40 | 7.56 |

TYPE 200 TENSILIZED TAPE. Super-strength, long-play tape. Polyester $3 / 4$-mil base. $7^{\prime \prime}$ reel; $2400^{\prime}$. Shpg. wt., 12 oz .
92 R 934. 24-Up, EACH. . ...5.54 1-23, NET EACH
5.71

EMPTY PLASTIC REELS. Supplied complete with index box. Durably made of molded high-strength plastic, completely transparent. Adequate space provided on each reel for labeling or marking. Av. shpg. wt., 4 oz.

| Stock No. | Reel Size | List | 1-11, EACH | $12-$ Up, EACH |
| :---: | :---: | :---: | :---: | :---: |
| 96 R 237 | $3^{\prime \prime}$ | $25 \phi$ | $17 \phi$ | $15 \phi$ |
| 96 R 349 | $4^{\prime \prime}$ | $55 \phi$ | $37 \phi$ | $33 \phi$ |
| 96 R 236 | $5^{\prime \prime}$ | $65 \phi$ | 444 | $39 \phi$ |
| 96 R 194 | $7^{\prime \prime}$ | $75 \phi$ | $50 \phi$ | $45 \phi$ |

ONE-REEL MAILING BOXES. Shpg. wt., 3 oz .

| Stock No. | Reel Size | List | 1-11, EACH | 12-Up, EACH |
| :---: | :---: | :---: | :---: | :---: |
| 96 R 324 | $5^{\prime \prime}$ | 156 | 104 | $9 \downarrow$ |
| 96 R 323 | $7{ }^{\prime \prime}$ | 20. | 136 | 124 |
| 96 R 322 | 101/2" | 30.6 | 204 | 184 |



## Reeves SOUNDCRAFT Recording Tape

"LIFETIME" TAPE $-11 / 2$-MIL MYLAR. Micropolished. Plastic reels, except *RETMA fiberglass reel. Av. shpg. wt., 8 oz .

| Stock No. | Mfr's Type | Footage | Reel Size | 1-11, EA. | 12-Up, EA |
| :---: | :---: | :---: | :---: | :---: | :---: |
| 96 R 968 | L-6 | $600^{\prime}$ | $5^{\prime \prime}$ | 2.78 | 2.50 |
| 96 R 969 | L-12 | $1200{ }^{\prime}$ | $7{ }^{\prime \prime}$ | 4.58 | 4.12 |
| 92 R 954 | L-24RF* | $2400{ }^{\prime}$ | 101/2" | 10.19 | 9.17 |

"RED DIAMOND" STANDARD TAPE- $11 / 2$-MII ACETATE. Micropolished. Acetate base. Plastic reels except *RETMA fiberglass.

| Stock No. | Mfr's Type | Footage | Reel Size | 1-11, EA. | 12-UP, EA. |
| :---: | :---: | :---: | :---: | :---: | :---: |
| 96 R 960 | SPN-1 | $150{ }^{\prime}$ | $3^{\prime \prime}$ | . 46 | . 41 |
| 96 R 961 | SPN-3 | $300{ }^{\prime}$ | $4^{\prime \prime}$ | . 88 | . 79 |
| 96 R 962 | SPN-6 | $600{ }^{\prime}$ | 5** | 1.47 | 1.32 |
| 96 R 963 | SPN-12 | $1200{ }^{\prime}$ | $7{ }^{\prime \prime}$ | 2.29 | 2.06 |
| 92 R 950 | SPN-24RF* | $2400{ }^{\prime}$ | 101/2" | 7.12 | 6.41 |

"PLUS-50" TAPE-1-MIL MYLAR. 50\% more footage. Micropolished. Mylar base. Plastic reels except *RETMA fiberglass. 8 oz .

| Stock No. | Mfr's Type | Footage | Reel Size | 1-11, EA. | 12-Up, EA. |
| :---: | :---: | :---: | :---: | :---: | :---: |
| 92 R 952 | PL-2 | $225{ }^{\prime}$ | $3^{\prime \prime}$ | . 66 | . 59 |
| 96 R 972 | PL-9 | $900^{\prime}$ | $5{ }^{\prime \prime}$ | 2.45 | 2.20 |
| 96 R 973 | PL-18 | 1800' | $7^{\prime \prime}$ | 4.24 | 3.82 |
| 92 R 953 | PL-36RF* | $3600^{\prime}$ | 101/2" | 9.80 | 8.82 |

95 R 917. XP-24 "Plus 100" Tape- $1 / 2$-Mil Mylar. Extra-long-play micropolished tape. Requires careful handling. 2400'. 7" plastic reel. Shpg. wt., 14 oz .12 -Up, EA. . . . 5.39 1-11, EA..... 6.05 TAPE TIMING CHART. Semi-logarithmic tape timing chart. Covers speeds from $17 / 8$ to $15^{\prime \prime}$, single and dual track. Wt., 6 oz .
92 R 955 . List, $\$ 1.20$. NET.
88c
COMBINATION OFFERS-REELS OF TAPE IN CHESTS. *8x73/4x71/2".

| No. | Mfr's Type | Tape | Reels | Lbs. | List | NET EACH |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 96 R 964 | SPNC-7 | "Red Diamond" | 5-1200' | 8 | 17.50 | 11.45 |
| 96 R 953 | LC-7 | "Lifetime" | 5-1200' | 8 | 31.50 | 22.90 |
| 96 R 952 | PLC-7 | "Plus-50" | 5-1800' | 9 | 30.00 | 21.20 |
| 95 | 7 STC | Tape Chest |  | 4 | 1.50 | 1.10 |

## Wood Furniture Base for Tape Decks



Expertly designed, carefully made furniture bases for shock-mounting of tape decks. Correct size for Viking, Bell and Pentron decks. Constructed of selected $3 / 4^{\prime \prime}$ hardwood stock and fine furniture veneers, hand-rubbed to a lustrous finish. Top board "floats" on sponge rubber to keep shocks from being transmitted to tape deck. Mitered joints provide extra firmness and rigidity. Rubber-covered feet prevent marring of furniture. Feet are adjustable to permit leveling of base. Top board is blank to permit cutting to fit particular tape deck. Height, $6^{3 / 8^{\prime \prime} \text {; width, } 21^{\prime \prime} \text {.; depth, } 16^{3} / 4^{\prime \prime} \text {. Base }{ }^{\prime} \text {. }{ }^{\prime} \text {. }}$ is completely pre-assembled. Shpg. wt., 15 lbs .
91 RU 563C. Mahogany.
21.75

91 RU 563C. Limed Oak
21.75

91 RU 563C. Walnut . .
21.75

HEAVY-DUTY DRAWER SLIDES FOR ABOVE. $18^{\prime \prime}$ long. Normal extension is $16^{\prime \prime}$. Shpg. wt., 5 lbs.
86 R 199. List, $\$ 4.55$. NET
3.50

## RCA Recording Tape

ACETATE-BASE TAPE. Quality magnetic tape for critical recording applications. Oxide coating is impregnated with dimethyl silicone, a dry lubricant, to reduce wow, flutter, squeal and tape head wear. Oxide particles are extremely small to minimize tape hiss and permit high-level recording with low distortion. Plastic reels specially slotted for easy loading. Av. shpg. wt., 8 oz .

| Stock No. | Mfr's <br> Type | Tape Footage | Reel Size | Mils | List | NET EACH |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  |  |  |  |  | \|-11 | 12.Up |
| 92 R 963 | 250C1 | $900^{\prime}$ | 5" | 1 | \$3.50 | 2.29 | 2.06 |
| 92 R 964 | 251 C 1 | $600^{\prime}$ | 5" | 11/2 | 2.25 | 1.47 | 1.32 |
| 92 R 965 | 255 C 1 | $1800^{\prime}$ | $7{ }^{\prime \prime}$ | 1 | 5.50 | 3.60 | 3.23 |
| 92 R 966 | 256 C 1 | $1200^{\prime}$ | $7^{\prime \prime}$ | $11 / 2$ | 3.50 | 2.29 | 2.06 |

MYLAR-BASE TAPE. Superior magnetic recording tape on a Mylar base. For use under adverse recording conditions, or where extended playing time is desired. Includes the modern features described in the acetate-base tape listing above-plus easy-loading, slotted plastic reels. Av. shpg. wt., 8 oz.

| Stock No. |  | Mfr's <br> Type | Tape Footage | Reel Size | Mils | List | NET EACH |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  | 1-11 |  |  |  |  | 12-Up |
| 92 | R 967 |  | 252C1 | $1200^{\prime}$ | $5{ }^{\prime \prime}$ | $1 / 2$ | \$4.55 | 2.97 | 2.68 |
| 92 | R 968 | 253 Cl | $900^{\prime}$ | 5" |  | 3.60 | 2.35 | 2.12 |
| 92 | R 969 | 254 C 1 | 600 | 5" | $11 / 2$ | 4.10 | 2.68 | 2.41 |
| 92 | R 970 | 257 C 1 | $2400^{\prime}$ | 7" | 1/2 | 7.85 | 5.34 | 4.61 |
| 92 | R 971 | 258 C 1 | $1800^{\prime}$ | 7 " | 1 | 6.20 | 4.05 | 3.65 |
| 92 | R 972 | 259 Cl | $1200^{\prime}$ | $7^{\prime \prime}$ | $11 / 2$ | 6.65 | 4.34 | 3.91 |

TYPE 501C1. Here's a handy bookshelf-type case for convenient filing and storage of your tapes. Case is covered with gold-stamped, simulated red leather. Employs heavy chipboard constructionenclosed on five sides. Vertically divided into five compartmentseach compartment holds one $5^{\prime \prime}$ reel of tape. Case size is $55 / 8 \times 43 / 16 x$ $53 / 8^{\prime \prime}$ deep. Shpg. wt., $1 / 2 \mathrm{lb}$.
92 R 961 . List, $\$ 1.28$. NET
$75 c$
TYPE 502C1. As above, but holds five $7^{\prime \prime}$ reels of tape. Size is $75 / 8 \mathrm{x}$ $43 / 16 \times 73 / 8^{\prime \prime}$ deep. Shpg. wt., $1 / 2 \mathrm{lb}$.
92 R 962. List, $\$ 1.40$. NET.

NEW DATREL "Tape IndX"


Eliminate messy, haphazard labeling of tapes and individual selections with the convenient Datrel tape index assortment. Includes 30 Mylar labels in 5 different colors-one set of colored labels for each reel of tape. This permits keying up to 6 selections on each of 5 different reels. Numbered Mylar labels will not come off of tape or rip-can be run through tape mechanism without binding. Also included are 5 selection cards, one for each reel. Numbered spaces are provided on the cards for the title of each selection. These cards can be put on the tape box, separated and attached to each spoke of the reel, or put in a card file or folder (folder listed below). Shpg. wt., 2 oz.
92 R 973 . NET
98c
TAPE INDEX FOLDER. Reinforced plastic filing folder-holds ten tape selection cards. Size, $7 \times 31 /{ }^{\prime \prime}$. Shpg. wt., 4 oz.
92 R 974. NET.
98 c


## How to Convert to Stereo with Nortronics Components

Now you can quickly convert your tape recorder to play back and record breathtaking stereophonic sound with a few easily installed components. The installation of any desired combination of these components is quick, easy, and involves no soldering-the only necessary tool is a screwdriver. The paragraphs below and to the right outline what you will need for converting your tape machine to perform the various stereo tape operations.

TO PLAY STEREO. The basic unit you will need for playing stereo tapes is one of the tape head assemblies listed below. The head can be connected directly to a stereo amplifier-speaker system equipped with tape-head inputs, or it can be connected to two PL-100 playback amplifiers. The PL-100 amplifiers have 4, 8 and 16 ohm outputs for direct connection to speakers; cathode follower outputs connect to inputs of a stereo amplifierspeaker system not having tape-head inputs.

TO RECORD STEREO. In order to make stereo recordings, you will need one of the two head assemblies below and two RA-100 recording amplifiers. The same head can be employed for both stereo record and playback by disconnecting it from the RA100's and plugging it into the playback amplifying system. Use a single RA-100 with the head for monaural recordings

TO COPY STEREO. You can use the recording combination de scribed above to record stereophonic broadcasts or to copy stereo tapes, etc. The RA-100's have all necessary inputs.

INTERCONNECTION OF NORTRONICS TAPE UNITS. A monaural instal lation without erase requires 1 pin-plug cable; a monaural installation with erase requires 2 . The numbers are doubled or stereo, with the addition of 1 cable for stereo recording See page 93 for cables (Stock No. 99 S 855).

STEREO TAPE HEAD ASSEMblies. Compact playback-record heads-mount on side routed through stereo assembly and then through present tape guides. May also be used monaurally. Response: $30-12,000 \mathrm{cps}$ $\pm 3 \mathrm{db}$ *at $71 / 2 \mathrm{ips}$, tat $33 / 4 \mathrm{ips} .50 \mathrm{db}$ crosstalk rejection. (Use SK-50 for the 4 -track pre-recorded stereo tapes.) $15 / 8 \times 3 \times 13 / 16^{\prime \prime} .6 \mathrm{oz}$.
92 RC 976. SK-100*. 2-track. NET 23.50
92 RC 977. SK-50†. 4-track. NET. . . 26.00
B STEREO ERASE ATTACHMENTS. Fit on either side of tape heads. Provide stereo or selective monaural erase. 2 oz .
92 RC 978. EK-100. 2-track. NET. .I4.00
92 RC 979. EK-50. 4-track. NET.
4.00
C. PL- 100 PLAYBACK AMPLIFIER. Designed 6) to match high-impedance magnetic tape head-can be used in pairs with a stereo head or with any stereophonic phono cartridge. Outputs for connection to a speaker, or to the high-level input of a basic amplifier.
Low-level Inputs: tape head, magnetic phono cartridge. High-level Input: tuner or ceramic cartridge. Outputs: 4, 8, 16 ohms; 1 v. cathode followers. Equalization: continuously variable, with NAR TB and RIAA Power Output: 3 watts, push-pull triodes. Response: $30-15,000 \mathrm{cps}, \pm 2 \mathrm{db} .2 \%$ harmonic distortion. $25 / 8 \times 5 \times 3 / 88^{\prime \prime}$. For $110-$ 120 v., 60 -cycle AC. Shpg. wt., 6 lbs. 39.50
92 R 980 . NET. . . . . . . . . . . . . . . 39.50

RA-100 RECORDING AMPLIFIER. Universal (recording amplifier-can be adjusted for use with any tape head. Supplies audio power, bias voltage and erase head power Includes inputs that permit use in pairs for copying stereo tapes or records. Has full NARTB equalization, VU meter and monitor jack.
Low-level Input: mike, tape head or magnetic phono cartridge. High-level Input: tuner or ceramic cartridge. Outpuis: audio and 65 kc bias to recording head (currents adjustable), high ( 6 K to 10 K ) or low ( 20 to 30 ohms) impedance to erase head. -55 db signal-tonoise ratio. $25 / 8 \times 53 / 8 \times 8^{\prime \prime}$. For $110-120 \mathrm{v}$. 60 -cycle AC. Shpg. wt., 6 lbs.
60-cycle AC. Stap
92 R 981 . NET.
49.50

Magnetic Telephone Pickups


High-impedance coil units designed to permit recording both sides of a telephone conversation. Ideal for home or business-eliminate guesswork and misinterpretations. Require no electrical or physical connection to the telephone -simply place telephone on pickup. Plug into the mike input of your tape recorder, wire recorder or amplifier.

ELECTRO-DUCER TELEPHONE PICKUP. For all types of telephones. Has removable coil. $1 \times 61 / 2 \times 91 / 2^{\prime \prime} .12 \mathrm{ft}$. cable. $11 / 4 \mathrm{lbs}$.
99 S 482. List. \$12.50. NET
7.35

F ELECTRO-SCRIBER TELEPHONE PICKUP. For standard rectangularbase cradle telephones. Heavy rubber construction. With 8 ft . cable and 3 -prong Jones plug. $13 / 4 \mathrm{lbs}$.
99 S 489. List, \$12.50. NET
7.35MAGNETIC RECORDING INDUSTRIES VM938 PICKUP. For any telephone. $13 / 4 \times 3 / 4 \times 4^{\prime \prime} .5^{\prime}$ cord, less plug, 8 oz .
99 S 478. NET.
2.98

KORD-O-KOIL MAGNETIC PICKUP. For cradle telephones only. Size $51 / 2 \times 5 / 8 \times 91 / 4^{\prime \prime}$. Attractive leatherette finish. Complete with $6-\mathrm{ft}$. cord and phone plug. Shpg. wt., $13 / 4 \mathrm{lbs}$.
99 S 486. List, $\$ 10.00$. NET
5.88


See the sound track on your recorded tapes with this unique kit! Permits perfect alignment of recording heads and precise editing of tape. Allows you to eliminate the crosstalk and distortion caused by head misalignment. Ideal for anyone engaged in magnetic instrumentation or video taping, as well as the serviceman or home recordist.
Tape is run through a colloidal iron suspension, which deposits fine iron particles on the magnetic track. Deposit pattern shows you the vertical and angular head alignment, and its condition of wear. Kit includes $1 / 2-\mathrm{pt}$. can of iron suspension, jewelers' "loop", plastic tray, and a roll of transparent tape with 4 slides. Shpg. wt., $11 / 2$ lbs.
parent tape with
92 R 975 . NET.
7.95

92 R 806. $1 / 2$-Pt. of Iron Suspension. $3 / 4 \mathrm{lbs}$. NET
3.00


## knilght KN-4500 DYNAMIC MICROPHONE

NET<br>\$24.95

\$2.50 DOWN

- Made by a Famous U.S. Manufacturer
- Perfect for Group Recording
- Greatly Improves Recording Quality

Superlative value in a high-fidelity dynamic microphone-made by one of America's leading manufacturers of broadcast equipment Ideal for PA and recording applications, the mike may be used on the desk stand supplied, or mounted on any standard floor stand. Comes complete with a $10-\mathrm{ft}$. cable and shielded screw-type micro phone connector to fit any PA amplifier. Phone plug adapter supplied will fit $90 \%$ of all home recorders.
Although the mikes supplied with most home tape recorders are of sufficient quality to provide good voice reproduction, recording of music calls for a fine dynamic microphone such as the top-value KN-4500. Another advantage of using the precision-made Knight dynamic microphone is a continued high standard of performance under extremes of temperature and relative humidity.
Pickup pattern is all-directional-perfect for recording group entertainment or discussions. Wide-range response, from 00 to 12,000 cps, assures realistic, natural quality of both voice and music. High impedance output; output level is $-56 \mathrm{db} .15 / 16 \times 71 / 2^{\prime \prime}$ long. Handsomely finished in black and gold. Shpg. wt., $21 / 2$ lbs. 94 S 097. Only $\$ 2.50$ Down. NET.
24.95

COMPLETE SELECTION OF QUALITY


## HANDY KIT FOR TAPE RECORDISTS

NET A complete kit of helpful, time-saving accessories \$735 for the tape recordist. Includes valuable aids for editing, splicing and identification; everything needed for cleaning and lubricating magnetic heads; and a convenient tape threader.
Contains: Robins TS-4JR Tape Splicer, 150 -inches dispenser roll of splicing tape, 30 tape identification labels, 150 -foot dispenser roll of leader and timing tape, 1 bottle each of "Long Life"' Tape Head Cleaner and Lubricant Fluids, and a Robins tape threader.
The Robins tape splicer cuts tape ends diagonally and gives splice a concave trim to prevent binding in the recording mechanism. The splicing tape is especially made for use with magnetic recording tape-adhesive will not spread to adjacent layers of tape under storage and cause them to stick together. Tape can be neatly identified by using the labels supplied. Labels have an easy-to-apply adhesive backing and show title, date and reel number. The leader and timing tape can either be used at the beginning of a reel or put and timing tape can either be used at the beginning of
Tape-head cleaner permits close contact of tape to head-increases effective recorder sensitivity and reduces noise in recordings. Lubricant reduces flutter and wow-assures that machine will run at correct speed for maximum timing accuracy and trueness of pitch in recordings. Tape threader greatly simplifies starting a tape on take-up reel-slips over shaft and empty reel hub for quick threading. Shpg. wt., complete kit, $11 / 2 \mathrm{lbs}$.
94 R 921 . NET. . . . . . . . . . . .
7.35


## MICROTRAN BULK TAPE ERASER

MODEL HD-11. Here's a unit designed to erase a complete reel of tape-quickly and efficiently. Permits making greatly improved recordings by lowering background noise levels from 3 to 6 db . Ideal for the recording enthusiast desiring clean, distor-tion-free tapes; also for those who have Pentron, Viking, or other tape decks without stereo erase. Exceptionally easy to op-erate-simply rotate reel of tape over unit. Tape is quickly demagnetized-cleaner than originally packaged, unused tape. Adds new life to often-used tapes. Size, $31 / 2 \times 43 / 4 \times 73 / 4$ " For operation from $110-120$ volts, $50-60$ for operation from $110-120$
92 R $941 . \$ 2.29$ Down. NET
22.91

## TAPE CASES AND RACK

10-REEL TAPE CARRYING CASE. Handsome, lightweight tape carrying case-stores ten $7^{\prime \prime}$ reels of tape. Sturdily constructed of wood with a cleanly styled, simulated-leather, brown and white covering. Has securely er, brown and white covering. Has securely fastened carrying handle and clasp lock.
Includes protective feet to prevent marring Includes protective feet to prevent marring
furniture. Measures only $81 / 2 \times 81 / 2 \times 83 / 4^{\prime \prime}$. Shpg. wt., $31 / 4 \mathrm{lbs}$.
96 RX 580. NET.
5.95

5-REEL TAPE CARRYING CASE. Rugged tape case designed for maximum portabilityholds five $7^{\prime \prime}$ reels of tape. Constructed of lightweight, rigid fiberboard with gripmolded plastic handle. Metal clasp securely locks cover. Case may also be used for tape filing or storage. Measures $73 / 4 \times 75 / 8 \times 33 / 8^{\prime \prime}$. Shpg. wt., 1 lb .
99 R 172 . NET
1.49

10-REEL TAPE STORAGE RACK. Convenient tape storage rack with sleek modern styling Holds 10 reels of tape between sturdy curved steel rods. Smart black and gold finish matches any decor. Has protective feet-can't mar furniture. Maximum height is $7^{\prime \prime}$. Shpg. wt., 2 lbs.
92 R 91 4. List, \$3.98. NET.
2.40

## "JIFFY-RASE" BULK TAPE ERASER

Highly efficient, easy-to-use bulk tape eras-er-permits you to erase an entire reel of tape or wire at a time without using your recorder. Just push momentary switch and move "Jiffy-Rase" over reel-provides a move nofy-Rase over reel-provides a clean, noise-free erasure. Tape is restored
to better than its original condition. You to better than its original condition. You can also improve your recordings by using
the "Jiffy Rase" to demagnetize record and playback heads. Allows quick erasure of tapes recorded on stereo decks that do not include erase heads. Demagnetize s screwdrivers, pliers, or any other tools in which magnetism is undesirable. $5^{\prime \prime}$ O.D. x $31 / 2^{\prime \prime} \mathrm{H}$. For $110-120$ v., 60 cycle AC. 7 lbs . For 110-120 v., 60 cycle AC.
96 R $569 . \$ 2.10$ Down. NET.
20.98

## WIRE RECORDER <br> WIRE AND HEADS



WEBSTER-CHICAGO 2904 WIRE RECORDING HEAD. Not illustrated. Replacement head for all WebsterChicago wire recorders. Records, plays back and erases. Less head cover and mounting screw. Complete with instructions. Wt., 11 oz .
96 R 049. List, $\$ 7.50$. NET.
5.88

## ECHO RECORDING WIRE

High-quality $.0036^{\prime \prime}$ stainless steel wire on die-cast spools. With plasticleaders.

| Stock No. | Spool Size | Shpg. Wt. | NET EACH |
| :---: | :---: | :---: | :---: |
| 96 R 145 | 1/4 | 6 oz . |  |
|  | 1/2 hour | 802. |  |
| 96 R 14 |  |  |  |

EMPTY METAL SPOOL. Holds 1-hr. wire supply. Shpg. wt., 8 oz.
96 R 044. NET
42c



## ROBINS RECORDING ACCESSORIES

SP-4 TAPE SPLICER. Small, low-cost tape splicer-makes diagonal and concave trim cuts described at left under TS4A-JR. Consists of tape alignment guide and cutting surface, cutting unit, and blade cover. Shpg. wt., 2 oz .
92 R 986. List, \$3.50. NET
2.57

HD-6 HEAD DEMAGNETIZER. Compact demagnetizer for removing permanent magnetism from tape recording heads. Reduces noise level and harmonic distortion. Just place flat surface of demagnetizer pole piece on poles of head and slowly remove-quickly and easily neutralizes any residual magnetism. $45 / 8^{\prime \prime}$ overall length $x 11 / 4^{\prime \prime}$ dia. For 110 v., 60 cycle AC. Shpg. wt., 1 lb. 92 R 990. List, $\$ 10.00$. NET
7.35

TC-12 TAPE CLIPS. Handy clips keep tape from unwinding. 3 oz .12 per pkg.
92 R 989. List, 35c. PER PKG.
Selected Tape Recording Accessorie

AUDIO COLORED PLASTIC REELS. Attractive colored plastic reels (less tape) available in blue, green, yellow and red, as well as standard clear plastic. All are available in $5^{\prime \prime}$ and $7^{\prime \prime}$ sizes. Reels are supplied in boxes. Av. shpg. wt., 4 oz.

| Size | Stock No. |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: |
|  | Clear | Red | Yellow | Green | Blue |
| 5** | 96 R 748 | ${ }_{96}^{96} \mathrm{R} 740$ | 96 R 742 | ${ }_{96}^{96} 744$ |  |
| $7^{*}$ | 96 R 749 | 96 R 741 | 96 R 743 | 96 R 745 | $96 \text { R } 747$ |
| $5^{\prime \prime}$ REEL. List, 60 c . NET EACH. . . . . . . . . . . 39 c c 35 c$10-$ Up. EACH. . . . . . . . . . . . . . . . . |  |  |  |  |  |
|  |  |  |  |  |  |
| 7" REEL. List, 75c. NET EACH. . . . . . . . . . 49 c 10-Up, EACH.... . . . . . . . . . . . . . . . . . . . . . 44 c |  |  |  |  |  |
|  |  |  |  |  |  |

AUDIO TYPE 400 HEAD DEMAGNETIZER. Quickly demagnetizes tape recording heads to achieve reduced noise level and distortion. Neutralizes the residual magnetism induced in head by transients from speech, music, line noise, and starting and stopping the tape machine. Consists of an AC magnet with pole pieces shaped to fit contour net with pole pieces shaped to fet contour
of recording heads. Extremely easy to use -just place pole tips against head for a moment and slowly remove. AC magnet dia., $13 / 4^{\prime \prime}$. For $110-115$ volts, 60 cycle AC. Shpg. wt., 1 lb .
96 R 563 . List, $\$ 10.00$. NET . . . . . . 5.88
AUDIO TYPE 30AL IDENTIFICATION LABELS. Self-adhesive. $1 / 2 \times 2$ " labels. Attach to reel for quick identification. Shpg. wt., per pkg., 40 oz .30 per pkg.
96 R 564. List, 20c. NET PER PKG..... 12 c

JIFFY-SPLICE TAPE SPLICER. Holds magnetic recording tape in alignment for cutting and splicing. Two clamping clips hold the tape in place-slots guide your knife or razor blade in making both diagonal and trim cuts. Trim cuts are made slightly into the splice to prevent binding in tape mechanism or sticking to other layers of tape on the reel. $3 / 4 \times 41 / 4 \times 11 / 2^{\prime \prime}$. Shpg. wt., 5 oz . 96 R 379. List, $\$ 2.50$. NET.
I. 50 SCOTCH 43P PLASTIC BASE LEADER AND TIMING TAPE. Precision leader and timing tape for editing and starting of tapes. Has strong plastic base. Marked in 1 -second strong plastic base. Marked in $15^{\prime \prime}$ per second. intervals for 3.75
$150-\mathrm{ft}$. roll. 3 oz . 92 R 905. NET.

57 c TAPEMASTER $41 / 2^{\prime \prime}$ VU METER. Make better-than-ever tape recordings with this precision volume unit meter. Eliminates guesswork when adjusting level control by indicating whether recording level is too high or too low. Helps prevent overload distortion; permits emphasizing or de-emphasizing any passage. Needle swing is at a slow rate for positive readings. 2-color scale calirate for positive readings. 2 -color scale call-
brated 0 to $100 \%$ modulation percentage and -20 to +3 VU. Has dual-impedance input for use with high or low impedance circuits. Basic sensitivity is 200 microamps -supplied with shunts for 1.2 or $12-\mathrm{v} .0$ VU operation. Mounts in $23 / 4^{\prime \prime}$ dia. hole; depth behind panel is $11 / 2^{\prime \prime}$. With instruc tions for using with all makes of recorders Shpg. wt., 1 lb .
92 R 942 . NET.
15.95

## SHURE EXACT-REPLACEMENT TAPE RECORDER HEADS

Quality Shure tape recorder heads for replacement or modernization of older tape recorders. If in doubt as to the correct unit to select, send the make, model and serial number of your recorder to Allied for the proper replacement data. *Has Cinch plug and $14^{\prime \prime}$ leads.


Fig. A: upper-track record, playback, erase type. Fig. B: upper-track record, playback type Fig. C: $0.093^{\prime \prime}$ upper-track record playback type.

TT-1 TAPE THREADER. Place your tape against the reel, slip on threader turn crank a few the reel, slip on threader, turn crank a few
times, and tape is securely threaded on the times, and tape is securely threaded
reel. For reels to $7^{\prime \prime}$. Shpg. wt., 2 oz .
96 R 713 . List, 98 c . NET
79c
JCT-2 JOCKEY CLOTH FOR TAPES. Cleans, lubricates and protects tape by depositing on it a thin film of silicone. Just apply cloth while running tape through player or rewhile running tape through player or recorder. Reduces squeal, chatter, and hea
and tape wear. Cloth is washable. 3 oz .
92 R 988. List, $\$ 1.00$. NET.
$59 c$
ST-500 SPLICING TAPE. Roll of quality splicing tape. $1 / 2^{\prime \prime}$ wide. 2 oz .
95 R 713 . List, 39c. NET
29c
RK-2 REPLACEMENT KIT. For TS4A series splicers. Contains replacement cutter cartridge and 2 cutting pads. Shpg. wt., 5 oz . 92 R 987 . List, $\$ 1.25$. NET.



## Rek-O-Kut "Imperial" Professional Recorder

Precision Rek-O-Kut dise recorder equipped with the M-12S overhead recording lathe. Unit will accommodate all standard verticalmounting cutting heads. Supplied with 120 -line leadscrew; interchangeable with leadscrews up to 270 lines (see below). Lathe can be hand-cranked for run-in and run-off spiral grooves. Calibrated for critical timing. Model A-160, $16^{\prime \prime}$ playback pickup arm accommodates records up to $16^{\prime \prime}$ in diameter. Supplied complete with cutting head (Model R-56); frequency response, $50-10.000 \mathrm{cps}$. Less microphone. Uses standard short-shank cutting needle. For 105-125 v., 60 cycle AC. Shpg. wt., 80 lbs.

95 RZ 742 . NET
599.95

MODEL M-12S OVERHEAD RECORDING LATHE. Used in "Imperial" professional recorder listed above. Interchangeable with M-12 mechanism. Less head. Shpg. wt., 20 lbs.
95 RU 745. NET.
150.00

MODEL R-56 CUTTING HEAD. For Model M-12S recording lathe, above. Impedance, 8 ohms. Shpg. wt., 1 lb .
95 RC 746. NET
60.00

MODEL M-12S-210 MICROGROOVE LEADSCREW. For Model M-12S recording lathe. 210 lines per inch. Shpg. wt., 1 lb .
95 R 743. NET
44.95

MODEL M-12S-240 MICROGROOVE LEADSCREW. As above except 240 lines per inch. Shpg. wt., 1 lb.
95 R 744. NET.
44.95

MODEL TR-43H DUAL-SPEED RECORDING TURNTABLE. Dual speed, $12^{\prime \prime}$ aluminum turntable. Plays $331 / 3$ and 78 rpm . Tapped for M-12S cutter. With heavy-duty, hysteresis synchronous motor. Includes $45-\mathrm{rpm}$ idler. Less cutter. Shpg. wt., 21 lbs .
91 RZ 749. NET.
149.95

## G. I. Recorder-Phono Assembly

MODEL GI-R85L-LP. Low-cost recorder-phono assembly for cutting and playing recordings. Easily mounted in cabinet, carrying case, etc. Cuts discs up to $10^{\prime \prime}$ in diameter at 160 lines per inch (standard groove only) at $331 / 3$ and 78 rpm ., or 45 and 78 rpm , using adapter spring included for that purpose. Weighted pickup arm provides proper needle pressure for playing standard and microgroove records.
Turntable is rim-driven by 4 -pole motor. Convenient depth of cut adjustment. An ideal unit for replacement of older disc recorders. Size, Base plate $15^{\prime \prime} \mathrm{W}, 111 / 2^{\prime \prime} \mathrm{D}$; height, $65 / 8^{\prime \prime}, 23 / 4^{\prime \prime}$ above, $37 / 8^{\prime \prime}$ below plate. Requires high-gain amplifier or radio with 3 watts or more output. Cutter head must be connected to high impedance source. Supplied complete with crystal cutting head less cutting needle (requires short shank type) and playback styli. For operation from 110-120 volts, 60 cycle AC. Shpg. wt., 17 lbs.
96 RX 106. List, \$59.50. NET
35.70

MODEL GI-R85-LP WITH MAGNETIC HEAD. Same as GI-R85L-LP, but with magnetic cutting head which connects directly to 8 -ohm output of any P.A. or hi-fi amplifier. Shpg. wt., 18 lbs .
96 RX 703. List, \$63.50. NET
37.80

## Astatic Disc Recording Heads and Needles

TYPE X-26 CRYSTAL. High impedance; response to 6000 cps . Includes flange for Wilcox-Gay, Knight and G.I. recorders. Connects to plate of output tube or 60,000 ohms transformer secondary. Approximate drive voltage required: 150 v . (rms). Size, $13 / 8 \times 5 / 8 \times 31 / 4^{\prime \prime}$. Complete with $24^{\prime \prime}$ leads. Shpg. wt., 1 lb .
65 R 125. NET
7.53

TYPE M41-8 MAGNETIC. Impedance, 8 ohms; connects directly to amplifier output. Upper frequency limit, 7000 cps . Drive voltage, 3 v. (rms). Size, $13 / 4 \times 11 / 16 \times 33 / 4^{\prime \prime} .24^{\prime \prime}$ leads. Shpg. wt., 1 lb .
65 R 128. NET.
.7 .53
KNIGHT STEEL CUTTING NEEDLES. Short shank. Have . $003^{\prime \prime}$ tip. Average cutting life, 20 minutes. Provide quiet cutting for fine recording. Shpg. wt., 3 oz.
$59 c$
65 R 803. Pkg. of 5. NET
KNIGHT SAPPHIRE CUTTING NEEDLE. Precision-ground and highly polished. Short shank. Has .003" tip. Av. life, 5 hrs .2 oz .
65 R 800. NET EACH.
3.88

## Quality Recording Discs for All Purposes audiodisc professional recording blanks

Smooth-coated on both sides of aluminum base. Red Label discs for highest quality work; Yellow Label for general purpose work in studios and schools; Blue Label for home recording. *Large center hole for $45-\mathrm{rpm}$ recordings

| Stock No. |  | Size | Label | Base | Wt., Ea. | Lbs., Pkg. | Std. Pkg. | NET EACH |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  | Single Lots |  |  |  |  |  | Std. Pkg. |
| 69 R | 085 |  | 7"* | Red | . 05017 | 502. | 5 | 25 | .91 | . 82 |
| 69 R | 069 | $8{ }^{\prime \prime}$ | Red | .040" | 502. | 5 | 25 | .71 | . 65 |
| 69 R | 070 | $10^{\prime \prime}$ | Red | .040" | 6 oz . | $81 / 2$ | 25 | 1.01 | . 91 |
| 69 R | 071 | $12^{\prime \prime}$ | Red | .050 ${ }^{\prime \prime}$ | 9 oz . | 131/2 | 25 | 1.67 | 1.50 |
| 69 RX | 072 | $16^{\prime \prime}$ | Red | .050" | 1 lb . | 25 | 25 | 3.01 | 2.70 |
| 69 R | 089 | $8^{\prime \prime}$ | Yellow | .040 ${ }^{\prime \prime}$ | 502. | 5 | 25 | . 61 | . 55 |
| 69 R | 090 | $10^{\prime \prime}$ | Yellow | .040" | 60 zz . | 81/2 | 25 | . 81 | . 72 |
| 69 R | 091 | $12^{\prime \prime}$ | Yellow | .050" | 902. | $131 / 2$ | 25 | 1.30 | 1.18 |
| 69 RX | 092 | $16^{\prime \prime}$ | Yellow | .050 ${ }^{\prime \prime}$ | 1 lb. | 25 | 25 | 2.42 | 2.18 |
| 69 R | 065 | $61 / 2^{\prime \prime}$ | Blue | .027"' | 3 oz . | $61 / 2$ | 50 | . 32 | .29 |
| 69 R | 066 | $8^{\prime \prime}$ | Blue | .027 ${ }^{\prime \prime}$ | 402. | 71/2 | 50 | . 46 | . 41 |
| 69 R | 067 | $10^{\prime \prime}$ | Blue | .027 ${ }^{\prime \prime}$ | 50 cz . | 101/2 | 50 | . 66 | . 59 |

## REEVES SOUNDCRAFT RECORDING DISCS

THE BROADCASTER. For critical recording. Finest physical and sound properties. Made with extreme care. Double face.

| Stock No. | Size | Base | Wt.,Ea. | Lbs., Pkg. | Std. Pkg. | NET EACH |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  |  |  |  |  | Single Lots | Std. Pkg |
| 69 R 260 | $10^{\prime \prime}$ | .040" | 502. | 8 | 25 | 1.11 | 1.00 |
| 69 R 261 | $12^{\prime \prime}$ | .050" | 8 oz . | 14 | 25 | 1.73 | 1.56 |
| 69RX 262 | $16^{\prime \prime}$ | .050" | 26 oz . | 16 | 25 | 3.17 | 2.86 |

THE PLAYBACK. Standard broadcast-quality double-faced discs.

| 69 R | 263 | $61 / 2^{\prime \prime}$ | $.040^{\prime \prime}$ | 3 oz. | 4 | 25 | .59 | .53, |
| :--- | :--- | :--- | :--- | :--- | ---: | ---: | ---: | ---: |
| 69 R | 265 | $10^{\prime \prime}$ | $.040^{\prime \prime}$ | 5 oz. | 8 | 25 | 1.01 | .91 |
| 69 R | 266 | $12^{\prime \prime}$ | $.050^{\prime \prime}$ | 8 oz. | 14 | 25 | 1.67 | 1.50 |

THE AUDITION. For recording in the home. Double-faced discs.

| 69 R | 268 | $61 / 2^{\prime \prime}$ | $.040^{\prime \prime}$ | 3 oz. | 4 | 25 | .52 | .47 |
| :--- | :--- | :--- | :--- | :--- | ---: | ---: | ---: | ---: |
| 69 R | 270 | $10^{\prime \prime}$ | $.040^{\prime \prime}$ | 5 oz. | 8 | 25 | .81 | .73 |
| 69 R | 271 | $12^{\prime \prime}$ | $.050^{\prime \prime}$ | 8 oz. | 14 | 25 | 1.30 | 1.17 |

## SEMI-PROFESSIONAL \& HOME-TYPE RECORDING DISCS

For home, semi-professional and school use. Aluminum base (except tpaper bond base), cellulose acetate coated. Red Label is semi-professional grade with excellent sound qualities.

| Stock No. | Size | Label | Base | $\begin{aligned} & \text { Wt., } \\ & \text { Ea. } \end{aligned}$ | Std. Pkg. | Wt., Std. Pkg. | NET EACH |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  |  |  |  |  |  | Single Lots | Std. Pkg. |
| $69 \mathrm{R109}$ | 61/2" | Orange | 1 | 3 oz . | 6 | $1 / 2 \mathrm{lb}$. | $25 ¢$ | $15 ¢$ |
| 69 R 140 | $6{ }^{1 / 22^{\prime \prime}}$ | Red | .021" | 3 oz . | 5 | 1/2 lb. | 304 | $27 ¢$ |
| 69 R141 | $8^{\prime \prime}$ | Red | .021" | 4 oz . | 5 | 3/4 lb. | 404 | 364 |
| 69 R 142 | $10^{\prime \prime}$ | Red | .021" | 4 oz . | 5 | 1 lb . | 604 | 544 |
| 69 R 143 | $12^{\prime \prime}$ | Red | .021" | 6 oz . | 5 | $21 / 2 \mathrm{lbs}$. | 734 | 664 |
| 69 R 195 | $61 / 2^{\prime \prime}$ | Purple | .012" | 3 oz . | 5 | $1 / 2 \mathrm{lb}$. | 234 | 214 |
| 69 R 196 | $8^{\prime \prime}$ | Purple | . $012^{\prime \prime}$ | 40 oz . | 5 | $3 / 4 \mathrm{lb}$. | 334 | 304 |
| 69 R 197 | $10^{\prime \prime}$ | Purple | . $012^{\prime \prime}$ | 4 oz . | 5 | 1 lb . | 474 | 424 |

RECORD LABELS. Gummed record labels with spaces for title, artist, date, etc. Shpg. wt., per pkg., 2 oz .50 per pkg.
65 R 520. 4 or more Pkgs., EA... 31 c NET PER PKG.
35c

## Disc Cutting Needles

AUDIOPOINTS. High-quality recording needles. *For non-professional and Presto Model K recorders. †For professional recorders. 65 R 960 has $87^{\circ}$ included angle; $65 \mathrm{R} 961,70^{\circ}$. All $.003^{\prime \prime}$ except 65 R 966, .001". Shpg. wt., 2 oz.

| Stock No. | Mfr's Type | Description | NET EACH |
| :---: | :---: | :---: | :---: |
| 65 R 960* | 14 | Sapphire, short dural shank | 4.85 |
| 65R 967* | 20 | As above, for microgroove |  |
| 65 R 961 | 14 | Sapphire, tong dural shank |  |
| 65 R $966 \dagger$ | 20 | As above, for microgroove |  |
| 65R 962* | 202 | Sapphire, short brass shank |  |
| 65 R $963 \dagger$ | 202 | Sapphire, long brass shank | 3.88 |
| 65 R 964* | 34 | Stellite, short brass shank |  |
| 65R965t | 34 | Stellite, long brass shank | 1.47 |

Fully guaranteed for 1 year. Number prefix in tube type indicates screen size. All tubes have magnetic focus and deflection except $\ddagger$ electrostatic focus and magnetic deflection. *Indicates aluminized screens. Department AU3 \& AZ3 designates RCA, AU4 \& AZ4 Raytheon; AU5 Dumont. Prices include Federal Excise Tax. When ordering, give the complete Stock Number, which consists of the Dept. No. and the Manufacturer's Tube Type. See page 442 for shipping instructions.


| Stock No. |  | Shpg. Wt. Lbs. | List | $\begin{gathered} \text { NET } \\ \text { EACH } \end{gathered}$ | Stock No. |  |  | Shpg. Wt. Lbs. | List | $\begin{aligned} & \text { NET } \\ & \text { EACH } \end{aligned}$ |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Dept. | Tube Type |  |  |  | Dept. | Tub | Type |  |  |  |
| AU3 | 8DP4 $\ddagger$ | 4 | \$32.00 | 23.52 | AZ3 | 19AP4 B |  | 24 | \$52.50 | 38.68 |
| AU4 | 10APB4B | 5 | 23.25 | 17.10 | AU3 | 20DP4A/20CP |  | 29 | 40.25 | 29.60 |
| AU3 | 10 BP 4 A | 13 | 22.50 | 16.53 | AU3 | $20 \mathrm{DP} 4 \mathrm{C} / 20 \mathrm{CP}$ | D* | 29 | 48.00 | 35.15 |
| AU3 | 10FP4A* | 13 | 27.50 | 20.19 | AU3 | 20HP4A/20M |  | 29 | 42.00 | 30.90 |
| AU3 | 12KP4A* | 17 | 31.75 | 23.20 | AU3 | 20HP4D $\ddagger$ * |  | 29 | 49.75 | 36.46 |
| AU3 | 12LP4A | 17 | 27.25 | 19.93 | AU3 | $21 \mathrm{ACP} 4 \mathrm{~A} / 21 \mathrm{~A}$ | MP4A/21BSP4* | 33 | 48.00 | 35.15 |
| AU4 | 14ASP4 $\ddagger$ * | 17 | 43.50 | 31.88 | AU3 | $21 \mathrm{ALP} 4 \mathrm{~A} / 21 \mathrm{~A}$ | P4B $\ddagger *$ | 33 | 49.75 | 36.46 |
| AU3 | 14ATP4 $\ddagger$ * | 12 | 36.00 | 26.46 | AU3 | 21 AP 4 |  | 25 | 50.75 | 37.24 |
| AU3 | 14EP4/14CP4/14BP4 | 14 | 29.25 | 21.56 | AU3 | 21 ATP4/21AT | 4A $\ddagger *$ | 33 | 49.75 | 36.46 |
| AU3 | $14 \mathrm{HP} 4 \ddagger$ | 14 | 29.25 | 21.56 | AU3 | 21AVP4/21AU | P $\ddagger$ | 33 | 42.00 | 30.90 |
| AU3 | 14QP4A $\ddagger$ | 10 | 38.00 | 27.76 | AU3 | 21AVP4B/21A | $\mathrm{UP} 4 \mathrm{~B} /$ |  |  |  |
| AU3 | 14RP4 | 12 | 29.25 | 21.56 |  | $21 A V P 4 A / 2$ | $\text { AUP4A } \ddagger *$ | 33 | 49.75 | 36.46 |
| AU3 | 14RP4A* | 12 | 36.00 | 26.46 | AU3 | 21AWP4* |  | 33 | 48.00 | 35.15 |
| AU3 | 14WP4/14ZP4* | 12 | 36.00 | 26.46 | AU3 | $21 \mathrm{BTP} 4^{+*}$ |  | 31 | 49.75 | 36.46 |
| AU3 | 16AP4A | 17 | 48.25 | 35.41 | AU3 | $21 \mathrm{CBP} 4 \mathrm{~A} \ddagger *$ |  | 33 | 49.75 | 36.46 |
| AU3 | 16DP4A | 23 | 45.75 | 33.64 | AU3 | 21CEP4 $\ddagger$ * |  | 28 | 55.00 | 40.38 |
| AU3 | 16GP4B | 16 | 48.25 | 35.41 | AU4 | 21CWP4 $\ddagger *$ |  | 31 | 49.75 | 36.46 |
| AU3 | 16LP4A | 25 | 44.50 | 32.66 | AU3 | $21 \mathrm{DAP4}$ |  | 26 | 55.00 | 40.38 |
| AU3 | 16RP4/16KP4 | 21 | 33.25 | 24.50 | AU3 | 21DFP4 $\ddagger$ * |  | 33 | 55.00 | 40.38 |
| AU3 | 16RP4A/16KP4A* | 21 | 40.50 | 29.72 | AU3 | 21 EP 4 A |  | 36 | 42.00 | 30.90 |
| AU3 | 16TP4 | 21 | 33.25 | 24.50 | AU3 | 21EP4B* |  | 34 | 49.75 | 36.46 |
| AU3 | 16WP4A | 21 | 44.50 | 32.66 | AU3 | $21 \mathrm{FP} 4 \mathrm{~A} \ddagger$ |  | 36 | 43.75 | 32.21 |
| AU4 | 16ZP4 | 24 | 44.50 | 32.66 | AU3 | $21 \mathrm{FP} 4 \mathrm{C} \ddagger{ }^{*}$ |  | 34 | 51.50 | 37.76 |
| AU3 | 17AVP4/17ATP4 $\ddagger$ | 17 | 35.25 | 25.80 | AU5 | $21 \mathrm{KP} 4 \mathrm{~A} \ddagger$ |  | 34 | 54.75 | 40.25 |
| AU3 | 17AVP4A/17ATP4 $\ddagger$ | 17 | 42.50 | 31.04 | AU3 | $21 \mathrm{MP} 4 \ddagger$ |  | 25 | 52.50 | 38.68 |
| AU3 | 17BJP4 $\ddagger$ * | 17 | 42.50 | 31.04 | AU3 | 21WP4 |  | 31 | 40.25 | 29.60 |
| AU3 | 17 BP 4 A | 21 | 33.25 | 24.50 | AU3 | 21WP4A* |  | 31 | 48.00 | 35.28 |
| AU3 | 17BP4B* | 21 | 40.50 | 29.72 | AU3 | 21XP4A* |  | 33 | 49.75 | 36.46 |
| AU3 | $17 \mathrm{BVP} 4 \pm *$ | 14 | 47.75 | 34.95 | AU3 | $21 \mathrm{YP} 4 \pm$ |  | 33 | 42.00 | 30.90 |
| AU3 | $17 \mathrm{BZP} 4 \ddagger^{*}$ | 14 | 47.75 | 34.82 | AU3 | 21YP4A $\ddagger *$ |  | 33 | 49.75 | 36.46 |
| AU3 | 17CDP4 $\ddagger$ * | 14 | 47.75 | 34.82 | AU3 | 21ZP4A |  | 33 | 40.25 | 29.60 |
| AU4 | 17CFP4\#* | 16 | 42.50 | 31.04 | AU3 | 21ZP4B* |  | 33 | 48.00 | 35.15 |
| AU3 | 17 CP 4 | 16 | 43.75 | 32.14 | AZ3 | 24ADP4/24VP |  |  |  |  |
| AU3 | 17GP4 $\ddagger$ | 16 | 48.25 | 35.41 |  | 24CP4A/24 |  | 43 | 69.00 | 50.64 |
| AU3 | $17 \mathrm{HP} 4 / 17 \mathrm{RP} 4 \ddagger$ | 23 | 35.25 | 25.80 | AZ3 | 24AEP4 $\ddagger$ * |  | 43 | 71.25 |  |
| AU3 | $17 \mathrm{HP} 4 \mathrm{~B} / 17 \mathrm{RP} 4 \mathrm{C} \ddagger *$ | 23 | 42.50 | 31.04 | AU3 | 24AHP4 $\ddagger$ * |  | 37 | 76.75 | 56.52 |
| AU5 | $17 \mathrm{KP} 4 \ddagger$ | 22 | 35.75 | 26.14 | AZ3 | 24DP4A/24Y | 4 $\ddagger$ | 43 | 71.25 | 52.26 |
| AU3 | 17LP4/17VP4 $\ddagger$ | 23 | 35.25 | 25.80 | AZ4 | 27EP4* |  | 61 | 118.75 | 87.22 |
| AU3 | 17LP4A/17VP4B+* | 23 | 42.50 | 31.04 | AZ3 | 27MP4* |  | 42 | 163.50 | 126.49 |
| AU3 | 17 QP 4 | 23 | 33.25 | 24.50 | AZ4 | 27RP4* |  | 61 | 118.75 | 87.22 |
| AU3 | 17QP4A* | 23 | 40.50 | 29.72 | AZ3 | 21AXP22A $\ddagger *$ | (Color) | 38 | 160.00 | 137.20 |
| AU3 | 17 TP4 $\ddagger$ | 16 | 43.75 | 32.14 | AZ3 | 21CYP22 | (Color) | 53 | 160.00 | 137.20 |

## WESTINGHOUSE $8^{\prime \prime}$ TV RECEIVER CHECK TUBE

- Fits Most Sets - Self-focusing - Saves Time

Here's an extremely versatile $8^{\prime \prime}$ rectangular universal picture tube -a great aid in television servicing. An exceptionally valuable time-saving accessory -permits testing television set without using the original picture tube. Provides a positive on-the-spot substitution test for questionable picture tubes and eliminates the necessity for taking the original picture tube back to shop for servicing. Even if it should prove necessary to take the chassis back for shop servicing, the check tube may remain in the customer's set until the chassis is returned. Whether used in shop or on home service calls, the check tube saves time and money by providing a quick means for locating CRT or yoke troubles. The check tube is completely self-focusing. It can be used in virtually all electromagnetically deflected television sets regardless of the deflection angle. For $53^{\circ}, 66^{\circ}, 70^{\circ}$, or $90^{\circ}$ yoke. No ion trap required. Ideal for electrostatic or magnetic-focus sets. The receiver check tube is lightweight and compact. A "must" for every TV service shop-a tremendous aid to the individual serviceman. Shpg. wt., 6 lbs.
AU5 $8 \times P 4$. NET.
21.56

Model 8YP4 Receiver Check Tube. Same as above, but with $110^{\circ}$ magnetic deflection. Shpg. wt., 6 lbs.
AU5 8 YP4. NET. $\qquad$ 28.91

## SPECIAL AUDIO TUBES

High quality tubes, specifically designed to deliver outstanding performance in audio circuits. Many of the tubes listed below are very widely used in the newest and most advanced types of high-fidelity equipment. Because they are manufactured to conform to rigidly controlled specifications, you have complete assurance that they will be long-lasting and thoroughly reliable in operation. They are ideal as replacements for standard type tubes in hi-fi amplifiers and for other critical applications. Can be used to bring out the best in your existing equipment or for designing original equipment. Every tube guaranteed (except burnouts) for a full twelve months. *Directly interchangeable types. Other equivalent types listed may require slight wiring changes. MP after Stock No.
 indicates matched pair. Av. shpg. wt., 4 oz .

| RCA |  |  |  |
| :---: | :---: | :---: | :---: |
| Stock No. | Tube Type | Equiv. <br> Tube | $\begin{aligned} & \mathrm{NET} \\ & \mathrm{EACH} \end{aligned}$ |
| E1-1614 | 1614 |  | 3.11 |
| E1-1620 | 1620 | 617 | 6.36 |
| E1-1621 | 1621 | $6 F 6$ | 2.40 |
| E1-1622 | 1622 | 6L6 | 3.15 |
| E1-5881 | 5881 | 6L6 | 3.50 |


| AMPEREX |  |  |  |
| :--- | :--- | :--- | :--- |
| E4-6CA7 | $6 C A 7 *$ | EL34 | 3.60 |
| E4-EL84 | EL84* | 6B05 | 1.20 |
| E4-EC81 | ECC81* | $12 A T 7$ | 1.43 |
| E4-EC882 | ECC82* | $12 A 47$ | 1.15 |
| E4-EC83 | ECC83* | $12 A X 7$ | 1.15 |
| E4-EF86 | EF86* | 6267 | 1.45 |


| GENALEX |  |  |  |
| :---: | :---: | :---: | :---: |
| E3-KT66 | KT66* | 6 L 6 | 3.50 |
| E3-2729 | 2729 | 5879 | 2.95 |
| E3-KT88 | KT88 |  | 4.95 |
| E3-KT88MP | KT88, Matched pr. |  | $11.65 / \mathrm{Pr}$. |


| TUNGSOL |  |  |  |
| :---: | :---: | :---: | :---: |
| E3-5881 | $5881^{*}$ | $6 L 6$ | 3.50 |
| E3-6550 | 6550 | $\ldots \ldots \ldots .$. | 4.95 |

[^2]MULLARD

| MULLARD |  |  |  |
| :---: | :---: | :---: | :---: |
| Stock No. | Tube Type | Equiv. Tube | $\begin{aligned} & \text { NET } \\ & \text { EACH } \end{aligned}$ |
| E3-GZ32 | GZ32 |  | 3.19 |
| E3-EL34 | EL34* | 6CA7 | 4.65 |
| E3-EL34MP | EL34, |  |  |
|  | Matched pr. |  | $10.05 / \mathrm{Pr}$. |
| E3-GZ34 | GZ34 | 5U4GA/B | 3.15 |
| E3-EL37 | EL37 | 6L6 | 4.31 |
| E3-EL37MP | EL37 |  |  |
|  | Matched pr. |  | 9.38/Pr. |
| E3-EABC80 | EABC80 | 6AK8 | 2.74 |
| E3-EBF80 | EBF80 | 6 N8 | 2.25 |
| E3-EZ80 | EZ80 | 6 V 4 | 1.13 |
| E3-ECH81 | ECH81 | 6AJ8 | 2.63 |
| E3-EZ81 | EZ81 | 6BW4 | 1.23 |
| E3-ECC8I | ECC81* | 12AT7 | 1.68 |
| E3-ECC82 | ECC82* | 12AU7 | 1.38 |
| E3-ECL82 | ECL82 |  | 2.63 |
| E3-ECC83 | ECC83* | 12AXT | 1.38 |
| E3-EL84 | EL84* | 6BQ5 | 1.35 |
| E3-EL84MP | EL84 |  |  |
|  | Matched pr. |  | $3.90 /$ Pr. |
| E3-ECC85 | ECC85 | 6AQA | 1.71 |
| E3-EF86 | EF86* | 6267 | 1.88 |
| E3-EF89 | EF89 |  | 2.25 |
| E3-EC90 | tC90* | 6 C 4 | 1.31 |
| E3-EK90 | EK90 | 6BE6 | 1.69 |
| E3-EB91 | EB91* | 6AL5 | 1.09 |
| E3-ECC91 | ECC91* | 616 | 1.99 |
| E3-EF94 | EF94* | 6AU6 | 1.29 |



RCA RADIOTRONS - THE GREAT NAME IN ELECTRONIC TUBES. Premi-um-quality receiving tubes, universally known for their highly dependable performance. Purchasers of tubes in quantity lots may obtain RCA tube literature at no cost-see page 117 of Catalog No. 180 for literature. *Not made by RCAother well-known brands supplied.

GUARANTEED FOR ONE FULL YEAR You can be sure of complete satisfaction when you order receiving tubes from Allied. We will replace any tube listed on these pages that does not give efficient performance for 12 months from date of purchase. This does not apply to burned-out or broken tubes, Av. shpg. wt. per tube, 4 oz .; per 10 tubes, $21 / 2$ lbs.

## Extra Savings When You Buy More Than 5 Tubes

The first net price column ( 1 to 5 ) is for orders of less than 6 tubes. If you buy 6 or more of any one type or assorted types (up to a total of 49), use the second net price column ( 6 to 49 ). For 50 tubes and over, use the third price column.

| Tube Type | List <br> Price | NET EACH <br> In Quantities of: |  |  | Tube Type | List <br> Price | NET EACH <br> In Quantities of: |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  | 1 to 5 | 6 to 49 | 50 or More |  |  | 1 to 5 | 6 to 49 | 50 or More |
| OZ4 | \$1.65 | . 92 | . 81 | . 73 | 3G5GT | \$3.60 | 2.01 | 1.76 | 1.58 |
| OZ4G | 2.00 | 1.12 | . 98 | . 88 | 354 | 2.45 | 1.37 | 1.20 | 1.08 |
| 1 A3 | 3.05 | 1.70 | 1.49 | 1.34 | 3 V 4 | 2.35 | 1.31 | 1.15 | 1.03 |
| 1A5GT | 3.20 | 1.79 | 1.57 | 1.41 | 4AU6 | 2.15 | 1.20 | 1.05 | . 94 |
| 1A7GT | 3.70 | 2.07 | 1.81 | 1.63 | 4BC5* | 2.35 | 1.31 | 1.15 | 1.03 |
| 1AH4* | 2.95 | 1.65 | 1.44 | 1.30 | 4BC8 | 4.05 | 2.26 | 1.98 | 1.78 |
| 1AJ5* | 3.10 | 1.73 | 1.52 | 1.37 | 4BN6 | 3.05 | 1.70 | 1.49 | 1.34 |
| 1 AX2 | 3.05 | 1.70 | 1.49 | 1.34 | 4BE7-A | 4.00 | 2.23 | 1.96 | 1.76 |
| 1B3GT/1G3GT | 2.90 | 1.62 | 1.43 | 1.29 | 4BS8 | 3.85 | 2.15 | 1.89 | 1.70 |
| 1C5GT | 3.60 | 2.01 | 1.76 | 1.58 | 4BU8 | 2.80 | 1.56 | 1.37 | 1.23 |
| 1D8GT* | 4.80 | 2.68 | 2.35 | 2.11 | 4BX8* | 3.45 | 1.93 | 1.69 | 1.52 |
| 1 DN5 | 2.20 | 1.23 | 1.08 | . 97 | 4BZ6 | 2.25 | 1.26 | 1.10 | . 99 |
| 1G4GT* | 2.75 | 1.54 | 1.35 | 1.21 | 4BZ7 | 4.05 | 2.26 | 1.98 | 1.78 |
| 1H4G* | 2.50 | 1.40 | 1.23 | 1.11 | 4CB6 | 2.30 | 1.29 | 1.13 | 1.02 |
| 1H5GT | 3.05 | 1.70 | 1.49 | 1.34 | 4CS6* | 2.35 | 1.31 | 1.15 | 1.03 |
| 1J3* | 2.90 | 1.62 | 1.43 | 1.29 | 4CY5* | 2.50 | 1.40 | 1.23 | 1.11 |
| 1J3GT* | 2.90 | 1.62 | 1.43 | 1.29 | 4DT6 | 2.25 | 1.26 | 1.10 | . 99 |
| 1K3GT* | 2.90 | 1.62 | 1.43 | 1.29 | 5AM8 | 3.20 | 1.79 | 1.57 | 1.41 |
| 1L4 | 2.60 | 1.45 | 1.27 | 1.14 | 5AN8 | 3.55 | 1.98 | 1.74 | 1.57 |
| 1 L6 | 3.35 | 1.87 | 1.64 | 1.48 | 5AQ5 | 2.20 | 1.23 | 1.08 | . 97 |
| 1LA4* | 4.45 | 2.49 | 2.18 | 1.96 | 5AS4A | 2.10 | 1.17 | 1.03 | . 93 |
| 1 LA6 | 4.10 | 2.29 | 2.01 | 1.81 | 5AS8 | 3.45 | 1.93 | 1.69 | 1.52 |
| 1LB4 | 4.45 | 2.49 | 2.18 | 1.96 | 5AT8 | 3.25 | 1.82 | 1.59 | 1.43 |
| $1 \mathrm{LC5}$ | 4.05 | 2.26 | 1.98 | 1.78 | 5AU4* | 3.40 | 1.90 | 1.66 | 1.49 |
| 1 LC6 | 4.10 | 2.29 | 2.01 | 1.81 | 5AV8 | 4.05 | 2.26 | 1.98 | 1.78 |
| 1LD5 | 4.25 | 2.37 | 2.08 | 1.87 | 5AW4* | 2.50 | 1.40 | 1.23 | 1.11 |
| 1 LE3 | 4.25 | 2.37 | 2.08 | 1.87 | 5AZ4 | 2.65 | 1.48 | 1.30 | 1.17 |
| 1 LG5 | 4.05 | 2.26 | 1.98 | 1.78 | 5B8 | 3.90 | 2.18 | 1.91 | 1.72 |
| 1LH4 | 3.95 | 2.21 | 1.94 | 1.75 | 5BE8* | 3.30 | 1.84 | 1.62 | 1.46 |
| 1LN5 | 3.95 | 2.21 | 1.94 | 1.75 | 5BK7A | 3.40 | 1.90 | 1.66 | 1.49 |
| 1N5GT | 3.65 | 2.04 | 1.79 | 1.61 | 5BQ7A | 4.00 | 2.23 | 1.96 | 1.76 |
| 1Q5GT* | 4.05 | 2.26 | 1.98 | 1.78 | 5B R8 | 3.30 | 1.84 | 1.62 | 1.46 |
| 1 R5 | 2.55 | 1.43 | 1.25 | 1.12 | 5BT8 | 3.30 | 1.84 | 1.62 | 1.46 |
| 154 | 3.65 | 2.04 | 1.79 | 1.61 | 5CG8 | 3.25 | 1.82 | 1.59 | 1.43 |
| 155 | 2.55 | 1.43 | 1.25 | 1.12 | 5CL8 | 3.15 | 1.76 | 1.54 | 1.39 |
| 1T4 | 2.40 | 1.34 | 1.18 | 1.06 | 5CM8* | 3.55 | 1.98 | 1.74 | 1.57 |
| 1 U 4 | 2.35 | 1.31 | 1.15 | 1.03 | 5CQ8 | 3.35 | 1.87 | 1.64 | 1.48 |
| 1 U | 2.05 | 1.15 | 1.00 | . 90 | $5 \mathrm{CZ5}$ | 2.85 | 1.59 | 1.40 | 1.26 |
| 1 V | 3.65 | 2.04 | 1.79 | 1.61 | 5DH8* | 3.55 | 1.98 | 1.74 | 1.57 |
| 1V2 | 2.00 | 1.12 | . 98 | . 88 | 5J6 | 2.80 | 1.56 | 1.37 | 1.23 |
| 1V6* | 3.75 | 2.10 | 1.84 | 1.66 | 5T4 | 7.25 | 4.05 | 3.56 | 3.20 |
| $1 \times 2 \mathrm{~A}$ | 3.05 | 1.70 | 1.49 | 1.34 | 5 T8 | 3.40 | 1.90 | 1.66 | 1.49 |
| $1 \times 2 \mathrm{~B}$ | 3.05 | 1.70 | 1.49 | 1.34 | 5U4G* | 2.05 | 1.15 | 1.00 | . 90 |
| 2 A 3 | 6.30 | 3.52 | 3.09 | 2.78 | 5U4GA* | 2.00 | 1.12 | . 98 | . 88 |
| 2AF4-A | 3.95 | 2.21 | 1.94 | 1.75 | 5U4-GB | 2.00 | 1.12 | . 98 | . 88 |
| 2B3* | 2.90 | 1.62 | 1.43 | 1.29 | 5 U | 3.35 | 1.87 | 1.64 | 1.48 |
| 2BN4 | 2.55 | 1.43 | 1.25 | 1.12 | 5V3* | 3.65 | 2.04 | 1.79 | 1.61 |
| $2 \mathrm{CY5}$ | 2.80 | 1.56 | 1.37 | 1.23 | 5V4GA | 3.30 | 1.84 | 1.62 | 1.46 |
| 2EA5* | 2.80 | 1.56 | 1.37 | 1.23 | 5V6GT | 2.20 | 1.23 | 1.08 | . 97 |
| 3 A2 | 3.60 | 2.01 | 1.76 | 1.58 | 5X4G | 2.95 | 1.65 | 1.44 | 1.30 |
| 3A3 | 3.40 | 1.90 | 1.66 | 1.49 | $5 \times 8$ | 3.30 | 1.84 | 1.62 | 1.46 |
| 3AF4A | 4.05 | 2.26 | 1.98 | 1.78 | 5Y3GT | 1.70 | . 95 | . 83 | . 75 |
| 3 AL5 | 1.85 | 1.03 | . 91 | . 82 | 5Y4GT | 2.35 | 1.31 | 1.15 | 1.03 |
| 3AU6 | 2.15 | 1.20 | 1.05 | . 94 | 5Z3 | 3.00 | 1.68 | 1.47 | 1.32 |
| 3AV6 | 1.75 | . 98 | . 86 | . 77 | 5Z4 | 4.55 | 2.54 | 2.23 | 2.01 |
| 3B2 | 6.20 | 3.46 | 3.04 | 2.74 | 6A3* | 5.05 | 2.82 | 2.47 | 2.23 |
| 3BA6* | 2.05 | 1.15 | 1.00 | . 90 | 6A6* | 3.05 | 1.70 | 1.49 | 1.34 |
| 3BC5 | 2.30 | 1.29 | 1.13 | 1.02 | 6A7 | 4.60 | 2.57 | 2.25 | 2.03 |
| 3BN4* | 2.55 | 1.43 | 1.25 | 1.12 | 6 A8 | 4.75 | 2.65 | 2.33 | 2.10 |
| 3BN6 | 3.05 | 1.70 | 1.49 | 1.34 | 6A8G | 4.75 | 2.65 | 2.33 | 2.10 |
| 3BU8 | 2.80 | 1.56 | 1.37 | 1.23 | 6A8GT | 4.75 | 2.65 | 2.33 | 2.10 |
| $3 \mathrm{BY6}$ | 2.35 | 1.31 | 1.15 | 1.03 | 6AB4 | 2.15 | 1.20 | 1.05 | . 94 |
| $3 \mathrm{BZ6}$ | 2.35 | 1.31 | 1.15 | 1.03 | 6AB5/6N5 | 3.70 | 2.07 | 1.81 | 1.63 |
| $3 \mathrm{CB6}$ | 2.25 | 1.26 | 1.10 | . 99 | 6AB7 | 5.00 | 2.79 | 2.45 | 2.20 |
| 3 CF 6 | 2.55 | 1.43 | 1.25 | 1.12 | 6AC5GT | 4.35 | 2.43 | 2.13 | 1.92 |
| 3CS6 | 2.45 | 1.37 | 1.20 | 1.08 | 6AC7 | 4.05 | 2.26 | 1.98 | 1.78 |
| 3DK6* | 2.40 | 1.34 | 1.18 | 1.06 | 6AD7G | 5.90 | 3.30 | 2.89 | 2.60 |
| 3DT6 | 2.20 | 1.23 | 1.08 | . 97 | 6AF4-A | 3.95 | 2.21 | 1.94 | 1.75 |
| 3LF4 | 4.20 | 2.35 | 2.06 | 1.85 | 6AF6G | 3.60 | 2.01 | 1.76 | 1.58 |
| 3Q4 | 2.75 | 1.54 | 1.35 | 1.21 | 6AG5 | 2.60 | 1.45 | 1.27 | 1.14 |

QUANTITY PRICES ALSO APPLY TO ASSORTED TUBES

| Tube Type | List Price | NET EACH <br> In Quantities of: |  |  | Tube Type | List <br> Price | NET EACH <br> In Quantities of: |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  | 1 to 5 | 6 to 49 | 50 or More |  |  | 1 to 5 | 6 to 49 | 50 or More |
| 6AG7 | \$4.60 | 2.57 | 2.25 | 2.03 | 6CH8 | \$3.60 | 2.01 | 1.76 | 1.58 |
| 6AH4GT | 3.30 | 1.84 | 1.62 | 1.46 | 6CK4* | 2.80 | 1.56 | 1.37 | 1.23 |
| 6AH6 | 4.60 | 2.57 | 2.25 | 2.03 | 6CL6 | 3.80 | 2.12 | 1.86 | 1.57 |
| 6AH6V* | 4.65 | 2.60 | 2.28 | 2.05 | 6CL8 | 3.15 | 1.76 | 1.54 | 1.39 |
| 6 AK5 | 4.65 | 2.60 | 2.28 | 2.05 | 6CM6 | 2.55 | 1.43 | 1.25 | 1.12 |
| 6AK6 | 2.85 | 1.59 | 1.40 | 1.26 | 6CM7 | 2.80 | 1.56 | 1.37 | 1.23 |
| 6AL5 | 1.85 | 1.03 | . 91 | . 82 | 6CM8* | 3.55 | 1.98 | 1.74 | 1.57 |
| 6AL7GT | 5.45 | 3.04 | 2.67 | 2.40 | 6CN7 | 2.60 | 1.45 | 1.27 | 1.14 |
| 6AM4 | 5.60 | 3.13 | 2.74 | 2.47 | 6CQ8 | 3.30 | 1.84 | 1.62 | 1.46 |
| 6AM8A | 3.25 | 1.82 | 1.59 | 1.43 | 6CR6 | 2.40 | 1.34 | 1.18 | 1.06 |
| 6AN4 | 4.95 | 2.77 | 2.43 | 2.19 | 6CS6 | 2.35 | 1.31 | 1.15 | 1.03 |
| 6AN8 | 3.50 | 1.96 | 1.72 | 1.55 | 6CS7 | 2.80 | 1.56 | 1.37 | 1.23 |
| 6AQ5A | 2.15 | 1.20 | 1.05 | . 94 | 6CU5 | 2.30 | 1.29 | 1.13 | 1.02 |
| 6AQ6 | 2.20 | 1.23 | 1.08 | . 97 | 6CU6/6BQ6GA* | 4.35 | 2.43 | 2.13 | 1.92 |
| 6AQ7GT | 4.00 | 2.23 | 1.96 | 1.76 | 6CU8 | 3.65 | 2.04 | 1.79 | 1.61 |
| 6AR5 | 2.60 | 1.45 | 1.27 | 1.14 | 6СX8* | 3.65 | 2.04 | 1.79 | 1.61 |
| 6 AS5 | 2.40 | 1.34 | 1.18 | 1.06 | $6 \mathrm{CY5}$ | 2.75 | 1.54 | 1.35 | 1.21 |
| 6AS8 | 3.30 | 1.84 | 1.62 | 1.46 | 6CY7* | 2.95 | 1.65 | 1.44 | 1.30 |
| 6AT6 | 1.90 | 1.06 | . 93 | . 84 | 6CZ5 | 2.80 | 1.56 | 1.37 | 1.23 |
| 6AT8A | 3.20 | 1.79 | 1.57 | 1.41 | 6D6 | 4.35 | 2.43 | 2.13 | 1.92 |
| 6AU4GTA | 3.35 | 1.87 | 1.64 | 1.48 | 6DA4* | 2.70 | 1.51 | 1.32 | 1.19 |
| 6AU5GT | 4.25 | 2.37 | 2.08 | 1.87 | 6DB5* | 2.70 | 1.51 | 1.32 | 1.19 |
| 6AU6 | 2.10 | 1.17 | 1.03 | . 93 | 6DC6 | 2.75 | 1.54 | 1.35 | 1.21 |
| 6AU6A* | 2.10 | 1.17 | 1.03 | . 93 | 6DE6 | 2.45 | 1.37 | 1.20 | 1.08 |
| 6 AU8 | 3.45 | 1.93 | 1.69 | 1.52 | 6DG6GT | 2.55 | 1.43 | 1.25 | 1.12 |
| 6AV5GA | 3.80 | 2.12 | 1.86 | 1.67 | 6DK6* | 2.35 | 1.31 | 1.15 | 1.03 |
| 6AV6 | 1.65 | . 92 | . 81 | . 73 | 6DN6* | 6.25 | 3.49 | 3.06 | 2.75 |
| 6AW8A | 3.55 | 1.98 | 1.74 | 1.57 | 6DQ5 | 7.65 | 4.27 | 3.75 | 3.37 |
| 6AX4GT | 2.65 | 1.48 | 1.30 | 1.17 | 6DQ6-A | 4.15 | 2.32 | 2.03 | 1.83 |
| 6 6X5GT | 2.90 | 1.62 | 1.43 | 1.29 | 6 DS5 | 2.65 | 1.48 | 1.30 | 1.17 |
| 6AX8* | 3.50 | 1.96 | 1.72 | 1.55 | 6DT5* | 2.90 | 1.62 | 1.43 | 1.29 |
| 6AZ8 | 4.20 | 2.35 | 2.06 | 1.85 | 6DT6 | 2.15 | 1.20 | 1.05 | . 94 |
| 637* | 3.70 | 2.07 | 1.81 | 1.63 | 6DT8 | 3.75 | 2.10 | 1.84 | 1.66 |
| 6B8 | 4.70 | 2.63 | 2.30 | 2.07 | 6E5 | 3.00 | 1.68 | 1.47 | 1.32 |
| 6BA6 | 2.05 | 1.15 | 1.00 | . 90 | 6EA8* | 3.15 | 1.76 | 1.54 | 1.39 |
| 6BA7 | 3.65 | 2.04 | 1.79 | 1.61 | 6EH5 | 2.35 | 1.31 | 1.15 | 1.03 |
| 6BA8A | 3.70 | 2.07 | 1.81 | 1.63 | $6 F 5$ | 3.10 | 1.73 | 1.52 | 1.37 |
| 6BC4 | 4.80 | 2.68 | 2.35 | 2.11 | 6F6 | 3.60 | 2.01 | 1.76 | 1.58 |
| 6BC5 | 2.30 | 1.29 | 1.13 | 1.02 | 6F6G | 3.60 | 2.01 | 1.76 | 1.58 |
| 6 BC 7 | 3.80 | 2.12 | 1.86 | 1.67 | 6F6GT | 3.65 | 2.04 | 1.79 | 1.61 |
| 6BC8 | 3.95 | 2.21 | 1.94 | 1.75 | 6 F7 | 6.65 | 3.71 | 3.26 | 2.93 |
| 6BD6 | 2.30 | 1.29 | 1.13 | 1.02 | 6F8G | 5.10 | 2.85 | 2.50 | 2.25 |
| 6BE6 | 2.25 | 1.26 | 1.10 | . 99 | 6G6G | 4.05 | 2.26 | 1.98 | 1.78 |
| 6BF5 | 2.75 | 1.54 | 1.35 | 1.21 | 6H6 | 2.75 | 1.54 | 1.35 | 1.21 |
| 6BF6 | 1.80 | 1.01 | . 88 | . 79 | 6 J 5 | 2.55 | 1.43 | 1.25 | 1.12 |
| 6BG6G | 6.45 | 3.60 | 3.16 | 2.84 | 6J5GT | 2.55 | 1.43 | 1.25 | 1.12 |
| 6BG6GA | 6.45 | 3.60 | 3.16 | 2.84 | 6 J 6 | 2.80 | 1.56 | 1.37 | 1.23 |
| 6BH6 | 2.70 | 1.51 | 1.32 | 1.19 | 6J6A* | 2.80 | 1.56 | 1.37 | 1.23 |
| 68H8 | 3.45 | 1.93 | 1.69 | 1.52 | 6J7 | 3.65 | 2.04 | 1.79 | 1.61 |
| 6BJ6 | 2.55 | 1.43 | 1.25 | 1.12 | 6J7GT | 3.65 | 2.04 | 1.79 | 1.61 |
| 6BJ8 | 2.90 | 1.62 | 1.43 | 1.29 | 6K5GT* | 3.00 | 1.68 | 1.47 | 1.32 |
| 6BK4 | 7.50 | 4.18 | 3.68 | 3.31 | 6K6GT | 2.30 | 1.29 | 1.13 | 1.02 |
| 6BK5 | 3.50 | 1.96 | 1.72 | 1.55 | 6K7 | 3.75 | 2.10 | 1.84 | 1.66 |
| 6BK7B | 3.35 | 1.87 | 1.64 | 1.48 | 6K7GT | 3.75 | 2.10 | 1.84 | 1.66 |
| 6BL7GTA | 3.95 | 2.21 | 1.94 | 1.75 | 6 K 8 | 4.45 | 2.49 | 2.18 | 1.96 |
| 6BN4 | 2.50 | 1.40 | 1.23 | 1.11 | 6L6 | 6.10 | 3.41 | 2.99 | 2.69 |
| 6BN6 | 3.05 | 1.70 | 1.49 | 1.34 | 6L6GB | 4.20 | 2.35 | 2.06 | 1.85 |
| 6BN8 | 2.70 | 1.51 | 1.32 | 1.19 | 6 L 7 | 4.35 | 2.43 | 2.13 | 1.92 |
| 6BQ5 | 2.60 | 1.45 | 1.27 | 1.14 | 6N7 | 4.00 | 2.23 | 1.96 | 1.76 |
| 6BQ6GTB/6CU6 | 4.35 | 2.43 | 2.13 | 1.92 | 6N7GT | 4.35 | 2.43 | 2.13 | 1.92 |
| 6BG7A | 3.95 | 2.21 | 1.94 | 1.75 | 6P5GT* | 2.80 | 1.56 | 1.37 | 1.23 |
| 6BR8 | 3.30 | 1.84 | 1.62 | 1.46 | 6Q7 | 3.40 | 1.90 | 1.66 | 1.49 |
| 6 BS 8 | 3.75 | 2.10 | 1.84 | 1.66 | 6G7GT | 3.20 | 1.79 | 1.57 | 1.41 |
| $6 \mathrm{BU8}$ | 2.80 | 1.56 | 1.37 | 1.23 | 6R7 | 3.60 | 2.01 | 1.76 | 1.58 |
| 6BV8* | 2.90 | 1.62 | 1.43 | 1.29 | 6R8* | 3.85 | 2.15 | 1.89 | 1.70 |
| 6BW4* | 1.85 | 1.03 | . 91 | . 82 | 654-A | 2.05 | 1.15 | 1.00 | . 90 |
| 6BW8* | 3.30 | 1.84 | 1.62 | 1.46 | 6S7 | 4.20 | 2.35 | 2.06 | 1.85 |
| 6BX7GT | 4.00 | 2.23 | 1.96 | 1.76 | 6S8GT | 2.75 | 1.54 | 1.35 | 1.21 |
| 6BY5-GA | 4.20 | 2.35 | 2.06 | 1.85 | 6SA7 | 3.25 | 1.82 | 1.59 | 1.43 |
| 6BY6 | 2.30 | 1.29 | 1.13 | 1.02 | 6SA7GT | 3.25 | 1.82 | 1.59 | 1.43 |
| 6BY8 | 2.65 | 1.48 | 1.30 | 1.17 | 6SB7Y | 4.50 | 2.51 | 2.21 | 1.99 |
| 6BZ6 | 2.25 | 1.26 | 1.10 | . 99 | 6SC7 | 3.10 | 1.73 | 1.52 | 1.37 |
| $6 \mathrm{BZ7}$ | 3.95 | 2.21 | 1.94 | 1.75 | 6SD7GT* | 4.05 | 2.26 | 1.98 | 1.78 |
| 6BZ8/X155* | 4.25 | 2.37 | 2.08 | 1.87 | 6SF5 | 2.70 | 1.51 | 1.32 | 1.19 |
| 6 C 4 | 1.80 | 1.01 | . 88 | . 79 | 6SF5GT | 3.20 | 1.79 | 1.57 | 1.41 |
| $6 \mathrm{C5}$ | 2.75 | 1.54 | 1.35 | 1.21 | 6SF7 | 3.90 | 2.18 | 1.91 | 1.72 |
| 6C5GT | 2.90 | 1.62 | 1.43 | 1.29 | 6SG7 | 3.45 | 1.93 | 1.69 | 1.52 |
| 6C6 | 4.35 | 2.43 | 2.13 | 1.92 | 6SH7 | 3.50 | 1.96 | 1.72 | 1.55 |
| 6C8G | 5.10 | 2.85 | 2.50 | 2.25 | 6SJ7 | 2.75 | 1.54 | 1.35 | 1.21 |
| 6CB5A | 7.50 | 4.18 | 3.68 | 3.31 | 6SJ7GT | 3.20 | 1.79 | 1.57 | 1.41 |
| 6CB6 | 2.25 | 1.26 | 1.10 | . 99 | 6 KK7 | 3.05 | 1.70 | 1.49 | 1.34 |
| 6CB6A* | 2.25 | 1.26 | 1.10 | . 99 | 6SK7GT | 3.05 | 1.70 | 1.49 | 1.34 |
| 6CD6GA | 5.80 | 3.24 | 2.84 | 2.56 | 6SL7GT | 3.25 | 1.82 | 1.59 | 1.43 |
| 6CE5* | 2.35 | 1.31 | 1.15 | 1.03 | 6SN7GTA* | 2.60 | 1.45 | 1.27 | 1.14 |
| 6CF6 | 2.55 | 1.43 | 1.25 | 1.12 | 6SN7GTB | 2.65 | 1.48 | 1.30 | 1.17 |
| $\begin{aligned} & \text { 6CG7 } \\ & \text { 6CG8A } \end{aligned}$ | 2.45 3.15 | 1.37 | 1.20 | $\begin{aligned} & 1.08 \\ & 1.39 \end{aligned}$ | RECEIV1 | TUBES | TINUED | NEXT PA | E |

## RCA Receiving Tubes



## TUBE LISTINGS CONTINUED FROM PAGES 114 AND 115

## Exfra Savings When You Buy More Than 5 Tubes

The first net price column (1 to 5 ) is for orders of less than 6 tubes. If you buy 6 or more tubes of any one type or assorted types (and up to a total of 49), use the prices in the second net price column ( 6 to 49 ). For 50 tubes and over, use the third price column (50 or More).

| Tube Type | List Price | NET EACH <br> In Quantities of: |  |  | Tube Type | List Price | NET EACH <br> In Quantities of : |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  | 1 to 5 | 6 to 49 | 50 or More |  |  | 1 to 5 | 6 to 49 | 50 or More |
| 6SQ7 | \$2.70 | 1.51 | 1.32 | 1.19 | 12AE7* | \$3.10 | 1.73 | 1.52 | 1.37 |
| 6SQ7GT | 2.70 | 1.51 | 1.32 | 1.19 | 12AF6 | 2.25 | 1.26 | 1.10 | . 99 |
| 6SR7 | 2.70 | 1.51 | 1.32 | 1.19 | 12AF6A* | 2.25 | 1.26 | 1.10 | . 99 |
| 6SS7 | 3.45 | 1.93 | 1.69 | 1.52 | 12AH7GT | 3.80 | 2.12 | 1.86 | 1.67 |
| 6T4 | 4.25 | 2.37 | 2.08 | 1.87 | 12AJ6 | 1.70 | . 95 | . 83 | . 75 |
| 6T8* | 3.35 | 1.87 | 1.64 | 1.48 | 12AL5 | 1.90 | 1.06 | . 93 | . 84 |
| 6T8A | 3.35 | 1.87 | 1.64 | 1.48 | 12AL8 | 4.05 | 2.26 | 1.98 | 1.78 |
| 6 6 5 | 3.20 | 1.79 | 1.57 | 1.41 | 12AQ5 | 2.40 | 1.34 | 1.18 | 1.06 |
| 6U7G* | 2.55 | 1.43 | 1.25 | 1.12 | 12AT6 | 1.85 | 1.03 | . 91 | . 82 |
| 6U8A | 3.30 | 1.84 | 1.62 | 1.46 | 12AT7 | 3.05 | 1.70 | 1.49 | 1.34 |
| 6V3A | 4.35 | 2.43 | 2.13 | 1.92 | 12AU6 | 2.15 | 1.20 | 1.05 | . 94 |
| 6 V 6 | 4.35 | 2.43 | 2.13 | 1.92 | 12AU7A | 2.45 | 1.37 | 1.20 | 1.08 |
| 6V6GT | 2.15 | 1.20 | 1.05 | . 94 | 12AV5GA | 3.85 | 2.15 | 1.89 | 1.70 |
| $6 \mathrm{~V} 8^{*}$ | 3.95 | 2.21 | 1.94 | 1.75 | 12AV6 | 1.65 | . 92 | . 81 | . 73 |
| 6W4GT | 2.40 | 1.34 | 1.18 | 1.06 | 12AV7 | 3.20 | 1.79 | 1.57 | 1.41 |
| 6W6GT | 2.85 | 1.59 | 1.40 | 1.26 | 12AW6 | 3.00 | 1.68 | 1.47 | 1.32 |
| $6 \times 4$ | 1.65 | . 92 | . 81 | . 73 | 12AX4-GTA | 2.60 | 1.45 | 1.27 | 1.14 |
| 6X5GT | 2.05 | 1.15 | 1.00 | . 90 | 12AX7 | 2.50 | 1.40 | 1.23 | 1.11 |
| $6 \times 8$ | 3.20 | 1.79 | 1.57 | 1.41 | 12AY7 | 5.15 | 2.88 | 2.52 | 2.27 |
| 6Y6G | 4.50 | 2.51 | 2.21 | 1.99 | 12AZ7 | 2.75 | 1.54 | 1.35 | 1.21 |
| 7 74 | 3.25 | 1.82 | 1.59 | 1.43 | 12B4-A | 2.70 | 1.51 | 1.32 | 1.19 |
| 7A5 | 3.85 | 2.15 | 1.89 | 1.70 | 12BA6 | 2.00 | 1.12 | . 98 | . 88 |
| $7 \mathrm{A6}$ | 3.15 | 1.76 | 1.54 | 1.39 | 12BA7 | 3.95 | 2.21 | 1.94 | 1.75 |
| 747 | 3.50 | 1.96 | 1.72 | 1.55 | 12BD6 | 2.25 | 1.26 | 1.10 | . 99 |
| 7A8 | 4.45 | 2.49 | 2.18 | 1.96 | 12BE6 | 2.15 | 1.20 | 1.05 | . 94 |
| 7AD7 | 6.45 | 3.60 | 3.16 | 2.84 | 12BF6 | 1.80 | 1.01 | . 88 | . 79 |
| 7AF7 | 3.85 | 2.15 | 1.89 | 1.70 | 12BH7-A | 3.05 | 1.70 | 1.49 | 1.34 |
| 7 AG7 | 3.85 | 2.15 | 1.89 | 1.70 | 12BK5 | 3.80 | 2.12 | 1.86 | 1.67 |
| 7AH7 | 3.85 | 2.15 | 1.89 | 1.70 | 12BL6 | 2.15 | 1.20 | 1.05 | . 94 |
| 7AU7 | 2.65 | 1.48 | 1.30 | 1.17 | 12BQ6GTB/12CU6 | 4.45 | 2.49 | 2.18 | 1.96 |
| $7 \mathrm{B4}$ | 3.05 | 1.70 | 1.49 | 1.34 | 12BR7 | 2.60 | 1.45 | 1.27 | 1.14 |
| $7 \mathrm{B5}$ | 4.75 | 2.65 | 2.33 | 2.10 | 12BV7 | 3.05 | 1.70 | 1.49 | 1.34 |
| $7 \mathrm{B6}$ | 3.25 | 1.82 | 1.59 | 1.43 | 12BY7-A | 3.10 | 1.73 | 1.52 | 1.37 |
| 787 | 3.30 | 1.84 | 1.62 | 1.46 | 12BZ7 | 3.05 | 1.70 | 1.49 | 1.34 |
| $7 \mathrm{B8}$ | 3.55 | 1.98 | 1.74 | 1.57 | 12C5/12CU5* | 2.35 | 1.31 | 1.15 | 1.03 |
| 7С4* | 5.00 | 2.79 | 2.45 | 2.20 | 12 C 8 | 5.65 | 3.16 | 2.77 | 2.49 |
| $7 \mathrm{C5}$ | 3.35 | 1.87 | 1.64 | 1.48 | 12CA5 | 2.50 | 1.40 | 1.23 | 1.11 |
| $7 \mathrm{C6}$ | 3.30 | 1.84 | 1.62 | 1.46 | 12CN5 | 2.25 | 1.26 | 1.10 | . 99 |
| $7 \mathrm{C7}$ | 3.05 | 1.70 | 1.49 | 1.34 | 12CR6 | 2.40 | 1.34 | 1.18 | 1.06 |
| 7E5* | 4.05 | 2.26 | 1.98 | 1.78 | 12CT8* | 4.05 | 2.26 | 1.98 | 1.78 |
| 7E6* | 4.05 | 2.26 | 1.98 | 1.78 | 12CU5 | 2.35 | 1.31 | 1.15 | 1.03 |
| 7E7 | 4.45 | 2.49 | 2.18 | 1.96 | 12CU6/12BQ6GA* | 4.45 | 2.49 | 2.18 | 1.96 |
| 7F7 | 3.65 | 2.04 | 1.79 | 1.61 | 12CX6 | 2.25 | 1.26 | 1.10 | . 99 |
| $7 \mathrm{F8}$ | 4.60 | 2.57 | 2.25 | 2.03 | $12 \mathrm{D4}$ | 2.75 | 1.54 | 1.35 | 1.21 |
| 7G7 | 4.00 | 2.23 | 1.96 | 1.76 | 12DB5* | 2.75 | 1.54 | 1.35 | 1.21 |
| 7H7 | 3.90 | 2.18 | 1.91 | 1.72 | 12DE8* | 2.90 | 1.62 | 1.43 | 1.29 |
| $7 \mathrm{J7}$ | 5.15 | 2.88 | 2.52 | 2.27 | 12DF7* | 2.60 | 1.45 | 1.27 | 1.14 |
| 7K7 | 4.45 | 2.49 | 2.18 | 1.96 | 12DK7* | 2.95 | 1.65 | 1.44 | 1.30 |
| 7L7* | 4.25 | 2.37 | 2.08 | 1.87 | 12DL8 | 3.90 | 2.18 | 1.91 | 1.72 |
| 7N7 | 3.40 | 1.90 | 1.66 | 1.49 | 12DG6-A | 4.25 | 2.37 | 2.08 | 1.87 |
| $7 \mathrm{P7}$ | 4.10 | 2.29 | 2.01 | 1.81 | 12DS7 | 3.50 | 1.96 | 1.72 | 1.55 |
| $7 \mathrm{R7}$ | 5.15 | 2.88 | 2.52 | 2.27 | 12DT5* | 2.95 | 1.65 | 1.44 | 1.30 |
| 7V7 | 4.65 | 2.60 | 2.28 | 2.05 | 12DT7* | 2.90 | 1.62 | 1.43 | 1.29 |
| 7W7 | 4.75 | 2.65 | 2.33 | 2.10 | 12DT8 | 3.75 | 2.10 | 1.84 | 1.66 |
| 7X7 | 5.85 | 3.27 | 2.87 | 2.58 | 12DW8* | 3.10 | 1.73 | 1.52 | 1.37 |
| 7Y4 | 2.75 | 1.54 | 1.35 | 1.21 | 12DZ6 | 2.30 | 1.29 | 1.13 | 1.02 |
| 724 | 2.75 | 1.54 | 1.35 | 1.21 | 12EH5 | 2.35 | 1.31 | 1.15 | 1.03 |
| 8AU8* | 3.55 | 1.98 | 1.74 | 1.57 | 12EK6 | 2.30 | 1.29 | 1.13 | 1.02 |
| 8AW8A | 3.70 | 2.07 | 1.81 | 1.63 | 12EM6* | 2.90 | 1.62 | 1.43 | 1.29 |
| 8BA8A* | 3.65 | 2.04 | 1.79 | 1.61 | 12EN6* | 2.70 | 1.51 | 1.32 | 1.19 |
| 8BH8** | 3.55 | 1.98 | 1.74 | 1.57 | 12F8 | 2.60 | 1.45 | 1.27 | 1.14 |
| $8 \mathrm{CG7}$ | 2.50 | 1.40 | 1.23 | 1.11 | 12 H 6 | 2.75 | 1.54 | 1.35 | 1.21 |
| 8CM7 | 2.85 | 1.59 | 1.40 | 1.26 | 12J5GT | 2.70 | 1.51 | 1.32 | 1.19 |
| 8CN7* | 2.60 | 1.45 | 1.27 | 1.14 | 12J7GT | 4.20 | 2.35 | 2.06 | 1.85 |
| 8CS7* | 2.95 | 1.65 | 1.44 | 1.30 | 12J8 | 3.30 | 1.84 | 1.62 | 1.46 |
| 8CX8* | 3.70 | 2.07 | 1.81 | 1.63 | 12 K 5 | 2.75 | 1.54 | 1.35 | 1.21 |
| 9CL8* | 3.15 | 1.76 | 1.54 | 1.39 | 12K7GT | 4.05 | 2.26 | 1.98 | 1.78 |
| 9U8A* | 3.30 | 1.84 | 1.62 | 1.46 | 12 K 8 | 4.75 | 2.65 | 2.33 | 2.10 |
| 10C8* 10DE7 | 4.25 | 2,37 | 2.08 | 1.87 | 12L6GT | 2.50 | 1.40 | 1.23 | 1.11 |
| 10DE7 | 2.95 | 1.65 | 1.44 | 1.30 | 12Q7GT | 3.30 | 1.84 | 1.62 | 1.46 |
| 12A8GT | 4.75 | 2.65 | 2.33 | 2.10 | 12 R 5 | 2.60 | 1.45 | 1.27 | 1.14 |
| 12AB5 | 2.45 | 1.37 | 1.20 | 1.08 | $12 \mathrm{~S} 8 \mathrm{GT} *$ | 2.90 | 1.62 | 1.43 | 1.29 |
| 12AC6* | 2.20 | 1.23 | 1.08 | . 97 | 12SA7 | 3.25 | 1.82 | 1.59 | 1.43 |
| 12AD6 | 2.25 | 1.26 | 1.10 | . 99 | 12SA7GT | 3.25 | 1.82 | 1.59 | 1.43 |
| 12AE6 | 1.85 | 1.03 | . 91 | . 82 | 12SC7 | 3.30 | 1.84 | 1.62 | 1.46 |


|  |  | QUANTITY PRICES ALSO APPLY TO ASSORTED TUBES |  |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Tube Type | List Price | NET EACH <br> In Quantities of : |  |  | Tube Type | $\begin{aligned} & \text { List } \\ & \text { Price } \end{aligned}$ | NET EACH <br> In Quantities of: |  |  |
|  |  | 1 to 5 | 6 to 49 | 50 or More |  |  | 1 to 5 | 6 to 49 | 50 or More |
| 12SF5 | \$2.75 | 1.54 | 1.35 | 1.21 | 25 L 6 | \$5.80 | 3.24 | 2.84 | 2.56 |
| 12SF5GT* | 2.70 | 1.51 | 1.32 | 1.19 | 25L6GT | 2.25 | 1.26 | 1.10 | . 99 |
| $12 \mathrm{SF7}$ | 3.95 | 2.21 | 1.94 | 1.75 | 25W4GT | 2.70 | 1.51 | 1.32 | 1.19 |
| 12 SG 7 | 3.30 | 1.84 | 1.62 | 1.46 | 25W6GT* | 2.90 | 1.62 | 1.43 | 1.29 |
| $12 \mathrm{SH7}$ | 3.60 | 2.01 | 1.76 | 1.58 | 2575 | 2.90 | 1.62 | 1.43 | 1.29 |
| 12537 | 2.90 | 1.62 | 1.43 | 1.29 | 25Z6GT | 2.90 | 1.62 | 1.43 | 1.29 |
| 12SJ7GT* | 3.20 | 1.79 | 1.57 | 1.41 | 26* | 4.35 | 2.43 | $3: 13$ | 1.92 |
| $12 \mathrm{SK7}$ | 3.05 | 1.70 | 1.49 | 1.34 | 27 | 4.35 | 2.43 | 3.13 | 1.92 |
| 12SK7GT | 3.05 | 1.70 | 1.49 | 1.34 | 35/51* | 4.35 | 2.43 | 3.13 | 1.92 |
| 12SL7GT | 3.75 | 2.10 | 1.84 | 1.66 | 35A5 | 3.50 | 1.96 | 1.72 | 1.55 |
| 12SN7GT | 2.70 | 1.51 | 1.32 | 1.19 | 35B5 | 2.65 | 1.48 | 1.30 | 1.17 |
| 12SN7GTA* | 2.70 | 1.51 | 1.32 | 1.19 | 35C5 | 2.15 | 1.20 | 1.05 | . 94 |
| $12 \mathrm{SQ7}$ | 2.65 | 1.48 | 1.30 | 1.17 | 35L6GT | 2.45 | 1.37 | 1.20 | 1.08 |
| 12SQ7GT | 2.65 | 1.48 | 1.30 | 1.17 | 35W4 | 1.40 | . 78 | . 69 | . 62 |
| $12 \mathrm{SR7}$ | 2.80 | 1.56 | 1.37 | 1.23 | 35Y4 | 2.75 | 1.54 | 1.35 | 1.21 |
| 12V6GT | 2.15 | 1.20 | 1.05 | . 94 | 3523 | 2.75 | 1.54 | 1.35 | 1.21 |
| 12W6GT | 3.00 | 1.68 | 1.47 | 1.32 | 35Z4GT | 2.35 | 1.31 | 1.15 | 1.03 |
| $12 \times 4$ | 1.80 | 1.01 | . 88 | . 79 | 3525GT | 1.85 | 1.03 | . 91 | . 82 |
| 1223* | 3.50 | 1.96 | 1.72 | 1.55 | 36* | 4.35 | 2.43 | 2.13 | 1.92 |
| 13DR7* | 2.95 | 1.65 | 1.44 | 1.30 | 37* | 3.80 | 2.12 | 1.86 | 1.67 |
| 14A7 | 3.50 | 1.96 | 1.72 | 1.55 | 38* | 4.35 | 2.43 | 2.13 | 1.92 |
| 14AF7 | 3.80 | 2.12 | 1.86 | 1.67 | 41 | 3.50 | 1.96 | 1.72 | 1.55 |
| 14B6 | 3.30 | 1.84 | 1.62 | 1.46 | 42 | 3.45 | 1.93 | 1.69 | 1.52 |
| $14 \mathrm{C7}$ | 3.35 | 1.87 | 1.64 | 1.48 | 43 | 4.70 | 2.63 | 2.30 | 2.07 |
| 14F7 | 3.85 | 2.15 | 1.89 | 1.70 | 47 | 8.70 | 4.86 | 4.26 | 3.83 |
| 14F8 | 4.60 | 2.57 | 2.25 | 2.03 | 50A5 | 3.95 | 2.21 | 1.94 | 1.75 |
| 1497 | 4.10 | 2.29 | 2.01 | 1.81 | 50B5 | 2.65 | 1.48 | 1.30 | 1.17 |
| $14 \mathrm{R7}$ | 5.15 | 2.88 | 2.52 | 2.27 | 50 C 5 | 2.15 | 1.20 | 1.05 | . 94 |
| 17AX4GT | 2.70 | 1.51 | 1.32 | 1.19 | 50EH5 | 2.30 | 1.29 | 1.13 | 1.02 |
| 17BQ6GTB | 4.60 | 2.57 | 2.25 | 2.03 | 50L6GT | 2.45 | 1.37 | 1.20 | 1.08 |
| 17C5* | 2.35 | 1.31 | 1.15 | 1.03 | $50 \times 6$ | 3.20 | 1.79 | 1.57 | 1.41 |
| 17D4GT* | 2.75 | 1.54 | 1.35 | 1.21 | 50Y6GT | 2.95 | 1.65 | 1.44 | 1.30 |
| 17DG6A | 4.25 | 2.37 | 2.08 | 1.87 | 50Y7GT | 3.05 | 1.70 | 1.49 | 1.34 |
| 17H3* | 1.95 | 1.09 | . 96 | . 86 | 56* | 2.60 | 1.45 | 1.27 | 1.14 |
| 18A5* | 3.75 | 2.10 | 1.84 | 1.66 | 57* | 4.35 | 2.43 | 2.13 | 1.92 |
| 19* | 3.70 | 2.07 | 1.81 | 1.63 | 58* | 4.35 | 2.43 | 2.13 | 1.92 |
| $19 \mathrm{AU4}$ | 3.50 | 1.96 | 1.72 | 1.55 | 70L7GT | 10.15 | 5.66 | 4.98 | 4.48 |
| 19AU4GTA* | 3.45 | 1.93 | 1.69 | 1.52 | 714* | 5.10 | 2.85 | 2.50 | 2.25 |
| 19BG6-GA | 6.50 | 3.63 | 3.19 | 2.87 | 75 | 5.10 | 2.85 | 2.50 | 2.25 |
| 19C8* | 4.45 | 2.49 | 2.18 | 1.96 | 76* | 1.80 | 1.01 | . 88 | . 79 |
| $19 \mathrm{J6}$ | 3.15 | 1.76 | 1.54 | 1.39 | 78 | 5.10 | 2.85 | 2.50 | 2.25 |
| 19 T 8 | 3.35 | 1.87 | 1.64 | 1.48 | 80 | 2.90 | 1.62 | 1.43 | 1.29 |
| $19 \times 8$ | 3.70 | 2.07 | 1.81 | 1.63 | 84/6Z4 | 2.70 | 1.51 | 1.32 | 1.19 |
| 21EX6* | 5.70 | 3.18 | 2.79 | 2.51 | 85* | 4.35 | 2.43 | 2.13 | 1.92 |
| 24A | 4.15 | 2.32 | 2.03 | 1.83 | 117L7/117M7GT | 10.15 | 5.66 | 4.98 | 4.48 |
| 25AV5GA* | 3.80 | 2.12 | 1.86 | 1.67 | 117N7GT | 9.30 | 5.19 | 4.56 | 4.10 |
| 25AX4GT | 2.90 | 1.62 | 1.43 | 1.29 | 117P7GT | 9.30 | 5.19 | 4.56 | 4.10 |
| 25BK5* | 3.65 | 2.04 | 1.79 | 1.61 | 11723 | 2.50 | 1.40 | 1.23 | 1.11 |
| 25BG6GTB/25CU6 | 4.60 | 2.57 | 2.25 | 2.03 | 11726GT | 4.35 | 2.43 | 2.13 | 1.92 |
| 25C5 | 2.15 | 1.20 | 1.05 | . 94 | 5642* | 5.00 | 2.79 | 2.45 | 2.20 |
| 25CA5* | 2.50 | 1.40 | 1.23 | 1.11 | 5879 | 3.85 | 2.15 | 1.89 | 1.70 |
| 25CD6GB | 5.85 | 3.27 | 2.87 | 2.58 | 5881 | 6.25 | 3.49 | 3.06 | 2.75 |
| 25DN6 | 5.55 | 3.10 | 2.72 | 2.45 | 6973 | 4.50 | 2.51 | 2.21 | 1.99 |
| 25EC6** 25EH5 | 5.70 2.30 | 3.18 1.29 | 2.79 1.13 | 2.51 1.02 | 7025 7027 | 2.95 | 1.65 2.93 | 1.44 2.57 | 1.30 |
| $\underline{25 E H 5}$ | 2.30 | 1.29 | 1.13 | 1.02 |  | 5.25 | 2.93 | 2.57 | 2.31 |

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Hold tubes securely in place. Prevent breakage and assure greater stability. Particularly valuable where tubes are lent for portable radios, portable test and measurement equipment, mobile transmitters and receivers, and other equipment subject to vibration and shock. For use with 7 or 9 pin miniature tubes. Mount with nut and bolt, or may be installed with rivet. Av. shpg. wt., 3 oz. 3 per package. Stock No. Type Height

| 6AQ5, 6X4, 35B5, 35W4, 50B5, etc. | $\frac{\text { Per }}{2}$ |
| :--- | :--- |
| 1R5, 6AG5, 6AT6, 6BE6, 6C4, etc. |  |
| 6AJ5, 6AK5, 6AL5, 6AS6, 6N4, etc. | 2 |
| 2 |  | $\frac{\text { Per Pkg. }}{26 \$}$



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- OEM Prices
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## EXPLANATION OF COLUMN HEADINGS AND SYMBOLS

Column Headings: $P$ indicates Max. Collector Dissipation @ $25^{\circ}$ except $\dagger \dagger 80^{\circ} \mathrm{C}$. BV indicates Breakdown Voltage. I ${ }_{c}$ indicates Max. Collec-

TM TEXAS INSTRUMENT

| $\begin{gathered} \text { Stock } \\ \text { No. } \end{gathered}$ | Type | FIg. | Pt Mw | $\begin{aligned} & \mathrm{BV} \\ & \mathrm{~V} \\ & \hline \end{aligned}$ | Ma | $\begin{aligned} & \mathrm{F}_{\mathrm{Mc}}{ }_{c} \end{aligned}$ | Descriptlon | NET EACH |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 8 EC 128 | 2N117 $\ddagger$ | A | 150 | 45 | 25 | $1 \dagger$ | Sma | 00 | 65 |
| 8 EC 129 | 2N118 $\ddagger$ | A | 150 | 45 | 25 | $2 \dagger$ | Smali signal; NPN | 6.95 |  |
| 8 EC 130 | 2N118A $\ddagger$ | A | 150 | 45 | 25 | $8 \dagger$ | Small signal; NPN | 6.95 |  |
| 8 EC 131 | 2N119 $\ddagger$ | A | 150 | 45 | 25 | $2 \dagger$ | Small signal; NPN | 22.05 | 70 |
| 8 EC 238 | 2N120 $\ddagger$ | A | 150 | 45 | 25 | 7 | Small signal; NPN | 25.60 | 17.05 |
| 8 E 110 | 2 N145 | A | 65 | 20 | 5 |  | IF coniverter; NPN |  |  |
| 8 E 111 | 2N146 | A | 65 | 20 | 5 |  | IF converter; NPN | 3.20 |  |
| 8 E 112 | 2N147 | A | 65 | 20 | 5 |  | IF converter; NPN | 3.60 |  |
| 8 E 109 | 2N172 | A | 65 | 16 | 5 |  | IF converter; NPN | 2.45 | ** |
| 8 E 104 | 2 N 185 | A | 150 | -20 | -150 |  | Audio; PNP | 1.45 |  |
| 8 E 105 | 2N238 | A | 50 | -20 |  |  | Audio; PNP | 1.40 | ** |
| 8 EC 135 | 2N243 $\ddagger$ |  | 750 | 60 | 60 |  | Med. power; NPN | 21.40 | 14.25 |
| 8 EC 136 | 2N244\# |  | 750 | 60 | 60 |  | Med. power; NPN | 31.20 | 20.80 |
| 8 E 116 | 2 N 248 | ${ }^{\text {A }}$ | 30 | -25 | -5 | 50 | HF; PNP |  |  |
| 8 E 106 | 2N250 | C | 25W | -30 | $-3 \mathrm{~A}$ |  | Power; PNP |  | ** |
| 8 E 107 | 2N251 | C | 25W | -60 | -3A |  | Power; PNP | 4.80 | ** |
| 8 E 100 | 2N252 | A | 30 | 16 | -5 |  | IF converter; PNP | 2.90 | ** |
| 8 E 113 | 2 N 253 | A | 65 | 12 |  |  | IF converter; NPN | 2.25 |  |
| 8 E 114 | 2N254 | A | 65 | 20 | 5 |  | IF converter; NPN | 2.60 | ** |
| 8 E 108 | 2N294 | A | 300 | -25 | -200 |  | Audio; PNP | 1.45 | ** |
| 8 E 101 | 2 N 308 | A | 30 | -20 | -5 |  | IF converter; PNP | 2. | ** |
| 8 E 102 | 2N309 |  | 30 | -20 | -5 |  | IF converter; PNP | 2.90 |  |
| 8 E 103 | 2N310 | A | 30 | -30 | -5 |  | IF converter; PNP | 2.90 | ** |
| 8 E 183 | 2N332§ | L | 150 | 45 | 25 | $1 \dagger$ | Small signal; NPN | 9.45 | 6.30 |
| 8 EC 184 | 2N3338 | L | 150 | 45 | 25 | $2 \dagger$ | Small signal; NPN | 6.20 | 0.80 |
| 8 EC 185 | 2N3348 |  | 150 | 45 | 25 | $8+$ | Small signal; NPN | 16.20 |  |
| 8 EC 186 | 2N335§ |  | 150 | 45 | 25 | $2 \dagger$ | Small signal; NPN |  | 4.40 |
| 8 EC 187 | 2N3368 | 1 | 150 | 45 | 25 | 7 | Small signal; NPN | 25.60 | 7.05 |
| 8 EC | 2N3378 | L | 125 | 40 | 20 | $10 \dagger$ | Switching; NPN | 19.15 | 5 |
| 8 EC 189 | 2N33888 |  | 125 | 45 <br> 5 | 25 |  | Switching; NPN |  |  |
| 8 EC 190 | 2N3398 | K K | 1000 | 55 | 60 |  | Med. power; ${ }^{\text {NPN }}$ | 9.85 |  |
| 8 ECC 191 | 2N3408 |  | 1000 | 85 | 50 |  | Med. power; NPN | 9.95 | 0 |
| 8 EC | 2N3418 | K | 1000 | 125 | 40 |  | Med. power; NPN | 24.00 | 6.00 |
| 8 EC 193 | 2N3428 | K | 1000 | 60 | 60 |  | Med. power; NPN | 20.10 | 3.40 |
| 8 EC 194 | 2N3438 | K | 1000 | 60 | 60 |  | Med. power; NPN |  |  |
| 8E118 | 2N364 | A | 150 | 30 | 50 | 2.5 | Gen. purpose; NPN | 2.40 |  |
| 8 E 119 | 2N | A | 150 | 30 | 50 | 3 | Gen. purpose; NPN | 3.55 | ** |
| 8 E 120 | 2 N 366 | A | 150 | 30 | 50 | 3.5 | Gen. purpose; NPN | 1.55 | ** |
| 8 E 121 | 2N367 | A | 150 | -30 | - 50 | 0.7 | Gen. purpose; PNP | 1.55 | ** |
| 8 EE 122 | 2N368 | A | 150 | -30 | -50 | 1 | Gen. purpose; PNP | 2.10 | ** |
| 8 E 123 | 2N369 | A | 150 | -30 | 50 | 1.3 | Gen. purpose; PNP | 2.40 | ** |
| 8 EC 216 | 2N389 $\ddagger$ | E | 85 | 60 | 2A |  | High power; NPN | 69. | 46.00 |
| 8 EC 218 | 2N424ђ | E | 85 | 80 | 2 A |  | High power; NPN |  |  |
| 8 E 220 | 2N456 | C | 50 W | -40 | 5A |  | Power; PNP | 00 |  |
| 8 E 221 | 2N457 |  | 50W | -60 | 5 A |  | Power; PNP | 5.60 | ** |
| 8 E 234 | 2N458 | C | 50W | -80 | -5A |  | Power; PNP | 12.40 |  |
| 8 EC 227 | 2N4978 | L | 4W | 60 | 200 | 10 | Med. power; NPN | 24.10 | 6.05 |
| 8 EC 228 | 2N498§ | L | 4W | 100 | 200 | 14 | Med. power; NPN | 30.75 | 20.50 |
| 8 E 2 | 2N623 |  |  |  |  | 90 | HF; PNP | 12.50 | ** |
| 8 EC 235 | 2N656\# | L | 4 W | 60 | 200 | 10 | Med. power; NPN | 26. | 17.90 |
| 8 EC 236 | 2N657\% |  | 4 W | 100 | 200 | 14 | Med. power; NPN |  |  |
| 8 EC 117 | 3N25 | D | 25 | -15 | -2 | 200 | VHF tetrode; PNP | 16.00 |  |
| 8 EC 195 | 3N328 |  | 125 |  | 10 |  | HF; NPN | 25.05 | 16.70 |
| 8 EC 196 | 3N338 | L. | 125 | 30 | 10 |  | HF; NPN | 31.0 | 0.70 |
| 8 EC 197 | 3N348 | L | 125 | 30 | 10 |  | HF; NPN | 29.20 | 9.45 |
| 8 EC 219 | 3N358 | L | 125 | 30 | 10 | 100 | HF; NPN | 31.50 | $\underline{21.00}$ |
| 8 E 237 | 204A |  | 150 |  | 50 | 2.5 | Gen. purpose; NP | 4.80 | ** |
| 8 E 115 | 800 | B | 65 | 20 | 5 |  | Phototransistor;NPN | 10.40 |  |
| 8 EC 124 | 903 $\ddagger$ | A | 150 | 30 | 25 | $1 \dagger$ | Small signal; NPN | 0.1 | 6.75 |
| 8 EC 125 | 904 $\ddagger$ | A | 150 | 30 | 25 | $2 \dagger$ | Small signal; NPN | 17.10 | 1.40 |
| 8 EC 126 | 904A $\ddagger$ | A | 150 | 30 | 25 | $8 \dagger$ | Small signal; NPN | 17.10 | 1.40 |
| 8 EC 127 | 905 $\ddagger$ | A | 150 | 30 | 25 | $2+$ | Small signal; NPN | 23.40 | 5.60 |
| 8 EC 217 | $910 \ddagger$ | A | 150 | 30 | 25 | 7 | Small signal; NPN | 26.25 | 7.50 |
| 8 EC 132 | $951 \ddagger$ |  | 750 | 50 | 60 | - | Med. power; NPN | 20.85 | 3.90 |
| 8 EC 133 | $952 \ddagger$ |  | 750 |  | 50 |  | Med. power; NPN | 21.15 | 4.10 |
| 8 EC 134 | $953 \ddagger$ |  | 750 | 120 | 40 |  | Med. power; NPN | 22.95 | 5.30 |
| 8 EC 137 | $970 \ddagger$ |  | 8.75 | 120 | 140 |  | Power; NPN | 60.00 | 40.00 |

## (3) HUGHES

"High-temperature" transistors-have coaxial leads which permit maximum ford inteat through the silicon crystal whing provintrg circuitry at medium power levels. Feature 500 mw dissipation at $25^{\circ} \mathrm{C}$. in free air; low saturation resistance, low collector and emitter cut-off current and high maximum voltages. Av. wt., 2 oz.

| Steck No. | Type | Fig. | Pt Mw | $\stackrel{\text { BV }}{V}$ | $\begin{aligned} & \mathrm{I}_{\mathrm{c}} \end{aligned}$ | $\begin{aligned} & \mathrm{F}_{\mathrm{a}} \end{aligned}$ | Description | NET EACH |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 8 ECC 574 | HA7501 | F | 500 | -60 |  | 0.8 | Audio; P PP | 22.0016 .93 |
| 8 EC 575 | HA7502 | F | 500 | -60 |  | 0.9 | Audio; PNP | 32.0124 .63 |
| 8 EC 576 | HA7503 | F | 500 | -110 |  | $0.5 \dagger$ | Audio; PNP | 36.0127 .70 |
| 8 EC 577 | HA7505 | F | 500 | -35 |  | $0.5+$ | Audio; PNP | 12.619 .70 |
| 8 EC 578 | HA7506 | F | 500 | -35 |  | $0.5 \dagger$ | Audio; PNP | 17.6213 .55 |
| 8 EC 579 | HA7507 | F | 500 | -20 |  | 1:5 $\dagger$ | Audio; PNP | 21.6116 .63 |
| 8 EC 580 | HA7508 | F | 500 | -60 |  | $0.5+$ | Audio; PNP | 131.01123 .85 |

Symbols: $\begin{aligned} & \text { silicon; §silicon in JETEC can; all others germanium. } \\ & \text { drift type. Av. shpg. wt., } 2 \text { oz. **For prices on quantity lots of } 100 \text { or }\end{aligned}$ more, write Allied's Industrial Division.


| Stock No. | Type | Fig. | Pt <br> Mw |  | $\mathrm{F}_{\mathrm{Mc}}^{\text {a }}$ | Description | (NET <br> EACH <br> 158 |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 85 | 2N7 | G | $35 \dagger$ | -25 -15 | 0.7 | Audio | 86 |
|  | ${ }^{2} \mathrm{~N} 104$ | H | 150 35 | -30 -250 | 0.7 | Audio; PNP | 2.25 |
| SE856 | 2N105 | ${ }_{\text {J }}$ | $35 \dagger$ 150 | -25 <br> -25 <br> -15 <br> -70 | 0.75 | Audio; PNP Audio: PNP | 70 |
| 858 | ${ }^{2} \mathrm{~N} 139$ | H | 80 | -16 -15 | 68 | IF; PNP | 3 |
|  | ${ }^{2 N 140}$ | H | 80 | -16-15 | 10 | Converter; PNP |  |
| 5E860 | ${ }^{2 N 175}$ | H | 50 | -10 -2 | 0.85 | Audio; PNP |  |
| 5E894 | 2N206 | G | 75 | 30 - 50 | 0.78 | Audio; PNP | 5.47 |
| 76 | 2 N 215 | G | Same as 2 N 104 but has flexible leads Same as 2 N 109 but has flexible leads Same as 2 N139 but has flexible leads Same as 2 N 140 but has flexible leads |  |  |  | 09 |
|  | ${ }^{2 N 217}$ | G |  |  |  |  |  |
| 878 | 2 N 218 | G |  |  |  |  | . 93 |
| E 879 | 2N219 | G |  |  |  |  | 2.0 |
| 5E884 | 2N220 | G | Same as 2N175 but has flexible leads |  |  |  | 2.25 |
| $\begin{aligned} & \text { SE E85 } \\ & 5 E 887 \\ & 5 E 895 \\ & \hline \end{aligned}$ | $\begin{aligned} & \text { 2N247** } \\ & \text { 2N269 } \\ & \text { 2N270 } \\ & \hline \end{aligned}$ | $\begin{aligned} & \mathbf{K} \\ & \mathbf{G} \\ & \mathbf{K} \end{aligned}$ | 80120250 | 35 -10 | 30 | RF; PN | 3.22 |
|  |  |  |  | -20-100 | 12 | Switching; PNP | 3.78 |
|  |  |  |  | -25 -150 |  | Audio; PNP | . 89 |
| $\begin{aligned} & \hline 5 E 888 \\ & 5 E 889 \\ & 5 E 893 \\ & 5 E 967 \\ & \hline \end{aligned}$ |  | $\begin{aligned} & \mathbf{G} \\ & \mathbf{C} \\ & \mathbf{C} \end{aligned}$ | $\begin{gathered} 80 \\ 11 W+\dagger \\ 11 W+\dagger \\ 10 W+\dagger \\ \hline \end{gathered}$ | -35 -10 | 30 | RF; PNP Power; PNP | 3.222.97 |
|  |  |  |  | + $\begin{aligned} & -40 \\ & -60\end{aligned}$ |  |  |  |
|  |  |  |  |  |  | Power; PNP <br> Power; PNP | 4.83 |
|  |  |  |  | -40 | ... | Power; PNP | 3.22 |
| 5 E 974 | 2N356 | L | 0 | 20.500 | 3 | Switching; | 64 |
| SE 975 | ${ }^{2 N 357}$ | $\underline{L}$ | 100 | 20500 | 6 | Switching; NPN |  |
| 76 | 2N358 | L | 100 | 20.500 | 9 | Switching; NPN | 9. |
| E 961 | 2N370* | K | 80 | -20 - 10 | 30 | RF; PNP | 3. |
|  | 2N371* | K | 80 | -20 -10 | 30 | Osc. | 22 |
| 63 | 2N372* | K | 80 | -20 - 10 | 30 | Mixer; PNP | 3. |
| 69 | 2N373* | K | 80 | -25 -10 | 30 | IF; PNP | 2. |
| 5E971 | 2N374* | K | 80 | 25 | 30 | Converter; PNP | 2.3 |
| 8 | 2N376 |  | $10 \mathrm{~W}+\dagger$ | $-40-3 \mathrm{~A}$ |  | Power; | 3.38 |
| E97 | ${ }^{2} \mathrm{~N} 384 *$ | G | 120 | -30 -10 | 100 | VHF; PNP | 6.44 |
| 5 E 897 | 2 N 398 | I | 50 | - $105-100$ |  | Switching; PNP | 2.42 |
| 5 E 898 | 2N404 | L | 120 | -25 -100 | 12 | Switching; PNP | 4. |
| 5E965 | 2N405 | H$\mathbf{G}$H$\mathbf{G}$ | $150-12$ |  | ........ | Audio; PNP | . 13 |
| 5 E 899 | 2N406 |  | Same as 2N405, but has flexible leads |  |  |  | . 13 |
| 5 E 953 | 2N407 |  | 150 \| -20|-70| ...... |Audio; PNP |  |  |  | 1.36 |
| 5 E 950 | 2N408 |  | Same as 2N407 but has flexible leads |  |  |  | 1.36 |
| $\begin{aligned} & \hline 5 \mathrm{E} 954 \\ & 5 \mathrm{E} 951 \\ & 5 \mathrm{E} 955 \\ & 5 \mathrm{E} 952 \\ & \hline \end{aligned}$ | $\begin{aligned} & \text { 2N409 } \\ & \text { 2N410 } \\ & \text { 2N411 } \\ & \text { 2N412 } \end{aligned}$ | G | Same as 2N409 but has flexible leads |  |  |  | 1.6 |
|  |  |  |  |  |  |  | 1.6 |
|  |  |  | 80 | $\|-12\|-15 \mid$ | 10 | IConverter; PNP | 1.70 |
|  |  |  | Same as 2N411 but has flexible leads |  |  |  | 1.70 |
| 5E970 | 2N544 | K |  | -18\|-10 | 30 | RF; PNP | 2.42 |
| 5 E 977 | 2 N 578 | $L$ | 120 | -20-400 | 5 | Switching; PNP | 4.9 |
| E 978 | 2 N 579 | L | 120 | -20-400 | 8 | Switching; PNP | 7.08 |
| 5E982 | 2N580 | $L$ | 120 | -20 -400 | 15 | Switching; PNP | 9,57 |
| 5 E 979 | 2 N 581 | L | 80 | -18 | 8 | Switching; PNP | 3.0 |
| 3 | 2 N 58 | 1 | 120 | -25 -100 | 18 | Switching; PNP | 7. |
| 0 | $2 \mathrm{N583}$ | G | 80 | - 100 | 8 | Switching; PNP | 2.8 |
| 5 E 984 | 2N584 | G | 120 | -25 -100 | 18 | Switching; PNP | 6.44 |
|  | 2 N 5 | L | 120 | 200 | 5 | Switching; NPN | 3.6 |
| E | 2 N | K | 250 50 | -25 <br> -320 <br> -40 | 0.7 | Switching; PN Audio; PNP | 2.9 |

## (artion RAYTHEON

| $\square$ | 2N106 <br> 2N131A <br> 2N132 <br> 2N133A | A A A A | $\begin{aligned} & 100 \\ & 100 \\ & 100 \\ & 100 \end{aligned}$ | $\begin{array}{\|l\|l\|l\|} \hline-20 & -10 \\ -30 & 0 \\ -20 \\ -1500 \\ \hline & 1000 \\ \hline \end{array}$ | $\begin{aligned} & \hline 1.2 \\ & 0.8 \\ & 1.2 \\ & 0.8 \\ & \hline \end{aligned}$ |  | 4.55 <br> 2.83 <br> 2.83 <br> 2.97 |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| $5 \mathrm{EF99}$ | $2{ }^{2 N 1388}$ | ${ }^{\text {A }}$ | 100 | -35 -100 <br> -3  | 1 | Audio; PNP | 2.90 |
| 8 EC 000 | 2 2N327A $\ddagger$ |  | ${ }_{3} 837$ | $-50-100$ | 0.3 | Gen. purpose; PNP |  |
| 5E867 | ${ }_{2}{ }^{\text {N362 }}$ | L | 168 | -20 | 1.2 | Audio: PNP | . 32 |
| 8 EE 006 | ${ }^{2 N 363}$ | L | 168 150 15 | - 40 <br> -1800 <br> -200 | ${ }_{3}^{1.2}$ | Audio; PNP | 1.16 |
| 8E807 | $\xrightarrow{2 N 413}$ | L | 150 150 |  | 3 | RF; PNP <br> PF: PN | 1.88 |
| SE808 | ${ }^{2 N 416}$ | L | 150 | -12 | 10 | ${ }_{\text {RF\% }}$ | 6.44 |
| 7E425 | 2 N 417 | L | 150 <br> 150 <br> 1 | - $10-200$ |  | RF; PNP | 8.26 |
| 8 E E 009 | 2N422 | L | 150 | - 20 | ${ }_{4}^{0.8}$ | Computer; PNP | 4.7 |
| 8 E 011 | 2 N 426 | L | 150 | -18 | 6 | Computer; ; PNP | 4.96 |
| 8 E O12 | $2{ }^{2} \times 227$ | L | 150 | -15 -400 | ${ }_{10}^{11}$ | Computer: PNP | 7.26 |
|  | ${ }^{2 N}{ }^{2 N 464}$ | J | 168 50 | 40 <br> -12 <br> -20 |  |  |  |
| SE957 | ${ }^{2 N 483}$ | L | 50 | $\begin{array}{ll}-12 \\ -12 & -20\end{array}$ | 5 | $1 \mathrm{FF} ; \mathrm{PNP}^{\text {P }}$ | 1.74 |
|  | 2 N 484 | L |  | -10 -20 |  | IF; PNP |  |
| 9 | ${ }^{2 N 486}$ | L | 50 |  |  | Converter; PNP |  |
| 8ECOIL | - ${ }_{\text {2N619 }}^{\text {2N620F }}$ |  | 337 <br> 337 | $\begin{array}{lll}40 & 100 \\ 30\end{array}$ | ${ }_{0}^{0.2}$ | Gen. purpose; NPN | 14.87 26.43 |
|  |  |  | 337 | 100 |  | Gen. purpose; NPN |  |
| 8 EC 017 |  |  | 337 | 20.100 | 0.25 |  |  |
| 11 | C6722 |  | 180 | $-150$ | 13 | Audio; | 2.40 |
| 822 | ${ }_{\text {ckice }}^{\text {ck722 }}$ | A | 180 150 | -22 -15 | ${ }_{2} .5$ | ${ }_{\text {AF-AF: }}^{\text {Audio; }}$ | - 95 |

COLUMN HEADS AND SYMBOLS:
$\mathrm{P}_{\mathrm{t}}:$ Max. Collector Diss. at $25^{\circ}$
C. except $\$ 30^{\circ} \mathrm{C} . ; \# 40^{\circ}$ C. $;^{* * 50^{\circ}}$
C. $\$ \S 80^{\circ}$ C. BV: Breakdown
Voltage; Ic: Collector Current;
Fa: Typical Alpha Cut-Off Freq.
except $*$ Max.; $\ddagger \ddagger$ Min. †Military.
Approved. $\ddagger$ Surface Barrier. All
are germanium except \#\#silicon.
$\dagger \dagger$ Heat sink. 2 oz.


GENERAL ELECTRIC

| Stock No. | Type | Fig. | $\begin{gathered} \mathrm{Pt} \\ \mathrm{Mw} \end{gathered}$ | $\begin{aligned} & \mathrm{BV} \\ & \mathrm{~V} \end{aligned}$ | $\begin{aligned} & \mathrm{l} \mathbf{c} \\ & \mathrm{Ma} \end{aligned}$ | $\begin{aligned} & \mathrm{F}_{a} \\ & \mathrm{Mc} \\ & \hline \end{aligned}$ | Description | $\begin{aligned} & \text { NET }^{\prime} \\ & \text { EACH } \end{aligned}$ |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 7 E 443 | 2N43 | A | 240 | $-30$ | -300 | 1.3 | Audio; PNP | 4.77 |
| 8 E 050 | 2N43A | A | 155 | -25 |  | 1.3 | Audio; PNP | 4.80 |
| 8 E 068 | USAF/2N43A $\dagger$ | A | 155 | -25 |  | 1.3 | Audio; PNP | 6.42 |
| 7 E 444 | 2N44 | A | 240 | -30 | -300 | 1.3 | Audio; PNP | 3.16 |
| 8E 069 | USAF/2N44At | A | 155 | -25 |  | 1 | Audio; PNP | 5.69 |
| 7 E 448 | 2N78 | C | 65 | 15 | 20 | 9 | Computer; NPN | 3.64 |
| 7 E 442 | 2N107 | A | 50 | -12 | 10 | 0.6 | Audio; PNP | . 97 |
| 7 E 938 | 2N123 | A | 150 | -15 | -125 | 8 | Computer; PNP | 5.37 |
| 7 E 484 | 2N135 | A | 100 | -20 | -50 | 3 | RF IF; PNP | 2.10 |
| 7 E 485 | 2N136 | A | 100 | -20 | $-50$ | 5 | RF IF; PNP | 2.51 |
| 7 E 486 | 2N137 | A | 100 | $-10$ | -50 | 7 | RF IF; PNP | 6.07 |
| 7 E 941 | 2N167 | C | 75 | 30 | 75 | 9 | Computer: NPN | 6.31 |
| 7 E 488 | 2N168A | C | 65 | 15 | 20 | 8 | IF; NPN | 2.02 |
| 7 E 489 | 2N169 | C | 65 | 15 | 20 | 9 | IF; NPN | 1.92 |
| 7 E 490 | 2N169A | C | 65 | 25 | 20 | 9 | IF; NPN | 1.96 |
| 7 E 441 | 2N170 | C | 25 | 6 | 20 | 4 | Audio; NPN | 1.26 |
| 7 E 415 | 2N186A | A | 200 | -25 | -200 | 0.8 | Audio; PNP | 1.92 |
| 7 E 417 | 2N187A | A | 200 | -25 | -200 | 1 | Audio; PNP | 1.96 |
| 7 E 419 | 2N188A | A | 200 | -25 | -200 | 1.2 | Audio; PNP | 1.99 |
| 7E420 | 2N189 | A | 75 | -25 | -50 | 0.8 | Audio; PNP | 1.73 |
| 7 E421 | 2N190 | A | 75 | -25 | $-50$ | 1 | Audio; PNP | 1.74 |
| 7 E 422 | 2N191 | A | 75 | -25 | -50 | 1.2 | Audio; PNP | 1.78 |
| 7 E 423 | 2N192 | A | 75 | -25 | -50 | 1.5 | Audio; PNP | 1.84 |
| 7 E 942 | 2N241 | A | 100 | -25 | -200 | 1.3 | Audio; PNP | 1.89 |
| 7 E 943 | 2N241A | A | 200 | -25 | $-200$ | 1.3 | Audio; PNP | 2.04 |
| 7 E 944 | 2N265 | A | 75 | -25 | -50 | 1.5 | Audio; PNP | 1.87 |
| 7E945 | 2N292 | C | 65 | 15 | -20 | 5 | RF IF; NPN | 1.82 |
| 7E499 | 2N293 | C | 65 | 15 | -20 | 8 | RF IF; NPN | 1.99 |
| 7 E 948 | 2N319 | B | 240 | -20 | -200 | 2 | Audio; PNP | 1.96 |
| 7 E 978 | 2N320 | B | 240 | -20 | -200 | 2.5 | Audio; PNP | 1.99 |
| 7E979 | 2N321 | B | 240 | -20 | -200 | 3 | Audio; PNP | 2.04 |
| 7 E 980 | 2N322 | B | 140 | -16 | -100 | 2 | Audio; PNP | 1.74 |
| 7 E 982 | 2N324 | B | 140 | -16 | -100 | 3 | Audio; PNP | 1.84 |
| 7 EC 991 | 2N332\#\# | B | 150 | 45 | 25 | 30 | Amp\&Computer; NPN | 9.55 |
| 7 EC 992 | 2N333\#\# | B | 150 | 45 | 25 | 33 | Amp \& Computer; NPN | 17.30 |
| 7 EC 993 | 2N335\#\# | B | 150 | 45 | 25 | 38 | Amp\&Computer;NPN | 22.05 |
| 8 E 051 | 2N394 | B | 150 | -10 | -200 | 5.5 | Computer; PNP | 3.89 |
| 8 E 052 | 2N395 | B | 150 | -15 | -200 | 7 | Computer; PNP | 3.33 |
| 8 E 053 | 2N396 | B | 150 | -20 | -200 | 7 | Computer; PNP | 5.29 |
| 8 E 054 | 2N397 | B | 150 | - 10 | -250 | 10 | Computer; PNP | 7.94 |
| 8 E 055 | 2N450 | B | 150 | 30 | 30 | 25 | RF; NPN | 3.17 |
| 7 EC 994 | 2N489\#\# | B | 350 | 45 |  | 0.9* | Unijunction PN sw. | 15.00 |
| 7 EC 995 | 2N490\#\# | B | 350 | 55 |  | 0.7* | Unijunction PN sw. | 15.00 |
| 7 EC 996 | 2N491\#\# | B | 350 | 45 |  | 0.8* | Unijunction PN sw. | 15.00 |
| 7 EC 997 | 2N492\#\# | B | 350 | 55 |  | 0.7* | Unijunction PN sw. | 15.00 |
| 7 EC 998 | 2N493\#\# | B | 350 | 45 |  | 0.7* | Unijunction PN sw. | 15.00 |
| 7 EC 999 | 2N494\#\# | B | 350 | 55 |  | 0.65* | Unijunction PN sw. | 15.00 |
| 8 E 056 | 2N508 | B | 140 | -16 | -100 | 3.5 | Audio; PNP | 1.87 |
| 8 E 064 | 2N524 | B | 225 | -45 | -500 | 2 | Audio; PNP | 2.99 |
| 8 E 065 | 2N525 | B | 225 | -45 | $-500$ | 2.5 | Audio; PNP | 3.16 |
| 8 E 066 | 2N526 | B | 225 | -45 | -500 | 3 | Audio; PNP | 3.49 |
| 8 E 067 | 2N527 | B | 225 | -45 | $-500$ | 3.3 | Audio; PNP | 4.07 |
| 7E 983 | 4JD1B3 | A | 200 | -30 | 1000 | 0.8 | Symmet sw.; PNP | 6.47 |
| 7 E 984 | 4JD1B4 | A | 200 | -30 | 1000 | 0.8 | Symmet sw.; PNP | 6.87 |

## MOTOROLA

02 N700 "Mesa". PNP; for lower UHF range. Oscillates up to 600 mc ; at least 10 db gain at $200 \mathrm{mc} . \mathrm{Maximum}$; Ic: 5 ma ; Fa: 500 mc .
5 EC 948 . NET EACH
36.80

| Stock No. | Type | Fig. | $\begin{gathered} \mathrm{Pt}_{\mathbf{t}} \\ \mathrm{Mw} \end{gathered}$ | BV | $\begin{aligned} & \text { Ic } \\ & \mathrm{Ma} \end{aligned}$ | $\begin{aligned} & \mathrm{F}_{a} \\ & \mathrm{Mc} \end{aligned}$ | Description | $\begin{gathered} \text { NET } \\ \text { EACH } \end{gathered}$ |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 5 E 930 | 2N176 | K | 40W§ | -40 | 3A | 7 kc | Power; PNP | 2.78 |
| 5 E 936 | 2N350 | K | 40W§ | -40 | 3A | 8 kc | Power; PNP | 2.85 |
| 5 E 937 | 2N351 | K | 40W8 | -40 | 3A | 7 kc | Power; PNP | 3.00 |
| 5 E 931 | 2N375 | K | 40 W § | -80 | 3A | 10 kc | H.V. Power; PNP | 5.55 |
| 5 E 938 | 2N376 | K | 40W§ | -40 | 3 A | 6 kc | Power; PNP | 3.15 |
| 5 E 462 | 2N425 | B | 150 | -30 | 400 | 4 | Switching; PNP | 4.35 |
| 5 E 463 | 2N426 | B | 150 | -30 | 400 | 6 | Switching; PNP | 4.50 |
| 5 E 464 | 2N427 | B | 150 | -30 | 400 | 11 | Switching; PNP | 6.60 |
| 5 E 465 | 2N428 | B | 150 | $-30$ | 400 | 17 | Switching; PNP | 9.00 |
| 5 E 450 | 2N464 | B | 150 | -45 | 100 | 0.7 | Switching; PNP | 1.65 |
| 5 E 451 | 2N465 | B | 150 | -45 | 100 | 0.8 | Audio; PNP | 1.73 |
| 5 E 452 | 2N466 | B | 150 | -35 | 100 | , | Audio; PNP | 1.80 |
| 5 E 453 | 2N467 | B | 150 | -35 | 100 | 1.2 | Audio; PNP | 2.25 |
| 5 E 941 | 2N505 | K | 125 | -40 | 400 | 8 | Switching; PNP | 6.00 |
| 5 E 939 | 2N554 | K | 40 W § | -30 | 3A |  | Power; PNP | 1.35 |
| 5 E 940 | 2N555 | K | 40W8 | -40 | 3A | 8 kc | Power; PNP | 1.95 |
| 5 EC 947 | 2N618 | K | 40 W § | -80 | 3A | 8.5 kc | H.V.Power\&Sw;PNP | 6.37 |
| 5 E 943 | 2 N 627 | K | 50W§ | -40 | 10A | 7.5 kc | Switching; PNP | 5.25 |
| 5 E 944 | 2N628 | K | 50W§ | -60. | 10A | 7.5 kc | Switching; PNP | 6.75 |
| 5 EC 945 | 2N629 | K | 50W | -80 | 10A | 7.5 kc | Switching; PNP | 10.50 |
| 5 EC 946 | 2N630 | K | 50W8 | -100 | 10A | 7.5 kc | Switching; PNP | 21.00 |
| 5 E 454 | 2N650 | B | 200 | -45 | 250 |  | Audio; PNP | 1.87 |
| 5 E 455 | 2N651 | B | 200 | -45 | 250 | 2.5 | Audio; PNP | 2.10 |
| 5 E 456 | 2N652 | B | 200 | -45 | 250 | 3 | Audio; PNP | 2.40 |
| 5 E 457 | 2N653 | B | 200 | -30 | 250 | 2 | Audio; PNP | 1.65 |
| 5 E 458 | 2N654 | B | 200 | -30 | 250 | 2.5 | Audio; PNP | 1.80 |
| 5 E 459 | 2N655 | B | 200 | -30 | 250 | 3 | Audio; PNP | 1.95 |
| 5 E 466 | 2N669 | K | 10W§ | -40 | 3 A | 5 | Power; PNP | 3.15 |
| 5 E 932 | MN-32 | K | 40W8 | -40 | 3A | 15 kc | Power; PNP | 3.30 |


| Stock No. | Type | Fig. | $\begin{aligned} & \mathrm{Pt} \\ & \mathrm{Mw} \end{aligned}$ | $\stackrel{B V}{\mathrm{BV}}$ | $\begin{aligned} & \hline \mathbf{1 c} \\ & \text { Ma } \end{aligned}$ | $\begin{aligned} & \mathrm{F}_{a} \\ & \mathrm{Mc} \\ & \hline \end{aligned}$ | Description | $\begin{aligned} & \mathrm{NET} \\ & \mathrm{EACH} \end{aligned}$ |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 8 E 305 | 2N128 | F | 30 | -10 | -5 | 65* | IF, RF; SBT $\ddagger$ | 6.30 |
| 8 E 311 | 2N207 | E | 50 | -12 | -20 |  | Audio; PNP | 2.80 |
| 8 E 312 | 2N207A | E | 50 | -12 | -20 | 2 | Audio; PNP | 3.00 |
| 8 E 313 | 2N2078 | E | 50 | -12 | -20 | 2 | Audio; PNP | 3.40 |
| 8 E 307 | 2 N 223 | E | 200 | -18 | -150 | 0.6 | Audio; PNP | 1.65 |
| 8 E 308 | 2N224 | E | 250 | -25 | -150 | 0.51 | Audio; PNP | 1.95 |
| 8 E 309 | 2N226 | E | 250 | -30 | -150 | 0.4 | Audio: PNP | 1.65 |
| 8 E 306 | 2N240 | F | 30 | -6 | -15 | 50 | Computer; SBT $\ddagger$ | 7.35 |
| 8 E 302 | 2N344/SB101 | F | $20 \%$ | -5 | -5 | 50 | IF, RF; SBT $\ddagger$ | 3.45 |
| 8 E 303 | 2N345/SB102 | F | $20 \%$ | -5 | -5 | 50 | IF, RF; SBT $\ddagger$ | 4.35 |
| 8 E 304 | 2N346/SB103 | F | 204 | -5 | -5 | 75 | IF, RF; SBT $\ddagger$ | 5.85 |
| 8 E 317 | 2N352 | G | 25W | -40 | $-2 A$ | 16 kc | Power; PNP | 2.80 |
| 8 E 318 | 2N353 | G | 30W | -40 | -2A | 16 kc | Power; PNP | 3.75 |
| 8 E 319 | 2N386 | G | 12.5 W | -60 | -3A | 7 kc | Power; PNP | 6.75 |
| 8 E 320 | ${ }^{2} 1387$ | G | 12.5 W | -80 | -3A | 6 kc | Power; PNP | 9.75 |
| 8 E 324 | 2N393 | F | 50 | -6 | -50 | 60* | Switching; Micro-Alloy | 9.40 |
| 8 E 310 | 2N462 |  | 150 | -40 | -200 | 0.8 | Bilateral; PNP | 6.00 |
| 8 EC 322 | 2N495\#\# |  | 150 | -25 | -50 | 15* | IF, RF; PNP | 21.00 |
| 8 EC 323 | 2N496\#\# | F | 150 | -10 | - 50 | 15* | Switching; PNP | 26.55 |
| 8 E 325 | 2N499 | F | 75 | -30 | - 50 | 320* | VHF; MADT | 8.25 |
| 8 EC 326 | 2N500 | F | 75 | -20 | -50 | 500* | UHF Osc.; MADT | 10.90 |
| 8 EC 327 | 2N501 | F | 50 | -15 | - 50 | 375* | Switching; MADT | 14.25 |
| 8 EC 328 | 2N502 | D | 60 | -20 | - 50 | 700* | UHF; MADT | 12.40 |
| 8 EC 329 | 2N503 | D | 60 | -20 | -50 | 425* | RF; MADT | 11.25 |
| 8 E 330 | 2N504 | F | 50 | -35 | -50 | 100* | IF, HF, MADT | 6.00 |
| 8 E 314 | 2N534 | E | 25** | - 50 | -25 |  | Audio; PNP | 2.80 |
| 8 E 315 | 2N535 | E | 50 | -20 | -20 | 2 | Audio; PNP | 2.80 |
| 8 E 316 | 2N536 | E | 50 | 20 | 30 | 1 | Switching; PNP | 3.40 |
| 8 E 331 | 2N588 | F | 80 | -20 | -50 | 225* | IF, VHF; MADT | 6.00 |
| 8 EC 321 | 2N589 | G | 37.5W | - 100 | -3A |  | Power; PNP | 13.50 |
| 8 E 334 | 2 N 597 | D | 250 | -30 | -400 | 4.5 | Switching; PNP | 4.35 |
| 8 E 335 | 2N598 | D | 250 | 30 | -400 | 7.5 | Switching; PNP | 5.85 |
| 8 E 336 | 2N599 | D | 250 | -30 | -400 | 18 | Switching; PNP | 8.85 |
| 8 E 337 | 2N670 | D | 300 | -40 | -2A | 0.65 | Pulse Amp.; PNP | 3.90 |
| 8 E 338 | 2 N 671 |  | 1 W | -40 | -2A | 0.5 | Pulse Amp.; PNP | 5.25 |
| 8 E 339 | 2 N 672 |  | 300 | -25 | -2A | 600 | Pulse Amp.; PNP | 3.90 |
| 8 E 301 | SB100 | F | 10.4 | -4.5 | -5 | 45* | IF, RF; SBT $\ddagger$ | 3.90 |
| 8 E 300 | SB200 |  | 10\% | -4.5 | -5 | 22.5* | HF'; SBT $\ddagger$ | 2.25 |

Ss SYIVANIA

| Stock No. | Type | Fig. | $\begin{aligned} & \mathrm{Pt} \\ & \mathrm{Mw} \\ & \hline \end{aligned}$ | $\begin{gathered} \mathrm{BV} \\ \mathrm{~V} \end{gathered}$ | $\begin{aligned} & \mathrm{Ic} \\ & \mathrm{Ma} \end{aligned}$ | $\begin{aligned} & \mathrm{F}_{a} \\ & \mathrm{MC} \end{aligned}$ | Description | $\begin{aligned} & \text { NET } \\ & \text { EACH } \end{aligned}$ |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 7E 342 | 2N34 | H | 50 | -40 | 50 | 0.4 | Gen'I Purp.; PNP | 3.30 |
| 7 E 34 | 2N35 | H | 50 | 40 | 1000 | $10 \mathrm{kc} \ddagger \ddagger$ | Gen'l Purp.; NPN | 1.16 |
| 7 E 343 | 2N68 | J | 1.5W | -30 | 1.5A |  | Power; PNP | 5.36 |
| 7 E 344 | 2N94 | H | 50 | 20 |  | 3 | RF, IF; NPN | 1.65 |
| 7 E 346 | 2N94A | H | 50 | 20 | 50 | 3 | RF, IF; NPN | 5.78 |
| 7 E 345 | 2N95 | J | 1.5 W | 30 | 1.5A | 0.4 | Power; NPN | 5.36 |
| 7 E 335 | 2N101 |  | 1 w | -30 |  | 0.4 | Power; PNP | 4.95 |
| 7 E 336 | 2N102 |  | 1W | 30 | 800 | 0.4 | Power; NPN | 4.95 |
| 8 E650 | 2N109 |  | 50 | -25 | 70 |  | Audio; PNP | 1.74 |
| 7 EC 339 | 2N141 | j | 1.5 W | -60 | 800 | 0.4 | Power; PNP | 10.31 |
| 7 EC 349 | 2N142 | J | 1.5 W | 60 | 800 | 0.4 | Power; NPN | 10.31 |
| 8 E 651 | 2N143 |  | 1W | -60 | 800 | 0.4 | Power: PNP | 9.90 |
| 8 E 652 | 2N144 |  | 1W | 60 | 800 | 0.4 | Power; NPN | 9.90 |
| 8 E 653 | 2N155 | K | $8.5 \mathrm{~W} \dagger \dagger$ | -30 | 3A | $6 \mathrm{kc} \ddagger \ddagger$ | Power; PNP | 3.05 |
| 8 E 655 | 2N176 | K | 10W§§† $\dagger$ | -30 | 3A | $4 \mathrm{kc} \ddagger \ddagger$ | Power; PNP | 3.05 |
| 8 E 656 | 2N193 | H | 50 | 18 | 50 | 3 | Osc; NPN | 1.57 |
| 7 E 389 | 2N194 | H | 50 | 18 | 50 | 3 | Mixer; NPN | 1.90 |
| 7 E 398 | 2N212 | H | 50 | 12 | 50 | 6 | Converter; NPN | 1.98 |
| 7 E 399 | 2N213 | H | 50 | 40 | 100 | $10 \mathrm{kc} \ddagger \ddagger$ | Audio; NPN | 1.29 |
| 7 E 863 | 2N214 | H | 180 | 40 | 100 | $10 \mathrm{kc} \ddagger \ddagger$ | Audio; NPN | 1.49 |
| 8 E657 | 2N214MP | Matc | hed pair | N214 | ransis | ors. Per | Pair........ | 2.9 |
| 7 E 864 | 2N216 | H | 50 | 18 | 10 | 3 | IF; NPN | 1.73 |
| 8 E 658 | 2N217 |  | 50 | -25 | 50 | 0.4 | Audio; PNP | 1.73 |
| 8 E 659 | 2N228 | H | 50 | 40 |  | 0.6 | Audio; NPN | 1.82 |
| 7 E 347 | 2N229 | H | 50 | 6 | 40 | 3 | Gen'l Purp.; NPN | . 75 |
| 7 E 865 | 2 N 233 | H | 50 | 10 | 50 |  | Gen'l Purp. RF; NPN | . 9 |
| 8 E 660 | 2N233A | H | 50 | 18 |  | 3 | Gen'I Purp. RF; NPN | 1.29 |
| 8 E 661 | 2N235B | K | $25 \mathrm{~W}+\dagger$ | -40 | 3A |  | Power; PNP | 3.38 |
| 7E348 | 2N242 | K | 25W $\dagger$ t | -45 | 2A | $7 \mathrm{kc} \ddagger \ddagger$ | Power; PNP | 3.05 |
| 7 E 867 | 2N255 | K | $6.25 \mathrm{~W} \dagger \dagger$ | - 15 | 3A | 0.2 | Power; PNP | 1.32 |
| 8 E 662 | 2N257 | K | $25 \mathrm{~W} \dagger \dagger$ | -40 | 2A | $7 \mathrm{kc} \ddagger \ddagger$ | Power; PNP | 3.23 |
| 8 E 664 | 2N296 | K | $25 \mathrm{~W}+\dagger$ | -60 | 2A | $4 \mathrm{kc} \ddagger \ddagger$ | Power; PNP | 6.19 |
| 8 E 665 | 2N306 | H | 50 | 20 |  | 0.6 | Audio; NPN | . 99 |
| 7 E 866 | 2N307 | K | $10 \mathrm{~W} \dagger \dagger$ | -35 | 1A | $3 \mathrm{kc} \ddagger \ddagger$ | Power; PNP | 1.5 |
| 8 E 666 | 2N307A | K | 17W | -35 | 2A | $3.5 \mathrm{kc} \ddagger \ddagger$ | Power; PNP | 2.15 |
| 8 E 667 | 2N312 | D | 100 | 15 | 200 |  | Computer sw.; NPN | 8.2 |
| 8 E 668 | 2N356 | D | 100 | 20 | 500 | 3 | Computer sw.; NPN | 5.78 |
| 8 E 669 | 2N357 | D | 100 | 20 | 500 | 6 | Computer sw.; NPN | 7.26 |
| 8 E 670 | 2N358 | D | 100 | 20 | 500 | 9 | Computer sw.; NPN | 9.90 |
| 8 E 671 | 2N377 | D | 150 | 25 | 200 | 6 | Computer sw.; NPN | 4.95 |
| 8 E 672 | 2N385 | D | 150 | 25 | 200 | $4 \ddagger \ddagger$ | Computer sw.; NPN | 5.78 |
| 8 E 673 | 2N388 | D | 150 | 25 | 200 | 8 | Computer sw.; NPN | 7.43 |
| 8 E 674 | 2 N 401 | K | 25W+ + | -40 | 3A |  | Audio; PNP | 3.22 |
| 8 E 675 | 2N420 | K | $25 \mathrm{~W}+\dagger$ | -40 | 5A |  | Switching; PNP | 4.52 |
| 8 E 676 | 2N515 | H | 50 | 18 | 10 | $3 \ddagger \ddagger$ | IF; NPN | 1.73 |
| 8 E 677 | 2N516 | H | 50 | 18 | 10 | $3 \ddagger \ddagger$ | IF; NPN | 1.73 |
| 8 E 678 | 2N517 | H | 50 | 18 | 10 | $3 \ddagger$ | IF; NPN | 1.98 |
| 8 E 679 | 2N556 | D | 100 | 25 | 200 |  | Computer sw.; NPN | 5.78 |
| 8 E 680 | 2N557 | D | 100 | 20 | 200 |  | Computer sw.; NPN | 2.98 |
| 8 E 681 | 2N558 | D | 100 | 15 | 200 |  | Computer SW.; NPN | 9.08 |
| 8 E 682 | 2N576 | D | 200 | 20 | 400 |  | Computer; NPN | 8.99 |
| 8 E 683 | 2N587 | D | 150 | 40 | 200 |  | Computer sw.; NPN | 5.36 |

# Diodes and Rectifiers 

## MAKE ALLIED YOUR SEMICONDUCTOR HEADQUARTERS

## - OEM Prices for Industrial Buyers <br> - Most Complete Stocks of Electronic Equipment <br> - Fast, Efficient Service-Same-Day Shipment

- Split-Shipment on Quantity Orders as Desired
- Large Stock Quantities of All Components
- New Types Added to Stock as Announced verse wkg. voltage @ $25^{\circ} \mathrm{C}$. Oper. temp. range: - $78^{\circ}$ to $+90^{\circ} \mathrm{C}$. Max. rent $a, 25^{\circ} \mathrm{C}$. Max. av. rectified current © $150^{\circ} \mathrm{C}$ is 70 ma . Power dissipation: 0.5 watts @ $25^{\circ} \mathrm{C}$. Oper. temp. range: $-80^{\circ}$ to $+200^{\circ} \mathrm{C}$. Max. size: . 265x. $140^{\prime \prime}$. High-Conductance Diodes: IMAR6 is max. avi. rectified current (a) $150^{\circ} \mathrm{C}$. Max. av. rectified current @ $25^{\circ} \mathrm{C}$ of units with IMAR6 of 50 ma is 125 ma , with IMAR6 of $70 \mathrm{ma}, 200$ ma. Max. power dissipation: 0.5 watts © $25^{\circ} \mathrm{C}$. Oper. temp. range:- $80^{\circ}$ to $+200^{\circ} \mathrm{C}$. Max. size: . $265 \times 140^{\prime \prime}$. Fast-Recovery (Diffusión Computer) Diodes: T is max. recovery time. IMR1 is max. reverse current © $25^{\circ}$ C. Oper. temp. range: $-65^{\circ}$ to $+150^{\circ}{ }^{\circ}$ : Max. size: $265 \times 140^{\circ}$. Submin. Rect. @ $25^{\circ} \mathrm{C}, 150 \mathrm{ma}$ @ $150^{\circ} \mathrm{C}$. IMR4 is ${ }^{\circ}$. (1 N group) Rent @ $100^{\circ} \mathrm{C}$ VPRI6 is peak recurr. inverse voltage max reverse current $150^{\circ} \mathrm{C}$. Max. size $1065 \times 140^{\circ}$. (PS group) : Rated 250 ma @ $25^{\circ} \mathrm{C}, 125$ ma @ $100^{\circ} \mathrm{C}$. VRMS4 is max. RMS input voltage. VPRis is peak recurr: inverse voltage. Max. av: inverse current is $100 \mu$ a
 150 C. RMS6 is max. RMS input voltage @ $150^{\circ}$ C. VPR1 6 is peak recurr. inverse votage @ $150^{\circ}$. Max av. inverse current is $500 \mu$ a @ $\pm 200^{\circ} \mathrm{C}$. Max. size: . $760 \mathrm{x} .140^{\prime \prime}$. Av. shpg. wt., all units, 2 oz

| Stock | Type | Fig. |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: |
|  |  |  |  | -99 | 100-999 |
| E | 1 N | $\overline{8}$ | *Gen.-Purp. |  |  |
|  | 1N55 | $\begin{aligned} & \mathbf{B} \\ & \mathbf{B} \end{aligned}$ | *Gen.--Purp. Point-Gontact Diode (80v. VMI) $*$ Gen.-Purp. Point-Gontact Diode (80v. VII) |  |  |
|  | 1N90 | B | *Gen.-Purp. Point-Contact Diode (60v. VMI) |  |  |
| 8 E 254 | 1N99 | B | *Gen.-Purp. Point-Contact Dlode (80v. VMI) |  |  |
| 8 E 255 | 1N116 | B | *Gen.-Purp. Point-Contact Diode (60v. VMI) | 6 | . 50 |
|  | 1N118 | B | *Gen.-Purp. Point-Contact Dlode |  |  |
|  | 1N126 | ${ }^{\text {B }}$ | *Gen.-Purp. Point-Contact Diode (60v. VMI) |  |  |
|  | 1N198 | B | *Gen.-Purp. Point-Contact Diode (80v. VMI) |  |  |
| 8 E 259 | 1N456 |  | Gen.-Purp. Dio |  |  |
| 8 E 260 | 1N457 | B | Gen.-Purp. Diode (75 ma IMAR1) | 3. | 2.85 |
|  | 1 N | B | Gen.-Purp. Diode (55 |  |  |
|  | 1 N 459 | B | Gen.-Purp. Diode (40 ma IMAR1) |  |  |
|  | 1N461 | B | Gen.-Purp. Diode (60 ma MAR1) |  |  |
| E 264 | 1N462 | B | Gen.-Purp. Diode (50 ma IMARI) | 2.3 |  |
|  | 1 N |  | Gen.-Purp. Diode (200 ma IMAR1) |  |  |
|  | in | B | Gen.-Purp. Diode (40 ma IMAR1) |  |  |
|  | IN48 | B | High-Conductance Diode ( 50 ma IMA |  |  |
|  | IN48 | B | High-Conductance Diode (70 ma IMAR6) |  |  |
| BE 269 | 1N484 | B | High-Conductance Diode (50 ma IMAR6) | 2.74 |  |
|  | 1 N | B | High- |  |  |
|  | 1 N | B | High-Conductance Diode (50 ma |  |  |
|  | $1{ }^{1} 48$ | B | High-Conductance Diode (70 ma IMAR6) |  |  |
|  | 1N486 | B | High-Conductance Diode (50 ma MMAR6) |  |  |
| L | 1N486A | B | High-Conducatnce Diode (70 ma IMAR6) | 4.23 |  |
|  | IN487 | 8 | High-Conductance Diode (70 |  |  |
|  | 1 N 4 | B | High-Conductance Diode (50 ma IMAR6) |  |  |
|  | 1 N 488 | B | High-Conductance Diode (70 ma IMAR6) |  |  |
|  | 1N625 | B | Fast-Recov. (0.15 $\mu$ sec T, $1 \mu \mathrm{a}$ IMR1@ 10 v . |  |  |
| E | 1 N 626 | B | Fast-Recovv. ( $1 \mu$ sec T, $20 \mu$ a IMR1@ 35v.) |  | 5 |
|  | 1N627 |  | Fast-Recov. (1 $\mu$ sec T, $20 \mu \mathrm{I}$ IMR1 @ 75 |  |  |
|  | 1N628 | B |  |  |  |
|  | 1N629 | B | Fast-Recov. ( $\mu$ sec $\mathrm{T}, 20$ |  |  |
|  | 1 N643 | 8 | Fast-Recov. ( $03 \mu \mathrm{sec}$ T, $1 \mu \mathrm{a}$ IMR1@ 100v.) |  |  |
| 8 E 284 | 1 N 645 | B | Submin. Rectifier ( $15 \mu \mathrm{a}$ IMR4@ 225v. VPRI |  | 2.40 |
| 8 E 285 | 1N646 | B | Submin. Rectifier (15 $\mu$ a 1 MR4 @ 300v.VPR16) | 4 |  |
|  | 1N647 | B | Submin. Rectifier (20 $\mu$ IMR4@400v. VPRI6) |  |  |
|  | 1N648 | B | Submin. Rectifier (20 $\mu$ a IMR4@ 500v. VPRI6) |  |  |
|  | 1 N 49 | B | Submin. Rectifier ( 25 ua IMR4@ 600v. VPRI6) |  |  |
| 8E 295 | 1N663 | B | Fast Recov. (0.5 $\mu \mathrm{sec}$ T, $5 \mu \mathrm{a}$ IMR1@ 75 v .) | $4.70$ | 3.60 |
|  | PS005 |  |  |  |  |
|  | PSO | B | Submin. Rectifier (70v. VRMS4, 200v. VPR14) |  |  |
|  | PSO | B | Submin. Rectifier (350v. VRMS4, 500v. VPR14) |  |  |
|  | PS06 | B | Submin. Rectifier (420V, VRMS4, 600 V , VPR114) |  |  |
|  | PS10 | A | Min. Rectifier |  |  |
| E 283 | PS120 | A | Min. Rectifier (140v. VRMS6, 200v, VPRI6) |  |  |

## PACIFIC "VARICAP" VOLTAGE-VARIABLE CAPACITORS

(B) Compact, silicon PN junction device permits varying circuit capaciB tance through control of bias yoltage. Functions like capacitor and resistor in series from $5-500 \mathrm{mc}$, with capacitance varying essentially as virtually independent of frequency; and Capacitance and resistance are constant over operating range of $-65^{\circ}$ to $+150^{\circ} \mathrm{C}$ and over of time. Hermetically sealed-have glass-to-metal fused and metal-tometal welded seals. Color coded. Mini. lead length: $114^{\prime \prime}$. Max size: 265 $.140^{\prime \prime}$ dia. Av. shpg. wt., 2 oz.

| Stock No. | Type | Capacitance* $(a-4 v .$ | Max. Oper. 1 Voltage | Series | Typical | Typical Q @ 50 mc | $\begin{gathered} \text { NET } \\ 1-99 \end{gathered}$ | $\frac{\text { EACH }}{100-999}$ |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 8 E 296 | V15 | 15 mmf | $-100$ |  | 30 | 7.5 |  |  |
| 8 E 750 | V20 | 20 mmf | $=20$ | 18 | 8.5 | 18.7 |  |  |
| 8 E 297 | V27 | 27 mmf | $-20$ | 14 | 7.5 | 15.7 |  |  |
| 8 E 751 | V33 | 33 mmf | -20 | 12 | 6.6 | 14.6 | 7 | 2.06 |
| 8 E 298 | $V 39$ | 39 mmf | -20 | 10 | 5.4 | 15.1 |  |  |
| 8 E 752 | V47 | 47 mmif | -20 | 7.5 | 4.4 | 15.4 |  |  |
| 8 E 299 | V56 | 56 mmf | -15 | 7.0 | 4.2 | 13.5 |  |  |



TEXAS INSTRUMENT SILICON DEVICES
GR diode; IV-gen. purp. diode; II-computer diode; IIIbreakdown voltage (@) $25^{\circ}$ is peak inverse voltage, except tolerance), and peak recurr. inverse voltage (@250 ${ }^{\circ} \mathrm{C}$ ) for IV. Specification "S" (@ $25^{\circ} \mathrm{C}$ ) is av. rectified fwd. current (I), max. reverse recov. time (II), max. power diss. (III), av. rectified fwd. current @ Vp (IV).Av. shpg. wt., 3 oz.

| No. | Type | Fig. | Group | Vp (volts) | S | NET EA. |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| $8 \mathrm{E} \quad 179$ | 1N538 | G | IV | 200 | 750 ma | 2.50 |
| 8 E 180 | 1N539 | G | IV | 300 | 750 ma | 2.90 |
| 8 E 173 | 1 N 540 | G | IV | 400 | 750 ma | 4.14 |
| 8 E 167 | 1 N 588 | E | IV | 1500 | 25 ma | 8.10 |
| 8 EC 168 | 1N589 | E | IV | 1500 | 50 ma | 11.20 |
| 8 EC 169 | 1N590 |  | IV | 1500 | 125 ma | 14.00 |
| 8 EC 170 | 1N591 |  | IV | 1500 | 125 ma | 14.00 |
| 8 E 174 | 1N645 | D | I | 225 | 400 ma | 3.28 |
| 8 E 175 | 1N646 | D | I | 300 | 400 ma | 4.44 |
| 8 E 176 | 1N647 | D | I | 400 | 400 ma | 5.77 |
| 8 E 177 | 1N648 | D | I | 500 | 400 ma | 7.10 |
| 8 E 178 | 1N649 | D | I | 600 | 400 ma | 8.42 |
| 8 E 222 | 1N659 | D | II | 50 | $0.3 \mu \mathrm{sec}$ | 4.00 |
| 8 E 223 | 1N660 | D | II | 100 | $0.3 \mu \mathrm{sec}$ | 4.13 |
| 8 E 224 | 1N661 | D | II | 200 | $0.3 \mu \mathrm{sec}$ | 4.97 |
| 8 E 181 | 1N1095 | G | IV | 500 | 750 ma | 5.80 |
|  | 1N1096 | G | IV | 600 | 750 ma | 7.50 |
| 8 E 229 | 1 N 1124 | F | IV | 200 | 3.0 A | 2.70 |
| 8 E 240 | 1N1124R | F | IV | 200 | 3.0 A | 2.70 |
| 8 E 230 | 1N1125 | F | IV | 300 | 3.0 A | 3.38 |
| 8 E 241 | 1N1125R | F | IV | 300 | 3.0 A | 3.38 |
| 8 E 231 | 1N1126 | F | IV | 400 | 3.0 A | 4.73 |
| 8 E 242 | 1 N 1126 R | F | IV | 400 | 3.0 A | 4.73 |
| 8 E 232 | 1 N 1127 | F | IV | 500 | 3.0 A | 6.76 |
| 8 E 243 | 1N1127R | F | IV | 500 | 3.0 A | 6.76 |
| 8 E 239 | 1 N 1128 | F | IV | 600 | 3.0 A | 8.32 |
| 8 E 244 | 1N1128R | F | IV | 600 | 3.0 A | 8.32 |
| 8 EC 171 | 1 N 1130 |  | IV | 1500 | 300 ma | 11.20 |
| 8 EC 172 | 1N1131 |  | IV | 1500 | 300 ma | 11.20 |
| 8 E 141 | 600 C | C | I | 27 | 25 ma | 1.94 |
| 8 E 142 | 601 C |  |  | 45 | 25 ma | 3.60 |
| 8 E 145 | 608 C | C | I | 10 | 75 ma | 3.25 |
| 8 CE 146 | 610 C | C | I | 15 | 60 ma | 3.30 3.40 |
| 88 E 147 | 612 C 620 C | C | I | - 100 | 50 ma 30 ma | 3.40 3.65 |
| 8 E 152 | ${ }^{622} \mathrm{C}$ |  | I | 150 | 25 ma | 3.70 |
| 8 E 153 | 624 C | C | I | ${ }^{220}$ - | 20 ma | 3.75 |
| 8 E 154 | 650 C | C | III | 3.7-4.5* | 150 mw | 4.35 |
| 8 E 155 | 651 C | C | III | 4.3-5.4* | 150 mw | 4.35 |
| 8 E 156 | 652 C | C | III | 5.2-6.4* | 150 mw | 4.35 |
| 8 E 157 | 653 C | C | III | 6.2-8.0* | 150 mw | 4.35 |
| 8 E 158 | 650C0 | C | III | $3.7 \dagger$ | 150 mw | 4.85 |
| 8 E 159 | 650C3 | C | III | $4.0 \dagger$ | 150 mw | 4.85 |
| 8 E 60 | 651 C 0 | C | III | $4.5 \dagger$ | 150 mw | 4.85 |
| 8 E 161 | 651 C 5 | C | III | $5.0 \dagger$ | 150 mw | 4.85 |
| 8 E 162 | ${ }_{652 \mathrm{C}}{ }^{6}$ | C | III | $5.5 \dagger$ | 150 mw | 4.85 |
| 8 E ¢ 64 | 653 C 0 | C | III | $6.5 \dagger$ | 150 mw | 4.85 |
| 8 E 165 | 653C4 | C | III | $7.0 \dagger$ | 150 mw | 4.85 |
| 8 E 166 | 653C9 |  | III | $8.0 \dagger$ | 150 mw | 4.85 |
| 88 E \% 225 | 654C9 | C | III | $9.0 \dagger$ $10.0 \dagger$ | 150 mw 150 mw | 4.85 |

## RATHEON

All are bonded nium; tgold bonded germanium. Low shunt capacitance. Have wire leads. Av. shpg. wt., 3 oz.

[k RCA POINT-CONTACT GERMANIUM DIODES

| Stock No. | $\begin{aligned} & \text { Mfr's } \\ & \text { Type } \end{aligned}$ | ption | Inv. V. | Av. Fwd. $\mathrm{Ma}(\mathrm{a}) 25^{\circ} \mathrm{C}$. | $\begin{aligned} & \text { Wt., } \\ & \text { Oz. } \end{aligned}$ | $\begin{gathered} N \\ E A \end{gathered}$ |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 870 | 1N34A | $\bar{G}$ | 60 | - ${ }^{\text {a }}$ | Oz. |  |
| 5 E 874 | 1N38A | Large Sigrial | 100 | 50 | 3 |  |
| E 875 | 1 N 54 A | High Back | 50 | 50 | 3 | 97 |

## HOFFMAN SILICON DIODES AND RECTIFIERS

- Ready for Delivery at OEM Prices - In Stock-In Quantity

A complete line of silicon diodes and rectifiers for practically any need, featuring a full assortment of the new zener diodes. These units have characteristics refer make them suitable for voltage regulation, glass-cased or switching. Also includes general purpose, and low-cost HB general purpose series-ideal for replacement use. Extremely stable and reliable; designed to meet close tolerances. Av. shpg. wt., 3 oz. For further descriptions and specifications, write Allied's
Industrial Division. Any type not listed is available on Industrial Division. Any type not listed is available on
special order. Write for literature and prices.

- Same Day Shipment
- New Types Added as Announced

| Stock No. | Type | Fig. | Description | EACH | Stock No. | Type | Fig. | Description | EACH | Stock No. | Type | Fig. | Description | EACH |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| $8 \mathrm{8E351}$ | $\begin{aligned} & \text { 1N137A } \\ & \text { 1N138A } \end{aligned}$ | A |  | 2.75 | $\begin{aligned} & 8 E 410 \\ & 8 E 411 \end{aligned}$ | $\begin{aligned} & \text { 1N463 } \\ & \text { IN464 } \end{aligned}$ | $\mathrm{E}$ | Glass; general purpose | 3.50 <br> 3.30 | 8 E 454 | $\begin{aligned} & \hline \text { IN1320 } \\ & \text { 1N132 } \end{aligned}$ | $\begin{aligned} & \mathrm{A} \\ & \mathrm{~A} \end{aligned}$ | Zener single anode; medium | 3.50 |
| 8 E 353 | 1 N 200 | A | purpose | 3.25 | 8 E 377 | 1 N465 | A |  |  | 8E456 | $\begin{aligned} & \text { IN1322 } \\ & \text { iN1323 } \end{aligned}$ |  | voltage |  |
| 8 8 355 | in202 | ${ }_{\text {A }}^{\text {A }}$ |  | 3.25 3.25 | 8 E E 378 | 1N466 in467 | ${ }_{\text {A }}$ | Zener; low |  | 8E458 | 1N1324 |  |  |  |
| 8 8E356 | 1 N 203 i 204 | A |  |  | 8E380 | IN468 | A A A | voltage | 3.75 | 8 E 459 | $\begin{aligned} & 1 N 1325 \\ & 1 N 1256 \\ & 1 N 1326 \\ & \hline \end{aligned}$ | A A A | Zener single anode; medium voltage | 3.50 |
| E 358 | 1 N 205 | A | General <br> purpose | 3.25 | 8E 382 | 1 N470 |  |  |  | 8 C 461 | 1N1327 |  |  |  |
| 8 8E360 | in206 in207 | A |  |  | 8 E392 | 1 N 471 | A |  |  | 8 EC 462 | ${ }^{\text {1N1351 }}$ | $\bar{F}$ |  |  |
| 8 E361 | 1N208 | A |  |  | 8 E 394 | iN473 | A | anode; low | 5.20 | $8 \mathrm{BCC464}$ | IN1353 | F | voltage | 10.00 |
| 362 | 1 N 209 | A |  |  | 8 E 395 | 1 N 474 | ${ }^{\text {A }}$ | voltage |  |  | $\begin{aligned} & \text { 1N1354 } \\ & \text { 1N1355 } \end{aligned}$ | F | regulator |  |
| 364 | 1 N 210 | A | purpose | 3.25 | 8 E 396 | 1 N 475 |  |  |  |  |  |  |  |  |
| 8 E 365 | 1N212 | A |  |  | 8 EE 423 | 1 1536 | B |  | 1.50 | 8 EC 467 | $\begin{aligned} & \text { 1N1356 } \\ & \text { iN1357 } \end{aligned}$ | F | Zener; power | . 00 |
| E 366 | 1N213 | A |  |  | 8 E 425 | 1 N 538 | ${ }_{8}$ | Medlum-power | 1.80 | 8 EC 469 | 1N1358 | F | voltage | 0.00 |
| $8 E 367$ | 1 N 214 | A |  |  | 8 E426 | 1N539 | B |  | 2.45 | 8 EC 470 | 1N1359 | F | regulator | 0.00 |
| 8 E 368 | 1 N 215 | A | purpose | 3.25 | 8 E 427 | 1 N540 | B |  | 3.70 | 8 EC 471 |  |  |  | 11.00 |
| $\begin{aligned} & 8 \text { E } 369 \\ & 8 E 370 \end{aligned}$ | $\begin{aligned} & \text { 1N216 } \\ & \text { 1N217 } \end{aligned}$ | A |  |  | 8 E412 | 1N625 | E |  | . 80 | 8 EC 472 | 1N1361 |  |  |  |
| 8 E 371 | 1N218 | A |  | 3.25 | $8 \mathrm{EE4} 43$ | 1N626 iN627 | E | Glass; fast | 2. | 8 EC 474 | $\begin{aligned} & \text { 1N1362 } \\ & \text { 1N1363 } \end{aligned}$ | F | Zener; power voltage | 11.00 |
| $8 E 372$ | 1 N 219 | A |  | 3.25 | 8 E415 | 1N628 | E |  | 2.90 | 8 EC 475 | 1N1364 | F | regulator |  |
| 8 BE 373 | 1N20 | A | burpose | 4.50 | 8E416 | 1N629 | E |  | 3.10 | 8 EC476 | 1N1365 |  |  |  |
| 8 8E374 | 1 N 221 1 N 22 | A |  | 4.75 5 | 8 E 428 | 1N1095 | B |  | 5.60 | 8 EC 477 | 1 N | $\stackrel{F}{F}$ |  | . 00 |
| 8E383 | 1N225 | A |  | 5.00 | 8 | 1N1115 | F | Medlum-power | 2. | 8 EC479 | 1N13688 | F | Zener; power voltage | . 00 |
| 8 E 384 | $1{ }^{1} 226$ | A | Zener double |  | 8 E 434 | 1N1117 | F | rectifier | 4.15 | 8 EC 480 | 1N1369 | F | regulator |  |
| 8 E 385 | 1 N 227 | A | anode; medium | 5.75 | 8 E 435 | 1N1118 | F |  | 5.80 | 8 EC 481 | 1N1370 |  |  | 3.00 |
| $\begin{aligned} & 8 E 386 \\ & 8 E 387 \end{aligned}$ | 1 ${ }_{1} \mathbf{N} 228$ | A | voltage |  | 8 | 1N1251 | D |  | . 50 | 8 EC 482 | 1N1371 |  |  |  |
| 8E388 | 1N230 |  |  |  | 8 E 437 | 1N1252 | D | Medium-power | 1.5 | 8 EC484 | 1N1372 | $\stackrel{F}{F}$ | Zener; power | 3.00 |
| 8 C 389 | ${ }_{1} 1231$ | A | Zener double |  | $8 \mathrm{8E} 439$ | ${ }^{1} 1254$ | D | rectuier | 2.45 | 8 EC 485 | 1N1374 | F | regulator |  |
| E 390 | 1 N 232 | A | anode; medium | 6.25 |  | 1N12 |  |  |  | 8 EC 486 | 1N1375 |  |  |  |
| 8E391 | 1N233 | A | voitage |  | 8 BE 4404 | 1N1255A |  |  | 3.70 | 8 EC 401 | 1N1530 | G | Zener reference | 8.00 |
| 8 E429 | 1N253 | F |  | 2.90 | 8 E 441 | 1N1256 | D | rectifier | 5.60 | 8 EC402 | 1N1530A | G |  | 27.00 |
| $\begin{aligned} & 8 E 430 \\ & 8 E 431 \end{aligned}$ | $\begin{aligned} & 1 N 254 \\ & 1 N 255 \\ & 1 \end{aligned}$ | $\stackrel{F}{F}$ | Medium rectifier | 3.30 | 8 E 442 | 1N1257 | D |  | 8.00 | 8 E417 | GZ-1 |  | Glas |  |
| 8 E397 | 1N429 |  |  | 5.80 | 8 8EC 443 | 1N1258 | D |  | 11.00 12.00 | $\begin{aligned} & 8 E 418 \\ & 8 E 419 \end{aligned}$ | $\begin{gathered} \mathrm{GZ}-2 \\ \text { GZ } \end{gathered}$ | E | voltage | 4.00 |
| 8 EC398 | $1{ }^{1} 430$ | c | Zener reference | 18.00 | 8 EC 445 | 1N1260 | - | rectifier | 13.00 | 8 E420 | GZ-4 |  |  |  |
| $\begin{aligned} & 8 E C 399 \\ & 8 E C 400 \end{aligned}$ | 1N430A | C | [unit | 27.00 | 8 EC 446 | 1N1261 | D |  | 14.00 | 8 E | GZ-5 | E | zener low | 4.00 |
| 8E376 | 1N431 | A | General purpose | 5.00 | 8 E 447 | ${ }_{1}^{1 N 1313}$ | A |  |  |  | H8-1 |  |  |  |
| $8 \mathrm{EE403}$ | IN456 |  |  |  | 8 E 449 | IN1315 | A | Zener |  | 8 E488 | HB-2 | A | Gener | 44 |
| 8 E 404 | 1N457 | E |  | 4.05 | 8 E 450 | ${ }^{1 N 1316}$ | A | anode; mediu | 3.50 | 8E489 | HB-3 | A | purpose |  |
| 8 E405 | 1 N 458 |  |  | 4.60 | 8 BE 451 | 1N1317 | A | Voltage |  | $8 \mathrm{E490}$ |  |  |  |  |
| $8 \mathrm{8E} 406$ | 1N459 | E | $\int_{\text {purpose }}$ | 4.80 2.15 | 88 BE 453 | IN1319 | A |  |  | 8 E491 | HB-5 | A | General | . 44 |
| $\begin{aligned} & 8 E 408 \\ & 8 E 409 \end{aligned}$ | $\begin{aligned} & \text { iN461 } \\ & \text { N462 } \end{aligned}$ | E |  | 2.15 3.20 |  |  |  |  |  | 8 E492 | HB-6 | A | purpose |  |

## SYLVANIA CRYSTAL AND MICROWAVE SILICON DIODES



These compact, highly ANIUM crystal diodes have hundreds of applications. May be used for rectification of frequencies up to 200 mc -have applications as detectors in irs and

| Stock No. | Type | Fig. | Description |
| :---: | :---: | :---: | :---: |
| 7 E 236 | $1{ }^{\text {N34 }}$ | $k$ | 60-volt |
| 7E220 | 1N35 | H | Matched pair 1N34A |
| 7E426 $8 E 744$ | 1N38A 1 N38B | K | \}100-volt |
| 7 E 235 | 1N39A | K | 200-volt |
| 8 E 685 | 1 N 48 | k | 855-volt |
| 8 8E686 | 1N52A | K |  |
| 7E427 | 1N54A 1N55A | K | H50 bac |
| 7 E 289 | IN56A | K | High conductance |
| 7 E 237 | 1N58A | k | 100-volt |
| 7 E 292 | 1 N 60 | K | Video detector |
| 8 E 687 | 1N63 | K | High back res. |
| 8E688 | 1N64 | ... | Video detector |
| 8 E'689 | 1N65 |  | 70-volt |
| 8 E690 | 1N67A | J | Min. high back |
| 8 E691 | 1N69A | K | ${ }^{60}$-volt |
| 8 E692 | 1N70A | K | 100-volt |
| 8 8C693 | 1N77A |  | Photodiode |
| 8EC694 | 1 1 l 7 B 1 B 81 A | K | Low voltage |
| 7 E 440 | 1N82 | K |  |
| 8 E696 | 1N82A | K | UHF mlxer |
| 8 E 6997 | 1N90 | J | Min. general |
|  |  |  | purpose ${ }^{\text {Min high ba }}$ |
| $8 \mathrm{E}_{\text {E }} 699$ | IN118 | J | Min. high |
|  |  |  | conductance |
| 8 EF 700 | $1{ }^{1 N 19}$ |  | $60-\mathrm{v}$. computer |
| 8 BE 701 | ${ }_{\text {1N126 }}^{1 N}$ | J | Min. 60-volt |
| $8 \mathrm{8E} 702$ | 1N126A | J | Min. 100-volt |

Point-contact crystal rectifiers, hermetically sealed in glass-to-metal moisture-proof carsealges in githst-to-metal extended exposure to humidity. Items below which are only designated by a voltage rating are general purpose types.

## Diodes and Rectifiers



## HUGHES DIODES

Tiny point-contact germanium and silicon junction

diodes. Fusion-sealed in moisture and gas-proof one-piece glass envelope. Highly resistant to shock and vibration. Stable over wide 3 bands on cathode end and letter " H "' on anode end. Germanium diodes: shunt capacitance, 0.5 mmf nom.; ambient operating temperature range, $-70^{\circ}$ to $+90^{\circ}$ C.-all specifications at $25^{\circ} \mathrm{C}$.; 1N126, 1N127, 1N128, 1N198 are JAN types; HD 2051, electrical equivalent to 1 N 63 , HD2120, electrical equivalent to 1N34A.* Silicon junction diodes: Highly efficient operation throughout wide temperature range of $-80^{\circ}$ to $+200^{\circ}$ C.; max. power dissipation at $25^{\circ} \mathrm{C}$. is 200 mw ; $\ddagger$ Silicon rectifiers have type number beginning with $H R ; 1 \mathrm{sec}$. surge is 10 x av. rect. fwd. cur-
rent; max. av. reverse current is 10 microamps. $\dagger$ @ 1.1 v . §Av. rect. fwd. rent; max. av. reverse curren
current. Av. shpg. wt., 2 oz .

| Stock No. | Type | Fig. | Min. Fwd. Ma @ IV. | $\begin{gathered} \text { Inv. } \\ \text { V. } \end{gathered}$ | Max. Inv. $\mathrm{Ma@} 25^{\circ} \mathrm{C}$. | NET EACH |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  |  |  |  |  | 1-99 | 100-999 |
| 7 E 575 | 1N55B | A | 5 | 150 | 500 @ 150v. | 5.04 | 3.88 |
| $7 E 576$ | 1N67A | A | 4 | 80 | 50 @ 50v. | . 80 | . 71 |
| 7E577 | 1N68A | A | 3 | 100 | 625 @ 100v. | 1.04 | . 80 |
| 7 E 578 | 1N89 |  | 3.5 | 80 | 100 @ 50v. | . 85 | . 65 |
| 7 E 579 | 1N90 | A | 5 | 60 | 500 @ 50v. | 39 | . 30 |
| 7 E 580 | 1N95 | A | 10 | 60 | 500 @ 50v. | . 52 | .40 |
| 7 E 51 | 1N96 | A | 20 | 60 | 500 @ 50v. | . 59 | .45 |
| 7 E 582 | 1N97 | A | 10 | 80 | 100 @ 50v. | . 88 | . 68 |
| 7 E 53 | 1 N 98 | A | 20 | 80 | 100 @ 50v. | 94 | 73 |
| 7E584 | $1 N 99$ | A | 10 | 80 | 50 @ 50v. | 1.24 | . 95 |
| 7 E 585 | 1 N100 | A | 20 | 80 | 50 @ 50v. | 1.43 | 1.10 |
| 7 E 56 | 1N116 | A | 5 | 60 | 100 (a) 50v. | . 78 | . 60 |
| 7E 588 | 1 N 118 | A | 20 | 60 | 100 @ 50v. | 81 | . 63 |
| 7 5 59 | 1N126A | A | 5 | 60 | 850 @ 50 v . | . 45 | . 34 |
| 7 5 590 | 1N127A | A | 3 | 100 | 300 @ 50v. | 1.04 | . 80 |
| 7E591 | 1N128 | A | 3 | 40 | 10 @ 10v. | . 68 | . 53 |
| 7E 592$7 E 594$$7 E 673$$5 E 400$ | 1N1911N1981N456*1N456A* | $\begin{aligned} & \hline \mathbf{A} \\ & \mathbf{A} \\ & \mathbf{B} \\ & \mathbf{B} \\ & \hline \end{aligned}$ | Computer- 0.5 sec . to $50 \mathrm{k} \Omega$ |  |  | $\begin{array}{r} .98 \\ 1.25 \\ 3.09 \\ 4.06 \end{array}$ | $\begin{array}{r} .75 \\ .90 \\ 2.38 \\ 3.13 \\ \hline \end{array}$ |
|  |  |  | 4 | 80 | 50 @ 50v. |  |  |
|  |  |  | 40 | 25 | . 025 @ 25v. |  |  |
|  |  |  | 100 | 25 | . 025 @ 25v. |  |  |
| 7 E 674 | 1N457* | B | 20 | 60 | . 025 @ 25v. | 3.58 | 2.75 |
| 5 E 401 | 1N457A* | B | 100 | 60 | . 025 @ 60v. | 4.35 | 3.35 |
| 7 E 675 | 1N458* | B | 7 | 125 | . 025 @ 125v. | 3.93 | 3.03 |
| SE 402 | 1N458A* | B | 100 | 125 | . 025 @ 125v. | 4.75 | 3.65 |
| 7 E 676 | 1N459* | B | 3 | 175 | . 025 @ 175v. | 4.19 | 3.23 |
| 5 E 403 | 1N459A* | B | 100 | 175 | . 025 @ 175v. | 4.94 | 3.80 |
| 7 E 670 | 1N461* | B | 15 | 25 | . 5 @ 25 v . | 1.24 | . .95 |
| 5E404 | 1N461A* | B | 100 | 25 | . 5 @ 25 v . | 2.28 | 1.75 |
| 7 EF 67 | 1N462* | B | 5 | 60 |  |  |  |
| 5 E 405 | 1N462A* | B | 100 | 60 | $.5 \text { @ } 60 \mathrm{v}$ | 2.96 | 2.28 |
| 7 E 672 | 1N463** | B | 1 | 175 | . 5 @ 175v. | 2.21 | 1.70 |
| SE406 | 1N463A* | B | 100 | 175 | . 5 @ 175v. | 3.35 | 2.58 |
| 7 E 677 | 1N464* |  | 3 | 125 | . ${ }^{\text {@ }} 125 \mathrm{v}$. | 2.76 | 2.13 |
| 5 E 407 | 1N464A* | B | 100 | 125 | . 5 @ 125v. | 3.22 | 2.48 |
| 5 E 408 | 1N482* | B | $100 \dagger$ | 36 | .25 @ 30v. | 2.08 | 1.60 |
| 5 E 409 | 1N482A* | B | 200 | 36 | . 25 @ 30v. | 2.63 | 2.03 |
| 5 E 410 | 1N483* | B | $100 \dagger$ | 70 | . 25 @ 60v. | 2.76 | 2.13 |
| 5 E 411 | 1N483A* | B | 200 | 70 | . 025 @ 60v. | 3.28 | 2.53 |
| 5 E 412 | 1N484* | B | $100 \dagger$ | 130 | . 25 @ 125v. | 3.02 | 2.33 |
| 5 E413 | 1N484A* | B | 200 | 130 | . 25 @ 125v. | 3.61 | 2.78 |
| 5E414 | 1N485* | B | $100 \dagger$ | 180 | . 25 @ 175v. | 3.15 | 2.43 |
| 5 E415 | 1N485A* | B | 200 | 180 | . 025 @ 175v. | 3.77 | 2.90 |
| SE416 | 1N486* | B | $100 \dagger$ | 225 | . 25 @ 225v. | 3.77 | 2.90 |
| $5 E 417$ | 1N486A* | B | 200 | 225 | . 05 @ 225v. | 4.84 | 3.73 |
| 5 E 418 | 1N487* | B | $100 \dagger$ | 300 | . 25 @ 300v. | 5.82 | 4.48 |
| $5 E 419$ | 1N487A* | B | 200 | 300 | . 1.3 300v. | 7.28 | 5.60 |
| 5 E420 | 1N488* | B | $100 \dagger$ | 380 | .25 @ 380v. | 6.18 | 4.75 |
| $5 E C 421$ | 1N488A* | B | 200 | 380 | . 1 @380v. | 12.35 | 9.50 |
| 7 E 595 | HD2051 | A |  | 100 | 50 @ 50v. | 2.02 | 1.55 |
| 7 E 96 | HD2120 | A | 5 | 60 | 500 @ 50 v . | . 2.46 | . 35 |
| 5 E 422 | HD2125 | A | 3 | 100 | 50 @ 50v. | 1.43 | 1.10 |
| 7 E 599 | HD2135 | A | 5 | 60 | 100 @ 50v. | 1.20 | . 93 |
| 7 E 597 | HD2150 | A | 100 | 80 | 50 @ 50v. | 1.95 | 1.50 |
| 7 F 598 | HD2155 | A | 50 | 60 | 500 @ 50 v . | . 59 | . 45 |
| 7 E 685 | HD6751* | B | 100 | 175 | 100 @ 150v. | 2.70 | 2.08 |
| 7 E 687 | HD6753* | B | 100 | 275 | 100 @ 250v. | 4.10 | 3.15 |
| 7 E 688 | HD6754* | B | 100 | 325 | 100 @ 300v. | 4.42 | 3.40 |
| 7 E 689 | HD6755* |  | 100 | 375 | 100 @ 350v. | 5.36 |  |
| 7 E 691 | HR10211 $\ddagger$ | B | 1508 | 175 | 100 a | 2.11 | 1.46 |
| 7 E 692 | HR10213 $\ddagger$ | B | 1508 | 275 |  | 3.51 | 2.70 |
| 7E693 | HR10215 $\ddagger$ | B | 1508 | 375 |  | 4.94 | 3.80 |
| 7 E694 | HR10251 $\ddagger$ | B | 2008 | 175 | . $\cdot$ | 2.60 | 2.00 |

B SILICON QUICK RECOVERY DIODES
High-speed, fast-recovering diodes for usage where fast switching time is necessary. Feature high temperature, voltage and resistance storage temperature, $150^{\circ} \mathrm{C}$. Av. shpg. wt., 2 oz . $7135^{\circ} \mathrm{C} . ;$ maximum

| Stock No. | Mfr's Type | ax. Back |  | $\begin{gathered} \text { Rev. V. for } \\ 100 \mu \mathrm{a} \\ \hline \end{gathered}$ | NET EACH |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  | ma@ $25^{\circ} \mathrm{C}$ | $\mu \mathrm{a} @ 100^{\circ} \mathrm{C}$ |  | 1-99 | 100-9 |
| 7 E 682 | 1N625 | 1@-10V | 30@-20V | 30 | 1. | 1.28 |
| 690 | 1 N62 | 1@-35V | 30@)-35V | - | 1.98 | 1.53 |
| 68 | 1N62 | 1 @) -75 V | 30@-75V | 100 | 2.28 | 1.75 |
| 7 E 679 | 1 N628 | $1 @-125 \mathrm{~V}$ | 30@-125V | 150 | 2.54 | 1.95 |
| 7 E 681 | 1N629 | 1@-175V | 30@-175 | 200 | 2.80 | 2.15 |
| COMPLETE SEMICONDUCTOR STOCKS- OEM Prices- Same Day Shipmentrarge \& Complete StocksWrite, Wire or Phone Your Order to Allied's Industrial Division |  |  |  |  |  |  |

## G.E. GERMANIUM \& SILICON RECTIFIERS

Complete line of general-purpose and special-type G.E. crystal diodes and rectifiers for use in electronic and electrical power which require detection or rectification. Feature welded joint between platinum whisker and crystal for high strength and rigidity. Withstand shock and vibration. Free from microphonic effects. Low shunt capacitance. Exceptionally stable in operation. Explanation of Symbois stud temperature all ather raticon ambient temperature Av. shpg th 2 oz Topes $1 N 93$ 1N315 1N538 $1 N 540$ are also available on special t., ${ }^{\text {oz }}$. Division for price and delivery. livery

| Stock No. | Type | Fig. | PIV | $\begin{aligned} & \text { Max DC } \\ & \text { Ma © }{ }^{\circ} \mathrm{C} . \end{aligned}$ |  | $\begin{gathered} \text { Max 1-Sec. } \\ \text { Surge } \end{gathered}$ | Storage Max. ${ }^{\circ} \mathrm{C}$. | NET EACH |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| $7 E 491$ | 1N91 | D | 100 | 150 | 55 | 25A | 85 | 81 |
| 7 E 492 | $1 N 92$ | D | 200 | 100 | 55 | 25A | 85 | 1.86 |
| 7 E 493 | 1 N 93 | D | 300 | 75 | 55 | 25A | 85 | 2.60 |
| 7 E479 | 1N151 | C | 100 | 500 | 55 | 25A | 85 | 2.11 |
| 7 E 476 | 1N153 | C | 300 | 500 | 55 | 25A | 85 | 3.53 |
| 8 E 057 | 1N253 | G | 95 | 1000 | $135 \dagger$ | 15A | 175 | 2.45 |
| 8 E 058 | 1N254 | G | 190 | 400 | $135 \dagger$ | 15A | 175 | 2.74 |
| 8 E 059 | 1N255 | G | 380 | 400 | $135 \dagger$ | 15A | 175 | 5.49 |
| 8 EC 070 | 1N256 | G | 570 | 200 | $135 \dagger$ | 15A | 175 | 11.27 |
| 8 E 071 | IN315 | G | 100 | 100 | 85 | 5A | 95 | 2.94 |
| 8 E 072 | 1N440B* | E | 100 | 500 | 100 | 15A | 175 | 2.35 |
| 8 E 073 | 1N441B* | E | 200 | 500 | 100 | 15A | 175 | 2.74 |
| 8 E 074 | 1N442B* | E | 300 | 500 | 100 | 15 A | 175 | 3.43 |
| 8 E 075 | 1N443B* | E | 400 | 500 | 100 | 15A | 175 | 4.83 |
| 8 E 076 | 1N444B* | E | 500 | 425 | 100 | 15 A | 175 | 6.86 |
| 8 EE 077 | 1N445B* | E | 600 | 350 | 100 | 15A | 175 | 9.80 |
| 7 E 931 | 1N536* | E | 50 | 500 | 100 | 15 A | 175 | 1.13 |
| 7 E 497 | 1N537* | E | 100 | 500 | 100 | 15 A | 175 | 1.32 |
| 7 E 498 | 1N538* | E | 200 | 500 | 100 | 15A | 175 | 1.72 |
| 7 E 932 | 1N539* | E | 300 | 500 | 100 | 15A | 175 | 2.65 |
| 7 E 933 | 1N540* | E | 400 | 500 | 100 | 15 A | 175 | 3.23 |
| 7E990 | 1N1095* | E | 500 | 425 | 100 | 15A | 175 | 5.68 |
| 7E934 | 1N1115* | G | 100 | 1500 | $85 \dagger$ | 15A | 175 | 2.35 |
| 7 E 935 | 1N1116* | G | 200 | 1500 | $85 \dagger$ | 15A | 175 | 2.74 |
| 7 E 936 | 1N1117* | G | 300 | 1500 | $85 \dagger$ | 15 A | 175 | 3.43 |
| 7 E937 | 1N1118* | G | 400 | 1500 | $85 \dagger$ | 15A | 175 | 5.49 |
| 8 E 060 | 1N1301* | F | 50 | 15A | $85{ }^{+}$ | 300 A | 200 | 6.47 |
| 8 E 061 | 1N1302* | F | 100 | 15A | $160+$ | 300A | 200 | 8.72 |
| 8 EC 062 | 1N1304* | F | 200 | 15A | 160 $\dagger$ | 300A | 200 | 11.66 |
| $8 E C 063$ | 1N1306* | $F$ | 300 | 15A | $160 \dagger$ | 300A | 200 | 15.58 |
| 8 E 078 | 1N1487* | E | 100 | 250 | 125 | 15A | 150 | 1.08 |
| 8 E 079 | 1N1488* | E | 200 | 250 | 125 | 15A | 150 | 1.37 |
| 8 E 080 | 1N1489* | E | 300 | 250 | 125 | 15A | 150 | 1.96 |
| 8 E 081 | 1N1490* | E | 400 | 250 | 125 | 15A | 150 | 2.84 |
| 8 8 082 | 1N1491* | E | 500 | 250 | 110 | 15A | 150 | 4.07 |
| 8 E 083 | 1N1492* | E | 600 | 250 | 95 | 15A | 150 | 6.08 |
| 8 EE 084 | 1N1692* | D | 100 | 250 | 100 | 20A | 115 | . 73 |
| 8 EE 085 | 1N1693* | D | 200 | 250 | 100 | 20 A | 115 | . 98 |
| 8 E 086 | 1N1694* | D | 300 | 250 | 100 | 20 A | 115 | . 22 |
| 8 E 087 | 1N1695* | D | 400 | 250 | 100 | 20A | 115 | 1.37 |

## PHILCO UHF \& X-BAND LOW NOISE DIODES

Hermetically sealed germanium diodes. Symbols: PIV-peak inverse voltage; $\mathrm{Im}_{\mathrm{m}}$-maximum forward; $\mathrm{F}_{\mathrm{R}}$-maximum frequency. Av. shpg. wt., 2 oz .

| Stock No. | Type | Fig. | PIV | IM | FR | NET |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| $8 E 333$ 8 EC 332 | 1N147A | H | $2 v$ | 55 ma |  | $\begin{aligned} & 1.00 \\ & 12.50 \end{aligned}$ |

而IRC SELENIUM DUAL DIODES Exact replacement, highly stable, selenium dual diodes or use in horizontal
7 E 752. Typo D4. Common-cathode. List, \$1.65. NET. 97
[J AMPEREX GERMANIUM DIODES
Point-contact germanium diodes hermetically sealed in glass. Ratings for $25^{\circ} \mathrm{C}$. Peak rect. current, 150 ma ; av. rect. current, 50 ma . PIV indicates peak inverse DC voltage. Av. shpg. wt., 3 oz .

| Stock No. | Type | PIV | NET | Stock No. | Type | PIV | NET |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| $5 E 805$ | $1 N 34 A$ | 75 | .66 | $5 E 881$ | $1 N 87$ | 30 | .39 |
| $5 E 806$ | $1 N 38 A$ | 120 | 1.10 | $5 E 882$ | $1 N 119$ | 75 | 1.58 |
| $5 E 807$ | 1N54AA | 75 | 1.10 |  |  |  |  |

## GERMANIUM DIODE BOOKS

40 USES FOR GERMANIUM DIODES. By Sylvania engineers. Has workable circuits and data for 40 important uses of diodes and suggests others. 46 pages. $6 \times 9^{\prime \prime}$
37 K 044. Postpaid in U.S.A.
35c
ELECTRONIC SHORTCUTS FOR HOBBYISTS. By Sylvania engineers. Tells how to build 24 devices using germanium diodes. Has 40 pages. 6x9". Postpald In U.S.A. engineers. 40 tried and proven circuits. Ratings and characteristics of 37 all Sylvania germanium diodes. 35 pages. $6 \times 9^{\prime \prime}$ 37 K 091 . Postpald In U.S.A...
GERMANIUM DIODEINDUST RIAL USES. By Sylvania engineers. Has circuit diagrams, germanium diode installation hints, and germa


## Sarkes Tarzian Rectifiers



Outstanding new development in the field of power conversion and semiconductors. Especially useful for applications where rectifier may be subjected to extremes of heat and cold, vibration and shock or where high power capacity in a small size unit is required. Thermal range from $-55^{\circ} \mathrm{C}$. to $100^{\circ} \mathrm{C}$. without derating. Forward resistance less than one ohm; reverse resistance on the order of 1000 ohms -gives rectification efficiency greater than $99 \%$. Terminals, Types L, M, and SM : fuse type, Types P and K: pigtail leads; Type Q: stud $5 / 16^{\prime \prime}-24$ thread. Note: All DC current ratings are for resistive or inductive loads only except Types 30M, 40 M , and $K-200$ (for capacitive loads also). For these types derate maximum rms input by $50 \%$ for a capacitive load. On all other types derate DC current by $20 \%$ for capacitive, motor, or battery loads. Type $\mathbf{Q}$ $170^{\circ} \mathrm{C}$. Type $\mathrm{K}-200$ requires a 10 -ohm minimum series resistance. *Peak $170^{\circ} \mathrm{C}$. Type K-200 requires a 10 -ohm minimum series re
inverse voltage. $\dagger$ Rated at $100^{\circ} \mathrm{C}$. Av. shpg. wt., 3 oz .

| Stock No. | Jetec No. | Mfr's Type | Fig. | $\begin{aligned} & \operatorname{Max} \\ & \text { *PIV } \end{aligned}$ | RMS Volts | $\dagger$ Max. DC Amps | Overall Size L x Dia. | $\begin{aligned} & \text { NET } \\ & \text { EACH } \end{aligned}$ |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 4 A 731 | 1N1086 | 20L | A | 200 | 140 | 1.5 | $11 / 8 x^{1 / 2}{ }^{\prime \prime}$ | 4.07 |
| 4 A 732 | 1N1088 | 40L | A | 400 | 280 | 1.5 | $11 / 8 x^{1 / 2}{ }^{\prime \prime}$ | 5.96 |
| 4 A 733 | 1N1053 | 10P1 | B | 100 | 70 | 1.5 | 7/16 $\times 7 / 16^{\prime \prime}$ | 7.35 |
| 4 AC 734 | 1N1056 | 30P1 | B | 300 | 210 | 1.5 | 7/16x ${ }^{1 / 16^{\prime \prime}}$ | 12.44 |
| 4 AC 735 | 1N1078 | 15Q4 | E | 150 | 150 | 15. | 121/32 $\mathrm{x}^{27} / 32^{\prime \prime}$ | 13.82 |
| 4 AC 736 | 1N1080 | 3004 | E | 300 | 210 | 15. | $121 / 32 \times 27 / 33^{4 \prime}$ | 19.30 |
| 4 A 737 | 1N1082 | 20M | A | 200 | 140 | . 5 | $1 \mathrm{x}^{13 / 32^{\prime \prime}}$ | 1.23 |
| 4 A 850 | 1N1083 | 30M | A | 300 | 210 | . 5 | $1 x^{13 / 32^{\prime \prime}}$ | 1.32 |
| 4 A 739 | 1N1109 | 120SM | A | 1200 | 840 | . 425 | 115/16 ${ }^{13} / 32^{\prime \prime}$ | 6.30 |
| 4 A 740 | 1N1110 | 160SM | A | 1600 | 1120 | . 4 | $2^{13 / 32} \times 13 / 32^{\prime \prime}$ | 8.40 |
| 4 A 851 | 1N1111 | 200SM | A | 2000 | 1400 | . 375 | $27 / 8 \times 23 / 8^{\prime \prime}$ | 10.48 |
| 4 A 741 | 1 N1113 | 280SM | A | 2800 | 1960 | . 325 | $313 / 16 \times 13 / 32^{\prime \prime}$ | 14.70 |
| 4 A 852 | 1N1440 | 20 K | B | 200 | 140 | . 625 | $5 / 8 x^{3 / 81}{ }^{\prime \prime}$ | 1.23 |
| 4 A 853 | 1N1442 | 40K | B | 400 | 280 | . 625 | 5/8x ${ }^{3 / 8}$ | 1.47 |
| 4 A 854 |  | K-200 | B | 360 | 260 | . 200 | 5/8x ${ }^{3 / 8}$ | . 88 |

NEW HERMETICALLY SEALED SILICON RECTIFIERS
Miniaturized silicon rectifiers-hermetically sealed for full protection against moisture or dust. Stable under extreme conditions of temperaure, altitude and shock. Thermal range: $-55^{\circ}$ to $100^{\circ} \mathrm{C}$. without derating. Capacitive loads require $20 \%$ derating for all types.

| Stock No. | Jetec No. | Mfr's Type | Fig. | Max. PIV | RMS Volts | $\begin{gathered} \text { Max } \\ \text { DC Amps } \\ \hline \end{gathered}$ | Overall Size L x Dia. | $\begin{aligned} & \text { NET } \\ & \text { EACH } \end{aligned}$ |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 4 A 855 | 1N1029 | 10N1 | B | 100 | 70 | . 5 | $7 / 16 x^{3 / 8}{ }^{\prime \prime}$ | 4.68 |
| 4 A 856 | 1N1032 | 30 N 1 | B | 300 | 210 | . 5 | 7/16x ${ }^{3 / 8}$ | 6.56 |
| 4 A 857 | 1N1036 | 15N2 | D | 150 | 105 | 1 | $916 x^{3 / 8}$ | 5.54 |
| 4 A 858 | 1N1039 | 40N2 | D | 400 | 280 | 1 | 9/16x ${ }^{3 / 8}$ | 8.33 |
| 4 A 859 | 1N1041 | 10N3 | C | 100 | 70 | 1 | $13 / 16 x^{3 / 8}{ }^{\prime \prime}$ | 4.68 |
| 4A860 | 1N1043 | 20N3 | C | 200 | 140 | 1 | $13 / 16 x^{3 / 8}{ }^{\prime \prime}$ | 5.93 |
| 4 A 861 | 1N1047 | 10N4 | E | 100 | 70 | 1 | $7 / 16{ }^{1 / 2}{ }^{\prime \prime}$ | 4.68 |
| 4 A 862 | 1N1050 | 30N4 | E | 300 | 210 |  | 7/16 $\mathrm{x}^{1 / 2}{ }^{\prime \prime}$ | 6.56 |
| 4A863 | 1N1059 | 10P2 | D | 100 | 70 | 5 | $7 / 16 x^{1 / 2}{ }^{\prime \prime}$ | 7.35 |
| 4 AC 864 | 1N1062 | 30P2 | D | 300 | 210 | 5 | $7 / 16 \times 1 / 2$, | 12.44 |
| 4 AC 865 | 1N1067 | 20P3 | C | 200 | 140 | 5 | 7/16x ${ }^{3 / 8}$ | 10.58 |
| 4 AC 866 | 1N1073 | 20P4 | E | 200 | 140 | 5 | 15/32 $\times 9 / 16^{6}$ | 10.58 |
| 4 AC 867 | 1N1077 | 10Q4 | E | 100 | 70 | 15 | $25 / 32 \times 27 / 38^{\prime \prime}$ | 11.32 |

## HIGH CURRENT SILICON RECTIFIERS

Extremely efficient silicon rectifiers for heavy currents. Special mounting design assures maximum heat transfer. All current ratings based on heat sink design limiting case temperature to $125^{\circ}$ derate $20 \%$ for capacitive, motor, or battery loads. All listed have negative bases. Diameters
 given are for bases. $3^{\prime \prime}$ terminal. $\dagger 4^{\prime \prime}$ terminal. All high current silicon rectifiers, including types with positive bases, available on special orderwirite or phone Allied Industrial Division.

| $\begin{aligned} & \text { Stock } \\ & \text { No. } \end{aligned}$ | $\begin{aligned} & \text { Jetec } \\ & \text { No. } \end{aligned}$ | $\begin{aligned} & \text { Mifr's } \\ & \text { Typee } \end{aligned}$ | $\begin{aligned} & \text { Max } \\ & \text { PIV } \end{aligned}$ | $\begin{aligned} & \text { RMS } \\ & \text { Volts } \end{aligned}$ | $\begin{gathered} \text { Max } \\ \text { DC Amps } \\ \hline \end{gathered}$ | $\begin{gathered} \text { Overall Size } \\ \text { L x Dia. } \end{gathered}$ | $\begin{aligned} & \text { NET } \\ & \text { EACH } \end{aligned}$ |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 4 A 868 | 1N1159 | 20RN* | 200 | 140 | 20 | $15 / x^{1 / 8}{ }^{\prime \prime}$ | 5.98 |
| 4 A 869 | 1 N1163 | 20SN* | 200 | 140 | 35 |  | 5 |
| 4 AC 870 | 1N1167 | 20VN $\dagger$ | 200 | 140 | 100 | $23 / 4 \times 114^{4}$ | 21.07 |
| 4 AC 874 | 1N1264 | 10WN $\dagger$ | 100 | 70 | 150 | 23/4 $\times 1{ }^{1 / 4}{ }^{\prime \prime}$ | 25.18 |
| 4 AC 872 | 1N1264A | $10 \times \mathrm{Nt} \dagger$ | 100 | 70 | 200 | $23 / 4 \times 11 / 4$; | 29.4 |
| 4 AC 871 | 1N1266 | 30WN $\dagger$ | 300 | 210 | 150 | $23 / 4 \times 11 /{ }^{\text {a }}$ | 46.06 |
| 4 AC 873 | 1N1266A | 30XN $\dagger$ | 300 | 210 | 200 | 23/4 $\times 114^{\prime}$ | 57.3 |

NEW FULL WAVE PLUG-IN SILICON RECTIFIERS
Outstanding development in rectifier tube replacement. Silicon rectifier plug-ins feature long dependable life and remarkable stability under extreme operating temperatures. Do away with heater power losses. Perform equally well mounted vertically or horizontally. Type S-5011 replaces tube types $80,82,83,83 \mathrm{~V}$, 5Z3; Type S-5017: OZ4, 5X4, 5Y4, 6AX5, 6X5; Type S-5018:
5AU4, 5AW4, 5AZ4, 5T4, 5U4, 5V4, 5W4, 5Y3, 5Z4; Type S-5019: 5R4; Type Ş-5033: 6AU4, 6AX4, 6BL4, 6́W4, 12AX4, 17AX4, 25 W4. All plug-ins fit standard octal sockets except type S-5011 (4-contact socket). *Hermetically sealed. 4 oz.


| Stock No. | Jetec No. | Mfr's Type | $\begin{aligned} & \text { Max } \\ & \text { PIV } \end{aligned}$ | RMS Volts | $\begin{gathered} \text { Max } \\ \text { DC Amps } \\ \hline \end{gathered}$ | $\begin{gathered} \text { Overall Size } \\ \text { L x Dia. } \end{gathered}$ | $\begin{gathered} \text { NET } \\ \text { EACH } \end{gathered}$ |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 4 A 646 | 1N1150A | S-5011 | 1600 | 1100 | . 750 | $21 / 4 \times 11 / 4^{\prime \prime}$ | 2. |
| 4 A 647 | 1 N1237 | S-5017 | 1600 | 1100 | . 750 | $219 / 32 \times 13$ | 2.74 |
| 4 A 648 | 1N1238 | S-5018 | 1600 | 1100 | . 750 | $2^{19} 32^{2} 1^{3} / 16^{\prime \prime}$ | 2.74 |
| 4 A 649 | 1N1239 | S-5019* | 2800 | 1950 | . 5 | $33 / 4 \times 15 / 16^{\prime \prime \prime}$ | 20.04 |
| 4 A 875 | 1N1262 | S-5033 | 4500 | 1600 | . 25 | $33 / 4 \times 13 / 8{ }^{\text {c }}$ | 20.04 |

## GRAYHILL 17-1 DIODE HOLDER

Crystal diode holder with spring tension clip. Loop terminal and spring clip are formed from one piece of phosphor bronze wire, insuring good contact with easily Has provision to prevent turning on chassis. base (MIL-P-14, Type CFG). $15 / 16 \times 3 / 8 \times 1 / 8^{\prime \prime}$. Wt., 2 oz .

## SELENIUM RECTIFIERS

"Centre-Kooled" selenium rectifiers-premium quality at low cost. Widely used as replacements in radio and TV sets, intercoms, bias supplies, amply iers, etc. Also and bias voltages directly from power line or from transformer. Maximum rms input volts, 130. Conservatively rated to deliver highly dependable and efficient performance. "Centre-Kooled" design assures cool, stable operation. Maximum inverse peak volts, 380. Approximate internal drop, 5 volts. Av. shpg. wt., 5 oz.

| Stock No. | $\begin{aligned} & \text { Mfr's } \\ & \text { Type } \end{aligned}$ | $\begin{aligned} & \mathrm{DC} \\ & \mathrm{Ma} \end{aligned}$ | Size | $\begin{aligned} & 1 \mathrm{to}^{4} \\ & \text { EACH } \\ & \hline \end{aligned}$ | $\begin{aligned} & 5 \text { or More, } \\ & \text { EACH } \\ & \hline \end{aligned}$ |
| :---: | :---: | :---: | :---: | :---: | :---: |
| 4 A 631 | 50 | 50 | $13 / 16 \mathrm{x}^{23 / 32 \times 19 / 3{ }^{6}}$ | .65 | . 59 |
| 4 A616 | 65 | 65 | $1 \times 1 \times 11 / 16^{\prime \prime}$ | . 82 | . 74 |
| 4 A 617 | 75 | 75 | $1 \times 1 \times 1{ }^{13 / 16^{\prime \prime}}$ | . 91 | . 82 |
| 4 A 618 | 100 | 100 | $11 / 4 \times 11 / 4 \times^{13 / 16^{*}}$ | 1.06 | . 95 |
| 4 A 619 | 100A | 100 | $1 \times 1 \times 1{ }^{\prime \prime}$ | . 82 | . 74 |
| 4 A 620 | 150 | 150 | 11/4 $\times 11 / 4 \times 1116{ }^{\prime \prime}$ | 1.15 | 1.03 |
| 4 A 621 | 200 | 200 | ${ }^{119} 32 \times 1{ }^{19} 932 \times 1{ }^{\prime \prime}$ | 1.41 | 1.27 |
| 4 A 622 | 250 | 250 | $119 / 3 \times 119 / 32 \times 15 / 16^{\prime \prime}$ | 1.47 | . 32 |
| 4 A 685 | 250A | 250 | $11 / 4 \times 11 / 4 \times 17 / 8^{\prime \prime}$ | 1.29 | 1.16 |
| 4 A 623 | 300 | 300 | $11932 \times 11^{19} 3 \times 17 /{ }^{\prime \prime}$ | 1.56 | 1.40 |
| 4 A 686 | 300A | 300 | $113 / 32 \times 113 / 32 \times 1{ }^{15 / 46^{\prime \prime}}$ | 1.38 | 1.24 |
| 4 A 624 | 350A | 350 | $11932 \times 119 / 32 \times 23 / 32^{\prime \prime}$ | 1.47 | 1.32 |
| 4 A 627 | 400 | 400 | $2 \times 2 \times 15 / 6^{\prime \prime}$ | 1.71 | . 54 |
| 4 A 687 | 400AD | 400 | $14 / 5 \times 14 / 5 \times 11 / 4^{\prime \prime}$ | 1.65 | 1.48 |
| 4 A 625 | 500 | 5 | 2×2×178* ${ }^{\prime \prime}$ | 1.97 | 1.77 |
| 4 A 688 | 500AD | 500 | 14/5 $\times 14 / 5 \times 15 / 16^{\prime \prime}$ | 1.71 | 1.54 |

## MINIATURIZED SILICON RECTIFIERS

Type M500. Extremely small, clip-in silicon rectifier-perfect for TV replacement and miniaturization uses. Lower voltage drop (only 2 V. .) results in increased B+, more
drive and sweep voltage, and more anode

voltage on picture tube for greater clarity.
Maximum ratings: AC input, 130 v.; peak inv., 400 v.; DC current, 500 ma; peak current, 4000 ma. Shpg. wt., 4 oz.
10-49, NET EACH.
............ 1.37
Type M150. Similar to above but 150 ma . max. current. For replacement use in portable radios, etc. Will replace Sarkes Tarzian Models 65 and 75 selenium rectifiers. In plastic container, complete with two clips, 4 A 696. 10 to 49, EACH... 83 ¢ 1 to 9 , NET EACH.
Conversion Kit. Exceptionally handy unit for use in TV sets, or any equipment now using selenium or full wave vacuum tube rectifiers. Allows conversion to silicon rectifiers with resulting higher efficiency, comparative freedom Exom breakdown, easier future replacement. Excellent ization of older model 1 sets or other types of original equipment where miniaturizasion ond reliability are required. Rectifiers clip in or out
 like fuses. Conversion kit includes 2-M500 sili ing

Single Mounting CIIp. Overall size, $3 / 4 \times 115 / 16 \times 1 / 2^{\prime \prime}$. Shpg. wt., 2 oz . 4 A 669. NET.......................................................... 4 A 670 . NET......... . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . 24 .

## FULL-WAVE POWER RECTIFIERS

An excellent selection of single-phase, full-wave selenium rectifier stacks for general-purpose and industrial use. Compact, lightweight and economical. Famous for dependability and long life. "Cen-tre-Kooled" design for ample current capacity without overheating. Convenient solder-type terminals for use in center-tapped or bridge-type
hook-ups. Cover an extremely wide range of industrial applications Ideal for: electro-plating, motor control, DC filament supplies, battery charging, DC relay supplies, DC supplies for telephone equipment or
railway and traffic control signals, general laboratory use, etc. *Centertapped. $\dagger$ Bridge-connected. Av. shpg. wt., 10 oz.

| Stook No. | $\begin{aligned} & \text { Mifr's } \\ & \text { Type } \end{aligned}$ | Max. Amps. | $\begin{aligned} & \text { Max. AC } \\ & \text { Input V. } \end{aligned}$ | $\begin{aligned} & \text { DCV } \\ & \text { Output } \end{aligned}$ | Slzo | $\begin{aligned} & \text { NET } \\ & \text { EACH } \end{aligned}$ |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 4 A 700 | *D-10 | 2 | 13 | 6-10 | $3 \times 21 / 2 \times{ }^{\prime \prime}$ | 3.82 |
| 4 A 701 | *D-12 | 6 | 13 | 6-10 | $4 \times 27 / 8 \times 4^{\prime \prime}$ |  |
| 4 A 402 | *D-14 | 12.5 | 13 | $6-10$ | 5x27/8 ${ }^{10}{ }^{\prime \prime}$ | 6.47 |
| 4 A 410 | ${ }_{\text {* }{ }^{\text {D-16 }} \text {-17 }}$ | 22.5 | 13 | 6-10 | ${ }^{41 / 4 \times 27 / 8 \times 12^{\prime \prime}} 3$ | 11.22 |
| 4 A 704 | +D-18 | 4 | 26 | 6-20 | $4 \times 33 / 16 \times 4^{\prime \prime}$ | 8.57 |
| 4 A 705 | †-19 | 6 | 26 | 6-20 | $4 \times 4 \times{ }^{\prime \prime}$ | 9.06 |
| 4 A 706 | †D-20 | 8 | 26 | 6-20 | 5x33/6x ${ }^{\prime \prime}$ | 11.02 |
| 4 A 707 | $\dagger$ D-21 | 12 | 26 | 6-20 | 5x4x6" | 11.51 |
| 4 A 4111 | †D-23 | 22.5 | 26 | $6-20$ $20-40$ | $41 / 4 \times 4 \times 12^{\prime \prime}$ $3 \times 45 / 8 \times 3^{\prime \prime}$ | 20.48 |
| 4 A 709 | †-25 | 4 | 52 | 20-40 | $4 \times 45 / 8 \times 4^{\prime \prime}$ |  |
| 4 A 712 | $\dagger$ D-26 | 6 | 52 | 20-40 | $4 \times 65 / 16 \times 4^{\prime \prime}$ |  |
| 4 A 713 | †-30 | 22.5 | 52 | 20-40 | $41 / 4 \times 65 / 16 \times 12^{\prime \prime}$ | 37.39 |
| 4 A 714 | tD-39 | 1 | 130 | 60-100 | $2 \times 53 / 16 \times 2^{\prime \prime}$ | 17.25 |
| 4 A 715 | +D-40 | 2 | 130 | 60-100 | 3x8 ${ }^{13 / 16 \times 3^{\prime \prime}}$ | 22.73 |
| 4 A 716 | $\dagger$ D-45 | . 5 | 156 | 100-120 | $1.6 \times 6 \times 1 .{ }^{\prime \prime}$ | 12.74 |
| 4 A 717 | †-46 | 1 | 156 | 100-120 | $2 \times 6 \times 2{ }^{\prime \prime}$ | 19.99 |
| 4 A 718 | tD-47 | 2 | 156 | 100-120 | $3 \times 101 / 4 \times 3$ " | 26.41 |
| 4 A 719 | †D-48 |  | 156 | 100-120 | 4x101/4 $\times 4^{\prime \prime}$ | 39.10 |
| 4 A 720 | †D-49 | 6 | 156 | 100-120 | $4 \times 159 / 16 \times 4^{\prime \prime}$ | 39.35 |

[^3] OEM Prices on all Sarkes Tarzian Rectifiers

## Silicon and Selenium Rectifiers

## I T \& T—FEDERAL RECTIFIERS



Versatile plug-in and solder-in type rectifiers. Permit use of the same compact rectifying unit for a wide range of television, industrial or military uses. Miniaturized units (1/4 x $\quad x / 2$ dia.) are hermetically
humidity. Rectifiers are stable from $-55^{\circ}$ to $100^{\circ} \mathrm{C}$.
A "Kwik Klip" Kits. Have fuse-type holder for easy clip-in. Type A HF 504 K is rated at 500 ma DC at 130 v . rms. Peak inverse voltage 400 v . Includes 2 rectifiers. Type HF 154 K is similar except for current rating of 150 ma , DC. Has one rectifier. Shpg. wt., 2 oz .
4 A 900 . Type HF504K. List, \$6.30. NET.
4 A 901 . Type HF154K. List, $\$ 1.60$. NET.
3.67

B Universal Replacement Kits. Have 4-way mounting design. Type B HE504U rated 500 ma DC at 130 v . rms. Peak inverse voltage, 400. Includes 2 rectifiers. Type HE154U is similar except for current rating of $150 \mathrm{ma}, \mathrm{DC}$. Has one rectifier. Shpg. wt., 2 oz .
4 A 902. Type HE504U. List, \$6.40. NET...
3.77
$\qquad$ . .936 C. Axial Lead Types. For direct-soldering into circuits. 11/2" leads. voltage, 400 . Type HA154 is similar but rated at 150 ma DC. 2 oz. 1.57 4 A 904. Type HA504. List, $\$ 2.65$. NET.


## SELENIUM RECTIFIERS

 MINIATURE TYPEAn excellent selection of top-quality selenium rectifiers at unusually low prices. Fully miniaturized for limited space applications. Ideal for replacement use and for space applications. Ideal for replacement use and for original equipment. Types 1016 and 1017 are bridgeconnected. Internal voltage drops: Type $1001-1.2$
volts; Types $1015,1016,1017-2.4$ volts; Types 1002 A volts; Types $1015,1016,1017-2.4$ volts; Types 1002 A, 1008, 1009, $1014-9$ volts. $\dagger$ Maximum rms input voltage. Rectifiers with letter A in type number have locking lug. *Ultra-compact tubular rectifier; enclosed in paper tube. Has $11 / 2^{\prime \prime}$ leads for easy installation. Average shpg. wt., 5 oz.

| Stock No. | $\begin{aligned} & \text { Mfr's } \\ & \text { Type } \end{aligned}$ | $\begin{aligned} & \text { DC } \\ & \mathbf{M} \mathbf{A} \end{aligned}$ | $\dagger$ RMS | Size | T EACH |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  |  |  |  | 1-4 | 5-Up |
| 4 A 662 | 1159 | 20 | 130 | *1/2" dia. | . 74 | .67 |
| 4 A 606 | 1002A | 65 | 130 | $1 \times 1 \times 9 / 16^{\prime \prime}$ | . 74 | . 67 |
| 4 A 602 4 | ${ }^{1003 A}$ | 75 75 | 130 20 | 1x1x ${ }_{1 \times 1 \times 4}$ | . 78 | . 70 |
| 4 A 913 | 1007 | 75 | 160 | $1 \times 1 \times 21 / 16^{\prime \prime}$ | 2.22 | 2.00 |
| 4 A 914 | 1008 | 100 | 172 | $113 / 64 \times 1{ }^{13 / 64 \times 21 / 16^{7}}$ | 2.72 | 2.45 |
| 4 A 915 | 1014 | 100 | 160 | $19 / 32 \times 1932 \times 1{ }^{10}$ | 1.28 | 1.18 |
| 4 A 600 | 1004A | 100 | 130 130 | 19/32x113/64x ${ }^{3 / 4}$ | . 96 | . 86 |
| 4 A 603 | 1005A | 150 | 130 | $19 / 3 \times 11^{13 / 64 \times 1 / 4}$ | 1.00 | . 90 |
| 4 A 916 | 1015 | 150 | 25 | $1 \times 1 \times 1{ }^{\prime \prime}$ | 1.22 |  |
| 4 A 917 | 1009 | 200 | 172 | $117 / 3 \times 117 / 3 \times 2 \times 21 / 33^{\prime \prime}$ | 3.70 | 3.33 |
| 4 A 666 4 A 660 | 1016 | 300 600 | 25 |  | 1.28 | . 31 |

Type 1013 Battery Charger Rectifier. A low-priced and highly efficient unit. Excellent for charging small 2 and 6 -volt batteries, such as those used in electronic photoflash equipment and self-charging portable radios. Max. rms input volts, 18 . Max. DC, 450 ma .1 .2 v . internal drop. Overall size, $117 / 32 \times 117 / 3 x^{1 / 4} 4^{\mu}$. Shpg. wt., 4 oz . 66c
Type 1512 Battery Charger Rectifier. Lightweight and dependable. Ideally suited for trickle charging of 6 -volt auto batteries. Also suitable for DC filament supplies. Max. rms input volts, 26. Max. DC, 1800 ma . 1.2 v. internal drop. Overall size, $41 / 4 \times 21 / 8 \times 5 / 8^{\prime \prime}$. Shpg. wt., 6 oz.
4 A 664 . NET............................................
.1 .72
Federal Miniature Selenium Rectifier Handbook. Extremely valuable and informative handbook for radio-TV servicemen, amateurs and experimenters. Includes full specifications and circuit applications. 80 pages. Size, $81 / 2 \times 43 / 4$.
37 K 106 . Postpaid in U.S.A.
50c

## HI-DENSITY TYPE RECTIFIERS

Top-quality selenium rectifiers. Advanced design permits remarkably high current capacity and extremely compact size. Excellent for replacement use and for original equipment. Eliminate installation problems peak inverse volts 380 . Internal drop 7 volts. All have locking lug peak inverse volts, 380. Internal drop 7 vols. All have locking lug.

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| Stock No. | Mfr's. <br> Type | DC MA | Size | NET EACH |  |
| :---: | :---: | :---: | :---: | :---: | :---: |
|  |  |  |  | 1-4 | 6-Up |
| 4 A 918 | 1234.A-H | 65-75 | 11/16 $\times^{11 / 16 \times 21 / 33^{\prime \prime}}$ | . 65 | . 58 |
| 4 A 919 | 1235A-H | 100-150 | $1 \times 1 x^{3 / 4}{ }^{\prime \prime}$ | .89 | . 79 |
| 4 A 675 | 1236A-H | 250-300 | $11 / 4 \times 11 / 4 \times 13 / 8{ }^{\prime \prime}$ | 1.17 | 1.05 |
| 4 A 676 | 1241A-H | 350-400 | 117/32 $\times 17 / 32 \times 1{ }^{\prime \prime}{ }^{\prime \prime}$ | 1.53 | 1.38 |
| 4 A 677 | 1237A-H | 450-500 | 117/32 ${ }^{15117 / 32 \times 13 / 8 " ~}$ | 1.76 | 1.58 |
| 4 A 920 | 1242A-H | 550-600 | $15 / 8 \times 15 / 8 \times 11 / 2^{\prime \prime}$ | 1.94 | 1.74 |

## GENERAL ELECTRIC RECTIFIERS



## SILICON RECTIFIER STACKS

GE's famous 4JA411 series. Feature excellent regulation, high efficiency drops less leakage. Forward voltage up to $99 \%$. Almost negligible reverse losses make them excellent for all magnetic amplifier applications. Have wide range of operating temperature $\left(-65^{\circ}\right.$ to $170^{\circ} \mathrm{C}$.). Compact space-saving de-
sign, require no fins or insulation. 2 -bolt mtg. Av. shpg. wt., 12 oz .

| Stock No. | Mir's Type | ACInput Volts | DC Output |  | Size | $\begin{array}{\|c\|} \text { NET } \\ \text { EACH } \end{array}$ |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  |  | Volts | Amps |  |  |
| 4 A 950 | AB1AD1 | 70 | 62 | 3 | 21/2×11/2×31/2" | 8.62 |
| 4 A 951 | AB1AD2 | 70 | 62 | 6 | $21 / 2 \times 11 / 2 \times 51 / 2^{\prime \prime}$ | 15.48 |
| 4 A952 | BB1AD1 | 140 | 125 | 3 | $21 / 2 \times 11 / 2 \times 31 / 2^{\prime \prime}$ | 10.09 |
| 4 A 953 | BB1AD2 | 140 | 125 | 6 | $21 / 2 \times 11 / 2 \times 51 / 2^{\prime \prime}$ | 18.13 |
| 4 A 954 | CB1AD1 | 210 | 188 | 3 | $21 / 2 \times 11 / 2 \times 31 / 2^{\prime \prime}$ | 12.35 |
| 4 A 955 | CB1AD2 | 210 | 188 | 6 | $21 / 2 \times 11 / 2 \times 51 / 2^{\prime \prime}$ | 22.24 |
| 4 A 956 | DB1AD2 | 280 | 250 | 6 | $21 / 2 \times 11 / 2 \times 51 / 2^{\prime \prime}$ | 31.06 |
| 4 A 957 | EB1AD1 | 350 | 314 | 3 | $21 / 2 \times 11 / 2 \times 31 / 2^{\prime \prime}$ | 24.50 |
| 4 A 958 | CB2AD1 | 420 | 376 | 3 | $21 / 2 \times 11 / 2 \times 5^{\prime \prime}$ | 22.24 |

## GERMANIUM TV RECTIFIERS

Germanium TV power rectifiers for low-voltage power supplies. Feature compact size, increased output voltage, long life and easy installation. Extremely low voltage drop. Types 1 N 1005 , 1 N 1007 , and 1 N 1013 re quire single mounting hole. Type 1 N 573 requires two mounting holesintended for original equipment. All half-wave except *dual rectifier wired as voltage doubler. Av. shpg. wt., 3 oz .

| Stock No. | $\begin{aligned} & \text { Mfr's } \\ & \text { Type } \end{aligned}$ | $\begin{aligned} & \text { Max. AC } \\ & \text { Input V } \\ & \hline \end{aligned}$ | Peak Inverse $V$ | DC Output Ma. | Full Load Voltage Drop | $\begin{aligned} & \text { NET } \\ & \text { EACH } \end{aligned}$ |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 4 A 742 | 1N1005 | 130 | 380 | 250 | . 15 | 1.52 |
| 4 A 743 | 1N1007 | 130 | 380 | 350 | . 3 | 1.91 |
| 4 A 689 | IN1008 | 130 | 380 | 400 | . 3 | 2.15 |
| 4 A 744 | 1N1013* | 130 | 380 | 250 | . 15 | 2.99 |
| 4 A 745 | 1N573 | 130 | 380 | 250 | . 15 | 1.52 |



- Built for Long Useful Life
- Withstand High Temperatures
- Easy-Installation Design

Expertly designed silicon power rectifiers. Withstand maximum surge currents of 900 high as $200^{\circ} \mathrm{C}$. Capable of amps, 60 cps. Operating temperatures as fying unit at lower temperatures. Cathode connection is by threaded $19 / 32^{\prime \prime}$ stud; anode connection is terminal lug for nut and bolt. Current specifications are at $120^{\circ}$ stud temperature. $4^{11 / 32 \times 119 / 3 a^{\prime \prime}}$ dia. Wt., 4 oz .

| Stock No. | $\begin{aligned} & \hline \text { Mfr's } \\ & \text { Type } \\ & \hline \end{aligned}$ | PIV | $\begin{aligned} & \text { Max. }{ }^{1} \\ & \text { a) } 120^{\circ} \end{aligned}$ | $\begin{aligned} & \text { NET } \\ & \text { EACH } \end{aligned}$ |
| :---: | :---: | :---: | :---: | :---: |
| 4 A 959 | 4JA60A | 100 | 70A | 21.07 |
| 4 A 960 | $4 \mathrm{JA60B}$ | 200 | 70 A | 29.15 |
| 4 A 961 | 4JA60C | 300 | 70 A | 38.95 |
| 4 A962 | $4 \mathrm{JA60D}$ | 400 | 70A | 51.94 |
| 4 A 963 | $4 \mathrm{JA60F}$ | 50 | 70A | 14.70 |
| 4 A964 | 4JA62A | 100 | 40 A | 14.70 |
| 4 A 965 | $4 \mathrm{JA62B}$ | 200 | 40 A | 19.35 |
| 4 A 966 | 4JA62C | 300 | 40A | 25.97 |
| 4 A 967 | $4 \mathrm{JA62D}$ | 400 | 40 A | 40.67 |
| 4 A 968 | 4JA62F | 50 | 40A | 11.27 |

ALLIED IS SEMICONDUCTOR HEADQUARTERS

- OEM Prices
- Latest Types Available
- Same-Day Shipment
- Famous-Name Brands
- Widest Selection

Industrial Users: Allied stocks a complete line of famous name semiconductors for industrial applications. Write, wire, or phone your order to our Industrial Division for immediate attention.

## Rectifiers and Photocells

## PHOTOELECTRIC CELLS INTERNATIONAL RECTIFIER SELF-GENERATING PHOTO-CELLS

- Require No External Power
- Sunlight Output: 0.2-60 Ma
- Sensitive to White, Colored, or Ultra-Violet Light


MOUNTED

Selenium "barrier-layer" self-generating photoelectric cell sun batteries. Convert light energy into electrical energy without any auxiliary source of power for proper operation. Outputs in
average sunlight range from 0.2 to 60 ma. Excellent for autoaverage sunlight range from 0.2 to 60 ma . Excellent for automatic controls, colorimeters, door control and burglar alarms, exposure meters, smoke indicators, and many others. Spectral sensitivity corresponds very closely with that of the human eye; suitable also for measurements requiring an ultra-violet source.
Optimum load resistance ranges from 10 to 10,000 ohms. Ali Optimum load resistance ranges from 10 to 10,000 ohms. All with $100-\mathrm{ohm}$ load. Wt., 2 oz.

| Stock No. | Type | Size | Style | $\mu \mathrm{a}$ | NET |
| :---: | :---: | :---: | :---: | :---: | :---: |
| 7 E 732 | A-2M | 9/32" dia. | Mounted | 13 | 5.14 |
| 7 E 733 | A-5 | $11 / 8^{\prime \prime \prime}$ dia. | Unmounted | 250 | 1.96 |
| 7 E 734 | A-10 | $1^{13 / 4}{ }^{\prime \prime}$ dia. | Unmounted | 500 | 4.41 |
| 7 E 735 | A-15 | $2^{\prime \prime}$ dia. | Unmounted | 750 | 5.88 |
| 7 E 736 | B-2 | $23 / 32 \times 7 / 16^{\prime \prime}$ | Unmounted | 75 | 98 |
| 7 E 737 | B-5 | $1^{7 / 16 \times 44+1 / 64^{\prime \prime}}$ | Unmounted | 220 | 1.96 |
| 7 E 738 | B-10 | $111 / 16 \mathrm{x}^{7} / 8^{\prime \prime}$ | Unmounted | 350 | 2.45 |
| 7 E 739 | B-15 | $111 / 16 \times 111 / 16^{\prime \prime}$ | Unmounted | 750 | 5.88 |
| 7 E 740 | B-10M | 111/16x ${ }^{7} / 8^{\prime \prime}$ | Mounted | 350 | 6.96 |

Tppe B-2-M. Self-generating selenium photocell sun battery. Gives 2 ma output in average sunlight; 50 microamperes at 100 footcandles and 100 ohms resistance. Uses B-2 cell described above with right-angle mounting bracket. Use with a meter as a light-measuring device. Also lends itself to many other applications, such as sun-powered electronic equipment. Mounted. Sizes, ${ }^{23} / 32 \times 7 / 16^{\prime \prime}$. Shpg. wt., 2 oz.

## CLAIREX PHOTOCELLS

Highly efficient crystal photocell. Extremely sensitive to visible light. Type CL-2 is made of cadmium sulphide; Type CL-3 is made of cadmium selenide and is exceptionally sensitive in the red and near infra-red region of the spectrum. Both types have a maximum rating of 300 volts. AC or DC. Sensitivity of CL-2, $100 \mu \mathrm{a}$ at 100 v . at 2 footcandles; time constant, 100 footcandles at $10 \mathrm{~ms}, 1$ footcandle at 150 ms . Sensitivity of $\mathrm{CL}-3,600 \mu \mathrm{a}$ at
2 footcandles; time constant, 100 footcandles at $11 / 2 \mathrm{~ms}, 1$ footcandle at 15 ms . Sizes: $1 / 4^{\prime \prime}$ diameter by $1 / 2^{\prime \prime}$ long. Shpg. wt., 3 oz. 7 E 881. CL-2. NET 1.47

$$
7 \text { E 882. CL-3. EACH }
$$



## HOFFMAN SILICON PHOTOCELL

Type P-100. Photocell for use in countless photometric applications. Replaces older type selenium cells and operates with greater efficiency. Features high output-in sunlight, $1 / 2$ volt open circuit; 7 mw with 12 ohm load. Sufficient to operate sensitive relays-no auxiliary power needed. Operates on near infrared as well as visible light. Amount of generated current durable-
 unaffected by moisture or exposure to weather. $1 \times 1 \times 9 / 32^{\prime \prime}$. Fits standard octal socket. Wt., 4 oz .
77 E 063 . NET.
4.00

## HOFFMAN SILICON SOLAR CELL

Type S-1A. Silicon junction solar energy converter. Developed by Bell Telephone Labs. Offers countless uses. Extremely compact, only $13 / 8^{\prime \prime}$ diameter by $3 / 11^{\prime \prime}$ thick-ideal for miniaturized equipment. High output-under direct noon sunlight measures 0.3 volts across 3.0 ohm load. No auxiliary power source needed. Under optimum conditions will produce up to 35 mw . electrical power from solar energy. Wil operate on infrared light. High stabinty and rugged constructionditions, Coxidize or corrode. No deteroration umeidity May be banked in series or parallel unaffected by moisture or whainy. May baltage or current parallel arrangements in order to obtain increased voltage or current output.
Shpg. wt., 4 oz.
77 E O29. NET. ....................................................... 6.00

## PHOTOCELL-SUN BATTERY HANDBOOK

An excellent handbook for technicians, experimenters and engineers. Thoroughly describes the applications and basic circuits in which photocells and sun batteries can be effectively used. Typical chapters include. Communication. 9 chapters, 58 pages. Size, $51 / 2 \times 9^{\prime \prime}$.
37 K 129. Postpaid in U.S.A.
I. 50

## INTERNATIONAL RECTIFIER HIGH-VOLTAGE SELENIUMS

High-voltage, cartridge-type selenium rectifiers. For replacement in TV cameras, Geiger counters, computing ma-


## Industrial \& Service Items

## NEW FENWAL THERMISTORS



- Precision-Engineered for"High Reliability
- Extremely Stable; High Shock Resistance
- For Measurement and Control Applications

Thermal resistors-resistors with a high negative temperature coefficient. deal for temperature measurement, temperature compensation, tem perature control, liquid level measurement, time delay, remote control, switching, power measurement and power level contro, thermal conductivity instruments and others. These high-quality thermistors are precision-engineered components, carefully designed to exacting specifiHave practically unlimited life under normal aperating conditistance ead types listed below are glass-coated-useful for insertion probes UHF power measurements etc. Washer types have hole in center probes, be mounted on a bolt with terminals between them and connected in series or parallel. This permits a compact arrangement for tight spaces Disc and rod types may be used up to $125^{\circ} \mathrm{C}$.; washers up to $150^{\circ} \mathrm{C}$ beads up to $600^{\circ}$ F. Av. shpg. wt., 1 oz

| Stock No. | Mfr's Type | Similar to Fig. | Style | $\left\|\begin{array}{c} \text { Ohms at } \\ 25^{\circ} \mathrm{C} . \end{array}\right\|$ | $\begin{aligned} & \text { Res. Ratio } \\ & 0^{\circ} \mathrm{C} .: \\ & 50^{\circ} \mathrm{C} . \end{aligned}$ | NET | EACH |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 9 E 909 | GA51J1 | B | Bead | 100,000 | 10.3:1 | 2.70 | 2.16 |
| 9 E 910 | GA51P2 | A | Bead | 100,000 | 10.3:1 | 2.65 | 2.12 |
| 9 E 911 | GB32J2 | B | Bead | 2000 | 7.3:1 | 2.70 | 2.16 |
| 9 E 912 | GB32P8 | A | Bead | 2000 | 7.3:1 | 2.75 | 2.20 |
| 9 E 913 | GC32L1 | B | Bead | 2000 | 5.7:1 | 3.75 | 3.00 |
| 9 E 914 | KA31L1 |  | Disc | 1000 | 9.1:1 | . 85 | . 68 |
| $9 E 915$ | LB21J1 | C | Disc | 100 | 6.9:1 | . 85 | . 68 |
| 9 E 916 | QA51J1 | D | Rod | 100,000 | 9.1:1 | 1.25 | 1.00 |
| 9 E 917 | RB33L1 | D | Rod | 3150 | 7.1:1 | 1.20 | . 96 |
| 9 E 918 | RB41L1 | D | Rod | 10,000 | 7.1:1 | 1.35 | . 08 |
| 9 E 919 | WA21W1 | E | Washer | 100 | 9.1:1 | 1.25 | 1.00 |
| 9 E925 | WB11W1 | E | Washer | 10 | 6.9:1 | . 25 | . 00 |



Model G-200 Experimenter's Thermistor Kit. All of above- 12 thermistors (worth \$22.55) for use in circuit design, experimental work, of for is packed with complete data including resististor is packe with and volte dataincluding resistanceresistance from $0^{\circ}$ to $50^{\circ} \mathrm{C}$.; alpha temperature coefficient at $25^{\circ} \mathrm{C}$. dissipation constant, and time constant. Shpg. wt., 10 oz. ..... 19.95

## TELEMETER MAGNETICS FERRITE CORES



- Extremely Small, Compact
- Both Memory and Switching Types

Ferrite magnetic memory and switching cores-permanent magnets in which polarity can be reversed by extremely low magnetizing force. Typical applicacions include use in digital computers, high-speed counter, radiation counters, shift registers, juke box-802-10 3751-10 es, information storage TM501-10, TM501-40, TM802-10, TM802-40 similar devices. Types TM501-10, TM501-40, TM802-10, TM802-40, Types TM1801-10 TM1802-50, TM $3751-10$ and TM $3752-50$ are cores Types TM1801-10, TM1802-50, TM3 mum turn-over magnetomotive force; 1800 gauss saturation flux density; 1680 gauss residual flux density. $\dagger$ Indicates: 0.72 oersteds coercive force 0.9 oersteds optimum turn-over magnetomotive force; 2100 gauss satura tion flux density; 1900 gauss residual flux density. Circuits employing these cores are described in the February 1956 issue of Electronics magazine. Av. shpg. wt., per box, 4 oz. 25 cores per box.

| Stock No. | $\begin{aligned} & \text { Mfr's } \\ & \text { Type } \\ & \hline \end{aligned}$ | Outside Diameter | Switch Time, Microseconds | $\begin{aligned} & \text { NET } \\ & \text { PERBOX } \\ & \hline \end{aligned}$ |
| :---: | :---: | :---: | :---: | :---: |
| 9 E 888 | $\dagger$ TM3752-50 | . $375{ }^{\prime \prime}$ | 5 | 25.00 |
| 9 E 889 | +TM1802-50 | .180" | 5 | 25.00 |
| 9 E 890 | $\dagger$ TM1002-40 | . $1080^{\prime \prime}$ | 5 | 11.25 |
| 9 E 891 | $\dagger$ TM 802-40 + TM501-40 | . 080 " ${ }^{\prime \prime}$ | 5 | 11.25 |
| 9E893 | *TM3751-10 | . $375^{\prime \prime}$ | 1.2 |  |
| $9 E 894$ | *TM1801-10 | . $180^{\prime \prime}$ | 1.2 | 25.00 |
| 9 E 895 | *TM1002-10 | .100" ${ }^{\prime \prime}$ | 1.2 | 11.25 |
| $9 E 896$ | *TM802-10 | .080" | 1.2 | 11.25 |
| 9 E 897 | *TM501-10 | .050" | 1.2 | 11.25 |

## ADC TERMINAL BLOCKS



Especially useful in design of telephone circuits, computers, and other applications with very large numbers of circuits. Each unit has a one separators ard phenolic base. Individual termina surface makes for easy removal of solder flash after wiring. Terminals are .040 inch plated brass. Rows of terminals are graduated in length, and identified by numbering along the top row. Avail able with 1-6 rows, 20 terminals per row. Base dimensions: $3 \times 61 / 16$ inches. Height depends on number of rows. Av. shpg. wt., $11 / 2 \mathrm{lbs}$.

| Stock <br> No. | Mrf's <br> Type |
| :---: | :---: |
| 40 H 694 | PJ-101 |
| 40 H 695 | PJ-102 |
| 40 H 696 | PJ-103 |
| 40 H 697 | PJ-104 |
| 40 H 698 | PJ-105 |
| 40 H 699 | PJ-106 |


| Rows of <br> Terminals | Norminals <br> Term |
| :---: | :---: |
| 1 | 20 |
| 2 | 40 |
| 3 | 60 |
| 4 | 80 |
| 5 | 100 |
| 6 | 120 | wts., $10^{\prime}, 1 / 2$

49 W 560. 30 ohms resistance per ft. NET
49 W 570.60 ohms resistance per ft. ft PET Poot

| Height | NET EACH |
| :---: | :---: |
| $1^{129 / 32}{ }^{\prime \prime}$ | 3.45 |
| 21/4" | 4.65 |
| $2^{19} / 3^{\prime \prime}$ | 5.85 |
| 215/16" | 7.05 |
| 39,32" | 8.25 |

220-110 V. Step- Down Cord. For operating 110 v . AC-DC radio sets
$220-110 \mathrm{~V}$. Step-Down Cord. For operating 110 v . AC-DC radio sets
from 220 v . AC-DC. Convenient way to step down 220 volts for sets using 0.15 amp tubes. 500 ohms. 0.2 amps capacity. 5 oz .

JFD Universal Line Cord. Replaces AC-DC cords from 220 to 300 ohms. Easy to install. Just select desired resistance leads; clip off unused leads. For standard three-terminal or pilot bulb tapped cords. Length, 6 ft . 49 Shpg. 530 wt. 5 NET.
1.68

## "MAKE-UR-OWN" RESISTANCE CORDS

Resistance cords for supplying exact line cord resistance need. Shpg.

Per Foot.
12c
1.32 <br> \section*{(S. AMPERITE REGULATOR TUBES <br> \section*{(S. AMPERITE REGULATOR TUBES <br> <br> For Replacement Use in Industrial Electronic Equipment <br> <br> For Replacement Use in Industrial Electronic Equipment <br> <br> Amperite regulator tubes have achieved wide acceptance for <br> <br> Amperite regulator tubes have achieved wide acceptance for current-voltage regulating applications in industrial electronic current-voltage regulating applications in industrial electronic quipment. Built to rigid specifications to assure extremely de quipment. Built to rigid specifications to assure extremely de pendable service. Listed below are special purpose ballast tubes
used in original industrial equipment and identified by Amperite pendable service. Listed below are special purpose ballast tubes
used in original industrial equipment and identified by Amperite type numbers. Av. shpg. wt., 4 oz.} type numbers. Av. shpg. wt., 4 oz.}

| Stock No. | Type | EACH | Stock No. | Type | EACH |
| :---: | :---: | :---: | :---: | :---: | :---: |
| 9 E 981 | 1H22 |  | 9 E 987 | 6H6 |  |
| 9 E 984 | 3-4 <br> $3-14$ | 1.76 | 9 E 991 | $9-4$ 4 H 4 C | 1.76 |
| $9 E 985$ | 6-4 |  | 9 E 999 | 10-25 |  |



## CONSOLIDATED AC-DC

 RESISTANCE LINE CORDSHeavily insulated resistance line cords. Have color-coded tinned leads. Supply proper volt age for tubes wired in series across 115 vol lines. 135, 160, 180 and 200 ohm cords can also be used for 1 -lamp, 15 and 20 -watt fluorescent units. $\dagger$ For 3 -way battery port ables. $6^{\prime}$ long. Shpg. wt., 6 oz .

| Stock No. | Mfr's Type | Ohms | NET EACH |
| :---: | :---: | :---: | :---: |
| 49 T 522 | ${ }_{2401}^{2401}$ | 135 160 |  |
| $49 \mathrm{~T} \mathrm{~T}^{4} 519$ | 2402 2412 | 160 <br> 180 <br> 18 |  |
| 494549 <br> 49 | 2411 2403 | 200 200 | 71 c |
| 49 T 516 | ${ }_{2410}$ | 250 |  |
| 49 T 5515 | ${ }_{2408}^{2404}$ | 290 |  |
| 497512 | ${ }_{2405}$ | 330 |  |
| 49 T 511 | ${ }_{2406 \mathrm{~A}}^{2407}$ | 350 300 | 7 c |
| 49 T 525 | 2414A $\dagger$ | 560 |  |

Adustable Types. For virtually all replacement needs. 8-prong. 6 oz 9 E 885. Replaces ballasts beginning with $K, L, M, B K, B L, B M$ heving numbers 6-42, ending with A, B, C, D, F, G, or H. ................................................ 2.06
 S-1, 2 or 3 .
2.06

## Special Purpose Tubes



Easy to Order-Specify Department and Tube Type. This tabular presentation enables you to locate the tube types you want, quickly and easily. When ordering, give the full Stock Number, which consists of the Dept. No. and the Mfr's. Type No. These numbers represent exact location of the tube in Allied stockrooms-speeds up your shipment. Give Stock No. thus: E3-1B85. MP after tube type indicates matched pair.

## SPECIAL TUBES FOR <br> CRITICAL USES

High-reliability RCA)
tubes: (RCA's "Premium" and G.E.'s "Five-Star" types), are indicated by an asterisk*, or * with prototype tube in brackets, thus; 5654 *(6AK5). For industrial and military uses.

| Stock No. |  | Mfr. | $\begin{gathered} \mathrm{NET} \\ \mathrm{EACH} \end{gathered}$ | Stock No. |  | Mfr. | NET <br> EACH | Stock No. |  | Mfr. | $\begin{aligned} & \text { NET } \\ & \text { EACH } \end{aligned}$ |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Dept. | Tube Type |  |  | Dept. | Tube Type |  |  | Dept. | Tube Type |  |  |
| E1 | OA2 | RCA | 1.26 | E2 | RK 3B24 W | RAY | 10.50 | E4 | 6CA7 | AMP | 3.60 |
| E1 | OA2 WA* | RCA | 3.70 | E3 | GL 3B24 W | GE | 10.55 | E3 | EL 6C/L | ELEC | 21.90 |
| E1 | OA3 | RCA | 1.27 | E1 | 3B25 | RCA | 7.00 | E2 | 6C4 W | RAY | 8.90 |
| E1 | OA4G | RCA | 1.68 | E1 | 3B28 | RCA | 7.00 | E3 | 6D4 | SYL | 2.85 |
| E3 | OA5 | SYL | 7.30 | E1 | 3BP1A | RCA | 23.25 | E1 | 6F4 | RCA | 7.00 |
| E1 | OB2 | RCA | 1.32 | E3 | EL 3C | ELEC | 11.80 | E3 | EL C6J | ELEC | 28.90 |
| E1 | OB2 WA* | RCA | 4.10 | E3 | EL 3C/L | ELEC | 13.20 | E1 | C6J/5C21 | RCA | 28.90 |
| E2 | OB3 | RAY | 1.65 | E1 | 3 C 23 | RCA | 11.98 | E3 | EL C6J/A | ELEC | 29.30 |
| E1 | OC2 | RCA | 1.40 | E4 | 3 C 23 | AMP | 11.98 | E1 | C6J-A/5685 | RCA | 29.30 |
| E1 | OC3 | RCA | 1.27 | E3 | GL 3C23 | GE | 11.98 | E3 | EL C6J/K | ELEC | 28.90 |
| E2 | OC3 | RAY | 1.27 | E3 | 3CX100A5 | EIM | 32.15 | E3 | EL C6J/KL | ELEC | 31.70 |
| E1 | OD3 | RCA | 1.27 | E1 | 3D 22A | RCA | 21.20 | E3 | EL C6J/L | ELEC | 31.70 |
| E2 | OD3 | RAY | 1.27 | E1 | 3 E 29 | RCA | 20.25 | E1 | 6 J 4 | RCA | 4.33 |
| E4 | OE3/85A1 | AMP | 2.50 | E3 | C3J | CE | 14.40 | E1 | 6J4 WA*(6J4) | RCA | 5.90 |
| E4 | OG3/85A2 | AMP | 2.50 | E3 | EL C3J | ELEC | 14.10 | E1 | 6SJ7Y | RCA | 1.60 |
| E2 | OZ4A/CK 1003 | RAY | . 95 | E1 | C3J/5632 | RCA | 15.50 | E3 | 6SJ7 WGT | SYL | 2.60 |
| E2 | 1 AD4 | RAY | 3.05 | E3 | EL C3J/A | ELEC | 19.80 | E3 | 6SL7 WGT | SYL | 3.25 |
| E2 | 1 AE4 | RAY | 4.50 | E1 | C3J-A/5684 | RCA | 19.80 | E2 | 6SN7 WGT | RAY | 2.60 |
| E2 | 1 1AG5 | RAY | 2.05 | E3 | EL C3J/L | ELEC | 16.90 | E3 | 6SU7 GTY | TUNG | 4.25 |
| E3 | EL C1B | ELEC | 7.60 | E1 | 3JP1 | RCA | 27.50 | E3 | 6V6GTY | SYL | 1.45 |
| E3 | 1885 | VIC | 8.50 | E1 | $3 \mathrm{KP1}$ | RCA | 24.75 | E2 | $6 \times 4$ W | RAY | 2.00 |
| E3 | 1886 | VIC | 7.50 | EI | 3KP4 | RCA | 25.75 | E2 | 6X5 WGT | RAY | 2.00 |
| E3 | EL 1 C | ELEC | 9.80 | E3 | 3 NP4 | (NA Phil.) | 22.50 | E3 | $7 \mathrm{AK7}$ | SYL | 7.45 |
| E1 | $1 \mathrm{C21}$ | RCA | 3.85 | E1 | 3RP1 | RCA | 17.65 | EZ3 | GL 7 C29 | GE | 189.50 |
| E3 | CE 1C/918 | CE | 3.32 | EZ3 | 3X2500A3 | EIM | 198.00 | EX3 | $7 \mathrm{JP1} / 7 \mathrm{VP1}$ | SYL | 29.00 |
| E3 | 1D21/SN4 | SYL | 7.10 | EZ3 | 3X2500F3 | EIM | 198.00 | EXI | 7 7.JP4 | RCA | 21.69 |
| El | 1EP1 | RCA | 21.35 | E1 | 4-65 A | RCA | 20.00 | EZ1 | 7TP4 | RCA | 68.50 |
| E3 | EL CIJ | ELEC | 13.40 | E1 | 4-125A/4D21 | RCA | 30.25 | EZ1 | 7VP1 | RCA | 35.00 |
| E3 | EL C1J/A | ELEC | 15.90 | E3 | 4-125A | EIM | 30.25 | EZ1 | 10SP4 | RCA | 82.25 |
| E3 | EL C1K | ELEC | 12.90 | E1 | 4-250A/5D22 | RCA | 41.25 | E3 | UXCV11 | UE | 19.50 |
| E1 | C1K/6014 | RCA | 12.90 | E3 | 4-250A | EIM | 41.25 | E1 | $12 \mathrm{A6}$ | RCA | 2.09 |
| E1 | 1 P 21 | RCA | 58.50 | E3 | 4-400A | EIM | 48.00 | E1 | 12AT7 WA* | RCA | 4.75 |
| E1 | 1 P 22 | RCA | 16.90 | E4 | PL 4-400A | PEN | 48.00 | E3 | EL C16J | ELEC | 56.90 |
| E1 | 1 P 28 | RCA | 31.35 | EZ3 | 4-1000A | EIM | 132.00 | E1 | C16J/5663 | RCA | 56.90 |
| E1 | 1 1P29 | RCA | 4.20 | E3 | WL 4B24/3C | WES | 11.20 | E3 | KY21A | EIM | 25.00 |
| E1 | 1 P 37 | RCA | 3.45 | E3 | 4CX250B | EIM | 45.00 | E3 | RX21A | EIM | 24.00 |
| E1 | 1 P 39 | RCA | 2.15 | E3 | 4CX300A | EIM | 48.00 | E3 | CE 23A | CE | 2.50 |
| E1 | 1 P 40 | RCA | 3.20 | EU4 | 4CX1000A | EIM | 156.00 | E3 | 25T | EIM | 15.00 |
| E3 | CE 1P/40 | CE | 3.00 | E4 | 4D21A | PEN | 31.25 | E3 | FG 27A | GE | 40.25 |
| E1 | 1 P 41 | RCA | 3.80 | E2 | RK 4D32 | RAY | 30.95 | E3 | 28D7 | SYL | 2.85 |
| E1 | 1 P 42 | RCA | 12.50 | E1 | 4E27/8001 | RCA | 26.00 | E3 | CE 29R | CE | 2.23 |
| E4 | E1T/6370 | AMP | 16.50 | E1 | 4E27A/5-125B | RCA | 40.00 | E3 | GZ 32 | MULL | 3.19 |
| E3 | 122 | CHA | 6.40 | E3 | 4E27A/5-125B | EIM | 40.00 | E3 | EL 34 | MULL | 4.65 |
| E3 | 2-01C | EIM | 15.25 | E3 | EL C4J/F | ELEC | 20.10 | E3 | EL 34 MP | MULL | 10.05 pr. |
| E1 | 2AP1A | RCA | 18.00 | EZ3 | 4 W20000A | EIM | 1850,00 | E3 | GZ 34 | MULL | 3.15 |
| E3 | 2AS15A | THER | 7.50 | E1 | 4X150A | RCA | 38.95 | E3 | 351 | EIM | 20.00 |
| E1 | 2BP1 | RCA | 18.20 | E3 | $4 \times 250 B$ | EIM | 42.50 | E3 | EL 37 | MULL | 4.31 |
| E1 | 2BP11 | RCA | 19.85 | EZ1 | 4X500A | RCA | 121.00 | E3 | EL 37 MP | MULL | 9.38 pr . |
| E1 | 2C39A | RCA | 22.50 | EZ3 | 4X500A | EIM | 121.00 | E3 | IZ 40 | TAY | 10.20 |
| E3 | 2C39B | EIM | 32.15 | EZ1 | 5ABP 1 | RCA | 39.75 | E4 | EFP 60 | AMP | 8.75 |
| E3 | 2 C 39 WA | SYL | 30.00 | EZ1 | 5ABP7 | RCA | 42.65 | E2 | RK 61 | RAY | 3.70 |
| E1 | $2 \mathrm{C40}$ | RCA | 27.50 | EZI | $5 \mathrm{BP1A}$ | RCA | 32.75 | E3 | KT 66 | GEN | 3.50 |
| E1 | $2 \mathrm{C43}$ | RCA | 24.55 | EZ1 | 5 CPIA | RCA | 31.65 | E4 | 75 NB3 | AMP | 10.00 |
| E3 | 2 C 51 | TUNG | 5.50 | EZ1 | 5 CP7 A | RCA | 38.35 | E3 | EABC80 | MULL | 2.74 |
| E3 | $2 \mathrm{C53}$ | (Nat. Un.) | 13.50 | EZ1 | 5FP4A | RCA | 45.70 | E3 | EBF 80 | MULL | 2.25 |
| E3 | CE 2D | CE | 5.47 | E1 | 5R4GY | RCA | 1.90 | E3 | EZ 80 | MULL | 1.13 |
| E1 | 2D21 | RCA | 1.62 | E2 | 5R4GY | RAY | 1.90 | E3 | ECC 81 | MULL | 1.68 |
| E4 | 2 D 21 | AMP | 1.61 | E3 | 5R4GYA | GE | 1.90 | E4 | ECC 81 | AMP | 1.43 |
| E2 | 2D21 | RAY | 1.64 | EX1 | 5TP4 | RCA | 57.50 | E3 | ECH 81 | MULL | 2.63 |
| E1 | 2D21 W*(2D21) | RCA | 2.80 | EZ1 | 5UP 1 | RCA | 22.65 | E3 | EM 81 | MULL | 1.91 |
| E1 | 2 E 24 | RCA | 4.65 | EZ1 | 5UP7 | RCA | 32.00 | E3 | EZ 81 | MULL | 1.23 |
| E2 | $2 E 26$ | RAY | 3.85 | El | 6AC7 W*(6AC7) | RCA | 3.95 | E3 | FG 81A | GE | 27.77 |
| E1 | $2 E 26$ | RCA | 3.85 | E1 | 6AG7Y | RCA | 2.55 | E3 | ECC 82 | MULL | 1.38 |
| E2 | 2 E 30 | RAY | 2.60 | E2 | 6AJ5 | RAY | 4.35 | E4 | ECC 82 | AMP | 1.15 |
| E2 | 2 E 31 | RAY | 2.25 | E2 | 6AN5 | RAY | 3.75 | E3 | ECL 82 | MULL | 2.63 |
| E2 | 2 E 32 | RAY | 2.25 | E3 | 6AR6 | TUNG | 5.75 | El | ${ }_{\text {ECC }}^{83}$ | RCA | 1.57 |
| E2 | $2 E 36$ | RAY | 6.23 | E1 | 6AS6 | RCA | 3.46 | E3 | ECC 83 | MULL. | 1.38 |
| E2 | $2 \mathrm{G21}$ | RAY | 6.23 | E2 | 6AS6 | RAY | 3.46 | E4 | ECC 83 | AMP | 1.15 |
| E2 | RK 2 K 25 | RAY | 28.30 | E1 | 6AS7 G | RCA | 4.45 | E3 | EL 84 | MULL | 1.35 |
| E1 | 2K26 | RCA | 48.20 | E2 | 6AS7 G | RAY | 4.45 | E3 | EL 84 MP | MULL | 3.90 pr. |
| E1 | $2 \times 2 \mathrm{~A}$ | RCA | 2.55 | E1 | 6AU6 WA* | RCA | 3.60 | E4 | EL 84/6BQ5 | AMP | 1.20 |
| EI | 3 A4 | RCA | 1.20 | E3 | 6AU6 WA | GE | 3.60 | E3 | ECC 85 | MULL | 1.71 |
| El | 3A5 | RCA | 1.62 | E3 | EL 6B | ELEC | 13.00 | E3 | EF 86 | MULL | 1.88 |
| E2 | 3 A5 | RAY | 1.25 | E3 | 6BF7 W | SYL | 4.45 | E4 | EF 86 | AMP | 1.45 |
| E1 | 3AP1A | RCA | 25.50 | E3 | EL 6B/L | ELEC | 14.50 |  |  |  |  |
| E2 <br> E3 | $\begin{gathered} 3 \mathrm{~B} 4 \\ \text { WL 3B22/1C } \\ \hline \end{gathered}$ | $\begin{aligned} & \hline \text { RAY } \\ & \text { WES } \\ & \hline \end{aligned}$ | $\begin{aligned} & 2.75 \\ & 9.80 \\ & \hline \end{aligned}$ | E3 E3 | EL C6C EL 6C | ELEC ELEC | $\begin{aligned} & 56.10 \\ & 19.80 \end{aligned}$ |  | TINGS OF SPECIAL ONTINUED ON PAG | $\begin{aligned} & \text { PURPO } \\ & \text { ES } 128 \end{aligned}$ | $\begin{aligned} & \text { E TUBES } \\ & \text { AND } 129 \end{aligned}$ |


| AMP | Amperex Elect. Corp. |
| :--- | :--- |
| CE | Continental Electric Co. |
| CHA | Chatham/Tungsol |
| EIM | Eitel McCullough |
| ELEC | Electrons, Inc. |
| GE | General Electric |
| GEN | Genalex |
| MULL | Mullard Products |
| NAT | Nat' Electronics, Inc. |
| PEN | Penta Lab, Inc. |
| RCA | Radio Corp. America |
| RAY | Raytheon Mfg. Co. |
| SYL | Sylvania Electric |
| TAY | Taylor Tubes, Inc. |
| THER | Thermosen, Inc. |
| TUNG | Tungsol |
| UE | United Electronics |
| VIC | Victoreen Instrument |
| WES | Westinghouse |

MULL Mullard Products NAT Nat'l Electronics, Inc. Penta Lab, Inc. Radio Corp. America
Raytheon Mfg. Co. Sylvania Electric Taylor Tubes, Inc THER Thermosen, Inc. UE

Victoreen Instrumen

|  | Stock No. |
| ---: | ---: |
| Dept. | Tube Typ |

TUBE LISTINGS CONTINUED FROM PAGES 127 AND 128

| Stock No. |  | Mfr. | $\begin{aligned} & \text { NET } \\ & \text { EACH } \end{aligned}$ | Stock No. |  | Mfr. | $\begin{aligned} & \text { NET } \\ & \text { EACH } \end{aligned}$ |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Dept. | Tube Type |  |  | Dept- | Tube Type |  |  |
| E3 | 5663 | GE | 2.10 | E3 | 5932 | SYL | 11.30 |
| EZ3 | WL 5668 | WES | 307.00 | E3 | 5933 | SYL | 12.35 |
| E1 | 5670 *(2C51) | RCA | 4.80 | E3 | WL 5934 | WES | 18.00 |
| E3 | 5670 *(2C51) | GE | 4.45 | E1 | 5963 | RCA | 1.40 |
| E2 | CK 5670 | RAY | 4.80 | E2 | CK 5963 | RAY | 1.40 |
| E2 | CK 5672 | RAY | 2.45 | E1 | 5964 | RCA | 1.40 |
| E1 | 5675 | RCA | 13.20 | E1 | 5965 | RCA | 2.40 |
| E2 | CK 5676 | RAY | 3.05 | E3 | 5965 | GE | 2.40 |
| E2 | CK 5678 | RAY | 2.45 | E2 | CK 5965 | RAY | 2.40 |
| E3 | 5679 | SYL | 1.35 | E2 | CK 5975 | RAY | 4.20 |
| E1 | 5686* | RCA | 3.71 | E2 | RK 5976 | RAY | 68.00 |
| E3 | 5686* | GE | 3.75 | E3 | 5998 | TUNG | 11.85 |
| E1 | 5687 | RCA | 4.25 | E1 | 6005* (6AQ5) | RCA | 4.50 |
| E3 | 5687 | TUNG | 4.25 | E3 | 6005/6AQ5W | GE | 4.60 |
| E2 | CK 5687 | RAY | 4.25 | E4 | 6007 | AMP | 1.50 |
| E3 | GL 5687 | GE | 4.50 | E3 | GL 6011 | GE | 14.00 |
| E1 | 5690* | RCA | 12.95 | E3 | WL 6011/710 | WES | 14.00 |
| E1 | 5691* | RCA | 8.45 | E1 | 6012 | RCA | 7.10 |
| E1 | 5692* | RCA | 8.15 | E3 | 6014/C1K | NAT | 12.90 |
| E1 | 5693* | RCA | 6.40 | E1 | 6021* | RCA | 5.75 |
| E1 | 5696 | RCA | 1.90 | E3 | 6021* | GE | 5.75 |
| E2 | CK 5702 | RAY | 4.20 | E2 | CK 6021 | RAY | 5.75 |
| E2 | CK 5702 WA | RAY | 8.25 | E2 | CK 6029 | RAY | 5.00 |
| E2 | CK 5703 | RAY | 2.35 | E1 | 6072* (12AY7) | RCA | 4.70 |
| E2 | CK 5703 WA | RAY | 7.50 | E3 | 6072* (12AY7) | GE | 4.70 |
| E1 | 5718* | RCA | 4.85 | E1 | 6073* (OA2) | RCA | 3.00 |
| E1 | 5719* | RCA | 4.20 | E1 | 6074* (OB2) | RCA | 3.45 |
| E3 | G1. 5720/FG33 | GE | 34.75 | E1 | 6080 | RCA | 5.25 |
| E3 | 5722 | SYL | 6.40 | E1 | 6080 WA |  |  |
| E1 | 5725* (6AS6) | RCA | 4.15 |  | *(6AS7G) | RCA | 11.40 |
| E2 | CK 5725 | RAY | 3.65 | E1 | 6082 | RCA | 5.30 |
| E1 | 5726* (6AL5) | RCA | 1.70 | E3 | 6087* (5Y3GT) | GE | 6.30 |
| E3 | 5726* (6AL5) | GE | 1.70 | E2 | CK 6088 | RAY | 2.75 |
| E2 | CK 5726 | RAY | 1.70 | E1 | 6101*(6J6) | RCA | 7.00 |
| E1 | 5726/6AL5 W* |  |  | E2 | CK 6111 | RAY | 6.25 |
|  | (6AL5) | RCA | 2.10 | E2 | CK 6112 | RAY | 6.25 |
| E1 | 5726/6AL5 W/ |  |  | E1 | 6130/3C45 | RCA | 17.80 |
|  | 6097 *(6AL5) | RCA | 3.25 | E2 | CK 6135 | RAY | 2.60 |
| E1 | $5727^{*}$ ( ${ }^{\text {a }}$ | RCA | 2.80 | E1 | 6136* (6AU6) | RCA | 3.60 |
| E3 | $5727 *$ (2D21) | GE | 2.80 | E3 | 6136* (6AU6) | GE | 3.60 |
| E1 | $5727 / 2 \mathrm{D} 21 \mathrm{~W}$ |  |  | E1 | 6146 | RCA | 5.00 |
|  | *(2D21) | RCA | 2.80 | E4 | 6146 | AMP | 4.90 |
| E3 | $5727 / 2 \mathrm{D} 21$ W | GE | 2.80 | E2 | CK 6146 | RAY | 4.90 |
| E1 | 5734 | RCA | 18.00 | E4 | 6155 | AMP | 30.25 |
| EZ3 | WL 5736 | WES | 170.00 | E4 | 6156 | AMP | 41.25 |
| E1 | 5749 *(6BA6) | RCA | 2.70 | E1 | 6159 | RCA | 5.00 |
| E3 | 5749 *(6BA6) | GE | 2.70 | EZ1 | 6166 | RCA | 1020.00 |
| E1 | 5750 *(6BE6) |  | 3.80 | E2 | CK 6174 | RAY | 3.80 |
| E3 | 5750 *(6BE6) | GE | 3.80 | EZ1 | 6181 | RCA | 925.00 |
| E1 | 5751 *(12AX7) | RCA | 3.70 | E1 | 6186/6AG5 WA |  |  |
| E3 | 5751 *(12AX7) | GE | 3.70 |  | *(6AG5) | RCA | 4.00 |
| E2 | CK 5751 | RAY | 3.70 | E1 | 6189/12AU7 |  |  |
| E2 | CK 5755 | RAY | 10.40 |  | WA*(12AU7) | RCA | 4.70 |
| EZ1 | 5762/7C24 | RCA | 230.00 | E1 | 6197 | RCA | 2.80 |
| E1 | 5763 | RCA | 2.37 | EZ1 | 6198 | RCA | 230.00 |
| E2 | CK 5763 | RAY | 2.37 | EZ1 | 6198 A | RCA | 230.00 |
| E2 | CK 5783 | RAY | 4.20 | E1 | 6199 | RCA | 52.50 |
| E2 | CK 5783 WA | RAY | 8.30 | E1 | 6201* (12AT7) | RCA | 4.75 |
| E2 | CK 5787 | RAY | 5.00 | E3 | 6201* (12AT7) | GE | 4.75 |
| E2 | CK 5787 WA | RAY | 10.80 | E3 | 6202* (6X4) | GE | 3.60 |
| EZ3 | GL 5788 | GE | 476.25 | E3 | 6203* | GE | 4.50 |
| E3 | WL 5796 | WES | 16.40 | E1 | 6211 | RCA | 2.40 |
| E1 | 5814A*(12AU7) | RCA | 3.85 | E1 | 6217 | RCA | 72.00 |
| E3 | 5814A* (12AU7A) | GE | 3.85 | E2 | CK 6247 | RAY | 11.20 |
| E1 | 5819 | RCA | 56.90 | EZ3 | GL 6251 | GE | 2300.00 |
| EZ1 | 5820 | RCA | 1200.00 | E4 | 6252 | AMP | 25.00 |
| EZ4 | 5822AP | AMP | 116.00 | E3 | 6265* (6BH6) | GE | 4.50 |
| E1 | 5823 | RCA | 1.57 | E4 | 6268 | AMP | 32.50 |
| E3 | 5824 | GE | 3.60 | E4 | 6279 | AMP | 45.00 |
| E1 | 5825 | RCA | 20.85 | E1 | 6293 | RCA | 6.20 |
| E2 | CK 5829 | RAY | 4.20 | EX1 | 6326A | RCA | 515.00 |
| E1 | 5840* | RCA | 7.00 | E1 | 6328 | RCA | 12.15 |
| E3 | 5841 | VIC | 6.50 | EZ4 | 6333 | AMP | 260.00 |
| E3 | 5844 | GE | 2.40 | E3 | 6336 | CHA | 17.65 |
| E4 | 5847 | AMP | 20.00 | E3 | 6336 A | CHA | 24.40 |
| EZ4 | 5868 | AMP | 55.00 | E1 | 6342 | RCA | 72.00 |
| E1 | 5876 | RCA | 13.55 | E3 | GL 6346 | GE | 65.00 |
| E2 | CK 5879 | RAY | 1.75 | E3 | GL 6347 | GE | 99.00 |
| E1 | 5881 | RCA | 3.50 | EZ3 | GL 6348 | GE | 245.00 |
| E3 | 5881 | TUNG | 3.50 | E1 | 6350 | RCA | 2.35 |
| E2 | CK 5886 | RAY | 5.00 | E4 | 6360 | AMP | 4.00 |
| E2 | CK 5889 | RAY | 12.45 | E3 | 6386* | GE | 8.15 |
| E1 | 5893 | RCA | 19.40 | E2 | CK 6397 | RAY | 8.30 |
| E4 | 5894 | AMP | 25.00 | E1 | 6417 | RCA | 2.37 |
| E3 | GL 5894 | GE | 32.40 | E2 | CK 6418 | RAY | 3.05 |
| E3 | 5896* | GE | 4.60 | E2 | CK 6419 | RAY | 2.20 |
| E3 | 5899* | GE | 7.40 | E2 | CK 6437 | RAY | 8.30 |
| E1 | 5915 | RCA | 1.55 | EXI | 6448 | RCA | 5300.00 |


| Stock No. |  | Mfr. | $\begin{aligned} & \text { NET } \\ & \text { EACH } \end{aligned}$ |
| :---: | :---: | :---: | :---: |
| Dept. | Tube Type |  |  |
| E3 | 6463 | GE | 2.15 |
| E3 | 6476 | SYL | 16.95 |
| E2 | CK 6485 | RAY | 2.05 |
| E2 | CK 6519 | RAY | 3.05 |
| E1 | 6524 | RCA | 16.00 |
| E3 | 6550 | TUNG | 4.95 |
| E1 | 6570 | RCA | 8.20 |
| E1 | 6655 | RCA | 56.25 |
| E1 | 6660/6BA6 | RCA | 1.11 |
| E1 | 6661/6BH6 | RCA | 1.44 |
| E3 | 6661/6BH' | GE | 1.44 |
| E1 | 6663/6AL5 | RCA | 1.02 |
| E3 | 6663/6AL5 | GE | 1.02 |
| E1 | 6669/6AQS | RCA | 1.16 |
| E3 | 6669 | GE | 1.16 |
| E1 | 6677/6CL6 | RCA | 1.95 |
| E3 | 6677 | GE | 1.95 |
| E1 | 6679/12AT7 | RCA | 1.60 |
| E3 | 6679/12AT7 | GE | 1.60 |
| E1 | 6680/12AU7 | RCA | 1.32 |
| E3 | 6680/12AU7 | GE | 1.32 |
| E1 | 6681/12AX7 | RCA | 1.34 |
| E3 | 6681/12AX7 | GE | 1.34 |
| E1 | 6694A | RCA | 5.60 |
| EZ4 | 6786 | AMP | 200.00 |
| E3 | 6802 | SYL | 14.50 |
| E3 | GL 6807 | GE | 29.30 |
| E3 | GL 6808 | GE | 29.40 |
| E1 | 6816 | RCA | 60.00 |
| E1 | 6883 | RCA | 5.00 |
| E1 | 6884 | RCA | 60.00 |
| E1 | 6893 | RCA | 4.25 |
| E1 | 6895 | RCA | 25.00 |
| E3 | GL 6897 | GE | 32.15 |
| E4 | 6939 | AMP | 14.00 |
| E1 | 6957 | RCA | 3.70 |
| E4 | 6977 | AMP | 2.80 |
| E1 | 7054 | RCA | 1.55 |
| E1 | 7055 | RCA | 1.05 |
| E1 | 7056 | RCA | 1.20 |
| E1 | 7057 | RCA | 2.00 |
| E1 | 7058 | RCA | 1.35 |
| E1 | 7059 | RCA | 1.75 |
| E1 | 7060 | RCA | 2.10 |
| E1 | 7061 | RCA | 1.35 |
| EZ3 | GL 7085/356 | GE | 600.00 |
| E1 | 7094 | RCA | 31.95 |
| E4 | 7136 | AMP | 25.00 |
| E2 | RK 7158 | RAY | 67.90 |
| E1 | 7163 | RCA | 2.85 |
| EZ1 | 7200 | RCA | 255.00 |
| E1 | 7212 | RCA | 15.45 |
| E1 | 8005 | RCA | 16.20 |
| E1 | 8008 | RCA | 9.90 |
| E4 | 8008AX | AMP | 9.35 |
| E1 | 8013A | RCA | 14.85 |
| E1 | 8020 | RCA | 24.00 |
| E3 | GL 8020 | GE | 24.00 |
| E1 | 9001 | RCA | 4.90 |
| E1 | 9002 | RCA | 3.25 |
| E1 | 9003 | RCA | 4.90 |
| E1 | 9004 | RCA | 4.15 |
| E1 | 9005 | RCA | 4.60 |
| E1 | 9006 | RCA | 2.35 |

## RCA TUBE LITERATURE

37 A 109. Type $1 \mathrm{D}-1020 \mathrm{~A}$. Interchangeability Directory. Guide to selection of RCA tubes for replacement of non-receiving tubes. No charge.
37 A 159. Type PCH101B. User Price Schedule. 6 pages. Latest edition. No charge. 37 A 137. Type CRPD-105. Photosensitive
Devices and Cathode- Ray Tubes. Technical information on 106 RCA tubes including single, tubes, monoscopes, etc. 24 pages. No charge.

37 A 138. Type RIT-104. Receiving-Type Tubes for Industry and Communications. Valuable data on 130 RCA tubes including special red, premium, pencil, computer, glowdischarge, etc. 20 pages. No charge.
37 A 576. Type PG-101-C. Power and Gas Tube Bulletin. Data on more than 150 RCA special tubes. 24 pages. No charge. and other

37 A 157. HAM-103B. Latest ratings, technical data and base diagrams for 48 RCA
Amateur tubes. 4 pages. No charge.

## IRC Resisfors



## BT AND BW $10 \%$ INSULATED TYPES

Type BT Fixed Composition. Exceed rigid MIL-R-11 specifications. Withstand $50-100 \%$ overloads for short periods. EIA (RETMA) coded. Sizes: BTR, $23 / 32 x^{3} / 32^{\prime \prime}$; BTS, ${ }^{13 / 12 \times x} 1 / 8^{\prime \prime}$; BTA, ${ }^{23 / 32 \times 1 / 4 " ; ~ B T B, ~} 11 / 4 \times 1 / 44^{\prime \prime}$. Figure in Type No. indicates wattage rating.

Type BW Fixed Wire-Wound (Low Power). Withstand $50 \%$ to $100 \%$ overloads with little or no resistance change. Have standard EIA (RETMA) color coding. Sizes: BW- $1 / 2,5 / 8 x^{3} / 6^{\prime \prime} ;$ BW-1, $11 / 4 \times 1 / 4^{\prime \prime} ; B W-2,13 / 4 \mathrm{x}$ $21 / 4^{\prime \prime}$. Figure in Type No. indicates wattage rating.
$10 \%$ EIA (RETMA) VALUES-SPECIFY RESISTANCE WANTED

| Ohms | Ohms | Ohms | Ohms | Ohms | Ohms | Ohms | Ohms | Ohms | Ohms | Ohms | Ohms |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 0.27 | 1.2 | 5.6 | 27 | 120 | 560 | 2700 | 12,000 | 56,000 | 0.27 meg | 1.2 meg |  | 6 meg |
| 0.33 | 1.5 | 6.8 | 33 | 150 | 680 | 3300 | 15,000 | 68,000 | 0.33 meg | 1.5 meg |  | meg |
| 0.39 | 1.8 | 8.2 | 39 | 180 | 820 | 3900 | 18,000 | 82,000 | 0.39 meg | 1.8 meg |  | meg |
| 0.47 | 2.2 | 10 | 47 | 220 | 1000 | 4700 | 22,000 | 0.1 meg | 0.47 meg | 2.2 meg | 10 | meg |
| 0.56 | 2.7 | 12 | 56 | 270 | 1200 | 5600 | 27,000 | 0.12 meg | 0.56 meg | 2.7 meg | 12 | meg |
| 0.68 | 3.3 | 15 | 68 | 330 | 1500 | 6800 | 33,000 | 0.15 meg | 0.68 meg | 3.3 meg | 15 | meg |
| 0.82 | 3.9 | 18 | 82 | 390 | 1800 | 8200 | 39,000 | 0.18 meg | 0.82 meg | 3.9 meg | 18 | meg |
| 1.0 | 4.7 | 22 | 100 | 470 | 2200 | 10,000 | 47,000 | 0.22 meg | 1.0 meg | 4.7 meg | 22 | meg |

TYPE BT $10 \%$ FIXED COMPOSITION
5-lot price applies to purchase of one resistance value only.

TYPE BW 10\% FIXED WIRE-WOUND (Low Power)
5-lot price applies to purchase of one resistance value only.

|  | ype | MIL Equiv. | alues | $\begin{aligned} & \text { NET } \\ & \text { EACH } \end{aligned}$ | $\begin{gathered} 5 \\ \text { FOR } \end{gathered}$ | Stock No. | Mfr's <br> Type | MIL Equiv. | $\begin{aligned} & \text { Values } \\ & \text { (See Chart Above) } \\ & \hline \end{aligned}$ | $\begin{aligned} & \text { NET } \\ & \text { EACH } \end{aligned}$ | $\begin{gathered} 5 \\ F O R \\ \hline \end{gathered}$ |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 1 MM 010 | BTR-1/4 | RC09 | $10 \Omega$ to 22 | 12 c | 46 c | 1 MM 061 | BW-1/2 | RU-3 | 0.27 to $8.2 \Omega$ | 24 c | 94 |
| 1 MM 000 | BTS-1/2 | RC20 | $10 \Omega$ to 22 megs | 12 c | 35 c | 1 MM 060 | BW-1/2 | RU-3 | 10 to $820 \Omega$ | 20 c | . 78 |
| 1 MM 020 | BTA-1 | RC30 | $10 \Omega$ to 22 megs | 18 c | 53 c | 1 MM 080 | BW-1 | RU-4 | 0.47 to $4700 \Omega$ | 30 c | 1.18 |
| 1 MM 050 | BTB-2 | RC41 | $100 \Omega$ to 22 megs | 24 c | 94 c | 1 MM 100 | BW-2 | RU-6 | 1 to $8200 \Omega$ | 40 c | 1.57 |

INDUSTRIAL QUANTITIES-SUBSTANTIAL SAVINGS ON BTS AND BTA $10 \%$ TYPES

Industrial quantities-to provide tremendous savings on IRC $10 \%$ resistors. Supplied in boxes of 100 -the minimum quantity of any one value that you may order.

Values may be assorted for 500 - and 1000-lot prices -but only in boxes of 100 per value. For example, if you order 1000 resistors, select up to 10 different values.

Type BTS $1 / 2$-Waff Fixed Composition
Type BTA 1-Waft Fixed Composition

| Stock No. | MIL Equiv. | Values | $\begin{aligned} & \text { Lots of } \\ & 100, \\ & \text { Per } 100 \end{aligned}$ | $\begin{aligned} & \text { Lots of } \\ & 500, \\ & \text { Per } 100 \end{aligned}$ | $\begin{aligned} & \text { Lots of } \\ & 1000, \\ & \text { Per } 100 \end{aligned}$ | Stock No. | MiL Equiv. | Values | Lots of 100, Per 100 | $\begin{aligned} & \text { Lots of } \\ & 500, \\ & \text { Per } 100 \end{aligned}$ | $\begin{aligned} & \text { Lots of } \\ & 1000 . \\ & \text { Per } 100 \end{aligned}$ |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| $1 \mathrm{MM} \mathrm{O01}$ | RC20 | $10 \Omega$ to 22 megs | 4.30 | 3.20 | 2.85 | 1 MM 021 | RC30 | $10 \Omega$ to 22 megs | 7.10 | 5.40 | 4.80 |

## BT AND BW $\mathbf{5 \%}$ INSULATED TYPES

Type BT Fixed Composition. Filament carbon $5 \%$ resistors. Highly dependable low-cost units for use in circuits requiring close tolerance values. EIA (RETMA) color coding. Completely insulated.

Type BW Fixed Wire-Wound (Low Power). Stable, lowcost units, completely insulated. Similar in appearance to carbon resistors, but have double-width first color band. Withstand shock, vibration, temperature changes.

5\% EIA (RETMA) VALUES-SPECIFY RESISTANCE WANTED

| Ohms | Ohms | Ohms | Ohms | Ohms | Ohms | Ohms | Ohms | Ohms | Ohms | Ohms |  | Ohms |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 0.24 | 1.1 | 5.1 | 24 | 110 | 510 | 2400 | 11,000 | 51,000 | 0.24 meg | 1.1 | meg | 5.1 | meg |
| 0.27 | 1.2 | 5.6 | 27 | 120 | 560 | 2700 | 12,000 | 56,000 | 0.27 meg | 1.2 | meg | 5.6 | meg |
| 0.30 | 1.3 | 6.2 | 30 | 130 | 620 | 3000 | 13,000 | 62,000 | 0.30 meg | 1.3 | meg | 6.2 | meg |
| 0.33 | 1.5 | 6.8 | 33 | 150 | 680 | 3300 | 15,000 | 68,000 | 0.33 meg | 1.5 | meg | 6.8 | meg |
| 0.36 | 1.6 | 7.5 | 36 | 160 | 750 | 3600 | 16,000 | 75,000 | 0.36 meg | 1.6 | meg | 7.5 | meg |
| 0.39 | 1.8 | 8.2 | 39 | 180 | 820 | 3900 | 18,000 | 82,000 | 0.39 meg | 1.8 | meg | 8.2 | meg |
| 0.43 | 2.0 | 9.1 | 43 | 200 | 910 | 4300 | 20,000 | 91,000 | 0.43 meg | 2.0 | meg | 9.1 | meg |
| 0.47 | 2.2 | 10 | 47 | 220 | 1000 | 4700 | 22,000 | 0.1 meg | 0.47 meg | 2.2 | meg | 10 | meg |
| 0.51 | 2.4 | 11 | 51 | 240 | 1100 | 5100 | 24,000 | 0.11 meg | 0.51 meg | 2.4 | meg | 11 | meg |
| 0.56 | 2.7 | 12 | 56 | 270 | 1200 | 5600 | 27,000 | 0.12 meg | 0.56 meg | 2.7 | meg | 12 | meg |
| 0.62 | 3.0 | 13 | 62 | 300 | 1300 | 6200 | 30,000 | 0.13 meg | 0.62 meg | 3.0 | meg | 13 | meg |
| 0.68 | 3.3 | 15 | 68 | 330 | 1500 | 6800 | 33,000 | 0.15 meg | 0.68 meg | 3.3 | meg | 15 | meg |
| 0.75 | 3.6 | 16 | 75 | 360 | 1600 | 7500 | 36,000 | 0.16 meg | 0.75 meg | 3.6 | meg | 16 | meg |
| 0.82 | 3.9 | 18 | 82 | 390 | 1800 | 8200 | 39,000 | 0.18 meg | 0.82 meg | 3.9 | meg | 18 | meg |
| 0.91 | 4.3 | 20 | 91 | 430 | 2000 | 9100 | 43,000 | 0.20 meg | 0.91 meg | 4.3 | meg | 20 | meg |
| 1.0 | 4.7 | 22 | 100 | 470 | 2200 | 10,000 | 47,000 | 0.22 meg | 1.0 meg | 4.7 | meg | 22 | meg |

TYPE BT 5\% FIXED COMPOSITION
5-lot price applies to purchase of one resistance value only.

| Stock No. | Mfr's <br> Type | MIL Equiv. | Values | $\begin{gathered} \text { NET } \\ \text { EACH } \end{gathered}$ | $\begin{gathered} 5 \\ \text { FOR } \end{gathered}$ | Stock No. | Mfr's Type | MIL Equiv. | Values | $\begin{aligned} & \text { NET } \\ & \text { EACH } \end{aligned}$ | $\begin{gathered} 5 \\ \text { FOR } \end{gathered}$ |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 1 MM 015 | BTR-1/4 | RC09 | $10 \Omega$ to 22 megs | 24 c | . 94 | 1 MM 066 | BW-1/2 | RU-3 | $0.24 \Omega$ to $9.1 \Omega$ | 48 c | 1.88 |
| 1 MM 005 | BTS-1/2 | RC20 | $10 \Omega$ to 22 megs | 24 c | . 94 | 1 MM 065 | BW-1/2 | RU-3 | $10 \Omega$ to $820 \Omega$ | 30 c | 1.18 |
| 1 MM 025 | BTA-1 | RC30 | $10 \Omega$ to 22 megs | 36 c | 1.41 | 1 MM 085 | BW-1 | RU-4 | $0.47 \Omega$ to $5100 \Omega$ | 45 c | 1.76 |
| 1 MM 035 | BTB-2 | RC41 | $100 \Omega$ to 22 megs | 48 c | 1.88 | 1 MM 105 | BW-2 | RU-6 | $1.0 \Omega$ to $8200 \Omega$ | 60 c | 2.35 |

130

## Precision 1\% Resisfors

## MOLDED AND UNMOLDED RESISTORS

## IRC MIL-10509B UNMOLDED RESISTORS

Types DCC, DCF and DCH.
Unmolded, film-type carbon resistors for circuits requiring
 high voltage ratings and low noise levels. Wattage rating indicated by last letter of Type: C ( $1 / 2$ watt); Specify values when ordering. Slipg. wts.: $1 / 2$ watt, 3 oz.; 1 watt, 4 oz.; Specify values when ordering. Shipg. wts.: $1 / 2$ watt, 3 ozats, 6 oz . Write for prices on larger quantities.

EIA (RETMA) VALUES

| Ohms 0 | Onms | Ohms | Ohms | Ohms | Megs | Megs | Megs |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 51 | 360 | 2200 | 6800 | 43,000 | . 27 | 1.2 | 5.1 |
| 56 | 390 | 2400 | 8200 | 47,000 | . 30 | 1.6 | 5.6 |
| 62 | 400* | 2500* | 9100 | 50,000* | . 33 | 1.8 | 6.2 |
| 68 | 430 | 2700 | 12,000 | 51,000 | . 36 | 2.2 | 6.8 |
| 82 | 470 | 3000 | 16,000 | 56,000 | . 39 | 2.4 | 8.2 |
| 91 | $500 *$ | 3300 | 18,000 | 62,000 | .40* | 2.5 | 9.1 |
| 120 | 510 | 3600 | 22,000 | 68,000 | . 43 | 2.7 | 12.0 |
| 160 | 560 | 3900 | 24,000 | 82,000 | . 47 | 3.0 | 16.0 |
| 180 | 620 | 4000* | 25,000* | 91,000 | . $50 \dagger$ | 3.3 | 18.0 |
| 220 | 680 | 4300 | 27,000 | . 12 meg | . 51 | 3.6 | 22.0 |
| 240 | 820 | 4700 | 30000 | . 16 meg | . 56 | 3.9 | 24.0 |
| $250 *$ | 910 | 5000* | 33,000 | . 18 meg | . 62 | 4.0* | 27.0 |
| 270 1 | 1200 | 5100 | 36,000 | . 22 meg | . 68 | 4.3 | 30.0 |
| 3001 | 1600 | 5600 | 39,000 | . 24 meg | . 82 | 4.7 |  |
| 330 1 | 1800 | 6200 | 40,000* | .25 meg | . 91 | 5.0 |  |
| Stock No. | Type | MIL Type | Values |  |  | NET | ACH |
|  |  |  |  |  |  | 1-24 | 25-99 |
| MM 490 | $\bigcirc$ DCC | RN20X | 51 ohms to 1.8 megs except * or $\dagger$ |  |  | 434 | 344 |
| 1 MM 450 | 1 DCF | RN25X |  | 100 ohms to 5 megs |  | $65 ¢$ | 524 57 |
| 1 MM 451 | 1 DCF | RN25XRN30X | X 5.1 | 220 ohms to 10 megs |  | 724 | 574 |
| 1 M M 470 | D DCH |  | X 220 |  |  | 764 | 62¢ |
| 1 MM 471 | 1 DCH | RN30X | 12 except megs to 30 megs |  |  | 844 | $68 \%$ |

MIL-OHM VALUES

| Ohms | Oh | ms | Ohms | Ohms | Ohms | Megs | Megs | Megs |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 75 |  | 50 | 1100 | 7500 | 15,000 | . 1 | . 20 | 1.3 |
| 100 |  | 00 | 1300 | 10,000 | 20,000 | . 11 | . 75 | 1.5 |
| 110 |  | 50 | 1500 | 11,000 | 75,000 | . 13 | 1.0 | 2.0 |
| 130 | 10 | 00 | 2000 | 13,000 |  | . 15 | 1.1 |  |
| $\begin{gathered} \text { Stock } \\ \text { No. } \\ \hline \end{gathered}$ |  | Type | MILType | Values |  |  | NET EACH |  |
|  |  | 1-24 |  |  |  |  | 25-99 |
| M M | 491 |  | DC | RN2 |  | ms to 2.0 |  | 394 | 314 |
| M M | 452 | DC | F 2 | X 100 | ms to 2.0 |  | 594 | 474 |
| M Mi | 472 | DC | H RN3 | X 200 | ms to 2.0 | megs | 714 | 564 |

## AEROVOX CARBOFILM RESISTORS

For circuits requiring accuracy and stability. Carbon deposited on ceramic rod. Silver-plated contacts. Size and voltage: CP-1/2 watt, $19 / 64 \mathrm{x}^{15} / 11^{n \prime}$, 2500 volts. Specify values when ordering. Av. shpg. wt., 2 oz. Write for prices on larger quantities.


## CONTINENTAL CARBON NR \& NA RESISTORS

NR-25 1-watt resistors have metallic resistance film formed on surface of low-loss ceramic tubes. Hermetically sealed with smooth, uniform vitreous enamel coating. Hollow body for withstanding temperatures to $400^{\circ} \mathrm{F}$. Rating, 500 v . No. $18,11 / 2^{\prime \prime}$ tinned copper leads. Size, $1 / 4^{\prime \prime}$ dia., ${ }^{15 / 11^{\prime \prime} \text { long. NA-15, }}$ ( 2 -watt precisted in table below) up to 1.0 meg. Have No. 20 , $112^{\prime \prime}$ tinned copper leads. Rating, 350 v . Size, $1 / \mathrm{s}^{\prime \prime}$ dia., $17 / 32^{\prime \prime}$ long. Specify value. Shpg. wt., 2 oz.


| Ohms | Ohms |  | Ohms |  | Ohms |  | Ohms | Ohms | Ohms | Miegs |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 1 | 150 |  | 2000 |  | 5500 |  | 15,000 | 85,000 | 400,000 | 1.0 |
| 5 | 200 |  | 2500 |  |  | 50 | 20,000 | 90,000 | 450,000 | 1.5 |
| 10 | 300 |  | 2950 |  |  | 50 | 25,000 | 100,000 | 490,000 | 2.0 |
| 15 | 400 |  | 3500 |  |  | 00 | 30,000 | 150,000 | 500,000 | 2.5 |
| 20 | 500 |  | 4000 |  |  | 50 | 40,000 | 200,000 | 600,000 | 3.0 |
| 25 | 1000 |  | $\begin{aligned} & 4450 \\ & 4950 \end{aligned}$ |  |  | 50 | 50,000 | 240,000 | 750,000 | 3.5 |
| 50 | 1450 |  |  |  | 10,00013,500 |  | 60,000 | 250,000 | 800,000 | 4.0 |
| 100 |  |  | $\begin{aligned} & 4950 \\ & 5000 \end{aligned}$ |  |  |  | 75,000 | 300,000 | 900,000 | 5.0 |
| Stock No. |  | $\begin{aligned} & \text { Mfr's } \\ & \text { Type } \\ & \hline \end{aligned}$ |  | Watts |  | Values |  |  | NET EACH |  |
|  |  | 1-24 | $25-\mathrm{U}_{\text {p }}$ |  |  |  |  |  |  |  |
| MM 300 <br> 2 MM 301 <br> 2 MM 350 |  |  |  | $\begin{aligned} & \text { NR-25 } \\ & \text { NR-25 } \\ & \text { NA-15 } \end{aligned}$ |  | $\begin{aligned} & 1 \\ & 1 \\ & 1 / 2 \\ & \hline \end{aligned}$ |  | 1 ohm to 1.0 meg 1.5 megs to 5.0 megs 1 ohm to 1.0 meg |  |  | 594 |  |
|  |  | 764 | 55¢ |  |  |  |  |  |  |  |  |  |
|  |  | 474 | 334 |  |  |  |  |  |  |  |  |  |

IRC MIL-10509B MOLDED RESISTORS

## Types MDB, MDC, and

M DF. Molded, film-type car-
bon resistors for circuits re-
bon resistors for circuits re-

quiring high voltage ratings
and low noise levels. Sealed in a molded plastic case. Wattage rating is indicated by the last letter of type designation: B ( $1 / 4$ watt) ; C ( $1 / 2$ watt) F (1 watt). All units meet MIL 10509 B specifications. Ratings are for watt. 3 oz .; 1 watt, 4 oz . Write for prices on larger quantities.

MIL-OHM VALUES


## TEXAS INSTRUMENTS PRECISION RESISTORS <br> TYPE CD $1 / 2 M R-C O A T E D$

Coated, film-type carbon re-
sistors designed to provide de-
pendable service in critical cir-
cuits. Ideal for use where high voltage ratings and low noise levels are required. All units listed below have a wattage rating of $1 / 2$ watt. Meet MIL-R10509B specifications have excellent moisture resistance and overload copacity. Nominal lead kength, $1 / 2$; number $20-0.032$ diameter tinned prices on larger quantities.

| Ohms | Ohms | Ohms | Ohms | Ohms | Ohms | Megs | Megs |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 51 | 220 | 680 | 2700 | 10K | 39 K | . 15 | . 51 |
| 56 | 240 | 750 | 3000 | 11 K | 43 K | . 16 | . 56 |
| 62 | 250 | 820 | 3300 | 12 K | 47 K | . 18 | . 62 |
| 68 | 270 | 910 | 3600 | 13 K | 50 K | . 20 | . 68 |
| 75 | 300 | 1000 | 3900 | 15 K | 51 K | . 22 | . 75 |
| 82 | 330 | 1100 | 4300 | 16 K | 56 K | . 24 | . 82 |
| 91 | 360 | 1200 | 4700 | 18 K | 62 K | . 25 | . 91 |
| 100 | 390 | 1300 | 5000 | 20 K | 68 K | . 27 | 1.0 |
| 110 | 400 | 1500 | 5100 | 22 K | 75K | . 30 | 1.1 |
| 120 | 430 | 1600 | 5600 | 24 K | 82 K | . 33 | 1.2 |
| 130 | 470 | 1800 | 6200 | 25 K | 91 K | . 36 | 1.3 |
| 150 | 500 | 2000 | 6800 | 27 K | .10 meg | . 39 | 1.5 |
| 160 | 510 | 2200 | 7500 | 30 K | .11 meg | . 43 | 1.6 |
| 180 | 560 | 2400 | 8200 | 33 K | . 12 meg | . 47 | 1.8 |
| 200 | 620 | 2500 | 9100 | 36K | . 13 meg | . 50 | 2.0 |
| Stock No. | Type |  | Values |  | NET EACH |  |  |
|  |  |  |  |  | 25-99 |
| I M M 4 | 0 CD 1/2MR |  |  |  | 51 ohms to 2.0 megs |  | 394 |  | 314 |

## TYPE CDM-MOLDED

Precision-made, molded, film-type
carbon resistors. Excellent for cir
cuits where noise must be mini-
mized and which operate at high voltage ratings. Specially designed to provide maximum dependability in critical applications. Have high dielectric strength and resist humidity, dust and abusive handłing. Available in $1 / 4$ watt and $1 / 2$ watt values. Type CDM $1 / 4$ designates $1 / 4$ watt; Type CDM $1 / 2,1 / 2$ watt. Meet requirements of MIL-R 10109 B specifications. Type CDM $1 / 4$ and CDM $1 / 2$ are calibrated at $25^{\circ} \mathrm{C}$. Nominal ead length, $11 / 2^{\prime \prime}$; number 20-0.032 diameter tinned copper. Type CDM $1 / 4$ is MIL Type RN65B; $0.585^{\prime \prime}$ long, $\mathrm{x} 0.200^{\prime \prime}$ diameter. Type CDM $1 / 2$ is MIL Type RN70B; $0.750^{\prime \prime} \times 0.250^{\prime \prime}$ diameter. Specify values when ordering. Shpg. wts.: $1 / 4$ watt, 2 oz.; $1 / 2$ watt, 3 oz. Wr



## STOCK RANGES-SPECIFY RESISTANCE VALUE VALUES AVAILABLE IN OHMS

| VALUES AVAILABLE IN OHMS |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| $1+$ | $25 \dagger$ | 350*§ | 1250* | 3500§ | 8500*§ | 30,000* |
| $2+*$ \% | $50 \dagger$ | 400 | 125 | $4000 \dagger$ | 9000*§ | 40,000* |
| 3+* | $75 \dagger$ | $500+$ | $1500 \dagger$ | 4500 *§ | 10,000 $\dagger$ | 50,000* |
| $5 \dagger$ | $100 \dagger$ | $600 \dagger * \S$ | 1750*§ | $5000 \dagger$ | 12,000*§ | 100,000* |
| 7.5*§ | $150 \dagger$ | $750 \dagger$ | $2000 \dagger$ | 6000* | 12,500*§ |  |
| $10 \dagger$ | $200+$ | 800* | 2250 *§ | 7000* | 15,000 |  |
| $15 \%$ | $250 \dagger$ | $1000 \dagger$ | $2500 \dagger$ | $7500 \dagger$ § | 20,000 |  |
| $20 \dagger^{*} \S$ | $300 \dagger$ | 1200* | $3000 \dagger$ | 8000* | 25,000 |  |

## FIXED POWER RESISTORS

$13 / 4$ A (AB)- 10 WATT
To 25,000 ohms, except 2 and 3 ohms. $13 / 4 x^{5} / 16^{\prime \prime}$.

| Stock No. | Ohms | EACH |
| :---: | :---: | :---: |
| MM 120 | 1 to 1000 | 7 |
| M M 121 | 1200 to 5000 | . 53 |
| MM 122 | 6,000 to 10,000 | . 59 |
|  |  | . 65 |
| 1 min 124 | $\begin{array}{r} 12,000 \\ 25,000 \\ \hline \end{array}$ | . 71 |

2 D (DG)-20 WATT
All values to 50,000 ohms, except $\S$. $2 \times 9 / 16^{\prime \prime}$.

| M M 140 | 1 to 1000 | .62 |
| :--- | :--- | ---: |
| M M 141 | 1200 to 5000 | .65 |
| M M 142 | 6000 to 10,000 | .71 |
| M M 143 | 15,000 and 20,000 | .76 |
| M M 144 | 25,000 to 40,000 | .88 |
| M I45 | 50,000 | .83 |

4i/2 E (EP)- 50 WATT
In values indicated below only. $41 / 2 \mathrm{x}^{3} 4^{\prime \prime}$

| Stock No. | Ohms | EACH |
| :---: | :---: | :---: |
| IMM 160 | 1 and 2 | 1.47 |
| I MM 161 | $\begin{aligned} & 5,10,25,50,75,100, \\ & 200,250,500,1000 \end{aligned}$ | 1.06 |
| 1 M M 162 | $\begin{aligned} & 1500,2000,2500,3000 \text {, } \\ & 4000,5000 \end{aligned}$ | 1.12 |
| \| M M 163 | 6000 and 10,000 | 1.23 |
| 1 M 168 | 100,000 | 2.06 |

In $61 / 2 \mathrm{H}$ (HA)- 100 WATT
In values indicated below only. $61 / 2 \times 11 / 8$

| 1 M M 300 | $5,10,25,50,75,100,150$ |
| :--- | :---: |
| $250,500,750,1000$ |  |

1 MM 301
$250,500,750,1000$
$1250,1500,2000$,
$2500,3000,5000$
7500

1.56 | 1.65 |
| :--- |
| 1.76 |

| 1 M 302 | 7500 |
| :--- | :--- | :--- |



## RESISTOR ASSORTMENTS

Keep your resistor stocks complete, orderly and accessible with IRC metal Resist-O-Cabinets. These space saving cabinets have 4 drawers and 28 compartments and are available with a choice of 4 resistor assortments $( \pm 10 \%)$. Each resistance value is in a separate compartment. Prices are for resistors only-no charge for cabinets. $53 / 8 \times 515 / 16 \times 10^{7} / 8^{\prime \prime}$.

## METAL RESIST-O-CABINETS

Assortment No. 3A. 120 2-watt resistors as follows: 7 each: $8200,10 \mathrm{~K}, 22 \mathrm{~K}, 47 \mathrm{~K} ; 5$ each $1 \mathrm{~K}, 6800,15 \mathrm{~K}, 0.1 \mathrm{meg} ; 4$ each: $100,330,470$, $1500,2200,3300,4700,27 \mathrm{~K}, 1.0 \mathrm{meg} ; 3$ each: 2 each: $4.7,10,22,68$; 1 each: $15,27,33,39$. 2 each: $4.7,10,22,68 ; 1$ each: $15,27,33,39$.
Complete with metal Resist-O-Cabinet. Shpg. Complete wi
wt., $41 / 2 \mathrm{lbs}$.
2 M 776 . NET
28.22

Assortment No. 4A. 150 IRC $1 / 2$-watt resistors. 8 each: $1 \mathrm{~K}, 47 \mathrm{~K}, 0.1 \mathrm{meg}, 0.27 \mathrm{meg}, 1.0$ meg; 7 each: $4700,10 \mathrm{~K}, 0.22 \mathrm{meg}, 2.2 \mathrm{meg} ;$
5 each: $3300,22 \mathrm{~K}, 27 \mathrm{~K}, 33 \mathrm{~K}, 0.33 \mathrm{meg}, 4.7$ meg: 4 each: $100,470,1500,2200,56 \mathrm{~K}, 68 \mathrm{~K}$ 3.3 meg; 3 each: $47,220,270,10$ meg. Supplied complete with Metal Resist-O-Cabinet. Shpg wt. $41 / 2$ lbs. NET.
17.64

Assortment No. 5A. 125 IRC 1-watt resistors. $7 \mathrm{each}: 1 \mathrm{~K}, 10 \mathrm{~K}, 27 \mathrm{~K}, 47 \mathrm{~K}, 0.1 \mathrm{meg} .0 .27 \mathrm{meg}$,
$0.47 \mathrm{meg}, 1.0 \mathrm{meg} ; 5$ each: $2200,4700 \mathrm{~K}$; $0.47 \mathrm{meg}, 1.0 \mathrm{meg} ; 5$ each: $2200,4700,22 \mathrm{~K}$;
4 each: $33 \mathrm{~K}, 39 \mathrm{~K}, 68 \mathrm{~K} ; 3$ each: $47,100,150$, 4 each: $33 \mathrm{~K}, 39 \mathrm{~K}, 68 \mathrm{~K} ; 3$ each: $47,100,150$,
$220,270,470,1500,2700,3300,15 \mathrm{~K}, 0.15 \mathrm{meg}$, $0.22 \mathrm{meg}, 2.2 \mathrm{meg}, 4.7 \mathrm{meg}$. With metal Resist O-Cabinet. Shpg. wt., $43 / 4 \mathrm{lbs}$.
2 M 778. NET.
22.05

Combination Assortment No. 6A. Complete resistor stock for AM, FM and TV in om handy cabinet. 139 IRC insulated and Type
DCF resistors. $1 / 2-$ Watt. 4 each: $1000,47 \mathrm{~K}$, $100 \mathrm{~K}, 270 \mathrm{~K}, 470 \mathrm{~K}, 1.0 \mathrm{meg} ; 3$ each: 4700 $10 \mathrm{~K}, 27 \mathrm{~K}, 33 \mathrm{~K}, 39 \mathrm{~K}, 68 \mathrm{~K}, 150 \mathrm{~K}, 4.7 \mathrm{meg} .1$ Watt. 4 each: $1000,10 \mathrm{~K}, 27 \mathrm{~K}, 100 \mathrm{~K}, 1.0 \mathrm{meg}$; 3 each: $47 \mathrm{~K}, 470 \mathrm{~K}, 2.2 \mathrm{meg}$; 2 each: $3300,15 \mathrm{~K}$, $22 \mathrm{~K}, 68 \mathrm{~K}, 150 \mathrm{~K}, 270 \mathrm{~K} ; 1$ each: $47,100,150$ $220,270,470,1500,2200,2700,4700,33 \mathrm{~K}$,
$39 \mathrm{~K}, 220 \mathrm{~K}, 4.7$ mes, $2 \mathrm{Watt} 1 \mathrm{each} .47,100$ $39 \mathrm{~K}, 220 \mathrm{~K}, 4.7 \mathrm{meg} .2$ Watt. 1 each: 47,100 ,
$470,4700,10 \mathrm{~K}, 22 \mathrm{~K}, 47 \mathrm{~K} . ~ T y ~ p e ~ D C F . ~$
4 $470,4700,10 \mathrm{~K}, 22 \mathrm{~K}, 47 \mathrm{~K} . \operatorname{Type} \mathrm{DCF} .1$ each:
$1000,10 \mathrm{~K}, 100 \mathrm{~K}, 1.0 \mathrm{meg}, 5.0 \mathrm{meg}$. With metal Resist-O-Cabinet. Shpg. wt., 5 lbs.
2 M 779. NET
22.76

## AXIAL-LEAD POWER RESISTORS

Type PW-10. IRC 10-watt wire-wound resistors with glass fiber core. Element-lead assembly is fully sealed and insulated in rectangular cer amic case. Particularly recommended for cir cuits where a stable resistor is required with an actual wattage dissipation of 10 watts or less. Has axial leads $11 / 2^{\prime \prime}$ long. Tolerance $\pm 10 \%$ Specify values when ordering - see listing Specify
below.

## VALUES AVAILABLE (OHMS)

| 1 | 10 | 75 | 300 | 1500 | 5000 | 20,000 |
| :--- | :--- | :--- | ---: | ---: | ---: | ---: |
| 2 | 15 | 100 | 500 | 2000 | 7500 | 25,000 |
| 3 | 20 | 150 | 750 | 2500 | 8200 |  |
| 4 | 25 | 200 | 1000 | 3000 | 10,000 |  |
| 5 | 50 | 250 | 1250 | 4000 | 15,000 |  |



## FUSE-RESISTORS



Type FR 7.5. A highly reliable plug-in type resistor with characteristics of a slow-blow fuse. For series-string filament other equipment. Prevents severe tube lossesopens filament circuits if current is excessive. May be used to replace simila wnits in Ray Has fully insulated ceramic body. Kesistance, 7.5 ohms. Shpg. wt., 3 oz . 44 c 2 M 771.1 to 9 EACH
10 or More,
Type FR 5. As above, but 5 ohms. 3 oz.
2 M 773. 1 to 9, NET EACH.........44C
10 or More, EACH..................... 35
Type FR 5.6. As above, but 5.6 -ohm. 3 oz .44 C
2 M 772.1 to 9 EACH............... 44 C
2 M 772.1 to 9 , EACH
10 or More, EACH.....
$44 c$
$.35 ¢$

## Ohmite Resistors

FAMOUS "BROWN DEVIL" WIRE-WOUND RESISTORS
For voltage dropping, bias units, bleeders, etc. Thick vitreous en amel lent heat conduction and insulation;

also protects against effects of humidity. Welded high-strength alloy terminals. Accuracy, $\pm 5 \%$. Size: 5 -watt units, $1 \times 5 / 16^{\prime \prime} ; 10$-watt
units, $13 / 4 \times 5 / 16^{\prime \prime} ; ~ 20$-watt units, $2 \times^{7} / 16^{\prime \prime} .11 / 2^{\prime \prime}$ tinned leads. Av. shpg. wt., 3 oz.

SPECIFY VALUES DESIRED

|  |  |  |  |  | MM 700 1 to 1000 <br> MM 701 1100 to 5000 <br> MMM 702 6000 to 10000 |  | $\begin{array}{r} .47 \\ .53 \\ .59 \\ \hline \end{array}$ |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Ohms | Ohms | Ohms | Ohms | Ohms |  |  |  |
|  | 100 | 1000 | 7500 | 35,000 |  |  |  |
| $1.5 \dagger *$ | 125* | 1100* | 8000 | 40,000 | IMM 703 | 11000 22500 to 20000 | . 71 |
| 2* ${ }^{*}$ | 150 | 1200 | 8500*§ | 45,000 | 1 M M 705 | 30000 to 50000 | .779 |
| 4* | 225* | 1250 1500 | 9000 10,000 | 50,000 55,000 |  |  |  |
| 5 | 250 | 1750 | 11,000* | 60,000 |  | 20-WATT SIZE |  |
| 7.5* | 300 | 2000 | 12,000* | 65,000 | Available in | values except thos | ked * in |
| 10 | 350 | 2250 | 12,500 | 70,000 | table at left. |  |  |
| 12* | 400 | 2500 | 13,500* | 75,000 |  |  |  |
| 15* | 450* | $2750 \dagger$ § | 15,000 | 80,000 | I MM 720 | 5 to 1000 | . 62 |
| 20* | 500 | 3000 | 16,000* | 85,000 | 1 M M 721 | 1200 to 5000 | .65 |
| 25 | 600* | 3500 | 17,500* | 90,000 | 1 M M 722 | 6000 to 10000 | .71 |
| 30* | 650†§ | 4000 | 18,000* | 95,000 | I M M 723 | 12500 to 20000 | .76 |
| 35* | 700 | 4500 | 20,000 | 100,000 | IMM 724 | 25000 to 40000 | . 88 |
| 40* | 750 | 5000 | 22,500* | 100,000 | 1 M M 725 | 45000 to 60000 | 1.03 |
| 50 | 800 | 6000 | 25,000 |  | I M M 726 | 65000 to 80000 | 1.18 |
| 75 | 900* | 7000 | 30,000 |  | 1 MM 727 | 85000 to 100000 | 1.35 |

"DIVIDOHM" WIRE-WOUND ADJUSTABLE RESISTORS


Used for voltage-dividing networks in power Supplies, adjustable dropping resistors, etc, enameled coat. Accuracy core with vitreous and mounting brackets. Av. shpg. wt., $1 / 2 \mathrm{lb}$.

10 WATTS $-13 / 4 \times 5 / 16^{\prime \prime}$

| No. | Type | Ohms | Ma. | EACH |
| :---: | :---: | :---: | :---: | :---: |
| 74 M 950 | 1001 | 1 | 3160 |  |
| 74 M 951 | 1002 | 2 | 2240 |  |
| 74 M 952 | 1003 | 3 | 1830 | . 94 |
| 74 M 953 | 1004 | 5 | 1410 |  |
| 75 M 861 | 1006 | 10 | 1000 |  |
| 75 M 862 | 1009 | 25 | 630 |  |
| 75 M 863 | 1010 | 50 | 450 |  |
| 75 M 864 | 1011 | 75 | 370 |  |
| 75 M 865 | 1012 | 100 | 320 |  |
| 75 M 866 | 1013 | 150 | 260 |  |
| 75 M 867 | 1015 | 250 | 200 |  |
| 75 M 868 | 1019 | 500 | 140 |  |
| 75 M 869 | 1021 | 750 | 120 |  |
| 75 M 870 | 1023 | 1000 | 100 |  |
| 75 M 871 | 1025 | 1500 | 81 |  |
| 75 M 872 | 1028 | 2500 | 63 | 1.00 |
| 75 M 873 | 1033 | 5000 | 45 |  |
| 75 M 874 | 1036 | 7500 | 36 |  |
| 75 M 875 | 1040 | 10,000 | 32 | 06 |
| 75 M 883 | EXTR | A SLID | . . . | ....18¢ |

25 WATTS-2x9/16"

| No. | Type | Ohms | Ma. | EACH |
| :---: | :---: | :---: | :---: | :---: |
| 74 M 954 | 0360 | 1 | 5000 | 1.21 |
| 74 Mi 955 | 0361 | 3 | 2880 |  |
| 74 M 956 | 0362 | 5 | 2240 |  |
| 74 M 957 | 0363 | 10 | 1580 |  |
| 74 M 958 | 0364 | 15 | 1290 | 1.21 |
| 74 M 959 | 0365 | 25 | 1000 |  |
| 74 M 960 | 0366 | 50 | 710 |  |
| 74 M 961 | 0367 | 75 | 580 |  |
| 75 M 780 | 0368 | 100 | 500 | 1.21 |
| 75 M 781 | 0371 | 250 | 320 |  |
| 75 M 782 | 0372 | 500 | 220 |  |
| 75 M 783 | 0373 | 750 | 180 |  |
| 75 M 784 | 0375 | 1000 | 160 |  |
| 75 M 785 | 0376 | 1500 | 130 | 1.24 |
| 75 M 786 | 0377 | 2000 | 120 |  |
| 75 M 787 | 0378 | 2500 | 100 |  |
| 75 M 788 | 0379 | 3000 | 91 |  |
| 75 M 789 | 0382 | 5000 | 70 |  |
| 75 M 790 | 0384 | 7500 | 57 |  |
| 75 M 791 | 0385 | 10000 | 50 | .29 |
| 75 M 792 | 0386 | 12000 | 42 | 1.35 |
| 75 M 793 | 0387 | 15000 | 36 |  |
| 75 M 794 | 0388 | 20000 | 31 |  |
| 75 M 795 | 0389 | 25000 | 28 | 1.47 |
| 75 M 880 | EXTRA SLIDER. |  |  | $\ldots .184$ |


| No. | Type | Ohms | Ma. | EACH |
| :---: | :---: | :---: | :---: | :---: |
| 74 M 962 | 0560A | 1 | 7070 | 1.94 |
| 74 M 963 | 0560B | 2 | 5000 | 1.53 |
| 74 M 964 | 0560C | 3 | 4070 | 1.53 |
| 74 M 965 | 0560D | - 4 | 3530 | 1.53 |

Available in all values to 10,000 except those marked $\S$ in table at left.

| No. | Ohms | EACH |
| :---: | :---: | :---: |
| MM 730 | 1 to 1000 | .44 |
| MM 731 | 1100 to 5000 | .47 |
| MM 732 | 6000 to 10,000 | .50 |

10-WATT SIZE
Available in all values to 50,000 except those marked $\dagger$ in table at left.



| Stock No. | Watts | NET EACH |  |  |
| :---: | :---: | :---: | :---: | :---: |
|  |  | 1-99 | 100-249† | 250-499 $\dagger$ |
| 2 MM O 2 MM 065 2 MM 085 | $\begin{array}{r} 1 / 2 \\ 1 \\ 2 \end{array}$ | $\begin{aligned} & 24 \phi \\ & 354 \\ & 474 \end{aligned}$ | $\begin{aligned} & .141 \\ & .212 \\ & .282 \end{aligned}$ | $\begin{aligned} & .094 \\ & .159 \\ & .235 \end{aligned}$ |

$\dagger$ Applies to resistors of one value only.

## "LITTLE DEVIL" ASSORTMENTS



Selected supply of $1501 / 2$-watt or 1251 - or 2watt resistors in most-often-needed values. Complete with handsome plastic cabinet, $43 / 4 \frac{x}{5}$ $9 \times 51 / 4^{\prime \prime}$, at no extra charge. Cabinet has 5 drawers and 40 compartments. Has dovetail top and bottom. Shpg. wt., 7 lbs.
No. | Type | Description

## Quality Resisfors

## OHMITE AXIAL-LEAD WIRE-WOUND RESISTORS



Axial-lead, ceramic-core resistors. Covered with vitrehigh temperature. Resistance wire and terminals welded to end caps to assure excellent stability and minimum noise. Tolerance: $\pm 5 \%$ for values over 50 ohms; $\pm 10 \%$ for values less than 50 ohms. Wattage ratings based on temperature rise to $300^{\circ} \mathrm{C}$. $11 / 2^{\prime \prime}$ leads. Av. shpg. wt., 4 oz .

SPECIFY RESISTANCE WHEN ORDERING

| Ohms | Ohms | Ohms | Ohms | Ohms | Ohms | Ohms | Ohms |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 1.0 | 12 | 75 | 350 | 900 | 2250 | 7000 | 18,000 |
| 1.5 | 15 | 100 | 400 | 1000 | 2500 | 7500 | 20,000 |
| 2.0 | 20 | 125 | 450 | 1100 | 3000 | 8000 | 22,500 |
| 3.0 | 25 | 150 | 500 | 1200 | 3500 | 9000 | 25,000 |
| 4.0 | 30 | 200 | 600 | 1250 | 4000 | 10,000 |  |
| 5.0 | 35 | 225 | 700 | 1500 | 4500 | 12.500 |  |
| 7.5 | 40 | 250 | 750 | 1750 | 5000 | 15,000 |  |
| 10.0 | 50 | 300 | 800 | 2000 | 6000 | 17,500 |  |
| 3 WATTS-9/16x1/4" |  |  |  |  |  |  |  |
| No. |  |  | EACH | No. | Ohms |  | EACH |
| $\begin{aligned} & 2 M M 0 \\ & 2 M M O \\ & \hline \end{aligned}$ | $1-1000$ <br> $1100-5000$ |  | $\begin{aligned} & 50 \phi \\ & 534 \end{aligned}$ | 2 MM I | 0 0000 | -10,000 | 56\% |
| 5 WATTS-11/16x ${ }^{11 / 32}{ }^{\prime \prime}$ |  |  |  |  |  |  |  |
| No. |  |  | EACH | No. | Ohms |  | EACH |
| $2 M M$ $2 M M$ $2 M M$ | 15 $1-100$ <br> 30 1100 <br> 35 6000 | 1-1000 | 534 564 $59 \%$ | $\begin{array}{\|ll\|l\|} \hline 2 & M M & 145 \\ 2 & M M & 146 \\ \hline \end{array}$ | $\begin{array}{\|l} 12,500-20,000 \\ 22,500-25,000 \\ \hline \end{array}$ |  | $\begin{aligned} & 714 \\ & 734 \end{aligned}$ |

SPRAGUE "KOOLOHM" WIRE-WOUND RESISTORS

|  |  |  |  | Feature high-voltage insulated resistance wire windings; will |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  |  |  | withstand 10,000surface of jacket |  | resistance |
| element. KT types are inductively wound; NIT types have non-inductive |  |  |  |  |  |  |
| winding. Ceramic jackets and special end-seals provide complete protection against high humidity and heat-ceramic coating insulation withstands temperatures to $1000^{\circ}$ C. Accuracy within $5 \%$. Av. shpg. wt., 2 oz. |  |  |  |  |  |  |
|  |  |  |  |  |  |  |
|  |  |  |  |  |  |  |
| SPECIFY RESISTANCE WHEN ORDERING |  |  |  |  |  |  |
| Ohms | Ohms | Ohms | Ohms | Ohms | Ohms | Ohms |
| 5 | 50 | 400 | 1250 | 5000 | 12,000 | 30,000 |
| 10 | 75 | 500 | 1500 | 6000 | 14,000 | 35,000 |
| 15 | 100 | 600 | 1750 | 7500 | 15,000 | 40,000 |
| 20 | 150 | 700 | 2000 | 8000 | 17,500 | 50,000 |
| 25 | 200 | 800 | 2500 | 9000 | 20,000 | 60,000 |
| 30 | 250 | 900 | 3000 | 10,000 | 25,000 | 70,000 |
| 40 | 300 | 1000 | 4000 |  |  |  |

TYPE SKT-5 WATT-17/2 $\mathbf{x}^{15 / 2^{7}}$

| No. | Ohms | EACH | No. | Ohms | EACH |
| :---: | :---: | :---: | :---: | :---: | :---: |
| IMM 640 | 5 to 1000 | 38¢ | M 645 | 20,000 | 564 |
| 1 M M 641 | 1250 to 5000 | 414 | I M 646 | 25,000 | $65 ¢$ |
| 1 MMM 642 | 6000 to 10,000 | 474 | 1 M 647 | 30,000 | 714 |
| 1 M 643 | 14,000 | 534 | 1 M 649 | 35,000 | 824 |
| 1 M 644 | 15,000 | 564 | M 648 | 40,000 | 884 |
| TYPE 10KT-10 WATT-127/32 $\times^{15} / 32^{\prime \prime}$ |  |  |  |  |  |
| IMM 660 | 5 to 1000 | 444 | M 666 | 30,000 | . 76 |
| 1 MM 661 | 1250 to 5000 | 474 | M M 658 | 35,000 | .88 |
| 1 M M 662 | 6000 to 10,000 | 534 | 1 M 667 | 40,000 | . 97 |
| I M M 663 | 12,000 to 17,500 | 594 | I M 668 | 50,000 | . 06 |
| \| M 664 | 20,000 | 654 | M 669 | 60,000 | .18 |
| 1 M 665 | 25,000 | 714 | M 659 | 70,000 | . 29 |



| No. | Ohms | EACH | No. | Ohms | EACH |
| :---: | :---: | :---: | :---: | :---: | :---: |
| $\begin{aligned} & \hline \text { MM 670 } \\ & \text { IMM } 671 \end{aligned}$ | $\begin{aligned} & 5 \text { to } 1000 \\ & 1250 \text { to } 2000 \end{aligned}$ | $\begin{aligned} & 594 \\ & 68 \% \end{aligned}$ | $\left\lvert\, \begin{aligned} & M M 672 \\ & I M 673 \end{aligned}\right.$ | $\begin{aligned} & 2500 \text { to } 4000 \\ & 5000 \end{aligned}$ | $\begin{aligned} & 73 \$ \\ & 76 \% \end{aligned}$ |

TYPE 10NIT-10 WATT NON-INDUCTIVE- $1{ }^{27} / 32^{\prime \prime} x^{15} / 32^{\prime \prime}$


## OHMITE TYPE FR FUSE RESISTOR



A highly dependable $71 / 2$-ohm fuse resistor. May be used to replace many fuse resistors used in television circuits. $11 / 2^{\prime \prime}$ tinned wire leads make replacement application easy and quick. Supplied with convenient, plug-in bakelite mounting strip-or can be wired directly into circuit of TV set. Widely
used in series-string filament circuits. Length, $1716^{\prime \prime}$. 3 oz.
2 M 063. NET.
38c


## HANDY OHM'S LAW CALCULATOR

Easy-to-use calculator. Solves problems in Ohm's Law and DC power. Shows power voltage and current when resistance is voltage and current when resistance is resistance can be determined. Also has parallel resistance calculator Size, 9x3". Shpg. wt., 3 oz.

2 M 781 . Deluxe Plastic Model. NET


## ALLIED'S COLOR-CODE GUIDE

An "instant-reference" color-code guide for resistors. Code colors may be set to show corresponding resistance values, or resistance values set to show corresponding code colors. Size, $23 / 4 \times 33 / 4^{\prime \prime}$. Includes tolerance code and listing of EIA-JAN $\pm 10 \%$ standard stock values. (Supplied at no charge with order for 20 or more resistors.) Shpg. wt., 2 oz. 2 M 770. EACH...


## DAVEN QUALITY RESISTORS

## ENCAPSULATED WIRE-WOUND RESISTORS

Encapsulated wirewound precision resist ors, $\pm 1 \%$. All have non-inductive windings encased in low moisture absorption plastic. Types 1250 and 1174 meet MIL-R-9444 specs. Type 1250 has axial leads of No. 20 wire, $2^{\prime \prime}$ long; Type 1174 has gold-plated solder lugs. Size and wattage ratings: Type $1250,1 / 4 \times 1 / 2^{\prime \prime}$ Iong, $1 / 3$ watt; Type $1174,1 / 2^{5} / \mathrm{s}^{\circ}$ long, $3 / 5$ watt. Wattage at $25^{\circ}-125^{\circ} \mathrm{C}, 400 \mathrm{v}$. max. Wt., 2 oz .

| Ohms | Type 1250 Stock No. |  | Type 1174 Stock No. |  | NET EACH |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  |  | 1-9 | 10-24 | 25-U p |
| 1 | 31 | M 400 |  |  | 31 | M 475 | 1.31 | 1.00 | . 85 |
| 10 | 31 | M 401 | 31 | M 476 | 1.31 | 1.00 | . 85 |
| 20 | 31 | M 402 | 31 | M 477 | 1.31 | 1.00 | . 85 |
| 40 | 31 | M 403 | 31 | M 478 | 1.31 | 1.00 | . 85 |
| 50 | 31 | M 404 | 31 | M 479 | 1.31 | 1.00 | . 85 |
| 100 | 31 | M 405 | 31 | M 480 | 1.31 | 1.00 | . 85 |
| 150 | 31 | M 406 | 31 | M 481 | 1.31 | 1.00 | . 85 |
| 200 | 31 | M 407 | 31 | M 482 | 1.31 | 1.00 | . 85 |
| 300 | 31 | M 408 | 31 | M 483 | 1.31 | 1.00 | . 85 |
| 400 | 31 | M 409 | 31 | M 484 | 1.31 | 1.00 | . 85 |
| 500 | 31 | M 410 | 31 | M 485 | 1.31 | 1.00 | . 85 |
| 600 | 31 | M 411 | 31 | M 486 | 1.31 | 1.00 | . 85 |
| 1000 | 31 | M 413 | 31 | M 488 | 1.31 | 1.00 | . 85 |
| 1500 | 31 | M 412 | 31 | M 487 | 1.31 | 1.00 | . 85 |
| 2000 | 31 | M 414 | 31 | M 489 | 1.31 | 1.00 | . 85 |
| 3000 | 31 | M 415 | 31 | M 490 | 1.31 | 1.00 | . 85 |
| 4000 | 31 | M 416 | 31 | M 491 | 1.31 | 1.00 | . 85 |
| 5000 | 31 | M 417 | 31 | M 492 | 1.31 | 1.00 | . 85 |
| 6000 | 31 | M 418 | 31 | M 493 | 1.35 | 1.03 | . 87 |
| 8000 | 31 | M 419 | 31 | M 494 | 1.35 | 1.03 | . 87 |
| 10,000 | 31 | M 420 | 31 | M 495 | 1.35 | 1.03 | . 87 |
| 15,000 | 31 | M 421 | 31 | M 496 | 1.45 | 1.12 | . 94 |
| 18,000 | 31 | M 422 | 31 | M 497 | 1.45 | 1.12 | . 94 |
| 20,000 | 31 | M 423 | 31 | M 498 | 1.45 | 1.12 | . 94 |
| 22,000 | 31 | M 424 | 31 | M 499 | 1.45 | 1.12 | . 94 |
| 25,000 | 31 | M 425 | 31 | M 500 | 1.45 | 1.12 | . 94 |
| 30,000 | 31 | M 426 | 31 | M 501 | 1.54 | 1.19 | 1.00 |
| 40,000 | 31 | M 427 | 31 | M 502 | 1.54 | 1.19 | 1.00 |
| 43,000 | 31 | M 428 | 31 | M 503 | 1.54 | 1.19 | 1.00 |
| 47,000 | 31 | M 429 | 31 | M 504 | 1.54 | 1.19 | 1.00 |
| 50,000 | 31 | M 430 | 31 | M 505 | 1.54 | 1.19 | 1.00 |
| 56,000 | 31 | M 431 | 31 | M 506 | 1.61 | 1.24 | 1.05 |
| 60,000 | 31 | M 432 | 31 | M 507 | 1.61 | 1.24 | 1.05 |
| 70,000 | 31 | M 433 | 31 | M 508 | 1.61 | 1.24 | 1.05 |
| 75,000 | 31 | M 434 | 31 | M 509 | 1.61 | 1.24 | 1.05 |
| 80,000 | 31 | M 435 | 31 | M 510 | 1.68 | 1.31 | 1.10 |
| 82,000 | 31 | M 436 | 31 | M 511 | 1.68 | 1.31 | 1.10 |
| 100,000 | 31 | M 437 | 31 | M 512 | 1.68 | 1.31 | 1.10 |
| 120,000 | 31 | M 438 | 31 | M 513 | 1.74 | 1.37 | 1.15 |
| 150,000 | 31 | M 439 | 31 | M 514 | 1.90 | 1.51 | 1.27 |
| 160,000 | 31 | M 440 | 31 | M 515 | 1.99 | 1.58 | 1.32 |
| 180,000 | 31 | M 441 | 31 | M 516 | 2.06 | 1.63 | 1.37 |
| 200,000 | 31 | M 442 | 31 | M 517 | 2.06 | 1.63 | 1.37 |
| 220,000 | 31 | M 443 | 31 | M 518 | 2.18 | 1.76 | 1.47 |
| 250,000 | 31 | M 444 | 31 | M 519 | 2.18 | 1.76 | 1.47 |
| 300,000 | 31 | M 445 | 31 | M 520 | 2.47 | 1.96 | 1.63 |
| 400,000 | 3 | M 446 | 31 | M 521 | 2.83 | 2.24 | 1.86 |
| 500,000 | 31 | M 447 | 31 | M 522 | 3.10 | 2.45 | 2.04 |
| 750,000 |  |  | 31 | M 523 | 4.18 | 3.29 | 2.73 |
| 1 Megohm |  |  | 31 | M 524 | 4.79 | 3.76 | 3.12 |

Type 1195. Same design as Type 1250, but $1 / 4 \times 3 / 4^{\prime \prime}$ long and rated at $1 / 2$ watt. Meets MIL-R-93B proposed requirements. Shpg. wt., 2 oz.


## TYPE 850 12-WATT METAL-FILM PRECISION RESISTORS

HEREDTE
Hermetically sealed, precision $1 / 2$-watt resistors. Designed low cost. Exceed MIL-R. 10509B specs. for temp. cycling, low-temp. exposure, short-time overload, effect to soldering, moisture resistance, voltage coefficient, load life, temp. coefficient (PPM $/{ }^{\circ} \mathrm{C}$ ). Tolerance is $\pm 1 \%$. Voltage: $350 \mathrm{v} .$, max. Size (less leads): $3 / 16^{\prime \prime}$ diameter, $5 / 8^{\prime \prime}$ long. Av. shpg. wt., 2 oz.

## STOCK RANGES-SPECIFY RESISTANCE WHEN ORDERING

| Ohms | Ohms | Ohms | Ohms | Ohms | Ohms | Ohms | Ohms |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| $* 1$ | 20 | 200 | 1500 | 8000 | 30,000 | 100,000 | 400,000 |
| $* 2$ | 40 | 300 | 2000 | 10,000 | 40,000 | 150,000 | $* 500,000$ |
| $* 3$ | 50 | 400 | 3000 | 15,000 | 50,000 | 200,000 | $* 600,000$ |
| $* 5$ | 80 | 500 | 4000 | 20,000 | 60,000 | 250,000 | $* 700,000$ |
| $* 8$ | 100 | 800 | 5000 | 25,000 | 80,000 | 300,000 | $* 800,000$ |
| 10 | 150 | 1000 | 6000 |  |  |  |  |


| Stock No. | Values Avallable | NET EACH |  |  |
| :---: | :---: | :---: | :---: | :---: |
|  |  | 1-9 | 10-24 | 25-UP |
| 31 M 360 | 1,2,3,5, and 8 -ohm only | 1.15 | 1.00 | . 85 |
| 31 MM 365 | All values in above table except* | 1.04 | . .90 | .75 |
| 31 MM 370 | $500 \mathrm{~K}, 600 \mathrm{~K}, 700 \mathrm{~K}, 800 \mathrm{~K}$-ohm only | 1.15 | 1.00 | . 85 |

## ALLIED BARGAIN RESISTOR ASSORTMENT



Servicemen, hams, experimenters-here's a useful assortment of 100 high quality carbon resistors at a money-saving low price! An excellent selection $1 / 2$-watt and 1 watt sizes. All resistors are brand new and have tinned copper leads. Non-insulated types only. Shpg. wt., 12 oz. 58 M 086. NET

## Special-Purpose Resistors, Controls

## DAVEN STEP-TYPE ATTENUATORS

Attenuators for broadcast and industrial use. For mixer volume controls, meter multipliers. equalizer and sound level controls, RF line and video controls. Feature uniform contact pressure and low contact resistance; give All have 20 steps at 2 db per step except $* 30$ Aleps at $11 / 2 \mathrm{db}$ per step. SP-2627 exactly resteps at $11 / 2$ db per step. SP-2627 exactly re-
places Gates A-9703 with cue, RCA 14775-2; Places Gates A-9703 with cue, RCA 147875-2; 354-T-RCA 147875-7, RCA 147273-4;'LA-350-G RCA 14875 M2R32P7, Collins 378-0369-000; LA-350-AH is used in Magnecord tape recorders. ' 1 Indicates cueing switch. Prefixes indicate: T-bridged "Tape, networks; LA-unbalanced ladder networks; TA-multiplier networks for VU meters (ranges: $\S \mathrm{MW}+4$ to +40 and off; $\ddagger+4$ to +42 and off) CP-carbon resistor potentiometers. Last steps taper to cutoff (infinity), except \#no taper (last step is cutoff). Av. shpg. wt., $11 / 4$ lbs. Allied can
supply the complete Daven line at OEM prices-write for literature.

| Stock No. | Mfr's <br> Type | Terminal Impedance | NET EACH |  |
| :---: | :---: | :---: | :---: | :---: |
|  |  |  | 1 to 4 | 6 or More |
| 31 M 456 | $\dagger$ ¢P-4627 | 150/300 | 15.58 | 14.25 |
| 31 M 457 | SP-4633 | 150/300 | 13.58 | 12.45 |
| 31 M 458 | LA-350-EF | 250/500 | 13.58 | 12.45 |
| 31 M 459 | LA-350-G | 600/600 | 13.58 | 12.45 |
| $31 \mathrm{M460}$ | LA-350-AH | 30/60 | 13.58 | 12.45 |
| 31 M 461 | \# CP-350-V | 500,000 | 13.58 | 12.45 |
| 31 M 462 | CP-354-T | 100,000 | 13.58 | 12.45 |
| 31 M 463 | CP-354-X | 250,000 | 13.58 | 12.45 |
| 31 M 464 | \#CP-350-T | 100,000 | 13.58 | 12.45 |
| 31 M 465 | $\dagger$ LAQ-350-EF | 250/500 | 15.58 | 14.25 |
| 31 M 466 | 8 TA-1000-1 | 7100/3900 | 38.92 | 35.25 |
| 31 M 467 | $\ddagger$ TA-1000-4 | 7100/3900 | 38.92 | 35.25 |
| 31 M 468 | *T-330-G | 600/600 | 32.25 |  |
| 31 M 469 | *T-330-K | 150/150 | 32.25 | 29.25 |
| 31 M 470 | T-321-G | 600/600 | 27.25 | 25.65 |
| 31 M 471 | T-255-G | 600/600 | 27.25 | 25.65 |

NEW TEXAS INSTRUMENTS SENSISTORS
Temperature sensing resistors; also for temperature compensating use. Have large $0.7 \% /{ }^{\circ} \mathrm{C}$. positive temperature coefficient of resistance. Tol., $\pm 10 \%$. TM $1 / 4$ has molded case with axial leads; TC $1 / 8$ has hermetically-sealed, round welded case. Av. shpg. wt., 2 oz . Specify values when ordering. TM $1 / 4$

|  |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Ohms | Ohms | Ohms | Ohms | Ohms | Ohms | Ohms |
| 100 | 150 | 220 | 330 | 470 | 560 | 820 |
| 120 | 180 | 270 | 390 | 500 | 680 | 1000 |


| StookNo. | $\begin{aligned} & \text { Mfr's } \\ & \text { Type } \\ & \hline \end{aligned}$ | Watts | Loading Characteristics | NET EAC |  |
| :---: | :---: | :---: | :---: | :---: | :---: |
|  |  |  |  | 1-49 | 50-499 |
| 31 MM 561 31 MM 562 | TM $11 / 4$ | 1/4 | Full load to $100^{\circ} \mathrm{C}$. | 4.00 5.00 | 3.50 4.50 |

## GC-WUERTH SURGISTORS

Surge resistors for increased receiving tube, CR tube and component life. Combines the functions of a resistor and a relay Limits harmful initial voltage surge to $25 \%$ of normal, yet allows full voltage after warm-up. Connects directly into the power shpg. wt., 7 oz.

| Stock No. | Type | Watts | NET |
| :--- | :--- | :---: | :---: |
| 80 G 144 | 5301 | $100-275$ | .97 |



## G-C GLO-BAR THERMISTORS

Popular thermistors used in series-string filament circuits of RCA, Crosley, Philco, and other TV sets. A necessary service replacement item. *Matched pair; replaces filament resistors of G.E., M'rola, Sears, etc. Av. wt., 1 oz.

| Stock No. | Type | Ohms |  | Replaces | NET EACH |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  | Hot | Cold |  | 1-9 | 10-UP |
| 22 M 066 | 9214 | 20 | 250 | GE RRW051 | . 79 | . 72 |
|  | 9215 | 75 | 950 | GE RRW041 | . 79 | . 72 |
|  | 9216 | 31 | 260 | GE RRW097 | . 83 | . 74 |
|  | 9217 | 35 | 460 | GE RRW054 | . 83 | . 74 |
| 2 M 053 <br> 2 M 054 <br> 2 M 055 | 9265 | 11 | 250 | M'rola 6A735941 | . 79 | . 72 |
|  | 9266 | 50 | 1050 | Philco 33-1343-3 | . 71 | . 64 |
|  | 9267 | 10500 | $t 125 \mathrm{~V}$. | G.E. RRW052 | . 88 | . 79 |
| 2 M 070 <br> 2 M 071 <br> 2 M 072 | 9268 | 43 | 125 | Crosley | 1.00 | . 90 |
|  | 9269 | 9 | 200 | RCA 100118 | 1.09 | . 98 |
|  | 9135 | 40 | 375 | *(see above) | . 41 | 1.27 |

## G-C TV FUSE-SISTORS

Reliable, low-cost replacement units for series-string TV tube circuits. Replace similar units in Raytheon, RCA Motorola, Sylvania, Zenith and other TV receivers. All units are less than an inch in length; tinned leads for quick and easy installation. Av., shpg, wt., 1 oz .

| Stock No. | Type | Ohms | List | 1-9, EACH | 10 or More, EACH |
| :---: | :---: | :---: | :---: | :---: | :---: |
| 2 M 073 | 9276 | 5. |  | 384 | 34¢ |
| 2 M 074 | 9207 | 7.5 | . 65 | 386 | 346 |
| 2 M 075 | 9277 | 9.0 | . 65 | $38 ¢$ | $34 ¢$ |
| 2 M 076 | 9278 | 22.0 | . 65 | 384 | $34 ¢$ |



## BOURNS TRIMPOT SUBMINIATURE POTENTIOMETERS



Precision-made, multi-turn miniature potentiometers used to control all types of electronic circuits. Widely used in airborne and instrumentation equipment. Ideal for use in printed circuits and a wide variety of portable acceleration; all units are specially sealed to be splash, sand and dustproof. Self-locking adjustment holds any setting under extreme conditions. Interchangeable mounting for easy substitution in experimental circuits. All except Models $120-15,215 \mathrm{~L}$ are wire-wound; all except Model 222 W have 25-turn screwdriver adjustment. Model 200 S has solder lug connectors; all others have wire leads. Units mount easily in stacked assemblies-twenty Model 200L "Trimpots" fit into a $11 / 4$-inch cube! All metal parts are fully corrosion-resistant; contacts and collector strips are platinum alloy. Wiper assembly of all units idles at ends of elements-prevents possible damage from forced adjustments. Units are $100 \%$ inspected; Total Resistance Tolerance: $\pm 10 \%$, except Models $120-15,215 \mathrm{~L}, \pm 20 \%$. Features of various models are briefly explained below. Av. shpg. wt., 2 oz. Write for prices on larger quantities and complete specifications.

| Model | $\underset{\text { Size }}{\text { SxWxL}}$ | Max. Oper Temp. | Diss. Watts | Features |
| :---: | :---: | :---: | :---: | :---: |
| 200L | $5 / 16 \times 1 / 4 \times 11 / 4^{\prime \prime}$ | 105 | 0.25 | Standard "Trimpot." |
| 120-15 | $5 / 16 \times 1 / 4 \times 11 / 4^{\prime \prime}$ | 95 | 0.20 | Carbon element for infinite resolution and high resistance. |
| 200S |  | 105 | 0.25 | Solder lug connectors. |
| 215L | 5/16x1/4 $\times 11 / 4^{\prime \prime}$ | 125 | 0.25 | Carbon element; infinite resolution; humidity-proof. |
| 201L | $5 / 16 \times 1 / 4 \times 11 / 4^{\prime \prime}$ | 105 | 0.25 | "TrimR" variable resistor; two leads. |
| 260L | 5/16x1/4×11/4" | 175 | 1.0 | High temperature model. |
| 236L | $23 / 64 \times 1964 \times 1{ }^{11 / 32}$ | 135 | 0.8 | Humidity-proof; exceeds MIL-STD-202A, method 106. |
| 222W | 5/16x ${ }^{11 / 64 \times 10}$ | 175 | 1.0 | Micro-miniature, "Trimpot, Jr."; high temperature humidityproof; 15-turn adjustment. |

RESISTANCES AVAILABLE-SPECIFY WHEN ORDERING *Available in Model 201L Only.

| Ohms | Ohms | Ohms | Ohms | Megohms | Megohms |
| :---: | :---: | :---: | :---: | :---: | :---: |
| 10 | 200 | 5,000 | 30,000 | $.1 \dagger$ | .4 |
| 20 | 500 | 10,000 | 40,000 | .15 | $.3 \dagger$ |
| 50 | 1000 | $20,000+$ | 50,000 | $.2 \dagger$ | .75 |
| 100 | 2000 | 25,000 | 75,000 | .3 | $1.0 \dagger$ |

When Orderlng-Specify Stock No., Model No., and resistance.

| Stock No. | Model | Reslstances Avallable (See Table Above) | EAC'H | $10-24$ <br> EACH | $\begin{aligned} & 26-49 \\ & \text { EACH } \end{aligned}$ |
| :---: | :---: | :---: | :---: | :---: | :---: |
| 31 MM 380 | 200L | 10 to 10,000 | 4.86 | 4.50 | 5 |
| 31 M 381 | 200L | 20,000 only | 6.48 | 6.00 | 5.40 |
| 31 MM 382 | 120-15 | 20,000 to 1.0 meg | 4.86 | 4.50 | 4.05 |
| 31 M M 383 | 200 S | 10 to 10,000 | 4.86 | 4.50 | 4.05 |
| 31 M 384 | 200 S | 20,000 only | 6.48 | 6.00 | 5.40 |
| $31 \mathrm{M} \quad 385$ | 201L | 20,000 only | 5.94 | 5.50 | 4.95 |
| 31 M 386 | 201L | 25,000 only | 5.94 | 5.50 | 4.95 |
| 31 M 387 | 201L | 50,000 only | 7.56 | 7.00 | 6.30 |
| 31 M M 388 | 260L | 10 to 10,000 | 5.94 | 5.50 | 4.95 |
| $31 \mathrm{M} \quad 394$ | 260L | 20,000 | 7.56 | 7.00 | 6.30 |
| 31 M M 389 | 236L | 10 to 10,000 | 7.02 | 6.50 | 85 |
| 31 M 390 | 236 L | 20,000 | 8.64 | 8.00 | 7.20 |
| 31 M M 395 | 222W | 100 to 10,000 | 8.64 | 8.00 | 7.20 |
| 31 M 396 | 222W | 20,000 only | 10.26 | 9.50 | 8.55 |
| 31 M M 376 | 215 L | Values indicated by $\dagger$ | 5.94 | 5.50 | 4.95 |

BOURNS TRIMIT SUBMINIATURE POTENTIOMETERS
Low-cost subminiature potentiometers. Occupy remarkably little space -body is only $1 / 4 \times 5 / 16 \times 11 / 4^{\prime \prime}$. May be stacked. Have 25 -turn screwdriver adjustment with self-locking shaft. Supplied with flexible leads, solder lugs or pins for printed circuit mounting. (Appearance is similar to Trimpots above). Wire-wound units are rated at .25 watt. Carbon potentiometers are rated at .20 watt; element has infinite resolution. Temperature range, $-55^{\circ}$ to $\$ 85^{\circ} \mathrm{C}$. Av. shpg. wt., 2 oz . When orderingspecify Stock No., Model No., and resistance value wanted.

WIRE-WOUND TRIMIT POTENTIOMETERS


CARBON TRIMIT POTENTIOMETERS


## BOURNS MOUNTING ACCESSORIES FOR ABOVE

| Stock No. | Accessory | 1-24, EACH | 25-99, EACH |
| :---: | :---: | :---: | :---: |
| 31 M 391 | End Mounting Brackets | 204 | $15 ¢$ |
| 31 M 392 | Side Mounting Brackets | 204 | $15 \$$ |
| 31 M 393 | 2-56x11/2" Machine Screws | 24 | $11 / 2 ¢$ |

## Ohmite Controls

NOTE: Allied can supply all Ohmite industrial controls. Write for
free copy of complete Ohmite catalog, our Stock No. 37 M 047.
graphite contact brush. Ratings indicated are at full setting. U.L. Approved. Types H, J, K and L mount on panels up to $1 / 4^{\prime \prime}$ thick; Type $N$ on panels up to ${ }^{\text {to }} 11 / 4^{\prime \prime}$ thick. hind panel $1^{3 / 8^{\prime \prime}}$; Type J, dia. $25 / 16^{\prime \prime}$, depth behind panel $13 / 8^{\prime \prime}$; Type $K$, dia. $3^{\prime} 18^{\prime \prime}$, depth behind panel $13 / 4^{\prime \prime}$; Type L, dia. $4^{\prime \prime}$, depth behind panel $2^{\prime \prime}$; Type N, dia. $6^{\prime \prime}$, depth behind panel $23 / 8^{\prime \prime}$. Complete with fluted, plastic knob.

300 WATT-TYPE N

Type 5000 Dial Plate. For Type H, J, K and L. $23 / 16^{\prime \prime}$ diameter. Handsomely finished with bright figures and lines on etched black back74 M 405. NET. . . . . . . . . . . . . . .
Type 6001 Dial Plate. For Type N. 51/2" dia. 0-100. 3 oz. 74 M 407. NET.


## TANDEM COUPLING KITS

Kits for assembling Ohmite rheostats in tandem. Each kit consists of a steel "U"' frame, mica washer, coupling, Allen wrench, and complete instructions. arge rame and will accommodate Model H K and rheostats, and will accommodate Model $H$ or $J$ in using standard Ohmite knobs, $1 / \mathrm{s}^{\prime \prime}$. Frame is when long and $114^{\prime \prime}$ wide. Small frame (No. 6532) is designed for Models $H$ and J , and will accommodate Model K or L in the rear position. Maximum panel thickness, $5 / 32^{\prime \prime}$. Frame is $25 / 32^{\prime \prime}$ long and $11 / 4^{\prime \prime}$ wide.
No. 6532 Tandem Coupling Kit. Shpg. wt., 4 oz.
74 M 408. NET.
No. 6533 Tandem Coupling Kit. Shpg. wt., 5 oz.
74 M 409. NET.

MODEL E 121/2-WATT MINIATURE RHEOSTATS Extremely compact, $121 / 2$-watt power rheostats for limtenstrace applications. Rugged, all ceramic and meta emperature rise of $300^{\circ} \mathrm{C}$ at ambient $40^{\circ} \mathrm{C}$. Ideally suited for military and industrial applications at high mbient temperatures. Resistance tolerance is $\pm 10 \%$. Only $7 / 8^{*}$ in diameter. Require ${ }^{11 / 16^{\circ}}$ behind panel. Have $1 / 4^{\prime \prime}$ by 32 threaded bushing $1 / 4^{\prime \prime}$ long. $1 / 8^{\prime \prime}$ diameter shaft $3 / 8^{\prime \prime}$ long. With knob. Av. shpg. wt., 2 oz .

| No. | Type | Ohms | EACH | No. | Type | Ohms | EACH |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| M | 0101 | 1 | 4.53 | 74 M 932 | 0013 | 125 | 4.0 |
| 74 M | 0102 | 2 | 4.03 | 74 M 933 | 0114 | 175 |  |
| 74 M 922 | 0103 | 3 | 4.03 | 74 M 934 | 0115 | 250 | 4.0 |
| 74 M 923 | 0104 | 6 | 4.03 | 74 M 935 | 0116 | 35 | 4.03 |
| 74 M 924 | 0105 | 8 | 4.03 | 74 M 936 | 0117 | 500 | 4. |
| 74 M 925 | 0106 | 10 | 4.03 | 74 M 937 | 0118 | 750 | . |
| 74 M | 0107 | 15 | 4.03 | 74 M 938 | 0119 | 1000 | 4.5 |
| 74 M | 0108 0109 | 35 | 4.03 | 74 M 940 | 0121 | 1500 2500 |  |
| M | 0110 | 50 | 4.03 | 74 M 941 | 0122 | 3500 | 4.76 |
| 74 M 930 | 0111 | 75 | 4.03 | 74 M 942 | 0123 | 5000 | 4.76 |
| M 93 | 0112 | 100 | 4.03 |  |  |  |  |

## OHMITE "AB" TWO-WATT POTENTIOMETERS



Two-watt potentiometers featuring molded resistor element construction for exceptionalny high safety factor. enclosure to make each unit dust-proof and splash-proof. Carbon sliding contact and terminals assure smooth noise-free operation.
Size of single units, $15 / 3 z^{\prime \prime}$ dia. $\times{ }^{5 / /^{\prime \prime}}$. Size of double units, $15 / 37^{\circ}$ dia. $x$ d $17 / 8^{\prime \prime}{ }^{\prime \prime}$;
Mount in $3 / 8^{\prime \prime}$ hole on panels up to $1 / 4^{\prime \prime}$

## TYPES CA, CB, CU

| No. | Type | Ohms | EACH | No. | Type | Ohms | EACH |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 28 M 500 | Cu5001 | 50 |  | 28 M 512 | CB5031 | 50,000 | 2.20 |
| 28 M 50 | Cu1011 | 100 |  | 28 M 513 | CU1041 | 100,000 |  |
| 28 M 502 | CU2511 | 250 |  | 28 M 514 | CA1041 | 100,000 | 2.20 |
| 28 M 503 | CU5011 | 500 | 91 | 28 M 515 | CU2541 | 250,000 | 1.91 |
| 28 M 504 | CU1021 | 1000 |  | 28 M 516 | CA2541 | 250,000 | 2.20 |
| 8 M 505 | CU2521 | 2500 |  | 28 M 517 | CU5041 | 500,000 |  |
| 28 M 506 28 | $\begin{aligned} & \text { CU5021 } \\ & \text { CU1031 } \end{aligned}$ | 5000 10,000 |  | 28M518 | ${ }^{\text {c }}$ C 45041052 | 500,000 1 Meg* | 2.20 |
| 28 M 508 | CB1031 | 10,000 | 2.20 | 28 M 52 | CA1052 | $1 \mathrm{Meg}^{*}$ | 2.20 |
| 28 M 509 | CU2531 | 25,000 | 1.91 | 28 M 521 | CU2552 | $2.5 \mathrm{Meg}^{*}$ |  |
| 8 M 510 | CB2531 | 25,000 | 2.20 | 28 M 522 | CA2552 | $2.5 \mathrm{Meg}^{*}$ | 2.20 |
| 28 M 511 | CU5031 | 50,000 | 1.91 | 28 M 523 | CU5052 | $5 \mathrm{Meg} *$ | 1.91 |

Type CS-1 SPST Switch. For AB potentiometers. Wt., 3 oz . 28 M 524. NET

## Ohmite, IRC and Centralab Controls

OHMITE POTENTIOMETERS

## tYpe As miniature



- Smallest Molded Composition Potentiometers
- Screwdriver Slotted
- No Rivets or Soldered Parts
- Made to Rigid Specifications
- Synthetic-Resin Sealed

New, linear-taper, miniature potentiometers combining exceptional reliability and extremely is 0.5 watt. Oniy $1 / 2^{\prime \prime}$ in diameter-ideal for lightweight, miniaturized assemblies. Molded composition resistance and collector tracks (bridged by a molded composition brush) as sure long life. Greater cross-section of resistor track lowers current density-gives excellent performance in excess of 50,000 operation cycles. Terminals are molded directly into control elements for trouble-free connections. Enclosures are sealed with synthetic resin to keep out dust, moisture and fungus. Terminals are goldplated for easy soldering, even after long storage. Have screwdriver-slotted, ock" ing-type shafts. Rated at $350 \mathrm{~V} .1 /{ }^{\prime \prime}$ dia.; M/11
long. Shaft, $5 / 8^{\prime \prime}$ long. Meet $\mathrm{QQ}-\mathrm{M}-151$, MIL3614 and $3615 \mathrm{have} \pm 20 \%$ tolerance; others 3614 and 3615 have $\pm 20 \%$
are $\pm 10 \%$. Shpg. wt., 2 oz.

| Stock No. | Mfr's. Type | Ohms | $\begin{aligned} & \text { NET } \\ & \text { EACH } \end{aligned}$ |
| :---: | :---: | :---: | :---: |
| 28 M 580 | 3601 | 100 |  |
| 28 M 581 | 3602 | 250 |  |
| 28 M 582 | 3603 | 500 | 5.00 |
| 28 M 583 | 3604 | 1 K |  |
| 28 M 584 | 3605 | 2.5K |  |
| 28 M 585 | 3606 | 5K |  |
| 28 M 586 | 3607 | 10K |  |
| 28 M 587 | 3608 | 25K | 5.0 |
| 28 M 588 | 3609 | 50K |  |
| 28 M 589 | 3610 | .1 meg |  |
| 28 M 590 | 3611 | .25 meg |  |
| 28 M 591 | 3612 | . 50 meg |  |
| 28 M 592 | 3613 | 1.0 meg | 5.00 |
| 28 M 593 | 3614 | 2.5 meg |  |
| 28 M 594 | 3615 | 5.0 meg |  |

## IRC CONTROLS



## TYPE LC-1 LOUDNESS CONTROL

Easily installed, loudness-type volume control. Permits complete listening pleasure during periods when amplifier volume must be kept low.
Replaces conventional volume control in amiplifier, radio or phono. Automatically compensates for reduced response of the ear to bass and treble frequencies at low volume. Audio output can be reduced to nearly whisper level and yet retain almost perfect tonal balance. loss is only 6 db. Space required behind panel: loss is only 6 db . Space required behind panel: instructions, less AC switch (may be used with Type 76-1 or Type 76-2 switch, next columin).
 $\qquad$ 7.06

## TV SIGNAL ATTENUATOR

## Type QJ-3. Economically priced L-

 pad television signal attenuator. For use with sets having 300 -ohm twin line antenna input. Minimizes interstation interference, definition loss and sound bars caused by excessive signal strength. Diminishes buzz or hum due to high signal level in intercarrier systems. Reduces overloading effects in strong signal area. In many cases, corrects or reduces horizontal or vertical jitters in picture; also picture and sound break-over. Very userul device for the TV shop is located near fringe-area signals when nearly constant near powerful local station. A antenna lead-in to minimize ghosts caused on mismatch of antenna lead to receiver caused by mounted on cabinet or chassis Slotted shaft for screwdriver adjustment. Supplied with mounting bracket and instructions. $7 / 8^{\prime \prime}$ diameter, $1^{\prime \prime}$ deep. Shaft: $1 / 4^{\prime \prime}$ diameter, $1 / 2^{\prime \prime}$ long. Shpg. wt., 3 oz.
## IRC Controls

## INDUSTRIAL CONTROLS




RQ RQL


M

These, versatile industrial-type controls have a smooth carbon base element and "twofinger" wiper arm of thin, high-stress alloy-assures good contact and low noise. Type $M$ multi-sections can easily be added to either PQ, RQ or RQL types; Permit exact "tailoring" 'of dual, triple and quadruple units to meet individual requirements. Special-purpose controls can be made up by using a Type PQ, RQ or RQL with several M multisections and a Type 76 switch (listed below). Types PQ, RQ and RQL have a $3 /{ }^{\prime \prime}$ threaded bushing, Body diameter less terminals is $15 / 16^{\prime \prime}$ maximum; body diameter including terminals is $15 / 16^{\prime \prime}$ maximum; depth behind panel, ${ }^{33} 3^{\prime \prime}$. Each Type M multisection adds ${ }^{19 / 32^{\prime \prime}}$ to depth. Type $\mathrm{PQ}, \mathrm{RQ}, \mathrm{RQL}$ and M sections feature 300 degr
Power rating is $1 / 2$ watt, 500 volts maximum.
PQ types have shaft $3^{\prime \prime}$ long, $1 / 4^{\prime \prime}$ diameter. RQ and RQL types have a short shaft with a screwdriver slot for use where adjustment is semi-permanent; shaft extends $1 / 8^{\prime \prime}$ beyond threaded bushing. Types RQ, RQL are the same except RQL has split bushing and locking nut-for permanent, vibration-proof settings. Tolerance of all types is $\pm 10 \%$. Terminals tinned for easy soldering. Ground plate on Types PQ, RQ, and RQL has two locating tabs either or both of which may be bent down if not needed. Av. shpg. wt., 4 oz. See Explanation of Tap

| Mfr's Type | Ohms | Taper* | $\begin{aligned} & \text { Stock No. } \\ & \hline \text { PQ } \end{aligned}$ | $\underset{R Q}{\text { Stock } N o . ~}$ | $\begin{gathered} \text { Stock No. } \\ \text { RQL } \end{gathered}$ | $\underset{M}{\text { Stock }} \text { No. }$ |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 11-103 | 500 | A | 30 M 510 | 30 M 542 | 29 M 271 | 30 M 592 |
| 11-108 | 1000 | A | 30 M 511 | 30 M 543 | 29 M 272 | 30 M 574 |
| 11-110 | 2000 | A | 30 M 512 | 30 M 544 | 29 M 273 | 30 M 593 |
| 11-112 | 3000 | A | 30 m 513 | 30 M 545 | 29 M 274 | 30 M 598 |
| 11-114 | 5000 | A | 30 M 514 | 30 M 546 | 29 M 275 | 30 M 575 |
| 11-115 | 7500 | A | 30 M 515 | 30 M 547 |  |  |
| 11-116 | 10 K | A | 30 M 516 | 30 M 548 | 29 M 276 | 30 M 576 |
| 13-116 | 10K | C | 30 M 517 | 30 M 549 |  |  |
| 14-116 | 10 K | D | 30 M 518 | 30 M 550 |  |  |
| 17-116 | 10K | Q | 30 M 518 |  |  | 30 M 599 |
| 11-119 | 20K | A | 30 M 519 | 30 M 551 | 29 M 277 |  |
| 11-120 | 25K | A | 30 M 520 | 30 M 552 | 29 M 278 | 30 Ml 577 |
| 14-120 | ${ }_{30 \mathrm{~K}}^{25 \mathrm{~K}}$ | D | 30 M 521 | 30 M 553 |  |  |
| $11-121$ $11-123$ | 30 K 50 K | A | 30 M 522 30 M 523 | 30 30 30 |  | 30 M 596 30 M 578 |
| $\begin{aligned} & 11-123 \\ & 13-123 \\ & \hline \end{aligned}$ | 50K | $\stackrel{\text { A }}{\text { C }}$ | 30 30 30 | 30 30 30 | 29 M 2880 | 30 M 578 |
| 14-123 | 50K | D | 30 M 525 | 30 M 557 |  |  |
| 11-128 | 100 K | A | 30 M 526 | 30 m 558 | 29 M 282 | 30 M 579 |
| 13-128 | 100 K | C | 30 M 527 | 30 M 559 |  | 30 M 580 |
| 11-129 | 200K | A | 30 M 375 | 30 M 376 | 29 M 283 |  |
| 11-130 | 250 K | A | 30 M 528 | 30 M 560 | 29 M 284 | 30 M 581 |
| 13-130 | 250 K |  |  | 30 M 561 | 29 M 285 | 30 M 582 |
| $11-133$ $13-133$ | 500 K 500 K | ${ }_{\text {C }}^{\text {A }}$ | 30 M 530 30 M 531 | 30 M 562 30 M 563 | 29 29 M 2886 | 30 M 583 30 M 584 |
| 11-137 | 1.0 meg |  | 30 M 532 | 30 M 564 | 29 M 288 | 30 M 585 |
| 13-137 | 1.0 meg | C | 30 M 533 | 30 M 565 | 29 M 289 | 30 M 586 |
| 11-138 | 1.5 meg | A | 30 M 534 | 30 M 566 | 29 M 290 |  |
| 13-138 | 1.5 meg | C |  |  |  | 30 M 499 |
| 11-139 | 2.0 meg | A | 30 M 535 |  |  | 30 M 587 |
| $13-139$ $11-239$ | 2.0 meg | C |  | 30 M 568 | 29 M 292 | 30 M 588 |
| 11-239 | 2.5 meg | A | 30 M 537 30 M 538 | 30 M 569 30 M 570 | $\begin{array}{r}29 \\ 29 \\ \text { M } 293 \\ \hline\end{array}$ |  |
| $11-140$ | 3.0 meg |  |  | 30 M 571 |  |  |
| $13-140$ $17-140$ | 3.0 meg |  | 30 M 539 | 30 M 571 |  | 30 M 597 |
| 11-141 | 5.0 meg | A | 30 m 540 | 30 M 572 | 29 M 295 | 30 M 589 |
| 11-143 | 10.0 meg | A | 30 M 541 | 30 M 573 | 29 M 296 | 30 M 590 |

$P Q, R Q$ and $M$ Controls. NET EACH.
RQL Controls. NET EACH.

## *EXPLANATION OF TAPERS

Taper A. Linear curve for uniform resistance change.
Taper C. Logarithmic curve for audio circuit control or antenna shunt control.
Taper D. Tapered at both ends to provide control of grid bias or antenna circuit. Used where control of the grid bias is of prime importance in regulating the gain.
Taper Q. Logarithmic curve with reverse taper for TV contrast and picture control.

## TYPE 76 ATTACHABLE SWITCHES

## FOR PQ, RQ, RQL AND M CONTROLS

Can be easily attached to control by bending down four metal tabs. Switch housing is made of arcresistant material. Terminals are hydraulically staked-no openings for solder to run into switch Contacts are silver-plated alloy-maintains low contact resistance to assure long life. Type 76-1 handles up to 5 amps at 125 v . Type $76-2$ rated at 1 amp at 125 v . Shpg. wt., 2 oz .
30 M 359. Type 76-1. SPST. NET
30 M 359. Type 76-1. SPST. NET
30 M 59 I . Ty pe 76-2. DPST. EACH

## L AND T PAD SPEAKER CONTROLS


(A)


An excellent selection of L and T-type constant-impedance attenuator pads for controlling volume level of individual speakers in sound systems. Used in mutti-speaker systems to permit raising or lowering volume at one speaker without affecting volume of other speakers. Widely used on music distribution equipment and with hi-fi extension speakers. Handle up to 10 watts of audio power ( 3 watts DC). L pad attenuators provide constant input impedance; T pad attenuators pro-
vide both constant input and output impedances. Diameter $11 / 4^{\prime \prime}$; depth vide both constant input and output impedances. ${ }^{\prime \prime}$ iameter $1 / 4$; depth ing on panels up to $3^{\prime \prime}$ thick. With knob. Av. spg. wt. 602 . mount ing on panels up to $3 / 4^{\prime \prime}$ thick. With knob. Av. shpg. wt., 6 oz.
(B) L PADS

| Stock No. | $\begin{aligned} & \text { Mfr's } \\ & \text { Type } \end{aligned}$ | Impedance (ohms) | $\underset{\text { EACT }}{\mathrm{NET}}$ | Stock No. | $\begin{aligned} & \text { Mifr's } \\ & \text { Type } \end{aligned}$ | Impedance (ohms) | $\begin{aligned} & \text { NET } \\ & \text { EACH } \end{aligned}$ |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 30 M 880 | LP4 | 4 |  | 30 M 884 | TP4 | 4 |  |
| 30 M 881 | ${ }_{\text {LP8 }}$ | 8 | 27 | 30 M 885 | ${ }_{\text {TP8 }}$ | 15 | 3.09 |
| 30 M 8883 | LP500 | 500 | 2.73 | 30 M 886 30 M 887 | TP1500 | 500 | 3.09 |

UNIVERSAL WIRE-WOUND


Rugged 4-watt controls. Replace Types W, WK, Have linear taper, except *left-hand logarithmic taper for TV focus and tright-hand logarithmic taper for picture contrast. Rotation, $300^{\circ}$. Size: $11 / 4^{\prime \prime}$ dia., $23 / 32^{\prime \prime}$ deep; threaded bushing is $3 / 8^{\prime \prime}$ dia. and $3 / 8^{\prime \prime}$ long. Nickel-plated brass shafts, $1 / 4^{\prime \prime}$ dia. Type WP has round shaft, $3^{\prime \prime}$ long. Type WPK has 3" long "Knob Master" shaft-fits a wide variety of knobs. Type WPS has $3 / 4^{\prime \prime}$ long shaft, knurled at end and slotted. Type WM multisections can be attached to all controls. Shpg. wt., 4 oz .

WPK CONTROLS

| Type | Ohms | Type | Ohms |
| :---: | :---: | :---: | :---: |
| WPK-10 | 10 | WPK-1350R | 1350† |
| WPK-20 | 20 | WPK-1500 | 1500 |
| WPK-30 | 30 | WPK-1500L | 1500* |
| WPK-50 | 50 | WPK-2000 | 2000 |
| WPK-100 | 100 | WPK-2000L | 2000** |
| WPK-200 | 200 | WPK-2250L | 2250* |
| WPK-250 | 250 | WPK-2500 | 2500 |
| WPK-300 | 300 | WPK-2500R | 2500 $\dagger$ |
| WPK-400 | 400 | WPK-3000 | 3000 |
| WPK-500 | 500 | WPK-4000L | 4000* |
| WPK-600 | 600 | WPK-5000 | 5000 |
| WPK-650 | 650 | WPK-5000L | 5000* |
| WPK-750 | 750 | WPK-6000 | 6000 |
| WPK-750L | 750* | WPK-6000L | 6000* |
| WPK-750R | $750 \dagger$ | WPK-7500 | 7500 |
| WPK-1000 | 1000 | WPK-7500L | 7500* |
| WPK-1350 | 1350 | WPK-10000 | 10,000 |
| Specify Type No. and Ohms. 30 MM 216. NET EACH. |  |  |  |


| Type | Ohms | Type | Ohm s |
| :---: | :---: | :---: | :---: |
| WPK-12500 | 12,500 | WPK-20000 | 20,000 | | WPK-15000 | 15,000 | WPK-25000 | 25,000 |
| :--- | :--- | :--- | :--- | Specify Type No. and Ohms.

30 MM 199. NET EACH.....

WPS CONTROLS

| Type | Ohms | Type | Ohms |
| :--- | :--- | :--- | :--- |
| WPS-25 | 25 | WPS-2000 | 2000 |
| WPS-40 | 40 | WPS.-2250 | 2250 |
| WPSS-60 | 60 | WPSS-2250L | $2250^{*}$ |
| WPS-250 | 250 | WPS-2500 | 2500 |
| WPS-500 | 500 | WPS-3000 | 3000 |
| WPSS-500L | $500^{*}$ | WPSS-4000 | 4000 |
| WPS-1000 | 1000 | WPS-4000L | $4000^{*}$ |
| WPS-1500 | 1500 | WPS 5000 | 5000 |

Specify Type No. and Ohms.
Specify 21 MM 217. NET EACH.
WP CONTROLS

| Type | Ohms | Type | Ohms |
| :--- | :---: | :---: | :---: |
| WP-2 | 2 | WP-200 | 200 |
| WP-3 | 3 | WP-250 | 250 |
| WP-5 | 5 | WP-300 | 300 |
| WP-6 | 6 | WP-400 | 400 |
| WP-8 | 8 | WP-500 | 500 |
| WP-10 | 10 | WP-750 | 750 |
| WP-15 | 15 | WP-1000 | 1000 |
| WP-20 | 20 | WP-1500 | 1500 |
| WP-25 | 25 | WP-2000 | 2000 |
| WP-30 | 30 | WP-2500 | 2500 |
| WP-40 | 40 | WP-3000 | 3000 |
| WP-50 | 50 | WP-4000 | 4000 |
| WP-60 | 60 | WP-5000 | 5000 |
| WP-75 | 75 | WP-7500 | 7500 |
| WP-100 | 100 | WP-10000 | 10,000 |

Specify Type No. and Ohms.
30 MM 215 . NETEACH

## WM MULTISECTION CONTROLS

Ruggedly constructed 4-watt "add-on" control sections. Can be attached to the WPK, WPS or WP controls, listed above, to form dual control units. All have linear taper, except *Type WM-7500L which has left-hand logarithmic taper for $5{ }^{\prime \prime}$ focus. Rotation, $300^{\circ}$. Multisec tion adds $5 / 8^{\prime \prime}$ to depth. Shpg. wt., 2 oz .

| Type | Ohms | Type | Ohms |
| :--- | :--- | :--- | :--- |
| WM-50 | 50 | WM-2000 | 2000 |
| WM-100 | 100 | WM-2500 | 2500 |
| WM-200 | 200 | WM-3000 | 3000 |
| WM-250 | 250 | WM-5000 | 5000 |
| WM-500 | 500 | WM-7500L | $7500 *$ |
| WM-1000 | 1000 | WM-10000 | 10,000 |
| WM-1500 | 1500 | $\ldots . . . . .$. | $\ldots . .$. |

## Specify Type No. and Ohms. 30 MM 860 . NET EACH....

 I.12
## SWITCHES FOR ABOVE CONTROLS

Easily attached switches for all of above controls. Shpg. wt., 2 oz.
30 M 218 . Type $76-11$. SPST. NET 30 M 218. Type 76-11. SPST. NET
30 M 219. Type $76-12$. DPST. EACH...4lC

## General-Purpose and TV Controls

## IRC EXACT-DUPLICATE TV CONTROLS <br> TYPE QJ

A wide selection of exact-duplicate controls for TV receivers. All duplicate the originals in every detaillem when you use these carefully em when you use these carefully time is wasted in cutting down shafts afts or enlarging mounting holes and o modificatos in wiring required.
In cases where the original control has a switch, the IRC exact-duplicate control is equipped with an identical switch-no additional parts are ever required. All controls are made of finest materials and constructed o rity is always equal ar superior to the originals. uality is
Simply locate the name of the manufacturer and the part number of the original control in the table-you'll see the exact-duplicate IRC replacement in the adjoining column. Av. shpg. wt., 3 oz.


## CLAROSTAT CONTROLS

 miniature controls
## High quality miniaturized

potentiometers designed
for transistor circuits on equipment where extremely compact controls are required. Available with composition or wirewound elements. All have resistance tolerance of
$\pm 10 \%$; linear taper; me$\pm 10 \%$; linear taper; me-
 48М-9
 48 m chanical and electrical ro-
tation of $300^{\circ}$. Types 48 M and 49 M have $1 / 4^{\prime \prime}$ dia. bushings, $1 / 4^{\prime \prime}$ long shafts are $1 / 8^{\prime \prime}$ dia., $1^{1 / 2} \mathbf{2}^{\prime \prime}$ long beyond bushings. Types $48 \mathrm{M}-9$ and $49 \mathrm{M}-9$ eshings ang screw river slotted shafts. Av. shpg. wt., 5 oz. Industrial users-write for quantity prices on 50 or more.

## TYPES 48M AND 48M-9 COMPOSITION POTS

Composition elements. Power rating, 0.2 watts. Insulation tested at 1000 v. AC (terminals to ground). Control size: $15 / 32 \mathrm{x}^{5} / 8^{\prime \prime}$ dia.

RESISTANCES AVAILABLE-SPECIFY WHEN ORDERING

| Ohms | Ohms | Ohms | Ohms | Ohms | Ohms | Ohms |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 1000 | 2500 | 7500 | $25 K$ | 100 K | 500 K | 2.5 meg. |
| 1500 | 5000 | 10,000 | 50 K | 250 K | 1 meg. |  |


| Stock No. | Mfrs. <br> Type | Resistances Avallable (See Table Above) | NET EACH |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: |
|  |  |  | 1-9 | 10-24 | 25-49 |
| 31 M M 240 | 48M | 1000 ohms to 2.5 meg . | 4.28 | 3.21 | 2.78 |
| 31 M M 243 | 48M-9 | 1000 ohms to 2.5 meg . | 4.60 | 3.45 | 2.98 |

TYPES 49M AND 49M-9 WIRE WOUND POTS
Wire-wound elements. Power rating, 1.5 watts. Insulation tested at 1000 v. AC (terminals to ground). Control size: $15 / 32 \mathrm{x}^{25} / 32^{\prime \prime}$ dia.
resistances available-specify when ordering

| Ohms | Ohms | Ohms | Ohms | Ohms | Ohms |
| :---: | :---: | :---: | :---: | :---: | :---: |
| 5 | 25 | 200 | 1000 | 2500 | 10 K |
| 10 | 50 | 250 | 1500 | 5000 | 20 K |
| 20 | 100 | 500 | 2000 | 7500 |  |



TYPE 58 3-WATT WIRE-WOUND CONTROLS
Excellent 3-watt wire-wound controls. Designed to provide extremely smooth quiet operation. Ideal for use as voltage dividers, bias controls, and similar applications. Have linear windings; resistance tolControl size: $25 / 22^{\prime \prime} \times 1^{21 / 32^{\prime \prime}}$ dia. Shaft size: $2^{\prime \prime} \times 1 / 4^{\prime \prime}$ dia. Molded phenolic body. Av. shpg wt $4^{2 \prime} \mathrm{x}^{1 / 4^{\prime \prime}}$ dia.


RESISTANCES AVAILABLE-SPECIFY WHEN ORDERING

| Ohms | Ohms | Ohms | Ohms | Ohms | Ohms | Ohms |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 1 | 15 | 50 | 300 | 1500 | 7500 | 25 K |
| 2 | 20 | 60 | 400 | 2000 | 10K | 30 K |
| 4 | 25 | 75 | 500 | 2500 | 15K | 40 K |
| ${ }^{6}$ | 30 | 100 | 750 | 3000 | 20K | 50K |
| 10 | 40 | 200 | 1000 | 5000 |  |  |
| Stock No. |  | $\begin{aligned} & \hline \text { Mfrs. } \\ & \text { Type } \\ & \hline \end{aligned}$ | Resistances Avallable (See Table Above) |  | NET EACH |  |
| 31 MM 31 MM 31 MM | 20 21 22 |  | 1 ohm 15K; 20 30K; 40 | $\begin{aligned} & 10 \mathrm{~K} \\ & 25 \mathrm{~K} \\ & 50 \mathrm{~K} \end{aligned}$ |  |  |

TYPES 53C1 AND 53C2 MOLDED COMPOSITION POTS
High-quality molded, composition-element controls. Completely sealed against moisture for extreme stability under any climatic conditions. Ex-
cellent for use in critical cellent for use in critical
applications such as test
 53C2
 equipment, computers, servo systems, etc. Wiper assembly is of one piece construction with carbon to carbon contact, insuring exceptionally low noise level. Have stainless steel shafts and gold plated terminals. Type 53 Cl has $1^{\prime \prime}$ dia. $1 / s^{\prime \prime}$ long $158^{\circ}$ long and $3 / 8^{\prime \prime}$ dia. bushing $38^{\prime \prime}$ long. Type 53 C 2 has a $1 / 4^{\prime \prime}$ shaft Tolerance of $\pm 10 \%$. Linear taper. Control size is $9 / 6^{\prime \prime} \times 11^{1 / 16^{\prime \prime}}$ dia. Wt., 4 oz .

RESISTANCES AVAILABLE-SPECIFY WHEN ORDERING

| Ohms | Ohms | Ohms | Ohms | Ohms |  |
| :---: | :---: | :---: | :---: | :---: | :---: |
| 50 | 2000 | 20 K | 200 K |  | meg |
| 100 | 2500 | 25K | 250K |  | meg |
| 250 | 5000 | 50 K | 500K | 3 | meg |
| 500 | 7500 | 75K | 750 K | 4 | meg |
| 750 | 10K | ${ }^{100 \mathrm{~K}}$ | 1 meg | 5 | meg |
| 1000 | 15K | 150K | 1.5 meg | 10 | meg |


| Stock <br> No. | Myrs. <br> Type | Resistances Available <br> (See Table Above) | NET EACH |
| :---: | :---: | :---: | :---: |
| $3\|\mathrm{MM}\| 10$ | 53 C 1 | 50 ohms to 10 meg |  |
| 31 MM 115 | 53 C 2 | 50 ohms to 10 meg | 1.91 |

## Mallory Controls


"M" AND "MT" WIRE WOUND CONTROLS
For industrial and laboratory use as bias controls and voltage dividers. Also for TV replacement. 4 watts. Arm insulated from shaft. $294^{\circ}$ rotation. Knurled $1 /{ }^{1 / 4}$ hallow to accept DS-36 and DS-37 shafts (see below right). MT types center-tapped TV units. (see below, $9 / 16^{\prime \prime}$. Mount in $3 / 8^{\prime \prime}$ hole. Linear taper. Shpg. wt., 4 oz .

POTENTIOMETERS


29 M 65I. Type 395 Dial Plate. For " $M$ " Controls. 2 oz. NET. . $15 ¢$


RHEOSTATS



## "E" WIREWOUND POTENTIOMETERS

Ruggedly constructed, heavy-duty, wire-wound potentiometers. Conservatively rated to dissipate 7 watts.
For industrial, laboratory production control and For industrial, laboratory production control and
research applications. Contact arm grounded to shaft. $295^{\circ}$ effective electrical rotation. $25 / 16^{\prime \prime}$ dia. $x^{53} / 64^{\prime \prime}$ deep. $1 / 4^{\prime \prime}$ shaft slotted $564^{\prime \prime} \times 1 / 16^{\prime \prime}$ deep, extends ${ }^{11 / 32^{\prime \prime}}$ from bushing. Mount in $3 / 8^{\prime \prime}$ hole. Hexagon nut furnished. Use dial plate 29 M 650 , listed below. Linear taper. 6 oz .

| No. | Type | Ohms | Amperes | NET |
| :---: | :---: | :---: | :---: | :---: |
| $29 \mathrm{M} \mathrm{48O}$ | E5MP | 5000 | . 042 | 2.70 |
| 29 M 481 | E10MP | 10,000 | . 03 | 2.88 |
| 29 M 482 | E20MP | 20,000 | . 021 | 2.94 |
| 29 M 483 | E50MP | 25,000 50,000 | . 01913 | 3.03 3.09 |
| 29 M 485 | E75MP | 75,000 | . 011 |  |
| 29 M 486 | E100MP | 100,000 | . 0095 | 3.23 |
| 29 M 487 | E125MP | 125,000 150000 | . 00085 | 3.23 |
| 29 M 488 | E150MP | 150,000 | . 0078 | 3.29 |

29 M 650. Type 399 Dial Plate. For " $E$ '" Controls. 2 oz . NET.. . 2lC


以
For audio, tone and similar control circuits in home receivers, audio amplifiers, portables, TV sets, and industrial electronic equipment. Available in a full ine of resistances, tapers, and taps. Round, hollow shaft-easily cut to desired length Two spline-shank knob adapters furnished with each Midgetrol - see illustration above. With nut and lock washer. $15 / 1 s^{\prime \prime}$ dia. brass shaft, $21 / 8^{\prime \prime}$ long, $1 / 4^{\prime \prime}$ dia. Less switch (see below). Shpg. wt., 3 oz .

| No. | Type | Ohms | Taper* | No. | Type | Ohms | Taper* |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 29 M 714 | U-1 | 100 | 4 | 29 M 764 | U-36 | 75K | 1 |
| 29 m 715 | $\mathrm{U}-52 \mathrm{R}$ | 500 | 2 | 29 M 765 | U-39 | 100K | 1 |
| 29 M 709 | U-2 | 500 | 4 | 29 M 766 | U-40 | 100K | 2 |
| 29 M 638 29 M 796 | $\mathrm{U}_{\mathrm{U}-3}$ | 750 1 K | 2 | 29 M 767 | U-415 | 125 K | 4 |
| 29 M 785 | U-4 | 1 K | 4 | 29 M 768 | U-42 | 150 K | 1 |
| 29 M 797 | U-5 | 1500 | 2 | 29 M 769 | U-43 | 200K | 4 |
| 29 M 786 | U-6 | 2 K | 4 | 29 M 770 | U-44 | 250 K | 1 |
| 29 M 798 | U-7 | 2500 | 2 | 29 M 771 | U-45 | 250K | 2 |
| 29 M 787 | U-8 | 3K | $4{ }_{1}$ | 29 M 772 | U-46 |  |  |
| 29 M 717 | U-9 | 3K | 2 | 29 M 773 | U-48 | 500K | 1 |
| 29 M 751 | U-12 | 5K | 1 | 29 M 774 | U-50 | 500 K | 4 |
| 29 M 752 | U-14 | 5K | 4 | 29 M 775 | U-51 | 750K | 1 |
| 29 M 753 | U-18 | 10 K | 1 | 29 M 713 | U-52 | ${ }_{1} 1 \mathrm{Meg}$ | 1 |
| 29 M 754 | U-19 | 10K | 2 |  | --53 | 1 Meg |  |
| 29 M 755 | U-20 | 10 K | 4 | 29 M 777 | U-54 | ${ }_{1} \mathrm{Meg}$ | 4 |
| 29 M 756 | U-21 | ${ }_{15}^{15} \mathrm{~K}$ | 1 | 29 M 790 | U-155 | 1.5 Meg | 4 |
| 29 M 757 29 M 758 | U-22 | ${ }_{2}^{15 \mathrm{~K}}$ | 1 | 29 M 778 | U-55 | ${ }_{2}^{2 \mathrm{Meg}}$ | 1 |
| 29 M 783 | U-26 | 20K | 4 | 29 M 784 | U-255 | 2.5 Meg | 4 |
| 29 M 759 | U-28 | 25 K | 2 | 29 M 779 | U-57 | 3 Meg | 1 |
| 29 M 712 | U-28A | 25 K | 1 | 29 M 782 | U-59 | 3 Meg | 4 |
| 29 M 760 | U-29 | 25 K | 4 | 29 M 780 | U-65 | ${ }_{5} \mathrm{Meg}$ | 1 |
| 29 M 761 | U-34 | ${ }^{50 \mathrm{~K}}$ | 1 | 29 M 789 | U-62 | 5 Meg 10 Meg | 4 |
| 29 M 763 | U-35 | 50 K | 2 |  |  |  |  |

## EXPLANATION OF TAPERS*

Taper No. 1: For use in audio or antenna shunt circuits.
Taper No. 2: For series circuits or cathode voltage controls.
Taper No. 2:
Taper Neries circuits or cathode
No. 4:
Linear. For voltage control.
TYPE UT SINGLE-TAPPED MIDGETROLS
Same as U-types above, but tapped for tone compensation.


TYPE UDT DOUBLE-TAPPED MIDGETROLS

| No. | Mifr's Type | Ohms | Taps | EACH |
| :---: | :---: | :---: | :---: | :---: |
| 29 M 988 | UDT-283 | 500 K | $100 \mathrm{~K} / 200 \mathrm{~K}$ | 1.32 |
| 29 M 989 | UDT-289 | ${ }_{1}^{1} \mathrm{Meg}$ | $250 \mathrm{~K} / 500 \mathrm{~K}$ |  |
| 29 M 990 29 M 991 | UDT-291 | $\frac{1.5 \mathrm{Meg}}{2.25 \mathrm{Meg}}$ | $225 \mathrm{~K} / 500 \mathrm{~K}$ $250 \mathrm{~K} / 500 \mathrm{~K}$ |  |
| 29 M 992 29 M 719 | UDT-296 | 2.25 Meg <br> 3.3 Meg | $500 \mathrm{~K} / 1 \mathrm{Meg}$ $300 \mathrm{~K} / 1.5 \mathrm{Meg}$ |  |

## TYPE SU INSULATED-SHAFT MIDGETROLS FOR TV



Size and basic construction are the same as Midgetrols listed above, except the SU type control has a $1 / 4^{\prime \prime}$ dia., fixed knurled and slotted phenolic shaft protruding $1 / 4^{\prime \prime}$ beyond bushing. Meet exact physical and electrical requirements for special applications. Linear taper. With hex nut. Shpg. wt., 3 oz .

| No. | Mifr's Type | Ohms | No. | Mifr's Type | Ohms |
| :---: | :---: | :---: | :---: | :---: | :---: |
| 29 M 646 | SU-6 | 1.5 K | 29 M 828 | SU-46 | 250 K |
| 29 M 647 | SU-8 | 3K | 29 M 814 | SU-50 | 500K |
| 29 M 832 | SU-14 | 5K | 29 M 829 | SU-54 | 1 Meg |
| 29 M 826 | SU-20 | 10K | 29 M 830 | SU-56 | 2 Meg |
| 29 M 812 | SU-29 | 25 K | 29 M 833 | SU-565 | 2.5 Meg |
| 29 M 827 | SU-35 | 50K | 29 M 831 | SU-59 | 3 Meg |
| 29 M 813 | SU-41 | 100K | 29 M 815 | SU-67 | 5 Meg |

EACH. 91c

## SWITCHES AND ACCESSORIES FOR MIDGETROLS

"Push-on, stay-on"" switches for Midgetrols. Shpg. wt., 2 oz.
29 M 620. US-26 SPST Switch. NETi............................. 414 29 M 621. US-26T SPST Switch. With dummy terminal. NET.. 534 29 M 623. US-28 SPDT Switch. NET.
29 M 985. DS-36 Special $3^{\prime \prime}$ Extension Shaft. For tubular shaft Midgetrols, TV and industrial 2-watt controls, and Type "M" pots. Also couples front and rear sections together. Shpg. wt., 2 oz. NET ...32 3 29 M 882. DS-37 3/1" Diameter Shaft. For use with round-shaft Midgetrols to accommodate knobs requiring $3 / 16^{\prime \prime}$ shaft. Wt., 2 oz. NET.. 324 29 M 987. EB-214 Special Bushing. Dimensions: $1 / 2^{\prime \prime}-28$ thread, $23 / 16^{\prime \prime}$
long with $403^{\prime \prime}$ milled flat. Shpg. wt., 2 oz. NET.................. 546

# Industrial and Special Controls 

## MALLORY CONTROLS

## SPEAKER CONTROLS

Constant-load attenuator pads.
Widely used to control the Widely used to control the evel of low-impedance audio circuits in sound systems. Rated at 4 watts, continuous DC; 15 w. peak audio. Have $2^{\prime \prime}$ shafts. Bushing size: $3 / 8 x^{3} / 8^{\prime \prime}$ diameter. Supplied with bar knob, 0-10 dial plate and wiring instruc-
tions. Av. shog. wt., 7 oz.

T Pad Attenuators. Present constant source impedance as well as constant load at all control set-


L Pad Attenuators. Present a constant load impedance at all control se
$11 /$ s $^{\prime}$ deep.

| Ohms | Stock No. | Type | Stock No. | Type |
| :---: | :---: | :---: | :---: | :---: |
| 2 | 29 M 868 | T2 | 29 M 883 | L2 |
| 4 | 29 M 869 | T4 | 29 M 884 | L4 |
| 8 | 29 M 870 | T6 | 29 M 885 | L6 |
| 15 | 29 M 871 29 M 872 | T15 | 29 M 892 29 M 886 | L15 |
| 50 | 29 M 873 | T50 | 29 M 887 | L50 |
| 100 | 29 M 865 | T100 | 29 M 920 | L100 |
| 200 | 29 M 874 | T200 | 29 M 888 | L200 |
| 250 | 29 M 875 | T250 | 29 M 889 | L250 |
| 500 | 29 M 876 | T500 | 29 M 890 | L500 |
| 600 | 29 M 866 | T600 | 29 M 921 | L600 |
| 1000 | 29 M 867 | T1000 | 29 M 922 | L1000 |
| 2000 | 29 M 877 | T2000 | 29 M 891 | L2000 |
| 3000 | 29 M 878 | T3000 | 29 M 923 | L3000 |
| 4000 |  |  | 29 M 708 | L4000 |

"T" Pads. NET EACH... 3.03 "LL" Pads. NET EACH... 2.68

## VOLUME CONTROL ACCESSORIES

*Couples $1 / 4$ " shafts
 ngfor panel mountof control 5 "
from mounting surface. A.v. shpg. wts.: Brackets, 3 oz.; shafts, couplers and bushings, $11 / 4 \mathrm{oz}$.

| No. | Type | Fig. | Description | EACH |
| :---: | :---: | :---: | :---: | :---: |
| 29 M 676 | RB249 | A | Mtg. bracket. Mtg. Ctrs. $21 / 2^{\prime \prime}$ | 244 |
| 29 M 675 | RB248 | A | Mtg. bracket. Mtg. Ctrs. 13/4" | 214 |
| 29 M 661 | EB247 $\dagger$ | C | Extender | 414 |
| 29 M 665 | 178 | E | Wrench for $1 / 2^{\prime \prime}-9 / 16^{\prime \prime}$ v.c. hex nuts | 504 |
| 29 M 655 | RS242 | F | Ext. shaft, $4 \mathrm{x}^{1 / 4} \mathrm{x}^{1 / 32^{\prime}}$ flat. |  |
| 9 M 656 | RS243 | F | Ext. shaft, 4x ${ }^{1 / 4} x^{3} / 33^{\prime \prime}$ flat. |  |
| 29 M 657 | RS244 | F | Ext. shaft, 4x ${ }^{3 / 18} \mathrm{x}^{1 / 64}{ }^{\prime \prime}$ flat. |  |
| 9 M 658 | RS245 | F | Ext. shaft, $2 \times 1 / 4^{\prime \prime}$ with $3 / 32^{\prime \prime}$ slot. | 94 |
| 29 M 672 | EC240* | B | Coupling | 594 |
| 60 H 390 | UB2418 | D | Bushing | 94 |

G. W. BORG 'MICROPOTS' AND 'MICRODIALS'


G Model 205 "Micropots." High-precision, ten-turn linear pots. Widely used in electronic instruments, industrial and military controls, elec-隹 Anti-backlash spring in contact guide. Mechanical and electrical rotation, $3600^{\circ}$. Power dissipation, 5 watts @ $40^{\circ} \mathrm{C}$. Average life more than million revolutions. Control size: $21 / 8 \times 13 / 4^{\prime \prime}$ dia. Shaft, $7 / 8^{\prime \prime}$ long. Av. shpg. wt., $11 / 2 \mathrm{lbs}$.

| Stock No. | Ohms | Stock No. | Ohms | Stock No. | Ohms |
| :---: | :---: | :---: | :---: | :---: | :---: |
| 29 M 680 | 100 | 29 M 683 | 5000 | 29 M 686 | 50 K |
| 29 M 681 | 500 | 29 M 684 | 10 K | 29 M 687 | 100 K |
| 29 M 682 | 1000 | 29 M 685 | 20 K |  |  |

## NET EACH

15.00

H Model 1111B Micropots. High quality precision ten-turn potentioH meters. Similar to above but designed chiefly for commercial applicaions. Rated at 3 watts @ 40 C. Linearity accuracy is $0.5 \%$. Have average life of more than 500,000 revolutions. Control size: $21 / 8 \times 113 / 16$ diameter. Shaft, $7 / 8^{\prime \prime}$ long. Av. shpg. wt., $11 / 2$ lbs.

| Stock No. | Ohms | Stock No. | Ohms | Stock No. | Ohms |
| :---: | :---: | :---: | :---: | :---: | :---: |
| 31 M 991 | 100 | 31 M 994 | 5 K | 31 M 997 | 50 K |
| 31 M 992 | 500 | 31 M 995 | 10 K | 31 M 998 | 100 K |
| 31 M 993 | 1000 | 31 M 996 | 20 K |  |  |
| NET |  |  |  |  |  |

[^4]2-WATT TV AND INDUSTRIAL CONTROLS

Two-watt wirewound potentiometers designed espe- cially for replacement of television controls. Also excellent for use as voltage dividers and bias controls. Insulated contact arm type, linear taper. Special dual contactor mechanism. 900 volts AC insulation between $12564^{\prime \prime}$ in diameter. Knurled stub shaft slot. *Centameter. Knurled stub shaft has screwdrive

| No. | Type | Ohms | NET | No. | Type | Ohms | NET |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 29 M 835 | R20L | 20 | . 91 | 29 M 842 | R1000L | 1000 | 9 |
| 29 M 836 | R20CT* | 20 | 1.29 | 29 M 843 | R1500L | 1500 | :9 |
| 29 M 837 | R25L | 25 30 | . 9 | 29 M 844 | R2500L | 2500 | 9 |
| 29 M 839 | R30CT* | 30 | 1.29 | 29 M 845 | R5000L | 5000 | . 91 |
| 29 M 840 | R50L | 50 | . 91 | 29 M 692 | R7500L | 7500 | 1.06 |
| 29 M 864 | R100L | 100 | . 9 | 29 M 693 | R10ML | 10,000 | . 06 |
| 29 M 841 | R250L | 250 | . 9 | 29 M 694 | R15ML | 15,000 |  |

## THEATER SPEAKER CONTROLS

Precision units developed especially as controls in drive-in theater speaker installations. Withstand extremes of temperature and humidity. TSA-10 is an L-pad with 10 -ohm input and 4-ohm output. TSA-35 is a 35 -ohm series-type potentiometer. TSA-6 is a 6-ohm shunt-type attenuator. $11 / 16^{\circ}$ dia. cases. Shafts are $1 / 2^{\prime \prime}$ long; *steel (knurled), tbrass. Shpg. wt., 4 oz .

| No. | Mfr's Type | Descriptlon | EACH |
| :---: | :---: | :---: | :---: |
| 29 M 847 | *TSA-10 | L-pad | 1.44 |
| 29 M 848 | *TSA-35 | Potentiometer | 1.06 |
| 29 M 849 | +TSA-6 | Shunt-type Attenuator | 1.06 |

## IRC "CIRCUIT INSTRUMENTS" CONTROLS



## MINIATURE PRECISION POTENTIOMETERS

An excellent selection of ten-turn and one-turn precision linear potentiometers. All have highly desirable characteristcs of low temperature coefficient ( 20 ppm ), fine resolution, long rotational life, and high corrosion resistance. Insulated copper cores are wound with precision metal alloy wire resistance elements-carefully selected for each individual resistance range. Gold alloy contacts running on coin silver are used for the common contact; all moving contacts are alloys chosen for low contact resistance and long rotational life. All have max. torque of 2 oz . in. except types 151 and 751 with 4 oz. in. All except HD-150 have brass bushings, $3^{\prime \prime} 8^{\prime \prime}$ dia. and $1 / 2^{\prime \prime}$ long; HD-150 has 5/16 ${ }^{\circ}$-dia. bushing. Types HD-150, H-100T and H-750T have black, phenolic cases and shafts of nickel-plated brass. Types SM-500, 151 , and 751 have nickel-plated brass
cases with stainless steel shafts. All shafts are $1 / 2^{\prime \prime} \times 1 / 4^{\prime \prime}$ dia. Av., 3 oz. Model HD-150. 5 -watt, 10 -turn potentiometers. Tolerance, $\pm 5 \%$; linearity, $\pm 0.5 \%$. $2^{\prime \prime}$ long, $11 / 2^{\prime \prime}$ dia. Available in $1 \mathrm{~K}, 5 \mathrm{~K}, 10 \mathrm{~K}, 20 \mathrm{~K}, 50 \mathrm{~K}$ 31 M M 530 1-9, NET EACH
31 MM 530. 1-9, NET EACH .. I0.00 10-24, EACH
25-99, EACH 9.50 Model H-100T. 4-watt, 10 -turn potentiometers. Tolerance, ${ }^{ \pm 5 \%}$; linearity, $\pm 0.5 \% .21 / 32^{\prime \prime}$ long, $1^{\prime \prime}$ dia. Available in $500,1 \mathrm{~K}, 2.5 \mathrm{~K}, 5 \mathrm{~K}, 10 \mathrm{~K}$, 50 K and 100 K ohms-specify value when ordering.
31 MM 535. 1-9, NET EACH. 12.50 10-24, EACH
25-99, EACH ................... 10.00 100-Up, EACH........ 9.38 Model H-750T. 3-watt, 10-turn potentiometers. Tolerance, $\pm 5 \%$; limearity, $\pm 0.5 \% .1^{23} / 3^{\prime \prime}$ long, $3 / 4^{\prime \prime}$ dia. Available in 250 , 31 MM 540 1-9, NETEACH.14.40 10-24, EACH
 Model SM-500. 1.5-watt, 10 -turn potentiometers. Tolerance, $\pm 10 \%$; linearity $\pm 1 \%$. $115 / 32^{\prime \prime}$ long, $1 / 2^{\prime \prime}$ dia. Available in $500,1 \mathrm{~K}, 5 \mathrm{~K}, 10 \mathrm{~K}$ and 25 K ohms-speciry value when ordering.
$\begin{array}{lll}31 \text { MM 545. 1-9, NET EACH. } 12.50 & \text { 10-24, EACH } \\ \text { 25-99, EACH. }\end{array}$
11.25
9.38

Model 151. 3-watt, one-turn potentiometers. Tolerance, $\pm 5 \%$; linearity $\pm 0.5 \%$. $1 / 2^{\prime \prime}$ long, $11 / 2^{\prime \prime}$ dia. Available in $100,500,1 \mathrm{~K}, 2.5 \mathrm{~K}, 5 \mathrm{~K}$ and 10 K ohms-specify value when ordering.

Model 751. 1-watt, one-turn potentiometers. Tolerance, $\pm 10 \%$; linearity, $\pm 1 \% .3 / 8^{\prime \prime}$ long, $3 / 4^{\prime \prime}$ dia. Available in $100,250,500,1 \mathrm{~K}, 5 \mathrm{~K}$ and 10 K ohms-specify value when ordering.
31 MM 555. 1-9, NET EACH. 8.55 10-24, EACH
100-UP, EACH
H......
7.70
6.41

## DIRECT READING REVODEX DIALS

High quality turn-indicating knob for above precision pots or any with $1 / 4$ shatts. Gives 3-digit readings accurate within one hindredth of a turn for any device with ten turns or less. Has locking-screw for holding dial at aluminum body. Size: $13 / 16 \times 17 / \mathrm{s}^{\prime \prime}$ dia. Wt., 5 oz .
31 M 551 . Black Anodized Aluminum. NET
31 M 552. Clear Anodized Aluminum. EACH. 5.75
10-24, EA. ....5.46 25-99, EA. . 5.17 $\quad$ 100-199, EA. ...... 4.88

# Cornell-Dubilier Capacitors 



## "BLUE BEAVER" TUBULAR ELECTROLYTICS

"Blue Beaver" tubular electrolytic capacitors are specifically designed for service replacement applications. All are sealed in aluminum cans for protection against heat and humidity. Have waximpregnated cardboard outer sleeves. Single-section Type BR has Type BBR is a miniature version of Type BR, for limited-space Type BBR is a miniature version of Type BR, for limited-space
applications. Type BRHV is similar to Type BR, but is designed

TYPE BR SINGLE SECTION
Radio and TV replacement units. Ideal for bypass, filter, etc. Hermetically sealed.

| StockNo. | Type | Mfd | W.V. | Size | NET |
| :---: | :---: | :---: | :---: | :---: | :---: |
| 19 L 285 | 500-6 | 500 | 6 | 13/16x17/8 | 91 |
| $19 L 286$ | 1000-6 | 1000 | 6 | 15/16x23/16 | 12 |
| 19 L 287 | 2000-6 | 2000 | 6 | $11 / 16 \times 211 / 16$ | . 35 |
| 192272 | 2501 | 250 | 15 | $13 / 16 \times 17 / 8$ |  |
| 19 L 273 | 5001 | 500 | 15 | 15/16 $\times 23 / 16$ | 1.03 |
| 19 L 74 | 10001 | 1000 | 15 | $11 / 16 \times 23 / 16$ | . 35 |
| 19 L 284 | 20001 | 2000 | 15 | $11 / 16 \times 33 / 16$ | . 88 |
| 192270 | 2502 | 250 | 25 | 15/16x17/8 | . 00 |
| 9 L 271 | 5002 | 500 | 25 | $11 / 16 \times 23 / 16$ | . 35 |
| 9 L 147 | 1005 | 100 | 50 | $\frac{13 / 16 \times 23 / 16}{16}$ | . 82 |
| 9 L 148 | 1505 | 150 | 50 | $15 / 16 \times 23 / 66$ | . 91 |
| $9 L 149$ | 2505 | 250 | 50 | $11 / 16 \times 23 / 16$ | 1.03 |
| $9 L 269$ | 5005 | 500 | 50 |  | . 41 |
| 9L145 | 2515 | 25 | 150 | 13/16x15/8 | . 73 |
| 14 L 045 | 3015 | 30 | 150 | $13 / 16 \times 15 / 8$ | . 76 |
| 14 L 046 | 4015 | 40 | 150 | $13 / 16 \times 17 / 8$ | . 79 |
| 4 L 047 | 5015 | 50 | 150 | 15/16x17/8 | . 82 |
| 9 L 146 | 6015 | 60 | 150 | $15 / 16 \times 23 / 16$ | . 88 |
| 42039 | 8015 | 80 | 150 | 15/16x23/16 | . 94 |
| 14 L 056 | 10015 | 100 | 150 | 11/16×21 $1 / 16$ | . 03 |
| 14 L 057 | 15015 | 150 | 150 | 11/16x33/16 | 1.12 |
| $14 L 033$ | 1625 | 16 | 250 | 13/16x17/8 | . 76 |
| 141034 | 2025 | 20 | 250 | $13 / 16 \times 17 / 8$ | . 79 |
| 19 L 142 | 3025 | 30 | 250 | 15/16x17/8 | . 85 |
| 14 L 035 | 4025 | 40 | 250 | 15/16x23/16 | 1 |
| 19 L 143 | 5025 | 50 | 250 | 11/16 $\times 23 / 16$ | 1.00 |
| 19 L 144 | 6025 | 60 | 250 | $11 / 16 \times 211 / 16$ | . 06 |
| 14 L 020 | 435 | 4 | 350 | 11/16x15/8 | . 62 |
| 14 L 021 | 835 | 8 | 350 | $11 / 16 \times 17 / 8$ | . 71 |
| 14 L 022 | 1235 | 12 | 350 | $13 / 16 \times 17 / 8$ | . 76 |
| 14 L 023 | 1635 | 16 | 350 | 15/16x17/8 | . 82 |
| 14 L 018 | 2035 | 20 | 350 | 15/16x17/8 | . 85 |
| 14 L 019 | 3035 | 30 | 350 | $11 / 16 \times 23 / 16$ | . 97 |
| 14 L 026 | 4035 | 40 | 350 | $11 / 16 \times 211 / 16$ | . 03 |
| 19 LI 1 | 5035 | 50 | 350 | 11/16x211/16 | 1.09 |
| 14 L 008 | 145 | 2 | 450 | $11 / 16 \times 11 / 4$ | . 65 |
| 14 L 009 | 245 | 2 | 450 | $11 / 16 \times 11 / 4$ | . 65 |
| 14 L 010 | 445 | 4 | 450 | $11 / 16 \times 15 / 8$ | . 68 |
| 14 L 011 | 845 | 8 | 450 | $13 / 16 \times 15 / 8$ | .73 |
| $14 \mathrm{LOL2}$ | 1045 | 10 | 450 | 13/16x17/8 | . 76 |
| 14 L 013 | 1245 | 12 | 450 | $13 / 16 \times 17 / 8$ | . 79 |
| 14 Loi4 | 1645 | 16 | 450 | $15 / 16 \times 23 / 16$ | . 82 |
| 4 L 015 | 2045 | 20 | 450 | 15/16x23/16 | . 91 |
| 44 L 016 | 3045 | 30 | 450 | $11 / 16 \times 211 / 16$ | . 00 |
| 4 L 017 | 4045 | 40 | 450 | $11 / 16 \times 2{ }^{11 / 16}$ | . 06 |
| 14 L 004 | 6045 | 60 | 450 | 17/16x2 ${ }^{13 / 16}$ | 1.38 |
| 4 L 005 | 8045 | 80 | 450 | 17/16x35/16 | . 65 |
| 9 L 215 | 450 | 4 | 500 | $11 / 16 \times 17 / 8$ | . 71 |
| 4 L 000 | 850 | 8 | 500 | $13 / 16 \times 17 / 8$ | . 76 |
| 9 L 140 | 1250 | 12 | 500 | 15/16 $\times 23 / 16$ | . 82 |
| 14 L 001 | 1650 | 16 | 500 | $11 / 16 \times 23 / 16$ | 88 |
| 14 L 002 | 2050 | 20 | 500 | 1116x23/16 | . 94 |
| 14 L 003 | 3050 | 30 | 500 | 11/16x211/16 | 03 |

TYPE BBR SINGLE SECTION
Miniaturized units for hearing aids, transistor radios, low-voltage circuits, etc. Hermetically

| StockNo. | Type | Mfd | W.V. | Size | NET |
| :---: | :---: | :---: | :---: | :---: | :---: |
| 19 L 200 | 25-3 | 25 | 3 | 7/16x11/4 | . 50 |
| 9 L 201 | 50-3 | 50 | 3 | 7/16x11/4 | .56 |
| 9 L 202 | 5-6 | 5 | 6 | 7/16x11/4 | . 47 |
| 9 L 203 | 25-6 | 25 | 6 | 7/16x11/4 | . 50 |
| 19 L 204 | 50-6 | 50 | 6 | 7/16x11/4 | . 56 |
| 19 L 205 | 100-6 | 100 | 6 | $9 / 16 \times 11 / 4$ | .71 |
| 19 L 206 | 250-6 | 250 | 6 | $9 / 16 \times 15 / 8$ | .79 |
| 9 L 207 | 100-15 | 100 | 15 | $9 / 16 \times 11 / 4$ | .73 |
| 9 l 216 | 10-25 | 10 | 25 | 7/16x11/4 | . 59 |
| 9 L 17 | 20-25 | 20 | 25 | 7/16x11/4 | . 59 |
| 9 L 218 | 25-25 | 25 | 25 | 7/16 $\times 11 / 4$ | . 59 |
| 19 L 219 | 50-25 | 50 | 25 | 9/16x11/4 | .65 |
| 9 L 208 | 100-25 | 100 | 25 | $9 / 16 \times 15 / 8$ | . 79 |
| $9 L 209$ | 1-50 | 1 | 50 | 7/16x11/4 | 3 |
| 19 L 10 | 2-50 | 2 | 50 | 7/16x11/4 | . 53 |
| 19 L 11 | 4-50 | 4 | 50 | 7/16x11/4 | . 59 |
| 19 L 222 | 5-50 | 5 | 50 | 7/16x11/4 | . 59 |
| 19 L 223 | 10-50 | 10 | 50 | 7/16x11/4 | . 59 |
| 91224 | 25-50 | 25 | 50 | $9 / 16 \times 11 / 4$ | . 62 |
| 19 L 212 | 10-90 | 10 | 90 | $9 / 16 \times 11 / 4$ | . 65 |
| 19 L 213 | 16-90 | 16 | 90 | 9/6×15/8 | . 65 |
| 19 L 214 | 4-150 | 4 | 150 | 7/16x11/4 | . 59 |
| 9 L 249 | 8-150 | 8 | 150 | $9 / 16 \times 11 / 4$ | . 62 |
| 9 L 226 | 10-150 | 10 | 150 | $9 / 16 \times 11 / 4$ | . 62 |
| 19 L 247 | 12-150 | 12 | 150 | 9/16x11/4 | . 65 |
| 19L248 | 16-150 | 16 | 150 | $9 / 16 \times 15 / 8$ | . 68 |
| 19 L 225 | 20-150 | 20 | 150 | $9 / 16 \times 15 / 8$ | . 7 |
| 19 L 227 | 4-250 | 4 | 250 | $9 / 16 \times 11 / 4$ | . 59 |
| 19 L 228 | 8-250 | 8 | 250 | $9 / 16 \times 15 / 8$ | . 68 |
| 19 L 2291 | 12-250 | 12 | 250 | 9/16×15/8 | . 73 |

TYPE BBRD DUAL SECTION
Sealed in aluminum tube; wax-impregnated cardboard outer sleeve. Common negative lead.
or filter applications in higher-voltage power supplies. Surge voltage Type BRHV is 150 volts above working voltage. Types BBRD, Coded , and BBRQ have $7^{\circ}$ flexible vinyl "covered leads, with color or operation up to $85^{\circ} \mathrm{C}$., except 500 -volt types, which are for up to $65^{\circ} \mathrm{C}$. Av. shpg. wt., 4 oz . See Page 159 for mtg. hdwe.

## TYPE BBRT TRIPLE SECTION

| 19 L 230 | 22215 | 20-20-20 | 150 |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: |
| 19 L 231 | 32V215 | 30-25-20 | 150 |  | 32 |
| 19 L 232 | 33315 | 30-30-30 | 150 | $11 / 16 \times 23 / 16$ | 1.38 |
| 19 L 233 | 42215 | 40-20-20 | 150 |  | 1.32 |
| 19 L 234 | 43215 | 40-30-20 | 150 | $11 / 16 \times 23 / 16$ | 1.38 |
| 19 L 235 | 44215 | 40-40-20 | 150 |  | 1.38 |
| 19 L 236 | 44415 | 40-40-40 | 150 |  | 1.44 |
| 19 L 298 | 84215 | 80-40-20 | 150 | 11 | 1.62 |
| 18 L .620 | 0126.5 | 150-150-150 | 150 |  | 2.79 |
| 19 L 237 | 2215C | 20-20,20 | 150,25 | 15 | 1.21 |
| 19 L 238 | 3315C | 30-30,20 | 150,25 | 15/16×23/16 | 1.29 |
| 19 L 239 | 4215 C | 40-20,20 | 150,25 | $11 / 16 \times 1$ | 1.26 |
| 19 L 240 | 4315C | 40-30,20 | 150,25 | $11 / 16 \times 1$ | 1.29 |
| 19 L 241 | 4415C | 40-40,20 | 150,25 | $11 / 16 \times 17 / 8$ | 1.32 |
| 19 L 242 | 4415X25 | 40-40,250 | 150,10 | $11 / 16 \times 23 / 8$ | 1.53 |
| 19 L 243 | 5315C | 50-30,20 | 150,25 | 11 | 1.38 |
| 19 L 244 | 5515C | 50-50,20 | 150,25 |  | 1.47 |
| 19 L 299 | 5315 C 25 | 50-30,250 | 150,25 | $11 / 16 \times 33$ | 1.82 |
| 19 L 245 | 8415C | 80-40,20 | 150,25 | $11 / 16 \times 211 / 16$ | 1.56 |
| 19 L 246 | 3215 Cl 0 | 30-20,100 | 150,25 | $11 / 16 \times 23 / 16$ | 1.38 |
| 19 L 275 | 5315 X 20 | 50-30,200 | 150,10 | $176 \times 2 / 8$ | 1.50 |
| 19 L 276 | 5315 Cl 10 | 50-30,100 | 150,25 | $11 / 16 \times 23 / 8$ | 1.44 |
| 19 L 277 | 8215C10 | 80-20,100 | 150,25 | $11 / 16 \times 211 / 16$ | 1.62 |
| 19 L 278 | $2225 C$ | 20-20,20 | 250,25 |  | 1.32 |
| 19 L 279 | 4225C | 40-20,20 | 250,25 | $11 / 16 \times 23 / 8$ | 1.50 |
| 19 L 280 | 4425C | 40-40,20 | 250,2 | $11 / 16 \times 27 / 8$ | 1.71 |
| 19 L 281 | 7 V 4125 | 75-40-10 | 250 | $13 / 16 \times 33 / 16$ | 2.03 |
| 18 L 621 | 0185 | 40-40-40 | 300 | $11 / 8 \times 3$ | 2.70 |
| 18 L 625 | 0878 | 140-5,200 | 350,200 | $11 / 2 \times 43 / 16$ | 3.94 |
| 19 L 282 | 16745 | 16-16-16 | 450 |  | 1.82 |
| 19 L 283 | 2245C | 20-20,20 | 450,25 | $11 / 16 \times 33 / 16$ | 1.71 |
| 18 L 626 | 1411 | 30,50,100 | 450,150,25 | $11 / 8 \times 3$ | 2.18 |
| 18 L 627 | 1238 | 5,80-40 | 450,400 | $13 / 8 \times 39 / 16$ | 2.68 |

## TYPE BBRQ QUADRUPLE SECTION

| $19 \mathrm{~L} 2925{ }^{532}$ | 50-30-20,150 | 20,25 | ${ }^{1 / 161 \times 211 / 16}$ |  |
| :---: | :---: | :---: | :---: | :---: |
| 19 L 29344315 C | 40-40-30,150 | 20,25 | 11/6x211/16 | 1.76 |
| 19 L 294555515 C | 60-50-50,150 | 20,25 | 11/16 $\times 33 / 16$ | 2.03 |
| 19 L 29033215C | 30-30-20,20 | 150,25 |  |  |
| 18 L 6280789.4 | 140-5,200-30 | 300,150 | $11 / 2 \times 43$ | 3.03 |
| 18 L 6300789.5 | 80-60,40,20 | 350,300,150 | $1{ }^{13 / 8} \times 3$ | 3.47 |
| 18 L 6310925 | 140,5,200-30 | 350,300,200 | $11 / 2 \times 43$ | 4.50 |
| 18 L 6330125 | 20-20-20-10 | 450 | $138 \times 3$ | 2.50 |
| 18 L 63400170.5 | 40-20-20-10 | 450 | $13 / 8 \times 3$ | 2.76 |
| 18 L 6350174 | 40-40-20-20 | 450 | $13 / 8 \times 43 / 16$ | 3.20 |
| 19 L 295 2245C | 20-20-20,20 | 450,25 | 13/16x31/4 | 2.38 |
| 18 L 6360926.5 | 10,80,40-40 | 450,300,250 | $13 / 8 \times 39 / 16$ | 2.91 |
|  | 10,80,40,100 | $\begin{aligned} & 450,300, \\ & 250,50 \end{aligned}$ |  | 2.82 |
| 18 L 63910695.3 | 10,20-20-10 | 450,350 | $11 / 8 \times 3$ | 2.06 |


| StockNo. | Type | Mfd | W.V. | Slze | NET |
| :---: | :---: | :---: | :---: | :---: | :---: |
| 19 L 220 | 2202 | 20-20 | 25 | 13/16x11/4 | . 82 |
| 19 L 250 | 115 | 10-10 | 50 | $13 / 16 \times 11 / 4$ | 82 |
| 19 L 251 | 2115 | 20-10 | 150 | $13 / 16 \times 15 / 8$ | .9] |
| 19 L 252 | 2215 | 20-20 | 150 | $13 / 16 \times 17 / 8$ | . 97 |
| 19 L 253 | 3215 | 30-20 | 150 | 15/16 $\times 17 / 8$ | 1.00 |
| 19 L 254 | 3315 | 30-30 | 150 | 15/16 | 1.06 |
| 19 L 255 | 4215 | 40-20 | 150 | 15/16x17/8 | 1.03 |
| 19 L 256 | 4315 | 40-30 | 150 | 15/16 $\times 2^{3 / 16}$ | 1.06 |
| 19 L 257 | 4415 | 40-40 | 150 | $15 / 16 \times 23 / 16$ | 1.09 |
| 19 L 258 | 5315 | 50-30 | 150 | $15 / 16 \times 23 / 16$ | 1.15 |
| 19 L 259 | 5515 | 50-50 | 150 | $11 / 16 \times 23$ | 1.23 |
| 19 L 260 | 8415 | 80-40 | 150 | $11 / 16 \times 23 / 8$ | 1.32 |
| 18 L 609 | 0183.7 | 100-50 | 150 | $1 \times 3$ | 1.76 |
| 19 L 288 | 101015 | 100-100 | 150 | 11/16 $\times 33 / 16$ | 1.88 |
| 18 L 610 | 0196 | 200-5 | 150 | $1 \times 39 / 16$ | 1.56 |
| 19 L 289 | 8D25 | 8-8 | 250 | $13 / 16 \times 15 / 8$ | . 94 |
| 19 L 261 | 16825 | 16-8 | 250 | $1316 \times 23$ | 1.00 |
| 19 L 262 | 16D25 | 16-16 | 250 | $15 / 16 \times 23$ | 1.06 |
| 19 L 263 | 2225 | 20-20 | 250 | 11/16x1/8 | 1.09 |
| 19 L 296 | 3325 | 30-30 | 250 | $11 / 16 \times 23 / 8$ | 1.32 |
| 19 L 264 | 7V225 | 75-20 | 250 | 11/16×33/16 | 1.53 |
| 18 L 612 | 0242 | 80-10 | 250 | $1 \times 3$ | 1.50 |
| 18 L 614 | 0286 | 150-100 | 300 | 13/2x $39 / 10$ | 3.09 |
| 19 L 265 | 8D45 | 8-8 | 450 | 15/16x1/6 | 1.00 |
| 19 L 266 | 16845 | 16-8 | 450 | $11 / 16 \times 2 \%$ | 1.18 |
| 19 L 267 | 16D45 | 16-16 | 450 | 11/6621 | 1.32 |
| 19 L 268 | 2245 | 20-20 | 450 | 11/16×33/16 | 1.47 |
| 19 L 297 | 3345 | 30-30 | 450 | $13 / 16 \times 33 / 4$ | 1.76 |
| 19 L 221 | 4445 | 40-40 | 450 | 11/46x41/4 | 2.00 |
| 18 L 616 | 0646 | 20, 100 | 450, 25 | $1 \times 21 / 2$ | 1.29 |
| 18 L 617 | 0652 | 40, 50 | 450, 50 | $1 \times 39 / 4$ | 1.76 |
| 18 L 618 | 0722 | 80, 100 | 450, 50 | $13 / 8 \times 39 / 16$ | 2.20 |
| 181619 | 0707 | 30, 50 | 450, 200 | $11 / 8 \times 21 / 2$ | 1.68 |

## TYPE NL "ELECTROMITES" <br> 

SUBMINIATURE ELECTROLYTICS
Electromites" meet modern equipment design trends toward compactness, lightweight, and portability. These units offer "big capacitor" performance and reliability in smallest very low DC leakage of approximately 0 Have microamp per microfarad per volt-excellent in coupling applications. Surge voltages exceed $-20^{\circ} \mathrm{C}$ to $+85^{\circ}$ by $\mathbf{C}$. Grounded negative lead,

| StockN0. | Type | Mfd | W.V | Size | NET |
| :---: | :---: | :---: | :---: | :---: | :---: |
| 18 L 640 | 25-3 | 25 | 3 | $1 / 4 \mathrm{x}^{5} / 8^{\prime \prime}$ | . 73 |
| 18 L 641 | 200-3 | 200 | 3 | $3 / 8 \times 1{ }^{\prime \prime}$ | . 88 |
| 18 L 642 | 1-6 | 1 | 6 | $3 / 16 \times 1 /{ }^{\prime \prime}$ | . 73 |
| 18 L 643 | 2-6 | 2 | 6 | $3 / 16 \times 1 / 2^{\prime \prime}$ | . 73 |
| 18 L 644 | 5-6 | 5 | 6 | $3 / 16 \times 5 / 8^{\prime \prime}$ | . 73 |
| 18L645 | 10-6 | 10 | 6 | $1 / 4 \times 5 / 8{ }^{\prime \prime}$ | . 79 |
| $18 L 646$ | 20-6 | 20 | 6 | $1 / 4{ }^{5} / 8^{\prime \prime}$ | . 79 |
| 18 L 647 | 25-6 | 25 | 6 | 1/4×5/8* | . 79 |
| 18 L 648 | 50-6 | 50 | 6 | $3 / 8 \times 5 / 8{ }^{\prime \prime}$ | . 82 |
| 18L649 | 60-6 | 60 | 6 | 3/8x $3^{\prime \prime}{ }^{\prime \prime}$ | . 82 |
| 18L650 | 100-6 | 100 | 6 | $3 / 8 \times 7 / 8{ }^{\prime \prime}$ | 88 |
| 18 L 651 | 10-10 | 10 | 10 | 1/4x5/8 | 79 |
| 18 L 652 | 25-10 | 25 | 10 | $3 / 8 \times 5 /{ }^{\prime \prime}$ | . 79 |
| $18 L 653$ | 50-10 | 50 | 10 | $3 / 8 x^{3 / 4}{ }^{\prime \prime}$ | . 85 |
| $18 L 654$ | 100-10 | 100 | 10 | $3 / 8 \times 1{ }^{\prime \prime}$ | . 94 |
| 18 L 655 | 5-15 | 5 | 15 | $1 / 4 \times 5 / 8$ | . 82 |
| 18 L 656 | 10-15 | 10 | 15 | $1 / 4 \times 5 / 8$ | . 82 |
| 8 L 657 | 20-15 | 20 | 15 | $3 / 8 \times 5 / 8$ | . 85 |
| 18 L 658 | 30-15 | 30 | 15 | $3 / 8 \times 3 / 4{ }^{\prime \prime}$ | . 88 |
| 18 L 660 | 15-25 | 15 | 25 | $3 / 8 \times 5 / 8^{\prime \prime}$ | . 85 |
| 18 L 661 | 20-25 | 20 | 25 | $3 / 8 \times 5 / 8$ " | . 88 |
| 8 L 662 | 5-50 | 5 | 50 | $1 / 4 \times 3 / 4{ }^{\prime \prime}$ | . 85 |
| 8 L 663 | 10-50 | 10 | 50 | $3 / 8 \times 5 / 8{ }^{\prime \prime}$ | . 88 |
| 18 L. 664 | 20-50 | 20 | 50 | $3 / 8 \times 7 / 8{ }^{\prime \prime}$ | 88 |

## Cornell-Dubilier Capacitors

## TYPES UP AND UPE TWIST-PRONG ELECTROLYTICS

Highly efficient, electrolytic capacitors in hermetically sealed, seamless aluminum cans. Ideal for original equipment use as well as for exact replacements in radio, TV, audio and other electronic
equipment. Types with DC working voltage up to 450 volts have a

SINGLE SECTION

| StockNo. | New Type | Old Type | Mfd/WVDC | Size | NET |
| :---: | :---: | :---: | :---: | :---: | :---: |
| 14 L 426 | A0520 | A052 | $10 / 500 \mathrm{~V}$ | $1 \times 2$ " | 94 |
| 14 L 427 | A5030 | A053 | $20 / 500 \mathrm{~V}$ | $1 \times 21 / 2^{\prime \prime}$ | 1.09 |
| 18 L 670 | XA0541* | XA013 | $30 / 500 \mathrm{~V}$ | $1 \times 3$ "' | 1.18 |
| 14 L 11 | A0550 | A055 | $40 / 500 \mathrm{~V}$ | $1 \times 35 / 8{ }^{\prime \prime}$ | 1.47 |
| 14 L 428 | A0560 | A056 | $80 / 500 \mathrm{~V}$ | $13 / 8 \times 35 / 8^{\prime \prime}$ | 1.88 |
| 19 L 384 | A0430 | A043 | 10/450V | $1 \times 2$ " | 91 |
| 19 L 387 | A0460 | A046 | 20/450V | $1 \times 2$ " | 1.06 |
| 14 L 322 | A0470 | A047 | $30 / 450 \mathrm{~V}$ | $1 \times 21 / 2^{\prime \prime}$ | 1.15 |
| 14 L 408 | A0480 | A048 | $40 / 450 \mathrm{~V}$ | $1 \times 3{ }^{\prime \prime}$ | 1.21 |
| 19 L 388 | A0490 | A049 | $50 / 450 \mathrm{~V}$ | $1 \times 35 / 8^{\prime \prime}$ | 1.38 |
| 14 L 323 | A0510 | A051 | $80 / 450 \mathrm{~V}$ | $13 / 8 \times 3$ " | 1.79 |
| 18 L 665 | A0512 |  | $100 / 450 \mathrm{~V}$ | $13 / 8 \times 3{ }^{\prime \prime}$ | 2.03 |
| 18 L 666 | A0514 |  | 125/450V | $13 / 8 \times 41 /{ }^{\prime \prime}$ | 2.21 |
| 18 L 667 | XA0401* | XA011 | $80 / 350 \mathrm{~V}$ | $13 / 8 \times 21 / 2^{\prime \prime}$ | 1.64 |
| 18 L 668 | XA0411* | XA012 | $125 / 350 \mathrm{~V}$ | $13 / 8 \times 3^{\prime \prime}$ | 2.15 |
| 18 L 669 | XA0331* | XA010 | $80 / 300 \mathrm{~V}$ | $1 \times 3^{\prime \prime}$ | 1.50 |
| 19 L 460 | A0340 | A034 | 100/300V | $13 / 8 \times 3^{\prime \prime}$ | 1.71 |
| $18 L 679$ | XA0355* |  | $150 / 300 \mathrm{~V}$ | $13 / 8 \times 3^{\prime \prime}$ | 2.06 |
| 18 L 680 | XA0291* | XA008 | $40 / 250 \mathrm{~V}$ | $1 \times 2$ " | 1.06 |
| 18 L 681 | XA0315* |  | 150/250V | $13 / 8 \times 21 / 2^{\prime \prime}$ | 1.82 |
| 18 L 682 | XA0265.3* |  | 120/200V | $13 / 8 \times 2$ " | 1.65 |
| 141400 | A0200 | A020 | $50 / 150 \mathrm{~V}$ | $1 \times 2$ " | . 97 |
| 18 L 677 | XA0231* | XA002 | $80 / 150 \mathrm{~V}$ | $1 \times 2$ " | 1.09 |
| $18 L 678$ | XA0241* | XA003 | 100/150V | $1 \times 21 / 2^{\prime \prime}$ | 1.18 |
| 19 L 383 | A0250 | A025 | $120 / 150 \mathrm{~V}$ | $13 / 8 \times 2^{\prime \prime}$ | 1.21 |
| 18L674 | XA0261* | XA004 | 150/150V | $1 \mathrm{x} 3^{\prime \prime}$ | 1.26 |
| 18 L 675 | XA0262* |  | $200 / 150 \mathrm{~V}$ | $13 / 8 \times 21 / 2^{\prime \prime}$ | 1.44 |
| 18 L676 | XA0263* | XA005 | $300 / 150 \mathrm{~V}$ | $13 / 8 \times 3^{\prime \prime \prime}$ | 1.65 |
| 19 L | A0140 | A014 | $100 / 50 \mathrm{~V}$ | $1^{3 / 4 \times 2}{ }^{\prime \prime}$ | . 97 |
| 19 L 382 | A0160 | A016 | $500 / 50 \mathrm{~V}$ | $13 / 8 \times 2$ " | 1.56 |
| 14 L 320 | A0170 | A017 | $1000 / 50 \mathrm{~V}$ | $13 / 8 \times 35 / 8^{\prime \prime}$ | 2.20 |
| 18 L 673 | A0174 |  | $1500 / 50 \mathrm{~V}$ | $13 / 8 \times 41 / 8^{\prime \prime}$ | 2.26 |
| 19 L 380 | A0130 | A013 | $1000 / 25 \mathrm{~V}$ | $13 / 8 \times 2$ "' | 2.09 |
| 19 L 377 | A0060 | A006 | $1000 / 15 \mathrm{~V}$ | $1 \times 21 / 2^{\prime \prime}$ | 1.50 |
| 19 L 378 | A0070 | A007 | $2000 / 15 \mathrm{~V}$ | $13 / 8 \times 21 / 2^{\prime \prime}$ | 2.03 |
| 18 L 671 | A0080 | A008 | $3000 / 15 \mathrm{~V}$ | $13 / 8 \times 3^{\prime \prime}$ | 2.06 |
| 18 L 672 | A0040 | A004 | 2000/6V | $13 / 8 \times 2$ " | 1.50 |

temperature range to $+85^{\circ} \mathrm{C}$; 500 -volt types have range to $+65^{\circ} \mathrm{C}$. All are UP'types, except *UPE
types which are designed for selenium rectifier cirtypes which are designed for selenium rectifier cir-
cuits. Solder lugs. Av. shpg. wt., 5 oz . cuits. Solder lugs. Av. shpg. wt., 5 oz.
dUAL SECTION (Cont'd)

| Stock No. | New Type | OId Type | Mfd. | Size | NET |
| :---: | :---: | :---: | :---: | :---: | :---: |
| 19 L 390 | B0110 | B0110 | $30-30 / 150 \mathrm{~V}$ | $1 \times 2$ " | 1.09 |
| 14 L 424 | B0120 | B012 | $40-20 / 150 \mathrm{~V}$ | $1 \times 2$ " | 1.06 |
| 18 L 692 | XB0141* | XB002 | $40-40 / 150 \mathrm{~V}$ | $1 \times 2$ " | 1.12 |
| 14 L 425 | B0150 | B015 | $50-30 / 150 \mathrm{~V}$ | $1 \times 2$ " | 1.18 |
| 18 L 693 | X $\mathrm{B0161*}$ | XB003 | $50-50 / 150 \mathrm{~V}$ | $1 \mathrm{x} 21 / 2^{\prime \prime}$ | 1.26 |
| 18 L 694 | XB0181* | X B004 | $80-40 / 150 \mathrm{~V}$ | $1 \mathrm{x} 21 / 2^{\prime \prime}$ | 1.35 |
| 18 L 697 | XB0188* | XB008 | 200-150/150V | $13 / 8 \times 35 / 8^{\prime \prime}$ | 2.20 |
| 18 L 698 | XB0189* | XB009 | $200-200 / 150 \mathrm{~V}$ | $13 / 8 \times 35 / 8^{\prime \prime}$ | 2.35 |
| 19 L 16 | B0040 | B0040 | $1000-1000 / 15 \mathrm{~V}$ | $13 / 8 \times 21 / 2^{\prime \prime}$ | 2.59 |

TRIPLE SECTION

| 14 L 34 | C0380 | C038 | 10-10-10/500V | $1 \times 3^{\prime \prime}$ | 1.59 |
| :---: | :---: | :---: | :---: | :---: | :---: |
| 19 L 455 | C0390 | C039 | $30-20-20 / 500 \mathrm{~V}$ | $13 / 8 \times 3$ " | 2.47 |
| 19 L 373 | C0410 | C041 | 40-40-10/500V | $13 / 8 \times 35 / 8^{\prime \prime}$ | 2.97 |
| 19 L 339 | C1180 | C118 | 40-40/500V; 100/200V | $13 / 8 \times 41 / 8^{\prime \prime}$ | 3.4 |
| 19 L 454 | C0374 | C156 | 40-30-30/475V | $13 / 8 \times 35 / 8^{\prime \prime}$ | 3.03 |
| 14 L 432 | C 0240 | C 024 | 10-10-10/450V | $1 \times 21 / 2^{\prime \prime}$ | 1.53 |
| 19 L 365 | C 0260 | C026 | 20-10-10/450V | $1 \times 3$ " | 1.73 |
| 14 L 487 | C0270 | C 027 | 20-20-20/450V | $13 / 8 \times 21 / 2^{\prime \prime}$ | 2.1 |
| 14 L 458 | C0990 | C099 | $20-20 / 450 \mathrm{~V} ; 20 / 25 \mathrm{~V}$ | $1 \times 3^{\prime \prime}$ | 1.79 |
| 19 L. 366 | C0280 | C028 | $30-20-20 / 450 \mathrm{~V}$ | $13 / 8 \times 3$ " | 2.26 |
| 19 L 367 | C 0300 | C030 | 30-30-30/450V | $13 / 8 \times 3^{\prime \prime}$ | 2.56 |
| 19 L 370 | C0330 | C 033 | 40-30-20/450V | $13 / 8 \times 3$ " | 2.5 |
| 19 L 428 | C1070 | C107 | $40-40 / 450 \mathrm{~V} ; 20 / 25 \mathrm{~V}$ | $13 / 8 \times 3^{\prime \prime}$ | 2.3 |
| 19 L. 371 | C0340 | C034 | 40-40-10/450V | $13 / 8 \times 3$ " | 2.4 |
| 14 L 329 | C0350 | C035 | 40-40-40/450V | $13 / 8 \times 33 / 8{ }^{\prime \prime}$ | 2.88 |
| 19 L 388 | C1090 | C109 | 40-40/450V; 100/50V | $13 / 8 \times 35 / 8^{\prime \prime}$ | 2.53 |
| 19 L | C 0360 | C036 | 60-20-20/450V | $13 / 8 \times 35 / 8{ }^{\prime \prime}$ | 2.7 |
| 14 L 13 | C0370 | C037 | 80-40-20/450V | $13 / 8 \times 41 / 8{ }^{\prime \prime}$ | 3.18 |
| 19 L 36 | C0800 | C080 | $20-20 / 350 \mathrm{~V} ; 20 / 25 \mathrm{~V}$ | $1 \times 21 / 2^{\prime \prime}$ | 1.65 |
| 19 L 426 | C0840 | C084 | 30-30/350V; 20/25V | $13 / 8 \times 2^{\prime \prime}$ | 2.00 |
| 18 L 701 | XC1209* | XC010 | $100 / 300 \mathrm{~V} ; 60 / 20 / 250 \mathrm{~V}$ | $13 / 8 \times 41 / 8^{\prime \prime}$ | 4.32 |
| 18 L 702 | XC1212* | XC011 | $200 / 300 \mathrm{~V} ; 60 / 20 / 250 \mathrm{~V}$ | $13 / 8 \times 5^{\prime \prime}$ | 3.4 |
| 18 L 703 | XC0071* | XC002 | 40-20-20/150V | $1 \times 2$ " | 1.4 |
| 19 L 361 | C0080 | C008 | 40-30-20/150V | $1 \times 2$ " | 1.47 |
| 18 L 704 | XC0551* | XC008 | 40-40/150V; $20 / 25 \mathrm{~V}$ | $1 \times 2$ " | 1.4 |
| 14 L 434 | C0090 | C009 | 40-40-40/150V | $1 \times 21 / 2^{\prime \prime}$ | 1.53 |
| 18 L 705 | XC0105* | XC003 | 50-50-50/150V | $1 \times 3$ " | 1.7 |
| 19 L | C0110 | C011 | $60-40-20 / 150 \mathrm{~V}$ | $1 \times 21 / 2^{\prime \prime}$ | 1.6 |
| 18 L 706 | C0113 |  | 70-15-15/150V | $1 \times 21 / 2^{\prime \prime}$ | 1.59 |
| 14 L 512 | C0120 | C 012 | 80-40-20/150V | $1 \times 3$ ' | 1.71 |

QUADRUPLE SECTION

| 14.450 | D0090 | D009 | 10-10-10-10/450V | $13 / 8 \times 2$ " |  |
| :---: | :---: | :---: | :---: | :---: | :---: |
| 141445 | D0480 | D048 | 10-10-10/450V; 20/25V | $13 / 8 \times 2$ " |  |
| 19 L 435 | D0810 | D081 | $\begin{aligned} & 10-10 / 450 \mathrm{~V}-60 / 200 \mathrm{~V} \\ & 100 / 50 \mathrm{~V} \end{aligned}$ |  |  |
| 19 L 341 | D0120 | D012 | 20-10-10-10/450V | $13 / 8 \times 21 / 2^{\prime \prime}$ | 2.1 |
| 14 L 451 | D0130 | D013 | 20-20-20-20/450V | $13 / 8 \times 3^{\prime \prime}$ | 2. |
| 19 L 432 | D0520 | D052 | $20-20-20 / 450 \mathrm{~V} ; 20 / 25 \mathrm{~V}$ | $13 / 8 \times 21 /{ }^{\prime \prime}$ | 2 |
| 9 OL 442 | D0170 | D017 | 40-20-10-10/450V |  | 2.6 |
| 19 L 43 | D0640 | D064 | 40-30-10/450V; $20 / 25 \mathrm{~V}$ | $13 / 8 \times 3$ " | 2 |
| 19 L 438 | D0174 | D121 | 40-40-20-20/450V | x41/8 ${ }^{\prime \prime}$ | 3.2 |
| 19 L 439 | D0176 | D122 | 40-40-30-30/450V | $13 / 8 \times 41 / 8^{\prime \prime}$ | 3.5 |
| 19 L 436 | D0920 | D092 | $40-40 / 450 \mathrm{~V} ; 30-30 / 350 \mathrm{~V}$ |  | 3.4 |
| 19 L 429 | D0020 | D002 | 40-40-20-10/300V | $13 / 8 \times 21 / 2^{\prime \prime}$ | 2.6 |
| 9 L437 | D0866 | D109 | 100-10/300V , 200-30/150V | $13 / 8 \times 5^{\prime \prime}$ |  |
| 19 L 431 | D0230 | D023 | $40-40-20 / 150 \mathrm{~V} ; 200 / 10 \mathrm{~V}$ | $13 / 8 \times 2$ " | 1.9 |
| 19 L 43 | D0300 | D030 | $60-40-20 / 150 \mathrm{~V} ; 200 / 10 \mathrm{~V}$ | $13 / 8 \times 2^{\prime \prime}{ }^{\prime \prime}$ | 2. |
| 19 L 344 | D0330 | D033 | $80-40-40 / 150 \mathrm{~V} ; 100 / 25 \mathrm{~V}$ | $13 / 8 \times 21 / 2^{\prime \prime}$ |  |

TYPE KR 600-VOLT SCREW-NECK ELECTROLYTICS
Compact, single-section electrolytic capacitors with screw-neck for one hole mounting. Etched-foil plates and aluminum can construction. Color-coded wire leads, $8^{\prime \prime}$ long. Av. shpg. wt., 6 oz .

| Stock No. | Type | Mfd | WVDC | Size | NET |
| :---: | :---: | :---: | :---: | :---: | :---: |
| $14 L$ W | 61 | 608 C | 8 | 600 | $13 / 8 \times 43 / 8^{\prime \prime}$ |
| 14 L | 62 | 616 C | 16 | 600 | $13 / 8 \times 43 / 8^{\prime \prime}$ |

## GENERAL-PURPOSE DISC CERAMIC CAPACITORS

Exceptionally small, lightweight, disc-type ceramic capacitors. An excellent choice for a wide variety of equipment and particularly suited for limited-space applications. Provide highly dependable performance in transmitters, receivers, gineered, and constructed to rigid standards to assure low inductance, minimized eddy current losses, and high stability. All types listed below are rated to operate over a temperature range from $-55^{\circ} \mathrm{C}$ to $85^{\circ} \mathrm{C}$ and are rated at 1000 WVDC , except $* 600 \mathrm{WVDC}$ All have a guaranteed minimum capacity tolerance, except $\dagger \pm 20 \%, \ddagger \pm 0.5 \mathrm{mmf}$. Av. shpg. wt., 3 oz .

| No. | Type | M mif | Size | EA. |
| :---: | :---: | :---: | :---: | :---: |
| 195577 | BYA10T5 | 500 | $9 / 32 \times 5 / 32^{\prime \prime}$ |  |
| 19 L 578 | BYA10T82 | 820 | 9/32 ${ }^{5} / 32^{\prime \prime}$ |  |
| $18 L 707$ | BYA-6D1* | 1000 | $9932 \times 5 / 32^{\prime \prime}$ | 2 c |
| 19 L 579 | BYA10D1M $\dagger$ | 1000 | $3 / 8 \times 5 / 32^{\prime \prime}$ |  |
| 19 L 50 | BYA10D15 | 1500 | $3 / 8 \times 5 / 32^{\prime \prime}$ |  |
| 19 L 51 | BYA10D2 | 2000 | $3 / 8 \times 5 / 32^{\prime \prime}$ |  |
| 19 L | BYA10D3 | 3000 | 19/32 ${ }^{5 / 32}{ }^{\prime \prime}$ |  |
| $19 L 583$ | BYA10D4 | 4000 | $19 / 32 \times 5 / 32 \prime \prime \prime$ | 2c |
| 18.1708 | BYA -10D $47 \mathrm{M} \dagger$ | 4700 | $19 / 32 \times 5 / 31{ }^{\prime \prime}$ |  |
| 19 L 584 | BYA10D5 | 5000 | $5 / 8 \times 5 / 32^{\prime \prime}$ |  |
| 18 L 709 | BYA-10D68 | 6800 |  | 124 |
| 18 L 710 | BYA-6S1* | 10000 | 5/8×5/32 ${ }^{\prime \prime}$ | 124 |
| $19 L 585$ | BYA10S1 | 10000 | 3/4x ${ }^{5 / 32}{ }^{\prime \prime}$ | 124 |
| 19 L 586 | BYB6S2* | 20000 | 7/8x7/32 ${ }^{\prime \prime}$ | 184 |




| No. | Type | M mf | Size | EACH |
| :---: | :---: | :---: | :---: | :---: |
| 19 L 59 | L10047 | 47 | $\frac{9}{932 \times 5 \times 32^{\prime \prime}}$ |  |
| 19 L 560 | L1005 | 50 | $9382{ }^{5} / 32^{\prime \prime}$ |  |
| 19 L 561 | L10056 | 56 | $932 \times 533^{\prime \prime}$ | 12 c |
| 19 L 562 | ${ }^{\text {L10T1 }}$ | 100 120 | $932 \mathrm{x}^{5 / 32^{\prime \prime}}$ |  |
| 19 L 564 | L10T15 | 150 | $9 / 32 \mathrm{x} 5 / 32^{\prime \prime}$ |  |
| 19 L 565 | L10T18 | 180 | $9832 \times 5$ |  |
| 19 L 566 | L10T2 | 200 |  | 120 |
| 18 l 7191 | L10T22 | 220 | 9/32x ${ }^{5 / 33^{\prime \prime}}$ |  |
| 19 L 568 | L10T27 | 270 | $9 / 23 \times 5 / 32^{\prime \prime}$ |  |
| 19 L 59 | L10T33 | 330 | $9{ }^{9} 32 \times 5{ }^{5} / 32^{\prime \prime}$ |  |
| 19 L 570 | L10T39 | 390 | ${ }^{93} 532 \mathrm{x} 5 / 32^{\prime \prime}$ | 12c |
| 19L571 | L10T47 | 470 | $3 / 8 x^{5 / 32^{\prime \prime}}$ |  |
| 19 L 572 | L10T5 | 500 | $3 / 8{ }^{5 / 32^{\prime \prime}}$ |  |
| 19 L 573 | L10T68 | 680 | $3 / 8 \times 5 \times 32^{\prime \prime}$ |  |
| 19 L 54 | L10T82 | 820 | 19, ${ }^{1} \times 2 \times x^{5 / 32^{\prime \prime}}$ |  |
| $\begin{array}{r}192575 \\ 19 \mathrm{~L} \\ \hline\end{array}$ | ${ }_{\text {L10D15 }}$ | 1000 1500 |  | 12 c |

## QC PLUG-IN ELECTROLYTICS

Quality electrolytics featuring 4-pin, octal bases to permindard octal tube socket. Ideal where quick capacitor changes are required For experimental work, juke boxes, government communications receivers, etc.
Capacitors are hermetically Capacitors are hermetically sealed in aluminum containers. Ground lugs supplied with all multiple-section units. Tem peratur $+65^{\circ} \mathrm{C}$ Av shpg wt., 6 oz . 500 v unit to $+65^{\circ} \mathrm{C}$. Av. shpg. wt.,

SINGLES

| Stock No. | Mfrs. <br> Type | Mfd | $\begin{gathered} \text { D.C. } \\ \text { W.V. } \end{gathered}$ | Size | NET |
| :---: | :---: | :---: | :---: | :---: | :---: |
| 19 L 328 | QC 4050 | 40 | 500 | $13 / 8 \times 21 / 2^{\prime \prime}$ | 2.94 |
| 19 L 324 | QC 1045 | 10 | 450 | $15 / 32 \times 21 / 2^{\prime \prime}$ | 2.38 |
| 19 L 326 | QC 4045 | 40 | 450 | $13 / 8 \times 21 / 2^{\prime \prime}$ | 2.68 |
| 19 L 327 | QC 8045 | 80 | 450 | $13 / 8 \times 31 / 2^{\prime \prime}$ | 3.26 |
| DUALS |  |  |  |  |  |
| 19 L 333 | QC 2250 | 20-20 | 500 | $13 / 8 \times 21 / 2$ | 3.12 |
| 19 L .329 | QC 1145 | 10-10 | 450 | $15 / 32 \times 21 / 2^{\prime \prime}$ | 2.59 |
| 19 L 330 | QC 2245 | 20-20 | 450 | $1388 \times 21 / 2^{\prime \prime}$ | 2.97 |
| 19 L 321 | QC 4445 | 40-40 | 450 | $13 / 8 \times 31 / 2^{\prime \prime}$ | 3.50 |
| TRIPLES |  |  |  |  |  |
| 19 L 334 19 L 335 | $\mathrm{QC11145}^{\text {QC22245 }}$ | 10-10-10 | 0 450 <br> 150  | 15/33x21/21/ | 3.00 3.59 |

## Cornell-Dubilier Capacitors

## "CUB" PLASTIC TUBULAR CAPACITORS

For general replacement service; extremely durable and very compact. Have high insulation resistance, low power factor and excep-
tional capacitance stability. Molded in extra hard, non-inflammable tional capacitance stability. Molded in extra hard, non-inflammable
bakelite; resistant to moisture, high temperature and shock: Excelbakelite; resistant to moisture, high temperature and shock. Excellent dielectric strength. Dry assembled and sealed after impregna-
tion to insure long life. Extra strong copper-weld leads eliminate breakage during installation, Leads are solder sealed securely to the capacitor. 200 and 400 -volt units are impregnated with special HT compound; 600 -volt units and higher are oil impregnated. Temperature range: 200 and 400 -volt units, -40 to $+90^{\circ} \mathrm{C}$.; 600 volt units and up, -55 to $+100^{\circ}$ C. *ST types in ceramic case. Av. shpg. wt., 4 oz.



## PM MOLDED MYLAR TUBULARS

A wide selection of highquality, molded tubular capacitors designed to withstand severe operating conditions and high temperature applications. Feature mylar polyrange is $-55^{\circ} \mathrm{C}$ to $+85^{\circ} \mathrm{C}$-derate $90 \%$ or voltage at $100^{\circ} \mathrm{C}$ and derate $50 \%$ at $130^{\circ} \mathrm{C}$.

200 VOLTS DC WORKING
$\qquad$

Non-inductive construction insures low resistance connections and low RF impedance. Rugged thermoset assembly firmly secures leads and sections making it possible to withstand exremes of handling, shock, vibration and solder-JAN-C-91 or MIL-C-25A requirements shpg. wt., 3 oz.

600 VOLTS DC WORKING

| Stock No. | Type | Mfd | Size | NE |
| :---: | :---: | :---: | :---: | :---: |
| 14 L 158 | PM6T5 | . 0005 | 5/16x1" | $15 \%$ |
| 14 L 159 | PM6D1 | . 0010 | 5/16x111 |  |
| 14 L 167 | PM6D22 | . 0022 | 5/16x11 |  |
| 14 L 169 | PM6D47 | . 0047 | 3/8811/4" | 156 |
| 14 L 178 | PM 6S1 | . 010 | $3 / 8 \times 11 / 4^{\prime \prime}$ | 186 |
| 14 L 179 | PM6S15 | . 015 | 3/8x |  |
| 14 L 180 | PM6S22 | . 0222 | 7/16 |  |
| 14 L 183 | PM6S68 | . 068 |  |  |
| 14 L 184 | PM6P1 | . 10 |  | 264 |
| 14 L 197 | PM6P22 | . 22 | 3/4×2 | 384 |
| 14 L 198 | PM6P33 | . 33 | $1 \times 21 / 8^{\prime \prime}$ | 534 |
| 14 L 199 | PM6P47 | . 47 | $1 \times 21 / 8^{\prime \prime}$ | 684 |

PM Capacitor Kit. In handy plastic case with 10 each $.001, .005, .02, .047, .10 ; 12$ each .01 , .05 ; and 6 . 000 . All are rated at 600 WVDC.
Shpg. wt.,
15.52

## INDUSTRIAL CAPACITORS

## TYPE TAN "SUB-MINIATURE" TANTALUM FOIL ELECTROLYTIC CAPACITORS

Remarkably small subminiature size Tantalum electrolytic capacisuited for applications n transistor circuits and other uses demanding compact physical size. $9 / 16^{\prime \prime}$ long; $3 / 16^{\prime \prime}$ diameter. From $-55^{\circ} \mathrm{C}$. to $+85^{\circ} \mathrm{C}$. Standard capacitance tolerance is $\pm 20 \%$ (except $*$ maximum capacitance for that voltage). Power factor and frequency characteristics are excellent even at their lowest rated operating temperature. Leakage current; Max., 07 microamps per mid per volt at room tem$11 / 2^{\prime \prime}$ long. Av. shpg. wt., 2 oz .

| Stock No. | Mfr's <br> Type | Mfd | $\begin{gathered} \text { Volts } \\ \text { DC } \end{gathered}$ | NET |
| :---: | :---: | :---: | :---: | :---: |
| $19 L 300$ | TAN 76 | 1.0 | 3 |  |
| 191301 | TAN 68 | 2.0 | 3 |  |
| 19 L 302 | *TAN 77 | 8.0 | 3 | 1.62 |
| $19 L 303$ | TAN 65 | 4.0 | 4 |  |
| 19 L 304 | TAN 60A | 1.0 | 6 |  |
| $19 L 305$ | *TAN 78 | 4.0 | 6 |  |
| 191306 | TAN 69 | 0.5 | 10 |  |
| 19 L 307 | TAN 56A | 1.0 | 10 | 1.62 |
| 19 L 308 | TAN 58A | 2.0 | 10 |  |
| 19 L 309 | *TAN 79 | 3.0 | 10 |  |
| 19 L 10 | *TAN 59A | 2.0 | 15 |  |
| $19 L 311$ | TAN 70 | 0.25 | 20 | 1.62 |
| 19 L 12 | *TAN 80 | 1.75 | 25 | 1.02 |
| 191313 | *TAN 81 | 1.5 | 30 |  |
| 19L314 | TAN 71 | 0.1 | 40 |  |
| 19 L 315 | *TAN 82 | 1.0 | 40 |  |
| $19 L 316$ | $\text { *TAN } 83$ | 0.8 | 50 | 1.62 |
| 19 L 17 | *TAN 84 | 0.2 | 150 |  |
|  |  |  |  |  |
| FB HIGH-CAPACITY |  |  |  |  |
| LOW-VOLTAGE TYPES |  |  |  |  |

Highly dependable capacitors hermetically sealed in aluminum cans with wax-impregnated insulating sleeves. Ruggedly built for long life and dependable service. Temperature range up to 85 degrees Centigrade. Tinned solder lug connections. Av. shpg. wt., 6 oz .

| Stock No. | Mfr's <br> Type | Mfd | $\begin{gathered} \text { Volts } \\ \text { DC } \end{gathered}$ | Size | $\begin{aligned} & \text { NET } \\ & \text { EACH } \end{aligned}$ |
| :---: | :---: | :---: | :---: | :---: | :---: |
| 19 L 320 | $\overline{\text { FB } 5005}$ | 500 | 50 |  | 2.2 |
| 19 L | FB 5010 | 1000 | 50 | $13 / 8 \times 41 / 8^{\prime \prime}$ |  |
| 19 L 32 | FB 5020 | 2000 | 50 | $13 / 4 \times 41 / 8{ }^{\prime \prime}$ |  |
| 19 L 323 | FB 5040 | 4000 | 50 | $21 / 2 \times 41 / 8{ }^{\prime \prime}$ |  |
| 191355 | FB 2510 | 1000 | 25 | $13 / 8 \times 31 / 8{ }^{\prime \prime}$ | 2.8 |
| L 356 | FB 2520 | 2000 | 25 | $3 / 8 \times 41 /{ }^{\prime \prime}$ |  |
| L 318 | FB 2540 | 4000 | 25 |  |  |
|  | F B 2550 | 5000 | 25 |  |  |
| L | FB 1520 | 2000 | 15 | 13/8 | 2.7 |
| 19 L 354 | FB 1560 | 6000 | 15 | 2x41/8" |  |

TYPE MP "PUP" METAL END-CAP CARDBOARD TUBULARS
Self-healing, metallized cardboard tubulars. Self-healing, metalized cardboard tubulars. Lightweight, compact, and made to last. WaxBare wire leads firmly anchored in metal endcaps. Temperature range: $-40^{\circ}$ to $+60^{\circ} \mathrm{C}$. Extended foil construction; non-inductively wound. High insulation resistance, low power factor and low capacity change. Tolerance. $\pm 20 \%$. Av. shpg. wt., 2 oz

200 VOLTS DC WORKING

| Stock No. | $\begin{aligned} & \text { Mfr's } \\ & \text { Type } \end{aligned}$ | Mfd | Size | $\begin{aligned} & 1-24 ; \\ & E A C H \end{aligned}$ |
| :---: | :---: | :---: | :---: | :---: |
| 14 L 928 | $2 \mathrm{S5}$ | . 05 | $3 / 8 \times 5 / 8^{\prime \prime}$ | . 43 |
| 14 L 929 | 2P1 | . 10 | $3 / 8 \times 5 / 8^{\prime \prime}$ | 46 |
| 14 L 930 | 2 P 25 | . 25 | 15/16x5/8" | . 67 |
| $14 L 931$ | 2P5 | . 5 | 15/32 ${ }^{\text {x }}$ 11/8" | . 78 |
| 14 L 932 | 2W1 | 1.0 | $9 / 16 \times 11 / 8^{\prime \prime}$ | 1.05 |
| 14 L 924 | 2W2 | 2.0 | $5 / 8 \times 15 / 8^{\prime \prime}$ | 1.42 |
| 600 VOLTS DC WORKING |  |  |  |  |
| Stock No. | $\begin{aligned} & \text { Mfr's } \\ & \text { Type } \end{aligned}$ | Mfd | Size | $\begin{aligned} & 1-24 \\ & E A C H \end{aligned}$ |
| 14 L 942 | 6S1 | . 01 | $3 / 8 \times 5 / 81$ | . 44 |
| 14 L 946 | 6P1 | . 1 | $15 / 32 \times 11 / 8^{\prime \prime}$ | . 57 |
| 14 L 947 | 6P25 | . 25 | 5/8×11/8" | . 90 |
| 14 L 948 | 6P5 | . 5 | $23 / 32 \times 15 / 8^{\prime \prime}$ | 1.12 |
| 14 L 949 | 6W1 | 1.0 | 23/32 $\times 21 / 8{ }^{\prime \prime}$ | 1.40 |

[^5]
# Cornell-Dubilier Industrial Capacitors 



## MOLDED MICA CAPACITORS

Molded units with India ruby mica dielectric; special wax-treated stack, brown bakelite case. Designed for wide range of applications. Individually tested for accuracy. Tinned brass wire leads. Values are $\pm 20 \%$. Rated at 500 WVDC, 1000 v . DC test, except $* 300$ WVDC,
600 v. DC test. Shpg. wt., 2 oz.

TYPE 5W
Size, $51 / 64 x^{15} / 32 x 7 / 32^{\prime \prime}$. With $11 / 4^{\prime \prime}$ tinned leads.

| No. | Type | Mfd | EACH |
| :---: | :---: | :---: | :---: |
| 14 L 111 | 5W5V5 | . 000005 |  |
| 14.112 | 5W501 | . 000001 |  |
| 14 L 100 |  | . 0000025 |  |
| 14 L 101 | $5 \mathrm{~W} 5 \mathrm{Q} 3$ | . 00003 |  |
| 14 L 102 | 5W5Q4 | . 00004 |  |
| 14.103 | 5W5Q5 | . 00005 |  |
| 4 L L 114 | 5W5Q7 | . 000007 | 12c |
| 4 4 L 104 | 5W5T1 | . 000015 | 12 |
| 14 L 106 | 5W5T2 | . 0002 |  |
| 14 L 107 | 5W5T25 | . 00025 |  |
| $4{ }^{4} \mathrm{~L} 110$ | 5W5T3 | . 00003 |  |
| 14 L 108 | 5W5T4 | . 0004 | 15c |

## TYPE IW

Size, $13 / 16^{\prime \prime}$ square $\times 1 / 4^{\prime \prime}$. With $11 / 4^{\prime \prime}$ tinned leads.

| 14 L <br> 14 <br> 14 L <br> 14 <br> 14 | $\begin{aligned} & 1 \text { 1W5T6 } \\ & 1 W 5 T 7 \\ & 1 W 5 T 8 \\ & 1 W 5 T 82 \end{aligned}$ | $\begin{aligned} & .0006 \\ & .0007 \\ & .0008 \\ & .00082 \end{aligned}$ | 15c |
| :---: | :---: | :---: | :---: |
| 14 L 133 | 1W5T9 | . 0009 | 54 |
| 14 L 121 | 1W5D1 | . 001 | 84 |
| 14 L 122 | 1W5D15 | . 00015 | 84 |
| 141124 | 1W5D25 |  |  |
| 14 L 125 | 1W5D3. | . 0023 | 264 |
| 14 L 126 | 1W5D4 | . 004 | 324 |
| 14 L 127 | 1W5D5 | . 005 | $35 ¢$ |

## TYPE 1D

Size, $13 / 16^{\prime \prime}$ square $\times 5 / 16^{\circ}$. With $11 / 4^{\prime \prime}$ tinned leads.

| 14 L 128 | 1D5D6 | . 006 | 44 ¢ |
| :---: | :---: | :---: | :---: |
| 14 L 129 | 1D3D8* | . 008 | $59 ¢$ |
| 14 L 139 | 1D3D82* | . 0082 | 594 |
| 14 L 130 | 1D3S1* | . 01 | 714 |

## "SUPER MICADON" ENCAPSULATED MOLDED <br> MIDGET MICAS

Latest design "Super Micadon," midget mica capacitors. Hermetically sealed construction. Highly stable over temperature range from $55^{\circ}$ to $+130^{\circ}$. Ideal for printed circuits. Tolerance: $\pm 5 \%$. All are rated 500 WVDC.

## TYPES IA AND IAD

 wt., 2 oz.

| No. | Type | Mfd | NET |
| :---: | :---: | :---: | :---: |
| 14 L 998 | 1A5D39 | . 0039 | 1.27 |
| 14 L 979 | 1A5D51 | . 0051 | 1.32 |
| 14.4980 | 1A5D68 | . 0068 | 7 |
| 14 L | 1A5S1 |  |  |
| 14 L 983 | 1A5S15 | . 015 |  |
| 14 L 984 | 1AD5S2 | . 02 | 2.09 |

## TYPE 5A

Size, $15 / 32 \times 51 / 64 \times 7 / 33^{\prime \prime}$. Tolerance $\pm 5 \%$ or 1 mmf whichever is greater. Shpg. wt., 2 oz.

| No. | Type | Mfd | NET |
| :---: | :---: | :---: | :---: |
| 14L995 | 5A5D15 | . 0015 | . 79 |
| 14 L 996 | 5A5D2 | . 002 | . 79 |
| 14 L 997 | 5A5D3 | . 003 | 1.21 |
| INDUSTRIAL BUYERS ATTENTION! |  |  |  |
|  |  |  |  |
| In addition to maintaining the most complete stock of electronic components in the world, Allied can supply industrial quantities of any electronic item you may need. |  |  |  |
|  |  |  |  |
|  |  |  |  |
|  |  |  |  |
| Write for information on Allied's quantity price quotations and delivery schedules. |  |  |  |
| Address your inquiries to: |  |  |  |
| Industrial Division, <br> ALLIED RADIO CORPORATION <br> 100 N. Western Avenue Chicago 80, lllinois |  |  |  |

## DYKANOL TRANSMITTING CAPACITORS

## TYPE TJU-TJL HERMETICALLY SEALED

For power supply filter applications. Hermetically sealed steel containers; dielectric impervious to heat. *Type TJU, all others are Type TJL. Type TJU with universal mounting strap; TJL with mounting foot brackets. Av. wt., 5 lbs. Write Allied's Industrial Division for prices on quantities of $\mathbf{1 0}$ or more.

| LTS DC WORKIN |  |  |  |  | 2000 VOLTS DC WORKIN |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| No. | Type | Mfd | Size | NET | No. | Type | Mfd | Size | NET |
| 73 L 604 | 6005 | . 5 | $21 / 8 \times 113$ | 2.5 | 73 L 6 | 20001 | . 1 | $21 / 8 \times 113 / 1{ }^{\text {c }} 11 / 16^{\prime \prime}$ | 3. |
| 73 L 600 | 6010 |  | $21 / 8 \times 113 / 16 \times 1$ | 2.68 | 73 L 6 | 20005 | . 5 | /88 |  |
| 73 L 60 | 6020 | 2 | $27 / 8 \times 13 / 16 \times 11$ | 3.20 | 73 L 61 | 20010 | 1 | 33/ | 4 |
| 73 |  | 4 |  | 4.32 |  |  |  |  | 5.73 |
| 73 L 664 | 6050 | 5 | 43/4x13/16x | 4.6 | 73 L | 20040 |  | $313 / 16 \times 33 / 4 \times 21 /$ | 8.00 |
| 73 L 687 | 6060 |  | 45/82 | 5 | 73 | 20050 |  |  |  |
| 73 L 603 | 6080 | 8 |  |  |  | 20080* | 8 | $43 / 4 \times 33 / 4 \times 33 /$ | 12.09 |
|  |  |  |  |  | 2500 VOLTS DC WORKING |  |  |  |  |
| 1000 VOLTS DC WORKING |  |  |  |  | 73 L $691 \mid 25005$73 L 62073 L $6501025040^{*}$ |  | $\begin{aligned} & .5 \\ & 1 \\ & 4 \end{aligned}$ | $\begin{aligned} & 31 / 2 \times 33 / 4 \times 11 / 4^{\prime \prime} \\ & 31 / 4 \times 33 / 413 / 4 \\ & \hline \end{aligned}$ | $\begin{array}{r} 5.47 \\ 6.59 \\ 13.03 \end{array}$ |
| $\begin{aligned} & 73 \text { L } 609 \\ & 73 \\ & 73 L 613 \\ & 73 \\ & 73 L 605 \\ & 73 \\ & \hline \end{aligned}$ | $\begin{aligned} & 10001 \\ & 100025 \\ & 10005 \\ & 10010 \\ & 10020 \end{aligned}$ | .1 <br> .25 <br> .5 <br> 1 <br> 2 <br>  | $\begin{aligned} & 2 \times 113 / 16 \times 11 / 16^{\prime \prime} \\ & 21 / 8 \times 113 / 16 \times 11 / 6^{\prime \prime} \\ & 218 \times 113 / 6 \times 111 / 16^{\prime \prime} \\ & 218 \times 11 / 16 \times 11 / 16^{\prime \prime} \\ & 4 \times 113 / 16 \times 11 / 16^{\prime \prime} 6^{\prime \prime} \end{aligned}$ | 2.25 |  |  |  |  |  |
|  |  |  |  | $\begin{aligned} & 2.60 \\ & 2.67 \\ & 2.88 \\ & 3.61 \end{aligned}$ |  |  |  |  |  |
|  |  |  |  |  | 3000 VOLTS DC WORKING |  |  |  |  |
|  |  |  |  |  |  |  |  |  |  |  |  |  |
| 73 L 607 <br> 73 L <br> 7388 <br> 73 L 651 <br> 7365 | 10040 |  |  |  |  |  |  |  | $\begin{aligned} & 6.96 \\ & 7.40 \\ & 8.08 \end{aligned}$ |
|  | 10080 | 1 | $37 / 8 \times 3$ |  |  |  |  |  |  |  |  |
|  | 10100 |  | \% $8 \times 334 \times 13$ | 7. |  |  |  |  | $\begin{array}{r} 9.62 \\ 12.75 \\ 17.83 \end{array}$ |
|  | 150 | 15 | 3/4×33/4×21/2" | 0.8 | $\begin{aligned} & 73 \text { L } 625 \\ & 73 \text { L } 626 \\ & 73 \text { 656 } \end{aligned}$ | $\begin{aligned} & \hline 30010 \\ & 30020^{*} \\ & 30040^{*} \end{aligned}$ | $\begin{aligned} & 1 \\ & 2 \\ & 4 \\ & \hline \end{aligned}$ | $\left.\begin{array}{\|l\|} 313 / 16 \times 33 / 4 \times 21 / 4^{\prime \prime} \\ 41 / 8 \times 33 \times 33 / 1 "^{\prime \prime} \\ 43 / 4 \times 33 / 4 \times 49 / 16^{\prime \prime} \end{array} \right\rvert\,$ |  |
| 1500 DC VOLTS WORKING |  |  |  |  |  |  |  |  |  |
|  |  |  |  |  | 4000 VOLTS DC WORKING |  |  |  |  |
|  |  |  |  |  |  |  |  |  |  |
|  |  |  |  |  | 73L6 | 40010 |  | $5 \times 33 / 4 \times 21 / 4^{\prime \prime}$ | 11.37 |
|  |  |  |  |  | 73 L 659 | 0040A | 4 | $8 \times 33 / 4 \times 49 / 16^{\prime \prime}$ | 24.67 |

## TYPE DYR PAPER CAPACITORS

Non-inductively wound bypass conductors-specially designed to operate efficiently in RF and AF bypass, AF coupling and AC circuits even JAN-C-5. Ideal for aircraft, submarine, marine and tropical applications. Metal shell. Tol., $\pm 10 \% .600$ WVDC, except ${ }^{*} 1000$ WVDC. Av. shpg. wt., 6 oz . Write our Industrial Division for prices on quantities of 10-24, 25-49 and 50-99.

| No. | Type | Mfd | Size | NET |
| :---: | :---: | :---: | :---: | :---: |
| 14 L 620 | 6005 | . 05 | $113 / 16 \times 1 \times 3 / 4^{\prime \prime}$ | 1.69 |
| 14 L 621 | 6010 | . 1 | $113 / 16 \times 1 \times 3 / 4^{\prime \prime}$ | 1.73 |
| 14 L 622 | 6025 | . 25 | $113 / 16 \times 1 \times 3 / 4^{\prime \prime}$ | 1.81 |
| 14 L 623 | 6050 | . 5 | $1^{13} 16 \times 1 \times 7 / 8^{\prime \prime}$ | 1.93 |
| 14 L 624 | 6100 | 1.0 | $2 \times 13 / 4 \times 7 / 8^{\prime \prime}$ | 2.20 |
| 141625 | 6200 | 2.0 | $2 \times 2 \times 118^{\prime \prime}$ | 2.94 |
| 14 L 626 | 60055 | .05-. 05 | $1_{113 / 16 \times 1 \times 3 / 4 "}$ | 2.15 |
| 14 L 627 | 6011 | $.1-1$ | $113 / 16 \times 1 \times 3 / 4^{\prime \prime}$ | 2.18 |
| 142628 | 6022 X | .25-. 25 | $113 / 16 \times 1 \times 7 / 8^{\prime \prime}$ | 2.20 |
| 14 L 629 | 6055 | .5-. 5 | $2 \times 13 / 4 \times 7 / 8^{18}$ | 2.53 |


| No. | Type | Mfd | Size | NET |
| :---: | :---: | :---: | :---: | :---: |
| 14 L 630 | 6110 | 1.0-1.0 | $2 \times 2 \times 11 /{ }^{\prime \prime}$ | 3.12 |
| 14 L 631 | 6111 | . 1 - 1 -1- 1 |  |  |
| 14 L 633 | 10005 | . 05 -.5-. |  |  |
| 14 L 614 | 10010* | . 1 | $1{ }^{13 / 16 \times 1 \times 3 / 4^{\prime \prime}}$ | 1.85 |
| 14 L 615 | 10025* | . 25 | $113 / 16 \times 1 \times 3 / 4^{\prime \prime}$ | 1.89 |
| 14 L 616 | 10050* | . 5 | $2 \times 13 / 4 \times 1$ |  |
| 14 - | 10011* |  | $1{ }^{13 / 16 \times 1 \times 3 / 4}$ |  |
| 14 L | 10022* | .25-. 25 | $2 \times 13 / 4 \times 13 / 16^{\prime \prime}$ | 2. |

## TLA \& TNAD TRANSMITTING CAPACITORS

Designed to provide high safety factor and exceptionally long life. Inverted mtg. in $3 / 4^{\prime \prime}$ hole. *Have two $10-32$ screw terminals and two solder ugg terminals insulated from case; others have one screw terminal and one solder-type ground lug. Meet MIL-C25A test. $27 / 8 \times 11 / 2^{\prime \prime}$ diameter ex-
cept $\dagger 41 / 2 \times 11 / 2^{\prime \prime}$ diameter. With hardware. Av. shpg. wt., 2 lbs.


| No. | Type | Mfd | Volts | NET | No. | Type | Mfd | Volts | NET |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 73 L 630 | TLA6020 | 2 | 600 | 2.70 | 73 L 633 | TNAD6040 ${ }^{*+}$ | 4 | 600 | 4.17 |
| 73 L 632 | TLA6040 t | 4 | 600 | 3.70 | 73 L 636 | TNAD10020* $\dagger$ | 2 | 1000 | 3.70 |

Silvered mica midget capacitors molded in low-loss red bakelite.


Excellent for use in
high-Q electronic circuits where it is essential that frequency stability and high efficiency be working, 1000 volts DC test. Has tinned leads. Av. shpg. wt., 2 oz .

TYPE 5R
Size, $51 / 64 \mathrm{x}^{15} / 32 \mathrm{x} 7 / 32^{\prime \prime}$. With $11 / 4^{\prime \prime}$ tinned leads.

| No. | Type | Mfd | NET |
| :---: | :---: | :---: | :---: |
| 14 L 386 | 5R5T33 | .00033 | .32 |
| 14 L 387 | 5R5T39 | .00039 | .38 |
| 14 L 388 | 5R5T47 | .00047 | .41 |
| 14 L 389 | 5R5T51 | .00051 | .41 |
| 14 L 394 | 5R5T3 | .0003 | .32 |
| 14 L 395 | 5R5T4 | .0004 | .38 |
| 14 L 396 | 5R5T5 | .0005 | .41 |

TYPES IR AND IDR
Size: Type $1 \mathrm{R}, 13 / 1{ }^{\prime \prime}$, square $\times 1 / 4^{\prime \prime}$; Type 1DR, $13 / 16^{\prime \prime}$ square $\times 5 / 16^{\prime \prime}$. $* 300$ volts working.

| 14 L 341 | 1R.5T75 | . 00075 | . 56 |
| :---: | :---: | :---: | :---: |
| 141342 | 1R5T82 | . 00082 | . 56 |
| 14L343 | 1 R 5 D 1 | . 001 | . 65 |
| 14 L 380 | 1R5D15 | . 0015 | . 79 |
| 14 L 381 | 1 R 5 D 2 | . 002 | . 79 |
| 14.382 | 1 R 5 D 25 | . 0025 | 1.06 |
| 14 14.383 | 1R5D3 | .0023 .004 | 1.21 |
| 14 L 385 | 10R5D5 | . 005 |  |
| 14 L 344 | 1DR3D68* | . 0068 | 1.47 |
| 14 L 345 | 1DR3D75* | . 0075 | 1.47 |
| 14 L | 1DR3D82* | . 0082 | 1.47 |
| 14 L 347 | 1DR3S1* | . 01 | 1.47 |



## TYPE 22R

Highly stable micas. For use in circuits where accuracy and stability of capacity are of prime importance. Tolerance, $\pm 5 \%$. All rated 500 $3 / 16^{\prime \prime} .11 / 2^{\prime \prime}$ tinned leads. Av. shpg. wt., $2^{1 / 2 \times 19} 64 \mathrm{x}$


| No. | Type | Mfd | EACH |
| :---: | :---: | :---: | :---: |
| 14.850 | 22R5Q1 | . 00001 |  |
| 14.851 | 22R5Q15 | . 000015 |  |
| 14.852 | $\begin{aligned} & 22 \mathrm{R} 5 \mathrm{Q} 2 \\ & 22 \mathrm{R} 5 \mathrm{O} 22 \end{aligned}$ | . 000002 | $24 c$ |
| 144854 | $\begin{aligned} & \text { 22R5Q22 } \\ & \text { 22R5Q24 } \end{aligned}$ | .000022 |  |
| 141855 | 22R5Q27 | . 000027 |  |
| 14 L 856 | 22R503 | . 00003 |  |
| 14 L 857 | 22R5033 | . 000033 |  |
| 144859 | 22 R 5 Q 39 | . 0000039 | 24 C |
| 14 L 861 | 22R5Q47 | . 000047 |  |
| 14 L 862 | 22R505 | . 00005 |  |
| 141863 | 22R5051 | . 0000051 |  |
| $14 L 864$ 14865 | 22R5056 | . 0000056 | 24c |
| 14 L 866 | 22R5068 | . 000068 |  |
| 141867 | 22R5075 | . 000075 |  |
| 14 L 868 | 22R5082 | . 000082 | 24 c |
| 14 L 870 | 22R5T1 | . 0001 |  |
| 141872 | 22R5T12 | . 00012 |  |
| 14 L 873 | 22R5T13 | . 00013 |  |
| 14 L 874 | 22R5T15 | . 000015 |  |
| 14 H | ${ }_{22 \mathrm{R} 5 \mathrm{~T} 16}$ | . 000016 | 26c |
| 14 L 875 | $22 \mathrm{R5T} 2$ | . 0002 |  |
| 14 L 876 | 22 R 5 T 22 | . 000022 |  |
| 14 L 891 | 22R5T24 | . 00024 | 26c |
| 14 L 877 | 22R5T25 | . 00025 |  |

## Sprague Industrial Capacitors

## INDUSTRIAL BUYERS-BUY AT OEM PRICES FROM STOCK

Allied offers an excellent selection of Sprague industrial capacitors. All types listed here are in stock for immediate delivery in any of the quantities specified-and at the same prices you would pay if you ordered direct from the factory.

In addition to Sprague Capacitors, Allied has the world's largest stocks of other industrial electronic parts and equipment, also available at factory prices. Save time, money and effortwrite to our Industrial Division for quantity price quotations.

## SERIES 96P \& 196P "VITAMIN Q"

 SUBMINIATURE PAPER CAPACITORS

Subminiature capacitors impregnated with Vitamin $Q$ " for higher insulation resistance. Have insulating sleeve. Hermetically sealed ${ }_{96 P-S 2}$ units are inserted-tab type construction; 196P-S2 are extended-foil type; use where losses at resonance are a factor. Tol., $\pm 10 \%$. Av. shpg. wt., 4 oz.

| SERIES 96P-S2 |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: |
| No. | Type | Mfd | WVDC | Size | NET |
| 15 L 911 | 10391 | . 01 | 100 | $\frac{3}{3 / 16 x^{3 / 4}}$ | 1.94 |
| 15 L 926 | 10491 | . 1 | 100 | 5/16x ${ }^{1 / 8^{\prime \prime}}$ | 2.13 |
| 15 L 925 | 47491 | . 47 | 100 | 9/16x11/8" | 2.48 |
| 15 L 044 | 10591 | 1.0 | 100 | 9/16x1/8" | 2.80 |
| 15 L 912 | 10392 | . 01 | 200 | 15/64 ${ }^{3 / 4}{ }^{1 \prime}$ | 2.04 |
| 15 L 913 | 22392 | . 022 | 200 | 15/64 ${ }^{3 / 4}{ }^{\text {a }}$ | 2.04 |
| 15 L 914 | 47392 | . 047 | 200 | 5/16x ${ }^{1 / 8}$ | 2.15 |
| 15L915 | 22492 | . 22 | 200 | $13 / 32 \times 138^{\prime \prime}$ | 2.36 |
| 5 L 924 | 10492 | . 1 | 200 | 13/32x ${ }^{1 / 8}{ }^{\prime \prime}$ |  |
| 15 L 923 | 47492 | . 47 | 200 | $9 / 16 \times 138^{\prime \prime}$ | 2.68 |
| 151916 | 10592 | 1.0 | 200 | 43/64x17/8 ${ }^{4 \prime}$ | 3.09 |
| 15 L 045 | 47393 | . 047 | 300 | $5 / 16 \times 1 / 8^{3}{ }^{\circ}$ |  |
| 5 L 046 | 10493 | . 1 | 300 | ${ }^{13} 33 \times 1{ }^{1} / 8^{\prime \prime}$ | 2.24 |
| 5 L 047 | 47493 | . 47 | 300 | 9/16x1/8 ${ }^{\circ}$ |  |
| 15 L 048 | 10593 | 1.0 | 300 | $3 / 4 \times 21 / 8^{8}$ | 3.33 |
| 5L917 | 10394 | . 01 | 400 | 15/64 $x^{3 / 4}{ }^{4}$ | 2.11 |
| 5 L 918 | 22394 | . 022 | 400 | 5/16x ${ }^{\text {/ }} 8^{\prime \prime}$, | 2.18 |
| 5 L 919 | 47394 | . 047 | 400 | l $13 / 32 x^{1 / 3}{ }^{\prime \prime}{ }^{\text {a }}$ | 2.26 |
| 5 L 922 | 10494 | . 1 | 400 | $13 / 32 \times 13 /{ }^{\text {" }}$ | 2.39 |
| 15 L 920 | 22494 | . 22 | 400 | $9{ }^{1 / 16 \times 13 / 8^{\prime \prime}}$ | 2.68 |
| 15L921 | 47494 | . 47 | 400 | $11 / 16 \times 1 / 8^{\prime \prime}$ | 3.09 |
| 154049 | 10594 | 1.0 | 400 | $1 \times 1 /{ }^{1 / 8}{ }^{\prime \prime}{ }^{\prime \prime}$ | 3.71 |
| 15L927 | 22296 | . 0022 | 600 | $15 / 64 \mathrm{x}^{3 / 4}{ }^{\prime \prime}$ | 2.07 |
| 15 L 902 | 47296 | . 0047 | 600 | $15 / 64 \times 3{ }^{3 / 4}{ }^{\prime \prime}$ | 2.11 |
| 15 L 903 | 68296 | . 0068 | 600 | $15 / 64 \times 3 / 4^{\prime \prime}$ | 2.11 |
| 15 L 904 | 10396 | . 01 | 600 | 5/16x ${ }^{1 / 8} 8^{\prime \prime}$ | 2.17 |
| 51905 | 22396 | . 022 | 600 | 5/16x/8" | 2.22 |
| 15 L 906 | 47396 | . 047 | 600 | $13 / 32 \times 11 / 8^{\prime \prime}$ | 2.32 |
| 15 L 907 | 68396 | . 068 | 600 | $13 / 32 \times 13 / 8^{\prime \prime}$ | 2.42 |
| 15 L 908 | 10496 | . 1 | 600 | 9/16x11/8" | 2.57 |
| 15 L 910 | 47496 | . 47 | 600 | $3 / 4 \times 21 / 8^{\prime \prime}$ | 3.35 |


| F... SERIES 196P-S2 |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: |
| No. | Type | Mfd | WVDC | Size | NET |
| 15 L 444 | 10291 | . 001 | 100 | $\underline{11 / 64 \times 7 / 8^{\prime \prime}}$ | 1.98 |
| 15 L 445 | 33291 | . 0033 | 100 | $11 / 64 \times$ | 2.00 |
| 15 L 446 | 47291 | . 0047 | 100 | $11 / 64^{3} 3 / 4^{\prime \prime}$ | 2.00 |
| 15 L 447 | 47391 | . 047 | 100 | 5/16x7/8 ${ }^{\text {a }}$ |  |
| 15 L 448 | 10492 | . 1 | 200 | $13 / 32 \times 1 / 8^{\prime \prime}$ | 2.30 |
| 15 L 449 | 47293 | . 0047 | 300 | 15/64x ${ }^{3 / 4}$ |  |
| 15 L 454 | 47393 | . 047 | 300 | $13 / 32 \times 1 / 8^{\prime \prime}$ | 2.32 |
| 15 L 455 | 33294 | . 0033 | 400 | $15 / 54 \mathrm{X}^{3} 4^{\prime \prime}$ | 2.15 |
| 15 L 456 | 47394 | . 047 | 400 | 13/32 ${ }^{1 / 1 / 8^{\prime \prime}}$ | 2.38 |
| 15L45 | 10494 | . 1 | 400 | 9/16x15/819 | 2.58 |
| 15 L 458 | 10296 | . 001 | 600 | ${ }^{15} 564 x^{3 / 4}{ }^{\prime \prime}$ | 2.15 |
| 15 L 459 | 22296 | . 022 | 600 | ${ }^{15} / 64 x^{3 / 4}{ }^{\prime \prime}$ | 2.15 |
| 15 L 546 | 10396 | . 01 | 600 | 5/16x7/8" ${ }^{\text {c }}$ | 2.28 |
| 15 L 547 | 47396 | . 047 | 600 |  | 2.49 |

## CP-53 CAPACITORS

Non-inductive oil-filled bathtub capacitors; hermetically sealed. JAN C-25. Suffix K has tol. of For use up to $85^{\circ} \mathrm{C} .600$ WVDC except $* 1000$ WVDC. 5 oz .

| No. | JAN No. | Mfd | Size | NET |
| :---: | :---: | :---: | :---: | :---: |
| 15 L 727 | B1EF503K | . 05 | 113/16x13 ${ }^{3 / 4}$ | 1.77 |
| 15 L 736 | B1EF104K | . 1 | 113/16x | 1.83 |
| 151737 | B1EF254K | . 25 | $113 / 16 \times 1$ | 1.89 |
| 15 | ${ }^{\text {B1EF504K }}$ | 0 | ${ }^{113 / 16 \times 1 \times}$ |  |
| 15 L 739 | 05K | 1.0 | $2 \times 13 / 4 \times 1{ }^{1 /}$ |  |
| 15 L 740 | B1E | 2.0 | $2 \times 2 \times 11 /$ | 3.19 |
| 15 L 741 | B4EF104V | .1-17 | $113 / 16 \times 1 x^{3 / 4}{ }^{\prime \prime}$ |  |
| 151742 | B4EF254V | $\stackrel{.25-25}{5-5}$ |  |  |
| 15 L 744 | B5EF104V | .1-.1-1 | $2 \times 13 / 4 x^{1 / 8}{ }^{\prime \prime}$ | 2.85 |
| 15 L 745 | B1EG254K* | . 25 | $113 / 16 \times 1 \times 7$ | 2.00 |
| 15 L 735 | B1EG104K* | . 1 | $113 / 16 \times 1 \times 3 / 4{ }^{\prime \prime}$ |  |
| 15 L 746 | B4EG254V* | .25-25 | 2x13/47/8" | 2.80 |
| 15 L 747 | BIEG504K* | . 5 | 2x13/4 ${ }^{17 / /^{\prime \prime}}$ |  |
| 15 L 748 | B1EG105K* | 1.0 | 2x2x11/8" | 2.87 |

For OEM prices on 96P-S2 and 196P-S2 capacitors in quantities of 25-49 and 50-up; and for CP-53 capacitors in quantities of $10-24,25-49$ and $50-\mathrm{up}$, write or phone our Industrial Division.

## TYPE CP70 PAPER CAPACITORS <br> Type B <br>  <br>  <br> Type E

Oil-filled paper capacitors, hermetically sealed in metal cans with crimped and soldered seams. For heavy-duty use; withstand high tempera-
ture and surge voltages. JAN C-25. 12 oz . ture and surge voltages. JAN C-25. 12 oz

TYPE B

| No. | JAN No. ${ }^{\text {Mfd }}$ | WV | Size | NET |
| :---: | :---: | :---: | :---: | :---: |
| 15 L 262 | B1EF205K 2.0 |  | 113/16x11/6x31/4 | 3.92 |
| 15 L 263 | B1EF405K 4.0 |  |  |  |
|  | B1EF605K 6.0 |  | x |  |
| 5 L 265 | BIEF 106 K 10.0 |  | $33 \times 1{ }^{3 / 4} \times 4^{\prime \prime}$ | 8.69 |
| 5 L 266 | B1EG105K 1.0 |  | 113/16x11/16 2 $^{2 / 81}$, | 3.64 |
|  | B1EG205K 2.0 |  |  |  |
| 5 L 26 | 1EG405K 4.0 |  | $\times 3$ | 6.3 |



For OEM prices on CP70 capacitors (in lots of 10 and up), write to Allied's Industrial Division.

TYPE 118 -S2 METALLIZED SUBMINIATURES

Improved, highly reliable metallized-paper capacitors. Hermetically sealed. Will operate at rated voltage up to $125^{\circ} \mathrm{C}$. High insulation resistance and self-healing dielectric. Have insulating sleeve. Meet MIL-C-25A specifications. Developed especially for military and industrial equipment-give long service under rugged
conditions. Shpg. wt., 5 oz .

| No. | Type | Mfd | Size | NET |
| :---: | :---: | :---: | :---: | :---: |
| 15 L 256 | 10402 | . 1 | 5/16x ${ }^{13 / 16^{\prime \prime}}$ | 1.61 |
| 15 L 257 | 15402 | . 15 | 5/16 ${ }^{11} 116^{\prime \prime}$ | 1.65 |
| 15 L 258 | 22402 | . 22 |  |  |
| 15 L 275 | 33402 | . 33 | $13 / 32 \times 11 / 16^{\prime \prime}$ | 1.80 |
| 15 L 276 | 47402 | . 47 | 1/2x11/16" | 1.90 |
| 15 L 277 | 68402 | 1.68 | $1 / 2 \times 11^{1 / 16^{\prime \prime}}$ | 1.98 |
| 15 L 279 | 20502 | 2.0 |  | 3.85 |
| 15 L 282 | 30502 | 3.0 | $43 / 64 \times 113 / 16^{\prime \prime}$ | 4.21 |
| 15 L 283 | 40502 | 4.0 | $3 / 4 \times 113 / 16^{\prime \prime}$ | 5.04 |
| 15 L 2884 | 50502 60502 | 5.0 6.0 |  | 5.54 5.96 |

400 VOLTS DC WORKING

| 15 L 293 | 10404 | . 1 | 1/2 | 1. |
| :---: | :---: | :---: | :---: | :---: |
| 15 L 294 | 22404 | . 23 | 916x15/16" | 1.88 |
| 15 L 295 | 33404 10504 | 1.33 | $\frac{9}{16 \times 19} 11^{\prime \prime}{ }^{\prime \prime}$ | 2.08 |
| 15 L 224 | 20504 | 2.0 | $1 \times 1^{13} / 16^{\prime \prime}$ | 4.8 |

600 VOLTS DC WORKING

| 5 L 228 | 10306 | . 01 | 5/16x ${ }^{13 / 16^{\prime \prime}}$ | 1.59 |
| :---: | :---: | :---: | :---: | :---: |
| 5 L 235 | 10406 | . 1 | 1/2x11/16" |  |
| 5 L 237 | 47406 | . 47 | ${ }^{433} 64 \times 19196^{\prime \prime}$ | 2.64 |
| $5 L 238$ <br> 5 | 68406 10506 | 1.68 |  | 2.90 3.38 |

For OEM prices on 118P-S2 capacitors (in lots of 25 and up), write to Allied's Industrial Division.

## MINIATURE AND SUBMINIATURE TANTALEX CAPACITORS

## TYPE 102D MINIATURE FOIL

Miniature tantalum-foil electrolytic capacitors. Designed for reliable operation over the wide temperature range of $-55^{\circ} \mathrm{C}$. to $+85^{\circ}$ C. Useful for applications requiring up to 150 working volts DC in military or industrial equipment, including control equipment, computers, airborne radar and communi-
cation equipment. Can be used in low tempercation equipment. Can be used in low temperature conditions where aluminum-foil capac-
itors are inoperative. Have extremely low leakitors are inoperative. Have extremely low leak-
age current. Valuable for use where small age current. Valuable for use where sman istics, and long service elife are important. Silver-plated metal case. Polarized; shell should be insulated from chassis unless chassis is negative potential. Av. shpg. wt., 2 oz .

| $\begin{gathered} \text { Stock } \\ \text { No. } \end{gathered}$ | $\begin{aligned} & \text { Mfr's } \\ & \text { Type } \end{aligned}$ | Mf | $\left\lvert\, \begin{aligned} & D C \\ & W V \end{aligned}\right.$ | Size | $\begin{aligned} & \text { NET } \\ & \text { EACH } \end{aligned}$ |
| :---: | :---: | :---: | :---: | :---: | :---: |
| 15 L 332 | 102 D 107 | 35 |  | 9/32x ${ }^{1 / 8^{\prime \prime}}$ | 7.64 |
| 15 L 333 | 102 D 108 | 100 | 6 | $3 / 8 \times 1716^{\prime \prime}$ | 12.47 |
| 15 L 334 | 102 D 112 | 25 | 10 | $93 x^{1} 1 / 8^{\prime \prime}$ | 7.64 |
| 15 L 335 | 102 D 116 | 4.5 | 15 | 3/16x |  |
| 15 L 33 | 102D121 | 3 | 25 | 3/16 ${ }^{11 /}$ | 4.99 |
| 15L337 | 102D122 | 12 | 25 | 9/32x | 7.64 |
| 15 L 338 | 102D123 | 35 | 25 | $3 / 8 \times 17 / 16^{\prime \prime}$ | 12.47 |
| 15 L 339 | 102 D 124 | 70 | 25 | $3 / 8 \times 21 / 8^{\prime \prime}$ | 17.00 |
| 15 L 343 | 102D126 | 2.5 | 30 | 3/16x ${ }^{1 / 1 / 16^{\prime \prime}}$ | 4.99 |
| 15 L 344 | 102D127 | 10 | 30 | $9 / 32 x^{1 / 8^{\prime \prime}}$ | 7.64 |
| 15 L 345 | 102D131 | 1.5 | 50 | $3 / 16 \times 11 / 16^{17}$ | 4.99 |
| 15 L 346 | 102 D 132 | 6 | 50 | $993 \times 1 / 8^{\prime \prime}$ | 7.64 |
| 15 L 347 | $102 \mathrm{D133}$ | 20 | 50 | $3 / 8 \times 21$ | 12.47 |
| 15 L | 102 l 134 | 40 5 | 50 | $3 / 8 \times 21 /{ }^{\prime \prime}{ }^{\prime \prime}$ $9 / 3 \times 7 / 8^{\prime \prime}$ | 17.00 |
| 15 L 393 | 102D141 | 1 | 75 | 3/16 $\times 11 / 1{ }^{1}$ | 4.49 |
| 15 L 394 | 102D151 | . 5 | 150 | 3/16 $\times 1$ | 4.49 |
| 15 L 395 | 102 D 152 | 2 | 150 | $983 \times 1 / 8$ | 7.64 |
| 15 L 396 | 102D153 | 7 | 150 | $3 / 8 \times 17 / 16^{\prime \prime}$ | 12.47 |
| 15L397 | 102D154 | 14 | 150 | $3 / 8 \times 21 / 8^{\prime \prime}$ | 17.00 |

TYPE 150D SUBMINIATURE
Tiny, extremely stable tantalum capacitors. Ideal for transistorized circuitry in the most critical mintary and commercial applications. Provide highly reliable operation throughout temperature range of $-80^{\circ}$ to $+85^{\circ} \mathrm{C}$. Herrequirents. Meet MiLC-3965

| Stock No. | Type | Mfd | $\mathrm{DC}_{\mathrm{WV}}$ | Size | $\begin{aligned} & \text { NET } \\ & \text { EACH } \end{aligned}$ |
| :---: | :---: | :---: | :---: | :---: | :---: |
| 74 L 670 | 150D158 | 6.8 | 6 | 1/8x ${ }^{1 / 2}$ | 3.64 |
| 74 L 671 | 150D164 | 60.0 | ${ }^{6}$ | 11/547 |  |
| 74 L 672 | 150D172 | 4.7 | 10 |  | 3.6 |
| 74 L 673 | 150D177 | 33.0 | 10 |  |  |
| 74 L 674 | 150 D 178 | 40.0 | 10 | 11/64 |  |
| 74-675 | 150D185 | 3.3 | 15 | 1/8x ${ }^{1 / 4} 4^{1 /}$ | 3.64 |
| 74 L 676 | 150D190 | 22.0 | 15 | 11/64 |  |
| 74 L 677 | 150D195 | 1.5 | 20 |  |  |
| 74 L 678 | 150D196 | 2.2 | 20 | ${ }^{11 / 8} x^{1 / 4}{ }^{\prime \prime}$ |  |
| 74 L 679 | 150D199 | 6.8 | 20 | $11 / 64 \times 7 / 16^{\prime \prime}$ | 3.8 |
| 74 L 680 | 150D200 | 10.0 | 20 | 11/64x7/16" ${ }^{\prime \prime}$ | 3.81 |
| 74 L 681 | 1500259 | 15.0 | 20 | 11/64 |  |
| 74 L 682 | 1500242 | . 0047 | 35 | 1/81/4" |  |
| $\begin{aligned} & 74 \mathrm{~L} 683 \\ & 74 \mathrm{~L} \end{aligned}$ | $\begin{aligned} & \text { 150D244 } \\ & \text { 150D246 } \end{aligned}$ | . 0068 |  |  |  |
| 74 L 685 | 150D2 | . 015 |  | 1/3x $x^{1 / 2}$ |  |
| 74 L 686 | 150D250 | . 022 | 35 | $1 / 8 x^{1 / 4}{ }^{\text {b }}$ |  |
| 74 L 687 | 150D252 | . 033 | 35 | $1 / 8 x^{1 / 4}{ }^{\prime \prime}$ |  |
| 74 L 688 | 150D254 | . 047 | 35 | $1 / 8 x^{1 / 4}{ }^{\prime \prime}$ |  |
| 74 L 689 | 150D256 | . 068 | 35 | $1 / 8 x^{1 / 4} 4^{\prime \prime}$ | 3.29 |
| 74 L 690 | 150D2 | . 1 | 35 | 1/8x ${ }^{1 / 2}$ |  |
| 74 L 691 | 150D264 | . 22 | 35 | 1/8x1/4 ${ }^{\text {c }}$ | . 6 |
| 74 L 692 | 150D265 | . 33 | 35 | 1/8x x/4 $^{\prime \prime}$ | .6 |
| 74 L 693 | 150D266 | . 47 | 35 | $11 / 8 x^{1 / 4}{ }^{\prime \prime}$ |  |
| 74 L 694 | 150D267 | . 68 | 35 | $118 x^{1 / 4} 4^{\prime \prime}$ | 3.64 |
| 74 L 69 | 150D268 | 1.0 | 35 | 1/8x ${ }^{1 / 4}$ | 3.64 |
| 74 L 696 | 150D269 | 1.5 | 35 | $11 / 4$ | 3.81 |
| 74 L 697 | 150D270 | 2.2 | 35 |  | 3.8 |
| 74 L 698 | 150D271 | 3.3 | 35 | $11 / 64$ |  |
| 74 L 699 | 150D272 | 4.7 | 35 | $11 / 6 \times 7 / 16{ }^{\prime \prime}$ | 3.81 |

[^6]
## Sprague Capacitors

## 

## TYPE 68P PAPER MIDGETS

Midget－size capacitors，manufactured to ex－ tremely high standards．Ideal for replacement use or new design．May be used in portable and Provide dependable service，even under ad－ verse operating conditions．Provide reliable operation at ambient temperatures as high as 85 degrees Centigrade．Have high resistance to effects of humidity．Sizes give
and length．Av．shpg．wt．， 2 oz．

| No． | Type | Mid | W．V． | Slze | EA． |
| :---: | :---: | :---: | :---: | :---: | :---: |
| 15 L 820 | 68P26 | ． 001 | 600 | 1／4 $\mathrm{x}^{11 / 166^{\prime \prime}}$ | 214 |
| 154821 | 68P27 | ． 002 | 600 |  | 214 |
| $15 L 822$ | 68P28 | ． 003 | 600 | $9 / 3 x^{11} 116^{\prime \prime}$ | 214 |
| 151823 | 68P29 | ． 004 | 600 | $9 / 32 x^{1} 3 / 16^{\prime \prime}$ | 214 |
| 15 L 224 | 68P30 | ． 005 | 600 | $9 / 32 x^{13 / 16 "}$ | 244 |
| 154825 | 68P31 | ． 006 | 600 | 研 | 244 |
| 5 L 826 | 68P32 | ． 008 | 600 |  | 44 |
| 15 L 827 | 68P33 | ． 01 | 600 | 5／16x1＂ | 64 |
| 15 L 828 | 68P34 | ． 02 | 600 | $11 / 32 \times 1{ }^{\prime \prime}$ | 4 |
| 5 5 L 829 | 68P35 | ． 05 | 600 | 15／32x1 | 324 |
| 5 L 830 | 68P36 | ． 1 | 600 |  |  |
| $5 L 832$ | 68P40 | ． 2 | 600 | 5／8×111／16＂ | 474 |
| 5 L831 | 68P37 | ． 25 | 600 | $5 / 8 \times$ | 474 |
| 5 L 800 | $68 \mathrm{P1}$ | ． 001 | 400 | 1／4 ${ }^{1}$ | 214 |
| 5 | 68 P 3 | ． 003 | 400 | $1 / 4 \times$ | 214 |
| $5 L 803$ | 68P4 | ． 004 | 400 | 1／4 $\mathrm{x}^{11 / 16}{ }^{\prime \prime}$ | 214 |
| 15 L 804 | 68P5 | ． 005 | 400 | $1 / 4 x^{13} 16{ }^{\prime \prime}$ | 214 |
| 5 L 805 | 68P6 | ． 006 | 400 | 1／4 ${ }^{1}$ | 2 |
| 5 L 806 | 68P8 | ． 01 | 400 |  | 244 |
| 54807 | 68P9 | ． 02 | 400 | 5／1 | 264 |
| 15 L 808 | 68 P 10 | ． 05 | 400 | 13 | 296 |
| $15 L 843$ | 68P21 | ． 1 | 400 | 15／32 $511 /{ }^{\prime \prime}$ | 384 |
| 5 L 844 | 68P38 | ． 2 | 400 |  |  |
| 5 L 845 | 68P22 | ． 25 | 400 | $5 / 8 \times 13 / 8{ }^{\prime \prime}$ | 449 |
| $15 L 846$ | 68 P 23 | ． 5 | 400 | 5／8×25／16＂ | 504 |
| 154809 | 68P11 | ． 005 | 200 |  | 214 |
| 154810 | 68P12 | ． 006 | 200 | 1／4 $\mathrm{x}^{11116{ }^{\prime \prime}}$ | 214 |
| 15 L 11 | 68P14 | ． 01 | 200 | $9 / 32 \mathrm{x}^{11116^{\prime \prime}}$ | 244 |
| 15 L 812 | 68P15 | ． 02 | 200 |  | 264 |
| 5 L 813 | 68P16 | ． 05 | 200 |  | 294 |
| 15 L 814 | 68 P 17 | ． 1 | 200 |  | 354 |
| 154836 | 68P18 | ． 2 | 200 | $15 / 32 \times 11 /{ }^{\prime \prime}$ | 384 |
| 15 L 837 | 68P24 | ． 25 | 200 | $17 / 3{ }^{\prime \prime}$ | 414 |
| $15 L 838$ | 68P25 | ． 5 | 200 | x1 | 474 |
| 15 L 815 | 68P19 | ． 25 | 100 | $15 / 32 \times 118^{\prime \prime}$ | 414 |
| 15 L 816 | 68P20 | ． 5 | 100 | 5／8×11／8＂ | 474 |

DOORKNOB CAPACITORS
High－voltage， $500-\mathrm{mmf}$ plastic capacitors for replacement use in all types of TV sets．Moisture resistant，thermosetting molded plastic．Molded guard rings in crease surface leakage path．Ca－ pacitor body has threaded ends and can take a wide variety of T5＇s are supplied with 14 terminals 2 of each type illustrated）．Type 30DK－T5 is supplied with 2 ter minals，＊see illustration．
Typo 20DK－T5．Rated at 20 KV ．Size， $1^{\prime \prime}$ diameter，${ }^{31 / 32^{\prime \prime}}$ long．Shpg．wt．， 3 oz．．． 2.17
Type 30DK－T5．Rated at 30 KV ．Size， $15 / 6^{\circ}$ diameter， 15 L 597 ．NET EACH．．．．．．．．．．．．．．．．．．．． 1.76


## CAPACITOR INDICATOR



TypeC－751．Reads color codes directly in capac－



解男 U

## PLS＂TINY MIKE＂

525 Volis Surge－450 Volis Wkg．
（A）An assortment of electrolytic capacitors A with sections having separate positive leads foil construction．Av．shpg．wt．， 6 oz．


SC INVERTED SCREW CAN

## 600 Volts Surge－475 Volts Wkg．

（B）Threaded bushing mount．Negative can．

| No． | Type | Mfd | Size | NET |
| :---: | :---: | :---: | :---: | :---: |
| 15 L 320 | SC－4 | 4 | $1 \times 37 / 1{ }^{\prime \prime}$ | 1.50 |
| 151321 | SC－8 | 8 | $13 / 8 \times 47 / 16^{\prime \prime}$ | ． 62 |
| 15 <br>  | SC－12 | 16 | 11／2x47／16＂ | 85 |
| 15 L 325 | SC－88 | 8－8 | $13 / 8 \times 41 / 4^{\prime \prime}$ | 2.41 |

## CL INVERTED SCREW CAN

## 600 Voits Surge－ 475 Volis Wkg

（A）Like＂SC＂but can insulated from filter （A）section．Pos．and neg．leads．Wt．， 8 oz ．

| $\begin{aligned} & \hline 5 L 720 \\ & 15 \mathrm{~L} 721 \\ & 5 \mathrm{~L} 722 \end{aligned}$ | $\begin{aligned} & \mathrm{CL}-8 \\ & \mathrm{CL}-16 \\ & \mathrm{CL}-88 \end{aligned}$ | 8 16 $8-8$ | $\begin{aligned} & 13 / 8 \times 47 / 16^{\prime \prime \prime} \\ & 11 / 2 \times 476^{\prime \prime} \\ & 11 / 2 \times 415 / 6^{\prime \prime} \end{aligned}$ | 1.62 1.85 2.41 |
| :---: | :---: | :---: | :---: | :---: |
| $\begin{aligned} & 15 L 721 \\ & \hline \end{aligned}$ | $\begin{gathered} \text { CL-10 } \\ \hline \end{gathered}$ | 8－8 | $\begin{aligned} & 11 / 2 \times 47 / 1{ }^{\circ \prime \prime} \\ & 11 / 2 \times 45 / 6^{\prime \prime} \end{aligned}$ | 2.41 |

## WR REPLACEMENTS FOR WET ELECTROLYTICS

600 Volts Surge－ 500 Volis Wkg．
B High－voltage dry electrolytics．Designed B］to replace wet types．Will withstand high peak voltages．Lug terminals；can is negative． mountings．Av．shpg．wt．， 8 oz mountings．Av．shpg．wt．， 8 oz.

| No． | Type | Mifd | Slze | NET |
| :---: | :---: | :---: | :---: | :---: |
| 15 L 040 | WR－8 | 8 | 13／8x ${ }^{15 / 16^{\prime \prime}}$ | 1.68 |
| 15 L 041 | WR－16 | 16 | $13 / 8 \times 47 / 16^{\prime \prime}$ $11 / 2 \times 57 / 16^{\prime \prime}$ | 1.94 2.20 |

## Sprague Capacitors



| A Single－section atoms |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: |
| Sock | ${ }_{\text {Typo }}^{\text {Mat }}$ | Mra | wv | size | NET． |
|  |  | $\begin{aligned} & 88 \\ & 10 \\ & 160 \\ & 20 \\ & 8 \end{aligned}$ | $\begin{gathered} 600 \\ 6.000 \\ 6.000 \\ 500 \\ 500 \end{gathered}$ |  |  |
|  |  | $\begin{aligned} & 16 \\ & 20 \\ & 20 \\ & 20 \\ & 20 \end{aligned}$ | $\begin{aligned} & 500 \\ & 500 \\ & 5005 \\ & 4750 \\ & 450 \end{aligned}$ |  | .88 <br> 84 <br> 94 <br> .65 <br> 65 |
|  |  | $\begin{aligned} & 4 \\ & \hline 8 \\ & 10 \\ & 10 \\ & 16 \end{aligned}$ | $\begin{aligned} & \begin{array}{l} 40 \\ 405 \\ 40 \\ 450 \\ 450 \end{array} \\ & 450 \end{aligned}$ |  | .68 <br> .73 <br> .76 <br> .82 <br> 88 |
| $\begin{array}{\|l\|l\|} \hline 5 \mathrm{~L} \\ \hline \end{array}$ |  | 20 30 30 50 60 |  |  | 91 00 06 08 38 38 |
|  |  | $\begin{aligned} & 80 \\ & \hline 80 \\ & 40 \\ & 20 \\ & 40 \\ & 40 \end{aligned}$ |  |  | 65 <br> .62 <br> 75 <br> 83 <br> 03 |
|  |  | $\begin{gathered} -40 \\ \hline 40 \\ \hline 140 \\ 40 \\ 80 \\ \hline 8 \end{gathered}$ | 350 <br> 350 <br> and <br> 250 <br> 250 <br> 250 |  | 15 <br> 85 <br> .89 <br> 71 <br> 8 |
|  |  | $\begin{aligned} & 12 \\ & \begin{array}{l} 16 \\ 30 \\ 30 \\ \hline 40 \end{array} \\ & \hline \end{aligned}$ | $\begin{aligned} & \begin{array}{l} 250 \\ 250 \\ 250 \\ 2505 \\ 2505 \end{array} \\ & \hline 250 \end{aligned}$ |  | .73 <br> 786 <br> 85 <br> .91 <br> 7 |
|  |  | $\begin{array}{r} 200 \\ 8 \\ 18 \\ 10 \end{array}$ | $\begin{aligned} & 200 \\ & \hline 200 \\ & 150 \\ & 150 \\ & \hline 150 \\ & \hline 150 \end{aligned}$ |  | －7920 |
|  |  | $\begin{aligned} & 16 \\ & 50 \\ & 50 \\ & 30 \\ & 30 \end{aligned}$ | $\begin{aligned} & 150 \\ & \hline 150 \\ & 150 \\ & 150 \\ & \hline 150 \end{aligned}$ |  |  |
|  |  | $\begin{array}{\|c} 40 \\ 50 \\ 50 \\ 80 \\ 100 \end{array}$ | $\begin{aligned} & 150 \\ & \begin{array}{l} 150 \\ 150 \\ 150 \end{array} \\ & \hline 150 \end{aligned}$ |  |  |
|  |  | $\left.\begin{array}{\|c} 150 \\ 300 \\ 300 \\ 300 \end{array} \right\rvert\,$ | $\begin{array}{\|l\|l\|} \hline 150 \\ 150 \\ 150 \\ 50 \\ 50 \end{array}$ |  | （12 |
|  |  | $\begin{gathered} 15 \\ 105 \\ 50 \\ 100 \\ \hline 10 \end{gathered}$ | $\begin{gathered} 50 \\ 50 \\ 50 \\ 50 \\ 50 \\ \hline 50 \\ \hline \end{gathered}$ |  | － 59 |
|  |  | $\left.\begin{array}{\|c} 150 \\ \hline 50 \\ 250 \\ 20 \\ 5 \end{array} \right\rvert\,$ | $\begin{aligned} & 50 \\ & 50 \\ & 50 \\ & 25 \\ & 25 \end{aligned}$ |  | ｜1：03 |

（A）SINGLE－SECTION ATOMS（eonl．）

| $\begin{gathered} \text { Stock } \\ \text { No. } \end{gathered}$ | $\begin{aligned} & \text { Mfr's } \\ & \text { Type } \end{aligned}$ | Mid | WV | Slzo | $\begin{array}{\|l} \hline N E T \\ \text { EA. } \\ \hline \end{array}$ |
| :---: | :---: | :---: | :---: | :---: | :---: |
| 15L205 | TVA－1204 | 10 | 25 |  | 9 |
| 15 L 206 | TVA－1205 | 25 | 25 | 3／8x1 |  |
| 15 L | TVA－1206 | 50 | 25 |  |  |
| L | TVA－1208 | 1250 | 25 25 | 3／4x | 1.00 |
| 15L869 | TVA－1209 | 500 | 25 | 7／8x | 1.3 |
| 16 L 236 | TVA－1160 | 100 | 15 | $5 / 8 \times 1$ |  |
| 16 L 237 | TVA－1161 | 250 | 15 | 5／81 |  |
| 6 L 238 | TVA－1162 | 500 | 15 | 11／16x | 1.0 |
| 16 L 239 | TVA－1163 | 1000 | 15 | 1／8x23／1 | 1. |
| 16 L 234 | TVA－1130 | 100 | 12 | 9／16x | ． 71 |
|  | TVA－1131 | 250 500 | 12 |  |  |
| 154863 162235 | TVA－1132 | 500 1000 | 12 | ${ }^{33 / 16 \times 23}{ }^{3 / 11 / 16^{\prime}}$ | ． 32 |
| 5 | TVA－1100 | 50 | 6 | 3／8 | ． 56 |
| 16 L 230 | TVA－1101 | 100 | 6 | $1 / 2 \times 1$ | ． 7 |
| 162231 | TVA－1102 | 250 | 6 | ${ }^{5 / 8 \times 17} 7{ }^{7 / 16^{\circ}}$ | ． 91 |
| 16 L 232 | TVA－1103 | 500 | 6 | $5 / 8 \times 2^{3} / 16^{\prime \prime}$ | ． 91 |
| 151860 | TVA－1104 | 1000 | 6 | 11／16x23／160 | ． 12 |
| 16 L 233 | TVA－1105 | $\begin{aligned} & 1500 \\ & 2000 \end{aligned}$ | 6 | $13 / 16 \times 2$ $13 / 6 \times 2$ | 23 |

（B）DUAL－SECTION ATOMS

| $\begin{aligned} & 15 \mathrm{~L} 220 \\ & 55 \mathrm{~L} 221 \\ & 55 \mathrm{~L} 22 \\ & 5 \\ & \hline \end{aligned}$ | $\begin{aligned} & \text { TVA-2720 } \\ & \text { TU-88 } \\ & \text { TVA-2725 } \\ & \text { TVA-2722 } \end{aligned}$ |  | 450 450 450 450 |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: |
| 15 L 215 | TV－1616 | ＊16－16 | 450 | $1{ }^{13 / 8} \times 3$ |  |
| 15 L 227 | TVA－2730 | $20-20$ $30-30$ | 450 |  |  |
| 15L987 | TVA－2740 | 40－40 | 450 | $1 \times 3$ | 2.00 |
| 16L266 | TVA－2711 | ${ }^{80} 10$ | 450 50 |  |  |
| 162264 | TVA－25 | 120－80 | 250 | ${ }_{\text {d }}^{1 / 3} 18 \times$ |  |
| 15 L | TVA－2415 | $\xrightarrow{8-8}$ | 150 |  |  |
| 1551247 | TVA－2428 | ＊20－20 | 150 | ¢ $1 / 8 \times 2$ |  |
| 15 L | TVA－24 | 30 | 150 | \％／8x |  |
|  | TVA－24 | ${ }_{30} 0$ | 150 | \％ $1 / 8 \times 1$ |  |
|  | TU－420 | ＊40－20 | 150 | $11 / 1 / 6 \times 2 \times 1 /{ }^{16}$ |  |
| 15 L 250 | TVA－2442 | 40－30 | 150 | 7／8x15／160 |  |
| 15 L 243 | TVA－2445 | 年 $40-40$ | 150 | 年 $\times 1 \times 115151^{\circ}$ |  |
|  | TVA－2453 |  | 150 |  |  |
| 15L306 | TVA－2460 | 80－30 | 150 | 1／8x27／160 | ． 2 |
| 16 L 259 | TVA－2462 | ${ }^{80-50} 10$ | 150 | 1×31／40 | ． 3 |
|  |  | 100 | 150 | 11／8 |  |
| L255 | TVA－2315 | 10 | 150 | ${ }_{1 / 8 \times 17 / 66^{\circ}}^{1 \times 3 / 1}$ |  |

## C］TRIPLE－SECTION ATOMS

| $5 \mathrm{5L307}$ | TVA－3400 | ｜ $20-20-20 \mathrm{O}$ | 150 | 7／8x111／1／6 |  |
| :---: | :---: | :---: | :---: | :---: | :---: |
| 5L308 | TVA－3448 | 边 ${ }^{30-30-30-30}$ | 150 |  | 8 |
| 15 L 309 | TVA | 40－40－40 | 150 |  |  |
| 15 L 5189 | TVA－345 | 80－40－20 |  | $1 \times 2{ }^{15} / 16^{\prime \prime}$ | ． 62 |
| 89 | A－3419 | $30-30$ 100 | 12 | 1／8x15 | ． 35 |

［］TRIPLE－SECTION ATOMS（conl．）

| $\begin{gathered} \text { Stock } \\ \text { No. } \end{gathered}$ | $\begin{aligned} & \hline \text { Mir's } \\ & \text { Typo } \\ & \hline \end{aligned}$ | Mfd | WV | Slze | $\begin{aligned} & \text { NET } \\ & E A . \\ & \hline \end{aligned}$ |
| :---: | :---: | :---: | :---: | :---: | :---: |
| 15L988 | TVA－3415 | $\overline{20-20}$ | $\begin{aligned} & 150 \\ & 25 \end{aligned}$ |  |  |
| 15L312 | TVA－3423 | 40－30 | 150 |  |  |
| 15L328 | TVA－3427 | ${ }_{40-40}$ | 150 | x15／16 ${ }^{\text {c }}$ | 1.29 |
| 8 | TVA－3422 | 100 | 25 | 7／8 $\times 27 / 16^{\prime \prime}$ | 1.44 |
| 15L313 | TVA－3430 | $\begin{gathered} 50-30 \\ 20 \\ \hline \end{gathered}$ | 150 25 | 7／8x ${ }^{3} / 16^{\prime \prime}$ | 1.38 |
| $\overline{15 L 329}$ | TVA－3433 | $\begin{aligned} & 50-30 \\ & 200 \\ & \hline \end{aligned}$ | 150 25 | 1x23／6 $6^{\prime}$ | 1.62 |
| 15L314 | TVA－3436 | $50-50$ | $\begin{array}{r} 150 \\ 25 \\ 25 \end{array}$ | 15／16x23／16 | 1. |
| 16 L 283 | TVA－3712 |  | 450 | $15 / 16^{\times 23} / 16$ | 1. |
| 15L990 | TVA－3716 | $80-40$ $12-12$ | 400 | $13 / 8 \times 41 / 8^{\circ}$ | 2.6 |
| 15 L 90 |  | 20 | 25 | 1x2\％${ }^{\prime \prime}$ | 1.35 |


| QUADRUPLE－SECTION ATOMS |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: |
| No． | Type | Mfd． | WV | Size | EACH |
| $\overline{16 \mathrm{~L} 284}$ | TVA－4576 | 140－5 | 300 |  |  |
|  |  | 200－30 | 150 | $11 / 2 \times 4 / 8^{\prime}$ | 3.56 |
| 16 L 285 | TVA－4584 | $\left\|\begin{array}{c} 120-40-40 \\ 10 \end{array}\right\|$ | 350 | $13 / 845 / 8{ }^{\prime \prime}$ | 3.65 |
| 16L286 | TVA－4607 | 140 | 350 | 1／844／8 |  |
|  |  | $\left\lvert\, \begin{aligned} & 5 \\ & 200-30 \end{aligned}\right.$ | $\begin{aligned} & 300 \\ & 200 \end{aligned}$ | 11／2x51／8＇ | 0 |
| $\overline{16 L 287}$ | TVA－4618 | 80－60 | 350 |  |  |
|  |  | $\begin{aligned} & 40 \\ & 20 \end{aligned}$ | 300 150 |  |  |
| 16L288 | TVA－4659 | $\begin{aligned} & 20 \\ & 80-1 \end{aligned}$ | 150 | $11 / 2 \times 4{ }^{\prime} 8^{\prime}$ | 3.47 |
|  |  | 40 | 300 |  |  |
|  |  | 100 | 50 | $13 / 8 \times 41 / 8^{\circ}$ | 3.20 |
| 16L289 | TVA－4705 |  | 450 |  |  |
|  |  | 80 40 | 300 250 |  |  |
|  |  | 100 | 50 | $13 / 8 \times 41 / 2$ | 2.82 |
| 15L854 | $\overline{\text { TVA－4742 }}$ | $20-20-$ |  |  |  |
| 5L855 | TVA－4748 | 40－20－ | 450 | 13／83\％${ }^{\circ}$ | 2.50 |
|  |  | 20－10 | 450 | $13 / 8 \times 438^{\prime \prime}$ | 2.76 |
| 15L856 | TVA－4750 | 40－40－ |  |  |  |
|  |  | 20－20 | 450 | $11 / 2 \times 41 / 4^{\prime \prime}$ | 13.20 |

## ATOM CAPACITOR KITS

EK－1 KIt of ATOM Electrolytic Capacitors． A kit consisting of the following TVA types of capacitors（listed above）： 1 ea．－45 $\quad$ H1205，130． $\$ 1705,1709,1712$ ．Capacitors are small in size； rated $80^{\circ} \mathrm{C}$ or $185^{\circ} \mathrm{F}$ ．Excellent for use in auto and AC－DC radios．Supplied in crystal－clear compartmented plastic storage case．Each ca－ x13／4＂．Shpg．wt．， 2 lbs．
58 L 516 ．NET．
I3．70
SK－106 Kit of ATOM Electrolytlc Capaci－ tors．A kit containing one each of the following 1207，1303，1304，1306，1308，1310，1410，1422，1704， 1705，1708，1709，1711，1712，1713，1716，2428，2450， 2453．Supplied in compartmented welded metal inventory cabinet．Cabinet is open in front to allow easy access to units．Cabinet size， $91 / 2 \mathrm{x}$
$103 / 4 \times 53 / 4$. Shpg．wt．， 5 lbs.
58 L 5 i ．NET．．．．．．．．．．．． 18.05

## MOTOR－STARTING CAPACITORS

 TYPE AMElectrolytic capaci－ tors for 110 volt ca－ pacitor－start AC mo－ tors．In sealed alumi－
num cans with insu－ num cans with insu－ board tubes．Lug ter－ board tubes．Lug ter－ minals have screws for quick instaliation． sired．＊Minimum－maximum．Av．wt．， 10 oz ．

| No． | Type | Mfd | Size | NE |
| :---: | :---: | :---: | :---: | :---: |
| 5 5 579 | ${ }_{1}^{1106}$ | 47－56 | $\frac{1 \times 21}{1 \times 2}$ | 1.23 |
| 581 | 1108 | －53－64 | 1×2 | 1． 236 |
| L 582 | 11110 | $72-88$ $88-108$ |  | ． 35 |
| 5 L 584 | 1113 | 108－130 | $\frac{13 / 8 x^{5} / 8^{\prime \prime}}{}$ | ． 68 |
|  | 1116 | 124－149 | 133x25 ${ }^{\prime \prime}$ |  |
| 5 5886 | 1119 | － 1 130－156 |  | ． 73 |
| 5 L 588 | 1125 | 161－193 |  | 1．88 |
| 5 L 570 | ${ }_{1128}^{128}$ | 189－227 |  | 2.21 |
| 5 S 571 | 11131 | 216－259 |  |  |
|  | 1134 | 233－280 | ${ }^{13} 88 \times 31{ }^{\prime \prime} 8^{\prime \prime}$ |  |
| 5 L 54 | 1137 | 243－292 | $13 / 8 \times 41 / 8^{\prime \prime}$ | 2.76 |
| 5 L 575 | ${ }_{1140}^{114}$ | 270－324 |  | 2.79 |
| L 576 | 11142 | $324-388$ <br> $340-408$ |  | 3.18 3.26 3.5 |
| 589 | 1146 |  | $13 \times 8{ }^{1 / 88^{\prime \prime}}$ | 3.53 |
| 5 L 578 | 1149 | 400－480 | $13 / 4 \times 41 / 8^{\prime \prime}$ | 3.56 |

SPRAGUE＂LITTL－LYTIC＂SUBMINIATURE CAPACITORS

| INo． | Type | Mfd | WVDC | Size | EA． | No． | Type | Mfd | WVDC | Size | EA． |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| $16 \mathrm{LO27}$ | TE－1010 | 5 | 1 | 1／4 $\times$ | ． 73 | 16 L 629 | TE－1158 | 30 | 15 | 5／16 $\times 11 / 16^{\prime \prime}$ | 88 |
| 16 L 028 | TE－1055 | 25 | 3 | 1／4× ${ }^{11 / 16^{\prime \prime}}$ | ． 73 | $16 L 630$ | TE－1159 | 35 | 15 | $3 / 8 \times 11 / 1{ }^{\prime \prime}{ }^{\prime \prime}$ | ． 9 |
| 16 L 029 | TE－1060 | 110 | 3 | $3 / 8 \times 11 / 16^{\prime \prime}$ | ． 82 | 164631 | TE－1160 | 50 | 15 | $3 / 8 \times 11 / 1{ }^{\prime \prime}$ | ． 94 |
| 162030 | TE－1080 | 1 | 6 | $1 / 4 \times 11 / 16^{\prime \prime}$ | ． 73 | 16 L632 | TE－1161 | 75 | 15 | $3 / 8 \times 13 / 1{ }^{\prime \prime}{ }^{\prime \prime}$ | ． 00 |
| 16 L 031 | TE－1081 | 2 | 6 | 1／4 $\times^{11} 116^{\prime \prime}$ | ． 73 | 164633 | TE－1162 | 100 | 15 | $3 / 8 \times 15 / 16^{\prime \prime}$ | ． 06 |
| $16 \mathrm{LO32}$ | TE－1082 | 3 | 6 | 1／4 | ． 73 | 16 L 634 | TE－1163 | 150 | 15 | $3 / 8 \times 1{ }^{1 / 4}{ }^{\prime \prime}$ | ． 15 |
| $16 L 033$ | TE－1083 | 4 | 6 | $1 / 4 \times 11 / 16^{\prime \prime}$ | .73 | 162635 | TE－1164 | 200 | 15 | $3 / 8 \times 11 / 2^{\prime \prime}$ | ． 23 |
| 16 L 034 | TE－1084 | 5 | 6 | $1 / 4 \times 11 / 16^{\prime \prime}$ | ． 73 | 16L046 | TE－1202 | 5 | 25 | $1 / 4 \times 11 / 1{ }^{\prime \prime}$ | ． 82 |
| 16 L 035 | TE－1086 | 8 | 6 | 1／4 $\times 11 / 16^{\prime \prime}$ | ． 79 | 16 L 047 | TE－1203 | 6 | 25 | $1 / 4 \times 11 / 1{ }^{\prime \prime}$ | ． 82 |
| 16 L 036 | TE－1087 | 10 | 6 | 1／4 $\times^{11 / 166^{\prime \prime}}$ | ． 79 | 16 L 048 | TE－1204 | 10 | 25 | 1／4 ${ }^{1 / 11 / 16^{\prime \prime}}$ | ． 85 |
| 16 L 037 | TE－1089 | 15 | 6 | 1／4 $\times 11 / 16^{\prime \prime}$ | ． 79 | $16 L 049$ | TE－1205 | 15 | 25 | $5 / 16 \times 11 / 16^{\prime \prime}$ | 85 |
| 16 L 038 | TE－1091 | 25 | 6 | 1／4 $\times^{11} 116^{\prime \prime}$ | ． 79 | 164636 | TE－1206 | 20 | 25 | $3 / 8 \times 11 / 16^{\prime \prime}$ | ． 88 |
| 16 L 039 | TE－1092 | 30 | 6 | $1 / 4 \times 11 / 16^{\prime \prime}$ | ． 82 | 162637 | TE－1207 | 25 | 25 | $3 / 8 \times 11 / 1{ }^{\prime \prime}{ }^{\prime \prime}$ | ． 9 |
| 16 L 040 | TE－1095 | 40 | 6 | $1 / 4 \times 11 / 16^{\prime \prime}$ | ． 82 | 16 L638 | TE－1208 | 35 | 25 | $3 / 8 \times 13 / 1{ }^{\prime \prime}{ }^{\prime \prime}$ | －96 |
| 16 L 041 | TE－1100 | 50 | 6 | $5 / 16 \times 11 / 16^{\prime \prime}$ | ． 82 | $16 L 639$ | TE－1209 | 50 | 25 | $3 / 8 \times 15 / 16^{\prime \prime}$ | ． 06 |
| 16 L 026 | TE－1101 | 60 | 6 | 5／16x ${ }^{11 / 16^{\prime \prime}}$ | ． 82 | 16 L 640 | TE－1210 | 75 | 25 | $3 / 8 \times 11 / 4^{\prime \prime}$ | 1.15 |
| $16 L 042$ | TE－1116 | 15 | 10 | $1 / 4 \times 11 / 16^{\prime \prime}$ | ． 79 | 16 L 641 | TE－1211 | 100 | 25 | $3 / 8 \times 11 / 2^{\prime \prime}$ | 1.23 |
| 16 L 043 | TE－1118 | 25 | 10 | $1 / 4 \times 11 / 1{ }^{\prime \prime}{ }^{\prime \prime}$ | ． 79 | $16 L 642$ | TE－1301 | 2 | 50 | $1 / 4 \times 11 / 16^{\prime \prime}$ | ． 7 |
| 16 L 621 | TE－1119 | 50 | 10 | $3 / 8 \times 11 / 16^{\prime \prime}$ | ． 88 | 16 L 643 | TE－1302．1 | 4 | 50 | $1 / 4 \times 11 / 16^{\prime \prime}$ | ． 79 |
| 16 L 622 | TE－1119．3 | 100 | 10 | $3 / 8 \times 13 / 16^{\prime \prime}$ | 1.00 | 16 L 644 | TE－1305 | 20 | 50 | $3 / 8 \times 13 / 16^{\prime \prime}$ | ． 88 |
| 16L623 | TE－1119．6 | 200 | 10 | $3 / 8 x^{1 / 4} 4^{\prime \prime}$ | 1.18 | 16 L 645 | TE－1307 | 50 | 50 | $3 / 8 \times 112^{\prime \prime}$ | 1.03 |
| 16 L 044 | TE－1127 | 5 | 12 | 1／4 $\times 11 / 1{ }^{\prime \prime}$ | .79 | 162646 | TE－1404 | 5 | 100 | $3 / 8 \times 15 / 16^{\prime \prime}$ | ． 88 |
| 16 L 045 | TE－1128 | 10 | 12 | $1 / 4 \times 11 / 16^{\prime \prime}{ }^{\prime \prime}$ | ． 79 | 16 L 647 | TE－1407 | 10 | 100 | $3 / 8 \times 151 / 6^{\prime \prime}$ |  |
| 16 L 624 | TE－1152 | 5 | 15 | $1 / 4 \mathrm{X}^{11} / 16^{\prime \prime}$ | ． 82 | 16 L 648 | TE－1408 | 15 | 100 | $3 / 8 \times 11 / 4^{\prime \prime}$ | ． 91 |
| 16 L 625 | TE－1155 | 10 | 15 | $1 / 4 \times 11 / 16^{\prime \prime}$ | ． 82 | 16L649 | TE－1409 | 20 | 100 | $3 / 8 \times 11 /{ }^{\prime \prime}$ | 94 |
| 164626 | TE－1156 | 15 | 15 | $1 / 4 \times 11 / 16^{\prime \prime}$ | .85 | $16 L 650$ | TE－1502 | 3 | 150 | $3 / 8 \times 15 / 16^{\prime \prime}$ | ． 85 |
| 161627 | TE－1157 | 20 | 15 | 5／4×11／16＂ | ． 85 | 164651 | TE－1504 | 5 | 150 | 3／8×15／16 |  |
| 16L628 | TE－1157．1 | 25 | 15 | $5 / 16 \times 11 / 16^{\prime \prime}$ | ． 85 | 164652 | TE－1507 | 10 | 150 | $3 / 8 \times 11 / 4{ }^{\circ}$ | 9 |

## Sprague Capacifors

## TVL MIDGET CAN ELECTROLYTICS

"Twist-Lok," hermetically sealed, aluminum can capacitors for exact replacement use in Admiral, Motorola, Emerson and many other television receivers. Withstand extremely high temperatures, ripple currents and surge voltages encountered in TV circuits. Self-mounting, with twist-prong tabs that go through chassis or connect to

SINGLE SECTION

| Stock No. | Mir's <br> Type | Mfd | DC Wkg. V. | Slzo | $\begin{aligned} & \text { NET } \\ & \text { EACH } \end{aligned}$ |
| :---: | :---: | :---: | :---: | :---: | :---: |
| 16 L 10 | TVL-1940 | 10 | 500 | $1 \times 2$ " | . 94 |
| $16 L 435$ | TVL-1943 | 20 | 500 | $1 \mathrm{x} 21 / 2^{\prime \prime}$ | 1.09 |
| $16 L 184$ | TVL-1947 | 30 | 500 | $1 \times 3{ }^{\prime \prime}$ | 1.18 |
| $16 L 436$ | TVL-1950 | 40 | 500 | $1 \times 31 / 2^{\prime \prime}$ | 1.47 |
| 16 L 600 | TVL-1958 | 80 | 500 | $13 / 8 \times 3^{\prime \prime}$ | 1.88 |
| 16 L 185 | TVL-1960 | 90 | 500 | $13 / 8 \times 31 / 2^{\prime \prime}$ | 2.05 |
| 15 L 757 | TVL-1820 | 40 | 475 | $13 / 8 \times 2{ }^{\prime \prime}$ | 1.47 |
| 15 L 470 | TVL-1705 | 10 | 450 | $1 \times 2$ " | . 91 |
| $15 L 886$ | TVL-1714 | 20 | 450 | $1 \times 2$ " | 1.06 |
| $15 L 887$ | TVL-1720 | 30 | 450 | 1x21/2" | 1.15 |
| 151473 | TVL-1725 | 40 | 450 | $1 \times 3{ }^{\prime \prime}$ | 1.21 |
| $16 L 434$ | TVL-1730 | 60 | 450 | $13 / 8 \times 21 / 2^{\prime \prime}$ | 1.53 |
| 16 L217 | TVL-1735 | 80 | 450 | $13 / 8 \times 21 / 2^{\prime \prime}$ | 1.79 |
| $15 L 755$ | TVL-1760 | 125 | 450 | $13 / 8 \times 4^{\prime \prime}$ | 2.26 |
| 16 L 509 | TVL-1621 | 40 | 350 | $1 \mathrm{x} 2^{\prime \prime}$ | 1.18 |
| 15 L 54 | TVL-1630 | 80 | 350 | $13 / 8 \times 3^{\prime \prime}$ | 1.68 |
| 151799 | TVL-1638 | 125 | 350 | $13 / 8 \times 31 / 2^{\prime \prime}$ | 2.32 |
| 16 L 601 | TVL-1642 | 150 | 350 | $13 / 8 \times 4^{\prime \prime}$ | 2.32 |
| $16 L 204$ | TVL-1573 | 80 | 300 | $1 \times 31 / 2^{\prime \prime}$ | 1.50 |
| $15 L 753$ | TVL-1578 | 100 | 300 | $1 \times 4{ }^{\prime \prime}$ | 1.71 |
| $16 L 603$ | TVL-1580 | 125 | 300 | 13/8×31/2" | 2.06 |
| 16 L 205 | TVL-1584 | 150 | 300 | $13 / 8 \times 31 / 2^{\prime \prime}$ | 2.06 |
| 16 L602 | TVL-1590 | 250 | 300 | $13 / 8 \times 4{ }^{\prime \prime}$ | 3.26 |
| $15 L 797$ | TVL-1509 | 20 | 250 | $1 \times 2$ " | . 94 |
| 16 L 503 | TVL-1519 | 40 | 250 | $1 \times 2$ " | 1.06 |
| 16 L 506 | TVL-1535 | 100 | 250 | $1 \times 3^{\prime \prime}$ | 1.59 |
| $15 L 798$ | TVL-1540 | 150 | 250 | $13 / 8 \times 21 / 2^{\prime \prime}$ | 1.82 |
| 164604 | TVL-1547 | 200 | 250 | $13 / 8 \times 31 / 2^{\prime \prime}$ | 2.15 |
| $15 L 794$ | TVL-1415 | 50 | 150 | $1 \times 2{ }^{\prime \prime}$ | . 97 |
| $15 L 750$ | TVL-1420 | 80 | 150 | $1 \times 21 / 2^{\prime \prime}$ | 1.09 |
| $16 L 605$ | TVL-1423 | 100 | 150 | $1 \times 21 / 2^{\prime \prime}$ | 1.18 |
| $16 L 606$ | TVL-1425 | 120 | 150 | 1x31/2" | 1.26 |
| 16 L 190 | TVL-1426 | 120 | 150 | $13 / 8 \times 21 / 2^{\prime \prime}$ | 1.26 |
| 162218 | TVL-1428 | 140 | 150 | $1 \times 3$ " | 1.26 |
| 16 L 607 | TVL-1429 | 150 | 150 | $1 \times 3^{\prime \prime}$ | 1.26 |
| 15 L 75 | TVL-1430 | 150 | 150 | $13 / 8 \times 3^{\prime \prime}$ | 1.26 |
| 16 L 219 | TVL-1431 | 200 | 150 | $13 / 8 \times 4$ " | 1.44 |
| $15 L 796$ | TVL-1434 | 300 | 150 | $13 / 8 \times 31 / 2^{\prime \prime}$ | 1.65 |
| $16 L 500$ | TVL-1320 | 150 | 50 | $3 / 4 \times 21 / 2^{\prime \prime}$ | 1.06 |
| 15 L 793 | TVL-1330 | 500 | 50 | $13 / 8 \times 21 / 2^{\prime \prime}$ | 1.56 |
| 15L792 | TVL-1220 | 500 | 25 | $1 \times 2$ " | 1.50 |
| 16 L 220 | TVL-1230 | 1000 | 25 | $13 / 8 \times 2$ ' | 2.09 |
| 15 L 791 | TVL-1168 | 2000 | 15 | $13 / 8 \times 2$ " | 2.03 |
| 16 L 200 | TVL-1115 | 2000 | 6 | $13 / 8 \times 2^{\prime \prime}$ | 1.50 |

DUAL SECTION

| 16 L 42 | TVL-2940 | 40-40 | 500 | 13/8x3 ${ }^{\prime \prime}$ | 2.53 |
| :---: | :---: | :---: | :---: | :---: | :---: |
| 15 L 480 | TVL-2750 | 10-10 | 450 | $1 \times 2$ " | 1.12 |
| 16 L 192 | TVL-2753 | 15-15 | 450 | $1 \times 21 / 2^{\prime \prime}$ | 1.32 |
| 16 L 440 | TVL-2754 | 20-10 | 450 | $1 \times 21 / 2^{\prime \prime}$ | 1.32 |
| 15 L 481 | TVL-2755 | 20-20 | 450 | $1 \times 3^{\prime \prime}$ | 1.50 |
| 16 L 191 | TVL-2757 | 30-10 | 450 | $1 \times 3$ " | 1.41 |
| $15 L 897$ | TVL-2759 | 30-30 | 450 | $13 / 8 \times 21 /{ }^{\prime \prime}$ | 1.79 |
| 16 L 199 | TVL-2762 | 40-20 | 450 | $13 / 8 \times 21 / 2^{\prime \prime}$ | 1.91 |
| $15 L 477$ | TVL-2764 | 40-40 | 450 | $13 / 8 \times 3^{\prime \prime}$ | 2.03 |
| 16 L 41 | TVL-2768 | 60-20 | 450 | $13 / 8 \times 3$ " | 2.09 |
| 162209 | TVL-2770 | 60-40 | 450 | $13 / 8 \times 31 / 2^{\prime \prime}$ | 2.32 |
| 15 L 898 | TVL-2776 | 80-10 | 450 | $13 / 8 \times 3{ }^{\prime \prime}$ | 2.12 |
| 16 L 197 | TVL-2777 | 80-30 | 450 | $13 / 8 \times 4^{\prime \prime}$ | 2.47 |
| $16 L 524$ | TVL-2735 | 40-10 | 450-350 | $13 / 8 \times 21 / 2^{\prime \prime}$ | 1.53 |
| $16 L 439$ | TVL-2677 | 80-60 | 400 | $13 / 8 \times 4^{\prime \prime}$ | 2.76 |
| $16 L 438$ | TVL-2656 | 80-80 | 400-200 | $13 / 8 \times 31 / 2^{\prime \prime}$ | 2.32 |
| 16 L193 | TVL-2628 | 30-30 | 350 | $1 \times 3$ " | 1.71 |
| 16 L 195 | TVL-2639 | 100-60 | 350 | $13 / 8 \times 31 / 2^{\prime \prime}$ | 2.82 |
| 151762 | TVL-2585 | 80-80 | 300 | $13 / 8 \times 31 / 2^{\prime \prime}$ | 2.38 |
| 16 L 207 | TVL-2515 | 20-20 | 250 | $1 \times 2$ " | 1.12 |
| 154894 | TVL-2520 | 40-40 | 250 | $1 \times 31 / 2^{\prime \prime}$ | 1.47 |
| 16 L 225 | TVL-2535 | 150-150 | 250 | $13 / 8 \times 4^{\prime \prime}{ }^{\prime \prime}$ | 3.03 |
| 16 L608 | TVL-2442.1 | 80-50 | 150 | 1x21/2" | 1.41 |
| 15 L 483 | TVL-2415 | 20-20 | 150 | $1 \times 2$ " | 1.00 |
| 15 L 890 | TVL-2422 | 30-30 | 150 | $1 \times 2$ " | 1.09 |
| 15 L468 | TVL-2425 | 40-20 | 150 | $1 \times 2$ " | 1.09 |
| 154891 | TVL-2428 | 40-40 | 150 | $1 \times 21 / 2^{\prime \prime}$ | 1.12 |
| 151469 | TVL-2432 | 50-30 | 150 | $1 \mathrm{x} 21 / 2^{\prime \prime}$ | 1.18 |
| 15 L 484 | TVL-2435 | 50-50 | 150 | $1 \times 21 / 2^{\prime \prime}$ | 1.26 |
| 15 L 892 | TVL-2438 | 60-60 | 150 | $1 \times 31 / 2^{\prime \prime}$ | 1.38 |
| 15 L 893 | TVL-2442 | 80-40 | 150 | $13 / 8 \times 21 / 2^{\prime \prime}$ | 1.35 |
| 16 L 21 | TVL-2444 | 200-5 | 150 | $13 / 8 \times 3^{1 / 2}$ | 1.59 |
| $16 L 512$ | TVL-2445 | 200-125 | 150 | $13 / 8 \times 31 / 2^{\prime \prime}$ | 2.20 |
| 16 L 51 | TVL-2320 | 50-50 | 50 | $1 \mathrm{x} 2^{\prime \prime}$ | 1.00 |
| 15 L 761 | TVL-2160 | 1000-1000 | 15 | $1 \times 31 / 2^{\prime \prime}$ | 2.59 |

## TRIPLE SECTION

| 16L227 | TVL-3952 | 10-10-10 | 500 | $1 \times 3$ " | 1.59 |
| :---: | :---: | :---: | :---: | :---: | :---: |
| 16 L 228 | TVL-3965 | 40-40-10 | 500 | $13 / 8 \times 31 / 2^{\prime \prime}$ | 2.97 |
| 5 L 969 | TVL-3840 | 30-30-20 | 475 | $13 / 8 \times 3^{\prime \prime}$ | 2.62 |
| 16 L 559 | TVL-3843 | $40-30-30$ $20-20-60$ | - ${ }_{\text {475 }}$ | $13 / 8 \times 4^{\prime \prime}$ <br> $13 / 8 \times 4^{\prime \prime}$ | 3.03 2.85 |
| 5 L 478 | TVL-3776 | 10-10-10 | 450 | $1 \times 3^{\prime \prime}$ | 1.53 |
| 6 L 476 | TVL-3779 | 20-10-10 | 450 | $1 \times 3$ " | 1.71 |
| 5 L 965 | TVL-3780 | 20-20-20 | 450 | $1{ }^{13 / 8 \times 21 / 2^{\prime \prime}}{ }^{\prime \prime}$ | 2.12 |
| 5 L 966 | TVL-3782 | 30-30-30 | 450 | $13 / 8 \times 31 / 2^{\prime \prime}$ | 2.56 |
| 6 L 477 | TVL-3784 | 40-30-20 | 450 | $13 / 8 \times 3$ " | 2.53 |
| 5 L 778 | TVL-3785 | 40-40-10 | 450 | $13 \times 31{ }^{13 / 2}{ }^{\prime \prime}$ | 2.44 |
| 16 L 229 15967 | TVL-3786 | $40-40-20$ $40-40-40$ | 450 450 | 13/8x3"1/ | 2.62 |

washer for above-chassis mounting. Terminals are welded to capacitor cathode and tinned for easy soldering. Supplied with bakelite insulating washer and metal washer for secure mounting. Capacity and voltage clearly printed on tubular casing to eliminate replacement error. Can serves as common negative. Av. shpg. wt., 6 oz

TRIPLE SECTION (cont'd)

| $\begin{gathered} \hline \text { Stock } \\ \text { No. } \end{gathered}$ | $\begin{aligned} & \hline \text { Mir's } \\ & \text { Type } \\ & \hline \end{aligned}$ | Mfd | DC Wkg. V. | Size | $\begin{aligned} & \text { NET } \\ & \text { EACH } \end{aligned}$ |
| :---: | :---: | :---: | :---: | :---: | :---: |
| 16 L 554 | TVL-3789 | 60-20-20 | 450 |  | 2.70 |
| 16 L 555 | TVL-3790 | 60-30-10 | 450 | $13 / 8 \times 3$ " | 2.65 |
| 16 L 136 | TVL-3791 | 60-40-20 | 450 | $13 / 8 \times 31 / 2^{\prime \prime}$ | 2.94 |
| 16 L L 1773 | TVL-3793 | $80-40-20$ $40-10-80$ | ${ }_{450-450-200}$ | $13 / 8 \times 4^{\prime \prime}$ |  |
| 15 | TVL-3764 | 40-40-100 | 450-450-200 |  |  |
| 15 L 962 | TVL-3758 | 40-40-40 | 450-450-150 | $138 \times 31 / 2^{\prime \prime}$ | 2.44 |
| 16 L 146 | TVL-3757 | 80-20-100 | 450-450-50 | $13 / 8 \times 4^{\prime \prime}$ | 2.82 |
| 15 L 490 | TVL-3731 | 10-10-20 | 450-450-25 | $1 \times 2$ |  |
| 16 L 213 | TVL-3735 | 20-10-20 | 450-450-25 | 1 x 3 | 1.59 |
| 15 L 485 | TVL-3739 | 20-20-20 | 450-450-25 | $1 \times 3^{\prime \prime}$ | 1.79 |
| 15 L 961 | TVL-3741 | 30-30-20 | 450-450-25 | $13 / 8 \times 21 / 2^{\prime \prime}$ |  |
| 6 L 475 | TVL-3744.4 | 40-40-20 | 450-450-25 | $13 / 8 \times 3$ |  |
| 16 L 544 | TVL-3723 | 30-40-50 | 450-350-25 | $\begin{gathered} 13 / 8 \times 21 / 2^{\prime \prime} \\ 1 \times 4^{\prime \prime} \end{gathered}$ | 2.16 2.18 |
| 16.223 | TVL-3712 | 10-80-80 | 450-250-250 | 13/8x ${ }^{\prime \prime}$ | 2.44 |
| 16 L 222 | TVL-3706 | 40-40-130 | 450-150-50 | $13 / 8 \times 3$ " | 2. |
| 16 L 474 | TVL-3689.3 | 100-10-80 | 400-400-350 | $13 / 8 \times 4$ " | 3.5 |
| 5 L 426 | TVL-3678 | 20-20-20 | 400-400-25 | $3^{\prime \prime}$ | 1.68 |
| 16 L 538 | TVL-3640 | 0 | 350 | $13 / 8 \times 4^{\prime \prime}$ | 2.50 |
| 15 L 95 | TVL-3630 | 15-10-20 | 350-350-25 | $1 \times 21 / 2^{\prime \prime}$ | 1.47 |
| 16 L 449 | TVL-3639.2 | 100-60-20 | 350-350-200 | $13 / 8 \times 4$ | 3.23 |
| 16 L 609 | TVL-3635 | 20-20-20 | 350-350-25 | $1 \times 21 / 2^{\prime \prime}$ | 1.71 |
| 15 L 958 | TVL-3634 | 20-10-20 | $350-350-25$ $350-350-25$ | \% |  |
| 16 L 211 | TVL-362 | 30-30-2 | -300-2 |  |  |
| 16 L 5 | TVL-3580 | 10-10-10 | 300 | $1 \times 2$ " |  |
| 6 L 534 | TVL-3585 | 120-50-40 | 300 | $13 / 8 \times 4^{\prime \prime}$ | 3.44 |
| 15 | TVL-3540 | 40-20-20 | 250 | $1 \times 31 / 2^{\prime \prime}$ | 1.71 |
| 16 L 59 | TVL-3513 | 30-30-20 | 50-250-25 | $1 \times 3$ " | 1.65 |
| 6 | TVL-3471 | 80-10-2 | 200-200 | x ${ }^{\prime \prime}$ |  |
|  | TVL-3461.4 | 60-200-140 | 200-150-150 | 13/8x4" | 2.82 |
| 6 L 139 | TVL-3448 | 120-80-40 | 150 | $13 / 8 \times 31$ | 2.23 |
| 5 L 493 | TVL-3433 | 20-20-20 | 150 | $1 \times 2$ | 1.35 |
| 15 L 952 | TVL-3437 | 40-20-20 | 150 | $1 \times 21 / 2^{\prime \prime}$ | 1.41 |
| 15 L 421 | TVL-3440 | 40-40-40 | 150 | $1 \times 31 / 2^{\prime \prime}$ | 1.53 |
| 15L953 | TVL-3442 | 50-50-50 | 150 | $1 \times 3{ }^{\prime \prime}$ | 1.76 |
| 6 L 445 | TVL-3444 | 80-40-20 | 150 | $1 \times 3^{\prime \prime}$ | 1.7 |
| 16 L 224 | TVL-3420 | $200-100-60$ $40-20-20$ | $\begin{gathered} 150 \\ 150-150-25 \end{gathered}$ | 13/8x31/2" | 2.68 |
| 16 L 444 | TVL-3426 | 40-40-20 | 0-150-2 |  |  |
| 15 L 420 | TVL-3427 | 50-30-100 | 150-150-25 | $1 \times 3$ " | 1.59 |
| 15.951 | TVL-3430 | 50-50-20 | 150-150-25 | $1 \times 3^{\prime \prime}$ | . 56 |
| 16 L 525 | TVL-3210 | 20-20-20 | 25 | 1x2" | . 1 |

QUADRUPLE SECTION

|  |  |  | $500$ |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: |
|  |  |  | 500-450-50-50 |  |  |
|  |  |  | 475 |  |  |
| 6 L | TVL-4827 | 50-30-10-20 | 475-475-475-300 | $13 / 8 \times 31 / 2^{\prime \prime}$ |  |
| 16 L 5 | TVL-4815 | 15-15-80-40 | 475-475-300-50 |  |  |
|  | TVL-4811 | 10-60-30-125 | 475-450-40 |  |  |
|  | TVL-4800 | 20-40-100-80 | 475-300- |  |  |
|  | TVL-4760 | 10-10-10-10 | 450 | 13/8x2" |  |
| 5 | TVL-4763 | 20-20-20-20 | 450 | x ${ }^{\prime \prime}$ | 2.76 |
|  | TVL-4773 | 40-40-20-20 | 450 |  |  |
|  | TVL-4774 | 40-40-30-30 | 450 |  |  |
| 16 L | TVL-4775 | 40-40-40-40 | 450 | 13/8x4" |  |
|  | T | 80-10 | 450 | x4" |  |
|  | T | 40-40-10-100 | 450-450-450-1 |  |  |
|  | TVL-4742 | 30-30-15-30 | 450-450-450-50 |  |  |
| - | TVL-4745 | 40-40-10-25 | 450-450-450-50 | x $31 / 2^{\prime \prime}$ |  |
|  | TVL-4723 | 10-10-10-20 | 450-450-450-25 | x211 |  |
|  | TVL-4724.2 | 20-20-20-20 | 450-450-450-25 |  |  |
|  | TVL-4734 | 40-30-10-20 | 450-450-450-25 |  |  |
| 16 L 578 | TVL-4736 | 40-40-10-20 | 450-450-450-25 | $13 / 8 \times 31 / 2$ |  |
|  | T | 40 | 450-450-450-25 |  |  |
|  | TVL-4732 | 40-20-20-40 | 450-450-450-25 |  |  |
|  | TVL-4720 | 40-40-30-30 | 450-450-350-350 |  |  |
| 16 L | TVL-4710.2 | 80-10-40-30 | 400-300-30 | $13 / 8 \times 4^{\prime \prime}$ |  |
|  | TVL-4669 | 80-40-10-20 | 400-400-400-25 |  |  |
|  | TVL-4670 | 80-40-30-40 | 400-400-400-25 |  |  |
|  | TVL-4663.5 | 100-10-30-20 | 400-400-50 |  |  |
| 16 L 499 | TVL-4635.7 |  |  |  |  |
|  | TVL-4635. | 90-40-30-30 | 350 |  |  |
|  | TVL-4628 | 40-40-40-150 | 350-350-350-50 |  |  |
|  | TVL-4620 |  | $350-350-350-25$ $350-350-350-25$ |  |  |
| 16 | TVL-4621.6 |  | 0-2 | $13 / 8 \times 3^{\prime \prime}$ | 2.73 |
|  | TVL-4609 | 60-40-60-20 | 35020 |  |  |
|  | TVL-4590 | 200-20-20-20 |  |  |  |
| 16 L 565 | TVL-4561 | 40-40-40-20 | 300 | $13 / 4$ |  |
|  | TVL-4559. | 100 | 300-200-150-5 | 13/8x |  |
|  | TVL-4559 | 10-200- | 300-150-150-150 | 138 |  |
|  | TVL-4516 | 100-40-10-100 | 250-250-250-50 | 1 |  |
|  | TVL-4415 | 30-30-30-40 | 150-150-150-25 |  | 1.82 |
| 15 L 975 | TVL-4420 | 40-40-30-20 | 150-150-150-25 | $13 / 8 \times 2^{\prime \prime}$ | . 82 |
|  |  | 50-50-50-20 | 150-150-150-2 | $2^{\prime \prime}$ | 2.09 |
|  | TVL-4431 | 80-40-40-20 | 150-150-150-25 | $13 / 8 \times 2^{\prime \prime}$ | 2.09 |
|  | TVL-4414 | 60-40-20-200 | 150-150-150-10 | 1 | 2.03 |
|  | TVL-4409 |  | 5 | 13/8x |  |
| L |  |  |  | $13 / 8 \times 2^{\prime \prime}$ |  |

Industrial Users-all Sprague JAN-fype capacitors are available from Allied. Write to our Industrial Division for quantity prices.

## Sprague \& Condenser Products Capacitors



SPRAGUE "CERA-MITE" DISC CERAMIC CAPACITORS
High by-pact ceramic disc capacitors. In EIA (RETMA) and other popular values. WVDC types $\pm 20 \%$. 3000 WVDC types $1.5 \mathrm{mmf}, \pm .25 \mathrm{mmf} ; 4.7 \mathrm{mmf}, \pm .5 \mathrm{mmf}$ thru $68 \mathrm{mmf}, \pm 10 \%$; thru $500 \mathrm{mmf}, \pm 20 \%$. All capacitors are "tagged" for easy identification. Shpg. wt., 2 oz .

SERIES 5GA 1000 WVDC
*Designates Mfd.


| No. | Type | M 7 d. | EACH |
| :---: | :---: | :---: | :---: |
| 16 L 360 | ${ }^{\text {D43 }}$ | ${ }^{.0043}$ |  |
| 164362 | $\mathrm{D}^{\mathrm{D} 5}$ | . 005 | 18c |
| 16 L 363 | S1 | . 01 |  |

\begin{tabular}{|c|c|c|c|}
\hline \multicolumn{4}{|c|}{SERIES 30GA 3000 WVDC} <br>
\hline No. \& Type \& M mf \& AC <br>
\hline $1{ }^{6} \mathrm{EL}$ L 3870 \& ${ }^{\mathrm{V} 15}$ \& ${ }_{4}^{1.5}$ \& <br>
\hline 16 L L 371 \& ${ }_{0}{ }^{12}$ \& ${ }_{12}^{10}$ \& 24c <br>
\hline \& \& \& <br>
\hline  \&  \& $$
\begin{aligned}
& 25 \\
& 30 \\
& 30 \\
& 50
\end{aligned}
$$ \& 24c <br>
\hline \& \& \& <br>
\hline 6 L 3778 \& ${ }_{T 1}$ \& 120 \& 24c <br>
\hline 6 LL 379 \& ${ }_{T 118}$ \& 150
180 \& 24c <br>
\hline \& T2 \& \& <br>
\hline  \&  \& (2200 \& 24c <br>
\hline $6 L 385$
6486 \& T5 \& cen

500
500 \& <br>
\hline \multicolumn{4}{|l|}{SINGLE AND DUAL HIGH-K TYPES SERIES 5HK 1000 WVDC} <br>
\hline
\end{tabular}

| $15 L 672$ 156673 $15 L 674$ | D2 D5 S1 | .002 mfd .005 mfd .010 mfd | 154 154 184 |
| :---: | :---: | :---: | :---: |
| 15 L 675 | 2D1 | 2x. 001 mfd | 244 |
| $15 L 676$ | 2 D 15 | $2 \times .0015 \mathrm{mfd}$ | 244 |
| $15 L 677$ | 2D2 | 2 x .002 mfd | 244 |
| 15 L 678 | 2D4 | 2x. 004 mfd | 264 |

## MINIATURIZED DISC CERAMICS

## Excellent for Transistorized Circuits



Type TG. Designed for circuits requiring extremely small compo-sistor-type radios, etc. Provides very dependable service in bypass and coupling applications. Capacitors are covered with an exceptionally
tough, protective coating that assures top performance despite conditions of heavy humidity. All rated at 50 working volts, DC. Tolerance of $+80 \%$ cept $* 80 \%$ to $-30 \%$

TYPE NPO CERAMICS
Zero temperatúre-coefficient capacitors. 500


## TYPE N750 CERAMICS

A negative temperature coefficient capacitor with a negative change of 750 parts per million
per degree Centigrade. 500 WVDC. Discs.
except $\begin{aligned} & \text { trectangular. Shpg. wt. } 2 \text { oz. }\end{aligned}$. except ${ }^{\text {Frectangular. Shpg. wt. } 2 \mathrm{oz} .}$

| No. | Typo | M mf | EACH |
| :---: | :---: | :---: | :---: |
|  |  | $\begin{aligned} & 15 \\ & 10 \\ & 20 \\ & 20 \end{aligned}$ | 29c |
| 66485 166486 165488 165489 1648 |  | $\begin{aligned} & 25 \\ & 33 \\ & 48 \\ & 98 \\ & \hline 78 \end{aligned}$ | 29c |
| $\begin{array}{r}66490 \\ 16649 \\ 165492 \\ 165494 \\ \hline\end{array}$ |  | $\begin{aligned} & 100 \\ & 1100 \\ & 2000 \\ & 2300 \\ & 330 \end{aligned}$ | 29c |

## TYPE BL DISC CERAMICS

New 2000 WVDC disc ceramic capacitors for buffer applications. Tiny, rugged construction. Moisture-proof coating assures high dependashpg. wt., 2 oz.

| No. | Type | Mfd | EACH |
| :---: | :---: | :---: | :---: |
| 16 L 290 | BL-D10 | . 001 |  |
| 16 L 291 | BL-D20 | . 002 |  |
| $16 L 292$ | BL-D30 | . 003 | 21 c |
| 16 L 293 | BL-D40 | . 004 |  |
| 16 L 294 | BL-D50 | . 005 |  |
| 16 L 295 | BL-D60 | . 006 |  |
| 16 L 296 | BL-D 70 | . 007 |  |
| 16 L 297 | BL-D 75 | . 0075 | 21 c |
| 16 L 298 | BL-D80 | . 008 |  |
| 16 L 299 | BL-S10 | . 01 |  |

HISRAGUE Highly versatile, 4-lead ceramic SPRAGUE 2) 2 34 mum coverage with minimum stock. Ideal for use by servicemen, experimenters, etc. Offer a large variety of odd and popular ratings-simply wire leads in var ious combinations. With complete instructions on how to select the desired capacitance. *Guaranteed minimum value; UGA-1 and UGA-2 have tolerance of $\pm 20$
500 WVDC. Av. shpg. wt., 3 oz .

| Stock No. | Mfr's Type | Capacity Range, Mfd | Size | $\stackrel{\mathrm{ACH}}{ }$ |
| :---: | :---: | :---: | :---: | :---: |
| 15 L 216 | *UHK-1 | .001-. 004 | $25 / 32 \times 5 / 8 \times 5 / 32$ | 29¢ |
| 15L217 | *UHK-2 | .0025-.015 | $11 / 8 \times 5 / 8 \times 5 / 32^{\prime \prime}$ | 5 |
| 5L218 | UGA-1 | .0004-.0013 | 25/32 $\times 5.8 \times 5 / 32$, | 2.96 |
| 15L219 | UGA-2 | .0006-.0027 | $11 / 8 \times 5 / 8 \times 5 / 32^{\prime \prime}$ | 35 |

## UNIVERSAL CERAMIC

 CAPACITOR KITKit CK-4. New, universal multi-purpose capacitor kit. Handles $90 \%$ of all common ceramic, molded tubular, and mica replacements in bypass and coupling circuits. Includes 3 Supplied with detailed instructions. $31 / 2 \times 81 / 2^{\prime \prime}$.

3.88


CONDENSER PRODUCTS CO.

## SILICONE-FILLED GLASSMIKES

Type ASG. An excellent selection of silicone impregnated and filled capacitors. Carefully designed for precision applications. Ideal for electronic computer, Geiger counter, electro meter, oscilloscope or high termperature AC and DC circuits, etc. Also excellent for low current power supply filters as well as audio coupling and by-pass networks. Metal ferrule soldered to silver end bands are fused to each end of heavy walled glass tubes. Vacuum tigh and fungus proof. Ample flash-over spacing 1 provided between silver bands for sea level operations. Tolerance, $\pm 10 \%$. Temperature *Tinned copper lears $21 /{ }^{\prime \prime} 10 \mathrm{~s}$ No 18 gang $150 \%$ test pper leads, $21 / 4$ long, No. 18 gauge. ripple voltage plus the DC voltage should not exceed rated voltage Av. ohpg wt, 6 oz
1000 WORKING VOLTS

| Stock No. | Mfr's Type | Mfd. | Size | NET EACH |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  |  |  | 1-9 | 10-49 | 50-249 |
| 10 L 900 | 502* | . 005 | $13 / 16 \times 19 / 32^{\circ}$ | 1.71 | 1.43 | 1.28 |
| 10 L 902 | 203* | . 02 | $13 / 16 \times 19 / 32^{\prime \prime}$ | 1.71 | 1.43 | 1.28 |
| 10 L 903 | 503 | . 05 | $13 / 4 x^{3 / 4}{ }^{\prime \prime}$ | 1.85 | 1.54 | 1.39 |
| 10 L 904 | 104 | . 1 | 21/4 $x^{3 / 4}$, | 1.85 | 1.54 | 1.39 |
| 10 L 905 | 254 | . 25 | 21/4 ${ }^{29} 932^{\prime \prime}$ | 1.85 | 1.54 | 1.39 |

2000 WORKING VOLTS

| Stock No. | $\left\lvert\, \begin{gathered} \text { Mfr's } \\ \text { Type } \end{gathered}\right.$ | Mfd. | Size | NET EACH |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  |  |  | 1-9 | 10-49 | 50-249 |
| 10 L 906 | 202* | . 002 | 13 |  |  |  |
| 10 L 907 | 502* | . 005 | $13 / 16 \times 19 / 32^{\prime \prime}$ | 1.71 | . 43 | 28 |
| 10 L 908 | 103* | . 01 | 13/16x ${ }^{19} / 32^{\prime \prime}$ | 1.71 | . 43 | 28 |
| 10 L 909 | 203* | . 02 | 19/16x ${ }^{19} / 33^{\prime \prime}$ |  |  |  |
| 10 L 910 | 503 | . 05 | $13 / 4 x^{3 / 4}{ }^{6}$ | 1.85 | 1.54 | 1.39 |
| 10 L 911 | 104 | . 1 | 21/4 $x^{3 / 4}{ }^{\text {c }}$ | 1.91 | 1.59 | 1.43 |
| 10 L 912 | 254 | . 25 | 23/4 $\times 29 / 33^{\prime \prime}$ | 2.13 | 1.78 | 1.60 |
| 3000 WORKING VOLTS |  |  |  |  |  |  |
| Stock No. | $\begin{array}{\|c\|} \hline \text { Mfr's } \\ \text { Type } \end{array}$ | Mfd. | Size | NET EACH |  |  |
|  |  |  |  | 1-9 | 10-49 | 50-249 |
| 10 L 913 | 102* | . 001 | $13 / 16 \times 19 / 33^{3}$ | 2.45 | 2.04 | 1.84 |
| 10 L 914 | 202* | . 002 | $13 / 16 \times 1932^{\prime \prime}$ | 2.45 | 2.04 | 1.84 |
| 10 L 915 | 502* | . 005 | $13 / 16 \times 19$ | 2.45 | 2.04 | 1.84 |
| 10 L 916 | 103* | . 01 | 19/16x ${ }^{19 / 33^{\prime \prime}}$ | 2.55 | 2.13 | 1.91 |
| 10 L 917 | 203 | . 02 | $13 / 4 x^{3 / 4}$ | 2.97 | 2.48 | 2.23 |
| 10 L 918 | 503 | . 05 | 21/4x ${ }^{29} / 33^{\prime}$ | 3.27 | 2.73 | 2.45 |
| 10 L 919 | 104 | . 1 | $21 / 4 \times 2933^{\circ}$ | 3.60 | 3.00 | 2.70 |
| 5000 WORKING VOLTS |  |  |  |  |  |  |


| 10 L 920 | 102* | . 001 | $13 / 16 \times 19 / 32^{\prime \prime}$ | 3.78 | 3.15 | 2.83 |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 10 L 921 | 103 | . 01 | $13 / 4 x^{3 / 4}{ }^{\prime \prime}$ | 4.08 | 3.40 | 3.06 |
| 10 L 922 | 203 | . 02 | 21/4 $x^{3 / 4}{ }^{\prime \prime}$ | 4.32 | 3.60 | 3.24 |
| 10 L 923 | 503 | . 05 | 21/4 $\times^{29} / 32^{\prime \prime}$ | 4.56 | 3.80 | 3.42 |
| 10 L 924 | 104 | . 1 | 21/2x13/8' | 5.10 | 4.25 | 3.8 |


| 10 L 924 | 104 | .1 | $21 / 2 \times 13 / 8^{*}$ | 5.10 | 4.25 | 3.83 |
| :--- | :--- | :--- | :--- | :--- | :--- | :--- |
| 8000 WORKING VOLTS |  |  |  |  |  |  |


| 10 L 925 | 102* | . 001 | $19 / 16 \times^{19} 33^{\prime \prime}$ | 3.90 | 3.25 | 2.93 |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 10 L 926 | 202* | . 002 | 19/16x ${ }^{19 / 32^{\prime \prime}}$ | 4.08 | 3.40 | 3.06 |
| 10 L 927 | 502 | . 005 | $13 / 4 x^{3 / 4}{ }^{\prime \prime}$ | 4.20 | 3.50 | 3.15 |
| 10 L 928 | 103 | . 01 | $21 / 4 x^{3} / 4$ " | 4.50 | 3.75 | 3.38 |
| 10 L 929 | 203 | . 02 | $23 / 4 x^{29} / 32^{\prime \prime}$ | 5.16 | 4.30 | 3.87 |
| 10 L 930 | 503 | . 05 | $23 / 4 \times 13 / 8^{\prime \prime}$ | 4.20 | 3.50 | 3.15 |
| 10 L 931 | 104 | . 1 | $31 / 2 \times 15 / 8^{\prime \prime}$ | 7.50 | 6.25 | 5.63 |
| 10 L 932 | 204 | . 2 | $7 \times 158^{\circ}$ | 8.64 | 7.20 | 6.48 |

10,000 WORKING VOLTS

| 10 | 501* | . 0005 |  | 4.20 | 3.5 | 3.15 |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | 102* | . 001 |  | 4.32 | 3.60 | 24 |
| 10 L 935 | 202* | . 002 |  | 4.44 | 3.70 | 3.33 |
| 10 L 936 | 502 | . 005 | $13 / 4 \times^{13 / 16 "}$ | 5.10 | 4.25 | 3.83 |
| 10 L 937 | 103 | . 01 | $31 / 2 x^{29} / 3$ | 5.52 | 4.60 | 4.14 |
| 10 L 938 | 203 | . 02 | 23/4 | 6.84 | 5.70 | 5.13 |
| 10 L 939 | 303 | . 03 | $23 / 4 \times 13 / 8$ | 8.76 | 7.30 | 6.57 |
| 10 L 960 | 603 | . 06 | $41 / 4 \times 13 / 8^{\prime \prime}$ | 10.50 | 8.75 | 7.8 |

## 20,000 WORKING VOLTS

| 10 L 940 | $501 *$ | .0005 | $21 / 4 \times^{19} / 32^{\prime \prime}$ | 10.80 | 9.00 | 8.10 |
| :--- | :--- | :--- | :--- | :--- | :--- | :--- | | 10 L 941 | 102 | .001 | $31 / 2 x^{3 / 4} 4^{\prime \prime}$ | 11.40 | 9.50 | 8.55 |
| ---: | ---: | :--- | :--- | ---: | ---: | ---: |
| 10 L 942 | 202 | .002 | $31 / 2 x^{13} / 6^{\prime \prime}$ | 12.60 | 10.50 | 9.45 |

## SPRAGUE "TC" CALCULATOR

 Handy slide-rule. Determines values of NPOand N750 ceramics to be connected in parallel to equal a capacitor of desired intermediate to equal a capacitor of desired intermediate 37 Kh. wt., 40 NET.

> Industrial Users Attention! Allied can readily supply from stock a wide variety of industrial capacitors at OEM prices. (You pay the same low price as if purchase was made direct from factory.) Address your inquiries to: Industrial Division.


## SINGLE SECTION

| No. | Type | Mifd. | W. V. | Size | NET |
| :---: | :---: | :---: | :---: | :---: | :---: |
| 13 L 035 | 2 J | 10 | 450 | 15/32 ${ }^{1 / 21 / 2}$ | 2.38 |
| $13 L 037$ | 4 J | 20 | 450 | 15/32x21/2" | 2.53 |
| $13 L 038$ | 6 J | 30 | 450 | $15 / 32 \times 21 / 2^{\prime \prime}$ | 2.62 |
| $13 L 039$ | 8 J | 40 | 450 | $15 / 32 \times 21 / 2^{\prime \prime}$ | 2.68 |
| 3 L 040 | 16 J | 80 | 450 | $13 / 8 \times 31 / 2^{\prime \prime}$ | 3.26 |
| 3 L 0411 | 2L | 10 | 600 | $13 / 8 \times 41 / 4^{\prime \prime}$ | 2.47 |

## dUAL SECTION



## TRIPLE SECTION




## XPP MINIATURIZED

METAL-CASED ELECTROLYTICS
Miniature, hermetic alily
sealed metalcased tubular aluminum elec-

trolytic capacitors. Ideal for all transistorized assemblies where space limitations are present. Feature extended life, and provide for relatively
high capacitance values at low voltage. Tolerhigh capacitance values at low voltage. Tolerance: $-10 \%,+250 \%$. Operating temperature
range: -20 to $+65^{\circ} \mathrm{C}$. Av. shpg. wt., 2 oz .
Stock No. Mfd. WVDC


PRS MINIATURE ELECTROLYTICS
Extremely compact high-quality tubular electrolytics in metal cans with cardboard sleeves. Ideally suited to a wide variety of applications where space is at a tive leads are connected to aluminum cans. Dual and triple-section types have common negative leads. Sin-gle-section capacitors have bare, tinned copper leads, $3^{\prime \prime}$ long. Dual and triple-section types have flexible stranded-copper leads, $5^{\prime \prime}$ long, with insulating sleeves. All are conservatively rated for temperatures to $85^{\circ} \mathrm{C}$. Av. shpg. wt., 4 oz.


|  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: |
| Stock No. | Mifd | Volts | Size | $\begin{aligned} & \text { NET } \\ & \text { EACH } \end{aligned}$ |
| 13 L 639 | 8 | 700 | 15/16×31/6" | 1.29 |
| $13 L 640$ | 10 | 700 | $11 / 16 \times 31 / 16^{\prime \prime}$ | 1.38 |
| $12 L 623$ | 12 | 700 | $11 / 16 \times 39 / 16^{\prime \prime}$ | 1.44 |
| $13 L 642$ | 16 | 700 | $11 / 16 \times 39 / 16^{\prime \prime}$ | 1.56 |
| 13 L 632 | 8 | 600 | 15/16x31/16" | 1.23 |
| 13 L 633 | 10 | 600 | 15/16 $\times 31 / 16^{\prime \prime}$ | 1.29 |
| $13 L 634$ | 12 | 600 | $11 / 16 \times 31 / 16^{\prime \prime}$ | 1.41 |
| 131635 | 16 | 600 | 11/16 $\times 39 / 1{ }^{\prime \prime}$ | 1.50 |
| 12 L 617 | 1 | 450 | $916 \times 11 /{ }^{\prime \prime}$ | . 64 |
| 12 L 18 | 2 | 450 | 9/16 $\times 11 / 4^{\prime \prime}$ | . 64 |
| 13 L 385 | 4 | 450 | 11/16x11/2" | . 68 |
| 131386 | 8 | 450 | $13 / 16 \times 11 / 2^{\prime \prime}$ | .73 |
| 13 L 394 | 10 | 450 | $13 / 16 \times 13 / /^{\prime \prime}$ | .76 |
| $13 L 387$ | 12 | 450 | $15 / 16 \times 112^{\prime \prime}$ | .79 |
| $13 L 388$ | 16 | 450 | $15 / 16 \times 13 / 4^{\prime \prime}$ | . 82 |
| 131389 | 20 | 450 | 11/16x13/4" | .91 |
| $13 L 395$ | 30 | 450 | $11 / 16 \times 21 / 4^{\prime \prime}$ | 1.00 |
| 13 L 396 | 40 | 450 | $11 / 16 \times 21 / 2^{\prime \prime}$ | 1.06 |
| $12 L 619$ | 50 | 450 | $11 / 16 \times 31 / 4{ }^{\prime \prime}$ | 1.23 |
| 12 L 620 | 60 | 450 | $11 / 16 \times 31 / 4^{\prime \prime}$ | 1.38 |
| 121621 | 80 | 450 | 11/16x33/4" | 1.65 |
| 12 L 622 | 100 | 450 | $11 / 16 \times 33 / 4^{\prime \prime}$ | 1.88 |
| 12 L 612 | 10 | 350 | $13 / 16 \times 13 / 4^{\prime \prime}$ | . 73 |
| 131403 | 16 | 350 | $13 / 16 \times 13 / 4^{\prime \prime}$ | . 82 |
| 13 L 404 | 24 | 350 | 15/16x13/4" | .91 |
| 124613 | 30 | 350 | 13/16x21/4" | . 97 |
| 124614 | 40 | 350 | 15/16x21/4" | 1.03 |
| $12 L 615$ | 50 | 350 | 11/16×21/4" | 1.09 |
| 124616 | 60 | 350 | 11/16x21/2" | 1.15 |
| 13 L 410 | 4 | 250 | 11/16x11/4" | . 59 |
| $13 L 411$ | 8 | 250 | 11/16 $\times 11 / 2^{\prime \prime}$ | . 68 |
| 13 L 412 | 12 | 250 | $11 / 16 \times 13 / 4^{\prime \prime}$ | .73 |
| 131413 | 16 | 250 | 13/16 $\times 11 / 2^{\prime \prime}$ | .76 |
| 13 L 414 | 20 | 250 | 13/16 ${ }^{1 / 11^{\prime \prime}}$ | .79 |
| 12 L 608 | 30 | 250 | $13 / 16 \times 21 / 4^{\prime \prime}$ | . 85 |
| $12 L 609$ | 40 | 250 | 13/16 $\times 21 / 4^{\prime \prime}$ | . 91 |
| 12 L 10 | 50 | 250 | 15/16x21/4" | 1.00 |
| 126611 | 60 | 250 | 15/16x21/4" | 1.06 |
| $13 L 430$ | 4 | 150 | , $916 \times 11 / 4^{\prime \prime}$ | . 59 |
| $13 L 431$ | 8 | 150 | $11 / 16 \times 11 / 4^{\prime \prime}$ | . 62 |
| $13 L 425$ | 10 | 150 | 11/16x11/4" | . 62 |
| $13 L 432$ | 12 | 150 | 11/16x11/4" | . 65 |
| $13 L 433$ | 16 | 150 | 11/16×11/2" | . 68 |
| $13 L 443$ | 20 | 150 | 11/16x13/4" | .71 |
| $13 L 434$ | 24 | 150 | 11/16x13/4" | . 73 |
| $13 L 435$ | 30 | 150 |  | . 76 |
| $13 L 436$ | 40 | 150 | $13 / 16 \times 13 / 4 \prime \prime$ | . 79 |
| 13 L 441 | 50 | 150 | 15/16x13/4" | . 82 |
| $12 L 607$ | 60 | 150 | 15/16x13/4" | . 88 |
| $13 L 426$ | 80 | 150 | 15/16x21/4" | . 94 |
| $13 L 427$ | 100 | 150 | 15/16x21/4" | 1.03 |
| $13 L 428$ | 150 | 150 | 11/16x3 ${ }^{\prime \prime}$ | 1.12 |
| $13 L 450$ | 10 | 50 | 9/16x11/4" | . 59 |
| $13 L 856$ | 20 | 50 | 11/16x11/4" | . 59 |
| $13 L 451$ | 25 | 50 | 11/16x11/4" | . 62 |
| $13 L 452$ | 50 | 50 |  | . 71 |
| $13 L 453$ | 100 | 50 | $13 / 16 \times 13 / 4^{\prime \prime}$ | . 82 |
| $12 L 605$ | 150 | 50 | $15 / 16 \times 13 / 4^{\prime \prime}$ | . 91 |
| $12 L 606$ | 250 10 | 50 | $15 / 16 \times 13 / 4^{\prime \prime}$ $9 / 16 \times 14^{\prime \prime}$ | $\begin{array}{r}1.03 \\ \hline 59\end{array}$ |
|  | 16 | 25 |  |  |
| $13 L 461$ | 25 | 25 | $916 \times 1{ }^{16 \times 1} 14^{\prime \prime}$ | . 59 |
| 13 L 462 | 50 | 25 | $11 / 16 \times 112^{\prime \prime}$ | . 65 |
| $13 L 463$ | 100 | 25 | $13 / 16 \times 11 / 2^{\prime \prime}$ | . 79 |
| $12 L 604$ | 250 | 25 | 15/16x21/4" | 1.00 |



B-DOUBLE SECTION

| 13 L391 | 8-8 | 450 | 13/16x21/4" |  |
| :---: | :---: | :---: | :---: | :---: |
| 13 L 392 | 8-16 | 450 | $15 / 10 \times 21 / 4^{\prime \prime}$ | . 18 |
| $13 L 397$ | 10-10 | 450 | $15 / 16 \times 21 / 4^{\prime \prime}$ | 1.09 |
| 12 L 638 | 16-16 | 450 | $11 / 16 \times 21 / 4^{\prime \prime}$ | 1.32 |
| 124639 | 20-20 | 450 | 15/16x31/16" | 1.47 |
| $12 L 640$ | 30-30 | 450 | 11/16x31/4" | 1.76 |
| 12L641 | 40-20 | 450 | 1116x31/4" | . 73 |
| $13 L 851$ | 40-40 | 450 | $11 / 16 \times 4^{\prime \prime}$ | 1.97 |
| $12 L 642$ | 50-30 | 450 | 11/16 $\times 4^{\prime \prime}$ | 2.00 |
| 12 L 635 | 10-10 | 250 | 13/16 $\times 13 / 4^{\prime \prime}$ | . 97 |
| $12 L 636$ | 16-16 | 250 | $13 / 16 \times 214^{\prime \prime}$ | 1.00 |
| 13 L 852 | 20-20 | 250 | $15 / 16 \times 21 / 4^{\prime \prime}$ | 1.09 |
| 124637 | 30-30 | 250 | $15 / 16 \times 21 / 4^{\prime \prime}$ | 1.32 |
| \| 21631 | 8-8 | 200 | 11/16x13/4" | . 88 |
| $12 L 633$ | 30-30 | 200 | 15/16x21/4" | 1.26 |
| $13 L 437$ | 8-8 | 150 | 11/16x13/4" | . 88 |
| 13 L 439 | 20-20 | 150 | $13 / 16 \times 13 / 4^{\prime \prime}$ | . 97 |
| $12 L 625$ | 20-30 | 150 | 13/16x21/4" | 1.00 |
| 12 L 626 | 20-40 | 150 | 15/16x13/4" | 1.03 |
| 12 L 627 | 30-30 | 150 | $15 / 16 \times 13 / 4 *$ | 1.06 |
| $2 L 628$ | 40-30 | 150 | $15 / 16 \times 21 / 4{ }^{\prime \prime}$ | 1.06 |
| 13 L 442 | 40-40 | 150 | $15 / 16 \times 21 / 4^{\prime \prime}$ | 1.06 |
| 12 L 629 | 40-80 | 150 | 15/16x23/4" | 1.29 |
| $13 L 853$ | 50-30 | 150 | 15/16x21/4" | 1.15 |
| 131854 | 50-50 | 150 | ${ }^{15} / 16 \times 21^{\prime \prime}$ | 1.23 |
| $12 L 630$ | 100-100 | 150 | 11/16x31/4" | 1.88 |
| TRIPLE SECTION |  |  |  |  |

## TYPE MSRP MOTOR-START CAPACITORS

An assortment of mo-
tor-start capacitors plastic in molded plastic containers to
sistance to effects of
sistance to effects of oil, dirt, grease and mois-
ture. Units listed ture. Units insted come furnished with 2 screwtype terminals for easy installation. For 110 Less mounting hardware. Av. shpg. wt., 6 oz.

## MSRP CAPACITOR HARDWARE

Mounting hardware for MSRP capacitors. Types PCB-1 and PCB-2 are end caps for onmotor mtg. Types PCT-1 and PCT-2 are end 2 are snap-in mounting brackets. End caps are plastic; brackets are metal. Av. shpg. wt., 4 oz .

| Stock No. | Type | Size | NET |
| :---: | :---: | :---: | :---: |
| 13 L 300 | PCB-1 | ${ }^{17 / 11^{\prime \prime}}$ dia. | 124 |
| 13 L 301 | PCB-2 | 113/16 ${ }^{\prime \prime}$ dia. | 54 |
| 13 L 302 | PCT-1 | 17/16" dia. | 24 |
| 13 L 303 | PCT-2 | $1{ }^{113 / 16 " 1{ }^{\prime \prime}}$ dia. | 154 |
| 13 L 305 | CTB-2 | 43/8" ${ }^{\prime \prime}$ long | 214 |


| ockNo. | Type | Mfd | Size | NET |
| :---: | :---: | :---: | :---: | :---: |
| 13 L 306 | -811 | 20-24 |  |  |
| 13 L 307 | -813 | 32-36 |  |  |
|  | -815 -817 | $43-53$ $64-77$ | 17/6x33/8" | 3 |
| 13 L 358 | $\begin{aligned} & -817 \\ & -818 \end{aligned}$ | 70-84 |  | . 35 |
| 13 L 359 | -819 | 75-90 |  |  |
| 13 L 360 | -800 | 88-108 |  |  |
| 13 L 361 | -801 | 108-130 | 17/6x33/8' |  |
| 13 L 1362 | -802 | 124-149 |  |  |
| 13 L .364 | -823 | 145-175 |  |  |
| 13 L 365 | -803 | 161-193 |  |  |
| 13 L 366 | -824 | 189-227 | 17/6x $33 / 8^{\prime \prime}$ |  |
| 13 L 367 | -804 | $\xrightarrow{200-220}$ |  | 2.29 2.38 |
| 13 L 369 | -807 | 270-324 |  |  |
| 13 L 321 | -825 | 340-412 |  | 3.26 |
| 13 L 322 | -809 | 400-450 | $113 / 16 \times 33$ |  |
| 13 L 324 | -881* | 108-130 |  |  |
| 13 L 325 | -882* | 145-175 |  |  |
| 13 | -883* | 161-193 | 17/16x33/8 |  |
| 13 L 327 | -884* | 189-227 |  | 2.53 |

## Aerovox Capacitors

P92ZN
STANDARD INDUSTRIAL CAPACITORS


TYPE P92ZN METALLIZEDPAPER TUBULARS
High-quality capacitors of Aerolene-impregnated metallized-paper. Modified plastic tubular type. Paper cases with Duranite end seals. P92ZN capacitors are ideally suited for original or replacement use in radio and television receivers, amplifiers and other electronic equipment. Win withstand high temperatures. degrees C. Tolerance of $\pm 20 \%$ in all capacities and voltages. Sizes of $\pm 20 \%$ in are diameter and length. Av. shpg. wt., 2 oz.

| No. | Mfd | Volts | Size | 1-24, EA. |
| :---: | :---: | :---: | :---: | :---: |
| 12 L 700 | . 01 | 200 | 3/16x9/16 | . 42 |
| $12 L 701$ | . 02 | 200 | $1 / 4 x^{23} / 32^{\prime \prime}$ | . 42 |
| $12 L 702$ | . 03 | 200 | $1 / 4 x^{23} 33^{\prime \prime}$ | . 44 |
| 12 L 703 | . 05 | 200 | $1 / 4 \mathrm{x}^{27} / 32^{\prime \prime}$ | . 44 |
| 124704 | . 1 | 200 | $9 / 32 x^{27 / 32^{\prime \prime}}$ | . 46 |
| 12 L 705 | .25 | 200 | $3 / 8 x^{27} 32^{\prime \prime}$ | . 67 |
| $12 L 706$ | . 5 | 200 | $13 / 32 \times 15 / 32^{\prime \prime}$ | . 78 |
| 12 L 707 | 1.0 | 200 | 9 | 1.05 |
| $12 L 708$ | 2.0 | 200 | 5/8×11/2" | 1.42 |
| 12 709 | . 01 | 400 | $1 / 4 x^{23} / 32^{\prime \prime}$ | . 42 |
| 12 7 10 | . 02 | 400 | $5 / 16 x^{23 / 32}{ }^{\prime \prime}$ | . 44 |
| 2 L 71 | . 03 | 400 | $3 / 8 x^{23 / 32}{ }^{\prime \prime}$ | . 44 |
| 12 L 12 | . 05 | 400 | $3 / 8 \mathrm{x}^{27} / 32^{\prime \prime}$ | . 46 |
| 12 713 | . 1 | 400 | $3 / 8 \times 15 / 32^{\prime \prime}$ | . 49 |
| $12 L 714$ | . 25 | 400 | $916 \times 15 / 32^{\prime \prime}$ | .73 |
| 2 L 715 | . 5 | 400 | $5 / 8 \times 13 /{ }^{\prime \prime}$ | . 93 |
| $2 L 716$ | 1.0 | 400 | 3/4 ${ }^{17}{ }^{\prime \prime}$ | 1.29 |
| $12 \mathrm{Ll7}$ | 2.0 | 400 | $13 / 16 \times 23 / 8^{\prime \prime}$ | 1.82 |
| 12 l 18 | . 01 | 600 | $9 / 32 x^{23} / 32^{\prime \prime}$ | . 44 |
| 2 L 719 | . 02 | 600 | 3/8x ${ }^{23 / 32}$ | . 46 |
| 2 L 720 | . 03 | 600 | $13 / 32 \mathrm{x}^{23} / 33^{\prime \prime}$ | . 49 |
| 12L721 | . 05 | 600 | $13 / 32 \mathrm{x}^{27} 32^{\prime \prime}$ | . 52 |
| 12 L 22 | . 1 | 600 | $13 / 32 \times 15 / 32^{\prime \prime}$ | .57 |
| $2 L 723$ | .25 | 600 | 5/8×15/32" | . 90 |
| 2 L 724 | . 5 | 600 | 11/16 $\times 11^{\prime \prime}{ }^{\prime \prime}$ | 1.13 |
| 2 L 725 | 1.0 | 600 | $13 / 16 \times 178^{\prime \prime}$ | 1.40 |
| 12 L 26 | 2.0 | 600 | 15/16x23/8" | 1.99 |

For OEM prices in quantity lots of 25-49 and $50-u p$, write our Industrial Division.

TYPES P30ZN AND P30Z
"BATHTUB" CAPACITORS


Ruggedly constructed, dependable capacitors of metallized paper, Aerolene impregnated. In "bathtub" type metal housings. Vitrified ce ramic or glass terminal seals offer high insuladegrees $C$ to +100 degrees $C$ at full rating dan be operated at degrees +125 degrees $C$ at 75 per cent of voltage rating. Standard tolerance of $\pm 20 \% . *,-55^{\circ} \mathrm{C}$ to $+70^{\circ} \mathrm{C}$. Av. wt. 4 oz .

| No. | Mfd | Volts | Size (LWH) | 1-24, EA. |
| :---: | :---: | :---: | :---: | :---: |
| 12 750 | 3.0 | 150 | $13 / 4 \times 1 x^{3 / 4}$ | 3.21 |
| 12 l 151 | 4.0 | 150 | $13 / 4 \times 1 \times 3 / 4^{\prime \prime}$ | 3.87 |
| 12 L 987 | 4.0* | 150 | 13/4x1x7/8" | 3.58 |
| $12 L 752$ | 5.0 | 150 | $13 / 4 \times 1{ }^{3} / 4^{\prime \prime}$ | 4.29 |
| 12 L 75 | 6.0 | 150 | $13 / 4 \times 11 / 4 \times 7 / 8^{11}$ | 4.48 |
| $12 L 754$ | 8.0 | 150 | $2 \times 13 / 4 x^{3 / 4}{ }^{\prime \prime}$ | 5.17 |
| 12 L 988 | 8.0* | 150 | $2 \times 2 \times 1{ }^{\prime \prime}$ | 4.88 |
| 2 L 755 | 10.0 | 150 | $2 \times 13 / 4 \times 3 / 4^{\prime \prime}$ | 5.96 |
| 12 l 989 | 10.0* | 150 | $2 \times 2 \times 11{ }^{\prime \prime}$ | 5.66 |
| 2 L 756 | 12.0 | 150 | $2 \times 2 \times 7 / 8$ | 6.68 |
| 2 L 990 | 12.0* | 150 | $2 \times 2 \times 11 /{ }^{\prime \prime}$ | 6.39 |
| 12 L 757 | 15.0 | 150 | $2 \times 2 \times 1$ " | 8.08 |
| 2 L 761 | 1.0 | 200 |  | 2.80 |
| 2 L 991 | 1.0* | 200 | $13 / 4 \times 1 x^{3 / 4}$ | 2.5 |
| 21.762 | 2.0 | 200 |  |  |
| 12 L 992 | 2.0* | 200 |  | 3.17 |
| 12 763 | 1 | 400 | 13/4x | 2.25 |
| 2 L 766 | 1.0 | 400 | $13 / 4 \times 1 \times 7 / 8^{\prime \prime}$ | 2.90 |
| 2 L 993 | 1.0* | 400 | $13 / 4 \times 1 \times 7 / 8^{\circ}$ | 2.61 |
| 2 L 767 | 2.0 | 400 | $2 \times 13 / 4 x^{13 / 16 "}$ | 3.66 |
| 2 L 994 | 2.0* | 400 | $2 \times 13 / 4 \times 7 / 8^{\prime \prime}$ | 3.36 |
| 2 L 768 | 3.0 | 400 | $2 \times 13 / 4 \times 15 / 16^{\prime \prime}$ | 4.13 |
| 2 L 769 | 4.0 | 400 | $2 \times 2 \times 1$ " | 4.87 |
| 12 L 995 | 4.0* | 400 | $2 \times 2 \times 1{ }^{1 / 8}$ | 4.58 |
| 12 L 70 | 5.0 | 400 | $2 \times 2 \times 11 / 4^{\prime \prime}$ | 5.87 |
| 12 L 71 | . 1 | 600 | $13 / 4 \times 1 \times 3 / 4{ }^{4}$ | 2.32 |
| 12 L 72 | . 25 | 600 | $13 / 4 \times 1 \times 3 / 4$ | 2.41 |
| 12 7 4 | 1.0 | 600 | $13 / 4 \times 11 / 4 \times 7 / 8^{\prime \prime}$ | 3.18 |
| $12 L 997$ | 1.0* | 600 | $13 / 4 \times 11 / 4 \times 7 / 8^{\prime \prime}$ | 2.89 |
| 21775 | 2.0 | 600 | 2x2x7/8" | 3.77 |
| 2 L 996 | 2.0* | 600 | $2 \times 2 \times 1$ " | 3.48 |
| 12 L 776 | 3.0 | 600 | $2 \times 2 \times 1 /{ }^{\prime \prime}$ | 5.34 |
| 12 L 777 | 4.0 | 600 | $2 \times 2 \times 11 / 4^{\prime \prime}$ | 6.40 |

[^7]
## TYPE P82Z AEROLITE

 METALLIZED-PAPER TUBULARSLightweight, metallized-paper tubular capacitors. Hyvol $K$ impregnated units in moistureresistant, wax-impregnated cardboard cases Have selion against surge voltages. Low power actor, less than $1 \%$. Operate from $-40^{\circ} \mathrm{C}$ to $70^{\circ}$ C. Av. shpg. wt., 2 oz.

| No. | Mfd | Volts | Slze | 1-24, EA. |
| :---: | :---: | :---: | :---: | :---: |
| $3 L 670$ | . 01 | 200 | $3 / 8 \times 5 / 8^{\prime \prime}$ | . 42 |
| $3 L 671$ | . 02 | 200 | $3 / 8 \times 58^{\prime \prime}$ | .42 |
| 3 L 672 | . 03 | 200 | $3 / 8 \times 5{ }^{\prime \prime}$ | 44 |
| 3 L673 | . 05 | 200 | $3 / 8 \times 58^{\circ}$ | 4 |
| 13 L 674 | . 1 | 200 | $3 / 8 \times 5 / 8^{\prime \prime}$ | . 46 |
| $13 L 675$ | . 25 | 200 | 15/32x ${ }^{3 / 8}$ | 7 |
| $3 L 676$ | . 5 | 200 | 15/32x11/8" | . 78 |
| 3 L 677 | 1.0 | 200 | 916x11/8" | 1.05 |
| 3 L678 | 2.0 | 200 | $58 \pm 15 / 8^{\prime \prime}$ | . 42 |
| $13 L 679$ | . 01 | 400 | $3 / 8 \times 5 / 8$ | . 43 |
| 3 L 680 | . 02 | 400 | $3 / 8 \times 5 / 8^{\prime \prime}$ | . 44 |
| 3 L 681 | . 03 | 400 | $3 / 8 \times 58^{\prime \prime}$ | 44 |
| $3 L 682$ | . 05 | 400 | $15 / 32 x^{5} / 8^{\prime \prime}$ | 46 |
| $3 L 683$ | . 1 | 400 | $15 / 32 \times 1{ }^{\prime \prime}$ | . 49 |
| $13 L 684$ | . 25 | 400 | 9/16 $\times 11 /{ }^{\prime \prime}$ | . 7 |
| $3 L 685$ | . 5 | 400 | 5/8×15/8" | 93 |
| $3 L 686$ | 1.0 | 400 | ${ }^{23} 3372{ }^{\text {a }} 18^{\prime \prime}$ | 1.29 |
| 3 L 687 | . 01 | 600 | $3 / 8 \times 5 /{ }^{\prime \prime}$ | . 4 |
| 3 L 688 | . 02 | 600 | 3/8x ${ }^{\circ} 8^{\circ}$ | 46 |
| $13 L 689$ | . 03 | 600 | $15 / 32 \times 5 / 8^{\prime \prime}$ | . 49 |
| 13 L 690 | . 05 | 600 | $15 / 32 \mathrm{x}^{5} / 8^{\prime \prime}$ | . 52 |
| $13 L 691$ | . 1 | 600 | $15 / 32 \times 11 /{ }^{\prime \prime}$ | .57 |
| $3 L 692$ | . 25 | 600 | $5 / 8 \times 11{ }^{\prime \prime}$ | . 90 |
| 3 L 693 | . 5 | 600 | $33 / 32 \times 15 / 8{ }^{\prime \prime}$ | 1.13 |
| 13 L694 | 1.0 | 600 | ${ }^{33} / 32 \times 25 / 8^{\prime \prime}$ | 1.40 |

For OEM prices in quantity lots of 25-49 and $50-\mathrm{up}$, write our Industrial Division.

## TYPE P83Z MICROMINIATURE METALLIZED-PAPER TUBULARS

Ultra-small (resistor size); metallized dielectric. For replacement and original use as coupling and bypass capacitors in rad T and elec moisture-resistant cases Improved metallized foil serves as both dielectric and electrodes. Av. shpg. wt., 2 oz.

| No. | Mfd | W.V. | SIze | 1-24, EA |
| :---: | :---: | :---: | :---: | :---: |
| 13 L 885 | . 005 | 200 |  | 21 |
| 13 L 886 | . 01 | 200 | 3/6x7/6" | . 21 |
| 13 l | . 0022 | 400 400 | 3/6x $/ 16{ }^{\circ}$ | . 21 |
| 13 L 889 | . 01 | 400 | 1/4x9/6" | . 26 |
| 13 L 890 | . 0005 | 600 |  |  |
| 13 L 891 | . 001 | 600 | 3/16x7/6" | .21 |
| 13 L 892 | . 002 | 600 |  |  |
| 134894 | . 0047 | 600 | 1/4x ${ }^{2} / 66^{\prime \prime}$ | . 26 |
| 134895 <br> 13 | . 005 | 600 600 |  | . 26 |

For OEM prices in quantity lots of 25-49 and $50-\mathrm{up}$, write our Industrial Division.

TYPE JP30M HYVOL CAPACITORS


Hermetically sealed, immer sion-proof bathtub style ca pated, oil-filled drawn metal case. Bakelite insula mers riveted to case. Rug gedly constructed for use under severe operating con ditions. MIL type CP53, CP54, CP55. 600


For OEM prices in quantity lots of 10-24 and 25-up, write our Industrial Division.

## TYPE P123ZG ULTRA-COMPACT

## METALLIZED-PAPER CAPACITORS

Ultra-compact P123ZG capacitors. Extremely small size makes them ideal for military and aircraft applications where minimum size and Unght with maximum durability is required Units are also wel suited ror replacement and oquinmense in radio, telelision and electronic to wiment. Ind temperature sealed metal can and heat. Temperature range: $-55^{\circ} \mathrm{C}$. to $+70^{\circ}$ C at full voltage rating to $+100^{\circ} \mathrm{C}$. at lowe c., at ful That res and voltares. Av. shpg wt, 2 oz

| No. | Mfd | Volts | SIze | 1-24, EA |
| :---: | :---: | :---: | :---: | :---: |
| 13 L 900 | . 001 | 200 | 11/6477 | 5 |
| 13 L 90 | . 002 | 200 | $11 / 6$ | 5 |
| 13 L 902 | . 003 | 200 | ${ }_{11} 1 / 6 x^{7 / 16}{ }^{\prime \prime}$ |  |
| 134903 | . 005 | 200 | 11/6 |  |
| 13 L 904 | . 01 | 200 | $11 / 64 \times 7 / 6^{\prime \prime}$ | . 0 |
| L 905 | . 047 | 200 | ${ }^{15} / 64 \mathrm{X}^{23} / 32^{\prime \prime}$ | 1.05 |
| L 906 | . 050 | 200 | 1564 ${ }^{2}{ }^{23 / 32}{ }^{\prime \prime}$ |  |
| L 907 | . 068 | 200 | 5/16x $\mathrm{x}^{23 / 32^{\prime \prime}}$ | . 0 |
| 13 L 9 | . 10 | 200 | $5 / 16 \mathrm{x}^{23 / 33^{\prime \prime}}$ | 1.1 |
| 13 L 909 | . 22 | 200 | 5/16x11/32 | 1.13 |
| L910 | . 25 | 200 | 5/16x11/32" | 1.24 |
| L 911 | . 47 | 200 | $13^{1 / 32 \times 11 / 32^{\prime \prime}}$ | 1.33 |
| L 912 | 1.68 | 200 |  | 1.40 |
| 13 L 914 | 2.0 | 200 | 9/16x123/32 | 2.33 |
| 3 L 915 | . 0005 | 400 | ${ }^{11} / 6 x^{7} 7 / 6{ }^{\prime \prime}$ | . 99 |
| L 916 | . 001 | 400 | $11 / 64 \times 7 /$ |  |
| 291 | . 022 | 400 | $11 / 6 \times 1$ |  |
| 13 L 920 | . 022 | 400 | 5/16 $\mathrm{x}^{2} 3 / 32^{\text {a }}$ | 1.06 |
| 13 L 921 | . 033 | 400 | 5/16x | 1.06 |
| 13.922 | . 040 | 400 | 5/16 $\mathrm{x}^{23} 33^{\prime \prime}$ | . 06 |
| 13 L 923 | . 047 | 400 | $13 / 3 x^{2}{ }^{23 / 32^{\prime \prime}}$ | . |
| 13 L 924 | . 050 | 400 | ${ }^{13 / 32 x^{23} / 3 z^{\prime \prime}}$ | . 18 |
| 13 L 926 | . 10 | 400 | $\frac{13 / 32 \times 11 / 32^{\prime \prime}}{1 / 11^{\prime \prime}}$ | 1.18 |
| L 927 | . 15 | 400 | 1/2x11 | 1.25 |
| , | . 22 | 400 | 9/16x11/320 | . |
| 13.9 | . 47 | 400 | $916 \times 11 / 3$ |  |
| 13 L 933 | 1.0 | 400 | ${ }^{4} 46 \times 164 \times 2732^{\circ}$ | 1.92 |
| 13 L 934 | . 01 | 600 | $5 / 16 \mathrm{~K}^{23} 3 / 32^{2}$ | 1.08 |
| 13 L 936 | . 10 | 600 | $1 / 2 \times 1{ }^{1 / 33^{\prime \prime}}$ | . 2 |
| , | . 50 | 600 | $4{ }^{1 / 3}$ | . 53 |
| 13 L 938 | 1.0 | 600 600 | ${ }^{43 / 64 \times 123 / 3{ }^{12}}$ | . 84 |

For OEM prices in quantity lots of 25-up, write our Industrial Division.

TYPE P89ZXY SEALED METAL TUBULARS


Tubular Aerolites in her metically sealed meta pregnated. Have "self healing,' characteristi which assures full protection against voltage surges. Double-rubber bakelite terminal seals. For hard use under extreme conditions. Toler ance: $\pm 20 \%$. Negative lead not connected to metal case. Av. shpg. wt., 2 oz .

| No. | Mfd | Volts | Size | 1-2 |
| :---: | :---: | :---: | :---: | :---: |
| 12 L 730 | . 25 | 200 | $1 / 2 \times 1{ }^{\prime \prime}$ |  |
| 12 L 732 | 1.0 | 200 | $5 / 8 \times 11 / 2^{\prime \prime}$ |  |
| 12 L 7333 | 2.0 | 200 | 5 | 2.1 |
| 12 L 736 | . 1 | 400 | 7/16x |  |
| 12 L 737 | . 25 | 400 | $5 / 8 \times 15 / 16^{\prime \prime}$ |  |
| 12 L 738 | . 5 | 400 | 5/8x |  |
| 12 L 739 | 1.0 | 400 | $3 / 4 \times 21 / 2^{\prime \prime}$ | 2.1 |
| 12 L | 2.0 | 400 | $1 \times 21 / 2^{\prime \prime}$ | 3.1 |
| 12 l 741 | . 01 | 600 600 | $3^{3 / 821 .}$ | 1 |
| 12 L 742 | . 02 | 600 600 | ${ }^{3 / 8 \times 1}{ }^{\text {c/ }}$ | . 3 |
| 12 L 745 | . 1 | 600 | $1 / 2 \times 1{ }^{1 / 2^{\prime \prime}}$ |  |
| 12 | . 25 | 600 | $5 / 8 \times 15$ |  |
| 2 747 | . 5 | 600 | ${ }^{3 / 4} 3 \times 2{ }^{1 / 4}$ | . 9 |
| $12 L 748$ | 1.0 | 600 | $13 / 16 \times 21 / 2^{\prime \prime}$ | 3.6 |
| 12 L 749 | 2.0 | 600 | $11 / 4 \times 21 / 2^{\prime \prime}$ | 3.6 |

[^8]
## ROTATOR CAPACITORS

AC motor capacitors. 70 mfd ., 50 v . AC $7 / 8 \times 3^{\prime \prime}$ *Solder lugs; ${ }^{\dagger 5^{\prime \prime}}$ leads. 5 oz. 12L670. * * Type XA4283. EACH....73C

## INDUSTRIAL BUYERS:

Allied can make immediate shipment on all Aerovox, Cornell-Dubilier, Sprague, and Mallory capacitors in industrial quandustrial Division for price quotations.

# Aerovox Capacitors 



## MICA CAPACITORS

Extremely stable capacitors. Types 1468 LS , $1467 \mathrm{LS}, 1469,1464 ;$ Made to MIL C-5A specs; tolerance except 1464 WVDC; have $\pm 20 \%$ $\pm 5 \%$. Types $1650 \mathrm{~L}, 1651 \mathrm{~L}, 1652 \mathrm{~L}, 1445$, 1446 and $1447: \pm 10 \%$ tolerance. Types 1445 ,
(A) TYPE 1468LS

| Stock No. | Mmf | MIL No. | Size | $\begin{aligned} & \text { NET } \\ & \text { EACH } \end{aligned}$ |
| :---: | :---: | :---: | :---: | :---: |
| 12 L 468 | 5 | CM-20B-050 |  |  |
| 12 L 469 | 10 | CM-20B-100 |  |  |
| 12 L 470 | 20 | CM-20B-200 | 45/64 ${ }^{29 / 64 \times 3 / 16 " ~}$ | 8 c |
| 12 L 471 | 24 | CM-20B-240 |  |  |
| 12 L 472 | 30 | CM-20B-300 |  |  |
| 12 L 473 | 50 | CM-20B-500 | 45/64 $\times 29 / 64 \times 3 / 16^{\prime \prime}$ | 124 |
| 12 L 474 | 82 | CM-20B-820 |  | 124 |
| 12 L 475 | 100 | CM-20B-101 |  | 124 |
| 12 L 476 | 150 | CM-20B-151 |  | 154 |
| 12 L 477 | 200 | CM-20B-201 |  | 154 |
| $12 L 478$ | 250 | CM-20B-251 | 45/64 $\times 29 / 64 \times 3 / 16^{\prime \prime}$ | 184 |
| 12 L 479 | 270 | CM-20B-271 | /64 $\times 16 \times 3 / 16$ | 184 |
| 12 L 480 | 300 | CM-20B-301 |  |  |
| $12 L 48$ | 390 | CM-20B-391 | 45/64 $\times^{29} / 64 \times 3 / 16^{\prime \prime}$ |  |
| $12 L 482$ | 430 | CM-20B-431 |  | 8c |
| 12L483 | 500 | CM-20B-501 |  |  |

## (B) TYPE 1467 LS

| 12 L 778 | 560 | CM-30B-561 | $53 / 64 \times 53 / 64 \times 9 / 33^{\prime \prime}$ | $\begin{aligned} & 184 \\ & 186 \\ & 186 \\ & 214 \\ & 246 \end{aligned}$ |
| :---: | :---: | :---: | :---: | :---: |
| $12 L 779$ | 680 | CM-30B-681 |  |  |
| $12 L 780$ | 910 | CM-30B-911 |  |  |
| 12 L 71 | 1000 | CM-30B-102 |  |  |
| 12 L 782 | 1500 | CM-30B-152 |  |  |
| 121783 | 2000 | CM-30B-202 |  | 264 |
| $12 L 784$ | 2200 | CM-30B-222 |  | 264 |
| 12 L 785 | 2500 | CM-30B-252 | $53 / 64 x^{53} / 64 \times 9 / 32^{\prime \prime}$ | 294 |
| 12 L 786 | 2700 | CM-30B-272 |  | 294 |
| $12 L 787$ | 3000 | CM-30B-302 |  | 354 |
| $12 L 788$ | 3300 | CM-30B-332 |  | 354 |
| $12 L 789$ | 4700 | CM-30B-472 | $53 / 64 \times 53 / 64 \times 9 / 33^{\prime \prime}$ | 384 |
| $12 L 790$ | 5000 | CM-30B-502 | 534 ${ }^{5} / 64 \times 1 / 38$ | 414 |
| 12 L 71 | 5600 | CM-30B-562 |  | 414 |
| $12 L 792$ | 6200 | CM-30B-622 |  | 534 |
| 12 l | 7500 | CM-30B-752 | 53/64 $\times 53 / 64 \times 9 / 32^{\prime \prime}$ | 594 |
| $12 L 794$ | 8200 | CM-30B-822 |  | 59 |
| 12 L 795 | 10000 | CM-30B-103 |  | 714 |


| (A) | TYPE 1469-SILVERED MICA |  |  |  |
| :---: | :---: | :---: | :---: | :---: |
| Stock No. | Mmf | MIL. No. | Size | $\begin{aligned} & \mathrm{NET} \\ & \text { EACH } \end{aligned}$ |
| $\begin{aligned} & 12 L 300 \\ & 12 L 301 \\ & 12 L 302 \\ & 12 L 303 \\ & 12 L 304 \end{aligned}$ | $\begin{gathered} 5 \\ 10 \\ 12 \\ 15 \\ 18 \end{gathered}$ | CM-20C-050 CM-20C-100 CM-20C-120 CM-20C-150 CM-20C-180 | 45/64 $\times 29 / 64 \times 3 / 16^{\prime \prime}$ | $24 c$ |
| $\begin{aligned} & 12 L 305 \\ & 12 L 306 \\ & 12 L 307 \\ & 12 L 308 \end{aligned}$ | $\begin{aligned} & 20 \\ & 24 \\ & 27 \\ & 30 \end{aligned}$ | CM-20C-200 CM-20C-240 CM-20C-270 CM-20C-300 | $45 / 68 \times 29 / 64 \times 3 / 16^{\prime \prime}$ | 24 C |
| $\begin{array}{r} 12 \mathrm{~L} 309 \\ 2 \mathrm{~L} 310 \\ 2 \mathrm{~L} 31 \\ 12 \mathrm{~L} \\ \hline \end{array}$ | $\begin{aligned} & 33 \\ & 36 \\ & 39 \\ & 43 \end{aligned}$ | CM-20C-330 CM-20C-360 CM-20C-390 CM-20C-430 | $45 / 64 \times 29 / 64 \times 3 / 16^{\prime \prime}$ | 24c |
| $\begin{array}{lllll} \hline 12 & L & 3 & 3 \\ 12 & L & 3 & 4 \\ 12 & L & 3 & 5 \\ 2 & L & 3 & 6 \\ 12 & L & 3 & 7 \\ \hline \end{array}$ | $\begin{aligned} & 47 \\ & 50 \\ & 51 \\ & 56 \\ & 62 \\ & \hline \end{aligned}$ | CM-20C-470 <br> CM-20C-500 <br> CM-20C-510 <br> CM-20C-560 <br> CM-20C-620 | $45 / 64 \times 29 / 64 \times 3 / 16^{\prime \prime}$ | $24 c$ |
| $\begin{aligned} & \hline 2 \mathrm{~L} 318 \\ & 2 \mathrm{~L} 319 \\ & 2 \mathrm{~L} 320 \\ & 12 \mathrm{~L} 321 \end{aligned}$ | $\begin{aligned} & 68 \\ & 75 \\ & 82 \\ & 91 \end{aligned}$ | $\begin{aligned} & \text { CM-20C-680 } \\ & \text { CM-20C-750 } \\ & \text { CM-20C-820 } \\ & \text { CM-20C-910 } \end{aligned}$ | $45 / 64 \times 29 / 64 \times 3 / 16^{6}$ | 24c |
| $\begin{aligned} & 12 L \\ & 12 \\ & 12 \\ & 12 \\ & 12 \\ & 12 \\ & \hline \end{aligned}$ | $\begin{aligned} & 100 \\ & 150 \\ & 180 \\ & 200 \\ & \hline \end{aligned}$ | CM-20C-101 CM-20C-151 CM-20C-181 CM-20D-201 | $45 / 64 \times 29 / 64 \times 3 / 16^{\prime \prime}$ | $\begin{aligned} & 244 \\ & 264 \\ & 264 \\ & 264 \end{aligned}$ |
| $\begin{array}{lll} \hline 12 & L & 326 \\ 2 & L & 327 \\ 2 & L & 328 \\ 2 & L & 329 \\ 12 & L & 330 \\ \hline \end{array}$ | $\begin{aligned} & 220 \\ & 240 \\ & 270 \\ & 300 \\ & 360 \\ & \hline \end{aligned}$ | $\begin{aligned} & \hline \text { CM-20D-221 } \\ & \text { CM-20D-241 } \\ & \text { CM-20D-271 } \\ & \text { CM-20D-301 } \\ & \text { CM-20D-361 } \\ & \hline \end{aligned}$ | $45 / 64 \times 29 / 64 \times 3 / 16^{\prime \prime}$ | $\begin{aligned} & 264 \\ & 324 \\ & 324 \\ & 324 \\ & 324 \\ & \hline \end{aligned}$ |
| B | TYP | 1464-SIL | ERED MICA |  |
| $\begin{array}{r} 12 L 331 \\ 12 L 332 \\ 12 L 333 \\ 12 L 334 \\ \hline \end{array}$ | $\begin{aligned} & 470 \\ & 510 \\ & 560 \\ & 620 \\ & \hline \end{aligned}$ | $\begin{aligned} & \text { CM-30D-471 } \\ & \text { CM-30D-511 } \\ & \text { CM-30D-561 } \\ & \text { CM-30D-621 } \end{aligned}$ | $53 / 64 \times 53 / 64 \times 9 / 32^{\prime \prime}$ | .41 .41 .44 .44 |
| $\begin{array}{r} 12 L 335 \\ 12 L .336 \\ 12 L 337 \\ 12 L 338 \\ \hline \end{array}$ | $\begin{aligned} & 680 \\ & 750 \\ & 820 \\ & 910 \\ & \hline \end{aligned}$ | $\begin{aligned} & \text { CM-30D-681 } \\ & \text { CM-30D-751 } \\ & \text { CM-30D-821 } \\ & \text { CM-30D-911 } \\ & \hline \end{aligned}$ | $53 / 64 \times 53 / 64 \times 9 / 33^{\prime \prime}$ | .47 <br> .47 <br> .50 <br> .53 |
| $\begin{array}{ll} 12 & l \\ 1239 \\ 12 L & 40 \\ 12 & L \\ 12 & L \\ 12 & 3 \end{array}$ | $\begin{aligned} & 1000 \\ & 2000 \\ & 3000 \\ & 3900 \\ & \hline \end{aligned}$ | CM-30D-102 CM-30D-202 CM-30D-302 CM-30D-392 | $53 / 64 \times 53 / 64 \times 9 / 33^{\prime \prime}$ | $\begin{array}{r}.59 \\ .79 \\ 1.12 \\ \hline\end{array}$ |
| $\begin{aligned} & \hline 12 L 343 \\ & 2 L \\ & 1 \\ & 2 L \\ & 1 \\ & 1 \end{aligned}$ | $\begin{gathered} \hline 5000 \\ 6200 \\ 7500 \\ 10000^{*} \\ \hline \end{gathered}$ | CM-30D-502 CM-30D-622 CM-30D-752 CM-35D-103 | $\begin{aligned} & 53 / 64 \times 53 / 64 \times 9 / 32^{\prime \prime} \\ & 53 / 64 \times 5364 \times 92^{\prime \prime} \\ & 53 / 64 \times 53 / 64 \times 9 / 32^{\prime \prime} \\ & 53 / 64 \times^{53} / 64 x^{21 / 64} \end{aligned}$ | 1.26 <br> 1.41 <br> 2.47 |

1446 and 1447 are $11 / 8 \times 15 / 8 \times 11 / 32^{\prime \prime}$; Iug terminals and $15 / 16^{\prime \prime}$ centers; case styles are equivalent to CM45 and CM50 of MIL-C5A. Types 1650 L , 1651L and 1652L are $13 / 4 \times 15 / 16 \times 7 / 16^{\prime \prime}$; have $6-32$ $1467 \mathrm{LS}, 1468 \mathrm{LS}, 1469$ and 1464,2 oz.;others, 4 oz . 600 WVDC


| (C) TYPE 1652L |  |  | (D) TYPE 1447 |  |
| :---: | :---: | :---: | :---: | :---: |
| . 00005 | I 2 L 484 | 1.12 | 12L967 | 1.12 |
| . 0001 | 12 L 485 | 1.12 | $12 L 968$ | 1.12 |
| . 0002 | 121486 | 1.23 | $12 L 969$ | 1.12 |
| . 00025 | $12 L 487$ | 1.26 | $12 L 970$ | 1.29 |
| . 0003 | 12 L 488 | 1.29 | $12 L 971$ | 1.32 |
| . 0004 | 12 L 489 | 1.47 | 12 L 972 | 1.35 |
| . 0005 | $12 L 490$ | 1.50 | 12 L 973 | 1.41 |
| . 001 | 12 L 491 | 1.71 | $12 L 974$ | 1.65 |
| . 0015 | $12 L 492$ | 2.29 | 12 L 975 | 2.09 |
| . 002 | 12 L 493 | 2.50 | 12L976 | 2.44 |
| . 003 | 12 L 494 | 3.00 | $12 L 977$ | 2.88 |
| . 004 | $12 L 495$ | 3.32 | 12 L 978 | 3.32 |
| . 005 | 12 L 496 | 3.65 | 12L979 | 3.76 |
| . 01 | 12 L 497 | 4.29 |  |  |

 shpg. wt., 2 oz.

| Stock No. | Mfr's Type | M mif | EACH |
| :---: | :---: | :---: | :---: |
| 13 L 41 | ADM-15-050 | 5 |  |
| 13 L 42 | ADM-15-100 | 10 |  |
| 131543 | ADM-15-150 | 15 | 5 C |
| 131544 | ADM-15-200 | 20 |  |
| 13 L 45 | ADM-15-300 | 30 |  |
| $13 L 546$ | ADM-15-330 | 33 |  |
| 131547 | ADM-15-360 | 36 | 15c |
| $13 L 548$ | ADM-15-390 | 39 |  |
| 131549 | ADM-15-470 | 47 |  |
| $13 L 572$ | ADM-15-500 | 50 |  |
| $13 L 573$ | ADM-15-560 | 56 | 5 C |
| 13 L 574 | ADM-15-680 | 68 |  |
| $13 L 575$ | ADM-15-820 | 82 | 154 |
| $13 L 576$ | ADM-15-101 | 100 | 154 |
| $13 L 577$ | ADM-15-151 | 150 | 184 |
| $13 L 578$ | ADM-15-181 | 180 | 214 |
| 13 L 873 | ADM-15-201 | 200 | 214 |
| 131874 | ADM-15-221 | 220 | 244 |
| $13 L 875$ | ADM-15-271 | 270 | 264 |
| $13 L 876$ | ADM-15-301 | 300 | 264 |
| 131877 | ADM-15-361 | 360 | 294 |
| 134878 | *ADM-15-471 | 470 | 354 |
| $13 L 879$ | *ADM-15-511 | 510 | 354 |
| $13 L 880$ | ADM-19-681 | 680 | $35 ¢$ |
| 13 L 81 | ADM-19-821 | 820 | 354 |
| 131882 | ADM-19-102 | 1000 | 414 |
| 131883 | ADM-19-202 | 2000 | 65\% |
| 13 L 884 | *ADM-19-302 | 3000 | 884 |



## P84CM DURAMIC CERAMIC CASED TUBULARS

Ceramic-cased paper tubular capacitors for use in electronic equipment where outstanding performance and top dependability are require. Have high stabing and dielectric strength. Thermosetting type end-seals provide exceptional humidity protection. Pigtail leads aut Operating temperature range: $-55^{\circ} \mathrm{C}$ to $+85^{\circ} \mathrm{C} . \pm 20 \%$ tolerance. Av. shpg. wt., 4 oz .

| Stock No. | Mfd | WVDC | Size | $\begin{aligned} & \text { NET } \\ & \text { EACH } \end{aligned}$ |
| :---: | :---: | :---: | :---: | :---: |
| 12 L 400 | . 01 | 200 | 5/16x1" |  |
| 12 L 401 | . 015 | 200 | $3 / 8 \times 114^{\prime \prime}$ |  |
| 12 L 402 | . 02 | 200 | $3 / 8 \times 114^{\prime \prime}$ | 5 C |
| 12 L 403 | . 022 | 200 | $3 / 8 \times 11 / 4^{\prime \prime}$ |  |
| 12 L 404 | . 03 | 200 | $3 / 8 \times 11 / 4^{\prime \prime}$ |  |
| 12 L 405 | . 033 | 200 | $3 / 8 \times 11^{\prime \prime}$ | 154 |
| $12 L 406$ | . 047 | 200 | $7 / 16 \times 114^{\prime \prime}$ | 154 |
| $12 L 407$ | . 05 | 200 | 7/16x11/4" | 154 |
| 12 L 408 | . 068 | 200 | 17/32 $19 / 16^{\prime \prime}$ | 184 |
| 12 L 409 | . 1 | 200 | 17/32 $\times 19 / 16^{\prime \prime}$ | 214 |
| 12 L 10 | .15 | 200 | 17/32 ${ }^{\text {a }} 13 / 4^{\prime \prime}$ | 214 |
| 12 L 11 | . 2 | 200 | 5/8×17/8' | 214 |
| 12 L 43 | . 25 | 200 | $5 / 8 \times 17 / 81$ | 244 |
| 12 L 44 | . 33 | 200 | $3 / 4 \times 2{ }^{\prime \prime}$ | 294 |
| 12 L 415 | . 47 | 200 | $13 / 16 \times 21 / 4^{\prime \prime}$ | $35 ¢$ |
| 12 L 16 | . 5 | 200 | ${ }^{13 / 16 \times 21 / 4{ }^{\prime \prime}}$ | 354 |
| 12 L 48 | 1.0 | 200 | $1 \times 21 / 4^{\prime \prime}$ | 534 |
| 12 L 49 | . 0068 | 400 | 5/6x11" | 154 |
| 12 L 420 | . 01 | 400 | $5 / 16 \times 1$ " | 154 |
| 12 L 121 | . 015 | 400 | $3 / 8 \times 11 / 4^{\prime \prime}$ | 154 |
| 12 L 422 | . 02 | 400 | $3 / 8 \times 11 / 4^{\prime \prime}$ | 15¢ |
| 12 L 423 | . 022 | 400 | $3 / 8 \times 114^{\prime \prime}$ | 5 |
| 12 L 424 | . 03 | 400 | 7/16x11/4" | 84 |
| 12 L 426 | . 047 | 400 | 7/16x11/2" | 84 |
| 12 L 427 | . 05 | 400 | 7/16x $11 / 2^{\prime \prime}$ | 184 |
| 12 L 429 | . 1 | 400 | 17/32 ${ }^{\text {c }} 19 / 16^{\prime \prime}$ | 214 |
| 12 L 431 | . 2 | 400 | $5 / 8 \times 17 / 8^{\prime \prime}$ | 214 |
| 12 L | . 25 | 400 | $3 / 4 \times 2{ }^{\prime \prime}$ | 294 |
| 12 L 434 | .33 | 400 | 3/4×2" ${ }^{\prime \prime}$ | 324 |
| 12 L 435 | . 47 | 400 | $13 / 16 \times 21 / 4^{\prime \prime}$ | 324 |
| 12 L 46 | . 5 | 400 | $13 / 16 \times 21 / 4^{\prime \prime}$ | 354 |
| $12 L 438$ | 1.0 | 400 | $1 \times 27 / 8^{\prime \prime}$ | 534 |
| 12 L 439 | . 0005 | 600 | $5 / 16 \times 1$ " | 154 |
| 12 L 440 | . 001 | 600 | 5/16x1" | 154 |
| 12 L 441 | . 0015 | 600 | 5/16x17 | $15 \%$ |
|  | . 002 | 600 |  |  |
| $12 L 443$ | . 0022 | 600 | $5 / 6 \times 11^{\prime \prime}$ |  |
| $12 L 444$ | . 003 | 600 | $5 / 16 \times 1{ }^{\prime \prime}$ | $15 c$ |
| 12 L 445 | . 0033 | 600 | $5 / 16 \times 1^{\prime \prime}$ |  |
| 12 L 446 | . 004 | 600 | $5 / 16 \times 1$ 17 |  |
| 12 L 447 | . 0047 | 600 | $5 / 16 \times 1{ }^{\prime \prime}$ | 154 |
| $12 L 448$ | . 005 | 600 | $5 / 16 \times 1$ " | 156 |
| 12 L 449 | . 006 | 600 | $5 / 16 \times 1{ }^{\prime \prime}$ | 154 |
| 12 L 450 | . 0068 | 600 | $38 \times 11 /{ }^{\prime \prime}$ | 184 |
| 12 L 451 | . 01 | 600 | $3 / 8 \times 11 / 4^{\prime \prime}$ | 184 |
| 12 L 452 | . 015 | 600 | 3/8×11/4" | 184 |
| 12 L | . 02 | 600 | 7/16x11/4" | 186 |
| 121454 | . 022 | 600 | 7/16x11/4" | 18\% |
| 12 L 455 | . 03 | 600 | 1733 ${ }^{17}{ }^{\prime \prime}{ }^{\prime \prime}$ | 214 |
| 12 L 456 | . 033 | 600 | $17 / 32 \times 1916^{\prime \prime}$ | 214 |
| 12 L 457 | . 047 | 600 | $17 / 32 \times 19 / 16^{\prime \prime}$ | 244 |
| 12 L 458 | . 05 | 600 | 17/32 ${ }^{\text {c }} 1916^{\prime \prime}$ | 244 |
| 12 L 45 | . 068 | 600 | $916 \times 17{ }^{\prime \prime}$ | 244 |
| 12 L 460 | . 1 | 600 | $5 / 8 \times 17 /{ }^{\prime \prime}$ | 264 |
| 12 L 461 | . 15 | 600 | $3 / 4 \times 2$ " | 264 |
| 12 L 462 | . 2 | 600 | 13/16x21/4" | 264 |
| 12 L 463 | . 22 | 600 | $13 / 16 \times 21 / 4^{\prime \prime}$ | 294 |
| 12 L 464 | . 25 | 600 | $1 \times 21 /{ }^{\prime \prime}$ | 324 |
| $12 L 466$ | . 47 | 600 | $1 \times 27 /{ }^{\prime \prime}$ | 414 |
| 12 L 467 | . 5 | 600 | $1 \times 27 /{ }^{\prime \prime}$ | 474 |

CERAFIL MINIATURE CERAMIC CAPACITORS

## Actual Size (C-80V 102AM)

The last word in miniaturization-ceramic capacitors so small that over 350 of them will fit n a cubic inch of spacel "Cerafil" miniature capacitors now permit designs of a compactness heretofore impossible. These rugged ceramic units operate from -55 to $+85^{\circ} \mathrm{C}$, at 100 v . All alues of Cerafil capacitors are tested in accordance with MIL-C-11015A, and meet the equirements of this specification. Capacity tolerance, $\pm 20 \%$. Av. shpg. wt., 2 oz.
Stock No. Mfr's Type |Mid. WVDC Diam. Length NET

 | 82 L 856 | C-80V103AM | .01 | 100 | .180 | .500 | 1.99 |
| :--- | :--- | :--- | :--- | :--- | :--- | :--- |

[^9]
# Mallory Capacitors 

## FP, PFP, WP AND PWP ELECTROLYTIC CAPACITORS

For use in filter circuits, audio by-pass circuits and TV applications. Capacitors feature complete stability under heavy ripple current, high surge volt ages and high temperatures. Units are encased in compact, rubber-sealed aluminum cases. FP type anodes specially constructed Fabricated Plates gauze. WP types have etched-plate anodes. PFP and PWP types are identical in performance to FP
and WP types, but employ straight, lug-type ter minals and are for use in printed circuits. Special a WVDC Above 150 WVDC, tolerance is $-10 \%$ to $+50 \%$ Can is negative except *. Insulating washer supplied. For mounting hardware, see page 159. Av. shpg. wt., 6 oz .

| SINGLE SECTION |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: |
| Stock No. | $\begin{aligned} & \text { Mfr's } \\ & \text { Type } \\ & \hline \end{aligned}$ | Mfd | Wkg. Volts | Size | $\begin{aligned} & \text { NET } \\ & \text { EACH } \end{aligned}$ |
| 18 L 471 | FP171 | 10 | 500 | $1 \times 2$ " | 94 |
| 18 L 472 | FP173 | 20 | 500 | $1 \times 2$ " | 1.09 |
| 18 L 473 | FP175 | 30 | 500 | $1 \times 21 / 2^{\prime \prime}$ | 1.18 |
| 181474 | FP177 | 40 | 500 | 1x3" | 1.47 |
| $18 L 475$ | FP187 | 90 | 500 | $13 / 8 \times 3^{\prime \prime}$ | 2.06 |
| 17L360 | FP142 | 10 | 450 | $3 / 4 \times 2{ }^{\prime \prime}$ | .91 |
| 17 L | FP143 | 15 | 450 | $1 \times 2{ }^{\prime \prime}$ | 1.00 |
| 174361 | FP144 | 20 | 450 | $1 \times 2$ " | 1.06 |
| 17 L 367 | FP145 | 30 | 450 | $1 \times 21 /{ }^{\prime \prime}$ | 1.15 |
| 17 L 362 | FP146 | 40 | 450 | 1x21/2" | 1.21 |
| 18 L469 | FP148 | 60 | 450 | 13/8×21/2" | 1.65 |
| 17 L | FP149 | 80 | 450 | $13 / 8 \times 21 / 2^{\prime \prime}$ | 1.79 |
| 18 L 470 | FP150 | 100 | 450 | $13 / 8 \times 3$ | 2.03 |
| 17 L 170 | FP137 | 50 | 350 | $1 \times 21 / 2^{\prime \prime}$ | 1.23 |
| 18 L 468 | FP137.2 | 60 | 350 | $1 \times 3{ }^{\prime \prime}$ | 1.29 |
| 17 L [ 71 | FP140 | 125 | 350 | $13 / 8 \times 3^{\prime \prime}$ | 2.32 |
| 181465 | FP128 | 80 | 300 | $1 \times 3$ " | 1.50 |
| 18 L 466 | FP129.1 | 100 | 300 | $1 \times 3^{\prime \prime}$ | 1.71 |
| $18 L 467$ | FP131 | 150 | 300 | $13 / 8 \times 3^{\prime \prime}$ | 2.06 |
| 18 L 713 | FP121 | 120 | 200 | $13 / 8 \times 2^{\prime \prime}$ | 1.38 |
| 18 L 231 | PFP122 | 160 | 200 | $13 / 8 \times 21 / 2^{\prime \prime}$ | 1.68 |
| 171372 | FP115 | 50 | 150 | 1x2" | . 97 |
| 176373 | $\mathrm{FPP}^{\text {FP116 }}$ | 100 | 150 | $1 \times 21 / 2^{\prime \prime}$ | 1.18 |
| 18 L [463 | FP116.5 | 120 | 150 | $1 \times 3$ " | 1.21 |
| 18 L 232 | PFP116.8 | 140 | 150 | $1 \times 21 / 2^{\prime \prime}$ | 1.23 |
| 176799 | FP117 | 150 | 150 | $1 \times 3$ " | 1.26 |
| 184464 | FP118 | 200 | 150 | $13 / 8 \times 21 / 2^{\prime \prime}$ | 1.44 |
| 17236 <br> 17250 | FP119 | 300 | 150 | $13 / 8 \times 3^{\prime \prime}$ | 1.65 |
| 17 L <br> 17258 <br> 1 | WP065 WP068 | 500 1500 | 50 | $13 / 8 \times 2^{\prime \prime}$ | 1.56 |
| $\frac{17 L 258}{171257}$ | WP068 | 1500 | 50 | $13 / 8 \times 4^{\prime \prime}$ | 2.26 |
| 7 L L 257 <br> 1 | WP052 | 40 | 25 | $3 / 4 \times 2{ }^{\prime \prime}$ | . 79 |
| 18 HL 250 | WP057 <br> WP059 | 500 | 25 | $1 \times 21 / 2^{\prime \prime}$ | 1.50 |
| 17 L 1 252 | WP059 WP039 | 1000 | 25 | $13 / 8 \times 2{ }^{\prime \prime}$ | 2.09 |
| 17 L 1753 | WP039 | 1000 | 15 | $131 \times 1{ }^{\prime \prime}$ | 1.50 |
| 17 L 256 | WP042 | 3000 | 15 | 13/8x3 ${ }^{13}$ | 1.03 2.06 |

DUAL SECTION

| 18L458 | FP284 | 30-30 | 500 | $13 / 8 \times 21 / 2^{\prime \prime}$ | 1.91 |
| :---: | :---: | :---: | :---: | :---: | :---: |
| 181233 | PFP284 | 30-30 | 500 | $13 / 8 \times 21 / 2^{\prime \prime}$ | 1.91 |
| 17 L 286 | FP288 | 40-40 | 500 | $13 / 8 \times 3$ | 2.53 |
| 17 842 | FP258 | 15-15 | 475 | $1 \times 21 /{ }^{\prime \prime}$ | 1.38 |
| 18 L 455 | FP259 | 30-10 | 475 | $1 \times 3^{\prime \prime}$ | 1.53 |
| $17 \mathrm{L43}$ | FP262 | 40-40 | 475 | $13 / 8 \times 3^{7}$ | 2.53 |
| 18 L 52 | FP255 | 20-100 | 475-300 | $13 / 8 \times{ }^{\prime \prime}$ | 2.32 |
| 181456 | FP2 63 | 60-40 | 475 | $13 / 8 \times 4$ " | 2.68 |
| 181457 | FP264.5 | 80-40 | 475 | $13 / 8 \times 4$ " | 2.97 |
| 17 L 283 | FP266 | 80-50 | 475 | $13 / 8 \times 4{ }^{\prime \prime}$ | 3.06 |
| 17 L 75 | FP231 | 10-10 | 450 | $1 \times 2$ | 1.12 |
| $18 L 477$ | FP231.3 | 20-10 | 450 | $1 \times 21 / 2^{\prime \prime}$ | 1.29 |
| 17 L 376 | FP234 | 20-20 | 450 | $1 \times 3^{\prime \prime}$ | 1.50 |
| 171765 | FP237 | 30-30 | 450 | $13 / 8 \times 21 / 2^{\prime \prime}$ | 1.79 |
| 171430 | FP238 | 40-40 | 450 | $13 / 8 \times 3^{\prime \prime}$ | 2.03 |
| 17 L | FP239 | 50-40 | 450 | $13 / 8 \times 3$ " | 2.15 |
| 174766 | FP240* | 50-50 | 450 | $13 / 8 \times 3$ " | 2.26 |
|  | FP242.5 | 60-60 | 450 | $13 / 8 \times 4^{\prime \prime}$ | 2.65 |
| 18 L 454 | FP245.2 | 80-20 | 450 | $13 / 8 \times 3^{\prime \prime}$ | 2.29 |
| 174838 | FP230 | 20-50 | 450-250 | 1x3* | 1.65 |
| 18 L | FP244 | 80-50 | 450-50 | $13 / 8 \times 3$ " | 2.06 |
| 8 8 453 | FP229.5 | 120-40 | 400 | $13 / 8 \times 4^{\prime \prime}$ | 3.09 |
| $7 L 432$ | FP225 | 15-15 | 350 | $1 \times 2$ " | 1.32 |
| 74630 | ${ }_{\text {FP22 }}$ | 20-20 | 350 | $1 \times 21 /{ }^{\prime \prime}$ | 1.35 |
| 7 L 265 | FP227.3 | 30-30 | 350 | $1 \times 3{ }^{\prime \prime}$ | 1.71 |
| 18 L 482 | FP227.7 | 100-100 | 350 | $13 / 8 \times 4^{\prime \prime}$ | 3.62 |
| 184354 | FP218 | 120-20 | 300 | $13 / 8 \times 3$ | 2.35 |
| 8 L 480 | FP217.87 | 40-40 | 300 | $13 / 8 \times 2^{\prime \prime}$ | 1.73 |
| 8 L 355 | FP217.9 | 75-75 | 300 | $13 / 8 \times 3^{\prime \prime}$ | 2.23 |
| 8 L 234 | PFP217.86 | 10-10 | 300 | $13 / 8 \times 2{ }^{\prime \prime}$ | 1.15 |
| 17 L 77 | FP217 | 20-20 | 250 | $1 \times 2{ }^{\prime \prime}$ | 1.12 |
| 71837 | FP221 | 40-40 | 250 | $1 \times 3$ | 1.47 |
| 18 L 553 | FP217.7 | 150-150 | 250 | $13 / 8 \times 4^{\prime \prime}$ | 3.03 |
| 18 L L 49 | FP217.74 | 200-200 | 250 | $13 / 8 \times 4^{\prime \prime}$ | 3.53 |
| 174760 | FP208 | 20-20 | 150 | $1 \times 2$ " | 1.00 |
| 17 L 199 | FP211 | 30-30 | 150 | $1 \times 2$ | 1.09 |
| 7 L 761 | FP210 | 40-20 | 150 | 1x2" | 1.06 |
| 7 L 762 | FP212 | 40-40 | 150 | $1 \times 21 / 2^{\prime \prime}$ | 1.12 |
| 174763 | FP213 | 50-30 | 150 | 1x2* | 1.18 |
| 18 L 235 | PFP213.1 | 50-30 | 150 | $1 \times 2$ " | 1.18 |
| 17 L 80 | FP214 | 50-50 | 150 | $1 \times 21 / 2^{\prime \prime}$ | 1.26 |
| 18 L 236 | PFP214.3 | 70-30 | 150 | $1 \times 2$ | 1.29 |
| 17 l ¢ 74 | FP216 | 80-40 | 150 | $1 \times 3$ " | 1.35 |
| 17 L L 395 | FP215 | 125-100 | 150 | $13 / 8 \times 21 /{ }^{\prime \prime}$ | 2.00 |
| 17 L 995 | FP216.1 | 200-5 | 150 | $13 / 8 \times 21 / 2^{\prime \prime}$ | 1.59 |
| 17 L 263 | FP216.4 | 200-200 | 150 | $13 / 8 \times 4^{\prime \prime}$ | 2.35 |
| 8 L 237 | PFP216.4 | 200-200 | 150 | $13 / 8 \times 3$ " | 2.35 |
| 81451 | WP202.1 | 50-50 | 50 | $1 \times 2$ " | 1.00 |
| 18 L 452 | WP202.5 | 100-100 | 50 | $1 \times 2$ " | 1.23 |
| 18 L 450 | WP201.1 | 40-40 | 25 | $1 \times 2$ " | . 91 |
| 18 L 238 | PWP200.6 | 500-100 | 20 | $1 \times 2$ | 1.73 |
| 17 L 433 | WP200 | 1000-1000 | 15 | $13 / 8 \times 21 / 2^{\prime \prime}$ | 2.59 |
| 17 L 356 | WP204 | 250-1000 | 10-6 | $13 / 8 \times 2{ }^{\prime \prime}$ | 1.68 |

[^10]TRIPLE SECTION

| $\begin{gathered} \text { Stock } \\ \text { No. } \end{gathered}$ | $\begin{aligned} & \text { Mfr's } \\ & \text { Type } \end{aligned}$ | Mfd | $\begin{gathered} \text { DC } \\ \text { Wkg. Volts } \end{gathered}$ | Size | $\begin{aligned} & \text { NET } \\ & \text { EACH } \end{aligned}$ |
| :---: | :---: | :---: | :---: | :---: | :---: |
| $17 \mathrm{LT3}$ | FP398 | 10-40-40 | 500-450-450 | 13/8x3* | 2.44 |
| 17 L 8 | FP394 | 10-10-10 | 475 | $1 \times{ }^{\prime \prime}$ | 1.59 |
| 17 L | FP396 | 30-30-20 | 475 | $13 / 8 \times 3^{\prime \prime}$ |  |
| 17 L | FP396.2 | 40-10-10 $\mathbf{4 0 - 4 0 - 4 0}$ | 475 450 | 13/8×21/ ${ }^{3}$ | 2.26 |
| 17 L 8 | FP378 | 80-40-20 | 450 | $13 / 8 \times 4^{\prime \prime}$ | 3.18 |
| 17 L 66 | FP375.8 | 10-10-10 | 450 | $1 \times 21 / 2^{\prime \prime}$ |  |
| 17 L 6 | FP376.1 | 15-15-10 | 450 | 1×3** | 1.7 |
| 17 L 668 | ${ }_{\text {FP }}$ | 20-20-20 | 450 | $13 / 8 \times 21 / 2^{\prime \prime}$ | 2.12 |
| 17 L 669 | FP376.8 | 40-40-10 | 450 | 13/8x3" | 2.44 |
| 174855 | FP375 | 40-40-100 | 450-450-200 | $13 / 8 \times{ }^{\prime \prime}$ |  |
| 1718 | FP366 | 20-10-50 | 450-450-50 | $1 \times{ }^{1 \times 2}$ | 8 |
| 17 L 598 | $\mathrm{FPP}^{\text {FP345.5 }}$ | 15-15-40 | 450-450-25 | $1 \times 21 /{ }^{\prime \prime}$ | 2 |
| 17 L 599 | FP345.8 | 20-20-20 | 450-450-25 | $1 \times{ }^{\prime \prime}$ | 1.79 |
| 17 L 44 | FP346 | 40-40-20 | 450-450-25 | $13 / 8 \times 3$ " |  |
| 18.360 | ${ }_{\text {FPP3 }}{ }^{\text {FP3 }}$ | $40-90-50$ $100-10-80$ | $450-150-150$ $400-400-350$ | ${ }^{13 / 8 \times 3 / 1}$ | 2.35 3.59 |
| $18 L 239$ | ${ }_{\text {PFP333 }}$ | 10-30-20 | 400-350-300 | $13 / 8 \times 21 / 2^{\prime \prime}$ | 2.91 |
| 18 L 485 | FP332.4 | 100-100-10 | 350 | $13 / 8 \times 4^{\prime \prime}$ | 4.00 |
| 17 L | FP330.5 | 10-10-10 | 350 | $1 \times 2$ " |  |
| 17442 | FP330.7 | 30-20-10 | 350 | $1 \times{ }^{\prime \prime}$ |  |
| 174427 | FP330.3 | 20-10-5 | 350-350-250 | 1×2" | 1.65 |
| 17 L 386 | FP328 | 15-10-20 | 350-350-25 | $1 \times 2$ | . 47 |
| 17 L 46 | FP331 | 30-30-20 | 350-300-25 | $1 \times 3^{\prime \prime}$ | 1.85 |
| 18 L 241 | PFP326.76 | 150-100-30 | 300 | $13 / 8 \times 4^{\prime \prime}$ | 3.00 |
| 18 L 242 | PFP326.4 | 60-10-25 $100-60-20$ | $300-300-25$ $300-250-250$ | $13 / 8 \times 2^{\prime \prime}$ | 2.88 |
| 18 L 483 | FP326.3 | 100-200-60 | 300-150-150 | $13 / 8 \times 4^{\prime \prime}$ | 3.20 |
| 18 L 240 | PFP326.15 | 10-10-20 | 300-150-150 | $1 \times 2$ " | 1.32 |
| 17 L 42 | ${ }_{\text {FP }} 320$ | 40-20-20 |  | $13 / 8 \times 2^{\prime \prime}{ }^{\prime \prime}$ |  |
| 174358 | ${ }_{\text {FP319 }}$ | $80-40-50$ $\mathbf{2 0 - 2 0 - 2 0}$ | 250-150-50 | ${ }^{13 / 8 \times 21 / 2^{\prime \prime}}$ | . 94 |
| 17 L 337 | FP311.4 | 40-20-20 | 150 | $1 \times 21 / 2^{\prime \prime}$ | 1.41 |
| 17 L 338 | FP311.5 | 40-40-40 | 150 | $1 \times 3{ }^{\prime \prime}$ | 1.53 |
| 172339 | FP311.7 | 80-40-20 | 150 | 13/8x2** | 8 |
| 17 L 340 | FP311.9 63 | ${ }_{\text {120-120-40 }}$ | 150 | $13 / 8 \times 3^{\prime \prime}{ }^{\prime \prime}$ | 2.38 1.88 |
| 18L243 | PFP311.63 | 50-40-30 | 150 | $1 \times 21 / 2^{\prime \prime}$ | 1.88 |
| 18 L 248 | PFP311.12 | $70-30-20$ $40-20-20$ | 150-150-25 | $1 \times 2{ }^{1 / 1 / 2}$ | 2.35 1.35 |
| 17 L 767 | ${ }_{5} \mathrm{FP} 307$ | 40-20-100 | 150-150-25 | 1x21/2" | 1.4 |
| 17 L 768 | FP310 | 40-40-20 | $150-150-25$ | $1 \times 21 /{ }^{\prime \prime}$ | 1.41 |
| $\frac{17 L 438}{17 L 344}$ | FP309 | 50-30-100 | $\frac{150-150-25}{150+15095}$ | $1 \times 21 /{ }^{\prime \prime}$ | 1.59 |
| 17 L 344 | FP311 | 50-50-20 $40-40-200$ | $150-150-25$ $150-150-25$ | $1 \times 1 \times{ }^{\text {1 }}$ | 1.56 |
| 18 L 245 | PFP302.75 | 90-40-400 | 150-150-10 | $1 \times 3$ " | 2.06 |
| 18 L 723 | FP302.5 | 80-60-250 | 150-150-10 | $1 \times 21 / 2^{\prime \prime}$ | 2.00 |
| 181246 | PFP302.38 | 70-30-100 | 150-150-10 | $1 \times 21 / 2^{\prime \prime}$ | 6 |

QUADRUPLE SECTION

| 8 L 462 | FP4 | 40 | 50 | $13 / 8 \times 4^{\prime \prime}$ |  |
| :---: | :---: | :---: | :---: | :---: | :---: |
|  | FP474.5 | $20-20-10-10$ | 475 | 13 |  |
| L | FP475 FP475 | $\begin{aligned} & 20-20-20-20 \\ & 40-10-10-10 \end{aligned}$ | 475 475 |  |  |
| 7 7 880 | FP474 | 10-10-10-10 | 475 |  |  |
| 17 | FP476 | 40-20-10-10 | 475 |  |  |
|  | FP456 | 25-20-40-100 |  |  |  |
|  | ${ }_{\text {FP }}$ | 10-4-140-100 | 475 |  |  |
|  | FP434 | 10-10-10-10 | 450 |  |  |
| 7 | FP444 | 20-20-20-20 | 450 | 13/8x3 ${ }^{\prime \prime}$ |  |
| 17 L 893 | WP433.6 | 5-5-5-5 | 450 |  |  |
| 7 | FP434.5 | 20-10-10-10 | 450 |  |  |
|  | FP444.8 | 30-30-20-20 | 450 |  |  |
| 17 L | FP445 | $35-35-10-5$ $40-40-20-20$ | 450 450 |  |  |
| 17 L 88 | FP430.2 | 40-20-20-25 | 450-4 | $13 / 8$ |  |
|  | FP436 | 40-20-20-40 | 450-450-450-2 |  |  |
| 7 L | FP429 | 40-30-10-20 | 450-450-450-2 |  |  |
|  | FP430.6 | 40-40-40-40 | 450-450-450-25 |  |  |
| 17 | FP428.4 | 40-40-30-30 | 450-450-350-350 | 13/8x4 ${ }^{\prime \prime}$ |  |
| 17 | FP427.5 | 10-10-60-100 | 450-450-200-50 | 13/8x21/2" |  |
|  | FP426 | 20-15-20-20 | 450-450-25-25 | $13 / 8 \times 2^{\prime \prime}{ }^{\prime \prime}$ |  |
|  | PFP420.52 | 40-30-20-20 | 400-350-350-350 |  |  |
| 18 L 726 | FP420.7 | 100-10-30-20 | 400-400-50-50 | 13/8x ${ }^{\prime \prime}$ |  |
| 8 L 494 | FP420.45 | 40-80-100-25 | 400-350-200-50 |  |  |
|  | FP419.9 | 15-15-15-50 | 350-350-350-50 | $13 / 8 \times 2^{\prime \prime}$ |  |
| 84492 | FP419.87 | 40-20-20-50 | 350-350-350-25 |  |  |
| $18 L 728$ | FP419.67 | 60-100-60-40 | $350-350-350-25$ $350-350-200-75$ | $13 / 8 \times 4^{\prime \prime}$ | 2.7 |
| 8 L 491 | FP419.65 | 160-60-10-4 | 350-300-300-300 |  |  |
| 8 | FP419.54 | 200-20-20-20 | 300 | $13 / 8 \times 4^{\prime \prime}$ |  |
| 8 | FP419.37 | 150-30-30-150 | 300-300-300-50 | $13 / 8 \times 4^{\prime \prime}$ |  |
| 7 \% | FP419 | 200-20-100-20 | 300-250-50-25 | $13 / 8 \times 4^{\prime \prime}$ |  |
| 17 L 730 | FP412 | 100-80-60-40 | 150 | $13 / 8 \times 3^{\prime \prime}$ | 2.7 |
| 18 L 730 | FP411.8 | 200-200-100-10 | 150-150-150-75 | $13 / 8 \times 4^{\prime \prime}$ | 3. |
| 17 L 447 | FP409 | 40-40-30-20 | 150-150-150-25 | $13 / 8 \times$ |  |
| 17 L 76 | FP409.4 | 50-20-20-200 | 150-150-150-25 | $13 / 8$ |  |
|  | FP410 | 50-50-50-20 | 150-150-150-25 |  |  |
| 1717 | $\frac{F P 411}{\text { FP4113 }}$ | $\frac{80-40-30-100}{80-40-40-20}$ | $\frac{150-150-150-25}{150-150-150-25}$ | $\frac{13 / 8 \times 21 / 2^{\prime \prime}}{13 /{ }^{\prime \prime}}$ | 2. |
| $\begin{aligned} & 17178 \\ & 176715 \end{aligned}$ | $\begin{aligned} & \text { FP411.3 } \\ & \text { FP408 } \end{aligned}$ | $\begin{aligned} & 80-40-40-20 \\ & 60-40-20.200 \end{aligned}$ | $\begin{aligned} & 150-150-150-25 \\ & 150-150-150-10 \end{aligned}$ | $\begin{aligned} & 13 / 8 \times 21 / 2^{\prime \prime} \\ & 13 / 8 \times 2^{\prime \prime} \end{aligned}$ | 2. |
| 17 L 71 | FP405 | 20-20-160-40 | 150-150-25-25 | $13 / 8 \times 2^{\prime \prime}$ |  |

## "TT" CAPACITORS FOR TRANSISTOR CIRCUITS

Extremely small, aluminum-case, dry electrolytic capacitors. Designed for transistorized circuits and other equipment requiring utmost economy of space. Incorporate etched-foil design and high-purity aluminum construction to assure optimum efficiency and stability. A special silicon rubber compound is used to seal the
ends. Units have very low leakage current. Al ends. Units have very low leakage current. All
capacitors have an operating range of $-20^{\circ} \mathrm{C}$. to $+65^{\circ} \mathrm{C}$. Tolerance is $-10 \%$ to $+250 \%$. Leads are 22 gauge, tinned copper wire. Av. shpg. wt., 2 oz .

| StockNo. | Type | Mfd | WV DC | Size | NE |
| :---: | :---: | :---: | :---: | :---: | :---: |
| 18 L 763 | TT1X5 | 5 | 1 | 3/16x ${ }^{1 / 211}$ | ¢ |
| 18 L 764 | TT3X10 | 10 | 3 | 3/16x ${ }^{5 / 8 / 1}$ |  |
| 18 L 765 | TT3X25 | 25 | 3 | 1/4x5/8" | 73 |
| 18 L 7 | TT3X40 | 40 | 3 | 1/4x ${ }^{5} / 8^{\prime \prime}$ |  |
| 18 L 768 | TT6X2 | 2 | 6 | 3/16x ${ }^{1 / 2^{\prime \prime}}$ | 73 |
| 18 L 769 | TT6X5 | 5 | 6 | 3/16x ${ }^{1 / 2^{\prime \prime}}$ | 734 |
| 18 L 770 | TT6X8 | 8 | 6 |  |  |
| 8 L 77 | TT6X10 | 10 | 6 | 3/16x | ¢ |
| 8 L 772 | TT6X15 | 15 | 6 | 1/4x |  |
| 18 L 773 | TT6X25 | 25 | 6 | $1 / 4 \times 5{ }^{1 / 4}$ | 794 |
| 18 L 775 | TT6X40 | 40 | 6 | $3 / 8 \times 5 / 8$ | 824 |
| 18L776 | TT6X50 | 50 | 6 | $3 / 8 \mathrm{x}$ | 824 |
| $18 L 777$ | TT6X60 | 60 | 6 |  | 82 |
| 18 L 778 | TT6X100 | 100 | 6 |  | 8 |
| 18 L 779 | TT10X15 | 15 | 10 | $1 / 4 \times$ | 794 |
|  | TT10×25 | 25 | 10 |  |  |
| 18 L 781 | TT10x60 | 60 | 10 | $3 / 8 \times 5 / 8^{\prime \prime}$ | 854 |
| 8 L 782 | TT12X1 | 1 | 12 | $3 / 16 \times 1 / 2^{\prime \prime}$ | 7 |
| 18 L 783 | TT12X2 | 2 | 12 | 3/16x ${ }^{\text {d }}$ | 7 |
| 18 L 784 | TT12X5 | 5 | 12 | 3/16x9/16" | 794 |
| 8L785 | TT12X10 | 10 | 12 | 1/4x5/81" | 794 |
| 8 L 786 | TT15X10 | 10 | 15 | $1 / 4 \times 5$ |  |
| 8 L 787 | TT15X20 | 20 | 15 | 3/8x5/811 | 854 |
| 8 L 788 | TT15X30 | 30 | 15 | $3 / 8 x^{3} / 4^{\prime \prime}$ | 8 |
| 18 L 789 | TT25X5 | 5 | 25 | 1/4x ${ }^{1 / 8}{ }^{11}$ | 824 |
| 181790 | TT25X8 | 8 | 25 | $3 / 8 \times 5 / 8^{\prime \prime}$ | 824 |
| 18 L 791 | TT25X15 | 15 | 25 |  | 854 |
| 18 L 792 | TT25X20 | 20 | 25 | $3 / 8 \times 3 / 4$ " | 884 |
| 18 L 793 | TT50x5 |  | 50 |  | 854 |
| 18 L 794 | TT50x10 | 10 | 50 | 3/8x5/8" | 884 |
| 18 L 795 | TT50X20 | 20 | 50 | $3 / 8 \times 3 / 4$ | 884 |

AC MOTOR-STARTING CAPACITORS Non-polarized dry electrolytic capacitent duty in AC motor-starting cuits. All are Type plastic containers except $\dagger$ Type EP, aluminum case with cardboard sleeve. Equipped with two screw-type terminals, and two solder lugs for optional use. Capach with tolerance of $+20 \%$ Use mounting hardware listed below. All for 110 -volt AC motors, except *for 330 v . AC, 110 -volt AC motors, except *ior 330 v. AC, 10 oz .

| Stock No. | Type | Mfd | Size | NET |
| :---: | :---: | :---: | :---: | :---: |
| 18L403 | 2730* | 27 | $113 / 16 \times 33 / 8{ }^{\prime \prime}$ | 3.82 |
| 174550 | 5310 | 53 | 17/16x33/8" | 1.26 |
| 17 L 51 | 6410 | 64 | 17/16 $\times 33 /{ }^{\prime \prime}$ | 1.32 |
| 172552 | 7010 | 70 | 17/16x33/8" | 1.41 |
| 172553 | 7510 | 75 | 17/16x33/8' | 50 |
| $18 \mathrm{~L} 404 \dagger$ | 8130* | 81 | $29 / 16 \times 43 / 8{ }^{\prime \prime}$ | 6.76 |
| $17 L 554$ | 8610 | 86 | 17/16x33/8" | 1.56 |
| 174555 | 9710 | 97 | 17/16x33/8" | 1.65 |
| 171556 | 10810 | 108 | 1716x33/8" | 1.68 |
| $18 \mathrm{~L} 405 \dagger$ | 10830* | 108 | 29/16×43/8" | 8.06 |
| 17 L 57 | 12410 | 124 | 17/16x33/8" | 1.73 |
| 172558 | 13010 | 130 | $17 / 16 \times 33 /{ }^{\prime \prime}$ | 1.73 |
| $18 L 745$ | 14120** | 141 | $11 / 16 \times 43 / 8^{\prime \prime}$ | 5.50 |
| 17 L 59 | 14510 | 145 | 17/16x33/8" | 1.88 |
| 18 L 400 | 15810 | 158 | $1^{13} 16 \times 33 / 8^{\prime \prime}$ | 1.91 |
| 17 L 51 | 16110 | 161 | 17/16x33/8" | 1.91 |
| 174563 | 19410 | 194 | 17/16 $\times 33 /{ }^{\prime \prime}$ | 2.29 |
| 17 L 55 | 21610 | 216 | $113 / 16 \times 33 / 8{ }^{\prime \prime}$ | 2.38 |
| 171566 | 24310 | 243 | $113 / 16 \times 33 / 8{ }^{\prime \prime}$ | 2.76 |
| 18 L 402 | 243658 | 243 | 21/16x43/8" | 5.06 |
| 17 L 57 | 27010 | 270 | 113/16 $\times 43 / 8{ }^{\prime \prime}$ | 2.79 |
| 18 L 401 | 28210 | 282 | $113 / 16 \times 43 / 8{ }^{\prime \prime}$ | 2.85 |
| 172568 | 32410 | 324 | $113 / 16 \times 43 / 8^{\prime \prime}$ | 3.18 |
| 172569 | 34010 | 340 | $113 / 16 \times 43 / 8$ | 3.26 |
| 172570 | 37810 | 378 | $21 / 16 \times 43 / 8$ | 3.53 |
| $17 L 571$ | 40010 | 400 | $21 / 16 \times 43 / 8^{\prime \prime}$ | 3.56 |

## PL \& HB MOUNTING HARDWARE

Plastic end caps and mounting brackets for all capacitors (except EP types) listed abov indicates plastic end cap. Av. shpg. wt., 3 oz

[^11]

METAL-CASED ELECTROLYTICS
Metal-cased electrolytics. All units have external insulating sleeves. Type TC has $3^{\prime \prime}$ insulated wire leads. TCS, soldering lugs. *Non-polarized types. Shpg. wt., 4 oz.

| No. | Type | Mfd | W.V. | Size | EA. |
| :---: | :---: | :---: | :---: | :---: | :---: |
| 17 L 450 | 92 | 10 | 600 | 11/16x215/16" | 1.73 |
| 172245 | 81 | 10 | 500 | 15/16x13/4. | . 79 |
| 17 L24 24 | 84 | 20 30 | 500 500 | ${ }^{11 / 16 \times 13 / 4 *}$ | 1.03 |
| 17 L 452 | 70 | 5 | 450 | ${ }^{11} 116 \times 1{ }^{162} 4^{\prime \prime}$ | 1.71 |
| 17 L 619 | 71 | 8 | 450 | 13/16x13/4" | . 73 |
| 17 L 620 | 72 | 10 | 450 | 13/16x13/4" | . 76 |
| 17 L 638 | 7 | 12 | 450 | 15/16813/4" | . 89 |
| 17 L 453 | 75 | 20 | 450 | 11/16x13/4" | . 91 |
| 17 L 454 | 77 | 30 | 450 | 11/16x21/4" | 1.00 |
| 17 L 508 | 78 | 40 | 450 | 11/16x21/4" | 1.06 |
| 18 L 17204 | 795 80 | 60 80 | 450 | $1{ }^{11 / 16 \times 2}{ }^{1 / 88^{\prime \prime}}$ | 1.35 |
| 17 L 634 | 60 | 5 | 350 | 11/16813/4" | . 62 |
| 17 L 635 | 61 | 8 | 350 | 13/16x13/4" | . 71 |
| 17 L 455 | 62 | 10 | 350 | 13/16x13/4" | . 73 |
| 184341 | 63 | 12 | 350 | 13/16x13/4" | . 76 |
| 17 L 637 | 64 | 16 | 350 | $15 / 16 \times 13$ | . 82 |
| 172456 | 65 | 60 | 350 350 | 15/16x13/4" |  |
| 18 L 801 | 69 | 100 | 350 | ${ }_{11 / 16 \times 4^{\prime \prime}}{ }^{\prime \prime}$ | 1.82 |
| 17 L 626 | 50x | 5 | 250 | 11/16x1 | . 62 |
| 174627 | 51 | 10 | 250 | 11/16x13 | . 68 |
| 174457 | 52 | 10. | 250 250 |  | . 76 |
| 17 L 505 | 55 | 20 | 250 | 13/16x13/4" | . 79 |
| 17 L 63 | 58 | 40 | 250 | 11/16x13/4" | . 91 |
| 17 L 243 | 59 | 50 | 250 | 11/16x13/4" | 1.00 |
| 17 L 249 | 1265 | 100 | 250 | $1 \times 3{ }^{\prime \prime}$ | 1.44 |
| 17 L 458 | 40 | 5 | 150 | 7/16x15/16" | . 59 |
| 174624 | 41 | 8 10 | 150 | 7/16x113/1" | . 62 |
| 174625 | 42 | 12 | 150 | 7/16 $716 \times 1{ }^{13 / 3 / 11^{\prime \prime}}$ | . 62 |
| 17 L 608 | 44 | 16 | 150 | $11 / 16 \times 11 / 2^{16}$ | . 68 |
| 17 L 502 | 45 | 20 | 150 | 13/16x11/2" | . 71 |
| 174610 | 47 | 30 | 150 | 13/6x11/2" | . 76 |
| 174504 | 48 | 40 | 150 | 15/16x13 ${ }^{\text {a }}$ | . 82 |
| 17 L 640 | 492 | 80 | 150 | 15/16x2" | 94 |
| 18 L 802 | 493 | 100 | 150 | 11/16x21/4" | . 03 |
| 17 L 242 | 495 | 150 | 150 | $11 / 16 \times 21 / 4^{\prime \prime}$ | 1.12 |
| 176639 | 302 |  |  |  | . 53 |
| 17 L 623 | 30 32 | 5 10 | 50 50 |  | $\begin{array}{r}.59 \\ .59 \\ \hline\end{array}$ |
| 17 L 604 | 36 | 25 | 50 | 11/16 $\times 11 / 4^{\prime \prime}$ | . 62 |
| 17605 | 39 | 50 | 50 | ${ }^{13 / 16 \times 11 / 4 "}$ | . 71 |
| 178641 | 3501. | 100 | 50 | 11/16x13/4" | 1.82 |
| 17 L 600 | 22 | 10 | 25 | 7/6x ${ }^{15}$ | . 59 |
| 17 L 601 | 26 | 25 | 25 | 7/16x1/16" | . 59 |
| 172602 | 29 | 50 | 25 | 11/16x11/2" | . 65 |
| 17 L 207** | 2501 | 100 | 25 | (168154/8" | . 79 |

## ALUMINUM CAN THREADED-NECK

 DRY ELECTROLYTICS Threaded-neckunits for replacement of wet or dry electrolytics. ing types. With hardware to facilitate replacement.
 For sub-chassis mounting, see Universal clips (page 159). Necks are $5 / 8-16$ for $1^{\prime \prime}$ dia. units, $3 / 4-16$ for $1338^{\prime \prime}$ dia.
All $1^{\prime \prime}$ dia. units have special washer for $13 / 8^{\prime \prime}$ clamp mounting. RS, HS and RM types have $8^{\prime \prime}$ leads and are internily and RM types have *Has common positive and separate negative terminals (one connected to case). Type SR 638 is lug-type dual. Av. shpg. wt., 7 oz .


| No. | Type | Mfd | W.V. | Size | EA. |
| :---: | :---: | :---: | :---: | :---: | :---: |
| $\overline{18 \mathrm{~L} 804}$ | 304 | ${ }^{2}$ | 3 | 11 | 53 |
| 17 L 46 | 2505 | 500 | 25 | 11 | 1.35 |
| 17 l 1742 | 1505 | 200 500 | 15 | 15/16 | 1.83 |
| 17 L 20 | 1501 | 1000 | 15 | 11/16x21/4" | 1.35 |
| 17 L 206 | *415 | 1000 | 15 | $11 / 16 \times$ | 1.35 |
| 171205 | *412 | 500 | 10 | 11/16x21/3 | 94 |
| 17 L 461 | 605 | 500 | 6 | 13/16 $\times 13 / 4^{\prime \prime}$ | . 91 |
| 17 L 462 | 610 | 1000 | 6 | 15/1/82" | 1.12 |
| 18 L 80 | 305 | 500 | 3 | 11/1681 | 82 |
| 17 L 463 | 310 | 1000 | 3 | 15/16 $\times 13 /$ |  |

TCD COMMON-NEGATIVE DUALS

| No. | Type | Mfd | W.V. | Size | EA. |
| :---: | :---: | :---: | :---: | :---: | :---: |
| 17 L | 71 | 8-8 | 450 | 15/16x | 1.0 |
| 17 L 50 | 72 | 10-10 | 450 | $1^{1 / 16 \times 2 *}$ |  |
| 17447 | 74 | 15-15 | 450 | $111 / 16 \times 31$ |  |
| 174472 | 75 | 20-20 | 450 450 | $11 / 16 \times 4^{\prime \prime}$ | 1.47 2.00 |
| 17 L 473 | 62 | 10-1 | 350 | 15/16x2" | 1.00 |
| 17 | 65 | 20-20 | 350 | $11 / 16$ |  |
| 17447 | 52 | 10-10 | 250 | ${ }^{1 / 116 \times 2}$ | 1.09 |
| 17 L 503 | 45 | 20-20 | 150 | 13/16x13/4" | . 7 |
| 172477 | 47 | 30-30 | 150 | 15/16x13 | 1.06 |
| 174480 | 485 | 40-20 | 150 |  |  |
| 17447 | 497 | 40-40 | 150 | ${ }^{11 / 16 \times 2 \times 2}$ | . 1.15 |
|  |  | 50-50 |  | $116 \times$ |  |
| 18 L 344 | 498 | 80-50 | 150 | 11/16x21/4" | 1.38 |
| 17 L 479 | 26 | 25-25 | 25 | $13 / 16 \times 11 / 4^{\prime \prime}$ | . 82 |

TCS SEPARATE-SECTION DUALS

| No. | Type | Mfd | W.V. | Size | EA. |
| :---: | :---: | :---: | :---: | :---: | :---: |
| $17 \mathrm{L485}$ | 71 | 8 - | 450 | $11 / 16 \times 23 / 8^{\prime \prime}$ | 1.26 |
| 174487 | 75 | 20-20 | 450 | 11/16x31/2" | 5 |
| 17 L 490 | 45 | 10-10 | 150 | 15/6x23/8" |  |
| 17 L 495 | 48 | 40-40 | 150 | 11/16x27/8" | . 38 |

TCT TRIPLE COMMON NEGATIVE

| No. | Type | Mfd | W.V. | Size | EA. |
| :---: | :---: | :---: | :---: | :---: | :---: |
| 18 L 372 | 3112 | $\frac{20-20}{20}$ | $\begin{aligned} & 150 \\ & 150 \end{aligned}$ | 11/6x ${ }^{3 / 4}{ }^{\prime \prime}$ | 1.26 |
| 18 L 373 | 3113 | 30-30 | 150 |  |  |
| 18 L 374 | 3114 | 40-20 | 150 150 | $11 / 16 \times 21 / 4^{\prime \prime}$ | 1.38 |
|  |  | 20 | 150 | $11 / 16 \times 21 / 4^{\prime \prime}$ | 1.32 |
| 18 L 375 | 3115 | $\begin{gathered} 40-40 \\ 40 \end{gathered}$ | 150 150 150 | $11 / 16 \times 27 / 8^{\prime \prime}$ | 1.44 |
| 18 L 376 | 3116 | $\begin{aligned} & 40 \\ & 40 \\ & 20 \end{aligned}$ | 150 150 | 11/6x21/4 ${ }^{\prime \prime}$ | 8 |
| 18 L 371 | 3107 | 50-30 | 150 |  |  |
| 18 L 377 | 3094 | 50-30 | 150 |  | . 38 |

## HIGH-CAPACITY ELECTROLYTICS

Plastic-cased electrolytics with lug terminals-for fence control *NP non-polarized types-inter-
mittent AC use only. Others are polarized (all Type HC; except 45052, FF) **For photoflash. See hardware, at left. Av $\frac{\mathrm{wt} ., 10 \mathrm{oz} .}{\mathrm{No}}$

| No. | Type | MId | W.V | Size |
| :---: | :---: | :---: | :---: | :---: |
| 17 L 810 | 4505* | 50 | 450 | 析 |
| 17 | 4510* | 100 | 450 |  |
| 17 L 820 | 45003** | 300 | 450 |  |
| 18 L 4 | 45052** | 525 | 450 |  |
| 18 L 428 | 3003* | 15 | 300 | 17/6x33/8" |
| 17 L 808 | 3014* | 100 | 300 | $113 / 16 \times 43 / 8^{\prime \prime}$ |
| 17 | 3025* | 200 | 300 |  |
| 7 7 5 | 20005 | 500 | 200 | 21 |
| 7 L 5 | 15010 | 1000 | 150 | $21 / 16 \times 43 / 8^{\prime \prime}$ |
| 18 L 427 | 1235* | 300 | 125 | 21/16x43/8" |
| 17 L 805 | 1255* | 500 | 125 | $21 / 16 \times 43 / 8^{\prime \prime}$ |
| 7 | 5005 | 500 | 50 |  |
| 74586 | 5010 | 1000 | 50 |  |
| $\begin{array}{r}17 \mathrm{~L} \\ 1890 \\ \hline 1741\end{array}$ | 5020 4040 | 2000 | 50 40 | $\left\|\begin{array}{c} 133116 \times 43 / 8^{\prime \prime} \\ 21 / 16 \times 43 / 8^{\prime \prime} \end{array}\right\|$ |
| 17 L 582 | 2510 | 1000 | 25 | 17/16x |
| 7 L 5 | 2520 | 2000 | 25 | $1{ }^{13 / 16 \times 33 / 8{ }^{\prime \prime}}$ |
| 7 L | 2540 | 4000 | 25 | 113/16x43/8", |
| 84430 | 2060 | 6000 | 20 |  |
| 17 L 580 | 1520 | 2000 | 15 | 17/16x33/8" |
| 17 L | 1540 | 4000 | 15 |  |
| 17 L | 1560 | 600 | 15 | 11 |
| 7 L | 1020 | 2000 | 10 | 11/16x33/8" |
| 7 L 577 | 1040 | 4000 | 10 |  |
| 17 L 57 | 1060A $\dagger$ |  | 10 | $\left\|\begin{array}{c} 11 / 2 \times 418^{\prime \prime} \\ 21 / 16 \times 438^{\prime \prime} \end{array}\right\|$ |


| NET |
| :--- |
| 4.41 |
| 6.82 |
| 6.17 |
| 13.23 |
| 2.20 |
| 3.97 |
| 5.58 |
| 6.76 |
| 3.38 |
| 4.41 |
| 2.29 |
| 3.76 |
| 5.14 |
| 5.59 |
| 2.85 |
| 3.38 |
| 5.99 |
| 2.75 |
| 3.23 |
| 3.71 |
| 2.32 |
| 2.80 |
| 4.86 |

## Mallory Capacitors

## INDUSTRIAL \& SUBMINIATURE TANTALUM CAPACITORS



TYPE XT TANTALUM CAPACITORS

(A) EExtremely rugged tantalum electrolytic capacitors, designed for use ture range: $-55^{\circ} \mathrm{C}$ to $+200^{\circ} \mathrm{C}$. Hermetically sealed in steel. Ends have glass-to-metal seal. Dia., $7 / 8^{\prime \prime}$. Wrap-around terminals except for *screw terminal and nut. †Cathode tab. Av. wt., 4 oz.

| Stock No. | Type | Mfd | DC Volts |  | Ht. | NET EACH |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  |  | $\underline{175}$ | $85^{\circ} \mathrm{C}$ |  | 1-24 | 25-49 |
| 18 L 501 | XTL120 | 120 | 12 | 18 | 12 ${ }^{\prime \prime}$ | 8.55 | 8.05 |
| 18 L 502 | X TH240 | 240 | 12 | 18 | ${ }^{11 / 16}{ }^{\prime \prime}$ | 9.80 |  |
| 18 L 503 | XTL75 | 75 | 20 | 30 |  | 8.55 |  |
| 18 L 504 | XTL40 | 130 | 38 | 60 | $1 / 2$ | 8.55 | 8.05 |
| 18 L 435 | XTL40A | 30 | 38 | 60 | $1 /{ }^{1 \prime \prime}$ | 8.60 |  |
| 18 L 436 | XTLS40* $\dagger$ | 30 | 38 | 60 |  | 8.90 | 8. |
| 18 L 506 | X TH80 | 80 | 38 | 60 | 11/16" | 9.80 | 9.10 |
| 18 L 507 | X TL25 | 25 | 60 | 100 | 1/2" ${ }^{\prime \prime}$ | 8.55 | , |
| 18 L 508 | XTH50 | 50 | 6 | 100 | 16" | 9.80 |  |
| 18 LC 509 | XTL12 | 12 | 120 | 180 | 27/3" | 13.50 | 12.60 |
| 18 LC 510 | XTH25 | 25 | 120 | 180 | 11/4" | 15.60 | 14.55 |
| LC 511 | XTL8 | 8 | 180 | 270 | 13/16" ${ }^{\prime \prime}$ | 19.00 |  |
| 18 LC 434 | ${ }^{\text {XTL8A }} \dagger$ | 8 | 180 | 270 | ${ }^{13 / 16}$ | 19.05 |  |
| $18 \mathrm{LC513}$ | XTL6 | 6 | 140 | 360 | 117/32 ${ }^{\prime \prime}$ | 23.85 | 22.25 |
| 18 LC 433 | XTH12 | 12 | 240 | 360 | $23 / 8^{\prime \prime}$ | 28.75 | 26.8 |
| LC 515 | XTL5 | 5 | 300 | 450 | 12 | 29.65 | 27.6 |
| 18 LC 516 | XTH10 | 10 | 300 | 450 |  | 35.70 | 33.30 |
| LC 517 | - XTH 4 |  | 360 | 540 |  | 36.30 |  |
| 8 LC 432 | XTH8A $\dagger$ | 8 | 360 | 540 | $31 / 2^{\prime \prime}$ | 42.65 | 39.75 |

## SUBMINIATURE ELECTROLYTIC CAPACITORS

For transistor applications. Silver case; tantalum anode. Operate from $-55^{\circ}$ to $+85^{\circ} \mathrm{C}$. Tol. $-15 \%$ to $+75 \%$. $11 / 2^{\prime \prime}$ leads. $7 / 32 \mathrm{X}^{3} / 8^{\prime \prime} .5 \mathrm{oz}$.

| Stock No. | Type | Mfd | WVDC | NET EACH |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  |  |  | 1-24 | 25-49 | 50-99 |
| 18 L 796 | TAP90-2 | 2 | 90 |  |  |  |
| 18 L 441 | TAP75-3M | 3.5 | 75 60 | 2.50 | 2.00 | 1.75 |
| 18 L 443 | TAP50-5 | 5 | 50 | 2.50 | 2.00 | 1.75 |
| 18 L 444 | TAP40-6 | 6 | 40 |  |  |  |
| 18 L 445 | TAP30-8 | 8 | 30 |  |  |  |
| 18 L L 4467 | TAP25-10 | 10 12 | 25 | 2.50 | 2.00 | 175 |
| 18.449 | TAP10-20 | 20 | 10 |  |  |  |
| 18 L 438 | TAP6-30 | 30 | 6 |  |  |  |

## NEW TYPE TAS SOLID ELECTROLYTICS

C. Subminiature solid-electrolyte tantalum capacitors. Ideal for use in C. miniaturized military and computer equipment, recorders, and many other applications where space is at a premium and adverse conditions are encountered. Have extremely small tantalum anode with tantalum oxide film. The electrolyte is a solid, semi-conducting material which will neither leak nor corrode even if the hermetic seal of the outer case is $-80^{\circ} \mathrm{Ced}$. $85^{\circ}$ tand extreme conditions. Operating temperature range. $\frac{-80^{\circ} \mathrm{C} \text { to }+85^{\circ} \mathrm{C} \text {. Tol. } \pm 20 \% .3 / 6^{\prime \prime} \text { dia., } 7 / 16^{\prime \prime} \text { long. Av. shpg. wt., }}{\text { WET EACH }}$

| Stock No. | $\begin{aligned} & \text { Mfr's } \\ & \text { Type } \end{aligned}$ | Mfd | $\begin{gathered} \text { Working } \\ \text { Voltage } \\ \text { DC } \end{gathered}$ | $\left\lvert\, \begin{gathered} \text { Surge } \\ \text { VDC } \end{gathered}\right.$ | NET EACH |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  |  |  |  | 1-24 | 25-49 | 50-99 |
| 18L981 | TAS10-6 | 10 | 6 | 8 |  |  |  |
| 18 L 982 | TAS15-6 | 15 | 6 | 8 |  |  |  |
| 18 L 983 | TAS22-6 | 22 | 6 | 8 | 3.50 | 2.00 | 1.50 |
| 18 L 985 | TAS47-6 | 47 60 | 6 | 8 |  |  |  |
| 18L986 | TAS60-6 | 60 | 6 | 8 |  |  |  |
| 18 L 987 | TAS6.8-10 | 6.8 | 10 | 13 |  |  |  |
| $18 \mathrm{l}{ }^{1} \mathrm{~L} 988$ | TAS10-10 | 15 | 10 | 13 | 3.50 | 2.00 | 50 |
| 18 L 990 | TAS22-10 | 22 | 10 | 13 |  |  |  |
| 18 L 991 | TAS33-10 | 33 | 10 | 13 |  |  |  |
| 18 L 992 | TAS40-10 | 40 | 10 | 13 |  |  |  |
| 18 L 993 | TAS4.7-15 | 4.7 | 15 | 18 | 3.50 | 2.00 | 50 |
| 18 L 994 | TAS6.8-15 | ${ }^{6} 10$ | 15 | 18 | 3.50 | 2.00 | 5 |
| 18 L 996 | TAS15-15 | 15 | 15 | 18 |  |  |  |
| 18 L 997 | TAS22-15 | 22 | 15 | 18 |  |  |  |
| 18 L 998 | TAS3.3-20 | 3.3 | 20 | 23 |  |  |  |
| 18 L ¢ 999 | TAS4.7-20 | 4.7 | 20 | 23 | 50 | 2.00 | 50 |
| 18 L 948 | TAS10-20 | 10 | 20 | 23 |  |  |  |
| 18 L 949 | TAS15-20 | 15 | 20 | 23 |  |  |  |

## TYPES TNT \& STNT SUBMINIATURE CAPACITORS

(D) E Subminiature polarized tantalum electrolytic capacitors. Withand communications equipment. For use in hearing aids, extremely small and communications equipment. For use in hearing aids, extremely small Fig E. Type TNT will stand the vibration conditions of MIL-STD-202 Fig. E. Type TNT will stand the vibration conditions of MIL-STD-202, ance, -15 to $+75 \%$. Tinned leads. Size: TNT, $9 / 64 x^{3} / 8^{\prime \prime}$; STNT, $9 / 64 \times 5 / 16^{\prime \prime}$.

Stock No. Type $\mid$ Mfd WVDC 1-24, EA. 25-49, EA. 50-99, EA.


Industrial Buyers: Allied has complete stocks of tantalum capacitors at OEM prices. Any reductions in

GEM MOLDED TUBULAR PAPER CAPACITORS

Molded tubular paper capacitors, manufactured to extremely high standards. Rugged, mineral-filled bakelite cases and resin sealing assure exceptionally dependable service, even under adverse operating conditions. Have high resistance to moisture and mechanical shock. assure high durability. May be lead-mounted; leads are double-tinned copperweld wire. Types up to $1 / 2^{\prime \prime}$ dia. have No. 20 leads; types over $1 / 2^{\prime \prime}$ dia. have heavy-duty No. 18 leads. All GEM capacitors are designed to operate efficiently at temperatures up to $85^{\circ} \mathrm{C}$. All have capacity tolerance of $20 \%$, except* $10 \%$. Outside foil is clearly indicated by a line on the bakelite case. Av. shpg. wt., 5 oz.

| 400 VOLTS DC WORKING |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: |
| Stock No. | Mfrs Type | Mfd | Size | $\begin{aligned} & \text { NET } \\ & \text { EACH } \end{aligned}$ |
| 18 L 56 | GEM-421 | . 001 | 5/16x1" |  |
| $18 L 587$ | GEM-425 | . 005 | $5 / 16 \times 1$ " |  |
| $18 L 588$ | GEM-411 | . 01 | 5/16x1" | 5c |
| $18 L 589$ | GEM-4115 | . 015 | $3 / 8 \times 11 / 4^{\prime \prime}$ |  |
| 18 L 590 | GEM-412 | . 02 | $3 / 8 \times 1{ }^{1 / 4}{ }^{\prime \prime}$ |  |
| 18 L 91 | GEM-4122 | . 022 | $3 / 8 \times 11 / 4^{\prime \prime}$ |  |
| 18 L 592 | GEM-4125 | . 025 | $3 / 8 \times 11 / 4^{\prime \prime}$ |  |
| 18593 | GEM-413 | . 03 | $3 / 8 \times 11 / 4^{\prime \prime}$ | 18c |
| $18 L 594$ | GEM-4133 | . 033 | 7/16x11/4" |  |
| $18 L 595$ | GEM-414 | . 04 | 7/16 $\times 11^{1 / 4}$ |  |
| 18 L 596 | GEM-4147 | . 047 | 7/16x ${ }^{1 / 4}{ }^{\prime \prime}$ | $18 ¢$ |
| 18 L 597 | GEM-415 | . 05 | 7/16x11/4" | 184 |
| 18 L 598 | GEM-416 | . 06 | 1/2x11/2" | 214 |
| 8 L 599 | GEM-4168 | . 068 | $1 / 2 \times 1{ }^{1} / 2^{\prime \prime}$ | 214 |
| 18 L 600 | GEM-401 | . 1 | $1 / 2 \times 11 / 2^{\prime \prime}$ | 214 |
| 18 L 601 | GEM-4015* | . 15 | $5 / 8 \times 17 / 8^{\prime \prime}$ | $24 ¢$ |
| 18 L 602 | GEM-402* | . 2 | $3 / 4 \times 21 / 4 "{ }^{\prime \prime}$ | 264 |
| 18 L 603 | GEM-4022* | . 22 | $3 / 4 \times 21 / 4^{\prime \prime}$ | $26 ¢$ |
| 18 L 604 | GEM-4025* | . 25 | $3 / 4 \times 21 / 4^{\prime \prime}$ | 264 |
| 18 L 605 | GEM-4033* | . 33 | $3 / 4 \times 21 / 4^{\prime \prime}$ | 294 |
| $18 L 606$ | GEM-4047* | . 47 | $1 \times 2{ }^{3 / 8}{ }^{\prime \prime}$ | 354 |
| 18 L 607 | GEM-405* | . 5 | $1 \times 23{ }^{\prime \prime}{ }^{\prime \prime}$ | $35 \$$ |
| 18 L 608 | GEM-41* | 1.0 | $1 \times 23 /{ }^{\prime \prime}$ | 734 |

600 VOLTS DC WORKING

| $\begin{aligned} & \text { Stock } \\ & \text { NO } \end{aligned}$ | $\begin{aligned} & \text { Mfr's } \\ & \text { Type } \\ & \hline \end{aligned}$ | Mfd | Size | $\begin{aligned} & \text { NET } \\ & \text { EACH } \end{aligned}$ |
| :---: | :---: | :---: | :---: | :---: |
| 18 L 546 | GEM-621 | . 001 | 5/16x ${ }^{10}$ |  |
| 18 L 547 | GEM-6215 | . 0015 | $5 / 16 \times 1{ }^{\prime}$ |  |
| 18.548 | GEM-622 | . 00022 | ${ }^{5 / 16 \times 1^{\prime}}$ | 15c |
| 184549 | GEM-6222 | . 0022 |  |  |
| 18 L 551 | GEM-623 | . 003 | 5/16x ${ }^{\prime \prime}$ |  |
| $18 L 552$ | GEM-6233 | . 0033 | $5 / 16 \times 1{ }^{10}$ |  |
| 18 L 53 | GEM-624 | . 004 | 5 $516 \times 16{ }^{\text {5 }}$ | I5c |
| 18 L 554 | GEM-6247 | . 0047 | ${ }_{\text {5 }}^{5 \times 16 \times 11^{\prime \prime}}$ |  |
|  | GEM-625 | . 005 |  |  |
| 18 L 556 | GEM-626 | . 006 | 3/8x11/4" | 54 |
| 18 L 557 | GEM-6268 | . 0068 | 3/8x11/4" |  |
| 18 L 558 | GEM-627 | . 007 | 3/8x11/4, | ¢ |
| 18 L 559 | GEM-628 | . 008 |  | 186 |
| 182561 | GEM-611 <br> GEM-6112 | . 01 |  |  |
| 184563 | GEM-6115 | . 015 | 3/8x11/4* | 18c |
| 18L564 | GEM-612 | . 02 | 7/16x11/4" |  |
| 18 L 565 | GEM-6122 | . 022 | 7/16x11/4" |  |
| 18 L 566 | GEM-6125 | . 025 | 7/16x11/4. | 214 |
| 8 L 567 | GEM-613 | . 03 | 7/16x11/4, | 214 |
| 18 L 568 | GEM-6133 | . 033 | 1/2x11/2. | 214 |
| 18 L 569 | GEM-614 | . 04 | 1/2x11/2" | 214 |
| 18L570 | GEM-6147 | . 047 | 1/2x11/2* | 244 |
| 18 L 571 | GEM-615 | . 05 | 1/2x11/2" | $24 ¢$ |
| 18 L 572 | GEM-6156 | . 056 | 5\%x178" | $24 ¢$ |
| 8 L 573 | GEM-616 | . 06 | 5/811/8" | 244 |
| 8 L 574 | GEM-6168 | . 068 | 5/8x11/8", | 264 |
| 18L575 | GEM-601 | . 1 | 5/8x1/8" | 268 |
| 18 L 576 | GEM-6015* | . 15 | $5 / 8 \times 11 / 8^{\prime \prime}$ | 294 |
| 18L577 | GEM-602* | . 2 | 3/4x21/4", | 414 |
| 18L578 | GEM-6022* | . 22 | 3/4×21/4" | 416 |
| 18 L 59 | GEM-6025* | . 25 | 3/4×21/4** | 326 |
| 18L580 | GEM-6027* | . 27 | $1 \times 23 /{ }^{\prime \prime}$ | 414 |
| 18 L 581 | GEM-6033* | . 33 | $1 \times 23 /{ }^{\prime \prime}$ | 416 |
| 18 L 582 | GEM-6047* | . 47 | $1 \times 23{ }^{3 \prime \prime}$ | 478 |
| 18 L 583 | GEM-605** | . 5 | 1 $\times 2 \times 3{ }^{3 / 8 \prime \prime}$ | 475 |
| 185584 | GEM-6068* GEM-61* | 1.08 | (1×25/8" | 476 736 |

1600 VOLTS DC WORKING

| No. | Type | Mfd | Size | NET |
| :---: | :---: | :---: | :---: | :---: |
| 18L746 | GEM-16225 | . 0025 | 7/16×11/4 | $\begin{aligned} & 384 \\ & 324 \\ & 324 \\ & 324 \\ & 324 \\ & \hline \end{aligned}$ |
| $18 L 747$ | GEM-1623 | . 003 | 7/16x11/4" |  |
| $18 L 748$ | GEM-16233 | . 0033 | 7/16x11/" |  |
| $18 L 749$ | GEM-1624* | . 004 | 7/16x11/4" |  |
| $18 L 750$ | GEM-16247* | . 0047 | $1 / 2 \times 11 /{ }^{\prime \prime}$ |  |
| 18L751 | GEM-1625* | . 005 | $1 / 2 \times 1{ }^{1 / 2}{ }^{\prime \prime}$ | 324 |
| 181753 | GEM-1626* | . 006 | $1 / 2 \times 1{ }^{1 / 2}{ }^{\prime \prime}$ | 324384 |
| $18 L 754$ | GEM-16268* | . 0068 | $1 / 2 \times 11 / 2^{\prime \prime}$ |  |
| $18 L 755$ | GEM-1627* | . 007 | $1 / 2 \times 11 / 2^{\prime \prime}$ | 324354 |
| $18 L 757$ | GEM-1628* | . 008 | $1 / 2 \times 11 / 2^{\prime \prime}$ |  |
| 18L758 | GEM-16282* | . 0082 | $1 / 2 \times 11 / 2^{\prime \prime}$ | $\begin{aligned} & 384 \\ & 35 \% \\ & 414 \\ & 414 \end{aligned}$ |
| 184759 | GEM-1611* | . 01 | $1 / 2 \times 1{ }^{1 / 2}{ }^{\prime \prime}$ |  |
| $18 L 761$ | GEM-1612* | . 02 | $5 / 8 \times 17 /{ }^{\prime \prime}$ |  |
| 18 L 385 | GEM-1613* | . 03 | $5 / 8 \times 17 / 8^{\prime \prime}$ |  |
| 18 L 386 | GEM-1614* | . 04 | $3 / 4 \times 21 / 4^{\prime \prime}$ | 414 |
| $18 L 762$ | GEM-1615* | . 05 | $3 / 8 \times 21 / 4^{\prime \prime}$ | 414 |
| $18 L 387$ | GEM-1621* | . 001 | $3 / 8 \times 1{ }^{1 / 4}{ }^{\prime \prime}$ | 414 |
| 18L388 | GEM-1622* | . 002 | $3 / 8 \times 11 / 4^{\prime \prime}$ | 414 |
| 3000 VOLTS DC WORKING |  |  |  |  |
| 18L966 | GEM-3031 | . 0001 | 7/16x11/4" | $\begin{aligned} & 914 \\ & 65 ¢ \\ & 654 \\ & 684 \end{aligned}$ |
| $18 L 967$ | GEM-3035 | . 0005 | 7/16x ${ }^{11 / 4}{ }^{\prime \prime}$ |  |
| 18 L 968 | GEM-3021 | . 001 | 7/16x ${ }^{1 / 4 / 4}$ |  |
| 18 L 969 | GEM-3023 | . 003 | $1 / 2 \times 11 / 2^{\prime \prime}$ |  |
| 18 L 970 | GEM-3025 | . 005 | $5 / 8 \times 178^{\prime \prime}$ | $\begin{aligned} & 684 \\ & 824 \\ & 824 \\ & 944 \end{aligned}$ |
| 18 L 971 | GEM-3011 | . 01 | $5 / 8 \times 17 / 8^{\prime \prime}$ |  |
| 18 L 972 | GEM-3013 | . 03 | $1 \times 23 / 8^{\prime \prime}$ |  |
| 18 L 973 | GEM-3015 | . 05 | $1 \times 23 / 8^{\prime \prime}$ |  |
| 6000 VOLTS DC WORKING |  |  |  |  |
| 18 L 974 | GEM-6x35 | . 0005 | $1 / 2 \times 1{ }^{1 / 2}$ | $\begin{aligned} & 794 \\ & 79 \$ \\ & 854 \end{aligned}$ |
| 18 L 975 | GEM-6x21 | . 001 | $58 \times 1{ }^{1 / 8}$ |  |
| 18 L 976 | GEM-6x22 | . 002 | $5 / 8 \times 17 / 8^{\prime \prime}$ |  |
| 18L977 | GEM-6x23 | . 003 | $3 / 4 \times 21 / 4^{\prime \prime}$ | $\begin{aligned} & 1.03 \\ & 1.09 \\ & .23 \\ & 1.23 \\ & \hline \end{aligned}$ |
| 18 L 978 | GEM-6x25 | . 005 | $3 / 4 \times 21 /{ }^{\prime \prime}$ |  |
| 18 L 979 | GEM-6x275 | . 0075 | $1 \times 23 / 8{ }^{\prime \prime}$ |  |
| 18 L 980 | GEM-6x11 | . 01 | $1 \times 23 / 8{ }^{\prime \prime}$ |  |
| 10,000 \& 15,000 V. DC WORKING $\$ 10,000$ volts. $\dagger 15,000$ volts. |  |  |  |  |
| 18 L 950 | GEM-10035§ | . 0005 | $5 / 8 \times 15 / 8^{\prime \prime}$ | $\begin{array}{r} .88 \\ 1.23 \\ .94 \\ . .97 \\ 2.00 \\ \hline \end{array}$ |
| 18 L 951 | GEM-10021§ | . 001 | 15/16 $\times 21 / 4^{\prime \prime}$ |  |
| 18 L 952 | GEM-15031 $\dagger$ | . 0001 | $17 / 32 \times 21 / 2^{\prime \prime}$ |  |
| 18 L 953 | GEM-150325 $\dagger$ | . 00025 | $3 / 4 \times 21 / 2^{\prime \prime}$ |  |
| 18 L 954 | GEM-15035 $\dagger$ | . 0005 | $7 / 8 \times 21 / 2^{\prime \prime}$ |  |

## Centralab Ceramic Capacitors

## 850 S TRANSMITTING CAPACITORS

High-quality ceramic capacitors for use in RF power circuits. Can be employed in transmitters, induction heaters, electronic welding apparatus and X-ray units. Have ex-
tremely low power factor. "Double cup" construction provides high mechanical strength and long leakage paths. Silver electrodes fired to ceramic. $1 / 8^{\prime \prime}$-long hex stud terminals with $6-32$ tapped holes. $\dagger$ Negative temperature coefficient of 750 parts $/$ million $/{ }^{\circ} \mathrm{C}$. ${ }^{*}$ Zero temperature coefficient. $\pm 10 \%$ tolerance Series 858 S are same size and style; Hi-K dielectric; $5 / 8 x^{13} / 6^{\prime \prime}$ dia. $\pm 20 \%$ tolerance. $\S$ Based on $30^{\circ} \mathrm{C}$. temp. rise. Av. shpg. wt., 2 oz .

| $\begin{gathered} \text { Stock } \\ \text { No. } \\ \hline \end{gathered}$ | $\begin{aligned} & \text { Mfr's } \\ & \text { Type } \\ & \hline \end{aligned}$ | Mmf. | WVDC | $\mathrm{c} \left\lvert\, \begin{gathered} \text { RF Load, } \\ 30 \mathrm{Mc}, \\ \hline \end{gathered}\right.$ | NET EACH |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  |  |  |  | 1-4 | 5-9 | 10-24 | 25-149 | 50- |
| 112100 | 850S-252* | 25 | 7500 | 7 amps |  |  |  |  | 1. |
| $1)^{\text {L }} 101$ | 850S-502* | 50 | 7500 | 10 amps |  |  |  |  |  |
| L 102 | $850 \mathrm{~S}-50 \mathrm{~N} \dagger$ | 50 | 7500 | 8.8 amps | 2.65 | 2.38 | 2.20 | 1.99 | 1.6 |
| 11 L 103 | $850 \mathrm{~S}-75 \mathrm{~N}+$ | 75 | 7500 | 10 amps |  |  |  |  | 1.6 |
| L104 | 850S-100N | 100 | 5000 | 9.8 amps |  |  |  |  | . 64 |
| L 107 | 8585-500 | 500 | 5000 |  | 2.6 | 2.38 | 2.20 | 1.99 | 1.84 |
| 1 L 108 | 858S-1000 | 1000 | 5000 |  |  |  |  |  | 1.8 |

## FEED-THRU HI-KAPS

Tiny ceramics designed for single-hole mounting. Per mit convenient feeding of leads through chassis or shields and at the same time provide exceptionally effective RF by-passing. Special construction virtually eliminates lead inductance. Rated 500 WVDC. Type FT has 12-28 mounting nut and .050 tinned copper leads with hooked ends to facilitate soldering. MFT has $1 / 4^{\prime \prime}$ dia. flange, mounts in $5 / 32^{\prime \prime}$ dia. hole and is attached by soldering to chassis (has No. 16 leads). Tolerance: $* \pm 20 \% ; \dagger-20$ to $+50 \% ; \S \pm 10 \%$; $\ddagger$ guaranteed minimum value. Av. shpg. wt., 2 oz.

TYPE FT

| Stock No. | Mfr's <br> Type | Mmf | NET EACH |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: |
|  |  |  | 1-24 | 25-99 | 100-249 |
| $11 L 390$ | FT- 500 | * 500 |  |  |  |
| 111391 | FT-1000 | *1000 |  |  |  |
| $11 L 392$ | FT-1500 | $\dagger 1500$ | 59c | 47 c | 39c |
| 11 L 393 | FT-1800 | $+1800$ |  |  |  |
| $11 L 394$ | FT-2300 | $\dagger 2300$ |  |  |  |
| TYPE MFT MINIATURES |  |  |  |  |  |
| Stock No. | Mfr's <br> Type | M mf | NET EACH |  |  |
|  |  |  | 1-24 | 25-99 | 100-249 |
| 11 L 488 | MFT-50 | § 50 |  |  |  |
| 11 L 489 | MFT-100 | § 100 |  |  |  |
| IIL490 | MFT-500 | + 500 | .29 | .23 | .196 |
| 11 L 491 | MFT-1000 | $\ddagger 1000$ |  |  |  |

## DF FLAT PLATE HI-KAPS

Unusually thin, compact ceramics with capacities up to .1 mfd . Excellent for use in bypass and filter appli cations. Offer exceptionally high stability. Rated at minimum value except $*+80 \%$ to $-20 \%$ No 20 minned leads firmly anchored in capacitor bo. 20 Capacity and working voltage are stamped on all Capacitors. Size of DF-104 and $\mathrm{DF}-753$ is $17 / 16^{15} \mathrm{x}^{15} / 16 \mathrm{x}$ $1964^{\prime \prime}$; size of Type DF-503, Type DF-403 and Type DF-303 is $17 / 16 \times 15 / 16$ $7 / 32^{\prime \prime}$. Av. shpg. wt., 3 oz.

| Stock No. | Mfr's Type | Mfd | NET EACH |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: |
|  |  |  | 1-24 | 25-99 | 100-249 |
| 11L245 | DF-104* | . 1 | 474 | 374 | 35¢ |
| $11 L 246$ | DF-753 | . 075 | 47\% | 374 | $35 ¢$ |
| $11 L 247$ | DF-503 | . 05 | 414 | 324 | 314 |
| $11 L 248$ | DF-403 | . 04 | $41 \%$ | 324 | 314 |
| $11 L 249$ | DF-303 | . 03 | 414 | 324 | 314 |

UK ULTRA-KAP MINIATURE DISC CAPACITORS
New disc ceramic capacitors designed to meet the small size and high capacitance requirements of transistor circuitry. Specifically engineered for low-voltage bypass and coupling applications. Present extremely low power factors. Supplied n capacitance values from 0.22 to 2.2 mfd . Insulated with double coating of "Durez" and impregnated with highvacuum wax to withstand extreme temperatures, humidity mfd. in diameters from only $1 / 4$ to $3 / 4^{\prime \prime}$. Rated 3 working volts DC. All units stamped with capacity and voltage ratings. Tolerance: guaranteed minimum value. $5 / 32^{\prime \prime}$ thick. No. 22 tinned copper leads. Av. shpg. wt., 2 oz.

| Stock No. | Mfr's <br> Type | Mfd | Dia. | NET EACH |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  |  |  | 1-24 | 25-99 | 100-249 |
| 111293 | UK-224 | . 22 | $1 / 4{ }^{\prime \prime}$ | . 32 | . 25 | .216 |
| 111294 | UK-474 | . 47 | $3 / 8{ }^{\prime \prime}$ | . 32 | . 25 | .216 |
| $11 L 295$ | UK-105 | 1.0 | $9 / 16 "$ | . 44 | . 35 | . 29 |
| 11 L 296 | UK-225 | 2.2 | $3 / 4^{\prime \prime}$ | . 53 | . 42 | . 35 |

HI-VO-KAP UNIVERSAL CAPACITORS
Type TV-207. High-voltage TV-20 ceramic capacitor with set of 7 attachable terminals. Ideal for service hops-provides maximum coverage with a minimum f inventory. Capacitance, 500 mmf . Rated 20,000 working volts DC; 40,000 volts test. Employs heavy-,
ceramic insulation and rugged, threaded-hole terminal studs firmly bonded to the capacitor body. Terminals seat in studs without air gapeliminates internal corona. Tolerance: $-20 \%$ to $+50 \%$. Size, $1^{\prime \prime}$ dia. x
 1.09

TVK-5-50. Five of above capacitors in a convenient plastic case with 5 sets of 10 terminals. Shpg. wt., 1 lb
5.39


Compact, highly stable trimmer capacitors with ceramic dielectric. Full capacity range with $180^{\circ}$ rotation. Balanced rotor and heavy to stator and rotor, which make contact on a flat optically ground surface to eliminate air space. Rated 600 WVDC. Power factor: less than $0.2 \%$ at 1 mc . Capacitance drift: $\pm 0.75 \%$ or $\pm 0.5 \mathrm{mmf}$, whichever is greater. Types 820 have ceramic base, 822 and 823 steatite base, 827 phenolic base, 829 are tubular ceramic (with mtg. screw and lock-nut). Types 822 and 823 are made to JAN specifications. Letter N in Type No. indicates negative temperature coefficient, $Z$ indicates zero temperature coefficient. *body length. Av. shpg. wt., 1 oz .

| Stock No. | Mfr's <br> Type | Fig. | Mmf | Base <br> Size | NET EACH |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  |  |  |  | 1-24 | 25-99 | 100-249 |
| 115381 | 820-D |  | 1-3.5 |  |  |  |  |
| 114382 |  |  | ${ }_{\text {2-20 }}^{\text {2-6 }}$ |  | 71 | 56 | 47 |
| 112384 | ${ }^{820-\mathrm{C}}$ | A | - $\begin{aligned} & \text { 5-20 } \\ & 7-35\end{aligned}$ | $5 / 8 x^{2} / 32^{\prime \prime}$ | .71 | . 56 | . 47 |
| 112650 | 822-DN |  | 2-6 |  |  |  |  |
| 112651 | $822-\mathrm{EN}$ |  | 4-30 |  |  |  |  |
| If Li25 | $822-\mathrm{CN}$ $822-\mathrm{BN}$ | B | ${ }_{7-45}^{4.5-25}$ | $27 / 32 x^{21} / 32^{\prime \prime}$ | . 88 | . 70 | . 59 |
| 115123 | $822-\mathrm{AN}$ |  | 8-50 |  |  |  |  |
| 115652 | $822-\mathrm{DZ}$ |  | 1.5-3 |  |  |  |  |
| 11L653 | $822-\mathrm{EZ}$ |  | $\left\lvert\, \begin{aligned} & 1.5-7 \\ & 2-7.5 \end{aligned}\right.$ |  |  |  |  |
| 115128 | $822-\mathrm{BZ}$ | B | 2.5-13 | $27 / 32 x^{21 / 32}$ | . 88 | . 70 | . 59 |
| $\begin{array}{ll} 11 & 654 \\ 1127 \\ \hline \end{array}$ | $\begin{aligned} & 822-\mathrm{FZ} \\ & 822-\mathrm{AZ} \end{aligned}$ |  | $\begin{aligned} & 3-12 \\ & 4.5-25 \end{aligned}$ |  |  |  |  |
| 115512 | $823-\mathrm{DN}$ |  | 8-50 |  |  |  |  |
| 114511 | $823-\mathrm{BN}$ |  | 10-100 |  |  |  |  |
| 114510 | 823-AN | C | ${ }_{6-25}^{20-125}$ | 15/16x19/32" | 2.06 | 1.62 |  |
| 11554 | $823-\mathrm{BZ}$ | c | 10-50 | $15 / 16 \times 19 / 32^{\prime \prime}$ | 2.06 | 1.62 |  |
| 115513 | $823-A Z$ |  | 12-60 |  |  |  |  |
| 115516 | 827-A |  | 2.5-7 |  |  |  |  |
| 115517 | 827-B | D | ${ }_{6}^{3.5-12}$ | 17/3 | 73 | 58 |  |
| 115519 | 827-D | D | ${ }_{\text {7-35 }}$ | 17/32 ${ }^{3} / 4$ | . 73 | 58 |  |
| 114400 | 829-3 |  | . 5 -3 | \%1/2" $* 1 / \prime \prime$ | . 29 |  |  |
| 114401 | 829-4 |  | $1-4$ <br> $1-6$ | $* 1 / 2 \prime \prime$ $* 5 / \prime \prime$ | . 29 | . 23 | .196 .196 |
| 11 L 403 | 829-6 | E | ${ }_{1}^{1-6} 1$ |  | . 29 | . 23 | . 196 |
| 11 L 404 | -829-10 |  | 1.5-10 | *3/4" ${ }^{* \prime \prime}$ | .35 | . 28 | . |
|  | 10 | VO | TAGE | CAPACI | ORS |  |  |

Extremely compact, high-capacity, low-voltage ceramic capacitors. Have durable durez resin insulation. Designed especially for transistor circuits and other subminiature applications. Ruggedly constructed to resist the effects of heat, moisture and vibration. All units are stamped with capacity. Type DA: $1 / 2 x^{1 / 2 x^{3} / 6^{\prime \prime}}$ thick, tol-
 thick, tolerance $-30 \%$ to $+80 \%, 75$ and $\dagger-20 \%$ to $+80 \%, 150$ thick, tolerance $*-20 \%$ to

TYPE DA

| Stock No. | $\begin{aligned} & \text { Mifr's } \\ & \text { Type } \end{aligned}$ | Mfd | NET EACH |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: |
|  |  |  | 1-24 | 25-99 | 100-249 |
| $\begin{array}{ll} 11 & L 627 \\ 1 & L 628 \\ 1 & 629 \end{array}$ | $\begin{aligned} & 203 \\ & 503 \\ & 104 \end{aligned}$ | $\begin{aligned} & .02 \\ & .05 \\ & .1 \end{aligned}$ | .23 .38 .56 | .18 .30 .44 | .156 .25 .37 |
| TYPE DDA |  |  |  |  |  |
| $\begin{array}{r} 11 \mathrm{~L} 630 \\ 11 \mathrm{~L} \\ \hline \end{array}$ | $\begin{aligned} & 503 \\ & 104 \\ & \hline \end{aligned}$ | $\begin{aligned} & .05 \\ & \hline \end{aligned}$ | $\begin{array}{r} .29 \\ .53 \\ \hline \end{array}$ | $\begin{array}{r} .23 \\ .42 \\ \hline \end{array}$ | $\begin{aligned} & .196 \\ & .36 \\ & \hline \end{aligned}$ |
| TYPE DM |  |  |  |  |  |
| $\begin{array}{ll} 11 & L 632 \\ 1 & L \\ 1 & 635 \\ 1 & 6 \\ 1 & 636 \end{array}$ | 101* $201 *$ $501 *$ $102 *$ | .0001 .0002 .0005 .001 | .20 .20 .26 | .16 .16 .16 .20 | 137 .137 .177 .176 |
|  | $202 *$ $302 \dagger$ $502 \dagger$ $103 \dagger$ $2-502 \dagger$ | .002 .003 .005 .01 2 x .005 | .26 <br> .26 <br> .38 <br> .38 | .20 .20 .30 .30 .42 | .176 .175 .25 .36 |

## ATTENTION INDUSTRIAL BUYERS !

Allied now offers OEM prices on the Centralab capacitors on this page (except 850 S series) in quantities of $250-499$ and 500-999. Additionally, quantity orders will be bulk packed for your convenience. All capacitors listed are immediately available from the most complete stock of electronic components in the world. We can also supply any other Centralab capacitors in the quantity you require-write to our Industrial Division for prompt quotations and rapid delivery sched ules.

# Centralab Ceramic Capacitors 

## INDUSTRIAL QUANTITIES IN STOCK AT OEM PRICES

SERIES DD DISC CERAMICS


Compact, rugged disc ceramic capacitors designed for bypass and coupling or filter applications. Sizes
range from $1 / 4$ to $7 / 8^{\prime \prime}$ dia. Tolerance $\pm 20 \%$ except $\dagger \pm 0.5 \mathrm{mmf}, * \pm 10 \%$, 8guaranteed minimum valye and ** $-20 \%$ to $80 \%$. Capacitors are specially made to withstand ex-
treme temperature, humidity and vibration. Av. shpg. wt., 2 oz .
DD 1000 VOLTS (excep $\ddagger 600 \mathrm{v}$.)

| No. | Type | Mmf | No. | Type | M mf |
| :---: | :---: | :---: | :---: | :---: | :---: |
| TL 406 | 3R3¢ $\dagger$ | 3.3 | 11L429 | 331 | 330 |
| $11 L 407$ | $050 \dagger$ | 5 | $L 534$ | 361 | 360 |
| L 520 | $060 \dagger$ | 6 | L 430 | 391 | 390 |
| 11.408 | 6R8 $\dagger$ | 6.8 | L 535 | 401 | 400 |
| 112522 | $080 \dagger$ | 8 | 114431 | 471 | 470 |
| 11 L 409 | 100* | 10 | $11 \mathrm{L432}$ | 501 | 500 |
| 11.523 | 120* | 12 | 1433 | 561 | 560 |
| L410 | 150* | 15 | L 536 | 601 | 600 |
| L411 | 200* | 20 | L434 | 681 | 680 |
| 112525 | 220* | 22 | L 435 | 751 | 750 |
| 11 L 412 | 250* | 25 | L 436 | 801 | 800 |
| L 527 | 270* | 27 | L 537 | 821 | 820 |
| L.413 | 330* | 33 | L 437 | 102 | 1000 |
| L414 | 390* | 39 | L 538 | 122 | 1200 |
| 114415 | 470* | 47 | L 539 | 132 | 1300 |
| L4 | 500* |  | L438 | 152 |  |
| L417 | 560* | 56 | L 541 | 182 | 1800 |
| L. 418 | 680* | 68 | L 439 | 202 | 200 |
| 11.419 | 750* | 75 | 5 | 222 | 2200 |
| 11 L 529 | 820* | 82 | L543 | 252 | 2500 |
| 11 L 420 | 101* | 100 | 11L544 | 272 | 2700 |
|  | 121* | 120 | L 440 | 302 | 3000 |
| L. 531 | 131* | 130 | L 600 | 332 | 3300 |
| 11.422 | 151* | 150 | L 601 | 392 | 3900 |
| 11 L 423 | 181* | 180 | $11 L 602$ | 402 | 4000 |
| L 424 | 201* | 200 | 11.441 | 472 | 4700 |
| L. 425 | 221 | 220 | 112037 | 5028 | 5000 |
| L426 | 251 | 250 | 11 L 604 | 5628 | 5600 |
| 11.427 | 271 | 270 | 112605 | 6828 | 6800 |
| 11 L 428 | 301 | 300 | I L 455 | 1038 | 10,000 |

1-24, NET EACH
.15c
25-99, EACH.
.124
.104

| No. | Type | Mfd | No. | Type | Mfd |
| :---: | :---: | :---: | :---: | :---: | :---: |
| $\begin{array}{ll} 11 \\ 1106 \\ L & 422 \end{array}$ | $\begin{aligned} & 1032 \\ & 5022 \end{aligned}$ | $.01$ | $11 \mathrm{LO42}$ | 203 $\ddagger 8$ | . 02 |

1-24, NET EACH
25-99, EACH.
100-249, EACH
1-24, NET EACH.
100-249, EACH.

1-24, NET EACH.
25-99, EACH.

1-24, NET EACH.
25-99, EACH.
100-249, EACH

| No. | Type | Mfd | NET EACH |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: |
|  |  |  | 1-24 | 25-99 | 100-249 |
| 112456 | 3028 | . 003 | 21 c | 16 c | 14 c |
| 112370 | 4028 | . 004 |  |  |  |
| 11L372 | $\begin{aligned} & 5028 \\ & 6028 \end{aligned}$ | $\begin{aligned} & .005 \\ & .006 \end{aligned}$ |  |  |  |
| 11.457 | 7028 | . 007 |  |  |  |
| 116373 | 7528 | . 0075 |  |  |  |
| 112374 | 8028 | . 008 |  |  |  |
| 111.375 | 103§ | . 01 |  |  |  |
| 11 L 376 | 153** | . 015 | 35¢ | $28 ¢$ | $24 ¢$ |

DD30 3000 VOLTS

| No. | Type | M mf | No. | Type | M mf |
| :---: | :---: | :---: | :---: | :---: | :---: |
| 11.607 | 250 | 25 | 116617 | 221 | 220 |
| L609 | 470 | 47 | $1{ }^{1} 6618$ | 251 | 250 |
| L610 | 500 | 50 | L619 | 271 | 270 |
| 112611 | 560 | 56 | L620 | 471 | 470 |
| 116612 | 680 | 68 | 11621 | 501 | 500 |
| 115613 | 820 | 82 | 114622 | 102 | 1000 |
| $11 L 614$ | 101 | 100 | 115624 | 202 | 2000 |
| 111616 | 181 | 180 | 11L626 | 502 | 5000 |

24c
100-249, ЕACH................................... 94

| No. | Type | Mmf | No. | Type | Mmf |
| :---: | :---: | :---: | :---: | :---: | :---: |
| 115680 | 100 | 10 | 112475 | 151 | 150 |
| 11.681 | 150 | 15 | $11 L 476$ | 181 | 180 |
| $1{ }^{1} 462$ | 250 390 | 25 39 | 114478 | 221 | 220 |
| 11L467 | 470 | 47 | 11.480 | 271 | 270 |
| 11L468 | 500 | 50 | 11L682 | 391 | 390 |
| 115469 | 560 | 56 | $11 L 485$ | 471 | 470 |
| 11.470 | ${ }^{680}$ | 68 | 11.486 | 501 | 500 |
| 111472 | 820 | 82 | 11 L 683 | 751 | 750 |
| 11 L 473 | 101 | 100 |  |  |  |

.29c
.234
.204

## 

$.50 c$

## APACITOR KITS

HVK-150 Ceramic Capacitor Kit. 150 disc ceramics of the DD series (described above) in a single-drawer steel cabinet. Values: DD30 ( 5 of each - 5 of each) $-82,100,470,1000,2000 \mathrm{mmf} ;$ DD60 DD16 (10 of each, except $* 20$ ) $-3000,4000$; $5000,6000,7000,7500,8000, * 10,000,10,500$ mmf. Size of cabinet (HWD), $41 / 4 \times 61 / 2 \times 11^{11 / \mathrm{B}^{\prime \prime}}$. Shpg. wt., 6 1bs.
18 Lis.
34.30

DDK-200 Ceramic Capacitor Kit. 200 Type 1000 DCWV , except $\pm 600 \mathrm{DCWV} 5$ of each$5,10,25,33,47,50,68,120,150,180,220,250$, $270,300,330,390,470,500,680,1500,3000$, $4700 ; \$ 10,000 \mathrm{mmf}$. 10 of each $-100,200 \mathrm{mmf}^{2}$. 15 of each - 1000,$5000 ; ~ \$ 20,000$ mmf. 20 of each- $10,000 \mathrm{mmf}$. Size of cabinet (HWD), $41 / 4 \times 61 / 2 \times 1118^{\prime \prime}$. Shpg. wt., 6 lbs. 30.62
18 L 912. NET...................... 30.62


BC TUBULAR CERAMIC
For bypass and coupling or filter applications. 600 WVDC. $\pm 10 \%$ tolerance,
except $\delta=20 \%, * G M V$ except ${ }^{8} \pm$ aranteed minimum value). 2 oz .

## Cap. D6 CAPACITOR SIZES <br>  

| No. | Type | Mmf | No. | Type | Mmf |
| :---: | :---: | :---: | :---: | :---: | :---: |
| 115545 | 030 | ${ }^{3}$ | 11 L 571 | 271 | 280 300 |
| 115546 | 050 |  | 114572 | 301 331 | 380 330 |
| $1{ }^{1} \mathrm{~L} 5478$ | 120 | 12 | 1) 4574 | 391 | 390 |
| 115549 | $\begin{aligned} & 120 \\ & 150 \end{aligned}$ | 15 | 11 575 | 401 | 400 |
| 550 | 180 | 18 | L576 | 471 | 470 500 |
| 15551 | 200 | 20 | 1577 | 501 | 500 560 |
| L 5 | 220 | 22 | L 578 | 601 | 600 |
| 114554 | 270 | 27 | 115580 | 681 | 680 |
| 11 L 555 | 330 | 33 | 11 | 751 | 7508 |
|  | 390 | 39 | 1i 582 | 821 | 8208 |
| 1 L557 | 470 | 47 | 114583 | 102 | 10008 |
| 1 L 558 | 500 | 50 | 114584 | 122 | 12008 |
| 11.559 | 560 | 56 | $11 L 585$ | 152 | 1500 § |
| 11 L 560 | 680 | 68 | 115586 | 182 | 18008 |
|  | 750 | 75 | 115 | 202 | 20008 |
| 1 L 562 | 820 | 82 | 115 | 222 | 22008 |
| 5 | 910 | 91 |  | 252 | 2500* |
| 11 L 564 | 101 | 100 | $11 L 590$ | 272 | 2700* |
| 11 L 565 | 121 | 120 | 115591 | 302 | 3000* |
| 11 L 566 | 151 | 150 | $11 L 592$ | 332 | 3300* |
| 11 L | 181 | 180 | 114593 | 402 | 4000* |
|  | 201 | 200 | L 594 | 472 | 4700** |
| L 569 | 221 | 220 | $11 L 595$ | 502 | 5000* |
| L57 | 251 | 250 |  |  |  |

[^12]

1-24, NET EACH.
32c
1-24, NETCEA
.254

## CAPACITOR KITS

D6K-200. 200 Type D6 BC tubular ceramic capacitors (described at left) in a 1 -drawer steel included axuest 10 or 15 each of the most each ular values. Size of cabinet, $41 / 4 \times 61 / 2 \times 111 / 8^{\prime \prime}$.
Shpg whes. ibs of cabet, 18 L 914. NET.
29.89

TCK-80. 80 temperature-compensating capacitors in 1-drawer steel cabinet. Two each of selected values from . 68 to 750 mmf of the TCN and TCZ series (described at right). Size, 41/4x $61 / 2 \times 1118^{\prime \prime}$. Shpg. wt., 6 lbs.
8L915. NET..............
24.01

> Write to Allied's Industrial Division for OEM priceson DD, DD16, DD30, DD60, D6, TCZ and TCN ceramic capacitors in lots of 250 499 and $500-999$.

SERIES TC TEMPERATURECOMPENSATING CAPACITORS


Comply with JAN-C-20A specs. TCZ is NPO: capacity remains constant from -20 to $+85^{\circ}$ C. TCN has negative coefficient: N750, or 750 parts/million $/{ }^{\circ} \mathrm{C}$. A variety of other temperature coefficients may be obtained by putting both types of capacitors in parallel. All units rated 600 working volts DC. *Tolerance. Av. shpg. wt., 2 oz.

TC CAPACITOR SIZES

| TYPE TCZ |  | TYPE TCN |  |
| :---: | :---: | :---: | :---: |
| Cap. Mmf | Size | Cap. Mmf | Size |
| 0.5 to 24 | 1/5 $\mathrm{x}^{2 / 5}$ | 3.3 to 62 | 1/5 $\mathrm{x}^{2} / 5^{\prime \prime}$ |
| 25 to 56 | 1/5x1/16 | 68 to 160 | $1{ }^{1 / 5} \times{ }^{11 / 1 / 6^{6}}$ |
| 62 to 100 | ${ }^{15} 64 \times 4 \times 1{ }^{1 / 8}$ | 180 to 270 | ${ }^{1564 \times 4}{ }^{1 / 8}{ }^{\circ}{ }^{\circ}$ |
| 110 to to 300 | 9 | 300 470 to 750 | 9 $932 \times 151 / 8^{4}$ |

TYPE TCZ NEGATIVE-POSITIVE-ZERO (NPO)

| No. | M mf | Tol.* | No. | M mf | Tol.* |
| :---: | :---: | :---: | :---: | :---: | :---: |
| 11.200 | . 5 |  | 112215 | 27 |  |
| $11 L 201$ | . 68 |  | 114216 | 30 |  |
| 11.202 | 1.0 | $\pm .25$ | $11 L 217$ | 33 |  |
| $11 L 203$ | 1.5 | mmf | $11 L 219$ | 39 |  |
| 11 L 204 | 2.2 |  | 11 L 220 | 43 |  |
| 11 L 205 | 3.3 |  | 111221 | 47 |  |
| 114206 | 4.7 | $\pm .5$ | 114493 | 50 |  |
| 111207 | 6.8 |  | $1 \\| 222$ | 51 | $\pm 2 \%$ |
| 11 L 208 | 10 |  | 114223 | 56 |  |
| 11 L 209 | 12 |  | 11 L 224 | 62 |  |
| $11 L 210$ | 15 |  | 112225 | 68 |  |
| 114211 | 18 |  | 114226 | 75 |  |
| 114212 | 20 | $\pm 2 \%$ | 114227 | 82 |  |
| 114213 | 22 |  | 1) 2228 | 191 |  |
| 11 L 214 | 24 |  | 114229 | 100 |  |
| 114492 | 25 |  |  |  |  |

1-24, NET EACH.


| N | Mmf | Tol* | No. | Mmf | Tol.* |
| :---: | :---: | :---: | :---: | :---: | :---: |
| $11230$ | 110 120 | $\pm 5 \%$ | $\begin{array}{\|l\|lll\|} \hline 1 & L & 232 \\ \hline \end{array}$ | $150$ | $\pm 5$ |

1-24, NET EACH........................ . 44c
25-99, EACH....

| No. | Mmf | Tol.* | No. | Mmf | Tol.* |
| :---: | :---: | :---: | :---: | :---: | :---: |
| 11 L 235 | 180 |  | 11 L 238 | 0 |  |
| 11 L 236 | $\begin{aligned} & 200 \\ & 220 \end{aligned}$ | $\pm 5 \%$ | $\left\lvert\, \begin{array}{lll} 1 & -1 & 239 \\ 1 \\ 1 \\ \hline \end{array} 240\right.$ | 270 300 | $\pm 5 \%$ |

1-24, NET EACH.....................59C
25-99, EACH....
.474

| No. | M mf | Tol.* | No. | M mf | Tol.* |
| :---: | :---: | :---: | :---: | :---: | :---: |
| 11L241 | 15 | $\begin{aligned} & \pm .5 \\ & \mathrm{mmf} \\ & \hline \end{aligned}$ | 11L265 | 56 62 68 |  |
| 11 L 251 | 12 | $\pm 2 \%$ | L 267 | 68 | $\pm 2 \%$ |
| 11.252 | 15 |  | L 268 | 82 |  |
| 112253 | ${ }_{20}^{18}$ |  | $1 L^{1} 271$ | 100 |  |
| 114255 | 22 |  | 11 L 272 | 110 | $\pm 5 \%$ |
| 114494 | 25 |  | 112273 | 120 |  |
| 11.257 | 27 |  | $11 L 275$ | 150 |  |
| 112258 | 30 33 |  | 11. 277 | 180 |  |
| 112261 | 39 |  | IIL 278 | 200 |  |
| 11263 11295 | 47 50 |  | 112279 | 220 |  |
| 11 L 495 | 50 |  | L280 | 240 |  |
| 11 L 264 | 51 |  | 1 L 281 | 270 |  |

1-24, NET EACH
.29c


1-24, NET EACH........................44C
25-99, EACH
35
100-249, EACH
.296
No. Mmf|Tol.* No. Mmf|Tol.*

1-24, NET EACH........................ 59C
25-99, EACH.

## Industrial Capacitors-Capacitor Hardware

## VITRAMON SERIES A PORCELAIN CAPACITORS

- Miniature Size
- Humidity Proof
- Ruggedly Built

Vitramon miniature, porce-lain-dielectric capacitors are demanding industrial most cations. They possess outanding mechanical and lectrical characteristics, V electrical characteristics. Vapor-proof, stable and quiet, introduce mininum circuit losses, operate dependably over a wide temperature range, anical strength.

Their vitreous dielectric is unaffected by humidity and maintains its insulation resistance after total immersion. Meet shock requirements of MIL-C-5A 202 and MIL-T-5422C and exceed vibration requirements of MIL-C-5A and MIL-C-11272A; also meet requirements of 2000-cps vibration at 20 G 's acceleration. Used in industrial research applications where centrifugal accelerations in excess of 40,000 G's is created. Leads will stand 5 lb . pull. All capacitors listed below are rated at 500 WVDC , except $300 \mathrm{VOC}$. Tolerance: $\pm 5 \%$ or 0.25 mmf , whichever is greater. Types with 1 \%or $2 \%$ tolerance available on special order-write for prices.) $11 /{ }^{6}$ leads are tin-clad copper, soft solder coated. Sizes range from $3 / 8 x^{15} / 64$
$x^{3} / 16^{\prime \prime}$ thick to $29 / 32 x^{13 / 16 x^{2} / 32^{\prime \prime}}$ thick. Av. shpg. wt., 2 oz .

## STOCK RANGES-SPECIFY CAPACITANCE VALUE

Capacitors from 1.0 to 220 mmf are Type CY13C; 270 to 470 mmf are Type CY17C; 560 to 2000 mmf are Type CV22C; 2400 to 6200 mmf are Mmf

| M mf | M mf | Mmf | M mf | Mmf | Mmf | M mf | Mmf | M mf |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 1.0 | 5.1 | 12 | 24 | 47 | 100 | 270 | 680 | 30 |
| 2.2 | 6.2 | 15 | 27 | 51 | 120 | 330 | 820 | *3600 |
| 3.0 | 7.5 | 18 | 30 | 56 | 150 | 390 | 1000 | *4300 |
| 3.6 | 9.1 | 20 | 33 | 68 | 180 | 470 | *2000 | *51 |
| 4.3 | 10 | 22 | 39 | 82 | 220 | 560 | 2400 | *620 |
| Stock No. |  | $\begin{gathered} \text { Values } \\ \text { (See Table, Above) } \end{gathered}$ |  |  | NET EACH |  |  |  |
|  |  | 1-49 | 50-99 | 100-249 | 250-4 |
| $\begin{aligned} & 74 \text { LL } 660 \\ & 74 \mathrm{LL} 661 \\ & 74662 \\ & 74 \mathrm{LL} 664 \\ & \hline \end{aligned}$ |  |  |  |  | 12100 | 0 to | 0 mmf | 1. | . 95 | . 80 | . 75 |
|  |  | 2 mmf | . 80 | . 76 |  |  | . 64 | . 60 |
|  |  | $\begin{array}{r} \text { to } 390 \mathrm{mmf} \\ \\ \hline \mathbf{~} 70 \mathrm{mmf} \\ \hline \end{array}$ |  | 1.00 |  | $\begin{array}{r}.95 \\ \hline 24 \\ \hline\end{array}$ | . 80 | 8 |
| $\begin{aligned} & 74 \mathrm{LL} 665 \\ & 74 \mathrm{LL} 666 \\ & 74 \mathrm{LL} 667 \\ & 74 \mathrm{LL} 668 \\ & 74669 \\ & \hline \end{aligned}$ |  |  |  |  |  |  |  |  |
|  |  | 560 to 820 mmf$1000 \& 2000 \mathrm{mmf}$ |  | 2.16 | 2.05 | 1.73 |  |
|  |  | 12400 \& 3000 mmmf |  |  | 4.00 | 3.80 | 3.20 | 3.00 |
|  |  | 5.40 |  |  |  | 4.32 | 4.05 |
|  |  | $3600 \& 4300 \mathrm{mmf}$$5100 \& 6200 \mathrm{mmf}$ | 7.70 | 7.32 | 6.16 | 5.78 |

## TEXAS INSTRUMENT "TAN-TI-CAP" SOLID TANTALUM ELECTROLYTIC CAPACITORS

- Small Size, Rugged Capacitors
- Long Operating and Storage Life
- Ideal for Transistorized Circuits Small-sized solid tantalum electrolytic capacitors. Ideal for use in transistorized circuits, resistor-capacitor timing circuits, power supply circuits, etc. Excellent for control, computer and communication equipment for both military and commer-
cial purposes. Useful in any application requiring small size, stable electrical characteristics, long life and high efficiency, reThe hermetically sealed case can be mount-
 ed either vertically or horizontally on printed circuit boards. They are able to withstand both low and high frequency vibrations. Provide reliable, efficient operation over a wide temperature range-from $-80^{\circ} \mathrm{C}$ to $+85^{\circ} \mathrm{C}$. Exhibit both long storage life and long operating life.
Meets moisture resistance requirements of MIL Standard 202A, Method 106; low-frequency vibration requirements of MIL Standard 202A, Method 201; high-frequency vibration requirements of MIL Standard 202A, Method 204; shock test requirements of MIL Standard 202A, Method 202A. Have tinned brass case. $11 / 2^{\prime \prime}$ leads can be safely bent at angle to case. Leads withstand $3-1 \mathrm{~b}$. pull. Tol. $\pm 20 \%$. Av. shpg. wt., 2 oz .

| Stock No. | Mif's <br> Type | Mfd | Volts | Size | NET EACH |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  |  |  |  | 1-24 | 25-Up |
| 731781 | T050 | 22 | 6 | $11 / 64 \mathrm{X}^{23 / 64{ }^{\prime \prime}}$ | 3.75 | 2.25 |
| $73 L 782$ | T051 | 33 | 6 | $11 / 64 \times 7 / 16^{7 \prime}$ | 3.95 | 2.37 |
| 731783 | T052 | 47 | 6 | $3 / 16 \times 7 / 16^{\prime \prime}$ | 4.22 | 2.54 |
| 73 L 784 | T053 | 60 | 6 | $3 / 16 \times 7 / 16^{\prime \prime}$ | 4.50 | 2.70 |
| $73 L 785$ | T054 | 200 | 6 | 17/64 $\mathrm{x}^{45} / 64^{\prime \prime}$ | 9.16 | 5.50 |
| 73 L 786 | T200 | 10 | 15 | $11 / 64 \times 32 / 64^{\prime \prime}$ | 3.88 | 2.32 |
| 731787 | T201 | 15 | 15 | $11 / 64 \times 7 / 16^{\prime \prime}$ | 3.98 | 2.38 |
| 73 L 788 | T202 | 22 | 15 | $11 / 64 \times 7 / 16^{\prime \prime}$ | 4.40 | 2.64 |
| 731789 | T203 | 33 | 15 | $3 / 16 \times 7 / 16^{\prime \prime}$ | 4.77 | 2.86 |
| $73 L 790$ | T204 | 100 | 15 | 17/64 ${ }^{45} / 6^{\prime \prime}$ " | 9.85 | 5.91 |
| 731791 | T300 | 5 | 25 | $11 / 64 \mathrm{x}^{2} 3 / 64^{\prime \prime}$ | 3.65 | 2.19 |
| 73 L 792 | T301 | 10 | 25 | $11 / 64 \times 7 / 16^{\prime \prime}$ | 4.02 | 2.42 |
| 731793 | T302 | 15 | 25 | $3 / 16 \times 7 / 16^{\prime \prime}$ | 4.70 | 2.82 |
| 731794 | T303A | 35 | 25 | $17 / 64 \mathrm{X}^{45} / 64^{\prime \prime}$ | 7.87 | 4.72 |
| 731795 | T304 | 55 | 25 | $17 / 64 \mathrm{X}^{45} / 64^{\prime \prime}$ | 9.38 | 5.63 |
| $73 L 796$ | T400 | 4 | 35 | $11 / 64 \mathrm{X}^{23} 364^{\prime \prime}$ | 3.80 | 2.28 |
| 73 L 797 | T401 | 8 | 35 | $3 / 16 \times 7 / 16^{\prime \prime}$ | 4.05 | 2.43 |

MALLORY MOUNTING HARDWARE


A completeassortment of commonly used mounting hardware for electrolytic capacitors. For Mallory Type FP or WP capacitors use MP, BP, PS and MW-100 units listed below. For Type TC, FP, WP and other tubular capacitors TH spring clips for horizontal mounting. *Metal. †Phenolic. Av. shpg. wt., 3 oz .

| No. | Type | Fig. | Size | NET |
| :---: | :---: | :---: | :---: | :---: |
| 17 L 31 | PS-4 | A | $1{ }^{\prime \prime}$ | . 41 |
| $17 L 532$ | PS-6 | A | $13 / 8{ }^{\prime \prime}$ | . 53 |
| 17 L 402 | VR-1 | B | 1 to $11 / 16^{\prime \prime}$ | . $\quad .09$ |
| 174413 | VR-3 | B | 13/8 to 17/16" | . $\quad .09$ |
| 171414 | VR-4 | B | $11 / 2$ to $19 / 16^{\prime \prime}$ | . 12 |
| 171415 | VR-6 | B | $13 / 4$ to $1^{113 / 16}$ | " ${ }^{\prime \prime} 15$ |
| 17 L 16 | VR-8 | B | 2 to 21/16" | . 118 |
| 171412 | TH-25 | C | $13 / 8$ to $17 / 16^{\prime \prime}$ | . 06 |
| 17 L 17 | MW-100 | F | Mtg. Wren | ch/1.03 |
| Stock No. | Mfis. Type | Fig. | Size | $\begin{gathered} \text { Per Pkg. } \\ \text { of } 3 \end{gathered}$ |
| 18 L 44 | MP-2 | D* | $3 / 4 *$ |  |
| 184415 | MP-4 | D* | $1{ }^{1 / 4}$ |  |
| 18 L 16 | MP-6 | D* | 13/8" |  |
| 184417 | BP-2 | E $\dagger$ | $13^{3 \prime}$ | 96 |
| 18448 | BP-4 | E $\dagger$ | $1{ }^{\prime \prime}{ }^{\prime \prime}$ |  |
| 182419 | BP-6 TH-13 | ${ }_{\mathbf{E}}^{\mathrm{E}} \dagger$ | 13/8" |  |
| 18 L 420 | TH-13 | C | 3/8" |  |
| 18 L 421 | TH-15 | C | 1/2 to $9 / 16^{\prime \prime}$ |  |
| 18.422 | TH-17 | C | $5 / 8$ to $11116^{\prime \prime}$ |  |
| 18 L 423 | TH-19 | C | $3 / 4$ to $13 / 16^{\prime \prime}$ | 9C |
| 18 L 424 | TH-21 | C | 7/8 to ${ }^{15} / 16^{\prime \prime}$ |  |

INSULATING SLEEVES
Fiber aleeves for FP type capacitors. Wt., 2 oz.

| No. | Type | Size | EACH |
| :---: | :---: | :---: | :---: |
| 172510 | CE-1 | $3 / 4 \times 2$ " |  |
| 171511 | CE-3 | $1 \times 2{ }^{\prime \prime}$ |  |
| 174512 | CE-4 | $1 \times 3$ " |  |
| 172513 | CE-5 | $13 / 8 \times 2^{\prime \prime}$ | c |
| 172514 | CE-6 | 13/8x3* |  |
| $17 L 515$ | CE-7 | 1x21/2* |  |
| 7 7. 516 | CE-8 | $1 \times 4 *$ | 94 |
| 17L517 | CE-9 | 13/8×21/2" | $6 \%$ |
| $17 L 518$ | CE-10 | $13 / 8 \times 4^{\prime \prime}$ | 94 |

## SANGAMO MICA CAPACITORS TYPE E "HAM" MICAS

 For amateur equipment. Tol.$\pm 20 \% .31 / 2 \times 1 / 16 \times 21 /{ }^{\prime \prime}$. Mtg.
 centers: $35 / 16^{\prime \prime}$. Terminals $3 / 4^{\prime \prime}$ long; 12-24 thrd. studs, spaced $11 /{ }^{*}$ apart. *Max. under ICAS
conditions. Av. shpg. wt., $1 / 2 \mathrm{lb}$.

| No. | Type | Mfd | Volts* | EACH |
| :---: | :---: | :---: | :---: | :---: |
| $74 L 617$ | E-711 | . 01 | 7,000 | 12.38 |
| 74 L 597 | E-1023 | . 003 | 10,000 | 10.61 |
| 74 L 598 | E-1024 | . 004 | 10,000 | 11.20 |
| 74 L 599 | E-1025 | . 005 | 10,000 | 11.79 |
| 74 L 596 | E-1235 | . 0005 | 12,500 | 6.47 |
| 74 L 126 | E-1221 | . 001 | 12,500 | 6.47 |
| 74 L 127 | E-1222 | . 002 | 12,500 | 8.82 |
| 74 L 618 | E-1223 | . 003 | 12,500 | 10.61 |

TYPE F INDUSTRIAL MICAS Extra-heavy-duty capacitors. Sizes: F1, $115 / 16 \times 213 / 16 \times 15 / 6^{\prime \prime} ;$ F2,
$21 / 4 \times 31 / 8 \times 11 / 4^{\prime \prime} ;$ F3 $37 / 8 \times 27 / 16 \times$ inuous duty rating. Av. shpg. wt., $1 / 2 \mathrm{lb}$.

| No. | Type | Mifd | PeakWV* | EACH |
| :---: | :---: | :---: | :---: | :---: |
| 74 L 632 | F2-0501 | . 1 | 500 | 11.29 |
| 74 L 631 | F2-1515 | . 05 | 1500 | 10.17 |
| 74 L 620 | F1-335 | . 0005 | 3000 | 7.41 |
| 74 L 629 | F2-325 | . 005 | 3000 |  |
| 74 L 623 | F2-532 | . 0002 | 5000 | 17 |
| 74 L 624 | F2-533 | . 0003 | 5000 | 0.17 |
| 74 L 625 | F2-535 | . 0005 | 5000 |  |
| 74 L 626 | F2-521 | . 001 | 5000 |  |
| 74 L 627 | F2-522 | . 002 | 5000 | 0.17 |
| 74 L 628 | F2-523 | . 003 | 5000 |  |
| 74 L 634 | F3-821 | . 001 | 8000 | 23.08 |
| 74 L 636 | F3-825 | . 005 | 8000 | 28.58 |

## AEROVOX CIRCUIT MODULES

Modules are an entirely new concept in electronsembly! They are complete and extremely compact standard basic circuits consisting of miniaturzed components including capaci-

etc. mounted on stacked wafers. Will save hours of time and effort for design engineers and others who require basic circuit elements for quick production and testing of prototype and expermental electronic developments. These basic circuits are "on hand" when needed. They are easily inserted into breadboard; can be changed about as desired. Av. shpg. wt., 1 lb.

| Stock No. | Mfr's <br> Type | Description |  |
| :---: | :---: | :---: | :---: |
| 12 L 677 | P1002 | Low-Level Cathode |  |
| 12L678 | P1003 | Follower Dual Cathode Follower | 4 |
| 12L679 | P1 |  |  |
|  |  | Video Amplifie | 10.39 |
| 12 L 680 | P1005 | Triode Video Dri |  |
| 12 L 681 | G1001 | Amplifier PRF Multivibrato | 9 |
| 12 L 682 | R1001 | egulator $\pm 300$ | 20.68 |
| 40H404 | MBB-12 | 12-Pos. Breadboar | 60 |
| 40H405 | MBB-1 | Phenolic Socket |  |
| 12 L 683 | A1001 | Low-Level Lin. Amp. | 5.14 |
|  | A1 | Inter. Lin. Amp. |  |
| 12 L 685 | A1003 | Phase Inverter-Driver | 116 |
| 1 2 L 688 | R1002 | Linear Amplifier DC Regulator $\pm 150$ |  |

CORNELL-DUBILIER CAPACITOR-MOUNTING HARDWARE
Widely used mounting hardware for all types
of capacitors. Universal clip (Fig. L) adjusts to fit various sizes. Av. shpg. wt., 2 oz.

| Stock No. | Fig. | Description | Pkg. of 2 |
| :---: | :---: | :---: | :---: |
| 19L478 | G | Mtg. Ring; 11/4" dia. cans | . 23 |
| 19 L 479 | G | Mtg. Ring; $13 / 8^{\prime \prime}$ dia. cans | . 2 |
| 19 L480 | G | Mtg. Ring; $11 / 2^{\prime \prime}$ dia. cans | - |
| 19 L 48 l | H | Mtg. Clip; 3/4" dia. cans | . |
| 19 L 482 | H | Mtg. Clip; $1^{\prime \prime}$ dia. cans | . 35 |
| 194483 | H | Mtg. Clip; 13/8" dia. cans | . 35 |
| 19 L 484 | J | "C' Clamp; 5/8-3/4" cans | . 3 |
| 19 L 485 | J | "C" Clamp; 7/8-1" cans | . 3 |
| 19 L 489 | K | Mtg. Strap; I.D. $5 / 8^{\prime \prime}$ | .17 |
| $19 L 491$ | K | Mtg. Strap; I.D. 3/4" | 7 |
| 19 L 492 | K | Mtg. Strap; I.D. 7/8" |  |



| Stock No. | Fig. | Description | Pkg. $\text { of } 2$ |
| :---: | :---: | :---: | :---: |
| L 493 | L | a. cans | . 35 |
| L 494 | $\underline{L}$ | For $1 / 1 / 29 / 11^{\prime \prime}$ dia. cans | . 3 |
| 19 L 495 | L | For 5/8-11/16" dia. cans | . 35 |
| 19 L 496 | L | For 3/4-13/16 ${ }^{\prime \prime}$ dia. cans | . 35 |
| 19 L 497 | L | For $7 / 8-15 / 11^{\prime \prime}{ }^{\prime \prime}$ dia. cans | . 35 |
| $9 L 498$ | L | For $1-11 / 16^{\prime \prime}$ dia.cans For 13/8-17/16 ${ }^{\prime \prime}$ dia. can |  |

## Packaged Circuits and Printed Circuit Kits

## SPRAGUE BULPLATE PRINTED CIRCUITS



Each unit consists of a selfcontained "package"-capacitors, resistors and, in certain units, inductance. There is no need to waste time on excessive wiring and ply replace the entire circuit section. A moisture sealed shock-resistant ceramic base firmly holds printed circuit wiring and all components in place. Capacitors are rated at 500 v . DC, 1000 plied across the resistors is 250 v . DC; except Av. shpg. wt., 2 oz.
18 L 860. New Printed Circuit Guide No. K-351. An informative catalog listing complete information on Sprague's Bulplate printed circuits. Contains diagrams of all circuits listed below. Includes replacement information on manufacturers. NO CHARGE when requested with your next order.

| No. | Type | Description | NET |
| :---: | :---: | :---: | :---: |
| 18 L 81 | D-1 | Diode Filter | 35 |
| 18 L 862 | D-2 | Diode Filter | . 35 |
| 18 L 863 | D-3 | Diode Filter | . 35 |
| 18 L 864 | DP-1 | Detector Pentode Coup. | . 73 |
| $18 L 865$ | DT-1 | Audio Output | . 59 |
| 184866 | $\overline{\mathrm{DT}-2}$ | Audio Output | . 68 |
| 18 L 869 | DT-5 | Audio Output | . 68 |
| 184870 | DT-6 | Audio Output | . 68 |
| 18 L 871 | F-1 | Decoupling Filter | . 50 |
| 18 L 873 | $\mathrm{P}-1$ | Pentode Coupling | . 53 |
| 181874 | P-2 | Pentode Coupling | . 53 |
| $18 L 875$ | P-3 | Pentode Coupling | . 59 |
| 18 L 882 | T-1 | Triode Coupling | . 44 |
| 18 L 883 | T-2 | Triode Coupling | 4 |
| 18 L 885 | T-4 | Triode Coupling | . 41 |
| 181886 | T-5 | Triode Coupling | 44 |
| $18 L 887$ | V1/V3 | Vertical Integrator | . 65 |
| 18 L 888 | $\mathrm{V}-2$ | Vertical Integrator | . 73 |
| 18 L 890 | $V-4$ | Vertical Integrator | . 65 |
| 18 L 891 | V-5 | Vertical Integrator | . 59 |

## SPRAGUE BULPLATE MULTIPLE CERAMIC CAPACITORS



Compact, self-contained assemblies containing all the capacitors used in one or more stages of a radio circuit. All are rated at 500 shpg. wt., 2 oz .

| No. | Type | Mfd | Size | NET |
| :---: | :---: | :---: | :---: | :---: |
| 15 L 626 | 34C3 | $\begin{aligned} & .002, .00022, \\ & .00022, .005 \\ & \hline \end{aligned}$ | $11 / 8 \times 5 / 8 \times 5 / 32^{\prime \prime}$ | . 44 |
| 15 L 627 | 34C4 | $\begin{aligned} & .002, .00015,{ }^{2} \\ & .005, .0001, .005 \\ & \hline \end{aligned}$ | $11 / 8 x 5 / 8 \times 5 / 32^{\prime \prime}$ | . 53 |
| 15 L 628 | 34C5 | $\begin{aligned} & .002, .005, \\ & .0001, .005 \\ & \hline \end{aligned}$ | $11 / 8 \times 5 / 8 \times 5 / 3 z^{\prime \prime}$ | . 44 |
| 15 L 629 | 34C6 | 3X. 004 | $11 / 8 x^{5 / 8} \times 5 / 3 z^{7}$ | . 38 |

## CENTRALAB PACKAGED

## ELECTRONIC CIRCUITS (PEC)



Complete, printed electronic circuits-with resistors, cases, inductance. Ideal for the replacement of entire cir cuit sections in radio and TV sets. The printed-circuit wiring and all components are bound to a ceramic base and sealed against moisture, temperature change and physical shock. Av. shpg. wt., 2 oz.
18 L 893. PC-5 Packaged Electronic CirCHARGEe. Contains complete data-N

| No. | Type | Description | NET |
| :---: | :---: | :---: | :---: |
| 11 L 47 | PC-50 | Diode Load Filter | 354 |
| 11 L 148 | PC-51 | Diode Load Filter | 354 |
| 11 L 50 | PC-70 | Triode Couplate | 414 |
| 1 L 51 | $\mathrm{PC}-71$ | Triode Couplate | 414 |
| 11 L 152 | PC-80 | Triode Couplate | 444 |
| $L 153$ | PC-81 | Triode Couplate | 444 |
| 114165 | PC-84 | Triode Couplate | 444 |
| 11 L 154 | PC-90 | Pentode Couplate | 536 |
| $11 L 155$ | PC-91 | Pentode Couplate | 534 |
| 1L166 | PC-92 | Pentode Couplate | 594 |
| 11 L 156 | $\overline{\mathrm{PC}-100}$ | Vertical Integrator | 4 |
| 114157 | PC-101 | Vertical Integrator | 34 |
| $11 L 356$ | PC-104 | Vertical Integrator | 654 |
| 114357 | PC-105 | Vertical Integrator | 654 |
| 11 L 358 | PC-106 | Vertical Integrator | ¢ |
| 1 L 158 | PC-150 | Audio/Det Couplate | 59¢ |
| $11 L 170$ | $\mathrm{PC}-151$ | Audio/Det Couplate | 684 |
| 114359 | $\mathrm{PC}-154$ | Audio/Det Couplate | 594 |
| 111360 | PC-157 | Audio/Det Couplate | 594 |
| 114361 | $\mathrm{PC}-158$ | Audio/Det Couplate | 684 |
| 11 L 362 | PC-159 | Audio/Det Couplat | 684 |
| $11 L 171$ | PC-160 | Pentode/Det Couplate | 734 |
| $11 L 172$ | PC-165 | Pentode/Det Couplate | 794 |
| 11L368 | PC-260 | Sync Takeoff Couplate | 734 |
| $L 369$ | $\mathrm{PC}-262$ | Sync Takeoff Couplate | 734 |
| $1 L 380$ | PC-263 | Sync Takeoff Couplate | 734 |
| 18 L | PC-314 | Retrace Suppression | 594 |
| 18 L 908 | PC-32 | Pentode/Det Couplate | 734 |

## NEW CENTRALAB PACKAGED

Type PCK-40. 40 assorted packaged electronic circuit units in one-drawer steel Equipto cabinet. Contains packaged circuits most frequent Iy used in popular electronic equipment. All units are individually packed in transparent plastic package with part numbers clearly
shown for easy identification shown for easy identification
Kit consists of: 2-PC-81 Triode Couplates; 2-PC-91 Pentode Couplates; 10- ${ }^{\text {PC }}$ PC-100, 10 PC-101, 2-PC-104, $2-\mathrm{PC}-105,2-\mathrm{PC}-106$ Vertical Integrators;
$2-\mathrm{PC}-158,2-\mathrm{PC}-150$,
$2-\mathrm{PC}-151$,
2 $2-\mathrm{PC}-158,2-\mathrm{PC}-159 \mathrm{Audio}$ Detector Cou-
plates; 2-PC-160, 2-PC-165 Pentode-Deplates; $2-\mathrm{PC}-16$
tector Couplates.
Sturdily constructed Equipto cabinet measures


## CENTRALAB COMPONENTS



TRANSISTOR AMPLIFIER Ultra-miniature ampli-fiers-stamp or pencileluder size. Crcuit includes transistors, capaccomputers, pocket-size radios on recorders, hearing aids, and other ultra-miniature applications. Specially designed high-gain low-noise transistors hermetically sealed in stea-
titebase. Output willdrive headphones.
TA- 6
Type TA-6. 1 -stage. Response: 250Input $40,000 \mathrm{cps} \pm 5 \mathrm{db}$. Gain: 21 db at 1 kc . Input Imp.: 1000 ohms. Supply Voltage: 1.345 v.;. 5 ma. drain. Output: $1 / 16 \mathrm{mw} .1 / 5 \times 1 / 2^{\prime \prime}$ dia. 11 L 377 ,
5 to 9 , EACH.......................... 8.82
Type TA-11. 4-stage. Response: $250-40,000 \mathrm{cps}$ $\pm 5 \mathrm{db}$. Gain: 73 db at 1 kc . Input Impedance: 1000 ohms. Supply Voltage: $1.3-1.5 \mathrm{v} . ; 4 \mathrm{ma}$ drain. Output: 1 milliwatt. Size, $13 / 15^{11 / 16 \times 1 / 4^{\prime \prime}}$


Type TA-7. New, Single stage for output stage use. Response: $\pm 5 \mathrm{db}, 250-40,000 \mathrm{cps}$. Gain: 26 db at 1 kc . Input Impedance: 500 ohms. Supply Voltage: 1.3 to $1.5 \mathrm{v} . ; 2$ ma drain.
Output: $1 \mathrm{mw} @ 15 \%$ distortion or $1 / 3 \mathrm{mw} @$ Output: 1 mw @ $15 \%$ distortion or $1 / 3 \mathrm{mw}$ @
$2 \%$ distortion. $1 / 5 \mathrm{x}^{9} / 2^{\prime \prime}$ dia. 3 oz .



## AMPEC AUDIO AMPLIFIER

3 stage. Operates on $221 / 2$, v , "B" battery and 1.5 y ."A" battery. Response, $200-8000$
cps. Gain of 4500 at 1 kc . PCcps. Gain of 4500 at 1 kc . PC201 complete with tubes: One CK548DX; two CK512-AX less tubes. Wt., 4 oz. B16-228 volume control and switch for volume contror with switch for use with either Ampec unit.
$5 / 8^{\prime \prime}$ dia. $1 / 2^{\prime \prime}$ deep with knob. Instructions. Wt., 3 oz.
If L 160. Type PC-201. NET.........|4
4.70
$\begin{array}{ll}11 & L \\ 30 \mathrm{M} & 159 \text {. Type PC-200. NET…........8.82 } \\ 3\end{array}$


## AEROVOX RIGHT-ANGLE

TUBE SOCKETS
Space-saving sockets permit horizontal placement of tubes. For use with printed circuits. Allow Socket prongs insert easily into ver plated contacts. Molded Alkyd 430 body. 40 H 406 . Type RA9A. 9-Pin. NET....97c
40 H 403 . Type RA7A. 7-Pin. NET.....81¢

## HIGH-QUALITY PRINTED CIRCUIT KITS



A G.C. Model 683. Save time and minimize A replacement of printed circuit components with this handy repair kit. Permits quick repair ets, on resistors, capacitors, coils, wiring, sockKit includes: foil, solder washers; solder; "solder ease" tool for tightening contacts, etc.; der ease tool for tightening contacts, etc.; 6-oz. spray can of silicone resin lacquer; solvent for removing surplus solder; tweezers; practice wiring board; and an Ungar soldering iron with special tip. With instructions. $7 \times 121 / 2 \mathrm{x}$ $36^{1 / 2^{\prime \prime}}$ N Shpg. wt., ${ }^{1}{ }^{1 \mathrm{lb}}$ List, $\$ 13.25$. NET. $\qquad$ .7.79

(A)G.C. Type 682 Standard Kit. Complete printed circuit repair kit for quickly and nents in printed circuits on soldered components in printed circuits. Valuable service aid nents in printed circuits and sormered compoof sockets, lugs, copper foil, etc. Complete kit includes: silicone resin lacquer, solvent, solder includes: silicone resin lacquer, solvent, solder
washers, solder wire, handy solder probe tool with brush (for cleaning and tightening up contacts, etc.) and tweezers. Supplied complete with instructions and time-saving suggestions.
 $\qquad$ . 4.85

B Kepro Professional Kit. Etched circuit duced photographically, or manually with pronegative materials supplied. A sensitized sheet of copper-clad XXXP phenolic is exposed through the prepared negative, then developed and etched. Kit contains: 2 sheets of $1 / 16^{\prime \prime}$ cop-per-clad phenolic $6 \times 3^{\prime \prime} ; 2$ pieces negative mask; 1 printing frame glass;'2 printing frame clamps; 1 bottle developer; 2 bottles etching solution; 1 aluminum developing tray; 1 polystyrene etching tray; 1 cleaning pad; and a set of complete instructions. Shpg. wt., $21 / 2$ lbs. 5.29
(C) Kepro Standard Kit. This low-cost etch$C$ ing kit is supplied complete with all the materials needed for manually producing etched desired circuits. desired circuit on the copper clad XXXP phenolic using the etch-resistant coating supplied. Excess (unprotected) copper is removed with etching solution. Kit contains: 2 sheets of $1 / 16^{\prime \prime}$
copper-clad phenolic $6 \times 3^{\prime \prime} ; 1$ bottle etch-resist-copper-clad phenolic $6 \times 3^{\prime \prime} ; 1$ bottle etch-resistsolution; 1 cleaning pad; 1 brush; and instructions. Complete with convenient plastic case. Shpg. wt., 11/2 libs.
43 N 069 . NET..................... 3.38
(D) Micro Circuit Kit. This printed circuit miniature-sized electronic equipment. Make resistors. capacitors, connecting wires and many other components. Kit also allows you to paint your own radio circuit and make rapid easy repairs on existing printed circuits. Spe cial materials supplied with kit include: Brush; silver conducting paint; low, medium high and very high resistance paints; insulating lacquer; solvent; brush cleaner; the manual, "Design and Repair of Printed Circuits.' plus other informative literature. In plastic case. Shpg. wt. $13 / 4 \mathrm{lbs}$.
43 N 070. NET........
.17 .75
[E Techniques Kit. With this complete E kit, it's a very simple matter to set up operating prototypes of many different kinds of printed circuits. Kit contains all materials required for producing etched circuits. It in 5 cludes: 7 single-sided, copper-clad laminates; assorted tube sockets; roll of tape resist: assorted tube sockets; roll of tape resist:
1 bottle of liquid resist; photographic resist etchant; terminals; layout paper; sample of etched process, etc. In plastic box, $91 / 4 \times 13 \times 2^{\prime \prime}$ Wt. $91 / 2 \mathrm{NX}^{2}$ lbs. NET........................ 27.00

## Inferference Filters - Auto Suppressors



## AEROVOX INTERFERENCE FILTERS

(A) Type IN-27. A simple and inexpensive plug-in unit for use where A interference is slight; electric shavers, etc. Diameter, $13 / 8^{\prime \prime} ; 11 / 2^{\prime \prime}$ ${ }_{70}$ long. Shpg. wt., 5096 oz.
0. NET

88c
B Type IN-28. For use where ground is at a considerable distance. B Provides most efficient filtering action when mounted on appliance. Supplied with convenient mounting bracket. Diameter, $13 / 8^{\prime \prime} ; 2^{\prime \prime}$ long. Shpg. wt. 80 oz.
. 1.18
C] Type IN-30. Highly effective plug-in unit for local noise sources of 0 variable character and severe intensity; auto call systems, barber clippers, cash registers, billing and calculating machines, food mixers, fruit juice extractors, dental machines, drink mixers, fans, hair dryers, etc. Diameter, $13 / \mathrm{g}^{\prime \prime} ; 3^{\prime \prime}$ long. Shpg. wt., 7 oz.
70 B 098 List, $\$ 2.50$. NET................
.1 .47
(D) Type IN-42. Heavy-duty unit for serious interference from power dishwashmission lines, vacuum cleaners, washing machines, refrigerators, outlet-appliance or radio plugs into receptacle on filter. With mounting ring. Rated at $110-120 \mathrm{v}$. AC; 6 amps. Diameter, $212^{\prime \prime} ; 33 /^{\prime \prime}$ long. ${ }^{\text {Shpg. wt. }} 1 \mathbf{1} 1 \mathrm{lb}$.
4.4

## SPRAGUE "FILTEROL" TYPE F-400

(E Effective filter for suppression of moderate interference, with built-in E. screw for attachment directly to any standard duplex wall outlet. Most effective when used at appliance, but may also be used at receiver. | Rated 105-125v., AC-DC, 5 amps. $41 / 2 \times 23 / 4 \times 21 /{ }^{\prime \prime}$. Wt., $31 / 2 \mathrm{lbs}$. |
| :--- |
| 70 B 095. NET............................................. . . 7. |

## CORNELL-DUBILIER "QUIETONE" FILTERS

FType IF-18. Highly effective all-wave capacitive-inductive type of or air conditioning units, washing interference. Used where ventilating with reception on units, washing machines, or machine tools interfere wird and plug on radio biding Bakelite case, 70 B i20. List, $\$ 9.20$. NET.......................................... . 5.41

G Type IF-19. Effective capacitive-inductive type filter for use Where interference is severe. Used to eliminate interference from electric fans, diathermy machines, neon signs, etc. Mounting holes for permanent attachment to baseboard, back of receiver or any convenient 5 amps. Bakelite case, $4 \times 21 / 4^{\times 27 / 3^{71}}$. Shpg. wt., $11 / 2 \mathrm{lbs}$.
.4 .53
H Type IF-4. Plug-in, cylindrical filter for suppression of mediumintensity interference produced by fluorescent lights, electric shavers and similar devices. Well-suited for use with small receivers such as AC-DC midget sets, portable TV sets, etc. Filter plugs directly into wall; appliance or receiver plugs into filter. Rated 115 volts, AC-DC 5 amps. $13{ }^{3 / 8^{\prime \prime}}$ diameter and $2^{*}$ long. Supg. wt., 5 oz .
70 B 125 . List $\$ 1.25$. NET
. lo...................... . . .
73c
Type IF-6. Convenient plug-in filter for elimination of moderate interference. Especially suitable for suppression of interference caused by fluorescent lights, electric shavers, and similar devices. Con nects between power line and appliance, or between power line and receiver. Rated at 115 volts, AC-DC, 5 amps. Size, $13 / 8^{\prime \prime}$ diameter, 2 70 B 126 . List, $\$ 1.95$. NET
WIRED-IN TYPE FILTERS AND AUTO SUPPRESSORS
 CORNELL-DUBILIER "QUIETONE" FILTERS


Type IF-7A. For installation at appliance. Capacitive-inductive type $\int$ filter for suppression of severe interference. Attaches to oil burners, electric motors in dishwashers, disposal units, washing machines, home workshop tools, etc. For single-phase $110-220$ volt AC or DC. Rated 5 amps . Size, $6 \times 6 \times 4^{\prime \prime}$. Shpg. wt., 9 lbs.
70 B 124 . List, $\$ 13.75$. NET. ........
8.08

K Type IF-24. Exceptionally compact unit for wiring to appliances Ideal for elimint to moderate interference in broadcast or 1 receivers. filter unit effectively suppresses buzzing introduced through power line. For 115 v ., AC or DC. Shpg. wt., 8 oz .
.73c
L Type IF-54. General-purpose capacitive-inductive filter for use $L$ where moderate interference is present. For circuits drawing 2 amps or less from power line. Miniature size permits installation on almost any appliance or fluorescent fixture causing interference. Rated $110-220$ volts, AC or DC. Shpg. wt., 8 oz.
. 1.47

## SPRAGUE INTERFERENCE FILTERS

Type IF. Compact multi-section interference filters for suppressing man-made radio and TV interference. Small and completely selfcontained. For use on motors, thermostats, arcing devices, etc., up to 220 volts, AC or DC. Easily installed. Av. shpg. wt., 8 oz .

| $\begin{gathered} \hline \text { Stock } \\ \text { No. } \\ \hline \end{gathered}$ | $\begin{array}{\|c\|} \hline \text { Mfr's } \\ \text { Type } \\ \hline \end{array}$ | Fig. | Size | Sections | List | $\begin{aligned} & \text { NET } \\ & \text { EACH } \\ & \hline \end{aligned}$ |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 70 BIOO | IF-15 | M | $1 \times$ | Triple | \$2.60 | 1.5 |
| 70 B 105 | IF-21 | $\stackrel{\text { P }}{ }$ | $1 \times 2{ }^{1 / 6}{ }^{\prime \prime}$ | Dual | 1.75 | 1.0 |
| 70 B 712 | $\mathrm{iF-S7}_{\text {iF-31 }}$ | $\stackrel{\mathbf{P}}{\mathbf{P}}$ | 3/4x21/16 | Sringle | $\underline{1.25}$ | . 3 |

\footnotetext{
Filterol Types. Designed for connection in series with power supply lines of interference-producing industrial devices. A three-terminal network of matched, specially designed chokes and coils are inside the case, which should have a higher rating than the continuous current should have a higher rating than the continuous current
rating of the device with which it is to be used. Type 4 rating of "the device with which it is to be used. Type 4 utilizes "Hypass" capacitor, providing exceptionally
 All have convenient single-hole mounting: Types 2 and -hole mounting, Types 2 and 3 are drilled for Alder at either side. Av. shpg. wt., 1 lb .

| StockNo. | Type | Fig. | Amps | V.AC-DC | Size | List | NET |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 70 B 092 | 2 |  | 10 | 115 | 11/8x $2 \times 2{ }^{5}$ | \$14.80 | 8.70 |
| 708093 | 3 |  |  | 115 |  |  |  |
| 70 B 094 | 4 | R | 20 | 115 | $1^{\prime \prime}$ dia.x1 ${ }^{13 / 1 / 66^{\prime \prime}}$ long | 3.05 | 1.79 |

## NEW FEDERAL ELECTRONICS TVI FILTER

## - For Use With Any TV Receiver

- Greatly Reduces Interference
- Quick and Easy Installation

Precision built, 3-pi, high-pass filter for use with any TV set. Highly rated in nationally 8 known product research magazine. Employs printed circuit. Attenuation exceeds 46 db from $0-54 \mathrm{mc}$. Reduces interference caused by transmitters, neon signs, ignition systems, appliances, diathermy, X-ray equipment, heating systems, etc. Also aids in minimizing "snow" by suppressing interference in IF band. Exceptionally easy to install-attaches to input terminals on TV set. Hangs out of sight at rear of TV receiver. Plastic case, $2 \times 3 \times 1 / 2^{\prime \prime}$. Shpg. wt., 1/2 lb.
II 496. List, \$2.98. NET
1.75

## (1) <br> 

FM442 AG
AM
Prevent interference caused by generators, vibrators, marine or aircraft equipment. All units are wax impregnated. AG types are protected from moisture, but not hermetically sealed. AS types are enclosed in metal cases with screw terminals and hermetically sealedprovide low RF impedance, recommended for extreme climate conditions. Both AG and AS types are for noise suppression use on generators, mmeters, and other electrical equipment where there is contact spark shielded lead. FM 441 and FM 442 in midget aircraft motors. 454 for ammeter and gauges-has waxed-paper case, can be held in place with Mallory TH-17 clip (see Page 159). RF480 and RF481 used for vibrator hash and general noise suppression (have very low RF impedance) both have waxed-paper case. RF481 requires Mallory TH-19 mounting clip (see Page 159). CA275X, hermetically sealed bathtub type is used for noise suppression in marine and aircraft equipment. Av. shpg. wé, 3 oz .

| No. | Type | Mfd. | WVDC | Size | EACH |
| :---: | :---: | :---: | :---: | :---: | :---: |
| 17 L 681 | RF481 | 0.5 | 50 | $3 / 4 \times 13 / 8^{\prime \prime}$ | . 53 |
| 17 L 728 | CA275X | 4.0 | 50 | 2x2x1** | 1.76 |
| 17 L 677 | FM441 | 0.5 0.5 | 100 100 | 11/16x17/8" ${ }^{13 / 6 \times 15 / 16^{\prime \prime}}$ | . 50 |
| 17L721 | AS125 | 0.01 | 100 | 11/16 $\times 15 / 16^{6 \prime}$ | . 71 |
| 17 L 720 | AG442 | 0.05 | 100 | $3 / 8 \times 11 /{ }^{\prime \prime}$ | . 47 |
| 17 L 670 | AG443 | 0.05 | 100 | 7/16x13/16" | . 59 |
| 17 L 722 | A.S145 | 0.1 | 100 | 11/6x ${ }^{13 / 88^{87}}$ | . 82 |
| 17 L 723 | AS165 | 0.25 | 100 | $3 / 4 \times 11 / 2^{*}$ | . 88 |
| 17 L 724 | AS185 | 0.5 | 100 | $1 \times 15 /{ }^{\prime \prime}$ | 1.03 |
| 17 L 678 | FM442 | 0.5 | 160 | ${ }^{11 / 16 \times 17 / 8 "}$ | . 38 |
| 17 L 676 | AM454 | 0.5 | 200 | 11/16x2" | . 38 |
| 17 L 675 | AG453 | 0.5 | 200 | $3 / 4 \times 2^{\prime \prime}$ | . 88 |
| 176674 | AG452 | 1.0 | 200 | $1 \times 23 / 1{ }^{\prime \prime}$ | . 53 |
| 17 L 673 | AGG51 | 0.5 | 200 | $3 / 8 \times 2{ }^{3 / 4}$ | . 38 |

## Quality Voltage Controls



## "SUPERIOR" VARIABLE VOLTAGE CONTROLS

## POWERSTAT VARIABLE AUTOTRANSFORMERS

Delivers adjustable output voltage from AC line-output variable from zero to above line voltage. Negligible voltage change from no load to full load. Current ratings apply over full range of output voltage. Zero waveform distor-
tion. Rated for $50^{\circ} \mathrm{C}$. temperature rise under tion. Rated for $50^{\circ} \mathrm{C}$. temperature rise under
full load. *For $110-120 \mathrm{v}$. AC inputs. $\dagger \mathrm{For}$ full load. *For $\mathbf{2 4 0}$ volt inputs. For $50-60$. AC inputs. $\dagger$ For 240 volt inputs. For $50-60$ cycles, except $\S 60$
cycles only. 2 PF - 136 has standard 2 -blade plug and receptacle. 3PF-136 has 3-blade plug and and receptacle. 3 PF-136 has 3-blade plug and
receptacle; third wire is connected to Powerreceptacle; third wire is conected to G . F . $1256 \mathrm{C}-2 \mathrm{P}$ consist of 2 paralleled units operated
from common shaft. 1156C-3P and 1256C-3P consist of three units operated from a common shaft. 1156C-3Y consists of three units operated from a common shaft, wired for three-phase wye-connected operation. Sizes shown on gang types are height and diameter. Mountings: P, panel; and U, general utility. Sizes shown: P types, distance back of paner and diameter; 2PF10, overall height and diameter. Types cord and plug, fuse and output receptacle. $\ddagger$ Also 105-135 v. and 225-255 v. output for line-voltage correction.

| Stock No. | Mfr's <br> Type | Fig. | OUTPUT |  |  | Mtg. | SIz* | Wt., Lbs. | $\begin{aligned} & \text { NET } \\ & \text { EACH } \\ & \hline \end{aligned}$ |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  |  | Volts | Amps | KVA |  |  |  |  |
| 62 G 536 <br> 62 G 575 | $\begin{aligned} & 10^{* 8} \\ & 10 * 8 \end{aligned}$ | C | - | 1.25 1.0 | 0.165 0.132 | ${ }_{\mathbf{U}}^{\mathbf{P}}$ |  | ${ }_{31 / 2}^{21 / 2}$ | 8.50 6.50 |
| 62 G 62 G 51 | 20*5 | A | 0-130 | 1.0 3.0 | 0.132 0.42 | P | 311/16x311/16" | ${ }_{6} 1 / 2$ | 12.50 |
| 62 G 525 |  | F | 0-140 | 7.5 | 1.0 | U | 61/2x45 ${ }^{6 \prime \prime}$ | 12 | 24.00 |
| 62 <br> 62 GU 524 <br> 1 | ${ }_{136 *}$ | B | - $0-140$ | 7.5 20.0 | 1.0 2.8 | P | 47/8855/8" ${ }^{\prime \prime}$ | 11 | 18.00 50.00 |
| 62 GU 576 | LW136* ${ }^{\text {cht }}$ | D | 0-30 | 25.0 | ${ }^{2} .75$ | U | $611 / 16 \times 73 / 4{ }^{\prime \prime}$ | 25 | 80.00 |
| 62 GU 545 | 2PF-136* |  | 0-140 | 20.0 | 2.8 | U | $61 / 16 \times 73 / 4^{\prime \prime}$ | 26 | 65.00 |
| 62 GU 546 | 3PF-136* |  | 0-140 | 20.0 | 2.8 | U | 61/16x73/4" | 26 | 65.00 |
| 62 GU 529 | 1156C* |  | 0-140 | 45.0 | 6.3 | U | $81 / 2 \times 147 /{ }^{\prime \prime}$ | 80 | 118.00 |
| 62 G 527 | 216 $21+$ | B | 0-280 | 3.0 | 0.84 | U | $61 / 2 \times 4$ | 12 | 26.00 |
| 62 GU 62 | ${ }_{236 \dagger}^{2164} \dagger$ | $\stackrel{\text { B }}{ }$ | $0-280$ $0-280$ | 3.0 9.0 | 0.84 2.5 | $\stackrel{\mathrm{P}}{\mathbf{U}}$ | 47/8×45/8" | 11 25 | 20.00 |
| 62 GZ 530 | $1256 \mathrm{C} \dagger$ |  | 0-280 | 28.0 | 7.8 |  | $81 / 2 \times 1$ |  |  |
| 62 G2 537 | $1156 \mathrm{C}-2 \mathrm{P} *$ |  | 0-140 | 90.0 | 12.6 | U | 175/16x147/8" | 170 | 269.00 |
| 62 GZ 538 | 1156C-3P* |  | 0-140 | 135.0 | 18.9 | U | 253/16x147/8 ${ }^{\prime \prime}$ | 295 | 418.00 |
| 62 GZ 539 | ${ }_{1256 C-2 P}{ }^{125}$ |  | 0-280 | 56.0 | 15.7 | U | 175/16x147/8 ${ }^{\prime \prime}$ | 170 | 269.00 |
| 62 GZ 540 | $1256 \mathrm{C}-3 \mathrm{P}+$ |  | 0-280 | 84.0 45 | 23.5 | U | 253/16x1477 ${ }^{\prime \prime}$ | 295 | 418.00 |
| 62 GZ 541 | 1156C-3Y $\dagger$ § |  | 0-280 | 45.0 | 21.8 | U | 253/16x147/8 | 280 | 394.00 |

## MODEL UCIM VOLTBOX

E For industrial and electrical, chemical and physics laboratory installations and radioTV servicing. Provides AC source for variable AC voltage testing. Has a variable voltage transformer, voltmeter, fuse, line switch, two fiveway binding posts and three output receptacles. Continuously adjustable output voltage up to $17 \%$ above line voltage to all output receptacles and binding posts. Rated at 7.5 amp . In-


65.00

Model UC2M. As above but for 240 volts input. Output, $0-280$ volts at 3 amps.
62 GX 542. NET
62 GX 542. NET...................... 70.00

## OTHER "SUPERIOR" EQUIPMENT

Allied can supply Superior Powerstat equipment for commercial, industrial, laboratory and special-purpose applications. Available on special order are motor-driven, oil-cooled, explo-sion-proof powerstats and powerstat line correctors; Stabiline automatic voltage regulators, including instantaneous electronic and electromechanical regulators; Varicell DC power supplies; etc. Stabiline regulators are ideal for voltage regulation in radio and TV stations. When ordering, special items be sure to mark order "Special" and give manufacturer's type number, voltage and current as well as all information required for motor drive, etc. Important note-
37 G 102).


## RAYTHEON VOLTAGE REGULATORS

## Stabilize Varying Line Voltages to Within $\pm 1 / 2 \%$

Fully automatic magnetic-type AC line voltage stabilizers. For
applications requiring accurate voltage stabilization. Maintain applications requiring accurate voltage stabilization. Maintain absolutely constant output of 115 volts, within $1 / 2 \%$ despite input voltage fluctuations as great as $15 \%$. Quick response corrects for fluctuations so rapidly that no indication can be
noticed on an ordinary AC voltmeter. Can be used in paralnoticed on an ordinary AC voltmeter. Can be used in paralthan rated capacity of single unit. Require no adjustment. than rated capacity of single unit. Require no adjustment.
*Case has flat top instead of style ill ustrated. $\dagger$ In 2 sections, *Case has flat top instead of style illustrated. †In 2 sections,
mounted as single unit. For $95-130$ v., 60 cycle AC. Available mounted as single unit. For $95-130$ v., 60

| No. | Type | Watts | Size | Mtg. Ctrs. | Wt. | NET |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 62 G 675 | VR-6110* | 15 | $53 / 4 \times 211 / 6 \times 31 / 2^{\prime \prime}$ | 51/6" | 6 lbs. | 16.00 |
| 62 G 676 | VR-6111 | 30 | $71 / 2 \times 33 / 8 \times 41 / 8$ | 67/8×21/4" | 7 lbs. | 18.00 |
| 62 G 677 | VR-6112 | 60 | $71 / 2 \times 33 / 8 \times 47 / 16^{\prime \prime}$ | $67 / 8 \times 21 / 4$ | 10 lbs . | 25.00 |
| 62 G 678 | VR-6113 | 120 | $71 / 2 \times 33 / 8 \times 515 / 16^{\prime \prime}$ | 67/8×21/4" | 17 lbs . | 33.00 |
| 62 GU 679 | VR-6114 | 250 | $123 / 8 \times 5 \times 75 /{ }^{\prime \prime}$ | $119 / 16 \times 31 / 2^{\prime \prime}$ |  | 52.00 |
| 62 Gz 680 | VR-6115 | 500 | $123 / 8 \times 5 \times 918^{\prime \prime}$ | $1196 \times 312^{\prime \prime}$ | 52 lbs. | 81.00 |
| 62 Gz 681 | VR-6116 $\dagger$ | 1000 | 141/16x133/16x95/8" | 127/8×119/6 | 128 lbs. | 135.00 |

## CONNECTING ASSEMBLIES FOR VOLTAGE REGULATORS

Type 51-690G1. Cord, plug, socket and mounting plate assembly for
VR-6113. Shpg. wt., 2 ibs.
62 G 684. NET.,........ $\qquad$ . 2.25

Type $51-590 \mathrm{G} 2$. Cord, plug, socket and mounting plate assembly for R -6114 and VR-6115 Shpg. wt., ${ }^{2}$ 1bs.
3.00


TO-300

## ACROSOUND 300 SERIES

## HI-FI OUTPUT TRANSFORMERS

Model TO-300. High-fidelity output transformer. Designed for use with Ultra-Linear Acrosound and Williamson-type amplifier circuits. Provides 20 to $30,000 \mathrm{cps} ; 40$ watts undistorted from 20 to $30,00 \mathrm{cps} ; 40$ watts undistorted
from 30 to $20,000 \mathrm{cps}$. Recommended for type from 30 to $20,000 \mathrm{cps}$. Recommended for type
KT66, $807,1614,6 \mathrm{~L} 6$ or 5881 tubes. Primary impedance: 6600 ohms. Secondary impedance: $4,8,16$ ohms. Frequency response, $\pm 1 \mathrm{db}$, $10-100,000$ cps. Permissible feedback, 30 db . Maximum DC per primary, 75 ma. Primary shunt inductance, 150 henries minimum. $10^{\prime \prime}$ color-coded leads. Seamless steel case. Gray finish. Size, $41 / 4 \times 35 / 8 \times 31 / 4^{\prime \prime}$. Shpg. wt., 71 bs. 24.75
63 G 993 . NET.................... 24.
Model TO-310. High-fidelity output transformer. Excellent for converting push-pull though recommended for 12 -watt circuits, will deliver 10 watts undistorted power from 20 to $30,000 \mathrm{cps} ; 20$ watts undistorted from 30 to $20,000 \mathrm{cps}$. Primary impedance, 8000 ohms. Primary shunt inductance, 85 henries minimum. All other specifications same as TO-300, above. Size, $41 / 4 \times 35 / 8 \times 31 / 4{ }^{\prime \prime}$. Shpg. wt., 6 lbs. 18.75
63 G 994 . NET...................... 18.7
Model TO-305. Ideal for amplifiers where high-output impedances are required for multiple speakers, telephone lines, broad cast equipment, etc. Same specifications as $500-\mathrm{ohm}$ output impedances. Size, $41 / 4 \times 35 / 8 \times 31 / 4^{\prime \prime}$. Shpg. $63^{\text {wt. }} 8$ libs. 995 . NET.
30.75

Model TO-315. High-fidelity output transformer. Matches push-pull type 6V6 tubes for Ultra-Linear operation. Ideal for use in remote amplifer to feed ong line ore nas 4, 8, 16, 125 and 500 ohm output impedances. Other specifications are same as TO-310 above. Size, $41 / 4 \times 35 / 8 \times 31 / 4^{\prime \prime}$. Shpg. wt., 7 lbs .
24.75

Model TO-330. For Ultra-Linear operation in Williamson-type circuits. For push-pull 6550's, EL-34's, 6CA7's, KT88's, or push-pull parallel KT66's, 6L6's, 807 's, etc. in fixed-bias operation. Provides 50 watts undistorted power power from 30 to $20,000 \mathrm{cps}$. Primary impedpower from ${ }^{\text {ance, } 3800 \text { ohms. Secondary impedance, } 4,8 \text {, }}$ ance, 3800 ohms. Secondary impedance, 4,8 ,
16 ohms. Response, $\pm 1$ db. $10-100,000$ cps. 16 ohms. Response, $\pm 1$ db.ib. $10-100,000$ cps. Permissible feed back, 30 db . Max. D $\mathrm{frimary}$,150 ma . Fully potted. Gray finish. primary, 150 ma. Fully potted. Gray finish. $51 / 4 \times 4 \times 45 / 8^{\prime \prime}$ Shpg. wt., 14 lbs.
39.75

Model TO-320. Recommended for Ultra-Linear operation of 6Y6's. Provides 10 watts undisorted power from 20 to $30,000 \mathrm{cps} ; 20$ watts undistorted from 30 to $20,000 \mathrm{cps}$. Primary impedance: 3500 ohms plate-to-plate. Secondary sponse: $\pm 1$ db., 10 to $100,000 \mathrm{cps}$. Maximum sponse: $\pm$ primary, 75 ma. Seamless steel case. Silver gray hammerloid finish. $10^{\prime \prime}$ color coded wire leads are brought out through case bottom. Case mounts with base flange. Size, 41/4x $35 / 8 \times 31 / 4^{\prime \prime}$. Shpg. wt., 6 lbs.
18.75

Miodel TO-340. For push-pull Ultra-Linear 6550's as well as KT 88 's in self bias operation. Provides 50 watts undistorted power from 20 to 30,000 cps; 100 watts undistorted power 5000 o to 20,00 cps. Primary impedance ance: 4,8 and 16 ohms. Frequency response: $\pm 1 \mathrm{db} ., 10$ to $100,000 \mathrm{cps}$. Maximum DC per primary, 150 ma . Case has provision for either primary, 150 ma. Case has provision hor either color coded leads through case bottom. Size, $4 \times 45 / 8 \times 53 / 8^{n}$. Shpg. wt., 14 lbs.

## TP-520 POWER TRANSFORMER

Deluxe power transformer. Designed for use in high-fidelity amplifiers employing 6Y6's, 6V6's, EL84's, or similar output tubes having low plate voltage and high plate current requireplate
ments. Plate winding delivers 285-0-285. at 175
2 ma. Filament windings deliver 5 v . at 2 amps
and 6.3 v at 5 amps. Gray hammertone; endand 6.3 v . at 5 amps. Gray hat mounting. $4 x$ $31 / 4 \times 31 / 2^{\prime \prime} \cdot 10^{\prime \prime}$ wire leads. For $110-120 \mathrm{v}$. , $50-60$ cycle AC. Shpg. wt., 6 lbs.
63 G 992 . NET..........
.9.75

## Special-Purpose Transformers and Supplies

STANDARD ELECTRIC "ADJUST-A-VOLT" VARIABLE AUTOTRANSFORMERS

(A) Type T21U. Autotransformer designed to provide a variable output winding on a toroidal core. Sliding brush is always in of sontact with at winding on a toroidal core. Sliding brush is always in contact with at variable from $0-135$ volts. Regulation substantiall current flow. Output moderate temperature rise, zero wave-form distortion. Allows high initial moderate temperature rise, zero wave-form distortion. Allows high initial Max. load rating: 360 VA. Size, $31 / 4 \times 31 / 4 \times 315 / 16^{\prime \prime}$. For 115 v ., $50-60$ cycle AC. Shpg. wt. 5 lbs.
. 13.50
(B) Type T51U. Similar to above. Output is variable from $0-135$ volts. B Maximum output current: 7.8 amps. Maximum load rating: 900 VA . Size, $41 / 2 \times 41 / 2 \times 315 / 16^{\prime \prime}$. For operation from 115 volts, $50-60$ cycle AC. Shpg. wt., 8 ilbs.
. 17.00
C Type T502U. Similar to above. Output is variable from $0-270$ volts. For 230 v. $50-60$-cycle AC. Shpg. wt. 57 lbs . $7.5 \mathrm{KVA} .131 / 8 \times 121 / 2 \times 51 / 2^{\prime \prime}$. For 230 v., 50-60-cycle AC. Shpg. wt., 57 lbs. $\qquad$ . 120.00
(D) Type 100BU. Similar to above. Output is variable from $0-132$ volts. Max. load rating: 165 VA. $2^{3 / 32 \times 213 / 32^{\prime \prime}}$ dia. For operation from 120 v ., $50-60$ cycle AC. Shpg. wt., 2 lbs.
62 G 583. NET.................
8.33

E Type 300 BU Similar Max. load rating: 400 VA. Size, $311 / 16^{x} 311 / 6^{\prime \prime}$ dia. For 115 v ., $50-60$ cycle AC. Shpg. wt., 6 lbs.
FF Type $500 \mathrm{~B}, 500 \mathrm{BU}$ and 520 B . For laboratory and industrial applica-
520 B tis. Internal construction similar to that of above. Types 500 B and 520 B are cased, $61 / 2 \times 45 / 8^{\prime \prime}$ dia. Supplied with line cord, plug, receptacle, pilot light, on-off switch and fuse. Constructed of die-cast aluminum with gray wrinkle finish. Type 500BU is uncased (not illustrated) Designed for back-of-panel mounting-supplies pilot-light voltage, ad justable shaft length. Size, $5 \times 45 / 8^{\prime \prime}$ dia. For $50-60$ cycle operation. Av. shpg. wt., 10 lbs.

| Stock No. | $\begin{aligned} & \text { Mifr's } \\ & \text { Type } \end{aligned}$ | Input | Output |  |  | $\begin{aligned} & \text { NET } \\ & \text { EACH } \end{aligned}$ |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  |  | Volts | Amperes | KVA |  |
| 62 G 581 | 500B | 115 | 0-135 | 7.5 | 1.0 | 22.54 |
| 62 G 582 | 500BU | 115 | 0-135 | 7.5 | 1.0 | 17.64 |
| 61 G 969 | 520B | 230 | 0-270 | 3.0 | 0.81 | 25.47 |

Type 1500 B . (Not illustrated.) For heavy-duty applications such as theatrical lighting control. Maximum current output is 15 amps . Voltage output range is $0-135 \mathrm{v}$. Maximum load rating is 2.0 KVA . With dust cover. Size, $81 / 8 \times 8 \times 511 / 16^{\prime \prime}$. For operation from 115 v ., $50-60$ cycle AC. 62 GU 589 . NET
.45 .08

## SOLA CONSTANT-VOLTAGE TRANSFORMERS

## POWER TRANSFORMERS

G Replace ordinary power transformers. Stabilize plate and filament Pyranol oil-filled input filter condenser and mounting bracket. For 100130 volts, 60 cycles AC only.
Type 7104. DC input to filter, 275 v @ 50 ma . Fil., 6.3 vCT © 21/2A; 5v @ 62 G69.10-UiP, EACH..... il 1.40 1-9, NET EACH........ 12.00 Type 7106. Same as above, but delivers 385 volts DC to filter @ 110

. . . . 15.00 Type 7107. As above, but 380 v DC to filter @ 250 ma . Fil., 6.3 v @ 4A;


## TV VOLTAGE REGULATORS

Type 7202. Minimizes poor TV reception due to line variations. For any TV set with power consumption between 165 and 285 watts. Delivers $\pm 3 \%$ stabilized voltage. No wiring necessary. Turns on and off with set.
 62 GU 667. NET..
.37 .50
Type 7201. For 110 to 175 -watt sets. Shpg. wt., 19 lbs.
$62 \mathbf{G} 631$. NET..............................
34.50

## STANDARD-TYPE TRANSFORMERS

Static-magnetic voltage regulators. Provide constant output voltage within-1\%, even with extremely wide line voltage changes (transient or continuous). Adjusts quickly to changes-usually within a time range of 1.5 cycles or less. Current-limiting characteristic protects transformev and load equipment from excessive current. Use new low strayfield de-sign-suitable for use as internal components. All have 95-130 v. inputs, group which has $95-130 / 175-235 / 190-260 \mathrm{v}$. inputs. All types have group which has $95-130 / 175-235 / 190-260 \mathrm{v}$ inputs. All types have 50 cycle units available on special order. Write for quotation, giving full details about your requirements.

| No. | Type | Fig. | Output V. | VA | Size | Lbs. | EACH |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 61 G976 | 20-01-015 | H | 6.0 | 15 | $31 / 2 \times 25 / 8 \times 511 / 16^{\prime \prime}$ | 6 | 5.00 |
| 61 G 977 | 20-02-015 | H | 6.3 | 15 | $31 / 2 \times 25 / 8 \times 511 / 16^{\prime \prime}$ | 6 | 5.00 |
| 61 G 978 | 20-10-015 | H | 115 | 15 | $31 / 2 \times 25 / 8 \times 511 / 1{ }^{6}$ | 6 | 5.00 |
| 63 G 193 | 20-04-030 | G | 6.3 | 30 | $413 / 16 \times 31 / 8 \times 31 /{ }^{\prime \prime}$ | 6 | 6.00 |
| 63 G 194 | 20-04-065 | G | 6.3 | 60 | 413/16x31/8x33/4 | 7 | 20.00 |
|  | 20-04-095 | G | 6.3 | 120 | $413 / 16 \times 31 / 8 \times 411 / 16^{\prime}$ |  | 24.00 |
| 63 GU 196 | 20-04-113 | G | 6.3 | 150 | $7 \times 41 / 2 \times 51 / 8^{\circ}$ | 20 | 31.00 |
| 63 GU 197 | 20-04-116 | G | 6.3 | 250 | $7 \times 41 / 2 \times 511 / 16^{\prime \prime}$ | 23 | 35.00 |
| 62G657 | 20-13-030 | J | 118 | 30 | 6x4×53/16" | $61 / 2$ | 18.00 |
| 62 G 658 | 20-13-060 | J | 118 | 60 | 63/16x4x53/16" | 91/2 | 25.00 |
| 62 G 659 | 20-13-112 | J | 118 | 120 | $77 / 8 \times 4 \times 53 / 1^{\prime \prime}$ | 13 | 33.00 |
| 62 GU618 | 20-13-115 | J | 118 | 150 | $81 / 8 \times 53 / 8 \times 77 / 16^{\prime \prime}$ | 22 | 40.00 |
| 62 GU 660 | 20-13-125 | J | 118 | 250 | 111/8×615/16 ${ }^{67 / 16^{\prime \prime}}$ | 30 | 52.00 |
| 62 GU 661 | 20-13-150 | J | 118 | 500 | 121/2x615/16x67/16" | 40 | 81.00 |
| 62 GZ 662 | 20-13-210 | J | 118 | 1000 | 151/8×615/16 ${ }^{67 / 16^{\prime}}$ | 115 | 135.00 |
| 63 GZ 198 | 20-25-220 | J | 118 | 2000 | $211 / 2 \times 83 / 8 \times 91 / 16^{\prime \prime}$ | 168 | 245.00 |



## HARMONIC-FREE TRANSFORMERS

[ Designed for use with equipment that requires a stabilized source of J undistorted voltage. Especially suitable for input to a rectifier when close regulation of the DC output is required, and for equipment affected by harmonics from the power source. Less than $3 \%$ harmonic content in output. Regulated sine-wave output voltage constant within $\pm 1 \%$. All units are for operation from 60 cycle AC voltages.

| Stock No. | Mfr's <br> Type | Pri.V. | Sec. V. | Cap. VA | Wt. Lbs. | NET EACH |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  |  |  |  |  | 1-4 | 5-UP |
| 62 GU 517 | 23-13-060 | 95-130 | 115 | 60 | 35 | 35.00 | 33.25 |
| 62 GU 518 | 23-13-112 | 95-130 | 115 | 120 | 45 | 44.00 | 41.80 |
| 62 GU 646 | 23-13-125 | 95-130 | 118 | 250 | 32 | 70.00 | 66.50 |
| 62 GU 647 | 23-13-150 | 95-130 | 118 | 500 | 47 | 105.00 | 99.75 |
| 62 GZ 648 | 23-13-210 | 95-130 | 118 | 1000 | 80 | 175.00 | 166.25 |

## CONSTANT-VOLTAGE DC POWER SUPPLIES

Compactly built DC power supplies designed to provide a constant output voltage despite wide variations in line voltage. Typically used with equipment such as digital comindustrial motors. Employ a constant-voltage transformer, semi-cond coctor rectifier age transformer, semi-conductor rect high-capacitance filter. Output is held within $\pm 1 \%$ with line changes of $\pm 10 \%$. Ripple is less than $1 \%$ (rms), except $* 1 / 2 \%$. Easily tions can be series-wired for higher voltages. Input and output connections made at terminal strip. All circuits are insulated from ground, perrack panels. Depth, $93 /^{\prime \prime}$. Chassis have vent holes. For operation from 100-130 v., 60 cycles AC.

## "DC SOLAVOLT" ADJUSTABLE CONSTANT-VOLTAGE DC POWER SUPPLIES

Compact DC supplies with manually adjust-
able output and automatic voltage reguable output and automatic voltage regucapacity filter, ehoke, variable autotransHold output voltage withine transformer. line voltage changes of $\pm 15 \%$. Will safely handle "pulse" loads up to $200 \%$ of rated output. Have no tubes. Circuits insulat ed
 output. Have no tubes. Circuits insulat ed
from ground, permitting operation at either polarity. All units assembled
on $7 \times 19 \times 121 / 4^{*}$ rack panel. For $100-130$ volts, 60 cycle $A C$.

| Stock No. | $\begin{aligned} & \text { Mfr's } \\ & \text { Type } \end{aligned}$ | Output Range | Rated Load-Amps |  | $3 / 8$ Ripple Full Load | Wt. | $\begin{aligned} & \mathrm{NET} \\ & \mathrm{EACH} \end{aligned}$ |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  |  | Min. v. | Max. v. |  |  |  |
| 61 GZ 979 | 28510 | 5-35v. | 7.0 | 7.0 | 0.10 | 80 | 325.00 |
| 62 GZ 614 | 28520 | $25-60 \mathrm{v}$. | 6.0 | 4.0 | 0.05 | 84 | 325.00 |
| 62 GZ 615 | 28530 | $30-90 \mathrm{v}$. | 4.0 | 2.8 | 0.04 | 82 | 295.00 |
| 62 Gz 632 | 28540 | 60-180v. | 2.0 | 1.4 | 0.03 | 76 | 295.00 |

Type 999-006. Removable handle and side-plate assemblies for above units. For using power supply as a portable device. Shpg. wt., 5 lbs. 6.75

## Stancor TV Transformers

## EXACT-REPLACEMENT TV HORIZONTAL OUTPUT TRANSFORMERS

弊
A complete line of top-quality replacement flyback transformers for all standard television receivers. Every trans former faithfully duplicates all of the electrical and physiManufacturer's own specifications are used.

| No. | Type | Orig. Mfr'sPartNo. | NET |
| :---: | :---: | :---: | :---: |
| 64 G 210 | A-8128 | 79C23-3, 79C28-1 | 6.53 |
| 64 G 211 | A-8133 | 79С $30-1 /-3$ | 6.86 |
| 64 G 551 | A-8134 | $79 \mathrm{C}-30-2 /-4 \text {, }$ <br> 79C38-1, 79D38-1 |  |
| 64 G 213 | A-8254 | $\begin{aligned} & 79 \mathrm{C} 38-1, \\ & 79 \mathrm{C} 60-1 \end{aligned}$ | 6.86 4.47 |
| 64 G 214 | A-8255 | 79C60-2/-3 | 5.29 |
| 63 G 460 | $\overline{\mathrm{HO}-265}$ | 79C70-1 | 4.73 |
| 64 G 572 | A-8135 | 79D41-1/-2 | 7.02 |
| 64 G 212 | A-8253 | 79D48-1 | 6.37 |
| 63 G 459 | A-8292 | 79D65-1 | 5.10 |

## CAPEHART

| 64 G 22 | $\mathrm{~A}-8131$ | $750163 \mathrm{~A}-1$ |  |
| :--- | :--- | :--- | :--- |
| 63 | G 461 | $\mathrm{~A}-8285$ | $850285 \mathrm{E}-1$ |

## CBS-COLUMBIA

64 G $331 \mid$ A-8230 ${ }^{10104 / 07 / 18 / 10 / 26}$

 63 G 462 HO-258 12000751 63 G 464 A-8284 12001051 |  |  |  |
| :--- | :--- | :--- | :--- |
| 63 G 465 | A-8287 | PC10161 |

## CROSLEY

| 64 | G 222 | A-8241 | 157820 |  |
| :--- | :--- | :--- | :--- | :--- |
| 64 | G 223 | A-8248 | $154069 /-1,154990 /$ | 5.29 |
| 8.00 |  |  |  |  |


EMERSON

| 64 G 221 | A-8131 | $738047 / 48 / 53$ | 4.24 |  |
| :--- | :--- | :--- | :--- | :--- |
| 64 G 268 | A-8138 | $738079 / 84$ | 6.53 |  |
| 64 G 333 | A-8232 | $738067 / 68 / 69 / 73 /$ | 6.86 |  |
| 64 G 369 | A-8139 | $7475 / 82$ | 73896,738100 | 6.20 |

GENERAL ELECTRIC

| $\begin{array}{ll} \hline 64 \text { G } 546 \\ 64 & \text { G } 276 \\ 64 & \text { G } 277 \end{array}$ | 3* | $77 \mathrm{J1}$ | 6.53 |
| :---: | :---: | :---: | :---: |
|  | A-8259 | RTO-129/30 | 5.88 |
|  | A-8262 | RTO-131/141/- |  |
|  |  | 163-3 | 6.37 |
| 63 G 466 <br> 63 G 467 | A-8288 | RTO-149/1 | 5.48 |
|  | A-8289 | RTO-151/3 | 5.48 |
| 63 G 471 <br> 63 G 468 <br> 63 <br> 63 <br> 63 | A-8290 | RTO-166/5 | 5.48 |
|  | HO-252 | RTO-165 | 5.88 |
|  | HO-253 | RTO-175 | 5.88 |
|  | HO-254 | RTO-179 | 5.88 |

No alterations are required in the existing circuit or chassis for installation of the Stancor transformers. High-quality construction. *For 77 J 1 except where 6CD6 horizontal output tube is used
Av. shpg. wt., 1 lb .


| 63 G 472 | A-8293 | $360593-2,360552-1 / \mid$ | 6.37 |
| :--- | :--- | :--- | :--- |
| 63 G 473 | A-8294 | $-2 /-2 A, 360606 /-1$ |  |
| 63 G 474 | A-8295 | $360614-1,360623 /-1$ | 4.10 |
| 63 G 435 | HO-266 | 360659 | 5.88 |
| 63 G 970 | HO-279 | $360632-1$ | 6.53 |
| MOTOROLA |  |  |  |


| 64 G 325 | A-8224 | $\begin{aligned} & 24 \mathrm{C} 711265 / \mathrm{A} \\ & 24 \mathrm{C} 721290 \end{aligned}$ | 8.55 |
| :---: | :---: | :---: | :---: |
| 64 G 279 | A-8239 | 24K792753, |  |
|  |  | 24K701099 | 6.53 |
| 64 G 326 | A-8225 | 24K712193 | 8.55 |
| 64 G 327 | A-8226 | $27 \mathrm{~K} 21301 / \mathrm{C}$, |  |
|  |  | 24K721517C | 8.55 |
| 63 G 971 | HO-280 | 24K739284 | 7.35 |
| 63 G 972 | HO-281 | 24K730902/03 | 7.64 |
| 63 G 973 | HO-282 | 24C726487, | 7.64 |


| 64 G 281 | A-8129 | TO-0024 | 6.5 |  |
| :--- | :--- | :--- | :--- | :--- |
| 64 G 559 | A-8132 | TO-0031 | 6.8 |  |
| 64 G 283 | A-8240 | TO-0036 | 6.5 |  |
| 63 | G 436 | A-8291 | TO-0039 | 6.5 |
| 64 G 278 | A-8261 | C9.253/-1/-2/-E | 6.04 |  |
| PHILCO |  |  |  |  |


| 63 | G 438 | HO-277 | $32-8465-2,32-8509 /-2$ | 8.65 |
| :--- | :--- | :--- | :--- | :--- |
| 64 | G | 323 | A-8222 | $32-8533 / 34$ |
| 64 | G | 322 | A-8221 | $32-8555$ |
| 64 | G 321 | A-8220 | $32-8565$ | 7.35 |
| 64 G 324 | A-8223 | $32-8572$ | 6.96 |  |
| 63 | G 437 | HO-276 | $32-8624 /-1$ | 6.30 |
| 63 | G 439 | HO-278 | $32-8695-1$ | 6.59 |
| 63 | G 440 | HO-264 | $32-8709-1$ | 6.53 |
| PHIL.HARMONIC |  |  |  |  |

 RCA



| 63 | G 468 | HO-252 | $225 \mathrm{T1}$ |
| :--- | :--- | :--- | :--- |
| 63 | G4I | HO-256 | 235 T 1 |
| 64 G 789 | $\mathrm{~A}-8235$ | $75519,75585,76381$ |  |

6.30
5.88

RCA (Cont'd)

| RCA (Cont'd) |  |  |  |
| :---: | :---: | :---: | :---: |
| No. | Type | Orig. Mfr'sPar |  |
| $64 \mathrm{G787}$ | A-8233 | ${ }^{76430,76795}$ |  |
| 64 G 221 | A-8131 | 7695 |  |
|  | 43 | 77 |  |
| 64 G 63 |  | 78201, 78810 972914-1 103092 |  |

## SILVERTONE

| 64 G 331 | A-8230 |
| :--- | :--- |
| $10104 / 07 / 08 / 10 / 26 / 35$ | 6.86 | | 64 G 332 | A-8231 | $10136 \mathrm{~B} / 37 / 38 / 59$ | 6.86 |
| :--- | :--- | :--- | :--- |
| 63 G 969 | $\mathrm{~A}-8252$ | N 24989 | 5.88 |

SPARTON


## SYLVANIA

| 64 | G 328 | A-8227 | $241-0003$ | 4.70 |
| :--- | :--- | :--- | :--- | :--- |
| 64 | G 329 | A-8228 | $241-0005 /-0006$ | 5.03 |
| 64 G 330 | A-8229 | $241-0007$ | 5.29 |  |
| 63 G 443 | HO-259 | $241-0011$ | 4.80 |  |

## WESTINGHOUSE

| 64 | G 285 | $\mathrm{~A}-8237$ | $\mathrm{~V}-9904-1, \mathrm{~V}-10213-1$ | 6.37 |  |
| :--- | :--- | :--- | :--- | :--- | :--- |
| 64 | G | 286 | $\mathrm{~A}-8238$ | $\mathrm{~V}-10214-1, \mathrm{~V}-9904-2$, |  | | 64 G 286 | A-8238 | V-10214-1, V-904-2, | 6.37 |
| :--- | :--- | :--- | :--- | :--- | :--- |

## ZENITH



63 G $448 |$| HO-271 | S-22451, S-23438 |
| :--- | :--- | :--- |

## TELEVISION POWER TRANSFORMERS

Power transformers for replacement use in standard television receivers. Carefully designed to assure dependable, efficient service. Plate windings are CT. *With copper $117 / 107 \mathrm{v}$. For 117 volts, 60 cycles.

| Stock No. | Mfr's Type | $\frac{\text { Plate }}{\text { V } \mathrm{Ma}_{1}}$ | Rect. |  | FIL. |  | Overall Size | Ll., | NET EACH |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  |  | V | A | $V$ | A |  |  |  |
| 63 G 429 | P-5059 $\dagger$ | $\overline{675} 200$ | 5 | 3 | 6.3 CT | 5. | $43 / 8 \times 43 / 4 \times 4^{\prime \prime}$ | 93/4 | 11.69 |
| 63 G 430 | P-6315 | 740275 | 5 | 3 | 6.3 CT | 7.0 | $41 / 4 \times 33 / 4 \times 41 / 2{ }^{\prime \prime}$ | 91/2 | 12.73 |
| 64 G 510 | P-8154 | 750205 | 5 | 3 | 5/6.3 | 2/5.6 | $41 / 4 \times 43 / 4 \times 41 / 2^{\prime \prime}$ | 91/2 | 12.74 |
| 64 G 576 | P-8159* | 720290 | 5 |  | 5/6.3/6.3 | 2/8/.6 | $55 / 16 \times 313 / 16 \times 43 / 4^{\prime \prime}$ | 101/2 | 6.26 |
| 64 G 577 | P-8160 | 716185 | 5 | 3 | 6.45 | 12 | $41 / 4 \times 33 / 4 \times 41 / 2^{\prime \prime}$ | 10 | 14.00 |
| 64 G 578 | P-8164* | 600225 | 5 | 3 | 6.3 | 9.0 | $41 / 8 \times 37 / 16 \times 41 / 2^{\prime \prime}$ | $71 / 2$ | 13.12 |
| 64 G 580 | P-8166* | 680330 | 5 | 6 | 6.3/6.3/6.3 | 2.5/5.0/5.0 | $6 \times 313 / 16 \times 43 / 4^{\prime \prime}$ | 13 | 19.30 |
| 63 G 458 | P-8167 | 560400 | 5 | 6 | 6.3/6.3 | 4.8/8.5 | $6 \times 313 / 16 \times 43 / 4{ }^{\prime \prime}$ | 13 | 19.73 |
| 64 G 583 | P-8169* | 760220 | 5 | 3 | 6.3/6.3/6.3 | 1.2/5/7 | $45 / 8 \times 33 / 4 \times 41 / 2^{\prime \prime}$ | 101/2 | $\overline{15.44}$ |
| 63 G 431 | P-8170* | 760220 | 5 | 3 | 6.3/6.3/6.3 | 1.2/5/7 | $43 / 4 \times 4 \times 43 / 4{ }^{\prime \prime}$ | $101 / 2$ | 15.02 |
| 64 G 599 | P-8171* | 750225 | 5 | 3 | 6.3/6.3 | 2.0/9,0 | $5 \times 33 / 4 \times 41 / 2^{\prime \prime}$ | $101 / 2$ | 15.41 |
| 63 G 449 | P-8172 | 540200 | 5 | 3 | 6.3 | 8.5 | $43 / 8 \times 31 / 8 \times 3 / 4^{\prime \prime}$ | 7 | 13.85 |
| 64 G 413 | P-8331* | 620 240 | 5 | 3 | 6.3/6.3 | $6.4 / 3$ | $41 / 2 \times 33 / 4 \times 412^{\prime \prime}$ | 9 | 12.97 |
| 64 G 415 | P-8333* | 590225 | 5 | 3 | 6.3/6.3 | 11.4/.9 | $45 / 8 \times 33 / 4 \times 41 / 2^{\prime \prime}$ | 10 | 13.48 |
| 64 G 416 | P-8334* | 550305 | 5 | 5 | 6.3/6.3 | 8.5/1.2 | $51 / 8 \times 33 / 4 \times 41 / 2{ }^{\prime \prime}$ | 13 | 15.64 |
| 64 G 417 | P-8335* | 600325 | 5 |  | 6.3/6.3 | 8.8/1.5 | $51 / 8 \times 33 / 4 \times 41 / 2^{\prime \prime}$ | 13 | 15.64 |
| 64 G 419 | P-8337 | 630225 | 5 | 3 | 6.3 | 8.25 | $41 / 2 \times 33 / 4 \times 41 / 2^{\prime \prime}$ | $81 / 2$ | 13.88 |
| 64 G 421 | P-8339 | 650255 | 5 | 3 | 12.6 CT | 5.25 | $47 / 8 \times 33 / 4 \times 5^{\prime \prime}$ | $81 / 2$ | 11.59 |
| 64 G 422 | P-8340* | 710270 | 5 | 6 | 6.3/6.3/6.3 | 9.5/1.65/2.4 | $51 / 2 \times 33 / 4 \times 41 /{ }^{\prime \prime}$ | 12 | 14.69 |
| 64 G 424 | P-8342* | 730260 | 5 |  | 6.3/6.3 | 8.85/1.2 | $53 / 8 \times 33 / 4 \times 41 / 2^{\prime \prime}$ | 13 | 14.20 |
| 63 G 428 | P-8352* | 580\|240| | 5 | 3 | I2.6 CT | 5.25 | 4\%/8x33/4 $\times 43 / 4{ }^{\prime \prime}$ | $81 / 2$ | 2.96 |

## VERTICAL BLOCKING OSCILLATOR TRANSFORMERS

| No. | Type | Ratio (Pri. to Sec.) | Size | Lbs. | NET |
| :---: | :---: | :---: | :---: | :---: | :---: |
| 64 G 501 | A-8111 | 1:4.2 | $11 / 2 \times 21 / 2 \times 11 / 2^{\prime \prime}$ | 1/2 | 1.76 |
| 64 G 504 | A-8121 | 1:4.2 | $13 / 4 \times 25 / 16 \times 11 / 2^{\prime \prime}$ | $1 / 2$ | 2.42 |
| 64 G 543 | A-8122 | 1:4.2 | $19 / 16 \times 13 / 16 \times 13 / 11^{\prime \prime}$ | 1/2 | 2.74 |
| 64 G 549 | A-8124 | Sec. \#1, 1:0.48; \#2, 1:1 | $15 / 8 \times 27 / 8 \times 15 / 8^{\prime \prime}$ | 1/2 | 2.71 |
| 64 G 558 | A-8125 | 1:4.2 | $2^{3} / 16 \times 11 / 4 \times 13 / 16^{\prime \prime}$ | 1/2 | 1.76 |
| 64 G 471 | A-8126 | 1:1.5 | $13 / 4 \times 11 / 2 \times 2{ }^{\prime \prime}$ | 1/2 | 1.79 |
| 63 G 432 | VBO-200 | 1:1.5 | $11 / 2 \times 11 / 2 \times 21 / 2^{\prime \prime}$ | 1/2 | 1.89 |

HORIZONTAL BLOCKING OSCILLATOR TRANSFORMERS

| No. | Type | Size | Lbs. | NET |
| :---: | :---: | :---: | :---: | :---: |
| 64 G 500 | A-8110 | $11 / 2 \times 21 / 2 \times 11 /{ }^{\prime \prime}$ | $1 / 2$ | 1.99 |
| 64 G 503 | A-8120 | $13 / 4 \times 25 / 16 \times 11^{\prime \prime}$ | $1 / 2$ | 2.81 |

[^13]

## DEFLECTION YOKES

For $70^{\circ}$ deflection picture tubes; §for $50^{\circ}$. All have ferrite cores and cosine windings. Molded coil forms provide minimum "crosstalk." Av. shpg. wt., $11 / 3 \mathrm{lbs}$.

| No. | Type | Horizontal | Vertical | NET |
| :---: | :---: | :---: | :---: | :---: |
| 64 G 538 | DY-1A§ | $8.3 \mathrm{mh}, 13.5$ ohms | $50 \mathrm{mh}, 66 \mathrm{ohms}$ | 5.15 |
| 64 G 595 | DY-2A | $10.3 \mathrm{mh}, 14.5$ ohms | $50 \mathrm{mh}, 66$ ohms | 6.53 |
| 64 G 539 | DY-8A | $8.5 \mathrm{mh}, 14.5 \mathrm{ohms}$ | $50 \mathrm{mh}, 52.5$ ohms | 6.53 |
| 64 G 590 | DY-9A | $13.5 \mathrm{mh}, 17.5$ ohms | $50 \mathrm{mh}, 53.5$ ohms |  |
| 64 G 589 | DY-10A | $30.0 \mathrm{mh}, 45 \mathrm{ohms}$ | $3.5 \mathrm{mh}, 3.5$ ohms | 6.53 |
| 64 G 596 | DY-11A | $20 \mathrm{mh}, 31$ ohms | $50 \mathrm{mh}, 50$ ohms | 6.53 |
| 64 G 597 | DY-12A | $30 \mathrm{mh}, 41$ ohms | $50 \mathrm{mh}, 50$ ohms | 6.53 |
| 63 G 481 | DY-13A | 12.5 mh .15 ohms | 48 mh .52 ohms | 8.16 |
| 64 G 370 | DY-14A | $30 \mathrm{mh}, 45$ ohms | $3.5 \mathrm{mh}, 3.5$ ohms | 6.69 |
| 64 G 371 | DY-15A | $25 \mathrm{mh}, 35$ ohms | $50 \mathrm{mh}, 50$ ohms | 6.53 |
| 63 G 482 | DY-16A | $20 \mathrm{mh}, 26$ ohms | $44 \mathrm{mh}, 45$ ohms | 7.18 |
| 63 G 483 | DY-17A | $12 \mathrm{mh}, 20 \mathrm{ohms}$ | $42 \mathrm{mh}, 43$ ohms | 8.65 |
| 63 G 484 63 G 485 | DY-18A | $14.5 \mathrm{mh}, 18 \mathrm{ohms}$ | $41.5 \mathrm{mh}, 50 \mathrm{ohms}$ | 7.18 |
| 63 G 485 | DY-19A | $20 \mathrm{mh}, 28 \mathrm{ohms}$ | $41.5 \mathrm{mh}, 50 \mathrm{ohms}$ | 7.18 |
| 63 G 486 | DY-20A | $20 \mathrm{mh}, 28$ ohms | $41.5 \mathrm{mh}, 50$ ohms | 7.18 |
| 63 G 487 | DY-21A | $14.5 \mathrm{mh}, 10$ ohms | $3.1 \mathrm{mh}, 3.5 \mathrm{ohms}$ | 6.53 |
| 63 G 488 | DY-22A | $20 \mathrm{mh}, 25$ ohms | $46 \mathrm{mh}, 45$ ohms | 6.11 |
| 63 G 489 | DY-23A | $20 \mathrm{mh}, 27$ ohms | $45 \mathrm{mh}, 43 \mathrm{ohms}$ | 8.15 |
|  | DY-24A | $18.5 \mathrm{mh}, 34$ ohms | $11 \mathrm{mh}, 11.5$ ohms | 7.02 |
| $63 \text { G } 496$ | DY-25A | $24 \mathrm{mh}, 46$ ohms | $11 \mathrm{mh}, 11 \mathrm{ohms}$ | 7.02 |
| 63 G 497 | DY-26A | $19 \mathrm{mh}, 34$ ohms | $11.5 \mathrm{mh}, 16.5$ ohms | 10.64 |
| 63 G 498 | DY-27A | $17.5 \mathrm{mh}, 35.5$ ohms | $12.3 \mathrm{mh}, 13.5$ ohms | . 24 |

## VERTICAL DEFLECTION OUTPUT TRANSFORMERS

$\dagger$ Indicates autoformer type. *Copper shield. Pri. \& sec. in ohms.

| No. | Type | Pri. | Sec. | Size | Lbs. | NET |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 64 G 522 | A-8112 | 1300 | 10 | $2 \times 31 / 4 \times 13 / 4$ " | 1 | 2.84 |
| 64 G 523 | A-8113 | 700 | 12 | $2 \times 31 / 4 \times 1{ }^{3 / 4}{ }^{\prime \prime}$ |  | 2.91 |
| 64 G 502 | A-8115 | 600 | 7 | $31 / 16 \times 21 / 2 \times 21 / 2^{\prime \prime}$ | $21 / 2$ | 4.31 |
| 64 G 547 | A-8123 $\dagger$ | 1200 | 11 | $2 \times 31 / 4 \times 13 / 4$ " | 11/2 | 2.65 |
| 64 G 554 | A-8140 | 400 | 0.3 | $21 / 2 \times 21 / 2 \times 31 / 32^{\prime \prime}$ | 21/2 | 4.47 |
| 64 G 557 | A-8141 $\dagger$ | 1650 | 4.5 | $21 / 4 \times 33 / 4 \times 21 / 8{ }^{\prime \prime}$ | $11 / 2$ | 3.82 |
| 64 G 461 | A-8143 | 625 | 14 | $21 / 4 \times 21 / 4 \times 358^{\prime \prime \prime}$ |  | 2.84 |
| 64 G 462 | A-8144 | 540 | 15 | $21 / 4 \times 13 / 4 \times 35 / 8{ }^{\prime \prime}$ | $11 / 2$ | 2.52 |
| 64 G 472 | A-8147 $\dagger$ | 300 | 9 | $2 \times 13 / 4 \times 31 / 4{ }^{\prime \prime}$ | 1 | 2.28 |
| 64 G 473 | A-8148 $\dagger$ | 375 | 6.5 | $2 \times 17 / 8 \times 314^{\prime \prime}$ | $11 / 2$ | 2.77 |
| 63 63 6 | A-8150 | 450 580 | 11.3 | 2x $33 / 4 \times 23 / 11^{\prime \prime}$ | 111/2 | 2.81 |
|  | VO-103* |  |  | 2×11/2×31/ |  |  |
| 63 G 978 | VO-106 | 1400 | 3.8 | $15 / 8 \times 11 / 2 \times 278{ }^{\prime \prime}$ | 1 | 2.28 |
| 63 G 979 | VO-107. | 1220 | 3.0 | $15 / 8 \times 11 / 2 \times 27 / 8^{\prime \prime}$ | 1 | 2.28 |

## Stancor Transformers

re
(D)

(c)


## 5ing <br> BV] <br>  <br> NV <br> TD

POWER TRANSFORMERS

8400 Series-For 6.3 Volt Tubes. All have
center-tapped 6.3 v. winding except PS- 8415 and PA8421. *For 6AX5, 6X4, 6X5 or sel. rect.


## FILTER CHOKES

All ratings are with maximum DC in winding. All are Fig. A mounting type, except *Fig. L, $\dagger$ Fig. D, 8 Fig. C, $\ddagger$ Fig. NV. All are rated 1500 v . rms. except $* * 2000$ t† 3000

| Stock No. | Mfr'sType | Hys. | Ma. | Ohms | Size | $\begin{aligned} & \text { Wt., } \\ & \text { Lbs. } \end{aligned}$ | NET EACH |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  |  |  |  |  |  | 1-9 | 10-24 | 25-49 | 50-99 |
| 64 G 057 | C1001†t | 10.5 | 110 | 225 | $25 / 8 \times 4 \times 21 / 4^{\prime \prime}$ | $21 / 2$ | 2.91 | 2.62 | 2.35 | 2.19 |
| 64 G 056 | C1002 | 15.0 | 75 | 400 | $21 / 4 \times 33 / 4 \times 21 / 4^{\prime \prime}$ | $11 / 4$ | 2.13 | 1.91 | 1.72 | 1.60 |
| 64 G 055 | C1003 | 16.0 | 50 | 580 | $2 \times 31 / 4 \times 13 / 4{ }^{\prime \prime}$ | $11 / 2$ | 1.73 | 1.56 | 1.40 | 1.30 |
| 64 G 065 | C1080 | 3.5 | 50 | 200 | $15 / 8 \times 27 / 8 \times 1{ }^{\prime \prime}$ | 11/2 | 1.40 | 1.26 | 1.14 | 1.06 |
| 64 G 075 | C1279 | 8.5 | 50 | 400 | $15 / 8 \times 27 / 8 \times 11 / 2^{\prime \prime}$ | 3/4 | 1.44 | 1.29 | 1.17 | 1.08 |
| 64 G 067 | C1355* | 8.0 | 75 | 290 | 21/16 $\times 25 / 16 \times 13 / 4^{\prime \prime}$ | $11 / 2$ | 1.99 | 1.79 | 1.62 | 1.50 |
| 64 G 063 | C1410§t $\dagger$ | 4.0 | 175 | 100 | $33 / 16 \times 25 / 8 \times 25 / 8^{\prime \prime}$ | $21 / 2$ | 4.12 | 3.70 | 3.33 | 3.09 |
| 64 G 466 | C14118t $\dagger$ | 4.5 | 200 | 80 | $35 / 8 \times 3 \times 31 / 8{ }^{\prime \prime}$ | $31 / 2$ | 4.66 | 4.20 | 3.78 | 3.51 |
| 64 G 455 | C1412§t $\dagger$ | 4.0 | 250 | 60 | $35 / 8 \times 3 \times 31 /{ }^{\prime \prime}$ | 41/2 | 6.82 | 6.14 | 5.53 | 5.13 |
| 64 G 068 | C14208 | 16.0 | 80 | 360 | 33/16 $\times 25 / 8 \times 25 / 8^{\prime \prime}$ | $21 / 2$ | 3.53 | 3.18 | 2.86 | 2.65 |
| 64 G 465 | C1421§t $\dagger$ | 7.0 | 140 | 165 | 33/16 $\times 25 / 8 \times 25 / 8{ }^{\prime \prime}$ | 21/2 | 4.02 | 3.62 | 3.25 | 2.99 |
| 64 G 058 | C1515 | 20.0 | 15 | 900 | $15 / 8 \times 27 / 8 \times 11 / 2$ | 1 | 1.44 | 1.62 | 1.17 | 1.08 |
| 64 G 05 | C1706 | 4.5 | 50 | 300 | $13 / 8 \times 23 / 8 \times 13 / 8$ | 3/4 | 1.21 | 1.09 | . 99 | .91 |
| 64 G 051 | C1707 | 7.0 13 | 50 | 550 | $13 / 8 \times 23 / 8 \times 13 / 8$ | $1^{3 / 4}$ | 1.27 | 1.15 | 1.03 | .96 |
| 64 G 052 | C1708 | 13.0 | 65 | 500 | 2×31/4×13/4" | 1 | 1.97 | 1.79 | 1.62 | 1.50 |
| 64 G. 053 | C1709 | 8.0 | 85 | 250 | $2 \times 31 / 4 \times 2$ " | 13/4 | 2.22 | 2.00 | 1.80 | 1.67 |
| 64 G 05 | C1710 | 7.0 | 150 | 200 | $25 / 8 \times 4 \times 21 / 4^{\prime \prime}$ | $21 / 4$ | 3.23 | 2.91 | 2.62 | 2.43 |
| 64 G 06 | C1721†t $\dagger$ | 8.5 | 200 | 120 | $37 / 8 \times 31 / 8 \times 3$ " | $41 / 2$ | 5.64 | 5.09 | 4.58 | 4.24 |
| 64 G 456 | C1722 $+\dagger$ | 8.0 | 300 | 80 | $45 / 8 \times 33 / 4 \times 31 / 2^{\prime \prime}$ | $71 / 2$ | 9.37 | 8.44 | 7.59 | 7.04 |
| 64 G 059 | C2303** | 2.5 | 130 | 100 | 2x31/4×13/4" | $11 / 2$ | 2.03 | 1.82 | 1.64 | 1.52 |
| 64 G 060 | C2304 | 2.3 | 150 | 60 | $2 \times 31 / 4 \times 13 / 4{ }^{\prime \prime}$ |  | 2.09 | 1.88 | 1.70 | 1.57 |
| 64 G 061 | C2305 $\dagger$ | 5.0 | 100 | 300 | $211 / 16 \times 23 / 4 \times 23 / 16^{\prime \prime}$ | 11/2 | 3.07 | 2.76 | 2.49 | 2.30 |
| 64 G 064 | C2308§ $\dagger$ | 8.0 | 300 | 80 | $43 / 4 \times 4 \times 37 / 8^{\prime \prime}$ | $73 / 4$ | 9.47 | 8.53 | 7.67 | 7.10 |
| 64 G 457 64 G 505 | $\begin{aligned} & \mathrm{C} 2309 * * \\ & \mathrm{C} 2325 \end{aligned}$ | 3.0 2.0 | 150 200 | 90 60 | $21 / 4 \times 33 / 4 \times 21 / 4 \prime \prime$ $33 / 4 \times 21 / 4 \times 21 / 4$ | $13 / 4$ | 2.52 2.52 | 2.26 2.26 | 2.04 | 1.89 |
| 64 G 52 |  | 1.0 | 300 | 43 |  |  | 2.84 | 2.55 | 2.30 | 2.14 |
| 64 G 073 | C 2327 | 1.5 | 200 | 85 | $15 / 8 \times 27 / 8 \times 11 / 2^{\prime \prime}$ | 13/4 | 1.60 | 1.44 | 1.29 | 1.21 |
| 64 G 458 | C2328 | . 8 | 375 | 25 | $21 / 2 \times 33 / 4 \times 2^{\prime \prime}$ | $11 / 2$ | 3.30 | 2.97 | 2.68 | 2.48 |
| 64 G 459 | C2334 | 2.8 | 300 | 60 | $25 / 8 \times 21 / 4 \times 4^{\prime \prime}$ | $21 / 2$ | 2.77 | 2.50 | 2.25 | 2.09 |

## SELENIUM RECTIFIER TRANSFORMERS

BV Versatile multi-tap transformers for low voltage, high current applications. For use with CT bridge, rectifier circuit. Nominal input of 117 v ., $50-60$ cycle AC . With wiring chart.

| Stock No. | Mfr's Type | Range of AC Vo.ts | Max. DC Output Load |  | Size | Wt., Lbs. | NET EACH |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  |  | Resistive | Capacitive |  |  | $1-9$ | 10-24 | 25-49 | 50-99 |
| 64G372 | RT-201 | 11.7 to 29.4 | 11.2v. (3) 2.0A | 13.8v. @ 2.0A | $31 / 8 \times 21 / 2 \times 33 / 8^{\prime \prime}$ | 21/2 | 4.73 | 4.26 | 3.84 | 3.56 |
|  |  | 11.1 to 28.5 | 23.0v. @ 1.25A | 30.0v. @ 1.25 A |  |  |  |  |  |  |
| 64 G 373 | RT-202 | $\left\|\begin{array}{l} 12.0 \text { to } 29.8 \\ 12.0 \text { to } 29.8 \end{array}\right\|$ | $\begin{array}{lll} 11.1 v . @ & 4.0 \mathrm{~A} \\ 24.3 \mathrm{v} . @ & 2.0 \mathrm{~A} \end{array}$ | $\left\|\begin{array}{ll} 14.7 \mathrm{v} \text { @ } & 4.0 \mathrm{~A} \\ 33.0 \mathrm{v} \text { @ @ } & 2.0 \mathrm{~A} \end{array}\right\|$ | $35 / 8 \times 27 / 8 \times 31 / 2^{\prime \prime}$ | 4 | 6.27 | 5.64 | 5.08 | 4.70 |
| 64G 374 | RT-204 | 11.7 to 29.2 | 12.0 v @ 8.0A | 14.5v.@8.0A | $4 \times 31 / 4 \times 41 / 8^{\prime \prime}$ | 61/4 | 7.90 | 7.11 | 6.40 | 5.93 |
|  |  | 11.6 to 29.2 12.0 to 29.7 | $24.0 \mathrm{v} . @ 8.08$ $11.5 \mathrm{v} . @$ 12.0 A | $\begin{array}{lll}32.4 \mathrm{v} .0 & \text { ar } & 4.0 \mathrm{~A} \\ 14.4 \mathrm{v} \text { @, } & 12.0 \mathrm{~A}\end{array}$ |  |  |  |  |  |  |
| 64G375 | RT-206 | $\left\|\begin{array}{l} 12.0 \text { to } 29.7 \\ 12.0 \text { to } 29.7 \end{array}\right\|$ | $\begin{aligned} & 11.5 \mathrm{v} \text { © @ } \\ & 24.0 \mathrm{v} \text { @ } \quad 6.0 \mathrm{~A} \\ & \hline \end{aligned}$ | $\left\|\begin{array}{lcc} 14.4 \mathrm{v} \text { @ } & 12.0 \mathrm{~A} \\ 32.0 \mathrm{v} \text {. @s } & 6.0 \mathrm{~A} \end{array}\right\|$ | $41 / 4 \times 37 / 16 \times 51 / 8^{\prime \prime}$ | $91 / 4$ | 10.52 | 9.47 | 8.52 | 7.89 |
| 64G376 | RT-208 | 12.1 to 29.2 | 11.4 v . @ 15.0A | 14.8 v . © 15.0 A | $43 / 4 \times 33 / 4 \times 51 / 4^{\prime \prime}$ | $\overline{121 / 2}$ | 12.44 | 11.20 | 10.08 | 9.34 |
| 64GU378 | RT-2012 | 12.1 to 29.2 | 23.7 v . @ 8.0A 11.4 v @ 22.5 A | 32.5v. © 15.0 A 14.3 v © ${ }^{22.5 A}$ 3 | $53 / 8 \times 43 / 8 \times 63 / 8{ }^{\prime \prime}$ | 21 | 19.30 | 17.38 | 15.64 | 14.48 |
| 64 U378 | RT-2012 | 12.0 to $29.0 \mid$ | 23.5v. @ 12.0A | $\left\lvert\, \begin{aligned} & \text { l3.0v. ©) } \\ & \end{aligned}\right.$ | 5/8x4/8x6/8 | 21 | 19.30 | 17.38 | 15.64 | 14.48 |

## POLY-PEDANCE MODULATION TRANSFORMERS

D Highly dependable modulation transformD ers for matching Class ' $B$ ' modulators to Class $C$ load impedances in amateur and ommercial transmitters. Multi-tapped primary and secondary windings will each match oad impedances from 2000 to 20,000 ohms Range covers all common impedances and as sures a correct match for efficient high-quality modulation at all times.
Type A-3893. Rated 60 watts. Maximum DC primary and secondary, 180 ma . each. Overal size: $4 \times 31 / 4 \times 1 / 8^{\prime \prime}$. Shpg. wt. 7 libs. $\quad 12.90$ 10 to 24, EACH.
25 to 49 , EACH. 25 to 49, EACH.
50 to 99, EACH. .....
ype A-3894. Rated 125 watts Max. D 9.60 mary and secondary 225 ma each Siz. DC, pri64 G 488 . wt., 10 libs. NET EACH....... 15.58
10 to 24, EACH.
25 to 49 , EACH.
14.52

50 to 99; EACH.
14.02

## TUBE CHECKER TRANSFORMER

Type P-1834-3. Multiple-secondary transformer. Pri.: 125/115/105 v. 60 cycles. Secondary output volts: $1.1 / 1.4 / 1.5 / 2.0 / 2.5 / 3.0 /$ 110/117. Size, $25 / 8 \times 4 \times 2$ ". "A" style mounting With data sheet. Shpg. wt.,21/2 lbs. 9.27
10 to 24, EACH.
.8 .35
.7 .52
60 to 99; EACH.
.7 .52
.6 .96

## AUDIO INPUT TRANSFORMERS

A For single plate to push-pull grids except A single plate to single grid; for 7000-20,000 ohm plate impedances. All others have 7000$15,000 \mathrm{ohm}$ plate impedance. Maximum primary DC, 10 ma .
Type A-52-C. $1: 2$ ratio. Size, $13 / 8 \times 23 / 8 \times 11 / 2^{\prime \prime}$.
Shpg. wt., 3/4 lbs.
10 to 24, EACH
25 to
50
to 99,
99
1.35

Type A53*. $1: 3$ ratio. Size, $13 / 8 \times 23 / 8 \times 11 / 2^{\prime \prime}$.
64 G 090 . 1 to 9 , NET EACH . . . . . . . . 1.73
to 24, EACH.......
25 to 49, EACH
50 to 99, EACH...................................... ${ }^{40}$
Type A-53-C. $1: 3$ ratio. Size, $13 / 8 \times 23 / 8 \times 13 / 8^{\prime \prime}$.
${ }_{64}$ Ghpg. wit., 1 lb. 1 to 9 , NET EACH . . . . . . . . 1.76

Type A-63-C. $1: 3$ ratio. Size, $15 / 8 \times 27 / 8 \times 11 / 2^{\prime \prime}$.
Shpg. wt., $3 / 4$ lbs.
10 to 24, EACH.............................. .79
25 to 49, EACH.

## DRIVER TRANSFORMERS

A Single plate ( 10,000 ohms primary impedance) to push-pull grids. For use between first audio and push-pull output stage.
Type A-4713. $2: 1$ primary to $1 / 2$ secondary ra-
tio; 3 ma. max. in primary. Size, $15 / 8 \times 27 / \mathrm{s}^{1} 11 \mathrm{~s}^{\prime \prime}$. tio; 3 ma. max. in primary. Size, $15 / 8 \times 27 / 8 \times 11 / 8^{\prime \prime}$. 64 G. wt., 1 lb.
64 G 076. 1 to 9, NET EACH . . . . . . . I. 96
10 to 24, EACH
25 to 49, EACH
50 to 99, EACH.
Type A-4723. 3.1 prima tio; 30 ma . max. in primary. Over-all size, $15 / 8 \mathrm{x}$

10 to 24, EACH.
25 to 49, EACH.
1.96
1.76

Type A-4752. 2/1.5/1:1 primary to $1 / 2$ secondary ratio; 40 ma. max. in primary. Size, $2 \times 31 / 4 x$
$3 / 4^{\prime \prime}$. Shpg. wt., $11 / 2$ lbs. $^{2}$. 039.1 to 9 , NET EACH . . . . . . 2.87
0 to 24, EACH
2.87

10 to 24, EACH
50 to 99, EACH
.2 .58
.2 .33
2.16

Stancor Transformers

N

TC
TA

R


## UNIVERSAL OUTPUT TRANSFORMERS

For single or push-pull plates to voice coil. All are Fig. $Q$ except *Fig. J. Secondary: $\dagger 500$ ohms; $\S 500,333,200,125,50$ ohms; others match any voice coil. Av. shpg. wt., $11 / 2 \mathrm{lbs}$.

| Stock No. | Mfr's | Primary | Watts | Size | NET EACH |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | pe |  |  |  | 1-9 | 10-24 | 25-49 | 50-99 |
| 64 G 294 | A32508 | $5 \mathrm{~K} ; 10,20 \mathrm{~K}$ CT | (15ma) | $2 \times 31 / 4 \times 13 / 4^{\prime \prime}$ | 3.23 | 2.91 | 2.62 | 2.43 |
| 64 G 005 | A3822 | $7-10 \mathrm{~K}$ | 4 | $13 / 8 \times 23 / 8 \times 13 / 8^{\prime \prime}$ | 1.79 | 1.62 | 1.46 | 1.35 |
| 64 G 026 | A3823 | 4-14K CT | 8 | $15 / 8 \times 27 / 8 \times 11 / 2^{\prime \prime}$ | 2.28 | 2.06 | 1.85 | 1.71 |
| 64 G 242 | A 3824 | 6-10K | 8 | $2 \times 31 / 4 \times 2^{\prime \prime}$ | 3.23 | 2.91 | 2.62 | 2.43 |
| 64 G 002 | A3825 | 1.5-4.5 | 8 | $2 \times 31 / 4 \times 15 / 8^{\prime \prime}$ | 2.58 | 2.32 | 2.09 | 4 |
| 64 G 028 | A 3830 * | 3-10K CT | 20 | $211 / 16 \times 35 / 16 \times 21 / 4$ " | 3.53 | 3.18 | 2.86 | 2.65 |
| 64 G 293 | A3841* $\dagger$ | $2.5,4.5,6,7$ | 10 | $211 / 16 \times 35 / 16 \times 21 / 4{ }^{\prime \prime}$ | 4.90 | 4.41 | 3.97 | 3.67 |
| 64 G 023 | A3849 | $1.5-10 \mathrm{~K}$ | 10 | $15 / 8 \times 27 / 8 \times 11 / 2^{\prime \prime}$ | 2.19 | 1.97 | 1.77 | 1.65 |
| 64 G 024 | A3850* | 4-14K CT | 8 | $2 \times 23 / 8 \times 11 / 2^{\text {F }}$ | 2.58 | 2.32 | 2.09 | 1.94 |
| $64 \text { G } 027$ | A3852* | 4-14K CT | 18 | $25 / 16 \times 27 / 8 \times 2^{\prime \prime}$ | 2.84 | 2.56 | 2.30 | 2.14 |
| 64 G 025 | A3856 | 4-14K CT | 4 | $13 / 8 \times 23 / 8 \times 13 / 8{ }^{\prime \prime}$ | 2.12 | 1.91 | 1.72 | 1.60 |
| 64 G 029 | A3870 | ${ }^{4-14 K}$ CT | 18 | $2 \times 31 / 4 \times 2$ " | 3.23 | 2.91 | 2.62 | 2.43 |
| 64 G 292 | A3880 | 4-14K CT | 15 | $21 / 4 \times 33 / 4 \times 21 / 4^{\prime \prime}$ | 3.89 | 3.50 | 3.15 | 2.92 |

FIXED-IMPEDANCE OUTPUT TRANSFORMERS
All transformers listed below are Fig. A mounting type, except *Fig C. Type A3337 is similar to Fig. J, but has leads. Type A3330 has $4.5 \%$ primary tap used in B+ filter network for hum reduction.

| Stock No. | $\begin{aligned} & \text { Mfr's } \\ & \text { Type } \\ & \hline \end{aligned}$ | Primary | Sec. | Watts | Mtg. Ctrs. | Wt., Lbs. | NET EACH |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  |  |  |  |  |  | 1-9 | 10-24 | 25-49 | 50-99 |
| 64 G 013 | A2312 | 14,000 CT | 4 | 10 | $23 / 8^{\prime \prime}$ | 1 | 2.28 | 2.06 | 1.85 | 1.71 |
| 64 G 245 | A2313 | 7,000 | ${ }^{8}$ | 10 | $213 / 16^{\prime \prime}$ | 1 | 2.22 | 2.00 | 1.80 | 1.67 |
| 64 G 033 | A3304* | 7,10K CT | 500/15/8/4 | 25 | $2 \times 1{ }^{11 / 16}{ }^{\prime \prime}$ | $23 / 4$ | 6.30 | 5.67 | 5.11 | 4.73 |
| 64 G 297 | A3311* | $10 \mathrm{~K} C T$ | 500/15/8/4 | 25 | $21 / 4 \times 2{ }^{\prime \prime}$ | $31 / 2$ | 5.94 | 5.35 | 4.81 | 4.46 |
| 64 G 296 | A3327 | 25K | 4 |  | $2^{\prime \prime}{ }^{\prime \prime}$ | 1/2 | 1.60 | 1.44 | 1.29 | 1.21 |
| 64 G 244 | A3328 | 4,000 | 3.5 | 3 | 13/4" | $1 / 2$ | 1.34 | 1.21 | 1.09 | 1.01 |
| 64 G 246 | A3329 | 8,000 | 3.5 | 3 | $13 / 4^{\prime \prime}$ | 1/2 | 1.24 | 1.12 | 1.01 | . 93 |
| 64 G 299 | A3330 | 2K | 3.5 | 5 | $2^{\prime \prime}$ | $1 / 2$ | 1.79 | 1.62 | 1.46 | 1.35 |
| 64 G 243 | A3332 | 2,000 | 3.2 | 3 | $13 / 4{ }^{\prime \prime}$ | $1 / 2$ | 1.05 | . 94 | . 84 | . 78 |
| 64 G 295 | A3337 | 5 K | 6-8 | 10 | $23 / 8{ }^{\prime \prime}$ | $1{ }^{1}$ | 1.99 | 1.79 | 1.62 | 1.50 |
| 64 G 020 | A3800* | 5,000 CT | $500 / 250 / 15 /$ | 30 | 21/4x2" | 4 | 6.04 | 5.44 | 4.90 | 4.54 |
| 64 G 021 | A3801* | 6,600 CT | $\begin{gathered} 500 / 450 / 15 / \\ 8 / 4 \end{gathered}$ |  | $21 / 2 \times 23 / 16^{\prime \prime}$ | $43 / 4$ | 7.25 | 6.44 | 5.87 | 5.44 |
| 64 G 298 | A3831 | 10K CT | $\begin{array}{r} 8 / 4 \\ 8 / 4 / 2 \end{array}$ | 35 5 | 21/2x23/16" | 43/4 | 7.25 2.35 | 6.53 2.12 | 5.87 1.90 | 5.44 1.76 |
| 64 G 015 | A3857 | ${ }_{2} 5 \mathrm{~K}$ CT | 4 | 5 | $2^{\prime \prime}$ | $1 / 2$ | 1.67 | 1.50 | 1.35 | 1.25 |
| 64 G 001 | A. 3876 | 2,000 | 4 | 5 | $2^{\prime \prime}$ | $1 / 2$ | 1.24 | 1.12 | 1.01 | . .93 |
| 64 G 004 | A3877 | 5,000 | 4 | 5 | $2^{\prime \prime}$ | $1 / 2$ | 1.30 | 1.18 | 1.06 |  |
| 64 G 006 | A3878 | 7,000 | 4 | 5 | $2^{\prime \prime}$ | $1 / 2$ | 1.27 | 1.15 | 1.03 | . 96 |
| 64 G 010 | A3879 | 10,000 | 4 | 5 | $2^{\prime \prime}$ | $1^{1 / 2}$ | 1.24 | 1.12 | 1.01 | . 93 |
| 64 G 138 | A8094 | 4,000 | 32/16/8 | $71 / 2$ | $31 / 16^{* *}$ | $11 / 2$ | 2.94 | 2.65 | 2.38 | 2.20 |
| 64 G 519 | A8114 | 7,600 | 3.2 | 5 | $2^{\prime \prime}$ | $1 / 2$ | 1.73 | 1.56 | 1.40 | 1.30 |

## FILAMENT TRANSFORMERS

Single-secondary transformers. Secondaries center-tapped except P6469 and P8190. *Has 6.3 v. primary and secondary for filament isolation. Fig. BV on p. 165. All others for $117 \mathrm{v} ., 60$ cycle.

| Stock No. | Mfr's Type | Fig. | Volts | Amps | Insul. | Mteg. Ctrs. | Wt., Lbs. | NET EACH |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  |  |  |  |  |  |  | 1-9 | 10-24 | 25-49 | 50-99 |
| 64 G 14 | P6133 |  | 2.5 | 5.0 | 7500 | $213 / 16^{\prime \prime}$ | $11 / 2$ | 3.72 | 3.35 | 3.02 | 2.79 |
| 64 G 301 | P3060 | BV | 2.5 | 10.0 | 10 KV | $21 / 4 \times 17 / 8^{\prime \prime}$ |  | 4.66 | 4.20 | 3.78 | 3.51 |
| 64 G 262 | P6467 | A | 5.0 | 3.0 | 2500 | $2^{13 / 16^{\prime \prime}}$ |  | 3.14 | 2.82 | 2.54 | 2.35 |
| 64 G 255 | P3062 | BV | 5.0 | 6.0 | 2500 | $2 \mathrm{x} 2^{\prime \prime}$ | $21 / 4$ | 4.15 | 3.73 | 3.36 | 3.12 |
| 64 G 887 | P6465 | A | 6.3 | . 6 | 1500 | $21 / 2^{\prime \prime}$ | 1 | 1.73 | 1.56 | 1.40 | 1.30 |
| 64 G 888 | P6492 | D | 5.0 | 30.0 | 2500 | $3 \times 2$ | $71 / 2$ | 10.61 | 9.55 | 8.60 | 7.97 |
| 64 | P6134 | A | 6.3 | 1.2 | 3000 | $23 / 8$ | $1{ }^{1}$ | 1.89 | 1.71 | 1.54 | 1.42 |
| 64 G 584 | P8190 | A | 6.3 | 1.2 | 5000 | $213 / 1$ | 1 | 2.48 | 2.23 | 2.01 | 1.86 |
| 64 G 585 | P8191* | A | 6.3 | 1.2 | 5000 | $213 / 1$ | 1 | 2.68 | 2.41 | 2.17 | 2.01 |
| 64 | P6466 | A | 6.3 | 3.0 | 2500 | 213/16" | 11/2 | 3.04 | 2.73 | 2.46 | 8 |
| 64 | P5014 | BV | 6.3 | 3.0 | 2500 | $2 \times 13 / 4^{\prime \prime}$ | 2 | 3.56 | 3.20 | 2.88 | 2.68 |
| 64 G 256 | P4019 | C | 6.3 | 4.0 | 2500 | $2 \times 1{ }^{11 / 16^{\prime \prime}}$ | $21 / 2$ | 4.70 | 4.23 | 3.81 | 3.53 |
| 64 G 264 | P4089 | C | 6.3 | 6.0 | 2500 | $21 / 4 \times 2$ | $31 / 2$ | 5.39 | 4.85 | 4.37 | 4.05 |
| 64 G 312 | P3064 | BV | 6.3 | 6.0 | 2500 | $2 \times 2{ }^{\prime \prime}$ | $21 / 2$ | 4.09 | 3.67 | 3.31 | 3.07 |
| 64 G 313 | P6308 |  | 6.3 | 10.0 | 2500 | 2 | /2 | 4.90 | 4.41 | 3.97 | 3.67 |
| 64 G 265 | P6309 |  | 6.3 | 20.0 | 2500 | $3 \times 23 / 8$ | 63/4 | 9.27 | 8.35 | 7.52 | 6.96 |
| 64 G 314 | P5015 | BV | 7.5 | 4.0 | 2500 | $2 \times 21 / 8{ }^{\prime \prime}$ | 3 | 4.151 | 3.73 | 3.36 | 3.12 |
| 64 G 257 | P5016 | BV | 10.0 | 4.0 | 2500 | 21/4×21/8" | $31 / 4$ | 5.00 | 4.50 | 4.05 | 3.75 |
| 64 G 318 | P6139 |  | 10.0 | 8.0 | 2500 | $21 / 2 \times 23 / 8^{\prime \prime}$ | 5 | 6.08 | 5.47 | 4.92 | 4.56 |
| 64 G 258 | P4097 | C | 10.0 | 8.0 | 2500 | $21 / 2 \times 27 / 16^{\prime \prime}$ | 5 | 6.60 | 5.94 | 5.34 | 4.95 |
| 64 G 142 | P8130 | A | 12.6 | 2.0 | 1500 | $213 / 16^{\prime \prime}$ | $11 / 2$ | 3.36 | 3.03 | 2.72 | 2.53 |
| 64 G 143 | P6469 | A | 25.2 | 1.0 | 1500 | $213 / 16^{\prime \prime}$ | $11 / 2$ | 3.20 | 2.88 | 2.60 | 2.40 |

HIGH-FIDELITY OUTPUT TRANSFORMERS
C Frequency response of $20-20,000$ cycles at 25 watts, $\pm 1 \mathrm{db}$. Maximum rating: 50 watts. Have C inter-leaved "trifilar" windings and are well balanced. Types A8054 and A8072 may be used with Williamson amplifiers. Sizes: $45 / 16 \times 39 / 16 \times 41 / 4^{\prime \prime}$. Shpg. wt., 7 lbs.

| Stock No. | Mfr's Type | Pri. Imp.$(P-P)$ | Sec. Imp. | Max. Pri. DC Per Half | NET EACH |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  |  |  |  | 1-9 | 10-24 | 25-49 | 50-99 |
| 64 G 563 | A-8053 | 5000 | 8, 16 | 150 ma | 13.36 | 12.02 | 10.82 | 10.03 |
| 64 G 570 | A-8056 | 6600 | 8, 16 | 125 ma | 13.36 | 12.02 | 10.82 | 10.03 |
| 64 G 564 | A-8054 | 9000 | 8,16 | 100 ma | 13.36 | 12.02 | 10.82 | 10.03 |
| 64 G 574 | A-8072 | 7600 | 4, 8, 16 | 100 ma | 16.27 | 14.70 | 13.23 | 12.25 |

## MICROPHONE TRANSFORMERS

Type A4350 is for mike to line or line to line. Others for mike, pickup or line to grid. A4350 and A4352 are Fig. Q. A4705 is Fig. A. A4351 is Fig. TD (p. 165). 500 and 200 -ohm primary sections are center-tapped.

| Stock No. | $\begin{aligned} & \text { Mfr's } \\ & \text { Type } \end{aligned}$ | Pri. Ohms | Sec. Ohms | Mtg. Ctrs. | Lbs. | NET EACH |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  |  |  |  |  | 1-9 | 10-24 | 25-49 | 50-99 |
| 64 G 094 | A4 | 500/333/200/125 | me |  |  | 4.24 | 3.82 | 3.44 | 3.18 |
|  | A4351 | 500/333/200/125/50 | 89,000 | $23 / 8 \times 1$ | 11 | 4.54 | 4. | 3.67 | 3.41 |
| 4 G |  | 500/333/200/125/50 | 89,000 80 |  |  | 3.95 2.09 | 3.56 1.88 | 3.20 1.70 | $\underline{1.97}$ |
| 4 G |  | 00/70 | 80,000 |  | 1/2 | 2.09 | 1.8 | 1.70 | 1.5 |

## VIBRATOR TRANSFORMERS

For New Automotive Equipment. *6volt DC and 115 -volt AC primary. Others 6-volt DC primary only. All are similar to Fig. N, except P6166, Fig. TC.
Type P4062. Secondary, 600 volts, CT; 65 ma . $31 / 8 \times 21 / 2 \times 25 / 8^{\prime \prime}$. Shpg. wt., $21 / 2$ lbs. $\qquad$
Type P4061. Secondary, 580 volts, CT; 50 ma . $31 / 8 \times 21 / 2 \times 25 / 8^{\prime \prime} \cdot$ Shpg. wt., $21 / 2$ lbs.
64 G 126. . . . . 4.24
Type P6301. Secondary, 420 volts, CT; 40 ma .

Type P6166*: Secondary, 700 volts, CT; 135 ma. Also has 6.3 volt filament @ 2.25 amperes. $43 / 4 \times 4 \times 35 / 8^{\prime \prime} \cdot$ Shpg. wt., $71 / 2 \mathrm{lbs}$.
64 G 127. NET..........................|l. 01

| Exact Replacements. A selection of exact vibrator transformer replacements for original equipment. Av. shpg. wt., 2 lbs. |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: |
| DELCO |  |  |  |  |
| Stock No. | $\begin{aligned} & \hline \text { Mfr's } \\ & \text { Type } \\ & \hline \end{aligned}$ | Fig. | Original Part No. | $\left\lvert\, \begin{gathered} \text { NET } \\ \text { EACH } \end{gathered}\right.$ |
| 64 G 757 | $\overline{\text { P6471 }}$ | TC | 725581 |  |
| 64 G 767 | P6482 | TC | 6060 | 5.7 |
| 64 G 774 | P6489 | R | 6067 | 3.26 |

## MOTOROLA

| Stock No. | $\begin{aligned} & \hline \text { Mfr s } \\ & \text { Type } \\ & \hline \end{aligned}$ | Fig. | Original Part No. | $\begin{aligned} & \hline \text { NET } \\ & \text { EACH } \\ & \hline \end{aligned}$ |
| :---: | :---: | :---: | :---: | :---: |
| 64G757 | P6471 | TA | 25B472533 | 4.96 |
| 64 G 758 | P6472 | TA | $\begin{gathered} \mathrm{C} 217020, \mathrm{C} 71014, \\ 25 \mathrm{~B} 70950 \end{gathered}$ | 4.96 |
| 64 G 761 | P6476 | TA | C70267, D70267 | 5.10 |
| 64 G 763 | P6478 | R | 25C501644 | 3.30 |
| 64G894 | P6493 |  | 25C535794 | 3.04 |

PHILCO

| Stock <br> No. | Mfr's <br> Type | Fig. | Original <br> Part No. | NET <br> EACH |
| :---: | :---: | :---: | :---: | :---: |
| 64 G 765 | P6480 | $\ldots$. | $65-0347$ |  |
| 64 G 766 | P6481 | $\ldots .$. | $32-831$ 3-1 | 3.70 |

## INTERCOM AND TRANSCEIVER TRANSFORMERS

(A) Type A-3833. For transceiver applications. (A) 200 and 5 K -ohm pri. for carbon mike; sec.

10 to 24, EACH $\qquad$
25 to 49, EACH
TD Type A-4749. For telephone patch circuit TD use. $10 \mathrm{~K}-\mathrm{ohm}$ pri.; sec., 500 ohms.


25 to 49, EACH
50 to 99 , EACH
.3 .18
(A) Type A-4744. For intercom use; voice coil A to grid input. 4 -ohm pri., sec., $25 \mathrm{~K} .13 / 8 \mathrm{x}$
64 G O30. 1 to 9 , NET EACH. . . . . . I. 83
10 to 24, EACH. $\qquad$
25 to 49, EACH.
50 to 99, EACH.
Type A-8090. Matches line to voice coil. Has 45-50 ohm pri., sec., 3-4, 6-8. Maximum watts, 3. Size, $13 / 8 \times 23 / 8 \times 11 / 2^{\prime \prime}$. (Not illustrated.) Shpg $64{ }^{\mathrm{wt}} \mathrm{G}^{3 / 489}$.
. 1.67
10 to 24, EACH.
50 to 99, EACH. $\qquad$
$\qquad$
Type A-8091. Matches line to voice coil. 45-50 ohm pri., sec., 3-4, 6-8. Max watts, 8. 15/8x

10 to 24, EACH
25 to 49, EACH
.1 .65
50 to 99, EACH

## WM-8 CHASSIS SET

Two completely punched and finished chassis for the ultra-linear Stancor-Williamson Amplifier (use A-8072 high-fidelity output transformer, isted at left) and power supply. Complete with schematic diagram and comprehen sive parts lists. Shpg. wt., $31 / 2$ lbs.
64 G 269. NET PER PAIR......
7.35

## Stancor and Acme Transformers

## 

## STANCOR TRANSISTOR TRANSFORMERS

An excellent selection of highly dependable transformers designed for use in transistor circuits. These units feature small size and we ight, very important for miniaturized or portable equipment. Ideally suited for general replacement applications and installation in new equipment. Allied will stock new transistor components as they
become available. ${ }^{*}$ Maximum primary $D C$
(for each half if primary has center tap). §Type TA-14 has two secondaries, 16 ohm series, 4 ohms parallel. †Type TP-1 is for bridge rectifier power supplies; has 117 volt 60 cycle primary and 2 secondaries, each supplying 13 or 18 volts at 900 ma. Av. shpg. wt., 3 oz., except: Type TA-13, 11/2 lbs.; TA-14, $61 / 4 \mathrm{lbs}$; $; ~$

INPUT TRANSFORMERS

| Stock No. | Mfr's Type | Pri. <br> Imp. | Sec. Imp. | Ma* | Pri. Res. | Sec. Res. | Watts | Size | Fig. | NET EACH |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  |  |  |  |  |  |  |  |  | 1-9 | 10-24 | 25-49 | 50-99 |
| 63 G 952 | TA-1 | 600 CT | 10 | 20 | 42 | . 8 | . 05 | 13/16 ${ }^{19 / 16 \times 15 / 16^{\prime \prime}}$ | A | 1.89 | 1.71 | 1.54 | 1.42 |
| 63 G 857 | TA-15 | 50-100 | 10 | 50 |  |  | 5 mw | $13 / 16 \times 19 / 16 \times 15 / 16^{\prime \prime}$ | A1 | 1.47 | 1.32 | 1.20 | 1.11 |
| 63 G 860 | TA-18 | 30 CT | 50K |  | 14.7 | 4060 1815 | . 150 | $21 / 32 \times 13 / 1 x^{5 / 86}$ $13 / 16{ }^{15} /{ }^{3 / 4}$ | ${ }_{\text {Al }}$ | 3.26 | 2.94 | 2.65 | $2.45$ |
| $63 \mathrm{Gg} 89$ |  |  |  |  | 123 | 1815 | . 300 | $13 / 16 \times 15 / 8 \times 3 / 4^{\prime \prime}$ | A | $3.26 \mid$ | 2.94 |  | 2.45 |
| OUTPUT TRANSFORMERS |  |  |  |  |  |  |  |  |  |  |  |  |  |
| 63 G 95 | TA-8 | 9800 | 15 | 2 | 640 | 2 | . 05 | $13 / 8 \times 27 / 16 \times 13 / 8$ | A | 4.24 | 3.82 | 3.44 | 3.18 |
| 63 G 960 | TA-9 | 1000 | 4/8/16 | 10 | 180 | 3.5 | . 2 | $3 / 4 \times 1916 \times 3 / 4{ }^{\prime \prime}$ | A | 4.86 | 4.38 | 3.94 | 3.66 |
| 63 G 961 | TA-10 | 2 K CT | 4/8/16 |  | 250 | 4 | . 2 | $3 / 4 \times 19 / 16 \times 3 / 4$ " | A | 5.32 | 4.79 | 4.31 | 4.00 |
| 63 G 962 | TA-11 | 48 CT | 8/16 | 275 | 5 | 1.5 | 5 | $2 \times 35 / 16 \times 1{ }^{1 / 4}{ }^{\prime \prime}$ | A | 2.74 | 2.47 | 2.22 | 2.06 |
| 63 G 963 | TA-12 | 20 CT | 8 | 500 | . 55 | . 35 | 10 | $13 / 8 \times 17 / 16 \times 11 / 2^{\prime \prime}$ | A | 1.89 | 1.71 | 1.54 | 1.42 |
| $\begin{aligned} & 63 \text { G } 965 \\ & 63 \text { G } 862 \\ & 63 \text { G } 863 \\ & 63 \text { G } 865 \end{aligned}$ | TA-14§ | 24 CT | 16/4CT | 200 |  |  | 10 | $4{ }^{4} /{ }^{\text {x }} \times 3 / 8 \times 39 / 16^{\prime \prime}$ | TD | 9.41 | 8.47 | 7.62 | 7.06 |
|  | TA-20 | 350 CT | 4/12 |  | 38 | 1.45 | . 150 | $21 / 32 \times 13 / 16 x^{5 / 81}$ | A1 | 3.26 | 2.94 | 2.65 | 2.45 |
|  | TA-21 | 500 CT | 4/8/16 |  | 75.3 | 3.55 | .150 | $21 / 32 \times 13 / 16 \times 5 /{ }^{\prime \prime}$ | A1 | 3.26 | 2.94 | 2.65 | 2.45 |
|  | TA-23 | 600 CT | 4/8/16 |  | 732 | 3.2 | . 150 | $21 / 32 \times 13 / 16 \times 5 / 8^{\prime \prime}$ | A1 | 3.26 | 2.94 | 2.65 | 2.45 |
| 63 G 867 | TA-25 | ${ }^{825}$ CT | 50 K |  | 74 | 2.7 | .150 | $21 / 32 \times 13 / 16 \times 5 / 8^{\prime \prime}$ | A1 | 3.26 | 2.94 | 2.65 | 2.45 |
| 63 G 868 | TA-26 | 1250 | 4/12 |  | 132.5 | 1.4 | .150 | $21 / 32 \times 13 / 16 \times 5 / 8^{\prime \prime}$ | Al | 3.26 | 2.94 | 2.65 | 2.45 |
| 63 G 871 | TA-29 | 2500 | 4/16 |  | 370 | 2.3 | . 150 | $21 / 32 \times 13 / 16 \times 5 / 8^{\prime \prime}$ | A1 | 3.26 | 2.94 | 2.65 | 2.45 |
| 63 G 875 | TA-33 | 10 KCT | 4/8/16 |  | 1174 | 2.6 | . 150 | $21 / 32 \times 13 / 16 \times 5 / 8^{\prime \prime}$ | A1 | 3.26 | 2.94 | 2.65 | 2.45 |
| $\begin{aligned} & 63 \text { G } 879 \\ & 63 \text { G } 881 \\ & 62 \text { G } 882 \\ & 63 \text { G } 883 \\ & \hline \end{aligned}$ | TA-37 | 400 CT | 11 |  | 71.5 | 1.5 | .150 | $21 / 32 \times 13 / 16 \times 5 /{ }^{\prime \prime}$ | A1 | 3.26 | 2.94 | 2.65 | 2.45 |
|  | TA-39 | 100 CT | 4/8/16 |  | 10.9 | 1.45 | . 300 | $13 / 16 \times 158 \times 3 / 4{ }^{\prime \prime}$ | A | 3.26 | 2.94 | 2.65 | 2.45 |
|  | TA-40 | 160 | 4/8/16 |  | 18.7 | 1.4 | . 300 | $13 / 16 \times 15 / 8 x^{3 / 4}{ }^{\prime \prime}$ $13 / 16 \times 15 \times 3 / 4$ | A | 3.26 | 2.94 | 2.65 | 2.45 |
|  | TA-41 | 400 CT | 4/8/16 |  | 34 | 1.5 | . 300 | $13 / 16 \times 15 / 8 x^{3 / 4}$ | A | 3.26 | 2.94 | 2.65 | 2.45 |
| $\begin{aligned} & 63 \text { G } 884 \\ & 63 \text { G } 885 \\ & 63 \text { G } 886 \\ & 63 \text { G } 887 \\ & \hline \end{aligned}$ | TA-42 | 500 CT | 4/8/16 |  | 47 | . 85 | .300 | $13 / 16 \times 15 / 8 \times 3 / 4{ }^{\prime \prime}$ | A | 3.26 | 2.94 | 2.65 | 2.45 |
|  | TA-43 | 700 CT | 4/8/16 |  | 77 | 1.15 | . 300 | $13 / 16 \times 15 / 8 x^{3 / 4}{ }^{\prime \prime}$ | A | 3.26 | 2.94 | 2.65 | 2.45 |
|  | TA-44 | 2500 | 4/8/16 |  | 172 | 1.15 | . 300 | $13 / 16 \times 15 / 83^{3 / 4}{ }^{\prime \prime}$ | A | 3.26 | 2.94 | 2.65 | 2.45 |
|  | TA-45 | 3000 | 4/8/16 |  | 192 | 1.2 | . 300 | $13 / 16 \times 15 / 8 x^{3 / 4}$ | A | 3.26 | 2.94 | 2.65 | 2.45 |

INTERSTAGE TRANSFORMERS

| 63 6953 | - | 100 CT | 10 CT | 100 | 4.3 | . 8 | . 25 | $116 \times 218 \times 1 / 8$ | A | 89 | 7 | 4 | 42 |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 63 G 954 | TA-3 | 100 | 1 KCT | 100 | 5.8 | 4.5 | . 25 | $13 / 8 \times 27 / 16 \times 1{ }^{3 / 8}{ }^{\prime \prime}$ | A | 1.89 | 1.71 | 1.54 | 1.42 |
| G 955 | TA-4 | 500 CT | 5 KCT | 12 | 37 | 250 | . 03 | $13 / 8 \times 27 / 16 \times 13 / 8^{\prime \prime}$ | A | 2.48 | 2.23 | 2.01 | 1.86 |
| 63 G 861 | TA-19 | 100 CT | 10 CT |  | 19 | 1.27 | . 150 | 21/32 $x^{13} / 16 x^{5} /{ }^{\prime \prime}$ | A1 | 3.26 | 2.94 | 2.65 | 2.45 |
| G 864 | TA-22 | 500 CT | 50 |  | 59.7 | 7.9 | . 150 | 21/32x | A1 | 3.26 | 2.94 | 2.65 | 2.45 |
| 63 G 866 | TA-24 | 500 CT | 50K |  | 76.8 | 5135 | . 150 | $21 / 32 \times 13 / 16 \times 5 / 8$ " | A1 | 3.26 | 2.94 | 2.65 | 2.45 |
| 63 G 869 | TA-27 | 1200 | 20 KCT |  | 142 | 1860 | . 150 | $21 / 32 x^{13} 16 x^{5 / 8}$ | A1 | 3.26 | 2.94 | 2.65 | 2.45 |
| 63 G 870 | TA-28 | 1500 | 500 CT |  | 104 | 46.5 | . 150 | $21 / 32 x^{13 / 16} x^{3 / 8}$ | A1 | 3.26 | 2.94 | 2.65 | 2.45 |
| G 872 | TA-30 | 5 KCT | 7500 CT |  | 650 | 790 | . 150 | 21/32 x | A1 | 3.26 | 2.94 | 2.65 | 2.45 |
|  | TA-31 | 5 K CT | 10K CT |  | 635 | 1100 | . 150 | $21 / 32 \times 13 / 16 \times^{5 / 8}$ | A1 | 3.26 | 2.94 | 2.65 | 2.45 |
|  | TA-32 | 5 K CT | 80 KCT |  | 573 | 5740 | . 150 | $21 / 32 \times 13 / 16 \times^{5 / 8}$ | A1 | 3.26 | 2.94 | 2.65 | 2.45 |
| 63 G876 | TA-34 | 10K | 200 CT |  | 1200 | 33.4 | . 150 | $21 / 32 \times 13 / 16 x^{5 / 8}$ | A1 | 3.26 | 2.94 | 2.65 | 2.45 |
| 63 G 877 | TA-35 | 10K | 2 KCT |  | 1200 | 257 | . 150 | 21/32 $\mathrm{x}^{13} / 16 \mathrm{x}^{5} / 8^{\prime \prime}$ | A1 | 3.26 | 2.94 | 2.65 | 2.45 |
| 63 G | TA-36 | 10K | 3 KCT |  | 1200 | 385 | . 150 | $21 / 32 \times 13 / 16 \times 5 / 8{ }^{\prime \prime}$ | A1 | 3.26 | 2.94 | 2.65 | 2.45 |
| 63 G 88 | TA-38 | 500 CT | 150 CT |  | 62 | 21.2 | . 150 | $21 / 32 \times 13 / 16 \times 5 /{ }^{\prime \prime}$ | A1 | 3.26 | 2.94 | 2.65 | 2.45 |
| 63 G 888 | TA-46 | 100K | 1500 CT |  | 3250 | 143 | . 300 | $13 / 16 \times 15 / 8 \times 3 / 4{ }^{\prime \prime}$ | A | 3.26 | 2.94 | 2.65 | 2.45 |



## MODULATION TRANSFORMERS

63 G 859|TA-17 | 8CT | 7500/5K@120 Ma DC
..$|5.88| 5.29|4.77| 4.41$

## STANCOR LINE-TO-VOICE COIL TRANSFORMERS

Type A3837 is auto-transformer; operates A8102 and Type A8103 are EIA 70.7

| Stock No. | $\begin{aligned} & \text { Mfr's } \\ & \text { Type } \\ & \hline \end{aligned}$ | Primary Imp. | Secondary Imp. | Watts | Mtg. Ctrs. | $\begin{aligned} & \text { Wt., } \\ & \text { Lbs } \end{aligned}$ | Fig. | NET EACH |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  |  |  |  |  |  |  | 1-9 | 10-24 | 25-49 | 50-99 |
| 64 G 087 | A3818 | 1500/1000/500 | 15/8/4 | 25 | $31 / 8^{*}$ | 21/2 | J | 3.56 | 3.20 | 2.88 | 2.68 |
| 64 G 088 | A3837 | 500/1000 | . 06 to 8, 12 to 16 |  |  |  |  |  |  |  |  |
|  |  | $\begin{aligned} & 1500 / 2000 \\ & 2500 / 3000 \end{aligned}$ | $\begin{aligned} & .18 \text { to } 24, .24 \text { to } 32 \\ & .30 \text { to } 40 . .36 \text { to } 48 \end{aligned}$ |  |  |  |  |  |  |  |  |
|  | A3883 | $\begin{gathered} 2500 / 3000 \\ 500 \end{gathered}$ | $30 \text { to } 40,36 \text { to } 48$ | 15 25 | 23/8", | 131/4 | j | 3.60 | 3.23 | 2.91 | 2.69 |
| 64 G 085 | A7947 | $\begin{aligned} & 200 / 1500 / \\ & 1000 / 500 \end{aligned}$ | 6-8/3.2 | 2 | 23/8. | $1 / 4$ $3 / 4$ | Q | 2.09 | 1.88 | 1.70 | 1.57 |
| 64 G 086 | A7949 | 2000/1500/ |  |  |  |  |  |  |  |  |  |
|  |  | 1000/500 | 6-8/3.2 | 12 | 23/8* | 11/4 | J | 2.77 | 2.50 | 2.25 | 2.09 |
| 64 G 089 | A8101 | 500 - ${ }^{\text {¢ }}+$ | 3.2/6-8 | 8 | ${ }^{2}$ | $1 / 2$ $3 / 4$ | 0 | 1.54 | 1.38 | 1.24 | 1.15 |
| 64 G 64 G 092 | A8102 | 8/4/2/1/.5 $\dagger$ | 4/8/16 | 8 | $2^{*}$ | 3/4 | J | 2.94 | 2.65 | 2.38 | 2.20 |
|  |  | 1/.5t | 4/8/16 | 16 | 213/16" | 11/2 | J | 4.12 | 3.70 | 3.33 | 3.09 |
| 64 G 099 | A8104 | $\begin{aligned} & 3000 / 2000 / 500 / 1000 / 500 \\ & 1500 \end{aligned}$ | 16/8/4 | 10 | 23/8" | 11/2 | J | 3.99 | 3.59 | 3.22 | 2.99 |
| 64 G 889 | A8105 | 5/2.5/1.25/ |  |  |  |  |  |  |  |  |  |
|  |  | .62/.31 $\dagger$ |  | 5 | $2^{\prime \prime}$ |  | J | 2.13 | 1.91 | 1.72 | 1.60 |
| 64 G 890 |  | $8 / 4 / 2 / 1 \dagger$ | $\begin{aligned} & 4 / 8 / 16 \\ & 4 / 8 / 16 \end{aligned}$ | 8 16 | $2^{13 / 166^{\prime \prime}}$ | 3/4/4 | J | 2.94 | 2.65 | 2.38 3.33 | 2.20 |
| 64 G 891 649892 | $\begin{aligned} & \text { A8107 } \\ & \text { A8108 } \end{aligned}$ | $\begin{aligned} & 16 / 8 / 4 / 2 / 1 \dagger \\ & 5 / 25 / 125 / \end{aligned}$ | 4/8/16 | 16 | 213/16" | 13/4 | J | 4.12 | 3.70 | 3.33 | 3.09 |
|  |  | . $62 \dagger$ | 4/8 | 5 | 2' | 1/2 | Q | 2.13 | 1.91 | 1.72 | 1.60 |

STANCOR ISOLATION TRANSFORMERS
Primaries tapped for 125,115 and 105 v ,, with 115 v . secondary (except R-6415). R-6415 has 117 v . pri. and tapped secondary with 3 standard output receptacles for 105,115 and 125 V ; built-in electrostatic shields are grounded in-
ternally to core. $* 117 \mathrm{v}$. pri. to 117 v . sec.

K Type P-6410. 50 watts. Size, $39 / 16 \times 215 / 16 x$ 64 G 449 . 1-9, EA...6.72 10-24, EA. . 6.06 25-49, EACH.. 5.45 50-99, EACH...5.05

KA Type P-6160. 100 watts. Size, $43 / 4 \times 4 \times 35 / 8^{\prime \prime}$. 64 G 443 . 1-9, EA. 13.16 10-24, EA. 11.85 25-49, EACH... 10.66 50-99, EACH... 9.88

Type P-6371. (Not illus.). 175 watts*. 55/16x49/16x51/4". Shpg. wt., 9 lbs.
64 G $475.1-9$, EA. 18.95 10-24, EA. 17.06 64 G 475. 1-9, EA. 18.95 10-24, EA. 17.06
25-49, EACH. $15.37^{\text {50-99, EACH. }} 14.22$

## K C Type P-6415. 350 watts. Size, $53 / 8 \times 41 / 2 x$

 64 G 444 . Shpg. wt., 17 ligs. 20.86 10-24, EA. 18.79 25-49, ЕАСKA Type P-6298. 500 watts. Size, 75/8x61/8x 64 GU 448 . $1-9$, EA. 38.69 10-24, EA. 34.84 25-49, ЕАСН. 31.36 50-99, ЕАС'H.. 29.04

## STANCOR AIR CONDITIONER AUTOTRANSFORMERS

Type PSU-2000.
For use with home air conditioners
having $1 / 2$ to $1-h p$. having $1 / 2$ to $1-\mathrm{hp}$.
motors. ( $1 / 2$ to $1-\mathrm{ton}$ motors. ( $1 / 2$ to $1-$ ton units.) Converts 230 -volt line. Con230 -volt line. Con-
verting a 230 -volt

is done by a simple change inside the outlet box. Supplied with line cord, standard 250 -volt polarized plug, and receptacle. Rated at 2.3 KVA . Size, $31 / 2 \times 61 / 2 \times 33 / 4^{\prime \prime}$. Shpg. wt., 9 lbs.
63 G 967.1 to 9 , NET EAC'H...... 14.45


Type PSU-3000. Similar to PSU-2000, but designed for larger air conditioners. Supplies enough power to drive a 1 to 2 -hp. motor of the
type used in 1 to 2 ton conditioners. Converts 208 -volt unit to 230 volts, or 230 -volt unit to 208. Size, $4 \times 6 \times 41 / 2^{\prime \prime}$. Shpg. wt., 10 lbs. 16.26 10-24, EACH. 16.26
.14 .64


ACME VARIABLE VOLTAGE ADJUSTERS


Highly efficient, constant-duty voltage regulators. Used as step-up or step-down transformers to correct for either low or high line voltage. Easily adjusted by manually turning 7-position rotary switch until built-in voltmeter reads 115 volts output. Type T8394M has input switch positions for $95,100,105,110$, T10306 is for $65,75,90,100,115,130$ and 145 volts. Features simple, "plug-in" installation (built-in AC receptacle and 8 ft . line cord). Ideal for localities with fluctuating voltage supplies, to assure correct performance of electrical appliances. Also for the radio serviceman for over-voltage testing-speeds location of intermittent troubles.

Ty pe T8394 M. Especially designed for use
with television sets. Rated, 300 watts. $43 / 4 x$ $4 \times 5^{\prime \prime}$ Shpg. wt., 9 lbs.
62 G 514. NET. . . . . . . . . . . . . . . . . . . 11.55
[M] Type T10306. Rated, 150 watts. $45 / 8 \times 37 / 8$ 62 G501. NET........... . 14.33

## UTC Transformers



G-2


G-3, G-4

G-5
G-8
G-9
G-10
G-12

CASE DIMENSIONS

| Case | Height | Width | Depth | Shpg. Wt. |  |
| :---: | :---: | :---: | :---: | :---: | :---: |
| G-2 | 25/16" | $33 / 8$ " | 115/16" |  | lbs. |
| G-3 | $21 / 2^{\prime \prime}$ | $33 / 4{ }^{\prime \prime}$ | $25 / 33^{\prime \prime}$ | 2 | lbs. |
| G-4 | $2{ }^{15} /{ }^{\prime \prime \prime}{ }^{\prime \prime}$ | $41 /{ }^{\prime \prime}$ | 25/16" | 3 | lbs. |
| G-5 | $33 / 4{ }^{\prime \prime}$ | $31 / 8{ }^{\prime \prime}$ | $41 /{ }^{\prime \prime}$ | 41 |  |
| G-7 | 45/8" | $45 / 8^{\prime \prime}$ | $51 / 2^{\prime \prime}$ | 8 | lbs. |
| G-8 |  | $53 / 8{ }^{\prime \prime}$ |  | 12 | lbs. |
| G-9 | 57/8' | $53 / 8{ }^{\prime \prime}$ | 63/4* | 21 | libs. |
| G-10 | 57/8" | 61/8" | $65 / 8{ }^{\prime \prime}$ | 24 | lbs. |
| G-11 | 57/8" | $61 / 2^{\prime \prime}$ | 73/8" | 31 | lbs. |
| G-12 | 101/4" | $73 / 8{ }^{\prime \prime}$ | $91 / 4^{\prime \prime}$ | 52 | libs. |

## POWER TRANSFORMERS- 115 V., 50-60 CYCLES

All Fil. 2 windings are center tapped.
 62 G 739 S-39 980/800




## LINE-TO-SPEAKER TRANSFORMERS

| Stock No. | Type | Watts | Primary | Sec. | Case | 1-24, EA. | 25-99, EA. |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 62 G 769 62 G 770 | S-12 | 15 30 | $\left\{\begin{array}{l}500,2000\end{array}\right.$ | $\left\{\begin{array}{l}2,4,8, \\ 15\end{array}\right.$ | G-2 | 5.29 7.64 | 4.50 6.50 |



Stock No. 62G780 62 G 781 $\frac{62 \text { G } 782}{62 \text { G } 783}$

## 62 G 784 62 G 785

| 62 G 785 |
| :--- |
| 62 G 786 |
| 62 G 787 |

62 G787
62 G 788
62 G 789

| 62 G 789 |
| :--- |
| 62 G 790 |
| 62 G 793 |

62 G 793
62 G 791
62 G 792
62 G 794
62 G 494
62 G 495
62 G 495
62 G 492


Weigh only 1 ounce-for all compact applications. Response characteristics are: $\pm 1 \mathrm{db} 30-20,000 \mathrm{cps}$, except $0-14,0-15$, $4,000 \mathrm{cps}$. Maximum and which are for voice from 150 to minum housings. $7 / 8^{\prime \prime}$ dia., $13 / 16^{\circ}$ high. Mount by two $2-56$ minum on ${ }^{11} / 16^{\circ}{ }^{\circ}$ centers opposite terminals. Shpg. wt., 4 oz.

SUB AND SUB-SUBOUNCER TRANSFORMERS
"Tiny" transformers for miniature equipment. Frequency response, $\pm 3$ db from 200 to 5000 cps . Sub-
 size $7 / 16 x^{3 / 4} x^{5 / 8}{ }^{\prime \prime}$. Weight, $1 / 8$ oz. $\dagger$ Fixed imp. ratio; $1250: 1$ 2675 ohms DC resistance; SSO-5, 4400 ohms. Wt., 2 oz. SUB-OUNCER TRANSFORMERS


UNIVERSAL DRIVERS

| Stock No. | $\begin{array}{\|l\|l\|} \hline \text { Mfr's } \\ \text { Type } \end{array}$ | Application | Case | $\begin{gathered} 1-24 . \mid \\ E A . \end{gathered}$ | $\begin{aligned} & 25-99, \\ & \text { EACH } \end{aligned}$ |
| :---: | :---: | :---: | :---: | :---: | :---: |
| $62 \mathrm{G761}$ | S-8 | Single driver plate to PPgrids | G-3 | 6.47 | 5.50 |
| 62 G 762 | S-9 | PP pl. to grids of class B tubes | 4 | 8.23 | 7.00 |
| 62 G 763 | S-10 | 12AU7 orsimilar tubesto5881 or 6L6's, self or fixed bias. | G-3 | 6.47 | 5.50 |

UNIVERSAL OUTPUTS-TO LINE AND VOICE COIL Secondary impedances: $500,15,8,2$ ohms.

| Stock No. | Type | Primary Ohms | Watts | Case | $\begin{aligned} & \text { 1-24, } \\ & \text { EA. } \end{aligned}$ | $\begin{aligned} & 25-99, \\ & \text { EACH } \end{aligned}$ |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| $\begin{aligned} & 62 \text { G } 764 \\ & 62 \text { G } 765 \end{aligned}$ | $\begin{aligned} & \mathrm{S}-14 \\ & \mathrm{~S}-15 \end{aligned}$ | $\begin{aligned} & \text { 2500, } 4000,7000,10,000 \\ & \text { PP tubes: } 4000,5000,10,000 \end{aligned}$ | $\begin{aligned} & 10 \\ & 12 \\ & 30 \end{aligned}$ | $\begin{aligned} & \mathrm{G}-2 \\ & \mathrm{G}-2 \\ & \mathrm{G}-4 \end{aligned}$ | $\begin{aligned} & 6.47 \\ & 7.06 \\ & 8.73 \end{aligned}$ | $\begin{aligned} & 5.50 \\ & 6.00 \end{aligned}$ |

FILTER, SWINGING AND AUDIO CHOKES

| Stock No. | $\begin{aligned} & \text { Mfr's } \\ & \text { Type } \end{aligned}$ | Henrys | Ma | Ohms | Insul. | Case | $\begin{aligned} & \text { 1-24, } \\ & \text { EACH } \end{aligned}$ | $\begin{aligned} & 25-99, \\ & \text { EACH } \end{aligned}$ |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 62 G 776 | S-23 | 300 | 5 | 5000 | 1500 V . | G-2 | 4.41 | 3.75 |
| 62 G 725 | S-24 | 500 CT | 3 | 6000 | 1500 V . | G-2 | 5.00 | 4.25 |
| 62 G 726 | S-25 | 30 | 30 | 800 | 1500 V . | G-2 | 3.82 | 3.25 |
| 62 G 727 | S-26 | 12 | 60 | 250 | 1500 V . | G-2 | 3.82 | 3.25 |
| 62 G 728 | S-27 | 25 | 75 | 350 | 1500 V . | G-4 | 5.00 | 4.25 |
| 62 G 729 | S-28 | 20 | 100 | 350 | 1500 | G-4 | 5.88 | 5.00 |
| 62 G 730 | S-29 | 6 | 175 | 90 | 1500 V . | G-4 | 5.00 | 4.25 |
| 62 G 731 | S-30 | 4/20 | 175 | 90 | 1500 V. | G-4 | 5.00 | 4.25 |
| 62 G 732 | S-31 |  | 225 | 100 | 2700 V. | G-5 | 6.76 | 5.75 |
| 62 G 733 | S-32 | 4/20 | 225 | 100 | 2700 V . | G-5 | 6.76 | 5.75 |
| $62 \mathrm{G751}$ | S-33 | 8 | 300 | 100 | 4000 V . | G-7 | 9.11 | 7.75 |
| 62 G 734 | S-34 | 4/20 | 300 | 100 | 4000 V . | G-7 | 9.41 | 8.00 |
| 62 G 735 | S-35 |  | 400 | 60 | 5000 V . | G-8 | 11.76 | 10.00 |
| 62 G 736 | S-36 | 4/20 | 400 | 60 | 5000 V . | G-8 | 11.76 | 0.00 |
| 62 G 737 | S-37 |  | 550 | 60 | 6000 V . | G-8 | 14.70 | 2.49 |
| 62 G 738 | S-38 | 4/20 | 550 | 60 | 6000 V . | G-8 | 14.70 | 12.49 |

PLATE TRANSFORMERS-115 V., 50-60 CYCLES

| Stock No. | Type | Sec. VCT | DC Ma | Case | 1-24, EA. | 25-99, EA. |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 62 GU 744 | S-44 | 1150/1050 | 500 | G-9 | 23.52 | 19.99 |
| 62 G 745 | S-45 | 1800/1500 | 200 | G-8 | 20.58 | 17.49 |
| 62 GU 746 | S-46 | 2000/1500 | 300 | G-9 | 23.52 | 19.99 |
| 62 GU 748 | S-47 | 3000/2500/2000 | 300 | G-10 | 32.34 | 27.49 |
| 62 GU 749 | S-48 | 3000/2500/2000 | 500 | G-11 | 38.22 | 32.49 |
| 62 GU 750 | S-49 | 4200/3600/3000 | 300 | G-11 | 35.28 | 29.99 |
| 62 GU 700 | S-50 | 6000/5000 | 300 | G-12 | 58.80 | 49.98 |

UNIVERSAL MODULATION TRANSFORMERS

| Stock No. | Type | Audio Power | Case | 1-24, EA. | $\begin{aligned} & 25-99, \\ & \text { EACH } \end{aligned}$ |
| :---: | :---: | :---: | :---: | :---: | :---: |
| 62 G 771 | S-18 | 12 watts | G-3 | 7.06 | 6.00 |
| 62 G 772 | S-19 | 30 watts | G-4 | 9.11 | 7.75 |
| 62 G 62 GU 775 | S-22 | 250 watts | G-5 | 14.70 32.34 | 12.49 |

SINGLE-SECONDARY FILAMENT TRANSFORMERS
All primaries tapped at 105, 115 Volts, $50-60$ cycles. *Tapped sec.


62 G
62 C
62 C



| 1500 |
| ---: |
| 2500 |
| 1500 |
| 10000 |
| 10000 |
| 5000 |
| 10000 |
| 3000 |
| 3000 |
| 500 |



| 5.88 | 5.00 |
| :--- | ---: |
| 5.59 | 4.75 |
| 5.29 | 4.50 |
| 8.82 | 7.50 |
| 9.41 | 8.00 |
| 8.82 | 7.50 |
| 2.94 | 11.00 |
| 0.00 | 8.50 |
| 9.11 | 7.75 |
| 2.94 | 11.00 |

MULTIPLE-SECONDARY FILAMENT TRANSFORMERS Primary tapped 105,115 volts, $50-60$ cycles. Insulation, 3000 v ., except | S-71. $10,000 \mathrm{v}$. and S-72, 5000 v . All in G-5 case except ${ }^{*} \mathrm{G}-7$ case. |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Stock | Mfr's | Fil. 1 | Fil. 2 | Fil. 3 | $1-24$, | $25-99$, |

| Stock No. | Mfr's Type | $\begin{gathered} \text { Fil. } 1 \\ \text { CT } \end{gathered}$ | $\begin{gathered} \text { FiI. } 2 \\ \text { CT } \end{gathered}$ | $\begin{gathered} \text { Fil. } 3 \\ \mathrm{CT} \end{gathered}$ | $\begin{gathered} 1-24, \\ \text { EA. } \end{gathered}$ | $\begin{aligned} & 25-99, \\ & \text { EACH } \end{aligned}$ |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 62 G 717 | S-67 | 5V@6A | 6.3V@5A |  | 9.70 | 8.24 |
| 62 G 720 | S-70 | 6.3 V@ 5 A | 6.3V@5A |  | 10.00 | 8.50 |
| 62 G 721 | S-71* | 2.5V@6A | 2.5V@6A | 2.5 V @ 12 A | 14.70 | 12.49 |
| 62 G 722 | S-72 | 5V@3 A | 5V@6A | 5V@6A | 10.58 | 9.00 |

## 400 CYCLE FILAMENT TRANSFORMERS

a
a
a
Designed to provide maximum reliability with small size and weight. Primary for 105-115 v., 380-1000 cycles AC. reliability industrial and military needs. Hermetically realinity industria
sealed to MIL-T-27A specs. Av. shpg. wt., 1 lb .

| Stock No. | Mfr's Type | Sec. Amp: | Ins. V. | Size | $\begin{aligned} & 1-24, \\ & \text { EACH } \end{aligned}$ | $\begin{aligned} & 25-99, \\ & \text { EACH } \end{aligned}$ |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 63 G 138 | H-101 | 3 | 2500 | $13 / 4 \times 15 / 8 \times 2^{\prime \prime}$ | 13.82 | 11.75 |
| 63 G 139 | H-102 | 5.5 | 2500 | $13 / 4 \times 2 \times 21 / 4^{\prime \prime}$ | 14.70 | 12.50 |
| 63 G 140 | H-103 | 10 | 2500 | 25/16 $\times 21 / 8 \times 21 / 2^{\prime \prime}$ | 17.05 | 14.49 |
| 63 G 141 | H-104 | 20 | 2500 | $213 / 16 \times 21 / 2 \times 3^{\prime \prime}$ | 19.11 | 16.24 |

## UTC Transformers

## CASE DIMENSIONS

| Case | Holght | Width | Longth | Mounting | Shpg. Wt. |
| :---: | :---: | :---: | :---: | :---: | :---: |
| H-1 |  | 115/600 | ${ }^{23 / 8}$ | ${ }^{13 / 8113 / 1 /^{\prime \prime}}$ | $21 / 2 \mathrm{lbs}$. |
| $\stackrel{\text { L }}{\text { L }}$ | 31/4, | ${ }^{11 / 2}$ | 11/2" | ${ }^{15 / 23 \times 15 / 3)^{\circ}} 1$ | ${ }_{3}^{1} 11 \mathrm{lb}$. lbs . |
| ${ }_{\text {LS-3 }}$ | ${ }_{4}^{431 / 16^{\prime \prime}}$ | ${ }_{5}{ }^{1 / 2^{\circ}}$ |  | ${ }^{211 / 6 x 311 / 1 / 60^{\prime \prime}}$ | ( ${ }^{8} \mathrm{lbs}$ libs. |

## TYPE HA HIPERM-ALLOY TRANSFORMERS

Lightweight audio transformers for compact, portable applications. All have Hiperm-Alloy core. Hum-balanced coil, die-cast case reduces hum. Uniform frequency response.

## PLATE-TO-LINE TRANSFORMERS

Six secondary taps cover $50,125-150,200,250,333,500-600$ ohms. $\pm 1$ db from 30-40,000 cps. Maximum unbalanced DC in primary: HA-113,
0 ma.; HA-133, 8 ma.; HA-114, 1 ma. In H-1 case. *Imp. in ohms.

| Stock No. | Type | Application | *Pri. | dbm | 1-24, EA. | 25-99, EACH |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 62 G 816 | HA-113 | Plate to mult. line | 15 K | +21 | 17.64 | 14.99 |
| 62 G 869 | HA-133 | Plate to mult. line | 15 K | +22 | 20.58 | 7.49 |
| 62G817 | HA-114 | PP plates to line | 30K | +23 | 20.58 | 17.49 |

LOW-IMPEDANCE-TO-GRID AND MIXING TRANSFORMERS
Primary: 50, 125-150, 200, 250, 333, $500-600 \mathrm{ohms} . \pm 1 \mathrm{db}$ from $30-20,000$ cps, except HA-108X, $\pm 1 \mathrm{db}$ from $20-50,000 \mathrm{cps}$. Max. level ( dbm ): HA-100, HA-108X, +18 ; HA-100X, +16 . In H-1 case.
Stock No. Type |Application Sec. Ohms 1-24, EA. 25-99, EACH 62 G 805 HA-100 Line to grid 60,000
62 G 806
62 G 810
$\mathrm{HA}-108 \mathrm{X}$
60,000
As Pri.
17.05
17.05
19.40
14.49
14.49
16.49

## INTERSTAGE AUDIO TRANSFORMER

Type HA-106. Incorporates Hiperm-Alloy nickel iron core structure and hum balanced coils. Designed to match a single plate to push-pull grids. pedance, 135,000 ohms. Turns ratio, $3: 1$ overali. Response: from $30-20,000$ cycles, $\neq 1 \mathrm{db}$. Max. level, +20 dbm . In H-1 case
62 G 813. 25-99, EACH...... 15.75 . 1 to 24, NET EACH.
. 8.52

## ULTRA-COMPACT HIGH-FIDELITY AUDIOS

Max. level, +15 dbm , except $\dagger+30 \mathrm{dbm}$. *Multiple alloy shield. Response $-A-10, A-12, \pm 2 \mathrm{db}, 20-20,000 \mathrm{cps} ; \mathrm{A}-11, \pm 2 \mathrm{db}, 50-20,000 \mathrm{cps} ;$
$\mathrm{A}-16, A-18, \AA-19, A-25, \pm 2 \mathrm{db}, 40-20,000 \mathrm{cps} ; \mathrm{A}-20, \pm 2 \mathrm{db}, 10-50,000$ $\mathrm{A}-16, \mathrm{~A}-18, \mathrm{~A}-19, \mathrm{~A}-25, \pm 2 \mathrm{db}, 40-20,000 \mathrm{cps} ; \mathrm{A}-20, \pm 2 \mathrm{db}, 10-50,000$
$\mathrm{cps} ; \mathrm{A}_{-24}, \mathrm{~A}-26, \pm 2 \mathrm{db}, 20-40,000 \mathrm{cps} ; \mathrm{A}-21, \pm 2 \mathrm{db}, 30-30,000 \mathrm{cps} ; \mathrm{A}-15$, $\mathrm{cps} ; \mathrm{A}-24, \mathrm{~A}-26, \pm 2 \mathrm{db}, 20-40,000 \mathrm{cps} ; \mathrm{A}-21, \pm 2 \mathrm{db}, 30-30,000 \mathrm{cps} ; \mathrm{A}-15$,
$\mathrm{A}-22, \mathrm{~A}-23,2 \mathrm{db}, 40-10,000 \mathrm{cps}$. In A case. Av. shpg. wt., $11 / 8 \mathrm{lbs}$.

| Stock No. | $\begin{aligned} & \hline \text { Mir's } \\ & \text { Typo } \\ & \hline \end{aligned}$ | $\begin{gathered} \text { Pri. Imp., } \\ \text { Ohms } \end{gathered}$ | $\begin{gathered} \text { Sec. } \operatorname{limp}_{\text {Oh } \mathrm{ms}} \\ \hline \end{gathered}$ | $\begin{aligned} & \text { 1-24, } \\ & \text { EA. } \\ & \hline \end{aligned}$ | $\begin{aligned} & 25-99 \\ & \text { EACH } \end{aligned}$ |
| :---: | :---: | :---: | :---: | :---: | :---: |
| 62 G 820 | A-10 | 50, 125-150,200- |  |  |  |
|  |  | 250, 333, 500-600 | 50 K | 12.94 | 11.00 |
| 62 G 821 | A-11* | 50, 200, 500 | ${ }^{50 \mathrm{~K}} \mathrm{P}$. | 11.76 | 10.00 |
| 62 G 868 | $\stackrel{\text { A-12 }}{\text { A-15 }}$ | ${ }_{10 \mathrm{~K}-2.5 \mathrm{~K}}$ | 800-2K | 11.76 9.70 | 8.25 |
| $\begin{aligned} & 62 \text { G } 824 \\ & 62 \text { G } 825 \\ & 62 \text { G } 826 \\ & 62 \text { G } 827 \\ & 62 \text { G } 828 \end{aligned}$ | A-16 | 15 K | 60K 2:1 | 9.70 | 8.25 |
|  | A-18 | 15K (Split) | 80K P.P. 2.3:1 | 11.76 | 10.00 |
|  | A-19 | $15 \mathrm{~K}-8 \mathrm{ma} \mathrm{DC}$ | 80K P.P. 2.3:1 | 11.76 | 0.00 |
|  | A-20 | Same as A-10 | Same as Pri. | 14.11 | 12.00 |
|  | A-21* | $\begin{aligned} & \text { same as A-1 } \\ & 50,200-250,500- \\ & 600 \end{aligned}$ | Same as Pri. | 11.76 | 10.00 |
| 62 G 868 <br> 62 G 873 <br> 62 G 777 <br> 62 G 778 <br> 62 G 779 | A-22 $\dagger$ | 500 | 125-500, spl | 9.70 | 8.25 |
|  | A-23 $\dagger$ | 500 | 4-16, split | 9.70 | 8.25 |
|  | A-24 | 15K | As A-10 pri. | 12.64 | 10.75 |
|  | A-25 | $15 \mathrm{~K}-8 \mathrm{ma} \mathrm{DC}$ | As A-10 pri. | 11.76 | 10.00 |
|  | A-26 | 30 K P . to P. | As A-10 pri. | 12.94 | 11.00 |
| 62 G 874 | A.33 | Mumetal shield; fo | r any of above | 2.65 | 2.25 |

"DO-TS" TRANSISTOR TRANSFORMERS
Deci-Ouncer-Transformers (DO-TS). Miniature transistor transformers weighing only $1 / 10$ of an ounce. Moisture-proof case has firmly anchored leads, with plastic insulation. Especially suitable for printed circuits. $5 / 16^{\prime \prime}$ dia., ${ }^{13 / 32^{\prime \prime}}$ long. Shpg. wt., 1 oz .


(A)

## TYPE LS LINEAR STANDARD TRANSFORMERS

Type LS units fulfill the most critical specifications established for broadcast equipment. All have Hiperm-Alloy cores, plus multiple-section, inter-leaved windings in a semitoroidal coil structure. Special winding methods and insulations assure minimum leakage reactance and distrib-
uted capacitance. Minimum hum pickup is achieved by the use of a uted capacitance. Minimum hum pickup is achieved by the
high-conductivity outer case and hum-balancing coil structure.

## INTERSTAGE AUDIO TRANSFORMERS

Designed for coupling single plates to PP grids. LS-19: $\pm 1 \mathrm{db}, 20-20,000$ $\mathrm{cps} ;$ relative hum, -50 db . LS-21: $\pm 1 \mathrm{db}, 10-20,000 \mathrm{cps} ;$ relative hum -74 db . Maximum level: +20 dbm . Primary impedance, $15,000 \mathrm{ohms} ;$ for coupling single plate to PP grids. LS-1 case.

| No. | Type | Sec. Imp., Ohms | 1-24, EA. | 25-99, EACH |
| :---: | :---: | :---: | :---: | :---: |
| 62 G 835 | LS-19 | $95,000 . ~ R a t i o, ~$ <br> $11 / 4: 1$ | 17.64 | 14.99 |
| 62 G 837 | LS-21 | 135,000 Ratio, $3: 1$ | 17.64 | 14.99 |

## OUTPUT TRANSFORMERS

$\pm 1 \mathrm{db}, 7-50,000 \mathrm{cps}$. LS-35 and LS-65 are hi-fi types: LS-35; for class AB feedback; $43 \%$ screen tap; LS-65; for class AB1 feedback; $40 \%$ screen tap. All in LS-2 case, except ${ }^{\text {in }}$; LS- 3 case.

| Stock No. | $\begin{aligned} & \text { Mir's } \\ & \text { Type } \end{aligned}$ |  | Sec. Imp., Ohms | Watts | $\begin{aligned} & 1-24 \\ & \text { EACH } \end{aligned}$ | $\begin{aligned} & 25-99 \\ & \text { EACH } \end{aligned}$ |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 62 G 845 | LS-52 | 8000 | $\begin{aligned} & 1.2,2.5,5, \\ & 7.5,10.15 . \end{aligned}$ | 20 | 20.58 | 17.49 |
| 62 G 847 | LS-55 | 5000, 3000 |  | 20 | 23.52 | 19.99 |
| 62 G 850 | LS-61 | 10,000, 6000 | $\left\{\begin{array}{l} 20,30,50, \\ 125.200 \end{array}\right.$ | 20 | 23.52 | 19.99 |
| 62 G 851 | LS-6L1* | 9000 | $\left(\begin{array}{l} 125,200 \\ 333, \\ 500 . \end{array}\right.$ | 30 | 35.28 | 29.99 |
| 62 G 846 | LS-54 | 8000 | 1.2, 2.5, 5, | 20 | 17.64 | 14.99 |
| 62 G 848 | LS-57 | 5000, 3000 | 7.5, 10, 15 | 20 | 17.64 | 14.99 |
| 62 G 855 | LS-63 | 10,000, 6000 | 20, 30. | 20 | 17.64 | 14.99 |
| 62 G 871 | LS-35* | 5000 | 4, 8, 16 | 35 | 23.52 | 19.99 |
| 62 G 872 | LS-65* | 3300 | 4, 8, 16 | 60 | 41.16 | 34.99 |

## MIXING TRANSFORMERS

For mixing low-impedance mike, pickup or multiple line to multiple line. Maximum unbalanced DC in primary: LS-30, .5 ma ; LSS-30X, 3 ma. ohms. In LS-1 case.
Type LS-30. Maximum level, +23 dbm . Relative hum-pickup reduction
 Type LS-30X. Maximum level, +20 dbm . Multiple alloy shield gives relative hum-pickup reduction of -92 db . 1 db , $20-20,000 \mathrm{cps} .23 .52$
62 G 841. 25-99, EACH.....19.99. 1-24, NET EACH...... 23.5

## HIGH-LEVEL MATCHING TRANSFORMER

Type LS-33. Primary 50, 125, 200, 250, 333, 500-600 ohms. Secondary, $1.2,2.5,5,7.5,10,15,20,30,50,125,200,250,333,500-600$ ohms, Max level 20 watts. Response $\pm 1$ db, 10-40,000 cps. In LSS-2 case. 20.58
62 G 800. $25-99$, EACH...... i7.49. 1-24, NET EACH...... 20.5

## LOW-IMPEDANCE-TO-GRID TRANSFORMERS

LS-10, LS-10X to single grid; others to PP grids. Relative hum-pickup reduction compared to uncased type, $\mathbf{7 2} \mathrm{db}$; texcept, -92 db . Primary both sections. In LS-1 case. $\pm 1 \mathrm{db}, \mathbf{2 0 - 2 0 , 0 0 0} \mathrm{cps}$.

| Stock No. | Type | ${ }^{* S e c . ~ O h m s ~}$ | Max.Level\| 1-24, EA. |  | 25-99, EACH |
| :---: | :---: | :---: | :---: | :---: | :---: |
| 62 G 829 | LS-10 | 60,000 | $+19 \mathrm{dbm}$ | 20.58 | 17.49 |
| 62 G 830 ${ }^{\text {a }}$ | LS-10x | 50,000 | $+17 \mathrm{dbm}$ | 20.58 | 17.49 |
| 62 G 831 | ${ }_{\mathrm{LS}-12}$ | 120,000 | +19 dbm | 24.70 | 20.99 |
| 62 G 867 $\dagger$ | LS-12X | 80,000 | +17 dbm | 23.52 | 19.99 |

## PLATE-TO-LINE TRANSFORMERS

LS-50, single plate to multiple line. LS-51, for push-pull low-level plates to multiple line. Secondary impedances: $50,125-150,200,250,333$, $500-600$ ohms. In LS-1 case. $\pm 1 \mathrm{db}, 10-40,000 \mathrm{cps}$.

| Stock No. | Type | Pri. Ohms | Max.Level | 1-24,EA | 25-99, EACH |
| :---: | :---: | :---: | :---: | :---: | :---: |
| 62 G 843 62 G 844 | LS-50 | 15,000 30,000 | 23 dbm +24 dbm | 8 |  |

## TYPE DI-T TRANSFORMERS

Extremely compact transformers for transistor applications. Weigh 0.06 oz. and measure only ${ }^{5 / 16^{\prime \prime}}$ dia. by $1 / 4^{\prime \prime}$ long. Hermetically sealed to MIL-T-27A dia. by $1 / 4^{\prime \prime}$ long. Hermetically sealed to MIL-T-27A
standard. Excellent for printed circuit use- solder melting plastic covered leads. Leads withstand 10 lb . pull. Shpg. wt., 1 oz .

| Stock No. | $\begin{aligned} & \hline \text { Mfr's } \\ & \text { Type } \\ & \hline \end{aligned}$ | Application | Primary Ohms | Secondary Ohms Ohms | $\begin{aligned} & \text { 1-24, } \\ & \text { EA. } \end{aligned}$ | $\begin{aligned} & \text { 25-99, } \\ & \text { EACH } \end{aligned}$ |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 63 G 106 | DI-T2 | Output | 500-600 | 50-60 |  | 5.25 |
| 63 G 107 | DI-T3 | Output | 1K-1.2K | 50-60 | 6.17 | 5.25 |
| 63 G 108 | DI-T8 | Reactor | 2.5 hys. @ | DC | 5.59 | 4.75 |
| 63 G 109 | DI-T9 | Out. Driv. | 10K-12.5K | 500-600 | 7.35 | 6.25 |
| 63 G 110 | DI-T10 | Driver | 10K-12.5K | 1.2K-1.5K | 7.35 | 6.25 |
| 63 G I I | DI-T11 | Driver | 10K-12K | $2 \mathrm{~K}-2.5 \mathrm{~K}$ | 7.35 |  |
| 63 G 112 | D1-T19 | Output | 300 | 600 | 6.76 | 5.75 |
| 63 G 113 | DI-T20 | Output | 500 | 600 | 6.76 | 5.75 |
| 63 G 114 | D1-T22 | Output | 1.5 K | 600 | 6.76 | 5.75 |
| 63 G 137 | D1 T23 | Interstage | 20K-30K | 800-1.2K | 7.64 | 6.50 |

# UTC Transformers and Inductors 

TRANSFORMERS, TOROIDS, FILTERS, VOLTAGE CONTROLS, INDUCTORS

$M$


CG, CVP, CVM


HVC


VIC


B'MI

FIXED-IMPEDANCE \& VARIMATCH

## AUDIO OUTPUT TRANSFORMERS

Designed for industrial and commercial use where dependable operation is essential. Windings are vacuum impregnated and entire unit is sealed with a special compound. Will with units $\pm 11 / 2 \mathrm{db}$ from 40 to 10.000 cps P-P pri imp. of CG-15 8000 ohms; CG-16 3000 and 5000 ohms; have $1.5,3,5,8,16,200$ and 500 ohm taps on secondary, CVP-1 and CVP-2 are Varimatch type. Will match any tubes to line or voice coil. Pri. imp.: $3000,5000,6000$, 1.5, $3,5,8,16,50,200,500$ ohms. A11 units Shpg. wt . and size: $33 / 4 \times 3 \times 3^{\prime \prime}, 31 / 2 \mathrm{lbs}$; except ${ }^{*} 41 / 2 \times 33 / 4 \times 33 / 4^{\prime \prime}, 61 / 2 \mathrm{lbs}$.

| Stock | $\begin{array}{c}\text { Mfr's } \\ \text { No. }\end{array}$ | Type | Watts | $\begin{array}{c}\text { Typical } \\ \text { Tubes }\end{array}$ | EACH |
| :---: | :---: | :---: | :---: | :---: | :---: |
| EACH |  |  |  |  |  | | No. | $\frac{\text { Type }}{}$ | Watts | Tubes | EACH | EACH |
| :---: | :---: | :---: | :---: | :---: | :---: |
| 62 G 922 | $\mathrm{CG-15}$ | 20 | $\begin{array}{l}\text { 6A05, } 6 \mathrm{~V} 6,6 \mathrm{~F} 6 \\ \text { triode }\end{array}$ | $\begin{array}{l}11.76\end{array}$ | 10.00 |





## VARIMATCH MODULATION UNITS

Match any modulator tubes to any RF load. Vacuum impregnated and sealed against moisture. Primary imp., from 500 to 20,000 ohms; Maximu imp., from 30,000 to 300 ohms. CVM-1 30 w., CVM-2 ${ }^{\text {audings, }}{ }_{60}$ CVM-0 12 w., watts. Shpg. wt.: CVM-0 $31 / 2 \mathrm{ibs}$; CVM-1, $61 / 2 \mathrm{lbs}$.; CVM-2, 11 lbs .

| Stock No. | $\begin{aligned} & \text { Mfr's } \\ & \text { Type } \end{aligned}$ | Class C Input* | Size | $\begin{array}{\|l\|} \hline 1-24, \\ \text { EACH } \\ \hline \end{array}$ | $\begin{aligned} & 25-99 \\ & \text { EACH } \end{aligned}$ |
| :---: | :---: | :---: | :---: | :---: | :---: |
| 63 G 069 | CVM-0 | 25 | $3 \times 334^{4}$ | 10.29 | 8.75 |
| 63 G 070 | CVM-1 | 60 | $33 \times 4{ }^{1 / 2}{ }^{\prime \prime}$ | 13.52 | 11.49 |
| 63 G 071 | CVM-2 | 125 | 41/2x51/2" | 17.64 | 14.99 |

## HI-FI OUTPUT TRANSFORMERS

Hi-fi units. Sec. imp.: 4, 8, 16 ohms, 70 volt. Pri. imp. CG . 21
 Shpg. wt., 11 lbs.

| Stock No. | Mfr's. <br> Type | Watts | Typical Tubes | $\begin{aligned} & 1-24, \\ & \text { EACH } \end{aligned}$ | EACH |
| :---: | :---: | :---: | :---: | :---: | :---: |
| 62 G 102 | C | 25 | EL-34's in AB | 14.70 | 12.4 |
| 62 G 103 | CG-2 | 50 | 6550 | 23.52 | 19 |

## INPUT, INTERSTAGE, MIXING AND LOW-LEVEL OUTPUT TRANSFORMERS

A new line of transformers designed for a wide variety of applications. Shpg. wts. C $G$. 132 ,


| Stock No. | Mfr's. Type | Application | EACH | $\begin{aligned} & -99, \\ & \mathrm{CH} \end{aligned}$ |
| :---: | :---: | :---: | :---: | :---: |
| 62 G 104 | CG-132 | 1 plate to 2 | 9.70 | 8.25 |
| 62 G 105 | CG-133 | 2 plates to 2 grids | 10.29 | 8.75 |
| 62 G 106 | CG-134 | Line to 1 grid | 8.82 | 7.50 |
| 62 G 219 | CG-140 | Triode plate to line | 7.64 | 6.50 |
| 62 Gl 108 | CG-14 | PP plates to line |  | 7.50 |

## FILTER CHOKES

Inductance shown is at rated DC ma. Shpg. wts.: CG-40, 5 lbs.; CG-48C, $21 / 2$ lbs.; CG-102 11 lbs.; CG-104, $151 / 2$ lbs.; CG-108, 22 lbs.

|  |  | Hys. | Ma. | $\begin{gathered} \mathrm{DC} \\ 0 \mathrm{hms} \end{gathered}$ |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 2 G 109 | CG-40 |  |  |  |  |  |
| 62 G 111 | CG-48 | 75 |  | 2200 | , |  |
| G 112 | CG-102 | 12 | 250 | 100 | 12.94 |  |
| 226 | CG-104 | 10 | 350 | 90 | 14.70 |  |
| 113 |  | , | 50 | 52 | 6 |  |

## SWINGING INPUT CHOKE

Model CG-105. Input choke for improving voltage regulation in DC power supplies. Inductance increases as load decreases-varies from 5 henrys at 350 ma DC maximum rating
to 25 henrys at 35 ma . Has DC resistance of 90 to 25 henrys at 35 ma . Has DC resistance of 90
ohms. Insulation-tested
$5000 \quad \mathrm{v}$. rms. Height, $51 / 2^{\prime \prime} ;$ cutout dia., $4^{\prime \prime}{ }^{151 / 2}$ lbs. $14.70 ~$

## TYPE M TOROIDS

Coils conform to MIL-T-27 specifications. Inductance is virtually independent of frequency, temperature and vibration. Extremely low hum pickup. Very high $Q$ available. Typical $\mathbf{Q}$ values: MQE-7 max. Q, $130 @ 8 \mathrm{kc}$; MQA-10, $150 @ 5 \mathrm{kc}$; MQB-5, $250 @ 3 \mathrm{kc}$ and $50 @ 250$
cycles. Lab. adjusted to $1 \%$ tol. DC currents cycles. Lab. adjusted to $1 \%$ tol. DC currents
shown will drop coil inductance $5 \%$. Shpg. shown will drop coil inductance $5 \%$. Shpg.
wts., MQE 2 oz.; MQA, 4 oz.; MQB
14
oz.

TYPE MQE- $11 / 16 \times 1 / 32 \times 1 / 2^{\prime \prime}$

| Stock No. | Mfr's. Type | Inductance | Max. Ма. | I-24, | $\begin{aligned} & 25-99, \\ & \text { EACH } \end{aligned}$ |
| :---: | :---: | :---: | :---: | :---: | :---: |
| 62 G 945 | MQE-1 | 7 mhy | 135 | 7.06 | 6.00 |
| 62 G 946 | MQE-2 | 12 mhy | 100 | 7.35 | 6.25 |
| 62 G 947 | MQE-3 | 20 mhy | 80 | 7.64 | 6.50 |
| 62 G 948 | MQE-4 | 30 mhy | 65 | 7.64 | 6.50 |
| 62 G 949 | MQE-5 | 50 mhy | 50 | 7.94 | 6.75 |
| 62 G 975 | MQE-6 | 70 mhy | 40 | 8.23 | 7.00 |
| 62 G 976 | MQE-7 | 100 mhy | 35 | 8.23 | 7.00 |
| 62 G 977 | MQE-8 | 150 mhy | 30 | 8.53 | 7.25 |
| 62 G 978 | MQE-9 | . 25 hy | 22 | 8.53 | 7.25 |
| 62 G 979 | MQE-10 | . 4 hy | 17 | 8.82 | 7.50 |
| 62 G 980 | MQE-11 |  | 14 | 8.82 | 7.50 |
| 62 G 981 | MQE-12 | .9 hy | 12 | 9.11 | 7.75 |
| 62 G 982 | MQE-13 | 1.5 hy | 9 | 9.70 | 8.25 |
| 62 G 983 | MQE-14 | 2 hy | 8 | 10.58 | 9.00 |
| 62 G 984 | MQE-15 | 2.8 hy | 7.2 | 11.76 | . 00 |
| TYPE MQA- $19 / 3 \mathrm{x}^{123} / 3 \mathrm{x}^{11 / 16^{\prime \prime}}$ |  |  |  |  |  |
| 62 G 985 | MQA-1 | 7 mhy | 250 | 7.35 | 6.25 |
| 62 G 986 | MQA-2 | 12 mhy | 200 | 7.64 | 6.50 |
| 62 G 987 | MQA-3 | 20 mhy | 150 | 7.94 | 6.75 |
| 62 G 988 | MQA-4 | 30 mhy | 125 | 8.23 | 7.00 |
| 62 G 989 | MQA-5 | 50 mhy | 100 | 8.53 | 7.25 |
| 62 G 990 | MQA-6 | 70 mhy | 80 | 8.82 | 7.50 |
| 62 G 991 | MQA-7 | 120 mhy | 60 | 9.11 | 7.75 |
| 62 G 992 | MQA-8 | . 2 hy | 50 | 9.41 | 8.00 |
| 62 G 993 | MQA-9 | . 3 hy | 40 | 9.70 | 8.25 |
| 62 G 994 | MQA-10 | . 5 hy | 30 | 10.00 | 8.50 |
| 62 G 995 | MQA-11 | . hy | 25 | 10.29 | 8.75 |
| 62 G 996 | MQA-12 | 1 hy | 20 | 10.58 | 9.00 |
| 62 G 997 | MQA-13 | 1.5 hy | 17 | 10.88 | 9.25 |
| 62 G 998 | MQA-14 | 2.5 hy | 13 | 11.17 | 9.50 |
| 62 G 999 | MQA-15 | 4 hy | 10 | 11.76 | 10.00 |
| 62 G 967 | MQA-16 | 6 hy | 9 | 12.64 | 10.75 |
| 62 G 968 | MQA-17 | 10 hy | 7 | 13.52 | 11.49 |
| 62 G 969 | MQA-18 | 15 hy | 5 | 14.70 | 12.49 |
| 62 G 970 | MQA-19 | 22 hy | 4 | 17.64 | $\mid 14.99$ |

TYPE MQB- $29 / 16 \times 213 / 16 \times 15 / 16^{\prime \prime}$

| 62 G 953 | MQB-1 | 10 mhy | 400 | 12.64 | 10.75 |
| :---: | :---: | :---: | :---: | :---: | :---: |
| 62 G 954 | MQB-2 | 30 mhy | 250 | 12.94 | 11.00 |
| 62 G 955 | MQB-3 | 70 mhy | 170 | 13.23 | 11.25 |
| 62 G 956 | MQB-4 | 120 mhy | 120 | 13.52 | 11.49 |
| 62 G 957 | MQB-5 | . 5 hy | 60 | 13.82 | 11.75 |
| 62 G 958 | MQB-6 | 1 hy | 40 | 14.11 | 11.98 |
| 62 G 959 | MQB-7 | hy | 30 | 14.41 | 12.25 |
| 62 G 962 | MQB-8 | 3.5 hy | 22 | 14.70 | 12.49 |
| 62 G 963 | MQB-9 | 7.5 hy | 16 | 15.59 | 13.25 |
| 62 G 964 | MQB-10 | 12 hy | 11 | 16.46 | 13.99 |
| 62 G 965 | MQB-11 |  | 9 | 17.64 | 14.99 |
| 62 G 973 | MQB-12 | 25 hy | 8 | 18.82 | 15.99 |

## LOW-FREQUENCY HIGH "Q" COILS

Specially constructed coils of laminated permalloy to provide high $Q$ at low frequencies. stability. Inductance values laboratory adstability. Inductance values laboratory ad-

justed to $2 \%$ tolerance at 1 volt, 60 cycles. usted to $2 \%$ tolerance at 1 volt, 60 cycles. permalloy shielding and laminated structure. Two identical windings brought out to 4 terminals permit series, parallel, center-tapped, or transformer type connections. Requires $11 / 2^{\prime \prime}$ dia. cutout. $1^{13} /$ / $^{\prime \prime}$ dia. $\times 21 / 2^{\prime \prime}$. Shpg. wt., 1 lb . | $\begin{array}{c}\text { Stock } \\ \text { No. }\end{array}$ | $\begin{array}{c}\text { Mfr's. } \\ \text { Type }\end{array}$ | $\begin{array}{c}\text { Series } \\ \text { Hy. }\end{array}$ | $\begin{array}{c}\text { Parallel } \\ \text { Hy. }\end{array}$ | $\begin{array}{l}1-24, \\ \text { EACH }\end{array}$ | $\begin{array}{c}\text { 25-99, } \\ \text { EACH }\end{array}$ |
| :---: | :---: | :---: | :---: | :---: | :---: |

| No. | Type | Hy. | Hy. | EACH | EACH |
| :---: | :---: | :---: | :---: | :---: | :---: |
| 62 G 896 | MQL-1 | 10 | 2.5 | 20.58 | 17.49 |
| 62 G 897 | MQL-2 | 20 | 5 | 20.58 | 17.49 |
| 62 G 898 | MQL-3 | 200 | 50 | 20.58 | 17.49 |
| 62 G 899 | MQL-4 | 400 | 100 | 22.34 | 18.99 |

## FILAMENT TRANSFORMER

Model CG 33. 6.3 v. transformer rated for continuous duty. Vacuum impregnated and sealed in cylindrical case. Has primary tapped for 105, $115,210,220$ and 230 volts, $50-60$ cycle AC. 6.3 v . center-tapped secondary rated at 4
amps. Rated at 500 WVDC .2000 v . rms test. $27 / 8 \times 17 / 8^{\prime \prime}$ dia. Shpg. wt., $11 / 2$ libs.
62 G 228 1-24, NET EACH
62 G 228. 12.
25-99, EACH
8.82

## TYPE HVC VARIABLE INDUCTORS

Wide-range, high-Q variable inductors offering exceptional voltage and temperature stability. Ideal for filter, oscillator, equalizer, tuned amplifier, and other similar applications. Hermetically sealed to MIL-T-27A specifications. All are MIL type TF4RX20YY. *Adjustment screw on top of case permits changing inductance $+200 \%$ to $-70 \%$ of mean value. Range is covered in $900^{\circ}$ rotation. Mount by two $4 \times 40$ studs. Size, $17 / 32^{\prime \prime}$ high, $11 / 8^{\prime \prime}$ wide and $2 / 32^{\prime \prime}$ deep. Av. shpg. wt., 3 oz .

| Stock No. | Mfr's. Type | Mean Hys.* | Max. Ma. | $\begin{aligned} & 1-24, \\ & \text { EACH } \end{aligned}$ | $\begin{aligned} & 25-99, \\ & \text { EACH } \end{aligned}$ |
| :---: | :---: | :---: | :---: | :---: | :---: |
| 62 G 114 | HVC-1 | . 006 | 100 | 8.82 | 7.50 |
| 62 G 115 | HVC-2 | . 015 | 60 | 8.82 | 7.50 |
| 62 G 116 | HVC-3 | . 040 | 40 | 8.82 | 7.50 |
| 62 G 117 | HVC-4 | . 1 | 30 | 8.82 | 7.50 |
| 62 G 118 | HVC-5 | . 25 | 20 | 8.82 | 7.50 |
| 62 G 119 | HVC-6 | . 6 | 15 | 8.82 | 7.50 |
| 62 G 121 | HVC-7 | 1.5 | 10 | 9.41 | 8.00 |
| 62 G 122 | HVC-8 | 4.0 | 7 | 9.41 | 8.00 |
| 62 G 123 | HVC-9 | 10 | 5 | 9.41 | 8.00 |
| 62 G 124 | HVC-10 | 25 | 3.5 | 9.70 | 8.24 |
| 62 G 126 | HVC-11 | 60 | 2 | 10.58 | 9.00 |
| 62 G 127 | HVC-12 | 150 | 1.5 | 11.76 | 10.00 |

## TYPE VIC VARIABLE INDUCTORS

A wide selection of high-quality, economypriced variable inductors. Provide solution to many tuned audio circuit problems. Excellent for use in oscillators, tuned amplifiers, equalizers, and filters. Have convenient adjustment screw on side of case. $* 600^{\circ}$ rotation of screw varies inductance from $+85 \%$ to $-45 \%$ of mean value. Adjustment tool included. Housed in rugged die cast case, $111 / 32 \times 11 / 4 \times 17 / 16^{\prime \prime}$. Tapped
for four $4-40$ screws. Mtg. ctrs., $13 / 16 \mathrm{x}^{29} / 32^{\prime \prime}$. Shpg. for four 4
wt., 6 oz .

| Stock No. | Mfr's. Type | Mean Hys.* | Max. Ma. | $\begin{aligned} & 1-24, \\ & \text { EACH } \end{aligned}$ | $\begin{aligned} & 25-99, \\ & \text { EACH } \end{aligned}$ |
| :---: | :---: | :---: | :---: | :---: | :---: |
| 62 G 900 | VIC-1 | . 0085 | 75 | 6.47 | 5.50 |
| 62 G 901 | VIC-2 | . 013 | 60 | 6.47 | 5.50 |
| 62 G 902 | VIC-3 | . 021 | 50 | 6.47 | 5.50 |
| 62 G 903 | VIC-4 | . 034 | 40 | 6.47 | 5.50 |
| 62 G 904 | VIC-5 | . 053 | 35 | 6.47 | 5.50 |
| 62 G 905 | VIC-6 | . 084 | 30 | 6.47 | 5.50 |
| 62 G 906 | VIC-7 | . 13 | 25 | 6.47 | 5.50 |
| 62 G 907 | VIC-8 | . 21 | 21 | 6.76 | 5.75 |
| 62 G 908 | VIC-9 | . 34 | 18 | 6.76 | 5.75 |
| 62 G 909 | VIC-10 | . 54 | 15 | 6.76 | 5.75 |
| 62 G 910 | VIC-11 | . 85 | 12 | 6.76 | 5.75 |
| 62 G 911 | VIC-12 | 1.3 | 10 | 7.06 | 6.00 |
| 62 G 912 | VIC-13 | 2.2 | 8 | 7.06 | 6.00 |
| 62 G 913 | VIC-14 | 3.4 | 7 | 7.06 | 6.00 |
| 62 G 914 | VIC-15 | 5.4 | 6 | 7.35 | 6.25 |
| 62 G 915 | VIC-16 | 8.5 | 5 | 7.35 | 6.25 |
| 62 G 916 | VIC-17 | 13. | 4 | 7.35 | 6.25 |
| 62 G 917 | VIC-18 | 21. | 3.5 | 7.64 | 6.50 |
| 62 G 918 | VIC-19 | 33. | 3 | 7.64 | 6.50 |
| 62 G 919 | VIC-20 | 52. | 2 | 8.23 | 7.00 |
| 62 G 920 | VIC-21 | 83. | 1.5 | 8.82 | 7.50 |
| 62 G 921 | VIC-22 | 130. | 1 | 11.76 | 10.00 |

## INTERSTAGE AND LINE FILTERS

High quality filters designed for applications at the common mid-range frequencies. First letter in Type No. indicates function: B-bandpass; Interstage ( 10,000 ohms); L-line ( $500 / 600$ ohms). Shielded; reduce hum pickup to 150 mv. per gauss at 60 cps . Hermetically sealed in case. Require $7 / 8^{\prime \prime}$ dia. cutout. 4 hole mounting with 6-32 screws; mtg. centers $3 / 4 \times 11 / 4^{\prime \prime}$. Size, $13 / 16 \times 111 / 16 \times 15 / 8^{\prime \prime}$, except $* 13 / 16 \times 111 / 16^{\times 21 / 2^{\prime \prime}}$. Av. shpg. wt., 9 oz.

| Stock No. | Mfr's. Type | Cycles | $\begin{aligned} & 1-24, \\ & \text { EACH } \end{aligned}$ | $\begin{aligned} & 25-99, \\ & \text { EACH } \end{aligned}$ |
| :---: | :---: | :---: | :---: | :---: |
| 62 G 950 | BMI-60 | 60 |  |  |
| 63 G 004 | BMI-100 | 100 |  |  |
| 63 G 005 | BMI-120 | 120 | 26.46 | 22.49 |
| 62 G 951 | BMI-400 | 400 |  |  |
| 63 G 006 | BMI-500 | 500 |  |  |
| 63 G 007 | BMI-750 | 750 |  |  |
| 62 G 952 | BMI-1000 | 1000 | 26.46 | 22.49 |
| 63 G 009 | BMI-3000 | 3000 |  |  |
| 62 G 960 | BML-400 | 400 |  |  |
| 63 G 016 | *HMI-200 | 200 |  |  |
| 63 G 017 | *HMI-500 | 500 | 29.40 |  |
| 63 G 018 | * $\mathrm{HMI}-1000$ | 1000 | 29.40 | 25.00 |
| 63 G 019 | *HMI-3000 | 3000 |  |  |
| 62 G 966 | *HML-200 | 200 |  |  |
| 63 G 053 | *HML-1000 | 1000 | 32.34 | 26.51 |
| 62 G 971 | LMI-200 | 200 |  |  |
| 63 G 020 | L.MI-500 | 500 |  |  |
| 63 G 021 | LMI-1000 | 1000 | 29.40 | 25.00 |
| 63 G 022 | LMI-2000 | 2000 |  |  |
| 63 G 023 | LMI-2500 | 2500 |  |  |
| 62 G 972 | LMI-3000 | 3000 |  |  |
| 63 G 051 | LMI-10,000 | 10,000 |  |  |
| 63 G 054 | *LML-1000 | 1000 | 29.40 | 25.00 |
| 63 G 055 | *LML-2000 | 2000 |  |  |
| 63 G 056 | *LML-2500 | 2500 |  |  |
| 63 G 057 | *LML-4000 | 4000 | 29.40 | 25.00 |
| 63 G 063 | *LML-12,000 | 12,000 |  |  |

TRANSISTOR POWER TRANSFORMERS
S Type TY-685. Highly efficient transistor power supply transformer. May be used in conjunction with transistor oscillator and sili250 volts. Rated at a maximum of 65 ma . mounting centers are $11 / 2^{\prime \prime}$. Size (HWD), $13 / 4 \mathrm{x}$ $13 / 4 x^{111 / 32^{\prime \prime}}$. Shpg. wt., 8 oz.
61 G 944. $5-24$, EA.. 7.51 1-4, EA.. 8.34
 (S) Type TY-69S. Same as above but 300 61 G 945. 5-24, EA. 9.50 1-4, EA... 10.56
$25-49$, EA...... 8.55 50-99, EA...... 7.92
$\qquad$ EA. 95.50 1-4, EA. ST Type TY-70S. As above but 325 VDC, 150 61 G 946. 6-24, EA. 10.26 1-4, ÉA...II. 40 25-49, EA. .......9.23 50-99, E'A........ . 8.55 S Type TY-71S. As above but $375 \mathrm{VDC}, 200$ 61 ma max. rating. Size, $2 \times 23 / 8 \times 27 / 16^{\circ}$. 12.30 S Type TY-74S. 9.96 50-99, EA...... 92 $\mathrm{S}_{311 / \max ^{*}}$ max. rating. Size, $2 \times 41 / 8^{\times 3} 3^{\prime \prime}$. Mtg. ctrs. 61/G.948. 5-24, EA. 13.50 1-4, EA. 15.00 25-49, EA. ....... I2.15 60-49, EA.... II. 25 (A) Type TY-66A. Outstanding new modulaA tion transformer for transistor applications. Supplies up to 40 audio watts. 6 ohm CT primary rated at 5 amps . Secondary has taps for
$6000 / 40003000 \mathrm{RF}$ loads. Size (HWD), $37 / 8 \mathrm{x}$ $6000 / 4000 / 3000$ RF loads. Si
$392 \times 31 / 8^{\circ}$. Shpg. wt., $43 / 4 \mathrm{lbs}$.
61 G 949. 6-24, EA. 7.83 1-4, EA. . 8.70
$25-49$, EA. . . . 7.05 (A) Type TY-67A. Has power level up to 40 ped fatts. Pri. im. 6 ohms (CT); secondary tapped for $16 / 8 / 4$ ohm output im. $37 / 8 \times 39 / 32 \times 31 / 8^{\prime \prime}$.
 X Type M-1X. 5 audio watt modulation tapped for modulator tubes. Secondary impedance, $5000 / 8000 / 10000$ ohms. Rated at 50 ma .
 64-49, EA. .......2.19 60-99, EA....... 2.03 X Type M-3X. 20 audio watt modulation $X_{\text {ter }}$ transformer with 10,000 ohm primary center tapped for modulator tubes. Sec. imped$21 / 4 \times 313 / 1621 / 8^{\prime \prime}$. Wt. ${ }^{11 / 2}$ lbs. 4. 64-G 93 , EA. $5-24$, EA. 4.02 1-4, EA. . . 4.47
T Type M-4Z. 10 audio watt modulation autoformer with 5000 ohm primary. Tapped secondary with $6750 / 4 \mathrm{ohm}^{\mathrm{im}}$. Rated at 61 G 952. $5-24$, EA. $2.70^{1-4 / 4}$ EA. . 3.00 7 Type M-5Z. 20 audio watt modulation (2) autoformer with 5000 ohm primary. Has tapped secondary with 6750/4 ohms impedance. Rated at 165 ma (total). Size: $2^{11 / 16 \times 31 / 8 \mathrm{x}}$ $21 / 8^{\prime \prime}$. Wt., $11 / 2$ lbs.
$61^{\text {G }} 953.5-24$, EA. $3.591-4$, EA.. 3.99 25-49, EA........3.23 50-99, EA........ 2.99

## PLUG-IN TRANSFORMERS

(P) Type A-200P. High-quality input transor mike to amplifier. Has 70 db magnetic shielding. Equipped with nine prong plug for quick easy insertion. Primary is center tapped to match 200/50 ohm source to 36,000 ohm load impedance. Frequency response: $50-15,000 \mathrm{cps}$. $21 / 2^{\prime \prime} \mathrm{high} ; 11 / 4^{\prime \prime}$ dia. Shpg. wt., $1 / 4 \mathrm{lb}$. 14.40
$61^{\text {G }} 954$. NET........................ 44. [P] Type A-202P. Same as above in applicadb magnetic shielding and $30-15000 \mathrm{cps}$ response. $23 / 4^{\prime \prime}$ high, $13 / 4^{\prime \prime}$ dia. $1 / 2 \mathrm{lb}$. 61 G 955. NET.
19.02
(P) Type HS-273P. Similar in application to standard octal socket. Primary is conter tapped to match $200 / 50 \mathrm{ohm}$ source to $80,000 \mathrm{ohm}$ load impedance. 70 db magnetic shielding. Response: $30-30,000 \mathrm{cps} .13 / 4^{\prime \prime}$ high; $13 / 8^{\prime \prime}$ dia. Shpg. wt., ${ }^{1 / 3}$ Ib.
16.80


POWER TRANSFORMERS

| Stock No. | $\begin{aligned} & \text { Mfr's } \\ & \text { Type } \end{aligned}$ | Plate |  | Filaments |  |  |  | SIze (HWD) | $\left\|\begin{array}{c} W_{b} \\ \text { Whs } \end{array}\right\|$ | NET EACH |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  | Voits | Ma | Volts | Amps | Voits | Amps |  |  | 1-4 | 5-24 | 25-49 | 50- |
| 61 G901 | R-2C | 135 | 15 |  |  | 6.3 | . 9 | $13 / 3 \times 17 / 8 \times 19$ | 1 | 3.84 | 3.46 | 3.11 | 2.88 |
| 64 G 936 | R-3A | 500* | 20 |  |  | 6.3 * | 2 | 23/4x23/8x21/ | 11/4 | 4.95 | 4.46 | 4.01 | 3.71 |
| 64 G 976 | ${ }^{\text {R-4 }}$ - | 500* | 40 |  |  | 6.3** | 27 | 23/4 $2 \times 33 / 8 \times 23 / 4$, | $11 / 4$ | 4.95 | 4.46 5.16 | 4.01 | 3.71 4.30 |
| 64 G 977 | R-5A | 600* | 65 |  |  | 6.3* | 2.7 | $31 / 8 \times 25 / 8 \times 25 / 8^{\prime \prime}$ | 21/4 | 5.73 | 5.16 | 4.64 | 4.30 |
| 61 G 900 | R-6A | 480* | 50 | 5 | 2 | 6.3* | 2 | $31 / 8 \times 25 / 8 \times 2 / 8^{\prime \prime}$ | 23/4 | 5.73 | 5.16 | 4.64 | 4.30 |
| 64 G 978 | R-7A | 600* | 50 75 | 5 | 2 |  |  |  | 23/4 |  |  | 4.98 5 | 4.61 |
| 61 G 902 | ${ }^{\text {R-8A }}$ | 500* | 75 | 5 | 2 | 6.3** | 2.5 |  | $2_{31 / 2}$ | 6.60 | 5.94 6.43 | 5.35 | 4.95 5.36 |
| 64 G 979 | R-9A | 600* | 75 | 5 |  | 6.3* | 3 | $39 / 16 \times 3 \times 33 / 8^{\text {8 }}$ |  |  | 6.43 | 5.78 | 5.36 |
| 61 G 903 | R-10A | 525* | 90 | 5 | 2 | 6.3* | 5 | $31 / 2 \times 3 \times 35 /{ }^{\prime \prime}$ | $41 / 2$ | 7.92 | 7.13 | 6.42 | 5.94 |
| 64 G 986 | R-11A | 700* | 90 | 5 | 3 | 6.3* | 3.5 | 39916x3x31/8, | 41/4 |  | 7.26 |  | 6.05 |
| 61 G 904 | R-12A | 550* | 110 | 5 | 2 | 6.3** |  | 37/8x31/4 $31 / 8{ }^{\text {a }}$ | 41/2 | 7.95 | 7.16 | 6.44 | 5.96 6.95 |
| 4 G 987 | R-14A | 700* | 125 | 5 | 3 | 6.3* | 4.5 | $4 \times 31 / 4 \times 3{ }^{15} / 16^{\prime \prime}$ | 6 | 9.27 | 8.34 | 7.51 | 6.95 |
|  | R-16 | 70 | 160 |  |  | 6.3* |  |  |  |  |  | 8.60 | 7.97 |
| 61 G 906 | R-18A | 750* | 175 | 5 | 3 | 6.3* | 8 | $148 \times 35 / 843 / 8$ | $81 / 2$ | 2.30 | 1.07 | 9.96 | 9.23 |
| 61 G 907 | R-20A | 700* | 200 | 5 | 3 | 6.3* | 8 | $41 / 4 \times 35 / 8 \times 41 / 8$, | $81 / 2$ | 2.24 |  | 9.91 | 9.18 |
| 61 G908 | R-21A | 800* | 200 | 5 | 3 | 6.3* | 6 | $41 / 4 \times 35 / 8 \times 45 / 8^{\prime}$ | 91/4 | 3.35 | 2.02 | 0.8 | 10.01 |
| 61 G | R-29A | 230* | 40 |  |  | 6.3 | 1.5 | $23 / 4 \times 23 / 3 \times 2$ |  | 4.95 | 4.46 | 4.01 | 3.71 |
| 61 G 910 | R-30X | 135 | 50 |  |  | 6.3 | 1.5 | 25/16x31/4 $\times 2 / 4{ }^{1 /}$ | 11/2 | 4.02 | 3.62 | 3.26 | 3.02 |
| 61 G91 | R-54X | 115 | 15 |  |  | 6.3 |  | $111 / 16 \times 213 / 16 \times 158^{*}$ |  | 3.48 |  |  | 2.61 |
| $61 \mathrm{Gg12}$ | R-71A | 900* | 250 | 5* | 4 | 6.3*/6.3 | $2 / 4$ | $45 / 8 \times 4 \times 5{ }^{\circ}$ | 12 | 16.50 | 14.85 | 13.37 | 2.38 |
| 61 G913 | R-72A | 800* | 140 | 5 | 3 | 6.3 | 4 | $41 / 4 \times 319 / 33$ | 53/4 | 11.25 | 0.13 | 9.11 | 8.44 |
| 61 G914 | R-73B | 135 | 200 |  |  | 6.3* | 5.5 | $2 \times 33 / 82^{13} / 6^{6}$ | 23/4 | 7.50 | 6.7 | 6.08 | 5.63 |
| 61 G 915 | R-56A | 130 | 20 | 0/15 | .6/.6 | 22.5/30 | .6/6 | 23/x $\times 23 / 8 \times 23 / 4$ | 2 | 6.06 |  | 4.91 | 4.55 |
| 61 G 916 | R-68A | 800* | 30 | 5 | 2 | 6.3/6.3 | 1.2/1.2 | $31 / 8 \times 25 / 8 \times 31 / 8^{\circ}$ | 3 | 8.31 | 7.48 | 6.73 | 6.23 |
| 61 G917 | R-41C | 880* | 125 | 5 | ${ }^{3}$ | 6.3 | . 6 | $31 / 4 \times 41 / 8 \times 31 / 2^{\prime \prime}$ |  |  |  |  |  |
|  |  | 1250 | 5 | 2.5/2.5 | 5/1.75 |  |  |  |  | 16.62 | 4.96 | 3.46 | 2.47 |
| 1 G 918 | R-43C | 1600 | 3 | $\begin{aligned} & 5 / 5 \\ & 2.5 / 2.5 \end{aligned}$ | $\begin{aligned} & 1 / 3 \\ & 1 / 3 \end{aligned}$ | 6.3/6.3 | 1/3 | x3x2\% |  | 9.87 | . 88 | 8.0 | 7.40 |
| 61 G919 | R-45C | $800 *$ | $30$ | 5/5 | 2/2 | $6.3 / 6.3$ | $1 / .6$ | $2 \% \times 33 / 1 \times 31 / 6^{\prime \prime}$ | 41/2 |  |  |  |  |

DRIVER, INTERSTAGE, AND INPUT TRANSFORMERS
Response, $300-3000 \mathrm{cps}$ except $* 30-15,000 ; 770-7000 ; 850-10,000$. $\ddagger$ Spade-lug mtg. Last letter in Type No. is case style.

| Stock No. | Mfr's Type | Test Volts | Primary Ohms/MA | Turns Ratio | SIze | Wt.\| Lbs. | NET EACH |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  |  |  |  |  |  | 1-4 | 5-24 | 25-49 | 50-99 |
| 64 G 989 | A-1X | line/SB mike to grid | 100 | 31.4:1 | $13 / 16 \times 21 / 6 \times 13 / 40$ | 1/4 | 1.98 | 1.78 | . 6 |  |
| 61 G 925 | A-3X | line/DB mike to grid | 400 CT | 15:8:1 | $13 / 16 \times 21 / 8 \times 11 / 4$, | 1/4 | 2.16 | 1.94 | . 75 | 1.62 |
| 61 G 926 | A-4X | line to grid | 500/200/67.5CT | 12:1 | $1^{3} / 16 \times 21 / 8 \times 11^{\prime \prime}$ | $1 / 4$ | 2.25 | 2.03 |  |  |
| 61 G 927 | A-5X | SB mike-p.p. grlds | 100 | 84-1 | $111 / 16 \times 213 / 16 \times 11^{\prime}$ | $1 / 2$ | 2.97 | 2.67 |  |  |
| 61 G 928 | A-6X | speaker v.c. to grid | 8/3.2 | 79:1 | $\underline{13 / 16 \times 21 / 8 \times 11 / 4}$ | 1/4 | 2.16 | 1.94 | . 7 | . 62 |
| 61 G 929 | A-7J $\ddagger$ | speaker v.c. to grid | 3.2 | 124:1 | 1x11/8×11/8" | 1/8 | 5.01 | 4.51 | 4.06 | 3.76 |
| 61 G 930 | A-9]* | line/mike to grid | 600/250/50 | 12:1 | $13 / 4 \times 13 / 8 \times 13 / 8{ }^{\prime \prime}$, | $1 / 4$ | 9.30 | 8.37 | 7.53 | $6.98$ |
| 64 G 934 | A-21X | SBmike/plate to grid | 100 \& 10,000 |  | $13 / 16 \times 21 / 8 \times 11^{\prime}$ | $1 / 4$ | 2.3 | 2.08 | 1.87 | 1.73 |
| $64 \text { G } 991$ | A-31X | plate to s/p.p. grids | 10,000 | 1:3 | $13 / 8 \times 2^{3 / 8} \times 13 / 8{ }^{\text {a }}$ | 1/4 | 2.16 | 1.9 | . 75 | . 62 |
| 61 G 920 | A-33X + | plate to s/p.p. grids | 10,000 | 1:3 | $\underline{115 / 16 \times 31 / 4 \times 178^{\circ}}$ | 1 | 2.97 | 2.67 | 2.4 | . 23 |
| 64 G 993 | A-81X | driver (30, 1H4) | 15 ma . in Pri. | 2.66:1,1/2 sec. | 13/16 $\times 21 / 8 \times 11 / 4{ }^{\prime \prime}$ | 1/4 | 2.07 | 1.86 | 1.68 | . 55 |
| 61 G 921 | A-83X $\dagger$ | driver (6F6, 42, 45) | 40 ma in Pri. | 1.33:1,1/2 sec. | 111/16x213/16x11/2' | $1 / 2$ | 2.58 | 2.32 | $2.09$ | 1.94 |
| 61 G 922 | A-85X 8 | driver (6F6, 42, 45) | 40 ma . in Pri. | 2.66:1,1/2 sec. | $115 / 16 \times 31 / 4 \times 17 / 8^{\prime \prime}$ | 1 | 2.94 | 2.65 | $2.3$ | $2.21$ |
| 61 G 923 | A-89A | p.p. plates to grids | 100 ma . ea. side | 3.1/1.8:1,1/2sc. | 33/16x25/8x25/8' | 2314 | 6.60 | 5.94 |  | $\begin{aligned} & 4.95 \\ & 6.75 \end{aligned}$ |
| 61 G 924 | A-91A§ | p.p. plates to grids | 160 ma . ea. side | 3.1/1.8:1,1/2sc. | $3 / 16 \times 3 \times 31 / 2^{\prime \prime}$ | 4 | 9. | 8.1 |  | 6.75 |

FILAMENT TRANSFORMERS
Last letter in Type No. is case style.

| Stock No. | $\begin{gathered} \text { Mfr's } \\ \text { Type } \\ \hline \end{gathered}$ | Secondary |  | Test Volts | Slze (HWD) | Wt., | NET EACH |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  | Volts | Amperes |  |  |  | 1-4 | 5-24 | 25-49 | 50-99 |
| 61 G931 | F-1X | 2.5 CT | 3 | 1500 | 111 | 3/4 | 2.16 | 1.94 | 1.75 | 1.62 |
| 61 G 932 | F-3X | 2.5 CT | 10 | 3000 | 21/4 $\times 313$ | $13 / 4$ | 3.30 | 2.97 | 2.67 | 2.48 |
| 61 G 933 | F-50 | 2.5 CT | 10 | 7500 | $3 \times 21 / 2 \times 23 /{ }^{3 / 8}$ | 2 | 4.80 | 4.32 | 3.89 | 3.60 |
| 61 G 934 | F-6X | 2.5 CT |  | 2500 | 115/16x31/4 $\times 2^{\prime \prime}$ | 11/4 | 3.06 | 2.75 | 2.48 | 2.30 |
| 61 G 935 | F-7X | 5CT | 3 | 1500 | $115 / 16 \times 31 / 4 \times 2^{\prime \prime}$ | 11/4 | 3.42 | 3.08 | 2.77 | 2.57 |
| 61 G 936 | F-8X | 5 CT |  | 1500 | $21 / 4 \times 313 / 16 \times 21 /$ | $13 / 4$ | 3.96 | 3.56 | 3.21 | 2.97 |
| 64 G 953 | F-13x | 6.3 | . 6 | 1500 | $13 / 4 \times 23 / 8 \times 1{ }^{3 / 8^{\prime \prime}}$ | 1/2 | 2.04 | 1.84 | 1.65 | 1.53 |
| 64 G 954 | F-14X | 6.3CT | 1.2 | 1500 | 111/16 $\times 213 / 16 \times 158^{\prime \prime}$ | 3/4 | 2.22 | 2.00 | 80 | 1.67 |
| 64 G 955 | F-16X | 6.3CT | 3 | 1500 | 115/16x31/4 $\times 2^{10}$ | 11/4 | 3.18 | 2.86 | 2.58 | 2.39 |
| 64 G 956 | F-18A | 6.3CT | ${ }^{6}$ |  | $33 / 16 \times 25 / 8 \times 25 / 8^{\prime}$ | $21 / 2$ |  | 5.08 | 4.57 | 4.23 |
| 64 G 957 | F-21A | 6.3CT | 10 | 1500 | 39/16 $\times 3 \times 31 / 4$ | $31 / 2$ | 6.96 | 6.26 | 5.64 | 5.22 |
| 64 G 958 | *F-22A | 6.3CT | 20 | 2000 | $4 \times 31 / 4 \times 43 / 16^{\circ}$ | 7 | 9.90 | 8.91 | 8.02 | 7.43 |
| 64 G 959 | F-25X | 12.6 CT | 1.5 | 1500 | 115/16x31/4 $\times 2^{\prime \prime}$ | 11/4 | 3.51 | 3.16 | 2.84 | 2.63 |
| 61 G 937 | F-26X | ${ }^{12.6 C}$ | 2.5 | 1500 | $29 / 32 \times 311 / 16 \times 23 / 8$ | $21 / 4$ | 3.96 | 3.56 | 3.21 | 2.97 |
| 64 G 974 | F-40X | 24 CT | 1 | 1500 | $1{ }^{15 / 1 / 16 \times 31 / 4 \times 2^{\prime \prime}}$ | 11/4 | 3.39 | 3.05 | 2.75 | 2.54 |
| 61 G 938 | F-41X | ${ }^{25.2 C}$ | 2.2 | 1500 | $25 / 8 \times 41 / 16 \times 2^{1 / 2}{ }^{\prime \prime}$, | 21/4 | 4.80 | 4.32 | 3.89 | 3.60 |
| 64 G 935 | F-23U | 10CT | 7 | 1500 | $33 / 8 \times 213 / 16 \times 33 / 8^{\prime \prime}$ | 4 | 6.87 | 6.18 | 5.57 | 5.15 |

HIGH-LEVEL OUTPUT TRANSFORMERS
(A) $\pm 3 \mathrm{db}, 20-20,000 \mathrm{cps}$. Secondaries $4,8,16 \mathrm{ohms}$ *except $8,16,32$. Type S-34X is X.

| No. | Type | Pri. Imp. | Watts | Size | Lbs. | 1-4, EA. | 5-24, EA. | 25-49, EA. | 50-99, EA. |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 61 G 939 | S-34X* | 4000CT | 7.5 | $29 / 3 \times 311 / 16 \times 2{ }^{3 / 8}$ | $11 / 2$ | 4.95 | 4.46 | 4.01 | 3.71 |
| 64 G 833 | S-31A | 8000CT | 15 | 31/825/8x33/8" | $31 / 2$ | 8.58 | 7.72 | 6.95 | 6.44 |
| 61 G 940 | S-142A | 8000 CT | 15 | 31/8x25/8x33/80, | $31 / 2$ | 12.84 | 11.56 | 10.40 | 9.63 |
| 64 G 834 | S-35A | 5000 CT | 20 | $31 / 8 \times 25 / 8 \times 35 / 8^{*}$ | 4 | 9.30 | 8.37 | 7.53 | 6.98 |
| 61 G 941 | S-38A | 9000 CT | 25 | $31 / 2 \times 3 \times 41 / 4{ }^{\prime \prime}$ | 53/4 | 12.00 | 10.80 | 9.72 | 9.00 |
| 61 G 942 | S-146A | 6600 CT | 25 | $31 / 2 \times 3 \times 41 /{ }^{\prime \prime}{ }^{\prime \prime}$, | $53 / 4$ | 18.36 | 16.52 | 14.87 | 13.77 |
| 61 G 943 | S-152A | 4000 CT | 65 | $41 / 4 \times 35 / 8 \times 45 / 8^{\circ}$ | 9 | 26.76 | 24.08 | 21.68 | 20.07 |

## Chicago Transformers


©


B

(C)

(1)


因

F

| Case No. | Dopth | Width | Height | Case No. | Depth | Width | Height | Case ${ }^{\text {No. }}$ | Depth | Width | Height |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| ${ }_{13}^{12}$ | 21/4* | 21/8" | ${ }_{215}^{211 / 1 / 6^{\prime \prime}}$ | ${ }_{17}^{16}$ | 27/7\% | ${ }_{211}^{211 / 1 / 6_{6}^{\prime \prime}}$ | 31/3* | ${ }_{21}^{20}$ | ${ }^{3111 / 6{ }^{\circ}}$ | ${ }^{351 / 46}$ | ${ }^{45} 11^{6 \prime}{ }^{\prime \prime}$ |
| 114 | 21/ ${ }^{\prime \prime}$ | 21 ${ }^{2}$ | ${ }_{3}^{2151 / 16^{\circ}}$ | 17 18 |  | ${ }_{3}{ }^{211 / 16^{\prime \prime}}$ | 3/7\% | 21 22 | 41916 ${ }^{4}$ | ${ }^{3516^{\circ}}$ |  |
| 15 | $21 /{ }^{\prime \prime}$ | $238{ }^{\circ}$ | 35/16" | 19 | $31 / 4{ }^{\prime \prime}$ | $3^{\prime \prime}$ | $41 / 4^{*}$ |  | 55/16 | $4{ }^{4} / 1 / 16^{\circ}$ | $61 / 16^{\circ}$ |

TRANSFORMERS AND CHOKES

A complete selection of power transformers, filament transformers and filter chokes designed for electronic equipment. All units have high-grade magnet wire coils wound on non-aging silicon-steel cores. All have onepiece, steel cases for electrostatic and magnetic shielding, plus high
moisture resistance. Types PSC, PSR, and RS (Fig. B) are semi-sealed
units with steel base covers fitted with phenolic terminal boards and numbered solder lugs. Types PCC, PCR, and RC (Fig. C) are compoundsealed units with fiberboard base covers and $10^{\prime \prime}$ color-coded leads. *Have extra filament winding; 6.3 v . at 1 amp . tHas extra filament winding; 5 v . at 2 amps. All units have 117 volt, $50-60$ cycle primaries.

POWER TRANSFORMERS FOR CAPACITOR INPUT FILTERS

| Stock No. | Mfr's Type | Case No. | $\begin{aligned} & 1-9 \\ & \text { EA. } \\ & \hline \end{aligned}$ | $\begin{gathered} 10-24 \\ \text { EA. } \end{gathered}$ | $\begin{gathered} 25-49 \\ \text { EA. } \end{gathered}$ | Stock No. | Mfr's Type | Case No. | $\begin{aligned} & 1-9 \\ & \text { EA. } \end{aligned}$ | $\begin{gathered} 10-24 \\ \text { EA. } \end{gathered}$ | $\begin{gathered} 25-49 \\ \text { EA. } \end{gathered}$ | Plate |  | Rect. |  | Fil. |  | Wt., Lbs. |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  |  |  |  |  |  |  |  |  |  |  | VCT | Ma | V | A | VCT | A |  |
| 64 G 706 | PCC-40 | 16 | 5.00 | 4.75 | 4.50 | 64 G 707 | PSC-40 | 17 | 8.67 | 8.24 | 7.81 | 450 | 40 | 5 | 2 | 6.3 | 2 | 31/4 |
| 64 G 614 | PCC-55 | 16 | 5.38 | 5.12 | 4.84 | 64 G 607 | PSC-55 | 17 | 9.11 | 8.66 | 8.20 | 540 | 55 | 5 | 2 | 6.3 | 2 | $31 / 2$ |
| 64 G 708 | PCC-60 | 18 | 6.17 | 5.87 | 5.56 | 64 G 709 | PSC-60 | 19 | 9.70 | 9.22 | 8.73 | 600 | 60 | 5 | 2 | 6.3 | 3 | $41 / 2$ |
| 64 G 615 | PCC-70 | 18 | 6.62 | 6.28 | 5.96 | 64 G 608 | PSC-70 | 19 | 10.29 | 9.78 | 9.26 | 670 | 70 | 5 | 2 | 6.3 | 3 | $41 / 2$ |
| 64 G 616 | PCC-85 | 20 | 7.64 | 7.26 | 6.88 | 64 G 609 | PSC-85 | 20 | 10.97 | 10.42 | 9.87 | 660 | 85 | 5 | 2 | 6.3 | 3 | 6 |
| 64 G 617 | PCC-105 | 20 | 8.29 | 7.88 | 7.46 | 64 G 610 | PSC-105 | 20 | 11.61 | 11.03 | 10.46 | 690 | 105 | 5 | 2 | 6.3 | 3.5 | $61 / 2$ |
| 64 G 618 | PCC-120 | 22 | 9.32 | 8.85 | 8.39 | 64 G 611 | PSC-120 | 22 | 12.23 | 11.62 | 11.01 | 750 | 120 | 5 | 3 | 6.3 | 4 | $91 / 2$ |
| 64 G 619 | *PCC-150 | 22 | 10.67 | 10.14 | 9.61 | 64 G 612 | *PSC-150 | 22 | 16.17 | 15.37 | 14.55 | 740 | 150 | 5 | 3 | 6.3 | 4 | $111 / 2$ |
| 64 G 620 | *PCC-200 | 22 | 12.44 | 11.82 | 11.19 | 64 G 613 | *PSC-200 | 22 | 17.20 | 16.34 | 15.48 | 770 | 200 | 5 | 3 | 6.3 | 4.5 | 12 |
| 64 G 795 | $\dagger$ PCC-250 | 24 | 15.32 | 14.55 | 13.79 | 64 G 796 | +PSC-250 | 24 | 21.46 | 20.39 | 19.32 | 800/160 | 250 | 5 | 6 | 6.3 | 7 | 15 |

## POWER TRANSFORMERS FOR CHOKE INPUT FILTERS

| 64 G 637 64638 64 G 640 | PCR-55 PCR-70 PCR-105 | $\begin{aligned} & 16 \\ & 18 \\ & 20 \\ & \hline \end{aligned}$ | 5.59 6.32 7.85 | 5.31 6.01 7.46 | 5.03 5.69 7.07 | $\begin{array}{r} 64 \text { G } 630 \\ 64 \text { G } 632 \end{array}$ | $\begin{aligned} & \text { PSR-105 } \\ & \text { PSR-1 } \end{aligned}$ | $\begin{array}{\|l} 17 \\ 19 \\ 21 \\ \hline \end{array}$ | $\begin{array}{r} 9.26 \\ 10.14 \\ 11.76 \\ \hline \end{array}$ | $\begin{array}{r} 9.63 \\ 11.17 \\ \hline \end{array}$ | $\begin{array}{r} 9.13 \\ \hline \end{array}$ | $\begin{aligned} & 850 \\ & 900 \end{aligned}$ | $\begin{array}{r} 70 \\ 105 \\ \hline \end{array}$ | $\begin{array}{r} 5 \\ 5 \\ \hline \end{array}$ | 2 | $\begin{aligned} & 6.3 \\ & 6.3 \\ & 6.3 \end{aligned}$ | $\begin{aligned} & 2 \\ & 3 \\ & 3.5 \end{aligned}$ | $41 / 2$ <br> $61 / 2$ |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| $\begin{aligned} & 64 \text { G } 64 \\ & 64 \text { G } 64 \end{aligned}$ $64 \text { G } 64$ | $\begin{aligned} & \hline \text { PCR-120 } \\ & \text { *PCR-200 } \\ & \text { *PCR-300 } \end{aligned}$ | $\begin{aligned} & 22 \\ & 22 \\ & 24 \end{aligned}$ | $\begin{array}{r} 8.79 \\ 11.47 \\ 17.93 \end{array}$ | 8.35 10.90 17.04 | $\begin{aligned} & 7.91 \\ & 10.32 \\ & 6.14 \end{aligned}$ | 64 G 633 64 G 35 64 G 636 | $\begin{array}{\|c} \hline \text { PSR-120 } \\ * \text { PSR-200 } \\ * \text { PSR-300 } \end{array}$ | $\begin{aligned} & 22 \\ & 22 \\ & 24 \end{aligned}$ | $\begin{aligned} & 12.49 \\ & 18.52 \\ & 26.17 \end{aligned}$ | $\begin{aligned} & 11.87 \\ & 17.60 \\ & 24.86 \end{aligned}$ | $\begin{aligned} & 11.25 \\ & 16.67 \\ & 23.55 \end{aligned}$ | $\begin{aligned} & 1000 \\ & 1040 \\ & 0 \end{aligned}$ | $\begin{aligned} & 120 \\ & 200 \\ & 300 \end{aligned}$ | 5 5 5 | 3 3 3 6 | 6.3 6.3 6.3 | 4.5 | $91 / 2$ $121 / 4$ $171 / 2$ |

## FILTER CHOKES

| Stock No. | $\begin{aligned} & \hline \text { Mfr's } \\ & \text { Type } \end{aligned}$ | $\begin{gathered} \text { Case } \\ \text { No. } \\ \hline \end{gathered}$ | $\begin{aligned} & 1-9 \\ & \text { EA. } \end{aligned}$ | $\begin{gathered} 10-24 \\ \text { EA. } \end{gathered}$ | $\begin{gathered} 25-49 \\ \text { EA. } \\ \hline \end{gathered}$ | $\begin{gathered} \hline \text { Stock } \\ \text { No. } \end{gathered}$ | $\begin{aligned} & \hline \text { Mfr's } \\ & \text { Type } \\ & \hline \end{aligned}$ | $\begin{aligned} & \text { Case } \\ & \text { No. } \end{aligned}$ | $\begin{aligned} & 1-9 \\ & \text { EA. } \end{aligned}$ | $\begin{gathered} 10-24 \\ \text { EA. } \end{gathered}$ | $\begin{gathered} 25-49 \\ \text { EA. } \\ \hline \end{gathered}$ | Hys. | Ma. | Ohms | Test Volts | $\begin{aligned} & \text { Wt., } \\ & \text { Lbs. } \end{aligned}$ |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 64 G 669 | RC-1540 | 12 | 2.50 | 37 | 2.25 | 64 G 657 | RS-1540 | 12 | 3.53 | 3.35 | 3.17 | 15 | 40 | 475 | 2500 | 11/2 |
| 64 G 670 | RC-1055 | 12 | 2.91 | 2.76 |  |  | RS-105 | 13 | 3.91 |  | 3.52 | 10 | 55 | 230 | 2500 | 13/4 |
| 64 G 671 | RC-1555 | 12 | 3.06 | 2.90 | 2.75 | 64 G 659 | RS-1555 | 13 | 4.12 | 3.91 | 3.70 | 15 | 55 | 420 | 2500 |  |
| 64 G 672 | RC-1085 | 14 | 3.45 | 3.26 | 3.10 | 64 G 660 | RS-1085 | 15 | 4.12 | 3.91 | 3.70 | 10 | 85 | 175 | 2500 | 21/2 |
| 64 G 673 | RC-158 | 14 | 3.70 | 3.52 | 3.33 | 64 G 661 | RS-15 | 15 | 4.97 | 4.72 | 4.47 | 15 | 85 | 285 | 2500 | 23/4 |
| 64 G 674 | RC-8105 | 16 | 4.11 | 3.91 |  |  | RS-8105 | 17 | 5.59 | 5.31 | 5.03 | 8 | 105 | 100 | 2500 | 33/4 |
| 64 G 675 | RC-12105 | 16 | 4.32 |  |  | 64 G 663 | RS-12105 | 17 | 5.59 | 5.3 | 5.03 | 12 | 105 | 170 | 2500 | 4 |
| 64 G 676 | RC-8150 | 18 | 5.67 | 5.39 | 5.10 | 64 G 664 | RS-8150 | 19 | 6.47 | 6.14 | 5.82 | 8 | 150 | 100 | 2500 | $51 / 4$ |
| 64 G 677 | RC-12150 |  | 5.73 | 5.45 | 5.16 |  | RS-12 |  |  | 6.34 |  |  |  |  |  |  |
| 64 G 678 | RC-8200 | 20 | 6.67 | 6.34 | 6.01 | 64 G 666 | RS-8200 | 21 | 7.64 | 7.26 | 6.88 | 8 | 200 | 85 | 2500 | 7 |
| 64 G 679 | RC-12200 | 20 | 6.76 | 6.43 | 6.09 | 64 G 667 | RS-12200 | 21 | 8.08 | 7.68 | 7.28 | 12 | 200 | 140 | 2500 |  |
| 64 G 680 | RC-8300 | 22 | 9.35 | 8.88 | 8.42 | 64 G 668 | RS-8300 | 22 | 11.61 | 11.03 | 10.46 | 8 | 300 | 60 | 3500 | 121/2 |

## FILAMENT TRANSFORMERS

A Hermetically sealed filament transformers. Built to rigid specificaA. tions. Meet all MIL-T-27 requirements. All have 115-230 v., 50-60 primaries. 2500 v . insulation.

| Stock No. | $\begin{aligned} & \hline \mathbf{M f r}{ }^{\prime} \mathbf{s} \\ & \text { Type } \end{aligned}$ | $\begin{aligned} & \text { Sec. } \\ & \text { V.CT } \end{aligned}$ | Amps | $\begin{aligned} & \text { Case } \\ & \text { No. } \end{aligned}$ | Wt., Lbs. | 1-9. | $\begin{gathered} 10-24 \\ \text { EA. } \end{gathered}$ |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 64 G 72 | FH-615 | 6.3 | 1.5 | 12 | 1 | 7.94 | 5 |
| 64 G 722 | FH-63 | 6.3 | 3 | 14 | 2 | 9.38 | 8.91 |
| 64 G 693 | FH-65 | 6.3 | 5.5 | 16 | 3 | 10.91 | 10.36 |
| 64 G 695 | FH-610 | 6.3 | 10 | 19 | 5 | 15.43 | 14.66 |

$\qquad$ Semi-sealed, 115-230 v., 50-60 cycle primaries. 2500 v. insulation.

| Stock No. | $\begin{aligned} & \hline \text { Mfr's } \\ & \text { Type } \\ & \hline \end{aligned}$ | $\begin{aligned} & \text { Sec. } \\ & \text { V.CT } \\ & \hline \end{aligned}$ | Amps | Case No. | Wt., L.bs. | EA. | 10-24 EA. |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 64 G 686 | F-54 | 5 | 4 | 15 | $21 / 4$ | 6.38 | 6.06 |
| 64 G 688 | F-58 | 5 | 10 | 17 | $31 / 2$ | 10.88 | 10.33 |
| 64 G 692 | F-530 | ${ }_{6}^{5}$ | 30 | 22 | 101/2 | 16.61 | 15.78 |
| 64 G 723 | F-615 | 6.3 | 1.5 | 12 | 1 | 5.14 | 4.89 |
| 64 G 724 | F-63 | 6.3 | 3. | 14 | 2 | 6.17 | 5.87 |
| 64 G 694 | F-65 | 6.3 | 5.5 | 17 | 3 | 7.50 | 7.12 |
| 64 G 696 | F-610 | 6.3 | 10 | 19 | 5 | 10.29 | 9.78 |
| 64 G 698 | F-104 | 10.0 | 4 | 17 | $31 / 4$ | 8.23 | 7.82 |

## ISOLATION TRANSFORMERS

[E For faster, safer, easier servicing of AC-DC equipment. Chassis mary mary slide switch selects high, medium and low secondary voltages. 8 line cord, female output receptacle. Primary volts, 105/1

| Stock No. | Mfr's Type | Watts Cont. | Case No. | Wt., Lbs. | 1.99. | $\begin{gathered} 10-24 \\ \text { EA. } \end{gathered}$ |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 64 G 726 | IS-50 | 50 | 21 |  | 8.08 | 7.68 |
| 64 G 727 | IS-100 | 100 | 22 | $81 / 2$ | 11.61 | 11.03 |
| 64 G 728 64 G 729 | IS-150 | 150 250 | 24 | $1{ }^{121 / 2}$ | 13.82 16.32 | 13.13 15.50 |

## OUTPUT TRANSFORMERS

Full-frequency-range outputs. Typical response, $\pm 0.5 \mathrm{db}, 30-20,000$ $\square$ cps. *Indicates extra 150/4 ohm secondary. All except BO-12 and BO-13 have split, balanced secondary with CT.

| No. | $\begin{aligned} & \mathbf{M f r ^ { \prime }} \\ & \mathbf{T y p}^{\prime} \end{aligned}$ |  |  |  | $0 .$ |  | $1-5$ |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | BO-1 | 15 K | 600 | . 022 | 14 | 21/4 | 9.97 | 9.47 |
|  |  | 20 K | 60 |  |  |  |  |  |
|  |  |  |  | 15 |  |  |  |  |
| 64 G 748 | ${ }^{\text {BO}}$ | 10 | 16/8/4 | 20 | 21 | 7 | 7.49 |  |

Type BO-14 'Super- Range"' 100-Watt Output Transformer. Designed for use with Tungsol 6550's in pentode or triode amplifier circuits. 8 and 16 ohm plus 70.7 v . outputs. Similar to Fig. C. Size: $8 \times 51 / 2 \times 6^{\prime \prime}$. Shpg. wt., 21 lbs.
10 to 24, NET EAC' H........
38.95

## PA OUTPUT TRANSFORMERS

C Type PCO-150. 15-watt output transformer for public address amplifiers. Primary impedance, 10,000 ohms CT; secondary, 600/150/ 16/8/4 ohms, plus tertiary winding for $10 \%$ feedback. Primary rated 200 ma max. DC. Has $10^{\prime \prime}$ color-coded leads. Case No. 19.5 lbs .
10 to 24, NET EACH

## TRANSISTOR TRANSFORMERS

F Ultra-miniature audio transformers for transistor applications beF low 1 mw level. Wound on nylon bobbins with nickel-steel laminations. Actual wt., $1 / 10 \mathrm{oz} .3 / 8 \mathrm{x}^{3} / \mathrm{s}^{3} / 8^{\prime \prime} ;$ except $* 1 / 4 \mathrm{x}^{3} / 8 \mathrm{x}^{3} / 8^{\prime \prime} .2 \mathrm{oz}$.

| Stock No. | Mfr's <br> Type | Application | Impedance |  | DCResistance |  | $\begin{aligned} & 1-9 \\ & \text { EA. } \end{aligned}$ | $\begin{gathered} 10-24 \\ \text { EA. } \end{gathered}$ |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  |  | Pri. | Sec. | Pri. | Sec. |  |  |
| 64 G 237 | *UM-110 | Interstage | 20K | 1 K | 1675 | 285 | 5.59 | 5 |
| 64 G 238 | UM-111 | Output/ | 1K | 50/60 | 120 | 9 | 3.82 | 3.63 |
|  |  | Matching |  |  |  |  |  |  |
| $64 \text { G } 240$ | $\begin{aligned} & \text { UM-112 } \\ & \text { UM-113 } \end{aligned}$ | Mic. input Interstage | 200K 20 K | 1 l | $4 K$ 1350 | 195 | 6.17 4.26 | 5.87 <br> 4.05 |

## knight and Chicago Transformers


knight QUALITY TRANSFORMERS
An excellent selection of economy-priced, high-quality Knight transformers. All are carefully assembled of quality components and fully meet Allied's rigid standards for performance and dependability of

## STANDARD OUTPUTS

C. For coupling plate of output tube to the speaker voice coil. Designed C for class A amplifiers. Secondary impedance, 3.2 ohms. Shpg. wt., $3 / 4 \mathrm{lb}$.


UNIVERSAL OUTPUTS
B ${ }^{\text {CT primary. }} 6$ taps

FILTER CHOXES
C. Excellent for receivers, low power transmitters, etc.

| Stock No. | Hys. | Ma. | Ohms | Mtg. Ctrs. | Lbs. | NET EACH |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  |  |  |  |  | 1-9 | 10-24 | 25-49 | 50-99 |
| 62 G 135 | 5.5 | 50 | 330 | $2^{\prime \prime}$ | 1/2 | 1.03 | . 94 | .85 | . 79 |
| 62 G 136 | 8.5 | 50 | 400 | 23/8" | 1 | 1.11 | 1.02 | . 92 | . 85 |
| 62 G 137 | 16 | 50 | 550 | $213 / 16^{\prime \prime}$ | $11 / 2$ | 1.44 | 1.32 | 1.18 | 1.10 |
| 62 G ${ }^{68}$ | 15 | 75 | 400 | $31 /{ }^{\prime \prime}$ | 2 | 1.94 | 1.78 | 1.61 | 1.49 |
| 62 G \|39 | 10.5 | 110 | 220 | 39/16 | $21 / 2$ | 2.47 | 2.26 | 2.03 | 1.89 |

## REPIACEMENT POWER TRANSFORMERS

A) C 62 G 008 is Fig. C; all others Fig. A. Recommended for radio A C set replacement, kit building, etc. Fuily shielded; heavy duty $5^{\circ}$ flexible coded leads. All plate and Fil. 1 windings center-tapped. All have $110-120$ volt, $50-60$ cycle primaries.

| Stock No. | Plate |  | Rect. |  | Fil. 1 |  | Mtg. Centers | Wt. Lbs. | NET EACH |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | V | Ma | V | A | V | A |  |  | 1-9 | 10-24 | 25-49 | 50-99 |
| 62G008 | 250 | 25 |  |  | 6.3 | 1.0 | 23/8' | 1 | 1.81 | 1.66 | 1.50 | 1.39 |
| 62 G 034 | 480 | 40 | 5 | 2 | 6.3 | 2 | $2 \times 21 / 2$ | 3 | 3.43 | 3.15 | 2.84 | 2.62 |
| 62G041 | 650 | 40 | 5 | 2 | 6.3 | 2 | 2x21/2 | 3 | 3.83 | 3.52 | 3.18 | 2.94 |
| 62 G 042 | 650 | 70 | 5 | 3 | 6.3 | 3.5 | 2x21/2, | 5 | 4.65 | 4.27 | 3.85 | 3.56 |
| 62G043 | 700 | 90 | 5 | 3 | 6.3 | 3.5 | 21/4x21/8" | $53 / 4$ | 4.78 | 4.39 | 3.96 | 3.66 |
| 62 G 044 | 700 | 120 | 5 | 3 | 6.3 | 4.7 | $21 / 2 \times 31 / 8$ | 7 | 5.52 | 5.07 | 4.57 | 4.22 |
| 62 G 045 | 750 | 150 | 5 | 3 | 6.3 | 5 | $21 / 2 \times 318{ }^{\text {a }}$ | 71/4 | 6.30 | 5.82 | 5.24 | 4.85 |
| 62 G 033 | 800 | 200 | 5 | 5 | 6.3 | 5 | 3x $33 / 4$ | 10 | 7.65 |  |  |  |

## AUDIO TRANSFORMERS

[C] *Single or double-button. Shpg. wt., 1 lb .

| Stock No. | Description | Mtg. Ctrs. | NET EACH |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  |  | 1-9 | 10-24 | 25-49 | 50-99 |
| $\begin{aligned} & 62 \text { G 025 } \\ & 62 \text { G } 062 \end{aligned}$ | *Carbon mike to grid ${ }_{\text {\% }}^{\text {\% }}$ Single plate to single grid | $\overline{23 / 8^{\prime \prime}}$ | 1.58 | 1.155 | 1.31 | 1.21 .96 |

## FILAMENT TRANSFORMERS

(C) Primaries, $\mathbf{1 0 5 - 1 2 5}$ volts, 50-60 cycle AC.

operation. Recommended for replacement applications and installation in new equipment. A fine low-cost line of transformers for use by radioTV servicemen, Amateurs, experimenters, students and industrials.

## HIGH-FIDELITY OUTPUT TRANSFORMERS

Designed for ultra-linear Williamson-type amplifiers. All flat from 6$90,000 \mathrm{cps}$ *except $10-100,000 \mathrm{cps}$. Rated watts from $20-30,000 \mathrm{cps}$. Al have 4,8 and 16 ohm outputs. $\dagger$ Max. allowable DC current in each half of primary. \&End bell construction for upright mounting (similar to Fig. D).

| Stock No. | Fig. | Watts | $\begin{aligned} & \text { P-P } \\ & \text { Imp. } \end{aligned}$ | $\dagger$ Ma. | SIze | Wt., Lbs. | NET EACH |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  |  |  |  |  |  | 1-9 | 10-24 | 25-49 | 50-99 |
| 62G 082 | F | 12 | 8000 | 60 | $27 / 8 \times 31 / 8 \times 35 / 8{ }^{\prime \prime}$ | 5 | 7.60 | 6.99 | 6.29 | 5.82 |
| 62G018 | F | 18 | 8000 | 65 | $3 \times 31 / 4 \times 358^{\prime \prime}$ | $31 / 2$ | 7.94 | 7.29 | 6.56 | 6.07 |
| 62G 083 | G | 24 | 6600 | 75 | $33 / 4 \times 31 / 4 \times 378^{\prime \prime}$ | 61/2 | 12.40 | 11.38 | 10.26 | 9.49 |
| 62G019 | $F$ | 30* | 6600 | 100 | 41/4 $\times 3 / 8 \times 47 / 16^{\prime \prime}$ | $81 / 2$ | 13.26 | 12.18 | 10.97 | 0.15 |
|  | 8 | 12 | 8000 | 60 | $25 / 8 \times 25 / 8 \times 31 /{ }^{\prime \prime}$ | $31 / 2$ | 5.85 | 5.37 | 4.84 | 4.47 |
| $62 \mathrm{G} 058$ | C | 18 | 8000 |  | $23 / 8 \times 31 / 16 \times 29 / 16^{\prime \prime}$ | $21 / 4$ | 4.00 | 3.67 | 3.31 | 3.06 |
| 62 G 054 | 8 | 24 | 6600 |  | $31 / 4 \times 31 / 2 \times 41 /{ }^{\prime \prime}$ | 6 | 10.47 | 9.61 | 8.66 | 8.01 |
| 62G059 | 8 | 30* | 6600 | 100 | 41/8×35/8x41/4" | 71/4 | 11.33 | 10.41 | 9.38 | 8.67 |

### 70.7 VOLT LINE-TO-VOICE COIL OUTPUTS

B Secondaries: 4, 8, 16 ohms, except $* 3.2-4,6-8$.

| Stock No. | $\begin{aligned} & \text { Watt } \\ & \text { Taps } \end{aligned}$ | Watts | Mtg. Ctrs. | Wt., Lbs. | NET EACH |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  |  |  |  | 1-9 | 10-24 | 25-9 | 50 |
| C | 5, 1.25 |  |  |  |  |  |  |  |
|  |  | *5 Max. | 2" | $3 / 4$ | 0 | 1.38 | 1.24 |  |
|  |  | 10 | 23/8" | 1 |  | 1.53 | 38 |  |
| 62 G 078 | $18,9.4 .5,2.25$ |  |  |  |  | 1.53 | 1 |  |
|  | 1.12, . 56 | 18 M | 23/8 | $11 / 4$ | . 98 | 1.81 | 1.63 |  |
|  | 1.5,.75 | 24 Max | 31/8" | $13 / 4$ | 3.0 | 2.7 | 2.4 | 2. |

## 230-TO-115 VOLT AUTOTRANSFORMERS

E Well-built step-down transformers for reducing 220-250 volts, 50-60 E cycles AC to 110-125 volts. For operating tape recorders, radios, amplifiers, household appliances, etc. Shielded construction. Smooth black enamel finish. With 8-ft. cord and plug. Female outlet on case.

| Stock No. | Watts | Slze | Lbs. | NET EACH |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  |  |  | 1-9 | 10-24 | 25-49 | 50-99 |
| 62 G 510 | 80 | $31 / 2 \times 215 / 16 \times 3{ }^{\prime \prime}$ | 4 | 4.95 | 4.54 | 4.09 | 3.79 |
| 62 G 511 | 150 | $37 / 8 \times 33 / 16 \times 35 / 8{ }^{\prime \prime}$ | 6 | 6.81 | 6.25 | 5.64 | 5.21 |
| 62 G 512 | 250 | $45 / 8 \times 313 / 16 \times 4^{\prime \prime}$ | 91/4 | 8.94 | 8.20 | 7.39 | 6.84 |
| 62 G5i3 | 500 | $45 / 8 \times 313 / 16 \times 43 / 81$ | $11^{1 / 4}$ | 11.42 | 10.48 | 9.45 | 8.73 |

## VARIABLE VOLTAGE AND ISOLATION TRANSFORMERS

D Variable Voltage and Isolation Transformer. Rated 150 watts. and plug. Mtg. centers $30-250$ v., $50-60$ cycle $A C$ input. With 6-ft. cord 62 G 080 . 1-9, EACH.I 2.40 10-24, NET EACH 25-49, EACH, EACH. 12.40 60-24, NET EACH . . . . . . . . . . II. 38 (D) Variable Voltage Transformer. 150 watts. Tests for possible fail(D) ure in radio by voltage overload method. 7-tap switch calibrated in output volts, $90-150$ ( 10 -volt steps). For 115 v., $50-60$ cycle AC. 6-ft. cord, plug, output receptacle. Mtg. ctrs., $21 / 2 \times 33 / 4^{*}$. Wt., $61 / 2 \mathrm{lbs}$.
62 GOSACH; EACH. 80.88 NET EACH.............9.95
E Isolation Transformer. Reduces shock hazard by isolating test E units, or equipment under test, from line. For 115 volts, 50-60 cycle AC. With 6 -ft. cord, plug and output receptacle.

| Stock No. | Watts | $\begin{aligned} & \text { Size } \\ & \text { H.W.D. } \end{aligned}$ | Wt.,Lbs. | NET EACH |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  |  |  | 1-9 | 10-24 | 25-49 | 50-99 |
| 62 G 086 | 100 | $41 / 4 \times 39 / 16 \times 33 / 4^{\prime \prime}$ | 7 | 10.47 | 9.61 | 8.66 | 8.01 |
| 62 G 087 | 250 | $45 / 8 \times 313 / 16 \times 47 / 8{ }^{\prime \prime}$ | 121/2 | 16.84 | 15.46 | 13.93 | 12.89 |

## CHICAGO TRANSFORMERS

## MULTIPLE FILAMENT TRANSFORMERS

H Primaries tapped for 105,115 or $125 \mathrm{v} ., 50-60$ cycle AC. Insulation, H 2500 v . except $\mathrm{F} 8,5000 \mathrm{v}$. All secondaries have CT except *

 63 G 155 F2




## PLATE TRANSFORMERS

(J. Primaries for 115-230 v., 50-60 cycle AC.



AUDIO TRANSFORMERS
K. Size of each transformer, $2 \times 11 / 2^{2} \times 1 / 2^{\prime \prime}$. Shpg. wt., 10 oz .

| Stock No. | $\left\lvert\, \begin{aligned} & \text { Mfr's } \\ & \text { Type } \end{aligned}\right.$ | Description | NET EACH |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  |  | 1-9 | 10-24 | 25-49 | 50-9 |
| 63G187 | WF20 | Pri.:50,125/150,200,250,333,500/600 | 11.47 | 10.90 | 10.30 | 9.5 |
| 63G189 | WF22 | Pri.:50,125/150,200,250,333,500/600 Sec.: 80,000 overall in two sections. | 11.47 | 10.90 | 10.30 | 9.5 |
| $\begin{aligned} & \hline 63 G 190 \\ & 63 G 192 \end{aligned}$ | $\begin{array}{\|} \hline \text { WF28 } \\ \text { WF30 } \end{array}$ | Pri.:15000. Sec. Imp.: 80,000 overal. Pri.:50,125/150,200,250,333,500/600 Sec.:50,125/150,200,250,333,500/600 |  | 10.15 |  |  |

## Thordarson Transformers



UNIVERSAL-MOUNT POWER TRANSFORMERS
AGF $\begin{aligned} & \text { High quality, universal-mount power } \\ & \text { transformers. Easy to instal adust }\end{aligned}$ able brackets permit fush, vertical or horizon-

| Stock No. | Mfr's <br> Type | Plate |  | Rect. |  | Fil. 1 |  | Mtg. Ctrs. | Wt., Lbs. | NET EACH |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  | VCT | Ma | V | A | V | A |  |  | 1-9 | 10-24 | 25-49 | 50-Up |
| 63G700 | 22 ROO | 500 | 40 | 5 | 2 | 6.3 | 2.0 | $2 \times 21 / 2^{\prime \prime}$ | 21/2 | 4.88 | 4.39 | 3.95 | 3.74 |
| 63 G 701 | 22R01 | 550 | 50 | 5 | 2 | 6.3 | 2.5 | $2 \times 21 /{ }^{\prime \prime}$ | 3 | 5.88 | 5.29 | 4.76 | 4.50 |
| 63 G 702 | 22R02 | 600 | 70 | 5 | 2 | 6.3 | 3.0 | 2x21/2. | 31/4 | 7.03 | 6.32 | 5.68 | 5.38 |
| 63G703 | 22R04 | 600 | 90 | 5 | 2 | 6.3 | 3.5 | 21/4 $\times 213 / 16^{\prime \prime}$ | $33 / 4$ | 6.85 | 6.16 | 5.55 | 5.24 |
|  | 22R05 | 600 | 120 | 5 | 3 | 6.3 | 5.0 | $21 / 2 \times 31 / 8^{\prime \prime}$ | 51/2 | 7.50 | 6.74 | 6.07 | 5.74 |
| 63 G 705 | 22R06 | 650 | 150 | 5 | 3 | 6.3 | 5.0 | 21/2x ${ }^{1 / 8}{ }^{\prime \prime}$ | 63/4 | 8.76 | 7.89 | 7.10 | 6.70 |
| 63G706 | 22R07 | 700 | 200 | 5 | 3 | 6.3 | 6.0 | $3 \times 33 / 4{ }^{\prime \prime}$ | $81 / 2$ | 11.44 | 10.29 | 9.26 | 8.75 |

## UPRIGHT-MOUNT POWER TRANSFORMERS

GGV Have 117 v., 50-60 cycle primaries. Fila- *Additional 6.3 volt, 3-amp center-tapped GGV ment 1 windings center-tapped. EIA winding. $\dagger$ Fig. BGV; \&Not center-tapped.

| Stock No. | Mfr's <br> Type | Plate |  | Rect. |  | Fil. 1 |  | Mtg. Ctrs. | Wt., Lbs. | NET EACH |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  | VCT | Ma | V | A | V | A |  |  | 1-9 | 10-24 | 25-49 | 50-Up |
| 63G711 | 22R30 | 550 | 50 | 5 | 2 | 6.3 | 2.5 | $2 \times 21 / 4{ }^{\prime \prime}$ | 21/4 | 6.12 | 5.51 | 4.95 | 4.68 |
| $63 \mathrm{G712}$ | 22R31 | 720 | 80 | 5 | 2 | 6.3 | 2.5 | $2 \times 23 /{ }^{\prime \prime}$ | 4 | 8.67 | 7.80 | 7.02 | 6.64 |
| 63G713 | 22R32* | 700 | 110 | 5 | 2 | 6.3 | 3.0 | $21 / 2 \times 2{ }^{11} 16^{\prime \prime}$ | 61/4 | 10.76 | 9.68 | 8.71 | 8.23 |
| 63G714 | 22R33 | 750 | 160 | 5 | 3 | 6.3 | 5.0 | $27 / 8 \times 3^{\prime \prime}$ | 7 | 11.44 | 10.29 | 9.26 | 8.75 |
| 63G715 | 22R34 | 770 | 225 | 5 | 3 | 6.3 | 5.0 | $3 \times 39 / 16{ }^{\prime \prime}$ | 113/4 | 13.05 | 11.75 | 10.57 | 9.99 |
| 63 G716 | 22R35 | 800 | 340 | 5 | 6 | 6.3 | 7.0 | $3 \times 4{ }^{\prime \prime}$ | 13 | 15.99 | 14.40 | 12.96 | 12.24 |
| 63G719 | 22 R36 | 1200 | 200 | 5 | 3 | 6.3 | 5.0 | $3 \times 35 / 16$ " | $91 / 2$ | 11.76 | 10.58 | 9.53 | 9.00 |
| 63G737 | 26R60 $\dagger$ | 1508 | 25 | ... | $\ldots$ | 6.3 | . 5 | $2^{\prime \prime}$ | 3/4 | 2.62 | 2.35 | 2.12 | 2.00 |

"ECONOMY SERIES" POWER TRANSFORMERS
$\begin{array}{ll}\text { For general replacement. Types ending with } & \text { zontal } \mathrm{mtg} \text {. (Fig. AGF). Have } \mathbf{1 1 0 - 1 2 0} \text { volt, } \\ \text { U are for upright mounting (Fig. GGV). Others } & 50-60 \text { cycle primaries. Fil. } 1 \text { windings are }\end{array}$ U are for upright mounting (Fig. GGV). Others have brackets to permit flush, vertical or hori-

| Stock No. | Mfr's <br> Type | Plate |  | Rect. |  | Fil. 1 |  | Mtg. Ctrs. | Wt., Lbs. | NET EACH |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  | VCT | Ma | V | A | V | A |  |  | 1-9 | 10-24 | 25-49 | 50-Up |
| 63 G | 24R00 | 480 | 40 | 5 | 2 | 6.3 | 2.0 | $2 \times 21 / 2^{\prime \prime}$ | 2 | 4.41 | 3.97 | 3.57 | 3.38 |
| 63 G 320 | 24R00-U | 480 | 40 | 5 | 2 | 6.3 | 2.0 | 2x19/16" | 2 | 4.41 | 3.97 | 3.57 | 8 |
| 63 G 321 | 24R01 | 650 | 40 | 5 | 2 | 6.3 | 2.0 | $2 \times 2{ }^{1 / 2}{ }^{\prime \prime}$ | $23 / 4$ | 4.50 | 4.05 | 3.65 | 4 |
| 63 G 322 | 24R01-U | 650 | 40 | 5 | 2 | 6.3 | 2.0 | $2 \times 111 / 16^{\prime \prime}$ | 23/4 | 4.50 | 4.05 | 3.65 | 3.44 |
| 63 G 323 | $24 \mathrm{R02}$ | 700 | 70 | 5 | 2 | 6.3 | 2.5 | $21 / 4 \times 2 \times 13 / 16^{\prime \prime}$ | 4 | 5.62 | 5.06 | 5 | 30 |
| 63 G 324 | 24R04 | 700 | 90 | 5 | 3 | 6.3 | 3.5 | $21 / 4 \times 213 / 16^{\prime \prime}$ | 41/4 | 6.53 | 5.87 | 5.28 | 5.00 |
| 63 G 325 | 24R04-U | 700 | 90 | 5 | 3 | 6.3 | 3.5 | $21 / 4 \times 25 / 8^{\prime \prime}$ | 41/4 | 6.53 | 5.87 | 5.28 | 5.00 |
| 63G326 | $24 \mathrm{R05}$ | 700 | 120 | 5 | 3 | 6.3 | 4.7 | $21 / 2 \times 31 / 8^{\prime \prime}$ | 53/4 | 6.91 | 6.21 | 5.60 | 5.29 |
| 63 G 327 | 24R05- | 700 | 120 | 5 | 3 | 6.3 | 4.7 | $21 / 2 \times 211 / 1$ | 53/4 | 6.91 | 6.2 | 5.60 | 5.29 |
| 63 G 328 | $24 \mathrm{R06}$ | 750 | 150 | 5 | 3 | 6.3 | 4.7 | $23 / 4 \times 31 / 2^{\prime \prime}$ | $61 / 2$ | 8.17 | 7.35 | 6.62 | 6.25 |
| G 329 | 24R06-U | 750 | 150 | 5 | , | 6.3 | 4.7 | $23 / 4 \times 27 /{ }^{\prime \prime}$ | $61 / 2$ | 8.17 | 7.35 | 6.62 | 6.25 |
| 63 G 3 | 24 R 07 | 800 | 200 | 5 | 3 | 6.3 | 5.0 | $3 \times 33 / 4$ " | $91 / 2$ | 9.32 | 8.39 | 7.55 | 7.13 |
| 63 G 331 | 24R07-U | 800 | 200 | 5 | 3 | 6.3 | 5.0 | $3 \times 33 / 8^{\prime \prime}$ | $91 / 2$ | 9.32 | 8.39 | 7.55 | 7.13 |

MODULATION TRANSFORMERS

| Stock No. | Mfr's Type | Fig. | Watts | $\begin{aligned} & \text { PrI. } \\ & \mathbf{C T} \end{aligned}$ | Secondary Ohms | Mtg. Ctrs. | Wt., L.bs. | NET EACH |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  |  |  |  |  |  |  | 1-9 | 10-24 | 25-49 | 50-Up |
| 63 G 801 | 21 M 52 | FGV | 10 | 10K | 3K, 3.75K, 4.5K | 23/8" | 11/2 | 4.50 | 4.05 | 3.65 | 3.44 |
| 63 G 615 | 21M53 | BAH | 10 | 10K | 3K, 3.75K, 4.5K | 27/8* | $11 / 2$ | 3.91 | 3.52 | 3.16 | 3.00 |
| 63 G613 | 21M68 | BAV | 10 | 10K | $\begin{aligned} & 4 \mathrm{~K}, 5 \mathrm{~K} .7 .5 \mathrm{~K} \\ & 10 \mathrm{~K}, 12 \mathrm{~K} \end{aligned}$ |  |  |  |  |  |  |
| 63 G 612 | $21 \mathrm{M67}$ | GGV | 25 | 10K | $3 \mathrm{~K}, 5 \mathrm{~K}, 6.5 \mathrm{~K}, 8 \mathrm{~K}$ | 23/8 ${ }^{\prime}{ }^{\prime \prime}{ }^{\prime \prime}$ | 11/2/ | 3.59 5.41 | 4.827 | 2.90 4.38 | 2.74 4.14 |
| 63 G 802 | 21M54 | GGV | 25 | 6.6 K | 4 K | 2x2" | $31 / 4$ | 6.53 | 5.87 | 5.28 | 5.00 |

GGV $\begin{aligned} & \text { Multi-Match Type. Have taps to per- } \\ & \text { mit proper impedance match between }\end{aligned} \quad \begin{aligned} & \text { modulator output tubes and RF amplifier load. } \\ & \text { Split secondary. }\end{aligned}$

| Stock No. | Mfr's <br> Type | Watts | Prim. Ma. Each Side | Sec. Ma. |  | Mtg. Ctrs. | Wt., L.bs. | NET EACH |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  |  |  | Ser. | Par. |  |  | 1-9 | 10-24 | 25-49 | 50-Up |
| $\begin{aligned} & 63 G 812 \\ & 63 G 813 \\ & \hline \end{aligned}$ | $\begin{aligned} & \hline \text { 21M61A } \\ & \text { 21M62A } \\ & \hline \end{aligned}$ | $\begin{array}{r} 60 \\ 125 \\ \hline \end{array}$ | 125 | 125 160 | 125 320 | $\begin{aligned} & 23 / 4 \times 21 / 2^{\prime \prime} \\ & 31 / 4 \times 31 / 2^{\prime \prime} \end{aligned}$ | $15^{61 / 2}$ | 14.38 18.29 | 12.94 | 11.65 14.81 | $\begin{aligned} & 11.00 \\ & 14.00 \end{aligned}$ |

## FILTERING AND COUPLING CHOKES

20 C 58 is speech-frequency tuned audio choke pedance coupling choke. Others for both input for impedance coupling. 20 C 50 is plate im-
and smoothing use. *Inductance at rated ma

| Stock No. | Mfr's | Fig. | *Hys. | Rated Ma | Resis. Ohms | Test Volts | Mtg. Ctrs. | Wt., Lbs. | NET EACH |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | Type |  |  |  |  |  |  |  | 1-9 | 10-24 | 25-49 | 50-Up |
| 63 G 725 | 20 C 50 | BAH | 350 | 5 | 5500 | 2500 | 27/8" | 11/2 | 3.50 | 3.14 | 2.83 | 2.68 |
| 63 G 726 | 20 C 51 | BAH | 35 | 15 | 1850 | 2500 | $2^{\prime \prime}$ | 3/4 | 1.38 | 1.24 | 1.12 | 1.06 |
| 63 G 727 | 20 C 52 | BAH | 8 | 40 | 450 | 2500 | $2^{\prime \prime}$ | $3 / 4$ | 1.23 | 1.11 | . 99 | . 94 |
| 63 G 728 | 20 C 53 | BAH | 12 | 80 | 375 | 2500 | 27/8" | 11/2 | 2.06 | 1.85 | 1.67 | 1.58 |
| 63G729 | 20 C 54 | GGV | 8 | 150 | 145 | 2700 | $13 / 4 \times 2^{\prime \prime}$ | 3 | 4.08 | 3.67 | 3.30 | 3.13 |
| 63 G 730 | $20 \mathrm{C55}$ | GGV | 6 | 200 | 75 | 2700 | $2 \times 21 /{ }^{\prime \prime}$ | $33 / 4$ | 5.09 | 4.58 | 4.11 | 3.89 |
| 63 G 731 | $20 \mathrm{C56}$ | GGV | 8 | 250 | 60 | 3500 | $3 \times 21 / 2^{\prime \prime}$ | 63/4 | 8.26 | 7.44 | 6.69 | 6.33 |
| 63 G 733 | 20 C 58 | BAH | $3 / 4$ | 10 | 30 | 1100 | $23 / 8^{\prime \prime}{ }^{\prime \prime}$ | 3/4 | 2.35 | 2.12 | 1.90 | 1.80 |
| 63 G 738 | $26 \mathrm{C40}$ | BAH | 1.5 | 10 | 95 | 2500 | $13 / 4{ }^{\prime \prime}$ | $1 / 2$ | 1.29 | 1.17 | 1.95 | . 00 |

## CONTROL TRANSFORMERS

Fig. BHV, *except not illustrated. Two-section operate from secondary windings permit series or parallel either 115 volts or 230 volts. $50-60$ cycle AC.

| Stock No. | Mfr's Type | Secondary |  | Size | Mtg. Ctr. | Wt., Lbs. | NET EACH |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  | Parallel | Series |  |  |  | 1-9 | 10-24 | 25-49 | 50-Up |
| 63G179 | 23 V 50 | 6V.@2A | 12V.@1A | $23 / 8 \times 27 / 8 \times 2^{\prime \prime}$ | $23 / 8^{\prime \prime}$ | 3/4 | 3.53 | 3.18 | 2.86 | 0 |
| 63 G 180 | 23 V 51 | 6V.@4A | 12V.@2A | $35 / 8 \times 33 / 8 \times 21 / 4 "$ | 27/8" | $11 / 2$ | 5.29 | 4.76 | 4.29 | 4.05 |
| 63 G 181 | 23 V 52 | 12V.@4A | 24V.@2A | $31 / 8 \times 35 / 8 \times 23 / 8^{\prime \prime}$ | 31/8" | 2 | 7.05 | 6.35 | 5.55 | 5.40 |
| 63 G 182 | 23V53* | 12V.@8A | 24V.@4A | $33 / 8 \times 27 / 8 \times 3^{\prime \prime}$ | $23 / 8 \times 21 / 4^{\prime \prime}$ | $31 / 2$ | 9.41 | 8.46 | 7.62 | 7.20 |
| 63 Gl 183 | 23V54* | 12V.@16A | 24V.@8A | $41 / 8 \times 31 / 2 \times 31 / 2^{\prime \prime}$ | 27/8 $\times 23 / 4{ }^{\prime \prime}$ | 8 | 12.94 | 11.64 | 10.48 | 9.90 |

## UNIVERSAL TV POWER TRANSFORMER

A GF Type 26 R00. Extremely versatile, hightransformers in over 2000 popular for power transformers in over 2000 popular television helps keep down inventory. Multi-tapped 295 ma secondary. Primary: 117 volts $50-60 \mathrm{cycl}$ AC. Tapped high-voltage secondary. 840 volt center-tapped, 720 volts center-tapped, 600 volts center-tapped. Filament windings: One 5 v . @ 3 amps , one 5 v . @ 6 amps , and four 6.3-volt @ 3 amperes. Dual electrostatic shielding. $33 / 4 \times 41 / 2 \times 47 / 8^{\prime \prime}$. Shpg. wt.; 11 lbs. 17.96 63 G 820 . 1 to 9 , NET EACHH.......I7. 96 10 to 24, EACH. 16.17 50-Up, EACH.
4.55
13.75

## PLATE TRANSFORMERS

GGV Primaries for 115 volts, 50-60 cycles. amplifier and modulator power supplies. All amplifier and modulator powe
units listed are static shielded.

Type 21P87. Has tapped primary to provide choice of two output voltages. Delivers either 1670 volts CT or 1312 volts CT at 220 ma , depending upon primary tap used. Secondary centers, $33 / 8 \times 3^{\prime \prime}$. Overall size: $45 / 8 \times 37 / 8 \times 41 / 2^{\prime \prime}$.
Shpg. wt., 10 lbs. 10 to 24, EACH. 25 to 49, EACH
$50-U$ p, EACH
1.45
10.31
.9 .74

Type 21 P89. Secondary, 550-0-550 volts @ 175 ma. Mounting centers, $3 \times 21 / 2^{\prime \prime}$. Size, $37 / 8 \times 31 / 4 \times$
63 G 658. 1 to 9 , $\mathbf{N E T}$ EACH.
9.82

10 to 24, EACH.
50 to 49 , EACH.
............
.8 .84
.7 .95
7.51
Type 21 P93. For two full-wave rectifier systems, or one rectifier at combined current output. Secondary, $500-0-500$ volts @ 125 ma or

10 to 24, EACH.
17.62

25 to 49, EACH.
$50-$ U $_{\text {p, EACH... }}$
15.86
14.98

## DUAL TONE CONTROL COMPONENTS

Type 20C74. Reactor. For tone compensating systems to boost or attenuate bass or treble R1068X listed below Hum bucking with tance, 22 hys. DC resistance, 220 ohms. $2 \times 19 / 16^{\prime \prime}$ dia. Shpg. wt., 12 oz. $\quad$. 734 . 1 to 9 , NET EACH....... 7.94 10 to 24, EACH. . . . . . . . . . . . . . . . . . . . . . . 7.14 25 to 49, EACH
$50-U_{p}$, EACH..
6.43
6.07

Type R1068X. Dual Control. Use with reactor above. Size, $17 / 16^{\prime \prime}$ dia. x $13 / 4^{\prime \prime}$ overall length. Shaft, $3 / 8^{\prime \prime}$ long. With hardware and diagram. Two required for complete bass-treble system 63 G 165.1 to 9 , NET EACH
4.12

10 to 24, EACH.
25 to 49, EACH.
3.70

25 to 49, EACH.
50 -Up, EACH...
TUBE-TO-LINE TRANSFORMERS
Low-level tube-to-line transformers for a wide variety of applications. Both units listed below single or push-pull plates. Frequency response, 60-15,000 cps.
F GV Type 22590. Tube-to-line audio output FGV transformer. Primary, 20,000 ohms cen600 ohms. Mounting center, $23 / 8^{\prime \prime}$. Overall size,

10 to 24, EACH.
25 to 49 , EACH.
3.39
.3 .05

25 to 49, EACH
$50-\mathrm{U}_{\mathrm{p}}, \mathrm{EACH}$.
2.88

B AH Type 22S91. Tube-to-line audio output ter-tapped @ 25 ma . Secondary, $125,200,500$ 600 ohms. Mounting center, 27/8' O Overall size $2 \times 31 / 8 \times 2^{\prime \prime}$. Shpg. wt., 1 lb.
63 G 61 i. 1 to 9 , NET
63 G 61 I . 1 to 9 , NET EACH.
10 to 24 , EACH.............
25 to 49, EACH.
$50-U p$, EACH...
3.23
2.91
2.62

## TRANSISTOR TRANSFORMERS

［BAH Sigh－quality transistor transformers de－ output applications．These transformers need not necessarily be used at their stated imped－ ance－they may be used efficiently at any practical impedance，provided that the ratio of the windings is maintained．All leads are EIA color－coded．＊Figure BAH $300 \mathrm{mw}, 13 / 8^{\prime \prime}$ mounting centers；all other types， 150 mw （not illus．），have mttg．tabs on $13 / 6^{\prime \prime}$ centers．Appli－
cations：A－input；B－bridging；D－driver； cations：A－input；B－bridging；

| Stock No． | $\begin{gathered} \text { Mfr's } \\ \text { Type } \end{gathered}$ | $\begin{aligned} & \text { Turns } \\ & \text { Ratio } \end{aligned}$ | Winding |  | Appli－ cation |
| :---: | :---: | :---: | :---: | :---: | :---: |
| 63 G 228 |  | 1．00：1 | 500 CT | 500 CT | B，D，IS |
| 229 | TR－2 | 1．23：1 | 5000 CT | 7500 CT |  |
| 63 G 230 | TR－3 | 1．41：1 | 5000 CT | 10000 CT |  |
| 3 G 232 | TR－5 | 1．81：1 | 490 CT | 150 CT | D， |
| 63 G 234 | TR－7 | 2．24：1 | 10000 | 2000 CT |  |
|  | R－8 | 2．45：1 | 48 CT | 8 or 4 |  |
| － | TR－10 | 3．00：1 | 5000 CT | 45000 | A，IS |
| 63 G 239 | TR－12 | 3．16：1 | 100 | 10 C |  |
|  | TR－13 | 4．00：1 | 5000 | 80000 |  |
|  | TR－14 | 4.0 | 20000 | 1200 | A，IS |
|  |  |  |  |  |  |
| 63 G 24463 G 24663 G 24863 G 249 | TR－17 | 5．00：1 | 20000 |  | A，D，IS，S |
|  | TR－19 | 6．04：1 | 400 CT | 1 |  |
|  | TR－21 | 6．33：1 | 160 CT | 8 or 4 | 0 |
|  | TR－22 | 7．07：1 | 400 CT | 8 or 4 | 0 |
| 63 G 25763 G 258 | TR－23 | 7.07 | 10000 | 200 CT | D， |
|  | TR－24 | 8．17： | 100000 | 1500 CT | A，IS |
| $\begin{aligned} & 63 \text { G } 258 \\ & 63 \text { G } 259 \\ & 63 G 260 \end{aligned}$ | TR－25 | 8．66：1 | 15000 | 200 CT |  |
|  | TR－26 | 10．0：1 | 50000 | 500 CT | A，D， 0 |
| $\begin{aligned} & 63 G 261 \\ & 63 G 262 \\ & 63 G 271 \end{aligned}$ | TR－27 | 12．5：1 | 500 | 3.2 | 0 |
|  | ＊TR－28 | 14．1：1 | 200000 | 1000 | A |
|  | ＊TR－36 | 50．0：1 | 500000 | 200 CT | A |

$\begin{array}{ll}\text { 1－9，EA．} \ldots . .3 .26 & \text { 10－24，EA．．．．．．．．2．} 24 \\ 25-49, ~ E A . . . .2 .64 ~ & 50-U p, \text { EA．．．．．．．} 2.50\end{array}$ Miniature Transistor Transformers．（Not illus．）．For circuitry with limited space．Weigh $1 / 10 \mathrm{oz} .1 / 2^{\prime \prime} x 7 / 16^{\prime \prime} \times 7 / 16^{\prime \prime}$ ．Shpg．wt．， 2 oz ．

| Stock No． | Mfr＇s Type | Turns Ratio | Impedance |  | Appli－ cation |
| :---: | :---: | :---: | :---: | :---: | :---: |
|  |  |  | Winding 1 | Winding 2 |  |
| 63 G 350 | TR－37 | 1：1 | 500 CT | 500 CT | B，D，IS |
| 63 G 351 | TR－39 | 1．24：1 | 4000 | 2600 CT | D，IS |
| 63 G 352 | TR－40 | 2．23：1 | 10000 | 2000 CT | D，IS |
| 63 G 353 | TR－41 | 3．16：1 | 500 | 50 | D， 0 |
| 63 G 354 | TR－42 | 3．16：1 | 20000 | 2000 CT | A，IS |
| 63 G 355 | TR－43 | 3．53：1 | 125 CT | 10 |  |
| 63 G 356 | TR－44 | 4．07：1 | 20000 | 1200 | A，IS |
| 63 G 357 | TR－45 | 4．46：1 | 1000 | 50 | D， 0 |
| 63 G 358 | TR－46 | 4．47：1 | 200 CT | 10 | 0 |
| a | TR－47 | 5．46：1 | 300 CT | 10 |  |
| 63 G 360 | TR－48 | 5．75：1 | 20000 | 600 | A，IS |
| 63 G 361 | TR－49 | 7．06：1 | 500 CT | 10 | 0 |
| 63 G 362 | TR－50 | 7．9：1 | 200 CT | 3.2 | 0 |
| 63 G 363 | TR－51 | 9：65：1 | 300 CT | 3.2 | 0 |
| 63 G 364 | TR－52 | 11．8：1 | 7000 | 50 | D， 0 |
| 63 G 372 | TR－53 | 12．5：1 | 500 CT | 3.2 |  |
| $\begin{aligned} & 1=9, E A \\ & 25-49, E \end{aligned}$ |  | $\begin{aligned} & 08 \\ & .31 \end{aligned}$ | $10-24$, $50-U \mathrm{p}$, | A． | $3.13$ |

TRANSISTOR POWER OUTPUTS
For auto radios，audio amplifiers，etc．${ }^{*}$ For
parallel 3.2 and 8 ohm voice coils．Wt．， 1 lb.

| Stock <br> No． | Mfr＇s <br> Type | Fig． | Impedance |  | Size |
| :---: | :---: | :---: | :---: | :---: | :---: |
| Pri． | Sec． | Size |  |  |  |

63 G 373 TR－57＊$\overline{\text { BAH }} \frac{32 \mathrm{CT}}{1.6 / 4} \frac{2 \times 35 / 16 \times 17 / 8^{\prime \prime}}{}$

 | 63 G 375 | TR－60 | BAV | 48 CT | $3.2 / 8 / 16$ | $25 / 16 \times 27 / 8 \times 2^{\prime \prime}$ |
| :--- | :--- | :--- | :--- | :--- | :--- |
| 63 G 376 | TR－63 | BAV | 100 CT | $3.2 / 8 / 16 \mid 25 / 16 \times 27 / 8 \times 2^{\prime \prime}$ |  | $\begin{array}{ll}\text { 1－9，EA．．．．．．．2．26 } & \text { 10－24，EA．．．．．．．．2．94 } \\ 25-49 \text { ，EA．．．．} 2.64 & 50-U p, \text { EA．．．．．．．} 2.50\end{array}$

## DRIVER TRANSISTOR TRANSFORMER

For driving power transistors－Sylvania：
2N68，2N95，2N141；CBS：2N255，2N256． ＊Power output．Shpg．wt．， $1 / 2 \mathrm{lb}$ ．

| 63 G 814 | $* T R-61$ | BAV | 48 CT | $3.2 / 8 / 16$ | $13 / 4 \times 2 \times 1 \frac{1}{4} 4^{\prime \prime}$ |
| :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- |
| 63 G 377 | TR－64 | BAH | 100 | 100 CT | $11 / \times 21 / 1^{\prime \prime}$ | 63 G 377 TR－64 BAH $100 \quad 100 \mathrm{CT} \quad 11 / \times 2 \times 1 / 8 \times 1^{\prime \prime}$




## HI－FI TRANSISTOR TRANSFORMER

Model TR－67．（Notillus．）．Encased，wide－range output transformer．Response：$\cdot 1 / 2 \mathrm{db}$ from $20-$
20,000 cps．$I m p$ ．（ohms）：Pri．， 125 CT ；Sec．， 8. Pri．MADC 50 ．Power： $1-5$ watts．Mtg．ctrs．， $13 / 16^{\prime \prime} .19 / 16 \times 13 / 16 \times 13 / 16^{\prime \prime}$ ．Shpg．wt．， 11 lb
$\begin{array}{ll}63 \text { G 380．1－9，EA．．4．91 } & 10 \mathrm{~J}-24, \text { EA．．．4．42 } \\ 25-49 \text { ，EA．．．．．．．．．3．98 } & 50-\text { Up，EA．}\end{array}$
$\begin{array}{ll}\text { A wide selection of high－quality audio output } & \text { single－ended outputs and for push－pull ampli－} \\ \text { transformers for replacement purposes as well } \\ \text { fiers in a variety of impedances and wattage }\end{array}$ as new equipment use．Listing includes types for $\quad \begin{aligned} & \text { fiers in a variety of impedance } \\ & \text { ratings．Av．shpg．wt．，} 21 / 2 \mathrm{lbs} .\end{aligned}$

| Stock No． | Type | Fig． | Primary | Secondary | Watts | Ctrs． | EACH | $\begin{aligned} & 10-24 ; \\ & \text { EACH } \end{aligned}$ | $\begin{aligned} & 25-49, \\ & \text { EACH } \end{aligned}$ | 50-Up, EACH' |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 63G775 | 22S45 | BAH | 1500－3000 | 3．2－4 | 5 | $2^{\prime \prime}$ | 2.44 | 2.20 | 1.98 | 1.87 |
| 63 G 776 | $22 S 46$ | BAH | 2000－3000 | 3．2－4 | 5 | $2^{\prime \prime}$ | 2.76 | 2.49 | 2.24 | 2.11 |
| 63 G 777 | $22 S 47$ | BAH | 6000－7000 CT | 3．2－4 | 5 | $2^{\prime \prime}$ | 2.62 | 2.35 | 2.20 | 2.00 |
| 63 G 778 | 22S48 | BAH | 12，000－16，000 CT | 3．2－4 | 5 | $2^{\prime \prime}$ | 1.94 | 1.74 | 1.57 | 1.49 |
| 63 G 779 | 22S56 | BAH | 8000／10，000 CT | 3．2－4，6－8 | 10 | 27／8＂ | 3.26 | 2.94 | 2.64 | 2.50 |
| 63 G 780 | 22S58 | BAH | 5，000／7，000 CT | 3．2－4，6－8 | 8 | 27／8 ${ }^{8}$ | 2.20 | 1.98 | 1.79 | 1.69 |
| 63 G 781 | 22 S 60 | BAH | 2500／4000 CT | 3．2－4，6－8 | 10 | 27／8＊ | 3.09 | 2.77 | 2.50 | 2.36 |
| 63 G 782 | 22S62 | BHH | Univ．Plate | 0．1－30 | 8 |  | 3.20 | 2.88 | 2.60 | 2.45 |
| 63 G 783 | 22 S 64 | GGV | 10，000 CT | $\begin{aligned} & 3.2-4,6-8, \\ & 15,250,500 \\ & \hline \end{aligned}$ | 25 | $13 / 4 \times 2$ | 5.88 | 5.29 | 4.76 | 4.50 |
| 63G784 | 22S66 | GGV | 8000 CT | 3．2－4，6－8 |  |  |  |  |  |  |
|  |  |  |  | 15，250， 500 | 25 | $13 / 4 \times 2$ | 6.14 | 5.53 | 4.98 | 4.70 |
| 63 G 785 | 22S68 | GGV | 6500 CT | 3．2－4，6－8 |  |  |  |  |  |  |
|  |  |  |  | 15，250， 500 | 25 | $13 / 4 \times 2$ | 6.47 | 5.82 | 5.23 | 4.95 |
| 63 G 786 | 22S70 | GGV | 5000 CT | $\begin{aligned} & 3.2-4,6-8 \\ & 15,250,500 \end{aligned}$ | 25 | $13 / 4 \times 2$ | 5.23 | 4.71 | 4.24 | 4.00 |
| 63G790 | 22S78 | GGV | 3300 CT | $3.2-4,6-8$ |  |  |  |  |  |  |
|  |  |  |  | $15,250,500$ | 60 | $21 / 2 \times 21 / 2^{\prime \prime}$ | 9.82 | 8.84 | 7.80 | 7.51 |
| 63 G 788 | $22 \mathrm{S74}$ | BHH | Universal CT | 1 to 30 | 25 | $35 / 8^{*}$ | 5.44 | 4.89 | 4.32 | 4.16 |
| 63 G 796 | 22586 | BAH | Universal CT | 3．2－4 6－8 | 3 | $2^{\prime \prime}$ | 2.26 | 2.04 | 1.99 | 1.73 |
| 63 G 797 | 22S87 | BAH | Universal CT | 3．2－4，6－8 | 6 | 23／8＊ | 2.94 | 2.65 | 2.38 | 2.25 |
| 63 G 798 | 22S88 | BAH | Universal CT | 3．2－4，6－8 | 8 | 27／8＊ | 2.94 | 2.65 | 2.38 | 2.25 |
| 63G759 | 22 S 93 | GGV | 9500 CT | 3．2－4，6－8 |  |  |  |  |  |  |
|  |  |  |  | $15-16$ | 10 | $13 / 4 \times 2$ | 7.03 | 6.32 | 5.69 | 5.38 |
| 63 G 774 | 22S95 | GGV | $\begin{aligned} & 5,000 \mathrm{CT} \\ & 3,000 \mathrm{CT} \end{aligned}$ | $\begin{aligned} & 3.2-4,6-8, \\ & 15-16 \end{aligned}$ | 15 | $13 / 4 \times 2$ | 7.70 | 6.93 | 6.24 | 5.89 |
|  |  |  |  |  | 15 | 1／4×2 | 7.70 | 6.93 | 6.24 | 5.89 |
| 63 G 799 | 22S97 | GGV | 6，000 CT | $\begin{aligned} & 3.2-4,6-8 \\ & 15,250,500 \end{aligned}$ | 25 | $13 / 4 \times 2^{0}$ | 7.32 | 6.59 | 5.93 | 5.60 |
| 63 G 772 | 24S60 | BHH | 4000／7000／8000／ |  |  |  |  |  |  |  |
|  |  |  | 10，000／14，000 CT | 0．1－30 | 4 | $2^{\prime \prime}$ | 1.88 | 1.70 | 1.52 | 1.44 |
| 63G773 | 24S61 | BHH | $\begin{aligned} & 4000 / 7000 / 8000 / \\ & 10,000 / 14,000 \mathrm{CT} \end{aligned}$ | 0．1－30 | 8 | $23 / 8^{\prime \prime}$ | 2.20 | 1.98 | 1.78 | 1.68 |

## FILAMENT TRANSFORMERS

Primaries for 117 volt $50-60$ cycle AC，except $\quad 10,000$ volt，21F26 8500 volt， 21 F 273000 volt 26F65 6.3 volt， 21 F26 115－230 volt．All have 26 F 655000 volt．＊Single secondary with taps 2500 volt insulation，except 21 F 02 and 21 F 05 †Tapped primary

| Stock No． | Type | Fig． | Volts | Amps | Ctrs． | Lbs． | 1－9，EA． | 10－24，EA． | 25－49，EA． | 50－Up，EA． |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 63 G 665 | 21F00 | BAV | 2.5 CT | 5 | 23／8＂ | 1 | 2.35 | 2.12 | 1.90 | 1.80 |
| 63 G 666 | $21 F 01$ | BAV | 2.5 CT | 10 | 23／4 ${ }^{\text {a }}$ | 11／2 | 4.12 | 3.70 | 3.33 | 3.15 |
| 63 G 667 | $21 F 02$ | CAV | 2．5 CT | 10 | $2 \times 13 / 4$ | 23／4 | 4.62 | 4.16 | 3.74 | 3.53 |
| 63 G 668 | $21 F 03$ | BAV | 5 CT | 3 | 23／8＂ | $11 / 2$ | 3.26 | 2.94 | 2.64 | 2.50 |
| 63 G 669 | $21 F 04$ | CAV | 5 CT | 8 | $2 \times 13 / 4^{\prime \prime}$ | 3 | 5.56 | 5.00 | 4.50 | 4.25 |
| 63 G 681 | $21 F 05$ | CAV | 5 CT | 3 | $2 \times 13 / 4^{\prime \prime}$ | 21／2 | 5.70 | 5.14 | 4.62 | 4.36 |
| 63 G 670 | $21 F 06$ | CAV | 5 CT | 13 | $2 \times 2$＂ | 31／4 | 4.82 | 4.34 | 3.91 | 3.69 |
| 63 G 671 | $21 F 07$ | CAV | 5 CT | 21 | $21 / 4 \times 21 / 2^{\prime \prime}$ | $53 / 4$ | 9.14 | 8.23 | 7.41 | 7.00 |
| 63 G 672 | 21708 | BAV | 6.3 CT | 1 | $2^{\prime \prime}$ | I | 1.88 | 1.70 | 1.52 | 1.44 |
| 63 G 604 | 21F09 | BAH | 6.3 CT | 1.2 | 23／8＂ | 1 | 1.88 | 1.70 | 1.52 | 1.44 |
| 63 G 673 | $21 F 10$ | BAH | 6.3 CT | 3 | 23／4＂ | 1 | 3.03 | 2.73 | 2.45 | 2.32 |
| 63 G 674 | 21511 | CAV | 6．3 CT | 6 | $13 / 4 \times 2^{\prime \prime}$ | $23 / 4$ | 4.06 | 3.66 | 3.29 | 3.10 |
| 63 G 675 | $21 F 12$ | CAV | 6.3 CT | 10 | $2 \times 2$＂ | $31 / 4$ | 5.56 | 5.00 | 4.50 | 4.25 |
| 63 G 676 | $21 F 14$ | BAH | ＊6．3／5／2．5 | 2.5 | 27／8＂ | $13 / 4$ | 3.59 | 3.22 | 2.90 | 2.75 |
| 63 G 677 | $21 F 15$ | BAV | 7.5 CT | 4 | 27／8＂ | 2 | 4.09 | 3.67 | 3.31 | 3.13 |
| 63G678 | 21 F16 | CAV | 7.5 CT | 8 | $2 \times 2$＂ | $31 / 4$ | 5.88 | 5.29 | 4.76 | 4.50 |
| 63 G 682 | 21 F 17 | CAV | 7．5 CT | 12 | $21 / 4 \times 21 / 4^{\prime \prime}$ | 5 | 7.50 | 6.74 | 6.07 | 5.74 |
| 63 G 679 | $21 F 18$ | CAV | 10 CT | 5 | $13 / 4 \times 2^{\prime \prime}$ | $23 / 4$ | 5.88 | 5.29 | 4.76 | 4.50 |
| 63 G 680 | $21 F 19$ | CAV | $\dagger 10$ or 11 CT | 12 or 11 | $21 / 4 \times 21 / 2^{\prime \prime}$ | 6 | 9.61 | 8.65 | 7.79 | 7.36 |
| 63 G 605 | $21 F 26$ |  | 7.5 CT | 51 | $35 / 8 \times 41 / 16^{\prime \prime}$ | 15 | 25.96 | 23.36 | 21.03 | 19.87 |
|  | 21 F 27 | BAH | 26．5 CT | ． 6 | $27 /{ }^{\prime \prime}$ | $11 / 2$ | 3.26 | 2.94 | 2.64 | 2.50 |
| 63 G 746 | 26 F 60 | BAH | 6．3 CT | 1.2 | 27／8＂ | 11／4 | 2.44 | 2.20 | 1.98 | 1.87 |
| 63 G 607 | 26 F 65 | BAH | 6．3 CT | 1.2 | 27／8＂ | $11 / 2$ | 2.68 | 2.41 | 2.17 | 2.05 |
| 63 G 608 | 26F66 | LAV | 5 CT | 15 | $2 \times 21 / 2^{\prime \prime}$ | $31 / 2$ | 6.85 | 6.16 | 5.55 | 5.24 |

## AUDIO INPUT TRANSFORMERS

All are electrostatically shielded except 20A10，Type 20A01 has a frequency response of 60 20 A 01 and 20A04．Types 20 A 00 and 20A04

7500 cps and highly effective hum－bucking have a frequency response of $250-3500$ cps；construction．Av．shpg．wt．， 1 1b．

| Stock |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| No． |

AUDIO INTERSTAGE TRANSFORMERS
Primary current， 8 ma ．Type 20A25 has hum－also applicable for high impedance output mix－ bucking construction．Types 20A24 and 20A25 ing and can be connected as a driver with 2：1 have split secondary winding．Type 20A29 is ratio．Av．shpg．wt．， $11 / 4 \mathrm{lbs}$ ．

| Stock No． | Mfr＇s Type | Fig． | Ratio | Application | $\begin{aligned} & \text { Mtg. } \\ & \text { Ctrs. } \end{aligned}$ | $\begin{aligned} & 1-9, \\ & \text { EACH } \end{aligned}$ | $\begin{aligned} & \hline 10-24, \\ & \text { EACH } \end{aligned}$ | $\begin{aligned} & 25-49, \\ & \text { EACH } \end{aligned}$ | $\begin{aligned} & \text { 50-Up, } \\ & \text { EACH } \end{aligned}$ |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| $63 \mathrm{G750}$ | 20A16 | BAH | 1：2 | Sgl．plate to sgl．or PP grids． | $2^{\prime \prime}$ | 1.76 | 1.59 | 1.43 | 1.35 |
| 63 G 751 | 20 A17 | RAV | 1：2 | Sgl．plate to sgl．or PP grids． | $13 / 8{ }^{\prime \prime}$ | 5.23 | 4.71 | 4.24 | 4.00 |
| 63 G 752 | 20A19 | BAH | 1：3 | Plates to grids，sgl．or PP． | 23／8＂ | 1.94 | 1.74 | 1.57 | 1.48 |
| 63 G 753 | 20A22 | BAH | 1：3 | Sgl．plate to sgl．or PP grids． | 27／8＂ | 2.47 | 2.22 | 2.00 | 1.89 |
| 63 G 754 | 20A23 | FGV | 1：3 | Sgl．plate to sgl．or PP grids． | 23／8＂ | 4.90 | 4.41 | 3.98 | 3.76 |
| 63 G 755 | 20A24 | FGV | 1：3 | Plates to grids，sgl．or PP． | 23／8＂ | 4.00 | 3.60 | 3.23 | 3.06 |
| 63 G 756 | 20A25 | RTV | 1：1．41 | Plates to grids，sgl．or PP． | $13 / 8^{\prime \prime}$ | 8.03 | 7.22 | 6.50 | 6.14 |
| 63 G 748 | 20A29 | BAV | 1：1：1：1 | Univ．car radio interstage． | $2^{\prime \prime}$ | 2.35 | 2.12 | 1.91 | 1.80 |

## RF Chokes - Transformers and Coils



## POPULAR RF CHOKES FOR EVERY PURPOSE

Chokes below may be used in ${ }^{\top}$ transmitters, receivers, test equipment, etc. 71 H 160 is recommended for transmitters with plate supply of up to 3,000 volts modulated or 4,000 volts unmodulated. It may be used on all bands from 80 through 10 meters. R-33 series chokes are two-section; R-50 series chokes are 3 and 4 -section. 71 H 149 choke is hermetically sealed in glass. National suffix " $U$ " following type number indicates re-

| Stock No. | Mfr. | Type | Fig. | $\ddagger$ Mh | Ma | Ohms | NET |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 60 H | J.W. Miller | 4532 | J | 1. | 200 | 21 | . 53 |
| 71 H 150 | National | R-100 | C | 2. | 125 | 50 | . 40 |
| 71 H 188 | National | R-100 | C | 10 | 75 | 50 | . 40 |
| 71 <br> 71 | National | R-100 | C | 1 | 300 | 10 | . 44 |
| 71 H 1518 | National | R-100U | D | 2.5 | 125 | 50 | 48 |
| 7141868 | National | R-100U | D |  | 75 | 50 | . 48 |
| 71 H 187 | National | R-100U | D | 10 | 75 | 50 | . 48 |
| 71 <br> 71 <br> 1 | National | R-300S | $\underset{\text { E }}{ }$ | 2.5 | 125 | 50 | . 48 |
| 71 H 1788 | National | R-100S | E | 5 | 75 | 50 | . 48 |
| 71 H 1798 | National | R-100S | E | 10 | 75 | 50 | . 48 |
| 71 H 628 | National | R-300S | $\stackrel{\text { E }}{\mathbf{E}}$ | ${ }_{2} 5$ | 300 300 | 10 | 48 |
| 71 $H 64$  <br> 71 $H$ 59 | National National | ${ }_{\text {R-33 }}^{\text {R-300ST }}$ | $\underset{\mathbf{G}}{\mathbf{F}}$ | 10** | 300 100 | 10 | . 46 |
| 71 H 15 | Nation | R-33 | G | 50** | 100 | 4. | . 40 |
| 71 H163 | National | R-33 | G | 100** | 100 | 5.5 | . 40 |
| 71 H 148 | National | R-33 | G | 12** | 100 | 06 | . 40 |
| 71 <br> 71 <br> 18198 | National | R-33 $\mathrm{R}-50$ | ${ }_{\mathbf{G}}$ | 750** | 100 100 | ${ }_{41.5}^{17}$ | . 40 |
| 71 H 250 | Nationa | R-50 | A | 5 | 100 | 16 | . 40 |
| 71 H 251 | National | R-50 | A | 1 | 100 | 22 | . 40 |
| 71 H 252 | National | R-50-I | A | 10 | 100 | 30 | . 6 |
| 71 H 253 | National | R-60 | B | 2** | 1700 |  | . 40 |
| $71 H 156$ | National | R-154U | M | 1 | 600 | 6 | . 6 |
| 71 H160 | National | R-1 | R |  | 800 | 7 | 3.56 |
| $60 \mathrm{H} 027+$ | Meissner | 19-5588 | $\stackrel{N}{N}$ | 30.0 | 30 | 77 165 | . 88 |
| $60 \mathrm{HO31}$ | Meissner | 19-5594 | N | 30.0 | 16 | 165 | . 88 |
| 60 H $032+$ | Meissner | 19-5596 | N | 80.0 | 16 | 342 | 1.18 |
| 60 H 010 | Meissner | 19-1994 | P | 2.5 | 20 |  | . 53 |
| 60 H 011 | Meissner | 19-4551 | P | 5.5 | 20 | 57.5 | . 53 |
| $60 \mathrm{HOl4}$ | Meissner |  | $\stackrel{\mathrm{P}}{\mathrm{P}}$ | 16.0 30.0 | 20 | 108 | . 7 |
| $60 \mathrm{HO15}$ 60 HOl | Meissner | $19-2330$ $19-3247$ | P | 10.0 60.0 | 20 | 159 <br> 258 | . 76 |
| 60 H017 | Meissner | 19-2709 | P | 80.0 | 16 |  |  |
| 60 H 040* | M eissner | 19-6834 | P | 2.5 | 20 | 22.5 | . 68 |
| 60 H 042* | Meissner | 19-6842 | P | 30.0 | 20 | 114 | 1.00 |
| 60 H 045* | M eissner | 19-6848 | P | 125.0 | 75 |  | . 62 |
| 72 H 040 | Millen | 34100 34101 | D | 2.5 | 250 | 52.5 51.5 | . 48 |

movable standoff insulator at one end. National chokes wound on isolantite forms; Meissner, on specially treated dowels, except *iron-core type. $\dagger$ Shielded. The four highest frequency Ohmite chokes are wound on low power factor plastic cores; the other three units are wound on steatite tubes. §Mounted on standoff insulator for vertical mounting. $\ddagger$ Millihenries. **Microhenries. Av. shpg. wt., 2 oz.

| Stock No. | Mfr. | Type | Fig. | $\ddagger$ M h | Ma | Ohms | NET |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 72 H067 | Millen | 34103 | C | 2.5 | 250 | 52.5 | . 42 |
| 72 H 076 | Millen | 34106 | J | 1 | 300 | 13.5 | . 42 |
| 72 H 134 | Millen | 34300-100 | K | 100** | 250 | 6.7 | . 42 |
| 72 H 135 | Millen | 34300-250 | K | 250** | 250 | 11 | . 42 |
| 72 H 186 | Millen | 34300-25 | K | 25** | 250 | 3.1 | . 42 |
| 72 H 187 | Millen | 34300-50 | K | 50** | 250 | 4.7 | . 42 |
| 72 H 188 | Millen | 34300-300 | K | 300** | 250 | 10.1 | . 42 |
| 72 H 189 | Millen | 34300-500 | G | 500** | 250 | 19.8 | . 42 |
| 72 H 190 | Millen | 34300-1000 | G | 1000** | 250 | 19 | . 42 |
| 72 H 192 | Millen | 34225 |  | 25 | 75 | 159 | . 84 |
| 72 H 193 | Millen | 34280 |  | 80 | 75 | 336 | . 96 |
| 72 H 194 | Millen | J300-100 | B | 100** | 50 | 4.0 | . 42 |
| 72 н 195 | Millen | J300-250 | B | 250** | 50 | 6.2 | . 42 |
| 72 H 196 | Millen | J300-500 | B | 500** | 50 | 12.8 | . 42 |
| 72 H 197 | Millen | J300-1000 | B | 1000** | 50 | 20.3 | . 42 |
| 72 H 198 | Millen | J300-2500 | B | 2500** | 50 | 37.2 | . 42 |
| 60 H 417 | $\mathbf{P} \&{ }^{\text {H }}$ | 160-6 | L | 162** | 2500 |  | 3.50 |
| 60 H 406 | Bud | CH-926S | S | 2.5 | 200 | 25 | . 60 |
| 60 H 407 | Bud | CH-927S | S | 5.5 | 200 | 32 | . 60 |
| 60 H 408 | Bud | CH-928S | S | 10 | 200 | 49 | . 60 |
| 60 H 409 | Bud | CH-929S | S | 2.5 | 400 | 11 | . 60 |
| 60 H 410 | Bud | CH-1222 | T | 2.5 | 200 | 22 | . 60 |
| 60 H 411 | Bud | CH-1224 | T | 5.5 | 200 | 33 | . 60 |
| 60 H 412 | Bud | CH-1225 | T | 8 | 200 | 40 | . 60 |
| 60 H413 | Bud | CH-1227 | T | 16 | 200 | 59 | . 60 |
| 60 H 414 | Bud | CH-1228 | T | 30 | 190 | 88 | . 68 |
| 60 H 415 | Bud | CH-1229 | T | 60 | 180 | 130 | . 75 |
| 60 H 416 | Bud | CH-1230 | T | 80 | 175 | 160 | . 83 |
| Stock No. | Mfr. | Type | Fig. | ** $\mathbf{4}$ | Ma | Mc | NET |
| 74 M 410 | Ohmite | Z-460 | H | 0.2 | 1000 | 320-520 | 29 |
| 74 M 41 I | Ohmite | Z-235 | H | 0.84 | 1000 | 160-350 | . 29 |
| 74 M 412 | Ohmite | Z-144 | H | 1.8 | 1000 | 80-200 | . 29 |
| 74 M 413 | Ohmite | Z-50 | H | 7.0 | 1000 | 35-110 | . 29 |
| 74 M 414 | Ohmite | Z-28 |  | 21 | 600 | 20-60 | 47 |
| 74 M 415 | Ohmite | Z-14 |  | 44 | 600 | 7-35 | . 53 |
| 74 M 416 | Ohmite | Z-7 |  | 84 | 1000 | 3-20 | 1.21 |
| 71 H 296 | National | B20407-1 |  | . 1 | 2000 | 30 | 30 |
| 71 H 297 | National | B20407-2 |  | . 18 | 2000 | 30 | . 38 |
| 71 H 298 | National | B20407-3 |  | . 27 | 2000 | 30 | . 48 |
| 71 H 299 | National | B20407-4 |  | . 36 | 2000 | 30 | . 59 |



## THORDARSON-MEISSNER TRANSFORMERS

All Thordarson transformers are conservatively rated and may be depended upon to meet specifications shown. Each unit is made under rigorous control and final tests are made at full oad under actual operating conditions. Operating reliability methods for maximum dependability.


## UNIVERSAL LINE-TO-VOICE COIL

BHH 24S21, 24 S 22 and 24 S 23 are fig. TAV; others BHH. Secondary operation. $\dagger$ For 25 v . operation. §Autoformer. $\ddagger$ Also has 39 ohm pri. tap.

|  | Mfr's | Pr | Sec. | Watts | Ctrs | Wt., | NET EACH |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 0. | Type | Imp. | p. | Watts | Ctrs. | Lbs. | 1-9 | 10-24 | 25-49 | 0-U |
| 63 G | 22580 | 500,600 |  | 8 | 31/8" | 11/2 | 3.91 | 3.52 | 3.17 | 2.99 |
| 63 G 792 | 22882 |  |  | 25 | 35\%" | 21/2 | 3.53 | 3.18 | 2.86 |  |
| 63 G 793 | 22583 | 2000/1500/ | 3.2, | 15 | 31/7", | 21/2 | 3.91 | 3.52 | 3. | 2. |
| 63 G 794 | 22584 | 1000/500 | 8, 16 | 5 3 |  |  | 3.41 | 3.09 | 2.76 | 2.6 |
| 63 G 795 | 22885 |  |  | 3 | 23/8* | 3/4 | 3.76 | 3.39 | 3.05 | 2.88 |
| 63 G 744 | 24866 |  | $\overline{8.2,}$ |  |  |  |  |  |  |  |
| 63 G 745 | 24S62* | $\begin{aligned} & 1000,500 \\ & 3000,2500, \end{aligned}$ | $8$ | 10 | $2{ }^{\prime \prime}$ | 1 | 2.73 | 2.46 | 2.21 | 2.09 |
|  |  | $\begin{aligned} & 2000,1500, \\ & 1000,500 \end{aligned}$ | $\begin{aligned} & .06, \\ & 48 \end{aligned}$ | 10 | 3' | 21/2 | 4.23 | 3.81 | 3.43 | 3.24 |
| 63 G 166 | 24S21 $\dagger$ | $\begin{aligned} & 78,156 \\ & 312.625 \end{aligned}$ | $\begin{aligned} & 4, \\ & 8, \\ & 8, \end{aligned}$ |  |  |  |  |  |  |  |
| 63G167 | 24S22† $\ddagger$ | $\int_{1250}^{312,625}$ | $\begin{array}{\|l\|} 8 \\ 16 \\ \hline \end{array}$ | ${ }_{16}^{8}$ | ${ }^{213 / 16}$ | 13/4 | $\begin{aligned} & 2.85 \\ & 4.09 \\ & \hline \end{aligned}$ | 2.56 | 3.31 | $\begin{array}{r} 2.18 \\ 3.13 \\ \hline \end{array}$ |
| 63 G168 | 24S23† | $\begin{aligned} & 62,125 \\ & 250,500 \end{aligned}$ | $\begin{array}{\|l} 4, \\ 8 \\ 8 \end{array}$ | 10 | $23 / 8{ }^{\text {\% }}$ | 1 | 3.26 | 2.94 | 2.64 | 2.50 |
| 63 G 169 | 24S24 $\dagger$ | $\begin{aligned} & 125,2500 \\ & 500,1000, \end{aligned}$ | ${ }_{8}^{4}$, | 5 | $2^{\prime \prime}$ | 1/2 | 2.12 | 1.91 | 1.72 | 1.62 |

OSCILLOSCOPE TRANSFORMER
GGV Type 22 R40. For use in oscilloscopes, CRT applications and test 2 ma . Rectifier filament 2.5 volts at 1.8 amps. Filament $1,6.3 \mathrm{volts}$ at 0.6 amps; tapped at 2.5 volts, 2.1 amps. Overall size: $35 / 3 \times 33 / 4 \times 3.13 / 16^{\prime \prime}$


## CLASS "B" AND "AB" DRIVERS

High quality driver transformers designed to provide sufficient primary inductance and proper turns ratio for the most rigid requirements. For use in modulators or high-powered audio amplifiers. *Indicates single \$lllustrated on page 174 . an be used as single or PP plates to PP grids. 8 sllustrated on page

| Stock No. | $\begin{aligned} & \text { Mfr's } \\ & \text { Type } \\ & \hline \end{aligned}$ | Fig. | Max. <br> Ma DC | $\left.\begin{array}{\|c} \text { Pri.to } \\ 1 / 2 / 2 \end{array} \right\rvert\,$ | $\begin{aligned} & \text { Mtg. } \\ & \text { Ctrs. } \end{aligned}$ | $\begin{aligned} & \text { Wt., } \\ & \text { Lbs. } \\ & \hline \end{aligned}$ | NET EACH |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  |  |  |  |  |  | 1-9 | 10-24 | 25-49 | 50-UP |
| 63 G 690 | 20D75* | BAH | 5 | 2.4:1 | $2^{\prime \prime}$ | 1 | 2.76 | 2.49 | 2.24 | 2.12 |
| 63 G 691 | 20D76* | BAH | 15 | 5.2:1 | $2^{\prime \prime}$ | 1 | 2.76 | 2.49 | 2.24 | 2.12 |
| 63 G 692 | 20177* | FGV ${ }^{\text {G }}$ | 30 | 2.5:1 | $23 / 8{ }^{\prime \prime}$ | 1 | 4.23 | 3.81 | 3.43 | 3.24 |
| 63 G 693 | 20D78 | GGV | 40 | 4.0:1 | $13 / 4 \times 2^{\prime \prime}$ | 3 | 5.97 | 5.37 | 4.83 | 4.57 |
| 63 G 694 | 20079 | FGV8 | 30 | 5.2:1 | ${ }^{23 / 8 m^{\prime \prime}}$ | 2 | 5.03 | 4.26 | 4 | 3.85 |
| 63 G 609 | 20 D 87 | BAH | 30 | 5.2:1 | 27/8" | $13 / 4$ | 4.91 | 4.42 | 3.98 | 3.76 |

## "ECONOMY SERIES" OUTPUT TRANSFORMERS

BAH A wide selection of single-ended output transformers designed as phonographs. Available in popular ratings to meet a wide variety of as phonographs. Available in popular ratings to meet a wide variety of radio servicing needs and to match popular power output tubes used in new equipment design. All have single 3.2 -ohm secondaries and are rated for Class A operation. Av. shpg. wt., $11 / 2 \mathrm{lb}$.

| Stock No. | Mfr's Type | Primary <br> Impedance | Pri. Ma | Watts | Mtg. Ctrs. | NET EACH |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  |  |  |  |  | 1-9 | 10-24 | 25-49 | 50-UP |
| 63 G 742 | 24S48 | 4,000-5,000 | 10 | 5 | 13/4" | 1.29 | 1.16 | 1.05 | . 99 |
| 63 G 743 | 24 S 49 | 7,000-8,000 | 10 | 5 | 13/4" | 1.24 | 1.08 | . 98 | . 92 |
| 63 G 768 | 24550 | 2,000 | 55 | 5 | $2^{\prime \prime}$ | 1.21 | 1.08 | . 98 | . 92 |
| 63 G 769 | 24S51 | 5,000 | 40 | 5 | $2^{\prime \prime}$ | 1.29 | 1.16 | 1.05 | . 99 |
| 63 G 770 | 24 S 52 | 7,000-10,000 | 30 | 5 | $2^{\prime \prime}$ | 1.26 | 1.14 | 1.02 | . 97 |
| 63 G 771 | 24 S 54 | 15,000-25,000 | 10 | 5 | $2^{\prime \prime}$ | 1.38 | 1.24 | 1.12 | 1.06 |

## Meissner IF's and Coils



TRANSISTOR COILS
Transistor Antenna and Oscillator Coils. For broadcast frequencies with most transistors. High $Q$ for maximum signal pick up. Wt., 3 oz

| Stock No. | Mfr's <br> Type | Fig. | Use | $\mathrm{MF}$ | Size | $\begin{aligned} & \text { NET } \\ & \text { EACH } \end{aligned}$ |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 950 | 14-9001 | A |  | 98 |  | 1.47 |
| H 951 | 14-9003 |  |  | 365 | $1 / 2 \times 7^{\prime \prime}$ | 1.47 |
| H 952 | 14-9004 | B | Os | 365 | $11 / 16 \times 7 / 8^{\prime \prime}$ | 1.18 |
| 53 | 14-9005 | A | Ant | 123 | $5 / 32 x^{3 / 4} \times 3$ | 1.18 |
| 954 | 14-9006 | C | 0 | 78 |  | 2.94 |
| H 955 | 14-9009 |  | A | 165 | $3 / 8 \times 7^{\prime \prime}$ | 1.76 |
| 5 | 14-9010 | B | Osc | 82 | $9 / 16 \times 1{ }^{1 / 81}{ }^{\prime \prime}$ | 1.18 |
| H 957 | 14-9011 |  | A | 73 |  | 1.76 |
| H 958 | 14-9012 |  | Osc | 59 | $1 / 2 x^{3 / 4}{ }^{\prime \prime}$ | 1.47 |
| H 959 | 14-9013 |  |  | 123 | $3 / 8 \times 5^{\prime \prime}$ | 1.44 |
| 960 | 14-9014 | B | 0 s | 98 | $11 / 16 \times$ | . 18 |
| H 961 | 1 | B |  | 100-36 | $3 \times 22^{\prime \prime}$ | 1.03 |

C
Transistor IF Transformers. High-qual 4 ity units for input-A; interstage-IS; and except 16-9001 ( 262 KC ). $1 / 2^{\prime \prime}$ sq. 3 oz .

| Stock No. | Type | Pri. Imp. | Sec.Imp. | Use | NET |
| :---: | :---: | :---: | :---: | :---: | :---: |
| 60H 962 | 16-9001 | 20000 | 600 | All | 2. |
| 60H963 | 16-9002 | 25000 | 600 | All | 1. |
| 60H 964 | 16-9003 | 10000 | 500 | A, IS | 2.9 |
| 60 H 965 | 16-9004 | 10000 | 1500 | 0 | 2.9 |
| 60H966 | 16-9007 | 80000 | 25 | A | 2.9 |
| 60H 967 | 16-9008 | 30000 | 25 | IS | 2.94 |
| H H968 | 16-9009 | 30000 | 1000 | 0 | 2.9 |
| 60H969 | 16-9012 | 25000 | 250 | A | 2.9 |
| 60 H 970 | 16-9013 | 20000 | 150 | IS | 2 |
| 60 H971 | 16-9014 | 20000 | 1000 | 0 | 1.6 |

MINIATURE VARIABLE PEAKING COILS
For exact adjustment of frequency response in video amplifiers. Slug-tuned. Wt., 4 oz .

| No. | Type | Range | Size | EACH |
| :---: | :---: | :---: | :---: | :---: |
| 60 H O34 | $19-1920$ | $65-115 \mu \mathrm{~h}$ |  | $59 屯$ |
| 60 H O35 | $19-1921$ | $115-195 \mu \mathrm{~h}$ | $1 \times 112^{\prime \prime}$ | $59 屯$ |
| 60 H 036 | $19-1922$ | $195-325 \mu \mathrm{~h}$ | $5 \nmid$ |  |
| 60 H 037 | $19-1923$ | $325-500 \mu \mathrm{~h}$ |  | $73 \Varangle$ |



## IRC INSULATED HF CHOKES

Insulated wire-wound chokes for use in high requency circuitry. Compact size and wide choice of inductances. Fully protected by molded phenolic housings against humidity, abrasion and physical damage. 1000 volts test. Color coded. All values are EIA preferred and have $\pm 10 \%$ tolerance. Type CLA units have resistance tolerance of $\pm 20 \%$, except $0.47,0.56,0.68$ and 1.0 microhenry units which are $\pm 30 \%$. CL-1 units are $\pm 20 \%$, except $0.47,0.82$ and 1.0 microhenry units which are $\pm 30 \%$. "Q", rises with frequency. CLA, ${ }^{21} / 3 z^{\prime \prime} x$ $1 / 4^{\prime \prime}$ dia.; CL-1, $11 / 4^{\prime \prime} x^{1 / 4^{\prime \prime}}$ dia. Wt., 2 oz.

| Stock No. | Mfr's Type | Microhenries | DC Ohms | Res. (Mc.) Freq. |
| :---: | :---: | :---: | :---: | :---: |
| 74 M 420 | CLA | 0.47 | 0.22 | 305 |
| 74 M 421 | CLA | 0.56 | 0.26 | 275 |
| 74 M 422 | CLA | 0.68 | 0.37 | 250 |
| 74 M 424 | CLA | 1.0 | 0.66 | 205 |
| 74 M 425 | CLA | 1.2 | 0.68 | 190 |
| 74 M 426 | CLA | 1.5 | 0.94 | 170 |
| 74 M 427 | CLA | 1.8 | 1.3 | 155 |
| 74 M 428 | CLA | 2.2 | 1.8 | 140 |
| 74 M 429 | CLA | 2.7 | 2.0 | 125 |
| 74 M 430 | CLA | 3.3 | 2.8 | 115 |
| 74 M 431 | CL-1 | 0.47 | 0.14 | 330 |
| 74 M 434 | CL-1 | 0.82 | 0.29 | 250 |
| 74 M 435 | CL-1 | 1.0 | 0.33 | 225 |
| 74 M 437 | CL-1 | 1.5 | 0.56 | 185 |
| 74 M 438 | CL-1 | 1.8 | 0.77 | 170 |
| 74 M 439 | CL-1 | 2.2 | 0.87 | 150 |
| 74 M 440 | CL-1 | 2.7 | 1.2 | 135 |
| 74 M 441 | CL-1 | 3.3 | 1.7 | 125 |
| 74 M 442 | CL-1 | 3.9 | 2.3 | 115 |
| 74 M 443 | CL-1 | 4.7 | 2.5 | 105 |
| 74 M 444 | CL-1 | 5.6 | 3.4 | 95 |
| 74 M 445 | CL-1 | 6.8 | 4.7 | 86 |
| 74 M 446 | CL-1 | 8.2 | 5.2 | 79 |
| 74 M 447 | CL-1 | 10.0 | 7.5 | 71 |

## MINIATURE IRON-CORE COILS

D Permeability-tuned broadcast coils. For AC sets *except battery. Shpg. wt., 3 oz.

|  | No. | Type | Use | Size |  |
| :---: | :---: | :---: | :---: | :---: | :---: |
| 60 | H 167 | 14-1071 | Ant. | 1/2x ${ }^{3 / 817}$ |  |
|  | H 168 | 14-1072 | RF | " |  |
| 60 | 69 | 14-1073 | Osc. |  |  |

## IF TRANSFORMERS

LOW-COST PLASTICS
E Low-cost IF's. Air core except, tiron core. [5 $21 / 2 \times 11 / 4 \times 11 / 4^{\prime \prime} ; ~ \$ 11 / 8 \times 11 / 8 \times 21 / 2^{\prime \prime}$. Wt., 6 oz .

| Stock No. | $\begin{aligned} & \text { Mfr's } \\ & \text { Type } \\ & \hline \end{aligned}$ | Use | Freq. Kc | $\begin{aligned} & \text { NET } \\ & \text { EA. } \end{aligned}$ |
| :---: | :---: | :---: | :---: | :---: |
| 60 H 192 | 16-6649 | Input | 175 | 1.56 |
| 60 H 193 | 16-6651 | Output | 175 | 1.56 |
| 60 H 194 | 16-6652 | Input | 262 | 1.41 |
| 60 H 195 | 16-6654 | Output | 262 | 41 |
| 60 H 196 | 16-6658 | Input | 456 |  |
| 60 H 197 | 16-6659 | Interstage | 456 | 41 |
| 60 H 198 | 16-6660 | Output | 456 |  |
| 60 H 070 | 16-6666§ | Input | 456 |  |
| 60 H 071 | 16-66678 | Output | 456 | 1.41 |
| 60 H 139 | 16-6662 $\dagger$ | Input | 456 | 1.47 |
| 60 H 144 | 16-6663 $\dagger$ | Output | 456 | 1.47 |

## STANDARD GENERAL REPLACEMENTS

E
Suitable for most receivers. Double-tuned mica trimmers. Size, $3 \times 13 / 8 \times 13 / 8^{\prime \prime}$. Av., 4 oz .

| Stock No. | $\begin{aligned} & \text { Mfr's } \\ & \text { Type } \\ & \hline \end{aligned}$ | Use | Freq. Kc | $\begin{aligned} & \hline \text { NET } \\ & \text { EA. } \\ & \hline \end{aligned}$ |
| :---: | :---: | :---: | :---: | :---: |
| 60 H 077 | 16-5700 | Input | 175 | 1.6 |
| 60 H 080 | 16-5712 | Input | 456 | 1.47 |
| 60 H 081 | 16-6133 | Interstage | 456 | 1.62 |
| 60 H 082 | 16-5714 | Outpu | 456 | 1.47 |
| 60 H 079 | 16-3731 | OutputCT | 175 | 1.47 |
| 60 H 083 | 16-3736 | OutputCT | 456 | 1.62 |

456 KC IRON-CORE REPLACEMENTS
Same as above, but powdered iron cores
 dios. Wt., 5 oz.

| Stock No. | Mifr's Type | Use | $\overline{\begin{array}{c} \text { NET } \\ \text { EACH } \end{array}}$ |
| :---: | :---: | :---: | :---: |
| 60 H 181 | 16-5740† | Input | 2.06 |
| 60 H 190 | 16-5742 $\dagger$ | Output | 1.76 |
| 60 H 199 | 16-66688 | Inp | 1.76 |
| 60 H 143 | 16-66698 | Output | 1.76 |
| 60 H 104 | 16-66788 | Input/Output | 1.76 |

## "CARTWHEEL" IF TRANSFORMER

[F 60 H 095. Type 16-6661. Input, interstage F or output. Freq. range. $380-600 \mathrm{kc} .13 / 8 \times 1 \times$
$11 / 4^{\prime \prime}$. Dual trimmers. Wt., 5 oz . NET....|.4 1.

## $3 / 4$ " PERMEABILITY TUNED IF's

G Tuned at top and bottom by variable iron G cores. Silvered mica condensers. Size, $2 x^{3} / 4 \mathrm{x}$ $3 / 4^{\prime \prime}$. With mtg. plates. $\dagger$ With diode filters. 4 oz .

| Stock No. | $\begin{aligned} & \hline \text { Mfr's } \\ & \text { Type } \\ & \hline \end{aligned}$ | Use | Freq. Kc | $\begin{aligned} & \text { NET } \\ & \text { EACH } \\ & \hline \end{aligned}$ |
| :---: | :---: | :---: | :---: | :---: |
| $60{ }^{\text {H } 152}$ | 16-6758 | Input/Output | 456 | . 29 |
| 60 H 153 | 16-6770¢ | Output | 456 | . 35 |
| 60 H 157 | 16-6754† | Output | 262 | . 53 |
| 60 H 154 | 16-6752 | Input | 262 | 1.47 |

## TWEET FILTER OUTPUT IF TRANSFORMER

E Type 16-6670. Frequency, $456 \mathrm{kc} .21 / 2 \times 13 / 4$ $4^{\prime \prime}$ long. Shpg. wt., 4 oz.
60 H 145 . NET...................... . . 7.76

## AM-FM IRON CORE IF

 Type 16-6675. Has a 455 kc AM and 10.7mc FM transformer. Each circuit tunes by powdered iron cores. $21 / 2 \times 13 / 8 \times 13 / 8^{\prime \prime} .7 \mathrm{oz} .294$

### 10.7 MC FM IF TRANSFORMERS

High quality-permeability tuned. Input or interstage type. Stable shunt capacities. Excellent or replacement use or as part of original equipment. Av. shpg. wt., 5 oz .


## BROADCAST, TV AND PHONO COILS

 REPLACEMENT COILSWide selection of air-core types. High-impedance primary. Litz wire secondary. Tune 545 1620 kc , with 360 mmf tuning condenser. *Shielded. $\dagger 456 \mathrm{kc}$ IF frequency; 350 mmf pad der required. Shpg. wt., 5 oz

| No. | Type | Fig. | Use | Size | EACH |
| :---: | :---: | :---: | :---: | :---: | :---: |
| 60 H 000 | 14-1010 | K | Ant |  |  |
| 0 H 00 | 14-1011 | K | RF | $11 / 4 \times 21 / 2^{\prime \prime}$ |  |
| H 005 | 14-1004* | $L$ | Ant | $13 / 4 \times 13 / 4 \times 212^{\prime \prime}$ |  |
| 0 H 006 | 14-1005* | L | RF | $13 / 4 \times 13 / 4 \times 21 / 2^{\prime \prime}$ |  |
| H 075 | 14-2436* | L | Ant | $13 / 8 \times 13 / 8 \times 2{ }^{\prime \prime}$ |  |
| OH 076 | 14-2437* | $L$ | RF | $13 / 8 \times 13 / 8 \times 2^{\prime \prime}$ |  |
| 0 HI 11 | 14-4034 $\dagger$ | M | Osc | $1 \times 1 \times 1{ }^{1 / 8}{ }^{\prime \prime}$ |  |
| 60 H 166 | 14-4243* $\dagger$ | L | Osc | $11 / 2 \times 11 / 2 \times 13 / 4{ }^{\prime \prime}$ |  |
| $\begin{array}{l\|l} \mathrm{OH} & 5 \\ \mathrm{OH} & 5 \end{array}$ | $\begin{aligned} & 14-1022 \\ & 14-1023 \end{aligned}$ | $\begin{aligned} & \mathrm{K} \\ & \mathrm{~K} \end{aligned}$ | Ant RF | $11 / 8 \times 21 / 8^{\prime \prime}$ |  |

## PENTAGRID OSCILLATOR

 BROADCAST COILS$N$ Type 14-1033. Tapped type for 6SA7, dia. $1^{\prime \prime}$ long. Use 420 mmf padder. 4 oz . 60 H 170. NET

Type 14-1053. Oscillator coil. (Not illustrat section padder. 162 mmf . Single $1 / 4^{\prime \prime}$ hole mounting, $3 / 4^{\prime \prime}$ dia. Wt., 4 oz .
60 H II8. NET.
1.03

## UNIVERSAL ADJUSTABLE

## NDUCTANCE COILS

$\dagger$ For battery-operated sets. Osc. coils, 456 kc IF* except IF frequencies between 175 and 520 kc. Single-hole mounting. Screwdriver adj Broadcast band. Wt., 5 oz .

| No. | Type | Fig. | Coil | Size | EACH |
| :---: | :---: | :---: | :---: | :---: | :---: |
| 60 H 060 | 14-1040 | $N$ | Osc. | $5 / 8 \times 17 / 8^{\prime \prime}$ |  |
| 60 H 125 | ${ }^{14-1060} \dagger$ | N | Osc. | $3 / 4 \times 1{ }^{3 / 4}{ }^{\prime \prime}$ |  |
| 60 H 135 | 14-1026 | M | Ant. | $11 / 8$ sq. $\times 1^{3 / 4}{ }^{\prime \prime}$ |  |
| 60 H 136 | 14-1027 | M | RF | $11 / 8$ sq. $\times 13 / 4{ }^{\prime \prime}$ |  |
| 60 H 137 | 14-1028* | M | 0sc. | 11/8sq. $\times 13 / 4^{11}$ |  |
| 60 H 171 | 14-1056 | N | Ant. |  |  |
| 60 H 172 | 14-1057 | N | RF | $3 / 4 \times 1{ }^{1 / 8}{ }^{\prime \prime}$ | 47 |
| 60 H 173 | 14-1058* | N | Osc. | $3 / 4 \times 178^{\prime \prime}$ |  |

Type 15-2866. Adjustable Wave Trap. Not illustrated. 456 kc . Shpg. wt., 4 oz.
60 H 126 . NET....................... $\qquad$

## PHONO-OSCILLATOR COIL

$P$ Type 17-9373. For use in building either Permireless or direct connected phono-osc. units. receiver Knob adjustment allows selection to btain clear frequency. Size: $31 / 2 \times 13 / 8 \times 13 / 8^{\prime \prime}$. 60 H. w9., 4 oz.
2.20

## SHORTWAVE AND MULTIPLE-BAND COILS BFO COIL

P Type 17-6753. Beat frequency oscillator P coil. For receivers having IF's between 290 and 650 kcs . Supplies "beat" note necessary to receive CW. $3 \times 13 / 8 \times 13 / 8^{\prime \prime}$. Wt., 6 oz.
60 H 230 . NET.............................
2.94

## ADJUSTABLE INDUCTANCE

## SHORTWAVE COILS

N Adjustable Hi-Q iron cores. Tune with 292 $N \mathrm{mmf}$ condenser. Universal replacements EACH


## MULTIPLE-BAND COILS

K Engineered for custom set builders, experi$K$ menters, etc. For use with 456 kc IF. Range: $530-1660 \mathrm{kc}, 5.8-19 \mathrm{mc}$. Shpg. wt., 5 oz .
No. $\left|\frac{\text { Type }}{}\right|$ Coiltype $\left|\begin{array}{c}\text { Size } \\ \hline 1402860\end{array}\right| E A C H$


# J. W. Miller Coils and IF Transformers 



## 455-KC IF TRANSFORMERS

A Double-tuned air-core, universal input, inA terstage or output transformers. Universal wound primary and secondary tuned by mica (EIA) leads. Size, $13 / 8 \times 13 / 8 \times 25 / 8^{\prime \prime}$. Wt., 4 oz .

| Stock No. | Mfr's. Type | Application | $\begin{aligned} & \text { NET } \\ & \text { EA. } \end{aligned}$ |
| :---: | :---: | :---: | :---: |
| 60 H 739 | 512-C1 | Input IF |  |
| 60 H 740 | 512-C2 | Interstage IF |  |
| 60 <br> 60 | 512-C4 | Full-wave output IF <br> Half-wave output IF | 3 |

## MINIATURE IF TRANSFORMERS

B
B Shell core IF transformers with built-in Built-in diode funable powdered iron cores.



## SUBMINIATURE 455KC IF TRANSFORMERS

D Extremely small IF transformers with exD cellent gain and bandwidth characteristics. Ferrite-shelicores provide high efficiency. Pri. and $\sec$ mica-trimm
60 H 860. Type 10-C1. Input. NET . 1.53

## TRANSISTOR IF TRANSFORMERS

D Subminiature. A tiny $455-\mathrm{kc}$ IF transDformer with cup-cote construction for top performance. Only $3 / 8^{\prime \prime}$ square by $5 / 8^{\prime \prime}$ high. Primedance, $* 600$ ohms, $\dagger 1000 \mathrm{ohms}$. Will match CK760 and CK761 transistors. Primary is tuned and tapped. Shpg. wt., 3 oz . tuned and tapped. Shpg. wit.,
60 H 802 . Type $9-C 1$. . Input. NET
60 H 803 . Type $9-C 2 \dagger$. Output. EA. 2.20
(E) Miniature. High-quality $455-\mathrm{kc}$ IF transPrimary impedance, 25,000 ohms; secondary impedance, $* 600 \mathrm{ohms}, \dagger 1000 \mathrm{ohms}$. Will match CK670 and CK671 transistors. Primary is tuned and tapped. Shpg. wt., 3 oz . 60 H 973. Type 2042†. Output. EA....I. 76

## BANDPASS COUPLING COIL

Negative mutual coupling coil for hi-fi TRF FI receivers. $17 / 8 \times 2^{\prime \prime}$. Shpg. wt., $4 \mathrm{oz} . \quad$. 79 C
## MIDGET OSCILLATOR COILS

G H Cover 540-1600 with a 365 mmf capaciG $H$ tor. Series 5480 (Fig. H) : single-section secondary with high-impedance primary; for use with pentagrid converters. Series 5481 (Fig. G): no primary, secondary tapped for cathode and with separate oscillator and mixer. Size, and with separate osc
$1 \times 1^{\prime \prime}$. Shpg. wt., 4 oz .

| No. | Type | IF | Padder | EACH |
| :---: | :---: | :---: | :---: | :---: |
| 60 H 742 | 5480-K | 175 kc | . 001 mfd |  |
| 60 H 884 | 5480-H | 262 kc | . 0006 mfd |  |
| 60 H 743 | 5481-C | ${ }^{455} \mathrm{k} \mathrm{kc}$ | . 00004 mfd | $73 c$ |
| 60 H 744 60 H 885 | 5481-C | ${ }_{262} \mathbf{4 5 5} \mathrm{kc}$ | . 00004 mfd |  |
| 60 H 981 | $5481-\mathrm{K}$ | 175 kc | . 001 mfd |  |

## DELUXE BANK-WOUND COILS

J Shielded antenna RF and bandpass coils. Two-bank $540-1740 \mathrm{kc}$ with 365 mmf capacitor. primaries Litz secondaries. High impedance 60 H 783. Type 242-A. Ant. NET 60 H 784. Type 242-RF.RF. EACH 60 H 797: Type 242-BP. Bandpass. NETI. 03

## MINIATURE RF COILS

K
Shielded iron-core coils for compact receivers. For 365 mmf tuning capacitors. $\times 2^{\prime \prime} *$ na and osc. coils have tapped sec. ${ }^{3 / 4^{\prime \prime}}$ sq.

| No. | Type | Use | KC Range | EACH |
| :---: | :---: | :---: | :---: | :---: |
| 60H798 | X-121-A | Antenna | 140-425 |  |
| 60 H 785 | X-121-RF <br> X-121-C | $\stackrel{R}{\text { RF }}$ | * $140-425$ | 1.29 |
| 60 H 786 | X-121-C | Osc. | ${ }^{*} 120 \mathrm{mmf}$ |  |
| 60 H 706 | A-121-A | Antenna | 540-1700 |  |
| 60 H 707 | A-121-RF | RF | -540-1700 | 1.09 |
| 60 H 708 | ${ }^{\text {A }}$-121-C | Osc. 455 kc | * $* 600 \mathrm{mmf}$ | 1.07 |

## UNIVERSAL ADJUSTABLE BROADCAST BAND COILS

L Compact, variable-inductance iron-core $L$ coils for replacement use. Shielded type. Use with $250-450 \mathrm{mmf}$ variable capacitors. Oscillator coils have tapped secondary. $13 / 8 \mathrm{x}$ $13 / 8 \times 21 / 2^{\prime \prime}$. Av. shpg. wt., 5 oz . *IF frequency.


## ANTENNA AND RF COILS

(M) Untuned. Broadly self-resonant from 540 to $21 / 2 \times 15 / 8^{\prime \prime}$. Shpg. wt., 4 oz. $1 / 2 \times 158^{\prime \prime}$. Shpg. wt., ${ }^{4}$ oz. Ant. NET. . . 1.322 60 H 759. Type 472-UT. RF. NET...... 1.62

## HIGH "Q" BROADCAST RF COILS

N High-efficiency, unshielded, iron-core coils. N For replacement purposes or for new receiver design. Adjustable core for tracking
desired frequency range. Range indicated obdesired frequency range. Range indicated ob
tained using 365 mmf variable capacitor. Coils tained using 365 mmf variable capacitor. Coils mount in $1 / 4^{\prime \prime}$ hole. ${ }^{* P a d d e r}$ values shown
for $455 \mathrm{kc} I \mathrm{~F}$. Size: $3 / 8 \times 2^{\prime \prime}$. Shpg. wt., 4 oz .

| No. | Type | Use | KC Range | EACH |
| :---: | :---: | :---: | :---: | :---: |
| 60 H 862 | A-5495-A | An | 550.1700 |  |
| 60H863 | ${ }^{\text {A-5495-RF }}$ | ${ }_{\text {Std }} \mathrm{RF}_{\text {Osc }}$ | - $\begin{array}{r}5500 \\ * 40000\end{array}$ | 1.23 |
| 60 H 865 | A-5496-C | Tapped Osc. | **400 mmf |  |

## MINIATURE ADJUSTABLE RF COILS

P Variable-inductance RF coils. Use with P tuning capacitors of 250 to 450 max. capacty. Type 70-OSC coil has tapped secondary. 70 series installed self-supported. 71-OSC has $2-$ Max. size: $5 / 8 \times 11 / 2^{\prime \prime}$ high. Av. shpg. wt., 4 oz .

| No. | Type | Use | KC Range | NET |
| :---: | :---: | :---: | :---: | :---: |
| 60 H 866 | $70-\mathrm{A}$ | Antenna | $540-1600$ | .88 |
| 60 H 867 | $70-\mathrm{RF}$ | RF | $50 .-1600$ | .88 |
| 60 H 868 | $70-0 \mathrm{SC}$ | 0 sc. | $540-1600$ | .88 |
| 60 H 869 | $71-0 \mathrm{SC}$ | Osc. | $500-1800$ | 1.18 |

## TRANSISTOR OSCILLATOR COILS

R Type 2020. For use in a converter oscillator R circuit using only one transistor. For 365 mmf tuning capacitor, 455 KC IF. $5 / 8 \times 118^{\prime \prime \prime}$. 60 H 895 . NET
I. 32

Type 2022. Similar to above, except for use with variable capacitor $78-100$ mmf max.
60 H 974 . NET.......................... 1.32
SUBMINIATURE TRANSISTOR OSC. COIL
S Type 2021. Shielded. For use in converter mixer. Use with 100 mmf variable capacitor. Size, ${ }^{5 / 8^{\prime \prime}}$ high $x^{3 / 8^{\prime \prime}}$ sq. Shpg. wt., 2 oz. 1.62
60 H 975 . NET........................ 1.62

## ADJUSTABLE CERAMIC

 RF INDUCTORST] X Adjustable coils for the most exact$\triangle$ ing requirements. Wound on siliconeimpregnated ceramic forms. Tuned by powderediron core. Fig. T is single-layer wound, Fig. W is twin-pi wound, Fig. X is single-pi wound. Standard. High " $Q$ " units with a wide range of inductances. Require $1 / 4^{\prime \prime} \mathrm{mtg}$. hole. Form size: $3 / 8 \times 11 / 16^{\prime \prime}$. Av. shpg. wt., 3 oz .

| No. | Type | Fig. | Microhenries | ET |
| :---: | :---: | :---: | :---: | :---: |
| 60 H 982 | 4400 |  | Form only | . 98 |
| 60 H 983 | 4403 | T | 0.9-1.6 | . 29 |
| 60 H 984 | 4404 | T | 1. |  |
| 60 H 985 | 4405 | T | 3.1-6.8 | 5 |
| 60 H 986 | 4406 | T | 6.7-15 | 1 |
| 60 H 987 | 4407 | X | 14.8-31 | 1.47 |
| 60 H 988 | 4408 | X | 30-69 | 1.50 |
| 60 H 989 | 4409 | X | 68-130 | 1.56 |
| 60 H 990 | 4410 | X | 126-250 |  |
| 60 H 991 | 4411 | X | 245-475 | 1.59 |
| 60 H 992 | 4412 | X | 450-800 | 1.59 |
| 60 H 993 | 4413 | W | 750-1400 | 1.62 |
| 60 H 994 | 4414 | W | 1300-2100 | 1.62 |

Miniature. For limited space. $3 / 16^{\prime \prime} \mathrm{mtg}$. hole. Form size: $1 / 4 \times 7 / 8^{\prime \prime}$. Av. shpg. wt., 3 oz .

| 60 H 870 | 4500 |  | Form only | 88 |
| :---: | :---: | :---: | :---: | :---: |
| 60 H 871 | 4502 | T | 1.0-1.6 | 1.18 |
| 60 H 872 | 4503 4504 | T | 1. ${ }_{2}$ 8-2.8 | 1.23 |
| 60 H 874 | 4505 | T | 5-9 | 1.35 |
| 60 H 875 | 4506 | T | 9-16 | 1.41 |
| 60 H 876 | 4507 | W | 16-24 | 1.47 |
| 60 H 877 | 4508 | W | 24-35 | 1.47 |
| 60 H 878 | 4509 | W | 35-60 | 1.47 |
| 60 H 879 | 4511 | X | 60-120 | 1.47 |
| 60 H 880 | 4512 | X | 110-200 | 1.53 |
| 60 H 881 | 4513 | X | 190-330 | . 53 |
| 60 H 882 | 4514 | X | 320-500 | . 53 |

Subminiature. For ultra-compact equipment.
$11 / 64^{\prime \prime} \mathrm{mtg}$. hole. Form: $3 / 1 \mathrm{x}^{5} / \mathrm{s}^{\prime \prime} .3 \mathrm{oz}$.

| No. | Type | Fig. | Microhenries | NET |
| :---: | :---: | :---: | :---: | :---: |
| 60 H 995 | 4300 |  | Form only | . 88 |
| 60 H 996 | 4301 | 1 | 0.17-0.27 | 1.18 |
| 60 H 997 | 4302 | T | 0.27-0.41 | 1.18 |
| 60 H 998 | 4303 | T | 0.40-0.65 | 1.23 |
| 60 H 999 | 4304 | T | 0.64 -0.95 | 1.29 |
| 60 H 927 | 4305 | T | 0.94-1.55 | 1.32 |
| 60 H 928 | 4306 | T | 1.5-2.57 | 1.35 |
| 60 H 929 | 4307 | T | 2.5-4.40 | 1.41 |
| 60 H 930 | 4308 | T | 4.3-7.15 | 1.41 |
| 60 H 931 | 4309 | X | 7.1-12.5 | 1.47 |
| 60 H 932 | 4310 | X | 12.4-20.3 | 1.47 |
| 60 H 933 | 4311 | X | 20.1-32.8 | 1.47 |
| 60 H 934 | 4312 | X | 32.5-51.5 | 1.47 |
| 60 H 941 | 4313 |  | 51-102 | 1.53 |
| 60 H 942 | 4314 | X | 101-180 | 1.53 |
| 60 H 943 | 4315 | X | 178-300 | 1.53 |

## TYPE 20 ECONOMY TRF COILS

Y Unshielded TRF coils for 540 to 1750 kc With L mtg. bracket. Low impedance primary on adjustable sleeve over secondary. $11 / 8^{\prime \prime} \times 2^{\prime \prime}$ ${ }_{60}$ high. Shpg. wt., 3 oz.



## LOOP ANTENNAS

## FERRITE ROD ANTENNA

Type 705A. For universal replacement use. ing performance. Improves reception of distant stations. Extremely easy to adjust. Simply slide the coil along the ferrite rod to peak the an-
tenna. Non-directional. Replaces any loop an-

I. 62

## TRANSISTOR LOOP ANTENNA

K Type 2000. Has fixed inductance loop; Inducks up adequate signal to the first stage. impedance of the transistor. Frequency range is $540-1650 \mathrm{kc}$ when used with a 365 mmf variable capacitor. $11 / 4 \times 91 /{ }^{\prime \prime \prime}$. Shpg. wt., 3 oz. 1.62
60 H 894 . NET......................... 62

## TRANSISTOR ANTENNA RODS

L. Type 2001. Matches 600 ohm input imped[] ance. Inductance, $240 \mu \mathrm{~h}$. Tunes with 365 mmf. $3 / 4 \times 334^{\prime \prime}$. Shpg. wt., 4 oz . 60 H 976. NET..
1.47

Type 2003. As above, but 700 microhenries. Use with 125 mmf capacitor.

STRIP TRANSISTOR ANTENNA RODS M Type 2004. Matches 600 ohm input imped$m$ ance. Inductance, $240 \mu \mathrm{~h}$. Tunes with 365 mmf. $1 / 4 x^{3 / 4} \times 33 / 4^{\prime \prime}$. Shpg. wt., 4 oz . 1.47 Type 2005. As above, but 700 microhenries. Use with 125 mmf capacitor.

## SUB-MINIATURE ANTENNA ROD

N Type 2002. Adjustable from $35-300 \mu \mathrm{~h}$. Hi (N) $Q$ coil tunes with 500 mmf . Mounts in $5 / 16^{\circ}$ hole, or bracket supplied. Matches 600 ohm input. Size, $1 / 2 \times 21 / 2^{\prime \prime}$. Shpg. wt., 3 oz . 60 H 980. NET


P Effective line filters. Duo-lateral wound for P low distributed capacity. Ideal for use in AC lines to filter RF or noise pulses from Amateur or commercial transmitters; from power supplies, sign flashers, diathermy equipment, farm lighting plants, signal systems, oil burners and all intermittent switching systems. 7825 is $17 / 8 \mathrm{x}$ $13 / 4^{\prime \prime}$, wound on bakelite form. 7826 and 7827 are
$21 / 2 \times 4^{\prime \prime}$, wound on ceramic forms. $21 / 2 \times 4^{\prime \prime}$, wound on ceramic forms

No. Type Amps Ohms Oz. Mh NET \begin{tabular}{lll|l|l|l|l|l}
\hline 70 \& $H$ \& 185 \& 7825 \& 2 \& .7 \& 5 \& .600 <br>
\hline 60 \& H 886 \& 7826 \& 5 \& .18 \& 10 \& .570 \& 2.85 <br>
\hline

 

60 \& H 886 \& 7826 \& 5 \& .28 \& 10 \& .570 <br>
60 \& 2.85 <br>
6887 \& 7827 \& 10 \& .15 \& 16 \& .370 \& 3.20 <br>
\hline
\end{tabular}

## CENTER TAPPED CHOKE

R Duo-lateral wound, single-section RF chokes. Ceramic dowels. 20 mh .100 ohms ,


## CAPACITY-OPERATED RELAY COIL

S For alarm systems, window displays, etc. 60 H 589 . Type 695 . NET................I.71
BEAT FREQUENCY OSCILLATOR COIL T Type 612-M5. Mica tuned air core. Frefor adjustment. $3^{1 / 4 \times 13 / 8 \times 1^{3 / 8^{\prime \prime}} \text {. Wt., } 4 \mathrm{oz} \text {. }}$ for adjustment. $31 / 4 \times 13 / 8 \times 13 / 8^{\prime \prime}$. Wt., 4 oz .2 .06

100 KC HI-Q IF TRANSFORMER
(W) Type 1890-P1. For input or interstage 60 H 822 . NET., Shpg. wt., 4 oz . 5.00


G


TV COILS, INDUCTORS \& TRANSFORMERS
A complete selection of highest-quality components specifically designed to meet scopes, and related electronic equipment.

## SOUND IF TRANSFORMERS

A Permeability tuned sound IF transformers A. Type 6190 and Type 6191 for 21.25 mc in television receiver sets with separate picture and soundith inter-carrier system. Provide high in sets with anderuate bandwidth for high-fidelity sound. All units listed have primary adjustable from top of aluminum can; secondary from bottom. Have convenient spade bolt mounting. Type 6190 and Type 6191 have an over-all size of $7 / 8 \times 7 / 8 \times 21 / 4^{\prime \prime}$ high. Type 1466 and Type 1470 have an over-all size of $11 / 8 \times 11 / 8 \times 21 / 8^{\prime \prime}$ high. Shpg. wt., 5 oz .

| Stock No. | $\begin{array}{\|c\|} \hline \text { Mfr's } \\ \text { Type } \\ \hline \end{array}$ | Description | $\begin{gathered} \text { NET } \\ \text { EACH } \\ \hline \end{gathered}$ |
| :---: | :---: | :---: | :---: |
| 60 H 762 | 6190 | 1st IF sound | 1.41 |
| 60 H 763 | 6191 | 2nd IF sound | 1.41 |
| 60 H 764 <br> 60 | 1466 | Input or Interstage | $\begin{array}{r}1.53 \\ \hline\end{array}$ |

## SOUND DETECTOR AND OSCILLATOR TRANSFORMERS

(B) Quality TV components. Types 6192 and B 6184 for TV receivers with separate 21.25 are for 4.5 mc IF in sets using inter-carrier sound system; Type 6192 and Type 1467 are the Foster-Seely type and are normally preceded by one or two limiter stages. Type 6184 and Type 1468 are for use in ratio detector circuits. Type 6182 has tapped coil for horizontal oscillator Synchro-guide circuit. Type 6183 dual windings for Sync. Frequency and Phase circuit. Aluminum shields with 6-32 spade bolt mounting. Sizes: Type 6192 and Type $6184,11 / 8 \times 11 / 8 \times 21 / 2^{\prime \prime}$; Type 1467 and $6 y p e$
$1468,11 / 8 \times 11 / 8 \times 21 / 8^{\prime \prime} ;$ Type 6182 and Type 6183 , $1468,11 / 8 \times 11 / 8 \times 218^{\prime \prime}$; Type 6182
$17 / 16 \times 17 / 6^{2} 21 / 2^{\prime \prime}$. Shpg. wt., 5 oz .

| Stock No. | $\begin{aligned} & \text { Mfr's s.s } \\ & \text { Typp } \end{aligned}$ | Description | $\begin{aligned} & \text { NET } \\ & E A C H \end{aligned}$ |
| :---: | :---: | :---: | :---: |
| 60 H 765 | 6192 | Discriminator | 1.76 |
| 60 H 766 | 6184 | Ratio detector | 1.9 |
| 60 H 724 | 6182 | Hor. Osc. | 1.3 |
| 60 H 799 | 6183 | Hor. Os |  |
| 60 H 768 | 1468 | Ratio detector | . 9 |

SYNC STABILIZER (RINGING) COIL
C Type 6210. Has bakelite form with $7 / 1{ }^{\prime \prime}$ $21 / 2^{\prime \prime \prime}$ Shpg. Wt., ${ }^{2}$ oz.
$60^{\text {H }} 820$. NET....

## HORIZONTAL LINEARITY AND

 WIDTH CONTROL(D) Iron-core variable inductance coils for horiD zontal sweep circuits. *Have AGC winding Mounting clip fits $5 / 16^{\prime \prime}$ hole. 6300 series are $1 / 2 \times 21 / 4^{\prime \prime}$ " long on phenolic forms. 6100 series are $3 / 8 \times 21 / 2^{\prime \prime}$ long on bakelite forms. Shpg. wt., 4 oz .

| $\begin{gathered} \text { Stock } \\ \text { No. } \end{gathered}$ | $\begin{aligned} & \hline \text { Mfr's } \\ & \text { Type } \end{aligned}$ | Millihenries | $\begin{gathered} \text { NET } \\ \text { EA. } \end{gathered}$ |
| :---: | :---: | :---: | :---: |
| 60 H770 | 6195 | .185-1.000 | . 73 |
| 60 H 771 | 6196 | .054- 0.245 |  |
| 60 H 897 | ${ }_{6197}^{6196-A}$ | $.054-$ <br> $.550-20$ <br> .300 | . 73 |
| 60 H 773 | 6198 | .170-0.610 | . 6 |
| 60 H 774 | 6199-A | 1.300- 4.100 tapped | 6 |
| 60 H 775 | 6199-B | .500-1.700 | . 73 |
| 60 H 826 | 6313 |  | . 88 |
| 60 H 827 | 6314 | $\begin{array}{lll}2.0 & -18\end{array}$ | 1.03 |
| 60 H 828 | 6315 | 4.0 -30 | 1.06 |
| 60 H 829 | 6316* | $4.0-30$ | 1.3 |
| 60 H 830 | 6317** | 3.2-9 | 1. |
| 60 H 831 60 H 832 | 6318 6319 | 15.0 -6 <br> 1  | . 88 |
| 60 <br> 60 | 6320 | $\begin{array}{rrr}15.0 & -60 \\ .2 & -3\end{array}$ | 1.32 |
| 60 H 834 | 6321 | 1.0-5 tapped | 88 |
| 60 H 835 | 6322 | $1.5-10$ | 1.03 |
| 60 H 836 | 6323 | . 5 - 5 tapped | . 88 |
| 60 H 898 | 6324 | $60-130$ tapped | 1.32 |

deal for both original equipment and replacement use. All units are manufactured from the finest materials-your absolute assurance of dependable service.

## HIGH VOLTAGE RF POWER SUPPLY TRANSFORMERS

(E Type 4525. RF power supply transformer


Type 4526. Up to $10,000 \mathrm{v}$. DC. ( $30,000 \mathrm{in}$ rec-tifier-tripler circuit). Size, $6 \times 21 / 4^{\prime \prime}$ diameter. Shpg. wht. ${ }^{4}$ Nz.
8.08

## 20 MC RANGE PICTURE IF TRANSFORMERS

Popular shielded and unshielded permeaF bility tuned TV IF transformers, single and bifilar wound. Type 6247 has single tuned circuit and cathode trap. Type 6248 employs single winding. Types 6251 and 6252 are shielded. Unshielded coils have mounting clip for $5 / 16^{\prime \prime}$ hole. Maximum dimensions of units listed: $3 / 4^{\prime \prime}$ O.D. by $21 / 2^{\prime \prime}$ long. Type 6245 , Type 6246 , Type 6247 and Type 6248 are single wound Type 6249, Type 6250, Type 6251, Type 6252, Type 6253 and Type 6254 are bifilar wound.
Av. shpg. wt., 5 oz.

| Stock No. | $\begin{gathered} \text { Mfr's } \\ \text { Type } \\ \hline \end{gathered}$ | IF Mc | Trap Mc | $\begin{aligned} & \hline \text { NET } \\ & \text { EA. } \end{aligned}$ |
| :---: | :---: | :---: | :---: | :---: |
| 60 H 840 | 6245 | 25.5 | 27.25 | 1.47 |
| 60 H 841 | 6246 | 22.0 | 21.20 | 1.47 |
| 60 H 842 | 6247 6248 | 21.25 24.5 |  | 1.47 |
| 60 H 844 | 6249 | 21-25 |  | 8 |
| 60 H 845 | 6250 | 25-29 |  | . 88 |
| 60 H 846 | 6251 | 21-25 |  | 1.32 |
| 60 H 8478 | 6252 | $25-29$ <br> $21-30$ |  | 1.32 |
| 60 H 848 | 6254 | 22-32 | 24-29 | . 62 |

## HORIZONTAL OSCILLATOR

 AFC DISCRIMINATOR TRANSFORMERG Type 6194. For horizontal oscillator circuits $G$ using "synchro-lock" automatic frequency control system. Two coupled permeability tuned windings; one, tapped for use in horisecond, center-tapped for phase discrimination second, center-tapped for phase discrimination for horizontal frequency at top, and adjustment for horizontal phase at bottom. 6-32 spade bolt mounting. Over-all size: 17/16x17/16x21/2" higa Shpg. wt., 5 oz.
60 H 769. NET
1.62

## VIDEO PEAKING \& FILAMENT CHOKE COILS

Type 6175 is filament choke. Reduces stray coupling, feedback, etc. Others are video peaking coils for proper bandwidth and wave shape of video signals. Coils without shunt resistor wound on plastic forms; shunt types wound on resistor. Over-all size: Type 6175 , $7 / 8 \times 9 / 32^{\prime \prime}$ diameter; all other types, $3 / 8 \times 3 / 16^{\prime \prime}$ diameter. Av. shpg. wt., 2 oz.

| Stock No. | Mir's Type | $\mu \mathrm{hys}$. | Shunt | $\begin{aligned} & \text { NET } \\ & \text { EACH } \end{aligned}$ |
| :---: | :---: | :---: | :---: | :---: |
| 60 H 792 | 6172 | 73 | None |  |
| 60 H 889 | 6153 | 120 | None |  |
| 60 H 793 | 6173 | 250 | 22 K | 35c |
| 60 H 794 | 6174 | 500 | None |  |
| 60 H 776 | 6175 | 0.8 | None |  |
| 60 H 888 | 6152 | 20 | None | 29C |
| 60 H 777 | 6176 | 36 | None |  |
| 60 H 778 | 6177 | 93 | None |  |
| 60 H 779 | 6178 | 120 | 22 K |  |
| 60 H 780 | 6179 | 180 | 39 K |  |
| 60 H 781 | 6180 | 180 | None | 35 c |
| 60 H 890 | 6154 | 200 | None |  |
| 60 H 782 | 6181 | 250 | None |  |
| 60 H 891 | 6155 | 300 | None |  |

# Shields, Caps, Coil Forms, Capacitors 



## RECEIVING TUBE GRID CAPS AND SHIELDS

A complete selection of grid caps and shields for receiving-type tubes. Shields are used extensively with high-gain RF and audio amplifier tubes to minimize microphonics, and pre-
vent oscillation, hum pickup, etc. Also used to radiation. Tube caps provide positive, dependable contact. Av. shpg. wt., per pkg., 3 oz.

| Stock No. | Fig. | Description and Application | Quantity Per Pkg. | $\begin{gathered} \text { NET } \\ \text { Per Pkg. } \end{gathered}$ |
| :---: | :---: | :---: | :---: | :---: |
| 42H510 | A | Goat G1332-3 tube shield for GT tubes, $25 / 16^{\prime \prime}$ high, $78^{\prime \prime}$ hole. | 4 | 254 |
| 42 H 51 | B | Goat G1332-5A. Same as 42 H 510, but with closed top. | 4 | 254 |
| 42 H 513 | C | H. H. Smith 537 metal tube grid shield. Slot for grid lead. | 2 | 244 |
| 42H512 | D | Goat G1700 tube shield for miniature T51/2 with G1710-B base. $865{ }^{\prime \prime} \times 1 / 8^{\prime \prime}$. | 3 | 146 |
| 42H514 | E | National Type 24. For standard tubes, $3 / 8^{\prime \prime}$ dia. grid caps. | 5 | 20¢ |
| 42 H 515 | E | National Type 8. For octal tubes, $1 / 4^{\prime \prime}$ diameter grid caps. | 5 | 204 |
| 42H507 | F | Goat G1222K-5 tube shield for GT types. $11 / 4$ " dia., $2^{25} / 32^{\prime \prime}$ high. | 4 | 144 |
| 42H509 | F | Goat G1222L-4 tube shield for loktal type tubes. 19/32" dia., 27/16" high. | 4 | 136 |
| 42H508 |  | (Not illustrated). Goat G1004-2 ground clip for grounding shields on octal tubes. | 10 | \| \| \% |
| 42H506 |  | (Not illustrated). Goat G1307-2 double clip for octal base tubes (fits on tube socket). | 5 | $7 ¢$ |

## TRANSMITTING TUBE CAPS

An excellent selection of plate and grid caps for transmitting tubes. Listing includes heatdissipating types; fins provide large metal surmachine screw for secure connection. Millen

| Stock No. | Fig. | Description and Application | Quantity Per Pkg. | $\begin{gathered} \text { NET } \\ \text { Per Pkg. } \end{gathered}$ |
| :---: | :---: | :---: | :---: | :---: |
| 42H093* | G | Eimac HR-3 heat dissipating cap for 35T, 250TH, etc. $.070^{\prime \prime}$ hole. | 1 | . 60 |
| 42 H096 | G | Eimac HR-6 heat dissipating cap for 4-250A, 304TH, etc. . $359^{\prime \prime}$ hole. | 1 | . 80 |
| 73 H 007 | G | Bud TC-487 heat dissipating cap for UH50, HK24, 304B, 829B, 832A, 834. $.062^{\prime \prime}$ hole. | 1 | . 67 |
| $\begin{aligned} & 73 \mathrm{H} 000 \text { * } \\ & 73 \mathrm{HOOI} \end{aligned}$ | G | Bud TC-488 heat dissipating cap for HK24, 3C24, 24G, 25T, etc. .052" hole. Bud TC-489 heat dissipating cap for 35T, HK54, etc. . $072^{\prime \prime}$ hole. | 1 | .67 .67 |
| $73 \mathrm{H002}$ | G | Bud TC-1920 heat dissipating cap for 100T, 807, 4-125A, 2-150D, 250TH, 4-250A, 6146, 1625, 4D32, 807W, 1B3GT, etc. . $375^{\prime \prime}$ hole. | 1 | .67 |
| $73 \mathrm{HOO3}$ | G | Bud TC-1921 heat dissipating cap for 866, T125, HF100, 450TH, 750TH, 809, $811,812,813,828,866$, etc. $.570^{\prime \prime}$ hole. | 1 | . 78 |
| 73H004 | G | Bud TC-1924 heat dissipating cap for HK57, 152TH, etc. .125" hole. | 1 | . 71 |
| 73H005 | G | Bud TC-1925 heat dissipating cap for 304TH, 304TL, etc. $125^{\prime \prime}$ hole. | 1 | .73 |
| 73 H 006 | G | Bud TC-1926 heat dissipating cap for WL468, WL463, WL460, HF200, HF201, HF300. $810^{\prime \prime}$ hole. | 1 | 1.03 |
| $72 \mathrm{H082}$ | H | Millen 36011 industrial snap-action plate cap. $9 / 16^{\prime \prime}$. | 1 | . 69 |
| $71 H 246$ | J | National SPP-9 ceramic-insulated grid and plate cap. $9 / 16^{\prime \prime}$. | 1 | .24 |
| 42H518 | E | National Type 12 grid and plate cap. $9 / 16^{\prime \prime}$. | 3 | . 21 |
| 72H 069 | K | Millen Type 36002 steatite tube cap, $3 / 8^{\prime \prime}$. | 1 | . 24 |
| 72 H 140 | K | Millen Type 36004 steatite tube cap, $1 / 4^{\prime \prime}$. | 1 | . 24 |
| 72H068 | K | Millen 36001 steatite plate cap for 866 , etc. $9 / 16^{\prime \prime}$. | 1 | . 24 |

## JFD PISTON-TYPE VARIABLE TRIMMER CAPACITORS

(3131(i) (i)

## L



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Selection of precision-made glass and quartz trimmer capacitors with spring-loaded piston. Withstands severe shock and vibration. Ideai Withstands severe shock and vibration. Ideal for automation and printed circuit applications. Insulation resistance, 10,000 megs. Dielectric strength, 1500 v . G in Type No. indicates glass; others are quartz. Glass dielectric for operating temperatures up to $125^{\circ}$ C.; quartz dielectric for temperatures , up to $150^{\circ}{ }^{\circ} \mathrm{C}$. $8 .{ }^{\prime \prime}$ Mounts in 257 round or $D$ hole. ${ }^{+192^{\prime \prime}} \mathrm{D}$ hole. \#ReWith mounting hard. *Requires 4 hole mount

L Standard Panel-Mount Series. Rugged4 constructed. Low-loss, linear tuning. Contain a stainless steel spring and nut that provid
compensation for backlash and thread wear.

| Stock No. | Type§ | Mmf | 1-24, EA. |  | $\begin{array}{\|lll} 16 H & 068 \\ 6 H & 079 \\ 16 H 080 \end{array}$ | $\begin{aligned} & 81 \\ & 82 \\ & 82 \\ & 83 \\ & \hline \end{aligned}$ | $\begin{array}{c\|c} 3.2-3.2 & 0 \\ 5.5-5.5 & 0 \\ 11-11 & 4 . \\ \hline \end{array}$ | $0.4-0.4$ 4.50 <br> $0.5-0.5$ 5.10 <br> $4.8-4.8$ 7.50 | $\begin{aligned} & 2.01 \\ & 4.05 \\ & 4.79 \\ & 6.75 \end{aligned}$ |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  |  |  | 25-99, EA. |  |  |  |  |  |
| $\begin{aligned} & 16 \mathrm{HOO5} \\ & 16 \mathrm{H} 000 \\ & 6 \mathrm{HOOI} \\ & 6 \mathrm{HOO} \\ & 16 \mathrm{HOO} \\ & \hline \end{aligned}$ | $\begin{aligned} & \hline \text { VC2 } \\ & \text { VC5 } \\ & \text { VC11 } \\ & \text { VC11A } \\ & \text { VC12 } \end{aligned}$ | $\begin{aligned} & \hline 0.7-4.5 \\ & 0.5-5 \\ & 1-10 \\ & 1-10 \\ & 10-20 \end{aligned}$ | $\begin{aligned} & 3.30 \\ & 3.90 \\ & 4.50 \\ & 4.50 \\ & 6.00 \end{aligned}$ | $\begin{aligned} & 2.97 \\ & 3.51 \\ & 4.05 \\ & 4.05 \\ & 5.40 \end{aligned}$ |  |  |  |  |  |
|  |  |  |  |  | Miniature Trimmer Series. For automatic insertion and dip soldering techniques. |  |  |  |  |
|  |  |  |  |  |  |  |  |  |  |  |  |  |  |
|  |  |  |  |  | Stock No. | Type\# | Mmf | 1-24, EA. | 25-99, EA. |
|  |  |  |  |  | 16 H 081 | VC9G |  | $\begin{aligned} & 2.40 \\ & 2.40 \\ & 3.00 \\ & 3.15 \\ & 3.30 \\ & 3.60 \\ & \hline \end{aligned}$ | $\begin{aligned} & 2.16 \\ & 2.16 \\ & 2.90 \\ & 2.83 \\ & 2.97 \\ & 3.24 \end{aligned}$ |
| 16 H 008 | VC1G | 0.5-8 | 1.95 | 1.75 | 16 H 082 |  | 0.8-4.5 |  |  |
| 16 H009 | VC3G | 0.7-8 | 1.65 | 1.48 | 164083 | VC31G <br> VC32G <br> VC42G <br> VC43G | $\begin{aligned} & 0.8-12 \\ & 0.8-18 \\ & 1-21 \\ & 0.8-30 \end{aligned}$ |  |  |
| $16 \mathrm{HO1O}$ | VC4G | 1-18 | 1.95 | 1.75 | 16 H 084 |  |  |  |  |
| 16 HOII | VC5G | 1-18 | 2.25 | 2.02 | 16 H 090 |  |  |  |  |
| $16 \mathrm{HO12}$ | VC6GA | 1-18 | 1.80 | 1.62 | $16 \mathrm{HO91}$ |  |  |  |  |
| $\begin{array}{r} 16 \mathrm{HO} 3 \\ 6 \mathrm{HO} 4 \\ 6 \mathrm{HOO2} \\ 16 \mathrm{HO} 5 \\ 16 \mathrm{HOH} \\ \hline \end{array}$ | VC6GCVC7GVC11GVC11GRAVC11GRB | $\begin{aligned} & \hline 1-18 \\ & 2-30 \\ & 0.7-12 \\ & 0.7-10 \\ & 0.7-10 \end{aligned}$ | $\begin{aligned} & 1.95 \\ & 2.25 \\ & 2.25 \\ & 2.10 \\ & 1.80 \end{aligned}$ | $\begin{aligned} & 1.75 \\ & 2.02 \\ & 2.02 \\ & 1.89 \\ & 1.62 \end{aligned}$ | R Miniature Printed Circuit Board Series. Four wire leads for more shock resistant mounting. |  |  |  |  |
|  |  |  |  |  |  |  |  |  |  |  |  |  |  |
|  |  |  |  |  |  |  |  |  |  |  |  |  |  |
|  |  |  |  |  | Stock No. | Type* | Mmf | 1-24, EA. | 25-99, EA. |
|  |  |  |  |  | 16 | VC9GW | 0.8-8.5 | 2.40 | 2.1 |
| $16 \mathrm{HOl7}$ | VCIIGRC | 0.7-10 | 2.10 | 1.89 | 16 H 093 | VC10GW | 0.8-4.5 | 2.40 | 2.16 |
| $16 \mathrm{HO18}$ | VC13GA | 1-10 | 1.20 | 1.08 | 16 H 094 | VC31GW | 0.8-12 | 3.00 | 2.70 |
| 16 H 004 | VC30G | 1-30 | 2.40 | 2.16 | 16 H 098 | VC32GW | 0.8-18 | 3.15 | 2.83 |
| $16 \mathrm{HO19}$ | VC3GI | 0.7-9 | 1.80 | 1.62 | 16 H099 | VC42GW | 1-21 | 3.30 | 2.97 |
| 16 H 020 | VC6GI | 0.8-17 | 1.95 | 1.75 | 16 Hl 102 | VC43GW | 0.8-30 | 3.60 | 3.24 |

(M) Miniature Panel-Mount Series. TeleM] scoping tuning assembly saves length. Has end stops.

| Stock No. | Type $\ddagger$ | Mmf | 1-24, EA. | 25-99, EA. |
| :---: | :---: | :---: | :---: | :---: |
| $16 \mathrm{HO21}$ | VC20G | 0.8-8.5 | 2.70 | 2.43 |
| 16 H 022 | VC21G | 0.8-4.5 | 2.70 | 2.43 |
| 16 H 023 | VC22G | 0.7-12 | 3.30 | 2.97 |
| 16 H 024 | VC23G | ${ }_{1}^{0.80}$ | 3.45 | 3.10 |


|  |  |  |  |  | 3.9 | 3. |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| N <br> VC Split Stator Panel Mount Series. For push-pull RF circuits, and similar networks. |  |  |  |  |  |  |
| Stock No. | Type§ |  | Max. | Min. | . 1-24, EA. | A. 25-99,EA. |
| 16 | 16G |  |  | 0.5-0.5 | . 5.40 | 2.16 |
| 16 H065 | 17G |  | 8.5 | 0.6-0.6 | . 2.70 | 2.43 |
| 16 H 066 | 18G |  |  | 0.7-0.7 | . 3.00 | 2.70 |
| 16 H 067 | 80 |  |  | 0.3-0.3 | 3.90 | 3.51 |
| 16 H 068 | 81 |  | 3.2 | 0.4-0.4 | 44.50 | 4.05 |
| 16 H 079 | 82 |  | 5.5 | 0.5-0.5 | 5.10 | 4.59 |
| 16 HO 00 | 83 |  |  | 4.8-4.8 | .8 7.50 | 6.75 |
| Miniature Trimmer Series. For automatic insertion and dip soldering techniques. |  |  |  |  |  |  |
| Stock No. | Typ |  | Mm |  | 1-24, EA. | 25-99, EA. |
| 16 HO | VC |  |  |  |  |  |
| 16 H 082 | VCl |  | 0.8-4 |  | 2.40 | 2.16 |
| 16 H 083 | VC3 |  | 0.8-1 |  | 3.00 | 2.90 |
| 16 H 084 | VC3 | 2G | 0.8-1 |  | . | 2.83 |
| 16 H 090 | VC4 |  | 1-2 |  | 3.30 | 2.97 |
| $16 \mathrm{HO91}$ | V |  | 0.8-3 |  | 3.60 | 3.24 |
| R Miniature Printed Circuit Board Series. Four wire leads for more shock resistant mounting. |  |  |  |  |  |  |
|  |  |  |  |  |  |  |
| Stock No. | Type* |  | Mmf |  | 1-24, EA. | 25-99, EA. |
| $\begin{aligned} & 16 \mathrm{HO} 022 \\ & 16 \mathrm{H} 093 \\ & 16 \mathrm{H} 094 \\ & 6 \mathrm{H} 098 \\ & 6 \mathrm{H} 099 \\ & 16 \mathrm{H} 102 \\ & \hline \end{aligned}$ | VC9GW |  | 0.8-8.5 |  | 2.402.40 | 2.16 |
|  | VC10GW |  | 0.8-4 |  |  | 2.16 |
|  | VC31GW |  | 0.8-1 |  | 3.00 | 2.70 |
|  |  |  | 0.8-1 |  | 3.15 | 2.83 |
|  |  |  | 1-2 |  | 3. | 2.97 |
|  | VC43 | VC42GW | 0.8-3 |  | 3.60 | 3.24 |

## J. W. MILLER PRINTED CIRCUIT

 RF CHOKESHigh-quality, air-core RF chokes for use on printed circuit boards. Available in a wide range of Available in a wide range of receivers, test equipment, etc. Printed-circuit type mounting ugs for quick, easy soldering into circuit. Coil forms are $7 / 8^{\prime \prime}$ long. Av. shpg. wt., 2 oz.
Sto
60
60 $60 H 6$
$60 H 6$
$60 H 6$
$60 H 6$ 60H612 601
601
$60 H$ $60 H$
$60 H$
$60 H$ 60 H
60 H 60 H
60 H 60
60
60 !it

## $\%$ <br> 요

!
60 H
$60 H 63$
$60 H 63$
$60 H 64$
60H641

| Type | Mh |
| :---: | :---: | :---: |
| 9 | 1 |
| 971 | 1.2 |
| 972 | 1.5 |
| 973 | 1.8 |
| 974 | 2.2 |
| 975 | 2.7 |
| 976 | 3.3 |
| 977 | 3.9 |
| 978 | 4.7 |
| 979 | 5.6 |
| 980 | 6.8 |
| 981 | 8.2 |
| 9882 | 10 |
| 983 | 12 |
| 984 | 15 |
| 985 | 18 |
| 986 | 22 |
| 987 | 27 |
| 988 | 33 |
| 989 | 39 |
| 990 | 47 |
| 991 | 56 |
| 9992 | 68 |
| 993 | 82 |
| 994 | 100 |


$|$| Ohms |
| :--- |
| 17.2 |
| 19.8 |
| 21.8 |
| 24.7 |
| 27.4 |
| 31.2 |
| 34.8 |
| 38.9 |
| 43.2 |
| 48 |
| 53.6 |
| 60.8 |
| 68 |
| 77 |
| 87.7 |
| 97.9 |
| 108 |
| 121 |
| 209 |
| 231 |
| 263 |
| 292 |
| 326 |
| 368 |
| 394 |


| Ma | Dia. | EACH |
| :---: | :---: | :---: |
| 125 | 11/16" | 384 |
| 125 | 23/32* | 384 |
| 125 | $3 / 4{ }^{18}$ | 384 |
| 125 | 3/4* | 414 |
| 125 | 25/32" | 446 |
| 125 | 13/16" | 44¢ |
| 125 | $13 / 16^{\prime \prime}$ | $44 ¢$ |
| 125 | $27 / 32^{\prime \prime}$ | $44 ¢$ |
| 125 | $7 / 8^{\prime \prime}{ }^{\prime \prime}$ | $44 ¢$ |
| 125 | 29/32" | 446 |
| 125 | 15/16" | 47¢ |
| 100 | 27/32" | $47 ¢$ |
| 100 | $7 / 8^{\prime \prime}$ | $50 ¢$ |
| 100 | 29/32" | 504 |
| 100 | 15/16 ${ }^{\prime \prime}$ | 534 |
| 100 | $31 / 32^{\prime \prime}$ | 53¢ |
| 75 | $31 / 32^{\prime \prime}$ | $59 ¢$ |
| 75 | $11 / 16^{\prime \prime}$ | 594 |
| 75 | $1^{\prime \prime}{ }^{\prime \prime}$ | 65¢ |
| 75 | 11/16" | 654 |
| 50 | 29/32" | 684 |
| 50 | 15/16" | 714 |
| 50 | $1^{\prime \prime}$ | 764 |
| 50 | 11/32* | 824 |
| 50 | 11/16" | 884 |



AMPHENOL COIL FORMS
Low-loss, miniature transparent polystyrene coil forms. Excellent for receivers, low-power transmitters, The rigidly fit Amphenol Series 78 S standard and miniature sockets (page 189). Coils can be coated after winding with Amphenol '912' cement, listed on page 297. Av. shpg. wt., 2 oz .

| Stock No. | $\begin{array}{\|c\|} \hline \text { Mfr's } \\ \text { Type } \end{array}$ | Description | Size |
| :---: | :---: | :---: | :---: |
| 71 H 723 | $24-5 \mathrm{H}$ | 5-Prong Min. | 19/16 $\times 13 / 4^{\prime \prime}$ |
| 714711 | 24-6H | 6-Prong Min. | $19 / 16 \times 13 / 4^{\prime \prime}$ |
| 71 H 713 | 24-4 P | 4-Prong Std. | 21/4x11/4" |
| 71 H 714 | 24-5 P | 5-Prong Std. | $21 / 4 \times 11 / 4^{\prime \prime}$ |
| 71 H 724 | 24-6 P | 6-Prong Std. | $21 / 4 \times 11 / 4^{\prime \prime}$ |
| $\begin{aligned} & \text { 1-99, NET } \\ & 100-249, E \\ & 250-u p, E \end{aligned}$ | $\begin{aligned} & \mathrm{CAC} \\ & \mathbf{C H} . \end{aligned}$ |  | $\begin{aligned} & 24 \phi \\ & 204 \end{aligned}$ |

Type No. 24 Coil Form. As above, less prongs. Has hole in center of base for screw 71 H $712.1-99$, NET EACH.
71 H $712.1-99$,
$100-249, ~ E A C H$.

CTC SLUG-TUNED COILS
For broadband RF amplifiers, TV traps, HF circuits, etc. Bodies of LS3, LSM and LS 4 are HF paper base phenolic; PLS5 and PLS6 are ceramic. LS3 has larger slug, greater bandpass. LS4 for larger inductance and $Q$. Tunable from
 PLS5, $11 / 16^{3} \mathrm{x}^{\prime \prime}$ dia.; PLS6, $27 / 32 \mathrm{x}^{1 / 4^{\prime \prime}}$ dia. With hardware; assembled. Shpg. wt., 4 oz . Write for prices on larger quantities.

| Stock No. | Mfr's Type | Description | NET EACH |  |
| :---: | :---: | :---: | :---: | :---: |
|  |  |  | 1-49 | 50-249 |
| 72H294 | LS3 | Coil Form | 526 | 444 |
| 72H 295 | LS3 | 1 Mc Coil | 786 | 754 |
| 72H296 | LS3 | 5 Mc Coil | 744 | 714 |
| 72H 297 | LS3 | 10 Mc Coil | 716 | 694 |
| 72H298 | LS3 | 30 Mc Coil | 704 | 684 |
| 72H299 | LS3 | 60 Mc Coil | 70¢ | 684 |
| 72 H 282 | LSM | Coil Form | 524 | 444 |
| 72H283 | LSM | 1 Mc Coil | 784 | 75 ¢ |
| 72H284 | LSM | 5 Mc Coil | 744 | 714 |
| 72H 293 | LSM | 10 Mc Coil | 714. | $69 ¢$ |
| 72H286 | LSM | 30 Mc Coil | 70¢ | 68¢ |
| 72 H 287 | LSM | 60 Mc Coil | 70¢ | 68 ¢ |
| 72 H 288 | LS4 | Coil Form | $68 ¢$ | 584 |
| 72 H 289 | PLS5 | Coil Form | 614 | 494 |
| 72 H 292 | PLS6 | Coil Form | 564 | $45 ¢$ |

## AMPEREX VACUUM CAPACITORS



For industrial RF applications. Provide extremely high stability in critical byizing circuits. Can be used as plate tank capacitor. Break-down voltage of all capacitors rated at 32 KV maximum. Size $21 / 2 \times 61 / 2^{\prime \prime}$. Av. shpg. wt., 10 oz .

| Stock No. | Type | Mmf | NET |
| :---: | :---: | :---: | :---: |
| 42 H 075 | VC- 25 | 25 | 23.25 |
| 42 H 076 | VC- 50 | 50 | 27.50 |
| 42 H 077 | VC-100 | 100 | 33.00 |



Stock No. Type Description |EA. Stock No. 72 H 05439005 Universal joint 72 H 094339006 Insulated slide action 72 H $666|39017| *$ Miniature of 39016

## DRIVE MECHANISMS

## Type 10000 Worm Drive. A

 ruggedly constructed drive mechanism offering a 16 -to- 1 step-down ratio. Cast-aluminum frame drilled for secure mounting on panel or chassis base. Spring-loaded split gears or smooth operation and minimum backlash. $1 / 4^{\prime \prime}$ left and right-hand shafts. Size, $3 \times 2 \times 23 / 8^{\prime \prime}$ 72 Hil73. NET.Type A012 Right-Angle Drive. Compact single-hole bushing mount type drive mechanism. Has 1 -to- 1 ratio. $1 / 8{ }^{\prime \prime}$ left and right-hand
Shpg. wt., 4 Hz.
.3 .90
Type 45004. Molded-mica, phenolic base type coil forms. Four-prong type. For shortwave receivers and low$113 / 32^{\prime \prime}$ winding length; $23 / 16^{\prime \prime}$ overall. 72 H H. wt. $2{ }^{2} \mathrm{oz}$. $\qquad$ 5 lc


Type 45005. Same as 45004 , but has 5 prongs. | Shpg. wt., ${ }^{2}$ oz. |
| :--- |
| 72 HET |
| 125. | .514 Type 45000. As above, without prongs. Screw mounting. Shpg. wt., 2 oz.

72 H 128 . NET..........

## INSTRUMENT DIALS

(P) Type 10007. Handsome dial with 0-10 clockwise scale spread over
$180^{\circ}$. Lends professional approfessional ap-
 instruments, receivers, etc. Black, etched numerals; black knob.

R Type 10008. Has a clockwise dial scale $R$ with $0-100$ calibration, spread over $180^{\circ}$. For instruments, transmitters, etc. Black knob.


MINIATURE KNOBS


Black plastic knobs with brass inserts for $1 / 8^{\prime \prime}$ dia. shafts. Overall ht.: A006 and A007, $1 / 2^{\prime \prime \prime}$; A018 and A019, 5/8" ${ }^{\prime \prime}$ Shpg. wt., 4 oz.

| No. | Type | Fig. | Size | NE |
| :---: | :---: | :---: | :---: | :---: |
| 72 H 271 | A006 | S | 3/4"11 dial | 424 |
| 72 H 272 | A007 | T | $5 / 8$ " dial dia. | 424 |
| 72 H273 | A018 | W | $3 / 8 \prime \prime \prime$ $1 / 4 \prime \prime \prime$ dial dial dia. | 394 |



## "DESIGNED FOR APPLICATION" COMPONENTS Precision Components for Finest Performance

Famous Millen components for use in original equipment and for replacement purposes in existing equipment. Made to exacting specifications to assure extremely dependable service in all industrial, amateur and experimental applications. In all Series 69000 slug-tuned coil forms, copper slug decreases inductance as slug is turned into coil; iron slug increases inductance. Series 80000 CRT bezels have satin-black
finish, neoprene cushions and green lucite filters. Series 37200 binding posts, plates and plugs provide a number of combinations to meet the most varied requirements. For extensive listings of Millen high-quality RF chokes, see page 176. *Items not illustrated. Coil dimensions are winding lengths. Refer to manufacturers' index on page 448 for the many other Millen products listed in this Catalog.

| $\begin{gathered} \text { Stock } \\ \text { No. } \end{gathered}$ | $\begin{aligned} & \text { Mfr's } \\ & \text { Type } \end{aligned}$ | Fig. | Description | $\begin{aligned} & \text { Wt., } \\ & \text { Oz.' } \end{aligned}$ | $\begin{aligned} & \text { NET } \\ & \text { EACH } \end{aligned}$ |
| :---: | :---: | :---: | :---: | :---: | :---: |
| 72 H 085 | 10012 | H | Right Ang | 5 | 5.00 |
| 72 H 087 | 10050 | K | Dial Lock | 4 | . 54 |
| 72 H099 | 10061 | $\stackrel{F}{F}$ | Shaft Lock, for $3 / 8{ }^{\prime \prime}$ Bushing; $1 / 4{ }^{\prime \prime}$ | 4 | . 45 |
| $72 H 668$ 72 H 088 | A061 10062 | $\stackrel{\mathrm{F}}{\mathrm{G}}$ | Shaft Lock, for $1 / 4^{\prime \prime}$ Bushing; $1 / 8^{\prime \prime}$ | 4 | . 39 |
| 72 | 37001 | J | High Voltage Terminal and Thru-Bushing, Black | 3 | 5 |
| 72 H 037 | 37001 | ${ }^{\text {J }}$ | High Voltage Terminal and Thru-Bushing, Red | 3 | . 48 |
| 72 H 260 | 40305 | * | 5-Prong Steatite Coil Plug | 3 | .6 |
| $72 H 261$ 72 H 057 | 41305 | * | 5-Prong Steatite Jack Bar | 3 | . 8 |
| 72 H 138 | 37212 | * | Double Banana Plug, Black | 3 | . 78 |
| 72 H 059 | 37222 | D | Binding Post, for 37212 | 6 | . 3 |
| 72 H 163 | 37302 |  | Steatite Terminal Strip, 2 Termin | 3 | . 7 |
| 72 H 65 | 37304 37305 | * | Steatite Terminal Strip, 4 T | 4 |  |
| 72 H 166 | 37305 | * | Steatite Terminal Strip, 5 | 5 | . 1 |
| 72 H 167 | 37306 | * | Steatite Terminal Strip, 6 Terminals. | 5 | 1.23 |
| 72 H 130 | 69041 | C | Ceramic Slug-tuned Coil Form, ${ }^{13 / 32} \times 7 / 32^{\prime \prime}$, Copper | 3 |  |
|  | 69043 | A | Ceramic Siug-tuned Coil Form, $1 / 4 \dot{x}^{3} / 8^{\prime \prime}$, Iron siug | 3 | . 84 |
| 72 H 084 | 69045 | B | Ceramic Slug-tuned Coil Form, $1 / 2 \times 11 / 16^{\prime \prime}$, Copper Slug. | 3 | . 05 |
| 72 H 132 | 69046 | B | Ceramic Slug-tuned Coil Form, $1 / 2 \times 11 / 16^{\circ \prime}$, Iron Slug. | 3 | 1.05 |
| 72 H 133 | 69048 | * | Ceramic Slug-tuned Coil Form, $1 / 4 \times 3 / 8^{\prime \prime}$, Iron Slug | 3 | 1.05 |
| 72 H 669 |  | E | Ceramic Slug-tuned Coil Form, $3 / 8 \times 3 / 8^{\prime \prime}$, Copper |  |  |
|  | 69052 | E | Ceramic Slug-tuned Coil Form, $3 / 8 \times 3 / 8 \%$, Iron Siug | 3 | . 87 |
| 72 H 671 | 69055 | E | Ceramic Slug-tuned Coil Form, $1 / 2 \times 11 / 2^{\prime \prime}$, Copper Slug. |  |  |
| 72 H 672 | 69056 | E | Ceramic Siug-tuned Coil Form, $1 / 2 \times 11 / 2 \mathrm{~m}$, iron Siug | 3 | 1.05 |
| 72 H673 | 69057 | E | Ceramic Slug-tuned Coil Form, $1 / 4 \times 5 / 8^{\prime \prime}$, Copper |  |  |
| 72 H 674 | 69058 | E |  | 3 | . 87 |
| 72 H 675 | 69061 | E | Ceramic Slug-tuned Coil Form, $3 / 8 \mathrm{x}^{3 / 4} 4^{\prime \prime}$, Copper |  |  |
|  |  | E |  | 3 3 | . 90 |
| 72 H 150 | 80042 | L | Nicoloi Shield for 2AP1 and 2BP1 ${ }^{\prime \prime}$ ' CR Tubes | 10 | 6.63 |
| 72 H 151 | 80043 | L | Nicoloi Shield for use with either 3AP1 or 3BP1 |  |  |
|  | 80055 |  |  | 10 | 7.62 |
| 72 H153 | 80072 | * | Bezel, Cushion and Filter for ${ }^{\text {a }}$ " $\mathrm{C}^{\text {R }}$ Tu | 4 | 1.80 |
| 72 H 154 | 80073 | * | Bezel, Cushion and Filter for $3^{\prime \prime}$ CR T | 5 | 4.35 |
| 72 H 155 | 80075 | * | Bezel, Cushion and Filter for $5^{\prime \prime}$ CR Tube.. | 7 | 8.40 |

## VARIABLE CAPACITORS

Series 20000 Ultra-MIdgets.
Top-quality, steatite-insulat-Top-quaity, steatite-insulat-
ed variables. All are singleed variables. Ath are single-
bearing type with $.015^{\prime \prime}$ air gap bearing type with .015 air gap
(rated 600 volts peak), except ${ }^{\text {rated }}$ double-bearing type with *double-bearing type with
 peak). All have $1 / 4^{\prime \prime}$ round shafts, $1^{\prime \prime}$ long. $5 / 16^{\prime \prime}-32$ thread mounting bushing. Av. shpg. wt., 5 oz .

|  | Stock No. | $\begin{aligned} & \text { Mfr's } \\ & \text { Type } \end{aligned}$ | Max. | $\begin{aligned} & \hline \mathrm{Min}_{2} \\ & \mathrm{Mmf} \\ & \hline \end{aligned}$ | Overall Length | $\begin{aligned} & \text { NET } \\ & \text { EACH } \end{aligned}$ |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 72 | H 030 | 20015 | 20 | 2.8 | ${ }^{129 / 32^{\prime \prime}}$ | 1.77 |
| 72 | H 044 | 20025 | 28.5 | 3.0 | ${ }^{1 / 32^{\prime \prime}}$ | 1.86 |
| 2 | H H 32 | 20050 | 111 | 3.5 |  | 2.04 |
| 72 | H 045 | 21935* | 39.5 | 6.7 | 39332 | 4.08 |

## 33087 TUBE BASE CLAMPS

Sturdily made, polished spring steel tube base clamps. Hold tubes in sockets and protect against damage from sud-

 cellent for use in mobile equipment and fo cellent for use in mobile equipment and for | reducing vibration of oscillator tubes. 2 oz . |
| :--- |
| Stock No. |

| Stock No. | Type | Diameter | EACH |
| :---: | :---: | :---: | :---: |
| 72 H178 | 33087A | $1.125^{\prime \prime}$ | 36c |
| 72 H 179 | 33087 B | $1.165^{\prime \prime}$ |  |
| 72 H 180 | 33087 C | $1.250^{\prime \prime}$ |  |
| 72 H181 | 33087 D | $1.275^{\prime \prime}$ |  |
| 72 H 182 | 33087 E 33087 F | ${ }^{1.375 *}$ |  |
| 72 H 184 | ${ }_{3}^{330871}$ | $1.000^{\prime \prime}$ |  |

##  <br> M <br> MULTI-SCALE DIALS

(M) Type 10035 Multi-Scale Dial. A deluxeM type illuminated slide-rule dial. Ideal for home-built amateur receivers, VFO s, etc. Two built-in pilot lights provide even illumination over dial. Unit is self-contained. Large finger 4 grip knob control. Has 12 to 1 drive ratio. Has 4 blank scales for calibration and one $0-100$
logging scale. Cardboard scale supplied can be logging scale. Cardboard scale supplied can be Ample panel space provides room for 2 small controls. Size, $81 / 2 \times 61 / 2^{\prime \prime}$. Black finish. Shpg. wt., $1 / 2 \mathrm{lbs}$.
72 I
123 . NET.
7.26
(N) Type 10039 Midget Panel Dial. EconN omy model. Excellent for small transmitters, receivers and measurement equipment. Drive ratio is 8 to 1. Totally self-contained mechanism eliminates back-of-panel interfer ence; quick, easy installation. Compact design. Comfortable, finger-grip knob. Has 5 blank scales for calibration and one 0-100 logging scale. Attractive Shpg. wt., 13 oz .
72 H 050 . NET.

## National Components

# CALIBRATED AND UNCALIBRATED DIALS 



## CALIBRATED DIALS

Famous National dials for smooth performance and dependability. Rec ommended for all types of equipment. We can supply any National dial promptly-specify type mumber for models not listed. †Gray, §Black.

| Stock No. | Mfr's <br> Type | Fig. | Ratio | Scale | Dia. | $\begin{aligned} & \mathrm{Wt.} \\ & \mathrm{Oz} . \end{aligned}$ | $\begin{aligned} & \text { NET } \\ & \text { EACH } \end{aligned}$ |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 71 H072 | AM-2 |  | 5:1 | 0-100; 180 ${ }^{\circ}$ | 3 " | 10 | 3.93 |
| 71 H07 | AM-3 |  | 5:1 | 100-0; 180 ${ }^{\circ}$ | $3^{\prime \prime}$ | 10 | 3.93 |
| 71 H 076 | AM-4 |  | 5:1 | 150-0; $270^{\circ}$ | $3^{\prime \prime}$ | 10 | 3.93 |
| 71 H 077 | AM-5 |  | 5:1 | 200-0; 360 ${ }^{\circ}$ | $3^{\prime \prime}$ | 10 | 3.93 |
| 71 H 078 | AM-6 |  | 5:1 | 0-150; $270^{\circ}$ | $3^{\prime \prime}$ | 10 | 3.93 |
| 714067 | BM-1 | A | Fixed | 0-100-0; 160 ${ }^{\circ}$ | $3^{\prime \prime}$ | 10 | 4.88 |
| 71 H 068 | BM-2 | A | Fixed | $0-100 ; 180^{\circ}$ | $3^{\prime \prime}$ | 10 | 4.64 |
| 71 H 069 | BM-5 | A | Fixed | 200-0; 360 ${ }^{\circ}$ | $3^{\prime \prime}$ | 10 | 4.64 |
| 71 H 063 | N-5 |  | 5:1 | 200-0; 360 ${ }^{\circ}$ | $4^{\prime \prime}$ | 12 | 7.50 |
| 71 H 091 | K | C |  | 0-100; 180 ${ }^{\circ}$ | 31/2" ${ }^{\prime \prime}$ | 12 | 1.73 |
| 71 H058 | HRS-38 | D | Fixed | 0-10; $300^{\circ}$ | 17/16" | 2 | . 58 |
| 714059 | HRS-3 $\dagger$ | D | Fixed | 0-10; 300 ${ }^{\circ}$ | 17/16" | 2 | . 58 |
| $71 H 218$ | HRS-48 | D | Fixed | 1-line; $300^{\circ}$ | 17/16" | 2 | . 58 |
| 71 H219 | HRS-4 $\dagger$ | D | Fixed | 1-line; $300^{\circ}$ | $1716^{\prime \prime}$ | 2 | . 58 |
| 71 H 082 | $\stackrel{\mathrm{O}}{\mathrm{O}}$ | $\underset{\text { B }}{\text { B }}$ |  | $0-100 ; 180^{\circ}$ $0-10 ; 180$ | (1/2" | 4 | 2.85 .69 |

Type ODD Pinch Drive Mechanism. For Type O dial above. Same as used on "K" dial (Fig. C). With knob. 11/8x3/8". Shpg. wt., 2 oz. 48 C

B Type NPW-O Precision Gear Drive. Ruggedly constructed, gear $B$ driven, precision dial mechanism featuring accuracy to one part in 500 . Offers smooth control and high reset accuracy. Dial finished in black with white numerals. Diameter, $41 / 2^{\prime \prime}$. Shpg. wt., 3 lbs.
7 II H 083 . NET. . . . . . . . . . . . . . . . . . . . . . . . . . . . .


EQUIPMENT DESIGN COMPONENTS

| Stock No. | Mfr's <br> Type | Fig. | Description | $\begin{aligned} & 1-24, \\ & \text { EACH } \end{aligned}$ | 25 or More, EACH |
| :---: | :---: | :---: | :---: | :---: | :---: |
| 71 H 167 | FWA |  | Binding Post. Takes wire, Iugs, etc. | . 42 | 37 |
| 71 H 166 | FWC |  | Insulator for FWA. Mica-Bakelite. (Pr.) | . 60 | . 54 |
| 71 H 173 | FWH | K | Terminal Strip-Binding Post. | 1.10 | . 99 |
| 71 H176 | FWJ |  | Terminal Strip-As FWH, for jacks only | . 87 | . 78 |
| 71 H 157 | FWT |  | Plug for FWH and FWJ terminal strips. | 1.56 | 1.40 |
| 71 H 208 | HR | F | Knob, Black, HRS Type; white dot | . 35 | . 31 |
| 71 H 209 | HR | F | Knob, Gray; same as above. . . . . | .35 | .31 |
| 71 H 204 | HRB | H | Lever Knob; bright zinc alloy. | . 52 | .47 |
| 71 H 086 | HRK |  | Knob, Black. $23 / 8^{\prime \prime}$ dia. Set screw; for $1 / 4^{\prime \prime \prime}$ | . 66 | . 59 |
| 71 H 071 | HRP-P |  | Bar knob with pointer. $11 / 4 \times 1 / 2^{\prime \prime}$. . . . . . . . . | . 28 | . 24 |
| 71 H056 | HRT | G | Knob, Black; chrome trim. $21 / 8^{\prime \prime}$ dia. | . 86 | . 77 |
| $71 H 057$ | HRT | G | Knob, Gray; chrome trim. As above | .86 | .77 |
| 71 H 242 | CFA | J | Chart frame; $1 / 16^{\prime \prime}$ steel; $21 / 4 \times 31 / 4^{\prime \prime}$. | . 40 | . 36 |
| 714199 | OSR |  | 100 kc . Osc. Coil. For superregen | 2.07 | 1.86 |
| 71 H116 | TPB | L | Threaded Polystyrene Bushing. | . 07 | . 06 |
|  | XR-50 | M | Coil Form, iron-slug tuned. Mica-bakelite | 1.04 | . 93 |
| 71 H 229 | XR-60 | N | Coil Form, iron-slug tuned. Ceramic. . . . . | 1.32 | 1.19 |
| 71 H 241 | XR-62 | N | Coil Form, iron-slug tuned. Ceramic. | 1.32 | 1.19 |
| 71 H 239 | XR-91 | N | Coil Form, iron-slug tuned. Ceramic. | . 87 | . 78 |
| 71 H 122 | XS-6 | . . . | Steatite Bushing. . . . . . . . . . . | .14 | .13 |

## TRANSMITTING CAPACITORS



Compact, rigid construction. Steatite insulation. Provisions for panel, chassis or standoff insulator mounting. Air Gap and Peak Voltage: TMS types, . $026^{\prime \prime}, 1000$ volts; TMC types, $.077^{\prime \prime}, 3000$ volts; ST types, $.026^{\prime \prime}, 1000$ volts $\ddagger$ except. $018^{\prime \prime}, 600$ volts. Lengths: $* 3^{\prime \prime} ; \dagger 3^{\prime \prime}$ to
$6^{\prime \prime} ; \S 4^{\prime \prime} / 8^{\prime \prime}$ to $91 / 4^{\prime \prime} .180^{\circ}$ rotation. Wt. 1 ib $6^{\prime \prime} ; \S 4^{5} / 8^{\prime \prime}$ to $91^{\prime \prime} 4^{\prime \prime}$. $180^{\circ}$ rotation. Wt., 1 'lb
TYPE TMS-SINGLE STATOR*

| Stock <br> No. | Mfr's <br> Type | Max. <br> M mf | Min. <br> Mimf | NET <br> EACH |
| :---: | :---: | :---: | :---: | :---: |
| 71 H 000 | TMS-100 | 100 | 9.5 | 5.48 |
| 71 | H 001 | TMS-150 | 150 | 11 |
| 71 | H 002 | TMS-250 | 250 | 13.5 |
| 71 | H 003 | TMS-300 | 300 | 15 |

TYPE TMS-DOUBLE STATOR*

| 71 | H 004 TMS-50D | $50-50$ | $6-6$ | 6.09 |  |
| :--- | :--- | :--- | :--- | :--- | :--- |
| 7 | H 005 | TMS-100D | $100-100$ | $7-7$ | 6.05 | | 71 | $H$ | 005 | TM S-100D | $100-100$ | $7-7$ |
| :--- | :--- | :--- | :--- | :--- | :--- |
| 71 | H Ol | TM S-125D | $\mathbf{1 2 5 - 1 2 5}$ | 8.05 |  |

TYPE TMC-SINGLE STATOR $\dagger$

| 71 | $H$ | 0 | TMC-50 | 50 |  |  |
| :--- | :--- | :--- | :--- | :--- | :--- | ---: |
| 71 | $H$ | 6 | 6 | 10 | 7.17 |  |
| 71 | $H$ | 0 | 7 | TMC-100 | 100 | 13 |
| 71 | H OI | TMC-250 | 150 | 17 | 8.61 |  |

TYPE TMC-DOUBLE STATOR§ \begin{tabular}{|l|l|l|l|l|}
\hline H O2O TMC-50D \& $50-50$ \& $9-9$ \& 5.64 <br>
\hline

 

71 \& $H 21$ <br>
$71 . H 022$ \& TMC-100D \& $100-100$ \& $11-11$ \& 11.61 <br>
\hline
\end{tabular}

TYPE ST-SINGLE BEARING*

| $\begin{aligned} & \text { Stock } \\ & \text { No. } \end{aligned}$ | $\begin{aligned} & \text { Mrr's } \\ & \text { Type } \end{aligned}$ | Max Mmi | $\underset{\substack{\mathrm{Min} \\ \mathrm{Min} \\ \text { in }}}{ }$ | EAET |
| :---: | :---: | :---: | :---: | :---: |
| $71{ }^{7} \mathrm{HO30}$ | STHS-15: | 15 25 | ${ }_{3}^{3}$ | 3.09 3 3 |
| 71 71 7 | STHS-25\# | 25 50 | 3.25 3.5 | 3.24 |

TYPE ST-DOUBLE BEARING*


FRONT PANEL RIGHT-ANGLE DRIVE
Typerad.
Front panel con-
trol for variable tentiometers, etc., at right anetc., at right an-
gles to panel.
gles to panel.
freedom in parts layout. May be
used to drive two units. Die-cast zinc housing and gears. $1 / 2 \times 11 / 8 \times 2^{\prime \prime} ; 21 / 2 \times 1 / 4^{\prime \prime}$ shaft. 6 oz .4 .31 Type PRAD. As above but deluxe precision model with brass gears. Backlash less than
 71 H 247 NET

MULTI-BAND TANK ASSEMBLIES


Type MB-150. Tunes all frequencies from 80 through 10 meters with no coil change. Constant $L / C$ ratio maintained on all bands. Rated 3 at 150 watts; handles 1500 v . peaks. Consists of balanced or single-ended amplifiers. Size, $81 / 4 \times$ $3 \times 9^{\prime \prime}$ Sh or $3 \times{ }^{3 \prime}{ }^{\prime \prime}$. Shpg. wt., ${ }^{4}$ lbs.
21.56

Type MB-40DL. Low-power version of MB150 tank above. Excellent for final tank in lowpower transmitters or for grid circuit in transmitter using MB-150 in final. Has same frequency coverage. Shielded swinging link minimizes harmonics. Handies up to 40 wats $55 / 1 \times 21 / 461 /{ }^{\prime \prime}$ ) Shage wt $13 / 4 \mathrm{lbs}$. $55 / 16 \times 21 / 4 \times 61 /{ }^{\prime \prime \prime}$. Shpg. wt., $13 / 4$ lbs.
17.75

UM MINIATURE CAPACITORS

$180^{\circ}$ rotation. Straight-linecapacity plates. . $017^{\prime \prime}$ air gap, 600 v. peak. $1 / 4^{\prime \prime}$ dia. shafts; protrude for ganging. Low minimum capacity. Ceramic base for 4 -hole mounting or single $5 / 88^{\prime \prime}$ hole. $1 \times 21 / 4 \times 25 / 6^{\prime \prime}$. Wt., 5 oz.

| Stock No. | $\begin{aligned} & \text { Mfr's } \\ & \text { Type } \end{aligned}$ | Max. M mf | Min. Mmf | $\begin{aligned} & \text { NET } \\ & \text { EACH } \end{aligned}$ |
| :---: | :---: | :---: | :---: | :---: |
| 71 H275 | UM-15 | 15 | 1.5 | 1.17 |
| 71H276 | UM-35 | 35 | 2.5 | 1.32 |
| 71H27\% | UM-50 | 75 | 3.5 |  |
| 71 H279 | UM-100 | 100 | 4.5 | 1.84 |

## Variable Capacifors

## HAMMARLUND CAPACITORS FOR AMATEUR, INDUSTRIAL AND MILITARY USE

#  

TYPE MC

## TYPE MAPC

A Siliconized steatite base, nickel-plated brass plates. Panel or chassis mounting. *Straightme capacity characteristic; others have M and S types, $.0245^{\prime \prime}$; MX and SX types, $.0715^{\prime \prime}$. Tested at 1000 v . and 1750 v . ( 60 cycle rms ) respectively. Capacity increases with clockwise rotation. All capacitors have rotor stop. Shpg. wt., 10 oz .

| Stock No. | $\begin{aligned} & \text { Mfr's } \\ & \text { Type } \\ & \hline \end{aligned}$ | Max. M mif | Min. Mmi | $\begin{aligned} & \mathrm{NET} \\ & \text { EACH } \end{aligned}$ |
| :---: | :---: | :---: | :---: | :---: |
| 72 H 425 | *MC-20-S | 20 35 | 5.5 | 2.64 |
| 72 H 426 | *MC-35-S | 35 | 6.0 |  |
| 72 H427 | *MC-50-S | 50 | 6.5 | 2. |
| 72 H 428 | *MC-50-M | 50 80 | 6.3 8.0 |  |
| 72 H43 | MC-75-M | 80 | 7.3 | 3.0 |
| 72 H43 | *MC-100-S | 100 | 8.3 | 3.1 |
| 72 H 432 | MC-100-M | 100 | 7.7 |  |
| 72 H 433 | M C-140-M | 140 | 9.0 | 3.39 |
| 72 H434 | *MC-140-S | 140 | 10.0 | 3.39 |
| 72 H 435 | MC-200-M | 200 | 10.3 | 3.63 |
| 72 H 436 | $\mathrm{MC-250-M}$ | 250 | 12.0 | 3.87 |
| 72 H437 | MC-325-M | 320 | 13.5 | 4.23 |

DOUBLE-SPACED MC's

| 72 H 451 72 H 452 72 H 453 | $\left\|\begin{array}{\|c\|} * M C-20-S X \\ * M C-35-S X \\ M C-35-M X \end{array}\right\|$ | 20 32 32 | 8.5 7.8 |  |
| :---: | :---: | :---: | :---: | :---: |
| 72 H 454 | *MC-50-SX | 53 | 11.5 | 3.15 |
|  | MC-50-MX | 53 | 10.5 |  |
| 72 H 456 | *MC-100-SX | 100 | 16.5 | 3.9 |

## TYPE MCD DUALS

B Panel-mount type. Steatite base; nickelplated brass plates. Tested at 1000 v . mid-linecapacity characteristic. Shpg. wt. 11 oz .

| Stock No. | $\begin{aligned} & \text { Mir's } \\ & \text { Typo } \end{aligned}$ | $\begin{aligned} & \text { Max. } \\ & \text { M mif } \\ & \hline \end{aligned}$ | $\left\|\begin{array}{\|c\|} M_{1} \\ M_{\text {m }} \end{array}\right\|$ | $\begin{aligned} & \text { NET } \\ & \text { EACH } \end{aligned}$ |
| :---: | :---: | :---: | :---: | :---: |
| 72 H 465 | $\overline{\mathrm{MCD}-50-\mathrm{M}}$ | 50 | 5.5 | 4.44 |
| 72 H 466 | MCD-100-M | 100 | 6.3 | 4.89 |
| 72 H 467 | *MCD-100-S | 100 | 7.0 | 4.89 |
| 72 H 468 | MCD-140-M | 140 | 7.8 | 5.28 |

DOUBLE-SPACED DUALS


## E. F. JOHNSON CAPACITORS



K


## MINIATURE VARIABLES

For VHF and UHF use. Low-loss steatite insulation. Mount in $14^{\prime \prime}$ panel hole; $3 / 4 x^{5 / 8^{\prime \prime}}$ panel mtg. space. Slotted shaft takes $3 / 6^{\prime \prime} \mathrm{knob}$. 1250 volts approximate peak break-down. Nickel-plated. Av. shpg. wt., 2 oz.
(J) Single

| $\begin{gathered} \text { Stock } \\ \text { No. } \\ \hline \end{gathered}$ | $\begin{aligned} & \hline \text { Mfr's } \\ & \text { Type } \\ & \hline \end{aligned}$ | Max M mf | Min. M mi | No. of Plates | $\begin{aligned} & \text { EACH } \\ & \hline \end{aligned}$ |
| :---: | :---: | :---: | :---: | :---: | :---: |
| 75 H 175 | 5M11 | 5.0 | 1.5 | 5 | 1.0 |
| 75 H 176 | 9M11 | 8.7 | 1.8 | 9 |  |
| 75 H 177 | 15M11 | 14.2 | 2.3 | 5 | . 20 |
| 75 H 178 | 20M11 | 19.6 | 2.7 | 21 | 1.35 |

(K) BUTTERFLY


TYPE "R" VARIABLES

L
For transmitting and receiving. Have $.024^{\prime \prime}$ L] airgap; $.023^{y}$ plates. Av. shpg. wt., 1 lb .



| 75 H | 20R12 | 20 | 5 | 3 | 2.25 |
| :---: | :---: | :---: | :---: | :---: | :---: |
| 75 H | 35R12 | 35 | 6 | 5 |  |
| 75 H 055 | 50R12 | 50 | 6.5 | 7 | 2.45 |
| 75 H 056 | 75R12 | 80 | 8 | 11 | 60 |
| 75 H0 | 100R12 | 102 | 8.5 | 14 |  |
| 75 H 05 | 140R12 | 140 | 13.5 | 19 |  |

C Midget padding, trimming and general-purpose capacitors. Similar to APC, but smaller. Rotors and stators are nickel-plated brass. Nickel-plated beryllium copper wiper contact. Tapped ( $4-40$ thread) brass studs in steatite base permit mounting without grounding rotor. Tested at 600 volts rms, 60 cps . Overall size: $25 / 32^{\prime \prime}$ wide, $15 / 16^{\prime \prime}$ high. All units listed below have slotted shafts for screwdriver or hex wrench. Shpg. wt., 4 oz.

| $\begin{gathered} \text { Stock } \\ \text { No. } \end{gathered}$ | Mfr's Type | Max. Mmf | Min. Mmf | $\begin{aligned} & \text { NET } \\ & \text { EACH } \end{aligned}$ |
| :---: | :---: | :---: | :---: | :---: |
| 72 H 208 | MAPC-15 | 15 | 2.3 | 1.17 |
| 72 H 209 | MAPC-25 | 25 | 2.6 | 1.20 |
| 72 H 210 | MAPC-35 | 35 | 2.9 | 1.23 |
| 72 H211 | MAPC-50 | 50 | 3.2 | 1.32 |
| 72 H 212 | MAPC-75 | 75 | 3.9 | 1.44 |
| 72 H213 | MAPC-100\| | 100 | 4.5 | 1.71 |

## TYPE HFA

(D) Sturdy capacitors, similar to HF, but larger Dlates and wider air gaps. For generalpurpose and transmitting applications. Singlehole panel mounting. Also bracket for base air gap, B-. $03^{\prime \prime}, \mathrm{E}-.07^{* \prime}$ type no. denotes. 1200 and 1750 test volts respectively. Shpg. wt., 1 lb .

| $\begin{gathered} \text { Stock } \\ \mathrm{No.} \\ \hline \end{gathered}$ | $\begin{aligned} & \hline \text { Mfr's } \\ & \text { Type } \\ & \hline \end{aligned}$ | Max. Mmi | Min. Mmf | NET EACH |
| :---: | :---: | :---: | :---: | :---: |
| $72 \mathrm{H224}$ | HFA-10B | 9 | 2.3 | 1.92 |
| 72 H 225 | HFA-15B | 16 | 2.8 | 1.98 |
| 72 H 229 | HFA-15E | 16 | 4.0 | 2.13 |
| 72 H 226 | HFA-25 B | 25 | 3.0 | 2.07 |
| 72 H227 | HFA-50B | 50 | 4.3 | 2.25 |
| 72 H 228 | HFA-100B | 100 | 7.5 | 3.18 |
| 72 H 222 | HFA-100A | 102 | 4.5 | 2.37 |
| 72 H223 | HFA-140A | 145 | 6.0 | 2.79 |

## TYPE MAC

(Not illustrated.) Extremely small variable capacitors. Excellent for use as VHF trimmers. Steatite base; only $3 / 4 \times 5 / 8^{\prime \prime}$. Screwdriver adjustment. Have threaded sleeve for convenient

| Stock No. | $\begin{aligned} & \hline \text { Mfr's } \\ & \text { Type } \\ & \hline \end{aligned}$ | Max. Mmf | Min. Mmf | $\begin{gathered} \text { NET } \\ \text { EACH } \end{gathered}$ |
| :---: | :---: | :---: | :---: | :---: |
| $72 \mathrm{H255}$ | MAC-5 | 5.0 | 1.4 | 1.14 |
| 72 H 256 | MAC-10 | 8.7 | 1.7 | 1.17 |
| 72 H 258 | MAC-20 | 19.6 | 2.7 | 1.32 |

## BUD VARIABLE CAPACITORS



## "MC" MIDGETS

Sturdy, highly efficient midget variables. Single and double-bearing types; *double. Fit $3 / 8^{\prime \prime}$ dia. mounting hole. $3 / 8$ " Cad-mium-plated brass rotor ite insulation. $.024^{\prime \prime}$ air-
gap. Shpg. wt., 7oz.

| Stock No. | $\begin{array}{\|c\|} \hline \text { Mfr's } \\ \text { Type } \\ \hline \end{array}$ | Max. M mf |  | No. of Plates | $\begin{aligned} & \text { NET } \\ & \text { EACH } \end{aligned}$ |
| :---: | :---: | :---: | :---: | :---: | :---: |
| 61 H142 | 1850* | 15 | 3 | 3 | 1.78 |
| 61 H 143 | 1852* | 33 | 4 | 5 | 1.84 |
| 61 H 444 | 1855* | 50 | 5 7 | 14 | 2.45 |
| 61 H146 | 1856 | 140 | 7 | 19 | 2.72 |
| 61 H 147 | 1858* | 190 | 9 | 27 | 2.94 |
| 61 H 148 | 1859* | 235 | 10 | 33 | 3.38 |
| 61 H149 | 1860* | 300 | 12 | 43 | 3.67 |
| 61 H 150 | 1870 |  |  |  |  |
| 61 H151 | 1872 | 33 | 4 | 5 | 1.84 |
| 61 H 152 | 1873 | 50 | 5 | 7 | 1.91 |
| 61 H154 | 1875 | 100 | 7 | 14 | 2.06 |
| 61 H 155 | 1876 | 140 | 8 | 19 | 2.35 |

## MIDGET TRIMMERS

Type MT-833. For antenna coupling, interstage coupling and receiver tracking applications. Maximum capacity, 36 mmf.; minimum capacity, 3 mmf. Has ceramic base. Shpg.
Wt.'H 43 . NET $\qquad$ capacity of 420 mmf ; minimum has maximum capacity of 420 mmf ; minimum, 94 mmf . With ceramic base. Shpg. wt., 4 oz .


15c

294


1. 2.95

## Coils, Capacitors \& Accessories

## RECEIVER-TYPE VARIABLE CAPACITORS

## TRF TYPE CAPACITORS

2-Gang. For use in superhets without RF stage or in 2-stage TRF receivers. Each section has 29 plates. Range of 15.5 Counter-clockwise rotation increases capacity. With trim mers for each section. End位 ments. Spring brass wipers. Requires series padder for oscillator use. Has $3 / 8^{\prime \prime}$ diameter shaft. Use with shaft extender Stock No. 60 H 366 (at center, below) for conversion to $1 / 4^{\prime \prime}$
shaft. See pages 177 to 179 for coils. Size: $15 / 8 \mathrm{x}$ $61 /{ }^{1} \times 23 / 1^{\circ}$. Shpg. wt. 10 oz. 10-49. EACH... $97 \Varangle$ 50-99. EAC
1.08
. .906


2- and $3-G a n g ~ C a p a c i-~$
tors. Compact tors. Compact TRF variable capacitors. Have trimmers on side of frame. Outer rotor plates are slotted for
tracking adjustment. Tapped tracking adjustment. Tapped holes in frame provide
secure mounting. Range: 12 secure mounting. Range: 12 $3 / 8^{\prime \prime}$. Size of 2-gang: $23 / 16 \mathrm{x}$ $33 / 16 \times 113 / 16 \times 15 /{ }^{\prime \prime}$. Av. shpg. wt., 6 oz . $\quad 1.04$ 10-49, EACH...94¢ $50-99$, EACH.. .866


## SUPERHET CAPACITOR

 AND MATCHING COILS

Varia-Section Superhet lator max. 10.6 min mmf. has one $2-17 \mathrm{mmf}$. trimmer. 27-plate RF section with 434 max. -14.5 min . mmf.; has one 2-17 mmf. trimmer. Provides 455 kc
frequency difference in frequency difference in combination with oscillator coil and loop antenna, below. Capacity increases in counterclockwise direction. $15 / 8 \times 113 / 16 \times 23 / 16^{n}$. Shaft, $1 / 4^{n}$ diameter. $3 / 4^{\prime \prime}$ long. Shpg. wt., 10 oz . . . 1.02 $10-49, E A C H$. $92 \phi$ 50 599 EACHH.. $85 \phi$ Oscillator Coil for Above. Shpg. wt., 4 oz.
55 H 507 NET Loop Antennaffor ÀBove. Shpg. wt., 8 oz. 36

## MIDGET SUPERHET AND TRF TYPES



Midget Superhet. Miniature size without sacrifice of performance makes these 2-gang variables perfect for portable and midget sets. Capacity: RF section. 14.5 to 368 mmf ; 27 plates; osc. section, 11.6 to $136.6 \mathrm{mmf}, 15$ plates. Capacity increases with counter-clocktrime rotation. For $111 / 16 \times 11 / 2 \times 15 / 16^{\prime \prime}$. $1 / \mathrm{kN}^{\mathrm{N}}$ diame . With trimmers. Size, ${ }^{\prime \prime} 11 / 16 \times 1 /{ }^{2} \times 15 / 16^{\prime \prime}$. ${ }^{1 / 4}$ diameter mounted shaft. Shpg. wt., 6 oz . 61 H 008. 1 to 9 EACH. 6 oz.
10-49, EACH.. 914 50-99, EAĊH... 84 61 HOII. Smaller version of above. RF sec., 10.8 mmf to 232.4 mmf . Osc. sec., 8.5 mmf to $106-3 \mathrm{mmf}$. $15 / 16 \times 13 / 8 \times 13 / 16^{\prime \prime}$. Shpg. wt., 5 oz .

 Midget TRF. 33-plate, singlegang capacitor. Cariable from 109 mmf . Capacity increse clockiwise. Size: $13 / 6^{\prime \prime}$ deep, $13 / 8^{\prime \prime}$ wide, $15 / 6^{\prime \prime}$ high. $1 / 4^{\prime \prime}$ diameter shaft wide, $15 / 16^{\prime \prime}$ high. $1 / 4^{" d i a m e t e r ~ s h a f t ~}$ wt., 5 oz
 $.73 c$
. .614

## TRANSISTOR VARIABLE CAPACITOR



Midget, variable, two-section capacitor designed for use with broadcast band transis-
tor receivers. Ideal for small tor receivers. Ideal for small table models and portables. for capacity increase Each section includes a trimmer for precise adjustment. Oscillator section designed mmf. Antenna section capacity 7.5 to 81 to 66 Shaft diameter $1 / 4^{\prime \prime}$. Size: $13 / 8 \times 15 / 16 \times 15 / 6^{\prime \prime}$. Shppg
 Write for quantity prices on 100 or more capacitors

## TRIMMERS AND PADDERS



Mica trimmer and padder capacitors. Treated to as sure resistance to humidpacity permanence of caceramic base. Clear India mica. The adjusting plates have been rigidly constructed to permit bending soldering lugs with out affecting capacity. Size, $17 / 32 \times 3 / 4 \times 5 / 8^{\prime \prime}$. Mtg.
 rom 3 turns open trimmer to tight setting Av. shpg. wt., 2 oz .

| Stock No. | Mmf | NET EACH |  |  |
| :---: | :---: | :---: | :---: | :---: |
|  |  | $1-9$ | 10-49 | 50-99 |
| 60 H 347 | 1.5-15 | 12 c | 114 | 104 |
| 60H340 | 2-30 | $12 c$ | 114 | 104 |
| 60H341 | $4-80$ | 24 | 114 | O4 |
| 60H342 | 9-180 | 146 | 134 | 124 |
| 60H343 | 25-280 | 154 | 136 | 129 |
| 60H344 | 45-380 |  |  |  |
| 60H345 | 70-480 | 194 | 174 | 54 |
| 60H346 | 100-580 | 234 | 204 | 84 |
| 60H348 | 140-680 | 244 | 214 | 194 |
| 60H349 | 170-780 | 274 | 244 | 224 |

Write for Prices on Larger Quantities

## PANEL BEARING ASSEMBLY



For use with rigid or flexible couplings for mounting volume controls, etc., away from the panel. Made of brass. Take panels up to $7 / 16^{\prime \prime}$ thick. For standard $1 / 4^{\prime \prime}$ shafts. Supplied with 2 fiber insulating washers. shpg. wt., 3 38. Overall length $3^{\prime \prime}$. NET. . . . .32c 60 H 386. Overall length $6^{\prime \prime}$. NET....... 38 60 H 390. Bearing only.

NET.
94

## E. F. JOHNSON FLEXIBLE SHAFTS



Non-rusting phosphorbronze flexible shafts connecting out-of-line shafts together. Handy accessory for amateurs, experimenters, labs, etc. Permit up to 90 degrees angular control Shpg. wt., 2 oz
73 H 290. 115-253. Length $3^{\prime \prime}$. NET.... $50 ¢$ 73 H 291. 115-254. Length $6^{\prime \prime}$. NET.... $75 ¢$


Couplings for extending shafts of volume controls, switches, condensers, etc., or for ganging single units, even when shafts are not of the same diameter. Available in insulated and noninsulated types. Insulated types are made of black phenolic. Extenders for decreasing or shaft shaft. Shaft 60 H 366 has $3 / 8^{\prime \prime}$ opening, $1 / 4$ length, $11 / \mathrm{s}^{\prime \prime}$. Av. shpg. wt., 4 oz .

| Brass | Insulated | Kind |
| :---: | :---: | :---: |
| 60 H 360 | 60 H 350 | Coupling |
| 60 H 361 |  | Coupling |
| 60 H 362 60 H 365 | 60 H 352 60 H 355 | Coupling Ext. |
| 60 60 H 365 | 60 H 355 | $\begin{aligned} & \text { Ext. } \\ & \text { Ext. } \end{aligned}$ | | Size |
| :--- |
| $1 / 4$ to 1 |
| $3 / 8$ to 3 |
| $1 / 44$ to 3 |
| $1 / 4$ |
| $3 / 8$ to |

1 to 9, EACH.
. $16 \nmid$
10 to 49, EACH
Write for prices on larger quantities.

## HAMMARLUND COUPLINGS



Type FC-46S. Insulated coupling. Excellent for providing flexible linkage between angularly misaligned shafts. Maximum torque is limited only by For $1 / 4^{4}$-dia. shafts. Shaft clearance, $5 / 33^{\prime \prime}$. Flash voltage, 6000 v . Size, $11 / 4 \mathrm{x}$

.. 1.25
 Type FNC-46S. As above, but non-insulated type. Has durable, plated-metal construction $11 / 4 \mathrm{D} . \mathrm{x}^{23} / 32^{\prime \prime}$. Shpg. wt., 3 oz .
72 H 497. NET.

## INSULATED COUPLING



For coupling drive shafts to condensers, gang switches, etc. to fit $1 / 4^{\prime \prime}$ shafts; set-screws hold


## B\&W AMATEUR COILS



A wide selection of rugged, efficient and inexpensive RF coils covering amateur bands from 160 through 10 meters. Ideal for use in lowpower final amplifiers, exciters, bufiter and osstandard 5-prong tube sockets. Polystyrene coil supports for high RF insulation.

## 75 WATT "JUNIOR" COILS

Rated, 75 watts- 850 DC volts. Tune with 15 mmf to 100 mmf . Supplied in fixed-end (JEL), fixed-center (JCL) or variable-center (JVL) link types. All fit standard 5 -prong tube sock-
ets. $31 / 16 \times 151 / 16^{\prime \prime}$. Shpg. wt., 5 oz .

| Band | JEL | JCL | JVL | EACH |
| :---: | :---: | :---: | :---: | :---: |
| 160 | 75 H320 | 75 H 330 | 75 H340 | 1.86 |
| 80 | 75 H 321 | 75 H331 | 75 H 341 |  |
| 40 | 75 H322 | 75 H332 | 75 H 342 |  |
| 20 | 75 H 323 | 75 H333 | 75 H343 |  |
| 15 | 75 H 349 | 75 H354 | $\left\|\begin{array}{lll} 75 & 3 & 35 \\ 75 & H & 344 \end{array}\right\|$ |  |
| 10 | 75 H 324 | 75 H 7445 | 75 75446 |  |

## 25 WATT "BABY" PLUG-IN COILS

Very compact coils for exciters and low-power transmitters. Only $11 / 4 \times 11 / 2^{\prime \prime}$. MC-center tap, no link. MEL-end link. MCL-center link. Tune with 50 mmf (except 100 mmf for 160 M ). Fit standard 5 -prong sockets. Wt., 3 oz .

| Band | MC | MEL | MCL | EACH |
| :---: | :---: | :---: | :---: | :---: |
| 160 | 75 H 380 | 75 H 300 | 75 H310 | 1.47 |
| 80 | 75 H359 | 75 H 301 | 75 H 311 |  |
| 40 | 75 H370 | 75 H 302 | 75H312 |  |
| 20 | 75 H371 | 75 H303 | 75 H313 |  |
| 15 | 75 H358 | 75 H 357 | 754356 |  |
| 10 | 75 H372 | 75 H304 | 75 H 314 |  |

## MINIDUCTOR COIL STOCK

Easily-cut, polystyrene-supported, air-wound coils. High $Q$ values. Ideal for high frequency coircuits in compact mobile and portable rigs. Standard lengths can be cut to specific needs. Use for tank coils, IF transformers, loading coils, etc. $1^{\prime \prime}$ dia. coils are $3^{\prime \prime}$ long, all others,
$2^{\prime \prime}$. Av. shpg. wt., 5 oz.


## $2^{\prime \prime} \& 2 \underline{1} \mathbf{2}^{\prime \prime}$-DIA. COIL STOCK

Ideal for making buffer and final tank coils, antenna loading coils, line noise filter coils, etc. Easily cut to size. $2^{\prime \prime}$ dia. types perform as inks when fitted inside any $21 / 2^{\prime \prime}$ dia. type. per inch. All $10^{\prime \prime}$ long

| Stock No. | Type | Dia. | Wire | *TP1 | Wt., $\mathrm{Oz} .$ | $\begin{aligned} & \text { NET } \\ & \text { EACH } \end{aligned}$ |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| $\overline{75 H 406}$ | 3900 | 2" | \#14 | 8 | 9 | 1.86 |
| 75 H 407 | 3905-1 | 21 | \#12 | 8 | 13 | 1.95 |
| 75 <br> 75 | 390 | $2^{1 / 1 / 2}$ | \#14 | 10 | 12 | . 86 |

## TYPE 3975 BALUN ANTENNA COILS

Bifilar inductors for efficiently matching 75 ohm unbalanced output to 75 or 300 -ohm 10 meters without tuning or switching. Excellent for use with transmitters having Pi-networks. Rated, 250 watts input. Less base
Shpg. wt., 12 Oz. Two required.
75 H
594 . NET EACH.....
3.15

## Dials, Coils, Accessories

## MORRIS COIL WINDER

You'll be able to wind efficient, com-mercial-looking honeycomb, spiderweb and solenoid coils with this very vera real time saver and gives your work a more professioual appearance. Just set up the winder for the type of coil you need and turn the handle-dial Indicator counts the turns for you.
May be used for winding RF coils, oscillator coils, loop antennas, chokes,
 filter inductors, parasitic suppressors, TVI traps, etc. Handles up to No. 16 wire, making it suitable for almost all coil requirements in receivers, test equipment and small transmitters. Unit is supplied with wood spool for holding honeycomb and solenoid coils, plus cast pegholders and four $61 / 8^{\prime \prime}$ wooden pegs for spiderweb coils, Winder is mounted on cast-iron base with holes for bench mounting. With extension shaft for winding
solenoid coils up to $31 / 4^{\prime \prime}$ long. Less wire and forms. Base size, $45 / \mathrm{s}^{\prime \prime}$. solenoid coils up to $31 / 4^{\prime \prime}$ long. Less wire and forms. Base size, $45 / 8 \times 5^{\prime \prime}$.
Shpg. wt., 3 lbs . 83 Phys. wt., ${ }^{3}$ NET.
.4 .95

## AMPHENOL "TUNING EYE" ASSEMBLIES

Tuning eye ("magic-eye") indicator assemblies for use in custom-built AM or FM chassis and tuners, test instruments, etc. Type 58-MEA-6 assembly takes $6-$ prong indicator tubes such as the 6 E 5 or
 indicator tubes such as the 6AD6G, ${ }_{6 A F}$ indich 6 AL 7 GT . Easily installed in any superhet receiver having automatic volume control circuit. Complete with hood escutcheon; less matic volume control

| Stock No. | $\begin{aligned} & \text { Mfr's } \\ & \text { Type } \end{aligned}$ | NET EACH |  |  |
| :---: | :---: | :---: | :---: | :---: |
|  |  | 1-99 | 100-249 | 250-Up |
| $\begin{aligned} & 45 \mathrm{H} 855 \\ & 45 \mathrm{H} 856 \\ & \hline \end{aligned}$ | $\begin{aligned} & \text { 58-MEA-6 } \\ & 58 \text {-MEA- } \end{aligned}$ | $\begin{aligned} & 1.12 \\ & 1.53 \\ & \hline \end{aligned}$ | 1.27 | $\begin{aligned} & .84 \\ & 1.15 \end{aligned}$ |

CRONAME "TAILORED" TUNING ASSEMBLIES

"Croflex" dials are "tailored" to fit any average chassis. They offer handsome, modern styling that will complement the finest of custom installations. The tuning knob can be located at either end of the dial or along its lower edge. To install, simply position dial assembly and mount on chassis, string dial cord and set pointer, and make shaft hole and dial cutout on panel. Capacitor pulley is furnished with each dial assembly-
assemblies accommodate either clockwise or counter-clockwise capacitors assemblies accommodate either clockwise or counter-clockw"se capacitors
with shafts up to $1 / 4$ " in diameter. Modern " 3 -dimension" edge-lighted glass scales are calibrated horizontally. Supplied with gold-bronze finished aluminum escutcheon and two clip-on, miniature-base, screw-type pilot light sockets (less bulbs). AM calibration covers $550-1700 \mathrm{kc}, \mathrm{FM}$ ratio $33 /{ }^{\prime \prime}$, mc , shortwave covers $6-18 \mathrm{mc}$. Series CR-1: $9: 1^{\prime \prime}$ tuning ratio, $33 / 4$ pointer travel. Series CR-2: ${ }^{\text {m }}$, logging scale.

| Stock No. | $\begin{aligned} & \text { Mfr's } \\ & \text { Type } \end{aligned}$ | Application | Cutout | Lbs. | $\begin{aligned} & \text { NET } \\ & \text { EACH } \end{aligned}$ |
| :---: | :---: | :---: | :---: | :---: | :---: |
| 55 H317 | CR-1 | *AM-Shortwave |  |  | 7.35 |
| 55 H 318 | CR-1A | AM-FM | 113/16x45/16" | , 1 | 7.35 |
| 55 55 5 | $\begin{aligned} & \text { CR-1B } \\ & \mathrm{CR}-1 \mathrm{C} \end{aligned}$ | AM |  | \} | 7.35 |
| 55 H 322 | CR-2 | *AM-Shortwave |  |  | 8.17 |
| 55 H 323 | CR-2A | ${ }_{\text {AM-FM }}$ | 113/6x $79 / 16^{\prime \prime}$ | 11/4 | 8.17 |
| 55 55 5 | CR-2B $\mathrm{CR}-2 \mathrm{C}$ | AM |  |  | 8.17 |
| 55 H 325 | CR-3 | *AM-Shortwave |  |  |  |
| 55 55 H 326 | CR-3A CR-3B | AM-FM | $\}^{2 \times 81 / 2 "}$ | $\}^{11 / 2}$ | 10.58 |

## ILLUMITRONIC COIL STOCK

High-quality airwound coil stock for a wide variety mental, and laborimental, and laboratory applications, tuned circuits of
 tuned circuits of ceivers, VFO's, converters, and other types of RF equipment. Each coil comes in a convenient $10^{\prime \prime}$ length. May be tapped or easily cut to any length to provide the exact inductance required. All coils are constructed of finest quality tinned copper wire to assure easy soldering and efficient performance. Polystyrene supporting physical stability for frequency determining circuits. *Turns per inch.

| Stock No. | Type | Dia. | *TPI | $\begin{aligned} & \text { Wire } \\ & \text { Size } \end{aligned}$ | $\begin{array}{\|c\|} \hline \text { Wt., } \\ \mathbf{O z} . \end{array}$ | NET |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| $72 \mathrm{H312}$ | 1006T | 11/4" | 6 | 14 | 5 | 1.65 |
| 72 H 313 | 1008 T | $11 / 4 "$ | 8 | 16 | 5 | 1.65 |
| 72 H 314 | 1010 T | 11/4" | 10 | 14 | 5 | 1.65 |
| 72 H 316 | 1208 T | $11 / 2^{\prime \prime}$ | 6 | 16 | 5 | . 8.80 |
| 72 H317 | 1210T | 11/2" | 10 | 18 | 5 | 1.80 |
| 72 H 318 | 1406T | $13 / 4$ " | 6 | 14 | 5 | 1.90 |
| 72 H319 | 1408T | 13/4" | 8 | 14 | 5 | 1.90 |
| 72 H 326 | 1410T | 13/4" | 10 | 16 | 5 | 1.90 |
| 72 H 327 | 1606 T | $2^{\prime \prime}$ | 6 | 14 | 9 | 1.95 |
| 72 H328 | 1608 T | $2^{\prime \prime}$ | 8 | 14 | 9 | 1.95 |
| 72 H 329 | 1610T | $2^{\prime \prime}$ | 10 | 16 | 9 | 1.95 |
| 72 H 330 | 2006 T | 21/2"' | ${ }_{8}^{6}$ | 12 | 13 | 2.25 |
| 72 H332 | 2010T |  | 10 | 16 | 13 |  |
| 72 H 333 | 2406 T | $3^{3 / 1}$ | 6 | 12 | 17 | 3.40 |
| 72 H 334 | 2408 T | $3^{\prime \prime}$ | 8 | 14 | 17 | 3.40 |
| 72 H 337 | 2410 T | $3^{\prime \prime}$ | 10 | 14 | 17 | 3.40 |

## E. F. JOHNSON ROTARY INDUCTORS

Smooth-operating rotary in-ductors-ideal for tank circuits in multi-band transmitters. Variable-pitch windings for improved efficiency at high 3 amps. Av. shpg. wt., $11 / 2 \mathrm{lbs}$.

| $\begin{aligned} & \hline \text { Stock } \\ & \text { No. } \end{aligned}$ | $\begin{aligned} & \text { Mfr's } \\ & \text { Type } \end{aligned}$ | Size | $T_{\mu \mathrm{h}}^{\operatorname{Max}}$ | $\begin{array}{\|c\|} N E T \\ E A C H \end{array}$ |
| :---: | :---: | :---: | :---: | :---: |
|  | 229-201 |  | 10 |  |
|  |  |  |  |  |
|  | 229-202 | $155 / 32 \times 21 / 2 \times 2{ }^{31}$ |  |  |

## B\&W "CC-50" COAXIAL CONNECTOR

Provides weatherproof cable connection to halfwave doublet antenna; also serves as center insulator. Antenna elements connect to forged steel eye-bolts. Internal soldering connections for coax cable. Includes cement, eye-bolts, rubber sleeve, screws, 2 housing sections, and instructions. Shpg. wt., 1 lb.
75 H 593. NET...........


## WALSCO DIAL CORD SPOOLS

An excellent selection of dial cord covering $80 \%$ of the replacement demand. All types have either a fi-ber-glass or a linen core. Pre-stretched; maintains proper tension. Nylon-
braided sleeves. Av. shpg. braided sl., 4 oz .
wt.


G-C DIAL POINTERS
Will fit most radio sets. Can be cut shorter for small dials. Wt., 2 oz .
Type 6810. Kit of 10 pointers in plastic case.
60 Hhpg. wt., 449 NET.

(A) 6802. $5^{\prime \prime}$ rotary for $1 / 4^{\prime \prime}$ shaft. Has gold and

60 H 446. N
(B) $68013^{3 \prime}$ rotary for $4^{1 / 4^{\prime \prime}}$ shaft. Gold.
(C) $6804.2^{\prime \prime}$ slide pointer. White enamel

C 60 H 448. NET EACH............... $24 ¢$
(D) $6803.21 / 2^{\prime \prime}$ slide pointer. Red translucent.

## G-C AUTO-RADIO SPEAKER CONTROLS

Type 8891. Switch assembly for selecting operation of er, or both at the same time. Quickly mounts under the dash. Includes switch, dial plate, knob, instruction hardware. Shpg. wt., 3 oz .
 Type 9183. Fader Control. Raises volume of One speaker while reducing volume of other. 83 D 054 . NET.............................82c

## NATIONAL VARIABLE CAPACITORS

Type VHF-2S. Precisionmade, chassis-mounting dual split-stator variable sion at rear, ball extenfront and back and brack front and back and brackets for mounting 2-7-pin
 miniature sockets. Each split-stator section has a min of 3.0 mmf max. capacity of $22.5 \mathrm{mmf}, \mathrm{min}$, of 3.0 mmf . nearest stator plate). Wt., 2 lbs.
72 H 596 . NET............ 23.07 72 H 597. Type VHF-1S. One section of above-single split-stator unit. 1 lb . . . 13.08

## CRONAME DIAL \& SWITCH PLATES



G

## SQUARE DIAL PLATES

E Attractive anodized aluminum dial plates ty with black scales. Available in a large variho of designations. Excellent for installers, hobbyists and experimenters. Use with $11 / 4^{\prime \prime}$ bar Shpg. wt., 2 oz.

| Stock No. | $\begin{aligned} & \text { Mfr's } \\ & \text { Type } \end{aligned}$ | Description |
| :---: | :---: | :---: |
| 55 H 160 | 448 | Treble, 0-10 |
| 55 H 161 | 447 | Bass, 0-10 |
| 55 H 137 | 429 | Treble, 5-0-5 |
| 55 H 136 | 428 | Bass, 5-0-5 |
| 55 H 164 | 416 | Microphone, 1, 0-10 |
| 55 H 165 | 417 | Microphone, 2, 0-10 |
| 55 H 126 | 415 | Microphone, 0-10 |
| 55 H 170 | 413 | Master Gain, 0-10 |
| 55 H 124 | 412 | Gain, 0-10 |
| 55 H 127 | 422 | Gain, 5-0-5 |
| 55 55 5 H H | 411 | Tone, 0-10 |
| 55 H 134 | 426 | Volume, 0-10 |
| 55 H 125 | 414 | Record, 0-10 |
| 55 <br> 55 <br> 5 | 427 430 | Fader, 5-0-5 |
| 55 H 138 | 446 | Expansion, 0-10 |
| 55 H 131 | 423 | Increase, with arrow |
| 55 H 172 | 410 | No title, $0-10$ |

1-24, NET EACH. 51c
1-24, NET EACH.
100-U', EACH.
424

## ROUND DIAL PLATES

(F)Easy-to-read etched aluminum scale with black background. $13 / 4^{\prime \prime}$ diameter. Type 25 has clockwise arrow labeled "Volume." Type 569, 0-100 over $180^{\circ}$ clockwise. Type 905, 0-100 over $270^{\circ}$ clockwise. Use with $11 / 4^{\prime \prime}$ bar knobs.
$13 / 32^{\prime \prime}$ ctr. hole. Shpg. wt., 2 oz.

| Stock No. | $\begin{aligned} & \text { Mir's } \\ & \text { Type } \end{aligned}$ | NET EACH |  |  |
| :---: | :---: | :---: | :---: | :---: |
|  |  | 1-24 | 25-99 | 100-Up |
| 55 H 141 | 25 | 378 | $33 ¢$ | 304 |
| 55 <br> 55 <br> 55 | 569 905 | $37 \%$ 274 | 334 244 | 304 224 |

## "OFF-ON" SWITCH PLATE

Economy-priced "OffOn switch plates Etched aluminum with black background. Has polished aluminum letters and border. Size, $11 / 16 \times 111 / 16^{\prime \prime}$. Shpg. wt., 2 oz. 60 H 338. 1-24, NET EACH


25-99, EACH
100-U P; E

## Molded Knobs-Speaker Repair Service <br> 

POPULAR MOLDED KNOBS FOR EVERY REQUIREMENT

| A wide selection of handsomely styled plastic knobs. For replacement use on majority of radios and TV sets. Figs. B and C are excellent for small radios. *For knurled shafts only; other types are equipped with |  |  |  |  |  |  |  | setscrews to permit use with either round or flatted shafts. Figs. F, $G$ and $M$ have rich, contrasting gold-metal inlays. All knobs are for use with standard $1 / 4^{\prime \prime}$ shafts. Simple to install. Av. wt., 3 oz. |  |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Stock No. | Fig. | Dia. | Color | NET EACH |  |  |  | Stock No. | Fig. | Dia. | Color | NET EACH |  |  |  |
|  |  |  |  | 1.9 | 10-49 | 50-99 | 100-Up |  |  |  |  | 1-9 | 10-49 | 50-99 | $100-U_{p}$ |
| 55 HO 31 55 | A | 11/2" | Black | . 12 | .108 | . 099 | . 09 | 55 H 024 55 | H | $13 / 8$ | Black | .10 | . 090 | . 083 | .07 |
| 55 55 5 | A | 11/2" | Red | .12 | . 108 | . 099 | . 09 | 55 <br> 55 | H | 13/4 | Black | . 14 | . 126 | .116 .033 | . 10 |
| S 55 H 022 | A |  | Black | . 08 | . 072 | .066 .066 | . 06 | 55 H 082 54 H 982 | K | $1^{3 / 4}$ | Walnut | .104 .10 | .036 .090 | .033 .083 | . 03 |
| 55 H 025 | B | $3 / 4$ " | Black | . 08 | . 072 | . 066 | . 06 | 54 H983 | K | $11 / 8$ | Ivory | .10 | . 090 | . 083 | 07 |
| 55 H 027 | B | $3 / 4{ }^{\prime \prime}$ | Walnut | . 10 | . 090 | . 083 | . 07 | 54 H 980 | L | $11 / 8$ | Walnut | .10 | . 090 | . 083 | . 07 |
| 55 H 028* | B |  | Walnut | . 04 | . 036 | . 033 | . 03 | 54 H 981 | L | $11 / 8$ | Ivory | .10 | . 090 | . 083 | . 07 |
| 55 H 029 | B | $3 / 4$ " | Ivory | . 08 | . 072 | . 066 | . 06 | 54 H 962* | M | $11 / 2^{\prime \prime}$ | Walnut | . 22 | . 198 | . 182 | . 16 |
| 55 H043* | C |  | Black | .04 | . 036 | . 033 | . 03 | 55 H067 | X | 11/16" | Black | .35 | .315 | . 290 | .26 |
| 55 H 035 | C | $11 / 16^{\prime \prime}$ | Black | . 06 | . 054 | . 049 | . 04 | 55 H 083 | Y | 3/4" | Black | . 08 | . 072 | . 066 | . 06 |
| 55 H 036 | C | $11 / 16^{\prime \prime}$ | Walnut | . 06 | . 054 | . 049 | . 04 | 55 H 084 | Z | $13 / 16^{\prime \prime}$ | Black | . 08 | . 072 | . 066 | .06 |
| 55 H 023 | C | 171 | Black | .10 | . 090 | . 083 | . 07 | 55 H 072 | AA | 11/4" | Black | . 06 | . 054 | . 049 | . 04 |
| 55 H 040 | D | 11/16 | Black | . 06 | . 054 | . 049 | . 04 | 55 H 073 | AA | 11/4 | Red | . 08 | . 072 | . 066 | 06 |
| 55 H 042* | D | 11/16" | Black | . 04 | . 036 | . 033 | . 03 | 55 H 078* | AA | $11 / 4$ | Black | . 12 | . 108 | . 099 | . 09 |
| 55 H 081 | D | $1{ }^{\prime \prime}$ | Black | .12 | . 108 | . 099 | . 09 | 55 H 074 | BB | $11 / 4$ | Black | . 08 | . 072 | . 066 | . 06 |
| 55 H018 | E | $11 / 8^{\prime \prime}$ | Black | .10 | . 090 | . 083 | . 07 | 55 H 070 | CC | $2{ }^{\prime \prime}$ | Black | .14 | . 126 | . 116 | .10 |
| 554019 | E | $11 / 8^{\prime \prime}$ | Red | .10 | . 090 | . 083 | .07 | 55 H 071 | CC | $2^{\prime \prime}$ | Red | .16 | . 154 | . 132 | . 12 |
| 54 H 960* | F | $15 / 8^{\prime \prime}$ | Walnut | .24 | .216 | . 199 | .18 | 55 H 079* | CC | $2^{\prime \prime}$ | Black | .16 | .154 | .132 | .12 |
| 54 H 964* | G | 15/16" | Walnut | .16 | . 154 | . 132 | . 12 | 55 H 006 | DD | 15/8" | Black | .16 | . 154 | . 132 | . 12 |
| 54 H 965* | G | 15/16" | Ivory | .16 | . 154 | . 132 | . 12 | 55 H089 | DD | 21/2" | Black | .16 | . 154 | . 132 | 12 |

## TELEVISION REPLACEMENT KNOBS

For television receivers using dual-type controls manufactured by Standard Coil, Sarkes-Tarzian, etc. May be used on practically all popular TV sets, such as RCA, Bendix, Westinghouse, Admiral, etc.

Made of molded plastic; have walnut pattern with attractive goldfinish inlay on face. *For $1 / 4^{\prime \prime}$ knurled shaft. $\dagger 1 / 4^{\prime \prime}$ flatted shaft. $81 / 5^{\prime \prime}$ flatted shaft. $\ddagger .265^{\prime \prime}$ keyway shaft. $* * 3 / 8^{\prime \prime}$ flatted shaft. Av. wt., 2 oz.
$G$ and $M$ have rich, contrasting gold-metal inlays. All knobs are for use with stand ard $1 / 4$ sharts. Simple to install. Av. wt., 3 oz.

| Stock No. | Fig. | Dia. | Use | NET EACH |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  |  |  | 1-9 | 10-49 | 50-99 | 100-Up |
| 54 H 974** | R | 25/8" | Rear dual | . 26 | . 234 | . 215 | .19 |
| 54 H9731 | S | 21/4" | Front dual | . 73 | . 657 | . 605 | . 54 |
| 54 H971t | $\stackrel{T}{W}$ | $2{ }^{\prime \prime}$ | Front dual | . 53 | . 477 | . 439 | .39 |
| 54 H 972** | W | 15/3" | Rear dual | . 16 | .154 | . 132 | .12 |

## FLUTED BAKELITE KNOBS



An excellent selection of highquality fluted knobs. Made of durable high-gloss bakelite. All strength. Set screw mounting for use on either $1 / 4^{\prime \prime}$ round or flatted shafts. *Types with pointer. Av. shpg. wt., 4 oz .


| NET |  |  |  |
| :---: | :---: | :---: | :---: |
| $1-9$ | $10-49$ | $50-99$ | $100-U_{p}$ |
| .32 | .288 | .265 | .24 |
| .32 | .288 | .265 | .24 |
| .32 | .288 | .265 | .24 |
| .46 | .414 | .381 | .30 |
| .20 | .180 | .166 | .15 |
| .20 | .180 | .166 | .15 |
| .24 | .216 | .199 | .18 |
| .36 | .324 | .298 | .27 |
| .38 | .342 | .315 | .28 |
| .48 | .432 | .398 | .36 |

## CHROME-PLATED BRASS KNOB

High-quality brass knob with heavy chrome plating. Has handsome professional appearance. Makes an ideal replacement for knobs on most automobile radios; also excellent for Small diameter prevents crowding of controls where panel space is limited; $5 / 8^{\prime \prime}$ diameter, ${ }^{11 / 16^{\prime \prime}}$ long. Fits $1 / 4^{\prime \prime}$ round or flatted shafts. Shpg. wt., 4 oz .
56 H 75 I. NET.
$32 c$

| Stock No. | Fig. | Dla. | Uso | NET EACH |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  |  |  | 1-9 | 10-49 | 60-99 | 100-Up |
| 54 H 966* | M | 15/16" | Front dual | . 26 | . 234 | . 215 | .19 |
| 54 H $967{ }^{\text {¢ }}$ | M | 15/16" | Front dual | . 29 | .261 | .240 | .21 |
| 54 H 9688 | M | 15/16" | Front dual | . 29 | . 261 | . 240 | .21 |
| 54 H $969 \ddagger$ | $\mathbf{N}$ | 15/8" | Rear dual | .16 | . 154 | . 132 | . 12 |
| 54 H 970 ${ }^{\text {+ }}$ | $\mathbf{P}$ | 15/8" | Comb. dual | . 44 | . 40 | . 365 | .33 |



High quality rigidly-mounting socket savers of durable phenolic material with long. life metal contacts. Designed to protect your tube tester sockets from wear caused with time consuming socket replacements Prevents tube tester sockets replacements ing loose, worn contacts which cause inacing loose, worn contacts which cause inacis necessary-the socket saver easily plugs into original socket. Comes equipped with threaded bolt and nut to secure it rigidly in position through keyway of original socket. An excellent tube tester accessory, available for 7 and 9 -pin miniature sockets as well as standard octal Av. shpg. wt., 3 oz .

| Stock <br> No. | Mfr's. <br> Type | Descriptlon | NET |
| :---: | :---: | :---: | :---: |
| 40H668 | SS-7 | For 7-pin min. | 1.91 |
| 40 H 669 | SS-8 | For 8-pin octal | 1.91 |
| 40 H678 | SS-9 | For 9-pin min. | 1.91 |

## POMONA $110^{\circ}$ CONVERSION ADAPTER

Model 110-S. Sylvania Type. Efficient and durable conversion adapter socket for duo-decal test equipment. No rewiring necessary-simply plug in adapter to convert for $110^{\circ}$ socket. H Shpg wt 4 .ircle diamet. Seven pins, . 09 40 H 683 NET

Model 110-R. RCA Type. Similar to above but has $0.600^{\prime \prime}$ pin circle diameter. Eight pins, $.040^{\prime \prime}$ dia. Wt., 5 oz.

## ALLIED OFFERS COMPLETE SPEAKER REPAIR SERVICE

## HI-FI SPEAKER REPAIR SERVICE

Your valuable hi-fi speakers can be completely rebuilt by skilled technicians, using exact replacement parts. For just a fraction of the original cost any hi-fi speaker can be reconed with a matching high-fidelity cone and voice coil. The repaired speaker will meet all specifications for highfidelity performance, and will be fully restored to top-notch condition. Just pack your speaker carefully and ship it to us by insured parcel post or Railway Express. Send remittance, and postage, with ort ver. 30 days delvery. Service includes $\mathbf{8}^{\prime \prime} \mathbf{H i}$-Fi Speaker. Repair Service..................... 7.70 12" Hi-Fi Speaker. Repair Service. . . . . . . . . . . . . . . . . II. 25 15" HI-Fi Speaker. Repair Service. . . . . . . . . . . . . . . . 15.00

## STANDARD SPEAKER REPAIR SERVICE

Skilled technicians will completely rebuild your old speakers for the small charges listed below. Service covers generalpurpose speakers including radio, TV and phonograph types. Ship speaker to us prepaid and send remittance (including postage) with order. Allow 30 to 45 days for delivery. Additional charges for field coil repair or replacement are as follows: $\$ 1.25$ for $4^{\prime \prime}$ to $9^{\prime \prime} ; \$ 2.25$ for $10^{\prime \prime}$ to $12^{\prime \prime}$. Field coils
welded into speaker frames cannot be replaced.

| SIzo | Repair Sorvice | Slize | Ropalir Sorvice |
| :---: | :---: | :---: | :---: |
|  | 1.55 | 14* to $15^{5}$ | 3.85 |
| 11" to 12" | 2.85 3.05 3.8 |  | 2.50 2.55 2 |

## All-Purpose Tube Sockets

WAFER-TYPE SOCKETS
Sturdily constructed, aminated-bakelite tube sockets. All have $11 / 2^{\prime \prime}$ which has $1^{\prime \prime}$ centers. Av: shpg. wt., 2 oz

| Stock No. | Prongs | NET EACH |  |  |
| :---: | :---: | :---: | :---: | :---: |
|  |  | 1-9 | 10-49 | 50-99 |
| $40 \mathrm{H224}$ | 4 | $7 ¢$ | 64 | $5 ¢$ |
| 40 H 225 | 5 | $8 ¢$ | 74 | $6 ¢$ |
| 40 H 227 | 7 (small) | 19484 | 84 | 74 |
| 58 H 004* | 7 (min.) | 64 | 54 | $4{ }_{4}$ |
| 40 H 228 | Octal | 74 | 64 | $5 ¢$ |

## EBY SOCKETS



Above-Chassis Type. One-piece molded bake lite construction, for top-of-chassis or panel mounting. Contact designations molded in base. Mounting centers, $111 / 16^{\prime \prime}$. Shpg. wt., 2 oz.

| Stock No. | $\begin{aligned} & \hline \text { Mfr's } \\ & \text { Type } \end{aligned}$ | Prongs | EACH | $\begin{aligned} & 10-49, \\ & \text { EACH } \end{aligned}$ |
| :---: | :---: | :---: | :---: | :---: |
| $40 \mathrm{H254}$ | 12-4 | 4 | $30 ¢$ | $27 ¢$ |
| 40 H 255 | 12-5 | 5 | 324 | 29 |
| 40 H 256 | 12-6 |  | 344 | 314 |
| 40 H 261 | 12-7-N-O | 7 L \& 7S | 354 | 324 |
| 40 H258 | 12-8 | Octal | 394 | $35 ¢$ |

TV Tube Socket Type 49-13 D D. All-molded bakelite, duo-decal TV tube socket for magnetic or electrostatic focusing tubes. Complete with $12^{\prime \prime}$ leads. Shppg. wt., 4 oz. $42 申 1-9$, EA. . . . $47 ¢$
40 H 29 I. 10-49, EA. . .

## CRT TEST SOCKET ADAPTER

TV picture tube socket adapter, easy to install or remove. ExCRT pin voltages while set is in operation. No wiring or solder40 required. wt., 3 oz, 40 H 273.1 1-9, ЕАС Н...94C

## JAMES MILLEN TUBE SOCKETS <br> Recommended for UHF use. Higher steatite body gives onger leakage path between  $13 / 4^{\prime \prime}$. Shpg. wt., $40 z$. <br> | Stock No. | Type | Prongs | EACH |
| :---: | :---: | :---: | :---: |
| $72 H 060$ | 33004 | 4 |  |
| $72 H 061$ | 33005 | 5 |  |
| $72 H 062$ | 33006 | 6 | 45 C |
| $72 H 064$ | 33008 | 8 |  |



RAY-PAR ANTI-CORONA SOCKETS
Octal socket for 1B3 highvoltage rectifier tube. Corona ring minimizes breakdown. Laminated bakelite. Mounts on insulator or high-voltage minal Shpg wt 3 type ter

minal. Shpg. wt., 30 oz
44c

| VECTOR SOCKETS <br> PLUG-IN UNITS |  |  |  |
| :---: | :---: | :---: | :---: |
| Consist of standard tube socket, tubular terminal post, octal plug and shield can. Can sizes: B10M and B10N, $1.37^{\prime \prime}$ square, $2.5^{\prime \prime}$ |  |  |  |
|  |  |  |  |
|  |  |  |  |
|  |  |  |  |
| C 10 M and C10N, $2^{\prime \prime}$ square, $2.5^{\prime \prime}$ |  |  |  |
|  |  |  |  |
| Stock No. | Type | Description | NET EA. |
| 40 H 237 | B10M | 7-pin Miniatur | 1.7 |
| 40 H 23840 H 2140 | B10N | 9-pin Noval | 1.82 |
|  | C10M | 7-pin Miniature |  |
| $\begin{array}{r}40 \mathrm{H} 239 \\ \hline\end{array}$ | C10N | 9-pin Noval | 2.2 |

## TUBE ADAPTER TEST KIT

Type T-789. Ideal for making voltage, resistance and wave form measurements from tube side of electronic equipment chassis without removing components or disassembling unit. A valuable aid for on-the-spot repair of any radio or TV equipment. Set contains 1 - 7 -pin, adapter in plastic carrying octa adapter in plastic carrying case. To use, adapters are simply inserted between tube and tube pocket. points. Adapters will fecessed tabs for test prod points. Adapters
40 H 210 . NET.......


## E. F. JOHNSON TUBE SOCKETS


(A)


## SPECIAL SOCKET TYPES

A Type 122-244. 4-pin steatite for "super jumbo" tubes. Takes 8008, BR6, SC22, 5C22, GL146, GL152, GL159, GL169, RO585, RH507, SR50, SR53, SK60, FG105. Wt., $1 / 2 \mathrm{lb}$.
73 H 997 . NET...................... 1.60
(A) Type 122-275. Steatite socket for giant 5A) pin base tubes. Takes $4-125 \mathrm{~A}, 4-250 \mathrm{~A}$. RK28, RK48, $125 \mathrm{M}, ~ 803$. Shpg. wt., 10 oz.
73 H 998 . NET.................... 90 (B) Type 124-109. 8-pin socket of Kel-F plasholes on $17 / 8^{\prime \prime}$ circle. Shpge wt., $1 / 2 \mathrm{lb}$.
40 H 299. NET.
. .5 .00
C. Type 122-101. 7-pin steatite with base 6 shield and retainer springs. For use with $4-65 \mathrm{~A}, 826,829,832$, etc. Shpg. wt., $1 / 2 \mathrm{lb}$ l
$73 \mathrm{H}^{245}$. NET........................ 2.35

## MINIATURE SERIES

D Type 120-267. 7-pin steatite socket with D. silver-plated contacts. For 9000 series and miniature tubes 1 R5, 1S5, 6CB6, etc. $5 / 8^{\circ}$ $\mathrm{mtg}_{\mathrm{H}}$ hole. Shpg. wt., 3 oz .
40 H 290. NET..
(E) Type 120-277. As above, but metal mtg.

73 frame and shield base. Shpg. wt., 3 oz
73 H 186. NET..
F Type 133-278-6 Shield. For use with Type 73 120-277 socket. Height $13 / \mathrm{s}^{\prime \prime}$. oz. F Type 133-278-8 Shield. As above but 73 H187. NET......... 3 oz.
G]

(T)
(J)

STANDARD WAFERS
G Steatite wafer sockets for receiving and G] low-power transmitting tubes. Cadmiumplated contacts. Size, $25 / 1^{\prime \prime} \times 111 / 16^{\prime \prime} .13 / 4^{\prime \prime} \mathrm{Mtg}$. centers. Shpg. wt., 4 oz .

| Stock No. | Mfr's Type | Prongs | NET |
| :---: | :---: | :---: | :---: |
| 73 H 238 | 122-224 | 4 | $69 ¢$ |
| 73 H 239 | 122-225 | 5 | 764 |
| 73 H 240 | 122-226 | 6 | 944 |
| 73 H241 | 122-228 | Octal | 904 |

## JUMBO WAFERS

(H) Type 122-237. Steatite wafer for 80013 , 4 mounting holes, $178^{\prime \prime}$, between centers. Shpg.
 Type 122-247. Same steatite "giant" 7-pin wafer socket as above, but with etched aluminum base shield. For tubes 825, 826, etc. Shpg. wt., $1 / 2 \mathrm{lb}$.
. 1.45

## BAYONET SOCKETS

J Type 123-209. For tubes with 4 prong mtg. holes. $25 / 1{ }^{\prime \prime \prime}$ "centers. Shpg. wt., 10 oz.
73 H 195. NETT............................. I. 50
J Type 123-211. Porcelain base socket for 211,872 tubes, etc. Mounting centers are 211,872 tubes, etc. Mounting centers are

1.95

## ELCO SOCKETS, SHIELDS, AND INSERTS

JAN-TYPE MINIATURE SOCKETS AND SHIELDS
The JAN miniature sockets and shields listed below are manufactured in accordance with military standards and are warranted to comply with JAN-S28 A and JAN-S28 A specifications. Bayonet-hip used in the construction of each precision part. Shpg. wt., 3 oz .

| Stock No. | $\begin{array}{\|c\|} \text { JAN. No. } \\ \text { S-28 A1 } \\ \hline \end{array}$ | Description | NET EACH |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  |  | 1-24 | 25-99 | 100-249 | 250-UP |
| 40 H 263 | TS 102C01 | 7-Pin Shield Base, Ceramic | 32¢ | 284 | 254 | 15¢ |
| 40 H 264 | TS 102P01 | 7-Pin Shield Base, Mica-filled | 244 | 204 | 174 | 114 |
| 40 H 265 | TS 103C01 | 9-Pin Shield Base, Ceramic | 354 | 304 | 284 | $17 \%$ |
| 40 H 266 | TS 103P01 | 9-Pin Shield Base, Mica-filled | $26 ¢$ | 224 | 204 | 124 |
| 40 H 267 | TS 102U01 | 7-Pin Tube Shield, $13 / 8{ }^{\prime \prime}$ | 154 | 136 | 114 | $71 / 24$ |
| 40 H 268 | TS 102U02 | 7-Pin Tube Shield, $13 / 4$ " | 164 | 144 | 124 | 84 |
| 40 H 269 | TS 102 U 03 | 7-Pin Tube Shield, $214^{\prime \prime}$ | 196 | 164 | 144 | $94$ |
| 40 H 270 | TS 103U01 | 9-Pin Tube Shield, $11 / 2^{\prime \prime}$ | 184 | 164 | 144 |  |
|  | TS 103U02 | 9-Pin Tube Shield, $115 / 16^{\prime \prime}$ |  |  |  | 94 |
| 40 H 272 | TS 103U03 | 9 -Pin Tube Shield, $23 / 8^{\prime \prime}$ | 22 ¢ | 194 | 164 | $11 \%$ |
| 40 H 286 | TS 101C01 | Octal, Saddle, Ceramic | $74 \%$ | 644 | $54 ¢$ | 264 |
| 40 H 287 | TS 101P01 | Octal, Saddle, Mica-filled | 314 | 274 | 234 | 154 |

## CORRUGATED JAN SHIELD INSERTS

Corrugated JAN-type shield inserts effectively reduce over-heating of miniature tubesprolong tube life. Material: $0.003^{\prime \prime}$ cadmium-plated beryllium copper. Black, non-corrosive finish. Shpg. wt., 2 oz.

| Stock No. | Mif's Type | Description |  | $\begin{aligned} & \text { EACH } \end{aligned}$ | $\begin{aligned} & 25-99 \\ & \text { EACH } \end{aligned}$ | $\begin{gathered} 100-249 \\ \text { EACH } \end{gathered}$ | $\begin{aligned} & \text { 250-UP } \\ & \text { EACH } \end{aligned}$ |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  | Ht. | For JAN-Shield |  |  |  |  |
| 41 H 232 | 929 | 13/8 ${ }^{\prime \prime}$ | TS102U01 | 184 | 164 | $15 ¢$ | 94 |
| 41 H 233 | 930 | 13/4" | TS102U02 | 214 | 184 | 174 | 104 |
| 41 H 234 | 931 | 21/4" | TS102U03 | 264 | 234 | 224 | 134 |
| 41 H 235 | 932 | $11 / 2^{\prime \prime}$ | TS103U01 | 224 | 194 | 184 | 114 |
| 41 H 236 | 933 | 115/16 ${ }^{\prime \prime}$ | TS103U02 | 274 | 244 | 234 | 134 |
| 41 H 237 | 934 | 23/8" | TS103U03 | 324 | 284 | 274 | 154 |

## SERIES 3300 TRANSISTOR SOCKETS

An excellent selection of sub-miniature mica sockets. Eliminate loss and damage from direct soldering of transistor pins. For 3-pin transistors with in-line pins, or 3 and 4-pin transistors with pins on $.200^{*}$ flashed beryllium copper contacts. Av. shpg. wt., 2 oz.

| Stock No. | Type | Fig. | Description | 1-24, EA. | 25-99, EA. | 100-249, EA. | 250-UP |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 41H092 | 3301 | K | Saddle Mounting | 354 | 304 |  |  |
| 41 H238 | 3303 | K | Printed-Circuit Type | 274 | 246 | 214 | $131 / 24$ |
| 41 H 093 | 3304 <br> 3305 | $\stackrel{\mathrm{K}}{\mathrm{K}}$ | Mounting Ring Type | 264 | 224 | 184 | $13{ }^{1 / 24}$ |
| 41 H094 | 3305 | K | Printed-Circuit Type | 304 | 264 | 224 | 154 |
| 41 H 239 | 3306 | L | Saddle Mounting | 354 | 304 | $25 ¢$ | 174 |
| 41 H 243 | 3307 3308 | L | Mounting Ring Type | 264 | 224 | 184 | 134 |
| 41 H 244 | 3308 <br> 3309 | ${ }_{\mathbf{M}}^{\mathbf{M}}$ | Printed-Circuit Type | 304 | 264 | 224 | 15 |
| 41 H245 | 3309 | M | Saddle Mounting | 354 | 304 | 254 | 174 |
| 41 H 246 | 3310 | M | Mounting Ring Type | 264 | 224 | 186 | 36 |
| 41 H 247 | 3311 | M | Printed-Circuit Type | 304 | 264 | 224 | 54 |
| 4  <br> 4 H 248 | 3312 3313 | $\stackrel{N}{N}$ | Saddle Mounting | 386 | 334 | 284 | 94 |
| 41 H 095 | ${ }^{3} 757$ | N | Mounting Ring Type | 294 | $25 ¢$ | 214 | $41 / 2 \$$ |
|  |  |  | 3307, 3310, $3313^{\circ}$ | $3 ¢$ | 21/24 | 24 | 14 |

## Sockets, Plugs, Connectors



## CANNON PLUGS AND RECEPTACLES

## TYPE XLR CONNECTORS

A wide selection of small 3 and 4 contact audio connectors with clamp and resilient socket insulator. Minimize mechanical interference and reduce noise due to movement of cables. Feature prene cable relief and push-action latchlock. First number in type column indicates number of contacts. Available with three 15 -ampere contacts, or four 10 -ampere contacts. *Wall-type receptacles; †panel-type receptacles. Av. shpg. wt., 4 oz.

STRAIGHT CORD PLUGS

| Stock No. | Type | Fig. | Description | 1-24,EA. | 25-99, EA. |
| :---: | :---: | :---: | :---: | :---: | :---: |
| 40 H 790 | XLR-3-11C | A | Female (socket insert) | . 91 | 78 |
| 41 H 212 | XLR-4-11C | A | Female (socket insert) | 1.26 | 1.08 |
| 40 H 791 | XLR-3-12C | B | Male (pin insert) | . 88 | . 75 |
| 41 H 213 | XLR 4-12C\| | B | Male (pin insert) | 1.18 | 1.00 |
| WALL AND PANEL RECEPTACLES |  |  |  |  |  |
| 41 H214 | XLR-3-13* |  | Female (socket inser | . 91 | . 78 |
| 41 H215 | XLR-4-13* | C | Female (socket insert) | 1.26 | . 08 |
| 41 H216 | XLR-3-13N $\dagger$ | D | Female (socket insert) | . 9 |  |
| 41 H 217 | XLR-4-13N $\dagger$ | D | Female (socket insert) | 1.26 | 1.08 |
| 41 H 218 | XLR-3-14* | E | Male (pin insert) | . 71 | 60 |
| 41 H 219 | XLR-4-14* | E | Male (pin insert) | 1.00 | 5 |
| 41 H 223 | XLR-3-14N $\dagger$ | G | Male (pin insert) | 85 | 73 |
| 41 H 224 | XLR-4-14N $\dagger$ | G | Male (pin insert) | 1.15 | . 98 |
| 40 H 792 | XLR-3-31* | H | Female (socket insert) | 91 | . 78 |
| 41 H 225 | XLR-4-31* | H | Female (socket insert) | 1.26 | 1.08 |
| 40 H 793 | XLR-3-32* |  | Male (pin insert) | . 71 | .60 |
| 41 H 226 | XLR-4-32* |  | Male (pin insert) | 1.00 | . 85 |

## TYPE P CONNECTORS

3 -contact receptacles and cable connectors for audio circuits. For any size wires up to No. 10.15 amp contact capacity. Black phenolic insulation. Plugs have steel shells and zinc cable clamps. Av. wt., 4 oz.

| 40 H 707 | $\mathrm{P}^{\mathrm{P} 3-13}$ |  | Panel mount, female (socket) | 3.28 |  |
| :---: | :---: | :---: | :---: | :---: | :---: |
| 40 H 757 | ${ }^{\text {P }} 3$ 3-14 |  | Panel mount, male(pin) | 1.28 | 1.79 |
| 40 H 724 | P3-CG-11S |  | Cable plug, female(skt) | 3.70 | 3.33 |
| 40 H 701 | ${ }_{\text {P3-CG-12S }}$ |  | Cable plug, male (pin) | 3.03 | 2.72 |
|  |  |  | for 40 H 701 | 5.11 | 4.69 |

Manufacturers and industrials-write for special prices on Cannon Plugs and Receptacles in quantities of $\mathbf{1 0 0}$ or more.

## CINCH-JONES RECEPTACLES

## TYPE 8PB 8-CONTACT PLUG



For making up to 8 connections between chassis. Molded black bakelite. Fits any octal socket. Use with 16 F shield, (below). Shpg. wt., 2 oz.
40 H 846. 1-24, NET EACH
.22c
25-99, EACH.....19¢ 100 or More, EACH...... $18 ¢$ Type 11PB 11-Contact Plug. Same as above, but with 11 contacts. Use with type 16 F snap-on shield Shpg wt, 2 , ype 11 RB listed below. 40 H $847,25-99$, EA. $211 / 24100$ or More, 2 oz.

## TYPE 16F STEEL SNAP-ON SHIELD

Cadmium-plated, durable steel shield. Designed to snap on 8PB and 11 PB sockets. For use with extension cables. Rubber grommet with $25 / 4^{\prime \prime}$ hole protects cable. Shpg.
40 H 848. $25-99$ EA. $25 ¢ 100$ or More, EA. $24 ¢$ 1-24, EA... 28C

## TYPE IIRB 11-CONTACT SOCKET

For use with 11 PB 11-contact plug (above). Molded from high-dielectric, black bakelite. Hot solder-dipped solder connections. Can be mounted on quick, positive using retaining ring. Can also be used with 16 F chassis shield (above) on extension cables. Shpg. wt., 2 oz . 40 H 849. 25-99, EA. $25 ¢ 100$ or More, EA. 24 1-24, EA.... 28 C

## H. H. SMITH TV COAX CABLE CONNECTORS



Low-cost solderless coaxial cable con-
nectors for use with $\mathrm{RG}-59 / \mathrm{U}$ and other nectors for use with RG-59/U and other (L) Silver-plated for high conductivity. Av.
(J) Male Connector. For below.

40 H 300. 10-49, EA.... 42ф 50-Up, EA. 38ф 1-9, EA....47C
(K) Female Receptacle. $5 / \mathbf{y c}^{\prime \prime}$ threaded stem. Chassis type.

ЕА....47c
(L) Cable Junction. Feed-through. Both ends fit 40 H 300 .
.59c

## SPECIAL-VALUE OCTAL SOCKETS

For receiving and low-power transmitting equipment. Have phenolic insulated bases, except Fig. $P$, which has low-loss ceramic. Figs. M, N, and R have tinned steel saddles; $M$ and $N$ saddles are equipped with ground lugs. Fig. $M$ is for below chassis mounting. Figs. $N$ and $R$ mount from top of chassis. Contacts are cadmium-plated brass. Av. shpg. wt., 4 oz. per pkg. 3 sockets per pkg.

| Stock No. | Fig. | Mtg. Centers | Mtg. Hole Req. | 1-4 Pkgs. PER PKG. | 5-9 Pkgs. PER PKG. | 10 or More Pkgs. PER PKG. |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 41 H 524 | M | 11/2" | $19 / 32^{\prime \prime}$ | 236 | 20¢ | 18¢ |
| 41 H 525 | N | 15/16" | $11 /{ }^{\prime \prime}{ }^{\prime \prime}$ | 224 | 204 | 184 |
| 41 H 526 | P |  | $11 / 4{ }^{\prime \prime}$ | 624 | 564 | 494 |
| 41 H 527 | R | 15/16" | $11 / 8^{\prime \prime}$ | 224 | 206 | $18 ¢$ |



## MINIATURE SOCKETS

Special values in high-quality miniature receiving tube sockets. Top and bottom-mounting types. Available with either general-purpose phenolic or mica-filled phenolic insulated bases. Mica-filled types are ideal for low-loss RF use. All sockets have cadmium-plated brass contacts, and have cadmium-plated steel saddles.
Bottom Mounting Type. Miniature-type sockets for below-chassis mounting. 7-pin types require $3^{3 / 4^{\prime \prime}}$, mounting hole; mounting centers are
 $11 / 8^{\prime \prime}$ apart. Av. shpg. wt., 4 oz . per pkg. 3 per pkg.

| Stock No. | Pins | Fig. | Base | 1-4 Pkgs. PER PKG. | 5-9 Pkgs. PER PKG. | 10 or More Pkgs. PER PKG. |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 41 H 528 | 7 | S | Phenolic | 224 | 204 | $18 ¢$ |
| 41 H 529 | 7 | S | Mica-Filled Phenolic | 284 | $25 ¢$ | 224 |
| 41 H 530 | 9 | T | Phenolic | $29 ¢$ | 264 | 234 |
| 41 H531 | 9 | T | Mica-Filled Phenolic | 346 | 314 | 274 |

Top Mounting Type. Miniature type sockets for top-of-chassis mounting. 7 -pin types require ${ }^{55} 64^{\prime \prime}$ mtg. hole; mtg. centers are $7 / 8^{\prime \prime}$ apart. 9 -pin types require $63 / 64^{\prime \prime} \mathrm{mtg}$. hole; mtg. centers are $11 / \mathrm{s}^{\prime \prime}$ apart. Both types have shielded base. Shpg. wt., 2 oz. per pkg. 3 per pkg.

| Stock No. | Pins | Fig. | Base | 1-4 Pkgs. PER PKG. | 5-9 Pkgs. PER PKG. | 10 or More Pkgs. PER PKG. |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 41H532 | 7 | S | Phenolic | 25¢ | $23 ¢$ | $0 ¢$ |
| 41 H 533 | 7 | S | Mica-Filled Phenolic | 319 | $28 ¢$ | $25 ¢$ |
| 41 H 534 | 9 | $T$ | Phenolic | 294 | 264 | 234 |
| 41 H 535 | 9 | T | Mica-Filled Phenolic | 344 | 314 | $27 ¢$ |

ELCO SOCKETS FOR PRINTED CIRCUITS


X

| Stock No. | $\begin{aligned} & \text { Mfr's } \\ & \text { Type } \end{aligned}$ |
| :---: | :---: |
| 41 H 50 | 645* |
| 41 H551 | 612PH* |
| 41 <br> 42 H 552 | $\begin{aligned} & 653 * \\ & 646 * \pm \end{aligned}$ |
| $42 \mathrm{H411}$ | 647*\# |
| 42 H 412 | 648** |
| 42 H 413 | 657+ |
| 42 H 414 | 658† $\ddagger$ |
| 42 H 415 | 659 ${ }^{\text {\# }}$ |
| 42 H 416 | 660+\# |
| 42 H 417 | 623BC8 |
| 42 H 418 | $622 \mathrm{PHSP§}$ | | Fig. |
| :---: |
| $W$ |
| $W$ |
| $W$ |
| $W$ |
| $W$ |
| $W$ |
| $W$ |
| $W$ |
| $W$ |
| $W$ |
| $W$ |
| $W$ |
| $X$ | Pins.

## VECTOR SOCKET-TURRETS



Highly dependable terminal structures for use in single or multi-stage sub-assemblies-ideal for limited space applications. Simplifies construction of electronic equipment. Components mount on mica-filled phenolic form. Turrets are $1 / 2^{\prime \prime}$ diam. Octal units mount in $1^{\prime \prime}$ hole; miniatures,
$5 / 8^{\prime \prime}$ hole. Av. shpg. wt. 3 oz . $5 / 8^{\prime \prime}$ hole. Av. shpg. wt., 3 oz .
21/2" Turrets. Has 9 terminals in two rings, spaced $13 / 8^{\prime \prime}$ apart. Stock No. Type Socket 1-19, EA. 20-49, EA. 50-199, EA. 40 H211 $10-0-9 \mathrm{~T} \mid$ Octal 624 57
$\mathbf{2}^{\prime \prime}$ Turrets. 9 terminals in two rings, spaced $\mathbf{1}^{\prime \prime}$ apart.

| $40 \mathrm{H212}$ | $8-0-9 \mathrm{~T}$ | Octal | 594 | 544 | 494 |
| :---: | :---: | :---: | :---: | :---: | :---: |
| 40 H 217 | 8-M-9T | 7-Pin Min. | 684 | 624 | 574 |
| 40 H 233 | 8-N-9T | 9-Pin Noval | $68 \%$ | $62 ¢$ | 574 |

$11 / 2^{\prime \prime}$ Turrets. Have 6 terminals in one ring only.


| 40 H 234 | $6-\mathrm{N}-6 \mathrm{~T}$ | $9-\mathrm{Pin}$ Noval | 624 |
| :--- | :--- | :--- | :--- |


| $49 \phi$ | $44 ¢$ |
| :--- | :--- |
| $57 ¢$ | $52 \phi$ |
| 576 | $52 \phi$ |

Shield Bases. For miniature sockets above. Fasten above chassis on socket mtg. centers. Use with standard bayonet type shield. Shpg. wt., 2 oz. Stock No. Type Description 1-19, EA. 20-49, EA. 50-199, EA.


Dependable 7 and 9 miniature, and octal type sockets designed for use in 659 are for general-purpose use; others have low-loss mica insulation. *Bottom solder; top solder; §shield base; $\ddagger$ ground contact; \#shield contact. Av. shpg. wt., 3 oz.

# Amphenol Sockets 

# Peremos 

## MINIATURE SOCKETS AND SHIELDS bakelite and steatite sockets

High-grade miniature sockets and shields. 147 series mount in $5 / 8^{\prime \prime}$ chassis hole; $7 / 8^{\prime \prime}$ mtg. ctrs., with $1 / 8^{\prime \prime}$ screw holes. 59 series mount in $3 / 4^{\prime \prime}$ chassis hole and have $11 / 8^{\prime \prime} \mathrm{mtg}$. ctrs. with $.095^{\prime \prime}$ rivet holes, (except $40 \mathrm{H} \mathrm{103}$, $.125^{\prime \prime}$ ). *Steatite. $\ddagger$ Black bakelite. $\dagger$ Mica-filled bakelite. Av. wt., 5 oz .
(A) WITHOUT TUBE SHIELD BASE

| Stock No. | Mfr's <br> Type | Prongs | $\begin{aligned} & 1-99 \\ & \text { EACH } \end{aligned}$ | $\begin{gathered} 100-249 \\ \text { EACH } \end{gathered}$ | $\begin{aligned} & \text { 250-Up } \\ & \text { EACH } \end{aligned}$ |
| :---: | :---: | :---: | :---: | :---: | :---: |
| 40 H 191 | $\ddagger 147-500$ | 7 | . 15 | . 125 | .113 |
| 40 H 192 | *147-501 | 7 | .24 | .205 | .185 |
| 40 H 199 | †147-505 | 7 | .15 | .125 | .113 |
| 40 H 193 | $\ddagger 59-409$ | 9 | .20 | .17 | .153 |
| 40 H 167 | $\dagger 59-410$ | 9 | .20 | .17 | .153 |
| [B] WITH TUBE SHIELD BASE |  |  |  |  |  |
| 40 H 194 | †147-905 | 7 | . 21 | .18 | .162 |
| 40 H 195 | *147-925 | 7 | .26 | .225 | .203 |
| 40 H 175 | $\dagger 147-913$ | 7 | . 22 | . 188 | .169 |
| $40 \mathrm{HiO3}$ | +59-403 | 9 | . 29 | . 24 | .225 |
| 40 H 176 | +59-407 | 9 | . 27 | .24 | . 216 |
| 40 H 196 | $\ddagger 59-406$ | 9 | . 24 | .21 | . 189 |

## (C) TUBE SHIELDS <br> FOR 7-PRONG SOCKETS

| Stock No. | Type | Height | 1-99, EA. | 100-249,EA. | 250-UP, EA. |
| :---: | :---: | :---: | :---: | :---: | :---: |
|  | 5-401 | 13/81" | . 08 | . 074 | $\begin{aligned} & .066 \\ & .069 \\ & \hline \end{aligned}$ |
| FOR 9-PRONG SOCKETS |  |  |  |  |  |
| Stock No. | Type | Length | 1-99, EA. | 100-249,EA. | 250-UP, EA. |
| 40 H 188 | 5-405 | $1{ }^{11 / 2^{\prime \prime}}$ | .09 | . 075 | . 068 |
| 40 <br> 40 <br> 40 | 5-408 | 15/16" ${ }^{\prime \prime}$ | . 10 | . 099 | . 088 |

## 7- AND 9-PIN "ETHYLON-A" SOCKETS

Molded of low-loss "Ethylon-A" high "Q" insulating material. For use where temperature is below $125^{\circ} \mathrm{F}$. Sockets without shield base are Zip ${ }_{27} n^{\prime \prime}$ type; require special keyed hole. 7-pin sockets with shield base require
(D) WITHOUT TUBE SHIELD BASE

E with tube shield base

| 40 40 | $\xrightarrow{59-367}$ | ${ }_{9}^{7}$ | : 21 | . 318 | ${ }^{.167}$ |
| :---: | :---: | :---: | :---: | :---: | :---: |

## RETAINER RING SOCKETS

Mount in $5 / 8^{*}$ round or "D" shaped hole with retainer ring provided. May be used with 91-MPM piugs (page 192). Av. shpg. wt., 5 oz. BLACK BAKELITE

| $\begin{gathered} \text { Stock } \\ \text { No. } \end{gathered}$ | $\begin{aligned} & \text { Mifr's } \\ & \text { Type } \end{aligned}$ | $\begin{gathered} \text { No. } \\ \text { Prongs } \end{gathered}$ | $\begin{aligned} & 1-99 \\ & \text { EACH } \\ & \hline \end{aligned}$ | $\begin{gathered} 100-249, \\ E A C H \end{gathered}$ | $\begin{gathered} 250-\mathrm{UP}_{1} \\ \text { EACH } \end{gathered}$ |
| :---: | :---: | :---: | :---: | :---: | :---: |
| $40 \mathrm{HI31}$ | 78-S3S | 3 | . 07 | . 063 | . 056 |
| 40 H 115 | $78-\mathrm{S4S}$ | 4 | . 07 | . 063 | . 056 |
| 40 H | $78-\mathrm{S5} 5$ | 5 | .10 | . 095 | . 081 |
| 40 H <br> 40 | 78-56S | 7 | -11 | .1295 | . 1086 |
| MICA-FILLED |  |  |  |  |  |
| 40 HI 124 | 78-7PT | 7 | . 15 | . 128 | . 115 |



## SPECIAL OCTAL, AND MAGNAL SOCKETS

[G] Type 77-MIP8FK Floating Octal. Live-rubber grommets in enG] larged mounting holes of sturdy steel plate. Mounts in $13 / 16^{\prime \prime}$ hole with two $1 / 4^{\prime \prime}$ holes on $112^{\prime \prime}$ centers. With grommets, mtg. screws, nuts and washers. Shpg. wt., 50 OZ
.21

.21
H Type 168-015 Saddie Octal. Designed for below-chassis mounting. (1) Steel plate is molded directly into bakelite body. For $1^{\prime \prime}$ hole; $9 / 4^{4 \prime}$ mtg. holes on $15 / 16^{\prime \prime} \mathrm{ctrs}$. Shpg. wt. 5 oz .

.09
Type 59-355 "Ethylon-A" Octal. Molded of low-loss "Ethylon-A" $\int$ insulating material. High " $Q$ " factor. For applications where temperature does not exceed $125^{\circ} \mathrm{F}$. May be mounted above or below chassis. Requires $13 / 16^{\prime \prime}$ diameter hole; two $5 / 32^{\prime \prime}$ mounting holes on $11 / 2^{\prime \prime}$ centers. Shpg. wt., 50 oz. NET EACH.

.20
K Type 49-SS11L Magnal. Has $11 / 16^{\prime \prime}$ pin circle to accept 11-prong cathode-ray tubes. Constructed from low-loss steatite. Steel retaining




## POPULAR STANDARD SOCKETS

L
Type MIP. Bakelite body with molded-in steel plate. *Require $11 / 8^{\circ}$ $15 / 16^{\prime \prime}$. All others have $11 / 2^{\prime \prime}$ mounting centers

| Stock No. | $\begin{aligned} & \text { Mfr's } \\ & \text { Type } \\ & \hline \end{aligned}$ | Prongs | $\begin{aligned} & \text { 1-99, } \\ & \text { EACH } \end{aligned}$ | $\begin{gathered} 100-249 \\ \text { EACH } \end{gathered}$ | 250-U ${ }^{2}$ EACH |
| :---: | :---: | :---: | :---: | :---: | :---: |
| $40 \mathrm{HO24}$ | 77MIP4§ | 4 | . 09 | . 078 | 0 |
| 40 H 025 | 77 MIP 58 | 5 | .10 | . 086 | . 077 |
| 40 H 026 | $77 \mathrm{MIP68}$ | ${ }^{5}{ }^{6}$ | 11 | . 099 | . 087 |
| 40 H 027 | 77M1P7S§ | 7 Small | .12 | . 107 | . 096 |
| 40 H 029 | $77 \mathrm{MIP} 7 \mathrm{~L} \dagger$ | 7 Large | . 1 | .106 | 095 |
| 40 H 028 | $77 \mathrm{MLP88}$ | Octal | .10 | . 085 | . 077 |
| 40 H 126 | 88-8* | Octal | .11 | . 095 | . 086 |
| 40 H 030 | 88-8X* | Loctal |  |  |  |
| 40 H 034 | 77MIP8T8 $\ddagger$ | Octal |  | .102 | . 092 |
| 40 H 032 | 77MIP98 | 9 | .12 | . 10 | . 09 |
| 40 H 033 | 77MIP118 | 11 | .13 | . 11 | . 099 |

Type RS. Have removable mounting plate. 40 H 009 mounts in (vi $1 / 64^{4}$ hole, others in $111 / 64^{\prime \prime}$ hole. Slotted mounting holes to fit centers rom $11 / 2$ to $17 / 8^{\prime \prime}$. Av. shpg. wt., 4 oz .

| 40 H 004 | 78RS4 | 4 | . 11 | . 098 | . 088 |
| :---: | :---: | :---: | :---: | :---: | :---: |
| 40 H 005 | $78 \mathrm{RS5}$ | 5 | .12 | .105 | .095 |
| 40 H 006 | 78RS6 | 6 | .13 | . 113 | .101 |
| 40 H 007 | 78RS7S | 7 Small | .14 | . 118 | .106 |
| 40 H 009 | 78RS7L | 7 Large |  |  |  |
| 40 H 008 | 78RS8 | Octal | .13 | .11 | . 099 |
| 40 HOlO | 78RS8L | Loctal | . 17 | .148 | . 133 |
| $40 \mathrm{HOl2}$ | 78RS9 | , | .13 | .115 | . 104 |

N Type RSS. Ultra-low-loss steatite sockets. Excellent for use in highremovable mounting plate with slotted holes $11 / 2$ to $17 /{ }^{\prime \prime}$. Mounting hole $11 / 4^{\prime \prime}$ except 40 H 079 , which requires $121 / 4^{\prime \prime}$. Av shpg. wt. 5 oz .

| 40 H 074 | 49RSS4 | 4 | . 28 | . 245 |  |
| :---: | :---: | :---: | :---: | :---: | :---: |
| 40 H 075 | 49RSS5 | 5 | . 29 | . 255 | . 23 |
| 40 H 076 | 49RSS6 | 6 | . 31 |  | . 243 |
| 40 H 077 | 49RSS7S | 7 Small |  |  |  |
| 40 H 079 | 49RSS7L | 7 Large | . 34 | . 295 | . 266 |
| 40 H 078 | 49RSS8 | Octal | . 30 | . 255 | . 23 |

P Type S. High-dielectric molded bakelite body. Units are the same as Pype RS, but without mounting plate; mount with retainer ring, supplied. All sockets require $111 / 64^{\prime \prime}$ hole, except 40 H 059 , which require
$121 / 4^{4}$ hole. Av. shpg. wt., 4 oz. $1^{121 / 64^{\prime \prime}}$ hole. Av. shpg. wt., 4 oz .

| 40 H054 | 78 S 4 | 4 | . 08 | . 07 | . 063 |
| :---: | :---: | :---: | :---: | :---: | :---: |
| 40 H 055 | $78 \mathrm{S5}$ | 5 | . 09 | . 078 | . 07 |
| 40 H 056 | 78S6 | 6 | .10 | . 085 | . 077 |
| 40 H 057 | 78S7S | 7 Small | .10 | . 09 | . 081 |
| 40 H059 | 78S7L | 7 Large | .14 | . 123 |  |
| 40 H 058 | 78.88 | Octal | .10 | . 085 | . 077 |
| 40 H 062 | $78 \mathrm{S9}$ | 9 | .11 | . 098 | . 088 |



R Type 59-402 Television Tube Socket. Duodecal socket for cathoderay tubes. Has 12 prongs equally spaced on a $1.063^{\prime \prime}$ diameter circle Body constructed from low-loss bakelite insulating material. Has removable cap, which fits over terminals to provide protection from shock hazard 100 .
$40-99$,
HET.
 S Type "S" Miniature Sockets. Have high-dielectric, molded bakeretainer ring supplied. Av. shpg. wt., 5 oz.


T Type 23-1S ACS Socket Shells. Lightweight aluminum shell for $\square_{49}$ type "RSS," "RS," and "S" sockets, except 78S7L, 78RS7L, and 49RSS7L. Permits extension of sockets $13 / 1^{\prime \prime}$ above or below chassis sur-
face. Body dia., $111 / 16^{\prime \prime}$. Mounts in $1^{3 / 4^{\prime \prime}}$ hole. Less socket. Shpg. wt, 5 oz . face. Body dia., $1^{11} / 16^{\prime \prime}$. Mounts in $13 / 4^{\prime \prime}$ hole. Less socket. Shpg. wt,, 5 oz . 40 H 127. 1-99, NET EACH.

086 250-Ü, ЕАС̈H.. $\qquad$
WW Type 77A-4T High-Voltage 4-Contact Safety Socket. For high$W$ voltage, small-base TV rectifier tubes. Takes all 4 -pin types with $1.156^{\prime \prime}$ base dia., such as 2X2A. Requires $11 / 2^{\prime \prime}$ dia. hole. Shpg. wt., 5 oz .
40 H 147. 1-99, NET EACH.
Barrier-Type Industrial Octal Sockets. Max. EIA working voltage, $2,000 \mathrm{DC}$. Bronze cloverleaf contacts. 2.6 mm Emps each contact. Inter-electrode capacitance, 2.6 mmf . Eight screw terminals. Insulating barriers. Top mounting. Ancludes molded-in threaded inserts fo use as tie points
Shpg. wt., 8 oz.



## Amphenol AN Connectors



## AN OR MS MARKING-MEET ARMY-NAVY SPECIFICATIONS

## ALLIED STOCKS ALL AMPHENOL AN CONNECTORS <br> Allied can supply any Amphenol Type AN (MS) connector directly from stock. Only the most popular types are listed below. To order any type not listed, give complete Amphenol Type No. and description. Write for special prices on quantities of 50 or more of any one type.

| Size 8S |  |  |  |
| :---: | :---: | :---: | :---: |
| Stock No. | "AN" Type | Contacts | NET |
| $39 \mathrm{H7O1}$ | 3106A-8S-1P | 1 | . 75 |
| 39 3 702 | 3108A-8S-1P |  | 1.16 |
| 39H703 | 3102A-8S-15 | 1 | . 53 |
| Size IOS |  |  |  |
| Stock No. | "AN" Type | Contacts | NET |
| $39 \mathrm{H7O4}$ | 3102A-10S-2P | 1 | . 44 |
| $39 H 705$ $39 H 706$ | $3102 \mathrm{~A}-10 \mathrm{~S}-2 \mathrm{~S}$ $3106 \mathrm{~A}-10 \mathrm{~S}-2 \mathrm{~S}$ | 1 | . 44 |
|  |  |  |  |
| Size 10SL |  |  |  |
| Stock No. | "AN" Type | Contacts | NET |
| $39 \mathrm{H708}$ | 3106A-10SL-4S | 2 | . 69 |
| 39 H 709 | $3100 \mathrm{~A}-10 \mathrm{SL}-3 \mathrm{P}$ | 3 3 3 | . 86 |
| 39 H 710 | 3101A-10SL-3P | 3 3 3 | . 73 |
| $39 \mathrm{H712}$ | 3106A-10SL-3S |  |  |
| 39 H 713 | 3102A-10SL-4P | 2 | . 47 |
| 39 H 714 | 3108A-10SL-4S | 2 | 1.30 |
| 39H715 | 3108B-10SL-4S | 2 | 1.03 |
| Size 125 |  |  |  |
| Stock No. | "AN" Type | Contacts | NET |
| 39H717 | 3102A-12S-3P | 2 | . 44 |
| $39 H 718$ | 3106A-12S-3P | 2 | . 727 |
| 39H720 | 3108A-12S-3P | 2 | 1.71 |
| 39 H 721 | 3102A-12S-3S | 2 | . 47 |
| 39H722 | 3106A-12S-3S | 2 | . 78 |
| $39 \mathrm{H723}$ | 3108A-12S-3S | 2 | 1.30 |
| $39 H 724$ 39 H 725 | ${ }^{3108 B-12 S-3 S}$ | 2 | 1.05 |
| 39 H 726 | 3106A-12S-4S | 1 | . 78 |


| Size 12SL |  |  |  |
| :---: | :---: | :---: | :---: |
| Stock No. | "AN" Type | $\begin{aligned} & \text { Con- } \\ & \text { tacts } \end{aligned}$ | NET |
| 39H716 | 3106A-12SL-844S | 4 | 2.40 |
| Size 14S |  |  |  |
| Stock No. | "AN" Type | Contacts | NET |
| $39 H 729$ | 3102A-14S-1P | 3 | . 62 |
| 39 H 730 | 3106A-14S-1P | 3 | . 93 |
| $\begin{array}{r}39 H 731 \\ 39 \\ \hline\end{array}$ | 3102A-14S-1S $3106 \mathrm{~A}-14 \mathrm{~S}-15$ | $\begin{array}{r}3 \\ 3 \\ \hline\end{array}$ | . 66 |
| 39 H 733 | 3108A-14S-1S | 3 | 1.52 |
| 39H734 | 31088-14S-1S | 3 | 1.10 |
| 39 H 735 | 3102A-14S-2P | 4 | . 62 |
| $39 H 736$ 39 | ${ }^{3106 A-14 S-2 P}$ | 4 | . 93 |
| 39 H 738 | 3108A-14S-2P | 4 | 1.49 |
| $39 H 739$ | 3100A-14S-2S | 4 | . 93 |
| 39 H 740 | 3101A-14S-2S | 4 | .96 |
| $39 H 741$ <br> 39 | 3102A-14S-2S | 4 | 1.71 |
| 39 H 743 | $3106 B-14 S-2 S$ | 4 | 1.34 |
| $39 H 744$ | 3108A-14S-2S | 4 | 1.57 |
| 39 H 745 | 3108B-14S-2S | 4 | 1.15 |
| 39 H 747 | 3101A-14S-5P | 5 | 1.00 |
| 39H748 | ${ }^{3102 A-14 S-5 P}$ | 5 | . 73 |
| 39H749 | 3106A-14S-5P | 5 | 1.05 |
| $39 \mathrm{H750}$ | 3100A-14S-5S | 5 | 1.00 |
| $39 H 751$ | 3102A-14S-5S | 5 | . 76 |
| $39 H 752$ 39 H 753 | 3106A-14S-5S | 5 5 | 1.08 |
| 39 H 754 | 3108A-14S-5S | 5 | 1.64 |
| $39 H 755$ | 31088-14S-5S | 5 | 1.21 |
| $39 H 756$ | 3102A-14S-6P | 6 | . 83 |
| 39 H 757 | 3106A-14S-6S | 6 | 1.15 |


| Size 14S (cont'd) |  |  |  |
| :---: | :---: | :---: | :---: |
| Stock No. | "AN" Type | Contacts | NET |
| 39H758 | 3108B-14S-6S | 6 | 1.27 |
| 39H759 | 3102A-14S-7P | 3 | . 62 |
| 39H760 | $\begin{aligned} & 3106 \mathrm{~A}-14 \mathrm{~S}-7 \mathrm{P} \\ & 3101 \mathrm{~A}-14 \mathrm{~S} \end{aligned}$ | 3 <br> 3 | . 93 |
| 39 H762 | 3102A-14S-7S | 3 | . 66 |
| 39 H763 | 3106A-14S-7S | 3 | . 96 |
| $39 H 766$ | 3101A-14S-9P | 2 | . 83 |
| 39H767 | 3102A-14S-9P | 2 | . 57 |
| 39H768 | 3106A-14S-9P | 2 | . 88 |
| $39 H 769$ | 3102A-14S-9S | 2 |  |
| 39H770 |  | 2 | . 91 |
| 39H771 | 3108B-14S-9S | 2 | 1.05 |

Size 16

| Stock No. | "AN" Type | Contacts | NET |
| :---: | :---: | :---: | :---: |
| $39 H 772$ | 3106A-16-10P | 3 | 1.18 |
| $39 H 774$ | 3102A-16-11P | 2 | . 62 |
| 39H775 | 3106A-16-11S | 2 | 1.22 |

Size 165

| Stock No. | "AN" Type | Contacts | ET |
| :---: | :---: | :---: | :---: |
| 39H777 | 3101A-16S-1P | 7 | 1.10 |
| 39 H 778 | 3102A-16S-1P | 7 |  |
| 39 H 779 | 3106A-16S-1P | 7 | 1.15 |
| $39 H 780$ <br> 39 | 3108B-16S-1P <br> 3100A-16S-1S | 7 | 1.45 |
| 39H782 | 3102A-16S-1S | 7 | . 76 |
| 39 H 783 | 3106A-16S-1S | 7 | 1.13 |
| 39 H 784 | 31068-16S-15 | 7 | 1.52 |
| 39 H 785 | 3108B-16S-15 | 7 | . 44 |
| 39H786 | 3102A-16S-5P | 3 | . 59 |
| 39H788 | 3106A-16S-6P | 3 | 1.01 |
| $39 H 789$ | 3102A-16S-8P | 5 |  |
| 39H790 | 3102A-16S-8S $3106 A-16 S-8 S$ | 5 | 1.75 |

Size 18

| Stock No. | "AN" Type |  |  |
| :---: | :---: | :---: | :---: |
|  | A |  |  |
| $\begin{aligned} & 39 H 792 \\ & 39 H 793 \\ & 204701 \end{aligned}$ | $3102 A-18$ <br> $3106 A-18$ | $\begin{aligned} & 10 \\ & 10 \\ & 10 \end{aligned}$ |  |
| H794 | ${ }^{31088-18-1}$ | 10 |  |
| H 796 | 3102A-18-15 | 10 |  |
| 39 H 797 | 3106A-18-1 | 10 |  |
| H | 31068-18 | 10 |  |
| + | 31088-18-13 | 10 |  |
| H 801 | 3102A-18-3P | 2 |  |
| 39H802 | 310 | 2 |  |
| 39H8 | 3106A-18-4 | 4 |  |
| H | 3102A-18 | 4 |  |
|  |  |  |  |
| 39 H807 | - |  | 1.03 |
| 39 H | 3102A-18 | 8 |  |
| 39 H 812 | ${ }^{\text {a }}$ | 8 | 1.6 |
| $39 \mathrm{HBl}{ }^{3}$ | 3100A |  |  |
| H 8 | ${ }^{\text {3 }}$ | 7 |  |
| 39 H 816 | ${ }^{3106 A-18-11 P}$ | 5 | . 47 |
|  | 3106A-18-12P |  |  |
| $39 \mathrm{H8}$ | ${ }_{31064}^{3102}$ | 6 |  |
| H | 3102A-18-15S | 4 | 2.6 |
| Size 20 |  |  |  |
| Stock No. | "AN" Type |  |  |
| 9 H 822 | 3102A-20-4P |  | . 98 |
| 39H823 | 3106A-20-4S |  |  |

Amphenol "AN" connectors for use in aircraft and other critical applications. The connectors you receive will have either the "AN" markings or the government's new "MS" markingsconnectors with the same numerical designations are identical in every respect whether marked "AN" or "MS". Explanation of type nos.: E.g., Type 3102A-20-7P. Letter "A" after first 4 digits indicates solid shell (letter " $B$ " would mean split shell). - 20 - indicates shell size in 16 th's of an inch; ( $20 / 16^{\prime \prime}$, or $11 / 4^{\prime \prime}$ ). The final letter " $P$ " in type number indicates male contacts (pins); type numbers ending in " S " indicate female contacts (sockets). Av. shpg. wt., 6 oz .

| Stock No. | "AN" Type | Contacts | NET |
| :---: | :---: | :---: | :---: |
| 39H824 | 3102A-20-7P | 8 | 1.08 |
| 39 H 825 | 3106A-20-7P | 8 | 1.64 |
| 39 H826 | 3101A-20-7S | 8 | 1.60 |
| 39 H 827 | 3102A-20-7S | 8 | 1.20 |
| 39 H828 | 3106A-20-7S | 8 | 1.74 |
| 39H829 | 3102A-20-9P | 8 | 1.18 |
| 39 H830 | 3106A-20-11P | 13 | 1.86 |
| $39 H 831$ | 3102A-20-11S | 13 | 2.33 |
| 39 H832 | 3102A-20-15P | 7 | 1.22 |
| $39 H 833$ | 3106A-20-15P | 7 | 1.78 |
| 39H834 | 3102A-20-15S | 7 | 1.78 |
| 39 H835 | 3102A-20-16P | 9 | 1.06 |
| 394836 | 3106A-20-16P | 9 | 1.62 |
| $39 H 837$ | 3102A-20-18P | 9 | 1.21 |
| 39 H838 | 3102A-20-18S | 9 | 1.40 |
| $39 H 839$ | 3102A-20-27P | 14 | 1.40 |
| 39 H840 | 3106A-20-27P | 14 | 1.96 |
| 39 H841 | 3106B-20-27P | 14 | 2.33 |
| 39 H 842 | 3108B-20-27P | 14 | 2.42 |
| 39 H843 | 3100A-20-27S | 14 | 1.70 |
| 39H844 | 3102A-20-27S | 14 | 1.45 |
| 39 H 845 | 3106A-20-27S | 14 | 2.01 |
| 39 H846 | 3106B-20-27S | 14 | 2.38 |
| $39 H 847$ | 3108A-20-27S | 14 | 3.18 |
| 39 H 848 | 3108B-20-27S | 14 | 2.47 |
| 39H849 | 3102A-20-29P | 17 | 1.59 |
| $39 H 850$ | 3106A-20-29P | 17 | 2.14 |
| 39 H 851 | 3102A-20-29S | 17 | 1.60 |
| $39 H 852$ | 3106A-20-29S | 17 | 2.16 |


| Size 22 |  |  |  |
| :---: | :---: | :---: | :---: |
| Stock No. | "AN" Type | Contacts | NET |
| 394853 | 3102A-22-5P | 6 | 1.08 |
| $39 H 854$ | $3106 \mathrm{~A}-22-5 \mathrm{~S}$ | 6 | 2.22 |
| $39 H 855$ | 3100A-22-14P | 19 | 2.01 |
| 39H856 | 3102A-22-14P | 19 | 1.69 |
| $39 H 857$ | 3106A-22-14P | 19 | 2.35 |
| 39H858 | 3108B-22-14P | 19 | 2.76 |
| 39H860 | 3102A-22-14S | 19 | 1.89 |
| 39 H861 | 3106A-22-14S | 19 | 2.57 |
| $39 H 862$ | 3106B-22-14S | 19 | 3.07 |
| $39 H 863$ | 3108A-22-14S | 19 | 3.74 |
| 39H865 | 3106A-22-18P | 8 | 1.94 |
| $39 H 866$ | 3102A-22-18S | 8 | 1.30 |
| 39 H867 | 3102A-22-19P | 14 | 1.50 |
| 39 H868 | 3102A-22-19S | 14 | 1.57 |
| $39 H 869$ | 3106A-22-19S | 14 | 2.23 |
| $\begin{aligned} & 39 H 870 \\ & 39 H 871 \end{aligned}$ | $\begin{aligned} & \hline 3106 \mathrm{~A}-22-23 \mathrm{P} \\ & 3102 \mathrm{~A}-22-23 \mathrm{~S} \end{aligned}$ | 8 | $\begin{aligned} & 1.98 \\ & 1.83 \end{aligned}$ |
| Size 24 |  |  |  |
| Stock No. | "AN" Type | Contacts | NET |
| 39 H 872 | 3106A-24-5P | 16 | 2.32 |
| 39 H 873 | 3102A-24-5S | 16 | 1.88 |
| 39 H874 | 3106A-24-5S | 16 | 2.62 |
| $39 H 875$ | 3108B-24-5S | 16 | 2.97 |
| 39H876 | 3106A-24-7P | 16 | 2.32 |
| 39H877 | 3100A-24-7S | 16 | 2.18 |
| $39 H 879$ | 3108B-24-7S | 16 | 2.94 |
| 39 H880 | 3106A-24-9P | 2 | 2.42 |
| 39H881 | 3102A-24-9S | 2 | 1.86 |
| $39 H 883$ | 3106A-24-20P | 11 | 2.09 |
| $39 H 884$ | 3102A-24-20S | 11 | 1.49 |
| $39 H 885$ | 3101A-24-28P | 24 | 2.19 |
| 39 H886 | 3102A-24-28P | 24 | 1.70 |
| 39 H 887 | 3106A-24-28P | 24 | 2.43 |
| $39 H 889$ | 3102A-24-28S | 24 | 2.22 |
| 39 H890 | 3106A-24-28S | 24 | 2.96 |
| $39 \mathrm{H891}$ | 3106B-24-28S | 24 | 13.30 |
| Size 28 |  |  |  |
| Stock No. | "AN" Type | Contacts | NET |
| 39 H 892 | 3102A-28-11P | 22 | 2.22 |


| Size 28 (cont'd) |  |  |  |
| :---: | :---: | :---: | :---: |
| Stock No. | "AN" Type | Contacts | NET |
| $39 \mathrm{H893}$ | 3106A-28-11P | 22 | 3.07 |
| 39 H 894 | 3102A-28-11S | 22 | 2.50 |
| 39H895 | 3106A-28-11S | 22 | 3.35 |
| 39 H 897 | 3102A-28-12P | 26 | 2.04 |
| 39H898 | 3106A-28-12P | 26 | 2.89 |
| 39H900 | 3102A-28-12S | 26 | 2.58 |
| 39H901 | 3106A-28-12S | 26 | 3.43 |
| 39H903 | 3102A-28-15P | 35 | 2.84 |
| 39H904 | 3106A-28-15P | 35 | 3.69 |
| 39H905 | 3102A-28-15S | 35 | 3.02 |
| 39H906 | 3106A-28-15S | 35 | 3.87 |
| 39H907 | 3102A-28-16P | 20 | 1.91 |
| 39 H 908 | 3106A-28-16S | 20 | 3.02 |
| 39H910 | 3106A-28-20S | 14 | 3.20 |
| 39 Hgll | 3102A-28-21P | 37 | 2.94 |
| 39H912 | 3106A-28-21P | 37 | 3.79 |
| 39 H 913 | 3102A-28-21S | 37 | 3.12 |
| 39H914 | 3106A-28-21S | 37 | 3.97 |
| Size 32 |  |  |  |
| Stock No. | "AN" Type | Contacts | NET |
| 39H917 | 3102A-32-7S |  | 3.67 |
| 39H918 | 3106A-32-7S | 35 | 5.03 |
| 39H920 | 3102A-32-13S | 23 | 3.09 |

## DUST CAPS

Provide protection against live circuits and from dirt and dust when con-
nector is not being used. With internal threads for use on all receptacles listed. Have soft rubber gasket to form a highly dependable, waterproof seal. Shpg. wt., 2 oz .

| Stock | $\begin{aligned} & \hline \text { Mfr's } \\ & \text { Type } \\ & \hline \end{aligned}$ | Fits Shell | NET |
| :---: | :---: | :---: | :---: |
| 39H924 | 9760-10 | 10S, 10SL | . 42 |
| 39H925 | 9760-12 | 12, 12 S | . 47 |
| 39 H 926 | 9760-14 | 12SL, 14, 14 S | . 53 |
| 39H927 | 9760-16 | 16, 16 S | . 59 |
| 39H928 | 9760-18 | 18 | . 67 |
| 39H929 | 9760-20 | 20 | . 71 |
| 39 H930 | 9760-22 | 22 | . 75 |
| 39 H 931 | 9760-24 | 24 | . 83 |
| 39 H 941 | 9760-28 | 28 | 1.02 |
| 39 H 942 | 9760-32 | 32 | 1.20 |

## CABLE CLAMPS

Sturdy cable clamps to support wire or cable at the plug or receptacle and prevent twisting or pulling. Die-cast aluminnum or light weight. Screws and washers are plated to prevent corrosion. Shpg. wt., 2 oz .

| Stock <br> No. | "AN" <br> Type | Fits Shell | NET |
| :---: | :---: | :---: | :---: |
| 39 H 932 | $3057-3$ | $8 \mathrm{~S}, 10 \mathrm{~S}$ | .44 |
| 39 H 933 | $3057-4$ | $10 \mathrm{SL}, 12,12 \mathrm{~S}$ | .44 |
| 39 H 934 | $3057-6$ | $14,14 \mathrm{~S}$ | .44 |
| 39 H 935 | $3057-8$ | $16,16 \mathrm{~S}$ | .44 |
| 39 H 936 | $3057-10$ | 18 | .53 |
| 39 H 937 | $3057-12$ | 20,22 | .53 |
| 39 H 938 | $3057-16$ | 24,28 | .59 |
| 39 H 939 | $3057-20$ | 32 | .62 |
| 39 H 940 | $3057-24$ | 36 | .69 |

## Write for Quantity Prices on 50 or More of Any One Type



## BLUE RIBBON CONNECTORS

Amphenol Type 26 Blue Ribbon connectors for heavy-duty operation. Provide an excellent solution to multi-circuit connection switching and re-routing problems. Self-cleaning spring contacts require visual alignment. Positive nditions of severe vibration. Do no connectors. Feature low inositive polarization prevents mismating o firm, positive contact Exclusive and withdrawal force, but provide silver base plated and gold finished; will not tarnish or corrode. Plug contacts are supported their full length on the dielectric. Dielectric

TYPE 26 BARRIER POLARIZATION TYPES

| (B) MALE |  |  |  |  | (A) FEMALE |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Contacts | Stock No. | $\begin{aligned} & \text { Mfr's } \\ & \text { Type } \\ & \hline \end{aligned}$ | NET EACH |  | Stock No. | $\begin{aligned} & \text { Mfr's } \\ & \text { Type } \\ & \hline \end{aligned}$ | NET EACH |  |
|  |  |  | 1.9 | 10-49 |  |  | 1-9 | 10-49 |
| 8 | 40H542 | 182 | 1.02 | . 76 | 40H 543 | 183 | 1.64 | . 22 |
|  | 40 H 660 | $4100-8 \mathrm{P}$ | . 96 | . 72 | 40 H 664 | $4200-8 \mathrm{~S}$ | 1.57 | 1.18 |
| 16 | 40 H 661 | $4100-16 \mathrm{P}$ | 1.78 | 1.34 | 40 H 665 |  | 2.26 | 1.70 |
| 24 | 40 H 662 | 4100-24P | 2.14 | 1.60 | 40 H 666 | $4200-24 \mathrm{~S}$ | 2.72 | 2.04 |
| 32 | 40 H 663 | 4100-32P | 2.51 | 1.88 | 40 H 667 | 4200-32S | 3.20 | 2.40 |

## TYPE 26 BARRIER POLARIZED

 CONNECTORS WITH KEYED SHELLS| (D) MALE |  |  |  |  | (C) FEMALE |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Contacts | Stock | $\begin{gathered} \text { Mfr's } \\ \text { Type } \end{gathered}$ | NET EACH |  | Stock No. | Mfr'sType | NET EACH |  |
|  |  |  | 1-9 | 10-49 |  |  | 1-9 | 10-49 |
| ${ }^{8}$ | 40 H 650 | ${ }^{4101-8 P}$ | 1.88 |  |  | 4201-8S | 2.16 | 1.62 |
| 16 | 40 H 651 | ${ }^{4101-16 P}$ | 2.82 | 2.12 | 40 H 672 | 4201-16S | 2.94 | 2.20 |
| 24 | 40H652 | ${ }_{4}^{4101-24 P}$ | 3.26 |  |  | 4201-24S | 3.51 | 2.63 |
| 32 | 40 H 653 | 4101-32P | 3.74 | 2.81 | 40 H 674 | 4201-32S | 4.10 | 3.07 |

TYPE 26 BARRIER POLARIZED CONNECTORS WITH KEYED LATCH SHELLS

| (E) PLUGS |  |  |  |  | (F) MATING RECEPTACLES |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| $\begin{aligned} & \text { Con- } \\ & \text { tacts } \end{aligned}$ | Stock No. | $\begin{aligned} & \text { Mfr's } \\ & \text { Type } \end{aligned}$ | NET EACH |  | Stock No. | $\begin{aligned} & \text { Mfr's } \\ & \text { Type } \end{aligned}$ | NET EACH |  |
|  |  |  | 1 to 9 | 10 to 49 |  |  | 1 to 9 | 10 to 49 |
| 8 | 40 H 610 | $4301-8 \mathrm{~S}$ |  | 4.09 | $\overline{40 \mathrm{H}^{618}}$ | 4401-8P | 2.92 | 2.19 |
| 8 | 40 H 614 | ${ }^{4501-8 P}$ | 4.83 | 3.63 | 40 H619 | $4401-8 \mathrm{~S}$ | 3.53 |  |
| 16 | 40 H 611 | 4301-16S | 6.53 | 4.90 | 40 H 620 | 4401-16P | 3.86 |  |
| 16 | 40 H 615 | 4501-16P | 6.06 | 4.55 | 40 H 621 | 4401-16S | 4.33 | 3.25 |
| 24 | $40 \mathrm{H}^{612}$ | 4301-24S | 7.38 | 5.54 | 40H 622 | 4401-24P | 4.31 | 3.23 |
| 24 | 40H616 | 4501-24P | 6.79 | 5.10 | 40 H 623 | 4401-24S | 4.90 | 3.67 |
| 32 | 40H613 | 4301-32S | 8.26 | 6.19 | 40H630 | 4401-32P | 4.79 | 3.60 |
| 32 | 40H617 | 4501-32P | 7.56 | 5.66 | 40 H 631 | 4401-32S | 5.49 | 4.12 |

configuration makes it impossible to overstress or fatigue contacts and individual protective barrier between each spring member insures proper spacing. Bodies are dally phate blue dielectric and meet government specifications. Have hign insulation resistance and steel and are molded into the body 4301 Series has end cable stainless 4501 Series has side cable outlet. Sin Type No indicates socket contacts; Pindicates plug contacts. For wire size up to No. 16. Rated 5 amperes at 600 v., DC. Av. shpg. wt., 5 oz .

TYPE 26 PIN POLARIZATION TYPES

| (H) MALE |  |  |  |  | (G) FEMALE |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Contacts | Stock No. | Mfr's Type | NET EACH |  | Stock No. | Mfr's <br> Type | NET EACH |  |
|  |  |  | 1-9 | 10-49 |  |  | 1-9 | 10-49 |
| 16 | 40 H 544 | 159-16 | 1.94 | 1.46 | 40 H 545 | 190-16 | 2.42 | 1.81 |
| 24 | 40 H 546 | 159-24 | 2.33 | 1.74 | 40 H 547 | 190-24 | 2.92 | 2.19 |
| 32 | 40 H 548 | 159-32 | 2.74 | 2.06 | 40 H 549 | 190-32 | 3.44 | 2.58 |

## TYPE 57 MICRO-RIBBON MINIATURE CONNECTORS

J. K Extremely compact, high-quality connectors for use in cable-tohe Bladmibm-plated brass shels whed above. Rated 5 amps, 700 v. DC. Av. shpg. wt., 1 oz.

| Stock No. | Type No. | Description | 1-9, EA. | 10-49, EA. |
| :---: | :---: | :---: | :---: | :---: |
| 41H075 | 57-30140 | 14-Contact Plug | 2.76 | 2.08 |
| 41 H079 | 57-40140 | 14-Contact Socket | 2.07 | 1.55 |
| 41 H 076 | 57-30240 | 24-Contact Plug | 3.09 | 2.31 |
| 41 H 082 | 57-40240 | 24-Contact Socket | 2.48 | 1.86 |
| 41 H 077 | 57-30360 |  | 3.37 | 2.53 |
| 41 H 083 | 57-40360 | 36-Contact Socket | 2.66 | 1.99 |
| 41 H 078 | 57-30500 | 50-Contact Plug | 4.16 | 3.12 |
| 41 H 084 | 57-40500 | 50-Contact Socket | 3.44 | 2.58 |

## TYPE 57 MICRO-RIBBON MINIATURE CONNECTORS

[L M Miniature connectors for chassis-to-chassis connections. Have wire up to No. 22. Rated $5 \mathrm{amps}, 700 \mathrm{v}$. DC. Av. shpg. wt., 2 oz.

| 40 H 482 | 57-10140 | 14-Contact Plug | 1.68 | 1.25 |
| :---: | :---: | :---: | :---: | :---: |
| 40 H 485 | 57-20140 | 14-Contact Socket | 1.72 | 1.29 |
| 40 H 483 | 57-10240 | 24-Contact Plug | 2.22 | 1.67 |
| 40 H 486 | 57-20240 | 24-Contact Socket | 2.24 | 1.69 |
| 40 H 484 | 57-10360 | 36-Contact Plug | 2.55 | 1.91 |
| 40 H 487 | 57-20360 | 36-Contact Socket | 2.57 | 1.93 |
| 40 H 098 | 57-10500 | 50-Contact Plug | 3.26 | 2.45 |
| 40 H 099 | 57-20500 | 50-Contact Socket | 3.33 | 2.50 |

## PRINTED CIRCUIT CONNECTORS AND PLUGS

Series 143 Printed Circuit Connectors. Highquality connectors for use in printed circuit networks. Printed circuit board acts as male part of connector. Ideal for use in computers, telephone equipment, military gear, etc. Specially designed to resist set or over-stress-even arter repeated insertions. Blue dielectric; gold-plated contacts. All Av. shpg. wt., 2 oz.

| Stock No. | Type | Contacts | 1-9, EA. | 10-49, EA. |
| :---: | :---: | :---: | :---: | :---: |
| 41 H 090 | $143-006-01$ | 6 | 1.43 | 1.08 |
| 40 H 503 | $143-010-01$ | 10 | 1.16 | .86 |
| 40 H 500 | $143-015-01$ | 15 | 1.55 | 1.16 |
| 40 H 501 | $143-018-01$ | 18 | 1.68 | 1.25 |
| 40 H 502 | $143-022-01$ | 22 | 2.01 | 1.50 |

Series 133 Printed Circuit Plugs. A selection of dependable plugs and adapters. Recommended for use with standard 143 series printed circuit connectors listed at left. Have molded diallyl phthalate body, molded nylon guide pins, brass cadmium-plated end caps and brass
contacts with gold over albaloz plating. Average voltage rating 2300 v. rms at sea level; current rating meets or surpasses any printed circuit wiring. board requirement. All units are polarized. Av. shpg. wt., 2 oz.

| Stock No. | Type | Contacts | 1-9, EA. | 10-49, EA. |
| :---: | :---: | :---: | :---: | :---: |
| 41 H 085 | $133-010-21$ | 10 | 1.80 | 1.35 |
| 4 | $H 086$ | $133-015-21$ | 15 | 2.11 |
| 4 | $H 087$ | $133-018-21$ | 18 | 2.59 |
| 41 | $H 088$ | $133-022-21$ | 22 | 2.57 |

## SERIES 165 AN-TYPE CONNECTORS

The Amphenol Series 165 electrical connectors feature compact design and complete dependability. Two sizes are available-a small size with 5,9 or 12 contacts and a nectors are available with either male or female inserts installed in plug or receptacle. Connectors remain waterproof whether mated or apart Bronze contacts are gold-plated over a silver base and shells are made of aluminum. Small receptacles mount in $13 / 16^{\prime \prime}$ hole and are secured through $4, .125^{\prime \prime}$ equally spaced holes on the flange. Flange is only $11 / 16^{\prime \prime}$

SMALL SHELL-S No. 20 AWG

| Stock No. | Typo No. | Contacts and Ampore Rating | Description | $\begin{aligned} & \text { NET } \\ & \text { EACH } \end{aligned}$ |
| :---: | :---: | :---: | :---: | :---: |
| 40 H595 | 165-33 | *5@7.5 | Male Plug | 3.14 |
| 40 H 596 | 165-34 | *5@ 7.5 | Female Plug | 3.53 |
| 40 H 597 | 165-35 | *5@ 7.5 | Male Receptacle | 2.40 |
| 40 H 598 | 165-36 | *5@ 7.5 | Female Receptacle | 2.82 |

## SMALL SHELL-9 No. 20 AWG

| 40 | $H$ | 579 | $165-13$ | 9 | 0 |
| :--- | :--- | :--- | :--- | :--- | :--- |

square. Large receptacles mount in 11/s"
hole and are secured through 4, $125^{\circ}$ equally spaced holes on a $15 / 1^{\prime \prime}$ square fange Plug are approximately $21 / 16^{\prime \prime}$ long. Small sized plug is ${ }^{57} 764^{\prime \prime}$ diameter and large sized plug is
$19 / 64^{\prime \prime}$ diameter. All are rated at 500 volts rms except $* 600$ volts rms. Al plugs have built-in, strain-relief, cable clamps. Av. shpg. wt., 3 oz Quantity prices on 50 or more of any type-write for prices.

LARGE SHELL-4 No. 16 \& 7 No. 20 AWG

| Stock No. | Type | Ampere Rating | Description |  |
| :---: | :---: | :---: | :---: | :---: |
| 40 H 583 | 165-17 | 4@17;7@7.5 | Male Plug | 4.48 |
| 40 H 584 | 165-18 | 4@17; ${ }^{\text {@ }}$ @ 7.5 | Female Plug | . |
| 40 H 585 | 165-19 | 4@17; ${ }^{\text {@ }}$ @ 7.5 | Male Receptacle | 2.96 |
| 40 H 586 | 165-20 | $4 @ 17 ; 7 @ 7.5$ | Female Receptacle | 3.7 | LARGE SHELL- 14 No. 16 AWG


| 40 H 591 | $165-29$ | $14 @ 17$ | Male Plug | 4.64 |
| :--- | :--- | :--- | :--- | :--- |
| 40 H 592 | $165-30$ | $14 @ 17$ | Female Plug | 5.73 |
| 40 H 593 | $165-31$ | $14 @ 17$ | Male Receptacle | 3.07 |
| 40 H 594 | $165-32$ | $14 @ 17$ | Female Receptacle | 4.16 | LARGE SHELL- 24 No. 20 AWG


| 40 | $H$ | 587 | $165-25$ | 24 | M |
| :--- | :--- | :--- | :--- | :--- | :--- |
| 40 | 7.5 | Male Plug | 5.34 |  |  |
| 40 | $H$ | 588 | $165-26$ | 24 | $@$ |
| 40 | H 589 | $165-27$ | 24 | Female Plug | 6.5 |
| 40 | H 590 | $165-28$ | $24 @$ | Male Receptacle | 3.75 |

## Amphenol Connectors and Plugs


(4)

B

©

(D)

## MINIATURE RACK PANEL \& CABLE CONNECTORS

Miniature type connectors designed especially for interconnection of miniature electronic equipment. Molded of Blue Amphenol 1-501 dielectric. Silver base plated, gold finished contacts will not tarnish. All hardware is solid nickel-plated brass. Three types available, all interchangeable. Figs. A and B have threaded bodies for mounting to panels. Require ${ }^{333 / 64^{\prime \prime}}$ dia. mounting hole. This type also available with a locking clip (Fig. C) for mating with the hood and cable clamp type where a locking
feature is desirable. Fig. D shows hood and cable clamp type. Overall feature is desirable. Fig. D shows hood and cable clamp type. Overall diameter, hex nut type only $5 / 8^{\prime \prime}$; cable clamp type, $3 / 4^{\prime \prime}$. Overall length,
cable clamp type, $1^{15 / 64^{4}}$. Av. shpg. wt., 5 oz . Write for quantity prices on cable clamp type, $1{ }^{5} / 64^{\prime \prime}$. A
50 or more of any one $t y p e$.

MALE CONNECTORS

| Stock No. | Mfr's <br> Type | Contacts | Fig. | Description | NET EACH |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  |  |  |  | $1-9$ | 10-49 |
| $40 \mathrm{H632}$ | 126-010 | 5 | B | Hex nut type, for panel mtg. | . 76 | . 58 |
| 40H634 | 126-191 | 7 | B | Hex nut type, for panel mitg. | 1.14 | . 85 |
| 40H636 | 126-012 | 9 | B | Hex nut type, for panel mtg. | . 98 |  |
| 40 H 644 | 126-217 | 5 | D | Hood and cable clamp type | 1.38 | 1.04 |
| 40 H 646 | 126-195 | 7 | D | Hood and cable clamp type | 1.52 | 1.15 |
| 40 H 648 | 126-220 | 9 | D | Hood and cable clamp type | 1.59 | 1.20 |
| 40 H 638 | 126-216 | 5 |  | Hex nut type, with locking clip | . 82 | . 62 |
| 40 H 640 | 126-197 | 7 |  | Hex nut type, with locking clip | . 98 | . 73 |
| 40 H 642 | 126-219 | 9 |  | Hex nut type, with locking clip | 1.04 | .78 |
| FEMALE CONNECTORS |  |  |  |  |  |  |
| 40 H 633 | 126-011 | 5 | A | Hex nut type, for panel mtg. | 1.20 | 90 |
| 40 H 635 | 126-192 | 7 | A | Hex nut type, for panel mtg. | 1.71 | 1.28 |
| 40 H 637 | 126-013 | 9 | A | Hex nut type, for panel mtg. | 2.07 | 1.55 |
| 40H645 | 126-223 | 5 | $\cdots$ | Hood and cable clamp type | 1.79 | 1.34 |
| 40 H 647 | 126-196 | 7 |  | Hood and cable clamp type | 2.29 | 1.72 |
| 40 H 649 | 126-222 | 9 |  | Hood and cable clamp type | 2.65 | 1.99 |
| 40 H639 | 126-218 | 5 | C | Hex nut type, with locking clip | 1.26 | . 95 |
| 40 H 641 | 126-198 | 7 | C | Hex nut type, with locking clip | 1.73 | 1.30 |
| 40 H 643 | 126-221 | 9 | C | Hex nut type, with locking clip | 2.12 | 1.59 |

MULTI-CONTACT PLUGS AND SOCKETS
Versatile, shielded connectors with 11, 15 and 20 contacts. Two-types-cable, and chassis. May be combined for "pull-out" rack mounting, inter-connecting several units, and extending conductors. Mica-filled phenolic plastic
has high impact strength, low loss and low has high impact strength, low loss and low shrinkage. Non-rotating contacts are silver-
plated with $.00002^{\prime \prime}$ hard gold shell plating plated with . $00002^{\prime \prime}$ hard gold shell. Plating gives improved appearance, makes soldering easier and faster-no preting holes for added strength and interlocking eyelets inserted in mounting holes for added strength, and interlocking *Insert only; all others with can. Cable type, 4 oz., chassis type, 2 oz . Write for quantity prices on 50 or more of any one type.

| Stock No. | Mfr's Type | Total Contacts | Contacts |  | Description | NET EACH |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  |  | No. 16 | No. 20 |  | 1-9 | 10-49 |
| 40H530 | 126-804* | 11 | 2 | 9 | Chassis plug | 1.04 | . 78 |
| 40 H 531 | 126-805* | 11 | 2 | 9 | Chassis socket | . 82 | . 62 |
| 40 H 532 | 126-809 | 11 | 2 | 9 | Cable plug | 1.65 | 1.23 |
| 40 H 533 | 126-808 | 11 | 2 | 9 | Cable socket | 1.41 | 1.06 |
| 40 H 534 | 126-151* | 15 | 3 | 12 | Chassis plug | 1.26 | . 95 |
| 40 H 535 | 126-150* | 15 | 3 | 12 | Chassis socket | . 87 | . 66 |
| 40 H 536 | 126-152 | 15 | 3 | 12 | Cable plug | 1.91 | 1.43 |
| 40 H 537 | 126-153 | 15 | 3 | 12 | Cable socket | 1.52 | 1.15 |
| 40H538 | 126-806* | 20 | 4 | 16 | Chassis plug | 1.79 | 1.34 |
| 40 H539 | 126-807* | 20 | 4 | 16 | Chassis socket | 1.47 | 1.11 |
| 40 H 540 | 126-811 | 20 | 4 | 16 | Cable plug | 2.56 | 1.92 |
| 40 H 541 | 126-810 | 20 | 4 | 16 | Cable sockel | 2.23 | 1.68 |
| 40 H 569 | 126-813* | 20 | 20 |  | Chassis plug | 2.62 | 1.96 |
| 40 H 568 | 126-812* | 20 | 20 |  | Chassis socket | 1.47 | 1.11 |



MULTI-WIRE CONNECTORS
Matching Amphenol male and female cable connectors. Take cables up to $7 / 16^{\prime \prime}$ O.D. Male types can be plugged into chassis-mounted tube sockets.
Size, $13 / 16 \times 13 / 32^{\prime \prime}$. Av. shpg. wt., 3 oz .
TFEMALE

| Stock No. | $\begin{aligned} & \text { Mfr's. } \\ & \text { Type } \end{aligned}$ | Contacts | NET EACH |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: |
|  |  |  | 1-99 | 100-249 | 250-Up |
| 40 H 524 | 78-PF4 | 4 | 174 | 141/24 | 134 |
| 40 H 525 | 78-PF5 | 5 | 184 | 154 | 144 |
| 40 H 526 | 78-PF6 | 6 | $19 \%$ | 164 | $14 \%$ |
| 40 H 527 | 78-PF7S | 7 S | 204 | 161/24 | 154 |
| 40 H 528 | 78-PF8 | 8 octal | $19 ¢$ | 164 | 144 |
| 40 H 516 | 78-PF9 | $9{ }^{\text {a }}$ | 214 | 174 | $151 / 24$ |
| 40 H517 | 78-PF11 | 11 | 224 | $181 / 24$ | $161 / 24$ |
|  |  |  |  |  |  |
| Stock | Mir's. | Con- |  | ET EAC |  |
| No. | Type | tacts | 1-99 | 100-249 | 250-Up |
| 40 H 504 | 86-PM4 | 4 | 214 | $171 / 24$ | 164 |
| 40 H 505 | 86-PM5 | 5 | 214 | $171 / 24$ | 164 |
| 40 H 506 | 86-PM6 | 6 | 224 | 181/24 | 174 |
| 40 H 507 | 86-PM7S | 7 S | $23 ¢$ | 194 | 174 |
| 40 H 508 | 86-PM8 | 8 | 224 | 184 | 164 |
| 40 H 512 | 86-PM9 | 9 | 22 ¢ | $181 / 24$ | 174 |
| 40 H513 | 86-PM11 | 11 | 234 | $191 / 24$ | $171 / 24$ |

[^14]192


## SUBMINAX SUBMINIATURE RF CONNECTORS

Subminiature RF connectors for use with Amphenol subminiature coaxial cable. Feature high efficiency, plus space-saving design. Use screwon types with each other; push-on connectors only with push-on types; head jacks or receptacles. For cables use plugs and jacks. Use bulkhead jacks for chassis or panel mounting if internal wiring is coax; use receptacles if internal wiring is non-coax. Feed-through types are for permanent feed-through connection. All connectors have gold-plated bodies and contacts. Shpg. wt. 3 oz . Write for quantity prices on 50 or more of any one type.

| Stock No. | Mfr's | Description | For Amphenol Cables | NET | EACH |
| :---: | :---: | :---: | :---: | :---: | :---: |
|  | Type |  |  | 1-9 | 10-49 |
| 40H470 | 27-1 | Plug | 21-598 (RG-174/U) | . 91 | .69 |
| 40 H 495 | 27-6 | Right-Angle Plug | 21-598 (RG-174/U) | 2.79 | 2.10 |
| 40 H 471 | 27-2 | Jack | 21-598 (RG-174/U) | . 91 | . 69 |
| 40 H 472 | 27-3 | Receptacle | . . . . . . . . . . . . . | . 94 | . 71 |
| 40H 473 | 27-4 | Jack, Bulhkead | 21-598 (RG-174/U) | 1.09 | . 81 |
| 40 H 474 | 27-5 | Feed-Through |  | 1.47 | 1.11 |
| 40 H 045 | 27-801 | Terminator 521-596 | 21-598 (RG-174/U) | . 62 | . 46 |


| 50 OHM SCREW-ON |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: |
| Stock No. | Mfr's Type | Description | For Amphenol Cables | NET EACH |  |
|  |  |  |  | 1-9 | 10-49 |
| 40 H 475 | 27-7 | Plug | 21-598 (RG-174/U) | . 82 | . 62 |
| 40 H 476 | 27.8 | Jack | 21-598 (RG-174/U) | . 88 | . 67 |
| 40 H 477 | $27-9$ | Receptacle |  | . 94 | .71 |
| 40 H 478 40 H 479 | $27-10$ $27-11$ | Jack, Bulkhead Feed-Through | 21-598 (RG-174/U) | 1.00 1.62 | .75 1.22 |
| 40 H 479 | 27-11 | Feed-Through |  | 1.62 | 1.22 |
| 40 H 480 | $27-12$ | Receptacle, Hermetic |  | 2.20 | 1.66 |
| 40 H 496 | 27-26 | Right-Angle Plug | 21-598 (RG-174/U) | 2.35 | 1.76 |
| 40 H 046 | 27-28 | Adapter, Submin-BNC | .................. | 2.94 | 2.20 |
| 40 H 047 | 27-800 | Receptacle, prntd-crct | ................ | . 73 | . 55 |

75 OHM PUSH-ON

| Stock No. | Mfr's Type | Description | For Amphenol Cables | NET EACH |  |
| :---: | :---: | :---: | :---: | :---: | :---: |
|  |  |  |  | 1-9 | 10-49 |
| 40H481 | 27-13 | Plug | 21-597 | 1.12 | . 84 |
| 40 H 497 | 27-18 | Right-Angle Plug | 21-597 | 3.00 | 2.25 |
| 40 H 458 | 27-15 | Receptacle |  | 1.12 | . 84 |


| 75 OHM SCREW-ON |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: |
| Stock No. | Mfr's | Description | For Amphenol Cables | NET EACH |  |
|  | Type |  |  | $1-9$ | 10-49 |
| 40 H 461 | 27-19 | Plug | 21-597 | 1.03 | . 77 |
| 40H498 | 27-25 | Right-Angle Plug | 21-597 | 2.59 | 1.94 |
| 40H462 | 27-20 | Jack | 21-597 | 1.00 | . 75 |
| 40 H463 | 27-21 | Receptacle |  | 1.09 | . 81 |
| 40H464 | 27-22 | Jack, Bulkhead | 21-597 | 1.32 | . 99 |


| CRIMPINC |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: |
| Stock No. | $\begin{aligned} & \hline \text { Mfr's } \\ & \text { Type } \end{aligned}$ | Description | For Amphenol Cables | $\begin{aligned} & \text { Wt. } \\ & \mathrm{Oz} . \end{aligned}$ | NET EACH |
| 40 H 467 | 27-900 | Crimp Tool | 21-598 | 12 | 14.00 |
| 40 H 468 | 27-901 | Crimp Tool | 21-597 | 12 | 14.00 |

## MINIATURE CABLE CONNECTORS

|  |  |  |  | letter in Ty ( $13 / 16^{\prime \prime}$ ), or sh Type No. -chassis ty female type wt., 2 oz. | No. indicates rt ( ${ }^{\left.13 / 16^{\prime \prime}\right) \text {. Last }}$ notes contacts Figs. E and Fig. F, male. |
| :---: | :---: | :---: | :---: | :---: | :---: |
| No. | Typo | Fig. | 1-49, EA. | 50-149, EA. | 150-UP, EA. |
| 40 H 320 | 91-MPF3L | E | 274 | 244 | 214 |
| 40 H 571 | 91-MPF3S | E | 274 | 244 | 214 |
| 40 H 321 40 H 572 | 91-MPF4L | E | 294 | 244 | 236 |
| 40 H 325 | 91-MPM3L | F | 244 | 214 |  |
| 40 H 573 | 91-MPM3S | F | 236 | 204 |  |
| 40 H 326 | 91-MPM4L | F | 244 | 214 | 194 |
| 40 H 574 | 91-MPM4S | F | 236 | 204 | $18 ¢$ |
| 40 H 570 | 91-MPM5L | $\stackrel{F}{\text { F }}$ | 264 | 234 | 204 |
| 40 H 328 | 91-MPM6L | $\stackrel{\mathrm{F}}{\mathrm{G}}$ | 27\% | 244 | 214 |
| 40 H 330 | 78-PCG3 | G | 164 | $131 / 24$ | 124 |
| 40 H 331 40 H 332 40 H 333 | $\begin{aligned} & 78-\mathrm{PCG4} 4 \\ & 78-\mathrm{PCG5} \\ & 78-\mathrm{PCG} 6 \\ & \hline \end{aligned}$ | ${ }_{\text {G }}^{\mathrm{G}}$ | $\begin{aligned} & 164 \\ & 181 / 24 \\ & 196 \end{aligned}$ |  | $\begin{aligned} & 124 \\ & 144 \\ & 144 \\ & \hline \end{aligned}$ |


|  | Stand Use ad mount $\dagger$ Have | akelite <br> plate <br> ing fo <br> e post | PE CP P <br> gs for $u$ $w$ for rep $6^{\prime \prime}$ holes aligning | GS <br> as chassis ement mou cept . ${ }^{* 121 / 64 " ~}$ y. Av. wt., | connectors ting. With keyed hole. oz. |
| :---: | :---: | :---: | :---: | :---: | :---: |
| No. | Mfr's Type | Prongs | 1-99, EA. | 100-249, EA. | 250-Up, EA. |
| 40H015 | 86-CP4 | 4 | 114 | 91/2¢ | 81/2¢ |
| $40 \mathrm{HO16}$ | 86-CP5 | 5 | 24 | 104 | 94 |
| 40 HOl 7 | 86-CP6 | 6 | $3 ¢$ | 114 | $10 ¢$ |
| 40H018 | 86-CP7L* | 7-Large | 154 | $121 / 24$ | $11 \%$ |
| $40 \mathrm{HO19}$ | 86-CP7S | 7-Small | 144 | $111 / 24$ | 104 |
| 40 H 020 | 86-CP8 $\dagger$ | Octal | $121 / 24$ | $10^{1 / 24}$ | $91 / 24$ |
| 40 H 021 | 86-CP9 $\dagger$ | 9 | 134 | 114 | 106 |
| 40 H 022 | 86-CP11 $\dagger$ | 11 | 144 | $12 ¢$ | 114 |

Adapter Plate. Nickel plated steel. For use with all Type CP plugs above except
40 H 023 . NET.........1/2".......................................... 2 C

# Amphenol Connectors, Sockets and Plugs 

## RF CABLE CONNECTORS



## TYPE 83 COAXIAL CONNECTORS

Meet government specs. *Polystyrene insulation. †Mica-filled insert. $\ddagger$ For twin coax RG-22/U and RG-22A/U cable. 3 oz . UHF Small Singie Contact. Popular connectors for any RF application.

| Stock No. | Military No. | Mfr's Type | Fig. | Description | NET EACH |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  |  |  |  | 1-9 | 10-49 |
| 40 H 357 | UG-106/U, M-360 | 83-1H | D | $\begin{aligned} & \text { For RG/U 8, 9, } 10 \\ & 11,12,13,63 \end{aligned}$ |  |  |
| 42 H 450 | UG-111/U | 83-750 | A | Plug for RG/U 59, | . 26 | . 22 |
| 40H360 | UG-175/U | 83-185 |  | 62, 71 | . 98 | . 81 |
|  |  |  |  | RG/U 29, 55 | 20 | 7 |
| 40 H 359 | UG-176/U | 83-168 |  | Reducing Adapter for RG/U59, 62 | . 20 | 17 |
| 40H351 | UG-177/U | 83-765 | D | For RG/U 29, 55, 58A | . 29 | . 25 |
| 40 H 373 | UG-203/U, 49482 | 83-776 | A | $\begin{aligned} & \text { For RG/U } 29,55,58 \mathrm{~A} \text {, } \\ & 59,62,63,71 \end{aligned}$ | 1.11 | . 92 |
| 40H356 | UG-363/U, PL-274 | 83-1F* |  | Feed-ThroughConnector | 1.94 | .92 1.62 |
| 40 H 353 | UG-646/U, M-359 | 83-1AP* | F | Right Angle Plug Adapter | 1.66 | 1.38 |
| 42 H 451 | UG-372/U | 83-1HP | D | $\begin{aligned} & \text { Hood for RG/U 8,9,10, } \\ & 11,12,13,63,65 \end{aligned}$ | . 32 | . 27 |
| 40H 354 | M-358, 49199 | 83-1T* |  | "T"' Adapter | 2.59 | 2.16 |
| 42 H 452 | M-359A, 49192 | 83-58 |  | Right Angle Adapter | 2.11 | 1.75 |
| 40 H 355 | PL-258, 49191 | 83-1]* | c | Straight Adapter | 1.13 | . 94 |
| 40 H 350 | PL-259, 49190 | 83-1SP $\dagger$ | A | $\begin{aligned} & \text { For RG/U } 8,9,10,11 \text {, } \\ & 12,13 \end{aligned}$ | 72 | . 60 |
| 42H454 | PL-259A, 49195 | $83-756$ | A | As above, but Tefion | 1.39 | 1.16 |
| 40 H 372 | PL-259A, 49195 | 83-1SPN | A | $\begin{aligned} & \text { For RG/U8, } 9,10,11 \text {, } \\ & 12,13,63,65 \end{aligned}$ | . 98 | . 81 |
| 40 H 352 | SO-239, 49194 | 83-1R $\dagger$ | B | Receptacle Chassis Type | . 73 | . 62 |
| 42 H 453 | S0-239A | 83-798 | B | Receptacle | 1.78 | 1.49 |
| 40H358 |  | 83-1AC |  | Cap and Chain | . 55 | . 45 |
| 42 H 455 | S0-239, 49194 | 83-1RTY* | B | Receptacle | . 73 | . 62 |
| 42 H 456 |  | 83-59 |  | Rt.-ang plug for RG/U5 8,9,10,11,12,13,63,6 |  |  |
| 42 H 457 | PL-259, 49190 | 83-822 | A | $\begin{aligned} & 8,9,10,11,12,13,63,6 \\ & \text { Plug-Tefion } \end{aligned}$ | 2.55 1.24 | 2.12 |

UHF Small Twin Contact. For use with 2-conductor coax cables.

| 40 H 361 |  | 83 | A | St |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | UG-103/U,S0-264 | 83-22R | B | Chassis receptacle |  |  |
| - | UG-104/U, PL-293 | 83-22A |  | Right-angle adapte | 2.44 |  |
|  | UG-105/U, PL-285 | 83-2 | c | Straight Adapter | 1.80 |  |
| 40H518 | PL-275 |  |  | Stra |  |  |
| 2H458 |  | 83-65 |  | Redapt'g Redptr. . 250 |  |  |

Solderless Type UHF Plug Connectors.


## SOCKETS AND PLUGS

Single-contact sockets and plugs. Molded bakelite bodies. Sockets mount in $3 / 8^{\prime \prime}$ hole. Supplied with Amphenol $2-11$ retainer ring. Contacts recessed $1 / 8 "$ to prevent shorts and possibility of shock from ex-
posed metal. Shpg. wt., $1 \mathbf{o z}$.


| Stock No. | Mfr's Type | Description | NET EACH |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: |
|  |  |  | 1-99 | 100-249 | 250-Up |
| 41H 153 | 71-1L | Plug. Red. For 5/32 ${ }^{6}$ socket. |  |  |  |
| 41 H154 | 71-1L | Plug. Black. Same as above. | . 03 | . 025 | . 023 |
| 41 H 156 | 71-1M | Plug. Red. For $1 / 8^{\prime}$ socket. |  |  |  |
| 41 H 157 | 71-1M | Plug. Black. Same as above. |  |  |  |
| 4 $H$ 58 <br> 4 $H$ 59 | ${ }^{71-1 S}$ | Plug. Red. For $3 / 32^{\prime \prime}$ socket. | . 03 | . 025 | . 023 |
| 41 H 159 | 71-1S | Plug. Black. Same as above. |  |  |  |
| 41 H 160 | 78-1L | Socket. Red. For 5/32 plug. |  |  |  |
| $4{ }^{4} \mathrm{H} 161$ | 78-11 | Socket. Black. Same as above. |  |  |  |
| 4 $H$ 62 <br> 4 $H$ 63 | ${ }^{78-1 M}$ | Socket. Red. For $1 / 8^{\prime \prime}$ plug. | . 05 | . 043 | . 039 |
| 41 H 163 | 78-1M | Socket. Black. Same as above. |  |  |  |
| 41 H 164 | 78-1P | Socket. Red. Std. 080" phone tip. |  |  |  |
| 41 H 165 | 78-1P | Socket. Black. Same as above. |  |  |  |
| 41 H 166 | 78-1S | Socket. Red. For 3/32' plug. | . 05 | . 043 | . 039 |
| 41 H 167 | 78-1S | Socket. Black. Same as above. |  |  |  |

## TYPE 71 PLUGS

Compact, efficient, high-dielectric plugs. Ideal for all plug-in connections where space is limited. Excellent for transmitters, lite. Molded ring allows. Body is made of high quality bakeanchored, nickel-plated brass prongs; deeply recessed to prevent shorts caused by pulled back insulation. Easily soldered. Contacts are polarized to assure proper connection. For cables with up to six conductors. Fit Amphenol 78-S series miniature sockets on page 189. Av. shpg. wt., 2 oz.

| $\begin{aligned} & \text { Stock } \\ & \text { No. } \end{aligned}$ | $\left\lvert\, \begin{gathered} \text { Mrir's } \\ \text { Type } \end{gathered}\right.$ | Prongs | NET EACH |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: |
|  |  |  | $1-99$ | 100-249 | 250-Up |
| $40 \mathrm{HI77}$ | $71-3 \mathrm{~S}$ | 3 | . 065 | . 055 |  |
| 40 H 69 | $71-4 \mathrm{~S}$ | 4 | . 08 | . 07 | . 063 |
| 41 H 49 | $71-5 \mathrm{~S}$ | 5 | . 09 | . 075 | . 068 |
| 40 H 179 | 71-6S | 6 | .10 | . 085 | . 077 |



TYPES 82 AND 31 COAXIAL CONNECTORS
A wide selection of highly dependable, weatherproof coaxial connectors. Designed to meet government specifications.
Type N Connectors. Low voltage. 50 ohms except $* 70$ ohms. 3 oz .

| Stock No. | Military No. | $\begin{aligned} & \text { Mfr's } \\ & \text { Type } \end{aligned}$ | Fig. | Description | NET EACH |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  |  |  |  | 1-9 | 10-49 |
| 42 H 459 | UG-18B/U | 82-86 | $L$ | Plug | 2.11 | 1.75 |
| 42 H 460 | UG-18C/U | 82-203 |  | Plug | 2.64 | 2.20 |
| 40 H 313 | UG-21B/U | 82-61 |  | Plug for RG/U 8, 9, 10 | 1.87 |  |
| 42 H 461 | UG-21D/U | ${ }_{82}^{82-202}$ |  | Plug | 2.53 |  |
| 40 H 314 | UG-22B/U | 82-62 |  | ${ }_{9,10}$ Panel Jack for RG/U 8, | 1.76 | 1.47 |
| 40H315 | UG-23B/U | 82-63 |  | Jack for RG/U 8, 9, 10 | 1.71 | 1.43 |
| 40 H 520 | UG-27A/U | 82-64 |  | Right-Angle Adapter | 3.39 | 2.83 |
| 42 H 462 | UG-278/ | 82-98 | M | Right-Angle Adapter | 3.53 | 2.94 |
| 42 H 463 | UG-27C/U | 82-213 | M | Right-Angle Adapter | 4.33 |  |
| 42 H 464 | UG-28A/U | 82-99 |  | T Adapter | 3.81 | 3.18 |
| 40 H 521 | UG-29A/U | 82-65 |  | Straight Adapter | 2.05 | 1.71 |
| 40 H 522 | UG-30/U | 82-66 |  | Bulkhead Adapter | 3.00 |  |
| 40 H 529 | UG-58A/U | ${ }^{82-97}$ | H | Receptacle | 1.18 | . 98 |
| 40 H 312 | UG-58/U | 82-24* | H | Receptacle |  |  |
| 40 H 316 | UG-94A/U | 82-84* |  | Plug for RG/U 11, 12, 13 | 2.20 | . 83 |
| 40 H 523 | UG-96A/U | 82-90* |  | Panel Jack for RG/U11,12 | 2.80 | 2.34 |
| 40 H 519 | UG-107A/U | 82-36 |  | T Adapter | 5.44 | 4.54 |
| 40 H 558 | UG-107B/U | 82-102 |  | T Adapter | 4.19 |  |
| 42 H 465 | UG-680/U | 82-811 |  | Bulkhead Receptacle | 2.61 | 2.18 |
| 42 H 466 | MX-913/U | 82-106 |  | Cap and Chain | 61 |  |
| H 559 | UG-167A/U | 82-104 |  | Plug for RG/U 17, | 5.35 | 4.46 |
| 40 H 560 | UG-1185/U | 82-312 |  | Plug $\mathrm{RG}^{\text {/ }}$ 8,9, 10,87A, | 2.46 |  |
| 40 H 56 | UG-1186/U | 82-313 |  | Jack $115,115 A^{\text {a }}$ | 2.1 |  |
| 40 H 562 | UG-1187/U | 82-314 |  | Panel Jack | 2.24 |  |
| 42 H 467 |  | 82-835 |  | Right Angle Plug | 4.96 | 4.14 |
| Type HN Connectors. High voltage. 50 ohms. Av. shpg. wt., 3 oz . |  |  |  |  |  |  |
| 40 H 375 | UG-59A/U | 82-38 |  | Plug for RG/U 8, 9, 10 | 3.11 | 2.60 |
| 40H317 | UG-59B/U | 82-804 |  | Plug for RG/U 8, 9, 10 | 3.37 | 2.8 |
| 42 H 468 | UG-496/U | 82-92 |  | Receptacle | 2.28 |  |
| 40H318 | UG-560/V | 82-805 |  | Receptacle | 3.18 | 2.65 |
| 40 H 563 | UG-1213/U | 82-320 |  | Plug For RG/U8, | 4.35 | 3.63 |
| 40 H | UG-1214/U | 82-321 |  | Jack ${ }^{\text {a }}$, 10, 87A, | 4.9 | 4. |
| 40 H 515 | UG-1215/U | 82-324 |  | Panel Jack 115, 115A | 5.1 | 4.26 |
| 42 H 469 | MX-564/U | 82-48 |  | Armor Clamp |  | 9 |
| 42 H 470 |  | 82-833 |  | Right Angle Plug | $. .64$ | 3.86 |

Type C and LC Connectors. Shpg. wt., 3 oz .


Push-On Connectors. Av. shpg. wt., 3 oz.

| 42 H 473 | $\ldots \ldots \ldots \ldots \ldots \ldots$ | $82-830$ | $\ldots$. | Plug | .50 | .42 |
| :--- | :--- | :--- | :--- | :--- | :--- | :--- |
| 42 H 474 | $\ldots \ldots \ldots \ldots \ldots \ldots$ | $82-831$ | $\ldots$. | Bulkhead Receptacle | .89 | .74 |
| 42 H 475 | $\ldots \ldots \ldots \ldots \ldots$ | .52 | .43 |  |  |  |

BNC Type Connectors. Small lightweight, weatherproofed connectors. Low voltage, single contact types for use with 50 ohm RG-55/U and RG-71/U. †Pressurized. Av. shpg. wt., 3 oz.

| Stock No. | Military No. | $\begin{aligned} & \text { Mfr's } \\ & \text { Type } \end{aligned}$ | Fig. | Description | NET EACH |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  |  |  |  | 1-9 | 10-49 |
| 40 H 391 | UG-88/U | 31-002 | G | Plug | 1.09 | . 91 |
| 42 H 476 | UG-88B/U | 31-018 | G | Plug | 1.16 |  |
| 42 H 477 | UG-88C/U | 31-202 | G | Plug | 1.52 | 1.27 |
| 40 H 393 | UG-89/U | 31-005 |  | Jack | 1.18 |  |
| 42 H 480 | UG-201/U | 31-830 |  | Adapter N to BNC | 2.61 | 2.18 |
| 42 H 481 | UG-254A/U | ${ }^{31-016 \dagger}$ |  | Bulkhead Receptacle | 3.09 | 2.58 |
| 40 H 396 | UG-260/U | ${ }^{31-012 *}$ | G | Plug | 1.16 |  |
| 42 H 478 | UG-260A/U | ${ }^{31-021 *}$ | G | Plug | 1.11 | . 92 |
| 42 H 479 | UG-260B/U | ${ }^{31-212}$ | G | Plug | 1.46 | 1.2 |
| 40 H 397 | UG-261/U | 31-015* |  | Jack | 1.22 | . |
| 40 H 395 | UG-262/U | ${ }^{31-011 *}$ |  | Panel Jack | 1.26 | 1.05 |
| 40 H 493 | UG-273/U | 31.028 |  | BNC to UHF Adapter | 1.89 | 1.5 |
| 40 H 492 | UG-274/U | 31-008 |  | T Adapter | 2.76 | 2.3 |
| 42 H 482 | UG-274A/U UG-290/U | 31-208 |  | T Adapter | 3.46 | 2.8 |
| 40H392 | UG-290/U | 31-003 | J | Receptacle | 1.00 | . 8 |
| 42H483 | UG-290A/U | 31-203 | J | Receptacle | 1.13 | 94 |
| 40 H 399 | UG-291/U | 31-001 |  | Panel Jack | 1.24 | 1.03 |
| 40 H 394 | UG-306/U | 31-009 |  | Right Angle Adapter | 2.57 | 2.1 |
| 42 H 484 | UG-349A/U | 31-217 |  | Adapter N to BNC | 2.74 | 2.28 |
| 42 H 485 | UG-447/U | 31-817 |  | Receptacle | 1.09 | . 1 |
| 42 H 486 | UG-491A/U | 31-218 |  | Double Plug Adapter | 2.55 | 2.12 |
| 40 H 494 | UG-492A/U | 31-220 |  | Adapter | 3.05 | 2.5 |
| 40 H 398 | UG-657/U | 31-102 | K | Receptacle | 1.61 | 1.34 |
| 42 H 487 | UG-909/U | 31-206 |  | Panel Jack | 1.96 | 1.64 |
| 42 H 488 | UG-910/U | 31-207 |  | Panel Jack | 1.77 | 1.47 |
| 42 H 489 | UG-913/U | 31-204 |  | Angle Plug | 3.70 | 3.09 |
| 42 H 490 | UG-914/U | 31-219 |  | Double Jack Adapter | 1.83 | 1.52 |
| 42 H 491 | UG-1094/U | 31-221 |  | Bulkhead Jack | 1.16 | . 96 |
| 42 H 492 | UG-1098/U | ${ }^{31-222}$ |  | Angle Bulkhead Jack | 2.73 | 2.26 |
| 40 H 490 | CW-123/U | 31-006 |  | Cap and Chain | . 50 | . 42 |
| 42 H 493 | CW-123A/U | 31-026 |  | Cap and Chain | . 52 | . 43 |
| 40 H 491 | CW-155/U | 31-007 |  | Cap | . 35 | . 29 |
| 42 H 494 | CW-155A/U | 31-027 |  |  | . 4.4 | . 34 |
| $42 H 495$ 42 H 496 |  | $31-304$ $31-59$ |  | ${ }_{\text {Plug }}^{\text {Shielded Grd. Lug }}$ | 1.64 | 1.36 |

# Cinch-Jones Terminals \& Fanning Strips 

## FANNING STRIPS



For neat, highly dependable terminal wiring. Insure correct, positive firm connections. Ideal for cable or harness wiring. These units simplify assembly-connections can be made before putting strip into assembly. Facilitate disconnecting sub-assemblies for servicing. Last letter in Typeno. indicates right or left mounting hole position. Laminated bakelite. Terminals made Series 160L. Fit Series 140 barrier terminals at right. Terminals are mounted on $3 / 32^{\prime \prime}$ bakelite, $1 / 2^{\prime \prime}$. wide and on $3 / 8^{\prime \prime}$ centers.

| Stock No. | Mfr's <br> Type | Term. | NET EACH |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: |
|  |  |  | 1-24 | 25-99 | 100-499 |
| 41 H 808 | 2-160L | 2 | 8 \% | $7 \%$ | 61/24 |
| 41 H809 | 3-160L | 3 | 124 | 114 | $10 ¢$ |
| 41 H 812 | 4-160L | 4 | 154 | 134 | $121 / 24$ |
| $41 H 813$ | 5-160L | 5 | 194 | 174 | 164 |
| 41 H814 | 6-160L | 6 | 234 | 214 | 204 |
| 41 H817 | 8-160L | 8 | 304 | 284 | 264 |
| 41 H818 | 10-160L | 10 | 374 | 344 | 324 |
| 41 H819 | 12-160L | 12 | 45 4 | $40 ¢$ | 384 |
| Series 160 R. Fit Series 140 barrier terminals at right. Term are mounted on $3 / 32^{\prime \prime}$ bakelite, $1 / 2^{\prime \prime}$ wide and on $3 / 8^{\prime \prime}$ centers. |  |  |  |  |  |
|  |  |  |  |  |  |  |  |
| 40 H 956 | 2-160R | 2 | $8 ¢$ | 74 | 61/24 |
| 40 H 957 | 3-160R | 3 | 124 | $11 \%$ | $10 ¢$ |
| 40 H 958 | 4-160R | 4 | $15 ¢$ | 134 | $121 / 24$ |
| 40 H 959 | 5-160R | 5 | 194 | 174 | 164 |
| 40 H 960 | 6-160R | 6 | 234 | 214 | 204 |
| 40 H 961 | 8-160R | 8 | 304 | $28 ¢$ | 264 |
| 40 H 962 | 10-160R | 10 | 374 | 344 | 324 |
| 40 H 963 | 12-160R | 12 | 45 4 | $40 ¢$ | 384 |
| Series 161 L. Fit Series 141 barrier terminals at right. Term are mounted on $3 / 32^{\prime \prime}$ bakelite, $5 / 8^{\prime \prime}$ wide and on $7 / 16^{\prime \prime}$ centers. |  |  |  |  |  |
|  |  |  |  |  |  |  |  |
| 41 H 822 | 2-161L | 2 | 8 ¢ |  | 74 |
| 41 H 823 | 3-161L | 3 | $13 ¢$ | $11 \%$ | 101/2¢ |
| 41 H 824 | 4-161L | 4 | 164 | 144 | 134 |
| 41 H 827 | 5-161L | 5 | 204 | 184 | $161 / 24$ |
| 41 H 828 | 6-161L | 6 | 244 | 22¢ | $20 ¢$ |
| 414829 | 8-161L | 8 | 304 | 274 | 264 |
| 41 H 832 | 10-161L | 10 | 384 | 344 | $321 / 24$ |
| 41 H833 | 12-161L | 12 | 454 | $40 \%$ | $381 / 24$ |

Series 161 R. Fit Series 141 barrier terminals at right. Terminals are mounted on $3 / 32^{\prime \prime}$ bakelite, $5 / 8^{\prime \prime}$ wide and on $7 / 16^{\prime \prime}$ mounting centers.

| 40 H 964 <br> 40 H 965 <br> 40 H 966 <br> 40 H 967 | $2-161 R$ <br> $3-161 R$ <br> $4-161 R$ <br> $5-161 R$ | 2 3 4 5 | 84 134 164 204 | $71 / 24$ <br> 114 <br> 146 <br> 184 | $\begin{aligned} & 74 \\ & 101 / 24 \\ & 134 \\ & 161 / 24 \\ & \hline \end{aligned}$ |
| :---: | :---: | :---: | :---: | :---: | :---: |
| 40 H968 | 6-161R | 6 | 244 |  | ¢ |
| 40 H 969 | 8-161R | 8 | 304 | 274 | 264 |
| 40 H 970 | 10-161R | 10 | 384 | 344 | $321 / 24$ |
| 40 H 971 | 12-161R | 12 | 456 | $40 ¢$ | 381/24 |

Series 162 L . Fit Series 142 barrier terminals at right. Terminals are mounted on $3 / 32^{\prime \prime}$ bakelite, $5 / 8^{\prime \prime}$ wide and on $9 / 6^{\prime \prime}$ centers.

| 41 H 834 | 2-162L | 2 | $10 ¢$ | 94 | $81 / 24$ |
| :---: | :---: | :---: | :---: | :---: | :---: |
| 41 H843 | 3-162L | 3 | 144 | 136 | $111 / 24$ |
| 41 H 844 | 4-162L | 4 | 174 | 154 | $141 / 24$ |
| 41 H845 | 5-162L | 5 | 214 | 194 | $171 / 24$ |
| 41 H846 | 6-162L | 6 | 254 | 234 | $211 / 24$ |
| 41 H 847 | 8-162L | 8 | 324 | 294 | $271 / 24$ |
| 41 H 848 | 10-162L | 10 | $40 ¢$ | 364 | $344^{\circ}$ |
| 41 H849 | 12-162L | 12 | 474 | 42\$ | 404 |

Series 162 R. Fit Series 142 barrier terminals at right. Terminals are mounted on $3 / 32^{\prime \prime}$ bakelite, $5 / 8^{\prime \prime}$ wide and on $9 / 16^{\prime \prime}$ centers.

| 40 H 972 <br> 40 H 973 <br> 40 H 974 <br> 40 H 975 | 2-162R $3-162 R$ $4-162 R$ $5-162 R$ | $\begin{array}{r}2 \\ 3 \\ 4 \\ \hline\end{array}$ | 104 144 214 | 94 134 154 194 |  |
| :---: | :---: | :---: | :---: | :---: | :---: |
| 40 H 976 | 6-162R | 6 |  | ¢ | $211 / 2$ |
| 40 H 977 | 8-162R | 8 | 324 | $29 \%$ | $271 / 24$ 346 |
| 40 H 978 40 H 979 | 10-162R | 10 12 | $40 ¢$ | 364 424 | 344 404 |



## CABLE CLAMPS

Cable clamps for fanning strips above. Made of nickel-plated brass, with 6-32 round head screws. Serve as strain relief and

| Stock No. | $\begin{aligned} & \text { Mfr's } \\ & \text { Type } \end{aligned}$ | Size | NET EACH |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: |
|  |  |  | 1-24 | 25-99 | 100-499 |
| $41 \mathrm{H852}$ | CC-161-4 | 1/4 |  |  |  |
| 41 41 4 4 | CC-161-6 | 1/8" | 84 | 71/24 | $7 ¢$ |
| 41H857 <br> 41 <br> 4 <br> 41 <br> 4 | $\mathrm{CC}-161-10$ $\mathrm{CC}-161-12$ $\mathrm{CC}-161-14$ |  | $8 ¢$ | 71/24 | 74 |



## SERIES 2000 TERMINAL STRIPS

Terminals are made of $.019^{\prime \prime}$ brass, tin-plated, and spaced on $5 / 6^{\circ \prime}$ centers. Molded bakelite insulation. Mounting brackets are made of end of bracket. Av. shpg. wt., 2 oz .

| Stock No. | $\begin{aligned} & \text { Mfr's } \\ & \text { Type } \end{aligned}$ | Term | Mtg. Ctrs. | NET EACH |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  |  |  | 1-24 | 25-99 | 100-499 |
| $41 \mathrm{H687}$ | 2002 | 2 | $1^{\prime \prime}$ | 64 | $51 / 24$ | 54 |
| 41 H688 | 2003 | 3 |  | 74 | 61/24 | 64 |
| 41 689 <br> 41  | 2004 | 4 |  | 88 | $\begin{aligned} & 74 \\ & 84 \end{aligned}$ | 61/24 $71 / 24$ |
| 41 H691 | 2006 | 6 |  | 104 |  |  |
| 41 H693 | 2008 | 8 | 27/8" | 114 | 104 | $91 / 24$ |
| 4  <br> 4 4695 | ${ }_{2012}$ | 12 | 31/2"1 | 136 | 124 | 114 |



## BARRIER TERMINALS

Barriers between each terminal provide increased insulation. Excellent for industrial and experimental applications. Barriers follow edge of strips and terminate at base. Make a long leakage path and prevent direct short caused by frayed wires at the terminals. Base is molded bakelite, with mounting holes at ends. Eyelets and binder screws of nickel-plated brass; terminals of ho tin-finish brass. Barrier-type terminals and fanning strips, when used together, insure positive contact an firm connections. No. 140 terminal strips have $5-40 \times 3 / 16^{\prime \prime}$ binder head screws, $1 / 4^{\prime \prime}$ metal-to-metal spacing. No. 141 terminal strips have $6-32 \times 1 / 4$ binder head screws, $3 / 8^{\prime \prime}$ metal-to-metal spacing. No. 142 terminal strips have $8-32 x^{3} / 16$ binder head hpg. wt., 50 oz
Seri"s Metal-to-metal spacing over bakelite $1 / 4^{\prime \prime}$. Base $7 / 8^{\prime \prime}$ wide $x 3 / 32^{\prime \prime}$ high. $3 / 8^{\prime \prime}$ centers. Use with Series 160 fanning strips.

| $\begin{gathered} \text { Stock } \\ \text { No. } \\ \hline \end{gathered}$ | $\begin{aligned} & \text { Mifr's } \\ & \text { Type } \\ & \hline \end{aligned}$ | Term. |  | NET | EACH |
| :---: | :---: | :---: | :---: | :---: | :---: |
|  |  |  | 1-24 | 25-99 | 100-499 |
| 41 H 580 | 1-140 | 1 | . 09 | . 08 | . 075 |
| 41 H 800 | 2-140 | 2 | .14 | .13 | .12 |
| $41{ }^{4} 801$ | 3-140 | 3 | . 20 | . 18 | .165 |
| $41 H 803$ $41 H 807$ | 4-140 | 4 | . 24 | . 28 | . 25 |
| 41 H 802 | 6-140 | 6 | . 34 | . 31 | . 30 |
| 41 H581 | 7-140 | 7 | . 40 | . 36 | . 34 |
| 41 H 804 | 8-140 | 8 | . 45 | . 41 | . 39 |
| 41 H 582 | 9-140 | 9 | . 51 | . 45 | . 43 |
| $4{ }^{4} 805$ | 10-140 | 10 | . 56 | . 50 | . 48 |
| 41 H 583 | 11-140 | 11 | .61 | . 55 | . 52 |
| $41 H 806$ | 12-140 | 12 | . 66 | . 60 | .56 |
| 41 H 584 | 13-140 | 13 | . 72 | . 64 | . 61 |
| 41 H 585 | 14-140 | 14 | . 77 | . 69 | . 66 |
| 41 $H 586$ <br> 41 $H 57$ | $15-140$ $16-140$ | 16 | .87 | . 78 | . 75 |
| 41 H 588 | 17-140 | 17 | . 92 | . 83 | . 79 |
| 41 H589 | 18-140 | 18 | . 98 | . 88 | . 83 |
| 41 H 590 | 19-140 | 19 | 1.03 | . 93 | . 88 |
| 41 H 591 | $20-140$ $21-140$ | 21 | 1.14 | 1.02 | . 92 |

Series 141. Metal-to-metal spacing over bakelite $3 / 8^{\prime \prime}$. Base $11 / 8^{\prime \prime}$ wide $x$ $1 / 2^{\prime \prime}$ high. $7 / 16^{\prime \prime}$ centers. Use with Series 161 fanning strips.

|  | 2-141 $3-141$ $4-141$ $5-141$ $6-141$ $8-141$ | 2 3 4 5 6 8 | .19 .24 .31 .44 .48 . | .17 .22 .285 .40 .52 | .16 .21 .27 .38 .50 |
| :---: | :---: | :---: | :---: | :---: | :---: |
| 41 H840 | 10-141 | 10 | . 72 | . 65 | . 61 |
| 41 H841 | 12-141 | 12 | . 84 | .76 | . 72 |
| 41 H 876 | 14-141 | 14 | . 98 | . 88 | . 84 |
| 41 H 877 | 16-141 | 16 18 | 1.12 | 1.12 | 1.07 |
| $\begin{array}{r}41 H 878 \\ 41 \\ \hline\end{array}$ | 18-141 | 18 | 1.38 | 1.24 | 1.18 |

Series 142. Metal-to-metal spacing over bakelite $9 / 16^{\prime \prime}$. Base $15 / 16^{\prime \prime}$ wide $x$ $5 / 8^{\prime \prime}$ high. $9 / 16^{\prime \prime}$ centers. Use with Series 162 fanning strips.

| 4 $H$ 670 <br> 4 $H$ 671 <br> 4 $H$ 672 <br> 4 $H$ 673 | 2-142 $3-142$ $4-142$ $5-142$ | 2 3 4 5 | .22 .30 .38 | $\begin{aligned} & .20 \\ & .28 \\ & .34 \\ & .42 \\ & \hline \end{aligned}$ | .18 .26 .33 .39 |
| :---: | :---: | :---: | :---: | :---: | :---: |
| 41 $H 674$ <br> 4 $H 676$ <br> 4 $H 678$ <br> 41 $H 680$ | $\begin{array}{r} 6-142 \\ 8-142 \\ 10-142 \\ 12-142 \end{array}$ | 6 8 10 12 | .54 .71 .87 1.04 | .49 .64 .78 .94 | .46 .60 .75 .88 |
|  | $13-142$ $14-142$ $15-142$ $16-142$ $17-142$ | 13 14 15 16 17 | 1.12 1.20 1.28 1.36 1.44 | 1.01 1.08 1.16 1.22 | .95 1.02 1.11 1.163 |

##  <br> ADAPTER SOLDER TERMINALS <br> Adapt barrier strips (listed above) to permit top-side or underside solder connections. Type $3 / 4 \mathrm{~W}$ permits top-side soldering to barrier terminals; Type $Y$ is for underside solder connections. Made of brass; hot-tin finish. Assure head screws. Av. shpg. wt., per 10, 3 oz.

| TYPE 3/4 W |  |  |  | TYPEY |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Stock No. | $\begin{aligned} & \text { Mifr's } \\ & \text { Type } \end{aligned}$ | $\begin{aligned} & \text { For } \\ & \text { Series } \end{aligned}$ | Pkg. of 10 | $\begin{gathered} \text { Stock } \\ \text { No. } \end{gathered}$ | $\begin{aligned} & \hline \text { Mfr's } \\ & \text { Type } \\ & \hline \end{aligned}$ | $\begin{aligned} & \text { For } \\ & \text { Series } \end{aligned}$ | Pkg. of 10 |
| 41H887 | $\frac{3 / 4 W-140}{3}$ | 140 | 294 | 41 | Y -140 | 140 | 294 |
| 414888 | 3/4W-141 | 141 | $34 ¢$ | 41 H892 | Y-141 | 141 | 344 |
| 41 H889 | $3 / 4 \mathrm{~W}-142$ | 142 | 424 | 41 H 893 | Y-142 | 142 | 424 |



## SERIES 170 TERMINAL STRIPS

Terminal strips with extra-heavy solder terminals. Ideal for industrial users, experimental labs; etc. Black molded bakelite insulation, $5 / 1{ }^{\prime \prime}{ }^{\prime \prime}$ "wide, $1 / 4$ Mounting holes are ${ }^{3 / 8^{\prime \prime}}$ from center of end terminals. Terminals are $\cdot 032^{\prime \prime}$ brass, tin plated. Double-notched solder terminals for rapid soldering or wrap-around connections. Compact, sturdy units. Av. shpg. wt., 5 oz .

| Stock No. | Type | Term. | 1-24, EA. | 25-99, EA. | 100-499, EA. |
| :---: | :---: | :---: | :---: | :---: | :---: |
| 40 H 990 | 1-170 | 1 | 144 | 134 | $121 / 24$ |
| 40 H 991 | 2-170 | 2 | 194 | 174 | 151/24 |
| 40 H 992 | $3-170$ <br> $4-170$ | $\begin{array}{r}3 \\ 4 \\ \hline\end{array}$ | 224 | $20 ¢$ |  |
| 40 H 993 40 H 994 | 4-170 | 4 | 254 | 234 264 | 224 |
| 40 H 995 | 6-170 | 6 | 336 | $30 ¢$ | 284 |
| 40 H996 | 7-170 | 7 | 364 | 334 | 314 |
| 40 H 997 | 8-170 | 8 | 394 | 354 | 344 |
| 40 H 998 | 9-170 | 9 | 434 | 394 | 374 |
| 40 H 999 | 10-170 | 10 | 464 | 424 | 404 |

## Cinch-Jones Plugs and Sockets

SERIES 300 PLUGS \& SOCKETS
Compact units rated 730 volts rms at 10 amps. Metal caps; bakelite body. Phosphor-bronze socket contacts engage both sides of plug contacts. Units are polarized; plugs with 24 or more contacts have positioning pin. Plug *Round shell; others rectangular. Av. shpg. wt., 3 oz .


TYPE AB FOR CHASSIS MOUNTING
(A) plugs

| Contacts | Stock No. | Type | 1-24, EA. | 25-99, EA. | 100-499, EA. |
| :---: | :---: | :---: | :---: | :---: | :---: |
| 2 | 40 H 870* | P-302-AB | .19 | .17 | .16 |
| 3 | 40 H 871 | P-303-AB | .24 | . 22 | . 20 |
| 4 | 40 H 872 | P-304-AB | . 25 | . 23 | . 22 |
| 6 | 40 H 873 | P-306-A B | . 31 | . 28 | . 27 |
| 8 | 40 H 874 | P-308-A B | . 37 | . 34 | . 32 |
| 10 | 40 H 875 | P-310-AB | . 42 | . 38 | .365 |
| 12 | 40 H 876 | P-312-AB | . 48 | . 43 | . 405 |
| 15 | 40 H 816 | P-315-AB | . 63 | . 57 | . 535 |
| 18 | 40 H 817 | P-318-AB | . 78 | . 71 | . 665 |
| 21 | 40 H 818 | P-321-AB | . 98 | . 88 | . 835 |
| 24 | 40 H 819 | P-324-AB | 1.19 | 1.07 | 1.01 |
| 27 | 40 H 820 | P-327-AB | 1.40 | 1.26 | 1.19 |
| 30 | 40 H 821 | P-330-AB | 1.61 | 1.45 | 1.36 |
| 33 | 40 H 822 | P-333-AB | 1.80 | 1.63 | 1.53 |

(B) SOCKETS

Contacts Stock No. $\frac{\text { Contacts }}{2}$

| Contacts | Stock No. | Type | 1-24, EA. | 25-99, EA. | 100-499, EA. |
| :---: | :---: | :---: | :---: | :---: | :---: |
| 2 | 40 H 880* | S-302-AB | . 21 | . 19 | .175 |
| 3 | 40 H 881 | S-303-AB | .24 | . 23 | .21 |
| 4 | 40 H 882 | S-304-AB | . 27 | . 24 | . 23 |
| 6 | 40 H 883 | S-306-AB | . 34 | . 31 | . 29 |
| 8 | 40 H 884 | S-308-AB | . 43 | . 39 | . 365 |
| 10 | 40 H 885 | S-310-AB | . 51 | . 46 | . 43 |
| 12 | 40 H 886 | S-312-AB | . 59 | . 53 | .50 |
| 15 | 40 H 864 | S-315-AB | . 71 | . 66 | . 62 |
| 18 | 40 H 865 | S-318-AB | . 88 | . 79 | . 75 |
| 21 | 40 H 866 | S-321-AB | 1.09 | . 98 | . 925 |
| 24 | 40 H 867 | S-324-AB | 1.29 | 1.17 | 1.10 |
| 27 | 40 H 868 | S-327-AB | 1.50 | 1.35 | 1.27 |
| 30 | 40 H 869 | S-330-AB | 1.71 | 1.54 | 1.46 |
| 33 | 40 H 877 | S-333-AB | 1.92 | 1.72 | 1.63 |

## C Plugs

| Contacts | Stock No. | Type | 1-24, EA. | 25-99, EA. | 100-499, EA. |
| :---: | :---: | :---: | :---: | :---: | :---: |
| - 2 | $40 \mathrm{H} \mathrm{802*}$ | P-302-CCT | . 43 | . 39 | . 37 |
| 3 | 40 H 803 | P-303-CCT | . 46 | . 42 | . 395 |
| 4 | 40 H 804 | P-304-CCT | . 51 | . 45 |  |
| 8 | 40 H 806 40 H 808 | P-306-CCT | . 56 | . 50 | . 475 |
| 10 | 40 H 810 | P-310-CCT | . 69 | . 62 | . 585 |
| 12 | 40 H 812 | P-312-CCT | . 75 | . 68 | . 64 |
| 15 | 40 H 805 | P-315-CCT | . 98 | . 88 | . 835 |
| 18 | 40 H 807 | P-318-CCT | 1.19 | 1.07 | 1.01 |
| 21 | 40 H 809 | P-321-CCT | 1.40 | 1.25 | 1.19 |
| 24 | 40 H 811 | P-324-CCT | 1.66 | 1.49 | 1.40 |
| 27 | 40 H 813 | P-327-CCT | 1.87 | 1.69 | 1.59 |
| 33 | 40 H 815 | $\mid \mathrm{P}-333-\mathrm{CCT}$ | 2.33 | 1.96 2.10 | 1.98 |

(D) SOCKETS

| Contacts | Stock No. | Type | 1-24, EA. | 25-99, EA. | 100-499, EA. |
| :---: | :---: | :---: | :---: | :---: | :---: |
|  | $40 \mathrm{H} 852^{*}$ | S-302-CCT | . 44 | . 40 | .375 |
| 3 | 40 H 853 | S-303-CCT | . 48 | . 43 | . 405 |
| ${ }_{6}$ | 40 H 854 40 H 856 | S-304-CCT | . 51 | . 46 | . 435 |
| 8 | 40 H 858 | S-308-CCT | . 69 | . 53 | . 58 |
| 10 | 40 H 860 | S-310-CCT | . 76 | . 69 | . 65 |
| 12 | 40 H 862 | S-312-CCT | . 87 | . 78 | . 745 |
| 15 | 40 H 850 | S-315-CCT | 1.09 | . 98 | . 925 |
| 18 | 40 H 851 | S-318-CCT | 1.29 | 1.17 | 1.10 |
| 21 | 40 H 855 | S-321-CCT | 1.50 | 1.35 | 1.25 |
| 24 | 40 H 857 | S-324-CCT | 1.77 | 1.60 | 1.50 |
| 27 30 | 40 H 859 | S-327-CCT | 1.98 | 1.78 | 1.65 |
| 30 33 | 40 H 861 | S-330-CCT | 2.28 | 2.06 | 1.94 |
| 33 | 40 H 863 | S-333-CCT | 2.44 | 2.20 | 2.07 |

## SUB-MINIATURE TUBE AND TRANSISTOR SOCKETS

Used extensively for miniature radios and transmitters, hearing aids and other electronic equiptubes. Molded from mica-filled low-loss bakelite. Silver-plated beryllium copper contacts. 4beryng tubes and G.E. transistors G11 and G11A fit 2 H 5 socket. All $7 / z^{\prime \prime}$ deep. Shpg. wt., 2 oz.

 Stock No. Type Contacts | 40 H 294 |
| :--- |
| 40 H 245 | 40 H 245 40 H 247

|  |
| :--- | :--- | :--- | :--- | :--- | :--- |

Transistor Types. 5-contact sockets designed for use with transistor circuits. Use type 5PC for printed circuits and 5 WC for conventional wired circuits. Average shpg. wt., 2 oz.


SERIES 400 AND 2400 PLUGS \& SOCKETS


Heavy-duty multiple-circuit type plugs and sockets. Series 400 rated at 1100 rms volts, 15 amps; series 2400 rated at 1700 rms volts, 15 amps. Bodies bakelite. Phosphor-bronze socket contacts engage both sides of flat plug contact prongs to minimize contact resistance. Series $2400 \mathrm{im}-$ proved design offers longer leakage path permitting use on higher operating voltages. 2400 series plugs and sockets can be mated with 400 series They are interchangeable mechanically, differing only in voltage ratings. Cap or panel mounting. *Similar to Fig. J. †Type DB recessed plugs take Type CCT (Fig. F) sockets. Av. shpg. wt., 5 oz.
[E] Plugs
TYPE CCT WITH CABLE CLAMP

| Contacts | Stock No. | Type | 1-24, EA. | 25-99, EA. | 100-499, EA. |
| :---: | :---: | :---: | :---: | :---: | :---: |
| 2 | 40 H 910 | P-402-CCT | . 73 | . 66 | . 62 |
| 4 | 40 H 911 | P-404-CCT | . 89 | . 80 | . 755 |
| 6 | 40 H 9 H 92 | P-406-CCT | 1.04 | . 974 | . 885 |
| 10 | 40 H 914 | P-410-CCT | 1.34 | 1.21 | 1.14 |
| 12 | 40 H 915 | P-412-CCT | 1.49 | 1.34 | 1.27 |
| 2 | 40 H 833 | P-2402-CCT | . 90 | . 81 | . 765 |
| 4 | 40 H 834 | $\mathrm{P}-2404$-CCT | 1.01 | . 91 | . 86 |
| 6 | 40 H 836 | P-2406-CCT | 1.14 | 1.02 | . 975 |
| 8 | 40 H 837 | P-2408-CCT | 1.25 | 1.13 | 1.07 |
| 10 | 40 H 838 <br> 40 | P-2410-CCT | 1.38 | 1.24 | 1.18 |
| 12 | \|40 H 8391 | P-2412-CCT | 1.52 | 1.34 | 1.30 |
| (F) SOCKETS |  |  |  |  |  |
| 2 | \|40 H 920 | S-402-CCT | . 78 | . 71 | . 67 |
| 4 | 40 H 921 | S-404-CCT | . 99 | . 89 | . 84 |
| 6 | 40 H 922 | S-406-CCT | 1.20 | 1.08 | 1.03 |
| 8 | 40 H 40233 | S-408-CCT | 1.40 | 1.26 | 1.20 |
| 10 12 | 40 H 924 | S-410-CCT | 1.62 1.81 | 1.45 1.63 | 1.38 1.55 |
| 12 | 40 H 925 | $\frac{\mathrm{S}-412-\mathrm{CCT}}{\text { S-2402-SB* }}$ | 1.81 | 1.63 | 1.55 |
| 2 | 40 H 840 <br> 40 H 841 | S-2402-SB* | . 70 | . 63 | . 795 |
| 6 | 40 H 842 | S-2406-SB* | . 95 | . 85 | . 81 |
| 8 | 40 H 843 | S-2408-SB* | 1.08 | . 97 | . 925 |
| 10 | 40 H 844 | S-2410-SB* | 1.22 | 1.10 | 1.09 |
| 12 | 40 H 845 | S-2412-SB* | 1.35 | 1.22 | 1.15 |

G) PLUGS TYPE AB FOR CHASSIS MOUNTING

(H) PLUGS TYPE DB RECESSED FOR CHASSIS MOUNTING $\dagger$

| Contacts | Stock No. | Type | 1-24, EA. | 25-99, EA. | 100-499,EA |
| :---: | :---: | :---: | :---: | :---: | :---: |
| 2 | 40 H 950 | P-402-DB | . 57 | . 51 | . 485 |
| 4 | 40 H 955 | P-404-DB | . 73 | . 66 | . 62 |
| 8 | 40 H 951 | P-406-DB | . 89 | . 80 | . 785 |
| 10 | 40 H 953 | $\xrightarrow{P-410-D B}$ | 1.20 | 1.08 | . 025 |
| 12 | 40 H 954 | P-412-DB | . 35 | . 22 | . 15 |

## SERIES 101 PLUG AND SOCKET

Low-loss plug and socket for high-ire-
quency RF use. For coax or shielded 1-
cond. Cadmium-plated brass; prong, con-
tacts, silver-plated. Shpg. wt., 4 oz .


Stock No. Type $\int_{\text {Description } \quad \text { 1-24, EA. } 25-99, E A .(100-499, E A .}$


## SERIES 202 PLUGS AND SOCKETS

Cadmium plated brass plugs and cackets. Type P-202-CCT is polarized. Knurled nut. Type S-202-B socket mtg. holes, No. 30 drill on thread; shpg. wt. of 3 oz . Type
 P-202-CCT and S-202-CCT-THR with cable clamp.

| Stack No. | Type | Fig. | Description | 1-24, EA. | 25-99, EA. | 100-499, EA |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 40 H 980 | P-202 | K | Plug, 2 co | . 58 |  |  |
| 40 H 982 | S-202 |  | Socket b |  |  |  |

## 2R2 CHASSIS TYPE AC SOCKET

Molded bakelite units for chassis mounting. Solder lug terminals. For $10 \mathrm{amps}, 250$ volts, or 15 amps, 125 volts, 2 screw mounting. $3 / 8 x^{3 / 4} 4^{\prime \prime}$ mounting hole. Overall size, $11 / 2 \times 1 / 2^{\prime \prime}$. Shpg. wt., 2 oz.
40 H $830.1-9$, NET EACH



## Switchcraft Plugs and Jacks

## (B) <br> "LITTEL-PLUGS" PHONE PLUGS



"LITTEL-JAX" PHONE JACKS
[K "Take standard $1 / 4^{\prime \prime}$ phone plugs, except *S-11 which takes S-250 K "Littel-Plug" and $+\mathrm{C}-12 \mathrm{~B}$ which takes 480 Military-type "LittelPhag." Jacks are $3 / 4^{\prime \prime}$ di." ${ }^{\prime \prime} / 3^{\prime \prime}$ overan, and have a $3 / 8$ dia. threaded open circuit. Av. shpg. wt., 3 oz .

| Stock No. | $\begin{aligned} & \text { Mifr's } \\ & \text { Type } \end{aligned}$ | Diag. | Cond. | Circuit | $\begin{array}{\|l\|} \text { JAN } \\ \text { Type } \\ \hline \end{array}$ | NET EACH |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  |  |  |  |  | 1-49 | 50-99 | 100-Up |
| $41 \mathrm{H622}$ | 11 | I | 2 | OC |  | 244 | $20 ¢$ | 184 |
| 41 H623 | C-11 | I | 2 | OC | JJ-034 | 354 | 296 | 274 |
| 41 H607 | S-11* | I | 2 | $\mathrm{OC}_{\mathrm{SC}}$ |  | 264 | 234 | 214 |
| 41 H624 | 12A | II | 2 | SCC |  | 264 | 234 | 214 |
| 41 H631 | $\frac{12 \mathrm{C}}{} \mathbf{1 2}$ | II | 2 | SCC | JJ-089 | $44 ¢$ | 374 | $34 ¢$ |
| 41 H632 | 12B | III | 3 | OC |  | 324 | 27 ¢ | $25 ¢$ |
| 41 H 633 | $\mathrm{C}-12 \mathrm{~B} \dagger$ | III | 3 | $\bigcirc$ | JJ-033 | 414 | 344 | 314 346 |
| 41 H634 | 13B | IV | 3 | SCC |  | 44¢ | 374 | 346 |

## "TINI-JAX" SUB-MINIATURE PHONE JACKS

Extra-small 2-conductor jacks for "Tini-Plugs". $21 / 32^{\prime \prime}$ long; fit $1 / 4$ " | 41 | H 516 | 41 | I | 2 | OC | $\ldots \ldots$ | $24 ¢$ | $20 \phi$ |
| :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- |



## "TINI-PLUGS" SUB-MINIATURE PHONE PLUGS

(M) $N$ For use with "Tini-Jax". $15 /{ }^{5}$ " overall length. 2-conductor. Han-

| StockNo. | $\begin{aligned} & \text { Mifr's } \\ & \text { Type } \end{aligned}$ | Fig. | Ter. | Handle | NET EACH |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  |  |  |  | 1-49 | 50-99 | 100-U |
| 41 H 518 | 740 | M | Screw | Black | 44¢ | 379 | $34 ¢$ |
| 41 H 519 | 745 | M | Screw | Red | 444 | 374 | 346 |
| 41 H 520 | 750 | M | Solder | Black | 414 | 349 | 314 |
| 41 H521 | 755 | M | Solder | Red |  | 346 | 31 |
| 41 H 522 | 770 | N | Screw | Shielded | 624 | 514 | 48 |
| 41 H523 | 780 | N | Solder | Shielded | 594 | 496 | 454 |

## "EXTENSION JAX" CABLE EXTENSION JACKS

(P) R Extension cable jacks; fit standard $1 / 4^{\prime \prime}$ plugs. ${ }^{11 / 16^{\prime \prime}}$ O.D.; 25/32" dles are nickeled brass All are open circuit type Av shpg. wt, 3 oz



AUDIO ADAPTER/CONNECTORS
For quick adaptation of plug to fit other type of jack on recorders, amplifiers, etc. 347 has metal handle. Av. shpg. wt., 6 oz.

| No. | Type | Fig. | Description | EA. |
| :---: | :---: | :---: | :---: | :---: |
| 41 H636 | 332 | X | Phone jack input to female microphone connector output | 1.0 |
| 41 H 637 | 334 | Y | Phono jack connector input to female mike connector output | . 85 |
| 41 H 712 | 335 | T | 2 cond.-input has conn. Switchcraft2501MP(Amphenol75PC1M) and output conn. Cannon XL-3-11 | 1.7 |
| H 638 | 336 | 2 | Phone jack input to phono plug connector output | . 85 |
| H 6 | 338 | AA | Male mike connector input to phono plug connector output | . 8 |
| 41 H 713 | 339 | W | As Type 335, but output conn. Switchcraft 2501 F (Amphenol XL-3-12 | 1.7 |
| H 609 | 342 |  | Dual-purpose binding post/banana jack input to phone plug output | 1.5 |
| 1 H | 343 | CC | Phono jack input; phone plug output. Built-in limiting resistor for cord | 1.1 |
| 41 H 645 | 344 | DD | Phono jack connector input to phone plug output |  |
| 41 H 649 | 346 | EE | Tip jack input to phone plug output | 1.26 |
| 41 H 608 | 348 | BB | Phono jack input to phone jack output | . 8 |
| 40 H 382 | 345 | S | Phone plug output with phono jack input |  |
| $40 \text { H } 383$ | $\begin{aligned} & 347 \\ & \hline 4 \end{aligned}$ | $\begin{aligned} & \mathrm{CC} \\ & \mathrm{FF} \end{aligned}$ | Phono jack input tophoneplugoutput Adapts Amphenol Type 75-MC1F | . 91 |
|  |  |  | or $75-\mathrm{MC1F}-\mathrm{A}$ connectors for use with standard $1 / 4^{\prime \prime} 2$-conductor phone jacks |  |



## STANDARD PHONE PLUGS

Standard $1 / 4^{\prime \prime}, 2$ and 3 -conductor, phone plugs for use with headphones, handsets, microphones, and for numerous other audio applications. Fit standard $1 / 4^{\prime \prime}$ phone jacks. 2-conductor plugs have built-in tie-cord anchor for terminal strain relief. Type 75A and 76A have a cable clamp built
into the handle to provide terminal strain relief. Shielded handles are nickel-plated brass with knurling for sure grip; others are molded phenolic. Screw-type terminals accommodate either tip jacks or wire. *Type 76 and 76 A (not illustrated) similar to 75 and 75 A . Av. shpg. wt., 3 oz .

| Stock No. | Mifrs <br> Type | Cond. | Terminals | Handle |  | $\begin{aligned} & \text { NET } \\ & \text { EACH } \end{aligned}$ |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  |  |  | Type | Length |  |
| 41 H 641 | 75 | 2 | Screw | Phenolic | $11 / 2^{\prime \prime}$ | . 44 |
| 41 H 640 | 75 N | 2 | Screw | Shielded | $15 /{ }^{\prime \prime}$ | .65 |
| 41 H 937 | 75A | 2 | Screw | Shielded | $113 / 16^{\prime \prime}$ | 1.03 |
| 41 H 941 | *76 | 3 | Solder | Phenolic | 19/16" | . 65 |
| 41 H 942 | *76A | 3 | Solder | Shielded | 1 $13 / 16^{\prime \prime}$ | 1.15 |

## STANDARD EXTENSION JACKS

Type 100. 2-conductor, fiber handle extension jack for standard $1 / 4^{\prime \prime}$
 Type 100 N . 2-conductor extension jack with shielded, nickel-plated brass handle. For standard $1 / 4^{\prime \prime}$ phone plugs. Screw terminals. Length, 35/6"' Shpg. wt., 6 oz.
1.06

Type 100A. 2-conductor extension jack with shielded, nickel-plated brass handle and built-in cable clamp. Screw terminals. For standard $1 / 4^{\prime \prime}$ phone plugs. Length, $31 / 16^{\prime \prime}$. Shpg. wt., 5 oz.
41 H 940 . NET............................ $\qquad$ . . . . . . . . . . . . 1.47


## LONG-FRAME STANDARD PHONE JACKS

Industrial-type, long-frame jacks offering a variety of switch combinations. All take standard $1 / 4^{\prime \prime}$ phone plugs. Types Nos. 1, 2, 2A, and 5 (Fig. A) are $31 / 8 \times 11 / 8 \times 9 / 16^{\prime \prime}$ wide. Mount in panels up to $1 / 4^{\prime \prime}$ thick by means of $3 / 8^{\prime \prime}$ diameter threaded shank. XP types (Fig. B) are $31 / 2 x^{27 / 32 x}$ $9 / 16^{\prime \prime}$ wide. Have $7 / 16^{\prime \prime}$ diameter smooth shank $9 / 6^{\prime \prime \prime}$ long and mount with
screw and nut. $*$ Column headed "Cond." indicates number of conductors screw and nut. *Column headed "Cond." indicates number of conductors in mating plug. †Diagram indicates switching arrangement (shown in
column at right). Av. shpg. wt., 4 oz.



## MALLORY STANDARD PHONE JACKS JUNIOR PHONE JACKS

G Compact "Junior" jacks for standard $1 / 4$ " phone plugs. Require G only $15 / 16^{\prime \prime}$ behind panel. Cadmium-plated frames with nickelplated brass shank, springs, and mounting hardware. $3 / 8^{\prime \prime}$ diameter threaded shank for mounting in panels up to $1 / 4^{\prime \prime}$ thick. Silver contacts. * Column head "Cond." indicates number of conductors in mating plug. Av. shpg. wt., 3 oz .

| Stock No. | Type | *Cond. | Circuit | Diagram | NET |
| :---: | :---: | :---: | :---: | :---: | :---: |
| 41 H 054 | 701 | 2 | Open | I | $44 ¢$ |
| 41 H 058 | 702 B | 3 | Open | III | 564 |
| 41 H 052 | 703 | 2 | Open | V | 594 |
| 41 H 059 | 703 B | 3 | Closed-Transfer 1 | IV | 594 |
| 41 H060 | 704B | 3 | Closed-Transfer 2 | VI | 684 |

## MIDGET AND INFANT PHONE JACKS

H Extremely small "Midget" and "Infant" type jacks for limitedspace applications. All take $1 / 4$ " phone plugs. " Midget"' type jacks require only $19 / 32$ " mounting space behind panel; "Infant" type requires only $7 / 8^{\prime \prime}$ behind panel. Cadmium-plated steel frames with nickel-plated brass shank, springs, and mounting hardware. $3 / 8$ " threaded shank for number of conductors in mating " ${ }^{\text {Midget" type }}$ "Infant" type jack. ( $\dagger$ Not illustrated). Av. shpg. wt., 2 oz.


## MILITARY-TYPE SC JACKS

Type SC phone jacks are commercial equivalents of military types complying with JAN-J-641 specification. Both require $7 / 8^{\prime \prime}$ mounting space behing panel. Type SC-1A has $3 / 8^{\prime \prime}$ diameter threaded shank, $3 / 8^{\prime \prime}$ long. Type SCA-2B has $5 / 16^{\prime \prime}$ diameter threaded shank, $5 / 16^{\prime \prime}$ long. Av. shpg. wt., 2 oz.
(J) Type SC-1A. Equivalent to military jack No. JJ-034. Open ciugs including Mallory 75 ; Western Electric Nos. 47 A and 47 B . $1 / 4^{\prime \prime}$ plugs including Mallory PL-47, PL-48, and PJ-047. PL-148, PL-155, PL-125, PJ-055, PJ-155, PJ-634,
35-636
K Type SCA-2B. Equivalent to military jack No. JJ-033. Open cirK. cuit, 3-conductor jack, see Diagram III. Takes all 3-conductor plugs with 206 diameter sleeves, including Western Electric 109; Military Nos. PL-68, PL-168, PJ-068, PJ-168, and PJ-309.
41 H 643. NET.... . . . . . . . . . . . . . . . . . . . .

JACK SCHEMATIC DIAGRAMS


## H. H. SMITH PLUGS AND JACK

 Standard $1 / 4 " 2$-conductor phone plugs and jack. Plugs have screw-type terminals and are available with red or black bakelite handle. Overall length, $2-21 / 32^{\prime \prime}$. shank $9 / 32^{\prime \prime}$ long. Require $1^{\prime \prime}$ behind panel. Av. shpg. wt., 3 oz.

| Stock No. | Mfr's Type | Fig. | Description | NET EACH |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  |  |  | 9 | 10-49 | 50-99 | 100-up |
| $41 \mathrm{HO17}$ | $\overline{222 B}$ | D |  | $38 ¢$ | $34 ¢$ | 314 | ¢ |
| 41 H018 | 222 R | D | Phone Plug (red) | 384 | 344 | 314 | 9\% |
| 41 H019 | 275 | C | Standard Phone Jack | 264 | 24¢ | 224 | 204 |

## MINIATURE PLUG-JACK

$13 / 8^{\prime \prime}$ long, $1 / 2^{\prime \prime}$ wide, $3 / 8^{\prime \prime}$ thick. Twoconductor type. Black bakelite case. 43 H 260 Plug.
43 H 260 . Plag. NET

## BATTERY BINDING POST


(F) Universal storage battery binding post. Shpg. wt., 5 oz. 56c

## GENERAL RADIO DOUBLE PLUG

Ty y pe 274-MB. Dual plug for standard banana jacks. Molded as a unit on $3 / 4^{\prime \prime}$ centers. Recessed top forms double jack. Holes in body accept phone tips or wires up to No. 12 ; terinal screws clamp conductors securely. 15 amp. rating. $1^{15} / 16^{\prime \prime}$ W., $1^{11 / 16^{\prime \prime} \mathrm{L} \text {. Shpg. wt., } 3 \mathrm{oz} \text {. }}$
 41 H 242. NET.


## [PHONO PIN PLUG \& JACK-TEST CLIPS

1 Shielded Phono Pin-Plug and Jack. For auto radios, record players, etc. Pin plug fits standard phono jack on radio. Pin dia., $8^{\prime \prime}$, length, $9 / 16^{\prime \prime}$. Single prong jack on $1 / 16^{\prime \prime}$ bakelite disc. $11 / 16^{\prime \prime} \mathrm{mtg}$. centers. Av. wt., 1 oz. 3 per package.
46 H 2 i 2. Pin Plug. 10 or More Pkgs., Per Pkg. 134. Per Pkg. I4C 46 H 213. Pin Jack. 10 or More Pkgs., Per Pkg. 184. Per Pkg. 204
M Grayhill Type 2-0 Test Clip. Spring clip with $8-32 \mathrm{x}^{3} / 8^{\prime \prime}$ mounting 45 H 182 . NET............................................ . . . . . . . . . . . . 20 C
N Grayhill Type 2-1 Test Clip. As above, but with banana plug for $\frac{N}{45}$ mounting in standard banana jacks. $11 /{ }^{\prime \prime}$ long. Shpg. wt., 2 oz. . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . 4 C
P H. H. Smith No. 1200 Motorola Type Plug. Antenna lead in plug Pit designed for connecting coaxial lead in antenna wire to auto radio. Pin dia 1 "/n 41 H I52. 10 or More, EACH ...74. 1 to 9, NETEACH
H. H. Smith No. 1214 Double Phono Jack Assembly. Two standard phono jacks on common base. Fit standard phono pinplugs on record players, tuners, preamplifiers, etc. Insulated base drilled for mounting screws. Base size, $13 / 16 \times 1^{\prime \prime}$ Shpg. wt., 2 oz.
41 H 179.10 or More, EACH...74 1 to 9 , NET EACH..8c

# Jack Panels, Jacks, Clips, Lugs, Strips 

## SWITCHCRAFT JACK PANELS

## 

## 

Heavy-duty jack panels for switching and distribution of audio signals in studio or theater installations, etc. Polished black phenolic panels are reinforced with steel for maximum rigidity. Panel includes plastic-coved to fit standard 19 .With militarytype MT-332A jacks listed on page 196 (recommended for military and low-level audio applications). $\dagger$ Have telephone-type T-332A jacks (non-military version of MT-332A).

| Stock | ype | Rows | Jacks | H. W. D. | Shpg. Wt | NET |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 41 H 452 | 1232A | Single | 12 pairt | 13/4x19x11 | 4 lbs . | 26.46 |
| 41 H 453 | 1332A | Sin | 12 pair* | 13 | 4 lbs. |  |
| H 454 | 2432A | D | 24 pair $\dagger$ | 21/8x19x11/4" | 5 lbs . | 44. |
| 41 H457 | 2532 | Double |  |  |  |  |
| 41 H 458 | 2632 A | Double | $52 \dagger$ | $138 \times 19 \times 5 / 8^{\prime \prime \prime}$ | 6 lbs . |  |
| 41 H459 | 2732A | Double | 52* | $13 / 4 \times 19 \times 5 / 8^{\prime \prime}$ | 6 lbs. | 64.68 |



## TELEX SUBMINIATURE

 JACKS AND PLUGType 9231 Plug. Extremely small phone-type plug for 2 -conductor cable up to $.150^{\prime \prime}$ diameter. $17 / 3^{\prime \prime}$ by $1 / 4^{\prime \prime}$ diameter. Shpg. wt., 2 oz.
$59^{\prime} \mathrm{J} 243^{\prime}$ NET.
.... 36c
Type 9245. Jack. Closed-circuit jack for plug above. Mounts in $1 / 4^{\prime \prime}$ hole. Shpg. wt., 2 oz.

Type 12102. Jack. Open Mounts in 59 J 254 . NET

244

| 0) y Num |  |  | H. H. SMITH ALLIGATOR CLIPS |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  |  | Steel alligator clips. phone tip or banana | Insulat plugs. | ed handle Wt., per | es accept 10, 5 oz. |
| Stock No. | Type | Color | Description | 1-9, EA. | 10-49, EA. | 50-Up,EA. |
| 41 H 300 | 304 | Red | With tip jack adapter. | 324 | 294 | $26 ¢$ |
| 41 H 305 | 304 | Black | With tip jack adapter. | 324 | 294 | $26 ¢$ |
| 41 H 168 | 305 | Red | With comb.tip \& banana jack. | 384 | 344 | 314 |
| 41 H 169 | 305 | Black | With comb.tip \& banana jack. | 384 | 344 | 314 |



GRAYHILL INSULATED TEST CLIPS
Completely insulated clips. Molded phenolic insulation. Silver contact points. Contact resistance 0.0015 ohms. Shpg. wt., 2 oz. 45 H 180. Type $16-\mathrm{B}$ Black. NET
45 H 181 . Type 16-R Red. EACH.
$83 c$


## NU-WAY SNAPS,

 STUDS AND LUGSMake and break contacts for temporary or permanent connections. A quick, simple way to join wires together. Snaps may be cascaded together for multiple connections-wires are secured by clamping terminal prongs over stripped wire and soldering. Nickel-plated brass. Fig. A has solder lug; Fig. C has hole for 6-32 screw. 100, 12 oz .100 per pkg.

| Stock No. | Fig. | Description | Size | $\begin{aligned} & 1-9 \text { Pkgs. } \\ & \text { PER PKG. } \end{aligned}$ | $\begin{gathered} 10 \text { Pkgs. or } \\ \text { More, PER PKG. } \end{gathered}$ |
| :---: | :---: | :---: | :---: | :---: | :---: |
| $44 \mathrm{H} 450$ | A | Snaps for lugs and studs. Stud for panel or chassis mtg. | $\text { 7/16" } \mathrm{Dx} 1 / 8^{\prime \prime}$ | 7.20 4.30 | 5.00 |

## AUDIO DEVELOPMENT JACK PANELS \& CORDS  <br> 

## BROADCAST-TYPE JACK PANELS

Professional-quality jack panels for use in broadcast stations, paging systems, theaters, and in any other installation requiring eficient distribution and switching of audio signals. With card
strips. Bakelite panels fit standard $19^{\prime \prime}$ relay rack.
Type PJ340. Double row jack panel complete with 52 ( 26 pairs) closed circuit jacks. Width, $13 / 4^{\prime \prime}$. Shpg. wt., 5 lbs. 86 HX 804. NET. 49.50

Type P.J341. Double row jack panel complete with 48 (24 pairs) closed circuit jacks. Width, $21 / 8^{\prime \prime}$. Shpg. wt., 5 lbs.
86 HX 802. NET.
$\qquad$ 42.75

Type P J343. Single row jack panel complete with 24 ( 12 pairs) closed circuit jacks. Width, $13 / 4^{\prime \prime}$. Shpg. wt., $31 / 4$ lbs.


## PATCH CORD SETS

One patch cord and two double plugs. Tinned-copper, 2 conductor, insulate and brass plugs. Have polariz and brass plugs. Have polariz

4 H 661 . Type PJ12. Patch Cord Set. 2-ft. Iong. NET.
7.41

41 H 662. Type PJ13. Patch Cord Set. 3-ft. long. NET
7.59

41 H 664. Type PJ15. Patch Cord Set. 5 -ft. long. NET
41
H 666. Type PJ1. Double Plug Only. NET......
8.07

Replacement Cords. Same fine quality 2-conductor cords as used on patch cord sets above. Insulated tinned copper. Heavy protective in makes of standard plugs. Av. shpg. wt., 6 oz.
4) H 667. Type PJ22. Replacement Cord. 2-ft. long. NET

41 H 668. Type PJ23. Replacement Cord. 3-ft. long. N ET......... 65 41 H 669. Type PJ24. Replacement Cord. 4-ft. long. NET........: 1.74 41 H 659. Type P J25. Replacement Cord. 5-ft. long. NET........|. 89


## FAHNESTOCK SPRING CONTACT CLIPS

Positive contact clips. *Made of bronze. All others brass. Av. shpg. wt. per pkg., 3 oz .10 clips per pkg.

| Stock No. | $\begin{aligned} & \text { Mfr's } \\ & \text { Type } \end{aligned}$ | Fig. | Length | Width | Max.Wir. | Mtg. | NET PER PKG. |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  |  |  |  |  |  | 1-9 | 10-99 | 100-U |
| 41 H 700 | 2 | D | 1 |  | \#10 | \#8 | 2 | . 11 | . 10 |
| $41 H 702$ | ${ }^{10}$ | D | $11 / 16$ |  | \#10 | \#8 | 17 | .15 | 8 |
| $41 H 705$ $41 H 703$ | 10 5 | E |  |  | \#14 | \#6 | . 10 | . 09 | 8 |
| 41 H 707* | 15 | E | $1 / 2$ | $7 / 32^{\prime \prime}$ | \#16 | \#4 | .10 | . 09 | . 08 |
| 41 H 70 |  | F | ${ }^{21 / 16}$ | 3/8, | ${ }^{410}$ | ${ }^{\# 8}$ | 51 | 6 |  |
| 41 H 71 | ${ }_{9}^{96}$ | F | ${ }^{13 / 44^{\circ}}$ | 3/8. | \#10 | \#8 | 1.50 | 1.35 | 1.24 |
| 41 H715 | 18 | F | 11/2. | 5/16" | \#14 | \#6 | . 50 | . 45 | . 41 |
| 41 H708* | 36 | G | 15/8' | $3 / 8^{\circ}$ | \#10 | lug | . 55 | . 50 | . 46 |
| $41 H 709$ | 45 | H | $3 / 4$. | $3 / 8{ }^{\prime}$ | \#12 | 46 | .17 | .15 | . 14 |

## TIE POINTS AND TERMINAL STRIPS

## Gamad J <br> STANDARD BAKELITE TIE-POINTS

0 Terminals riveted to $1 / 16^{\prime \prime}$ thick bakelite on $3 / 8^{\prime \prime}$ centers. *Have one 6 -terminal, $1^{7} / 8^{\prime \prime}$. Av. shpg. wt., per Mounting centers, 4 -terminal, $17 / 8^{\prime \prime}$;



## SINGLE-LUG TIE-POINT

K Tinned solder lug. Very convenient for keeping wiring neat and rigid. $\lfloor$ Reduces possibility of shorts from loose wires coming in contact with each other. Riveted to $1 / 1^{\prime \prime}$ thick, high-quality bakelite. One mount41 H 5 5 1 to 9 , pkg pkg., 4 oz. 10 per pkg.
10 or More Pkgs., PER PKG........
12 c

## TERMINAL STRIPS

(1) Excellent for cabled sub-assemblies, to simplify chassis removal. $L$ Have $1 / 16^{\prime \prime}$-thick bakelite strips. Cadmium-plated screw terminals and tinned solder lugs. Av. shpg. wt., per pkg., $1 / 2 \mathrm{lb} .6$ per pkg.


| Stock No. | Term. | PeR PKG. | PER PKG. | Stock No. | Term. | 1-9 Pkgs, PER PKG. | PER PKG. |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| $41 H 505$ <br> 41 <br> 41 | 2 | $\begin{aligned} & 424 \\ & 604 \\ & 770 \end{aligned}$ | $\begin{aligned} & 386 \\ & 544 \end{aligned}$ | $\left\lvert\, \begin{array}{ll} 41 & \mathrm{H} 508 \\ 41 \mathrm{H} 509 \end{array}\right.$ | $\begin{aligned} & \hline 5 \\ & 6 \end{aligned}$ | $1.13$ | $\begin{aligned} & 85 c \\ & 1.01 \end{aligned}$ |



四


## MINIATURE TIE-POINTS

M. Consist of $.025^{\prime \prime}$ tinned brass terminals on $1 / 16^{\prime \prime}$-thick laminated phe nolic. Ground lug included. Av. shpg. wt., per pkg., 8 oz. 10 per pkg.

| Stock No. | Term. | 1-9 Pkgs., PER PKG. | $\begin{array}{\|c\|} 10 \text { Pkgs \& Up, } \\ \text { PER PKG. } \end{array}$ | Stock No. | Term. | 1-9 Pkgs., PER PKG. | $\begin{aligned} & 10 \text { Pkgs \& Up } \\ & \text { PER PKG } \end{aligned}$ |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| $\left.\begin{array}{l\|l\|l\|} \hline 4 \mid & H & 5 \end{array} \right\rvert\,$ | $\begin{aligned} & 2 \\ & 3 \\ & 4 \end{aligned}$ | $\begin{aligned} & 15 \phi \\ & 21 \phi \\ & 25 \$ \end{aligned}$ | $\begin{aligned} & 131 / 2 \\ & 194 \\ & 224 \end{aligned}$ | $\begin{array}{\|l\|l\|l\|l\|} \hline 4 & H & 5 & 3 \\ 4 & H & H & 4 \\ \hline \end{array}$ | $\begin{aligned} & 5 \\ & 6 \end{aligned}$ | $364$ | 274 324 |

HEAVY-DUTY STRIPS
(N) Black $3 / 3 z^{\prime \prime}$ bakelite. Cadmium-plated screw terminals. Tinned lugs,

| Stock No. | Terminals | 1-9, EA. | 10-Up, EA. | Stock No. | Terminals | 1-9, EA. | 10-Up,EA |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 41 H 875 | 2 | 146 | 134 | $41 \begin{gathered}\text { H } 895\end{gathered}$ | 6 | 274 |  |
| 41 H 880 | 3 | 179 | 154 | 41 H 897 | 7 | 316 | 284 |
| 41 H 885 | 4 | 214 | 194 | 41 H 898 | 8 | 346 | 314 |

TERMINALS-CONNECTORS
Av. shpg. wt., per pkg., 4 oz .10 per pkg.

| $\begin{gathered} \hline \text { Stock } \\ \text { No. } \\ \hline \end{gathered}$ | Fig. | Description | 1-9 Pkgs., PERPKG. | 10orMore, PERPKG: |
| :---: | :---: | :---: | :---: | :---: |
| 41 H757 | P | Single hole fuse mou |  |  |
|  |  | For $1 / 4^{\prime \prime}$ diameter fuses. | $51 / 24$ | 54 |
| $\begin{array}{l\|l} 4 & H 67 \\ 41 & H 77 \\ \hline \end{array}$ | R | Terminal lugs. ${ }^{\text {Black, insulated }}$ pin-plug. | 534 864 | $48 \%$ $77 \%$ |

## H．H．Smith Plugs and Jacks



## TIP PLUGS，BANANA PLUGS AND MATCHING JACKS

## INSULATED TIP PLUGS

A Type 229 Heavy Duty Phone Tip Plug．Molded bakene handle．One－piece nickel－plated brass construction for heavier－cur－ rent use． $21 / 8^{\prime \prime}$ long．Shpg．wt．， 3 oz ．
 41 H 540．Blue 10 15C B Type200＂Senior＂Solderiess B Phone Tip Plug．Knurled nut tightens against wire，making sol－ dering unnecessary．Plug is made of nickel－plated brass；bakelite handie． $21 / 4$ long．Shpg．wt．， 3 oz.
 41 H 417 ．Green 15c
10－49，EA．． 134 C］Tess Phone Tip Plug．Has same tightening assembly in body of plug as Type 200，above．Bake－ lite handle；nickel－plated brass． $2^{\prime \prime}$ long．Shpg．wt．， 3 oz ．
 $\begin{array}{ll}41 & \mathrm{H} 545 \text { ．Green } \\ 41 & \mathrm{H} 546 \text { Blue }\end{array}$ 60－99，EA． 124 10－49，EA． 134 （D）Type 270 Subminiature fiber handle．Nickel－plated brass tip． $123 / 3 z^{\prime \prime}$ overall length． 2 oz ． 41 H 547．Red 1－9，
41 H 548．Black NET EA．I3C
$60-99$, EA． $114 \quad 10-49$ ，EA．I2 ［E］Type 237，For standard tip E］jacks．${ }^{13 / 32^{*}}$ Horg． 3 3 oz．
41 H 260 ．Red $1-9$
41 H 261. Black NET EA． 10 C
$60-99$ EA． 60－99，EA．．．8¢ 10－49，EA．．．9¢ F Type 203 Short Phone Tip mits insertion all the way up to insulated handle．Handle is mold－ ed bakelite．Nickel－plated brass tip． $117 / 32^{*}$ long．Shpg．wt．， 3 oz． 4 H H 575 ．Red
41 H 576．Black NETEACH 41 H 578．Green 12c
41 H 579 ．Blue 50－99，EA． $10 \Varangle$ 10－49，EA．．ll4

## NON－INSULATED TIP PLUGS

 R Type 105 ＂Senior＂Solder－ knurled phone for fastening．Has $115 / 32^{\prime \prime}$ long．Shpg．wastening $41 / 3^{\prime \prime}$ long．Shpg．wt．， 240 oz． $1-9$ N 60－99，EA．．．8¢ 10－49，EA．．． $9 ¢$S Type 106 ＂Junior＂Solder－ above，but ${ }^{13 / s^{\prime \prime}}$ Tip Plug．As 41 He 230.1 －9，NET EACH． 10 c 60－99，EA．．． $8 ¢$ 10－49，EA．．．．9 9 （Y）Type 123 Heavy－Duty Cord jacks．${ }^{\circ}$ ．Fits standard phone tip
 60－99，EA．．．24 10－49，EA．．21／24

NON－INSULATED TIP PLUG
（2）Type 108 Standard Cord 2．Tp．For instruments，test pa－ Shpg．wt．， 2 oz．NET EA．21／2C 50－99，EA．．．｜ $1 / 2 \not \subset 10-49$ ，EA． $2 \phi$

## MOLDED METER PLUGS

（N）Type 255 Banana－Type Me－ N ter Plug．Four－leaved phos－ phor bronze spring；nickel－plated． Tip is $15 / 32^{\prime \prime}$ long．Wt．， 2 oz ． 41 H 467．Red 1 1－9． 41 H 468．Black NET EA．35C
$50-99$ ，EA． $29 \Varangle 10-49$ ，EA．．．31 P Type 235 Meter Tip Plug． （1）Molded in two halves for easy assembly with screw and nut． Nickel－plated tip is $1 / 2^{\prime \prime}$ long． 2 oz ．
 50－99，EA．22ф 10－49，EA．．．24ф

## BANANA PLUGS

G Type 212 Insulated，Spring Wire can be soldered to brass stud supplied，or directly into plug． Length， $17 / 8^{\prime \prime}$ ．Shpg．wt．， 2 oz ．
41 H 593．Red

| 4 | H 594. Black |
| :--- | :--- | :--- |
| 4 | H 595 ．Yellow |
| 4 | H 596 ．Green |

41 H 596 ．Green 2lc
41 H 597 ．Blue
50－99，EA： $17 ¢$ 10－49，EA．．．．19¢
（H）Tipe 253 Insulated，Split slotted tip．Wire can er cross－ to brass stud supplied or directly into plug．Length， $15 / \mathrm{B}^{\mathrm{m}}$ ．Shpg．wt．， $21^{\circ} \mathrm{oz}$ ．
41 H 428. Red
4
4

| 4 | H 428．Red |
| :--- | :--- |
| 4 | H 427 ． |
| 4 | Black |
| 4 |  | 41 H 06 Bellow $^{\text {．Y }}$ 18c

41 H O69．Blue 10－49，EA．．． 164 （J）Type 236 Insulated，Spring plated Tenite handle．siver－ plated tip．Fits all standard ba－ nana jacks．Four leaved spring provides lasting contact．Has curved contact area to assure high current handling capacity． Length， $115 /$ 1＇＂$^{\prime \prime}$ ．Shpg．wt
41 H 408．Black NET EA．29C
K Type 204 Insulated，Spring K Tip．Solderless；has set screw in bakelite handle．Nickel－plated tip．Length， $111 / 16^{\prime \prime}$ ．Wt．， 2 oz ． 41 H 405 ．Red
41 H 410 ．Black 41 H 410．Black NET EACH 41 H 403．Greon 18c
50－99，EA． $15 \not \subset$ 10－49，EA．． $16 申$ （L）Tipe 213 Insulated，Split handle．Length， $19 / 6^{\circ}$ ．Shpg．wt．， 2 oz ．


## BANANA PLUGS

（M）Type 211 Insulated，Spring Wire can be soldered to brass stud supplied，or directly into plug． supplied，or directly into plug
41 H 462．Red $1-9$

41 H 463．Black NETEACH
41 H 464 ．Yellow 41 H 465．Green
41 H 466 ．Blue $\quad 18 \mathrm{C}$ 50－99，EA． $15 申$ 10－49，EA．． 164
T Type 103 All－Metal，Spring Teaved spring．Body and tip are leaved spring．Body and tip are nickel－plated． $6-32 \times 1 / 2^{\prime \prime}$ stud． 41 H 400．1－9，NET EACH．I5C 50－99，EA．I 24 10－49，EA． 134
W Type 100 All－Metal，Spring threads．permit use on all size panels．Length， $11 / a^{\prime \prime}$ ．Sh Shg．wt．， 2 oz ．
210 H 488．1－9，NET EACH．｜5C
50－99，EA． $12 \phi$ 10－49，EA． $13 ¢$
X Type 102 All－Motal，Spring $X$ Tip．Nickel plated，one－piece construction． $6-32 \times 3 / 8^{\prime \prime}$ stud． Length， $17 / 33^{\prime \prime}$ ．Shpg．wt．${ }^{2}{ }^{2}$ oz．I5C 60－99，EA．124 10－49，EA．． 134

## TIP JACKS

AA Type 1506 Miniature Nyion Tip Jacks．Silver－ plated，beryllium copper contact． Fits $1 / 4^{\prime \prime}$ hole；panels to $1 / 4^{\prime \prime}$ thick．
Overall size， $29 / 32^{\prime \prime} x^{3} / 8^{\prime \prime}$ dia．Wt．， 2 oz． Overall size，${ }^{29} 93^{\prime \prime} z^{3} 3^{\prime \prime}$ dia．Wt．， 2 oz ． 41 H 495. Red
41 H 496．Black NETEACH 41 H 497．Yellow 1 H 498．Greon 29C H0－99，EA．Blue 10－49 EA．．． 264
［B］Type 240 Nylon Tip Jack． phor bronze contact．11／16＂$x^{1 / 2} 2^{\prime \prime}$ dia． Shpg．wt．， 2 oz． 41 HOİ．Red

| 4 |  |
| :--- | :--- | :--- |
| 4 | H H |
| 4 | H |
| 4 |  | | 41 HOIS．Green |  |
| :--- | :--- |
| 4 | HOI6．Blue |

50－99，EA． $15 ¢$ 10－49，EA．． $16 ¢$
Type 202 Insulated Tip brass．Mock．Body is nickel－plated brass．Mounts in $5 / 16^{\prime \prime}$ hole in panels up to $3 / 8^{\prime \prime}$ thick．Size， $11 / 64^{\prime \prime} \times 7 / 16^{\prime \prime}$ $41 \mathrm{H}_{1} \mathrm{H}^{2}$ Red ${ }^{2}$

| 41 | H 110. Red | $1-9$, |
| :--- | :--- | :--- | :---: |
| 4 | H | 15 |
| 4 | H 432. Yellow | NETEACH |
| 4 | H 433. Green | I3C | 41 H 433．Green I3C

41 50－99，EA．II 14 10－49，EA．． $12 ¢$

[^15]TIP JACK
HH Type 107 Non－Insulated HH Tip Jack． $1 / 4^{\prime \prime}$ mtg．hole； $3 / 8^{\prime \prime}$ max．panel thickness．Has
phosphor－bronze spring contact． Shpg．wt．， 2 oz．NETEACH．IOC 41 H $100.1-9$ ，NET EACH．1OC
$60-99$ EA．．． $8 ¢$
10－49，EA．．．． $9 申$

## BANANA JACKS

FE Type 205 Insulated Ba－ EE nana Jack．With solder Requires $5 / 16^{\prime \prime}$ hole；for panels to $3 / 8^{\prime \prime} \cdot 21 / 32^{\prime \prime}$ long．Shpg．wt．， 2 oz．
41 H 475 ．Red
41 H 480．Black NETEACH
41 H 423 ．Green I3C
41 H 424 Blue
50－99，EA． 114 10－49，EA．I 24
Type 219 Insulated Ba－
nana Jack．Has molded plastic head．Recessed body as hole； $3 / \mathrm{g}^{\prime \prime}$ max panel thickness． Shpg．wt．， 2 oz． 41 H． 033 ．Red

| 4 |  |
| :--- | :--- |
| 4 | HO34．Black |
| H O35．Yollow NETEACH |  |

41 H 036 ．Groen 15C
50－99，EA． $12 \phi$ 10－49，EA．． 134
GG Type 221 Insulated Ba－ head and insulating washer $5 / 46^{6}$ mtg．hole； $3 / 8^{\prime \prime}$ max．Wt．， 2 oze mtg．hole；Red max．Wi．， 2
 41 H 44．Yellow 41 H 046．Bluen 18c
50－99，EA 15¢ 10－49，EA． $16 ¢$
Type 101 Non－Insulatod tinned lug． $1 / 4^{\prime \prime}$ mack．hole；$; / 16^{\prime \prime} \max ^{2}$ panel thickness．Shpg．w．， 2 OZ． 10 C 50－99，EA．．．8¢ 10－49，EA．．．． 96 KK Type 109 Non－Insulated hole； $3 / 8^{\prime \prime}$ max．thickness ${ }^{\prime \prime} 4^{\prime \prime}$ mtg hole；${ }^{3 / 8}$ m max．thickness． 2 Oz ． 10 C 41－99，EA．．．8¢ 10－49，EA．．．．94

## COMBINATION JACK

LL Type 206 Insulated Com－ commodate all standard phone tip or banana plugs．Nickel－plated brass body．Mounts in $5 / 16^{\circ}$ hole； panels up to $1 / 2^{\prime \prime}$ thick．Length， $111 / 3^{\prime \prime}$ ．Shpg．wt．， 2 oz ．
 4 H 38．Green lOC
41 H 143. Bluen 41 H 143．Blue
50－99，EA． $13 \Varangle$ 10－49，EA． 144

## INSULATED SPADE LUG

MM Type 218 Banana Plug To jack in rear of handle to allow in－ sertion of banana plug． $1 / 2^{\prime \prime}$ wide steel hot－tinned lug $.030^{\prime \prime}$ thick for extra durability．Size： $111 / 16^{\circ}$ ong， $3 / 8^{\prime \prime}$ O．D．Shpg．wt．， 2 oz． 41 H 049．Rlack NET EA．．．｜lC 41 H O49．Black NET EA．．．IIC
$50-99$ EA．．．94 $10-49$ ，EA．．IO

# Alligator Clips, Binding Posts 



## MUELLER UNIVERSAL CLIPS AND FLEXIBLE INSULATORS

A wide variety of clips for positive, dependable electrical contacts. For bat mitting apparatus, electroplating, and countless other applications.

## MESH TEETH TEST CLIPS

(A) For general purpose applications. *Solid Copper. $\ddagger$ Solid bronze §Cadmium-plated steel. †Insulation-piercing needle for quick wire contact. Av. shpg. wt., 3 oz

| Stock No. | $\begin{aligned} & \text { Mrr's } \\ & \text { Type } \end{aligned}$ | Amps | Size | NET EACH |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  |  |  | $1-9$ | 10-99 | 100-499 | 500-Up |
| 45 NOOO | ${ }^{8} 45$ | 5 | 11/2"1 | . 07 | . 05 | . 042 | . 04 |
| 45 N 005 | ${ }^{* 45}$ | 10 | $11 /{ }^{\prime \prime}$ | .13 | . 09 | . 078 | . 072 |
| 45 N 078 | ${ }_{* 48 \mathrm{C}}$ | 10 | $2^{\prime \prime}$ | -14 | . 078 | . 084 | . 05 |
| 45 N 087 | $\ddagger+50 \mathrm{C}$ | 10 | 21/4" | .24 | . 18 | . 15 | .14 |

## LEAD-PLATED BATTERY CLIPS

A For moderately heavy current work, including battery charging, elec A troplating, and light welding. Lead-plated steel for complete protec tion and long life. Av. shpg. wt., 4 oz.

| 45 | 27020 | 24 A | 25 | $27 / 8^{\prime \prime}$ | .20 | .14 | .12 | .112 |
| :--- | :--- | :--- | ---: | :--- | :--- | :--- | :--- | :--- |
| 45 | N 030 | 21 A | 50 | $4^{\prime \prime}$ | .35 | .24 | .22 | .21 |
| 45 N 040 | 11 A | 100 | $6^{\prime \prime}$ | .98 | .69 | .59 | .56 |  |

## SOLID COPPER CLIPS

A Heavy-duty, high-conductivity, solid copper clips. Shpg. wts.: 24C, A 3 oz .; $21 \mathrm{C}, 5 \mathrm{oz} . ; 11 \mathrm{C}, 8 \mathrm{oz}$.; 33C, 1 lb .

| 45 NO 5 | 24 C | 50 | 27/8" | . 33 | . 24 | 20 | . 19 |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 45 N 035 | 21 C | 100 | $41 / 2^{\prime \prime}$ | . 86 | . 61 | . 52 | 9 |
| 45 N 045 | ${ }_{31} 1 \mathrm{C}$ | 200 |  | 1.67 | 1.17 | 1.00 | . 95 |
| 45 N 050 | 33 C | 300 | 73/4" | 3.18 | 2.23 | 1.91 | 1.82 |

## 3-SIDED MESH TEETH CLIPS

B §Cadmium-plated steel; *solid copper. Jaws open $5 / \mathrm{s}^{\prime \prime}$. Meshing teeth on 3 sides of each jaw. Shpg. wt., 2 oz. | 45 N 015 | 827 |  |  |  |  |  |  |
| :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- |
| 45 N 097 | ${ }^{27} 27 \mathrm{C}$ | 40 | $27 / 6^{\prime \prime}$ | .12 | .08 | .07 | .066 |

## INSULATED ALLIGATOR CLIPS

§Cadmium-plated steel;*solid copper. Completely insulated with vinyl plastisol to provide excellent protection against shocks and shorts. Shpg. wt., 3 oz.


## 70 SERIES ALLIGATOR CLIPS

D Streamlined, simplified design. No. 70 is cadmium-plated steel, with solder connection; No. 70 S is cadmium-plated steel, with screw connection. No. 70CS is made of solid copper and has screw connection. Av. shpg. wt., 3 oz .

| 45 N 170 | 70 | 5 | 111/16" | . 07 | . 044 | . 038 | . 036 |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 45 N 171 | ${ }_{70} 70 \mathrm{C}$ | 5 | 111/16" | . 08 | . 05 | . 044 | . 04 |

Quality springs maintain firm grip, lead-plated clips resist battery acid. Solid copper types have low resistance and are non-magnetic. slip-on insulators (Fig. K) are listed for all types.

## INSULATED BARREL ALLIGATOR CLIPS

[E Made of cadmium-plated steel, except *solid copper. Jaws open $5 / 16^{*}$. E Av. shpg. wt., 2 oz.

| Stock No. | Mfr's <br> Type | Size | Description | NET EACH |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  |  |  | $1-9$ | 10-99 | 100-499 | 500-Up |
| 45 N 070 | 60HS |  | Red handle | .14 | . 095 | . 08 | . 076 |
| 45 N 075 | 60 HS | $211 / 32^{\prime \prime}$ | Black handle | .14 | . 095 | . 08 | . 076 |
| 45 N 090 | *60CHS | $211 / 32^{\prime \prime}$ | Red handle | .16 | .11 | . 096 | . 092 |
| 45 N 095 | *60CHS | 211/32" | Black handle | . 16 | .1 | . 096 | . 092 |
| CROCODILE CLIPS |  |  |  |  |  |  |  |
| *Solid copper; §cadmium-plated steel. $\ddagger$ Phone tip on one jaw. Wt., 2 oz. |  |  |  |  |  |  |  |
| 45 N060 | 885 | 21/8" | Screw Connection | . 08 | . 058 | . 048 | . 044 |
| 45 N 062 | *85C | 21/8" | Screw Connection | .16 | .11 | . 098 | . 092 |
| 45 N 098 | $\ddagger 85 \mathrm{~T}$ | 25/8" | Tip-Clip | .21 | .15 | . 126 | . 12 |

## ALLIGATOR CLIPS

(H) Steel, except *Solid copper. †Solder type; "S"-screw type. Slim H jaws for close work. Jaws open $5 / 16^{\prime \prime}$. Shpg. wt., 2 oz.

| 45N 200 | $\dagger 6$ |  | s | 7 | . 05 | . 044 | . 04 |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 45 N 065 | 605 | $2^{*}$ | Fit banana plugs | . 08 | . 058 | . 048 | . 0 |
| 45 N 080 | *60CS | $2^{\prime \prime}$ | Fit banana plugs | . 12 | . 084 | . 072 | . 06 |

NON-FERROUS R.F. TEST CLIP
Phosphor bronze clip with brass screw. Ideal for tapping small trans0 mitter coils; also for work in crowded chassis. Shpg. wt., 2 oz.


## "MINI-GATOR" CLIPS

F Miniaturized- $3 / 16^{\prime \prime}$ jaw opening, ${ }^{11} / 6^{\prime \prime}$ O.D. tip. §Cadmium-plated F steel; *solid copper. Shpg. wt., 2 oz.

| StockNo. | $\begin{aligned} & \text { Mifr's } \\ & \text { Type } \end{aligned}$ | Amps. | Size | NET EACH |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  |  |  | 1-9 | 10-99 | 100-499 | 500.Up |
| 45 N142 <br> 45 N 143 | 830 $* 30 \mathrm{C}$ | 10 | $\frac{\substack{11 / 16{ }^{\prime \prime} \\ 11 / 6^{\prime \prime}}}{}$ | . 078 | . 044 | .038 .048 | .036 .044 |

## SLIP-ON INSULATORS FOR CLIPS

K Tough, flexible plastic. High dielectric strength; resistant to oils and K grease. Covers entire clip except for end of nose. Av. shpg. wt. per pkg., 5 oz. 2 insulators per pkg.; one red, one black.

| Stock No. | $\begin{aligned} & \text { Mfr's } \\ & \text { Type } \end{aligned}$ | For Use With | NET PER PKG. |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  |  | 1-4 | 5-49 | 50-249 | 250-Up |
| 45 N:67 | 13 | Series 11 | 1.51 | 1.06 | . 90 | . 86 |
| 45 N 164 | 23 | Series 21 | . 94 | . 67 | .57 | . 53 |
| 45 N 163 | 26 | Series 24 | .47 | .33 | .278 | . 262 |
| 45 N 166 | 29 | Series 27 | . 31 | . 22 | . 192 | . 18 |
| 45 N 144 | 32 | Series 30 | . 22 | . 152 | .126 | 2 |
| 45 N 162 | 35 | Series 33 | 5.06 | 3.53 | 3.04 | 2.88 |
| 45 N 160 | 47 | Series 45 | . 14 | . 096 | . 08 | . 076 |
| 45 N 161 | 49 | Series 48, 50 | .20 | . 14 | .112 | .108 |
| 45 N 165 | 62 | Series 60, 70 | . 14 | . 096 | . 08 | . 076 |
| 45 N 168 | 87 | Series 85 | .14 | . 096 | . 08 | .076 |
| 45 N 169 | 93 | Series 88 | . 20 | . 14 | .12 | .116 |



BINDING
POSTS

蘭

©


## H. H. SMITH BINDING POSTS

L. Type 209. Dual binding post assembly with metal posts. Can accept $\left[\right.$ standard dual banana plug and wire, etc. Mounts in $2-1 / 2^{\prime \prime}$ holes on $3 / 4^{\prime \prime}$ centers in $1 / 6^{\prime \prime}$ to $1 / 4^{"}$ panels. With wrap-around solder studs. Has $3 / 411^{1 / 2 "}$ rounded black base. Shpg. wt., 4 oz .
(4) 508 ..........................................
(M) Type 208. 5-way metal binding post. Can accept banana plug. stud. $6-32$ thread. Shpg, in $1 / 16^{\prime \prime}$ to $3 / 8^{\prime \prime}$ panels. Has wrap-around solder 41 H 327 . NET............. 3 oz.

N Type 224. Dual 5 -way binding post assembly with black, insulated, ( fluted heads. Accepts dual banana plug. Mounts in 2-1/2" holes, $3 / 4^{\prime \prime}$ centers on $1 / 1^{16-1} 4^{\prime \prime}$ panels. Has solder studs, $3 / 4 \times 11 / 2^{\prime \prime}$ rounded base. 4 oz. P Type 269 Dual 5 -way binding post assembly with black hex-grip on $3 / 4^{\prime \prime}$ ctrs, $1 / 11^{\prime \prime} 1^{\prime \prime}$. Accepts dual banana plug. M11 on $3 / 4^{\prime \prime}$ ctrs, $1 / 16-1 / 4^{\prime \prime}$ panels. Has solder studs, $3 / 4 \times 11 / 2^{\prime \prime}$ rounded base. 4 oz .

Multi-purpose molded binding posts. Rated 2000 volts, 30 amps. Have banana-plug jack in head. All metal parts insulated from panel. For panels $1 / 1^{\prime \prime}$ to ${ }^{1 / 4^{\prime} i}{ }^{257}$ has wrap-around solder stud;

| Stock No. | $\begin{aligned} & \text { Mfr's } \\ & \text { Type } \\ & \hline \end{aligned}$ | Fig. | Mtg.$\mathrm{Hole}$ | Total Lgth.(Closed) | Color | NET EACH |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  |  |  |  |  | 1-9 | 10-49 | 50-Up |
| 41H368 | ${ }_{*}^{* 2578}$ | $\begin{array}{\|l} \hline \mathbf{R} \\ \mathrm{R} \end{array}$ | 1/2* |  | Red |  |  |  |
| $41 H 367$ 41 H 386 | *2678 | $\begin{aligned} & \mathrm{R} \\ & \mathbf{S} \end{aligned}$ | 11/2" | $\begin{aligned} & 1132_{3}^{\prime \prime} \\ & 119 / 32^{\prime \prime} \end{aligned}$ | Black Red | 356 | 314 | 28¢ |
| 41 H 387 | *267B | S | 11/2* | ${ }_{1} 1933^{\prime \prime}$ | Black |  |  |  |
| 41 H 330 | 220 R | T | $\frac{11 / 64{ }^{\prime \prime}}{}$ | 1964** | Red | 186 | 164 | 15 |
| 41 H335 | 220B | T | $11 / 64{ }^{\prime \prime}$ | 19/54* | Black | 184 | 164 | 154 |
| $41 H 388$ 41 4 | * $\begin{aligned} & * 260 \mathrm{R} \\ & * 260 \mathrm{~B}\end{aligned}$ | w | $5 / 16{ }^{\prime \prime}$ | $19.64^{\circ}$ | Red Black | 244 | 224 | 204 |

X Type 110 Post. For heavy-duty use and low-resistance connec


## SUPERIOR BINDING POSTS

Y Take spade lugs, banana plugs (have jack in top), clip leads, and up to V No. 12 wire. Rated 1000 volts, 30 amps. Insulated with nylon plas-


tic; all metal components are recessed. For $1 / 66^{-1 / 4^{\prime \prime}}$ panels. Mount in $1 / 2^{\prime \prime}$ | holes. Metal parts gold-plated. Choice of 6 colors. Shpg. wt., 4 oz . |
| :--- |
| Stock No. |
| Type |

| Stock No. | Type | Color | 1-99, EACH | 100 or More, EACH |
| :---: | :---: | :---: | :---: | :---: |
| 41 H 177 | DF30BC | Black |  |  |
| 4   <br> 4 H 178 | DF30RC | Red | 40c | 34c |

## Insulators, Plugs, Jacks and Adapters



## ANTENNA INSULATORS

A 51 C 223. Glazed porcelain insulator, $21 / 2^{\prime \prime}$ Alng. shpg. Wt., 2 oz. 4 per pkg. 1 to 9 Pkgs., Per Pkg
er pkg
2 lc
10 or More Pkgs., Per Pkg
199
B 51 C 224 . White porcelain strain insulator,
 10 or More Pkgs., Per Pkg
.264
C 51 C 225 . Standard nail knob. $13 / 4 \times 11 / 8^{\prime \prime}$ C dia. Shpg. wt., 4 oz. 4 per pkg. 1 to 9 Pkgs.; Per Pkg.
pkg.
(D) 51 C 226. Porcelain insulator for 300 ohm D twin-lead. Shpg. wt., 5 oz. 4 per pkg.27c 10 to 9 Pkgs., Per Pkg...........
10

## NATIONAL STAND-OFF

 INSULATORSMolded steatite insulators for use in RF circuits. Glazed to prevent moisture absorption. Base and terminal assembly removable to
 mount. Av. shpg. wt., 3 oz.

| Stock No. | $\begin{aligned} & \text { Mfr's } \\ & \text { Type } \end{aligned}$ | ${ }_{\substack{\text { Body } \\ \mathrm{Ht.}}}$ | Dia. | NET ${ }_{\text {NET }}^{\text {EACH }}$ |
| :---: | :---: | :---: | :---: | :---: |
| $7 \longdiv { 4 1 2 5 }$ | GS-1 |  | 1/2* | 274 |
| 71 H126 | GS-2 |  | 1/2" | $\begin{array}{r}354 \\ 694 \\ \hline\end{array}$ |

## LAB-TRONICS JACK ADAPTERS

 AND CONNECTORS

## C400



## P55A

Type C400 Double-ended Phono Pin Jack. Allows rapid connection of any two lin 94.5458 , NET.

Type P55A Ad with standard Adapter. Standard phone plug, With standard phono pin jack on opposite end Allows connection of standard phono pin plug into standard phone jack. Shpg. wt., 2 oz.
71 H 289. NET...........................


MP

$C 800$
Type MP Microphone Connector Adapter. Has standard microphone connector on one end and a standard phono pin plug on the address and hi-fi equipment, repair departments, labs, etc. Shpg. wt., 2 oz. Type C800 Microphone Cable Connector. For use where splicing microphone lines is male or female microphone connectors. 4 oz 71 H 291. NET............................594


Type E1106. 6 -ft. shielded cable with mike connector at one end; other end stripped and tinned. Shpg. wt., 1 lb. Type E1110. As above, but $10-\mathrm{ft}$. Wt., $11 / 4 \mathrm{lbs}$.
71 H 293. NET.......................... 1.47

## 

Type E906. 6 - ft . shielded cable with mike connectors on both ends. Shpg. wt., 1 lb .
Type E912. As above, but $12-\mathrm{ft}$. Wt., $11 / 4 \mathrm{lbs}$. Ty E925. As above, but $25-\mathrm{ft}$. Wt. 2 lbs 4i S 911. NET.............................. 2.79

FAMOUS E. F. JOHNSON QUALITY PRODUCTS
INSULATORS


Thru-Panel Insulators. High mechanical strength; long leakage paths. White glazed porcelain, except tsteatite. *Have Type 108-740 jack, listed below. Shpg. wt., 12 oz.


Lead-in Bushings. Have many applications in transmitter and antenna installations. Ideal as power supply and high voltage terminals. $50,51,52,55$ are steatite, with nickeled brass rod and nuts; 53 and 54 are porcelain, less hardware. Av. shpg. wt., 8 oz.

| Stock No. | Type | Fig. | Ht. | Max. <br> Dia. | Panel Hole | $\overline{\text { NET }}$ |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 73 H 160 | 135-50 | S | $1{ }^{1 / 2 \prime \prime}$ | 3/4" | 15 | 334 |
| $73 \mathrm{HI61}$ | 135-51 | S | 13/16" | $4^{\prime \prime}$ |  | $54 \%$ |
| 73 H 162 | 135-52 | S | $11 / 8^{\prime \prime}$ | 13/4" | 1732" | 784 |
| $73 \mathrm{H} \mathrm{l}^{63}$ | 135-53 | P | 13/4" | 2 | 127 | 294 |
| 73 H 164 | 135-54 | N | $4^{\prime \prime}{ }^{\prime \prime}$ | $31 / 2$ | 211 | 794 |
| $73 \mathrm{H} \mathrm{I65}$ | 135-55 | R | 1/4" | 3/4" | $15 / 32$ | 314 |

Ultra-Steatite Cone Insulators. Smooth, non-ribbed high grade steatite insulators. Ideal for mounting coils, capacitors, etc. Threads tapped directly into the steatite. Width shown is max. (base). With screws, washers. Wt., 5 oz

| Stock <br> No. | Mfr's <br> Type | Height | Width | NET <br> EACH |
| :---: | :---: | :---: | :---: | :---: |
| 73 H 150 | $135-500$ | $5 / 8^{\prime \prime}$ | $5 / 8^{\prime \prime}$ | .23 |
| 73 H | 51 | $135-501$ | $1^{\prime \prime}$ | $38^{\prime \prime}$ |
| 73 H | 52 | $135-502$ | $11 / 2^{\prime \prime}$ | $1^{\prime \prime}$ |
| 73 | .31 |  |  |  |
| 73 | 53 | $135-503$ | $2^{\prime \prime}$ | $11 / 8^{\prime \prime}$ |



Stand-Off Insulators. High-glaze porcelain (except §steatite). Ideal for transmitter applications, etc. Feature long leakage path, low capacity and freedom from moisture absorption. Heavy breakage-resistant bases. Nickel-plated brass hardware. Types $65,65-2,68,68-2$ are ibbed, otherw *Like Fig L but square base as listed below. *Like Fig. L but square base. Av. shpg. wt., 1 lb .

| Stock No. | $\begin{align*} & \text { Mir's } \\ & \text { Type } \end{align*}$ | Fig. | Body Ht. | Hardware | NET |
| :---: | :---: | :---: | :---: | :---: | :---: |
| 73 H 120 | 135-20§ | J | 19/16" | 10-32 | 4 |
| 73 H 121 | 135-20-2 | K |  | $740 \dagger$ | 304 |
| 73 H 122 | 135-22§ | J | 1 1' | 8-32 | 194. |
| 73 H 123 | 135-22-2 | K | $1{ }^{\prime \prime}$ | $740+$ | 234 |
| 73 H 139 | 135-248 | J | $5 / 8^{\prime \prime}$ | 6-32 | 154 |
| 73 H 125 | 135-60 | * | 41/2 | 1/4-20 | $98 ¢$ |
| 73 H 126 | 135-62 | * |  | 1/4-20 | 604 |
| 73 H 127 | 135-65 | L |  | 10-32 | 304 |
| 73 H 128 | 135-65-2 | L |  | $740 \dagger$ | 394 |
| 73 H 129 | 135-66 | M | $23 / 4 "$ | 1/4-20 | 874 |
| 73 H 130 | 135-66-2 | M | 23 | $760 \dagger$ | 984 |
| 73 H 131 | 135-67 | M | 41 | 1/4-20 | 984 |
| 73 H 136 | 135-68 | * | $2^{\prime \prime}$ | $10-32$ | 464 |
| 73 H 1371 | 135-68-2 | * | $2^{\prime \prime}$ | $740 \dagger$ | 544 |

## 

ANTENNA INSULATORS
Types 107 and 112 are wet-process porcelain; 800 lbs. breaking strength. Type 104 is dryprocess porcelain; 400 lbs. breaking strength.

| StockNo. Type | Size | Wt. | NET |
| :--- | :--- | :--- | :--- |




## FEEDER SPREADERS SNETH

General-purpose feeder spreaders for lowest leakage loss. For constructing open-wire feeders and transmission lines, with impedances of approximately 200 to 600 ohms. Unglazed, porcelain bars, $3 / 8 \times 1 / 2$ ". treated with Silaneal, silicone product-impervious to moistur Av. shpg. wt., 3 oz

| Stock <br> No. | Mfr's <br> Type | Length | NET <br> EACH |
| :---: | :---: | :---: | :---: |
| 73 H | 11 | $136-122$ | $2^{\prime \prime}$ |
| 73 H | 12 | $136-124$ | $4^{\prime \prime}$ |
| 73 H | 13 | $136-126$ | $6^{\prime \prime}$ |

## PLUGS AND JACKS



## NON-INSULATED PLUGS AND JACKS

Positive contact. Banana type plugs have nickel-silver springs; jacks are nickeled brass with phosphor bronze spring sleeves. Type 771 plugs have long screw for mounting on ceramic or steatite plug-in coil forms. Supplied with all hardware. Av. shpg. wt., 2 oz.

| Stock No. | Type | Fits | Lgth. | NET |
| :---: | :---: | :---: | :---: | :---: |
| 73 H 200 | 108-740 | 750, 750-2, 753 | 5/8" | 124 |
| 73 H 201 | 108-750 | 750 740 | 11/8" | 134 |
| 73 H 202 | 108-750-2 | 740 | 11/2" | 144 |
| 73 H 203 | 108-753 | 740 | 15/16" | 146 |
| 73 H 204 | 108-760 | 770, 771 |  | 314 |
| 73 H 205 | 108-770 | 760 | $125 / 32^{\prime \prime}$ | $30 ¢$ |
| 73 H 206 | 108-771 | 760 | $11 / 8^{\prime \prime}$ | 344 |

## NYLON TIP JACKS

Low loss nylon insulated .081" tip jacks. Silver-plated beryllium copper contacts. Body threaded $1 / 4-32$; single nut mounting. D.C. breakdown volts, Diameter $3 / 8^{\prime \prime}$. Shpg. wt., 2 oz.

| Stock No. | Mfr's Type | Color | EACH |
| :---: | :---: | :---: | :---: |
| 73 H 250 | $105-601$ | White |  |
| 73 H 251 | $105-602$ | Red |  |
| 73 H 252 | $105-603$ | Black | 25 C |
| 73 H 253 | $105-604$ | Green |  |
| 71 H 254 | $105-605$ | Brue |  |
| 71 H 255 | $105-607$ | Yellow |  |

## NYLON BANANA JACKS AND PLUGS

Compact, high voltage insulated, plugs and jacks. Molded of tough qualities through wide temperature range and high humidity Plugs have one piece nickel-plated brass body and pin; nickel silver springs. Solderless connection takes up to No. 16 wire. Voltage breakdown of jacks, $11,000 \mathrm{v}$ Jacks mount in $21 / 64^{\prime \prime}$ hole. 2 oz.


StockNo. Type Fig. Color LengthEACH | 71 | $H$ | 266 | 108-901 |
| :--- | :--- | :--- | :--- |
| 71 | T | White |  |
| Wh |  |  |  |

 | H 268 | $108-903$ |  |  |  |  |
| :--- | :--- | :--- | :--- | :--- | :--- |
|  | H 269 | $108-904$ | T | Black | $15 / 16^{\prime \prime}$ |
|  | Green | $15 / 6^{\prime \prime}$ |  |  |  |

 | 1 | $H$ | 272 | $108-302$ | $W$ | Red |
| :--- | :--- | :--- | :--- | :--- | :--- |
| 1 | $H$ | $13 / 8^{\prime \prime}$ |  |  |  |
| 1 | $H$ | 273 | $108-303$ | $W$ | Black |
| 1 | $13 / 8^{\prime \prime}$ |  |  |  |  |
| 1 | $H$ | 287 | $108-304$ | $W$ | Green |
| 1 | $13 / 8^{\prime \prime}$ |  |  |  |  |

## NYLON TIP PLUGS

Nylon insulated solderless tip plugs. Fit all standard tip jacks. No metal surfaces exposed when inserted. Withstand high voltages. Current rating 10 amps. Pin
size, $9 / 6^{\prime \prime}$ long; . $081^{\prime \prime}$ diameter. Body, $7 / 8^{\prime \prime}$ size, $9 / 16^{\prime \prime}$ long; . $081^{\prime \prime}$ diameter. Body, $7 / 8^{\prime \prime}$
long; $3 / 8^{\prime \prime}$ diameter. Wt., 2 oz.

| Stock No. | $\begin{aligned} & \hline \text { Mifr's } \\ & \text { Type } \end{aligned}$ | Color | $\begin{aligned} & \text { NET } \\ & \text { EACH } \end{aligned}$ |
| :---: | :---: | :---: | :---: |
| 714256 | 105-301 | White |  |
| 71 H 257 | 105-302 | Red |  |
| 714258 | 105-303 | Black | 6 |
| 71 <br> 71 <br> 1 | $105-304$ $105-305$ | Green | 6c |
| 71 H265 | 105-307 | Yellow |  |

# Electrical Plugs, Receptacles and Tape 

HARVEY HUBBELL "TWIST LOCK" CONNECTORS


A wide selection of heavy-duty electrical connectors for industrial as well as home use. Available in both midget and standard sizes. Feature "Twist Lock" design for safe, sure connections. Just plug connectors together and twist for a locked connec-

## MIDGET-SIZE CONNECTORS

## 2-WIRE NON-POLARIZED TYPES

Type 7428 male cap and Type 7427 female connector are brown bakelite with metal cable clamps for $5 / 16$ to $1 / 2^{\prime \prime}$ O.D. cords. Type 7466 male base and Type 7468 female base are bakelite with metal housings. Rated 10 amps at 250 v ., or 15 amps at 125 v .

| Stock No. | Mfr's <br> Type | Fig. | Description | NET EACH |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  |  |  | 1-9 | 10-49 | 50-U p |
| 41 H 282 | 7428 | A | Male Cap | . 39 | .31 | 28 |
| 41 H 283 | 7427 | B | Female Conn. | . 73 | . 58 | . 52 |
| 41 H 284 | 7466 | C | Male Base | . 85 | . 69 | . 62 |
| 41 H 287 | 7468 | D | Female Base | 1.03 | . 82 | . 74 |

## 3-WIRE POLARIZED TYPES

Similar to above connectors, but for use with 3 -conductor cables. Insulation is black bakelite. Clamps will accommodate cords from .281 to $.421^{\prime \prime}$ O.D. Polarization prevents incorrect connection. Rated 10 amps at 250 v ., or 15 amps at 115 v .

| 4 | $H$ | 288 | 7485 | A | Male Cap | .93 | .74 |
| :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- |
| 4 | $H$ | 289 | 7484 | B | Female Conn. | .35 | 1.08 |
| 4 | $H$ | 290 | 7486 | C | Male Base | .97 |  |
| 4 | $H$ | 1.20 | .96 | .86 |  |  |  |

AMPHENOL AC PLUGS AND RECEPTACLES

U. L. Approved. All plugs and receptacles are rated at $15 \mathrm{amps}, 110$ v., or $10 \mathrm{amps} ., 250 \mathrm{v}$. High-dielectric black bakelite. Fig. L mounts with retainer ring. Requires $11 / 8^{\prime \prime}$ hole. Fig. $M$ has mtg. plate. Requires $11 / 8^{\prime \prime}$ hole, mtg. centers, slotted $11 / 2^{\prime \prime}$ to $17 / 8^{\prime \prime}$. Fig. N is recessed type. Requires $13 / 8^{\prime \prime}$ hole, mtg. centers, $13 / 4^{\prime \prime}$. Fig. $P$ is shielded type with clamp. *For standard or polarized plugs. All are 2 pole except $\dagger 3$ pole. Av. shpg. wt., 3 oz .

RETAINER RING TYPE

| Stock No. | Mfr's Type | Fig. | Description | NET EACH |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  |  |  | $1-99$ | 100-249 | 250-Up |
| $40 H 675$ | 61-M | L | Male Standard | 204 | 174 | 154 |
| 40 H 676 | 61-MP | L | Male Polarized | 204 | 174 | 54 |
| 40 H 081 | 60-M | $L$ | Male Polarized $\dagger$ | $25 ¢$ | $211 / 24$ | 94 |
| 40 H 677 | 61-F | $L$ | Female Universal* | $19 \%$ | $16 \%$ | 141/24 |
| 40 H 082 | 60-F | $L$ | Female Polarized $\dagger$ | 224 | $19 ¢$ | $17 ¢$ |

WITH SEPARATE MOUNTING PLATE

| 40 H 680 | 61-M1 | M | Male Standard | $23 ¢$ | 194 |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 40 H 681 | 61 -MP1 | M | Male Polariized | 234 | $191 / 24$ |  |
| 40 H 083 | $60-\mathrm{Ml}$ | M | Male Polarized $\dagger$ | c | 231/24 | 214 |
| 40 H682 | 61-F1 | M | Female Universal* | 234 | 194 | $17 \%$ |
| 40 H 084 | 60-F1 | M | Female Polarized $\dagger$ | 244 | 214 | 194 |

## WITH BELOW-SURFACE SHELL

| $\begin{gathered} \text { Stock } \\ \text { No. } \\ \hline \end{gathered}$ | $\begin{aligned} & \text { Mfr's } \\ & \text { Type } \end{aligned}$ | Fig. | Description | NET EACH |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  |  |  | 1-99 | 100-249 | 250-Up |
| 40 H685 | $61 \mathrm{M10}$ | $N$ | Male Standard | 294 | 256 | $22^{1 / 24}$ |
| 40 H 686 | $61 \mathrm{MP10}$ | N | Male Polarized | $30 ¢$ |  | 236 |
| 40 H 687 | $61 F 10$ | N | Female Universal* | 284 | 241/2¢ | 224 |

## SHIELDED CABLE TYPE

| 40 H 690 | $61 \mathrm{M11}$ | P | Male Standard | 334 | 284 | 256 |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 40 H 691 | $61 \mathrm{MP11}$ | P | Male Polarized | 334 | 284 | 254 |
| 40 H 692 | $61 F 11$ | P | Female Universal* | 314 | 274 | 244 |
| 40 H 693 | 60 M 11 | P | Male Polarized $\dagger$ | 384 | 321/24 | 294 |

TYPE 61-MIP-6IF. Female receptacle. Same as Fig. M above except has molded-in plate. Two mounting holes on $11 / 2^{\prime \prime}$ centers. Takes all standard or polarized 2-pole plugs. High-dielectric, black bakelite insulation. Shpg. wt., 3 oz .
40 H 085. 1-99, NET EACH
100 to 249, EACH. $\qquad$ $16 \phi \quad 250$ or More, EACH
.19c ceptacles to Fig. N, for recessed mtg. Shpg. wt., 2 oz.
40 H 086. 1 to 99, NET EACH.
100 to 249. EACH $\qquad$ 7\& 250 or More, EACH.
8c

202
Depend on Allied for Everything in Radio, Television and Industrial Electronics

## Electrical Accessories

RACINE CORD'N REEL
Extension cord and storage reel with built-in electrical outlet. Designed to permit unwinding only as much cord as is needed during use. Has service to furnish current for ap to liance or tool to be used pliance or tool to be used. shop tools, lawn mowers floor sanders, vacuum
 cleaners, etc. Heavy-duty, U.L. Approved, rubber-covered 2 -conductor cords.

| Stock <br> No. | Mfr's <br> Type | Length, <br> Feet | Wire <br> Size | Amps | Wt., <br> Lbs. | NET <br> EACH |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 46 N 954 | 1825 | 25 | 18 | 7 | 2 | 3.40 |
| 46 N 958 | 1850 | 50 | 18 | 7 | 3 | 5.12 |
| 46 N 959 | 1650 | 50 | 16 | 10 | 4 | 7.38 |

## CORDOMATIC

 DROP-LIGHT REELSCORDOMATIC
DROP-LIGHT REELS
Unique, self-winding drop
light. Provides light where
you want it. Cord is out of
the way when light no
longer need ed. No. 18,
2-conductor cord, covered
with tough, neoprene insu-
lation. Crack-proof handle
with built-in outlet and tog-
gle switch. Chrome reflector
has swing-open bulb guard.
Steel housing is equipped
with universal mounting

TAP-A-LINE OUTLET An extremely handy multiple outlet tap. Ideal for home, store or $\qquad$ Provides multiple power outlets for tools, appliances and test equipment. Up to 8 AC line cords can be plugged into this outlet strip. Has two parallel conductors, spaced $1 / 2^{\prime \prime}$ apart (prong separation of standard plugs) Encased in $1^{\prime \prime}$ square. Supplied with 4 ft . line cord and plug. Rated 1650 watts. Wt., $11 / 2$ lbs. 1.47 2-Ft. Tap-A-Line. As above, but 2-ft. long. Shpg. wt., $21 / 2$ lbs.
52 NX 637 . NET

## ?

## BELDEN GRIP-PRONG REPLACEMENT CORDS

## (A) LIGHT-DUTY CORDS

 Type17126M (Old1765B) SP-16-Foot Replacemen Cord. No. 18 wire. Brown rubber-covered cord. Extra flexible. Unbreakable, plas tic plug on one end; othe end stripped. Ideal cord for electric clocks, lamps, fans, radio sets and other small electrical appliances. U.L. Approved. Shpg. wi., 6 oz.49 T 211 . NET $\qquad$ 24c

Type 17129 M (Old 1735K). SP-1. As above, but 9 feet. Shpg. wt., 8 oz. 49 T 236. NET.

29c
Type 17330M (OId 1750K). SJ 10-Foot Replacement Cord. No. 16 wire. For use on washing machines, workshop tools, etc. U.L. Approved. Shpg. wt., $3 / 4 \mathrm{lb}$.
49 T 213. NET
62c
Type 17308M (Old 1754K). SJ 8-Foot Replacement Cord. No. 18 wire. Black rubber cord. U.L. Approved. $1 / 2 \mathrm{lb}$.
49 T 215. NET...
45c
Type 17206 M (OId 1749 K ). SV 6-Ft. Replacement Cord. No. 18 wire. For use on small appliances. Gray rubber. Cord-holder plug. U.L. Approved. Wt. $1 / 2 \mathrm{lb}$.
49 T 212. NET.
35c
Type 17408 M (Old 1766B). SJ 8-Foot B Appliance Grounding Cord. No. 18 wire. Used for electric power tools and appliances. 3 conductor cord with 3-prong plug. U.L. Ap-
49 T 219. NET........
$.65 c$

(B)

## C HEAVY-DUTY CORDS

Type 17270M (Old 1751K). SV 20-Foot Extension Cord. No. 18 gauge wire. Extra lexible gray cord with plastic cord-holder plug and plastic connector. Specifically desall appliances and tools such as soldering small appliances and tools such as soldering irons, grinders, polishers, power saws, etc. In Handsomely styled to match the finest appliances or electric tools. Convenient safe and dependable to use. Grip-type prongs insure long service life. Rubber covered. Underwriters Laboratories Approved. Shpg. wt., 1 lb. 96c
Type 17361 M (Old 1756 K ). SJ 10 -Foot Extension Cord. No. 16 wire. For general-pur pose use. Unbreakable plastic plug and connector. Underwriters' Laboratories Approved Black rubber covered. Shpg. wt., 1 lb.
49 T 216 . NET...................... . 82 C
Type 17395M (OId 1791 K). SJT 50-Foot Extension Cord No 16 wire For lawn mowers, yard extensions, etc. U.L. Ap 49 T 217 . NET............................. 4.64
Type 17397 M (OId 1792K). SJT 100 -Foot Extension Cord. No. 16 wire. Extra-flexible. Red plastic. Same uses as above. U.L. Approved. Shpg. wt., $61 / 2 \mathrm{lbs}$.
7.50
(TBM)

(F)

##  <br> REPLACEMENT CORD VALUES <br>  <br> G VALUES

E 6-Ft. Replacement Cord Set. Heavy, plastic insulated cord firmly secured in sturdy molded plug on one end; other end stripped. 49 T 230. 10 or More

F Cube Tap Extension. 3-way extension F tap. Rated at 15 amps 125 volts; 10 amps 250 volts. With 6 -foot cord and bakelite plug
52 N 605.10 or More, EA. . 334. EA.. . 37C

Rubber Cube Tap Extension. An allrubber, solderless, 3 -way extension cord set. Consists of 9 -ft. cord, unbreakable cube tap and plug. No. 18 wire. Spring action contact in cube recephack. wt., 8 oz . 52 N 608. EACH.

59c
6-Ft. Extension. Same as above, but with 6 -ft. cord. Shpg. wt., 6 oz .
52 N 621. EACH.
$.50 ¢$

H



## VALUES IN HANDY ELECTRICAL ACCESSORIES

(H) Line Cord Receptacle. Rubber pullhandle receptacle. Dia., $11 / 4^{\prime \prime} .15 \mathrm{amps}$ at 5 V Shpg wt 3 oz .52 N 603. EACH
26c
Rubber-Handle Plug. Unbreakable softrubber. Approved for power tools. Excellent for use with 52 N 603, above, for line cord
extensions. Shpg. wt., 2 oz . 52 N 02 EACH.. 2 .
52 N 602. EACH
K Bakelite Plug Cap. With convenient K. finger-grip. Cap size, $11 / 8 \times 11 / 16 \times 9 / 16^{\prime \prime}$ deep. Brown finish. Shpg. wt., 2 oz.
52 N 600. EACH.
.8c
Flat Rubber Plug. Non-breakable molded rubber plug cap. Because of their narow construction, these caps are ideal for use with multiple AC receptacles similar to Fig. S above. Easily disassembled. Screw terminal wiring. Rated 15 amps at 125 v .; 10 amps at 250 v. Shpg. wt., 3 oz.
52 N 641 . EACH
10c
Rubber Cube Tap. Spring-action, 3-way M) Rutlet of one-piece, soft rubber. U. L. Approved. Shpg. wt., 4 oz.
52 N 609. EACH.
$.23 c$
N Continental Adapter. Male-female adapter. Permits using standard flat-prong American plugs in Continental Europe outlets or round prongs. Wt., 2 oz . 49 N 536. NET.

P Fused Plug. Protects equipment. Small fuses for each side of line fit snugly in cylindrical receptacles-blown fuse easily rewith any standard AC plug. Supplied less 3AG cartridge fuses. (See pages 214, 215 for fuses.) Shpg. wt., 3 oz. $\qquad$ 33cAcademy Automatic Plug. No wire stripping., Just insert through cap. Sure-grip needies" on prongs make positive connection through insulation. For POSJ cable only. 52 N 607 . NET EACH. $\qquad$ .10c

S Academy 3-Way Outlet. No wire strip-ping-insert cord, close case. $15 \mathrm{amps} / 125$ 52 N 622. Mahogany plastic. NET
52 N 622. Mahogany plastic. NET
52 N 619 . White plastic.
EACH
I6c
T Parallel Ground Adapter. Adapts 3prong plugs for use in standard 2 -prong wire with grounding lug. Shpg. wt., 3 oz. 25 C
52 N 669 . NET EACH...............2.

(W)Plug Fuses. U.L. Approved. Clear view5 per box.


X Morse Midget Cord Connector. 2-con$X$ tact pull-apart type. For AC-DC cords. pilot liz "' pug and receptacle. 17/8" long and 9/16" dia 52 N 626. 10 or More, EA. 444 . EA. . . 49C

$\square$
Cord Clamp Plug. Two-wire rubber plug cap with cord clamp attachment riveted on. Cord clamp is adjustable to all wire sizes and provides absolute strain relief; wire cannot slip out of clamp-clamp will not move. Spring-action prongs. Highly dependble. Brown. Shpg. wt., 4 oz
52 N 604. 10 or more, EACH 27¢. EA. 35c

## WIRE CONNECTORS

Solderless. Simply strip two wire ends, push into connector, and screw cap down. Wires cannot be pulled out. Finest
 grade phenolic. U. L. Approved. Av. wts.: Pkg. of $25,5 \mathrm{oz}$; P Pkg . of $100,11 / 4 \mathrm{lbs}$.

| $\begin{aligned} & \text { Wire } \\ & \text { Size } \\ & \hline \end{aligned}$ | Stock No. | Pkg. of 25 | Stock No. | $\begin{gathered} \text { Pkg. } \\ \text { of } 100 \end{gathered}$ |
| :---: | :---: | :---: | :---: | :---: |
| 16-18 | 52 N 874 | . 24 | 52 N | 73 |
| 14-18 | 52 N 875 | . 39 |  | . 06 |
| 12-18 $10-18$ | 52 52 N 876 | . 86 | 52 N 872 52 | . 281 |

# Belden Cable and Wire 

##  <br> SHIELDED MICROPHONE CABLE SINGLE CONDUCTOR-FOR HIGH-IMPEDANCE MIKES

No. 25, tinned, stranded conductor; $3 \times 33$ copper and $4 \times 33$ steel wire. Covered with cellulose acetate yarn braid, polyethylene insulation and black rubber jacket. Lengths under 100 ft. available only in spool sizes listed below.

| Mfr's | O. D. | Wt. <br> Type |
| :--- | :---: | ---: |
| 8400 | $.200^{\prime \prime}$ | $100 \mathrm{ft}_{.}$ |
| $8410^{*}$ | $.245^{\prime \prime}$ | 4 bs. |
| 8411 | $.144^{\prime \prime}$ | $21 / 4 \mathrm{lbs}$. |




## TWO-CONDUCTOR-FOR LOW-IMPEDANCE MIKES

Shielded cable. 8422 is No. 22 stranded ( $16 \times 34$ ) tinned copper, polyethylene insulation, chrome plastic jacket. 8412 is No. 20 stranded duty studio cable, No. 18 stranded ( $41 \times 34$ ), cotton wrap, black rubber jacket lengths under 100 ft available only in spool sizes listed jacket. Lengths under 100 ft. available only in spool sizes listed

| Mfr's <br> Type | O. D. | Wt.s. <br> 100 ft. |
| :---: | :---: | :---: |
| 8428 | $.295^{\prime \prime}$ | 7 lbs. |
| 8412 | $.268^{\prime \prime}$ | $51 / 2 \mathrm{lbs}$. |
| 8422 | $.231^{\prime \prime}$ | 4 lbs. |


| Mfr's Type | 15 ft. Spool |  | 25 ft. Spool |  | $50 \mathrm{ft}$. Spool |  | 100 ft . Spool |  | Over 100 ft . |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | No. | NET | No. | NET | No | NET | No | NET | No | er |
| 8428 | 47 T 4 |  | 47 T 46 |  | 47 T 467 |  | 47 T 454 | 10.29 | 47 W 468 |  |
|  | 47 T 4 | 1. | 7 T | 2.3 | 47 |  | 47 T 453 | 8.08 | 47 W 464 |  |
| 842 |  |  | 47 T 452 |  | 47 T 455 |  | 5 |  |  |  |

## MULTIPLE-CONDUCTOR MIKE AND POWER CABLE

For microphone and interconnecting power cable requirements. No. 20 stranded ( $26 \times 34$ ), tinned copper conductor, and color-coded conductors. Types $8423,8424,8425,8426,8427$, and 8418 have cotton wrap, rubber insulation, rayon braid, tinned copper braid shield, and black insulation, rayon, tinned copper braid shield, and chrome vinyl plastic jacket. Types $8403,8404,8423$, and 8424 for all low-impedance mikes; all others for general interconnecting power cable uses. Lengths under 100 ft . available only in spool sizes listed below.

| $\begin{aligned} & \text { Mifr's } \\ & \text { Tyoe } \end{aligned}$ | O.D. | $\begin{gathered} \text { Wt., } \\ 100 \mathrm{ft} . \end{gathered}$ |
| :---: | :---: | :---: |
| 8403 | . $247{ }^{\prime \prime}$ | $53 / 4 \mathrm{lbs}$. |
| 8404 | . $250{ }^{\prime \prime}$ | $71 / 2 \mathrm{lbs}$. |
| 8423 | . $277^{\prime \prime}$ | $53 / 4 \mathrm{lbs}$. |
| 8424 | .295 ${ }^{\prime \prime}$ | $71 / 2 \mathrm{lbs}$. |
| 8405 | . 275 " | $8{ }^{1 / 2}$ lbs. |
| 8425 | . 323 " | 8 lbs. |
| 8426 | . $349^{\prime \prime}$ | 101/4 lbs. |
| 8427 | . $360^{\prime \prime}$ | $103 / 4 \mathrm{lbs}$. |
| 8418 | . $386^{\prime \prime}$ | $101 / 2 \mathrm{lbs}$. |


| Mfr's Type No. | Conduc= Bors | $\mathbf{M m f}$. per foot | 15 ft. Spool |  | 60 ft . Spool |  | 100 ft . Spool |  | Over 100 ft . |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  |  | No. | NET | No. | NET | No. | NET |  | No. | Per 100' |
| 8423 | 3 | 85 | 47 T 461 | 1.62 | 47T462 | 4.80 | 47 T 460 | 8.82 |  | W 463 | 8.82 |
| 8403 | 3 | 45 | 47 T 554 | 1.47 | 47 T 555 | 3.67 | 47 T 557 | 7.35 |  | W 558 | 7.35 |
| 8404 | 4 | 42 | 47 T 559 | 1.70 | 47 T 565 | 4.41 | 47 T 566 | 8.82 |  | W 567 | 8.82 |
| 8424 | 4 | 95 | 47 T 471 | 1.86 | 47 T 472 | 5.39 | 47 T 470 | 10.29 |  | W 473 | 10.29 |
| 8425 | 5 | 58 | 47 T 481 | 2.06 | 47 T 482 | 6.42 | 47 T 480 | 12.64 | 47 | W 483 | 12.64 |
| 8405 | 5 | 42 | 47 T 568 | 1.91 | 47 T 569 | 5.44 | 47 T 572 | 10.88 |  | W 573 | 10.88 |
| 8426 | 6 | 60 | 47 T 491 | 2.65 | 47 T 492 | 7.89 | 47 T 490 | 15.14 |  | W 493 | 15.14 |
| 8427 | 7 | 56 | 47 T 507 | 2.89 | 47 T 508 | 8.53 | 47 T 510 | 16.56 | 47 | W 509 | 16.56 |
| 8418 | 8 | 64 | 48 T 834 | 2.89 | 48 T 835 | 8.77 | 148 T 836 | 16.86 | 48 | W 837 | 16.86 |

## UNSHIELDED TWO-CONDUCTOR WEATHERPROOF CABLE

For intercoms, speaker extensions, etc. 8205 is No. 22 stranded ( $7 \times 30$ ), | 8205 | $.165^{\prime \prime}$ | 2 lbs. |
| :---: | :---: | :---: | rubber insulation, black cotton braid; 8204 is No. 18 ( $16 \times 30$ ), rubber

| 8204 | $.220^{\prime \prime}$ |
| :---: | :---: | 3 lbs. insulation, white cotton braid.

8205
$\left|\begin{array}{ll|l|}47 \text { T } 861 \\ 47 \text { T } 640 & .79 \\ \hline\end{array}\right|$

$|$| 47 T 860 | $2.40 \mid 47$ W 862 | 2.40 |
| :--- | :--- | :--- | :--- | :--- | :--- |
| 47 T 639 | $3.53 \mid 47$ W 641 | 3.53 |

## 2-CONDUCTOR RUBBER SERVICE CORDS

Two conductor stranded bare copper wire with cotton fillers. Rubber insulation is $1 / 32^{\prime \prime}$ on type SJ. and $1 / 64^{\prime \prime}$ on SV. All are color coded for easy identification. 8452 and 8478 are No. 18 stranded ( $41 \times 34$ ). 8472 , No. 16 stranded only in spool sizes listed below.

| Mfr's <br> Type | O. D. | 25 ft. Spool |  | $50 \mathrm{ft}$. Spool |  | $100 \mathrm{ft}$. Spool |  | Over 100 ft . |  |  | Lbs., 100 ft . |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  | No. | NET | No. | NET | No. | NET |  | No. | Per 100' |  |
| 8452* | . $245^{\prime \prime}$ | 47 T 411 | 1.42 | 47 T 412 | 2.40 | 47 T 410 | 4.26 | 47 | W 413 | 4.26 | 5 |
| $8478 \dagger$ | . 299 " | 47 T 401 | 1.62 | 47 T 402 | 2.79 | 47 T 400 | 5.14 | 47 | W 404 | 5.14 | $51 / 4$ |
| $8472 \dagger$ | .325" | $\mid 47$ T $406 \mid$ | 1.91 | 47 T 407 | 3.38 | 47 T 403 | 6.32 | 47 | W 408 | 6.32 | $51 / 2$ |

## MULTIPLE-CONDUCTOR WIRE

Excellent for 3, 4, and 5-conductor wire extension speakers, public address systems, test equipment, remote control circuits, press-to-talk intercom circuits etc. Uniform quality. Bare copper fexible stranding; cotton wrap; rubber insulation; eolor-coded conductors; black rubber jacket, Av. shpg. wt., per $100-\mathrm{ft}$. spool.
$\mathbf{5} 1 / 2 \mathrm{lbs}$. Lengths under 100 ft . available only in spool sizes listed below.

| Type | O.D. |
| :---: | :---: |
| 8453 | $.265^{\prime \prime}$ |
| 8454 | $.265^{\prime \prime}$ |
| 8455 | $.280^{\prime \prime}$ |


| Mir's Type | Cond. | Wire Size | 15 ft . Spool |  | 50 ft . Spool |  | 100 ft . Spool |  | Over 100 ft. |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  |  | No. | NET | No. | NET | No. | NET | No. | Per 100' |
| 8453 | 3 | 18 (41x34) | 47 T 421 | 1.17 | 47 T 422 | 2.94 | 47 T 420 | 5.39 | 47 W 423 | 5.39 |
| 8454 | 4 | 18 (41x34) | 47 T 431 | 1.22 | 47 T 432 | 3.53 | 47 T 430 | 6.57 | 47 W 433 | 6.57 |
| 8455 | 5 | $\left\|\begin{array}{l} 3-22(16 \times 34) \\ 2-18(41 \times 34) \end{array}\right\|$ | 47 T 441 | 1.37 | 47 T 442 | 3.92 | 47 T 440 | 7.30 | 47 W 4431 | 7.30 |



## SHIELDED PA AND SOUND SYSTEM CABLE

For long runs in speaker installations. 8208 and 8209 are 2-cond. 8206,1cond.; 8735,3-cond.All have No. 18 stranded copper conductor (except 8735), cotton or paper wrap, ruber insulalat 8209 in lastic; 8206 in copper braid. Lengths under 100 ft available only in sizes below

| $\begin{aligned} & \text { Mir's } \\ & \text { Type } \end{aligned}$ | O. D. | 15 ft. Spool |  | 50 ft. Spool |  | 100 ft . Spool |  | ver 100 ft . |  |  | $\begin{array}{r} \text { L.bs.: } \\ 100 \mathrm{ft} . \end{array}$ |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  | No | NET | No. | NET | N | NET |  | N | Per 100' |  |
| 8206 | . 15 | 71831 | 71 | 47 T 832 | 1.9 | 47 T 830 |  |  | W 833 |  |  |
| 208 | . 260 | 77 T 852 |  | 47 T853 | 3.18 | 47 T 851 | 5.83 |  | W 854 |  |  |
| 209 | .258" | 47 T 847 | 1.08 | 47 T 848 | 3.04 | 47 T 850 | 5.59 |  | W 849 |  |  |
| 735 | . 195 | 48 T 872 | 85 | $\mid 48$ T 873 | 2.25 | 48 T 876 | 4.21 |  | W 874 | 4.21 | 3 |

## JUKE BOX CABLE

|  |  |  | Mfr's O.D. |  |
| :---: | :---: | :---: | :---: | :---: |
|  |  |  |  |  |
|  |  |  | 8783 | . $240^{\prime \prime}$ |
|  |  |  | 878 | . $058^{\prime \prime} \mathrm{x} .115^{\prime \prime}$ |
| $\mathrm{Hi}$ |  |  | $\left\lvert\, \begin{aligned} & 8785 \\ & 8786 \end{aligned}\right.$ | $\begin{aligned} & .195^{\prime \prime} \times .300^{\prime \prime} \\ & .195^{\prime \prime} \times .300^{\prime \prime} \end{aligned}$ |
| and control cable for all 8886 |  |  |  |  |
| juke box applications. |  |  |  |  |
| All have vinyl-plastic inner insulation; chrome |  |  |  |  |
| vinyl plastic outer jacket. Type 8782 parallel is |  |  |  |  |
| No. 24 stranded (7x32) for speaker cable; 1 |  |  |  |  |
| bare cond., 1 tinned copper cond. Others for |  |  |  |  |
| use as juke box control cable. 8783 is 3 -cond. |  |  |  |  |
| color-coded, $1-\mathrm{No}$ ( $26 \times 30$ ( $10 \times 30), 2-\mathrm{No}$. |  |  |  |  |
| ( $26 \times 30$ ). Type 8785 oval is 5 -cond. color-coded. |  |  |  |  |
| No. 22 stranded ( $7 \times 30$ ) tinned copper with |  |  |  |  |
| copper braid shield over 3 conductors, twisted |  |  |  |  |
|  |  |  |  |  |  |  |
| coded, $2-$ No. 22 ( $7 \times 30$ ), 4 No. 24 ( $7 \times 32$ ) |  |  |  |  |
| tinned copper braid shield over 4 conductors; twisted pair unshielded. |  |  |  |  |
|  |  |  |  |  |  |  |
| Stock No. | Mir ${ }^{\prime}$ s Type | $\left\|\begin{array}{c} \text { Wt.1. } \\ 100 \text { ft. } \end{array}\right\|$ | $\begin{gathered} \text { NET } \\ \text { Perft. } \end{gathered}$ | $\begin{gathered} \text { NET } \\ \text { Per } 100 \mathrm{f} \end{gathered}$ |
| 8 W 867 | 8783 | 4 | 54 | 4.2 |
| 48 W. 868 | 8782 | 10 | 24 |  |
| 48 W 86 | 8785 | 3 lbs . | 64 |  |
| 48 W 864 | 878 |  | 8 |  |

## CATHODE-RAY TUBE CABLE

## Type 8869. High

 voltage cable forCR tubes. power supplies and other applications. High dielectric strength, corona resistance and minimum sur face leakage. No. 20 single cond uctor stranded ( $7 \times 28$ ) tinned copper, with white flame retardant polyethylene insulation. $0,100 \mathrm{ft} ., 13 / 4 \mathrm{lbs}$.
O.D. 10,000 volts. Shpg. wt Available only in lengths shown below. 47 T 893. 25 ft . Spool. NET $\qquad$
47 T 895. 100 ft . Spool. NET
$\qquad$ .67 c Type 8868. As above but with $.065^{\prime \prime}$ insulation, white with red stripe; rated at 20,000 volts. $.168^{\prime \prime}$ O.D. Shpg. wt., 100 ft ., $23 / 4$ lbs.
47 T 897. 25 ft . Spool. NET.. 1.00

47 T 896. 100 ft. Spool. NET. 3.02

## dUPLEX LIGHTING CABLE

$\longrightarrow$ Weatherproof 2-cond.stranded copper wire. Outer jacket is brown and one red conductor parallel in plastic vinyl oval sheathing. Av. wt., 100 ft., 5 lbs.
Type 8677. No. ${ }^{16}$ (19x29).

100 ft 05. PER 10 . 6 C
Type 8675. No. 14 (19x27).

47 W 415 . PER FOOT 8 c

Type 8673. No. 12 (19x25).
47 W 425 . PER FOOT.
100 ft . or more, PER 100 Fi. 12c

## SHIELDED GRID WIRE

Type 8885. No. 20 single stranded ( $10 \times 30$ ) tinned copper, . $015^{\prime \prime}$. rubber insulation. Cellulose acetate yarn braid, fungus-resistant lacquer lose acetate yarn braid, rungus-resistant Usquer circuits where shielded grid return is required and to shield a circuit conductor from stray fields. Break-down voltage, 4000 volts. O.D., $.117^{\prime \prime}$. Shpg. wt., 100 ft ., 2 lbs . Lengths under 100 ft . available only'in spool sizes listed 47 T 791.15 ft . Spool. NET. 59c 47 T 792.25 ft. Spool. NET… $10 . . .9 .964$ 47 T 790. 100 ft . Spool. NET......... 2.94

## PHONO PICKUP ARM CABLE

Type 8430. New, phono pickup arm cable of exceptional flexibility. Lightweight; has minimum effect on tracking ed ( $7 \times 40$ ) copper conductor with $.009^{\prime \prime}$ vinyl plastic insulation. Red and black twisted pair; D. 055"

47 T 614. 10 -ft. Spool. Wt., 4 oz . NET 35 C 47 T $615.25-f t$. Spool. Wt., 5 oz . NET. 504
47 T 616.250 -ft.Spool, Wt., 8 oz . NET. 3.38

Type 8431. No. 24 stranded ( $16 \times 36$ ) tinned copper, rubber covered, tinned copper shield, brown cotton. Extremely limp and flexible.
 47 T 612.25 ft Spool. NET............... 994


## Belden Wire and Cable

## 3 \& 4-CONDUCTOR INTERCOM CABLE

Type 8734. No. 22 tinned, stranded copper ( $7 \times 30$ ) with plastic insulation. 3 cond.: 1 tinned copper shield, 2 unshielded. Chrome vinyl plastic jacket overall. For station-to-station and extension wiring. $0.190^{\prime \prime}$ O.D. Shpg. wt., 48 W 875 . PER FOOT. 100 ft . or more, PER 100 Fí: $5 c$
3.67

Type 8732. No. 22 tinned, stranded copper ( $7 \times 30$ ) with polyethylene insulation. 4 conductors: 1 pair tinned copper braid shield, 1 pair unshielded. Chrome vinyl plastic jacket. Oval, $.174^{\text {² }}$. $282^{\prime \prime}$ O.D. Wt., 100 ft ., 3 lbs. 48 W 897. PER FOOT. 100 ft . or more, PER 100 Fi.

## SHIELDED P.A. AND SOUND SYSTEM CABLE

For public address and intercom use. All have inner insulation of vinyl plastic except 8432 and 8433 (rubber) and 8799 (cotton except *copper braid shield. 8432 and 8433 are No. 20 per braid shield. 8789 and 8790 and
 8791 are No. 18 stranded ( $7 \times 26$ ) ; 8799 is No. 1 cast use) ; 8779 stranded

| $\begin{gathered} \text { Stock } \\ \text { No. } \end{gathered}$ | $\begin{aligned} & \hline \text { Mfr's } \\ & \text { Type } \\ & \hline \end{aligned}$ | Cond. | O. D. | $\begin{aligned} & \text { Lbs. } \\ & 100 \mathrm{ft.} . \end{aligned}$ | $\begin{aligned} & \text { PER } \\ & \text { FOOT } \end{aligned}$ | $\begin{gathered} 100 \mathrm{Ft} . \\ \text { For. } \end{gathered}$ |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 48 W884 | 8432* | 2 | . $2225^{\prime \prime}$ | $31 / 2$ | 74 | 5.98 |
| 48 W 866 | 8433* | 3 | . 230 " | $51 / 4$ | 94 | 7.45 |
| 48 W 814 <br> 48 | 8779* | 2 2 | . $2255^{\prime \prime}$ | $5_{5}^{1 / 2}$ | 88 | 6.17 6.17 |
| 48 W 865 | 8789* | 2 | .205" | 3 |  | 4.41 |
| 48 w 803 | 8790 | 2 | . $2225^{\prime \prime}$ |  |  |  |
| 48 W 804 | 8791 | 3 | . $230{ }^{\prime \prime}$ | 51/4 | 74 | 5.73 |
| 48 W 885 | 8799* | 2 | .165" | 3 | 64 | 4.85 |

## UNSHIELDED P.A. AND SOUND SYSTEM CABLE

For PA, intercom, speaker extension, alarm systems, etc. High insulation resistance and precision cabling assure low-noise circuits free from cross-talk. All have vinyl insulation except 8762 which has polyethylene. And have outer jackets of chrome vinyl plastic except $8482,8483,8460$ over copper ground wire and twisted pair, stranded ( $7 \times 28$ ). $*$ Solid copper conductors. $\dagger$ Stranded ( $7 \times 26$ ), \% stranded ( $19 \times 29$ ).

| Stock No. | $\begin{gathered} \hline \text { Mfr's } \\ \text { Type } \\ \hline \end{gathered}$ | Cond. | Wire Size | O. D. | $\begin{aligned} & \text { Lbs.; } \\ & 100 \mathrm{ft.} \end{aligned}$ | $\begin{array}{\|l\|} \hline \text { PER } \\ \text { FOOT } \\ \hline \end{array}$ | $\begin{gathered} 100 \mathrm{Ft} \\ \mathrm{For} \\ \hline \end{gathered}$ |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 48W878 | 8482* | 2 | 19 | . $115^{\prime \prime}$ | $31 / 2$ | $11 / 24$ | 1.25 |
| 48 W 879 | 8483* | 3 | 19 | . $132^{\prime \prime}$ | 13/4 | $2 ¢$ | 1.76 |
| 48 W W 806 | 8487* | 3 | 19 | . $1766^{\prime \prime}$ | $31 / 2$ $21 / 2$ | $2 \phi$ 36 | 1.85 2.34 |
| 48 W 809 | 8762 | 2 | 20 | .166" | 2 | 46 |  |
| 48 W 816 | $8460+$ | 2 | 18 | .175" | $21 / 2$ | 36 | 2.35 |
| 48 W 817 | $8461 \dagger$ | 2 | 18 | .195" | 3 | 56 | 3.97 |
| 48 W 818 | 84708 | 2 | 16 | .195" | $23 / 4$ | $31 / 2 \phi$ | 2.79 |
| 48 W 819 | 8471 § | 2 | 16 | .246" | 4 | 41/24 | 3.82 |

## 2-CONDUCTOR BROADCAST AUDIO CAble

All have tinned, solid-copper conductors. 8436, 8437 and 8440 have No. 22 solid copper ground wire parallel to twisted pair under copper spiral-wrapped shield ( 8437 , copper braid shield). All others have 2 conductors under copper braid shield. Outer jackets: Type 8436 and
8437 black vinyl plastic; 8438 and 8439 copper 8437, black vinyl plastic; 8438 and 8439, copper

 cellulose-acetate yarn braid over cellulose-acetate yarn wrap; 8437, cellulose-acetate yarn braid over cellulose-acetate
waxed cotton braid over cellulose-acetate yarn wrap.

| Stock No. | $\begin{aligned} & \text { Mifr's } \\ & \text { Type } \end{aligned}$ | Gauge | O. D. | $\begin{aligned} & \text { Lbs. } \mathrm{F} . \\ & 100 \mathrm{ft.} . \end{aligned}$ | $\begin{aligned} & \text { PER } \\ & \text { FOOT } \\ & \hline \end{aligned}$ | $100 \mathrm{Ft} .$ For |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 48 W 859 | 8436 | 22 | . $180^{\prime \prime}$ | 2 | $51 / 24$ | 4.56 |
| 48 w 886 | 8437 | 22 | . 222 " | $31 / 2$ | 64 | 4.95 |
| 48 W 887 | 8438 | 20 | . $140^{\prime \prime}$ | $23 / 4$ |  | 4.07 |
| 48 W 888 <br> 48 | 8439 8440 | 22 | . $180{ }^{\prime \prime}$ | $3^{3 / 4}$ | $51 / 24$ | 4.70 4.41 |

## COPPER BRAID SHIELDING AND BONDING CABLE

| $\begin{aligned} & \text { Mfr's } \\ & \text { Type } \end{aligned}$ | I. D. | Stranding | Flexible, braided and tinned copper for shielding conductors and |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 8660 | $1 / 8{ }^{\prime \prime}$ | $96 \times 34$ |  |  |  |  |
| 8668 | 1 | 120x34 | ing TVI-proof, metal-to-metal bonding. Braided in tubular form for easy slip-on installation over wiring. Av. shpg. wt. per 50 ft ., $11 / 2 \mathrm{lbs}$. Lengths under 50 ft . available only in 10 ft . spools. |  |  |  |
| 8661 |  | 192x 34 |  |  |  |  |
| 8669 |  | $336 \times 34$ |  |  |  |  |
| 88662 | 25/32" | $\begin{array}{r}376 \times 34 \\ \hline\end{array}$ |  |  |  |  |
|  |  |  |  |  |  |  |
| Mif's Type | $10 \mathrm{ft}$. Spool |  | 50 ft. Spool |  | 100 ft . or more |  |
|  | Stock No. | NET | Stock No. | NET | Stock No. | Per 100 |
| 8660 | 49 T 351 | . 41 | 49 T 350 | 1.32 | 49 W 35 |  |
| 8668 | 49 T 356 | . 51 | 49 T 355 | 1.76 | 49 w 357 | 3.35 |
| 8661 | 49 T 361 | . 56 | 49 T 360 | 2.16 | 49 w 362 | 4.00 |
| $\begin{array}{r}8669 \\ 8662 \\ \hline\end{array}$ | $\begin{array}{r}49 \\ 49 \\ \hline\end{array}$ | 1.140 | 49 T 365 49 T 380 | 5.14 6.47 | 49 W 367 49 w 382 | 9.41 12.94 |

## VINYL-COVERED PLASTIC-INSULATED CABLE

For permanent installation of speakers, control and intercom circuits, and other applications requiring highly durable, ightweight cable. Conductors are tinned copper, fexible, stranded wire, with color coded, plastic insulation; chrome vinyl plastic jacket overall. *All conductors are No. 22 stranded $(7 \times 30)$. $\dagger$ Have two conductors of No. 18 stranded ( $16 \times 30$ ); the others are No. 22 stranded. Lengths under 100 ft . available only in $s$ pool sizes listed below.

## Belden Cable and Wire

TYPE MIL-W-76A SRIR THERMOPLASTIC HOOK-UP WIRE


A general-purpose, heavy-duty, thermoplasticinsulated hook-up wire for critical electronic applications. Insulation is rated at 1000 volts rms. Made to conform to stringent government specifications. Features extremely high dielecatures and extremely low moisture absorptionHas high flame and fungi resistance, Vinyl thermoplastic insulation (. $016^{\prime \prime}$ thick) is virtually impervious to damage from solvents. All are tinned copper conductors. Avala blue, violet, ray and white, Specify choice, Av. shpg. wt. $25-\mathrm{ft}$. spool, 6 oz .; $100-\mathrm{ft}$. spool, $11 / 4 \mathrm{lbs}$.; $1000-\mathrm{ft}$. spool, 14 lbs.

| 25-FOOT SPOOLS-SPECIFY COLOR |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: |
| Stock No. | Mfr's Type | Size | Strands | O. D. | NET EACH |
| 47 TT | 214 | 8530 | 22 | Solid | $.0599^{\prime \prime}$ |
| 47 TT 215 | 8524 | 22 | $7 \times 30$ | $.064^{\prime \prime}$ | $32 \phi$ |
| 47 TT 216 | 8529 | 20 | Solid | $.066^{\prime \prime}$ | 374 |
| 47 TT 217 | 8523 | 20 | $10 \times 30$ | $.072^{\prime \prime}$ | 384 |



Type 8822 Assorted Wire Kit. Contains ten 25 -ft. spools of Type 8529 hook-up wire and a dispenser rack. Colors: black, blue, green, red, white, yellow, orange, brown, gray, violet. Shpg. wt., $21 / 2$ bs.
47 T 226. NET
Type 8824 Assorted Wire Kit. Contains eight 25 - ft. ............... 3.53 8523 hook-up wire and a dispenser rack. Colors: black, blue, green, red, white, yellow, orange, brown. Shpg. wt., $21 / 4$ lbs.
47 T227. NET............................


## POPULAR ANTENNA WIRE

High conductivity copper antenna wire. Ideal for all receiving and transmitting antenna requirements. Maximum tensile strength assures minimum stretch. *Nylclad insulation protects wire from corrosion. Supplied only in coil lengths listed below. Av. shpg. wt., per $100-\mathrm{ft}$. coil, 1 lb .

STRANDED BARE COPPER

| Type 8000-7x22 |  |  | Type 8002-7x24 |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: |
| Stock No. | Spool | NET | Stock No. | Spool | NET |
| 47 T 68 | 50 ft . | 81 | 47 T 654 | 50 | 59 |
| 47 T 681 <br> 47 | (100 ft. | 1.10 | 477655 | $\begin{array}{r}75 \\ 100 \mathrm{ft.} \\ \hline\end{array}$ | .73 .96 |
| 47 T683 | 1,000 ft. | 13.23 | 47 T 657 | $1,000 \mathrm{ft}$. | 8.82 |

*SOLID NYLCLAD COPPER

| Type 8008 No. 12 |  |  | Type 8009 No. 14 |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: |
| 47 T 670 | 100 ft . | 2.30 | 47 T 740 | 100 ft . | 1.62 |
| 47 T 735 <br> 47 | 200 ft 500 ft | 4.26 9.55 | 47 T 741 | 500 ft . | 6.61 |

## INDOOR AERIAL WIRE

Type 8014. Extra flexible. No. 25 stranded (13x36), tinned copper conductor, with chrome vinyl plastic insulation. O.D., . $044^{\prime \prime}$. Shpg. wts. $25-\mathrm{ft}$. spool, 2 oz .; $500-\mathrm{ft}$. spool, 2 lbs .
47 T 930. $25-\mathrm{ft}$. spool. NET 29C. 47 T 933. $500-\mathrm{ft}$. spool. NET 2.60

## NYLCLAD HEAVY MAGNET WIRE

Type HNC. This heavy-duty Nylclad copper magnet wire combines the most desirable features of Formvar wire with the toughness and solvent resistance of nylon enamel. Unexcelled for difficult and exacting windings of any type. Outstanding features: Withstands winding abuse and forming operations; resists solvent action on extreme temperatures; infinite moisture resistance.

| 1/2 lb. Spool |  |  |  | 1 lb . Spool |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Stock No. | Size | Feet | NET | Stock No. | Size | Feet | NET |
| 48 T 036 | 14 | 40 | . 61 | 48 T 086 | 14 | 80 | 1.15 |
| 48 T 037 | 16 | 63 | .61 | 48 T 087 | 16 | 126 | 1.15 |
| 48 T 038 | 18 | 150 | . 62 | 48 T 088 | 18 | 199 | . 18 |
| 48 T 040 | 22 | 250 | . 68 | 48 T 090 | 22 | 501 | 1.28 |
| 48 T 041 | 24 | 396 | . 71 | 48 T 091 | 24 | 793 | 1.35 |
| 48 T 042 | 26 | 630 | . 76 | 48 T 092 | 26 | 1260 | 1.4 .9 |
| 48 T 043 | 28 | 995 | . 84 | 48 T 093 | 28 | 1990 | 1.62 |
| 48 T 044 | 30 | 1570 | . 93 | 48 T 094 | 30 | 3140 | 1.81 |
| 48 T 045 | 32 | 2440 | . 97 | 48 T 095 | 32 | 4880 | 1.91 |
| 48 T046 | 34 | 3930 | 1.1 | 48 T 096 | 34 | 7860 | 2.20 |
| 48 T 047 | 36 | 6200 | 1.29 | 48 T 097 | 36 | 12400 | 2.50 |
| 48 T 048 | 38 40 | 9700 16050 | 1.70 | 48 T T 098 | 38 40 | 19400 32100 | 3.5 |

## WIRE MARKERS

New Stran Code adhesive markers provide efficient method of wire and cable identification. Consist of 33 numeral markers ( $3 / 8 \times 112^{\prime \prime}$ ) per card in numerical sequence from 1 through 33. On vinyl impregnated cloth or $003^{\prime \prime}$ soft aluminum. Pressure sensitive adhesive. Heat resistant. Card size: cloth, $2 \times 9^{\prime \prime} ;$ aluminum, $15 / 8 \times 63 / 4^{\prime \prime}$. Shpg. wt., 3 oz. Write for
49 T 898. Cloth. PER CARD, 1-9........ 234 10-49, Each..... 214 49 T 899. Aluminum. PER CARD, 1-9 ...21申 10-49, Each..... $19 \phi$

HIGH-TEMPERATURE THERMOPLASTIC HOOK-UP WIRE

## Type B Mil-W-16878-B. For general use in tempera-

 tures of up to 212 degrees $F$. and with voltages up to 600 volts rms. Vinyl thermoplastic insulation (. $010^{\prime \prime}$ ) resists damage from solvents. Conductors are stranded tinned copper. Supplied on durable spools for most convenient, storage and use. A color designation such as wh/black" indicates white body color and black strip ing. Available in 9 colors: wh/black, wh/brown, wh/red, wh/orange, wh/yellow, wh/green, wh bue, wh/violet, wh/gray. Av. shpg. wt.: 100 -ft spool, 1/2 lb.; 1000-ft. spool, $43 / 4 \mathrm{lbs}$.100 AND 1000-FOOT SPOOLS-SPECIFY COLOR

|  | Size | Strands | O.D. | $100^{\prime}$ Spool |  | 1000 Spool |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Type |  |  |  | No. | EACH | No. | EAC |
| 8501 | 18 | $7 \times 26$ | .068 ${ }^{\prime \prime}$ | 47 TT 260 | 1.3 | 47 TT 264 | 11.1 |
| 8502 | 20 | $7 \times 28$ | .058"' | 47 TT 261 | 1.20 | 47 TT 265 | 9.41 |
| 8503 | 22 | $7 \times 30$ | .050" | 47 TT 262 |  | 47 TT 266 |  |
| 8504 | 24 | $7 \times 32$ | .044" | 47 TT 263 | 1.0 | 47 TT 26 |  |



## CELLULOSE ACETATE HOOK-UP WIRE

Single, tinned copper conductor, with heavy cellulose acetate yarn wrap and cellulose yarn braid. Ideal for RF circuits where low-loss properties are required. Has ungus and flame resistant lacquer coating. 1000 v . AC megs/ft. Type 8943 is $10 \times 30$ type 8947 is $16 \times 30$, type megs/ft. Type 8943 is $10 \times 30$, type 8947 is $16 \times 30$, type
8942 is $26 \times 30$, type 8938 is $41 \times 30$. Type 8941 has $072^{\prime \prime}$ O.D., Type 8943 has . $076^{\prime \prime}$ O.D., Type 8945 has $.080^{\prime \prime}$ O.D. Type 8938 has. $.115^{\prime \prime}$ O.D. Av. shpg. wt. per 100 ft .: no. $20,1 / 2 \mathrm{lb}$. no. $18,1 / 2 \mathrm{lb}$.; no. $16,1 \mathrm{lb}$.; no. $14,11 / 2 \mathrm{lb}$.

## TYPE 8941-20 SOLID

| Coil | Red | Black | Blue | Green | Yellow | EACH |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 25 Ft . | 48 T 331 | 48 T 330 | 48 T 332 | $48 \text { T } 333$ | $48 \mathrm{~T} 334$ | 46 |
|  |  | 47 T 921 | 47 T 922 | 47 T 923 | 47 T 924 |  |
| 1000 Ft . | 48 T 351 | 48 T 350 | 48 T 352 | 48 T 353 | 48 T 354 | 1.40 |

Type 8818 Assorted Wire Kit. Contains eight spools of type 8941 cel ulose acetate insulated hook-up and lead wire described above. Kit in cludes convenient work-bench dispenser rack. Has 25 ft . each of the ollowing colors: black, blue, green, red, white, yellow, orange, and 47 T 228 . NET........
3.68

## TYPE 8943-20 STRANDED


Type 8820 Assorted Wire Kit. Contains eight $25-\mathrm{ft}$. spools of type 8943 cellulose acetate insulated hook-up and lead wire described above and a convenient work-bench dispenser rack. Colors: black, blue, green, red white, yellow, orange, brown. Shpg. wt., 2 lbs.
47 T'229. N'ET.
3.76

TYPE 8945-18 SOLID
47 T 900. Red. ${ }^{47}$ T 901 . Black. $\quad 100-\mathrm{Ft}$. Spools
$\left.\begin{array}{l}47 \text { T 902. Blue. } \\ 47 \text { T 903. Green. }\end{array}\right\} \begin{gathered}\text { NET } \\ \text { EACH } \\ \text { G }\end{gathered} 1.62$
47 T 903. Green. 47 T 904 . Yellow. 1.62
TYPE 8942-16 STRANDED

47 T 916 . Black $\}$ 100-Ft. Spools 47 T 917. Red $\}$ NET $2.06 \mid 47$ T 935. Red $\} \begin{aligned} & \text { RACH } \\ & \text { NET. Spools }\end{aligned}$ 47 T 918. Green $\}$ EACH $\left.2.06 \left\lvert\, \begin{array}{l}47 \text { T 936. Black }\end{array}\right.\right\}$| EACH 2.60 |
| :---: |



## TEST PROD WIRE

Rubber-covered lead designed for use with test equipment where a limp, flexible conductor is necessary. Made to withstand extremely high voltages. No. 18 conductor $230^{\prime \prime} \mathrm{OD}$ and $088^{\prime \prime}$ rubber insper with cotton wrapping. Type 8898 has. 230 O.D. and $080^{\prime}$ rubber insuration. $10,000^{\prime \prime}$ v. working voltage, $29,000 \mathrm{v}$. puncture voltage. Type 8899 has. $140^{\prime \prime}$ O.D. and . $043^{\prime \prime}$ rubber insulation. 5000 V . Working voltage, $20,000 \mathrm{v}$. under 100 ft . are available only in 10 and $\mathbf{2 5} \mathbf{- f t}$. spools.

| TYPE 8898 |  |  |  | TYPE 8899 |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Stock No. | Color | Length | Ea. | St | Color | Length | Ea |
| 47 T 81 | Red | 10 ft .spool | . 56 | 48 | Red | 10 ft .sp |  |
| 47 T 801 | Blac | 10 ff | . 56 |  | Black | 10 ft .s |  |
| 47 T 812 | Red | 25 ft | 15 | 48T912 | R | 25 ft .s. |  |
| 47 T 802 | Bla | 25 ft .spool |  | 48 | Blac | 25 | . 7 |
| 4 | Red | 100 ft .spool |  | 48 |  | 100 |  |
|  |  |  |  |  |  |  |  |
| W 803 | Black | PER | 3.38 | 48 w 903 | Blac | PE |  |

## LITZ WIRE

Type 8817. $5 \times 44$ stranded Celenamel with one nylon wrap. For rewinding antenna primaries, hand-winding RF coils, and similar applications Outside diameter; $.008^{\prime \prime} .100 \mathrm{ft}$. spool. Shpg. wt., 2 oz .
48 T981. NET

## CABLE LACING CORD

Genuine waxed linen twine. Hard-twist gray 8 -cord; $50-1 \mathrm{~b}$. test. For binding cables in switchboards, transmitters, etc. $1-1 \mathrm{~b}$. spool, approx. 450 yds.; $1 / 2-1 \mathrm{~b}$. spool, approx. 225 yds.
 49 T 245.1 1-1b. Spool. NET.
49 T $246.1 / 2$ - 1 lb . Spool. NET
3.18
.1 .68

## Consolidated Wire

## POSJ AND POT TYPE LAMP CORD

No. 18 stranded copper wire. POSJ has coded cotton wrap, heavy rubber jacket. Or 100 ft . Lengths under 100 feet are available only in $\mathbf{2 5 - f t}$ coil.

| Mfr's <br> Type | Color | 25 ft. Coil |  | 100 ft . Coil |  | ver 100 ft . |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  | Stk. No. | NE | N | NET | No | ER |
| PO | Bro |  | 74¢ | 0 |  | 48 W 763 |  |
|  | Black | 48 T 77 | $74 ¢$ | 8 T 770 | 2.73 | 48 w 773 |  |
| POT | Brow | 48 T 765 | 634 | 48 T 764 | 2.33 | 48 w 766 | . 33 |
| POT | Whit | 48 T 768 | 634 | 48 T 769 | 2.33 | 48 W 767 | 2.33 |

## RUBBER SHEATHED SERVICE CORD

New, high-quality, rubber-sheathed service cord designed to provide dependable service. Excellent for a variety of applications: Pow-
 electrical tools appliances, trouble lights, sound systems, garage lamps, etc.,-wherever rough usage power lines are required. Uniform quality, black rubber jacket resists abrasion. Types SV and SJ Nos. 18 and 16 are rated at 300 v .; all other types listed are rated at 600 v . U.L. Approved.

SHPG. WTS., 100-FT. SPOOLS:

| $\begin{aligned} & \text { Type, } \\ & \text { Size, } \end{aligned}$ | 2 Cond. |  | 3 Cond. |  | Type, Size | 2 Cond. | 3 Cond. |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| SV \#18 <br> $\mathrm{SJ} \# 18$ <br> $\mathrm{SJ} \# 16$ <br> $\mathrm{~S} \# 18$ |  |  | $63 / 4 \mathrm{lb}$ $83 / 4 \mathrm{bb}$ 8 | bs.  <br>   <br> bs. S <br> bs. S | S $\# 16$ $\mathrm{~S} \# 14$ S $\mathrm{S12}$ $\mathrm{~S} \# 10$ | $91 / 2 \mathrm{lbs}$. $11^{33 / 4} \mathrm{lbs}$. 23 lbs. 23 ibs. | $\begin{aligned} & 113 / 4 \\ & 19 \\ & 23 \\ & 29 \\ & \hline \end{aligned}$ | 3/4 lbs. lbs. lbs. lbs. |
| 2-CONDUCTOR |  |  |  |  |  |  |  |  |
| $\begin{aligned} & \text { Type, } \\ & \text { Size } \end{aligned}$ | 25 ft . Coil |  | 50 ft . Coil |  | 100 ft . Coil |  | Over 100 ft . |  |
|  | Stock No. | NET | Stock No. | NET | Stock No. | NET | $\begin{gathered} \hline \text { Stock } \\ \text { No. } \\ \hline \end{gathered}$ | $\begin{aligned} & \hline \text { PER } \\ & 100^{\prime} \\ & \hline \end{aligned}$ |
| $\overline{\text { SV H18 }}$ | 48 T 480 | 1.20 | 48 T 488 | 2.25 | 48 T 496 | 4.47 | 48 W 439 |  |
| SJ \#18 | 48 T 481 48 T 482 | 1.50 | 48 48 T 489 480 | 2.55 | 48 T 497 <br> 48 <br> 1898 | 4.90 6.30 | 48 W 451 | 4.90 6.30 |
| S\#18 | 48 T 483 | 2.48 | 48 T 491 | 4.43 | 48 T 499 | 8.37 | 48 W 453 | 8.37 |
| S $\# 16$ | 48 T 484 | 3.00 | 48 T 492 | 5.40 | 48 T 435 | 10.31 | 48 W 454 | 10.31 |
| S \#14 | 48 T 485 | 3.90 | 48 T 493 | 7.43 | 48 T 436 | 13.95 | 48 W 465 | 13.95 |
| S \#12 | 48 T 486 | 6.23 | 48 T 494 | 12.00 | 48 T 437 | 23.04 | 48 W 466 | 23.04 |
| S \#10 | 48 T 487 | 7.50 | 48 T 495 | 14.25 | 18 T 438 | $\underline{27.27}$ | 48 W 467 | 27.27 |
| 3-CONDUCTOR |  |  |  |  |  |  |  |  |
| SJ \#18 | 48 T 468 | 2.18 | 48 T 416 | 3.98 | 48 T 428 | \| 7.73 | 48 W 508 | 7.73 |
| SJ \#16 | 48 T 469 | 2.70 | 48 T 417 | 5.03 | 48 T 429 | 9.68 | 48 W 509 | 9.68 |
| S \#18 | 48 T 405 | 3.23 | 48 T 418 | 6.00 | 48 T 503 | 11.52 | 48 W 513 | 11.52 |
| S \#116 | 48 T 406 | 3.98 | 48 T 419 | 7.50 | 48 T 504 | 14.04 | 48 W 514 | 14.04 |
| ${ }^{\text {S }} 414$ | 48 T 407 | 5.85 | 48 T 425 | 11.33 | 48 T 505 | 21.64 | 48 W 515 | 21.64 |
| S $\# 12$ | ${ }_{48}^{48}$ T 408 | 7.50 | 48 T 426 | 14.25 | 48 T 506 | 27.23 | 48 W 516 | 27.23 |
| S \#10 | 48 T 415 | 9.38 | 48 T 427 | 17.63 | 48 T 507 | 32.57 | 48 W 51713 | 32.57 |

## TELEPHONE WIRE

2-Conductor Interior. For interior
use with telephones, intercoms, etc;
No. 22 solid, tinned copper wire. $1 / 32$.
insulation and glazed co
Shpg. wt., $100 \mathrm{ft} ., 21 / 2 \mathrm{bs}$.
48 W 810 . PER FOOT. . $4 ¢$. 100 ft . or More, PER 100 FT.. 3.73
2-Conductor Exterior. No. 22 solid tinned copper wire. Each conductor has rubber insulation; overall black, weatherproof braid. Shpg. wt., 100
48 W 826. PER FOOT. . 4 4 . 100 tt . or More, PER 100 FT. 3.38
3-Conductor Exterior. As above, but 3-cond. Wt., 100', 4 Ibs
48 W 825. PER FOOT. $51 / 24$. 100 ft . or More, PER 100 FT. 5.08

## TWISTED-PAIR ANTENNA LEAD-IN

High-quality, twisted-pair antenna lead-in wire. Designed especially for use with noise-reducing, doublet-type receiving antennas. Close imped-
nce match assures efficient signal transfer. Consists of two flexibl 8, stranded-wire conductors with tough, long-life rubber insulation $132^{\prime \prime}$ thick. Weather-proof; does not crumble or dry out during prolonged usage. Shpg. wt. , $100 \mathrm{ft} ., 3 \mathrm{lbs}$.
48 W 850. PER FOOT....3C 100 ft . or More, PER 100 FT. 2.56

## NEW ROME FLEXALL CABLE

A non-metalic sheathed waterproof and
rot resistant cable-designed specifically
for burial in the earth. Has 2 No. 14 solid wire conductors insulated with Type TW thermoplastic. An all-glass yarn wrap covers both conductors and a synthenol plastic sheath covers the entire cable. Ideal for outside lighting and speaker systems. Excellent for electrical feeders and branch circuits from house to garage or barn as well as to post or yard lights. Eliminates overhead wiring. Capacity
15 amps. Rated at 600 volts. U.L. Approved. Size, $200 \mathrm{x} .350^{\prime \prime}$. Shpg. wt. $100 \mathrm{ft} ., 71 / 4 \mathrm{lbs} . \mathrm{POOT}$ 9C 100 ft . 100 . Shpg. wt. 47 W594. PER FOOT. 9C 100 ft . or More, PER 100 FT. 8.52

## ROME ROFLEX CABLE

2 conductor cable for indoor or outdoor use.
deally suited for long speaker lines as well as for
lectrical feeders or branch circuits in power wiring. Excellent for making temporary or permanent extension power line installations for motors, power tools, etc. Color-coded No. 14 solid wire conductors have durable, heat resistant, thermoplastic insulation with plastic sheath overing entire cable. Flexible and easy to use. Current capacity is 15 $100 \mathrm{ft}, 7 \mathrm{lbs}$,
47 W 549 . PER FOOT. 7 C 100 ft . or More, PER 100 FT. 6.47

## THERMOPLASTIC HOOK-UP WIRE

U.L. Approved. Voltage breakdown test, 10,000 volts. Oil and acid resistant. Withstands temperatures up to $80^{\circ} \mathrm{C}$. Suitable for high-voltage circuits where low loss and proper insulation is essential. Shpg. wt., per 25 ft . spool, 4 oz .

## 20 SOLD




## STRANDED HOOKUP WIRE

No. 18 tinned soft drawn copper wire. Cotton wrap and colored rubber insulation overall. Excellent for general wiring in radio-TV chassis, switchboards, etc. Shpg. wt., 25 ft ., 5 oz .
Coil $\left|\frac{\text { Black }}{48 \mathrm{~T}}\right| \frac{\text { Red }}{48 \mathrm{~T}}\left|\frac{\text { Blue }}{48 \mathrm{~T}}\right| \frac{\text { Geen }}{48 \mathrm{~T}}\left|\frac{\text { White }}{48 \mathrm{~T}}\right| \frac{\text { EACH }}{48}$

## PUSH-BACK HOOK-UP WIRE

Highest quality tinned push-back hook-up wire, No. 20. Only evenly-drawn pure copper wire is used. Insulation easily pushed back for con-
venient wiring. Available in both solid and venient wiring. Available in both solid and stranded type. Unusually fexible and durable. damp-proof braid. 5 different colors. Shpg. wts.: 25 ft ., 4 oz .; 100 ft ., 1 lb .

## STRANDED TYPE, $10 \times 30$

## Spool $\quad$ Red $\mid$ Black $\mid$ Yellow $\mid$ Blue $\mid$ Green $\mid$ EACH 

## SOLID TYPE

## Spool $\quad$ Red $\mid$ Black $\mid$ Yellow $\mid$ Blue $\mid$ Green $\mid$ EACH <br> 

## HIGH-GRADE MAGNET WIRE ON SPOOLS

Insulated, soft-drawn copper wire of highest quality. Specially manufactured for all types of coil winding ap-plications-transformers, RF coils, chokes, etc. All sizes indicated below are standard B\&S gauge. Shpg.
wts.: $1 / 2-1 \mathrm{~b}$. spool, 14 oz .; $1-1 \mathrm{~b}$. spool, $11 / 2 \mathrm{lbs}$. wts.: $1 / 2-\mathrm{lb}$. spool, $14 \mathrm{oz} . ; 1-1 \mathrm{~b}$. spool, $11 / 2 \mathrm{lbs}$.


PLAIN ENAMELED $1 / 2$ LB. SPOOLS

| Stock N | Size | Feet | NET | Stock No. | Size | Feet | NET |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 48 T 100 | 14 | 38 | . 60 | 48 T 111 | 26 | 640 | 1 |
| 48 T 102 | 16 | 63 | . 60 | 48 T T12 | 28 | 1013 |  |
| 48 T 104 | 18 | 101 | . 62 | 48 T 113 | 30 | 1602 | 83 |
| 0 | 22 | 153 | . 62 | $48{ }_{4}^{48}$ T 115 |  | 4543 | . 92 |
| 48 T 109 | 24 | 402 | . 65 | 48 T 116 | 36 | 6410 | .92 |

SINGLE COTtON ENAMELED 1 Lb. SPOOLS

| 4 | 14 | 78 | . 44 | 8 | 22 | 490 |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 48 | 16 | 124 |  |  | 24 |  |  |
|  | 18 | 198 |  | 48 T 031 | 26 | 1209 |  |
| $488{ }_{4}{ }^{4} \mathrm{~T} 025$ | ${ }_{20}^{19}$ | 248 312 |  | 488 T T 0332 | 28 | 1876 2780 |  |

## HEAVY FORMVAR MAGNET WIRE IN I-POUND SPOOLS

Copper magnet wire covered with Formvar; tough, sturdy, abrasionresisting film. Stable dielectric is maintained under the cumulative Impervious to the deteriorating effects of after two hours at $105^{\circ} \mathrm{C}$. acid and alkali. Takes up less winding space. Infinite resistance to mois ture. Ideal for servicemen, experimenters, amateurs, etc. Replaces enamel, paper, cotton silk, and double cotton and double silk wire. Shpg. wt per spool, $11 / 2 \mathrm{lbs}$.

| Stock No. | Size | Feet | NET | Stock No. | Size | Feet | NET |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 48 T 180 | 14 | 78 | 1.13 | 48 T 187 | 28 | 1999 | 1.59 |
| 48 T 137 | 15 | 99 | 1.13 | 48 T 144 | 29 | 2780 | 1.77 |
| 48 T 181 | 16 | 124 | 113 | 48 T 188 | 30 | 3200 | 1.79 |
| 48 T 138 | 17 | 156 | 1.14 | 48 T 145 | 31 | 4410 | 2.03 |
| 48 T 182 | 18 | 198 | 1.14 | 48 T 189 | 32 | 4900 | 2.04 |
| 48 T 139 | 19 | 246 | 1.19 | 48 T 146 | 33 | 6441 | 2.16 |
| 48 T 183 | 20 | 313 | 1.20 | 48 T 190 | 34 | 7950 | 2.19 |
| 48 T 140 | 21 | 397 | 1.26 | 48 T 147 | 35 | 9002 | 2.51 |
| 48 T 184 | 22 | 501 | 1.26 | 48 T 191 | 36 | 12,800 | 2.54 |
| 48 T 141 | 23 | 628 | 1.34 | 48 T 148 | 37 | 15,898 | 3.45 |
| 48 T 185 | 24 | 798 | 1.34 | 48 T 192 | 38 | 20,000 | 3.51 |
| 48 T T 42 | 25 | 941 | 1.43 | 48 T 149 | 39 | 25,188 | 5.37 |
| 48 T 186 | 26 | 1200 | 1.46 | 48 T 193 | 40 | 31,700 | 5.47 |
| 48 T 143 | 27 | 1583 | 1.56 |  |  |  |  |

## TINNED SOLID COPPER WIRE

Fine quality, soft-drawn copper wire, tinned for easy soldering. Excellent for circuit wiring. Av. shpg. wt.: *3 lbs., †5 lbs.
*100-FT. COILS

| Stock No. | Gauge | NET | Stock No. | Gauge | NET |  |
| :--- | :---: | :---: | :---: | :---: | :---: | :---: |
| 47 T 523 | 16 | 1.07 | 47 T 530 | 12 | 2.07 |  |
| 47 T 520 | 14 | 1.44 | 47 T540 | 10 | 4.35 |  |
| $\dagger 1000-$ FT. SPOOLS |  |  |  |  |  |  |
| 47 T 525 | 24 | 2.55 | 47 T533 | 20 | 6.00 |  |
| 47 T 527 | 22 | 3.98 | 47 T 535 | 18 | 9.00 |  |

# Alpha Wire and Zipper Tubing 

## MIL-W-76A PLASTIC WIRE

## TYPE MW-UNCOVERED PLASTIC WIRE

SOLIDCOLORS. General-purpose, thermoplastic-insulated hookup wire. Stranded, tinned-copper conductor. Has high resistance to flame,
fungi, moisture and solvents. Insulation rated at 1000 v . rms. Conforms fungi, moisture and solvents. Insulation rated at 1000 v . rms. Conforms include: high dielectric strength, superior stability at high temperatures and low moisture absorption. Available in the following colors: white, black, red, green, yellow, blue, brown, orange, gray and violet, specify color when ordering. Áv. shpg. wt., $100^{\prime}, 11 / 4 \mathrm{lbs}$; 1000', 7 lbs.

| Mfr's Type | Type Designation | Size | Strand | 0.D. | 100-Ft. Spool |  | 1000-Ft. Spool |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  |  |  |  | Stock No. | NET | Stock No. | NE |
| 1550 | MW-C 24(7)U | 24 | 7/32 | .059" | 49 TT 750 | . 82 | 49 TT 755 | 6.76 |
| 1551 | MW-C 22(7)U | 22 | 7/30 | .064" | 49 TT 751 | . 93 | 49 TT 756 | 7.79 |
| 1553 | MW-C 20(10) U | 20 | 10/30 | .073" | 49 TT 752 | 1.17 | 49 TT 757 | 0.14 |
| 1555 | MW-C 18(16)U | 18 | 16/30 | .084" | 49 TT 753 | 1.59 | 49TT 758 | 14.34 |
| 1557 | MW-C 16(26)U | 16 | 26/30 | .095* | 49 TT 754 | 2.27 | 49 TT 759 | 21.02 |

TRACER COLORS. Hook-up wire as above, but offered in popular tracer colors. Specify choice of following colors when ordering: white/black, white/red, white/green, white/yellow, white/blue, ,



## TYPE MW-GLASS BRAID

Hook-up wire with tinned-copper stranded conductor-has thermoplastic insulation and overall glass braid. Meets military specifications. Insulation thickness, $.016^{\prime \prime}$. Voltage rating, 1000 volts. Available in choice of ten solid colors: white, black, red, green, yellow, blue, brown, orange, gray and violet-specify color when ordering. Av. shpg. wt., $100-\mathrm{ft}$. spool, $11 / 4 \mathrm{lbs}$. Av. shpg. wt., $1000-\mathrm{ft}$. spool, 8 lbs .

| $\overline{\substack{\text { Mfr's } \\ \text { Type }}}$ | Type <br> Designation | Size | Strand | 0.D. | 100-Ft. Spool |  | 1000-Ft. Spool |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  |  |  |  | Stock No. | NET | Stock No. | NET |
| 11590 | MW-C 22(7) B | 22 | 7/30 | .080" | 49 TT 766 | 1.71 | 49 TT 769 | 5.5 |
| 1591 | MW-C 20(10)B | 20 | 10/30 | .090" | 49 TT 767 | 2.05 | 49 TT 770 | 8.9 |
| 1592 | MW-C 18(16) ${ }^{\text {B }}$ | 18 | 16/30 | .100" | 49 TT 768 | 2.55 | 49 TT 771 | 23.9 |

## TYPE MW-NYLON JACKET

Tinned-copper, stranded hook-up wire with thermoplastic insulation and overall nylon jacket. Has . $016^{\prime \prime}$ insulation thickness. Voltage ratand overall nylon jacket. Has . 1000 volts. Available in choice of ten solid colors: white, black, red, green, yellow, blue, brown, orange, gray, and violet-specify color when ordering. Av. shpg. wt., $100-\mathrm{ft}$. spool, $11 / 4 \mathrm{lbs}$. Av. shpg. wt., $1000-\mathrm{ft}$. spool, 7 lbs .

| Mfr's | Type Designation | Size | Strand | O.D. | 100-Ft. Spool |  | 1000-Ft. Spool |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Type |  |  |  |  | Stock No. | NET | Stock No. | NET |
| 1504 | MW-C 22(7) | 22 | 8/30 | .075" | 49 TT 772 | 1.44 | 49 TT 775 | $\overline{12.20}$ |
| 1505 | MW-C 20(10)J | 20 | 10/30 | .090" | 49 TT 773 | 1.84 | 49 TT 776 | 16.1 |
| 1506 | MW-C 18(16)J | 18 | 16/30 | 103" | 49 TT 774 | 2.38 | 49 TT 777 | 21.6 |

## TYPE MW-SHIELDED WIRE

Single-conductor, stranded, tinned-copper, hook-up wire-has $.016^{\prime \prime}$ thermoplastic insulation and tinned-copper shield overall. Insulation rated at 1000 volts. Meets military specifications. Av. shpg, wt., $100-\mathrm{ft}$. spool, $11 / 4 \mathrm{lbs}$. Av. shpg. wt., $1000-\mathrm{ft}$. spool, 8 lbs .

| Mfr's Type | Type Designation | Size | Strand | O.D. | 100-Ft. Spool |  | 1000-Ft. Spool |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  |  |  |  | Stock No. | NET | Stock No. | NE |
| 1 | MW-C 22(7)S | 22 | 30 | .085" |  | 3 | 4 |  |
| 1352 | MW-C 20(10)S | 20 | 10/30 | .095"' | 49 T 779 | 3.31 | 49 |  |
| 1353 | MW-C 18(16)S | 18 | 16/30 | .105" | 49 T 78 | 4.0 | 49 T 78 |  |

## TYPE MW-SHIELDED NYLON

Hook-up wire with stranded tinned-copper conductor, white thermoplastic insulation, braided tinned copper shield plus clear nylon jacket overall. Made to conform to stringent government specifications. Insulation is rated at 1000 volts. Wall thickness, $016^{\prime \prime}$. Nominal jacket
thickness: Types 1371,1372 and $1373-007^{\prime \prime} ;$ Type 1374 . $008^{\prime \prime}$ An thickness: Types 1371,1372 , and $1373-.007^{\prime \prime}$; Type $1374.008^{\prime \prime}$. Av.
shpg. wt., $100-\mathrm{ft}$. spool, $11 / 4 \mathrm{lbs}$. Av. shpg. wt., $1000-\mathrm{ft}$ spool, 8 lbs.

| $\begin{gathered} \text { Mfr's } \\ \text { Type } \\ \hline \end{gathered}$ | Type Designation | Size | Strand | O.D. | 100-Ft. Spool |  | 1000-Ft. Spool |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  |  |  |  | Stock No. | NET | Stock No. | NET |
| 1371 | MW-C 22(7)S | 22 | 7/30 | ${ }^{.100^{\prime \prime}}$ | 49 T 784 | 4.05 | 8 |  |
| 1372 |  | 20 | 10/30 | . $110^{\prime \prime}$ |  |  |  |  |
|  | MW-C 18(16) | 18 | 16/30 | ${ }^{.120^{\prime \prime}}$ |  |  |  |  |



## TYPE HW-UNCOVERED PLASTIC

Stranded, single-conductor, tinned-copper hookup wire with heavy-wall thermoplastic insulation. Insulation is rated at 600 volts. Wall thickness, $.045^{\prime \prime}$. Conforms to stringent military specifications. Available in choice of white, black, and red-specify color when ordering. Av. shpg. wt., $100-\mathrm{ft}$. spool, $11 / 4 \mathrm{lbs}$. Av. shpg. wt., $1000-\mathrm{ft}$. spool, 14 ibs .
Mfr s Type




## MIL-W-76A PLASTIC WIRE

## TYPE LW-UNCOVERED PLASTIC

Stranded, tinned-copper wire with light-wall thermoplastic insulation. Has $.010^{*}$ insulation thickness: rated at 300 volts rms. Conforms to government specifications. Available in choice of 10 solid colors: white, black, red, green, yellow, blue, brown, orange, gray, and on handy spools. Av. shpg wt, 100-ft. spool, 1 lb. Av, shpg. wt., 1000-ft spool, 6 lbs .

| $\begin{aligned} & \text { Mfr's } \\ & \text { Type } \end{aligned}$ | $\begin{gathered} \text { Type } \\ \text { Designation } \\ \hline \end{gathered}$ | Size | Strand | 0.D. | 100-Ft. Spool |  | 1000-Ft. Spool |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  |  |  |  | Stock No. | NE | Stock No. | NET |
|  |  | 30 | 7/38 | .033" |  | 5 |  |  |
| 16 | LW-C 28 | 28 | 7/36 | . $035^{\prime \prime}$ |  |  |  |  |
|  |  | 26 | 7/34 | . 03 |  |  |  |  |
| 1688 | 24 | 24 | 7/32 |  | 497 | 1.0 | 49TT 945 |  |

## MIL-W-16878B PLASTIC WIRE

Hook-up wire for general use in miniature and subminiature circuitry. Stranded, tinned-copper single conductor. Vinyl thermoplastic insulation of uncovered types ( $1831,1832,1833,180^{\circ}, 1851,1852,1853,1854,1855$ and 1856) withstands temperatures to $100^{\circ} \mathrm{C}$.; all other types have $110^{\circ} \mathrm{C}$ jacket over thermoplasticulation thickness of $.010^{\prime \prime}$ and is rated at 600 v rms; Type C has. $016^{\prime \prime}$ insulation and is rated at $1000 \mathrm{v} . \mathrm{rms}$. Insulation has high resistance to solvents. Conforms to rigid government specs. MIL type designations are listed in column headed "MIL Type." Supplied in popular lengths on durable spools for most convenient storage plied in popular lengths on did colors white, black, red, green yellow, and blue-specify choice when ordering. Av. shpg. wt., $100-\mathrm{ft}$. spool, $1 / 2 \mathrm{lb}$. Av. shpg. wt., $1000-\mathrm{ft}$. spool, $43 / 4 \mathrm{lbs}$.

## TYPE B-UNCOVERED PLASTIC (Specify Color)



## TYPE ZIP-31 ZIPPER TUBING

Unique plastic tubing featuring zipper construction for quick, efficient harnessing of wire at low cost. Simply place wire in tubing and zip shut-elim inates time-consuming lacing or taping operations. Extremely strong, flexible and durable. Can be easily opened at any time to permit examination, addition or replacement of wire. May be permanently sealed (see sealer listed below) to provide maximum moisture protection for enclosed conductors. Constructed of poly chloride plastic to meet M1L-1-631C specifications. Wall thickness $020^{\prime \prime} \pm .001^{\prime \prime}$. Lateral puil strength when zipped, 42.7 . pounds per inch 59.8 pounds when sealed. Order tubing $14^{\prime \prime}$ larger than total $O$.D. of wires to be covered. One slider supplied wi
and black, $100-\mathrm{ft}$. lengths only.

| $\begin{aligned} & \text { Black } \\ & \text { Stock No. } \end{aligned}$ | Clear Stock No. | Inside Dia. | $\begin{aligned} & \text { Wt., } \\ & \text { Lbs. } \end{aligned}$ | 100-Foot Coils |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  |  |  | EACH | 10-49, EACH | 50-149, EACH |
| 49 T 946 | 49 T 959 | $1 / 2^{\prime \prime}$ | 4 | 31.00 | 29.00 | 28.00 |
| 49 T 947 | 49 T 960 | $58^{\prime \prime}$ | 41/2 | 31.50 | 29.50 | 28.50 |
| 49 <br> 49 <br> 1948 <br> 949 | 49 <br> 49 962 | $3 /{ }^{\prime \prime}$ | 5 $51 / 2$ | 32.00 | 30.00 30.50 | 29.00 29.50 |
| 49 T 950 | 49 T 963 | ${ }^{\prime \prime}$ | $61 / 4$ | 33.00 | 31.00 | 30.00 |
| 49 T 951 | 49 T 964 | $11 / 8{ }^{\prime \prime}$ | $61 / 2$ | 34.00 | 32.00 | 31.00 |
| 49 T 952 | 49 T 965 | 11/4* | $63 / 4$ | 34.50 | 32.50 | 31.50 |
| 49 T 953 | 49 T 966 | $11 /{ }^{\text {* }}$ | 71/4 | 36.00 | 34.00 | 33.00 |
| 49 T 954 | 49 T 967 | $1{ }^{3 / 44^{\prime \prime}}$ | 8 | 37.00 | 35.00 | 34.00 |
| 49 T 955 | 49 T 968 | $2^{\prime \prime}$ | 83/4 | 38.00 | 36.00 | 35.00 |
| 49 T 956 | 49 T 969 | ${ }^{21 / 2^{\prime \prime}}$ | $111 / 2$ | 40.50 | 38.50 | 37.50 |
| 49 T 4957 | 49 T 970 | ${ }^{3 \prime \prime}$ | $121 / 2$ $161 / 2$ | 43.00 | 41.00 | 40.00 |
| 49 T 958 | 49 T 971 | $4^{\prime \prime}$ | $161 / 2$ | 48.00 | 46.00 | 45.00 |

AB-295 METAL SLIDER. Extra sliders for above. Wt., 1 oz . 49 T 972. NET

## TYPE PB-200 SPECIAL SEALER

For permanent sealing of ZIP-31 plastic tubing. Easily applied by brush after tubing has been zipped shut. Also permits joining lengths of plastic after tubing has been zipped shut. Also permits joining len
tubing. 4 oz . will seal approximately 1000 ft . of tubing.

| Stock No. | Size | Wt. | NET | Stock No. | Size | Wt. | NET |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 49 T 973 | $1 \mathrm{oz}$. | 6 oz . | . 35 | 49 T 976 | $1 \mathrm{qt}$. | 3 lbs . | 5.00 |
| 49 T 974 | $2 \mathrm{oz}$. | 900. | . 60 | 49 T 977 | 1 gal . | 10 lbs. | 13.50 |

# Coaxial Cable, Hook-up Wire, Tubing 

## AMPHENOL COAXIAL CABLE AND HOOK-UP WIRE

## TEFLON-INSULATED HOOK-UP WIRE

High-quality hook-up wire designed to withstand high temperature use-including military fast-rise applications. Teflon insulation is uniformly extruded over stranded, silverplated wire. Tested for heat resistance after 96 hours aging at $250^{\circ} \mathrm{C}$ and given cold bend after 4 hours cooling at $-65^{\circ} \mathrm{C}$. Stranding: 18 ga., $19 \times 30$; 20 ga., $19 \times 32$; 22 ga., $19 \times 34$; 24 ga., 19x36. Shpg. wt., $100^{\prime}, 1 / 2 \mathrm{lb}$.

| Color | Stranded 18 Gauge | Stranded 20 Gauge | Stranded 22 Gauge | Stranded 24 Gauge |
| :---: | :---: | :---: | :---: | :---: |
| Black | 47 W 168 | 47 W 173 | 47 W 178 | 47 W 188 |
| Brown |  |  | 47 W 179 |  |
| Red | 47 W 169 | 47 W 174 | 47 W 180 | 47 W 189 |
| Orange |  |  | 47 W 181 |  |
| Yellow | 47 W 170 | 47 W 175 | 47 W 182 | 47 W 190 |
| Green | 47 W 171 | 47 W 176 | 47 W 183 | 47 W I91 |
| Blue |  |  | 47 W 184 |  |
| Violet |  |  | 47 W 185 |  |
| Gray |  |  | 47 <br> 47 |  |
| White | 47 W 172 | 47 W 177 | 47 W 187 | 47 W 192 |
| $\begin{aligned} & \text { 1-99 Ft. } \\ & \text { PER FT. } \end{aligned}$ | .127 | .106 | . 086 | . 082 |
| $\begin{aligned} & 100-499 \text { Ft., } \\ & \text { PER FT. } \end{aligned}$ | .115 | . 095 | . 077 | . 074 |
| $\begin{aligned} & \text { 500-999 Ft., } \\ & \text { PER FT. } \end{aligned}$ | .102 | . 084 | . 069 | . 067 |

## "SUB-MINAX" MINIATURIZED COAXIAL CABLE

Identical in construction features to full-size coaxial cable. Both types have polyethylene dielectric, vinyl jacket, braided copper shield, and stranded copperweld inner conductor. (21-598 has 7 x $.0063^{\prime \prime}$ and $21-597$ has $7 \mathrm{x} .0056^{\prime \prime}$ ). Shpg. wt., $100^{\prime}, 11 / 2 \mathrm{lbs}$.

| Stock No. | Mfr's Type | Imp., Ohms | $\begin{gathered} \operatorname{Mmf} \\ \text { Per Ft. } \end{gathered}$ | O.D. | $\begin{aligned} & \text { 1-99 Ft., } \\ & \text { PER FT. } \end{aligned}$ | $\begin{gathered} 100-999 \mathrm{Ft} . \\ \text { PER FT. } \end{gathered}$ |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 49W473 | 21-598 | 50 | 30 | . $105^{\prime \prime}$ | . 051 | . 047 |
| 49 W 472 | 21-597 | 75 | 20 | . $150^{\prime \prime}$ | . 057 | . 052 |

## MISCELLANEOUS CABLE

Type 21-146 is microphone cable with polyethylene dielectric and flexible vinyl jacket. Types 621-100 and 621-715 are similar to RG11/U and RG59/U respectively, but have polyfoam dielectric.

| Stock <br> No. | Mfr's <br> Type | Imp., <br> Ohms | Mmf <br> Per Ft. | 0.D. | Lbs., <br> $100^{\prime}$ | l-99 Ft., <br> PER FT. | 100-999 Ft., <br> PER FT. |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 49 W 313 | $21-146$ | $\frac{21}{45}$ | 35 | $.155^{\prime \prime}$ | 2 | .048 | .044 |
| 49 W 337 | $621-100$ | 75 | 16.5 | $.405^{\prime \prime}$ | 8 | .141 | .129 |
| 49 W 339 | $621-715$ | 73 | 17 | $.195^{\prime \prime}$ | 2 | .049 | .044 |

## CONSOLIDATED SHIELDED CABLE FOR SOUND SYSTEMS

Type 14-2. Flexible, 2-conductor P.A. cable. No. 14 wire (stranded $41 \times 30$ ) with $1 / 32^{\prime \prime}$ plastic insulation, tinned-copper braided shield, and weatherproof cotton outer jacket. Shpg. wt., per $100 \mathrm{ft} ., 4 \mathrm{lbs}$.
49W 614. 1-99 Ft., PER FOOT. . . . . . . . . . . . . . . . . . . . . . . . . . . . ${ }^{2} 1 / 2 \mathrm{C}$
100 Ft . or More, PER FOOT.
$.12 c$

## VARNISHED SPAGHETTI TUBING

## ASSORTED 8" LENGTHS



49 T 220. NET.

## SELECTION OF 36" LENGTHS

Used in industrial and electronic research laboratories, radio-TV shops, experimental laboratories, etc. Five lengths to a package. Standard grade varnished tubing. 4,000 volt av. dielectric strength. Meets V.T.S. and A.S.T.M. specifications. Shpg. wt., 2 oz.

| For Wire Size | Stock No. |  |  |  | $\begin{gathered} \text { Per } \\ \text { Pkg. } \end{gathered}$ | 5 or More Pkgs., Per Pkg. |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | Bla | Yellow | Red | Green |  |  |
| 20 | 49 T 164 | 49 T 165 | 49 T 166 | 49 T 167 | 534 | 484 |
| 18 | 49 T 169 | 49 T 170 | 49 T 171 | 49 T 172 | 574 | 524 |
| 16 | 49 T 174 | 49 T 175 | 49 T 176 | 49 T 177 | $58 ¢$ | 534 |
| 14 | 49 T 179 | 49 T 180 | 49 T 181 | 49 T 182 | $64 ¢$ | 584 |
| 12 | 49 T 184 | 49 T 185 | 49 T 186 | 49 T 187 | 684 | 624 |
| 10 | 49 T 189 | 49 T 190 | 49 T 191 | 49 T192 | 754 | 684 |

## NEW SPIRAP SPIRAL-CUT PLASTIC WRAPPING

Flexible, highly durable polyethylene plastic wrapping. Provides neat appearance and protection for wire harnesses from $1 / 4^{\prime \prime}$ to $2^{\prime \prime}$ in diameter. Spiral-cut design permits instant location of individual wires. Easy to wind or unwind. Shpg. wt., $100 \mathrm{ft},. 11 / 4 \mathrm{lbs}$. 71W 543. 1-99 Ft., PER FOOT. 100 Ft . and Up, PER FOOT.
.8c
 7 c

## rg coaxial cable

Low-loss coaxial cable for RF applications. All meet rigid military and commercial specifications. Imper vious to the effects of weather, acids, alkalis, oil and gasoline. POLYETHYLENE DIELECTRIC-VINYL JACKET

| $\begin{gathered} \hline \text { Stock } \\ \text { No. } \\ \hline \end{gathered}$ | $\begin{aligned} & \hline \mathrm{RG} \\ & \text { No. } \\ & \hline \end{aligned}$ | $\begin{aligned} & \text { Imp., } \\ & \text { Ohms } \end{aligned}$ | $\begin{aligned} & \mathrm{Mmf} \\ & \text { Per Ft. } \end{aligned}$ | 0.0. | $\begin{aligned} & \text { Lbs., } \\ & 100^{\prime} \end{aligned}$ | $\begin{aligned} & \text { 1-99 Ft, } \\ & \text { PER FT. } \\ & \hline \end{aligned}$ | $\begin{gathered} 100-499 \mathrm{Ft}, \\ \text { PER FT. } \end{gathered}$ | $\begin{aligned} & 500-999 \mathrm{Ft}, \\ & \text { PER FT. } \end{aligned}$ |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 49 W 303 | 5/U | 52.5 | 28.5 | .332" | 9 | .143 | . 131 | . 118 |
| 49 W 304 | 7/U | 97 | 12.5 | . $370^{\prime \prime}$ | $81 / 2$ | . 134 | . 123 | . 111 |
| 49 W 460 | $8 / \mathrm{U}$ | 52 | 29.5 | . $405^{\prime \prime}$ | 12 | . 132 | - 121 |  |
| 49 W 315 | 8A/U | 52 | 29.5 | . $405^{\prime \prime}$ | 12 | . 159 | . 145 |  |
| 49 W 469 | 9/U | 52 | 30 | . $420^{\prime \prime}$ | $121 / 2$ | . 314 | . 286 | . 258 |
| 49 W 314 | $9 \mathrm{~A} / \mathrm{U}$ | ${ }_{51}$ | 30 | . $420^{\prime \prime}$ | 121/2 | . 383 | .351 | .316 |
| 49 W 322 | $9 \mathrm{~B} / \mathrm{U}$ | 51 | 30 | .420" | 121/2 | . 407 | . 372 | . 335 |
| 49 W 470 | 11/U | 75 | 20.5 | .405" | 12 | . 126 | .116 |  |
| 49 W 317 | 11A/U | 75 | 20.5 | .405" | ${ }_{21}$ | . 1434 | . 302 |  |
| 49 W 305 | 14/U | 52 | 29.5 |  |  |  | . 302 | . 272 |
| 49 W 306 | 17/U | 52 | 29.5 | .870" | 47 | . 624 | . 571 | . 514 |
| 49 W 318 | 17A/U | 52 | 29.5 | .870" | 47 | . 651 | . 596 | . 537 |
| 49 W 307 | 19/U | 52 | 29.5 | 1.120" | 75 | 1.094 | 1.002 | . 902 |
| 49 W 308 | 21/U | 53 | 29 | . 332 " | $81 / 2$ | . 285 | . 261 | . 235 |
| 49 W 465 | 22/U | 95 | 16 | .405" | 12 | . 170 | . 155 | . 140 |
| 49 W 309 | 29/U | 53.5 | 28.5 | .184" | 3 | . 065 | . 059 | . 053 |
| 49 W 480 | 54A/U | 58 | 26.5 | .250" | $41 / 2$ | . 094 | . 084 | . 078 |
| 49 W 311 | 55/u | 53.5 | 28.5 | .206" | $31 / 2$ | . 101 | . 092 |  |
| 49 W 485 | 58/U | 53.5 | 28.5 | .195" | 3 | . 056 | . 051 |  |
| 49 W 487 | 58A/U | 50 | 28.5 | 195" | 3 | . 057 | . 052 |  |
| 49 W 319 | 58C/U | 50 | 28.5 | 195" | 3 | . 065 | . 059 |  |
| 49 W 490 | 59/U | 73 | 21 | .242" | 41/2 | . 060 | . 055 |  |
| 49 W 316 | 59A/U | 73 | 21 | .242" | $41 / 2$ | . 071 | . 065 |  |
| 49 W 488 | 62/U | 93 | 13.5 | .242" | 41/2 | . 065 | . 060 |  |
| 49 W 321 | 62A/U | 93 | 13.5 | .242" | 41/2 | . 072 | . 066 |  |
| 49 W 312 | 63/U | 125 | 10 | .405" | 12 | .139 | . 127 |  |
| 49 W 489 | $71 / \mathrm{U}$ | 93 | 13.5 | .250" | $41 / 2$ | . 109 | . 099 |  |
| 49 W 325 | 71A/U | 93 | 14.5 | .245"* | $41 / 2$ | . 118 | . 108 | . 097 |
| 49 W 323 | 114/U | 185 | 6.5 | .405" | 12 | . 152 | . 138 |  |
| 49 W 324 | 122/U | 50 | 29.3 | . 16 | $21 / 2$ | . 062 | . 057 | . 051 |

## TEFLON DIELECTRIC-FIBERGLASS SILICONE-IMPREGNATED JACKET

| Stock No. | $\begin{aligned} & \text { RG } \\ & \text { No. } \end{aligned}$ | $\begin{aligned} & \text { Imp., } \\ & 0 \mathrm{hms} \end{aligned}$ | $\begin{gathered} \mathrm{Mmf} \\ \operatorname{Per} \mathrm{Ft} \end{gathered}$ | 0.D. | $\begin{aligned} & \text { Lbs., } \\ & 100^{\prime} \end{aligned}$ | $\begin{aligned} & \text { 1-99 Ft., } \\ & \text { PER FT. } \end{aligned}$ | $\begin{gathered} 100-249 \mathrm{Ft} ., \\ \text { PER FT. } \end{gathered}$ |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 49 W 326 | 87A/U | 50 | 29.5 | . $425{ }^{\prime \prime}$ | 17 | 2.62 | 2.35 |
| 49 W 331 | 119/U | 50 | 29 | . 470 " | 24 | 4.34 | 3.91 |
| 49 W 327 | 140/U | 73 | 21 | . $242^{\prime \prime}$ | 6 | 1.96 | 1.76 |
| 49 W 328 | 141/U | 50 | 29 | . $195^{\prime \prime}$ | $4{ }^{4} 12$ | 1.62 | 1.45 |
| 49 W 329 | 142/U | 50 | 29 | .206" | $51 / 2$ | 1.73 | 1.56 |
| 49 W 333 | 187/U | 75 | 19.3 | $.110^{\prime \prime}$ | $11 / 4$ | . 47 | $\cdot 42$ |
| 49 W 332 | 188/U | 50 | 29 | . $110^{\prime \prime}$ | $11 / 2$ | . 42 | . 38 |
| 49 W 335 | 195/U | 95 | 15.2 | .155" | $21 / 2$ | . 72 | . 64 |
| 49 W 334 | 196/U | 50 | 29 | . 080 " | 1 | . 37 | . 33 |

## ALPHLEX PVC-105 PLASTIC TUBING

A wide selection of extruded plastic tubing for protection of wire and cable from effects of heat,
oil, corrosion, fungi, etc. Resists temperatures
from $-30^{\circ} \mathrm{C}$ to $105^{\circ} \mathrm{C}$. Conforms to military specifications MIL-631C, ASTM-D876, and ASTM-D922. Features high dielectric strength. Rated at 800 volts; resistance, over 1 million megs. Tensile strength, 2500 PSI.
Sizes 24 and 22, $.012^{\prime \prime}$ wall thickness; all others, $.016^{\prime \prime}$. Available in nine popular colors: clear, black, red, yellow, green, blue, brown, white, and orange-specify color. Av. shpg. wt., $100-\mathrm{ft}$., 5 oz .

| Size | Nom. I.D. | 25 Ft . Coil |  | 100 Ft . Coil |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  | Stock No. | $\begin{aligned} & \text { NET } \\ & \text { EACH } \end{aligned}$ | Stock No. | $\frac{1-9}{\text { EACH }}$ | $\frac{10-49}{\text { EACH }}$ | 50-Up, |
|  |  |  |  |  |  |  | EACH |
| 24 | . $022^{\prime \prime}$ | 71 TT 300 | . 51 | 71 TT 307 | 1.40 | 1.15 | . 96 |
| 22 | . $02027^{\prime \prime}$ | 71 TT 301 | .51 | 71 TT 308 | 1.40 | 1.15 | . 96 |
| 20 18 | . $0344^{\prime \prime}$ | 71 TT 302 | . 54 | 71 TT 309 | 1.44 | 1.18 | 1.08 |
| 16 | . $053{ }^{\prime \prime}$ | 71 TT 304 | . 57 | 71 TT311 | 1.61 | 1.28 | 1.07 |
| 14 | . $066^{\prime \prime \prime}$ | 71 TT 305 | . 59 | 71 TT 312 | 1.73 | 1.35 | 1.13 |
| 12 | . 085 " | 71 TT 306 | . 63 | 71 TT313 | 1.86 | 1.46 | 1.22 |

Tubing as above. Size $10, .016^{\prime \prime}$ wall thickness; all other sizes, . $020^{\prime \prime}$. Available in choice of six popular colors: clear, black, red, yellow, green, and blue-specify color. Av. shpg. wt., $100-\mathrm{ft} ., 10 \mathrm{oz}$.

| 10 | $.106^{\prime \prime}$ | 71 TT 314 | .68 | 71 TT 319 | 2.01 | 1.62 | 1.36 |  |  |  |
| ---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 8 | $.133^{\prime \prime}$ | 71 TT | 315 | .83 | 71 | TT | 320 | 2.88 | 2.27 | 1.75 |
| 6 | $.166^{\prime \prime}$ | 71 TT | 31 | 6 | .95 | 71 | TT | 321 | 3.30 | 2.52 |
| 4 | $.208^{\prime \prime}$ | 71 TT | 317 | 1.08 | 71 TT | 322 | 3.85 | 2.89 | 2.07 |  |
| 2 | $.263^{\prime \prime}$ | 71 TT 318 | 1.26 | 71 TT 323 | 4.43 | 3.41 | 2.89 |  |  |  |

Wall-thicknesses, size 0, .020"; *.025"; $\dagger .030^{\prime \prime} ; \S .035^{\prime \prime} ; \ddagger .040^{\prime \prime} ; 11 / 2^{\prime \prime}$, . $045^{\prime \prime}$. Choice of clear or black-specify. Av. wt., 100', 5 lbs .

| 5 | . 330 " | 71 TT 324 | . 46 | 71 | 5.18 | 4.03 | 3.44 |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 5/16 ${ }^{*}$ * | . $312^{\prime \prime}$ | 71 TT 325 | 1.71 | 71 TT 336 | 6.25 | 4.83 | 4.11 |
|  | . 375 " | 71 TT 326 | 2.07 | 71 TT 337 | 7.30 | 5.62 | 4.86 |
|  | . $500{ }^{\prime \prime}$ | 71 TT 327 | 2.63 | 71 TT 338 | 9.12 | 7.08 | 6.08 |
| 5/8 | . 625 " | 71 TT 328 | 3.60 | 71 TT 339 | 13.26 | 10.29 | 8.70 |
| 3/4"§ | . 750 " | 71 TT 329 | 4.73 | 71 TT 340 | 18.37 | 14.11 | 11.89 |
| 7/8"§ | .875" | 71 TT 330 | 5.33 | 71 TT 341 | 20.64 | 16.12 | 13.55 |
| $1^{\prime \prime}$ § | $1.000^{\prime \prime}$ | 71 TT 331 | 6.15 | 71 TT 342 | 23.07 | 18.00 | 15.04 |
| 1114" ${ }^{\prime \prime}$ | $1.250^{\prime \prime}$ | 71 TT 332 | 8.33 | 71 TT 343 | 31.98 | 25.07 | 21.14 |
| $13 / 8{ }^{\prime \prime}{ }^{\prime \prime}$ | $1.375^{\prime \prime}$ | 71 TT 333 | 8.85 | 71 TT 344 | 34.18 | 26.57 | 22.42 |
| $11 / 2^{\prime \prime}$ | $1.500^{\prime \prime}$ | 171 TT 334 | 10.80 | 71 TT 345 | 41.45 | 32.26 | 27.53 |

## Test Leads, Prods and Pafch Cords



G

Test Leads For Every Use

A Type 8463. With Interchangeable Con (A) nectors. $50^{\prime \prime}$ leads have $6^{\prime \prime}$ unbreakable plastic prods, one red, one black; with pointed phone tips. Instrument ends come with banana plugs. Supplied with spade lugs, pointed phone tips, and alligator clips, all of which are inter changeable with the banana plugs. 6000 -volt insulation. Shpg. wt., 4 oz.
42 N 350 . NET PE'R PAI R $\qquad$ . 1.76
Type 8464. With Interchangeable Connectors. Same as above except prod ends are equipped with needle point chucks and needle point tips for piercing insulation.
42 N 351 . NET PER PAIR
1.76

B Type 9102. HV Test Leads. $48^{\prime \prime}$ long, B flexible, heavy-duty, rubber-covered leads, $1 / 4^{\prime \prime}$ thick. One red, one black. Pointed phone tip prods; alligator clip ends. Special fingerguard prod handles. $5^{\prime \prime}$ long. 22,000-volt breakdown at 60 cycles. Shpg. wt., 4 oz. 3.52
42 N 352. NET PER PAI R.......... 52
C. Type 9301. Stretch Leads. No-kink-no 6 tangle test leads. $9^{\prime \prime}$ coil extends to 6 -no$6^{\prime \prime}$ Tenite prod handles. Pointed phone fet. both ends. Shpg. wt., 4 oz.
42 N 355 . NET PE'R PAI R.

D Type 9190. Slender Pencil. $5^{\prime \prime}$ long test (D) prods made of durable Tenite with $50^{\prime \prime}$ kink less leads. Have pointed phone tips on prod end; plain phone tips on connector end. Shpg. wt.' ${ }^{4}$ 3z. 35 . NET PER PAIR. $\qquad$ 73c
E Type 8459. 6000v Insulation. $6^{\prime \prime}$ durable E Tenite prods with pointed phone tips. Angle phone tips on connector ends. $50^{\prime \prime}$ leads. Shpg wt., 42 oz. 35 . NET PER PAIR. $\qquad$ .1 .23
Type 5050. Same as Type 8459 above but equipped with all-metal connector ends with pointed phone tips instead of the angle phone pointed phone tips instead of the angle phone
tips. Shpg. Wt., 4 oz.
42 N 35 . NET PE R PAI R . . . . ..... 1.09

Type 8461. Needle-tipped, Insulation Piercing. Same as Type 5050 but prods have needle type chuck and needle points for piercing insulation. Shpg. wt., 4 Oz OLIR $\qquad$
Type 8462. Same as Type 8459 above but equipped with angle phone tips on connector ends instead of the pointed phone tips. Shpg. wt., 42 oz 360 . NET PER PAIR

F Type 8465. Long Needle. Same as Type F 8462 but prod tips are $4^{\prime \prime}$ lengths of stiff, pointed No. 16 wire. Also prod handles are $4^{\prime \prime}$ long. Excellent for those hard-to-reach places. $50^{\prime \prime}$ leads- 6000 -volt breakdown, insulation. Shpg. wt., 4 oz.
42 NET PER PAIR.
I. 23

## KLIPZON TEST PRODS AND LEADS

G Prods equipped with clip-tip which holds on G] to wire, lug, etc.; leaving both hands free. $43 / 4^{\prime \prime}$ handles. $4^{\prime}$ leads. Av. wt., 4 oz . Stock No.|Type Description $\overline{42} \mathbf{N} 362$ PR.
 42 N $3645610 \left\lvert\, \begin{aligned} & \text { phone tip connectors } \\ & \text { Klipzon phone tip prods; } \\ & \text { Lanan phe }\end{aligned}\right.$

## KLIPZON JUMPER LEADS

H 2 wire leads with Klipzon phone-tip miniH prods at each end. Average shpg. wt., 4 oz . StockNo. Type Color Length PER PAIR \begin{tabular}{l|l|l|}
\hline 42 N 369 \& 5634 \& Coior <br>
42 Red

 

42 \& N 369 \& 5634 \& Red <br>
42 \& $\mathbf{N}$ \& 370 \& 5635 <br>
Black
\end{tabular}



| $12^{\prime \prime}$ | .59 |
| :--- | :--- |
| $12^{\prime \prime}$ | .59 |
| $24^{\prime \prime}$ | 1.09 |
| $24^{\prime \prime}$ |  |

## H. H. SMITH TEST PRODS



Type 302. Solderless Test Prod. Threaded prod with $51 / 2^{\prime \prime}$ long plastic handle, $3 / 8^{\prime \prime}$ diameter. Nickel plated phone tip. Wire fits thro rough handle wraps around screw portion Shpg wt 4 oz . 42 N 1 IO Red. 42 N III. Black. NET EACH PROD...

50c K Type 318. Phono Needie Test Prod. Brass nickel-plated body with Qteel, nickel-plated, phono-type needle. Removable chuck for replacing broken needles. Red or black molded plastic handle. Overall length 42 N 373. Red. 42 N 374. Black. NET EACH PROD....... 55 C Type 329. Heavy-duty Test Prod. Threaded type. Extra sturdy 42 N 375 Red 42 N 376. Black.

## G-C KLIPZON MINIPRODS

M Self-Gripping Tips. No. 5621. Clip to any terminal, lug, etc., and Mion inside there! Needle points for piercing insulation. Solderless connecion inside $11 / /^{\prime \prime}$ plastic handle. Shpg. wt., 2 oz (1) Mini-prod Adapter Tips. No. 5623. Fit over standard test points I or phono-needle types. Convert them to self-gripping types with special insert supplied. Shpg. wv.t, 2 oz.
50 N 159 . Red. 50 N 160 . Black.


## G-C SOLDERLESS TEST PRODS

Type 7830. Molded-plastic, angle phone tip prods. Feature solderless "Trigger-Quik" clamps for sure connections. 1-red and 1-black. Shpg. wt., 3 oz.

70c


## NEON GLOW TESTERS

## GENERAL CEMENT NEO-O-LITE

$N$ Highly versatile neon glow type tester. 1 N Indicates voltages from 60 v . AC and finding "hot", AC leads, checking fuses and finding "hot" AC leads, checking fuses and spark plugs, appliance repair, etc. Neon insulated leads with phone tip ends. Ideal insulated leads with phone tip ends. Ideal
for home handymen. Shpg. wt., 3 oz . 78 N 055 . NET EACH.............. 44 C
10 or More, EACH

## SITTLER LOW VOLTAGE TESTER

P Type T202. Extremely useful low voltage tester. Indicates voltages from 5 v . to $50 \mathrm{v} . \mathrm{AC} / \mathrm{DC}$. Perfect for testing low voltage circuits in automobiles, telephones, batteries, radio and TV filament circuits, etc. Uses incandescent lamp. Has red and yellow leads with alligator clips for
easy identification and use. Wt., 3 oz . easy identification and use. Wt., 3 oz.
42 N 406. NET EACH . . . . . . . . .

99c
Type T203. Simila to above but tests $21 / 2$ to 24 v . AC/DC.

## H. H. SMITH UNIVERSAL TEST LEAD KIT



Type 699. New, highly versatile test lead kit. Includes a pair of test leads and 12 interchangeable testing tips and connectors. Plastic handles at each end of test leads have threaded receptacles carefully cut to fit screw-in tips and connectors, assuring firm mechanical and electrical contact. Reuires only a twist of the hingers to convert Equips the test bench to meet almost any testing need. Has four phone tips, two alliesting need. Has four phone tips, two alliplugs, and two spade lugs. Ane exceptionally useful kit for the radio and TV serviceman, radio amateur or experimenter. Comes attractively packaged in transparent plastic wallet-style
kit. Shp. wt., 5 oz.
42 N 408. List, $\$ 4.00$. NET.

## PECO "STACK-UP" PATCH CORDS



- Permit parallel multiple stacking
- Designed for rapid circuit connections
- Fit terminals of test equipment

For instrumentation patching. Have banana plugs with built-in jacks to permit right-angle or lengthwise stacking. Plug bodies are molded polyethylene for full insulation. Double plugs have $3 / 4^{\prime \prime}$ spacing. Ground connection is clearly marked on one side. Types with single banana Withstands pull test exceeding 50 lbs. Solder bonding of each terminal assures noise-free connections. Contact resistance less than 0.001 ohm per assures noise-free connections. Contact resistance less than o.001 ohm per pendable contact and long life. Single plug types come in 7 different colors for easy lead identification. Double plug types are all gray except type 2BC-BNC-36 which is black.

* Shielded mike cablewith single inner conductor polyethylene insulation, vinyl jacket. $\dagger 18$-gauge, vinyl insulated twisted pair. §RG58-C/U coaxial cable with BNC connector on one end. Av. shpg. wt., 5 oz .

| WITH DOUBLE PLUGS |  |  |  | WITH SINGLE PLUGS |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Stock No. | $\begin{aligned} & \text { Mfr's } \\ & \text { Type } \end{aligned}$ | Length | $\begin{gathered} \text { NET } \\ \text { EACH } \end{gathered}$ | Stock No. | $\begin{aligned} & \text { Mfr's } \\ & \text { Type } \end{aligned}$ | Length | $\begin{aligned} & \hline \text { NET } \\ & \text { EACH } \end{aligned}$ |
| 42 N 203 | 2BA-24 $\dagger$ | $24^{\prime \prime}$ | 3.67 | 42 N 207 | 18 | ${ }^{18}{ }^{\prime \prime}$ | 1.47 |
| 42 N 204 | 2BA-36 $\dagger$ | 36" |  | 42 N 208 | B-24 | ${ }^{244^{\prime \prime}}$ | 1.47 |
| 42 N 205 | 2BB-36* | ${ }^{36}{ }^{\prime \prime}$ | 3.67 | 42 N 209 | B-36 | 36" | 1.47 |
| 42 N 206 | 2BC-BNC-36§ | 36" | 4.75 |  |  |  |  |

WITH DOUBLE PLUG AND TWO ALLIGATOR CLIPS

| Stock No. | $\begin{aligned} & \hline \text { Mfr's } \\ & \text { Type } \end{aligned}$ | Length | $\begin{aligned} & \text { NET } \\ & \text { EACH } \end{aligned}$ |
| :---: | :---: | :---: | :---: |
| $\begin{aligned} & 42 N 236 \\ & 42 N 237 \\ & 42 N 238 \\ & 42 N 239 \\ & \hline \end{aligned}$ | $\begin{aligned} & \text { 2BA-AL-24† } \\ & \text { 2BAAL-36† } \\ & \text { 2BB-AL-24* } \\ & \text { 2BB-AL- }-36^{*} \end{aligned}$ | $\begin{aligned} & 24^{\prime \prime \prime} \\ & 36^{\prime \prime} \\ & 24^{\prime \prime} \\ & 36^{\prime \prime} \end{aligned}$ | 3.67 |

## General Electric Lamps-Sockets



## [MINIATURE, NEON, AND ARGON LAMPS

## GENERAL-PURPOSE MINIATURE LAMPS

All are miniature, except: *Midget flanged type; $\dagger$ pre-focused candelabra type; §has screw terminals, sealed beam type. Under Amps, c.p. means candlepower. Abbreviations under Base mean: S. C., F.-single contact, anged; S. C., Bay.-single contact, bayonet; hape; TL-Lens end, tubular (pre-focus type); FE-flat end; RPefiector, pear shape; S-as in Fig. F; PAR-parabolic. Shpg. wts.: 1 lamp, 2 oz .; box of $10,4 \mathrm{oz}$.

| Stock No. | $\begin{aligned} & \hline \text { Mfr's } \\ & \text { Type } \\ & \hline \end{aligned}$ | Fig. | Volts | Amps | Base | $\begin{aligned} & \hline \text { Bulb } \\ & \text { Style } \\ & \hline \end{aligned}$ | $\begin{aligned} & \text { NET } \\ & \text { EA. } \end{aligned}$ | $\begin{gathered} 10 \text { or } \\ \text { More, Ea. } \end{gathered}$ | $\begin{gathered} 100 \text { or } \\ \text { More, Ea } \end{gathered}$ |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| E 344 | PR-2 | A | 2.4 | 0.50 | S.C., F. | B-31/2 | . 20 | . 14 | 3 |
| E 345 | PR-3 | A | 3.6 | 0.50 |  | B-31/2 | . 20 |  |  |
| 52 E 337 | PR-4 | A | 2.3 | 0.27 | S.C., | B-31/2 | . 20 | .14 |  |
| 52E338 | PR-9 | A | 2.7 | 0.15 |  | B-31/2 | . 25 | . 18 |  |
| 52E387 | PR-12 | A | 5.95 | 0.50 | S.C., F. | B-31/2 | . 20 | . 14 |  |
| 52 E 304 | PR-13 | A | 4.75 | 0.50 | S.C., F. | B-31/2 | . 20 | .14 |  |
| E 300 | 13 | H | 3.7 | 0.30 | Screw | G-31/2 | .17 | -12 |  |
| S2E301 | 14 | H | 2.5 | 0.30 | Screw | G-31/2 | .17 |  |  |
| $\begin{aligned} & 52 E 303 \\ & 52 E 302 \end{aligned}$ | $\begin{aligned} & 27 \\ & 31 \end{aligned}$ | $\mathrm{H}$ | 4.9 6.2 | 0.30 0.30 | Screw Screw | G-41/2 | . 17 | +12 |  |
| 52E305 | 40 | B | 6-8 | 0.15 | Screw | T-31/4 | . 15 | . 10 | . 09 |
| 52 E 306 | 41 | B | 2.5 | 0.50 | Screw | T-31/4 |  |  |  |
| E 307 | 42 | B | 3.2 | 0.35 | Screw | T-31/4 | .20 | . 14 |  |
| E 308 | 43 | c | 2.5 | 0.50 | Bayonet | T-31/4 |  | 10 |  |
| 52 E 309 | 44 | C | 6-8 | 0.25 | Bayonet | T-31/4 | . 15 |  | . 09 |
| 52 E 310 | 45 | C | 3.2 | 0.35 | Bayonet | T-31/4 | . 15 | . 10 | 9 |
| E 311 | 46 | c | 6-8 | 0.25 | Screw | T-31/4 |  | 0 |  |
| 52E ${ }^{2} 12$ | $\begin{aligned} & 47 \\ & 48 \end{aligned}$ | ${ }_{\text {B }}$ | $\begin{aligned} & 6-8 \\ & 2.8 \end{aligned}$ | 0.15 0.06 | Bayone | T-31/4 | - 15 | . 10 | . 0 |
| 52E314 | $\begin{aligned} & 48 \\ & 49 \\ & \hline \end{aligned}$ | ${ }_{\text {B }}^{\text {B }}$ | 2.0 | 0.06 0.06 | Screw Bayonet | T-31/4 | 5 |  | . 09 |
| 5 | 50 | H | 6-8 | $1 \mathrm{c}$. p | Screw | 1/2 | . 15 |  | 9 |
|  | 51 | J | 6-8 | $1 \mathrm{c} . \mathrm{p}$. | Bayonet | G-31/2 |  | 0 |  |
| 9 | 53 | J | 14.4 | 0.12 | Bayonet | G-31/2 | . 15 | 0 | . 09 |
| 52E 320 | $\begin{aligned} & 55 \\ & 57 \end{aligned}$ | J | 6-8 | 2c.p. | Bayonet Bayonet | G-41/2 | .15 | 0 |  |
| 2 | 63 | J | 6-8 | $3 \mathrm{c} . \mathrm{p}$. | S.C. Bay. | G-6 | . 20 | . 14 |  |
|  | 81 | J | 6-8 | 6 c . p. | S.C. Bay. | G-6 | . 20 | .14 |  |
| 7 | 82 | J | 6-8 | 6 c . | D.C. Bay. | G-6 | . 25 | . 18 |  |
| 325 | 112 | D | 1.2 | 0.22 | Screw | TL-3 | $\cdot 17$ | . 12 |  |
| 52E 327 | 136 | H | 1.3 | 0.60 | Screw | G-41/2 | . 17 | 2 | . 11 |
| 52 E 330 | 222 | D | 2.2 | 0.25 | Screw | TL-3 | .17 | -12 |  |
| 52 E 331 | 223 |  | 2.2 | 0.25 | Screw | FE-33/4 | - 7 | - |  |
| 52 E 333 | 224 | E | 2.15 | 0.22 | Special | TL-23/4 | .17 | . 12 |  |
| S2E 534 | 233 | H | 2.2 | 0.27 | Screw | G-31/2 | .17 | 2 |  |
| 52E 339 | 248 | H | 2.5 | 0.80 | Screw | G-51/2 | . 20 | . 14 | . 13 |
| 9 | 313 | C | 28 | 0.17 | Bayon | T-31/4 | . 35 | . 26 | 3 |
| 377 | 327 <br> 328 | . | ${ }_{6} 8$ | 0.04 | S.C. Mid.* | T-13/4 | .90 | . 66 | . 59 |
| E 378 | 325 | H | 5 | 0.50 | Screw |  |  |  |  |
| 52E658 | 428 | H | 12.5 | 0.25 | Screw | G-41/2 | .17 | .12 |  |
| 2 | 432 | H | 18.0 | 0.25 | Screw | G-41/2 | .17 | .12 | . 1 |
| - | 433 | H | 18 | 0.25 | Bayonet | G-41/2 | .17 | . 12 |  |
| 52 E 342 | 605 | H | 6.1 | 0.50 | Screw | G-41/2 | . 17 | . 12 |  |
| 52E664 | 1129 | F | 6-8 | $21 \mathrm{c} . \mathrm{p}$. | S.C. Bay. | S-8 | . 35 | . 26 | 23 |
| 52E650 | 1133 | G | 6-8 | $32 \mathrm{c.p}$. | S.c. Bay | RP-11 | 40 | . 29 | . 26 |
| 52E651 | 1188 | G | 6-8 | 50/32 |  |  |  |  |  |
| 52E 379 | 1323 |  | 6.2 | ${ }_{4}$ c. ${ }^{\text {p }}$. | D.C. Bay. | RP-11 | 1.00 | .72 | . 65 |
| E 659 | 1446 | H | 12 | 0.20 | Screw | G-31/2 | . 17 | . 12 |  |
| S2 E 341 | 1447 | H | 18.0 | 0.15 | Screw | G-31/2 | . 20 | .14 | 3 |
| 52E661 | 1449 | H | 14 | 0.20 | Screw | G-31/2 | . 17 | . 12 | .11 |
| 52 | 1458 | J | 20 | 0.25 | Bayonet | G-5 | .17 | .12 | . 11 |
|  | 1477 | B | 24 | 0.17 | Screw | T-3 | . 40 | . 27 | . 24 |
| E 55 | 1487 | ${ }^{\text {B }}$ | 12-16 | 0.20 | Screw | T-31/4 | . 20 | .14 |  |
| 52E655 | 1488 | C | 14 | 0.15 | Bayonet | T-31/4 | . 20 | .14 |  |
| 52 E 340 | 1490 | c | 3.2 | 0.16 | Bayonet | T-31/4 | . 15 | 10 | . 09 |
| 52E 656 | 1493 | F | 6.5 | 2.75 | D.C. Bay. | S-8 | 1.00 | . 70 | .63 |
| 52 E 326 | 1768 | ${ }^{\text {B }}$ | 6 | 0.20 | Midget Screw | T-13/4 | 75 | . 52 | . 47 |
| 52E657 | 1815 | c | 12-16 | 0.20 | Bayonet | T-31/4 | . 20 | . 14 | . 13 |
| E 324 | 1820 | ${ }_{\text {c }}$ | 28 | 1.0 | Bayo | T-3 | 40 | . 29 | 6 |
| 2 E 343 | 1829 | c | 28.0 | 0.07 | Bayonet | T-31/4 | 50 | .25 | 2 |
| 52E384 | 4546 |  | 4.7 | 0.50 | S.C. Term8 | PAR-36 | 2.50 | 1.77 | . 59 |

## TUNGAR BULBS

Tungar bulb rectifiers for replacement purposes. High-quality units. Used in battery-charging equipment. Gas-filled thermionic-emission types. *Provides DC for movie projector arcs. Av. shpg. wt., $11 / 4 \mathrm{lbs}$.

| No. | Type | Fig. | Amps | NET | No | Type | Fig | Amp | ET |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 9 E 900 | $12 \times 825$ |  | 2 | 4. | 4 | 189 | L | 6 |  |
|  | 206 | K | 2 | 4.4 |  | *217283 | L | 15 |  |
| 9 E 90 | 20x672 |  | 5 | 5.52 | 9 E 907 | $16 \times 897$ |  | 2 |  |
| E 903 | 189048 | L | 6 | 4.77 | 9 E 908 | 45X674 |  | 6 | 14.70 |

## NEON GLOW LAMPS

For 105-600 volt operation except types marked $\ddagger$ which are for 210 600 v . 8 Indicates DC only. S.C. stands for single contact; D.C., double contact; Sk., skirted. Screw types have series resistor in base-for 105125 v . operation; others require external resistor. AC starting voltage 1 lamp, 3 oz .; box of $10,5 \mathrm{oz}$

| Stock No. | $\begin{aligned} & \text { Mfr's } \\ & \text { Type } \end{aligned}$ | Fig. | Watt | $\begin{gathered} \mathrm{AC} \\ \mathrm{Volts} \end{gathered}$ | $\begin{aligned} & \text { Bulb } \\ & \text { Style } \end{aligned}$ | Base | $\begin{aligned} & \hline \text { NET } \\ & \text { EACH } \end{aligned}$ | $\begin{aligned} & \overline{10-U p} \\ & \text { EACH } \end{aligned}$ |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 52 E 370 | NE-2 | M | 1/25 | 65 | T-2 | Wire Term. | . 10 | 8 |
| 52 S 396 | NE-2 | M |  |  | T-2 | Wire Term. | .12 |  |
| E 37 | NE- | P | 崖 | 55 | T-41/2 | Wire Term. | 73 | . 5 |
| 52 E 82 | §NE-16 | S | 1/4 | 867 | T-41/2 | D.C. Bay. Cand. | . 63 | . 4 |
| 52E827 | NE-17 | S | 1/4 | 55 | T-41/2 | D.C. Bay. Cand. | . 90 | . 7 |
| 52 E 822 | NE-21 | T | 1/4 | 55 | T-41/2 | S.C. Bay. Cand. | . 95 | . 71 |
| 52 E 80 | NE-30 | ${ }^{W}$ | 1 | 60 | G-10 | Edison | 1.20 |  |
| 2 | NE-31 | X | 1 | 60 | G-10 | Sk. Cand. Screw | 2.98 | 2.6 |
| 2 E 814 | NE-32 | Y | 1 | 60 | G-10 | D.C. Bay. Cand. | 1.20 | . 9 |
| 52E 803 | NE-34 | z | 2 | 60 | S-14 | Edison | 1.85 | . 43 |
| 2 E | $\dagger$ NE-3 | Z | 2 | 60 | S-14 | Edison | 1.97 | . 53 |
| 52 E | NE-36 | AA | 2 | 60 | S-14 | Sk. D.C. Bay. Can | 2.40 | . |
| 52 E 806 | NE-40 | Z | 3 | 60 | S-14 | Edison | 2.70 | 2. |
| 52 | NE-42 | AA | 3 | 60 | S-14 | Sk. D.C. Bay. Can | . 2.65 | 2.0 |
| 52E807 | NE-45 | P | $1 / 4$ | 65 | T-41/2 | Cand. Screw | . 85 | 66 |
| 52 E | NE-48 | S | , | 65 | T-41/2 | D.C. Bay. Cand. | . 70 | . 54 |
|  | NE-51 | N | 1/25 | 65 | T-31/4 | S.C. Bay. Min. | . 21 |  |
|  | NE-514 | N | 1/4 |  | T-31/4 | S.C. Bay. Min. | 23 |  |
| 52 E 360 | $\pm$ NE | W | 1 |  | G-10 | Edison | 1.25 |  |
| 52 E |  |  |  |  | T-41/2 | Cand. Screw |  |  |
| 52 E |  | R | 1/2 | 65 | -41/2 | Cand. Screw | . 95 | . 7 |
| ARGON GLOW LAMPS |  |  |  |  |  |  |  |  |
| Pale blue-violet light-near-ultraviolet radiation. Clear glass. *Av. life 1000 hours; tav. life, 3000 hrs . Av. wt., 1 lamp, 3 oz.; box of $10,5 \mathrm{oz}$. |  |  |  |  |  |  |  |  |
|  |  |  |  |  |  |  |  |  |
| 52 E 811 | *AR-3 | P | 1/4 | 80 | T-41/2 | Cand. Screw | 85 | 68 |
| E 820 | $\dagger$ AR-2 | AA | 2 | 65 | S-14 | Sk. D.C. Bay. Cand. 2 | 2.20 |  |
| 52E810 | +AR-1 | z | 2 | 65 | S-14 | Edison | 1.90 | . 53 |

## AC-DC PILOT LAMPS

Rated at 1500 hours, average use. Have clear glass envelopes except $\delta$ white glass. Ideal for use behind small panel openings, as indicator lamps, etc. *Candelabra screw base. $\dagger$ Double contact candelabra bayonet base. $\ddagger$ Herzog tubular lamp-all others, G.E. Av. wt., 4 oz .

| Stock No. | Type | Fig. | Volts | Watts | EACH | 10-UP, EA. |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 52 E 349 | *S6 | BB | 120 | 6 | . 22 | . 20 |
| 52 E 352 | t6S6 | BB | 120 | 6 | . 30 | .27 |
| 52 E 354 | ${ }_{*}^{* 356}$ | BB | 120 | 10 | . 55 | $\cdot 47$ |
| 52 E 355 | * C 7 | CC | 115-125 | 7 | . 20 | .18 |
| 52 E 356 | ${ }^{88} \mathrm{C} 7$ | CC | 115-125 | 7 | . 20 | . 18 |
| 52E351 | ${ }_{+}^{+C 7}$ | CC | 115-125 | 10 | .26 | .235 |

SOCKETS FOR NEON, ARGON AND PILOT LAMPS


| *Hard rubber insert in metal shell. Av. shpg. wt., 3 oz. |
| :--- |
| Stock No. |
| Fig. |
| Description |


|  |  | Description | A |  |
| :---: | :---: | :---: | :---: | :---: |
| 52 E 850 | DD | Edison | . 13 | . 12 |
| 52 E 858 | DD | Miniature screw | .14 | .13 |
| 52 E 852 | EE | Candelabra screw | . 45 | . 41 |
| 52 E 855 | DD | Candelabra screw | . 14 | .13 |
| $52 \mathrm{E} 853 *$ | FF | Double-contact, bay. candelabra | . 29 | . 26 |
| 52 E 856 | GG | Double-contact, bay. candelabra | . 75 | . 67 |

LAMP SOCKET REDUCERS
Receptacle opening receives
base of bulb; other end fits inbase of bulb; other end fits in-
to socket desired. Enables user to convert to most commonlyused types of bulb bases. Positive contact. Av. shpg. wt., 2 oz .


| Stock No. | Flg. | Description | NET |
| :---: | :---: | :--- | :---: |
| 52 E 606 | HH | Edison-to-Candelabra | 164 |
| 52 | E 69 | JJ | Candelabra-to-Miniature |
| 52 | E 63 | JJ | Intermediate-to-Candelabra |
| 52 | E 638 | KK | Edison-to-Intermediate |

# Dialco Pilot Light Assemblies 



## OIl-TIGHT SERIES

Heavy-duty pilot light assemblies. Feature totally enclosed construction. Chrome finish Glass lens gives $180^{\circ}$ light spread. High-impact phenolic insulation. Rugged terminals. Caps mitg. hardware; less lamp. Av. shpg. wt., 3 oz.

## 1" MOUNTING HOLE TYPES

Series 103-3101. For use with S6 screw-base lamp. Size, $13 / 16 \times 17 / 8^{\prime \prime}$. Screw-type terminals. *Indicates frosted lens.

| $\text { A } \begin{gathered} \text { Stock No. } \\ \text { (Faceted) } \end{gathered}$ | $\begin{aligned} & \text { Mfr's } \\ & \text { Type } \end{aligned}$ | B | Stock No. (Dome) | $\begin{aligned} & \text { Mfr's } \\ & \text { Type } \end{aligned}$ | Color |
| :---: | :---: | :---: | :---: | :---: | :---: |
| 52 E 885 | -1331 |  | E 892 | -121** | Red |
| 52 E 886 | -1332 |  | E 893 | -1212* | Green |
| 52 E 888 | -1333 |  | E 89 | -1213* | Amber |
| 52 E 88 | -1335 |  | E 896 | ${ }_{-1235}{ }^{-1214 *}$ | Blue White |
| 52 E 890 | -1336 |  | E 897 | -1216* | Yellow |
| 52 E 891 | -1337 |  | E 898 | -1217* | Clear |

10 to 9 , NET EACH.
2.20
.1 .98

Series 103-3502. As above, but for 6S6 bayonet base lamp. *Indicates frosted lens.

| (A) Stock No. (Faceted) | $\begin{aligned} & \text { Mfr's } \\ & \text { Type } \end{aligned}$ | B] $\begin{gathered}\text { Stock No. } \\ \text { (Dome) }\end{gathered}$ | Mfr's Type | Color |
| :---: | :---: | :---: | :---: | :---: |
| 52E839 | -1331 | 52 E 846 | -1211* | Red |
| 52 E 840 | -1332 | 52 E 847 | -1212* | Green |
| 52 E 841 | -1333 | 52 E 848 | -1213* | Amber |
| 52 E 842 | -1334 | 52 E 849 | -1214* | Blue |
| 52 E 843 | -1335 | 52 E 878 | -1235 | White |
| 52 E 844 | -1336 | 52 E 879 | $-1216^{*}$ | Yellow |
| 52 E 845 | -1337 | 52 E 880 | -1217* | Clear |

1 to 9 , NET EACH
10 or More, EACH
.2 .20
.1 .98

## $11 / 16^{\prime \prime}$ MOUNTING HOLE TYPES

Series 125-408. Pilot light assemblies for use Series 125-408. Pilot light assemblies for use
with NE-51 neon lamps. Built-in resistor. All have solder terminals. Size, $15 / 16 \times 29{ }^{9} 6^{\prime \prime}$.

| $\text { C. } \begin{gathered} \text { Stock No. } \\ \text { (Fluted) } \end{gathered}$ | $\begin{aligned} & \text { Mfr's } \\ & \text { Type } \\ & \hline \end{aligned}$ | $D^{\text {Stock No. }} \begin{gathered} \text { Plain) } \end{gathered}$ | $\begin{aligned} & \text { Mfr's } \\ & \text { Type } \end{aligned}$ | Color |
| :---: | :---: | :---: | :---: | :---: |
| 52 E 823 | -1191 | 52 E 828 | -1131 | Red |
| 52E824 | -1193 | 52 E 829 | -1133 -1137 | Amber Clear |

10 to 9 , NET EACH $\qquad$ $\ldots 1.94$

## "PRESS-TO-TEST" SERIES

[E Series VM-911M. "Press-to-test" indicaEng tor assemblies. Feature built-in circuit testing provision and optional shutter dimming normal circuit and 1 for test circuit. Units are completely enclosed. Provide $180^{\circ}$ daylight beam; "halo" light for night. Require $15 / 32^{\prime \prime}$ mtg. hole. $5 / 8 \times 15 / 8^{\prime \prime}$. For Nos. 327,328 , bulbs. 1 oz.

| Dimmer |  | Non-Dimmer |  | Lens |
| :---: | :---: | :---: | :---: | :---: |
| Stock No. | Mil. No. | Stock No. | Mil. No. |  |
| 52 E 4 | MS2504 |  | MS25041-5 |  |
| 52 E 4 | MS25041-2 | 52 E 457 | MS25041-6 |  |
| S2 | MS25041-3 |  | MS25041-7 | Gr |
| 52 E 418 | MS25041-4 | 2 2 |  |  |
|  |  |  |  |  |

## SITTLER PANEL LAMP

- 5
Type 211007 Neon Indicating Lamp. Has starting voltages of 65 v . AC;



## COLE-HERSEE <br> DASH LAMP ASSEMBLY

Nimman Type DL-3. With nickelplated hood. Socket takes
Nos. $51.53,55$ or 57 bulbs (see page 211). $3 / 8^{\prime \prime} \mathrm{mtg}$. hole (stem-mounted). Has single wire $12^{\prime \prime}$ long. Easy to install on dashboards, panels, etc. Shpg. wt., 2 oz.

## Dialco "Datalites" and Indicator Lights



NEW "DATALITES" ULTRA-MINIATURE INDICATOR LIGHTS
Ultra-miniature indicators. Ideal for dataprocessing equipment, computers and automation applications. Fully insulated; comform to all applicable military specs. Two basic styles: twin or singie assemblies with replaceable built-in, non-replaceable neon glow lamps.

## TWIN LAMP ASSEMBLY

(A) Type 248-6939-1437. Compact assembly A. for two Dialco lamp cartridges (see below). Requires only $3 / 4^{\prime \prime}$ dia. hole. Permits independble conditions; or lamps can be parallel-wired. Cartridges replace from front. Clear plastic lens. Less cartridges. Wt., 3 oz. $\quad 6.12$ 20 or More, EACH............................ 4.08

## SINGLE LAMP ASSEMBLY

B Type 7538. Ultra-compact holder for DialB co lamp cartridges-requires only $3 / 8^{\prime \prime}$ dia. mtg. hole. Lamp cartridge is easily replaced from the front. Terminals are marked and offset to ind icate polarity. Less cartridge. 2 oz .2 .35
54 E 101.1 to 19, NET EACH....... 2.35 20 or More, EACH.

## REPLACEABLE LAMP CARTRIDGES

Series 38 Neon Gfow Lamp Cartridges. NE2 E neon lamps mounted in aluminum sleeves capped with plastic lenses. Stovepipe type is Fig. C; long cylindrical type is similar to Fig. D. Polarized pins for plugging into either assembly above. Pins are stainless steel; mounted in
nylon. $1 / 25$ watt requires 65 v. AC 90 v DC nylon. $1 / 25$ watt requires 65 v . AC or 90 v . DC
starting voltage; for use with $105-125 \mathrm{v} ., 1 / 2$ starting voltage; for use with 105-125 v., $1 / 2$ watt external resistor is recommended (see for longer life, use 100,000 ohms. Av, wt, 1 oz

 | Stock No. Type |  |
| :--- | :--- |
| $54 E / 02$ |  |

 | 54 | E | 03 | 933 | 54 | E | 08 | 1533 |
| :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- |
| 54 | E | 04 | 935 | 54 | E | 09 | 1535 |
| Amber |  |  |  |  |  |  |  |
| 54 | E | 05 | 936 | 54 | White | 10 | 1536 |
| 54 | Yellow |  |  |  |  |  |  | 1 to 19, NET EACH.

Series 39-6 Incandescent Lamp Cartridges. T-13/4 incandescent lamps in same type mount as above. Short cylindrical type is Fig D; stovepipe type is similar to Fig. C. For 6 v., 0.2 ings available on special order.

| Stovepipe |  | Short Cylindrical |  | Lens Color |
| :---: | :---: | :---: | :---: | :---: |
| Stock No. | Type | Stock No. | Type |  |
| 54 E 112 | 971 | 54E 118 | 1471 | Red |
| 54 E II3 | 972 | 54 E 119 | 1472 | Green |
| $54 \mathrm{E} \mid 14$ | 973 | 54 E 120 | 1473 | Amber |
| 54 E 115 | 974 | 54 E 121 | 1474 | Blue |
| 54 E 116 | 975 | 54 E 122 | 1475 | White |
| 54 E 117 | 976 | 54 E \| 231 | 1476 | Yellow |
| $\begin{aligned} & 1 \text { to } 19, \mathrm{~N} \\ & 20 \text { or Mor } \end{aligned}$ | EA |  |  | $\begin{aligned} & 2.00 \\ & 1.33 \end{aligned}$ |

## PERMANENT "DATALITES"

(E) Series 249-7840. Ultra-compact indicators glow lamps. Require only $3 / 8^{\prime \prime}$ dia. mtg. hole. Have same power requirements and use same external resistors as Series 38 above. Av. shpg. wt. 2 oz. Available on special order with built-in $56,000 \mathrm{ohm}$ or $100,000 \mathrm{ohm}$ resistors. Cylindrical types also available with hot-stamped legends. Write Allied for literature and prices.

## STOVEPIPE

Stock No. Type Lens 1-19, EA. 20-Up, EA.


CYLINDRICAL (Similar to Fig. D)
Stock No. Type Lens 1 1-19, EA. $2^{20-U p, E A .}$ 54 E 129 Red


## half INCH ENCLOSED TYPE INDICATOR LIGHTS

F Series $81410 \times$. Rugged, aviation-type socket shell with smooth jewel in $1 / 2^{\prime \prime}$ nickellamp, replaceable from front. $21 / 4^{\prime \prime}$ yonet base mtg . hole. Fits panels up to $3 / 8^{\prime \prime}$ thick. Less lamp (see page 211). U.L. Approved. Shpg. wt., 3 oz.

| Stock No. | $\begin{aligned} & \text { Mfr's } \\ & \text { Type } \end{aligned}$ | Cap Color | $\left\|\begin{array}{c} \text { NET } \\ \text { EACH } \end{array}\right\|$ | 10 or More, EACH |
| :---: | :---: | :---: | :---: | :---: |
| 52 E 530 | 111 | Red |  |  |
| 52 E 53 | 112 | Green |  |  |
| 52 E 532 | 135 | White | 1.19 | 07 |
| 52 E 533 | 113 | Amber |  |  |


| 2 E 55 | 81-111 | Red |  | 14 c |
| :---: | :---: | :---: | :---: | :---: |
| E 536 | 81-112 | Green |  |  |
| E 537 | 81-135 | White | 16c |  |
| 2 E 538 | 81-113 | Amber |  |  |

## HALF-INCH OPEN TYPES

G Series 857 B . Requires an ${ }^{11} / 16^{\prime \prime} \mathrm{mtg}$. hole. G $1 / 2^{\prime \prime}$ lens. $2^{\prime \prime}$ long. Tinned solder terminals. For panels up to $1 / 4^{\prime \prime}$ thick. With mounting washer. Less lamp. Uses type 44,47 or 51 listed on
page 211. Shpg. wt., 4 oz .

| Stock No. | Mfr's <br> Type | Jewel Color | $\begin{aligned} & \text { NET } \\ & \text { EACH } \end{aligned}$ | $\begin{aligned} & 10 \text { ormore, } \\ & \text { EACH } \end{aligned}$ |
| :---: | :---: | :---: | :---: | :---: |
| 52 E 545 | 431 | Red |  |  |
| 52 E 546 | 432 | Green |  |  |
| $\begin{array}{llll}52 & \text { E } & 547 \\ 52 & \text { E } & 548\end{array}$ | 433 | Amber | 44 C | 40 c |

## MINIATURE TYPES

(H) Series 810. Screw and bayonet types. $1 / 2^{\prime \prime}$ ture jewel. Require an ${ }^{11 / 16^{\prime \prime}} \mathrm{mtg}$. hole. Use miniabase; *Seri. Series $M$ takes $T-31 / 4$ bulb, screw Less lamp; see page 211. Shpg. wt., 2 oz.

| Stock No. | Mfr's <br> Type | Jewel Color | $\left\lvert\, \begin{gathered} \text { NET } \\ \text { EACH } \end{gathered}\right.$ | $\begin{aligned} & 10 \text { ormore, } \\ & \text { EACH } \end{aligned}$ |
| :---: | :---: | :---: | :---: | :---: |
| 52 E 450 | M-431 | Red |  |  |
| 52 E 451 | M-432 | Green |  |  |
| 52 E 452 | M-433 | Amber |  |  |
| 52 E 453 | B-431* | Red | 32c | 29c |
| 52 E 454 | B-432* | Green |  |  |
| 52E455 | B-433* | Amber |  |  |

Series 510, 610, and 710. Open-type visual $\square$ indicators. Faceted jewels. Lug terminals. Require ${ }^{7 / 16^{\prime \prime}}$ mounting hole. Less lamp (see style, 610 takes S6. Shpg. wt., 2 oz.

| Series 510 Miniafure Screw Type |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: |
| Stock No. | Mfr's <br> Type | Jewel Color | $\left\lvert\, \begin{gathered} \text { NET } \\ \text { EACH } \end{gathered}\right.$ | $\begin{aligned} & 10 \text { ormore, } \\ & \text { EACH } \end{aligned}$ |
| 52 E 475 | 431 | Red |  |  |
| 52 E 476 | 432 | Green | 21 c | C |
| 52E477 | 433 | Amber |  |  |
| Series 610 Candelabra Screw Type |  |  |  |  |
| 52 E 540 | 431 | Red |  |  |
| 52 E 541 | 432 | Green | 21 c |  |
| 52 E 542 | 433 | Amber |  |  |
| Series 710 Miniature Bayonet Type |  |  |  |  |
| 52 E 480 | 431 | Red |  |  |
| 52 E 481 | 432 | Green | $21 c$ | C |
| 52 E 482 | 433 | Amber |  |  |

## MINIATURE SOCKETS

K Series 910. Open type with chrome-plated $K$ brass jewel holders. $11 / 2^{\prime \prime}$ long. $1^{\prime \prime}$ mounting hole. Miniature types take $T-31 / 4$ bulb style; candelabra type takes S 6 style. Less bulb. Shpg. wt., 3 oz .

MINIATURE BAYONET TYPE

| Stock No. |  | Color |  | $\begin{gathered} \text { NET } \\ \text { EACH } \end{gathered}$ | 10 or More,EACH |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| $\begin{aligned} & 52 \text { E } 420 \\ & 52 \text { E } 421 \\ & 52 \text { E } 422 \\ & \hline \end{aligned}$ |  | Red Green Amber |  | 61 c | 55 c |  |
| MINIATURE AND CANDELABRA SCREW |  |  |  |  |  |  |
| Color |  | ature rew |  | delabra rew | $\begin{aligned} & \text { NET } \\ & \text { EACH } \end{aligned}$ | 10 or More, EACH |
| Red Green Amber |  | E 430 E 431 432 | 52 | $\begin{array}{ll} \text { E } \\ \text { E } \\ \text { E } 441 \\ 442 \end{array}$ | 58c | 52 c |

## ONE-INCH ENCLOSED TYPES

(L) Series 313101. 115-volt, enclosed pilot L lamp assembly. Black bakelite and brass. Has faceted jewel in chrome-plated holder. Candelabra screw socket. $1^{\prime \prime}$ mounting hole. *Not recommended for neon; all others for neon or incandescent. For type S6 bulbs. U.L. Approved. Shpg. wt., 4 oz .

| Stock No. | $\begin{aligned} & \text { Mfr's } \\ & \text { Type } \\ & \hline \end{aligned}$ | Jewel Color | $\left\|\begin{array}{c} \text { NET } \\ \text { EACH } \end{array}\right\|$ | 10 or More, EACH |
| :---: | :---: | :---: | :---: | :---: |
| 52 E 460 | 431 | Red |  |  |
| 52 E 461 | 432 | Green* |  |  |
| 52 E 462 | 433 | Amber |  |  |
| 52 E 510 52 E 51 | $\begin{aligned} & 437 \\ & 434 \end{aligned}$ | Clear Blue* | 1.03 | 93 C |
| $\begin{array}{ll}52 & \text { E } 511 \\ 52 & \text { E }\end{array}$ | 434 435 | White |  |  |

## ASSEMBLIES WITH WIRE LEADS

(M) Series $\mathbf{6}^{\prime \prime}$ wire leads. Solid brass. Has friction-fit, chrome-plated cap. $1^{\prime \prime}$ mtg. hole. U.L. ADproved. Less S 6 candelabra screw-base lamp (see page 211). Shpg. wt., 4 oz.

| Stock No. | Mif's Type | Jewel Color | $\begin{array}{\|c\|} \text { NET } \\ \text { EACH } \end{array}$ | 10 or More, EACH |
| :---: | :---: | :---: | :---: | :---: |
| 52 E 485 | 111 | Re |  |  |
| 52 E 486 | 112 | Green |  |  |
| 52 E 487 | 113 | Amber |  |  |
| 52 E 488 | 117 | Clear |  |  |
| ONE-INCH OPEN TYPES |  |  |  |  |
| N Series 75. 115-volt open-type pilot lamp |  |  |  |  |
| plated bra | s hold | . Cande | labra sc | crew socket. |
| Solid brass construction. Friction-fit chromeplated cap. $1^{\prime \prime}$ mounting hole. Less S6 lamp (see page 211). Shpg. wt., 5 oz . |  |  |  |  |
|  |  |  |  |  |
| Stock No. | Mfr's Type | Jewel Color | $\begin{gathered} \text { NET } \\ \text { EACH } \end{gathered}$ | 10orMore, EACH |
| 52 E 500 | C-431 | Red <br> $\begin{array}{l}\text { Green } \\ \text { Amber }\end{array}$ <br> 70c |  | 63 c |
| 52 E 501 | C-432 |  |  |  |
| 52 E 502 | C-433 |  |  |  |

## JEWEL CAP ASSEMBLIES

Series 31914. For NE-45, NE-57, etc. Can$\bigcirc$ delabra screw base neon lamps. $115 \mathrm{v} ., \mathrm{D}^{2} 1 / 2^{\prime \prime}$ long. $1^{\prime \prime}$ mtg. hole. Neon lamp removable from
front. Less lamp (see page 211). U.L. Apfront. Less lamp (see page 211). U.L. Ap-
proved. Shpg. wt., 4 oz.



REPLACEMENT JEWEL CAPS
For Series 312901 and 31914

| Stock No. | $\begin{aligned} & \hline \text { Mfr's } \\ & \text { Type } \\ & \hline \end{aligned}$ | $\begin{aligned} & \text { Cap } \\ & \text { Color } \end{aligned}$ | $\begin{aligned} & \mathrm{NET} \\ & \mathrm{EACH} \end{aligned}$ | 10 or More EACH |
| :---: | :---: | :---: | :---: | :---: |
| 52 E 575 | 31-111 | Red |  |  |
| 52 E 596 | 31-112 | Green |  |  |
| 52 E 576 52 S 78 | $31-113$ $31-117$ | Amber Clear | 35 c | 31 c |
| FOR SERIES 75, 910, AND 313101 |  |  |  |  |
| 52 E 525 | 31-431 | Red |  |  |
| 52 E 526 | $31-432$ $31-433$ | Grreen |  |  |
| 52 E 527 <br> 52 E | $31-433$ $31-437$ | $\xrightarrow{\text { Amber }}$ | 35c | 315 |

## DRAKE NEON INDICATING LIGHTS



R Type 110 "Flushlite." Neon light in $R$ translucent plastic base. For $110-125 \mathrm{v}$. AC-
 S Type 105 "Post-lite," Panel lights for Require $1 / 2^{\prime \prime}$ mtg, hole. With mtg, nut 2 oz . Require $1 / 2^{\prime \prime} \mathrm{mtg}^{2}$. hole. With mtg. nut. 2 oz.
78 E $062.10-\mathrm{Un}_{\mathrm{p}}$, EA. . . $52 \phi 1-9$, EA. . . $58 \phi$ Type R115 "Taperlite." Neon lamps with resistor
for $110-125 \mathrm{v}$. AC-DC. $3 / 8^{\prime \prime}$ for $110-125 \mathrm{~V}$. AC-DC. $3 / \mathrm{B}^{\prime \prime}$
dia. mtg. hole. Wt., 1 oz .
Type 115. As above, less
Type 115. As above, less built-in resistor.
53 E 193. NET...... . . . . . . . . . . . . . . 704

## Littelfuse Fuses and Mountings



## CARTRIDGE FUSES FOR RADIO, TV \& INSTRUMENTS

## TYPE SAG STANDARD FUSES

Series 312000. Quick to medium acting fuses for short time-lag applications. For auto radios, amplifiers, etc. High operating temperatures do not affect fuse characteristics $11 / 4 \times 1 / 4^{\prime \prime}$. Pkg. ship. wt., 2 oz .5 fuses per pkg.


## TYPE BAG SLO-BLO FUSES

Series 313000. Slo-Blo fuses with high time-lag to stand heavy surges. Designed for circuits having high inductive or capacitive surges. Also or circuits having heavy starting currents, such as motors and lamps, diameter. Shag. wt., per pkg. 2 oz . 5 fuses per pkg.


## TYPE SAB FUSES

Series 314000 . Steatite enclosed, arc-quenching, powder-filled fuses. Shat-er-proofed against quick shorts. Medium lag. $11 / 4 \times 1 / 4^{n}$. Types through 15 amps , U.L. Approved. Shag. wt., per pkg., 2 oz .5 fuses per pkg.


TYPE BAG FAST ACTION INSTRUMENT FUSES
Series 361000. For protection of meter movements and delicate electronic equipment. High-speed action to prevent damage to inst


## TYPE SAG PIGTAIL FUSES

*Series 315000. Series 318000. Wire lead fuses for TV and limitedspace applications. $11 / 4 x^{1 / 4} 4^{\prime \prime}$. Shag. wt., per pkg., 2 oz .5 fuses per pkg.


## TYPE AG SLO-BLO FUSES

Series 413000 . Will withstand severe vibration. Will open within 1 hour on $135 \%$ overload; within 60 seconds on $200 \%$; immediately
 5 fuses per package.


| Amps |
| :--- |
| $21 / 2$ |
| 3 |
| $3-2 / 10$ |
| 4 |
| 4 |
| $61 / 4$ |
| 8 |
| 10 |
| 15 |
| 20 |
| 25 |
| 30 |


| Max. |
| :---: |
| Volts |
| 250 |
| 250 |
| 250 |
| 252 |
| 32 |
| 32 |
| 32 |
| 32 |
| 32 |
| 32 |
| 32 |
| 32 |
| 32 |


| $\begin{array}{c}\text { Stock } \\ \text { No. }\end{array}$ |
| :---: |
| 528946 <br> 52 B 989 <br> 52 B 947 <br> 52 B 948 <br> 52 B 990 <br> 52 B 949 <br> 52 B 960 <br> 52 B 91 <br> 52 B 961 <br> 52 B 962 <br> 52 B 963 <br> 52$\|$ | | $\begin{array}{c}\text { Per } \\ \text { Pkg. }\end{array}$ | $\begin{array}{l}20 \text { Pkgs. } \\ \text { or more, } \\ \text { Per Pkg. }\end{array}$ |
| :---: | :---: |
| 79 c | 67 c |
| 79 c | 67 c |
| 79 c | 67 c |

TYPE HAG AND SAG STRAIGHT-ELEMENT FUSES
Series 417000: $11 / 4 \times 9 / 32^{\prime \prime}$; *Series 517000: $11 / 2 x^{13} / 32^{\prime \prime}$. Medium-lag, heavy. duty fuses. Shpg. wt., per pkg., 2 oz .5 fuses per package.


## LIMITED-CURRENT BAYONET FUSES

TV fuses for 346000 series bayonet-lock fuse holders only. Series 333000 are Slo-Blo; 332000 are regular. Shag. wt., 2 oz. 5 fuses per pkg.


TYPE SF 32-VOLT AUTO FUSES
Series 307000. Medium-acting fuses. Made to sizes specified by S.A.E. U.L. Approved. Shag. wt., per pkg., 2 oz. 5 fuses per pkg


LITTELFUSE MOUNTINGS-EXTRACTOR POSTS



Burnished nickel plate with fuse stop ears. 10 Clios Per Pkg. Wt., 5 oz . Stock No. For Fuse Types: Per Pkg. 10 Pigs., Per Pkg. 52 B 685 SEE, 3AG, RAG, 3AB 4AG, 4AB 5AG'High-voltage Mi
NEC-30 Fuses
Standard High-voltage $\qquad$

| Per Pkg. |
| :---: |
| .15 |
| .29 |$\frac{10 \text { Pkg., Per Pkg. }}{.13}$

## TYPE 350130 SNAP-ON FUSE HOLDER

Double-ended fuse holder for fast replacement of "pigtail" fuses. One side of holder clips onto blown fuse. New


# Buss and Fusetron Fuses 

## STANDARD AND FUSETRON TYPES

## TYPE MDL FUSETRON FUSES

Long time-lag prevents needless blows. Operates instantly on high overloads or shorts. Thermal cutout operates slowly on low overloads. Size, $11 / 4 \times 1 / 4^{\prime \prime}$. U.L. Approved. Shpg wt., per pkg., 2 oz .5 fuses per pkg.

250 VOLTS MAX

| Amps | Stock <br> No. | Per <br> Pkg. |  |
| :---: | :---: | :---: | :---: |
| $1 / 100$ | 5384441 | 1.08 |  |
| $1 / 32$ | 53 | 8442 | 1.08 |
| $1 / 16$ | 53 | 8443 | .78 |
| $1 / 10$ | 53 | 8444 | .78 |
| $15 / 100$ | 53 | 8450 | .78 |
| $2 / 10$ | 53 | B 451 | .78 | 20 Pkgs.


| Amps |  |
| :---: | :---: |
|  |  |
| $3 / 10$ | 53 |
| $4 / 10$ | 53 |
| $1 / 2$ | 53 |
| $6 / 10$ | 5 |
| $8 / 10$ | 5 |
| 1 | 53 |


| Stock |
| :---: |
| No. |
| 53 B 45 |
| 53 |
| 53 |
| 53 |
| 53 |
| 53 |
| 53 |
| 53 |
| 53 |


| Per | 20 Pkgs. <br> Pkg. |
| :--- | :--- |
| or more, |  |
| Per Pkg: |  |,

125 VOLTS MAX


32 VOLTS MAX


## TYPE MDX 125-VOLT FUSETRONS

Have same thermal delay action as Type MDL above, but open in approximately half the time. At $200 \%$ load opens in 12 seconds; at $300 \%$ load, 3 seconds; at $500 \%$ load, $1 / 2$ second. $11 / 4 \times 1 / 4^{11}$. U.L. Approved Shpg. wt. per pkg., 2 oz., per 100, 15 oz. 5 fuses per pkg.

| Amps | Stock No. | $\begin{gathered} \text { Per } \\ \text { Pkg. } \end{gathered}$ | 20 Pkgs. or More, Per Pkg. | Amps | $\begin{aligned} & \text { to } \\ & \text { No } \end{aligned}$ | $\begin{aligned} & \text { Per } \\ & \text { Pkg. } \end{aligned}$ |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| $\stackrel{4}{5}$ | $\begin{array}{lll}53 & \mathrm{~B} & 503 \\ 53 & \mathrm{~B} & 504\end{array}$ | .69 .69 | . 57 | 7 | $\|$53 B 505 <br> 53 B 506 | . 69 | . 57 |

## TYPE N TIME DELAY FUSES

Slow-blowing glass tube fuses. Time-delay action; unaffected by harmless surges


 | Amps | $\begin{array}{c}\text { Stock } \\ \text { No. }\end{array}$ | $\begin{array}{c}\text { Per } \\ \text { Pkg. }\end{array}$ | $\begin{array}{c}\text { 20 Pkgs. } \\ \text { or More, } \\ \text { Per Pkg. }\end{array}$ | Amps | $\begin{array}{c}\text { Stock } \\ \text { No. }\end{array}$ | $\begin{array}{c}\text { Per } \\ \text { Pkg. }\end{array}$ | $\begin{array}{c}\text { 20 Pkgs. } \\ \text { or Morr, } \\ \text { Per Pkg. }\end{array}$ |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| $1 / 4$ | 53 B 535 | .83 | .69 | 2 | 53 B 538 | .78 | .64 |
| $1-6 / 10$ | 53 | 8536 | .83 | .69 | $3-2 / 10$ | 53 B 539 | .669 |
| 53 | 537 | .78 | .64 | 4 | 53 | 8540 | .69 |

## TYPE W PLUG FUSES

Finest quality plug-type house fuses. Condition of fuse is visible at a glance-extremely large window area with white background behind fuse element shows when fuse is blown. Fine quality porcelain and first-cut mica used in construction. 125 volts max. Edison base. U.L. Approved. Shpg. wt., per pkg., 6 oz. 5 fuses per pkg.

| Amps | Stock No. | Per. Pkg. | 20 Pkgs. or more, Per Pkg. | Amps | Stock No. | Per Pkg. | 20 Pkgs. or more, Per Pkg. |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| $\begin{aligned} & 3 \\ & 5 \\ & 6 \\ & 8 \end{aligned}$ | 53 B 560 <br> 53 B 561  <br> 53 B 52 <br> 53 B 563 | $30 c$ | 27 c | $\begin{aligned} & 10 \\ & 15 \\ & 20 \\ & 25 \\ & 30 \end{aligned}$ | 53 B 564 <br> 53 B 565 <br> 53 B 566 <br> 53 B 567 <br> 53 B 568 | 26c | 24 c |

TYPE HKL AND HKR INDICATOR FUSEHOLDERS
For $11 / 4 \times 1 / 4^{\prime \prime}$ fuses. HKL has neon indicator which
lights when fuse is blown. HKL for use in 100 to 250 -volt circuits. HKR is for 32 -volt circuits 53 B 501. Ty HKL NET. 2653 B502.

## LITTLEFUSE FUSE CADDIES

- Designed for Radio-TV Servicemen
- The Right Fuse When You Need It Type 094041 Designed to fit in a tube caddy-puts the right fuse at your fingertips. Contains 15 different boxes ( 5 fuses fuses marked by $*$ in table below. Rated 250 v ., except $7 \mathrm{amp}, 125 \mathrm{v}$. Clear plastic case has 3 spare compartments. Size, $17 / 8 \times 3 \times 41 /{ }^{\prime \prime}$. Shpg. wt., 2 lbs.
52 B 283 . NET..............
.8 .32


Type 094037 As above, but 14 boxes of
fuses (types indicated by $\dagger$ ). Also includes emergency kit with various radio fuses. Shpg. wt., 2 lbs.
52 B 272. NET.
6.21


AGC, MTH AND ABC FUSES
Carry $110 \%$ of rated current; open in one hour at $135 \%, 250$ volts max. *Low-resistance fuse providing high-speed action necessary to protect delicate instruments. U.L. Approved. $11 / 4 \times 1 / 4^{\prime \prime}$. Wt., $100,15 \mathrm{oz} .5$ fuses per pkg

250 VOLTS MAX

| Amps | Mfr's Type |
| :---: | :---: |
| 1/16 | AGC* |
| $1 / 8$ | AGC |
| $1 / 4$ | AGC |
| 3/8 | AGC |
| 1/2 | AGC |
| $3 / 4$ | AGC |
| 1 | AGC |


| Stock <br> No. |
| :---: |
| 53 |
| B |
| 53 |
| B |
| 53 |
| 53 |
| B |
| 53 |
| B |
| 53 |


| Per <br> Pkg. | 20 Pkgs. <br> or more, <br> Per Pkg. |
| :---: | :---: |
| .78 | .67 |
| .59 | .49 |
| .39 | .32 |
| .39 | .32 |
| .39 | .32 |
| .39 | .32 |
| .24 | .20 |


| Amps | Mfr |
| :--- | :--- | :--- |
|  | Typ |
| $11 / 2$ | $A G$ |
| 2 | $A G C$ |
| 3 | $A G C$ |
| 4 | $M$ |
| 5 | $M$ |
| 6 | $M$ |
| 8 | $A B C$ |

TYPE AGC 32-VOLT FUSES
For circuits operating at 32 volts or less. $11 / 4 \mathrm{x}^{1 / 4^{\prime \prime}}$. U.L. Approved. Shpg. wt., 1 oz . per pkg. 5 fuses per pkg.

| Amps | Mfr's <br> Type | Stock No. | Per Pkg. | 20 Pkgs. or more, Per Pkg. | Amps | Mfr's <br> Type | Stock No. | Per Pkg. | 20 Pkgs. or more, Per Pkg. |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 5 | AGC | 53 B 434 | 154 | $3 ¢$ | 15 | AGC | 53 B 438 | $15 ¢$ | 4 |
| 6 | AGC | 53 B 435 | 154 | 34 | 25 | AGC | 538439 | 184 | 154 |
| $71 / 2$ | AGC | 53 B 436 | 154 | 36 | 30 | AGC | 53 B 440 | $18 ¢$ | $15 \%$ |
| 10 | AGC | 53 B 437 | 154 | 34 |  |  |  |  | ¢ |

## TYPE AGX FAST-ACTING FUSES

Capable of very high speed action for proper protection of valuable instruments. Specifications: will carry $100 \%$ load; open at $200 \%$ load within 5 seconds. U.L. Approved. Bridge construction of element. $1 \mathrm{x}^{1 / 4^{\prime \prime}}$. Shpg. wt., per 5, 3 oz .5 fuses per pkg.

| Amps | Max. Volts | $\begin{aligned} & \text { Stock } \\ & \text { No. } \end{aligned}$ | $\begin{aligned} & \text { Per. } \\ & \text { Pkg, } \end{aligned}$ | 20 Pkgs. or more, Per Pkg. | Amps | Max. Volts | $\begin{aligned} & \text { Stock } \end{aligned}$ No. | $\left\lvert\, \begin{aligned} & \text { Per } \\ & \text { Pkg. } \end{aligned}\right.$ | 20 Pkgs Per Pkg |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| $1 / 8$ | 250 | 53 B 5 | . 59 | . 49 | 3/4 | 125 | 53 B | . 39 | . 32 |
| 1/4 | ${ }_{2}^{250}$ | 53 B 514 | . 39 | . 32 | 1 | 125 | 53 B 5 | . 24 | . 20 |
| 3/8 | 250 | 53 535 | . 39 | . 32 | 11/2 | 125 | 53 515 | . 24 | . 2 |
| 1/500 | 250 | 53 B 507* | 3.53 | 2.94 | 1/100 | 250 | 53 B 509* | . 32 | . 11 |
| 1/200 | 250 | 53 B 508* | 1.47 | 1.22 | 1/32 | 250 | 53 B 510* | . 18 | . 98 |

## FUSETRON TYPE FNM LONG TIME LAG FUSES

Avoid needless blows from starting currents or surges. Fuse link operates only on high overloads or short-circuits. Thermal cutout functions on low overloads. Thermal cutout cannot operate quickly on any load-pro-
vides long time lag. Yet protection is obtained against short circuits or continued overloads. Dual-element type. Fiber tube. Specifications: carry $110 \%$ load; open at $135 \%$ load within 1 hour. Approximate blowing time: at $200 \%$ load, 25 seconds; at $300 \%$ load, 8 seconds; at $500 \%$ load, 3 seconds. U.L. Approved. $13 / 32 \times 11 / 2^{\prime \prime} .250 \mathrm{v}$. max. except $* 125 \mathrm{v} .10$ fuses per pkg. Shpg. wt. per pkg. 5 oz.
Amps

| Amps | No. | Pkg. | or More, Per Pkg. |
| :---: | :---: | :---: | :---: |
|  | $53 \text { B } 485$ |  |  |
| 1-6/10 | 53 B487 |  |  |
| $21 / 2$ | 53 B488 | 2.32 | 1.94 |
| 3-2/10 | 53 B490 |  |  |


| Amps | Stock No. |
| :---: | :---: |
| 5 | 53 B |
| 5114 | 53 5492 |
|  | 53 |
| 10 | 53 |
| 15* | 53 B |


| $\begin{array}{c}\text { Per } \\ \text { Pkg. }\end{array}$ | $\begin{array}{l}10 \text { Pkgs. } \\ \text { or More, } \\ \text { Per Pkg. }\end{array}$ |
| :--- | :--- |
| 2.32 | 1.94 |

## FUSETRON TYPE T DUAL-ELEMENT FUSES

New dual-element plug fuses. Provide an additional measure of protection against "blowing", with use of thermal element-element withstands surges of starting current, overloads and short circuits. 20,25 and 30 -ampere types
are for use on appliance circuits or mains; 15 -ampere fuse are for use on appliance circuits or mains; 15 -ampere fuse
for smaller household appliances. For voltages up to 125 volts, AC or DC. Completely shockproof-top cap is insulated with porcelain and mica. Size of fuse is imprinted on face of cap. Large window gives clear indication if fuse is blown. U.L. Approved. Shpg. wt. per pkg., 5 oz .4 fuses per pkg.

| 53 B 521. 15 amp. Per |  |
| :--- | :--- |
| 53 B 522.20 amp. Pkg.....27C | 53 | BUSS AND G.C. FUSE MOUNTINGS



Provide a convenient way of mounting fuses on radio, TV, instrument, automobiles, etc. Fuse always easy to remove as it projects beyond holder body and is not held tight at inner end when knob is removed. $\dagger$ screw terminals. Av. Shpg. wt., 1 oz.


## Photoflash and Stroboscope Components



## ELECTRONIC FLASH TUBES AND REFLECTORS

## SYLVANIA R4330

Flash tube for high－speed photo equipment． A High－voltage discharge type． 100 watt－ seconds； 2250 volts；flash duration， $1 / 5000$ second．Over 30,000 flashes．Wt．， 1 lb． 29.10

## AMGLO FLASH TUBES

For high－speed photo and strobe units． Specially engineered for long life．May be used for color work without filter．Color tem－ perature， $6500^{\circ}$ Kelvin．＊Relay type；all others are trigger type．Shpg．wt．， 1 lb ．

| Stock No． | $\begin{aligned} & \text { Mfr's } \\ & \text { Type } \\ & \hline \end{aligned}$ | W－S | Operating Voltage | $\begin{aligned} & \text { Cap., } \\ & \text { Mfd } \end{aligned}$ | EACH |
| :---: | :---: | :---: | :---: | :---: | :---: |
| 78 E 655 | 78R9D | 200 | 2000－2500 | 15－80 | 70 |
| 78 E 65 | 54R4X＊ | 200 | 2250－2850 | 15－8 |  |
| 78 E 63 | 56122 | 150 | 450－900 | 300－1400 | 2.74 |
| 78 E 658 | 5804X＊ | 110 | 2250－2850 | 15－32 | 3.72 |
| 78 E662 | HD－2－0 | 200 | 300－2000 | 1500 | 8.82 |
| 78 E66 | U－35 |  | 400－600 | $1-4$ | 5.88 |

## G．E．FLASH TUBES

Used in amateur and professional photography， and solving research and industrial problems． Provide flashes of exceedingly high intensity for a short duration，ranging from $1 / 1,000$ to $1 / 1,000,000$ second．Same tube can be Standard equipment in many units and popu－ Sandard equipment in many units and popu－ Tubes are helix－coiled，xenon－filled．$* 60$ watt Tubes are helix－coiled，xenon－filled． 60 watt FT－403．+ Similar to Fig．D，but has 3－pin base． Av．shpg．wt．， 1 lb ．

| Stock No． | Type | Fig． | W－S | Volts | Mfd | NET |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 52 E 388 | FT－218 | C | 200 | 1000 | 400 | 9.10 |
|  | FT－118 | c | 125 | 500 | 1000 |  |
| 52E 364 | FT－214 | D | 200 | 2000 | 100 | 21.50 |
| 52E 376 | FT－220 | E | 200 | 2000 | 100 | 23.00 |
| 52 E 359 | FT－403 | $t$ | 480 | 2000 | 240 | 24.50 |
| 52E 363 | 60761／2／1＊ | F |  | 120 |  | 2.10 |
| 73H998 | 122－275 | Socket for FT－21 |  |  |  | 1.90 |

## SPRAGUE \＆KEMLITE COMPONENTS

For use in two low－cost，portable，dry－cell powered photoflash units．Schematics，parts listings and instructions in Sprague Booklet C－703 below．Two models－one using Kemlite DX flashtube（same as FA－100），and one using
Kemlite DW－2 flashtube（same as FA－104）．For Kemlite DW－2 flashtube（same asFA－104）．For
synchro shutters or solenoid synchronization． Uses two 450 volt capacitors（listed below） and five 90 volt Burgess N60 batteries（listed page 425）．Flashes faster than $1 / 1000$ second． Light output of 100 w．s．Flashtubes are Kem－ ite；reflectors and adapter are Sprague．All other parts available from Allied．Write for free parts list．Av．shpg．wt．， 1 lb ．

| Stock No． | Type | Fig． | Descrip． | W－S |
| :---: | :---: | :---: | :---: | :---: |
| 785 | V． | NET |  |  |
| DX |  |  |  |  |

 | 78 E 703 | $F A-101$ |  | J |
| :---: | :---: | :---: | :---: |
| 78 E 704 | FA－105 | J |  |
| 78 E 702 | $F A-102$ | $\ldots .$. |  |

Reflector for DX
Reflector for DW－2

| Reflactor for DX－2 | 2.69 |
| :--- | :--- |
| Adapt．for Ed．bases | 2.55 |



BUILD YOUR OWN HIGH－SPEED PHOTOFLASH UNITS WITH THESE ESSENTIALS

## CAPACITORS

## SPRAGUE

K Type FF－1 525 Mfd．Capacitor． 450 $\mathrm{X}_{\mathrm{y} \text { tic }}$ volts DC working．Low－leakage electro－ lytic for dry battery photoflash service．Nom－
inal rating $53 \mathrm{w} . \mathrm{s}$ ．Shpg．wt．， $11 / 4 \mathrm{lbs}$ ． inal rating 53 w ．s．Shpg．wt．， $11 / 4$ lbs． 13.23Type PQ Capacitors．Combine maximum $L$ dependability with very compact size． StockNo．Type Mfd

| ck | Type | Mfd | W－S | Lbs． | NET |
| :---: | :---: | :---: | :---: | :---: | :---: |
| 5 L 730 | 2510 | 10 | 31 | $1{ }^{13 / 4}$ | 10.00 |
| 5 L 732 | 2525 | 25 | 78 | 41／4 | 15.58 |
| 5 L 733 | 2535 | 35 | 109 | ${ }_{71 / 4}$ | 19 |

Type 2TM－S5 Molded Tubular Capacitor． 200 v. at $.05 \mathrm{mfd} .3 / 8 \times 11 / 4^{\prime \prime}$ ．Shpg．wt．， 8 oz ． 15 C

## CORNELL－DUBILIER

Type GKGT High－Voltage Oil－Filled． High dielectric photoflash capacitors．Im－ pregnated and filled with Dynakol＂ G ．

| No． | Ty | Mfd | W－ | DCWV | Lbs． | NET |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | 1 A 01 | 25 | 50 | 2000 | $41 / 2$ |  |
|  | 1 A02 | 15 | 50 | 25 | 疗 |  |
|  | 104 | 32 | 5 | 25 | 6 |  |

N Low－Voltage Types．Type FB10063 has aluminum can with cardboard sleeve．Type FW10005 has bakelite case．

| No． | Type | Mfd | Volts | W－S | Lbs． | NET |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 14 L 841 | FB10063 | 200 | 450 | 20 | 11／4 | 4.03 |
| 14 L 842 | FW10005 | 200 | 500 | 25 | 11／4 | 6.17 |

## MALLORY LOW－VOLTAGE TYPE

P］Type HC 45003．An excellent low－voltage P）electrolytic for use in photoflash units． Capacity， 300 mfd at 450 volts working．Size， $21 / 16 \times 43 / 8^{\prime \prime}$ ．Shpg．wt．， 1 lb ．
17820 ．NET．．．．．．．．．．
6.17

## ILLINOIS UMC

Highly efficient，dependable capacitors． All units have very low leakage current． ．shpg．wt．， $13 / 4 \mathrm{lbs}$ ．

## TRANSFORMERS

## THORDARSON

S Type 22 R44．Ignition transformer．For S high－pressure 3 －electrode tubes．Pri．， 200 volt DC discharge from .25 to .5 mfd ．con－ denser．Sec．， $15,000 \mathrm{v}$ ．peak．Size， $21 / 4 \times 11 / 2 \times 11 / 8^{\prime \prime}$ ． 63 Ghpg．wt．， 8 ．NET
4.90

S Type 22 R41．Pri．， 4 volts from vib．at 115 cyc．or higher．Sec．， 450 volts DC or 900


TT 22 R42．Open frame type with leads．Pri．： $1117 \mathrm{v} . ; 60$ cycle，AC．Sec．for supply de－ ${ }^{2} 5$ vering 2250 volts $D C$ at 1.5 ma．；sec．No．${ }^{2}$ ，

63 a 720．NET．
T 22 R43．Pri．： 117 volts， 60 cycle，$A C$ or ma．Delivers 2250 volts in voltage doubler cir－ cuit．Size， $21 / 8 \times 33 / 8 \times 23 / 4^{\prime \prime} ; 213 / 16^{\prime \prime} \mathrm{mtg}$ ．centers． Shpg．wt．，11／2 ${ }^{\text {2 }}$ libs．
8.17

## STANCOR

W］Model P－6425．Power transformer for AC W）electronic photoflash units．Low output voltage for greater safety factor．Has 105／115／ 125 volt 60 －cycle primary．Charges 1050 mfd ． capacitor to 450 volts DC，through a half－wave selenium rectifier． $25 / 16 \times 22^{15 / 16 \times 2 "}$ ．Mtg．centers， $23 / 8^{\prime \prime}$ ．Shpg．wt．， $11 / 2 \mathrm{lbs}$.
64 G 445 ．NET．
64 G 445．NET．
3.43

Type P－6426．Trigger coil for P－6425 trans－ former． $3 / 44^{\prime \prime}$ long， $9 / 16^{\prime \prime}$ diametcr．Replaces G．E． 86 G 41 trigger coil．Shpg．wt．， 3 oz．
64 G 144 ．NET．．．．．．．．．．．．．．
1.64

## UTC

X Type PF－1．Primary for $115 \mathrm{v} ., 50-60 \mathrm{cy}-$ $\chi$ cles．Secondary supplies 2200 v ．DC when 100 mfd ．Transformer is compound－sealed in $21 / 8 \times 23 / 4 \times 21 / 2^{\prime \prime}$ case．Shpg．wt．， $21 / 2$ lbs． 8.23
$62 \mathbf{G} \mathbf{2 3 0}$ ．NET．．．．．．．．．．．．．．．．．．． 8.20.

Type PF－3．Trigger transformer for electron－ ically fired circuit． 15 kv rating．Size： $3^{\prime \prime}$ long， $7 / 8^{\prime \prime}$ diameter．Shpg．wt．， 6 oz.
62 G 232．NET．．．．．．．．．．．．
Lowest Prices－Highest Quality－Best Service

## COMPONENTS

## RECTIFIER，VIBRATORS，RELAY

Type 1013．Federal Telegraph \＆Radio Rectifier．Designed for use in photoflash stor－ age battery chargers．Delivers $700-\mathrm{ma}$ output At volts．Shpg．wt．， 4 oz ．
4 A 604．NET．．． （ Mallory Vibrator．Inter－ rupter type designed for photoflash applica－ tions．4－prong base．4－volt rating．Replaces
type W659．Tubular can： $1^{11 / 2^{\prime \prime}}$ diameter， $2^{7 / 8^{\prime \prime}}$ ong．Shpg．wt．， 8 oz ． 288
56 P｜l8．NET．．．
2.88

Type FA－106．Sprague Vibrator．（Same as Oak V6815）．For 225 to 450 v ．voltage doubler power supplies． 4 volts； 4 amp ． 7 －prong base．

8.33

Type FA－103．Sprague Relay．Synchroniza－ ion delay relay．Provides 5 to 25 millisecond delay．Designed for operation with 3 to $41 / 2^{-}$ volt battery flashgun．Shpg．wt．， 8 oz． 3.43

## PHOTOFLASH HANDBOOKS

Illinois Electronic Flash Handbook．Hand－ book and construction manual．Covers 3 photo－ flash units：low－voltage battery－operated，low－ battery Each construction article includes circuit diagram and parts list；latter two also circuit interior and extrior views of completed have interior and exterior views of completed 37 K 191．Postpaid in U．S．A．

Sprague C703 Electronic Flash Handbook． A popular handbook containing details on the assembly of two battery－operated，high－speed electronic flash units，as well as a flash unit for AC operation．Includes photographs showing parts placement，and easy－to－follow instruc－ ions．Excellent for the amateur or professional photographer． 15 pages．Size， $81 / 2 \times 11^{\prime \prime}$ ． 37 ． 35 C

Thordarson Booklet＂Universal Power Pack for High－Speed Electronic Photoflash Tubes＂． fhows how to build your own reliable high－ speed photoflash tube power pack．For amateur and professional photographers．Versatile－ may be operated from 117 v ．A．C．or from self－ contained batteries．Booklet includes complete circuit diagram and detailed parts list． 8 pages． Size， $7 \times 93 / 4$
37 K 028．Postpaid in U．S．A．．．．．．．．．．．I5c

## Potfer and Brumfield Relays

## PR HEAVY-DUTY POWER RELAYS

For motor starting up to 1 HP , heater loads up to 20 amps, remote break-in contro of transmitters, etc. at 20 amps. AC coils for 60 cycles. Operating power,
 types U.L. Approved. Av. shpg. wt, 12 oz

| Stock No. | Mfr's <br> Type | Coil Volts | Action | Norm. Pos. | NET EACH |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  |  |  |  | 1-24 | 25-50 | 51-74 | 75-99 |
| 75 P 846 | PR3AY | 6 AC | SPST* | Open | 3.95 | 3.75 |  |  |
| 75 P 847 | PR5AY | 6 AC | SPDT |  |  | 3.94 | 3.73 |  |
| 75 P 848 | PR7AY | 6 AC | DPST | Open | 4.65 | 4.42 | 4.19 | 3.72 |
| 75 P 849 | PR11AY | 6 AC | DPDT |  | 6.15 | 5.84 | 3 | 2 |
| 75 P 878 | PR5AY | 12 AC | SPDT |  |  | 3.94 |  |  |
| 75 P 879 | PR7AY | 12 AC | DPST | Open | 4.6 | 4.42 | 4.19 | 72 |
| 75 P 961 | PR3AY | 24 AC | SPST* | Open | 3.95 | 3.75 | 3.55 |  |
| 75 P962 | PR5AY | 24 AC | SPDT |  | 4.15 | 3.94 | 3.73 | 3.32 |
| 75 P 963 | PR7AY | 24 AC | DPST |  | 4.65 | 4.42 | 4.19 | 3.72 |
| 75 P 96 | PR11AY | 24 AC | DPDT |  | 6.15 | 5.84 |  | 4.92 |
| 75 P 600 | PR3AY | 115 AC | SPST* | pen | 3.9 |  |  |  |
| 75 P 602 | PR5AY | 115 AC | SPDT |  | 4. | 3.94 | 3.73 | 3.32 |
| 75 P 603 | PR7AY | 115 AC | DPST |  | 4. | 4.42 | 4.19 | 3.72 |
| 75 P663 | PR11AY | 115 AC | DPDT |  | 6.15 | 5.84 | 5.53 | 4.92 |
| 75 P 652 | PR3AY | 230 AC | SPST* | Open | 4.30 | 4.08 | 3.87 | 3.44 |
| 75 P | PR5AY | 230 AC | SPDT |  |  | 4.32 | 4.09 | 64 |
| 75 P 65 | PR7AY | 230 AC | DPST |  | 5.05 | 4.79 | 4.54 | 4.04 |
| 75 P 655 | PR11AV | 230 AC | DPDT |  | 6.55 | 6.22 | 5.89 | 5.24 |
| 76 P 508 | PR11D | 6 DC | DPDT |  |  | 5.84 |  | 92 |
| 76 P 509 | PR3D | 12 DC | SPST* | Open | 3.9 |  | 3.55 | 3.16 |
| 76 P 510 | PR5D | 12 DC | SPDT |  | 4.15 | 3.94 | 3.73 | 3.32 |
| 76 P 511 | PR7D | 12 DC | DPST | Open | 4.65 | 4.42 | 4.19 | 3.72 |
| 76 P 512 | PR11D | 12 DC | DPDT |  | 6.15 | 5.84 | 5.53 | 4.92 |
| 76 P | PR7D | 24 DC | DPST | Open | 4.65 | 4.42 | 4.19 | 3.72 |
| 76 P 514 | PR11D | 24 DC | DPDT |  | 6.15 | 5.84 | 5.53 | 4.92 |
| 75 P 968 | PR3D | 110 DC | SPST* | Open | 4.55 | 4.32 | 4.09 |  |
| 75 P 969 | PR5D | 110 DC | SPDT |  | 4.75 | 4.51 | 4.27 | 3.80 |
| 75 P 970 | PR7D | 110 DC | DPST | Open | 5.25 | 4.98 | 4.72 | 4.20 |
| 75 P971 | PR11D | 110 DC | DPDT |  | 6.75 | 6.41 | 6.07 | 5.40 |

## MR MEDIUM-DUTY POWER RELAYS Compact relays designed for general-purpose applica tions. Silver contacts rated at 8 amps except * rated 10 amps. AC coils draw $4-5$ VA; DC, 1.5 watts. Size SP units, $111 / 16 \times 11 / 32 \times 2^{31} 1^{3 \prime} ;$ DP units, $2 \times 23 / 16 \times 219 / 33^{\prime \prime} ;$ centers for SP and 3 P units, $21 / 4^{\prime \prime}$ centers for DP units. Av. shpg. wt., 8 oz.

6 AND 24 VOLTS AC

| Stock No. |  |  |
| :---: | :---: | :---: |
| $6 \mathrm{~V} . \mathrm{AC}$ |  | $24 \mathrm{~V} . \mathrm{AC}$ |
| 75 P 975 | 75 P 978 |  |
| 75 P 610 | 75 P 979 |  |
| 75 P 612 | 75 P 981 |  |
| 75 P 976 | 75 P 982 |  |


| Mfr's Type | Action | Norm. Pos. | $\begin{aligned} & 1-24, \\ & \text { EACH } \end{aligned}$ |
| :---: | :---: | :---: | :---: |
| MR3A | $\overline{\text { SPST* }}$ | Open | 3.30 |
| MR5A | SPPD |  | 3.00 |
| MR11A | DPDT |  | 4.20 |
| MR14A | 3PDT |  | 5.05 |


| $25-50$ | $51-74$, | $75-99$, |
| :---: | :---: | :---: |
| EACH | EACH | EACH |
| 3.13 | 2.97 | 2.64 |
| 2.85 | 2.70 | 2.40 |
| 3.99 | 3.78 | 3.36 |
| 4.79 | 4.54 | 4.04 |

115 VOLTS AC

| Stock No. | Mif's. Type | tion | Normal Pos. | $\begin{aligned} & 1-24 \mathrm{H} \\ & \text { EACH } \\ & \hline \end{aligned}$ | EACH | $\dot{H}$ |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 75 P665 | MR3A | SP | Open | 3.30 | 3. | 7 | 2.64 |
|  | MR5A | SPDT |  | 3.00 | 2. | 2.70 |  |
|  |  |  |  |  |  |  |  |
| 5 P972 | MR14 | 3PD |  | 5.05 | 4.79 | 4.5 | 4.04 |

230 VOLTS AC


6, 12 AND 24 VOLTS DC

| Stock No. |  |  | $\begin{aligned} & \text { Mfr's } \\ & \text { Type } \end{aligned}$ | Action | Norm. Pos. | $\begin{aligned} & 1-24, \\ & E A C H \end{aligned}$ | $\begin{aligned} & 25-50 \\ & \text { EACH } \end{aligned}$ | $\begin{aligned} & 51-74 \\ & \text { EACH } \\ & \hline \end{aligned}$ | $\begin{aligned} & \text { 75-99, } \\ & \text { EACH } \end{aligned}$ |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 6 V . DC | $12 \mathrm{~V} . \mathrm{DC}$ | 24 V . DC |  |  |  |  |  |  |  |
| 75 P 983 | 75 P 187 | 75 P 988 | MR3D | SPST* | Open | 3.05 | 2.89 | 2.74 | 2.44 |
|  |  |  | MR5D | SPDT |  |  |  |  |  |
|  |  |  | MRILD | DPDT |  |  |  |  |  |

## MG MINIATURE RELAYS

Sub-miniature, telephone-type relays. Rated 2 amps for 115 VAC resistive load.
D Type. For aircraft, computer, and other applications requiring good shock and vibration characteristics. Mounting: four tapped No. $3-48$ holes on $3 / 8^{\prime \prime}$ centers.

DP Type. Plastic-enclosed. For applications D Type DP Type chassis-to-chassis connection or uses where
quick replacement is necessary. Built with Amphenol 57-10140 plug. Fits Amphenol $57-20140$ socket on page 191 (not supplied). Max. size, $21 / 64 \times^{13 / 16 \times 147} 6^{\prime \prime}$. Av. shpg. wt., 3 oz .


## AB APPLIANCE RELAYS

$A B$ series relays are recommended for appliance applicatons where rugged construction, long life DPD T ilver contacts requit. Amps Mount ing. Two No 8-32 tapped holes an $11^{\prime \prime}$ center Overall size. $1^{29} / r^{\prime \prime}$ high, $15 / /^{\prime \prime}$ wide, $3^{\prime \prime}$ long *U L Approved. Av, shpg wt., 8 oz .

| Stock No. | Mfr's <br> Type | Coil Volts | $\begin{aligned} & 1-24, \\ & \text { EACH } \end{aligned}$ | $\begin{aligned} & 25-50 \\ & \text { EACH } \end{aligned}$ | $\begin{aligned} & \text { 51-74; } \\ & \text { EACH } \end{aligned}$ | $\begin{aligned} & 75-99 \\ & \text { EACH } \end{aligned}$ |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 75 P 399 | AB11AY* | 6v. AC | 5.05 | 4.79 | 4.54 | 4.04 |
| 75 P 418 | AB11AY* | 24 v . AC | 5.05 | 4.79 | 4.54 | 4.04 |
| 75 P 419 | AB11AY* | 115 v . AC | 5.05 | 4.79 | 4.54 | 4.04 |
| 75 P 448 | AB11A ${ }^{*}$ | 230 v . AC | 5.45 | 5.17 | 4.90 | 4.36 |
| 75 P 449 | AB11D | 110 v . DC | 5.45 | 5.17 | 4.90 | 4.36 |

## ABC MEDIUM POWER RELAYS

ABC series medium duty power relays with dust covers. Typically used with small motors, industrial controls, and tacts wapplications. All relat rating Snap-on terminals Size: $17 / 16 \times 3 \times 23 / 32^{\prime \prime}$ high above chassis. Mounting. One No $8-32$ stud $3 / 8^{\prime \prime}$ long. *U.L. Approved. Shpg. wt., 12 oz .

| Stock No. | $\begin{aligned} & \hline \text { Mfr's } \\ & \text { Type } \\ & \hline \end{aligned}$ | Coil Volts | $\begin{aligned} & 1-24 \\ & \text { EACH } \end{aligned}$ | $\begin{aligned} & 25-50 \\ & \text { EACH } \end{aligned}$ | $\begin{aligned} & 51-74, \\ & \text { EACH } \end{aligned}$ | $\begin{aligned} & 75-99 \\ & \text { EACH } \\ & \hline \end{aligned}$ |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 75 P 431 | ABC11AY* | 6v. AC | 6.10 | 5.80 | 5.49 | 4.88 |
| 75 P 432 | ABC11AY* | 24v. AC | 6.10 | 5.80 | 5.49 | 4.88 |
| 75 P 433 | ABC11AY* | $115 v . A C$ | 6.10 | 5.80 | 5.49 | 4.88 |
| 75 P 464 | ABC11AY* | $230 \mathrm{v} . \mathrm{AC}$ | 6.50 | 6.17 | 5.85 | 5.20 |
| 75 P 465 | ABC11D | 110 v . DC | 6.50 | 6.17 | 5.85 | 5.20 |

## CA LOW COST HIGH CAPACITY RELAYS

Compact power relays. Have double break, SPST normally open contacts; 10 amp. rating. Solder ter minals. Size: $11 / 4 \times 25 / 3 \times 111 / 16^{\prime \prime}$. Mounting: Two $3 / 16^{\prime \prime}$ dia

| Stock No. | $\begin{aligned} & \text { Mfr's } \\ & \text { Type } \end{aligned}$ | Coil Volts | EACH | $\begin{aligned} & 25-50 \\ & \text { EACH } \end{aligned}$ | $\begin{aligned} & 51-74, \\ & \text { EACH } \end{aligned}$ | $\begin{aligned} & 75-99 \\ & \text { EACH } \end{aligned}$ |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 75 P 568 | CA3A | 6v. AC | 2.75 | 2.61 | 2.47 | 2.20 |
| 75 P 569 | CA.3A | 24v. AC | 2.75 | 2.61 | 2.47 | 2.20 |
| 75 P 570 | CA3A | 115 v . AC | 2.75 | 2.61 | 2.47 | 2.20 |

## PS SERIES RELAYS

Extremely compact, long-life, medium-duty relays. Ideal or mobile communications, appliances, and similar applications requiring $10 \mathrm{amp}, \mathrm{DPDT}$ conta ype terminals. Mounting: Fous on $1 / 2 \times 15 / 16^{\prime \prime}$ centers. Shpg. wt., 8 oz

| Stock No. | $\begin{aligned} & \text { Mfr's } \\ & \text { Type } \end{aligned}$ | Coil Volts | $\begin{aligned} & 1-24 \\ & \text { EACH } \end{aligned}$ | $\begin{aligned} & 25-50, \\ & \text { EACH } \end{aligned}$ | $\begin{aligned} & \text { 51-74, } \\ & \text { EACH } \end{aligned}$ | $\begin{aligned} & 75-99 \\ & \text { EACH } \end{aligned}$ |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 75 P 115 | PS11A | 6v. AC | 7.60 | 7.22 | 6.84 | 6.08 |
| 75 P 116 | PS11A | 24v. AC | 7.60 | 7.22 | 6.84 | 6.08 |
| 75 P 117 | PS11A | 115 v . AC | 7.60 | 7.22 | 6.84 | 6.08 |
| 75 P 118 | PS11A | 230 v . AC | 8.00 | 7.60 | 7.20 | 6.40 |
| 76 P 515 | PS11D | 6v. DC | 6.55 | 6.22 | 5.89 | 5.24 |
| 76 P 516 | PS11D | 24v. DC | 6.55 | 6.22 | 5.89 | 5.24 |
| 75 P 119 | PS11D | $110 \mathrm{v}, \mathrm{DC}$ | 6.95 | 6.60 | 6.25 | 5.56 |

## SPII SHOCK-RESISTANT RELAYS

Medium-duty relay for general industrial use, keying Balanced armature rermits mounting in any position. Balanced armature permits mounting in any position. inductive load Maximum size $123 / 32 \times 15 / 3 \times 27 / s^{\prime \prime}$ Mount ing: 2 tapped 6-32 holes on $13 / 16^{\prime \prime}$ centers. Shpg. wt., 10 oz .
 ing: 2 tapped $6-32$ holes on $13 / 16^{\prime \prime}$ centers. Shpg. wt., 10 oz

| Stock No. | Mfr's <br> Type | Coil Volts | $\begin{aligned} & 1-24, \\ & \text { EACH } \end{aligned}$ | $\begin{aligned} & 25-50 \text {, } \\ & \text { EACH } \end{aligned}$ | $\begin{aligned} & \text { 51-74; } \\ & \text { EACH } \end{aligned}$ | $\begin{aligned} & 75-99 \\ & \text { EACH } \end{aligned}$ |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 76 P 517 | SP11A | 24v. AC | 6.20 | 5.89 | 8 | 6 |
| 75 P926 | SP11A | 115 v . AC | 6.20 | 5.89 | 5.58 | 4.96 |
| 76 P 518 | SP11D | 6 v . DC | 5.95 | 5.65 | 5.35 | 4.76 |
| 76 P 519 | SP11D | 12 v . DC | 5.95 | 5.65 |  | 4.76 |
| 76 P 520 | SP11D | 24v. DC | 5.95 | 5.65 | 5.35 | 4.76 |

## MB MINIATURE DC POWER RELAYS

Designed for very high current applications. Contact arms are heavy brass with large silver contacts; solder terminals. Rated 60 amps, SPSI, double break, normally open. Size, $15 / 8 x^{27} / 32 \times 13 / 8^{\prime \prime}$. Mounting: Four No. $3-48$ holes on $3 / 8 x^{3} / 8^{\prime \prime}$ centers. Shpg. wt., 5 oz

| Stock No. | $\begin{aligned} & \text { Mfr's } \\ & \text { Type } \end{aligned}$ | Coil Volts | EACH | $\begin{aligned} & 25-50 \\ & \text { EACH } \end{aligned}$ | $\begin{aligned} & 51-74 \\ & E A C H \end{aligned}$ | $\begin{aligned} & 75-99 \\ & \text { EACH } \end{aligned}$ |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 75 P 059 | MB3D | 6v. DC | 5.00 | 4.75 | 4.50 | 4.00 |
| 75 P 065 | MB3D | 12v. DC | 5.10 | 4.84 | 4.59 | 4.08 |
| 75 P 066 | MB3D | 24v. DC | 5.10 | 4.84 | 4.59 | 4.08 |
| 75 P 067 | MB3D | 110 v . DC | 5.50 | 5.22 | 4.95 | 4.40 |

## SM SUPER-MIDGET RELAYS

Subminiature relays weighing less than 1 oz . SPDT Silver-rhodium contacts rated 154 amp, 24 . DC $1,000,000$ aperations Non,inductive load Units hermetically sealed in deep-drawn steel tubes Have
standard 7 -pin miniature tube type bases. Size: $3 / 4^{\prime \prime}$ dia., $111 / 16^{\circ} \mathrm{high}$ above socket.* Current-actuated types for use in plate-circuit applications. Av. shpg. wt., 3 oz .

| Stock No. | Type | VDC | Ohms | Ma. | 1-24, EA. | 25-50, EA. | 51-74, EA. | 75-99, EA |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 75P915 | SM5DS | 6 | 80 |  | 6.25 | 5.94 | 5.62 | 5.00 |
| 76 P 521 | SM5DS | 12 | 360 |  | 6.25 | 5.94 | 5.62 | 5.00 |
| 75 P916 | SM5DS | 24 | 900 |  | 6.25 | 5.94 | . 62 | 5.00 |
| 75 P 917 | SM5LS | * | 5000 | 3.8 | 6.55 | 6.22 | 89 | 24 |
| 75 P 949 | SM5LS | * | 10,000 | 2.7 | 7.00 | 6.65 | 6.30 | 5.60 |

## Potter and Brumfield Relays

## GENERAL-PURPOSE, PLATE CIRCUIT AND SENSITIVE RELAYS



## KA GENERAL-PURPOSE RELAYS

Compact, low-cost general-purpose relays. Particularly useful for transmitters, power supply control, remote switching of small motors and solenoids, and for general automation work. All are moisture resistant. Heavy-duty contacts rated at 5 amps AC coils are for 60 cycles. All AC types U.L. ap

| Stock No. |  |  | Type No. | Action | $\begin{aligned} & 1-24, \\ & \text { EACH } \end{aligned}$ | $\left\|\begin{array}{l} 25-50 \\ \text { EACH } \end{array}\right\|$ | 51-74,EACH | $\begin{aligned} & \text { 75-99, } \\ & \text { EACH } \end{aligned}$ |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 6 v . AC | v. AC | v. AC |  |  |  |  |  |  |
| 75 P 15875 | 75 P 161 75 P 164 |  | KA5AY | $\begin{aligned} & \hline \text { SPDT } \\ & \text { DPDT } \\ & \text { 3PDT } \end{aligned}$ | $\begin{aligned} & 3.05 \\ & 3.65 \\ & 4.05 \end{aligned}$ | $\begin{aligned} & 2.89 \\ & 3.47 \\ & 3.85 \end{aligned}$ | $\begin{aligned} & \hline 2.74 \\ & 3.28 \\ & 3.64 \end{aligned}$ | $\begin{array}{r} 2.44 \\ 2.92 \\ 3.24 \\ \hline \end{array}$ |
| 75 P 15975 | P 16275 | P 165 | KAllay |  |  |  |  |  |
| 75 P 16075 | P 1637 | 166 | KA14AY |  |  |  |  |  |
| 6 v. DC | 2 v. DC 24 v. DC |  | KA5D KAllD KA14D | $\begin{aligned} & \text { SPDT } \\ & \text { DPDT } \\ & \text { 3PDT } \end{aligned}$ | $\begin{aligned} & 2.90 \\ & 3.25 \\ & 3.65 \\ & \hline \end{aligned}$ | $\begin{aligned} & 2.76 \\ & 3.09 \\ & 3.47 \end{aligned}$ | $\begin{aligned} & 2.61 \\ & 2.92 \\ & 3.28 \\ & \hline \end{aligned}$ |  |
| 75 P 167 7 | 70 | 173 |  |  |  |  |  | $\begin{aligned} & 2.32 \\ & 2.60 \\ & 2.92 \end{aligned}$ |
| 75 P 16875 | 171 | 174 |  |  |  |  |  |  |
| 75 P 169 | 172 |  |  |  |  |  |  |  |
| Stock No. | Type No. | Action | $\begin{aligned} & 1-24 \\ & \text { EACH } \end{aligned}$ | $\begin{aligned} & 25-50 \\ & \text { EACH } \end{aligned}$ |  | $\begin{aligned} & 51-74, \\ & \text { EACH } \end{aligned}$ | $\begin{aligned} & \text { 75-99, } \\ & \text { EACH } \end{aligned}$ |  |
| 110 v . DC |  |  |  |  |  |  |  |  |  |  |
| 76 P 522 | KA11D | DPDT | $\begin{aligned} & 3.86 \\ & 4.25 \end{aligned}$ | $\begin{aligned} & 3.66 \\ & 4.04 \end{aligned}$ |  | $\begin{aligned} & 3.47 \\ & 3.82 \end{aligned}$ | $\begin{aligned} & 3.08 \\ & 3.40 \end{aligned}$ |  |
| 76 P 523 | KA14D | 3PDT |  |  |  |  |  |  |  |  |



## KRP ENCLOSED TYPE RELAYS

Completely enclosed midget relays in high-impact, transparent, polystyrene case. Dust-proof and weather-proof. Plug on end fits standard octal or 11-pin socket (see sockets below KCP relay listing) Heavy silver contacts rated for 5 an



## KCP ENCLOSED RELAYS

Sensitive plate circuit relays completely enclosed in high-impact, transparent dust-proof and weatherproof polystyrene case. Plugs into standard octal or 11 -pin socket (see listing below). Silver contacts $113 / 32 \times 2^{\prime \prime}$ high. Shpg. wt., 5 oz .

| Stock No. | Type | Action | Ohms | Ma. | 1-24, EA. | 25-50, EA | 51-74, EA. | 75-99, EA. |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 75 P 287 | KCP5 | SPDT | 2500 | 7.2 | 5.60 | 5.32 | 5.04 | 4.48 |
| 75 P 288 | KCP5 | SPDT | 5000 | 5.0 | 5.70 | 5. | 5.1 | 4.56 |
| 75 P 289 | KCP5 | SPDT | 10,000 | 3.0 | 6.10 | 5.80 | 5.49 | 4.88 |
| 75 P 290 | KCP11 | DPDT | 2500 | 10.0 | 6.00 | 5.70 | 5.40 | 4.80 |
| 75 P 291 | KCP11 | DPDT | 5000 | 7.2 | 6.10 | 5.80 | 5.49 | 4.88 |
| 75 | KCP11 | DPDT | 10,000 | 5.0 | 6.50 | 6.18 | 5.85 | 5.20 |
| 75 P 097 | KCP14 | 3PDT | 2500 | 12.3 | 7.40 | 7.03 | 6.66 | 5.92 |
| 75 P 098 | KCP14 | 3PDT | 5000 | 8.7 | 7.50 | 7.13 | 6.75 | 6.00 |
| 75 P 099 | KCP14 | 3PDT | 10,000 | 6.1 | 7.90 | 7.51 | 7.11 | 6.32 |

Amphenol Sockets for KRP and KCP Relays. Type 146-103 octal for all relays except KRP14 and KCP14. Barrier type. Meets N.F.M.A. and U.L. requirements. Convenient screw-type tie points, separated by insulating barriers. Mtg. centers, $111 / 6^{\prime \prime}$. Wt., 5 oz . 40 H 180. NET
Type 77M1P11 Socket. For KRP14, KCP14 types. Molded bakelite. Mounts in $15 / 33^{\prime \prime}$
40 H 033 NET


Quality, medium-cost plate circuit relays. For photoelectric control, counting, and similar circuits. Armature spring tension adjustment and adjustable residual screw $3 / 16^{\prime \prime}$ fine silver contacts rated at 5 amperes. 115 volts. 60
$27 / 6^{\prime \prime} ;$


| Stock No. | Type | Action | Ohms | Ma. | 1-24, EA. | 25-50, EA. | 51-74, EA. | 75-99, EA |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 75 P 673 | LM5 | SPDT | 2500 | 6.3 | 3.50 | 3.33 | 3.1 | 80 |
|  | LM5 | SPDT | 5000 | 4.5 | 3. |  | 3. |  |
| 75 P675 | LM5 | SPDT | 10,000 | 3.2 | 4.00 | 3.80 | 3. | 3.20 |
| 75 P 682 | LM11 | DPDT | 2500 | 9.0 | 5.05 | 4.80 | 4.54 | 4.04 |
| 75 P 683 | LM11 | DPDT | 5000 | 6.3 | 5.25 | 4.99 | 4.72 | 4.19 |
| 75 P 684 | LM11 | DPDT | 10,000 | 4.5 | 5.75 | 5.46 | 5.17 | 4.60 |

## LB-5 PLATE CIRCUIT RELAYS



Small, fast-acting units. For any circuit supplying only a few milliwatts of DC. Breakdown, 500 v . rms min. Silver contacts rated at $5 \mathrm{~A}, 28 \mathrm{v}$. DC, with non-inductive load. Size: $211 / 16 \times 11 / 4 \times 13 / 8^{\prime \prime \prime}$. only. Shpg. wt., 5 oz .

| Stock No. | Action | Ohms | Ma. | 1-24, EA. | 25-50, EA. | 51-74, EA. | 75-99, EA |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 75 P 625 | SPDT | 2500 | g | 2.35 | 2.23 | 2.1 | 1.88 |
| 75 P 626 75774 | SPDT | 5000 10,000 | 6.3 4.5 | 2.55 | 2.42 | 2.29 | 2.04 |



## GA MULTIPLE LEAF RELAYS

A rugged, multiple leaf relay for general circuit and power control applications. Designed to withstand shock and vibration encountered in mobile operation. Very useful for remote power switching. Moisture-retacts roil prevents damage by high humidity. Con$1 \times 111 / 16 \times 1{ }^{15} / 3^{\prime \prime}$ high. Has tapped core to permit mounting with single $8-32$ screw. Shpg. wt., 10 oz .

|  |  |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 75 P 192 | GA11A | $6 \mathrm{v}$. AC | DP | 3. |  |  |  |
|  | GA17A | $6 \mathrm{v} . \mathrm{AC}$ | ${ }^{4 P D T}$ |  |  |  |  |
| 76 P 526 | GA17A | $12 \mathrm{v} . \mathrm{AC}$ | 4PDT | 4.50 | 4.28 | 4. |  |
| 75 | GA11 | $24 \mathrm{v} . \mathrm{AC}$ | DPD | 3.15 | 2.9 | 2.83 | 2.52 |
| 75 P 195 | GA17A | 24 v . AC | 4PDT | 4.50 |  |  |  |
| 75 P 197 | GA11 | 115 v | DPD |  |  |  |  |
|  | G | 6 | DP |  |  |  |  |
| 75 P199 | GA17D | v. | 4PD |  |  |  |  |
|  | GA11D | 12 v . DC | DPDT |  |  |  |  |
| 75 P 106 | GA17D | $12 \mathrm{v}$. DC | 4PDT | 4.50 | 4.28 | 4.05 | 3.60 |
| 75 P 107 | GA11D | $24 \mathrm{v} . \mathrm{DC}$ | DPDT | 3.15 | 2.99 | 2.8 |  |
| 76 P 527 | GA17D | 24 v . D | 4PDT | 4.50 | 4.28 | 4.05 | 3.60 |
| 76 P 527 | GA11D | $10 \mathrm{v} . \mathrm{DC}$ | DPDT |  | 3.42 | 3.24 |  |



## KL MULTIPLE-CONTACT RELAYS

 Highly versatile midget relays. Ideal for limited space applications. Extra-long actuating coil permits double the ampere turns; provides more power to actuate contacts and maintain 25 grams hold-down pressure. High dielectric phenolic insulation. Fine silver contacts; rated amperes at 115 volts, 60 cycles. $111 / 16^{215} / 16 \times 115 / 6^{\prime \prime}$ A 1 cycles. 111/16 $\times 15 / 16 \times 1{ }^{15} / 16^{\prime \prime}$. Av. shpg. wt., 4 oz .| Stock No. | Type No. | Coil Volts | Action | NET EACH |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  |  |  | 1-24 | 25-50 | 51-74 | 75-99 |
| 76 | KL1 | $6 \mathrm{v} . \mathrm{AC}$ | 3 P | 5.00 | 5 | 4.50 |  |
|  | KL17A | $6 \mathrm{v} . \mathrm{AC}$ | 4PDT | 5. |  |  |  |
| 76 | KL11A | $12 \mathrm{v} . \mathrm{AC}$ | DPDT | 4.45 | 4.23 | . 00 |  |
| 76 | KL17A | $12 \mathrm{v} . \mathrm{AC}$ | 4PDT | 5.90 | 5.6 | 5. | 4.72 |
|  | KL17A | $24 \mathrm{v}$. AC | 4PDT | 5.9 |  |  |  |
|  | KL11A | 115 v . AC | DPDT | 4. |  | 4.00 |  |
| 76 P 533 | KL14A | 115 v. AC | 3PDT | 5.0 | 4.7 | 4.50 | 4.00 |
|  | KL17A | 115 v. AC | 4PDT | 5.90 | 5.6 | 5. | 4.72 |
|  | KL14D | $6 \mathrm{v} . \mathrm{DC}$ | 3PDT | 4.8 |  | 4. | - |
|  | KL14D | 12 v . DC | 3PDT | 4.80 |  | 4.32 | 3.84 |
| 76 P 536 | L11D | $24 \mathrm{v}$. DC | DPDT | 4.30 | 4.08 | 3.87 | 3.44 |
|  | KL14D | $24 \mathrm{v}$. | 3PDT | 4.80 | 4.5 | 4.3 | 3.84 |
| 75 P 220 | KL17D | $24 \mathrm{v}$. DC | 4PDT | 5.60 |  |  |  |
| 76 P 538 | KL17D | 110 v . D | 4PDT | 6.2 | 5.89 | 5.58 | 4.9 |



## MP SNAP ACTION RELAYS

Snap action relays designed for starting split-phase capacitor-type motors of up to $11 / 2$-hp capacity. SPDT silver contacts are rated at 25 amps-large cycles. Mounts with $4-6-32$ screws, $3 / 4 \times 7 / 8^{\prime \prime}$ are ctrs. Size, $17 / 8 \times 21 / 4 \times 11 / 4^{\prime \prime}$. Av. shpg. wt., 4 oz .

| Stock No. | Type | Volts | 1-24, EA. | 25-50, EA. | 51-74, EA. | EA. |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| $\begin{aligned} & 75 \text { P } 005 \\ & 75 \text { P } 006 \\ & 75 \text { P } 007 \end{aligned}$ | MP5A MP5A MP5A | $\begin{aligned} & \text { 6VAC } \\ & 24 \mathrm{VAC} \\ & 15 \mathrm{VACC} \end{aligned}$ | 5.70 | 5.42 | 5.13 | 4.56 |
| $\begin{array}{r} 75 \text { P } 008 \\ 75 \text { P } 009 \\ \hline \end{array}$ | $\begin{aligned} & \text { MP5A } \\ & \text { MP5D } \end{aligned}$ | $\begin{aligned} & 230 \mathrm{VAC} \\ & 110 \mathrm{VDC} \\ & \hline \end{aligned}$ | $\begin{aligned} & 5.95 \\ & 6.50 \\ & \hline \end{aligned}$ | $\begin{aligned} & 3.18 \\ & 6.18 \end{aligned}$ | $5.85$ | $5.20$ |



## RS5D LIGHTWEIGHT RELAYS

A low-cost, lightweight, sensitive DC relay. Ideal for controlling light dimmers, model airplanes, electronic toys, and many other applications. SPDT contacts rated 2 amp at $115 \mathrm{v} . \mathrm{AC}$ or 28 v . DC. Mount with
$2-4-40$ screws. Size: $1 \times 15 / 3 \mathrm{x}^{29} 92^{\prime \prime}$. Av. wt., 3 oz .

| Stock No. | Volts | Ohms | Ma. | 1-24, EA. | 25-50, EA. | 51-74, EA. | 75-99, EA. |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 75 P 896 | 6 | 335 |  | 2.50 | 2.38 | 2.25 | 2.00 |
| 75 P 897 |  | 2500 | 5.0 | 2.70 | 2.57 | 2.43 |  |
| 75 P 898 |  | 5000 | 3.5 | 3.00 | 2.85 | 2.70 | 2.40 |
| 75 P 899 |  | 10,000 | 2.5 | 3.45 | 3.28 | 3.10 | 2.76 |



## PW HERMETICALLY SEALED RELAYS

Precision, lightweight DC relays. Sealed in air-tight brass cans. Vibration-proof for mobile or other applications. Mount in 7 -pin min. socket. Silver SPDT contacts are rated at 2 amps . Size: $3 / 4^{\prime \prime}$ dia.; $111 / 16^{\prime \prime}$ high (above socket). *Plate circuit type. $\mathbf{W t}$., 2 oz.

| Stock No. | Type | Volts | Ohms | Ma. | 1-24, EA. | 25-50, EA | A. | 75-9 |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 75 PO 18 | PW5DS | 6 | 202 |  | 10.25 | 9.74 | 9.23 | 8.20 |
| $75 \mathrm{PO19}$ | PW5DS | 12 | 810 |  | 10.25 | 9.74 | 9.23 | 8.20 |
| 75 P 027 | PW5DS | 24 | 3240 |  | 10.25 | 9.74 | 9.23 | 8.20 |
| 75 P 028 | PW5LS |  |  | 2.8 | 10.60 | 10.07 | 9.54 | 8.48 |
| 75 P 029 | PW5LS | * | 10,000 | 2 | 11.00 | 10.45 | 9.90 | 8.8 |



## SS5D SUPER-SENSITIVE DC RELAY

An ultra-sensitive 1 ma relay. SPDT contacts are pure silver. Rated at 2 amps 115 v . AC or 28 v . ture and pin hinge assembly pivot in needle-point bearings-virtually friction-free movement. Coil resistance, 10,000 ohms. Dual series coils with varnished windings. Mounting is by 2-6-32 holes on $23 / 32^{\prime \prime}$ centers. $1^{11 / 16 \times 15 / 16 \times 111 / 16^{\prime \prime}}$. Wt., 8 oz.
75 P 844. 1-24, EACH.. 12.00 25-50, EACH.
$61-74$, EACH......... $10.80 \quad 75-99$, EACH.
11.40
9.60

# Potter and Brumfield Relays 

## GP "PIC \& BUILD" SERIES

Flexibility-geynote of Potter \& Brumfield's new "Pic \& Build" series of separate coils and switches! Units available can be combined to produce twenty different relays, each easily converted to an alternative sensitivity or switching arrangem relay requirements, experimenters and industrial laboratories, or school use. Size of assembled relay and
 general specifications same as GA series on page 218 . Av. shpg. wt., 4 oz

| Stock No. | Mif's Type | Item | NET EACH |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  |  | 1-24 | 25-50 | 51-74 | 75-99 |
| 76 P 333 | GPA | 6v.AC Coil | 1.55 | 1.47 | 1.39 | 1.24 |
| 76 P 539 | GPA | 12v. AC Coil | 1.55 | 1.47 | 1.39 | 1.24 |
| 76 P 334 | GPA | 24 v . AC Coil | 1.55 | 1.47 | 1.39 | 1.24 |
| 76 P 335 | GPA | 115 v.AC Coil | 1.55 | 1.47 | 1.39 | 1.24 |
| 76 P 336 | GPA | 230 v .AC Coil | 2.00 | 1.90 | 1.80 | 1.60 |
| 76 P 337 | GPD | 6v.DC Coil | 2.00 | 1.90 | 1.80 | 1.60 |
| 76 P 338 | GPD | 12v.DC Coil | 2.00 | 1.90 | 1.80 | 1.60 |
| 76 P 339 | GPD | 24 v . DC Coil | 2.00 | 1.90 | 1.80 | 1.60 |
| 76 P 340 | GPD | 110 v . DC Coil | 3.00 | 2.85 | 2.70 | 2.40 |
| 76 P 341 | GPD | 2500-ohm Coil | 1.45 | 1.37 | 1.30 |  |
| 76 P 342 | GPD | 10,000-ohm Coil | 2.00 | 1.90 | 1.80 | 1.60 |
| 76 P 343 | GP11 | DPDT Switch | 1.60 | 1.52 | 1.44 | 1.28 |
| 76 P 344 | GP17 | 4PDT Switch | 2.80 | 2.66 | 2.52 | 2.24 |

## TYPE PC IMPULSE RELAYS

Compact, pulse-operated relay. Armature and pusher assembly operate phenolic rocker switching pulses. For on-off or reversing opplications P Plses pulses. For on-off or reversing applications. Pulses fashed silver contacts, rated 10 amps at 115 volts AC, resistive load. Size: $13 / 422^{31 / 2 \times 2 \times 25 / 64^{\prime \prime}}$. AC is for $50-60$ cycles. Shpg. wt., 10 oz .

| Stock No. | Mif's <br> Type | Action | Coil Volts | NET EACH |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  |  |  | 1-24 | 25-50 | 51-74 | 75-99 |
| 76 P 504 | PC11A | DPDT | 6AC | 5.25 | 4.98 | 4.72 | 4.20 |
| 76 P 505 | PC17A | 4PDT | 6AC | 7.25 | 6.88 | 6.52 | 5.80 |
| 76 P 502 | PC11A | DPDT | 24 AC | 5.25 | 4.98 | 4.72 | 4.20 |
| 76 P 503 | PC17A | 4PDT | 24 AC | 7.25 | 6.88 | 6.52 | 5.80 |
| 76 P 500 | PC11A | DPDT | 115AC | 5.25 | 4.98 | 4.72 | 4.20 |
| 76 P 501 | PC17A | 4PDT | 115AC | 7.25 | 4.98 6.88 | 6.52 | 5.80 |
| 76 P 506 | PC11D | DPDT | 24DC | 5.10 | 4.84 | 4.59 | 4.08 |
| 76 P 507 | PC17D | 4 PDT | 24DC | 7.10 | 6.74 | 6.39 | 5.68 |

## TYPE KB LATCHING RELAYS

Ideal for memory work and overload applications. One coil operates relay to set latch; other coil releases it. Operates on momentary impulse to either coil. Release and trip coils must be used with same voltage. Size: $215 / 16 \times 125 / 32 \times 23 / 32^{\prime \prime}$ high. Mounts with $2-5 / 32^{\prime \prime}$ holes on $13 / 8^{\prime \prime}$ centers. Contacts rated at 5 amperes,

| Stock No. | Mif's <br> Type | Action | Coil Volts | NET EACH |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  |  |  | 1-24 | 25-50 | 51-74 | 75-99 |
| 75 P 126 | KB17AY | 4PDT $\dagger$ | 6 AC | 10.00 | 9.50 | 9.00 | 8.00 |
| 76 P 540 | KB17AY | $4 \mathrm{PDT} \dagger$ | 12 AC | 10.00 | 9.50 | 9.00 | 8.00 |
| 75 P 125 | KB17AY | $4 \mathrm{PDT}{ }^{\text {4 }}$ | 24 AC | 10.00 | 9.50 | 9.00 | 8.00 |
| 76 P 541 | KB17AG | 4PDT* | 24 AC | 10.10 | 9.59 | 9.09 | 8.08 |
| 76 P 542 | KB23AY | 6PDT $\dagger$ | 24 AC | 12.00 | 11.40 | 10.80 | 9.60 |
| 75 P 124 | KB17AY | 4PDT $\dagger$ | 115 AC | 10.00 | 9.50 | 9.00 | 8.00 |
| 76 P 543 | KB17AG | 4PDT* | 115 AC | 10.10 | 9.59 | 9.09 | 8.08 |
| 76 P 544 | KB23AY | 6PDT $\dagger$ | 115 AC | 12.00 | 11.40 | 10.80 | 9.60 |
| 75 P 129 | KB17D | 4PDT | 6 DC | 9.00 | 8.55 | 8.10 | 7.20 |
| 76 P 545 | KB17D | 4PDT | 12 DC | 9.00 | 8.55 | 8.10 | 7.20 |
| 75 P 728 | KB17D | 4PDT | 24 DC | 9.00 | 8.55 | 8.10 | 7.20 |
| 75 P 127 | KB17D | 4PDT | 110 DC | 10.20 | 9.69 | 9.18 | 8.16 |

## MH MINIATURE TELEPHONE RELAYS

Extremely fast acting, long life telephone-type relays. Open AC models are designed for intermittent duty only. Sealed AC models operate with a 4.5 ma rectirier. ance. Contacts rated at 5 amps; break-beforemake. $\dagger$ Indicates hermetically sealed in metal housing. Sizes: Open type, $15 / 8 x^{25} / 32 \times 19 / 16^{\prime \prime}$; sealed type, $111 / 16 \times 11 / 32 \times 21 / 2^{\prime \prime}$. Mounting: MH11L model has a No. $6 / 32$ stud $11 / 32^{\prime \prime}$ long, plus a locating boss. All other open models have four No. 3-48 holes on $3 / 8 x^{3} / 8^{\prime \prime}$ centers. Header in glass with solder terminals; minimum leakage resistance of 10,000 megohms at $50 \%$ humidity. Av. Shpg. wt., 6 oz.

| Stock No. | Mfr's <br> Type | Coil <br> Volts | NET EACH |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  |  | 1-24 | 25-50 | 51-74 | 75-99 |
| 75 P937 | MH17D | 6v. DC | 5.75 | 5.46 | 5.18 | 4.60 |
| 75 P936 | MH17D | 24v. DC | 5.75 | 5.46 | 5.18 | 4.60 |
| 75 P 293 | MH11L* |  | 5.75 | 5.46 | 5.18 | 4.60 |
| 75 P 935 | MH17DM $\dagger$ | $6 \mathrm{v} . \mathrm{DC}$ | 11.60 | 11.02 | 10.44 | 9.28 |
| 75 P 941 | MH17AMR $\dagger$ | 24 v . AC | 25.00 | 23.75 | 22.50 | 20.00 |
| 75 P939 | MH17DM $\dagger$ | 24v. DC | 11.60 | 11.02 | 10.44 | 9.28 |
| 75 P 942 | MH17AMR $\dagger$ | 115 v . AC | 19.00 | 18.05 | 17.10 | 15.20 |
| 75 P 294 | MH11LM ${ }^{+}+$ |  | 9.70 | 9.21 | 8.73 | 7.76 |


wt., 10 oz


Sealed |  |
| :--- |
| $5-99$ |
| 4.60 |
| 4.60 |
| 4.60 |
| 9.28 |
| .00 |
| 9.28 |
| 7.76 |

## TYPE AFIIA 400-CYCLE RELAY

Rugged armature-type relay. Coil operates on 400 -cycle 15 -v. power used in aircraft. Contacts rated 5 amps at centers. $13 / 8 \times 19 / 6 \times 2^{\prime \prime}$. Shpg. wt., 4 oz .
76 P 546. 1-24, NET EACH
7.95

25-50, ЕA...7.55 51-74, ЕA...7.16 75-99, ЕА

## KE SERIES SUBMINIATURES

Sub-miniature latching relay with mechanical latch and electric release. Operates on momentary impuise to either coil. For intermittent use only. rated 2 amps. Useful where relay operation is based
 upon single pulse signals, or where it is preferable that relay coil draws no current while remaining in "closed" periods especially for considerable length of time. Ideal for applications requiring a latching relay of small size $11 / 32 \times 1^{111 / 16 \times 27 / 32^{\prime \prime} \text {. } * \text { Sealed. Shpg. wt., } 6 \mathrm{oz} \text {. }}$





## KM SERIES SUBMINIATURES

Sub-miniature relay for multiple switching applications. Relay will simultaneously switch one, two or three electrically actuated devices; exceptionally easy to install and wire into circuit. Especially well suited for use where size and weight are critical factors; weight is only $7 / 8$ oz. per relay. Contacts rated 2 amps. Solder lug terminals are all located at one end of relay. Size, $11 / 8 x$


| Stock No. |  |  | Mfr's Type | Action | NET EACH |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 6 v . DC | 12 v . DC | 24v. DC |  |  | 1-24 | 25-50 | 51-74 | 75-99 |
| 76 P 361 | 76 P 362 | 76 P 363 | KM5D | $\overline{\text { SPDT }}$ | 3.20 | 3.04 | 2.88 | 2.56 |
| 76 P 365 | 76 P 366 | 76 P 367 | KM11D | DPDT | 3.50 | 3.32 | 3.15 | 2.80 |
| 76 P 369 | 76 P 370 | 76 P 371 | KM14D | 3PDT | 4.05 | 3.84 | 3.64 | 3.24 |

KT SERIES ANTENNA SWITCHING RELAYS
Precision antenna switching relay useful for switching antenna for use by both receiver and transmitter; spe cially designed for efficient use in RF applications; glass300 -ohm line. Mounting: one No 6-32. stud to switch contacts, rated 5 amps. Size, $115 / 16 \times 13 / 32 \times 15 / 8^{\prime \prime}$. Shpg. wt., 2 oz

| Stock No. | Mfr's <br> Type | Coil Volts | Action | NET EACH |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  |  |  | 1-24 | 25-50 | 51-74 | 75-99 |
| 76 P 373 | KT11A | 6 AC | DPDT |  |  |  |  |
| 76 P 374 | KT11A | 115 AC | DPDT |  |  |  |  |
| 76 76 76 | KT11D | 6 DC | DPPDT | 3.35 | 3.18 | 3.01 | 2.68 |

## AP RATCHET IMPULSE RELAYS

An extremely fast acting relay for applications impulses. Gives positive operation on impulses as short as 20 ms . Stop mechanism assures accurate operation on each impulse, regardless of speed.
 Intermittent duty. Contacts are $3 / 11^{\prime \prime}$ fine silver, $10^{\circ}$ Phenolic cams, hardened steel pawl and ratchet with pin hinged armature. Tinned solder terminals. Mounting: Three $5 / 3 z^{\prime \prime}$ diameter holes on $33 / 8^{\prime \prime} \times 7 / 8^{\prime \prime}$ triangular centers. Size: $25 / 16 \times 21 / 4 \times 33 / 4^{\prime \prime}$. Weight, 7 oz . AC are for $50-60$ cycles. Shpg. wt., 12 oz.

| $\begin{aligned} & \text { Stock } \\ & \text { No. } \end{aligned}$ | $\begin{aligned} & \text { Mifr's } \\ & \text { Type } \end{aligned}$ | Coil Volts | Action | NET EACH |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  |  |  | 1-24 | 25-50 | 51-74 | 75-99 |
| 75 P997 | AP11A | 6 AC | DPDT | 7.90 | 7.51 | 7.11 | 6.32 |
| 75 P998 | AP17A | 6 AC | 4PDT | 9.50 | 9.03 | 8.55 | 7.60 |
| 76 P 581 | AP11A | 12 AC | DPDT | 7.90 | 7.51 |  | 6.32 |
| 76 P 582 | AP17A | 12 AC | 4PDT | 9.50 | 9.03 | 8.5 | 7.60 |
| 75 P996 | AP17A | 24 AC | 4 PDT | 9.50 | 9.53 | 8.55 | 7.60 |
| 75 P993 | AP11A | 115 AC | DPDT | 7.90 | 7.51 | 7.11 | 6.3 |
| 75 P 994 | AP17A | 115 AC | 4PDT | 9.50 | 9.03 | 8.55 | 7.60 |
| 76 P 583 | AP11A | 230 AC | DPDT | 8.30 | 7.89 | 7.47 | 6.64 |
| 76 P 584 | AP17A | 230 AC | 4PDT | 9.90 | 9.40 | 8.91 | 7.92 |
| 76 P 585 | AP11D | 6 DCC | ${ }_{\text {DPDT }}$ | 7.90 | 7.51 | 7.11 | 6.32 7.60 |
| ( 76 P 587 | AP11D | 12 DC | ${ }_{\text {DPD }}$ | 7.90 | 7.51 | 8.11 | 6.32 |
| 76 P 588 | AP17D | 12 DC | 4PDT | 9.50 | 9.03 | 8.55 | 7.60 |
| 75 P 999 | AP11D | 24 DC | DPDT | 7.90 | 7.51 | 7.11 | 6.32 |
| 75 P 778 | AP17D | 24 DC | 4PDT | 9.50 | 9.03 | 8.55 | 7.60 |
| 76 P 589 | AP11D | 110 DC | DPDT | 8.50 | 8.08 | 7.66 | 6.80 |
| 76 P 590 | AP17D | 110 DC | 4PDT | 10.10 | 9.59 | 9.09 | 8.08 |

## LATCHING AND NON-LATCHING RELAYS

New exceptionally rugged, sub-miniature, 24 volt DC relays. SC non-latching type, and SL latching type. Both are hermetically sealed and designed to withstand extreme shock and vibration (Shock, $100 \mathrm{~g} .$, Vibration, 30 g . 55 to 2000 cps .). The high shock and vibration resistance in the non-latching SC type is made possible by the permanent magnet in the structure. Temperature range: - 65 C . to $125^{\circ} \mathrm{C}$. Size, $.795 \mathrm{x} .359 \mathrm{x} .875^{\prime \prime}$. Weight, $3 / 4 \mathrm{oz}$. Contact pressure: SC- 16 grams min.; SL- 20
grams min. Breakdown voltage, 1000 v . rms. min. begrams min. Breakdown voltage, 1000 v. rms. min. between all elements and ground. Insulation resistance, 10,000 megohms, min. Coil circuit on se polarized, posive terminals marked with a 1 amp at 115 . PC pastive Avints, 2 amps at 28 volts DC 1 amp at 115 V . DC resistive. Available in choice of mountings: *Plug-in holes on $1.062^{\prime \prime}$ centers; §Mounting plate with four $.125^{\prime \prime}$ diameter holes on $1.062 \mathrm{x} .281^{\prime \prime}$ centers. Shpg. wt., 2 oz.

| Stock No. | Mfr's Type | Mounting | NET EACH |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  |  | 1-24 | 25-50 | 51-74 | 75-99 |
| 76 P 591 | SC11D | Plug-in* | 15.75 | 14.96 | 14.17 | 12.60 |
| 76 P 592 | SC11DA | Bracket $\dagger$ | 15.75 | 14.96 | 14.17 | 12.60 |
| 76 P 593 | SC11DB | Plate§ | 15.75 | 14.96 | 14.17 | 12.60 |
| 76 P 594 | SL11D | Plug-in* | 17.25 | 16.39 | 15.52 | 13.80 |
| 76 P 595 | SL11DA | Bracket $\dagger$ | 17.25 | 16.39 | 15.52 | 3.80 |
| 76 P 596 | SL11DB | Plate§ | 17.25 | 16.39 | 15.52 | 3.80 |

## Advance Quality Relays



A B Type GH General Purpose Midget Relays. Precision-built midget relays. The small size of these relays allows their installation in equipment where space is a problem. Types GHP and GHE have dust-proof, clear polystyrene covers and octal plug bases; except have 11-pin base (Fig. A). Types GHA and GHB are open with solder type load; GHP, GHE and GHA rated 5 amps a 115 v . AC with resistive load. Type GHE is current actuated and can he used as plate circuit relays. All others are voltage actuated. Size: Types GHA and GHB $13 / 32 \times 15 / 16^{\times 13 / 4}{ }^{\prime \prime}$; others are $13 / 32^{\prime \prime}$ square by $21 / 8^{\prime \prime}$ above chassis. Av. shpg. wt., 4 oz.

| Stock No. | Mfr's Type | Volts |  | Action | 1-24, EA. | 25-49, EA. | 50-99, EA. |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 76 P 447 | GHA/1C/6VA | $6 \mathrm{v} . \mathrm{AC}$ |  | SPDT | 3.05 | 2.90 | 2.75 |
| 76 P 451 | GHA/2C/6VA | $6 \mathrm{~V} . \mathrm{AC}$ |  | DPDT | 3.5 | 3.3 | 3.20 |
| 76 P 470 | GHB $/ 2 \mathrm{C} / 6 \mathrm{VA}$ | $6 \mathrm{~V} . \mathrm{AC}$ |  | DPDT | 4.05 | 3.85 | 3.65 |
| 6 P455 | GHA/3C/6VA | $\begin{aligned} & 6 \mathrm{v} . \mathrm{AC} \\ & 6 \mathrm{v} . \mathrm{AC} \end{aligned}$ |  | 3PDT | 4.05 |  |  |
| 6 P 473 | GHB $/ 3 \mathrm{C} / 6 \mathrm{VA}$ |  |  | 3PDT | 4.60 | 4.37 | 4.14 |
| 76 P 459 | GHA $/ 1 \mathrm{C} / 6 \mathrm{VD}$ | $6 \mathrm{v} . \mathrm{DC}$ |  | SPDT | 3.05 | 2.90 |  |
| P P46 | GHA $/ 2 \mathrm{C} / 6 \mathrm{VD}$ | $6 \mathrm{v} . \mathrm{DC}$ |  | DPDT | 3.35 | 3.18 |  |
| P P 476 | GHB $/ 2 \mathrm{C} / 6 \mathrm{VD}$ | $6 \mathrm{v}$.DC6$\mathrm{v} . \mathrm{DC}$ |  | DPDT | 3.8 | 3.6 | 3.42 |
| 76 P 464 | GHA $/ 3 \mathrm{C} / 6 \mathrm{VD}$ |  |  | 3PDT | 3.7 | 3.56 | 3.38 |
| 76 P 478 | GHB $/ 3 \mathrm{C} / 6 \mathrm{VD}$ | $6 \mathrm{v.DC}$ |  | 3PDT | 4.40 | 4.18 | 3.96 |
| 76 P 462 | GHA/2C/12VD | $12 \mathrm{v} . \mathrm{DC}$ |  | DPDT | 3.35 | 3.18 | 3.02 |
| P 46 | GHA $/ 3 \mathrm{C} / 12 \mathrm{VD}$ | $12 \mathrm{v}$. |  | 3PDT | 3.7 | 3.56 |  |
| 448 | GHA/1C/24VA | $24 \mathrm{v}$. AC |  | SPDT | 3.05 | 2.90 | 2.75 |
| 76 P 47 | GHB $/ 2 \mathrm{C} / 24 \mathrm{VA}$ | $\begin{aligned} & 24 \mathrm{v} . \mathrm{AC} \\ & 24 \mathrm{v} . \mathrm{DC} \end{aligned}$ |  | DPDT | 4.05 |  |  |
| 463 | GHA/2C/24VD |  |  | DPDT | 3.35 | 3.18 | 3.02 |
| 76 P 466 | GHA/3C/24VD | 24 v . DC |  | 3PDT | 3.75 | 3. | 3.38 |
| P | GHA/1C/115VA | 115 v . AC |  | SPDT | 3.05 | 2.90 |  |
| 6 P 487 | GHP/1C/115VA | $\begin{aligned} & 115 \text { v. AC } \\ & 115 \text { v AC } \end{aligned}$ |  | SPDT | 5.10 | 4.85 | 4.59 |
| P 453 | GHA/2C/115VA |  |  | DPDT | 3.55 | 3.37 | 3.20 |
| 76 P 472 | GHB/2C/115VA | 115 v. AC |  | DPDT | 4.05 | 3.85 | 3.65 |
| 76 P 489 | GHP /2C/115VA | 115 v. AC |  | DPDT |  | 5.4 |  |
| 76 P 457 | GHA $/ 3 \mathrm{C} / 115 \mathrm{VA}$ | $115 \mathrm{v} . \mathrm{AC}$ |  | 3PDT | 4.05 | 3.85 | 3.65 |
| 76 P 475 | GHB $/ 3 \mathrm{C} / 115 \mathrm{VA}$ |  |  | 3PDT | 4.60 |  |  |
| 76 P 490 | GHP $/ 3 \mathrm{C} / 115 \mathrm{VA}$ | $115 \mathrm{v.AC}$ |  | 3PDT | 7.05 | 6.70 | 6.35 |
| Stock No. | Mfr's Type | Ohms | Ma. | Actio | 1-24, EA. | 25-49, EA. | 50-99, EA. |
| 6 P 491 | GHE/2C/2500D | 2500 | 10.0 | DPDT | 6.30 | 5.99 | 5.67 |
| 76 P 492 | GHE/2C/5000D | 5000 | 7.2 | DPDT | 6.70 | 6.37 | 6.03 |
| 6 P493 | GHE/2C/10000D | 10000 | 5.0 | DPDT | 7.10 | 6.75 | 6.39 |

C Type NM Ultra-Miniature DC Relays. Hermetically sealed in $\square$ transistor-type nitrogen-filled case. Ideal for computers, missiles,


| Stock No. | Type | Ohms | Ma. | 1-24, EA. | 25-49, EA. | 50-99, EA. |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 76 P 195 | NM/1C/50 | 50 | 44 |  |  |  |
| 76 P 196 76 P | NM/1C/200 NM/1C/500 | 200 500 | 22 14 | 00 |  |  |
| 76 P 78 | NM/IC/1K | 1000 | 10 | . |  |  |
| 76 P 199 | NM/1C/2K | 2000 | 7 |  |  |  |(D) Type PC Power-Control Relays. Contacts rated 15 amps, at 115 Mount by $2,6-32$ holes on $2^{\prime \prime}$ type draws $21 / 2$ watts, AC coils $4-7$ VA. $15 / 8 \times 15 / 8 \times 2^{11} / 16^{\prime \prime} ; 3 P$ unit: $117 / 32 \times 2^{3} / 8 \times 3^{\prime \prime}$. Av. Shpg. wt. 8 oz .


| Stock No. | Mfr's Type | Action | Volts | 1-24, EA. | 25-49, EA. | 50-99, EA |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 76 P 208 | PC/1C/6VA | SPDT | $6 \mathrm{v} . \mathrm{AC}$ | 3.95 | 3.75 | 3.56 |
| 76 P 600 | $\mathrm{PC} / 2 \mathrm{C} / 6 \mathrm{VA}$ | DPDT | $6 \mathrm{v} . \mathrm{AC}$ |  | 5.65 |  |
| 76 P601 | $\mathrm{PC} / 3 \mathrm{C} / 6 \mathrm{VA}$ | 3PDT | $6 \mathrm{v} . \mathrm{AC}$ | 8.45 | 8.03 |  |
| 76 P 602 | PC/1C/24VA | SPDT | 24 v . AC |  |  |  |
| 76 P 495 | PC/2C/24VA | DPDT | 24 v . AC | 5. | 5. | 5.36 |
| 76 P 200 | PC/1C/115VA | SPDT | 115 v. AC | 3.9 |  |  |
| 76 | PC/2C/115VA | DPDT | 115 v. AC | 5.9 |  |  |
| 76 P 203 | PC/3C/115VA | 3PDT | 115 v. AC | 8.4 | 8.03 | 7.6 |
| 76 P 494 | $\mathrm{PC} / 4 \mathrm{C} / 115 \mathrm{VA}$ | 4PDT | 115 v. AC | 10.9 | 10.40 | 9.86 |
| 76 P 603 | PC/1C/220VA | SPDT | 220 v. AC | 4.95 | 4.70 | 4.46 |
| 76 P 633 | PC/3C/220VA | 3PDT | 220 v. AC | 9.65 | 9.17 | 8.69 |
| 76 P 604 | $\mathrm{PC} / 4 \mathrm{C} / 220 \mathrm{VA}$ | 4 PDT | 220 v. AC | 12.45 | 11.83 | 1.21 |
| 76 P 216 | PC/1C/6VD | SPDT | 6 v . DC | 3.95 | 3.75 | 3.56 |
| 76 P 605 | $\mathrm{PC} / 2 \mathrm{C} / 6 \mathrm{VD}$ | DPDT | $6 \mathrm{v} . \mathrm{DC}$ | 5.95 | 5.65 |  |
| 76 P 606 | PC/3C/6VD | 3PDT | 6 v. DC | 8.45 | 8.03 | 7. |
| 76 P 607 | $\mathrm{PC} / 2 \mathrm{C} / 12 \mathrm{VD}$ | DPDT | $12 \mathrm{v} . \mathrm{DC}$ | 5.95 | 5.65 | 5.36 |
| 76 P 608 | $\mathrm{PC} / 1 \mathrm{C} / 24 \mathrm{VD}$ | SPDT | 24 v . DC | 3.95 | 3.75 | 3.56 |
| 76 P 609 | PC/2C/24VD | DPDT | 24 v . DC | 5.95 | 5.65 | 5.3 |
| 76 P 610 | $\mathrm{PC} / 3 \mathrm{C} / 24 \mathrm{VD}$ | 3 PDTT | $24 \mathrm{v}$. DC | 8.45 | 8.03 | 7.6 |
| 76 P496 | $\mathrm{PC} / 4 \mathrm{C} / 24 \mathrm{VD}$ | 4PDT | $24 \mathrm{v}$. DC | 10.95 | 10.40 | 9.86 |

E Type MV Rotary Action Relays. Precision-built for dependability. E. Plug-in type, in plain can. Has new spring lead design. Meets test conditions of M1L-R-575, ML-R-6106A and ML-R-25018. Their migh performance makes them ideal for meeting requirements of severe military and industrial applications. $7 / 8^{\prime \prime \prime}$ high, ${ }^{51 / 64^{\prime \prime}}$ wide, ${ }^{23 / 64^{\prime \prime}}$ deep. Con-

| Stock No. | Mfr's Type | Ohms | Ma. | 1-24, EA. | 25-49, EA. | 50-99, EA. |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 76 P 634 | MV2C30D-24 | 30 | 85 | 13.60 | 12.92 |  |
| 76 P635 | MV2C120D-24 | 120 | 44 | 3.60 | 2.92 |  |
| 76 P 636 | M22C600D-24 | 600 | 21 | 13.60 | 12.92 |  |
| 76 P637 | MV2C1000D-24 | 1000 | 16 | 13.85 | . 16 | 2.47 |
| 76 P 638 | MV2C2500D-2 | 2500 | 10 | 14.4 | 13. |  |
| 76 P639 | MV2C5000D-24 | 5000 | 7 | 14.95 | 14.20 | 3.46 |
| 76 P640 | MV2C10,000-24 | 10,000 | 5 | 16.35 | 15.53 | 14.72 |

F Type SV Sensitive Relays. Highly sensitive relays for use in DC accessible . Actuating coils require only 0.005 watt excitation. Easily specific requirements. Screws permit changing relay sensitivity to meet specific requirements. Have transparent plastic dust covers. SPD 2 -hole mounting. Size, $11 / \mathrm{x}^{2 \times 29} \mathrm{~m}^{\prime \prime}$ Shpg wt, 8 oz .

| Stock No. | Mfr's Type | Ohms | Ma. | 1-24, EA. | 25-49, EA. | 50-99, EA. |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| $76 \mathrm{P611}$ | SV/1C/1000D | 1000 | 2.25 | 8.25 | 7.84 | 7.43 |
| 76 P612 | SV/1C/1600D | 1600 | 1.80 | 8.40 | 7.98 | 7.56 |
| 76 P613 | SV/1C/2200D | 2200 | 1.50 | 8.40 | 7.98 | 7.56 |
| 76 P614 | SV/1C/3500D | 3500 | 1.20 | 8.40 | 7.98 | 7.56 |
| 76 P615 | SV/1C/5500D | 5500 | 0.95 | 8.75 | 8.31 | 7.88 |
| 76 P616 | SV/1C/8700D | 8700 | 0.75 | 9.40 | 8.93 | 8.46 |
| 76 P617 | SV/1C/14000D | 14,000 | 0.60 | 10.10 | 9.60 | 9.09 |
| 76 P618 | SV/1C/20000D | 20,000 | 0.50 | 11.10 | 10.55 | 9.99 |
| 76 P619 | SV/1C/30000D | 30,000 | 0.40 | 11.85 | 11.26 | 10.67 |
| 76 P 620 | SV/1C/40000D | 40,000 | 0.35 | 13.30 | 12.64 | 11.97 |

G Type PG General-Purpose Relays. DPDT relays offering high G contact pressure to withstand severe vibration and shock. Contacts rated 15 amps at 115 VAC or 26.5 VDC resistive. Size, $17 / 8 \times 15 / 8 \times 11 / 2^{\prime \prime}$. Shpg. wt., 6 oz

| Stock No. | Mfr's Type | Volts | 1-24, EA. | 25-49, EA. | 50-99, EA. |
| :---: | :---: | :---: | :---: | :---: | :---: |
| 76 P621 | PG/2C/6VA | 6 v. AC | 7.50 | 7.13 | 6.75 |
| 76 P 622 | PG/2C/115VA | 115 v. AC | 7.50 | 7.13 | 6.75 |
| 76 P 623 | PG/2C/24VD | $24 \mathrm{v}$. DC | 6.90 | 6.56 | 6.21 |

(H) Type AM Midget Antenna Relays. Compact "transmit-receive" (H) antenna relays. For low-power RF use. DPDT contacts rated 2 amps at 115 VAC or 6.5 VDC resistive. Size, $19 / 16^{\times 15 / 16 \times 115 / 16^{\prime \prime} . ~ S h p g . ~ w t ., ~} 6$ oz.

| Stock No. | Mfr's Type | Volts | 1-24, EA. | 25-49, EA. | 50-99, EA. |
| :---: | :---: | :---: | :---: | :---: | :---: |
| 76 P624 | AM/2C/6VA | 6 v. AC | 4.70 | 4.47 | 4.23 |
| 75 P 644 | AM/2C/115VA | 115 v. AC | 5.05 | 4.80 | 4.55 |
| 76 P 625 | AM/2C/6VD | 6 v . DC | 4.20 | 3.99 | 3.78 |
| 76 P 626 | AM/2C/12VD | 12 v. DC | 4.20 | 3.99 | 3.78 |

J] Type AH Antenna Changeover Relay. Low-loss, steatite insulated J antenna changeover relays. DPDT contacts carry RF loads up to $1 / 2$ KW. *Indicates auxiliary SPDT contacts. $17 / 16 \times 15 / 8 \times 23 / 4^{\prime \prime}$. Shpg. wt., 6 oz .

| Stock No. | Mfr's Type | Volts | 1-24, EA. | 25-49, EA. | 50-99, EA. |
| :---: | :---: | :---: | :---: | :---: | :---: |
| 76 P 627 | AH/2C/6VA | 6 v AC | 13.00 | 12.35 | 11.70 |
| 76 P 628 | AH/2C/115VA | 115 v. AC | 13.00 | 12.35 | 11.70 |
| 76 P 629 | AH/2C1C/115VA* | 115 v. AC | 14.25 | 13.54 | 12.83 |

K Type MK Miniature Relays. Contacts rated 1 amp , at 115 VAC

| Stock No. | Mfr's Type | Action | Volts | 1-24, EA. | 25-49, EA. | 50-99, EA. |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 76 P 630 | MK/1C/6VD | SPDT | 6 v . DC | 4.95 | 4.70 | 4.46 |
| 76 P631 | MK/2C/24VD | DPDT | 24 v. DC | 5.95 | 5.65 | 5.36 |
| 76 P 632 | MK/2C/5000D | DPDT | 5000 ohms | 6.95 | 6.60 | 6.26 |

(L) Type SO Sensitive Relays. Extremely sensitive, adjustable, SPDT $L$ DC relays. Feature sensitivity and versatility equal to relays costing three times as much. Standard adjustment is 10 mw , can be adjusted to as low as 2 mw . Max. coil rating, 3 watts. Contacts rated 1.5 amps ,
DC., 115 v . AC resistive. Size, $13 / 16 \times 11 / 8 \times 11 / 4^{\prime \prime}$. Av. shpg. wt., 3 oz .

| Stock No. | Mfr's Type | Ohms | Ma. | 1-24, EA. | 25-49, EA. | 50-99, EA. |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 76 P 261 | S0/1C/4000D | 4000 | 1.6 | 5.85 | 5.56 | 5.27 |
| 76 P 262 | SO/1C/6500D | 6500 | 1.25 | 6.35 | 6.03 | 5.72 |
| 76 P 263 | S0/1C/10,000D | 10,000 | 1 | 6.70 | 6.37 | 6.03 |

M Type CB Coaxial Relays. For use with 52 -ohm RG cables at RF outputs of up to 800 watts on lines with low SWR. SWR of less than 1.08: 1.00 at 150 mc. SPDT internal contacts directly connected to Amphenol 83-1R connector. *SPDT with external DPDT contacts for auxiliary circuits. $31 / 16 \times 13 / 4 \times 37 / 8^{\prime \prime}$. Shpg. wt., 11 oz .

| Stock No. | Mfr's Type | Actio | Volts | 1 | 25-49, EA. | 50-99, EA. |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 76 P 250 | CB/1C/6VD | SPDT | 6 v . DC | 12.00 | 11.40 | 0.80 |
| 75 P 645 | CB/1C/115VA | SPDT | 115 v, AC | 12.15 | 11.54 | 0.92 |
| 76 P 252 | CB/1C2C/6VD | SPDT* | 6 v . DC | 113.00 | 12.35 | 1.70 |
| 76 P 254 | CB/1C2C/115VA | SPDT* | 115 v, AC | 13.25 | 12.59 | 1.93 |

N Type DM/2C/115VA Time Delay Relay. Provides adjustable 5-60 sec. delay. Excellent for use in pre-heating tube filaments, specialized DPDT $1 / 4^{\prime \prime}$ silver photographic controls, protection applications, etc non-inductive. Recycling time: $8-10$ times delay period. Coil for opera tion from $115 \mathrm{v} ., 60$ cycle AC. Size, $15 / 8 \times 25 / 8 \times 33 / 4^{\prime \prime}$. Shpg. wt., 12 oz . 4.35


P Type LE Latching Relays. For industrial and power-control appli cations-eliminates undesired continuous current consumption by


| Stock No. | Type | Action | Volts | 1-24, EA. | 25-49, EA. | 50-99, EA |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 76 P 497 | LE/2C/115VA | DPDT | 115 v. AC | 12.00 | 11.40 | 10.80 |
| 76 P 498 | LE/2C/24VD | DPDT | 24 v. DC | 11.65 | 11.08 | 10.48 |

# Guardian, Dow-Key and Amperite Relays 



## GUARDIAN RELAYS AND SOLENOIDS

## UNIVERSAL "200" SERIES

Universal interchangeable parts for assembling custom relays. Listings include AC, DC, and plate coils, and switch contact assemblies. Complete relay requires one coil and one contact assembly. For additional contacts use the contact switch parts kit. Contact ratings given are at 115 v .60 cycle AC, non-inductive load. Use two $6-32$ screws for mounting. Overal size: With standard contact assembly $27 / 8 \times 11 / 8 \times 13 / 4^{\prime \prime}$; midget contact assembly, $21 / 16 \times 11 / 8 \times 11 / 2^{\prime \prime}$. Av. shpg. wt., 4 oz .

| AC Coil Types |  |  |  |  | DC Coil Types |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Stock No. | Volts | $\begin{aligned} & 1 \text { to } 24, \\ & \text { EACH } \end{aligned}$ |  |  | No. | Volts | $\begin{array}{\|l\|} \hline 1 \text { to } 24, \\ \text { EACH } \end{array}$ | $\begin{aligned} & 25 \mathrm{to} \\ & \text { EAC } \end{aligned}$ |  |
| 9 | ${ }^{6}$ | 1. | 1.47 | 1.38 | $\overline{75 P 713}$ | ${ }^{6}$ | 1.63 | 1.47 | 1.38 |
| 75 P 710 | 12 |  | 7 |  | 75 P 7 | 12 | 1. | 1.47 |  |
|  | 24 | 63 | . 47 |  |  | 24 | 1. | 1.47 |  |
|  |  |  |  |  |  |  | 1. | 1.47 |  |

75 P 779. Type 200-5000D. 5000-ohm plate coil. 1-24, EACH ..... 2.10
2549 , EACH............ 1.89 50 to 99, EACH............ 1.78
SERIES 200 SWITCH CONTACT ASSEMBLIES

| Stock No. | Mfr's Type | Description |  |  | $\begin{gathered} 1 \text { to } 24 \\ \text { EACH } \end{gathered}$ | EACH | EACH |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 75 | 200-1 SP | SPDT contact assembly. 8 amps. |  |  |  |  |  |
| 75 P 708 | 200-2 DP | DPDT contact assembly. 8 amps . |  |  |  |  | 1.53 |
| 75 P 724 | 200-4 DP | DPDT contact assembly. 12.5 amps. |  |  | 2.10 | . ${ }^{\text {a }}$ | 78 |
| 75 P 889 | 200-5 4P | 4PDT contact assembly. 8 amps . |  |  |  |  |  |
|  | 200-M1 SP | SPDT midget contact assembly. 8 amps . DPDT midget contact assembly. 8 amps . 4PDT midget contact assembly. 8 amps . |  |  |  |  |  |
|  | 200-M2 DP |  |  |  |  |  |  |
|  |  |  |  |  |  |  |  |
| Type 200-M3. Switch parts. For adding poles to $200-\mathrm{M} 1$ and $200-\mathrm{M} 2$. 75 P 725. 50-99, EA... I. 13 25-49, EA... I. 21 1-24, EA...... 1.34 Type 200-3. Switch parts for adding poles to $200-1$ and $200-2$. 75 P 730.50-99, EA... 1.13 25-49, EA...I. 21 1-24, EA...... 1.34 |  |  |  |  |  |  |  |
|  |  |  |  |  |  |  |  |  |  |  |
|  |  |  |  |  |  |  |  |  |  |  |
| RC-100 LOCKING RELAYS |  |  |  |  |  |  |  |
| Locking relays for break-in control; phone to CW switching etc. Momentary coil energization locks contacts. Each impulse reverses contacts. $1 / 4^{*}$ silver contacts are rated 12.5 amps ; handle 1500 -watt non-inductive load at 60 cycle AC; 1000 -watt inductive load at 60 cycle AC. Overall size, $21 / 4 \times 23 / 16 \times 31 / 4^{\prime \prime}$. Av. shpg. wt., 12 oz . |  |  |  |  |  |  |  |
|  |  |  |  |  |  |  |  |  |  |  |
|  |  |  |  |  |  |  |  |  |  |  |
|  |  |  |  |  |  |  |  |  |  |  |
|  |  |  |  |  |  |  |  |  |  |  |
| Stock No. Type |  | Contacts | Volts | 1 to 24, EA. | 25 to 49, EA. | 50 to 99, EA. |  |
| 75 | RC-100-AR | 4PST | 115 | 6 | 5.36 |  | . 06 |
| 75 P 827 | RC-100-BR | SPDT \& DPST | 115 | 6.2 | 5 |  | 27 |
| 76 P 322 | RC-100-CR | SPDT | 115 |  |  |  | 8 |
| 75 P8871 | RC-100-GR | DPDT | 115 |  | 5.25 |  |  |

## OVERLOAD RELAYS

Relays protect against surges, or continuous overload. X-300-ER has remote electrical reset and overload adjustment; *adjustable from $250-$ 750 ma.. DC 3000 v . ins. Aux. contacts for pilot light indicates "overload"' or "clear" position. L-500 has manual reset. Contacts rated 1500 w . non-inductive; 1 kw inductive; at 115 v .60 cycles; 2000 v . ins.


## DOW-KEY COAXIAL ANTENNA RELAYS

Type DKC-G. Precision-built coaxial antenna relays. Re-designed magnet provides thrust pressure in excess of 200 grams-prevents intermittent failure type completely free of hum or chatter. Contacts rated 1000 watts. Negligible change in SWR up to 300 mc . Built-in automatic receiver antenna shorting device. Grounds contact leading to receiver before tongue makes contact with transmitter-prevents RF from reaching receiver circuit. Breakdown voltage: over 1000 volts rms. Takes SPDT switch (included in illustration) listed below, for operating $B+$ of receiver. Connectors, relay tongues and brass parts are silver plated. Size: $41 / 4 \times 23 / 4 \times 11 / 8^{\prime \prime}$. Shpg. wt., 9 oz .

| 75 |  |  |
| :--- | :--- | :--- |
| 75 | P | 48 . For 110 v. For 6 v. DC. NET. NET. |

12.45

IE SPDT Switch. Heavy-duty switch assembly for external mounting -duty switch assembly for external mounting which is part of relay. Shpg. wt., 2 oz . 2E DPDT Switch. As above, but DPDT contacts. Shpg. wt., 2 oz.
75 P 884. NET................................................................ 2.30

Type DKF-2L Connector. Double male. For mounting relays directly to output of transmitter. Designed for UHF. Heavy silver plating. Recommended for indoor use. Locking type. Shpg. wt., 6 oz.
75 P 136. NET $\qquad$
12VDC Coil. Model DK C-M. 12 volt relay coil for converting DKM 6 volt DC relay or DKC-G 6 and 110 volt AC relays for 12 volt DC use. Ideal for the new 12 v . automotive systems. Shpg. wt., 3 oz.
75 P138. NET.
.2 .30


## 2200-U POWER RELAYS

DPDT power relay featuring interchangeable coils. Relay may be modified by inserting replacement coil of another voltage. For motor starting, heater loads and other heavy-duty uses. Contacts rated at 25 amps , continuous duty, 230 v . AC with $75 \%$ power factor load. Operating power requirement, 9.5 va; coil drain, approx. . 080 amps at $115 \mathrm{v} ., 60$ cycles. $33 / 8 \times 21 / 2 \times 23 / 6^{\prime \prime}$. Av. shpg. wt., relays, 12 oz .; coils, 6 oz .

| Volts AC | Relays |  |  |  | Replacement Coils |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | Stock No. | $\begin{aligned} & 1-24 ; \\ & E A C H \end{aligned}$ | $\begin{aligned} & 25-49, \\ & \text { EACH } \end{aligned}$ | $\begin{aligned} & 50-99 \\ & \text { EACH } \end{aligned}$ | Stock No. | $\begin{aligned} & 1-24 ; \\ & \text { EACH } \\ & \hline \end{aligned}$ | EACH | $\begin{aligned} & 50-99 \\ & \text { EACH } \end{aligned}$ |
| 6 | 75 P 083 | 6.00 | 5.40 | 5.10 | 75 P 087 | 2.05 | 1.84 | 1.74 |
| 24 | 75 P 084 | 6.00 | 5.40 | 5.10 | 75 P 088 | 2.05 | 1.84 | 1.74 |
| 115 230 | 75 75 75085 | 6.00 6.25 | 5.40 5.62 | 5.10 | 75 <br> 75 <br> 75089 | 2.05 | 1.84 | 1.74 |

CS-2200. Switch Parts. Switch assemblies for above relays. "Left" or 75 P 563. Left Assembly. NET .1 .85

## I-18 SERIES INDUSTRIAL SOLENOIDS

Intermittent-duty solenoids are for applications that do not require energization of coil for more than 5 consecutive minutes with sufficient time between cycles for cooling. Continuous-duty solenoids are not to exceed a temperature rise of $85^{\circ} \mathrm{C}$. Sizes and shpg. wts.: $1 \mathrm{~A}-11 / 16 \times 13 / 4 \mathrm{x}$



| Stock No. | Type | Volts | Stroke | Lift 0z. | 1 to 24, EA. | 25 to 49, EA. | 50 to 99, EA. |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 75 P 890 | 1A* | 115AC | $1 / 8-1 / 2^{\prime \prime}$ | 8 | 2.48 | 2.23 | 2.10 |
| 75 P 891 | 1 1 $\dagger$ | 115AC | $1 / 8-1 / 2{ }^{\prime \prime}$ | 3 | 2.48 | 2.23 | 2.10 |
| 75P154 | 2* | 115AC | $1 / 8-7 /{ }^{\prime}$ | 27 | 2.90 | 2.61 | 2.46 |
| 75 P 155 | $2 \dagger$ | 115AC | 1/8-7/8" | 10 | 2.90 | 2.61 | 2.46 |
| 75 P 892 | 4* | 115AC | 1/8-1/8" | 24 | 3.13 | 2.82 | 2.66 |
| 75 P 893 | $4 \dagger$ | 115AC | 1/8-11/8' | 6 | 3.13 | 2.82 | 2.66 |
| 75 P 828 | 12* | 115AC | $1 / 8-1^{\prime \prime}$ | 32 | 3.88 | 3.49 | 3.29 |
| 75 P829 | 12† | 115AC | 1/8-1* | 22 | 3.88 | 3.49 | 3.29 |
| 75 P 595 | 11* | 6DC | $1 / 8-1^{\prime \prime}$ | 39 | 3.08 | 2.77 | 2.61 |
| 76P318 | $11 \dagger$ | 6DC | $1 / 8-1^{\prime \prime}$ | 21 | 3.08 | 2.77 | 2.61 |
| 75 P 596 | 11* | 24DC | 1/8-1' | 39 | 3.08 | 2.77 | 2.61 |
| 76 P 319 | $11 \dagger$ | 24DC | $1 / 8-1$ | 21 | 3.08 | 2.77 | 2.61 |
| 75 P 894 | 14* | 115AC | $1 / 8-11 / 2^{\prime \prime}$ | 110 | 5.61 | 5.05 | 4.76 |
| 75 P 895 | $14 \dagger$ | 115AC | $1 / 8-11 / 2^{\prime \prime}$ | 65 | 5.61 | 5.05 | 4.76 |
| 75 P 156 | 16* | 115AC | 1/8-5/8 | 80 | 3.48 | 3.13 | 2.95 |
| 75 P 885 | $16 \dagger$ | 115AC | 1/8-5/8" | 60 | 3.48 | 3.13 | 2.95 |
| 76 P 320 | $16 \dagger$ | 230AC | 1/8-5/8' | 60 | 3.65 | 3.28 | 3.10 |
| 75 P 157 | 18* | 115AC | 1/8-1" | 183 | 4.88 | 4.39 | 4.14 |
| 75 P 886 | $18 \dagger$ | 115AC | 1/8-1* | 145 | 4.88 | 4.39 | 4.14 |
| 76 P 321 | $18 \dagger$ | 230AC | $1 / 8-1{ }^{4}$ | 145 | 5.10 | 4.59 | 4.33 |

## MER-115 MIDGET STEPPING RELAY

Electrical-reset stepping relay with 21 active positions; resets from external control or own contacts. Contacts rated 1 amp at $115 \mathrm{v} ., 60$ cycle, non-inductive. Stepping and reset coils 115 " ${ }^{\circ}$., 60 cycle AC. Minimum



| AMPER | ITE THERM | ATIC DELA | RELAYS |  |
| :---: | :---: | :---: | :---: | :---: |
| Hermetic | cally sealed in | ass envelope | octal base. |  |
| Heater d | raws 2 watts a | nd may be oper | ted continu- |  |
| ously. Co | ntacts: SPST. | 3 amps at 115 | AC, 1 amp |  |
| at 220 v . | AC. Voltage ${ }^{\text {B }}$ | reakdown: Cont | cts, 1000 v.; |  |
| Heater-to | -Contact, 1500 | $\mathbf{v}_{i}$, except** 25 | v. and 500 |  |
| v . for del | ays of 10 sec . | r less. Ambient | temperatures |  |
| from -5 | $5^{\circ}{ }^{\text {to }}+70^{\circ} \mathrm{C}$. | Size, Dia., 19/32 | Height less | 0 des zeavi |
|  |  |  |  |  |
| number a | well as stock. | umber. | pecify lype | (TMO VUTU |
| Dolay | Type No. No | rmally Opon | Type No. No | mally Closed |
| Seconds | 6.3 v.AC=DC | 115 v. AC-DC | $6.3 \mathrm{v.AC-DC}$ | 115 v. AC-DC |
| 2* | $6 \mathrm{NO2}$ | 115 N 02 | 6 C 2 | 115 C 2 |
| 5* | 6 N 05 | 115 N 05 | 6C5 | 115 C 5 |
| 10* | $6 \mathrm{NO10}$ | 115 N 010 | 6 C 10 | 115 C 10 |
| 15 | 6N015 | 115 N 015 | 6 C 15 | 115 C 15 |
| 20 | 6N020 | 115 N 020 | 6 C 20 | 115 C 20 |
| 30 | 6N030 | 115N030 | 6 C 30 | 115 C 30 |
| 45 | 6 NO 045 | 115 N 045 | 6 C 45 | 115 C 45 |
| 60 | 6 N 060 | 115 N 060 | 6 C 60 | 115 C 60 |
| 75 | 6N075 | 115 N 075 | 6 C 75 | 115 C 75 |
| 90 | 6N090 | 115N090 | 6 C 90 | 115 C 90 |
| 120 | 6N0120 | 115 N 0120 | 6 C 120 | 115 C 120 |
| 150 | 6N0150 | 115 N 0150 | 6 C 150 | 115 C 150 |
| 180 | 6N0180 | 115N0180 | 6C180 | 115 C 180 |

75 PP 295. NET EACH.
2.35

Miniature Relays. All types above also available in miniature size except $115 \mathrm{C} 150,115 \mathrm{C} 180$, $115 \mathrm{NO} 150,115 \mathrm{NO} 180$. 9 -pin, $3 / 4 \times 25 / 8^{\prime \prime} .3$ oz. Specify type no., adding' letter " $T$ " following type number. Example:
75 PP 296. NET EACH.
2.35

Allied also stocks a complete selection of Amperite Regulator Tubes for industrial applications. See page 126 for listing.

## Industrial Relays and Motors

AGASTAT TIME DELAY RELAYS

©


Precision time-delay relays. Provide adjustable delays for a variety of industrial applications. Consist of sealed timing head, solenoid assembly, snap-action switch with fine silver contacts, and screw terminals. Contact single-break contacts; metal jumper supplied permits SPDT, double, break contact. Double-break contact rating, 15 amps; single-break 8 amps. DE units containing $Y$ in Type No. are adjustable from 1.0 through 30 seconds; $B$ units are adjustable from 30 seconds to 15 minutes; FE units are adjustable from 0.1 through 5 minutes. "Use" column numbers mean that delay starts when (1) coil is energized, (2) coil is de-energized, (3) coil is energized and de-energized; (4) provides two-step timing upon energizing cycle-auxiliary switch up to 15 seconds maximum; (5) provides two-step timing upon de-energizing cycle-auxiliary switch up to 15 seconds maximum; (6) as 1 , but with auxiliary switch which transfers instantly upon energizing and de-energizing of coil; (7) as 2, but with auxiliary switch which instantly transfers upon energizing and deenergizing of coil; (8) manually or mechanically actuated-slow make, instantaneous break: (9) manually or mechanically actuated-instan-
taneous make, slow break. $Q$ in Type No. indicates front panel mounting taneous make, slow break. $Q$ in Type No. indicates front panel mounting bracket $31 / 4^{\prime \prime}$ wide included; T in Type No. indicates front of pals
terminals. Coils are for $50-60$ cycle AC. Av. shpg. wt., $21 / 4 \mathrm{lbs}$.

| Stock No. | Mfr's <br> Type | Fig. | Use | Coil Volts | $\begin{aligned} & \text { Size } \\ & \text { HWD } \end{aligned}$ | $\left\lvert\, \begin{gathered} \text { NET } \\ \text { EACH } \end{gathered}\right.$ | EAD |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 76 P650 | FE-12QT | A | 1 | 115 | $41 / 8 \times 25 / 8 \times 211 / 16^{\prime \prime}$ | 34.20 | 30.78 |
| 76 P 651 | FE-12QT | A | 1 | 230 | $41 / 8 \times 25 / 8 \times 211 / 6^{\prime \prime}$ | 34.20 | 30.78 |
| 76 P652 | FE-12QT | A | 1 | 440 | $41 / 8 \times 25 / 8 \times 211 / 16^{\prime \prime}$ | 34.20 | 30.78 |
| 76 P 653 | FE-22QT | A | 2 | 115 | $41 / 8 \times 25 / 8 \times 211 / 1^{\prime \prime}$ | 34.20 | 30.78 |
| 76 P 654 | FE-22QT | A | 2 | 230 | $41 / 8 \times 25 / 8 \times 211 / 16^{\prime \prime}$ | 34.20 | 30.78 |
| 76 P 655 | FE-22QT | A | 2 | 440 | $41 / 8 \times 25 / 8 \times 211 / 16^{\prime \prime}$ | 34.20 | 30.78 |
| 76 P 656 | FE-12P | B | 1 | 115 | $5 \times 33 / 4 \times 27 / 8^{\prime \prime} 16^{\prime \prime}$ | 42.25 | 38.03 |
| 76 P 65 | FE-12P | B | 1 | 230 | $5 \times 33 / 4 \times 27 / 8^{\prime \prime}$ | 42.25 | 38.03 |
| 76 P 658 | FE-22P | B | 2 | 115 | $5 \times 33 / 4 \times 27 / 8^{\prime \prime}$ | 42.25 | 38.03 |
| 76 P 659 | FE-22P | B | 2 | 230 | $5 \times 33 / 4 \times 27 / 8^{\prime \prime}$ | 42.25 | 38.03 |
| 76 P 660 | FED-12 | C | 3 | 115 | 61/4×37/16x47 | 62.00 | 55.80 |
| 76 P661 | FED-12 | C | 3 | 230 | 61/4x37/16x4" | 62.00 | 55.80 |
| 76 P 662 | FET-12Q | D | 4 | 115 | $51 / 2 \times 25 / 8 \times 211 / 6^{\prime \prime}$ | 44.80 | 40.32 |
| 76 P 663 | FET-22Q | D | 5 | 115 | $51 / 2 \times 25 / 8 \times 211 / 6^{\prime \prime}$ | 44.80 | 40.32 |
| 76 P 664 | FEL-12QT | E | 6 | 115 | $41 / 8 \times 21 / 2 \times 33 / 8^{\prime \prime}$ | 39.20 | 35.28 |
| 76 P 665 | FEH-22Q | F | 7 | 115 | $57 / 8 \times 25 / 8 \times 211 / 16^{\prime \prime}$ | 38.80 | 34.92 |
| 76 P 666 | FM-12QT | G | 8 |  | $213 / 16 \times 31 / 2 \times 211 / 16^{\prime \prime}$ | 22.20 | 19.98 |
| 76 P 667 | FM-22QT | G | 9 |  | $213 / 16 \times 31 / 2 \times 211 / 16^{\prime \prime}$ | 22.20 | 19.98 |
| 76 P 668 | DE-Y-12QT | H | 1 | 115 | $47 / 16 \times 25 / 8 \times 211 / 16^{\prime \prime}$ | 36.20 | 32.58 |
| 76 P 669 | DE-Y-12QT | H | 1 | 230 | $47 / 16 \times 25 / 8 \times 211 / 6^{\prime \prime}$ | 36.20 | 32.58 |
| 76 P 670 | DE-Y-22QT | H | 2 | 115 | $47 / 16 \times 25 / 8 \times 211 / 16^{\prime \prime}$ | 36.20 | 32.58 |
| 76 P 671 | DE-Y-22QT | H | 2 | 230 | $47 / 16 \times 25 / 8 \times 211 / 16^{\prime \prime}$ | 36.20 | 32.58 |
| 76 P 672 | DE-B-12QT | H | 1 | 115 | $47 / 16 \times 25 / 8 \times 211 / 6^{\prime \prime}$ | 36.20 | 32.58 |
| 76 P 673 | DE-B-12QT | H | 1 | 230 | $47 / 16 \times 25 / 8 \times 211 / 6^{\prime \prime}$ | 36.20 | 32.58 |
| 76 P 674 | DE-B-22QT | H | 2 | 115 | $47 / 16 \times 25 / 8 \times 211 / 16^{\prime \prime}$ | 36.20 | 32.58 |
| 76 P 675 | DE-B-22QT | ${ }^{\mathrm{H}}$ | 2 | 230 | $47 / 16 \times 25 / 8 \times 211 / 6^{\prime \prime}$ | 36.20 | 32.58 |
| 75 P 739 | $G$ Encl. | J |  |  | $65 / 8 \times 22^{21 / 32 \times 35 / 32}$ | 5.00 | 4.50 |
| 75 P 248 | GY Encl. | J |  |  | $65 / 8 \times 22^{21 / 32 \times 4}{ }^{\prime \prime}$ | 6.00 | 5.40 |
| 75 P 249 | GZ Encl. | J |  |  | $75 / 8 \times 35 / 32 \times 325 / 32^{\prime \prime}$ | 6.00 | 5.40 |

## HURST 40-INCH-OUNCE MOTORS



Extremely compact, heavy-duty synchronous motors for continuous timing applications. In choice of seven output speeds for use in alarm systems, extra-large clocks, animated displays, railway signalling equipment, process controls,
lighting controls, code signal devices, time switches, program instruments, aircraft training devices, etc.
Excellent shock and vibration resistance. Start instantly at full torque ( 40 inch-ounces at 1 rpm). Clockwise rotation. Overall size: $21 / 2^{\prime \prime}$ diameter by $13 / 4^{\prime \prime}$ deep. Shaft: $3 /{ }^{\prime \prime}{ }^{\prime \prime}$ diameter by
$3 / 4^{\prime \prime}$ long. Power drain: 7 watts. For operation from $110-115$ volts, 60 cycle AC. Shpg. wt., 1 lb .

| Stock No. | $\begin{aligned} & \text { Mir's } \\ & \text { Typp } \end{aligned}$ | Output Speed | NET EACH |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: |
|  |  |  | 1-17 | 18-35 | 36-71 |
| 76 P 571 | SM-1 | 1 rpm |  |  |  |
| 76 P 572 | SM-4 | 4 rpm |  |  |  |
| 76 P 573 76 P 54 | ${ }_{\text {SM-6 }}^{\text {SM }}$ | ${ }_{10}^{6} \mathrm{rpm}$ | 6.75 | 6.40 | 6.07 |
| 76 P 575 | SM-16 | 16 rpm |  |  |  |
| 76 P 576 | SM-30 | 30 rpm |  |  |  |
| 76 P 577 | SM-60 | 60 rpm |  |  |  |

Write for prices on larger aumentitios.

## BARBER-COLMAN RELAYS AND MOTORS

 TYPE "O" ULTRA-SENSITIVE RELAYS

Ultra-sensitive, DC-polarized relays. Feature extremely high sensitivity. Ideal for use wherever power supply is limited. Will operate for years with mercury cells. Widely used in plate circuits. High-speed response; can be operated in excess of 10 cps. Fine tion. Polarity of signal determines which contact closes. Sensitivity is adjustable for precise setting. Two Alnico magnets are used for polarizing field. High resistance to physical shock. Normal tolerance on pull-in current at
$75^{\circ} \mathrm{F}$. is $\pm 25 \%$; from $-65^{\circ}$ to $+160^{\circ} \mathrm{F}$., $\pm 60 \%$. All have octal plug$75^{\circ} \mathrm{F}$. is $\pm 25 \%$; from $-65^{\circ}$ to $+160^{\circ} \mathrm{F} .{ }^{ \pm} \pm 6 \%$. All have octal plug-
in bases for chassis installation. $19 / 16^{3} 31 / \mathrm{x}^{17 / 8^{\prime \prime}}$. Shpg. wt., 10 oz .

Single Coil

| Stock No. | $\begin{aligned} & \hline \begin{array}{l} \text { Mfr's } \\ \text { Type } \end{array} \end{aligned}$ | $\begin{gathered} \text { Coil } \\ \text { Ohms } \\ \hline \end{gathered}$ | $\begin{aligned} & \text { Pull-in } \\ & \text { Volts } \end{aligned}$ | Pull-in Amps | Pull-in $\mu$ Watts | NET |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 75 P 252 | AYLZ-2542S | 215 | . 154 | . 00071 | 109.6 | 18.00 |
| 76 P 700 | AYLZ-2546S | 140 | . 076 | . 00054 | 41.1 | 22.00 |
| 75 P 250 | AYLZ-2804S | 7950 | . 930 | . 00012 | 108.8 | 18.00 |
| 76 P 418 | AYLZ-2841S | 7950 | . 604 | . 0000076 | 45.9 | 22.00 |
| 76 P419 | AYLZ-3165S | 560 | . 238 | . 00043 | 101.2 | 18.00 |
| 76 P 415 | AYLZ-4042S | 215 | . 100 | . 00046 | 46.3 | 22.00 |
| 75 P 255 | AYLZ-4436S | 13 | . 035 | . 00267 | 92.4 | 18.00 |
| 76 P 420 | AYLZ-4438S | 2300 | . 499 | . 00022 | 108.3 | 18.00 |
| 76 P 414 76 P 701 | AYLZ-4525S | 13 54 | . 047 | .00173 .00087 | 39.1 40.6 | 22.00 |
| 76 P 702 | AYLZ-4527S | 88 | . 062 | . 00068 | 41.2 | 22.00 |
| 76 P 703 | AYLZ-4528S | 350 | . 123 | . 00035 | 43.2 | 22.00 |
| 76 P 416 | AYLZ-4529S | 560 | . 155 | . 00028 | 42.8 | 22.00 |
| 76 P 704 | AYLZ-4530S | 1400 | . 243 | . 00017 | 42.1 | 22.00 |
| 76 P 417 | AYLZ-4531S | 2300 | . 325 | . 00014 | 45.9 | 22.00 |
| 76 P 705 | AYLZ-4532S | 3550 | . 524 | . 0000093 | 48.7 | 22.00 |
| 76 P 706 | AYLZ-4533S | 5650 | . 604 | . 0000076 | 45.9 | 22.00 |
| 76 P 707 | AYLZ-5653S | 900 | . 198 | . 00022 | 43.7 | 22.00 |


| Double Coil |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 76 P 427 | AYLZ-3078S | 940 | . 494 | . 00053 | 260.0 | 19.00 |
| 75 P 253 | AYLZ-3188S | 5 | . 033 | . 00667 | 222.2 | 19.00 |
| 75 P 251 | AYLZ-3192S | 3800 | 1.000 | . 00026 | 263.0 | 19.00 |
| 76 P 708 | AYLZ-3342S | 150 | . 122 | . 00081 | 99.0 | 23.00 |
| 75 P 254 | AYLZ-3353S | 240 | . 240 | . 00100 | 240.0 | 19.00 |
| 76 P 425 | AYLZ-3428S | 3800 | . 650 | . 00017 | 111.1 | 23.00 |
| 76 P 709 | AYLZ-3840S | 365 | . 190 | . 00052 | 98.7 | 23.00 |
| 76 P 426 | AYLZ-4443S | 95 | . 146 | . 00154 | 224.7 | 19.00 |
| 76 P 421 | AYLZ-4534S | 5 | . 022 | . 00433 | 93.7 | 23.0 |
| 76 P 710 | AYLZ-4535S | 9 | . 029 | . 00325 | 95.1 | 23.00 |
| 76 P 711 | AYLZ-4536S | 39 | . 060 | . 00153 | 91.2 | 23.00 |
| 76 P 712 | AYLZ-4537S | 61 | . 072 | . 00118 | 85.2 | 23.00 |
| 76 P 422 | AYLZ-4538S | 95 | . 095 | . 00100 | 95.0 | 23.00 |
| 76 P 423 | AYLZ-4539S | 240 | . 156 | . 00065 | 101.4 | 23.00 |
| $76 . \mathrm{P} 424$ | AYLZ-4540S | 940 | . 322 | . 00034 | 110.0 | 23.00 |
| 76 P 713 | AYLZ-4541S | 1450 | . 401 | . 00028 | 110.9 | 23.00 |
| 76 P 714 | AYLZ-4542S | 2300 | . 507 | . 00022 | 111.6 | 23.00 |

bYLM PERMANENT MAGNET DC MOTORS


Ideal for fan and blower drives, rapid transfer switches, and programming devices, Permanent magnet field. Tapered air action, for improved performance under varying load conditions. Multicoat treatment protects armature from moisture, fungus, or salt spray. Brush life at sea level usually exceeds 1000 hours. Motors perform well at high altitudes. Ambient temperature range is $-65^{\circ} \mathrm{F}$ to $+200^{\circ} \mathrm{F}$. Meet AN-M-40 and MIL-M-8609 (ASG) specs. $2^{\prime \prime}$ diam. spline shaft output. Can be used with gear trains listed below. *Pound inches. Av. shpg., 2 lbs .

| Stock No | Type | DC V. | Duty Cycle | HP | RPM | *Torque | EACH |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 76 P 550 | 40 F 50 | ${ }^{26}$ | Continuous | 013 | 0 | . 10 | 36.00 |
| 76 P 551 | 40050 | 26 | $3 \mathrm{min}$. on, 7 off | . 020 | 10300 | . 12 |  |
| 76 P 552 | 75050 | 26 | Continuous | . 023 | 7200 | . 20 | 41.00 |
| 76 P 553 | 70250 | 26 | 1.5 min on, 8.5 | . 054 | 12300 | 28 | 41.00 |
| 76 P 554 | 90150 | 26 | 2 min . on, 8 off | . 080 | 12600 | . 40 | 46.00 |
| 76 P 555 76 P 56 | 40A50 70750 | 115 | Continuous Continuous | $\begin{aligned} & .014 \\ & .027 \\ & \hline \end{aligned}$ | $\begin{array}{r} 10700 \\ 7200 \\ \hline \end{array}$ | . 23 | 45.0 |

BYLH Geartrains. For above. Reduce speed and increase the torque as indicated under "gear ratio." Maximum torque is $5-10$ pound inches. Fit motor frame and accepts motor shaft. All geartrains are $1.38^{\prime \prime}$ dia.
Lengths fom $1.07^{\prime \prime}$ (for 922 ) to $1.69^{\prime \prime}$ (for 919 ). Av. shpg. wt., 1 lb .

| Stock No. | Type | No. Steps | Gear Ratio | NET EACH |
| :---: | :---: | :---: | :---: | :---: |
| 76 P 557 | 922 | 2 | 9.5 to 1 | 21.00 |
| 76 P 558 76 P 59 | ${ }_{914}^{923}$ | 3 4 | 32.6 to 1 | 26.00 |
| 76 P 560 | 915A | 5 | 312 to 1 |  |
| 76 P 561 | 915 B | 5 | 390 to 1 | 22.00 |
| 76 P 562 | 916A | 6 | 1093 to 1 | 25.00 |
| 76 P 563 | 917 B | 7 | 1767 to 1 | 28.00 |
| 76 P 564 | 917 D | 7 | 4648 to 1 | 28.00 |
| 76 P 565 | 918 B | 8 | 16053 to 1 | 31.00 |
| 76 P 566 | 919 B | 9 | 55446 to 1 | 34.00 |

## LEDEX 12-POSITION RELAY



Master switch and solenoid-activated slave switch for remote switching. Slave switch may be installed at any remote location. Master switch mounts directly on panel, etc. Uses 5 -conductor cable. With demonstration board. Comes wired with selenium-rectifier power supply and line cord. For 95-130 v., po-60 cycle AC. Shpg. wt., 3 lor.
75 P 243 . NET. . . . . . . . . .
. 16.50

## Relays, Counters and Contact Protectors

## S

(A) Series 4F. Plate circuit relay for any 20 A] mw. sensitivity application. SPDT contacts rated 2 amps. $11 / 2 \times 15 / 8 \times 15 / 32^{\prime \prime} .3 \mathrm{oz}$.

| Stock <br> No. | Mfr's <br> Type | Ohms | Ma. <br> DC | NET |
| :---: | :---: | :---: | :---: | :---: |
| 76 P 377 | $4 \mathrm{~F}-1000-$ S/SIL | 1000 | 4.5 | 5.50 |
| 76 P 378 | $4 \mathrm{~F}-2500$-S/SIL | 2500 | 3.0 | 5.50 |
| 76 P 379 | $4 \mathrm{~F}-5000-$ S/SIL | 5000 | 2.0 | 5.75 |
| 75 P 285 | $4 \mathrm{~F}-8000$-S/SIL | 8000 | 1.6 | 6.00 |

## B

Series 5F. Rugged SPDT DC relay withtacts rated $1 \mathrm{amp} 13 / 4 \times 15 / 16 \times 111 / 16^{\prime \prime} 5 \mathrm{cz}$. Con 76 P 38015 F 1000 .

| 76 | P 380 | $5 \mathrm{~F}-1000-\mathrm{S} /$ SIL | 1000 | 2.3 | 7.50 |
| :--- | :--- | :--- | :--- | :--- | :--- |
| 76 | P 381 | $5 \mathrm{~F}-2500-\mathrm{S} /$ SIL | 2500 | 1.4 | 7.50 | | 76 P 381 | $5 F-2500-$ S/SIL | 2500 |  |
| :--- | :--- | :--- | :--- |
| 76 | P 382 | $5 F-5000-$ S/SIL | 5000 | 76 P $383|5 \mathrm{SF}-10,000-\mathrm{S} / \mathrm{SIL}| \begin{aligned} & 5000 \\ & 10,000\end{aligned}$ | 1.4 |
| :--- | :--- |
| 1.0 |
| 0.7 |



## (D)

(D) Series 22. Miniature hermetically-sealed DC relay i silver contacts rated 2 amps for 28 V at 20 mw sensitivity, except *DPDT at 40 mw $13 / 4 \times 1 \times 1^{\prime \prime}$. Shpg. wt., 4 oz .

| Stack <br> No. | Mfr's <br> Type | Ohms | Ma. DC | NET |
| :---: | :---: | :---: | :---: | :---: |
| 76 P 384 | 22RJC-1000-G/SIL | 1000 | 4.5 | 13.00 |
| 76 P 385 | 22RJC-2500-G/SIL | 2500 | 2.8 | 13.50 |
| 76 P 386 | 22RJC-5000-G/SIL | 5000 | 2.0 | 14.00 |
| 76 P 387 | 22RJC-8000-G/SIL | 8000 | 1.6 | 14.50 |
| 76 P 388 | 22RJCC-1000-G/SIL* | 1000 | 6.3 | 14.50 |
| 76 P 389 | 22RJCC-2500-G/SIL* | 2500 | 4.0 | 15.00 |
| 76 P 390 | 22RJCC-5000-G/SIL** | 5000 | 2.8 | 15.50 |
| 76 P 391 | 22RJCC-8000-G/SIL* | 8000 | 2.3 | 16.00 |

[^16]E
E Series 41. Exceptionally quiet, sensitive E relay, SPDT contacts rated: ${ }^{*} 2 ; \dagger 5$ amps.
Sensitivity, $40 \mathrm{mw} .21 / 4 \times 11 / 4 \times 15 / 16^{\prime \prime} .3 \mathrm{oz}$.

| Stock No. | Mfr's <br> Type | Volts (AC) <br> Ohms (DC) | Ma. (DC) | NET |
| :---: | :---: | :---: | :---: | :---: |
| 75 P 076 | 41FZ-10-ACG/SIL | $6 \mathrm{v} . \dagger$ |  | 3.50 |
| 76 P 392 | 41FZ-35-ACS/SIL | 6 v . * |  | 3.50 |
| 75 P 077 | 41FZ-200-ACG/SIL | 24 v. $\dagger$ |  | 3.50 |
| 76 P 393 | 41FZ-500-ACS/SIL | 24 v. * |  | 3.50 |
| 75 P 078 | 41FZ-5000-ACG/SIL | 115 v. $\dagger$ |  | 3.65 |
| 76 P 394 | 41FZ-10000-ACS/SIL | 115 v.* |  | 3.85 |
| 75 P 079 | 41FZ-12000-ACG/SIL | 230 v. $\dagger$ |  | 4.15 |
| 76 P 395 | 41F-5-S/SIL | 5 ohms | 90 | 3.50 |
| 76 P 396 | 41F-50-S/SIL | 50 ohms | 30 | 3.50 |
| 76 P 397 | 41F-200-S/SIL | 200 ohms | 15 | 3.50 |
| 76 P 398 | 41F-1000-S/SIL | 1 K ohms | 6.5 | 3.50 |
| 76 P 399 | 41F-5000-S/SIL | 5 K ohms | 3.0 | 3.65 |
| 76 P 400 | 41F-10000-S/SIL | 10 K ohms | 2.0 | 3.85 |


(F) Series 42. DPDT relay with octal plug-in quiet operation. Operating Provides extremely quiet operation. Operating power is under 0.25 Watt on
Silver contacts rated 5 amps at $28 \mathrm{~V} . \mathrm{DC}$ or 115 V. AC for 100,000 operations. AC units are designed for 60 cycle operation. Pin connections are printed on relay cover. $21 / 16 \times 15 / 16 \times 15 / 16^{\prime \prime}$. Shpg. wt., 4 oz .

| Stock No. | $\begin{aligned} & \hline \text { Mfr's } \\ & \text { Type } \\ & \hline \end{aligned}$ | Volts (AC) <br> Ohms (DC) | Ma. <br> (DC) | NET |
| :---: | :---: | :---: | :---: | :---: |
| 76 P 401 | 42ROZ-8-ACG/S | 6 v . |  | 20 |
| 76 P 402 | 42ROZ-50-ACG/SIL | 12 v. |  | 6.20 |
| 76 P 403 | 42ROZ-200-ACG/SIL | 24 v . |  | 6.20 |
| 76 P 404 | 42ROZ-4000-ACG/SIL | 115 v . |  | 6.20 |
| 76 P 405 | 42ROZ-12000-ACG/SIL | 220 v. |  | 6.80 |
| 76 P 406 | 42RO-5-G/SIL | 5 ohms | 200 | 6.20 |
| 76 P 407 | 42RO-50-G/SIL | 50 ohms | 65 | 6.20 |
| 76 P 408 | 42RO-200-G/SIL | 200 ohms | 32 | 6.20 |
| 76 P 409 | 42R0-1000-G/SIL | 1 K ohms | 14 | 6.20 |
| 76 P 410 | 42R0-5000-G/SIL | 5 K ohms | 6.5 | 6.40 |
| 76 P 411 | 42R0-10000-G/SIL | 10K ohms | 4.5 | 6.60 |

G] 26F-8000-C DS/PAL Relay. Similar to 4F column, but slightly lighter and with in lemand what greater sensitivity. Allows circuits to be adjusted so as to draw less plate current, for longer tube or battery life. Ideal for use in radio-controlled devices. SPDT, palladium contacts rated at 0.5 amp @ 28 v . DC or 115 v. AC. 8000 ohm coil. Operating current, 0.7 ma. Pull-on, drop-out current difference. 0.2 75 P 284. NET.....

## FEDERAL CONTACT PROTECTORS

## $\underset{\text { BizPR }}{\text { FTR }}$

Effective protection for relay contacts controlling
inductive circuits. Suppress arcing and RF tran
sients. Consist of selenium rectifier cells back-to-back in small tubular leads. P in Type No. indicates paper, H hermetically sealed. Wt. 6 oz.

| StockNo. | Type | Max.V. | Max. Ma | Min.V. | Size | NET |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 76 P 323 | 8A2PS2 | 52 AC | 200 | 27 AC |  | 1.08 |
| 76 P 324 | 15A2PS2 | 52 AC | 400 | 27 AC | $1 / 2 \mathrm{x}^{3 / 4}{ }^{\prime \prime}$ | . 1.08 |
| 76 P 326 | 8A5PS5 | 130 AC | 200 | 105 AC | $25 / 64 \times 15 / 16^{\prime \prime}$ | 1.42 |
| 76 P 327 | 15A5PS5 | 130 AC | 400 | 105 AC |  | 1.58 |
| 76 P 328 | 8A.2PS1 | 44 DC | 200 | 23 DC | $\begin{aligned} & 152 \times 1316^{\prime \prime \prime} \\ & 25 / 64 x^{3 / 1} \end{aligned}$ | $\begin{array}{r}1.58 \\ .92 \\ \hline 2.32\end{array}$ |
| 76 P 329 | 8A2HS1 | 44 DC | 200 | 23 DC | $33 / 64 \times 11 / 32^{\prime \prime}$ | 2.32 |
| 76 P 330 | 15A2PS1 | 44 DC | 500 | 23 DC | $1 / 2 \times 3 / 4^{11}$ | 2.97 |
| 76 P 331 | 15A2HS1 | 44 DC | 500 | 23 DC | ${ }^{1 / 2} 64 \times 1 / 32^{\prime \prime}$ | 2.37 |
| 76 P 332 | 8A3PS2 | 66 DC | 250 | 45 DC | 25/64 ${ }^{3} 3^{\prime \prime}$ | 2.38 1.08 |
| 76 P 325 | 15A3PS2 | 66 DC | 500 | 45 DC | $1 / 2 \times 3 / 4^{\prime \prime}$ | 1.13 |

## PRODUCTION INSTRUMENT COUNTERS



High-quality electric counters for commercial and industrial applications. For 60-cycle operation.
Prefix "M". Small counters for coin-operated equipment and light to moderate-duty industrial applications. Minimum make time 0.04 sec ., break time 0.06 sec . Rated at 600 CPM. Enclosed in tamper-proof case. Reset units count to 4 digits, non-reset to 5 . Shpg. wt., 11 b .
Prefix "6" and "P6". Small counters for general industrial applications. Minimum make and break time of 0.030 sec . Enclosed in dust-resistant housing. Rated at 1000 CPM, 50-million count life. Continuous-duty coils. 6 digits. Shpg. wt., 1 lb .
Prefix "ECS." Heavy-duty industrial-type counter. Minimum make and break time 0.030 sec . Rated at $1000 \mathrm{CPM}, 200$-million count life. Coil unharmed when current is left on. 6 digits. Shpg. wt., 3 lbs.

RESET TYPES

| No. | Type | Fig. | V. AC | Size | Mount | Mtg. Ctrs. | NET |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| $77 \mathrm{P099}$ | MDB-S4-24A | K | 24 | 115/16x213/16 $\times 213 / 32^{\prime \prime}$ | Panel | $19 / 16 \times 27 / 16^{\prime \prime}$ | $\overline{14.75}$ |
| 77 P 049 | MDB-S4-115A | K | 115 | $115 / 16 \times 2{ }^{13 / 16 \times 2} 2^{13 / 32^{\prime \prime}}$ | Panel | $19 / 16 \times 27 / 16^{\prime \prime}$ | 14.75 |
| 77 P 043 | MDA-S4-115A | J | 115 | $2^{13 / 32} \times 1{ }^{23 / 32 \times 21 / 44^{\prime \prime}}$ | Base | $11 / 8 \times 1{ }^{15} /{ }^{\prime \prime}$ | 14.00 |
| 77 P 236 | 624A | M | 24 | $21 / 2 \times 11 / 64 \times 31 / 2^{\prime \prime}$ | Base | $\frac{315 / 64 \times 1{ }^{23 / 64 *}}{}$ | 18.50 |
| 77 P 237 | 6115A | M | 115 | $21 / 2 \times 11 / 64 \times 31 / 2^{\prime \prime}$ | Base | $315 / 64 \times 1^{23 / 64 "}$ | 18.50 |
| 77 P 238 | P624A | $L$ | 24 | $213 / 16 \times 17 / 8 \times 47 / 16^{\circ}$ | Panel | 41/16x11/2.04 | 19.50 |
| 77 P 239 | P6115A | N | 115 | $213 / 16 \times 17 / 8 \times 47 / 16^{\circ}$ | Panel | $41 / 16 \times 1{ }^{1 / 2}$ | 19.50 |
| 77 P 036 | ECS-9 | N | 115 | $35 / 8 \times 1{ }^{15} / 16 \times 51.5 / 33^{\prime \prime}$ | Base | $49 / 32 \times 2$ ' | 38.50 |
| NON-RESET TYPES |  |  |  |  |  |  |  |
| 77 P 033 | MEA-N5-115A\| | H | 115 | $2^{13 / 32 \times 1^{23} / 33^{2} \times 1 / 4^{\prime \prime}}$ | \|Base |1 | $11 / 2 \times 115 / 16^{\circ}$ | 14.40 |

## Cutler-Hammer Switches



## DEPENDABLE TOP-QUALITY SWITCHES

STANDARD AC-DC TYPE
Phenolic case, $15 / 32^{\prime \prime}$ dial threaded stem. Stem length, $15 / 32^{\prime \prime}$, excpet $* 11 / 32^{\prime \prime}$ and ${ }^{1} 1 / 4^{\prime \prime}$. $\S 6^{\prime \prime}$ wire leads; $\ddagger$ screw terminals; all others have solder lug terminals. U.L. Approved. Av. shpg. wt., 3 oz .

| Stock No. | $\begin{gathered} \text { Mifr's } \\ \text { Type No. } \end{gathered}$ | Action | Fig. | Amperes |  | EACH | $\begin{aligned} & 10-99, \\ & \text { EACH } \end{aligned}$ | 100 or More, EACH |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  |  |  | 125V | 250 V |  |  |  |
| 34 B 500 | 8280-K16 | SPST | A |  | 3 | . 50 | . 42 | $34 ¢$ |
| 34 B 527 | 8280-K14 $\dagger$ | SPST | A |  | 3 | . 50 | . 42 | 344 |
| 34 B 508 | 8381-K8 | SPST | A | 6 | 3 | . 57 | . 48 | 384 |
| 34 <br> 34 <br> B 501 <br> 18 | 8282-K14 | SPDT | A | 3 | 1 | . 64 | . 54 | 436 |
| 34 B 502 | 8360-K7 | DPST | A |  | 3 | . 90 | . 77 | 614 |
| 34 B 529 | $8360-\mathrm{K} 6 \dagger$ | DPST | A |  | 3 | . 90 | . 77 | 614 |
| 34 B 530 | 8363-K6 $\dagger$ | DPDT | A |  | 3 | 1.04 | . 88 | 704 |
| 34 B 503 | 8363-K7 | DPDT | A |  | 3 | 1.04 | . 88 | 704 |
| 34 B 749 | 8280-K15* | SPST | A |  | 3 | . 50 | . 42 | 346 |
| 34 B783 | 8290-K15*§ | SPST | C |  | 3 | . 61 | . 52 | 416 |
| 34 B784 | 8290-K168 | SPST | C |  | 3 | .61 | . 52 | 414 |
| 34 B 785 | 8295-K7 ${ }_{\text {829 }}$ | SPST | B |  | 3 |  | . 52 | 414 |
| 34 <br> 34 | ${ }_{8381-\mathrm{K} 7}{ }^{\text {829-K }}{ }^{\ddagger}$ | SPST | B | 6 | 3 3 | . 61 | . 52 | 414 384 |
| 34 B788 | 8391-K7* | SPST | C | 6 | 3 | . 68 | . 58 |  |
| 34 B 789 | 8391-K8 | SPST | C | 6 | 3 | . 68 | .58 | 464 |
| 34 B 790 | 8396-K7* $\ddagger$ | SPST | B | 6 | 3 | . 68 | . 58 | 464 |
| 34 B 791 | 8396-K8 | SPST | B | 6 | 3 | . 68 | . 58 | 464 |
| 34 B792 | 8370-K7 | DPST | A |  |  | 98 | . 83 | 664 |
| 34 B 793 | 8372-K7 $\ddagger$ | DPST | B | 6 | 3 | 1.19 | 1.01 | 804 |
| 34 B 632 | 8373-K7 $\ddagger$ | DPDT | A | 6 | 3 |  | . 95 | 774 |
| 34 B 794 | 8373-K8* | DPDT | A | 6 | 3 | 1.12 | . 95 | 774 |
| 34 B 795 | 8375-K 7 | DPDT |  | 6 | 3 | 1.44 | 1.22 | 984 |

## AIRCRAFT TYPE

Meet JAN-S-23 requirements. All have solder terninals and $15 / 32^{\prime \prime}$ long threaded stem. *Have center-off position. †Have lever-seal to keep out sand and dust. Gov't ST-42 series are Fig. K; ST-52 series are Fig. D. Momentary contact. + Momentary contact one side. Momentary conStock

| Stock No. | $\begin{aligned} & \text { Mifr's } \\ & \text { Type } \end{aligned}$ | Gov'tNo. | Action | Amperes |  | $\begin{aligned} & 1-9, \\ & \text { EA. } \end{aligned}$ | $\begin{array}{\|c\|c\|} \hline 10-99 \\ \text { EA. } & \begin{array}{c} 100 \text { or } \\ \text { More, } \\ \text { EA. } \end{array} \\ \hline \end{array}$ |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  |  |  | $\begin{aligned} & 28 \mathrm{~V} \\ & \mathrm{DC} \end{aligned}$ | $\begin{gathered} 125 \mathrm{~V} \\ \mathrm{AC} \end{gathered}$ |  |  |  |
| 34 B 553 | 8802-K6* | ST42 | SPDT | 20 | 8 | 1.02 | 87 | 70 |
| 34 B414 | 8802-K10* $\dagger$ | ST42E | SPDT | 20 | 8 | 1.29 | 1.1 |  |
| 34 B | 8803-K6 | ST42A | SPST | 20 | 8 |  |  |  |
| 34 | 8815-K | ST42 | SPD | 20 | 7 | . 12 | 9 | 76 |
| 34 B | 8816-K5 | ST42D | SPDT | 20 | 8 | . 0 | . 87 |  |
| 34 B416 | 8816-K9 $\dagger$ | ST42D | SPDT | 20 | 8 | . 29 | 1.10 | . 87 |
| 34 B 695 | 8818-K5*§ | ST42G | SPDT | 20 | 7 | . 12 | . 95 | . 76 |
| 34 B696 | 8819-K | ST42 | SPST | 20 | 7 | 94 | 0 | 4 |
| 34 B417 | 8821-K6* | ST52P | DPDT | 30 | 20 | 1.68 | . 43 | . 13 |
| 34 B 554 | 8823 | ST52 | DPS | 30 | 20 | . 02 | 87 | . 70 |
| 34 34 B 4185 | $\begin{aligned} & 8823-\mathrm{K} 6 \dagger \\ & 8825-\mathrm{K} 5 \end{aligned}$ | ST52K ST52N | DPPST | $\begin{aligned} & 30 \\ & 30 \end{aligned}$ | 20 | . 16 | . 21 | . 96 |
| 34 B419 | 8825-K6 $\dagger$ | ST52N | DPDT | 30 | 20 | . 42 | 1.21 | 96 |
| 34 B 697 | 8827-K5** | ST52M | DPST | 20 | 12 | 1.16 | . 9 | 78 |
| 34 B69 | 8831-K5 § | ST52R | DPDT | 20 | 12 | 1.34 | . 14 |  |
| 34 B712 | 8833-K3* $\ddagger$ | ST52T | DPDT | 20 | 12 | . 3 | . 14 | . 91 |
| 34 B 713 | $8835-\mathrm{K} 3 * 8$ | ST52S | DPDT | 20 | 12 | . 3 | . 14 |  |

## PUSH-BUTTON AC-DC TYPE

[E]
Push-button type switches to control current bý opening or closing door. Automatically turn lights on and off in refrigerators, telephone booths, closets, vaults, etc. Momentary contact type. §Stem length, $1 / 4^{\prime \prime}$, others, ${ }^{15 / 3 z^{\prime \prime} \text {. }} \ddagger$ Red button; , others are black; Solder ulug terminals.
*Normally-open type is "on with door closed; tnormally-closed type is "on" with door open. U.L. Approved. Av. shpg. wt., 3 oz.

| Stock No. | $\begin{aligned} & \text { Mfr's } \\ & \text { Type } \end{aligned}$ | Action | Amperes |  | $\stackrel{1-9,}{\text { EAC'H }}$ | $\begin{aligned} & \text { 10-99' } \\ & \text { EACH } \end{aligned}$ | 100 or More EACH |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  |  | 125 V | 250 V |  |  |  |
| 348548 | 8411-K4 | SPST* | . 75 | . 25 | 364 | 314 | 244 |
| 34 B 631 | 8411-K6 | SPST*8 | . 75 | . 25 | 364 | 314 | 244 |
| 34 <br> 34 | 8411-K8 | $\underset{\text { SPST }}{\text { SPS }} \ddagger$ | .75 | . 25 | 256 736 | 214 624 | $17 \%$ $50 \%$ |

F Type 7208-K4 AC-DC Push-Push On-Off Switch. Push$\square$ button switch. For control of current by alternate impulses. With type terminals. ${ }^{5} / 32^{\prime \prime}$ diameter threaded stem; ${ }^{11 / 1 / 6^{\prime \prime}}$ long. U.L. Approved. type terminals.
Shpg. wt., 2 oz .
34 B. 5t., 1-9, EACH .78
T0-99, EACH.. 664100 or More, EACH..........................
Type 7196-K1 Momentary Type Normally Open Switch. (Not 125 volts AC or DC Wation. Rated at 3 amps, 2 . Threaded stem diameter, $15 / 3^{\prime \prime \prime} ;$ stem length, $1 / 2^{i}$. U.L. Approved. Shpg. wt., 4 oz .


## Carling and Grayhill Switches

## CARLING SWITCHES



## AC-DC TOGGLE SWITCHES

A AC-DC toggle switches for medium duty applications. Type Nos. with 25 are wall 73 are bat handle with $15 / 3^{\prime \prime}$ stem length; those ending nections except *wire leads. All have $15 / 32^{\prime \prime}-32$ threaded stem. Av. shpg. wt., 2 oz.

| Stock No. | $\begin{aligned} & \text { Mfr's } \\ & \text { Type } \end{aligned}$ | Action | Amperes |  | EAC'H | $\begin{aligned} & \text { 10-99, } \\ & \text { EACH } \end{aligned}$ | 100 or More EACH |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  |  | 125 V | 250 V |  |  |  |
| 34 B 175 | 110-73 | SPST | 6 | 3 | 394 | 354 | $25 ¢$ |
| 348092 | 110-25 | SPST | 6 | 3 | $47 ¢$ | 436 | 304 |
| 34 B 177 | 112-73 | SPDT | 3 | 1 | 464 | 416 | 304 |
| 34 - 093 | 112-25 | SPDT | 3 | 1 | $54 ¢$ | 496 | 354 |
| 34 B 178 | 216-73 | DPST | 3 | 1 | 624 | 564 |  |
| 34 B 094 | 216-25 | DPST | 3 | 1 | 714 | 644 | 464 |
| 34 B 179 | 316-73 | DPDT | 3 | 1 | 714 | 644 | 464 |
| 34 B 095 | 316-25 | DPDT | 3 | 1 | 784 | 714 | 514 |
| 34 B 096 | 2BB62-73 | SPDT | 6 | 3 | $54 ¢$ | 494 |  |
| 34 B 097 | 2BK62-73 | DPST | 6 | 3 | 684 | 614 | $44 ¢$ |
| 34 B 098 | 2BL62-73 | DPDT | 6 | 3 | 764 | 684 | 494 |
| 34 B 180 | 111-16-73* | SPST | 6 | 3 | 424 | 384 | 274 |

HEAVY-DUTY PLASTIC-TOGGLE AC SWITCHES
(B) Extremely compact AC switches for limited space applications. B. Require only $1 / 2^{\prime \prime}$ behind panels. Ideal for instrumentation and development use. Rated 15 amps at 125 v . and $71 / 2 \mathrm{amps}$ at 250 v . Solder lug terminals. *Cen ter off. $15 / 32^{\prime \prime}-32$ threaded stem; $1 / 4^{\prime \prime}$ stem length. U.L. Approved. Shpg. wt., 2 oz.

| Stock No. | $\begin{aligned} & \text { Mfr's } \\ & \text { Type } \end{aligned}$ | Color | Action | EAC'H | $\begin{aligned} & 10-99 \\ & \text { EACH } \end{aligned}$ | $\begin{aligned} & 100 \text { or } \\ & \text { More EA. } \end{aligned}$ |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 348312 | AA252-BL | Black | SPST | 486 | 43¢ | 324 |
| 34 B 313 | AA252-RD | Red | SPST | 484 | 434 | 324 |
| 4 B 314 | AB252-BL | Black | SPDT | 544 | 494 | 354 |
| 34 B 315 <br> 34 |  | Red Black | ${ }_{\text {SPDT }}$ | 544 | 4 |  |
| 34 B 317 | $\|\mathrm{AC} 252-\mathrm{RD}\|$ | Red | SPDT* | 544 | $49 ¢$ | 354 |

## MOMENTARY SPST AC-DC TOGGLE SWITCH

(C) Type 110-M-NO-93. With trigger-bat handle. Ideal for instrumen-AC-DC rating; 6 amps, 125 volts; 3 amps, 250 volts. Stem length, $15 / 32^{\prime \prime}$. AC-DC rating; 6 amps, 125 volts; 3 amps, 250 volts. Stem length, $15 / 32^{\prime \prime}$. Stem dia., $15 / 3^{\prime \prime}-32$ thread. Shpg. wt., 3 oz .
34 B 149.12 ,
 PUSH-BUTTON SWITCHES
(D) Heavy-duty, push-type momentary contact switches. Rated 10 amps , (1) 125-250 v. AC. N.o., normally open; n.c., normally closed. Screw terminals. $15 / 32^{\prime \prime}$ dia. stem,; $9 / 16^{\prime \prime}$ long. Shpg. wt., 3 oz .

| Stock No. | $\begin{gathered} \text { Mfr's } \\ \text { Type No. } \end{gathered}$ | Action | EAC'H | $\begin{gathered} 10-99, \\ \text { EA. } \end{gathered}$ | $\begin{aligned} & 100 \text { or } \\ & \text { More, EA. } \end{aligned}$ |
| :---: | :---: | :---: | :---: | :---: | :---: |
| $4 \text { B } 397$ | $172$ | SPST, n.o. | 57 | 51 |  |



F

## HEAVY-DUTY AC AND AC-DC TOGGLE SWITCHES

F F G Bat handle toggle switches, ${ }^{11 / 16^{\prime \prime}}$ long. $\ddagger$ AC-DC types; all covering. Stem length, $15 / 32^{\prime \prime}$. Stem. dia. $15 / 32^{\prime \prime}-32$ thread. $\operatorname{\text {Screwtherminals}}$ with 6-32 Sinding-h, with 6-32 binding-head screws. All others with solder lugs. †illustrated

$$
\text { I Fig. F. } 8 \text { Hustraceu in Pro }
$$

| Stock No. | Mifr's <br> Type | ion | $\frac{\text { Amp }}{125 \mathrm{~V}}$ | peres 250 | $\begin{aligned} & 1-9, \\ & \text { EA. } \end{aligned}$ | $\begin{gathered} 10-99, \\ \text { EA. } \end{gathered}$ | 100 or More, EA. |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 34 B 380 | 2DA25-73 $\ddagger$ | SPST | 12 | 6 | . 84 | . 75 | . 54 |
| 34 B 181 + | 2DK25-73 $\ddagger$ | DPST | 12 | 6 | . 84 | . 75 | . 54 |
| 34 в $379 \dagger$ | EA255-73 $\ddagger$ | SPST | 15 | 10 | 1.32 | 1.19 | . 86 |
| 34 B $182 \dagger$ | EK255-73 $\ddagger$ | DPST | 15 | 10 | 1.32 | 1.19 | . 86 |
| 34 B 183 | 2FA53-73 | SPST | 15 | 10 | . 48 | . 43 | . 32 |
| 34 B 385 | 2FA54-73* | SPST | 15 | 10 | . 54 | . 49 | . 35 |
| 34 В 386 | 2FB54-73* | SPDT | 15 | 10 | . 65 | . 58 | . 42 |
| 34 B 184 | 2FC53-73 | SPDT\# | 15 | 10 | . 54 | . 49 | . 35 |
| 34 B 387 | 2FC54-73* | SPDT ${ }^{\text {为 }}$ | 15 | 10 | . 65 | . 58 | . 42 |
| 34 E 187 | 2GK53-73 | DPST | 15 | 10 | . 70 | . 63 | . 46 |
| 34 в 389 | 2GK54-73* | DPST | 15 | 10 | . 86 | . 78 | . 56 |
| 34 В 188 | 2GL-53-73 | DPDT | 15 | 10 | . 81 | . 73 | . 53 |
| 34 B 390 | 2GL-54-73* | DPDT | 15 | 10 | 1.03 | . 93 | 67 |
| 34 B 167 | 2GM53-73 | DPDT\# | 15 | 10 | .81 | . 73 | . 53 |
| 34 B 391 | 2GM54-73* | DPDT\# | 15 | 10 | 1.03 | . 93 | .67 |
| 34 B $169 \S$ | 600-C-73 $\ddagger$ | SPST | 20 | 10 | . 62 | . 56 | . 40 |

Momentary Types. Circuit maintained only while switch handle is held in position. A spring returns handle to previous position when handle is released. Bat handle toggle switches, $11 / 16^{\prime \prime}$ long. Stem length, $15 / 32^{\prime \prime}$. Stem dia., $15 / 32^{2}-32$ thread. *Screw-type terminals with No. $6-32$ bindinghead screws as in Fig. E. Others with solder lugs. $\ddagger$ One side normally on; other side momentarily on; no center position. §Both sides momentarily on; center off. $\ddagger$ One side momentarily on; center off. Shpg. wt., 3 oz .

| Stock No. | Mfr's Type | Action | Amperes |  | $\begin{aligned} & 1-9 \\ & \text { EA. } \\ & \hline \end{aligned}$ | $\begin{gathered} 10-99 \\ \text { EA. } \\ \hline \end{gathered}$ | 100 or More, EA. |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 34 B 056 | 6FA54-73* | SPST n.o. | 15 | 10 | . 65 | . 58 | . 42 |
| 34 В 057 | 6FA58-73* | SPST n.c. | 15 | 10 | .65 | . 58 | .42 |
| 34 В 186 | 6FB53-73* | SPDT $\dagger$ | 15 | 10 | . 62 | . 56 | . 40 |
| 34 B 058 | 6FB54-73* | SPDT $\dagger$ | 15 | 10 | . 71 | . 64 | .46 |
| 34 в 388 | 6FC54-73* | SPDT§ | 15 | 10 | . 71 | . 64 | . 46 |
| 34 B 059 | 6FC58-73* | SPDT $\ddagger$ | 15 | 10 | 71 | . 64 | . 46 |
| 34 B 062 | 6GK54-73* | DPST n.o. | 15 | 10 | 1.00 | . 90 | . 65 |
| 34 B 063 | 6GK58-73* | DPST n.c. | 15 | 10 | 1.00 | . 90 | . 65 |
| 34 B 064 | 6GL54-73* | DPDT + | 15 | 10 | 1.16 | 1.05 | . 75 |
| 34 В 065 | 6GM54-73* | DPDT§ | 15 | 10 | 1.16 | 1.05 | . 75 |
| 34 B 392 | 6GM58-73* | DPDT $\ddagger$ | 15 | 10 | 1.16 | 1.05 | . 75 |

## TYPE 110-SP PUSH-BUTTON SPST AC-DC SWITCH

H Push-on, push-off switch. Handles AC-DC loads up to 4 amps, 125 $H^{\prime \prime}$ volts, and 3 amps at 250 volts. Screw type terminals. Stem length, $34^{\prime \prime}$. Stem dia., $15 / 32^{\prime \prime}-32$ thread. Size, $11 / \mathrm{x}^{2} 9 / 6 \mathrm{x}^{7} 78^{\prime \prime}$. Shpg. wt., 2 oz .


## A-H\&H LOCK SWITCH

Type 81715-L. Lock switch with key. SPST 3 amperes at 250 volts; 6 amperes at 125 volts. Sleeve diameter, ${ }^{15} /$ panels $^{\prime \prime}$. Will fit $9 / 32^{\prime \prime}$ thick. Size, $13 / 4 \mathrm{x}$ panels to $9 / 3 z^{\prime \prime}$ thick. Size, $13 / 4 \mathrm{x}$
$11 / 2^{\prime \prime}$. The switch must be open to remove key. Use on power to remove key. appliances, etc., for added safety factor. Shpg. wt., 2 oz.


34 B I56. 1-9, NET EACH ............ 1.44
34 B 128. Extra key for above. Wt., 2 oz.
NET............................................ $15 \$$
Type 81715-LE. As above, but key removable in open or closed position. . 1.44
10-99, EA...1. 30 100 or MÖO..EA.... 1.04

## STEVENS-WALDEN SPINTITE

## SWITCH WRENCHES

Specially designed spintite wrenches for easy installation of toggle switches. For this purpose, they are,"much more convenient than "regular" or general purpose wrenches. Feature a very deep recess to accommodate even bat-handle type toggle switches. Knurled inside surface tapered to accommodate different sizes of ring nuts. Wrenches have wood handles. Shpg. wt., 6 oz.
Type 3480. Specifically designed for use with A-H\&H switches only.
46 N 056. NET EACH...
Type 3481. Specifically designed for use with Cutler-Hammer switches only.
46 N 167. NET EACH....
. 2.58


## MOMENTARY PUSH-BUTTON TYPES

Series 4000. SPST. $117 / 32^{\prime \prime} x^{51} / 64^{\prime \prime}$ dia. Solder ter minals. $1 / 2 \mathrm{amp}, 115 \mathrm{v}$. AC, resistive. 4 oz .
34 B 870 . Normally open; red button. 69C
34 B 871 . Normally closed; black button.
Series 23-1. Tiny push-button switch. SPST. $13 / 4^{\prime \prime}$ long; $1 / 2^{\prime \prime}$ dia. Solder terminals. $1 / 4 \mathrm{amp}$ 115 V. AC, resistive. Normally open. Wt., 2 oz.
$34 \mathrm{~B} 890.50-99$, EA....64¢
$1=49$, EA.. $83 ¢$ Series 35. DPST. 117/64" long; $51 / 64^{\prime \prime}$ dia. Solder terminals. $1 / 2 \mathrm{amp}, 115 \mathrm{v} . \mathrm{AC}$, resistive. Normally open. Red button. Shpg. wt., 4 oz.
34 B 964. $50-99$, EA....904 $1-49$, EA. 18 Series 34. Solderless wiring switch. SPST. Receptacles for A-MP $\# 53$ taper pins. $31 / 32^{\prime \prime} \times 1 / 2^{\prime \prime}$ dia. $1 / 2 \mathrm{amp}, 115 \mathrm{v}$. AC, resistive. Normally 34 B $965.50-99$, EA.. I I.OI' 1 63/64, EA. 1.32 Series 30. Subminiature; SPST $63 / 64^{\prime \prime} x^{3} 38^{\prime \prime}$ dia. Solder term. $1 / 10 \mathrm{amp}$. 115 v . AC. 22 oz .
34 B 966 . Normally open; red button.
$50-99$, EA. ............714 $1-49$, EA. 934 34 B 967. Normally closed; black button.
$50-99$, EA..............714 1-49, EA. 934 Series 39. Ultra-miniature; SPST. 39/4" long; $1 / 4^{\prime \prime}$ dia. Solder term. $1 / 10 \mathrm{amp} .115 \mathrm{v}$. AC. resistive. Normally open. Red button. 2 oz.
34 B $968.50-99$, EA.... 754 1-49, EA. $98 ¢$

## ROTARY TAP SWITCHES

Series 24. Designed for military and commercial applications requiring high degree of reliability. Offered in 10-position, 1 and 2 -deck types; 1 pole per deck. Non-shorting contacts Solder terminals. Break 1 amp or carry 5 amps , 115 v. AC, resistive. Dia., $1^{\prime \prime}$.
1-Deck Type. 11/8" long. Wt., 1 oz.
34 B $707.50-99, ~ E A . ~$
$2.85 .1-49, ~ E A . ~$
2 2-Deck Type. $115 / 16^{\prime \prime}$ long. Wt., $11 / 2$ oz.
34 B $708.50-99$ EA.. 3.86 1-49, EA. 5.05 Series 12. A fully enclosed quality-built tap switch requiring minimum panel space. Offered in 10 -position, 1 and 2 -deck types; 1 pole per Break 1 amp or carry 5 amps, 115 v . AC, Break 1 amp or carry
resistive. Diameter, $1^{\prime \prime}$
1-Deck Type. 11/32" long. Wt., 2 oz 34 B $706.50-99$, EA.. 1.38 i-49, EA 2-Deck Type. $113 / 1{ }^{17}$ long. Wt., 3 oz.
34 B $709.50-99$, EA.. 3.07 1-49, EA. . 4.02

3 to 10 -Deck Series 12 and 24 avail-
able on special order. Write to our
Industrial Division for quantity prices.
ROTARY SWITCH ACCESSORIES
Non-Turn Washer. For series 5000, 12 and 24. Cadmium-plated brass. Shpg. wt., 1 oz. 3 C

Internal Tooth Lockwasher Series 5000, 12, 24. Steel, cadmium plated. Wt., 1 oz .
34 B 724. NET.

# Appliance and Miniature Switches 



## ARROW-HART \& HEGEMAN APPLIANCE SWITCHES

## BALL HANDLE TOGGLE SWITCHES

A *Indicates rating of 3 amps at 250 volts; $\dagger 10 \mathrm{amps}$ at 125 volts and A 5 amps at 250 volts. All others are rated 3 amps at 125 volts and 1 amp at 250 volts. §Momentary type. $15 / 3 z^{\prime \prime}$ diameter shanks. Solder lug terminals except 34 B 104 and 34 B 107 which have screw terminals. U.L. Approved. Shpg. wt., 2 oz .

| Stock No. | $\begin{aligned} & \hline \text { Mfr's } \\ & \text { Type } \end{aligned}$ | Action | Shank Length | EAC'H | $\begin{gathered} 10-99, \\ E A . \\ \hline \end{gathered}$ | $\begin{gathered} 100 \text { or } \\ \text { More, EA. } \end{gathered}$ |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| $34 \mathrm{B100}$ | 20994-BF | SPST | ${ }^{13 / 32^{\prime \prime}}$ | . 50 | . 42 | .34 |
| 34 B101 | 21518-B | SPST* |  |  | . 50 | . 59 |
| 34 <br> 34 | 880338 -BU | ${ }_{\text {DPPDT }}+$ | 1/2" | . 84 |  |  |
| 34 В 110 | 21350-B | SPDT | $13 / 32^{\prime \prime}$ | 3.4 | 2.54 | . 4 |
| B 127 | 21827-B | $\mathrm{SPDT}^{\text {SP }}$ | $13 / 3$ | . 93 | . 76 | . 63 |
| 34 B 120 | 20902-AM | DPST |  | . 91 | . 74 | . 6 |
| 34 B130 | ${ }^{20905-Z}$ | DPDT | 327 | 1.04 | . 85 | .70 |
| $4{ }^{4} \mathrm{~B}$ 131 | 20905-BT | DPDT <br> DPDT |  | 1.14 | . 93 | . 77 |
| 34 34 3 | $\xrightarrow{20905-C}$ | ${ }_{\text {DPPDT }}^{\text {DPP }}$ | ${ }_{1}^{15 / 32^{\prime \prime}}$ | 1.19 | . 96 | . |

## POWER TYPE TOGGLE SWITCHES

B Compact, toggle-operated power switches for motors and appliances. All rated 6 amps at 250 volts; 12 amps at 125 volts; 34 B 136 is also rated 1
Shank,
$15 / 32^{\prime \prime}$

dia. $5 / 16^{\prime \prime}$ long. With mtg. nuts. Shpg. wt., 2 oz.; 20,2 lbs. | Stock | Mfres |
| :---: | :---: | :---: | :---: | :---: |

| Stock No. | $\begin{gathered} \text { Mfr's } \\ \text { Type } \\ \hline \end{gathered}$ | Action | EAC'H | $\begin{aligned} & 10-993 \\ & \text { EACH } \\ & \hline \end{aligned}$ | 100 or <br> More, EACH |
| :---: | :---: | :---: | :---: | :---: | :---: |
| 34 $B$ 35 <br> 34 $B$ 36 <br> 34 $B$ 37 | $\begin{aligned} & 80607 \\ & 80600 \\ & 80618 \end{aligned}$ | $\begin{aligned} & \hline \text { SPST } \\ & \text { DPST } \\ & \text { SPDT } \end{aligned}$ | 96c | $78 c$ | 64 c |

## ROTARY SWITCHES

C) Positive contact. U.L. Approved. All switches $125 / 250$ volts. ThreadC. ed shank, $11 / 32^{\prime \prime}$ dia., $3 / 8^{\prime \prime}$ long. Shaft, $1 / 4^{\prime \prime}$ dia., $7 / 8^{\prime \prime}$ long. Wt., 2 oz .

| Stock No. | $\begin{aligned} & \text { Mir's } \\ & \text { Type } \end{aligned}$ | Action | Amps | $\begin{aligned} & 1-9.1 \\ & \text { EAC'H } \end{aligned}$ | $\begin{aligned} & 10-99, \\ & \text { EACH } \end{aligned}$ | 100 or More, EA. |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 34 B 141 | 81715-G | SPST | 6/3 | 1.22 | 99 | . 82 |
| 34 34 3 | 81724-G | DPST | $6 / 3$ $6 / 3$ | 1.63 | 1.32 | 1.19 |

## BAT HANDLE TOGGLE SWITCHES

Ruggedly built A-H and $H$ bat handle toggle switches. tin Action column refers to Fig. D above, $\delta$ Fig. E, \#Fig. B. Underwriters' Laboratories Approved. All have bakelite insulation. Silver-plated lug terminals, except for 34 B 106 and 34 B 109 which have screw type terminals. Shank, $15 / 33^{2}$ diameter, $13 / 33^{\prime \prime}$ long, except $* 11 / 32^{\prime \prime}$ long. With mounting nuts. Shpg. wt., each switch 3 oz.; 20 switches, 3 lbs.

| Stock No. | $\begin{aligned} & \hline \text { Mfr's } \\ & \text { Type } \end{aligned}$ | Action | Amps. | Volts | EAC'H | $\begin{gathered} 10-99 . \mid \\ E A . \end{gathered}$ | $\begin{gathered} 100 \text { or } \\ \text { More EA. } \end{gathered}$ |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 34 B 195 | 20994-EW | SPS | 3 | 125 | . 55 | . 45 | 8 |
| 34 B 196 | 21350-BP | SPDT | 3 | 125 | . 70 | . 57 | 7 |
| 34 34 34 B 998 | 20905-GA | DPST ${ }_{\text {DPT }}$ | 3 3 | 125 | 1.98 1.18 | . 79 | . 66 |
| 34 B 109 | 80607-BJ | SPST | 12 | 125 |  |  |  |
| 34 в 106 | 80602-CA | DPST\# | 15 | 125 | 1.67 | 1.35 | . 12 |
| 34 B 103 | 82024-D* | DPDT8 | 6 | 125 | 1.50 | 1.22 | . 00 |

## PUSH-BUTTON SWITCHES

[F Momentary contact. tindicates slow make and break type; frast make and break type. 34 B 119 and 34 B 124 are normally closed, all others are normally open. Metal base, and $911^{\prime \prime}$ shank length, except
34 B 152, $7 / 16^{\prime \prime}$. ${ }^{* T w o}$ circuit type. §Same as $3392^{\text {but with black bakelite }}$. button. S. Shpg. wt., 3 oz .


G] Type 86710-C. SPST push-button switch with snap-on bakelite butG ton in red or black. Press button to close circuit; press to open. Rated at 3 amps, 250 volts; 6 amps, 125 volts. U.L. Approved. Threaded shank, $15 / 32 \times 9 / 16^{17}$ long. With mtg. nuts. Shpg. wt., each, 2 oz.; 20, $11 / 4 \mathrm{lbs}$. 34 B 161 . Red.
34 B 162 . Black. 100 or More, EA... 724 10-99, EA. $87 \&$ EA... 1.07 Type 86710. Same as type $86710-\mathrm{C}$ push-button switch above, but less snap-on bakelite button. Shpg. wt., 2 oz.
34 BI 60.100 or More, EA....59
10-99, EA....74
EA.... 82 C Type 3391-GL. Momentary contact. SPST normally open. 1 amp. 125 v . AC. U.L. Approved. Threaded shank, $15 / 32 \times 1 / 16^{\circ \prime} \cdot$ With mtg. nuts. lugs and bakelite button. Shpg. wt., each, 2 oz.; $20,11 / 4$ lbs.
34 B 159.100 or More, EA.. 504
$10-99$, EA.... 594
EA.


UNIMAX SNAP-ACTION SWITCHES
Efficient snap-action switches for industrial applications. Require minimum space. Highly dependable switch actuators, are attached to stainless steel "Adaptaplates" except *actuators in switch cover. Rated $5 \mathrm{amp}, 125 \mathrm{~V}$ DC
and $20 \mathrm{amps}, 125,250$, or $480 \mathrm{v} ., 60$ cycle nonand $20 \mathrm{amps}, 125,250$, or $480 \mathrm{~V}, 60$ cycle non-
inductive AC. All switches SPDT. UL, CSA

| ock |  |  | Actuator |  |  |  | IET EAC |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| No. | Type | Fig. | Operating Force | Equiv. | Size | 1-9 | 10-19 | 20-4 |
| $34 \mathrm{B750}$ | *2HB-1 | L | Basic pin type; 9-13 02. | BZ-2R | 1 | . 47 | 1.32 | 1.20 |
| 34 B 75 | 2 HBL-1 |  | Leaf spring type; 5 oz. max | BZ-2RL | 1 | . 62 |  |  |
| 34 B 752 | 2HBW-1 |  | Same with roller; $502 . \max$ | BZ-2RL | 2 | 2.11 | . 90 |  |
| 34 B 755 | *2HBT-1 |  | Leaf spring, hinged; 1-2.5 oz. | BZ-2RW | 1 | 1.86 | 1.68 | 51 |
| 34 B 759 | *2HBA-1 |  | Same with roller; 1-3.5 02. | BZ-2RW2 | 3 | 2.35 | 2.12 | 90 |
| 34 B 764 | $2 \mathrm{HBM}-1$ | $N$ | Safety interiock; $10 \mathrm{oz}$. . | None | 4 | 2.70 | 2.43 | 2.19 |
| 34 B 753 | $2 \mathrm{HBQ}-1$ |  | Plunger, small; 9-13 oz. | BZ-2RS | 5 | 1.8 | 1.63 | 1.47 |
| 34 | $2 \mathrm{HBJ}-1$ | S | Plunger, large; 9-13 | BZ-2R0 | 2 | 3. | 3.05 |  |
| 34 | KEB2HB | K | Boot plgr., metal clad; 9-24 oz. | BZE | 6 |  |  |  |
| 34 B | KEJ |  | Plunger, metal clad; 9-13 0z. | BZE-2RQ81 | 6 | 4.5 |  |  |
| Subminiature Types. Snap action, fully enclosed SPDT switches. Rated 5-7 A, 125/250 v. non-inductive AC. Have UL, CSA Approval. |  |  |  |  |  |  |  |  |
|  |  |  |  |  |  |  |  |  |
|  |  |  |  |  |  |  |  |  |
| 34 B 846  <br> 34 B 847 <br> 34 B  <br> 34 B  <br> 349   |  |  | Pin; 7 amps; 7 oz. Pin (Military); 5 amps; 702. Leaf Spring; 6 amps; $7 \mathbf{~ o z}$. Leaf Spring roller; 6 amps; $7 \mathbf{0 z}$. | 1SM1 | 1 | . 37 | 1.23 |  |
|  |  | P |  | ISM1 | 1 | . 42 | 1.27 | .14 |
|  |  |  |  | IS-2, 1SM1 | 1 | . 52 | 1.37 | . 23 |
|  |  |  |  | JS-5, ISM1 | 1 | . 86 | 1.68 | O |
| $\begin{aligned} & 34 \text { B 898 } \\ & 34 \text { B } 748 \\ & 34 \text { B } 747 \\ & \hline \end{aligned}$ | USMB-1 | $\stackrel{R}{W}$ | Toggle; 7 oz. <br> Plunger; DPDT; 2 oz. <br> Sealed; pin plunger; 5-17 02. | 6ATI | 1 | 3.67 | 3.30 | 2.94 |
|  | 2 MJK |  |  |  | 3 | 7.3 | 6.61 | 6.08 |
|  | EAI |  |  | $1 \mathrm{SE1}$ | 2 | 5.98 | 5.38 | 4.84 |

UNIMAX DESIGN KIT
Contains two Type 2HB-1 basic switches, one $\quad$ plates." Hardware included. Wt., 12 oz .4 .25
Type 2HBT-23-1 switch, 3 different "Adapta- 34 B760. NET........................ 25.

## GENERAL-PURPOSE SWITCHES

H Type 81569 Slide Switch. SPST indicatH ing switch designed for use in instrument control panel, and appliance applications. Screw type terminals. Requires $13 / 8 x^{9} 911^{\prime \prime}$ cutout for mounting. Ratings: 3 amps at 250 volts;
6 amps at 125 volts. ${ }^{\text {Size }} 21 / 4 \times 3 / 4^{\prime \prime}$. Bakelite 6 amps
case. Underwriters' 125 valts. Size, $21 / 4 x^{3} / 4^{\prime \prime}$. Bakelite
Approved.
 10-99, EACH....744 100 or More, EA. 6 l 4
(J) Type 41047 Rotary Canopy Switch. $(\mathrm{SPST}$ switch for lamps and small applianc es. Rated 1 amp at 250 volts; 3 amps at 125 volts. Has $5 / 11^{\prime \prime}$ stem; $3 / 8^{\prime \prime}$ diameter. With 6 inch leads attached. Underwriters' Laboratories Approved. Shpg. wt.: each, ${ }^{2}$ Oz.; 20, $11 / 4 \mathrm{lbs} .48 \mathrm{C}$ 10-99, EA. . . $44 ¢ 100$ or More, EA..... . 404

Type 3597 Midget Push-Pull Switch. SPST switch, similar to Fig. F. Plunger-type actuator; pull '"On", push "'Off'". Metal button and laminated base. Solder-lug type terminals. Rated at 3 amps 250 volts. Requires $15 / 33^{\prime \prime} \mathrm{mtg}$. hole. $15 / 32 \times 19 / 1^{\prime \prime} "^{\prime \prime}$ Wt. ${ }^{2}$ oz.
34 B $154.1-9$ NE ${ }^{2}$ EACH............. 8lC 10-99, EA.... $64 ¢ 100$ or More, EA..... $55 ¢$

## EAGLE FLUSH MOUNT SWITCH

## Pushbutton Switch. For signal-

 ling bells, lights, etc. Pearl button Screw terminals. For $5 / 8^{\prime \prime}$ hole. Shpg wt., 2 oz.55 'B 196.1 1-9
$10-$ up, EACH
9, NET EACH.
29c
.264

## INDICATING SWITCH PLATES



X For toggle or rotary $\chi_{\text {polished aluminum }}$ swis. polished aluminum Etched on black background. Wt. 2 O Oz.
34 B IS I. NET. 34 B $151 . N E$
20-99, EACH.

Y For, Toggle Switches. Nickel-plated "On34 Bi45. Plate. $1 /{ }^{\prime \prime}$ hole. Shpg. wt., 4 oz. 50c

## Special-Purpose Switches

## INDUSTRIAL STEP-ON AND FOOT SWITCHES

Conceals SPST Switch



## "SWITCHMAT" STEP-ON SWITCH

Stepping on the Switchmat closes circuit which may be used to ring bells, operate door-opener, actuate electric counter, control machinery, etc. Durable corrugated vinyl-plastic mat conceals SP'S' switch (normally off). Designed for use on such surfaces as bare floors and platforms. Entire mat, except for narrow border, is sensitive to any force over 5 lbs. Mats are resistant to wear, and to oil, acid and most common chemicals-will provide long, trouble-free operation indoors or out. Controls 110 -volt watts. Can be used with loads of up to 1000 watts. Can be used with loads of up to 1000 is employed. Brown color; choice of two sizes, $5 / 1^{\prime \prime}$ thick. Both are supplied 10-ft. leads. 15.20
$78 \mathrm{BX} 355.14 \times 23^{\prime \prime} .61 / 2 \mathrm{lbs}$. NET...

78 BX 356. $18 \times 30^{\prime \prime} .10 \mathrm{lbs}$. NET. . . . . 21.60
Control Box. Relay control unit for use with Switchdies up to 1000 watts at 110-120 v., 60 cycle AC. Provides 6 v. AC for switch circuit. Has two outlets,
 one for normally on and one
for normally off operation of equipment. Special 2 -prong plug is furnished for use with Switchmat. Has 6 - ft . AC cord. Size, $3 \times 4 \times 5^{\prime \prime}$. For operation from 110-120 volts, 60 -cycle AC. Shpg. wt., $21 / 2$ lbs.
12.40

GENERAL CONTROL FOOT SWITCHES
Model MA. Small, lightweight foot switch designed for applications where high operating speed and minimum fatigue are important. Ideal for office and lightinSwitch is SPDT with spring
 return. Supplied with non-skid base; holes for floor mounting. Set for $1 / 2 \mathrm{lb}$. operating force. Equipped with BX connector. Contacts rated 10 amps at 125 v . and 5 amps at 250 v . AC, non-inductive load. Housing is cast iron. $13 / 4 \mathrm{x}$ $4 \times 41 /{ }^{\prime \prime}$. Shpg. wh., $13 / 4$ lbs.
78 B 374 . NET...........
.4 .60
Model MI-25. Heavy-duty foot switch designed specifically for industrial applications. Overlapping treadle with work-shoes. Switch has SPDT contact arrangement
 -first press transfangement -hirst press transters contacts, second press at 125 v . and 6 amps at 250 v . AC non-inductive load. Set for 10 lbs. operating force. With BX connector; holes for floor mounting. 3 x 4 x $78^{\prime \prime}$ B 370 . NET. ${ }^{1 / 2}$ lbs.
11.25

Model M1-23. As above, but with spring return. Has contacts and contact ratings of Model MA listed above. Shpg. wt., $31 / 2$ lbs. 9.80
78 B 371 . NET....................... 9.80

## LECTROMATIC FOOT SWITCH <br> Model 1010. Snap-action foot switch. Provides afaster, more efficient means of switching electric motors and machines on and off. Ideal for controlling a wide variety of power ing units, photogra weld

Promotes greater safety because operator can instantly stop machine by releasing pressure on Switch. Saves time and extra hand movement. led into the special socket and plug switch cord into AC wall socket. Normally-open SPST switch rated 10 amps, 115 v . AC.

Housed in durable metal case, with anti-skid pad on bottom, rubber foot tread on top. $31 / 4$ los. operating force.
78 E 382. NET.....
5.48


## ACRO SNAP-ACTION SWITCHES

Current ratings are given at 125 volts AC. Pretravel given in inches; operating force in ounces, except grams. All switches are SPDT except $\dagger$ SPST normally open, 8 SPST normally closed. $\ddagger$ SP4 and $\# \#$ SP2. \#With wire-leaf actuator;
**flat-leaf actuator; $\dagger \dagger$ with mounting bracket. §§Mechanically and electrically equivalent. but not interchangeable. All have solder termi nals except $\ddagger \ddagger$ screw. Av. shpg. wt., 4 oz. (exnals except + tscrew
cept fig. P, $21 / 2 \mathrm{lbs}$.)

| Stock No. | Mfr's <br> Type | Fig. | Oper. Force | Pretravel | Size | Amps | NET EACH |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  |  |  |  |  |  | 1-9 | 10-19 | 20-49 | 50-Up |
| 35 B 016 | TD-48L | K | 12* | 3/32 | 27/32 ${ }^{11 / 16 \times 1{ }^{15 / 16^{\prime \prime}}}$ | 10 | 2.02 | 1.82 | 1.62 | 1.41 |
| 35 B 009 | 1MD1-1A | J | 3-6 | 1/32 | $53 / 64 \times 9 / 32 \times 13 / 64{ }^{\prime \prime}$ | 10 | 1.45 | 1.31 | 1.16 | 1.02 |
| 35 B 018 | 2MD1-1A | J | 6-10 | 1/32 |  | 10 | 1.45 | 1.31 | 1.16 | 1.02 |
| 35 B 019 | 2MD3-1A | $J$ | 6-10 | 1/32 |  | 10 | 1.45 | 1.31 | 1.16 | 1.02 |
| 35 B 020 | 1CMD1-2AXX | .. | 20-27* | . 040 |  | 3 | 1.45 | 1.31 | 1.16 | 1.02 |
| 35 B 021 | 2CMD1-2AXX |  | 33-44* | . 040 |  | 3 | 1.45 | 1.31 | 1.16 | 1.02 |
| 35 B 024 | 1CMD1-2AXX-A22 | J\% | 2.5* | . 750 |  | 3 | 1.75 | 1.58 | 1.40 | 1.23 |
| 35 В 030 | 2CMD1-2AXX-A24 | J** | 4* | . 750 |  | 3 | 1.75 | 1.58 | 1.40 | 1.23 |
| 35 B 008 | 1MD1-1A-A18 | J†t | $11 / 2$ | 1/32 |  | 10 | 1.85 | 1.67 | 1.48 | 1.30 |
| 35 B 038 | 1MD1-1A-A18M | L | $2^{1 / 2}$ | . 040 |  | 10 | 2.05 | 1.85 | 1.64 | 1.44 |
| 35 B 028 | 3D05-5P | G | 10-15 | . $06-.09$ | 5/8 $\mathrm{x}^{29} / 32^{\prime \prime}$ dia. | $\dagger 12$ | 1.75 | 1.58 | 1.40 | 1.23 |
| 35 B 029 | 3DC5-5P | G | 10-15 | . $03-.06$ | 5/8x ${ }^{29} 932^{\prime \prime}$ dia. | §12 | 1.75 | 1.58 | 1.40 | 1.23 |
| 35 B 031 | ME-SIPOBD-R |  | 3-6 | . 188 | $5 / 16 \times 11 / 4 \times 9 / 33^{4}$ | 10 | . 70 | . 63 | . 56 | . 49 |
| 35 B 130 | 260-0001-00 | M | 9 | . 050 | $1 / 2 x^{1 / 4} x^{3 / 4}$ | \#\#10 | 1.50 | 1.35 | 1.20 | 1.05 |
| 35 B131 | 260-0008-00 | N | 14-20 | . 100 | $1 / 1 / 2 x^{1 / 4} \times 3 / 4^{\prime \prime}$ | \# ${ }^{4} 10$ | 1.99 | 1.79 | 1.59 | 1.39 |

SWITCHES WITH MICRO EQUIVALENTS

| Stock No. | Mfr's Type | Micro Equiv. | Fig. | Oper. Force | Pretravel | Size | Amps | NET EACH |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  |  |  |  |  |  |  | 1-9 | 10-19 | 20-49 | 50-Up |
| 35 B 013 | $\pm \pm$ RD-5L | BZ-2RL |  | 4-5 | 1/16 | $53 / 16 \times 13 / 4 \times 113 / 16^{\prime \prime}$ | 10 | 1.58 | 1.42 | 1.26 | 1.11 |
| 35 B 014 | $\ddagger \ddagger$ RD-2M | BZ-2RL2 |  | 5 | 5/32 | $53 / 16 \times 13 / 4 \times 13 / 16$ | 10 | 2.02 | 1.82 | 1.62 | 1.41 |
| 35 B 285 | $\dagger \dagger$ RD-1A-1S | BZ-2R-A2 | A | 9-13 | .010-.025 |  | 15 | 1.56 | 1.40 | 1.25 | 1.09 |
| 35 B 286 | $\dagger \dagger$ RD-2M-1S | BZ-2RL2-A2 | D | 5 | 5/32 |  | 15 | 2.11 | 1.90 | 1.69 | 1.48 |
| 35 B 287 | $\dagger$ ¢RD-5L-1S | BZ-2RL-A2 | E | 4-5 | 1/16 |  | 15 | 1.72 | 1.55 | 1.38 | 1.20 |
| 35 B 288 | $\dagger$ +RD-1P-1S | BZ-2RQ-A2 | $F$ | 9-13 | .010-. 025 |  | 15 | 3.34 | 3.01 | 2.67 | 2.34 |
| 35 B 289 | †+RD-70-1S | BZ-2RD-A2 | C | 9-13 | .010-.025 |  | 15 | 1.88 | 1.69 | 1.50 | 1.32 |
| 35 B 290 | $\dagger$ +RD-10-1S | BZ-2RS-A2 | B | 9-13 | .015-.030 |  | 15 | 1.88 | 1.69 | 1.50 | 1.32 |
| 35 B 291 | †tRD-LW28-1S | BZ-2RW82-A2 |  | 3.5 | .156-. 28 |  | 15 | 2.42 | 2.18 | 1.94 | 1.69 |
| 35 B 293 | + + RD-LW228-1S | BZ-2RW822-A2 |  | 6 | . 156 |  | 15 | 2.42 | 2.18 | 1.94 | 1.69 |
| 35 В 294 | + + RD-LW8-1S | BZ-2RW80-A2 |  | 2.5 | .128-.406 |  | 15 | 1.94 | 1.75 | 1.55 | 1.36 |
| 35 B 280 | †+S-RD-7PN-1S | BZE-2RN |  | 9-24 | . 078 |  | 15 | 5.70 | 5.13 | 4.56 | 3.99 |
| 35 B 281 | + + S-RD-8PQ2-1S | BZE-2RQ2 | H | 10-18 | 9/64 | $1 \times 13 / 4 \times 25 /$ | 15 | 7.65 | 6.89 | 6.12 | 5.36 |
| 35 B 282 | + + S-RD-9PR-1S | BZE-2RQ9 |  | 9-13 | .010-.025 | $1 \times$ | 15 | 7.65 | 6.89 | 6.12 | 5.36 |
| 35 B 284 | $t+$ S-RD-6PQ-1S | BZE-2RQ |  | 9-13 | .010-.025 |  | 15 | 4.40 | 3.96 | 3.52 | 3.08 |
| 35 B 132 | 242-0003-03 | 1 ML 188 | P | 48 | . 826 | $53 / 16 \times{ }^{3 / 4} \times 1^{13} / 16^{\prime \prime}$ | $\ddagger 20$ | 11.90 | 11.90 | 11.90 | 11.90 |

## HETHERINGTON SNAP-ACTION SWITCHES

Rugged, precision-made switches for exacting aviation and industrial applications-provide high dependability under severe conditions of shock, temperature and humidity. Feature positive cam-roller snap action and extremely compact cylindrical design. All contact surfaces are of heavy silver overlay on copper or brass. Av. wt., 3 oz.


TOGGLE TYPES
[R T-1003 meets MIL-S-6745 requirements for
-65 to $+160^{\circ}$ F. temps. T-2104 is a miniature
R

| Stock No. | Typo | Action | Amperes |  | Terminals | Mtg. Hole | Overall Depth Behind Pane! | Body Dia. | NET EACH |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  |  | 28 VDC | 115 VAC |  |  |  |  | 1-9 | 10-24 | 25-Up |
| 33 B 800 | T1003 | SPD | 20 | 10 | Screw | 15/32 |  | 3/4* | 3.22 | 2.74 | 2.42 |
| $33 \mathrm{B801}$ | $T 2104$ | SP2 | 10 | 5 | Lug |  | 43/64* |  | 3.63 |  | 2.72 |
| 33 B 802 | T3103 | SPDT | 5 | 2.5 | Lug | 1/4, | $43 / 64^{\prime \prime}$ | ${ }^{11} / 33^{\prime \prime}$ | 4.06 | 3.45 | 3.05 |

PUSH-BUTTON TYPES


## "SWITCHLITE" PUSH-BUTTON TYPES

WW Switches with lamps in buttons. All push $\begin{aligned} & \text { dependent, except toperates with switch on } \\ & \text { on-pull off, except }{ }^{*} \text { momentary. Lamps in- } \\ & \text { aux. contact. } 28-\mathrm{v} \text {. lamps. Rated } @ 28 \mathrm{VDC}\end{aligned}$

| No. | Type | Action | Amps. | Terminals | Mtg. Hole | Behind Panel | Body Dia. | 1-9 | 10-24 | 25-Up |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 33 B 803 | +A300 | SPST (NO) | 15 | Lug | $58^{\circ}$ | $117 / 33^{\circ}$ | 17/32 ${ }^{\circ}$ | 7.52 | 6.39 | 5.64 |
| 33 <br> 33 <br> B 804 | *A3531 | SPST (NO) SPST (NO) | 10 | Screw Screw | \%/8, | 13/20' | $3 / 8{ }^{\text {a }}$ | 11.13 | 9.46 | 8.35 |

## Rotary and General Purpose Switches

## NEW knight PRINTED CIRCUIT SWITCHES



- Cut Labor \& Wiring Costs
- Adaptable To Any Circuir
- Custom Types Available Revolutionary developmentin rotary switches; increases production efficiency and reduces costs. Employ standard switch mechanism with printed circuit leads which terminate
prongs at the wafer edges.
Plug directly into printed circuit board...then dip solder. Requires only a single bench position and one operator. Order custom made-with any number of shaft length, with any spacing between wafers.

Wafers: XXXP phenolic. Rotation: $360^{\circ}$ in either direction. Mounting: $3 / 8^{\prime \prime}$ diameter threaded bushing, $3 / 8^{\prime \prime}$ long. Shaft: $1^{\prime \prime}{ }^{\prime \prime}$ diameter, $17 / 8^{\prime \prime}$ long. listed are single pole; non-shorting. Ganged switches have $112^{\prime \prime}$ spacing between wafers. Av. shpg. wt., 4 oz.

7 POSITION:
11 POSITION:

| Stock No. | No. of Wafers | Pts. Ea. Wafer | $\begin{aligned} & \text { NET } \\ & \text { EA. } \end{aligned}$ | $\begin{gathered} \text { Stock } \\ \text { No. } \end{gathered}$ | No. of Wafers | $\begin{gathered} \text { Pts. Ea. } \\ \text { Wafer } \end{gathered}$ | EA. |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  | 8 | 2. | 34 |  | 12 |  |
|  | 2 | 8 | 3.54 | 34 B 346 | 2 | 12 |  |
| 34 в | 4 | 8 | 5.46 | 34 B 347 | 4 | 12 | 7.25 |

MANUFACTURERS: Allied can supply Knight printed-circuif rotary switches in any quantity. Custom switches for specific applications are available on special order. Write Industrial Division for quantity price quotation.


## JBT ROTARY SWITCHES

Sturdily constructed rotary selector switches. Made of molded bakelite, with rigid 3 -post deck suspension. Current-carrying capacity, 1 amp ; momentary, 5 amps. Rated 2000 rms volts between contacts and ground, except 6DT types, 1500 v. rms. With knob. Av. shpg.
wt., 6 oz.

## CONTINUOUS-ROTATION SWITCHES

Continuous rotation type, except *6-pole, double-throw. Type MS-14 has 13 circuits and 1 "off" position per deck. Angular indexing, $25^{\circ} 43^{\prime \prime}$. MS-20 has up to 19 circuits and 1 "off" position per deck. Letter B in for ruggedization, shock-proofing and further enclosure. Non-shorting.

| $\begin{gathered} \hline \text { Stock } \\ \text { No. } \\ \hline \end{gathered}$ | $\begin{aligned} & \text { Mif's } \\ & \text { Type } \end{aligned}$ | Gangs | Total Poles | Positions Per Pole | Depth | $\begin{aligned} & \text { NET } \\ & \text { EACH } \end{aligned}$ |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| $34 \mathrm{B950}$ | MS-14-1 | 1 | 1 | 14 | 13/6" | 1.96 |
| 33 B 950 | MS-14B-1 | 1 | 1 | 14 | 13/16" | 2.30 |
| 34 3 3 B 951 |  | 2 | 2 | 14 | 11/8" | 2.50 3.18 |
| 33 B 951 | $\mathrm{MS}-14 \mathrm{~B}-2$ | 2 | 2 | 14 | 11/8" ${ }^{\prime \prime}$ | 3.18 |
| 34 B 952 | MS-14-3 | 3 | 3 | 14 | 17/16" | 3.04 |
| 33 B 952 | MS-14B-3 | 3 | 3 | 14 | 1716" | 4.07 |
| 34 B 953 | M S-14-4 | 4 | 4 | 14 | 13/4" | 3.97 |
| 33 B 953 | M S-14B-4 | 4 | 4 | 14 | 13/4" | 5.34 |
| 34 B 954 | M S-14-6 | 6 | 6 | 14 | $23 /{ }^{\prime \prime}$ | 5.78 |
| 33 B 954 | M S-14B-6 | 6 | 6 | 14 | $23 / 8{ }^{\prime \prime}$ | 7.84 |
| 34 B 955 | M S-20-1 | 1 | 1 | 20 | 13/16" | 2.50 |
| 33 B 955 | MS-20B-1 | 1 | 1 | 20 | 13/15 ${ }^{\prime \prime}$ | 2.84 |
| 35 B 252 | *MS-20-1-6DT | 1 | 6 | 2 | 13/16 ${ }^{\prime \prime}$ | 3.18 |
| 33 B 956 | *MS-20B-1-6DT | 1 | 6 | 2 | ${ }^{13 / 16^{\prime \prime}}$ | 3.53 |
| 34 B 956 | MS-20-2 | 2 | 2 | 20 | 11/8 | 3.18 |
| 33 B 957 | MS-20B-2 | 2 | 2 | 20 | $11 /{ }^{\prime \prime}$ | 3.87 |
| 34 B 958 | MS-20-4 | 4 | 4 | 20 | $13 / 4^{\prime \prime}$ | 5.24 |
| 33 B 958 | MS-20B-4 | 4 | 4 | 20 | $13 / 4{ }^{\prime \prime}$ | 6.61 |
| 34 B 959 | MS-20-6 | 6 | 6 | 20 | $23 / 8{ }^{\prime \prime}$ | 7.40 |
| 33 B 959 | MS-20B-6 | 6 | 6 | 20 | 23/8' | 9.46 |



## LAMINATED ROTARY SWITCHES

14 and 20-position type instrument switches. Rigid, 3-post deck, suspension gives added strength. Both types include "off" position. Continuous rotation. Current ratings (not make or break): normal, 1 amp; momentary 5 amps. Sup-
plied with knob.

| Stock No. | $\begin{aligned} & \text { Mfr's } \\ & \text { Type } \end{aligned}$ | Gangs | $\begin{aligned} & \text { Total } \\ & \text { Poles } \end{aligned}$ | $\begin{gathered} \text { Pos. per } \\ \text { Pole } \end{gathered}$ | Shorting or Non-Shorting | Depth | $\begin{aligned} & \text { NET } \\ & \text { EACH } \end{aligned}$ |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 35 B 258 | SS-14-1 | 1 | 1 | 14 | N -S | $13 / 16^{\prime \prime}$ | 1.86 |
| 35 B 260 | SS-14-1S |  | 1 | 14 |  | 13/16" | 1.91 |
| 35 B 262 | SS-14-2 | 2 | 2 | 14 | $\mathrm{N}-\mathrm{S}$ | $11 /{ }^{\circ}$ | 2.30 |
| 35 B 263 | SS-14-2A | 2 | 4 | 5 | N -S | 11/8' | 2.60 |
| 35B264 | SS-14-2S |  | 2 | 14 | S | 11/8* | 2.40 |
| 35 B 266 | SS-14-3 | 3 | 3 | 14 | N-S | ${ }^{17 / 16^{\prime \prime}}$ | 2.74 |
| 35 B 268 | SS-14-4 | 4 | 4 | 14 | $\mathrm{N}-\mathrm{S}$ |  | 3.58 |
| 35 B 270 | SS-20-1 | 1 | 1 | 20 | $\mathrm{N}-\mathrm{S}$ | 13/16" | 2.40 |
| 35 B 273 | SS-20-2 | 2 | 2 | 20 | $\mathrm{N} \cdot \mathrm{S}$ | 11/8 ${ }^{\circ}$ | 2.99 |
| 35 B 277 | SS-20-6 | 6 | 6 | 20 | $\mathrm{N}-\mathrm{S}$ | 23/8* | 6.81 |

ETCHED DIAL PLATES. For the JBT rotary switches listed above. Raised bright metal numerals are easy to read against the dull black finish of the dials. Diameter, $23 / 4^{\prime \prime}$. Shpg. wt., $1 \mathbf{~ o z}$.

| Stock No. | Mir's Type | Calibration | Angular Indexing | EACH |
| :---: | :---: | :---: | :---: | :---: |
| 34 B 960 | EP-13 | Off thru 13 | $25^{\circ}{ }^{\circ}{ }^{\text {4 }}$ |  |
| 34 B 961 | EP-14 | 1 thru 14 | $25^{\circ}{ }^{\circ} 43^{\circ}$ |  |
| 348962 <br> 34 | EPP-20 | Ofthru 20 ${ }^{\text {Off }}$ | $18^{\circ}$ |  |

## DAVEN ADJUSTABLE-STOP SWITCHES



Adjustable-stop rotary switches designed to provide high flexibility in circuit devel opment applications. Ideal for use in lab oratory work, breadboard setups, etc., where the exact number of switch position may be changed later.
Feature large, silver-alloy contacts and slip rings; enclosed, knee-action, silveralloy rotor blades; machined dielectric stainess steel detent and shaft assembly; and gold-fiashed, turret type terminals slip ring is 3000 V . Meet and exceed MIL-S-3786, MIL-E5272 and MIL-T-945A where applicable, Capacity (not make and break), 15 amps. Size, $13 / 4^{\prime \prime}$ diameter and $2^{\prime \prime}$ long including $1 / 4^{\prime \prime}$ diam

| Stock No. | $\begin{aligned} & \text { Mfr's } \\ & \text { Type } \end{aligned}$ | Poles | Positions (Maximum) | $\begin{aligned} & \text { NET } \\ & \text { EACH } \end{aligned}$ |
| :---: | :---: | :---: | :---: | :---: |
| 35 B 374 | *11-CM-24A | 1 | 24 | 9.90 |
| 35 B 375 | *21-CM-12A | 2 | 12 | 10.20 |
| 35 B 376 | *31-CM-8A | 3 | 8 | 10.50 |
| 35 в 377 | *41-CM-6A | 4 | 6 | 10.80 |
| 35 B 378 | 11-CB-12A | 1 | 12 | 9.90 |
| 35 B 379 | 21-CB-6A | 2 | 6 | 10.20 |
| 35 B 380 | 31-CB-4A | 3 | 4 | 10.50 |
| 35 B 381 | 41-CB-3A | 4 | 3 | 10.80 |
| 35 B 382 | *12-CM-32A | 1 | 32 | 9.90 |
| 35 B 383 | *22-CM-16A | 2 | 16 | 10.20 |
| 35 B 384 | *32-CM-10A | 3 | 10 | 10.50 |
| 35 B 385 | * 42 -CM-8A | 4 | 8 | 10.80 |
| 35 B 386 | 12-CB-16A |  | 16 | 9.90 |
| 35 B 387 | 22-CB-8A | 2 | 8 | 10.20 |
| 35 B 388 | 32-CB-5A | 3 | 5 | 10.50 |
| 35 B 389 | 42-CB-4A | 4 | 4 | 10.80 |



## OHMITE POWER TAP SWITCHES

All-ceramic, power tap switches. Non-shorting, single-pole type. The 111 is rated at $10 \mathrm{amps}, 150$ volts, AC. Dia. $13 / 4^{\prime \prime}$. The 212 is rated at $35 \mathrm{amps}, 150$ volts, AC. 15 am rated at $25 \mathrm{mps}, 300$ volts, AC. 150 v . between taps. Dia. $35 / 16^{\circ}$. *Two-in-tandem types; rated same as single types. Shpg. wt., 111, 5 oz .; 212, 10 oz . All are UL Approved

| MODEL 111 |  |  |  | MODEE 212 |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| $\begin{aligned} & \text { Stock } \\ & \text { No. } \end{aligned}$ | Taps | Rotation | EACT | Stock No. | Taps | Rotatlon | $\begin{aligned} & \text { NET } \\ & \text { EACH } \end{aligned}$ |
| 34 B 226 | 2 | $30^{\circ}$ | 2.65 | 34 B 238 | 3 | $60^{\circ}$ | 6.56 |
| 34 B 227 | 3 | $60^{\circ}$ | 2.65 | $\begin{array}{ll}34 & \text { B } \\ 3 & 323 *\end{array}$ | 3 | $60^{\circ}$ | $18.35$ |
| 34 B 222* | 3 | $60^{\circ}$ | 10.29 | 34 8 239 <br> 34 8 3 | 4 | $90^{\circ}$ | $6.56$ |
| 34 B 228 | 4 | $90^{\circ}$ | 2.65 | 34 B 322* | 4 | $90^{\circ}$ | 18.35 |
| 34 B 229 | 5 | $120^{\circ}$ | 2.70 | 34 B 240 | 5 | $120^{\circ}$ | 6.82 |
| 34 B 220* | 5 | $120^{\circ}$ | 10.50 | 34 B 241 | 6 | $150^{\circ}$ | 6.82 |
| 34 B 230 | 6 | $150^{\circ}$ | 2.70 | 34 B 321* | 6 | $150^{\circ}$ | 18.87 |
| 34 B 231 | 7 | $180^{\circ}$ | 2.82 | 34 B 242 | 7 | $180^{\circ}$ | 7.09 |
| 34 B 232 | 8 | $210^{\circ}$ | 2.82 | 34 B 243 |  | $210^{\circ}$ | 7.09 |
| 34 B 233 | 9 | $240^{\circ}$ | 2.94 | 34 B 244 | 9 10 | $240^{\circ}$ | 7.32 |
| 34 B 234 | 10 | $270^{\circ}$ | 2.94 | 34 B 245 | 10 | $270^{\circ}$ | 7.32 |
| $\begin{array}{lll}34 & \text { B } 235 \\ 34 & 18 & 293\end{array}$ | 11 | $300^{\circ}$ | 3.03 1.61 | 34 B 247 | 12 | $330^{\circ}$ | 7.59 |
|  |  |  |  |  |  |  |  |
| MODEL 312 |  |  |  |  |  |  |  |
| 348279 | 3 | $60^{\circ}$ | 9.58 | 134 B 273 | 9 | $240^{\circ}$ | 10.35 |
| 34 B 278 | 4 | $90^{\circ}$ | 9.58 | 34 B 272 | 10 | $270{ }^{\circ}$ | 10.35 |
| 34 B 277 | 5 | $120^{\circ}$ | 9.82 | 348271 | 11 | $300^{\circ}$ | 10.58 |
| 34 B 276 | 6 | $150^{\circ}$ | 9.82 | 134 B 270 | 12 | $330^{\circ}$ | 10.58 |

See page 231 for $30^{\circ}$ type switch plates.

## FEDERAL ANTI-CAPACITY SWITCHES



Quick make-and-break type, positive-action switches An normally open. Lever action is cam-roller type, with graphite-impregnated bearing turning on tool atmospheric conditions. Round and flat master spring blades are silver-plated phosphor bronze with pure silver contacts. Insulating block is molded bakelite; chrome faceplate. Aluminum frame, $21 / 2 \times 5 \times 3 / 4^{\prime \prime}$. Av. shpg. wt., 5 oz .

| Stock No. | Mfr's Type | Action | NET EACH |
| :---: | :---: | :---: | :---: |
| 34 B 480 | 1427 | DPST | 2.79 |
| 34 B 481 | 1425 | DPDT | 2.79 |
| 34 B 482 | 1424 | 4PDT | 2.86 |
| 34 B 483 | 12494 | 8PDT | 6.20 |

## ECONOMY AC-DC SLIDE SWITCHES

Cadmium-plated steel housing. Size, $356{ }^{\prime \prime}$ " wide $\times 113 / 2^{2}$ long. Mounting centers, $118^{8}$. Type S -110-S is heavy dus ; 6 amps at 125 vols; 3 amps at 250 volts. Type SS-6 has $3 / 16^{\prime \prime}$ bevel trigger with prong guide, solde lug terminals, spring return. Type S-10-S has screw terminals; all others have hot-tinned solder lugs for easy soldering. For special prices for quantities over 50, write for quotation. U.L. Approved. Av. shpg. wt., 3 oz .

| Stock No. | Mfr | Mfr's Type | Action | Amps | EACH | $\begin{aligned} & 10-24 \\ & E A C H \end{aligned}$ | EAC |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 34 B 491 | Wirt | SW724 | SPDT | 0.75 | 224 | 204 | 84 |
| 34 B 492 | Wirt | SW725 | DPST | 0.5 | 224 | 204 | 184 |
| 34 B 148 | Carling | S-110-S | SPST | 6 | 436 | 394 | 284 |
| 34 B 421 | Carling | S-516 | SP2 Cir. | 3 | 514 | 46 | 334 |
| 34 B 422 | Carling | S60A | SPST | 4 | 94 | 84 | 64 |
| 34 B 423 | Carling | S60B | SPDT | 4 | 104 | 94 | 74 |
| 34 B 496 | Stackpol | SS-6 | 3PDT | 0.5 | 304 | 274 | 244 |

## Switchcraft Switches

## LEV-R TYPE SWITCHES

Ultra-compact lever-action switches. Silver contacts, rated at 3 amps, 120 volts, non-inductive load. Length, $317 / 4^{\prime \prime}$; width $5 / 8^{\prime \prime}$. § $_{\text {n.o. }}$ means normally open; n.c., normally closed means normally open; n.c., normally closed. operated to close either of two circuits keeping the other open T Types 3035 and 3035 L eeping are operated to open one of two circuits keeping other closed. Require $15 / 3 z^{\prime \prime} \mathrm{mtg}$. hole. Shipg. wt., 3 oz .

| Spring Return |  | 100'king |  | Action§ |  | NET EACH |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Stock No. | Type | Stock No. | Type | Poles | Diag. | 1-49 | 50-99 | 100-U |
| 34 B465 | 3001 | 348471 | 30011 | SPST, n.o. | 1 | 1.15 | 96 | 8 |
| 348454 | 3002 | 34 B 455 | 3002 L | SPST, n | 11 | 1.15 | 96 | 8 |
| 34 B466 | 3003 | 34 B 472 | 3003L | SPDT | 111 | 1.32 | 1.11 |  |
| 34 B 467 | 3004 | 34 B 473 | 3004L | DPST, п.o. | iv | 1.47 | 1.22 | 1.13 |
| 34 B 456 | 3005 | 34 B 457 | 3005L | DPST, n | V | 1.47 | 1.22 | 1.13 |
| 34 B468 | 3006 | 34 B 474 | 3006 L | DPDT | VI | 1.62 | 1.35 | 1.24 |
| $34 \mathrm{B485}$ | 3009 | 34 B 484 | 3009 L | 3PDT |  | 2.00 | 67 |  |
| 34 B 469 | *3033 | 34 B 475 | *3033L | SPDT, n.o. | VII | 1.47 | 1.22 | . 13 |
| $34 \mathrm{B458}$ | *3034 | 34 B 459 | *3034L | DP 2-ckt $\pm$ | VIII | 1.53 | 7 |  |
| $34 \mathrm{B464}$ | *3035 | 34 B 477 | *3035L | DP 2-ckt ${ }^{\text {+ }}$ | IX | 1.53 | 1.27 | 1.17 |
| 34 B478 | ${ }_{* 3037}^{* 3036}$ | 34 B 479 | *3036L |  |  |  | 1.42 | . 31 |
| 34 B 470 | *3037 | 34 B 476 | *3037L | DPDT, n.o. | XI | 1.73 | 1.45 | . 33 |

## NEW "BUTTON" SWITCHES

Unusually small, momentary-action push-button button 903 and 913 are $1 /^{\prime \prime}$ long. ${ }^{\prime \prime} 15$ n $^{\prime \prime}$ hole 923 and 933 are $78^{\prime \prime}$ long; fit $14^{\prime \prime}$ hole. Mounting: $* 903$ $913,913 \mathrm{D}$ lo $923 \mathrm{D}, 933$, 933 D mount from front of panel. + Rated at 250 ma , non-inductive load, AC ( 30 watts maximum) Shpg. wt., 2 oz .


| $\begin{gathered} \text { Stock } \\ \text { No. } \end{gathered}$ | Type(Red) | Stock No. | $\begin{array}{\|c\|} \hline \text { Type } \\ \text { (Black) } \end{array}$ | Action |  | NET EACH |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  |  |  | Poles | Diag. | 1-49 | 50-99 | 100 |
| 35B414 | *903 | 35B418 | *913 | SPDT | 111 |  | . 73 |  |
| 35 B 415 | *903D | 358419 | *913D | SPDT | XII | . 88 | 3 |  |
| 35 B 416 | +923 | 35 B 420 | +933 | SPDT | III | 1.03 | . 86 |  |
| 35B417 | +923D | 35 B 421 | +933D | SPDT | X 11 | 1.03 | . 86 | 79 |

## NEW CORD-TYPE PUSH-BUTTON SWITCHES

Specially designed, hand-held switch for use on control cords. Consists, of a Type 903, 903D, 913, or 913D momentary-action "button" switch (above), threaded into one end of a bright nickelplated sleeve. A handsome, easy-to-operate switch for remote control of recorders, lights, counters, many other devices. Sleeve is
$11 / 16^{\prime \prime}$ diameter and $23 / 16^{\prime \prime}$ long. Shpg. wt., 4 oz.

| Stock No. | $\begin{aligned} & \text { Type } \\ & \text { (Red) } \end{aligned}$ | Stock | $\begin{gathered} \text { Type } \\ \text { (Black) } \\ \hline \end{gathered}$ | Action |  | NET EACH |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  |  |  | Poles | Diag. | 1-49 | 50-99 | 100-UP |
| $35 \mathrm{B422}$ | E903 | 35 B 424 | E913 |  |  |  | 1.22 | 1.13 |
| 35 B 423 | E903D | 358425 | E913D | SPDT | XII | 1.47 | 1.22 | 1.13 |

## "TINI-SWITCHES"

Subminiature push-botton switches for limited space applications. Ideally suited for use in microphones, radio and automotive test instruments, inter-communication systems, electro-therapy equipment, etc. Quality conFor low-level currents only. Require $5 / /_{6 \prime \prime}^{\prime \prime \prime}$ behind panel. * mally open; n.c., normally closed. Shpg. wt., 3 oz .

| Stock No. | $\begin{aligned} & \text { Type } \\ & \text { (Red) } \\ & \hline \end{aligned}$ | Stock No. | $\begin{array}{\|c\|} \hline \text { Type } \\ \text { (Black) } \end{array}$ | Action* |  | NET EACH |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  |  |  | Poles | Diag. | 1-49 | 50-99 | 100-UP |
| $34 \mathrm{B831}$ | 951 | 34 B 834 | 961 | SPST n.o. |  | 536 | 446 | 414 |
| 34 E 832 | 952 | 34 E 835 | 962 | SPST n.c. | 11 | 534 | 446 | 414 |
| 34 B 833 | 953 | 34 B 836 | 963 | SPDT | 111 | 594 | 496 | 456 |

## STACK SWITCH KIT

Model K-101. Kit of component parts for assembling or repairing stacking switches. Designed to lab, aid maintenance men in the field, and save time in general replacement. Ideal for mechanical engineers and coin-machine servicing. Used in relays, remote control units, electronic organs, etc. Kit consists of 74 springs in 9 different thicknesses, over 115 phenolic spacers and insulators in 7 variations of design, hard-rubber insulating tubing, two different sets of stack assembling pins, two roller assemblies, assorted contacts, etc. switches is supplied in one package. Shpg. wt., $1 / 2 \mathrm{lbs}$.
34 B 837 NET...............................................


SWITCHCRAFT SCHEMATIC DIAGRAMS


## PUSH-BUTTON SWITCH ASSEMBLIES

A unique development in push-button switches. Permit easy assembly of custom switches to meet individual requirements in laboratory and test equipment, pilot models, control panels, etc. Each unit consists of the following items which are ordered separately: frame with push-
buttons; individual switches which are installed in the frame and lockout-bar. Purpose of the lockout-bar is to prevent the operation of more than one button at a time. Switches may be assembled to provide any of these three basic types of operation:


Interlock: Pressing any button or group of buttons will release previously depressed (lockout bars can be used to allow pressing only one button at a time).
Non-locking: Momentary action (no interaction between buttons). All-lock: Pressing button does not release button previously depressed (order frame with extra button to serve as release button).
In addition, momentary and either inter-lock or all-lock can be combined maximum non inductive load Use where circuit requirements call for circuit to be broken before next circuit is made.
(A) Multiple Push-Button Frames


## TELEVER TYPE SWITCHES

A rugged telephone-type lever switch. Nylon rollers actuate nick-el-silver springs. Palladium con-(non-inductive). Series 6000 tapped

for $3-48$ screws; standard telephone mtg. ctrs., $17 / 32 x^{13} / 1^{\prime \prime}$, Series 16000 has $15 / 32^{\prime \prime}-32$ thread single hole mounting. *3-position type. $\ddagger$ Two each side. $\$$ Four each side. With insulated black knob. All units have stainless steel pivot pins; solder Iug terminals. Available in locking or non-locking types. Shpg. wt., 6 oz.
(D) 6000 SERIES

| Spring Return |  | Locking |  | Action |  | NET EACH |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Stock No. | Type | Stock No. | Type | Poles | Diag. | 1-49 | 50-99 100-Up |
| 34 B 726 | 6006 | 34 B 734 | 6006L | DPDT | VI | 2.94 | 2.452 .25 |
| 34 B 729 | 60012 | 34 B 737 | 60012 L | 4PDT | 4 sec . III | 4.00 | 3.333 .06 |
| 34 B738 | *6036 | 34 B 742 | *6036L | 2-CktTr | X | 2.94 | 2.452 .25 |
| 34 B 740 | *60312 | 34 B 744 | *60312L | 4 PDT | $\ddagger 4 \mathrm{sec} .111$ | 4.00 | 3.333 .06 |
| 34 B741 | *60324 | 34 B 745 | *60324L | 8PDT | §8 sec. 111 | 5.88 | 4.9014 .50 |

## [E] 16000 SERIES


Type 530 Escutcheon. For Series 6000 Telever switches. 3 oz.
34 B 486. NET. ................................................................. 5 C

## NON-LOCKING PUSH-BUTTON TYPE SWITCHES

FF Switches. Flat frame construction provides frame adaptable to any stack of contact springs. Simple, direct action movement. Conventional spring stack assembly with bakelite spacers. Silver contacts rated at 3 amperes, 120 volts AC. One-piece, black button.
and shaft. $3 / 8^{\prime \prime}$ diameter threaded shank, $3 / 8^{\prime \prime}$ long. With locknut and washer. $\delta$ n.o. means normally open. n.c. means normally closed. Shpg. wt., 3 oz.

| Stock No. | $\begin{aligned} & \text { Mfr's } \\ & \text { Type } \\ & \hline \end{aligned}$ | Action§ |  | NET EACH |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  | Poles | Diag. | 1-49 | 50-99 | 100-Up |
| 34 B 994 | 1001 | SPST n.o. | 1 | . 62 | . 52 | . 47 |
| 34 B 995 | 1002 | SPST n.c. | 11 | . 62 | . 52 | . 47 |
| 34 B 996 34 B 997 | 1003 1004 | $\mathrm{SPDT}_{\text {DPST }}$ n.o. | IIV | . 71 | . 59 | . 54 |
| 34 B 998 | 1005 | DPST n.c. |  |  | . 64 | . 59 |
| 34 B 999 | 1006 | DPDT | VI | .91 | . 76 | .70 |
| 34B969 | 1009 | 3PDT |  | 1.23 | 1.03 | . 95 |

Littel Switches. For limited space applications. One-piece button and shaft. *Black button; tred button. Nickel silver spring contacts. Spring sections are insulated. $3 / 8^{\prime \prime}$ threaded shank, $3 / 8^{\prime \prime}$ long. Recommended for low-level currents only. With mounting hardware. Shpg. wt., 3 oz .

| $\begin{aligned} & 34 B 944 \\ & 348945 \\ & 348946 \\ & \hline \end{aligned}$ | $101 \dagger$ <br> $102 \dagger$ <br> $103 \dagger$ | $\begin{aligned} & \text { SPST n.o. } \\ & \text { SPST } \\ & \text { SPDT } \\ & \hline \end{aligned}$ | III | 534 534 594 | $44 ¢$ 449 496 | 419 414 456 |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 348947 | 201* | SPST n .0. | 1 | 536 |  |  |
| 34 B 948 | 202* | SPST n.c. | 11 | 536 | 449 | 414 |
| 34B949 | 203* | SPDT | III | 594 | 496 | 456 |

## Centralab Switches

## 而

## MINIATURE STEATITE SWITCHES

PA- 2000 Series. Compact rotary switches. Precision constructed to provide excellent RF characteristics. Rated 2 amps @ 15 v . progressively shorting positions. Switch $11 / 2^{\prime \prime} \times 15 / 6^{\prime \prime}$ dia. Shaft $17 / 8^{\prime \prime}$ long. Av. shpg. wt., 4 oz . per section.

| Shorting |  | Non-Shorting |  |  |  | $\begin{aligned} & \text { Pole } \\ & \text { Pos. } \end{aligned}$ | NET EACH |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Stock No. | Type | Stock No. | Type |  |  |  | 1-9 | 10-24 | 25-49 | 50 |
| $35 \mathrm{B095}$ | *2042 |  |  | 1 | 1 | 2-10 | 1.76 | 1.59 | 1.47 | 1.43 |
| 34 B 900 | 2000 | 34 B 921 | 2001 | 1 | 1 | 2-12 | 1.94 | 1.74 |  |  |
| 34 B 901 | 2002 | 34 B 922 | 2003 |  | 2 | 2-6 |  |  |  |  |
| 4 B 902 | $\begin{aligned} & 2004 \\ & 2006 \end{aligned}$ | 34 | 2005 | 2 | 2 | 2-12 | 2.76 |  |  |  |
| 34 B 904 | 2008 | 34 B 925 | 2009 | 3 | 3 | 2-12 | 3.53 | 3.18 | 2.94 | 2.85 |
| 34 B 905 | 2010 | 34 B 926 | 2011 | 2 | 4 | 2-6 | 2.76 | 2.49 | 2.30 | 2.23 |
| 34 B 906 | 2012 | 34 B 927 | 2013 | 4 | 4 | 2-12 | 4.23 | 3.81 | 3.5 | 3.42 |
| 34 B 907 | 2014 | 34 B 928 | 2015 | 1 |  | 2-3 | 1.94 | 1.74 | 1.62 |  |
| 34 B 908 | 2016 | 34 B 929 | 2017 | 5 | 5 | 2-12 | 5.06 | 4.55 | 4.21 | 4.08 |
| 34 B 909 | 2018 | 34 B 930 | 2019 | 1 | 6 | 2 | 1.94 | 1.74 | 1.62 | 1.57 |
| 34 B 910 | 2020 | 34 B 93 | 2021 | 2 | 6 | 2-5 | 2.76 | 2.49 | 2.30 | 2.2 |
| 34 B 9 | 2022 | 34 B 932 | 2023 | 3 | 6 | 2-6 | 3.53 | 3.18 | 2.94 | 2.85 |
| 34 B 912 34 B 913 | 20 | 34 B 9 | 202 | 6 4 | 8 | 2-6 | 5.8 | 5.29 | 3.93 | 4.75 3.42 |
| 34 B 914 | 2028 | 34 B 935 | 2029 |  |  |  |  |  | 2.94 |  |
| 34 B 915 | 2030 | 34 B 936 | 2031 | 2 | 10 | 2-3 | 2.76 | 2.49 | 2.30 | 2.23 |
| 34 B 917 | 2034 | 34 B 938 | 2035 | 2 | 12 | 2 | 2.76 | 2.49 | 2.30 | 2.23 |
| 34 B 919 | 2038 | 34 B 940 | 2039 | 3 | 15 | 2-3 | 3.82 | 3.44 | 3.18 | 3.09 |
| 34 B 920 | 2040 | 34 B 941 | 2041 | 3 | 18 | 2 | 3.82 | 3.4 | 3.1 | 9 |

## MINIATURE PHENOLIC SWITCHES



PA-1000 Series. Miniature phenolic-insulated switches. Compact-ideal for limited space applications. $30^{\circ}$ indexing, adjustable stop. $11 /{ }^{\prime \prime} x$ $15 / 16^{\prime \prime}$ dia. Shaft, $17 / 8^{\prime \prime}$ long. Rated 2 amps @ 15 v . DC, 150 ma . @ 110 v . AC. Shpg. wt., 5 oz .

| Shorting |  | Non-Shorting |  | Sec- <br> tions | Total Poles | $\left\|\begin{array}{l} \text { Polle } \\ \text { Poses. } \end{array}\right\|$ | NET EACH |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| ock No. | Typ | Stock No. | Type |  |  |  | 1-9 | 10-24 | 25-49 |  |
| 35 B 050 | 1000 | 35 B 065 | 1001 | 1 | 1 | 2-11 | 1.47 | 1.32 | . 22 |  |
| 35 B 051 | 1002 | 35 B 066 | 1003 | 1 | 2 |  | 1.47 | 1.32 |  |  |
| 35 B 052 | 1004 | 35 | 1005 | 2 | 2 | 2-11 |  |  |  |  |
| 5 B 054 | 10 | 35 в 069 | 1009 | 3 | 3 | 2-11 | 2.65 | 2.38 | 2.20 | 2. |
| 55 | 101 | 35 B 070 | 1011 | 1 |  | 2 | 1.47 | 1.32 | 1. |  |
| 5 B 056 | 1012 | 35 B 07 | 1013 | 2 |  | 2-5 |  |  |  |  |
| B 057 | 1014 | B | 1015 | 4 |  | 2-11 | 3. |  |  |  |
| 358.058 | 1016 | 35 B 073 | 1017 | 5 | 5 | 2-11 | 3.64 | 3.28 | 3.03 | 2. |
| 35 B 059 | 1018 | 35 B 074 | 1019 | 2 | 6 | 2-3 | 2.12 | 1.90 | . 76 | 1.7 |
|  | 1020 | 35 B | 1021 | 3 | 6 | 2-5 | 2.65 | 2.38 | 2.20 | 2.1 |
|  | 1024 |  | 1025 | 2 |  |  | 2. | 1.90 |  |  |
| 5 806 | 1026 |  | 102 | 4 |  | 2-5 |  |  |  |  |
| B 06 |  | 35 B 079 | 1029 |  | 12 |  |  | 2.38 |  |  |

SEPARATE ASSEMBLIES FOR MAKING MINIATURE SWITCHES
Type PA Phenolic Sections Only. Carry the same ratings as above miniature switches. Excellent RF characteristics. Adjustable stop. With hardware. Shpg. wt., 2 oz.

| Shorting |  | Non-Shorting |  | Total Poles | PolePos | NET EACH |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Stock No. | Type | Stock No. | Type |  |  | 1-9 | 10-24 | 25-49 | 50-99 |
| 35 B 080 | 30 | 35 B 085 | 31 | 1 | 2-11 |  |  |  |  |
| 35 B 081 | 32 | 35 B 086 | 33 | 2 | 2-5 | . 71 | . 64 | . 59 | . 56 |
| 35 B 082 | 34 | 35 B 087 | 35 | 3 | 2-3 |  |  |  |  |
| 35 B 083 | 36 | 35 B 088 | 37 | 4 |  |  |  |  |  |
| 35 B 236 | 40 | 35 B 237 | 41 | 1 | 2-11 |  |  |  |  |

Type PA Steatite Sections Only. Custom and standard switches can be assembled by using these sections. Wt., 2 oz .

| Shorting |  | Non-Shorting |  | Total Poles | Pole Pos. | NET EACH |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Stock No. | Type | Stock No. | Type |  |  | 1-9 | 10-24 | 25-49 | 50-9 |
| 35 B 040 | PA-0 | 35 B 045 | PA-1 | 1 | 2-12 |  |  |  |  |
| 35 B 04 | PA-2 | 35 B 046 | PA-3 | 2 | 2-6 | . 97 | . 87 | . 81 | . 78 |
| 35 B 042 | PA-4 | 35 B 047 | PA-5 | 3 | 2-5 |  |  |  |  |
| 35 в 044 | PA-8 | 35 B 049 | PA-9 | 6 | 2 |  |  |  |  |
| 38 | PA-11 | 35 B 240 | PA-18 |  | 2-11 |  |  |  |  |
| B 239 | PA-12 |  |  | 1 | 2-10 | . 97 | . 87 | . 81 | . 78 |
|  |  | 35 | PA-17 | 1 | 2-6 |  |  |  |  |

PA- 300 Series. Shaft and Index Assemblies. Hardware for miniature switches (spacers, tie-rods, etc.). $30^{\circ}$ indexing. Wt., 3 oz.

| $\begin{aligned} & \text { Stock } \\ & \text { No. } \end{aligned}$ |  | ShaftLength | Sections | NET EACH |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | Type |  |  | 1-9 | 10-24 | 25-49 | 50-99 |
| 35 B 092 | 300 | ${ }^{\prime \prime}$ | 1-3 | 1.12 | 1.01 | 93 | 9 |
| 35 B 093 | 301 | $4^{\prime \prime}$ | 4-6 | 1.47 |  |  | . 19 |
| 35 B 094 | 302 |  | 7.9 | 1.94 | 1.74 | 1.62 | . 57 |

## 2500 SERIES-STEATITE INSULATION



Rotary switches. Excellent for RF use. Switch, $15 / 8 \mathrm{x}$ $17 / 8^{\prime \prime}$ diameter. $1 / 2^{\prime \prime}$ spacing between sections for 1 and 2 section switches; $1^{\prime \prime}$ spacing for switches over
2 sections. Bushing, $3 / 8^{\prime \prime}$ dia. $x^{3} / 8^{\prime \prime}$ long. Shaft, $17 / 8^{\prime \prime}$. Positive $30^{\circ}$ index; adjustable stop. Shpg. wt., per section, 4 oz .

| Shorting |  | Non-Shorting |  |  |  | $\begin{array}{\|l} \text { Pole } \\ \text { Pos. } \end{array}$ | NET EACH |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Stock No. | Type | Stock No. | Type |  |  |  | 1-9 | 10-24 | 25-49 | 50-99 |
| 35 B 214 | 2500 | 35 B 225 | 2501 | 1 | 1 | 2-6 |  |  |  |  |
| 35 B 215 | 2502 | 35 B 226 | 2503 | 1 |  | 2-11 | 1.94 | 1.74 | 1.62 | 1.57 |
| 358216 <br> 35 | 2504 | 35 B 227 | 2505 | 1 | 1 | 2-5 |  |  |  |  |
|  | 2506 | 35 B 228 | 2507 | 1 | 3 | 2-3 |  |  |  |  |
| 35 B 218 | 2510 | 35 B 229 | 2511 | 2 |  | 2-6 |  |  |  |  |
| 5 B 220 | 2512 | 35 B 230 | 2513 | 2 | 4 | 2-11 | 2.76 | 2.49 | 2.30 | 2.23 |
| 35 B 221 | 2516 | 35 B 232 | 2517 | 2 | 4 | 2-3-2 |  |  |  |  |
| 35 B 223 | 2522 | 35 B 201 | 2523 | 3 | 3 | 2-11 |  |  |  |  |
| 35 B 224 | 2524 | 135 B 202 | 2525 | 3 | 6 | $\|$2-5 <br>  | 3.53 | 3.18 | 2. | . 85 |



## LEVER-ACTION SWITCHES

Low capacity. Use singly or in groups. *Shorting type; others non-shorting. Front plate and lever cadmium-plated. Index: $\dagger$ Positive; \& Spring-Return; tube tester replacement switch. $17 / 8 \times 5 / 8 \times 11 / 2^{\prime \prime} ; 1475$, tube tester replacement switch. $17 / 8 \times 5 / 8 \times 11 / 2^{\prime \prime}$, Mtg.
ctrs., $15 / 8^{\prime \prime}$. Knob and mtg. screws. Av. wt., 3 oz .

| Stock No. | Type | Stock No. | Type | Poles | Pos. | -9, EA. | 10 | A. | 50-99, EA |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 34 B 021 | 1452*+ | 34 B 026 | $1454 \dagger$ | 2 | 3 | 1.03 | . 93 | . 86 | . 84 |
| 34 B 022 | 1453*\$ | 34 B 027 | 1455§ | 2 | 3 | 1.03 | . 93 | . 86 | 84 |
| 34 B 025 | 1456*s | 34 B 030 | 1457§ | 4 | 2 | 1.18 | 1.06 | . 98 | 95 |
| 34 B 024 | 1459* $\dagger$ | 34 B 029 | $1458 \dagger$ | 4 | 2 | . 18 | 1.06 | . 98 | 95 |
| 34 B 023 | 1466* | 34 B 028 | 1467 | 2 | 3 | 1.03 | . 93 | . 86 | 3 |
|  |  | 35 B 198 | 1475 $\ddagger$ |  | 3 | . | - | . 86 | 83 |


| - - 9 | MOUNTING PLATES. For single or multiple mounting of lever-action switches. Black wrinkle finish steel. *Chromeplated. Av. shpg. wt., 4 oz. |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Stock No. | Type | Switch's | Size | 1-9, EA. | 10-24, EA. | 25-49, EA. | 50-99, EA. |
| 34 B 050 | P1755 | 1 | $3 / 4 \times 25 / 8^{\prime \prime}$ | . 29 | . 26 | . 24 | . 23 |
| 34 B 051 | P1756 | 2 | $11 / 2 \times 258^{\prime \prime}$ | . 29 | . 26 | . 24 | .23 |
| 34 B 052 | P1757 | 3 | 21/4 $\times 25 / 8^{\prime \prime}$ | . 32 | . 29 | . 27 | .26 |
| 34 B 053 | P1758 |  | $3 \times 258^{\prime \prime}$ | . 41 | . 37 | . 34 | .33 |
| 34 B 060 | P221* | 2 | $23 / 4 \times 41 / 2^{\prime \prime}$ | . 50 | . 45 | . 42 | . 40 |
| 34 B 061 | P222* | 1 | $23 / 4 \times 41 /{ }^{4}$ | . 41 | . 37 | . 34 | . 33 |



1400 SERIES-PHENOLIC INSULATION
Compact design. Switch, $15 / 8 x 17 / 8^{\prime \prime}$ dia. Bushings, $3 / 8^{\prime \prime} x^{3} / 8^{\prime \prime}$. Shafts, $17 / 8^{\prime \prime}$ from end of bushing. Positive $30^{\circ}$ index. Mtg.
nut, washer, $1^{11 / 4}$ knob. Av. shpg. wt., 6 oz.

| Shorting |  | Non Shorting |  | $\|$Sec- $\mid$ Total <br> tions <br> Poles |  | Pole Pos. | NET EACH |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Stock No. | Type | Stock No. | Type |  |  | 1-9 | 10-24 | 25-49 | 50-99 |
| 35 B 182 | 1400 | 35 B 163 | 1401 | 1 | 1 |  | 2-6 |  |  |  |  |
| 35 B 183 | 1402 | 35 B 164 | 1403 | 1 | 1 | 2-11 |  |  |  |  |
| 35 B 184 | 1404 | 35 B 165 | 1405 |  | 2 | 2-5 | 1.71 | 1.54 | 1.42 | 1.38 |
| 35 B 185 | 1406 | 35 B 166 | 1407 | 1 | 3 | 2-3 |  |  |  |  |
| 35 B 186 | 1408 | 35 <br> B 167 | 1409 | 1 | 4 | 2 |  |  |  |  |
| 35 B 187 | 1410 | 35 | 1411 | 2 | 2 | 2-6 |  |  |  |  |
| 35 B 188 | 1412 | 35 B 169 | 1413 | 2 | 2 | 2-11 |  |  |  |  |
| 35 B 189 | 1414 | 35 B 170 | 1415 | 2 | 4 | 2-5 | 2.12 | 1.90 | 1.76 | 1.71 |
| 35 B 190 | 1416 | 35 B 171 | 1417 | 2 | 6 | 2-3 |  |  |  |  |
| 35 B 191 | 1418 | 35 B 172 | 1419 | 2 | 8 | 2 |  |  |  |  |
| 55 B 193 | 1422 | 35 B 174 | 1423 | 3 | 3 | 2-11 | 2.65 | 2.38 | 2.20 | 2.14 |
| 35 B 194 | 1424 | 35 B 175 | 1425 | 3 | 6 | 2-5 | 2.65 | 2.38 | 2.20 | 2.14 |
| 35 B 197 | 1430 | 35 B 178 | 1431 | 4 | 8 | 2-5 | 3.12 | 2.80 | 2.60 | 2.52 |

P-120 Series. Shaft and Index Assemblies. Complete hardware for 1400 Series switches, above. Also fits 2500 series steatite sections. (Spacers, tie-rods, etc.). $30^{\circ}$ indexing. Shpg. wt., 3 oz .

| Stock No. | Type | Shaft | Sections | $1-9$, EA. | 10-24, EA. | $25-49$, EA. | $50-99$, EA. |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 35 B 233 | P-121 | $2^{\prime \prime}$ | 1.3 | 1.12 | 1.01 | .93 | .90 |
| 35 B 234 | P-123 | $7^{\prime \prime}$ | $5-8$ | 1.94 | 1.74 | 1.62 | 1.57 |

## UNIVERSAL AND INTERCOM SWITCHES

High-quality rotary switches. Bakelite constructed. metal is cadmium-plated. Shafts, $17 / 8^{\prime \prime} \cdot{ }^{* \prime} 1^{\prime \prime}$ behind parn in 3 rd. All are non-shorting except $\ddagger$. Wt., 8 oz.

| $\begin{gathered} \text { Stock } \\ \text { No. } \end{gathered}$ | $\begin{aligned} & \text { Mfr's } \\ & \text { Type } \end{aligned}$ | Description | NET EACH |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  |  | 1-9 | 10-24 | 25-49 | 50-99 |
| 34 B 088 | 1443*† | SP, 23 pos. | 1.62 | 1.45 | 1.34 | 1.31 |
| 34 B 085 | 1450†, | ${ }_{4}^{4 P D T}$ | . 82 | . 74 | . 68 | . 66 |
| 34 B 087 | ${ }^{14514}{ }^{\text {14* }}$ | ${ }_{\text {6P, }}{ }^{\text {4PDT, spos., sp-ring-return }}$ | 1.18 | 1. 1.45 | 1.98 | 1.35 |
| 34 B 072 | 1449*8 |  | 1.62 | 1.45 | 1.34 | 1.31 |

INTERCOM AND RADIO SWITCHES
Step type. Rated 2 amps . at 15 v . Shaft, $1 / 4^{\prime \prime}$ dia., $21 / \mathrm{s}^{\prime \prime}$ long. All switches listed below have shorting contacts except *non-shorting (for intercoms). Type 1472 is for AM-FM-phono. Av. shpg. wt., 5 oz.

| Stock No. | Mfr's Type | Description | NET EACH |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  |  | 1-9 | 10-24 | 25-49 | 50-99 |
| 34 E 080 | 1460 | SPDT phono-radio sw. | . 50 | . 45 | . 41 | . 40 |
| 34 B 081 | 1461 | SP-3-position selector | . 88 | . 80 | . 73 | .71 |
| 34 B 082 | 1462 | DPDT bandswitch | . 88 | . 80 | . 73 | . 71 |
| 34 B 083 | 1463* | SPDT spring return | . 88 | . 80 | . 73 | . 71 |
| 34 B 084 | 1464* | DPDT spring return | . 88 | . 80 | .73 | .71 |
| 35 B 235 | 1472* | DP 3-position | . 88 | . 80 | . 73 | . 71 |

## AUTO RADIO SPEAKER SWITCH



Type PK300 Switch Kit. Contains a complete assembly for switching between dual speakers such as auto rear seat and front seat. Etched dial-mounting plate; dual screws, instructions. Shpg. wt., 4 oz . 34 B 077. NET
34 B 086. Type 1483 Switch. SP 3-pos. switch for rear deck auto speaker. 2 amp @ 15 v . DC. Silver-plated contacts. 2 oz. NET.... $53 \Varangle$

## EAGLE KNIFE SWITCHES

Low-cost, heavy-duty knife switches for limited space applications. All units are rated at 25 amperes, 125 volts AC. Available in bakelite or porcelain base as shown. Shpg. wt., 5 oz.

| Stock No. | Action | Base | Size | NET EACH |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  |  |  | 1-9 | 10-99 | Over 100 |
| 34 B 884 | SPST | Bakelite | 15/8x17 | 204 | 184 | 164 |
| 34 B 886 | SPDT | Bakelite | 25/8×1 ${ }^{\prime \prime}$ | 234 | 216 | 186 |
| 34 B 887 | DPST | Bakelite | 13/4x11/2" |  |  |  |
| 34 <br> 34 | DPDT | Bakelite | ${ }^{25 / 8 \times 15 / 8{ }^{\prime \prime}}$ | 386 | 346 | 294 |
| 34 B 889 | SPST | Porcelain | 31/16x11/8* | 254 | 224 | 194 |

## Mallory Switches

## CERAMIC SECTION SWITCHES



Multi-contact ceramic-section selector switches. For minimum RF losses. All are non-shorting. Silver plated contacts. Maximum non-breaking current resistive load, 10 amps. 2 gang have wafers spaced $1 / 2^{\prime \prime}$ apart except $\ddagger$ spaced $17 / 8^{\prime \prime} ;$ all others have $1^{\prime \prime}$ spacing between wafers. $30^{\circ}$ indexing,
except $\dagger 90^{\circ} ; 114^{\prime \prime}$ base dia.; use plates below, at right. With $2^{\prime \prime}$ grooved shaft, knob and hardware. *Additional "Off"' position. $\S$ Rated 1000 v . DC and 100 watts. Av. shpg. wt., 8 oz .

| Stock No. | Mfr's Type | Gangs | Total Poles | Positions per Pole | $\begin{aligned} & \text { NET } \\ & \text { EACH } \end{aligned}$ |
| :---: | :---: | :---: | :---: | :---: | :---: |
| $\begin{aligned} & 34 \text { B } 327 \\ & 34 \text { B } 328 \\ & 34 \end{aligned}$ | $\begin{aligned} & 172 \mathrm{C} \\ & 173 \mathrm{C} \\ & 174 \mathrm{C}^{*} \end{aligned}$ | $\begin{aligned} & \hline 1 \\ & 1 \\ & 1 \end{aligned}$ | $\begin{aligned} & 1 \\ & 2 \\ & 3 \end{aligned}$ | $\begin{array}{r} 11 \\ 5 \\ 3 \end{array}$ | 1.94 |
| $\begin{aligned} & 34 \mathrm{~B} 331 \\ & 34 \mathrm{~B} 332 \\ & 7 \end{aligned}$ $34 \text { B } 333$ | $\begin{aligned} & 176 \mathrm{C} \\ & 177 \mathrm{C} * \\ & 178 \mathrm{C} * \end{aligned}$ | 2 2 2 | 2 4 6 | $\begin{array}{r} 11 \\ 5 \\ 3 \end{array}$ | 2.76 |
| $\begin{aligned} & 34 B 335 \\ & 34 \mathrm{~B} 336 \end{aligned}$ | $\begin{aligned} & 180 \mathrm{C} \\ & 181 \mathrm{C} * \end{aligned}$ | $\begin{aligned} & 3 \\ & 3 \end{aligned}$ | 3 6 | 11 | 3.53 |
|  | $\begin{aligned} & 161 C+\S \\ & 162 C+\S \\ & 163 C+8 \\ & 164 C+8 \\ & 165 C+8 \end{aligned}$ | $\begin{aligned} & 1 \\ & 2 \ddagger \\ & 3 \\ & 4 \\ & 5 \end{aligned}$ | $\begin{aligned} & 1 \\ & 2 \\ & 3 \\ & 4 \\ & 5 \end{aligned}$ | 4 4 4 4 4 | 1.76 2.50 3.23 3.97 4.70 |

Type 488 Dial Plate. For 160C switches, above. Shpg. wt., 2 oz.
34 B 688 . NET......................................................................

## LEVER-ACTION SWITCHES

Positive-indexing, lever action switcheswith shorting or non-shorting contacts. Indexing in 2,3 or 4 positions with $20^{\circ}$ spacing between positions. Types 6142, 6143 and 6243 have mounting brackets with round holes spaced for $15 / 8$ centers. 5124 and 5224 have elongated mounting holes in the brackins, spaced $23 / 16$ to $23 / 8$ apar. Pkenolc resin nsulation. Maximum non-breaking current resistive load, 5 amps. With znob and hardware. Shpg. wt., 4 oz

| SHORTING |  | $\begin{aligned} & \text { NON- } \\ & \text { SHORTING } \end{aligned}$ |  | Poles | Positions Per Pole | $\begin{aligned} & \text { NET } \\ & \text { EACH } \end{aligned}$ |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| No. | Type | No. | Type |  |  |  |
| 348382 | 5124 | 34 B 383 | 5224 | 2 | 4 |  |
| 34 B 365 | 6142 |  |  | 4 | 2 | . 97 |
| 34 B 366 | 6143 | 34 B 368 | 6243 | 4 | 3 | . 97 |

## "HAMSWITCH" TYPE 151 L

Two-section, 5 -position switch; 1 pole per ection. Non-shorting type. Excellent for ween sections Rated at 1000 volts AC (rms) or 1500 volts DC. $60^{\circ}$ indexing between (rms) sitions. With brass bushing $3 /{ }^{\prime \prime}$ long $3 / 3^{\prime \prime}$ dia and $2^{\prime \prime}$ long, is grooved at popular lengths for easy cutting and 2 long, $1 / 4$ dia. shaft and lock washer. Shpg. wt., 6 oz.

## TYPE 13124L 24-POINT TAP SWITCH

Single circuit, 24 position, non-shorting switch. Continuous rotation. $3 / 8^{\prime \prime}$ bushing. $2^{\prime \prime}$ grooved shaft. Useful in test equipment. $15^{\circ}$ indexing between positions
34 B 295 . NET.
2.26

## MINIATURE PUSH-BUTTON SWITCHES

Push-button switches for limited-space applications. Eight circuit combinations. *Locking type. when button is depressed ; contact is made only is cadmium plated. Mount in single hole, $7 / 16^{\prime \prime}$ diameter, on panels up to $1 / 4^{\prime \prime}$ thick. Mtg. radius is $11 / 16^{\prime \prime}$. Mtg. depth is $7 / 16^{\prime \prime} \mathrm{min}$. (Type 1011) and
 8 max. (1ype 1018). Voltage breakdown, 500 v. DC. Shpg. wt., 3 oz.

| Stock No. | Type | Action | NET |
| :---: | :---: | :---: | :---: |
| 34 B 432 | 1011 | SPST-Make | . 56 |
| 34 B 433 | 1012* | SPST-Break | . 56 |
| 34 B 434 | 1013 | SPDT | .65 |
| 34 B 435 | 1014 | DPST-Make 2 | . 71 |
| 34 B436 | 1015 | DPST-Break 2 | 71 |
| 34 B437 | 1016 | DPDT | . 85 |
| 34 B 438 | 1017 | DP-Make 2, Break 1 | . 85 |
| 34 B439 | 1018 | DPDT-Make before break | 1.18 |

## PLX SERIES PLUNGER SWITCHES

Designed for appliance applications such as: heater, motor and lighting loads. Switch is $11 / 32^{\prime \prime}$ dia. Mounts by a spring grip washer pushed over the $7 / 6^{\prime \prime}$ bushing. Requires mtg. hole a min. of 441 dia. Rated at 20 amps, 120 v . AC or 15 amps, 240 V . AC. Force to depress plunger, $1-5$ ibs. depending on circuits. Plunger actuation Approved. Shpg. wt., 3 oz .


| Mfr's |
| :---: |
| Type |
| PLX-1 |
| PLX-2 |
| PLX-3 |
| PLX-4 |

Action
DPST-2 Circuit progressive
DPDT-Break before make
SPST-Normally open
SPST-Normally closed
 NET
EACH $73 \phi$
734
594 SPST-Normally open
SPSmally closed

## TYPE 1200 L \& 1300 L MULTI-GANG SWITCHES

Versatile multi-gang switches for servicing and industrial ap plications. Have 1 fixed and adjustable stop, silver-plated contacts, solid silver rotor contact slugs, and phosphor-bronze springs. 3- and 4-gang spaced $1^{\prime \prime}$ all others $1 / 2^{\prime \prime}$. $2^{\prime \prime}$ notched shaft
 Shorting-type make before break. Require $7 / 1{ }^{\prime \prime}$ mtg. hole. With bar knob and hardware, less mtg. plate. Use 34 BB 600 plates below. *With additional "off" positions with all circuits open. Av. Shpg. wt., 8 oz .
Stock
34 B
34
34
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| Gangs | Total Poles | Pos.per Pole |
| :---: | :---: | :---: |
| 1 | 1 | 11 |
| 1 | 2 | 5 |
| 1 | 3 | 3 |
| 1 | 4 | 2 |
| 2 | 2 | 11 |
| 2 | 4 | 5 |
| 2 | 6 | 3 |
| 2 | 8 | 2 |
| 3 | 3 | 11 |
| 3 | 6 | 5 |
| 4 | 4 | 11 |
| 4 | 8 | 5 |
| 5 | 5 | 11 |
| 5 | 10 | 6 |
| 6 | 6 | 11 |
| 6 | 12 | 6 |

NET
EACH
1.71
2.12
2.65
2.65
3.12
3.12
3.35
3.70
3.94
4.50


Compact enclosed low-voitag switches Have $2^{\prime \prime}$ notched shaft; $3 / 8^{\prime \prime}$ threaded bushing, $3 / 8^{\prime \prime}$ long With bar knob and nut. All $1^{11} 11^{\prime \prime}$ base dia. types have adjustable stops. For band switching, etc Use plates listed below. Shpg. wt., 4 oz.

| Shorting |  | Non-Shorting |  | Poles | Positions | Base Dia. | $\begin{aligned} & \text { NET } \\ & \text { EACH } \end{aligned}$ |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Stock No. | Type | Stock No | Type |  |  |  |  |
| 34 B 300 | 3115 J | 34 B 350 | 3215 J | 1 | 5 | 11/4" |  |
| 34 B 301 | 31112 J | 34 B 351 | 32112 J | 1 | 12 | 11/4" |  |
| 34 B 302 | 3122 J | 34 B 352 | 3222 J | 2 | 2 | $11 / 4 *$ | 82c |
| 34 В 303 | 3123 J | 34 B 353 | 3223 J | 2 | 3 | $11 /{ }^{\prime \prime}$ | 82 |
| 34 B 304 | 3126 J | 34 B 354 | 3226 J | 2 | 6 | $11 / 4^{\prime \prime}$ |  |
| 34 B 305 | 3134 J | 34 B 355 | 3234 J | 3 | 4 | $11 / 4^{\prime \prime}$ | . 85 |
| 34 B 306 | 3142 J | 34 B 356 | 3242 J | 4 | 2 | 11/4" | . 85 |
| 34 В 307 | 3143 J | 34 B 357 | 3243 J | 4 | 3 | $11 /{ }^{\prime \prime}$ | . 85 |
| 34 B 308 | 31117 J | 34 B 358 | 32117 J | 1 | 17 | $111 / 1{ }^{\prime \prime}$ | 1.26 |
| 34 B 309 | 3129 J | 34 B 359 | 3229 J | 2 | 9 | 11/16" | 1.26 |
| 34 B 310 | 3136 J | 34 в 360 | 3236 J | 3 | 6 | $111 / 16^{\prime \prime}$ | . 35 |
| $34 \mathrm{B311}$ | 3163 J | 34 B 361 | 3263 J | 6 | 3 | 11/16" | 1.35 |

## TYPE 3122 TV ANTENNA SWITCH

New, high-quality antenna switch designed for applications where 2 separate antennas are used with 1 set. Just turn the switch to select desired antenna. Easily mounts on TV rear safety panel. $11 / 4^{\prime \prime}$ dia; shaft, $13 / 16^{\prime \prime}$, solder terminals. Complete with bar knob and all mounting


## TYPE 1400 L CIRCUIT OPENING SWITCH

Opens any, one of 12 "lines" for insertion of current reading meter while can be wired so that when switch opens 11 lines. Multiplying resistors can be wired so that when switch opens line, proper resistor is inserted
in circuit. For test sets, tube checkers, etc. Shaft, $1 / 4^{\prime \prime}$ dia.; length, $2^{\prime \prime}$. With bar knob, dial plate and hardware. Shpg. wt., 6 oz. . 3.82 34 B 290. NET.

## DIAL PLATES

Types 372 to 390 for switches $1200 \mathrm{~L}, 1300 \mathrm{~L}$ and $114^{\prime \prime}$ base 3100 J and 3200 J . Others for $111 / 16^{\prime \prime}$ base and aluminum. Black background. 113/16" dia. 7/16" hole. Shpg. wt., 2 oz.

| $30^{\circ}$ SPACINGFOR $11 / 4^{\prime \prime}$ BASE SWITCHES |  |  |  | $\begin{gathered} 20^{\circ} \text { SPACING } \\ \text { FOR } 111 / 16^{\prime \prime} \text { BASE SWITCHES } \end{gathered}$ |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Type | Marking | Type | Marking | Type | Marking | Type | Marking |
| 372 | 1 to 2 | 384 | Off 1 to 4 | 453 | 1 to 3 | 474 | Off 1 to 4 |
| 373 | 1 to 3 | 385 | Off 1 to 5 | 454 | 1 to 4 | 475 | Off 1 to 5 |
| 374 | 1 to 4 | 386 | Off 1 to 6 | 455 | 1 to 5 | 476 | Off 1 to 6 |
| 375 | 1 to 5 | 387 | Off 1 to 7 | 456 | 1 to 6 | 477 | Off 1 to 7 |
| 376 | 1 to 6 | 388 | Off 1 to 8 | 457 | 1 to 7 | 478 | Off 1 to 8 |
| 377 | 1 to 7 | 389 | Off 1 to 9 | 458 | 1 to 8 | 479 | Off 1 to 9 |
| 378 | 1 to 8 | 390 | Off 1 to 10 | 459 | 1 to 9 | 480 | Off 1 to 10 |
| 379 | 1 to 9 |  |  | 460 | 1 to 10 | 481 | Off 1 to 11 |
| 380 | 1 to 10 |  |  | 461 | 1 to 11 | 482 | Off 1 to 12 |
| 381 | 1 to 11 |  |  | 462 | 1 to 12 | 483 | Off 1 to 13 |
| 382 | 1 to 12 |  |  | 467 | 1 to 17 | 484 | Off 1 to 14 |
| 383 | Off 1 to 3 |  |  | 473 | Off 1 to | 486 | Off 1 to 16 |
| 34 BB 600. Specify Type NET EACH. |  |  |  | 34 BB 650. Specify Type. |  |  |  |

34 B 670. Type 369. 0-100 plate for volume control.
34 B 620. Type 391. Increase type plate for vol, control. \}NET 15 CH $\left.\begin{array}{l}34 \text { B 622. Type 393. 0-10 plate for rheostats and pots. } \\ 34\end{array}\right\}$ E 624 . Type 396. 0-10 plate for wire-wound controls. 15 C 34 B 623. Type 394. 1-24 position. $15^{\circ}$ opening. NET. $\qquad$

## RB254 UNIVERSAL MOUNTING BRACKET

"L" shaped Universal, Mounting Bracket for baseboard or rear support mounting of all Mallory circuit selector switches, volume controls and jacks. Shpg wWt., 2 oz.

## Industrial Time Switches

#  <br> <br> INDUSTRIAL <br> <br> INDUSTRIAL <br> <br> TIMER <br> <br> TIMER <br> <br> CORPORATION <br> <br> CORPORATION <br> © 



## SERIES CM RECYCLING CAM TIMERS

- Designed to Repeat a Definite Electrical On and Off Time Cycle Continuously
- Cams Are Precision Calibrated for Quick, Accurate Setting
- SPDT Switch Is Totally Enclosed and Completely Dust-Proof

A Motor driven timers specifically designed A for repeating a definite electrical "Off-On" cycle continuously. A complete time unit consists of a Series CM chassis-mounted foundaactivated single-pole double-throw switch, and a gear and rack assembly.
The gear and rack assembly determines the overall time of one full "Off-On" cycle e.g., 40 seconds to 6 minutes, depending on which gear and rack assembly it is used with.
Cams have single screw adjustment for setting time cycle. Synchronous motor assures precise

GEAR-AND-RA

## $+$

*S-Seconds M-Minutes H-Hours

| Stock No. | Mfr's Type | *Overall Time Cycles Available |  |  |  |  |  |  | NET EACH |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  | CM-2 | CM-4 | CM-5 | CM-6 | CM-8 | CM-10 | CM-12 | 1-3 | 4-5 | 6-11 | 12-24 | 25-49 |
| $78 \mathrm{B472}$ | E-12 | 10S | 40S | 2M | 3M20S | 20M | 2 H | 8 H |  |  |  |  |  |
| 78 B 470 | D-12 | 12 S | 48 S | 2M24S | 4M | 24M | 2H24M | 9H36M | 1.50 | 1.43 | 1.40 | 1.28 | 1.20 |
| 78 B 468 | C-12 | 15 S | 605 | 3M | 5M | 30 M | 3 H | 12H |  |  |  |  |  |
| 78 B 466 | B-12 | 205 | 80S | 4M | $6 \mathrm{M40S}$ | 40M | 4H | 16H |  |  |  |  |  |
| 78 B 467 | B-15 | 25 S | 100 S | 5M | 8M20S | 50 M | 5 H | 20 H |  |  |  |  |  |
| 78 B 457 | A-12 | 308 | 2M | 6M | 10M | 60M | 6 H | 24 H | 1.50 | 1.43 | 1.40 | 1.28 | 1.20 |
| 78 B 471 | D-36 | 36 S | 144S | 7M12S | 12M | 72M | 7H12M | 28H48M |  |  |  |  |  |
| 78 B 458 | A-16 | 405 | 1605 | 8M | 13M20S | 80M | 8 H | 32 H |  |  |  |  |  |
| $78 \mathrm{B459}$ | A-18 | $45 S$ | 3M | 9M | 15M | 90M | 9 H | 36 H |  |  |  |  |  |
| 78 B460 | A-20 | 50 S | 200 S | 10M | 16 M 40 S | 100M | 10 H | 40 H | 1.50 | 1.43 | 1.40 | 1.28 | 1.20 |
| 78 B 461 | A-24 | 60 S | 4 M | 12M | 20M | 2 H | 12H | 48 H |  |  |  |  |  |
| 78 B 465 | A-36 | 90 S | 6M | 18M | 30H | 3 H | 18H | 72H |  |  |  |  |  |

## SERIES CM FOUNDATION UNITS

| Stock No. | Mfr's | Stock No. | Mfr's <br> Type | Stock No. | Mfr's Type | NET EACH |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | Type |  |  |  |  | 1-3 | 4-5 | 6-11 | 12-24 | 25-49 |
| 78 B 450 | CM-2 | 78 B 453 | CM-6 | 78 B 455 | CM-10 |  |  |  |  |  |
| 78 B 451 78 B 452 | CM-4 CM-5 | 78 B 454 | CM-8 | 78 B 456 | CM-12 | 15.50 | 14.73 | 13.95 | 13.18 | 12.40 |

## SERIES H AND SF TIME DELAY TIMERS

## - Pre-Heats Transmitter Tube Filaments; Activates Store Displays

$$
\text { - Available for Time Cycles from } 15 \text { Seconds to } 5 \text { Minutes Duration }
$$

(B) C Dependable automatic reset timers. B) Useful for any operation requiring a of one circuit and the closing or opening of of one circuit.

SPDT switch has contacts rated 10 amperes at 115 volts AC with non-inductive load. Suitable for pre-heating transmitter tube filaments, also Both Series H and Series SF Store displays, etc. four models providing maximum time cycles
from 15 seconds to 5 minutes. All units have clutches as integral part of motor. Series H (Fig. B, illustrated above) is for front of panel is for back of panel mounting Both series are fastened by 4 screws. Constructed of highestquality parts for excellent service.

Overall sizes: H Series, $37 / 16 \times 39 / 16 \times 31 / 2^{\prime \prime} ; ~ S F$ Series, $23 / 4 \times 31 / 16 \times 25 / 8^{\prime \prime}$. Underwriters' Laboravolts, 60 cycle AC. Shpg, wt., $11 / 2$ lbs.
repetition of time cycle under continuous, industrial use. All gear and rack assemblies in the listing below are of standard construction to permit changing overall time cycle simply by changing the gear and rack assembly.
The SPDT switch is totally enclosed and dustproof. Contacts are rated 10 amperes at 115 $21 / 4 \times 211 / 16 \times 31 / 16^{\prime \prime}$. For operation from $110-120$ volts, 60 cycle AC .
HOW TO ORDER: Simply locate overall time cycle desired in the table below and order both the gear and rack assembly and the CM chassis-mounted foundation unit indicated.
Av. shpg. wt., complete, 4 lbs .

ASSEMBLIES

| Stock No. | Mif's <br> Type | Max. <br> Time Cycle | NET EACH |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  |  | 1-3 | 4-5 | 6-11 | 12-24 | 25-49 |
| 78 B 485 | H-15S | 15 seconds |  |  |  |  |  |
| 78 B 486 | H-1M | $\frac{1}{3}$ minute |  |  |  |  |  |
| 78 B 487 | H-3M | 3 minutes | 22.00 | 20.90 | 19.8 | 18.7 | 17.60 |
| 78 B 488 | H-5M | 5 minutes |  |  |  |  |  |
| 78 B 481 78 B 482 | SF-15S | 15 seconds |  |  |  |  |  |
| 78 B 482 78 B 483 | SF-1M SF-3M | ${ }_{3} 1$ minute | 19.00 | 18.05 | 17. | 16.1 | 5.20 |
| 78 B 484 | SF-5M | 5 minutes |  |  |  |  |  |


| Stock No. | Mfr's Type | Maximum TimeCycle | NET EACH |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: |
|  |  |  | 1-3 | 4-5 | 6-11 |
| 78 B 473 | P-4R | 15 sec . |  |  |  |
| 78 B 474 | $\mathrm{P}-1 \mathrm{M}$ | 1 min . |  |  |  |
| 78 B 475 | P-3M | 3 min . | 27.00 | 25.65 | 24.30 |
| 78 B 476 | P-5M | 5 min . |  |  |  |

## SERIES S SIGNALING TIMER

E Motor-driven manual-set timer with 2 AC E outlets. Designed to give visual and audible signal at completion of selected time interval Setting timer for any part of time cycle lights
lamp and powers one outlet. lamp and powers one outlet
On completion of cycle, lamp is turned off, a buzzer sounds, and a 10 ampere single-pole double-throw switch transfers power to the other outlet. Buzzer sounds until turned off manually or timing interval is again started. Overall size, $5 \times 5 \times 3^{\prime \prime}$. Durable metal case. Supplied complete with AC cord. For operation from 110-120 volts, 60 cycle AC. Shpg. wt., 3
lbs. For quantity prices in lots of 12 or more, lbs. For quantity prices in lots of 12 or more
write or phone Allied's Industrial Division.
78 B 477. S-1 H. 1-hr. max. cycle.
78 B 478. S-3H. 3-hr. max. cycle. 24.00


## SERIES PAB INSTANT RESET TIMERS

回
Extremely accurate automatic reset timers F designed specifically for heavy-duty use in industrial process control applications. Feature instant reset adjustment. Electrically operated clutch drives actuating arm to dial setting
selected and automatically releases. Spiral selected and automatically rel
spring resets arm in split second.
Output terminals can be wired for circuit transfer applications. Switch contacts rated 15 amps at 115 volts AC with non-inductive load. Metal enclosure has $1 / 2^{\prime \prime}$ knockouts for use with rigid or flexible conduit. $7 \times 5 \times 4^{\prime \prime}$. For $110-120$ v., 60 cycle AC. Shpg. wt., 4 lbs. For quantity prices in lots of 12 or more, write or phone Allied's Industrial Division.
78 B 489. PAB-60S. 1-min. max. cycle, 78 B 491 PAB-60M. 30-min. max. cycle. $1-3$, NET EACH.
$4-5$, EACH. . 43.2 $4-5$, ЕАСН. . 43.23 . $6-11$, ЕАСА

## RELIANCE HEAVY-DUTY TIME SWITCHES



## TYPE W-30 AMP

Model W-22. Completely automatic electric time switch. Ideal for control of apartment lights, water heaters, etc. Convenient manual switching will not interfere with automatic operation. Minimum "ON" period, $1 / 2 \mathrm{hr}$; motor. Snap-action syilver-to-silver contacts; motor. Snap-action silver-to-silver contacts; spring-temper, phosphor-bronze blades. DP $1 / 2^{\prime \prime}$ and $3 / 4^{\prime \prime}$ knockouts in bottom, sides and back. Indoor cabinet for wall mounting. Hammerloid enamel finish. Size: $4 \times 7 \times 4^{\prime \prime}$ deep. U.L. Approved. For 110-125 v., 60 cycle AC. Neutral tap for 3 -wire, 250 v. circuits. Wt., 5 lbs. 10.62
Model W-33. As above but DP, 2-circuit throw. Equal to two SP time switches in one. Will control 2 separate circuits independently or simultaneously 8 different combinations of 2-circuit control; may be set to operate both circuits simultaneously as a DPST switch.
78 B 391 . List, $\$ 20.00$. NET..................................
232
13.72

## "BADGER" 50 AMP

Model M1. Heavy duty time switch for dependable control of substantial loads. Self-starting, synchronous motor maintains accurately timed intervals. Automatically controls on and oif periods of illuminated billboards, flood lights; air conditioning units, etc. $231 / 2$ hours. Can be period, $1 / 2$ hour; maximum, $231 / 2$ hours. Can be switched on or of manualy if cycle without interfering with automatic operation. Plunger action, copper-tocopper SPST contacts. Contacts rated at 50 A at 120 to 240 v . Steel cabinet, 18 gauge. Cabinet finished in Hammerloid enamel. Has $3 / /^{\prime \prime}$ and $1^{\prime \prime}$ knockouts in bottom, sides, and back. U.L. Approved. For $110-125$ v., 60 cycle AC. Size: $51 / 2 x$ $10 \times 41 /{ }^{\prime \prime}$ deep. Shpg. wt. 101 lbs .
.15 .09
Model M2. Same as above except switch has DPST contacts. Neutral tap for 3 -wire, $240-\mathrm{v}$ circuits.
78 B 393. List, $\$ 24.00$. NET.

# Industrial-Type Time Switches 

## TORK SWITCHES—INTERVAL TIMERS



4100


948

MODEL 4100 "HOURMASTER"
Here's a highly versatile, heavy-duty, SPST, time switch. "Provides up to 24 hourly "on", cycles. Each "on" cycle may be accurately set in $1-\mathrm{min}$. intervals for durations from 2 to 55 minutes. Can operate every 1, 2, 3, 4, 6,12 , or curing, well pumping, lawn sprinkling, etc. Contacts rated at 30 amps. Steel case, $81 / 4 \times 5 \times 41 / 4 \prime \prime \prime$
U.L. Approved. For $110-120$ volts, 60 cycle AC. U.L. Approved. For $110-120$ volts, 60 cycle AC. 78 Shpg 295., 5 list.

## 78 B 295. List, $\$ 24.95$. NET

17.58

## MODEL 948 "TORKMASTER"

Automatically turns electrical equipment "on" and 'off', once over a 24 -hour period. Minimum setting of timer is 2 hours. Calibrated in
15 -minute intervals. Switch is single pole with rating of 30 amps. Ideal for window lights, hallways, coal stokers, defrosters, etc. May be opened by hand without disturbing pre-set adjustments. Blue-gray finished steel case with hinged cover. Has Telechron motor; precision gears. $51 / 4 \times 43 / 4 \times 31 / 2^{11}$. U.L. Approved. For $110-$ gears. $51 / 4 \times 43 / 4 \times 3 / 2{ }^{2} \cdot$ Uh.L. Approved.
$120 \mathrm{v} ., 60 \mathrm{cycle}$ AC.
78 B 308 . List, $\$ 11.95$. NET., 3 lbs.
7.77

## MODEL 7DI191 "SEVEN DAY"

Similar to 1191 "Little Giant" (center, above) but with dial calibrated to revolve once a
week. Provides automatic control for each day or any combination of days. Permits different "on" and "off" times for each day. Minimum setting 2 hours. With conduit knockouts. $81 / 4 x$ $5 \times 41 / 4^{\#}$. U.L. Approved. For $110-120$ v., 60 cycle AC. Shpg. wt. 5 lbs.
78 B 296. List, $\$ 24.95$. NET.
16.22


7D1191

## MODEL 1191 "LITTLE GIANT"

Automatically turns electrical equipment "on and off" at any pre-set time, once every 24 hours. For use in stores, offices and homes. On-off dial calibrated in 15 minute intervals. 45 minutes required between settings. Handles 35 amps at up to 3500 watts lighting load ( 4000 watts heating load) or 1 h.p. single phase motor. Manual operation if desired. Accurate, dependable clock motor. Heavy-duty, lug-type terminals take up to \#6 wire, Stee Approved. For operation from $110-120$ volts, 70 cycle AC. Shpg. wt., 5 lbs. $\qquad$ .9 .07

## MODEL 1191SK "SKIP-A-DAY"

(Not illustrated). Similar to above, but designed for use where "skipping"' of 1 to 6 days a week is desired. Features 7 -spoke "calendar wheel" in addition to 24 -hour dial for excellent versatility. Size of steel case, $81 / 4 \times 5 \times 41 / 4^{\prime \prime}$. U.L. Approved. For operation from $110-120$ volts, 60 cycle AC. Shpg. wt., 5 lbs
78 B 297. List, $\$ 17.95$. NET
. II. 67

## MODEL 1963 "3-POLE"

(Not illustrated). Heavy-duty timer designed for controlling three-phase power and lighting loads. Ideal for industrial applications. Has dial calibrated to provide same time intervals as Model 1191 listed above. 3-pole single-throw switch has a capacity of 7500 watts $(2500$ watts per pole); each pole can handle 25 amperes. 60 cycle AC. Shpg. wt., 5 lbs.
18.17


919


8001
MODEL 919 PORTABLE PLUG-IN
Portable, 24-hour, plug-in time switch o 1 antomatic. Operates air etc. "On" 'ime can be set for periods from 45 minutes to 23 hours, 15 minutes, in 15 -minute intervals. On-off levers for manual use. Capacity, 10 amps, 1100 watts. Size, $51 / 2 \times 41 / 4^{\prime \prime}$. U.L. Approved. For $110-120$ v., 60 cycle AC.
Shpg. wt., $31 / 4 \mathrm{lbs}$.

78 B 304 . List, $\$ 13.95$. NET. . . . . . . . . 9.07 Model 1919G. As above, but can control $3 / 4$ or 1 -ton air conditioner having 3 -prong plug.
78 B 360 . List, $\$ 19.95$. NET........... 2.97 Extra Trippers. For above. Pair, 3 oz . $.35 ¢$

## MODEL 8001 PROGRAM TIMER

Highly versatile unit provides almost any desired timing combination of intervals which are multiples of 15 minutes in duration. Combination of intervals repeats every 24 hours. Timer has a total of 96 tabs. When a tab is tilted into position, timer is "on" for 15 min utes each day. If an adjacent tab is tilted in, the timer will be "on'" for 30 minutes. Thus, the timer is "on" during various intervals that are multiples of 15 minutes and which are separated by "off" periods that also are multiples of 15 minutes. Since they are an integral part of the dial, there is no time loss between adjacent tabs.
Timer has 10 -amp single-pole switch. $81 / 2 \times 4 \mathrm{x}$ $41 / 2^{\prime \prime}$. U.L. Approved. For operation from 110120 volts, 60 cycle AC. Shpg. wt., 5 lbs. 17.52

INTER-MATIC TIME SWITCHES


## "SKIPPER" TIME SWITCHES

Permits "'skipping" control cycle. Has 2 dials: a time dial and a day dial. To skip any days, small skipping screws are inserted into the day time dial. Special "cutout" tripper ad set in the the day dial every 24 hours. Up to 12 on and off operations per day can be obtained by adding extra "on and off" trippers. Range: minimum "on" or "off"' time, 1 hour; maximum, 23 hours. Switch may be operated manually, Automatic reset resumes time cycle. Silver contacts are rated 35 amps at 125 volts ( 4000 watts). Steel case; gray finish. With three skipping screws, one on-cutout and one off tripper and instructions. Air conditioner, etc. plugs into unit; unit plugs into electrical outlet. $73 / 4 \times 5 \times 3^{\prime \prime}$.
U.L. Approved. For $110-120$ volts, 60 cycle AC. U.L. Approved. For $\mathbf{1 1 0 - 1 2 0}$ volts, 60 cycle AC. Shpg. wt., 4 lbs.
Type T171. SPST.
78 B 315 . List $\$ 17.95$. NET. . . . . . . . . $\|$. 67
Type 173. DPST.
78 B 316. List, \$19.95. NET. . . . . . . . . 12.97
Type T175. SPDT.
78 B 317. List, $\$ 19.95$. NET. . . . . . . . 12.97
TRIPPERS AND SKIPPING SCREWS Type 107T19A. On-Cutout Trippers. Replacement for" Skipper" types only. 3 oz . 20C Type 79T2. Skipping Screws. For 'Skipper" types only. Shpg. wt., 8 oz. 78 B 388. Pkg. of 3, EACH PKG ........l| $2 \phi$ Type 107T8A. Set of "On and Off" Trippers. For all Inter-Matic switches (except T185). 78 B324. NET PER SET


P101

## TYPE T101 TIME SWITCH

Inter-Matic SPST time switch turns equipment "on'" and "off' once in 24 hours. With extra trippers (see bottom of left column) will operate up to 12 times a day. Trippers can be added without removing the dial. Minimum time between settings is 1 hour. Manual operation does not interfere with settings. 35 amp contacts will handle a 4000 watt load at 125 v ., 60 cyc. Gray steel case with knockouts. Size, $5 \times 3 \times 7{ }^{7 / 8}$ ". U.L. Approved. For $110-120$ volts, 60 cycle AC. Shpg. wt., 4 lbs.
78 B 322 . List, $\$ 11.95$. NET.
7.77

Type T103. As above, but DPST.
78 B 321 . List, $\$ 13.95$. NET....
.9 .07
Adapter Kit. Handy adapter kit makes the above units portable. Consists of 6 ft . cord, plug, etc. 15 amperes. Shpg. wt., 1 lb .
1.12

## TYPE PIO1 TIME SWITCH

Portable type, SPST plug-in time switch. Simple to install. Improved version carries a much heavier load than earlier models. Will handle any appliance that plugs into regular outlets. Provides many uses in the shop, on-off operations per day. Minimum "on" or "off" time, 1 hr .; maximum, 23 hrs . Controls lamps, signs, electric roasters, radios, TV sets, communications equipment, etc. Precisionbuilt. Finest quality materials. Can be used with up to twelve extra trippers. May also be manually operated. Capacity: 10 amps at 125 volts. $5 \times 3 \times 77 / 8^{\prime \prime}$. U.L. Approved. For $110-120$ v., 60 B 314 . List, $\$ 13.95$. NET. . .
9.07


T185


## TYPE T185 TIME SWITCH

Versatile switch that provides up to 14 "onoff"' cycles. Each cycle is independently controlled and can vary from 5-60 min. Minimum interval between cycles, $13 / 4 \mathrm{hrs}$. Can be used as SPST normally open; SPST normally closed; or SPDT. Perfect for applications requiring more than one "on-off" cycle in a 24 -hour. period. Rated $35 \mathrm{amps}, 125 \mathrm{v} ., \mathrm{AC}$. With 3 U.L. Approved. For $110-120$ volts, 60 cycle AC.

Shpg. wt., 4 lbs.
78 B 3 I 3 . List, $\$ 17.95$. NET.
T. . . .

Extra Trippers. For above. 4 oz .
78 B 336. NET EACH.
.II. 67

## TYPE T965 TIME SWITCH

Program timer for up to " 96 ,operations in a 24 hour period. Minimum "on" or "off" period is 15 minutes. Can be used for 24 hour control of heating, ventilating and air conditioning systems. Ideal for programming ind ustrial music systems. Easily set by depressing trippers located on dial face. Trippers are permanently attached-cannot be misplaced. Large terminal screws on bakelite board allow easy hookup.
Switch is SPST type, rated 20 amps. Will reSwitch is SPST type, rated 20 amps. Wimg cycles without resetting. Synpeat timing cycles without resetting. Synchronous motor is low speed, high torque type.
$77 / 8 \times 5 \times 3^{\prime \prime}$. U.L. Approved. For $110-120 \mathrm{v}$., 60 $77 / 8 \times 5 \times 3^{\prime \prime}$. U.L. Approved. For $110-120$ v., 60
cycle AC. Shpg. wt., 3 lbs.
78 B 395 . List $\$ 37.50$. NET. . . . . . . 24.38
Type T966. For 210-250 v., 60 cycle AC.
78 B 396. List, $\$ 38.50$. N ET........... 25.03

## Clock Timers and Foot Switch

 controls permits selecting manual "on" and "off" operation; or automatic turning on of the "sleep switch." $3 / 16^{\prime \prime}$ holes $33 / 16$ inches apart. U.L. approved. For $110-120 \mathrm{v} ., 60$ cycle only. Wt., 2 lbs . 78 B 363. NET.


## MODEL A-211 "TIME-ALL"

Time control switch for office, store or home. Excellent for controlling lights or appliances, etc. Has manual control with automatic reset. Turns lights "on" and "off" at preset times-gives house a "lived in"' look to discourage prowlers while owners are out or away on a vacation.
Min. 'on' time, 15 min.; max., 23 hrs., 45 min. AC outlet for equipment to be controlled. Size, $5 \times 4 \times 21 / 2^{\prime \prime}$. Handles 15 amps, 1650 -watt load. With 6 -ft. cord, plug, instructions. For $110-120$ v., 60 cycle AC. Shpg. wt., 2 lbs.
78 B 311 . List, \$11.95. NET......... 7.97
Model A-221. As above, but handles 7 amps, 875 watts. Shpg. wt., 2 lbs.
78 B 397. List, \$9.95. NET.
6.64

## MODEL RC2021-4 SWITCH

A Automatically turns on radios, television sets, toasters, and other electrical de-vices-at any preset time within a 12 -hour period. Also serves as an accurate, highly attractive timepiece. An excellent musical alarm. May be installed in a small case with an AC outlet and line cord. All controls, off-automatic-on, time adjust and timer set, conveniently located on chrome outer dial face. Easy to install. Requires $31 / 2^{\prime \prime}$ diameter hole; overall size, $31 / 2 \times 31 / 2 \times 1{ }^{15} / 1^{\prime \prime}$ deep. Built-in single-pole switch handles appliances drawing up to 15 amps. 1650 -watt load. Mounting centers, $3^{13} / 1^{\prime \prime}$. U.L. Approved. For operation from $110-120$ volts, 60 cycle AC. Shpg. wt., 1 lb.
78 B 399. List, \$9.00. 1 to 5, NET... 6.44
6 or More, EACH . . . . . . . . . . . . . . . . . . . 5.93

## MODEL T-1101 "LAMP-LYTER"

(B) Electrical time switch for flush-mounttimed "on" and "off" cycle for controlling lights, heaters, hi-fi, or appliances automatically. Min. "on', time, 15 min.; max., $233 / 4$ hours. Can be switched "on" or "off"; manually; timed cycle resumes automatically. SPST switch rated 15 amps, 1650 watts. $61 / 2 \times 61 / 2 \times 2^{13} / 16^{\prime \prime}$. Beige finished door has concealed hinges; magnet holds door closed. Requires $5 \times 5^{\prime \prime}$ cutout. For 110-120 v., 60 cycle AC. Shpg. wt., 4 lbs.

78 B 398. List, \$21.95. NET
14.27

## MODEL A-401 "CLOCK-TIMER"

CCombination clock and switch. For automatically turning appliances "on" and "off" at preset times. Min. "on" time, $1 / 4$ hour; max., $51 / 2$ hours. SPST switch rated $15 \mathrm{amps}, 1650$ watts. AC receptacle for plugging in appliances. Green plastic case. 6 -ft. cord and plug. $41 / 2 \times 43 / 4 \times 21 / 4^{\prime \prime}$. U.L. Approved. For 110-120 v., 60 cycle AC. Shpg. wt., 2 lbs.
78 B 343. List, \$11.95. NET.
9.38

## MODEL A-301 "TIME-MINDER"

(D) Combination electric clock and signal timer. Can be set to time any pre-set interval from 1 min . to 4 hrs . Pleasant toned buzzer sounds at end of interval and keeps going until turned off manually. An excellent signalling device. Timer is accurate within seconds and easily set with large, easy-to-read pointer. Spruce green plastic easy-to-read pointer. Spruce green plastic
case. Clock and timing interval are both set from front panel. No installation is neces-sary-just plug the timer in and it's ready to go. U.L. Approved. Has 6 - ft . cord and plug. Size, $41 / 2 \times 43 / 4 \times 21 / 4^{\prime \prime}$. For operation from 110-120 v., 60 cycle AC. 2 lbs. 78 B 342. List, \$8.95. NET..
.7 .03
controlled device at a preselected time within a 12 -hour period. Automatic operation can also be employed with a signal alarm sounding 10 minutes after "on cycle" begins. This feature is excellent for use with a radio to "wake-up-to-music." The other switch control permits selecting a definitely timed on cycle of up to one hour duration-can be used with radio as

Excellent for mounting in present cabinets. Converts any AC operated radio to a modern clock radio. An ideal service replacement for clock radios. Can be mounted in a small case with an AC outlet for portable use. Outer dial ring and sweep second hand are of highly polished brass. Numbers are etched in brown on outer dial. Dial face is finished in soft ivory with matching brown minute and hour hands. Time-adjust and alarm set are selected with $3^{\prime \prime}$ long control on rear of clock. Rugged low speed motor is silent in operation. Outer brass bezel is $3^{1 / 2}$ inches square. Four mounting studs built on for ease of installation. Requires four
5.49

## INTERMATIC CLOCK TIMERS

## general (\%) electric

## TELECHRON CLOCK-TIMER

- Electric Clock and Automatic Time Switch
- Turns on Radio, TV, Etc. at Preset Time
- Complete with Knobs and Brass Bezel An exceptional value in a famous-name, combination electric clock and automatic time switch. Consists of a highly accurate clock with a built-in, single-pole, singlethrow switch rated 15 amperes at 125 volts AC. Two easy-to-operate switch controls are conveniently located asy-to-operate switch controls are conveniently located the outer edge of the clock dial. Switch can be used for versatile control of an AC radio or any appliance such as
minates clock watching and button pushing. Program schedules can easily be set or changed by inserting pins in desired time slots of 24 -hour mechanism. Program disks have 288 time slots-permit actuating disks have 288 time slots-permit actuating
signal at up to 5 minute intervals. Duration signag at up to 5 minute intervals. Duration
of fignal is adjustable from 4 to 20 seconds. Program mechanism is automatically set to correct time by turning the clock handsassures perfect synchronization. Switch for silencing of signals during any days or nights of the week. Single-circuit timer contacts rated at 10 amperes. Gray enameled steel case. $11 \times 8 \times 4^{\prime \prime}$. For $110-120$ volts, 60 cycle AC. Shpg. wt., 12 bs.
78 BX 351. \$8.77 Down. NET.
87.71

TORK 2925-P INTERVAL TIMERS


Interval timers for automatic timed operation of elec trical appliances rated up to 1650 watts. Can be set for any time interval up to the maximums shown below Ideal for timed con trol of such appli ances as cookers roasters, waffle irons, sun lamps, coffee makers, etc. Setting pointer to desired time closes SPST 15 ampere switch and starts interval-when time has elapsed, switch opens automatically. Built-in AC receptacle. White enamel finish. With cord and plug. $41 / 2 \times 31 / 2 \times 3^{\prime \prime}$. U.L. Approved. For 110-120 v., 60 cycle AC. Shpg. wt., 2 ibs.
Model 2925-4P. Max. setting, 4 hrs.
78 B 347. List, \$15.95. NET.... . .
10.36

MONTGOMERY PROGRAM CLOCK


Model M-24. Ideal for schools, industrial and service organizations. Provides dependable automatic control and operation of buzzers, bells or horns, on a 24 -hour schedule. Permits manual operation at any time for special program schedules, special program schedules, alarm, without affecting alarm, without affecting
accuracy of preset sched.

Model 2925-12P. Max. setting, 12 hours.
78 B 348. List, $\$ 15.95$. NET. . . . . . 10.3
Model 2925-24P. Max. setting, 24 hours.
78 B 349. List, \$15.95. NET. . . . . . . 10.3
Model 2925-IP. Max. setting 1 hour.
78 B 362. List, \$15.95. NET.
10.36
"SWITCHMAT" STEP-ON SWITCH

"Announcemat" Chime Alarm. Low-cost, practical alarm system for stores, offices, homes and industry. Signals the presence of visitors or intruders. Even the step of a small child on any part of the Switchmat sounds the alarm. Rugged Switchmat is $5 / 16^{\prime \prime}$ thick, heavily ribbed brown vinyl plastic. Completely protected-sealed between layer of plastic and rubber. Resistant to cleaning and sweeping compounds, oils, acids and most chemicals. Lies completely flat on floor most chemicals. Lies completely fat on foor floors. No installation problems-simply plugs into wall outlet. Can be quickly and safely installed by anyone. Switchmat operates on extremely low voltage supplied by transformer which is included.
Complete with $18 \times 30^{\prime \prime}$ commercial-type Switchmat, transformer with $6-\mathrm{ft}$. cord and plug, $25-\mathrm{ft}$. low-voltage cable and chime signal alarm. For 110-120 v., 60 cycle AC. Shpg. wt., 13 lbs.
78 BX 358. \$2.40 Down. NET..... 23.96


## STANDARD CHASSIS BASES

High-quality, sturdily constructed chassis bases. Available in zinc-plated and black-wrinkle steel, and lightweight aluminum types. Carefully formed, onepiece construction; corners are reinforced and spot-welded. The four sides are folded at the bottom to provide additional strength; bottom fold also permits easy addition of bottom plate. Aluminum types are spot-welded with government approved equipment; same as used for welding aluminum aircraft parts. Steel chassis gauges: *No. 22; $\dagger$ No. 20; $\$$ No. 18. Aluminum chassis gauges (aluminum gauge): $\ddagger$ No. 18; ${ }^{* *}$ No. $16 ; \dagger \dagger$ No. 14. Less bottom plates.


| H.W.D. Inches | Black-Wrinkle Steel |  |  | $\begin{aligned} & 1-24 \\ & \text { EA. } \end{aligned}$ | $\begin{aligned} & 25-49 \\ & \text { EA. } \end{aligned}$ | $\begin{gathered} \text { 50-99. } \\ \text { EA. } \end{gathered}$ | H.W.D. Inches | Zinc-Plated Steel |  |  | $\begin{aligned} & 1-24 \\ & E A . \end{aligned}$ | $\begin{aligned} & 25-49 \\ & \text { EA. } \end{aligned}$ | $\begin{aligned} & 50-99 \\ & \text { EA. } \end{aligned}$ |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | Stock No. | Type | Lbs. |  |  |  |  | Stock No. | Type | Lbs. |  |  |  |
| 2x7x5 | 80 P 456 | CB-628* | 1 | 1.05 | 94 | 84 | 2x7x5 | 86 P 277 | CB-629* | 11/4 | 1.27 | 1.15 | 1.02 |
| $21 / 2 \times 91 / 2 \times 5$ | 80 P 457 | CB-644* | $13 / 4$ | 1.34 | 1.21 | 1.08 | $21 / 2 \times 91 / 2 \times 5$ | 86 P 905 | CB-645* | $11 / 2$ | 1.64 | 1.47 | 1.31 |
| $11 / 2 \times 91 / 2 \times 5$ | 80 P 458 | CB-788* | 1 | 1.18 | 1.06 | . 94 | $11 / 2 \times 91 / 2 \times 5$ | 86 P 906 | CB-776* | $11 / 4$ | 1.66 | 1.49 | 1.32 |
| $3 \times 10 \times 5$ | 80 P 459 | CB-604* | $11 / 4$ | 1.24 | 1.12 | 1.00 | 3x10x5 | 86 P 271 | CB-605* | $11 / 2$ | 1.80 | 1.63 | 1.44 |
| $3 \times 14 \times 6$ | 80 P 460 | CB-755 $\dagger$ | 13/4 | 1.71 | 1.55 | 1.37 | 3x14x6 | 86 P 907 | CB-756 $\dagger$ | 2 | 2.01 | 1.81 | 1.61 |
| $2 \times 7 \times 7$ | 80 P 461 | CB-789 $\dagger$ | $11 / 2$ | 1.18 | 1.06 | . 94 | 2x7x7 | 86 P 272 | CB-1191 $\dagger$ | $13 / 4$ | 1.47 | 1.32 | 1.18 |
| $2 \mathrm{x} 9 \times 7$ | 80 P 462 | CB-790* | $11 / 2$ | 1.37 | 1.23 | 1.10 | $2 \times 9 \times 7$ | 86 P 273 | CB-1192* | $13 / 4$ | 1.56 | 1.40 | 1.24 |
| 2x11x7 | 80 P 463 | CB-791* | $11 / 2$ | 1.42 | 1.28 | 1.14 | 2x11x7 | 86 P 274 | CB-1193 $\dagger$ | $13 / 4$ | 1.64 | 1.47 | 1.31 |
| $3 \times 12 \times 7$ | 80 PX 464 | CB-792† | 13/4 | 1.54 | 1.38 | 1.23 | 3x12x7 | 86 P 275 | CB-793 $\dagger$ | 2 | 2.01 | 1.81 | 1.61 |
| $2 \times 13 \times 7$ | 80 PX 465 | CB-646 $\dagger$ | 2 | 1.51 | 1.36 | 1.21 | $2 \times 13 \times 7$ | 86 P 276 | CB-1194 $\dagger$ | 21/4 | 1.88 | 1.70 | 1.51 |
| $21 / 2 \times 131 / 2 \times 5$ | 80 PX 466 | CB-647† | $13 / 4$ | 1.73 | 1.56 | 1.39 | $21 / 2 \times 131 / 2 \times 5$ | 86 P 908 | CB-1198 $\dagger$ | 2 | 2.13 | 1.91 | 1.71 |
| $3 \times 15 \times 7$ | 80 P 467 | CB-649 $\dagger$ | 2 | 1.96 | 1.76 | 1.57 | $3 \times 15 \times 7$ | 86 PX 909 | CB-1189 $\dagger$ | $21 / 4$ | 2.35 | 2.12 | 1.88 |
| $3 \times 15 \times 81 / 2$ | 80 P 468 | CB-665 $\dagger$ | $21 / 2$ | 2.20 | 1.98 | 1.75 | $3 \times 15 \times 81 / 2$ | 86 PX 910 | CB-666 $\dagger$ | 23/4 | 2.66 | 2.39 | 2.13 |
| $3 \times 17 \times 4$ | 80 P 469 | CB-1068 $\dagger$ | $21 / 4$ | 1.76 | 1.59 | 1.41 | $3 \times 17 \times 4$ | 86 PX 911 | CB-1066 ${ }^{+}$ | $21 / 2$ | 2.10 | 1.89 | 1.68 |
| $21 / 2 \times 17 \times 7$ | 80 PX 470 | CB-648 $\dagger$ | $21 / 2$ | 1.95 | 1.75 | 1.56 | $21 / 2 \times 17 \times 7$ | 86 PX 912 | CB-1199 $\dagger$ | $23 / 4$ | 2.32 | 2.09 | 1.86 |
| $3 \times 17 \times 7$ | 80 P $\times 471$ | CB-757t | $13 / 4$ | 2.11 | 1.90 | 1.69 | $3 \times 17 \times 7$ | 86 PX 913 | CB-758 $\dagger$ | 2 | 2.54 | 2.28 | 2.03 |
| $21 / 2 \times 10 \times 8$ | 80 PX 472 | CB-701 $\dagger$ | 2 | 1.69 | 1.52 | 1.35 | 21/2×10×8 | 86 P 914 | CB-702 $\dagger$ | 21/4 | 1.98 | 1.78 | 1.59 |
| $21 / 2 \times 12 \times 8$ | 80 PX 473 | CB-703 $\dagger$ | $21 / 2$ | 1.71 | 1.55 | 1.37 | $21 / 2 \times 12 \times 8$ | 86 P915 | CB-704 $\dagger$ | $23 / 4$ | 2.20 | 1.98 | 1.75 |
| $3 \times 12 \times 8$ | 80 P 474 | CB-759 $\dagger$ | $13 / 4$ | 1.81 | 1.64 | 1.45 | $3 \times 12 \times 8$ | 86 P 916 | CB-760 $\dagger$ | 2 | 2.29 | 2.07 | 1.83 |
| $2 \times 17 \times 8$ | 80 P X 475 | CB-650 $\dagger$ | $21 / 2$ | 1.67 | 1.50 | 1.33 | 2x17x8 | 86 PX 917 | CB-774 $\dagger$ | 23/4 | 2.29 | 2.07 | 1.83 |
| $3 \times 17 \times 8$ | 80 PX 476 | CB-651 $\dagger$ | $31 / 4$ | 2.01 | 1.81 | 1.61 | 3x17x8 | 86 PX 918 | CB-775 $\dagger$ | $31 / 2$ | 2.57 | 2.31 | 2.06 |
| $3 \times 12 \times 10$ | 80 P 477 | CB-652 $\dagger$ | 3 | 1.85 | 1.67 | 1.48 | $3 \times 12 \times 10$ | 86 P 919 | CB-1195 $\dagger$ | $31 / 4$ | 2.20 | 1.98 | 1.75 |
| $3 \times 14 \times 10$ | 80 P 478 | CB-653 $\dagger$ | 4 | 2.00 | 1.80 | 1.60 | $3 \times 14 \times 10$ | 86 P920 | CB-779 ${ }_{\text {C }}$ | 41/4 | 2.39 | 2.16 | 1.91 |
| $2 \times 17 \times 10$ | 80 PX 479 | CB-654 $\dagger$ | $31 / 4$ | 1.96 | 1.76 | 1.57 | 2x17x10 | 86 PX 278 | CB-769 $\dagger$ | $31 / 2$ | 2.34 | 2.11 | 1.87 |
| $3 \times 17 \times 10$ | 80 PX 480 | CB-636 $\dagger$ | 4 | 1.96 | 1.76 | 1.57 | $3 \times 17 \times 10$ | 86 PX 921 | CB-1196§ | $51 / 2$ | 2.99 | 2.69 | 2.39 |
| $3 \times 17 \times 10$ | 80 PX 481 | CB-6558 | 5 | 2.49 | 2.24 | 1.99 | $3 \times 17 \times 10$ | 80 PX 385 | CB-637t | 4 | 2.78 | 2.51 | 2.22 |
| $3 \times 23 \times 10$ | 80 PX 482 | CB-656§ | $51 / 2$ | 2.80 | 2.52 | 2.24 | $3 \times 23 \times 10$ | 86 PX 922 | CB-1197§ | 6 | 3.35 | 3.02 | 2.69 |
| 2x17x11 | 80 PX 483 | CB-657§ | $41 / 2$ | 2.30 | 2.08 | 1.84 | 2×17x11 | 86 PX 923 | CB-770§ | $43 / 4$ | 2.75 | 2.48 | 2.20 |
| $3 \times 17 \times 11$ | 80 PX 484 | CB-6588 | $41 / 2$ | 2.71 | 2.44 | 2.18 | 3x17x11 | 86 PX 266 | CB-771§ | $43 / 4$ | 3.42 | 3.08 | 2.73 |
| $2 \times 17 \times 12$ | 80 PX 485 | CB-663§ | $41 / 2$ | 2.39 | 2.16 | 1.91 | 2×17×12 | 86 PX 925 | CB-661§ | $43 / 4$ | 3.03 | 2.72 | 2.42 |
| $3 \times 17 \times 12$ | 80 PX 486 | CB-6648 | $51 / 4$ | 2.85 | 2.57 | 2.28 | $3 \times 17 \times 12$ | 86 PX 268 | CB-662§ | $53 / 4$ | 3.60 3.65 | 3.23 | 2.88 |
| $2 \times 17 \times 13$ | 80 PX 487 | CB-659§ | 5 | 2.85 | 2.57 | 2.28 | 2×17x13 | 86 PX 269 | CB-7728 | $51 / 2$ | 3.65 | 3.28 | 2.92 |
| $3 \times 17 \times 13$ | 80 PX 488 | CB-6608 | 51/2 | 3.34 | 3.01 | 2.67 | $3 \times 17 \times 13$ | 86 PX 270 | CB-773§ | 6 | 3.99 | 3.59 | 3.19 |
| $4 \times 17 \times 10$ | 80 PX 489 | CB-640§ | $61 / 2$ | 2.86 | 2.58 | 2.29 | $4 \times 17 \times 10$ | 86 PX 926 | CB-641§ | 7 | 3.44 | 3.10 | 2.75 |
| $4 \times 17 \times 13$ | 80 PX 490 | CB-6428 | $71 / 2$ | 3.84 | 3.46 | 3.08 | $4 \times 17 \times 13$ | 86 PX 927 | CB-643§ | 8 | 4.59 | 4.13 | 3.67 |
| $5 \times 17 \times 10$ | 80 PX 491 | CB-6238 | $71 / 2$ | 4.42 | 3.98 | 3.54 | $5 \times 17 \times 10$ | 86 PX 928 | CB-624§ | 8 | 5.23 | 4.71 | 4.18 |
| $5 \times 17 \times 13$ | 80 P× 492 | CB-625§ | 8 | 4.83 | 4.35 | 3.86 | $5 \times 17 \times 13$ | 86 PX 929 | CB-6268 | 81/2 | 5.81 | 5.23 | 4.65 |


| $\begin{gathered} \text { Size } \\ \text { Inches } \end{gathered}$ | Stock No. | Mirs. Type | Wt. Lbs. | $\begin{gathered} 1-24 \\ \text { EA. } \end{gathered}$ | $\begin{gathered} 25-49 \\ \text { EA. } \end{gathered}$ | $\begin{gathered} \text { 50-99 } \\ \text { EA. } \end{gathered}$ | Size <br> Inches | Stock No. | Mfrs. <br> Type | Wt. Lbs. | $\begin{gathered} \text { 1-24. } \\ \text { EA. } \end{gathered}$ | $\begin{gathered} 25-49 \\ \text { EA. } \end{gathered}$ | $\begin{gathered} \text { 50-99 } \\ \text { EA. } \end{gathered}$ |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 2x6x4 | 86 P 930 | AC-431 $\ddagger$ | 3/4 | 1.08 | . 97 | . 86 | 3x17x7 | 86 PX 938 | AC-423** | 11/4 | 2.69 | 2.43 | 2.16 |
| 2x7x5 | 86 P 112 | AC-402 $\ddagger$ | 3/4 | 1.15 | 1.03 | . 92 | $3 \times 12 \times 8$ | 86 P939 | AC-424** | $13 / 4$ | 2.37 | 2.14 | 1.90 |
| $2 \times 91 / 2 \times 5$ | 86 P 113 | AC-403 $\ddagger$ | 3/4 | 1.22 | 1.10 | . 97 | 2x17x8 | 86 PX 940 | AC-425** | $13 / 4$ | 2.46 | 2.21 | 1.97 |
| $3 \times 6 \times 4$ | 86 P932 | AC-430 $\ddagger$ | $3 / 4$ | 1.31 | 1.19 | 1.05 | $3 \times 17 \times 8$ | 86 P 120 | AC-412** | 2 | 2.78 | 2.51 | 2.22 |
| $3 \times 7 \times 5$ | 86 P 933 | AC-429** | 1 | 1.39 | 1.25 | 1.12 | 3×12×10 | 86 P 121 | AC-413** | 13/4 | 2.62 | 2.35 | 2.10 |
| $3 \times 91 / 2 \times 5$ | 86 P 114 | AC-421 $\ddagger$ | 1 | 1.57 | 1.41 | 1.25 | $3 \times 14 \times 10$ | 86 P941 | AC-414** | 2 | 2.78 | 2.51 | 2.22 |
| $3 \times 10 \times 5$ | 86 P 127 | AC-404 | 1 | 1.60 | 1.44 | 1.27 | $2 \times 17 \times 10$ | 86 PX 942 | AC-415** | $11 / 2$ | 2.63 | 2.36 | 2.10 |
| $3 \times 13 \times 5$ | 86 P934 | AC-422 | 1 | 1.80 | 1.63 | 1.44 | $3 \times 17 \times 10$ | 86 PX 943 | AC-416** | $21 / 4$ | 3.11 | 2.79 | 2.49 |
| $3 \times 17 \times 6$ | 86 PX 935 | AC-433** | $11 / 2$ | 2.62 | 2.35 | 2.10 | 2×17×11 | 86 PX 122 | AC-426 $\dagger$ | $21 / 2$ | 3.35 | 3.02 | 2.69 |
| 2x7x7 | 86 P 115 | AC-405 | 3/4 | 1.32 | 1.20 | 1.06 | $3 \times 17 \times 11$ | 86 PX 123 | AC-417t $\dagger$ | 3 | 3.89 | 3.50 | 3.12 |
| $2 \times 9 \times 7$ | 86 P \|16 | AC-406 | 3/4 | 1.43 | 1.28 | 1.15 | $3 \times 17 \times 12$ | 86 PX 128 | AC-418t $\dagger$ | 3 | 4.00 | 3.60 | 3.19 |
| $2 \times 11 \times 7$ | 86 P 117 | AC-407 $\ddagger$ | 1 | 1.55 | 1.39 | 1.23 | 2x17x13 | 86 PX 944 | AC-419 $\dagger \dagger$ | 23/4 | 3.44 | 3.10 | 2.75 |
| $3 \times 12 \times 7$ | 86 P 118 | AC-408 $\ddagger$ | $11 / 4$ | 1.96 | 1.76 | 1.57 | $3 \times 17 \times 13$ | 86 PX 124 | $\mathrm{AC}-420{ }^{+} \dagger$ | 3 | 4.17 | 3.75 | 3.34 |
| $2 \times 13 \times 7$ | 86 P 119 | AC-409 $\ddagger$ | 1 | 1.64 | 1.47 | 1.31 | $4 \times 17 \times 10$ | 86 PX 125 | AC-427 $\dagger$ | $33 / 4$ | 4.42 | 3.98 | 3.54 |
| $3 \times 15 \times 7$ | 86 PX 936 | AC-411** | $13 / 4$ | 2.62 | 2.35 | 2.10 | $4 \times 17 \times 13$ | 86 PX 126 | AC-428 $\dagger \dagger$ | 4 | 5.15 | 4.64 | 4.13 |
| $3 \times 17 \times 4$ | 86 PX 937 | AC-432** | $11 / 2$ | 2.28 | 2.06 | 1.82 |  |  |  |  |  |  |  |

BOTTOM PLATES FOR CHASSIS RASES

Bottom plates to fit the chassis bases listed above. In zinc-plated or black ipple heavy-gauge steel plate and sturdy, lightweight aluminum for exact matching with chassis. Serve as an effective shielding against dust
and dirt. All bottom plates have four raised bosses in corners to prevent marring and scratching of table-tops or shelves. Drilled for use with No. 6 self-tapping screws.


Aluminum


## Bud Relay Racks and Cabinets



## DELUXE ENCLOSED RACKS

(A) Ruggedly constructed racks. 16-gauge steel with $1 / 8^{\prime \prime}$ panel sup- casters directly to base. All have chassis-type base. Accurately (A) ports. Have sturdy bottom supports which permit fastening drilled and tapped for $19^{\prime \prime}$ panels. Complete with hardware.

| Overall Size | Panel Height | $\begin{aligned} & \text { Mfr's } \\ & \text { Type } \end{aligned}$ | Gray Hammertone | $\begin{gathered} \text { Gray } \\ \text { Wrinkle } \end{gathered}$ | $\begin{aligned} & \text { Black } \\ & \text { Wrinkle } \end{aligned}$ | Wt., Lbs. | NET EACH |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  |  |  |  |  |  | 1-9 | 10-14 | 15-19 |
| $\begin{aligned} & 421 / 16 \times 22 \times 171 / 8^{\prime \prime \prime} \\ & 4756 \times 2 \times 1718{ }^{\prime \prime} \\ & 669562 \times 2 \times 171 / 8^{\prime \prime} \\ & 825 / 6 \times 2 \times 1718^{\prime \prime} \end{aligned}$ | $363 / 4^{\prime \prime}$ $42^{\prime \prime}$ $611 / 4^{\prime \prime}$ $77^{\prime \prime}$ | $\begin{aligned} & \text { CR-1774 } \\ & \text { CR-1771 } \\ & \text { CR-1772 } \\ & \text { CR-1773 } \end{aligned}$ | 88 PZ 503 888 PZ 501 888 PZ 502 | 98 PZ 808 98 PZ 843 98 PZ 844 98 PZ 845 | 86 PZ 819 86 PZ 816 86 PZ 817 86 PZ 818 | 90 95 122 150 | 44.27 50.08 62.69 75.04 | $\begin{aligned} & 39.84 \\ & 45.07 \\ & 56.41 \\ & 67.53 \end{aligned}$ | $\begin{aligned} & 35.42 \\ & 40.06 \\ & 50.15 \\ & 60.04 \\ & \hline \end{aligned}$ |
| $\begin{aligned} & 421 / 16 \times 22 \times 22^{\prime \prime} \\ & 4756 \times 22 \times 22^{\prime \prime} \\ & 66956 \times 22 \times 22^{\prime \prime} \\ & 825 / 16 \times 2 \times 22^{\prime \prime} \end{aligned}$ | $363 / 4^{\prime \prime}$ $42^{\prime \prime}$ $611 / 4^{\prime \prime}$ $77^{\prime \prime}$ | $\begin{aligned} & \text { CR-2074 } \\ & \text { CR-2071 } \\ & \text { CR-2072 } \\ & \text { CR-2073 } \\ & \hline \end{aligned}$ | 88 PZ 505 88 PZ 504 9888888 98 PZ 869 |  |  | 120 127 150 175 | $\begin{array}{r} 61.84 \\ 69.95 \\ 87.56 \\ 104.01 \end{array}$ | $\begin{aligned} & 55.65 \\ & 62.96 \\ & 78.81 \\ & 93.61 \\ & \hline \end{aligned}$ | $\begin{aligned} & 49.47 \\ & 55.96 \\ & 70.05 \\ & 83.20 \end{aligned}$ |

## ADD-A-RACK SERIES

For addition of rack cabinets to deluxe, enclosed racks (Fig. A, panel; add new top and bottom; attach original side panel to new above). Consist of four sections: Top, bottom, door and coupling


## SUPER-DELUXE ENCLOSED CABINET RACKS

(B) Similar to deluxe cabinet racks above, but with adjustable panel
hind cabinet front, at $\mathbf{1}^{\prime \prime}$ invervals. Front and rear doors. $1 / 8^{\prime \prime}$ panel

| $\begin{aligned} & \text { Overall } \\ & \text { Size } \end{aligned}$ | Panel Height | $\begin{aligned} & \text { Mfr's } \\ & \text { Typpe } \end{aligned}$ | $\begin{gathered} \text { Gray } \\ \text { Hammertone } \end{gathered}$ | Gray Wrinkle | Black Wrinkle | Wt., Lbs. | NET EACH |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  |  |  |  |  |  | 1-9 | 10-14 | 15-19 |
|  | $363 /{ }^{\text {" }}$ | CR-2174 | 88 PZ 517 | 98 PZ 856 | 86 PZ 834 | 108 | 62.85 | 56.57 | 50.27 |
| 46916x22x171/8" | 611/4" | CR-2171 | 888 PZ 514 | 98 PZ 857 | 86 PZ 856 86 PZ 857 | 117 146 | 71.20 | 64.08 82.70 | 56.97 73.52 |
| $825 / 16 \times 22 \times 1.71 / 8^{\prime \prime}$ | $77^{\prime \prime}$ | CR-2173 | 88 PZ 516 | 98 PZ 859 | 86 PZ 858 | 191 | 110.31 | 89.27 | 88.25 |

## SPACE SAVER RELAY RACKS AND ADD-A-RACKS

C Space Saver relay racks are only $10^{\prime \prime}$ deep. Sturdy 16 -gauge $1^{\prime \prime}$ intervals. Removable rear door. Width $22^{\prime \prime}$; inside depth $9^{\prime \prime}$. Take C. steel. Panel mounting supports adjustable (front to rear) at standard $19^{\prime \prime}$ panels. May be used with Add-A-Racks listed below.

| SPACE SAVER RELAY RACKS |  |  |  |  |  |  |  | ADD-A-RACKS |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| OverallHeight | Panel Height | $\begin{gathered} \text { Gray } \\ \text { Hammertone } \end{gathered}$ | $\begin{aligned} & \text { Mfr's } \\ & \text { Type } \end{aligned}$ | Wt., Lbs. | NET EACH |  |  | $\begin{gathered} \text { Gray } \\ \text { Hammertone } \end{gathered}$ | $\begin{aligned} & \text { Mfr's } \\ & \text { Type } \end{aligned}$ | $\begin{aligned} & \text { Used } \\ & \text { With } \end{aligned}$ | $\begin{aligned} & \text { Wt., } \\ & \text { Lbs. } \end{aligned}$ | NET EACH |  |  |
|  |  |  |  |  | 1-9 | 10-14 | 15-19 |  |  |  |  | 1-9 | 10-14 | 15-19 |
| $\begin{aligned} & 475 / 16^{\prime \prime \prime} \\ & 66916^{\prime \prime \prime} \\ & 755 / c_{1 \prime \prime}^{\prime \prime} \end{aligned}$ | $42^{\prime \prime}$ $611 / 4^{\prime \prime}$ $70^{\prime \prime}$ | 88 PZ 518 888 PZ 59 88 PZ 520 | $\begin{aligned} & \mathrm{RR}-1271 \\ & \mathrm{RR}-1272 \\ & \mathrm{RR}-1273 \end{aligned}$ | 64 84 94 | 35.87 44.93 52.67 | 32.28 40.43 47.40 | 28.69 35.95 42.14 | 88 PZ 521 888 PZ 52 88 PZ 523 | AR-1275 AR-1276 AR-1277 | RR-1271 RR-1272 RR-1273 | 54 69 76 | 34.20 42.87 50.22 | 30.78 38.58 45.20 | 27.36 34.30 40.18 |
| 755/16" | $70^{\prime \prime}$ | 88 PZ 520 | RR-1273 | 93 | 52.67 | 47.40 | 42.14 | 88 PZ 523 | AR-1277 | RR-1273 | 76 | 50.22 | 45.20 | 40.18 |

## (D) OPEN-TYPE RELAY RACKS

Have chassis-type base, except *has $1 / 4^{\prime \prime}$ iron angles and brackets to permit bolting unit to floor. In Hammertone or wrinkle finish.

| Overall Size | Panel Height | Mfr's Type | Gray Hammertone | Black Wrinkle | Shpg. Wt., Lbs. | 1-9, EACH | 10-14, EACH | 15-19, EACH |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| $\begin{aligned} & \overline{3539} 4 \times 20 \times 22^{\prime \prime \prime} \\ & 4055 / 54 \times 20 \times 22^{\prime \prime} \\ & 70394 \times 20 \times 22^{\prime \prime} \end{aligned}$ | $\begin{aligned} & 311 /{ }^{\prime \prime \prime} \\ & 363^{\prime \prime \prime} "^{\prime \prime} \\ & 661 / 2^{\prime \prime} \end{aligned}$ | $\begin{aligned} & \mathrm{RR}-1263 \\ & \mathrm{RR}-1363 \\ & \mathrm{RR}-1264 \end{aligned}$ | 88 PZ 524 <br> 88 <br> 88 <br> 827 <br> 525 | $\begin{aligned} & 98 \text { PZ } 840 \\ & 86 \text { PZ } 859 \\ & 98 \text { PZ } 841 \end{aligned}$ | $\begin{aligned} & 38 \\ & 37 \\ & 53 \end{aligned}$ | $\begin{aligned} & 21.28 \\ & 21.53 \\ & 24.30 \end{aligned}$ | $\begin{aligned} & 19.15 \\ & 19.37 \\ & 21.87 \end{aligned}$ | $\begin{aligned} & 16.99 \\ & 17.22 \\ & 19.44 \end{aligned}$ |
| $\begin{aligned} & 721 / 4 \times 20^{3 / 82313^{\prime \prime}} \\ & 7555 / 64 \times 20 \times 222^{\prime \prime} \\ & 817 / 64 \times 20 \times 22^{\prime \prime} \\ & \hline \end{aligned}$ | $\begin{aligned} & 61 / 12^{\prime \prime \prime} \\ & 71^{\prime \prime} 4^{\prime \prime} \\ & 77^{\prime \prime} \end{aligned}$ | *RR-1265 RR-1364 RR-1366 | 888 PZ 528 | $\begin{aligned} & 98 \text { PZ } 809 \\ & 86 \text { PZ } 877 \\ & 86 \text { PZ } 878 \\ & \hline \end{aligned}$ | $\begin{array}{r} 100 \\ 46 \\ 48 \\ \hline \end{array}$ | $\begin{aligned} & 53.68 \\ & 24.63 \\ & 29.38 \\ & \hline \end{aligned}$ | $\begin{aligned} & 48.31 \\ & 22.17 \\ & 26.44 \\ & \hline \end{aligned}$ | $\begin{aligned} & 42.94 \\ & 19.70 \\ & 23.50 \\ & \hline \end{aligned}$ |
| [E DESK-TYPE RACKS |  |  |  |  |  |  |  |  |
| Overall Size | Panel Height | Mfr's Type | Gray Hammertone | Black Wrinkle | Shpg. Wt., Lbs. | 1-14,EACH | 15-24, EACH | 25-34, EACH |
| $\begin{aligned} & 24 \times 203 / 8 \times 12^{\prime \prime} \\ & 31 \times 201 / 8 \times 12^{\prime \prime} \\ & \hline \end{aligned}$ | $\begin{array}{r} 21^{\prime \prime \prime} \\ 28^{\prime \prime} \\ \hline \end{array}$ | $\begin{aligned} & \mathrm{RR}-1248 \\ & \mathrm{RR}-1249 \\ & \hline \end{aligned}$ | $\begin{aligned} & 86 \text { PU } 879 \\ & 86 \text { PU } 880 \end{aligned}$ | $\begin{aligned} & 98 \mathrm{PU} 848 \\ & 98 \mathrm{PU} 849 \\ & \hline \end{aligned}$ | $\begin{aligned} & 15 \\ & 17 \\ & \hline \end{aligned}$ | $\begin{array}{r} 8.91 \\ 10.97 \\ \hline \end{array}$ | $\begin{aligned} & 8.03 \\ & 9.87 \\ & \hline \end{aligned}$ | $\begin{aligned} & 7.13 \\ & 8.77 \end{aligned}$ |

## HEAVY-DUTY CABINET RACKS AND ADD-A-CABS

(F For use where increased depth of cabinet is required. Overall width $22^{\prime \prime}$; clear inside depth $16^{1} /^{\prime \prime}$. Top and bottom similar to those of racks in Fig. A, above. Has hinged removable rear door.

Louvered sides and $21 / 2 \times 171 / 2^{\prime \prime}$ rear opening at bottom for ventilation. Save by ordering Add-A-Cabs for additional cabinets. Consists of top, bottom, back and one side. Uses one common side.

| Overall <br> Height <br> $241 / 2^{\prime \prime}$ <br> $31 /^{\prime \prime}$ <br> $401 / 4^{\prime \prime}$ |
| :---: |

## Bud Rack Accessories and Miniboxes

 of the tables below. *indicates wrinkle and thammertone.

| Height | Steel |  |  |  | NET EACH |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | * Black | *Gray | tGray | Lbs. | 1-49 | 50-99 | 100-149 |
| $13 / 4^{\prime \prime}$ | 98 PX 723 | 98 P 738 | 88 PX 589 | 2 | . 82 | . 74 | . 66 |
| $31 / 2 \prime \prime \prime$ 51 | 98 PX 724 | 98 PX 739 | 88 Px 590 | 3 | . 98 | . 88 | . 78 |
| $7^{\prime \prime}{ }^{\prime \prime}$ | 98 PX 725 | 98 PX 740 | 888 PX 591 | 4 | 1.22 | 1.15 | 1.98 |
| 83/4" | $98 \mathrm{P} \times 727$ | 98 PX 742 | 88 PX 593 | 7 | 1.71 | 1.55 | 1.37 |
| $10^{1 / 2}{ }^{\prime \prime}$ | 98 PX 728 | 98 PX 743 | 88 PX 594 | 8 | 2.05 | 1.84 | 1.64 |
| $121 /{ }^{1 \prime}$ | 98 PX 729 | 98 PX 744 | 88 PX 595 | 9 | 2.37 | 2.14 |  |
| $14^{\prime \prime}$ " | 98 P $\times 733$ | $98 \mathrm{P} \times 745$ | 88 PX 596 | 10 | 2.78 | 2.51 | 2.22 |
| 153/4" | 98 PX 734 | 98 PX 746 | 88 PX 597 | 12 | 3.03 | 2.72 | 2.42 |
| 171/2" ${ }^{19} 1{ }^{\prime \prime}$ | 98 PX 735 | 98 PX 747 | 888 PX 5989 | 14 | 3.44 3.76 | 3.10 <br> 3.39 | 2.75 |
| $21^{\prime \prime \prime}$ | 98 PX 737 | 98 PX 749 | 88 PX 600 | 15 | 4.17 | 3.75 | 3.34 |

(B) Extremely useful when accessibility to component parts on the chasdesisn is important. Made of $1 / 8^{\prime \prime}$ sheet steel, panels are $19^{\prime \prime}$ wide. Newly Available in choice of either black or gray wrinkle finish or light gray hammered finish. Height: PS-814 and PS-615. $1011^{\prime \prime \prime}$; PS-815 and PS-616, $1214^{\prime \prime}$. Offered in both ventilated as well as solid door styles. *Ventilated door (square perforations). Av. shpg. wt., 9 lbs.

| Gray Wrinkle | Black Wrinkle | Gray Hammertone | Mfr's | NET EACH |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  |  |  | 1-49 | 50-99 | 100 |
| 88 PX 613 | 88 |  | PS-615 | 5.96 |  |  |
|  |  |  |  |  |  |  |
| P |  |  | ${ }^{\text {PSS }}$-814* |  |  |  |
|  |  | 8 |  |  |  |  |

## SWIVEL TRUCK CASTERS

[C] Type RC-7756. Heavy duty, ball-bearing casters for Bud deluxe reare high grade, hard rubber. Shpg. wt., 10 oz .
88 PX $624.1-49, ~ N E T E A C H$.

.................78c 714

## VENTILATED GRILL PANELS

(D) Constructed of durable $1 / 8^{\prime \prime}$ thick steel. The grill is die-stamped in (D) the panel. Ideal for use where additional ventilation for equipment is needed. All panels are 19" wide and are available in a choice of black or gray wrinkle finish or light gray hammered finish. *Indicates $31 / 2^{\prime \prime}$ space provided from bottom of panel to ventilated portion of the panel to allow for chassis mounting. Av. shpg. wt., 5 lbs.

| Hgt. | Gray Wrinkle | Black Wrinkle | Gray Hammered | $\begin{aligned} & \text { Mifr's } \\ & \text { Type } \end{aligned}$ | NET EACH |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  |  |  |  | 1-49 | 50-99 | -1 |
| 51/4" | 88 PX 625 | 8 PX 630 | 88 PX 635 | PS-808 | 3. | 2.87 | 2.55 |
|  | 88 P | 8 PX | 8 PX | PS-809 | 3.47 |  |  |
| 83/4" | 88 P | 8 P | 8 PX | PS-810* |  |  |  |
| 10 | 88 PX 62 | 8 PX 6 |  | $1 *$ | 4.4 | 3.98 4 | 3.54 |
| 12 | 88 PX 62 | 8 PX | - |  | 4.74 | 4.2 | 3.7 |

## RELAY RACK SLIDE DRAWER

(E Type SD-1717. Sliding drawer assembly for any standard rack or Eabinet. Excellent for record player or portable typewriter base, writing table and many other practical uses. Easily and quickly assembled and installed in any standard rack. Stop screw on slide rail prevents
drawer from falling out of channel. Will support up to $50 \mathrm{lbs} .163 / 4 \times 14 \times 3^{\prime \prime}$. Shpg. wt., 5 lbs.

.10 .08 25-34, EACH.
11.20

15-24, EACH.
Type TP-1718. Aluminum-plate bottom for drawer above. Also attaches to top of drawer for shelf, desk top or support. 14 gauge aluminum with gold finish. Four mounting holes. Size, $163 / 4 \times 14^{\prime \prime}$. Wt., $13 / 4$ Ibs.
86 PX 257. 15-24, EA...2.25 $25-34$, EA...2.01 $1-14, ~ E A$.

## ALUMINUM MINIBOXES

Two-piece boxes with handsome gray Hammertone or natural aluminum finish-offered in a wide selection of sizes to fit many types of electronic devices. Particularly suited for housing above-chassis or below-chassis subunits where effective shielding as well as protection from dust and dirt is desired. May be used for phono amplifiers, VHF and UHF converters, low-pass TVI filters, test and measurement units, etc. Valuable for experi
menters, Amateurs and laboratory use. Two-piece construction permits installation of more components than possible in a conventional box; also permits easy access Flanges assure extremely low or RF leakage and also proFlanges assure extremely low RF leakage and also pro-
vide high rigidity. Self-tapping screws (supplied) hold vide high rigidity. Self-tapping screws (supplied) hold num; strong, easy to cut and drill. Excellent for any small construction project.

| Aluminum |  |  |  | NET EACH |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| *Black | *Gray | $\dagger$ Gray | Lbs. | 1-49 | 50-99 | 100-149 |
| 98 PX 864 | 98 PX 895 | 88 P 601 | 1 | 1.07 | . 96 | . 85 |
| 98 PX 865 | 98 PX 896 | 88 P 602 | 2 | 1.39 | 1.25 | 1.12 |
| 98 PX 866 | 98 PX 897 | 88 PX 603 | 2 | 1.88 | 1.70 | 1.51 |
| 98 PX 867 | 98 PX 898 | 88 P $\times 604$ | 2 | 2.37 | 2.14 | 1.90 |
| 98 PX 887 | 98 PX 899 | 88 PX 605 | 3 | 2.78 | 2.51 | 2.22 |
| 98 PX 888 | 98 PX 877 | 88 PX 606 | 3 | 3.52 | 3.17 | 2.81 |
| 98 PX 889 | 98 PX 878 | 88 PX 607 | 4 | 4.01 | 3.61 | 3.20 |
| 98 PX 890 | 98 PX 879 | 88 PX 608 | 5 | 4.66 | 4.19 | 3.73 |
| 98 Px 891 | 98 P 861 | 88 PX 609 | 5 | 5.23 | 4.71 | 4.18 |
| 98 PX 892 | 98 P 862 | 88 P 610 | 5 | 5.73 | 5.16 | 4.59 |
| 98 PX 893 | 98 PX 863 | 88 PX 611 | 6 | 6.30 | 5.67 | 5.04 |
| 98 PX 894 | 98 PX 803 | $88 \mathrm{PX612}$ | 7 | 6.87 | 6.18 | 5.50 |

## (F) Heavy-gauge

CHASSIS MOUNTING BRACKETS

| $\begin{aligned} & \text { Stock } \\ & \text { No. } \end{aligned}$ | $\begin{aligned} & \text { Mfr's } \\ & \text { Type } \end{aligned}$ | Ht. | Depth | Wt., Lbs. | NET PER PAIR |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  |  |  |  | 1-49 PR. | -99 P | -149 P |
| 86 P 219 | MB-458 | 61 | $8^{\prime \prime}$ | 2 | 1.07 | . 96 | . 85 |
| 86 P 220 | M B-448 | $61 / 2^{\prime \prime}$ | $10^{\prime \prime}$ | 3 | 1.32 | 1.20 | 1.06 |
| 86 P 218 | M B-459 | $61 / 2^{\prime \prime}$ | 11" | 3 | 1.47 | 1.32 | 1.18 |
| 86 P 221 | M B-449 |  | $12^{\prime \prime}$ | 3 | 1.71 | 1.55 | . 37 |
| 86 P 224 | M B-460 | 61/2"' | ${ }^{13}{ }^{\prime \prime}$ | 3 | 1.66 | 1.49 |  |
| 86 P 222 | M B-450 | *81/2" | $10^{\prime \prime}$ | 3 | 1.93 | 1.73 | . 55 |
| 6 P 22 | M B-451 | *81/2 | 13" | 4 | 2.05 | 4 | . 64 |

TRIANGULAR PANEL BRACKETS
(Not illus.) Panel-mounted chassis support. Heavy steel. Black enamel.

| $\begin{gathered} \text { Stock } \\ \text { No. } \\ \hline \end{gathered}$ | $\begin{aligned} & \text { Mfr's } \\ & \text { Type } \end{aligned}$ | Ht. | Depth | Wt., | NET PER PAIR |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  |  |  |  | 1-49 PR. | 50-99 PR. | 100-149 P |
|  | MB-1266 | ${ }^{\text {7" }}$ | 5"' | 1 | .98 | . 88 |  |
|  |  |  |  |  |  |  |  |
| 86 P 228 | M B-1268 |  |  |  |  |  | . 12 |

## CHASSIS SUPPORTING ANGLES

| Stock No. | $\begin{aligned} & \text { Mfr's } \\ & \text { Type } \end{aligned}$ | H.w.D. | Wt., Lbs. | NET PER PAIR |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  |  |  | 1-24 P R. | 25-49 P R. | 50-99 PR. |
| 86 P 235 88 P 641 | $\begin{array}{\|c\|} \hline \mathrm{SA}-1349 \\ \mathrm{SA}-1350 \end{array}$ | $\begin{array}{\|l\|} 13 / 8 \times 3 \times 14112^{\prime \prime} \\ 13 / 8 \times 3 \times 12^{\prime \prime} \end{array}$ | 4 | 2.20 2.13 | 1.99 | 1.76 |

## UTILITY HANDLES

Strong handles with comfortable grip. Made of tubu-


No. $\left.\left|\frac{\text { Type }}{\text { UHgth. }}\right| \frac{\text { Mtg. ctr. }}{51-49, \text { EA. }} \right\rvert\,$ 50-99, EA. $\mid 100-149$, EA. | 86 P 849 |
| :--- | :--- |
| 86 P $899-70 A$ |
| UH-71A |

| 86 P 849 | UH |
| :--- | :--- | :--- | :--- | :--- | :--- |
| 86 | 89 |

## HANDLE CATCH SET

Type CL-7777. Handsome plunger type handle and catch set. Opens with slight pressure of thumb -closes securely with spring-type snap. Chrome86 P $848.1-49$, NET EACH....., $1 / 4 \mathrm{lb}$. 1.07 50-99, EACH... 964 100-149, EACH …... 854

## HEAVY-GAUGE STEEL RACK SHELVES

## slide-in type. Require chassis support angles below. Black enamel finish. No. $\left|\frac{\text { Type }}{\text { H.W.D. }}\right|$ Lbs. 1-24, EA. $25-49$, EA. $50-99$ EA. 

NET EACH

| NET EACH |  |  |
| :---: | :---: | :---: |
| 1.49 | $50-99$ | $100-149$ |
| .83 | .75 | .67 |
| .82 | .74 | .66 |
| . .90 | .81 | .73 |
| 1.07 | .96 | .85 |
| .90 | .81 | .73 |
| .98 | .88 | .78 |
| .98 | .88 | .78 |
| 1.07 | .96 | .85 |
| 1.22 | 1.11 | .98 |
| 1.86 | .96 | .85 |
| 1.78 | 1.68 | 1.49 |
| 2.19 | 1.61 | 1.43 |
| 1.35 | 1.22 | 1.08 |
| 2.54 | 2.28 | 2.03 |
| 1.67 | 1.50 | 1.33 |
| 3.20 | 2.88 | 2.57 |
| 3.44 | 3.10 | 2.75 |


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| Natural Aluminum |
| :---: |
| 80 P 360 |
| 80 P 377 |
| 80 P 361 |
| 80 P 375 |
| 80 P 362 |
| 80 P 363 |
| 80 P 376 |
| 80 P 364 |
| 80 P 365 |
| 80 P 366 |
| 80 P 367 |
| 80 P 368 |
| 80 P 369 |
| 80 P 373 |
| 80 P 370 |
| 80 P 374 |
| 80 P 371 |
| 80 P 372 |


$|$| Mfr's |
| :---: |
| Type |
| CUVE000 |
| CU-3017 |
| CU-3001 |
| CU-3015 |
| CU-3002 |
| CU-3003 |
| CU-3016 |
| CU-3004 |
| CU-3005 |
| CU-3006 |
| CU-3007 |
| CU-3008 |
| CU-3009 |
| CU-3013 |
| CU-3010 |
| CU-3014 |
| CU-3011 |
| CU-3012 |


| NET EACH |  |  |
| :---: | :---: | :---: | :---: |
| $\mathbf{1 - 4 9}$ | $50-99$ | $100-149$ |
| .61 | .55 | .49 |
| .61 | .55 | .49 |
| .61 | .55 | .49 |
| .73 | .67 | .59 |
| .61 | .55 | .49 |
| .73 | .67 | .59 |
| .71 | .64 | .57 |
| .76 | .69 | .61 |
| .92 | .83 | .73 |
| .80 | .73 | .65 |
| 1.44 | 1.29 | 1.16 |
| 1.37 | 1.23 | 1.10 |
| 1.13 | 1.02 | 1.35 |
| 1.98 | 1.78 | 1.50 |
| 2.64 | 1.21 | 1.08 |
| 2.86 | 2.39 | 2.13 |
|  | 2.58 | 2.29 |

# Bud Mefal Products 



ELECTRO ZINC-PLATED

| Stock No. | $\begin{aligned} & \text { Mfr's. } \\ & \text { Type } \end{aligned}$ | HWD | Wt.Lbs. | NET EACH |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  |  |  | 1-24 | 25-49 | 50-99 |
| 86 PX 240 | CB-1765 | $3 \times 17 \times 8{ }^{\prime \prime}$ |  | 4.66 | 4.18 |  |
| 86 PX 242 | CB-1767 | $3 \times 17 \times 11^{\prime \prime}$ | 9 | 4.74 | 4.27 | 3.7 |
| 86 PX 243 | CB-1768 | 2x17x13" | 10 | 5.23 |  |  |
| 86 PX 244 | CB-1769 | 3x17x13" | 101 | 5.32 | 4.79 |  |
| 6 PX 946 | CB-1770 | $4 \times 17 \times 13^{\prime \prime}$ | 111/2 | 5.73 | 5.16 | 4.59 |
| BLACK WRINKLE |  |  |  |  |  |  |
| 88 PX 536 | CB-1758 | $3 \times 17 \times 8^{\prime \prime}$ |  |  |  | 3.34 |
| 88 PX 537 | CB-1760 | 3x17x11" | 91/2 | 4.25 | 3.83 | 3.40 |
| 8 P $\times 538$ | CB-1761 | 2x17x13" | 10 | 4.74 | 4.27 | . 89 |
| 88 PX 539 | CB-1762 | 3x17x13" | 101/2 | 4.83 | 4.35 | 3.86 |
| 88 PX 540 | CB-1763 | $4 \times 17 \times 13^{\prime \prime}$ | $111 / 2$ | 5.15 | 4.64 | 4.13 |



| Stock No. | $\begin{aligned} & \text { Mfr's. } \\ & \text { Type } \end{aligned}$ | H. W. D. | $\begin{gathered} \text { For } \\ \text { Cabinets } \end{gathered}$ | NET EACH |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  |  |  | 1-24 | 25-49 | 50-99 |
| 80 P 446 | CB-162 | $1 \times$ | CU-883 | 414 | $37 ¢$ | 334 |
| 80 P 452 | CB-1617 | 1 x | C-1602 | 404 |  |  |
| 80 P 448 | CB-1626 | $1 \times 41 / 8 \times 23$ | CU-728 | 444 | 394 | 354 |
| 80 P 453 | CB-1618 | $1 \times 41 / 8 \times 4^{\prime \prime}$ | 16 | 494 | $44 ¢$ | 394 |
| 80 P 454 | CB-1619 |  | C-1604 |  | 478 | 414 |
| 80 P 455 | CB-1620 | $1 \times 61 / 8 \times 4^{\prime \prime}$ | C-16 | 54 | 48 |  |
| 80 P 445 | CB-1623 | $11 / 4 \times 23 / 4 \times 25 / 8^{\prime \prime}$ |  | 374 | 336 | 294 |
| 80 P 450 | CB-1628 | 11/4×61 |  |  | 474 |  |
| P | CB-1627 | $11 / 2 \times 41 / 8 \times 33$ | CU-729 | 44¢ | 394 | 45 |
| 80 P 451 | CB-1629 | 11/2x47 | CU-1098 | 564 | $50 ¢$ | 45 |
| 80 P 447 | CB-1625 | 2x41/2x31/4 | C-1788 | 474 | $42 ¢$ | 374 |



## SLOPING PANEL UTILITY BOXES

Sloping panel utility boxes are carefully designed to provide streamlined appearance and maximum plifier space. Will conveniently house a small am located in rear of box; has $3 / 8^{\prime \prime}$ flange to permit simplified back cover mounting. Rigid construction assures proper support and protection for components. All units are $4^{\prime \prime}$ high, $41 / 4^{\prime \prime}$ deep. Finished in black wrinkle enamel.

| Stock No. | $\begin{aligned} & \text { Mfr's } \\ & \text { Type } \end{aligned}$ | Width | ForChas. No. | Lbs. | NET EACH |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  |  |  |  | 1.49 | 50-99 | 100 |
| 80 P 657 | C-1602 | $4^{\prime \prime \prime}$ | CB-1617 | 1/2 | 1. | 1.08 | . 96 |
| P | C-1603 | ${ }^{\text {5" }}$ | CB-1618 | $1 / 2$ | 1.37 | . 23 |  |
| 80 P | C-1604 | ${ }^{6 \prime \prime}$ | CB-1619 CB-1620 |  | 1.44 | 1.29 |  |



## OPEN-END CHASSIS

An excellent selection of open-end, heavygauge aluminum chassis. Have U-shaped construction with ends folded over $3 / 8^{\prime \prime}$ to provide additional strength. Available in a wide variety of sizes to accommodate nearprovide excellent fit when used with Bud cabinets listed on pages 239 240. Electro zinc-plated. Av. shpg. wt., $11 / 2 \mathrm{lbs}$

| Stock No. | Mfr's <br> Type | H.W.D. | For <br> Cabinet | NET EACH |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  |  |  | 1-24 | 25-49 | 50-99 |
| 80 P 437 | CB-30 | 11/2x7x5 ${ }^{\prime \prime}$ |  | . 95 | . 85 | . 76 |
| 80 P 438 | CB-41 | $11 / 2 \times 7 \times 7^{\prime \prime}$ | C-973 | 1.22 | 1.10 | .97 |
| 80 P 440 | CB-996 | $11 / 2 \times 9 \times 51 / 2^{\prime \prime}$ | C-993 | 1.07 | . 96 | .85 |
| 80 P 441 | CB-976 | $11 / 2 \times 9 \times 71 /{ }^{\prime \prime}$ | C-999, C-1746 | 1.37 | 1.23 | 1.10 1.02 |
| 80 P 443 | CB-997 | $11 / 2 \times 11 \times 7^{\prime \prime}$ | C-994, C-1747 | 1.27 | 1.15 | 1.02 |
| 80 P 444 | CB-998 | $11 / 2 \times 13 \times 7$ " | C-995, C-1748 | 1.56 | 1.40 | 1.24 |
| 80 P 436 | CB-38 | $2 \times 6 \times 7$ " | C-1584 | . 98 | . 88 | . 78 |
| 80 P 439 | CB-39 | $2 \times 8 \times 7^{\prime \prime}$ | C-1585 | 1.15 | 1.03 | . 92 |
| 80 P 442 | CB-40 | 2×10x7" | C-1586 | 1.34 | 1.21 | 1.08 |

MINIATURE UTILITY CABINETS WITH ATTACHED CHASSIS


Sturdily-made, unusually compact, steel utility cabinets with a built-in chassis attached to the front panel. Excellent for construction of equipment using miniature tubes or transistors. Especially suitable for standing-wave bridges, frequency meters, small transistorized receivers, code practice oscillators, decade boxes, crystal sets, and many other types or sman, self-costained with self-tapping able front and rear panels fastened with self-tapping screws permum layout fexibility. Built-in chassis is securely fastened in place. Panels fit snugly against securely fasten flanges of case to assure dust. Black-wrinkle enamel finish.

| Stock No. | $\begin{aligned} & \text { Mifr's } \\ & \text { Type } \end{aligned}$ | Cabinet H.W.D. | Chassis H.W.D. | Wt.Lbs. | NET EACH |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  |  |  |  | 1-49 | 50-99 | 100-149 |
| 80 P 326 | C-1793 | $4 \times 4 \times 2{ }^{\prime \prime}$ | $1 \times 31 / 8 \times 17 / 8^{\prime \prime}$ | 3/4 | 1.31 | 1.19 | 1.05 |
| 80 P 327 | C-1794 | $4 \times 5 \times 3^{\prime \prime}$ | $1 \times 41 / 8 \times 27 /{ }^{\prime \prime}$ |  | . 45 | . 30 | . 16 |
| 80 P 328 | C-1795 | $5 \times 4 \times 3$ " | $11 / 4 \times 31 / 8 \times 377^{\prime \prime}$ |  | . 59 | . 43 | . 27 |
| 80 P 329 | C-1796 | 6x5x ${ }^{\text {c }}$ | 13/4x41/8x37/8" | 13/4 | . 67 | . 50 | 1.33 |
| 80 80 80 | C-1797 | $\underset{6 \times 6 \times 6^{\prime \prime}}{ }$ | 13/4x47/8x57/8 ${ }^{\prime \prime}$ | 13/4 | 2.13 | . 91 | 1.71 |



## UNIVERSAL METER CASES

Sloping front meter case for use with either $2^{\prime \prime}$ or $3^{\prime \prime}$ meters. Unit is supplied with front panel cut or a $2^{\prime \prime}$ meter. An easily removable knockout ring enlarges the hole to accommodate a $3^{\prime \prime}$ meter. deal as a housing for an 'S" meter, or any of numerous small pieces of test equipment. Has one-piece back and bottom attached with 2 selftapping screws. Top has two $3 / 8^{\prime \prime}$ knockouts for terminal posts or feed-through insulators. Available in steel or aluminum; both have gray ham-
mertone finish. Size, $41 / 4 \times 4 \times 4^{\prime \prime}$.

| $\begin{array}{c}\text { Stock } \\ \text { No. }\end{array}$ | Mfr's |
| :--- | :--- |


| Stock No. | $\begin{aligned} & \text { Mfr's } \\ & \text { Type } \end{aligned}$ | Material | Wt., Lbs. | NEF EACH |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  |  |  | 1-49 | 50-99 | 100-149 |
|  | CM | St | 1 | 1.47 | 1.32 | 1. |



## METAL UTILITY CABINETS

A large selection of general purpose metal utility cabinets for all types of electronic equipment. Available in either steel or aluminum in choice of finishes and in a wide variety of sizes. Two removable panels provide easy access to inside nents prior to assembling cabinet Panels attach to compoon cabinet with self-tapping screws. For amateurs, experi-
menters, and builders. Excellent for housing receivers, monitors, VFO's, test equipment, frequency meters, transmitters, etc. Well adapted for shielding of high gain preamplifiers, RF sections, and other special circuits. Steel abimets units in etched aluminum or gray hammertone aluminum units in etched aluminum or gray hammertone finish.

| $\begin{aligned} & \text { Size, } \\ & \text { H.W.D. } \end{aligned}$ | Stock No. (Steel) |  | $\begin{aligned} & \text { Mfr's } \\ & \text { Type } \end{aligned}$ | Wt., Lbs. | NET EACH |  |  | $\frac{\text { Size H.W.D. }}{4 \times 4 \times 2^{\prime \prime}}$ | $\frac{\text { Etched Aluminum }}{88 \mathrm{P} 543}$ | $\frac{\text { Mfr's Type }}{\text { AU-1083 }}$ | Wt., Lbs. | 1-49, EA. 5 50-99, EA. |  | 100-149, EA. |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | Black | Gray |  |  | 1-49 | 50-99 | 100-149 |  |  |  | 1/4 | 1.26 | . 14 | 1.01 |
| 4x4x2" | 86 P 200 | 80 P 332 | CU883 | 11/4 | 1.07 | . 96 |  | $4 \times 5 \times 3^{\prime \prime}$ | 88 P 544 | AU-1028 | $11 / 4$ | 1.34 | .21 | . 08 |
| $4 \times 5 \times 3^{\prime \prime}$ | 86 P 201 | 80 P 333 | CU728 | 11/2 | 1.20 | 1.08 | . 96 | $6 \times 5 \times 44^{\prime \prime}$ | 88 P 545 | AU-1029 | 1/2 | 1.47 | . 32 | . 18 |
| $6 \times 5 \times 4{ }^{\prime \prime}$ | 86 P 202 | 80 P 334 | CU729 | $21 / 2$ | 1.35 | 1.22 | 1.08 | $6 \times 6 \times 66^{\prime \prime}$ $9 \times 6 \times 5{ }^{\prime \prime}$ | 88 88 8 | $\mathrm{AU}-1039$ $\mathrm{AU}-1040$ | ${ }^{3 / 4}$ | 2.13 2.46 | 2.21 |  |
| ${ }_{9 \times 6 \times 66^{\prime \prime}}$ | 80 P 203 868204 | 80 P 335 80 P 336 | CU1098 CU1099 | 3 <br> 4 | 2.05 2.29 | 1.84 | 1.64 | $\frac{9 \times 6 \times 5}{\text { Size, H.W,D. }}$ | Gray Hammertone | Mfr's Type | Wt., Lbs. | 1-49, EA. | 50-99, EA. | 100-149, EA. |
| 10x8×7" | 86 P 205 | 80 P 337 | CU879 | 5 | 3.27 | 2.95 | 2.62 | $4 \times 4 \times 2$ " | 88 P 548 | AU -1083HT | 1/4 | 1.47 | . 32 | . 18 |
| $10 \times 10 \times 8{ }^{\prime \prime}$ | 86 P 207 | 80 P 339 | CU880 | 8 | 4.00 | 3.54 | 3.15 | $4 \times 5 \times 3{ }^{3}$ | 88 P 549 | AU-1028HT | 1/4 | 1.64 | 1.47 | . 31 |
| $12 \times 7 \times 6^{\prime \prime}{ }^{\prime \prime}$ | 86 P 206 |  | CU1124 | 9 | 3.22 | 2.90 | 2.58 | $6 \times 5 \times 4{ }^{\prime \prime}$ | 88 P 550 | AU-1029HT | 1/2 | 1.80 | 1.63 | 1.44 |
| $12 \times 11 \times 8{ }^{\prime \prime}$ | 86 P 208 | 80 P 340 | CU881 | 9 | 4.25 | 3.83 | 3.40 | 6x6x60" | 88 P 551 | AU-1039HT | 3/4 | 2.37 | 2.14 | 1.90 |
| $15 \times 9 \times 7{ }^{\prime \prime}$ | 86 P 209 | 80 P 341 | CU882 | 9 | 4.42 | 3.98 | 3.54 | $9 \times 6 \times 5{ }^{\prime \prime}$ | 88 P 552 | AU-1040HT | 1 | 2.78 | 2.51 | 2.22 |



Attractive, ruggedly constructed 16 -gauge steel cabinet racks. Have welded joints. Ideal for commercial broadcast stations, amateur transmitters, sound or test equipment, chrome trim. All have recessed, hinged top doors, with snap locks. Ventilation is provided by means of louvered sides and a $21 / 2^{\prime \prime}$ opening in the bottom of the back, extending the

| Ht. | Panel Space | Stock No. |  |  | $\begin{aligned} & \hline \text { Mfr's } \\ & \text { Type } \end{aligned}$ | Wt., Lbs. | T EACH |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  | Gray Wrinkle | Black Wrinkle | Gray Hammertone |  |  | 1-14 | 15-24 | 25-34 |
| ${ }^{825 / 3 z^{\prime \prime}}$ | $7^{7 \prime \prime}$ | 88 PU 563 | 88 PU 564 | 88 PU 562 | CR-1726 | 25 | 14.97 | 13.47 | 11.98 |
| $10916^{\prime \prime}$ | 83/4" | 86 PU 729 | 98 PU 835 | 88 PU 557 | CR-1741 | 28 | 16.37 | 14.73 | 13.09 |
| 141/16" | 121/4" | 86 P PU 731 | 98 PU 804 | 88 PU 555 | CR-1740 $\mathrm{CR}-1742$ | 30 | 18.74 | 17.87 | 4.99 5 |
| 1513/16" | $14^{\prime \prime}$ | 86 PU 893 | 86 PU 894 | 88 PU 555 | CR-1739 | 34 | 21.52 | 19.36 | 17.22 |
| 195/16" | $171 /{ }^{\prime \prime}$ | 86 PU 732 | 98 PU 837 | 88 PU 559 | CR-1743 | 38 | 25.70 | 23.13 | 20.56 |
| 335/16" | $311 /{ }^{\prime \prime}$ | 86 PU 895 | 86 PU 896 | 88 PU 554 | CR-1728 | $391 / 2$ | 31.34 | 28.20 | 25.07 |
| ${ }_{22131 /{ }^{\prime \prime}}$ | ${ }_{21} 1^{1 / 4^{\prime \prime}}$ | 86 PU 733 | 98 PU 838 | 88 PU 560 | CR-1744 | 52 | 29.54 2750 | 26.59 | 23.63 |
| ${ }^{2613 / 16^{\prime \prime}}$ | $35^{\prime \prime}$ | 86 PZ 734 | 98 PZ 839 | 88 PZ 561 | CR-1745 | 60 | 32.98 | 29.68 | 26.38 |

STREAMLINED FOUNDATIONS Deluxe foundation units for use where an especially neat, pleasing appearance is required. Ideal for all types of electronic
equipment. Feature modern styling and equipment. Feature
Each unit consists of a removable top cover mounted on a chassis. Foundation covers are designed with louvered sides and perforated tops to provide proper ventilation and attractive styling.
Strong aluminum handles are solidly fitted to each end of chassis to allow safe, ${ }^{\prime \prime}$ high. Streamlined units are
 available in either black wrinkle or gray wrinkle enamel finish, with complementary chrome trim.

| $\begin{gathered} \text { Size } \\ \text { H.W.D. } \end{gathered}$ | Mfr's Type | Black Wrinkle | Gray Wrinkle | Wt., Lbs. | NET EACH |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  |  |  |  | 1-24 | 25-49 | 50-99 |
| $9 \times 101 / 16 \times 5$ " | CA1750 | 80 PX 493 | 80 PX497 | $43 / 4$ | 6.62 | 5.96 | 5.30 |
| $9 \times 121 / 16 \times 7^{\prime \prime}$ | CA1751 | 80 PX 494 | 80 PX 498 | 5 | 7.86 | 7.08 | 6.29 |
| $9 \times 17116 \times 7^{\prime \prime}$ | CA1752 | 80 PX 495 | 80 PX 499 | 8 | 8.35 | 7.52 | 6.68 |
| $9 \times 171 / 16 \times 10^{\prime \prime}$ | CA1753 | 80 PX496 | 80 PX 696 | 9 | 9.08 | 8.17 | 7.27 |

## STANDARD AMPLIFIER FOUNDATIONS

Standard amplifier foundations. Ideal units for most amplifier requirements. ruggedly constructed metal covers.
Solid pieces are used on ends of each cover to provide firm bracing and allow a snug fit to chassis. Entire side and top area between ends is enclosed by heavy-gauge
metal screening; will provide excellent ventilation and proper protection of tubes and related components. Extreme regularity of pattern and long clean lines provide a neat, functional appearance Smooth, easy-grip metal handles are attached to the chassis for increased portability. Types CA-699, CA-1125, and CA-1126 have $21 /{ }^{\prime \prime}$, high chassis; Type CA-1128 has a $3^{\prime \prime}$ high chassis. All standard amplifier founda-
tions are available in black wrinkle finish only. tions are available in black wrinkle finish only.

| Stock No. | $\begin{aligned} & \text { Mfr's } \\ & \text { Type } \end{aligned}$ | S.W.W. | Wt., | NET EAC |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  |  |  | 1-24 | 25-49 | 50-9 |
| 8 | A-699 | 85/16x95/8x5 |  | 5.50 | 4.95 | 4.40 |
| 80 PX 698 | CA-1125 | 85/16x135/8x | 43/4 | 6.30 | 5.67 |  |
| 880 PX 699 | CA-1126 |  | 6 |  | 6.40 | 9 |

## SLOPING CHASSIS AMPLIFIER FOUNDATIONS

## These high-quality, sloping chassis

 amplifier foundations combine at tractive design with rugged construction. The combination of deluxe chrome-trimmed top-cover and sloping chassis gives appearance of commercial deluxe units costing far more. Each foundation consists of a $4^{\prime \prime}$ sloping front chassis on which is mounted a removable top cover sloping front provides ample space for mounting of controls or instruments.

Ventilators on front panel and louvres on sides allow circulation of air for dissipation of heat. Top cover has gray wrinkle finish with chrome convenient carrying. Overall height, $91 / 2^{\prime \prime}$. Cover, $6^{\prime \prime}$ high. Base $31 / 2^{\prime \prime}$ high, Dimensions given below are: TWC-top depth by chassis width by chassis depth.

| Stock No. | Mfr's Type | Size, TWC | Wt., <br> Lbs. | NET EACH |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  |  |  | 1-24 | 25-49 | 50-99 |
| 88 P 585 | CA-1980 | $5 \times 10 \times 8{ }^{\prime \prime}$ | 5 | 8.51 | 7.65 | 6.80 |
| 88 P 586 | CA-1981 | $7 \times 12 \times 10^{\prime \prime}$ | 6 | 9.16 | 8.25 | 7.33 |
| 88 P 587 | CA-1982 | $7 \times 17 \times 10^{\prime \prime}$ | 8 | 10.48 | 9.43 | 8.38 |
| 88 P 588 | CA-1983 | $10 \times 17 \times 13^{\prime \prime}$ | 10 | 10.97 | 9.87 | 8.77 |

## "PRESTIGE" STEEL CABINETS

Stock cabinets of advanced design for housing highest quality instruments. Hinged cover swings back completely. Entire cover may be removed. Grommeted finger holes are provided
for easy lifting. Cover snaps tightly closed by for easy lifting. Cover snaps tightly closed by means of pressure fasteners. Cabinet can be safely carried by use of two recessed handle slots. Each cabinet includes two supporting
channels which can be moved to accommodate chassis of different widths or mounting platforms. Height of channels permits flow of cool-
 ing air and provides easy removal of cabinet contents through front opening. For standard size relay rack panels. Built of 16 -gauge steel. Has
rubber feet. Finished in gray hammertone. Width: $219 / 6^{\prime \prime} ;$ Depth Clear inside depth, $131 / 8^{\prime \prime}$. Rear opening, $18 \times 3^{\prime \prime}$. Cover opening, $219 / 1 x^{\prime \prime}$ 123/4". Covers: *solid; †perforated.

| Stock No. | $\begin{aligned} & \text { Mifr's } \\ & \text { Typpe } \end{aligned}$ | Height | PanelSpace | $\begin{aligned} & \text { Wt., } \\ & \text { Lbs. } \end{aligned}$ | NET EACH |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  |  |  |  | 1-14 | 15-24 | 25-34 |
| 86 PU 644 | C-1440* | $91 / 2^{\prime \prime}$ | $7{ }^{\prime \prime}$ | 21 | 27.66 | 24.89 | 22.13 |
| 86 PU 645 | C-1441** | $111 /{ }^{\prime \prime}$ | 83/4" | 23 | 29.46 | 26.51 | 23.57 |
| 86 PU 646 | C-1442* |  | ${ }^{101 / 2}$ | 25 | 32.16 | 28.95 | 25.73 |
| 86 PU 648 | $\mathrm{C}_{\mathrm{C}-1551+}$ | $11^{1 / 4}{ }^{\prime \prime}$ | 83/4" | 22 | 32.08 | 28.87 | 25.66 |
| 86 PU 649 | C-1552 $\dagger$ | $13^{\prime \prime}$ | $101 / 2^{\prime \prime}$ | 24 | 34.86 | 31.37 | 27.90 |

## "PRESTIGE" SLOPING PANEL CABINETS

Distinctively styled sloping panel cabinets, expertly engineered to provide custom housings fores include: swept-back top panel contures include: swept-back top panel con-
struction for ease of viewing; removable panel trim bar for quick and easy chassis installation; recessed handle slots for convenient carrying; ventilated top for air circulation; rear opening for ready access to cables or controls. Ruggedly built cover can be secured to prevent tampering with contents. Uses standard $19^{\prime \prime}$ relay rack panels. Gray hammertone finish. Rear opening, $21 / 2 \times 18^{\prime \prime}$. Panel recess, $11 / 4^{\prime \prime}$. Top depth, $9^{\prime \prime}$. Overall width, $22^{\prime \prime}$. All cabinets listed have $31 / 2^{\prime \prime}$ vertical panel space. Height and depth shown are overall measurements.

| Stock | Mfr's <br> Type | HXD | Panel Space | $\begin{array}{\|l\|l} \text { Wt., } \\ \text { Lbs. } \end{array}$ | NET EACH |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  |  |  |  | 1-14 | 15-24 | 25-34 |
| 88 PU 573 | C-1555 | 117/8×143/81" | $7^{\prime \prime}$ | 22 | 35.28 | 31.75 | 28.22 |
| 88 88 88 | C-1556 | \| $131 / 4 \times 151 / 8^{\prime \prime}$ |  | 25 28 | 37.88 40.62 | 34.08 36.65 | 30.30 32.50 |

## SLOPING PANEL CABINETS

Very attractive, professionally styled, sloping panel steel cabinets. Feature smooth-action hinged top for easy access to tubes and front panel permits easy attachment of chassis. Excellent for amplifiers, oscillators, test equipment, power supplies, etc. Designed to fit following sized chassis: Type C-1584, 7x6x $2^{\prime \prime}$; Type C-1585, $7 \times 8 \times 2$ " ; Type $1586,7 \times 10 \mathrm{x}$
 $13 \times 2^{\prime \prime} ;$ Type C-1896, $7 \times 17 \times 3^{\prime \prime}$. Rigid construction assures proper support and protection for components. Available in choice of handsome black wrinkle enamel or gray hammertone finish.

| $\text { H. Size } \mathrm{W} .$ | Mfr's Type | Stock No. Black | Stock No. Gray | Wt., L.bs. | NET EACH |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| $61 / 2 \times 71 / 16 \times 75 / 16^{\prime \prime}$ | C-1584 | 86 P 900 | 88 P 576 | 3 | 3.23 | 2.81 | 2.59 |
| $61 / 2 \times 91 / 16 \times 75 / 16^{\prime \prime}$ | C-1585 | 86 P 901 | 88 P 577 | $31 / 2$ | 3.67 | 3.31 | 2.94 |
| $61 / 2 \times 111 / 16 \times 75 / 16^{\prime \prime}$ | C-1586 | 86 P 902 | 88 P 578 | 4 | 4.25 | 3.73 | 3.40 |
| $8 \times 131 / 16 \times 81 / 2^{\prime \prime}$ | C-1892 | 86 PX 903 | 88 PX 581 | 53/4 | 5.48 | 4.93 | 4.38 |
| 10x181/16x101/2" | C-1893 | 86 PX 904 | 88 PX 582 | 9 | 7.69 | 6.93 | 6.15 |
| $8 \times 81 / 16 \times 8^{\prime \prime}$ | C-1587 | 86 P 968 | 88 P 579 | $31 / 4$ | 4.42 | 3.98 | 3.54 |
| $8 \times 101 / 16 \times 8^{\prime \prime}$ | C-1588 | 86 P 969 | 88 P 580 | $33 / 4$ | 4.91 | 4.42 | 3.93 |
| $8 \times 14116 \times 8$ " | C-1894 | 86 PX 970 | 88 PX 583 | $41 / 2$ | 5.23 | 4.71 | 4.18 |
| $9 \times 181 / 16 \times 81 / 8^{\prime \prime}$ | C-1896 | 86 PX 971 | 88 PX 584 | $71 / 2$ | 7.53 | 6.77 | 6.02 |

MINIATURE AMPLIFIER FOUNDATION
Type CA-1754. An extremely compact, sturdily built amplifier foundation. Designed expressly to meet the requirements of builders employing miniature tubes, transistors, capacitors and other miniaturized com-
 ponents. Excellent for small, portable-type P.A. amplifiers, recording preamplifiers, etc. Chassis, which is an integral part of the unit, is only $2^{\prime \prime}$ high, $7^{\prime \prime}$ wide, and $5^{\prime \prime}$ deep. With foundation cover fastened in place, entire unit stands only $6^{\prime \prime}$ high! All-steel construction.
Removable cover includes a carrying handle for comfortable hand grip and convenient carrying. Cover is heavily perforated to allow sufficient circulation of air.
Foundation cover is securely fastened to the chassis sides by means of 4 self-tapping screws. Has durable, attractive, black wrinkle enameled finish. Shpg. wt., 2 lbs. 86 P $214.1-24$, NET EACH......... 3.92 25-49, EACH..3.53 50-99, EACH.... 3.14

## ALUMINUM AND STEEL CARRYING CASES

Top-quality metal carrying cases offered in a wide selection of sizes to accommodate numerous types of electronic equipment. Ideal housings for portable transceivers, test instruments, power supplies, radio-control units, field strength meters, phono oscillators, etc. Top-mounted carrying handle provides convenient portability. Ruggedly constructed to withstand hard usage. Front and back panels mount with self-tapping screws. Panels are easily removable to provide access to interior; can be used for mounting components such as meters, relays, transformers, power resistors, etc. Available in either welded steel for maximum wrinkle or gray hammertone finish; aluminum units in choice of etched wrinke or gray hammertone
or gray hammertone finish.

PORTABLE STEEL CASES

| $\begin{aligned} & \text { Size } \\ & \text { H.W.D. } \end{aligned}$ | $\begin{aligned} & \text { Mifr's } \\ & \text { Tyrpe } \end{aligned}$ | Lbs. | Stock No. Black | Stock No. Gray | NET EACH |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  |  |  |  | 1-24 | 25-49 | 50-99 |
| 9x6x5 ${ }^{\prime \prime}$ | CC-1095 | $31 / 4$ | 80 P 798 | 80 P 813 | 2.95 | 2.66 | 2.36 |
| $6 \times 9 \times 5{ }^{\prime \prime}$ | CC-1091 | $31 / 4$ | 80 P 799 | 80 Pr 814 | 2.95 | 2.66 | 2.36 |
| 12x7x6" | CC-1096 |  | 80 PX 808 | 80 PX 816 | 4.10 | 3.68 | 3.27 |
| $7 \times 12 \times 6^{\prime \prime}$ | CC-1092 | 4 | 80 PX 809 | 80 PX 817 | 4.10 | 3.68 | 3.27 |
| $15 \times 73 / 4 \times 7^{\prime \prime}$ | CC-1097 | 5 | 80 PX 810 | 80 P 8818 | 4.59 | 4.13 | 3.67 |
| 10x10x8" | CC-1100 | 5 | 80 Px 811 | 80 P 8819 | 4.74 | 4.27 | 3.79 |
| $9 \times 15 \times 7^{\prime \prime}$ | CC-1093 | 5 | 80 PX 812 | 80 PX 848 | 5.73 | 5.16 | 4.59 |

ALUMINUM PORTABLE CASES

| $\begin{aligned} & \text { Size } \\ & \text { H.W.D. } \end{aligned}$ | Mfr'sType | Wt., Lbs. | Stock No. Etched | NET EA |  |  | Stock No. Gray | NET EACH |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  |  |  | 1-24 | 25-49 | 50-99 |  | 1-24 | 25-49 | 50-99 |
| $9 \times 6 \times 5^{\prime \prime}$ | ACC-2095 | 2 | 88 P 567 | 3.03 | 2.72 | 2.42 | 88 P 571 | 3.44 | 3.10 | 2.75 |
| 6x9x5 ${ }^{\prime \prime}$ | ACC-2091 | 2 | 88 P 565 | 3.03 | 2.72 | 2.42 | 88 P 569 | 3.44 | 3.10 | 2.75 |
| $12 \times 7 \times 6^{\prime \prime}$ | ACC-2096 | 2 | 888 | 4.41 | 3.97 | 3.57 | 88 P 572 | 4.99 | 4.49 | 3.99 |
| $7 \times 12 \times 6$ " | ACC-2092 | 2 | 88 P 566 | 4.41 | 3.97 | 3.57 | 88 P 570 | 4.99 | 4.49 | 3.99 |

# Bud Cabinets \& Chassis-Builders' Supplies 

## BUD CABINETS AND CHASSIS

## NEW UNIVERSAL SLOPING-PANEL CABINETS



Versatile, streamlined sloping-cabinets available in steel or aluminum. Feature one-piece detachable back and bottom fastened to body with self-tapping screws. Allow easy service and replacement of components. Fully enclosed to exclude dust and moisture. Easily accommodate most small chassis. Height of a durable gray hammertone finish.

STEEL

| SStock No. | $\begin{aligned} & \text { Mfr's } \\ & \text { Type } \end{aligned}$ | Width | Wt., Lbs. | NET EACH |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  |  |  | 1-49 | 50-99 | 100-149 |
| 88 P 642 | C-1606 | ${ }_{5 \prime \prime}^{\prime \prime \prime}$ |  | 1.42 | 1.27 | 1.14 |
| 88 P 643 | C-1607 | 5"' | $1^{3 / 4}$ | 1.52 | 1.36 | 1.22 |
| 88 P 644 | C-1608 | $6^{\prime \prime}$ | $11 / 8$ | 1.62 | 1.45 | 1.29 |
| 88 P 645 | C-1609 | $7{ }^{\prime \prime}$ | $11 / 8$ | 1.86 | 1.68 | 1.49 |


| ALUMINUM |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 88 P 646 | AC-1610 | $4^{\prime \prime}$ | 1/2 | 1.65 | 1.48 | 1.31 |
| 88 P 647 | AC-1611 | $5^{\prime \prime}$ | $1 / 2$ | 1.71 | 1.54 | 1.37 |
| 88 P 648 | AC-1612 | ${ }^{\prime \prime \prime}$ | $3 / 4$ | 1.86 | 1.68 | 1.49 |
| 88 P 649 | AC-1613 | $7{ }^{\prime \prime}$ | 3/4 | 2.06 | 1.85 | 1.65 |

## SLOPING-PANEL UTILITY CABINETS



Sloping-panel cabinets featuring a clean, modern design. Recommended for installations that require an opening in the bottom of the enclosure, rather than in the back. Typically used in microphone mixers, as control panels, etc. Adequate space is provided to allow proper ventilation when used with most small chassis. Height of all units is $41 / 4^{\prime \prime}$,
depth $4^{\prime \prime}$. All cabinets are finished in durable depth $4^{\prime \prime}$. All cabinets are finished in durable
black wrinkle enamel.

| Stock No. | $\begin{aligned} & \text { Mfr's } \\ & \text { Type } \\ & \hline \end{aligned}$ | Width | Wt., Lbs. | NET EACH |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  |  |  | 1-49 | 50-99 | 100-149 |
| 80 P 718 | $\mathrm{C}-1578$ |  |  |  |  |  |
| 80 <br> 80 <br> 80 | $\begin{aligned} & \mathrm{C}-1579 \\ & \mathrm{C}-1580 \end{aligned}$ | 5" | $3 / 4$ | 1.86 1.44 | 1.23 1.29 | 1.10 1.16 |
| 80 P 797 | C-1581 | 7 " | 1 | 1.51 | 1.36 | 1.21 |

## INSTRUMENT AND RECEIVER CABINETS



Ruggedly constructed, moderately priced steel cabinets. Particularly suitable for housing amateur receivers, transmitters, Signal generators, etc. Each unit has recessed hinged cover for easy access.
Front panel is held securely in place with Front panel is held securely in place with self-tapping screws. Panel extends full space for installation of controls. Louvers on each side of cabinet assure ample venon each side of cabinet assure ample venwrinkle enamel finish.


| $\begin{aligned} & \text { Size } \\ & \text { H.W.D. } \end{aligned}$ | Wt., Lbs. | NET EACH |  |  |
| :---: | :---: | :---: | :---: | :---: |
|  |  | 1-24 | 25-49 | 50-99 |
| $7 \times 8 \times 8{ }^{\prime \prime}$ | 5 | 4.10 | 3.68 | 3.27 |
| $7 \times 10 \times 8{ }^{\prime \prime}$ |  | 4.74 | 4.27 | 3.79 |
| $7 \times 12 \times 8{ }^{\prime \prime}$ | $53 / 4$ | 4.91 | 4.42 | 3.93 |
| $7 \times 14 \times 8$ " | 6 | 5.15 | 4.64 | 4.13 |
| $8 \times 16 \times 8{ }^{\prime \prime}$ | 7 | 7.45 | 6.70 | 5.96 |
| $9 \times 15 \times 11^{\prime \prime}$ | 8 | 9.01 | 8.10 | 7.20 |
| $12 \times 18 \times 12^{\prime \prime}$ | 15 | 9.72 | 8.75 | 7.78 |

## STREAMLINED CABINETS

Handsome, sturdily constructed cabinets with rounded corners. Recessed hinged top, plus $31 / 2^{\prime \prime}$ opening in rear permit easy access to sockets, terminals, etc. Front panel fastens with self-tapping screws. cellent for amateur transmitters, test cellent for amateur transmitters, etc. Available in a choice of equipment, etc. Availa pria choice of ment. Durable black wrinkle enamel finish. Durable black

| Stock No. | $\begin{aligned} & \text { Mifr's } \\ & \text { Type } \end{aligned}$ | $\begin{aligned} & \text { Size } \\ & \text { H.W.D. } \end{aligned}$ | Wt., Lbs. | NET EAC |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  |  |  | 1.24 | 25-49 | 50-99 |
| 80 PX 314 | C-1789 | $8 \times 10$ | 53/4 | 4.34 | 3.91 | 7 |
| 80 PX 315 | C-1746 | $8 \times 12$ |  | 5.32 | 4.79 | . 25 |
| 80 | C-1747 |  |  | 5.81 6.06 | 5.23 |  |
| +318 | C-1790 | $8 \times 181 / 2 \times 81 / 4^{\prime \prime}$ | $73 / 4$ | 6.62 | 5.96 | 5.30 |
| PX319 | C-1730 | $12 \times 20^{5} / 8 \times 12^{\prime \prime}$ | 15 | 12.02 | 10.82 | 9.62 |

## DELUXE STREAMLINED CABINETS



Bud's deluxe equipment cabinets feature striking gray-wrinkle finish and chrome stripping. Include hinged door, convenlent opening at rear for easy access to terminals, as well as all of the other fine constructional features offered in the cabinets listed above. Give a handsome, factory-built look to any electronic equip-ment-excellent for amateur transmitters and receivers, laboratory equipment, rugged, functional design are of prime importance. importance.

| Stock No. | Mfr's Type | $\begin{aligned} & \text { Size } \\ & \text { H.W.D. } \end{aligned}$ | Wt., Lbs. | NET EACH |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  |  |  | 1-24 | 25-49 | 50-99 |
| 80 PX 320 | C-1791 | $8 \times 101 / 2 \times 81 / 4^{\prime \prime}$ | 53/4 | 6.38 | 5.74 | 5.11 |
| 80 PX 321 | C-1781 | $8 \times 121 / 2 \times 81 / 4^{\prime \prime}$ | 6 | 6.51 | 5.89 | 5.23 |
| 880 PX 322 | C-1782 | 8x141/2x81/4" ${ }^{\prime \prime}$ | 61/22 | 6.87 | 6.18 | 5.50 |
| 80 PX 324 | C-1792 | $8 \times 181 / 2 \times 81 / 4{ }^{\prime \prime}$ | $73 / 4$ | 8.02 | 7.21 | 6.41 |
| 80 PX 325 | C-1731 | $12 \times 20^{5} / 8 \times 12^{\prime \prime}$ | 15 | 14.65 | 13.19 | 11.72 |



Open-side chassis for standard $19^{\prime \prime}$ mounting. . $062^{\prime \prime}$ aluminum with reinforced corners. $\mathbf{1}^{\prime \prime}$ flange on ends, with 4 elongated holes for mounting. Front flange has std. panel notching. All other edges wide, excluding flange, and $59 / 32^{\prime \prime}$ deep.

| Stock No. | $\begin{aligned} & \text { Mif's } \\ & \text { Type } \end{aligned}$ | Height | We.,Lbs. | NET EACH |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  |  |  | 1-24 | 25-49 | 50-99 |
| 86 PX 185 | CB-1370 | 13/4" | 11 | 2.25 | 2.03 | 1.80 |
| 86 PX 186 | CB-1371 | $31 / 2^{\prime \prime}$ | $11 / 2$ | 2.54 | 2.28 | 2.03 |
| 86 PX 187 86 PX 188 | CB-1372 CB-1373 | $7^{1 / 4 \prime}{ }^{\prime \prime}$ | $13 / 4$ $21 / 4$ | 2.78 3.19 | 2.51 | 2.22 |
| 86 PX 189 | CB-1374 | $83 / 4$ " | $21 / 2$ | 3.68 | 3.31 | 2.95 |
| 86 PX 190 | CB-1375 | $10^{1 / 2}{ }^{\prime \prime}$ | 31 | 4.34 | 3.91 | 3.47 |
| 86 PX 191 | CB-1376 | $121 /{ }^{\prime \prime}$ | $31 / 4$ | 4.74 | 4.27 | 3.79 |
| 86 PX 192 | СВ-1377 | $14^{\prime \prime}$ | $31 / 2$ | 5.23 | 4.71 | 4.18 |

POPULAR BUILDERS' SUPPLIES

## "SPECIFIC" C-100 CHASSIS

Versatile chassis for setting up temporary experimental circuits. Has holes for plates listed below. With 5 tie-point strips: 4 insulated, 1 grounded. Cadmium-plated 20-gauge steel. $13 / 4$ ibs. ${ }^{\text {Sigh, }} 167 / 8^{\prime \prime}$ wide, $51 / 4^{\prime \prime}$ deep. Shpg. wt., 86 PX 680. NET. .
4.85

MOUNTING PLATES. Easily installed on or removed from Speed Chassis. Pre-punched Stock No. $\quad$ Description

| ck No. | Description | Width | NE |
| :---: | :---: | :---: | :---: |
| 86 P 681 | Single 7-pin min. socket. | 11/8" | 204 |
| 86 P682 | Double 7-pin min. socket | 11/8" | 244 |
| 86 P692 | Single 7-pin Vector socket | $11 /{ }^{\prime \prime}$ | 344 |
| 86 P693 | Double 7-pin Vector socket | $15 /{ }^{\prime \prime}$ | 394 |
| 86 P 694 | Tripie 7-pin Vector socket. | 15/8" | 444 |
| 86 P683 | Single 9-pin min. socket | $15 / 8^{\prime \prime}$ | 236 |
| 8.6 P 684 | Double 9-pin min. socket. | $15 /{ }^{\prime \prime}$ | 274 |
| 86P695 | Single 9-pin Vector socket | 15/8" | 346 |
| 86 P696 | Double 9-pin Yector socke | $15 /{ }^{\prime \prime}$ | 394 |
| 86 P697 | Triple 9-pin Vector socket | $15 / 8^{\prime \prime}$ | 446 |
| 86 P 685 | Single octal socket $11 / 2^{\prime \prime}$ ctr | ${ }^{21 / 8^{\prime \prime}}$ | ¢ |
| 86 P 698 | Double octal socket $11 / 2^{\prime \prime}$ ctrs. | 21/8" | $30 ¢$ |
| 86 P 686 | Single octal socket $15 / 16^{\prime \prime \prime}$ ctrs. | 21/8" |  |
| 86 P69 | Double octal socket $15 / 16^{\prime \prime}$ cts | 21/8" | $30 ¢$ |
| 86 P 687 | Univ. transformer (2 required) | $11 / 8^{\prime \prime}$ | 54 c pr. |
| 86 P688 | Voiume control (mounts 2). | 11/8" | 34 c |
| 86 P 68 | Blank. | ${ }^{11 / 8 \%}$ | 159 |
| 86 P690 | Blank | 15/8" |  |
| 86P69 | Blank | 21/8" | 15 |

DUMONT CIRCUIT BREADBOARD


Type K-100. Time saver for experimenters. Consists of $3 \times 4 \times 12^{\prime \prime}$ steel frame with ends punched for controls,
16 phenolic $4 \times 2^{\prime \prime}$ subchassis, two 9-terminal chassis, two 9-terminal ended terminals. Sub-chassis include 4 single and 4 double-hole types for 7 or 9 -pin miniature sockets, 4 single-hole types for octal sockets and 4 chassis with random holes. Shpg. wt., 86 P 794. NET.

I2.25

## PLASTIC CASES AND PANELS

 Molded black plastic cases and panels designed for test instrument mounting. Sturdily constructed to protect meter and components. Cases have recessed of panels. Case walls mounting of panels. Case walls and panels are $1 /{ }^{\prime \prime}$ thick. Av. shpg. w

CASES

| Stock No. | Size | EAC'H\| | 10 or More, EACH EACH |
| :---: | :---: | :---: | :---: |
| $\begin{aligned} & \hline 86 \text { P } 286 \\ & 86 \text { P } 287 \\ & \hline \end{aligned}$ | $\begin{gathered} 1 \times 33 / 4 \times 2^{\prime \prime} \\ 16 \times 59 / 32 \times 25 / 16^{\prime \prime} \\ \hline \end{gathered}$ | 1.88 | 1.13 |
| MATCHING PANELS |  |  |  |
| 66 P 288 <br> 86 P 289 | $\begin{aligned} & \hline 6 \times 31 / 2^{\prime \prime \prime} \\ & 61 / 2 \times 5^{\prime \prime} \\ & \hline \end{aligned}$ | . 55 | . 48 |



All-metal 'breadboardtype"' chassis for rapid assembly of circuits. Deluxe features make this perfect for research use. Consists of heavy-gauge, double22 specially designed leads 22 specially designed leads and 91 assorted termine-

Chassis is pre-punched for potentiometers and tube and has a large number of bolt holes for transformers, chokes, etc. on the lower deck. Upper deck mounts 8 octal, 4 miniature 7 -pin and 4 miniature 9 -pin sockets. Includes 4 tie-point strips and 4 heavy, chassis-length bus bars, grooved for easy soldering.
Leads are of 18 -gauge rubber-covered flexible wire with socket-like terminals at each end. The terminals, only slightly larger in diameter than the wire, provide an almost zero-resistance connection to any of the 91 terminations, the bus bars, and some olue tie points. Terminaion assortment includes test prods, banana plugs, aligator chips, grid caps, $X$-connectors to components to permit the insertion of test to components to permit the insertion of test

Chassis can be bolted end-to-end for more complex constructions. $11 \times 71 / 2 \times 81 / 4^{\prime \prime}$. Shpg. wt., $31 / 2$ lbs.
$86^{1 / 2}$ PX 575 . NET.
20.50
the finest electronic equipment in money-saving kit form


Produced by Allied, these famous kits offer every desirable feature that 38 years of experience can provide. Every kit embodies creative engineering of the highest order-professional design and stylingand thorough laboratory testing. All with one purpose in mind-to bring you outstanding performance and value - and to provide you with the sense of accomplishment and satisfaction that comes with the building of a fine instrument.

knight-kits COME TO YOU IN PERFECT ORDER
Open the package-note the resistors, neatly mounted on cards with identifying symbols; capacitors, plainly marked values on these too; printed circuit boards, coated for easy soldering and marked for error-proof parts identification; even wires are pre-cut to correct length!


NO TECHNICAL SKILL NEEDED
No technical experience is required to assemble any Knight-Kit, and you don't have to know how to read schematic symbols. Every kit contains giant-size pictorial diagrams that can be tacked over your work table for ready reference.


## YOU GET NEWEST FEATURES AND PREMIUM-QUALITY PARTS

Printed circuit boards-exclusive printed circuit switches-high-quality, brand-new parts-hardware packaged in clear plastic bags-heavily cadmi-um-plated chassis with all holes pre-punched-strong steel cases and top styling. All this and more, in KnightKits.


## YOU SAVE UP TO HALF

When you choose a Knight-Kit, you save because Allied's volume buying power makes it possible to present these kits at lowest cost-and you save because you do the assembling yourself. Knight-Kits are easy to buy -easy to build-easy to usel
knight-kit


YOU GET EASIEST-TO-FOLLOW ASSEMBLY INSTRUCTIONS
Clearly written instruction manuals highlight every step of the way. Proper mounting of each part, what leads to solder, etc. Nothing is left to guess-work-as you complete each step, you check it off before going on to the next step. It's like having a good instructor at your side.


## YOU'LL ENJOY BUILDING AND OWNING A knight-kit

Nothing compares to the feeling of accomplishment and personal pride you'll derive from building a Knight-Kit-and you'll get performance that equals or surpasses factory-wired units costing much more.

NEWIEXCITING knight-kits YOU SHOULDN'T MISS


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Stereo Preamplifier


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60-Watt Stereo Amplifier


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Stereo Control

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12-Watt Hi-Fi Amplifier


25-Watt Basic Amplifier


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4-Band Span Master


Page 256


Printed Circuit Ranger

NEW
Page 257 Clock-Radio


Page 256


Ranger III Radio

Page 262
12-in-1 Lab Kit


Page 266<br>Tube Checker

here's why you get
MORE FOR YOUR MONEY in KNEGft-ikits

## EASIEST TO ASSEMBLE-BY FAR

No technical experience is required to assemble Knight-Kit equipment. Exceptionally clear step-by-step instructions, with giant-size picture diagrams, spotlight every step of assembly. As each step is completed, you check it off. You know just what you've done and exactly what comes next-there's no guesswork.

## ENGINEERED FOR SUPERIORITY

Knight-Kits are expertly engineered by a staff of specialists with many years of highly successful kit-development experience. Employing the finest research equipment available, this staff of experts design and develop units that are unsurpassed in quality and workmanship-your assurance of performance plus!

## A KNIGHT-KIT FOR EVERY NEED

See the following pages for KnightKits to suit every need or interesttest equipment for service-shop, factory and laboratory-hobby kits for beginners and experimenters-amateur radio-and high-fidelity. Whatever you choose, you can save up to half of the cost of equivalent factorybuilt units with Knight-Kits.


## knight-kit money-BACK GUARANTEE

Your purchase price is refunded in full if your Knight-Kit does not meet our published specifications for performance. These famous kits incorporate every desirable feature that 38 years of experience in kit design can provide. When you build a Knight-Kit, you can always be sure of unexcelled quality and outstanding value.

## easy payment plan TO FIT YOUR BUDGET

Knight-Kit electronic kits and accessory equipment may be purchased under our Easy Payment Plan-the most liberal in electronics. Your order need total only $\$ 20.00$ or more, and a down payment of only $10 \%$ is required-you then complete the balance in small easy-on-the-budget monthly payments. Carrying charges are small and there's no "red tape'. For Easy Pay Details, see page 444.

## SCHOOL INQUIRIES INVITED

Schools everywhere use Knight-Kits for easier, more effective electronics instruction. Knight-Kits maintain an exceptionally high level of class interest and make the job of teaching easier. Students learn more about electronics when they have the opportunity to build a working project themselves-give every student a chance to produce something he can point to with pride. Among our most popular kits in the educational field are the world-famous Knight-Kit "Ranger" III radio and the 12 -in-1 electronic lab. Schools are invited to inquire about quantity prices for easy-to-build Knight-Kits. Let us know your requirements-address our Educational Division.


BEAUTIFUL CUSTOM STYLING


Knight-Kit hi-fi components, as easy to look at as they are to assemble and use, are styled by professional designers to take their place alongside the finest of home furnishings.

## EXCLUSIVE PRINTED CIRCUITRY



Knight-Kits incorporate the latest technical advances. Many Knight-Kits feature printed circuitry and exclusive printed-circuit switches. With $90 \%$ of the wiring completed, assembly time is reduced to a minimum.
anyone can afford quality

## with easy-to-build watal

## YOU CAN SAVE UP TO HALF

Now you can build your own professionally styled high-fidelity equipment at tremendous savings. When you choose Knight-Kits, you save because Allied's huge buying power makes it possible to present these kits at lowest cost-and in addition, you save because you do the assembly yourself.

## SO EASY TO ASSEMBLE

Whether you're a beginner, or have years of electronic experience, you will find that it's really fun to build a Knight-Kit. Step-by-step instructions and giant-sized pictorial diagrams tell you when and how to mount each part -it's like having a good instructor at your side.


Knight-Kit stereo components combine outstanding quality with unsurpassed value to keynote a new era of breathtaking musical reproduction.

YOU CAN ASSEMBLE YOUR OWN HI-FI SYSTEM-SAVE UP TO $\mathbf{5 0 \%}$. Now, with Knight-Kits, anyone can afford to bring thrilling new musical adventures into his home. Knight-Kits offer a hi-fi music system to fit any budget -a system that's right for you. For hi-fi systems featuring Knight-Kits, see pages 28 through 31.

## knight-kits are FIRST with the LATEST-here's proof



## NOW! complete versatility at low cost

Enjoy single knob, centralized volume control of your stereo system from any location in your room.


## knight-kit Universal Stereo Control Kit

NET Introducing a versatile stereo control kit that provides 513 complete centralized control for any stereo system using amplifiers rated up to 20 watts. Simply connect stereo control unit to terminals of speakers and outputs of amplifiers -no rewiring of amplifiers required. Functions: lets you balance speaker system volume; serves as master gain control for adjustment of overall volume; permits playing either stereo channel monaurally through one-half of speaker system or through entire system; provides channel reversal; also includes phase reversal switch to assure optimum stereo performance. Controls: Volume; Balance; Selector (Stereo, B-Channel, B-Monaural, Channel Reverse, A-Channel, A-Monaural); Phase Reversal. Negligible line insertion loss makes this an excellent unit for remote placement. Metal case in French gray; front panel is aluminum with ebony trim. With all parts, wire, solder and instructions. $41 / 2^{x}$ $73 / 4 \times 4^{\prime \prime}$. Shpg. wt., $31 / 2$ lbs.


PRINTED CIRCUIT SWITCHES. A sensational advance in kit engineering! This exclusive Knight-Kit development simplifies construction - eliminates critical switch wiring, one of the major stumbling blocks encountered by the inexperienced kit builder.


PRINTED CIRCUIT BOARDS. Etched copper on a phenolic board-used in Knight-Kits to eliminate errors and assure peak performance. Two printed circuit boards containing wiring for all tubes are used in this Stereo Preamp Control Center-simply mount the parts in place and solder! With $90 \%$ of the wiring completed, assembly time is reduced to a minimum.

## Sensational knight-kit Stereo Preamp Control Center Kit

- Concentric Clutch-Type Controls-Permit Individual Channel and Overall Volume and Tone Control
- Separate Inputs for Both Stereo and Monaural
- Six-Position Mode Switch-Superior Versatility
- Special L-C Scratch Filter-Low Hum and Noise

Excitingly new in concept and design, the deluxe Knight-Kit stereo pre-amp is undeniably the finest, most complete preamplifier you can buy in kit form! Truly a masterpiece of engineering skill, this exceptionally versatile unit will amaze you with its superior flexibility. Incorporates every necessary control for complete enjoyment of any stereo or monaural high-fidelity system. Employs printed circuit boards and exclusive printed circuit switches for remarkable ease of assembly.
Superior features include: five pairs of jacks for stereo inputs plus four additional inputs for monaural-permits permanent installation of both stereo and monaural equipment; six positions for record equalization on monaural magnetic phono; RIAA for stereo discs. Special, concentric clutch-type bass, treble, and volume controls-permit individual channel and overall volume and tone control. Versatile mode switch-permits playing stereo; reversing channels; playing one or the other channel only; one or the other input to both outputs. L-C scratch filter (switchable)-provides $10 \mathrm{db} /$ octave attenuation above 3 kc . Extremely low hum and noise-DC on all tube filaments. Operation direct from tape heads. Calibrated potentiometer for exact setting of magnetic cartridge load.
SUPERIOR SPECIFICATIONS. Frequency Response: tuner, $\pm 1 / 2 \mathrm{db}, 7-120,000$ cps; aux., $\pm 1 / 2 \mathrm{db}, 7-75,000 \mathrm{cps}$. Harmonic Distortion: less than $0.15 \%$ at 1 volt output. Hum Level: 60 db below 1 v . at high-gain inputs; 80 db below 1 v. at low-gain inputs. 5 Pair Stereo Inputs-figures denote sensitivity in millivolts for 1 v. output: Tape Head ( 2.5 mv ); Magnetic Phono ( 2.5 mv ); Ceramic Phono ( 70 mv ) ; Aux. ( 500 mv ) ; Tuner ( 150 mv ). 4 Monaural Inputs: G.E., Pickering or ceramic phono; and microphone. Controls: SelectorEqualizer (Tape, Phono, Tuner, Aux. Mic, RIAA, EUR, 250 cps FFRR, AES, NAB); Channel Selector (Stereo, Stereo Reverse, Channel-A, Channel-B, A-Monaural, B-Monaural) ; Bass; Treble; Level; Off-On/Loudness; Rumble Filter On-Off (2-R-C types); Scratch Filter On-Off (2-L-C types for sharper cut-off). Tubes: 2-12AY7, 4-ECC82/12AU7.
Beautifully styled metal cabinet finished in attractive French gray; front panel is aluminum with ebony trim. Ideal companion-piece for the KnightKit 60 -watt stereo basic amplifier listed on next page. Supplied complete with all parts, cabinet, tubes, wire and solder and instructions. $41 / 4 \times 13 \times 8^{\prime \prime}$. For $110-125$ volts, $50-60$ cycle AC. Shpg. wt., $171 / 2 \mathrm{lbs}$.
83 YX 776. NET
62.50

## IN PERFORMANCE, ECONOMY, AND STYLING

thrilling performance. Perfectly balanced stereo-or superior monaural high-fidelity-is achieved through a perfect combination of expert design, highest-quality components and superb engineeringyour assurance of performance plus.

SUPERIOR ENGINEERING. Careful attention to details plus many months of intensive, expert research provide you with a unit that meets or surpasses the engineering standards of factory-wired stereo components costing far more.


# THE PERFECT <br> TOP-VALUE BASIC <br> STEREO HI-FI AMPLIFIER ANYONE CAN BUILD 

## TWO 30-WATT POWER AMPLIFIERS FOR STEREO; 60 WATTS FOR MONAURAL

Here's versatility plus! Use this perfectly balanced "powerhouse" to deliver 30 flawless watts per stereo channel-or enjoy full 60 watts for monaural reproduction. Everything is contained on one compact chassis!


Ruggedly constructed shield cover, finished in two-tone gray, offers a striking contrast to the gleaming chromechassis of the stereo amplifier. Perforated to permit ample ventilation for top efficiency.


- 60-Watt Monaural or Dual 30-Watt Stereo Unit
- Phenomenal $0.08 \%$ Distortion at Full 60 Watts
- Special Circuitry Design for Exact Balance

Introducing an exceptional basic amplifier that's truly a triumph of engineering skill-unquestionably in a class by itself! Use it as dual 30-watt channels for dazzling stereo or enjoy it as a powerful 60 -watt amplifier for monaural reproduction. Makes an ideal companion-piece for the deluxe stereo preamp described on preceding page.
Features include: special, built-in circuitry for precise balance of gain of each channel for perfect monaural performance-adjustment easily made from outside; static plate current balancing adjustments-separate for each channel; absolute stability even with high capacitive or inductive loads; extremely low distortion; negligible hum and noise; custom-quality transformers; two printed circuit boards; superior hi-fi tubes.
SUPERIOR SPECIFICATIONS. Frequency Response: (stereo) $\pm 0.5 \mathrm{db}, 9-42,000$ cps at half power; (monaural) $\pm 0.5 \mathrm{db}, 8-42,000 \mathrm{cps}$ at half power. Harmonic Distortion: (stereo) $0.15 \%$ at 30 watts; (monaural) $0.08 \%$ at 60 watts. Intermodulation Distortion: (stereo) $0.15 \%$ at 30 watts; (monaural) $1.0 \%$ at 60 watts. Hum and Noise: (stereo) 90 db below 30 watts; (monaural) 95 db below 60 watts. Speaker Output Impedances: 4,8 and 16 ohms for stereo and monaural. Tube Complement: 2-EF86/Z729/6267 voltage amplifiers; 2-ECC83/12AX7/7025 driver-inverters; 4-EL37 power outputs; 2GZ34/5AR4 rectifiers.
Beautiful black and chrome styling. Size (HWD), $9 \times 14 \times 814^{\prime \prime}$. Supplied complete with tubes, all parts, wire and solder, hardware and easy-tofollow instructions. Less cover, listed below. For operation from 110-125 volts, 50-60 cycle AC. Shpg. wt., 36 lbs.
83 YU 777. NET.
84.50

83 YX 779. Metal Cover For Above. Wt., 4 lbs . NET.
6.50

PROOF OF PERFORMANCE
The frequency response and power curves, at right, illustrate the superiority of the Knight-Kit 60 -watt stereoamplifier-compare these with other units before you buy. You'll agree Knight-Kits are the finest values available anywhere.




SINGLE KNOB SELECTOR


VERSATILE SELECTOR SWITCH. Unique design provides a choice of inputs and selection of stereo, stereo reverse, and monaural operation.

CLUTCH-TYPE LEVEL CONTROL


Dual concentric, clutch-type controls provide individual volume adjustment of each channel or convenient simultaneous adjustment.

## NEW knight-kit 20-Watt Stereo Amplifier

NET<br>- Quality Engineered-Economically Priced $\$ 1.50$ - Simplified Point-to-Point Wiring Throughout

Only \$4.45 Down - 13 db Negative Feedback for Minimum Distortion
Priced within reach of even the lowest hi-fi budget, this new KnightKit 20-watt stereo amplifier represents an outstanding achievement in stereophonic engineering. Incorporating the latest advances in stereo circuitry, it rivals factory-wired units costing more than twice as much. Famous Knight-Kit "convenience engineering" assures easy, simplified assembly and saves hours of construction time. The smart, modern styling of this unit will enhance any surroundings.
Featured in the high-quality design of this amplifier is a special concentric, clutch-type level control. This convenient, dual-purpose control provides overall volume adjustment as well as precise regulation of channel balance for peak stereo performance. Greatly simplifies control while providing extra versatility of operation.

A unique type of selector switch demonstrates the exceptional convenience offered by this fine stereo amplifier kit. Both the input function and the desired type of operation are conveniently selected by a single control. The following positions are provided: Phono, Phono Reverse, Tuner, Tuner Reverse, Aux, Aux Reverse, plus monaural Phono, Tuner, and Aux. No need for extra stereo reversing and stereo-monaural switches-one simplified control handles all operations.
Advanced design, dual-purpose triode-pentode tubes are employed in the push-pull output circuit of each channel. Providing efficient 10-watts-per-channel output and also serving as drivers, these high-quality tubes reduce cost and greatly simplify construction. Tubes designed especially for audio applications are also utilized in the preamplifier stages to assure top-quality high fidelity performance and minimize hum and noise, distortion, and other undesirable effects.
SPECIFICATIONS: Frequency Response: $\pm 11 / 2 \mathrm{db}, 20-20,000 \mathrm{cps}$. Harmonic Distortion: Less than $1.5 \%$ at 10 watts. Hum and Noise: Better than 85 db below full output. Sensitivity (figures denote sensitivity in millivolts for 10 watts output): Phono (Magnetic Stereo- 6 mv ; Magnetic Monaural-7.5 mv; Ceramic Stereo-0.4 v.; Ceramic Monaural0.5 v.); Tuner and Aux (Stereo-1 v.; Monaural-1.25 v.). Feedback: 13 db negative feedback with tone controls flat. Crosstalk Between Channels: Better than 45 db in all stereo selector positions. Bass Control: 10 db boost and attenuation at 35 cps . Treble Control: 7 db boost and attenuation at $10,000 \mathrm{cps}$. Output Impedances: 4, 8, 16 ohms on each channel. Tube Complement: 4-ECL82, 2-ECC83/12AX7, 1-EZ81/6CA4 rectifier.

Kit is supplied complete with tubes, all parts, wire and solder, and easy-to-follow, step-by-step instructions. Includes giant-size pictorial diagrams. In French gray metal cabinet with legs and contrasting chrome and ebony panel. Dimensions: $5 \times 131 / 4 \times 9^{\prime \prime}$. For operation from $105-125$ volts, 60 cycle AC. Shpg. wt., 27 lbs.
83 YX 773. NET.
44.50

## EASY-TO-BUILD HI-FI EVERYONE CAN AFFORD



## PRINTED CIRCUIT BOARDS AND SWITCHES

Two printed circuit boards contain the wiring for all tubes except the rectifier. Since $90 \%$ of the wiring is completed, assembly time is reduced to a minimum. The exclusive printed circuit switch simplifies kit con-struction-eliminates critical switch wiring, one of the major stumbling blocks encountered by the inexperienced kit builder.


## knight-kit Stereo Control

Versatile stereo remote control for use with two Knight-Kit 18-watt amplifier kits. Provides volume, balance and channel control for stereo music systems. See page 243 for details. $41 / 2 \times 71 / 2 \times 4^{\prime \prime} .31 / 2 \mathrm{lbs}$.
83 Y 778 . NET.

## PROOF OF SUPERIORITY

The frequency response and power curves at right graphically illustrate the superiority of the Knight-Kit 18-watt amplifier. Before you buy, compare these curves with other kits or factoryassembled units.

\author{

## Knight-kit 18-Watt Complete Amplifier Kit

 <br>  <br> \$4.00 Down <br> - RCA 6973 High-Fidelity Audio Tubes <br> - Only 0.5\% Distortion at Full 18 Watts Output <br> - Exclusive Knight-Kit Printed Circuit Switches <br> - Two Printed Circuit Boards <br> - Frequency Response, $\pm 1 \mathrm{db}, 20$ to $30,000 \mathrm{cps}$}

The famous Knight-Kit 18-watt high-fidelity amplifier kit offers brilliant performance and custom styling at exceptionally low cost. Here is an amplifier designed to bring flawless high-fidelity sound into your home at about half the cost of comparable commercially assembled units-an excellent unit around which a fine home music system can be built. Delivers full 18 -watts output at only $0.5 \%$ distortion using 6973 high-fidelity audio output tubes-designed by RCA for unparalleled hi-fi sound reproduction. Construction is simplified through the use of a Knight-Kit exclusive printed circuit switch and two printed circuit boards-most of the wiring has already been done for you-assembly is little more than mounting the printed circuit switch and the small parts on the printed circuit board and soldering them in place.
With the world-famous Knight-Kit step-by-step instructions and giantsized pictorial diagrams, you'll find this top-performing amplifier fun to build -even if you have no previous electronic experience. Highest-quality parts are used-your assurance of dependable service.
SPECIFICATIONS: Frequency Response: $\pm 1 \mathrm{db}, 20$ to $30,000 \mathrm{cps}$ at rated output. Distortion: Only $0.5 \%$ at 18 watts. Hum \& Noise: Better than 65 db below 18 watts. Sensitivity (tape head and magnetic cartridge): 5 mv for 18 watts output. Inputs: Microphone; Auxiliary; Tuner; Tape player; Magnetic (GE, Pickering); Ceramic; Tape Head. Controls: SelectorEqualizer (Mic, Aux, Tuner, Tape, Magnetic, Ceramic, Tape Head Equalization-RIAA, FFRR, NARTB, AES, RCA, 500 cps, COL); Bass Boost and Attenuate; Treble Boost and Attenuate; Off-On/Volume. Output Impedance: 4,8 , or 16 ohms. Tubes: 1-ECC83/12AX7 preamplifierequalizer driver and tone control driver, 1-EF86/Z729 voltage amplifier and phase inverter, 1 -ECC83/12AX7 push-pull driver, 2- 6973 push-pull power output amplifiers; $1-$ EZ 81 rectifier.
Supplied complete with all parts, wire and solder, tubes and carefully prepared step-by-step instructions. French gray steel cabinet with control panel finished in bright aluminum and ebony. Size, $41 / 4^{\prime \prime} \mathrm{H}$ (plus $3 / 4^{\prime \prime}$ legs) x $131 / 2^{\prime \prime} W \times 8^{\prime \prime}$ D. For $110-125 \mathrm{v}$., 50-60 cycle AC. Shpg. wt., 15 lbs.
83 YX 797. NET.
39.95



## MORE FOR YOUR HI-FI DOLLAR

Never before so much solid value and quality performance at such low cost! A true hi-fi amplifier packed with features for only $\$ 19.95$. Delivers outstanding audio at unsurpassable economy. Look at the operating curves and specifica-tions-you'll agree that you're getting the most for your money when you buy a Knight-Kit.


## knight-kit Stereo Control

Provides complete, centralized control for stereo operation of a pair of Knight-Kit 12 -watt amplifier kits, or one of these and your present amplifier. See page 243 for details. $41 / 2 \times 71 / 2 \times 4$ ". $31 / 2$ lbs.
83 Y 778. NET. . . . . . . . . . . . . . 9.95



## Top-Value knight-kit $\mathbf{1 2}$-Watt Complete Amplifier Kit

## NET - 15 db Inverse Feedback For Distortion-Free Performance <br> Less Cover <br> - Boost and Attenuation on Both Bass and Treble <br> - Preamp Stage Equalized For Magnetic-Cartridge Input <br> - Push-Pull El84 Hi-Fi Output Tubes

Designed so anyone can build it, and priced so everyone can afford it, the new Knight-Kit 12-Watt Amplifier is truly an amazing value. This compact, custom-engineered amplifier kit brings you superb high-fidelity reproduction at far less cost than that of comparable factory-wired units. In addition to its outstanding performance, this new kit offers you handsome styling that will look well on any table-top or shelf.
It incorporates expertly designed circuitry with EL84 tubes in push-pull output for smooth, clean output over its entire range. 15 db of inverse feedback contributes to the exceedingly low distortion, and internal noise and hum have been reduced almost to the vanishing point. Included are inputs for phono and tuner, a preamp stage equalized for magnetic cartridges and separate bass and treble controls that both boost and attenuate for complete control of tonal color. For superior stereo, now or later, just add the stereo control at left and use the combination with any monaural amplifier, or, better yet, with another Knight-Kit 12-watt!
SPECIFICATIONS: Frequency Response: $\pm 11 / 2 \mathrm{db}, 30$ to $15,000 \mathrm{cps}$ at half power. Harmonic Distortion: Less than $1 \%$ at full power. Hum and Noise Level: Better than 65 db below full power through Tuner input, 45 db through Phono input. Sensitivity (for full power output): 1 volt at Tuner input, 10 mv at Phono input. Inputs: Tuner and Magnetic Phono (RIAA equalized). Controls: Bass ( 9 db bass boost or cut at 40 cps ), Treble ( 9 db of treble boost or cut at 10 kc ), Tuner-Phono switch, Volume, Off-On switch. Feedback: 15 db negative feedback. Output Impedances: 4, 8, and 16 ohms. Tubes: 2-ECC83/12AX7, 2-EL84/6BQ5, EZ80/6V4 rectifier.
With all parts, wire, solder and easy-to-follow instructions; less cover (listed below). For operation from $110-125$ volts, $50-60$ cycle AC. Shpg. wt., $71 / 2 \mathrm{lbs}$.
83 Y 784. Only $\$ 2.00$ Down. NET.
19.95

METAL COVER FOR ABOVE. Attractive French-gray perforated cover for above. Size, cage plus amplifier, $5 \times 93 / 4 \times 7^{\prime \prime}$. Shpg. wt., 3 lbs.
83 Y 783. NET.
3.95


## OUTSTANDING PERFORMANCE

The response and distortion curves at left are graphic illustrations of Knight-Kit performance. Note that the distortion curve is well over the rated power at mid-frequency - you're assured of 12 clean watts of audio.


BUILD AND SAVE

## ADVANCED DESIGN



DUAL OUTPUTS. In addition to cathode follower type main output, an output jack is provided for connection of external multiplex stereo adapter-can be wired as a tape output if desired.


EASY flywheel tuning. A gentle touch moves the neon glow tuning pointer to the station you select, smoothly and quietly.


PRINTED CIRCUIT WIRING. The tuner of the futuretoday! Except for power leads, all wiring is done for you on the printed circuits. Assembly is a marvel of simplicity.

# Top-Performing knight-kit Hi-Fi FM-AM Tuner Kit 

## NET \$4995

Only \$5.00 Down

- Modern Printed Circuit-Most of the Wiring Is Already Done
- Exceptional Sensitivity- $2.5 \mu \mathrm{v}$ for 20 db Quieting On FM
- Flywheel Tuning Plus AFC-Locks In Stations Automatically
- Completely Pre-Aligned-No Further Adjustment Necessary

Here's a hi-fi tuner with every feature required for top performance on FM and AM! You'll be proud to place it where everyone can see its smart styling. It's easy to assemble, too; the entire unit has been carefully designed for quick, easy construction. Superior performance, advanced design and step-by-step assembly make it the greatest tuner value ever!
A tuned RF stage on FM provides high sensitivity- 2.5 microvolts for 20 db quieting. Wide-range, flat frequency response guarantees true highfidelity FM reception that vividly re-creates the full sonority of broadcast music. Built-in ferrite AM antenna may be rotated to improve reception. Flywheel tuning enables you to glide from station to station, effortlessly; automatic frequency control (AFC) locks in FM stations, eliminating distortion due to mis-tuning. AFC defeat switch helps tune distant stations. Has cathode follower output plus additional output which can be wired for an external multiplex stereo adapter or for "off-the-air" tape recording.
The Knight-Kit FM-AM tuner is styled to take its place alongside the very finest high-fidelity equipment; it is completely enclosed in a beautiful French gray case, supported on tapered, chrome-finished feet. Centered on the ebony-and-aluminum control panel is an easy-to-read slide rule scale; stations are located by the self-illuminated neon glow pointer, as it moves across the scale with jewel-like orange brilliance.
FM SPECIFICATIONS: Sensitivity: 2.5 microvolts for 20 db quieting. Hum and Noise: -65 db . IF Bandwidth: 200 kc at $50 \%$ down on curve. Frequency Response: $\pm 0.5 \mathrm{db}, 20-20,000 \mathrm{cps}$. AM SPECIFICATIONS: Sensitivity: 3 microvolts for 10 db signal-to-noise ratio. IF Bandwidth: 8 kc at $50 \%$ down on curve. Frequency Response: 20 to 8000 cps .
Most of the wiring is already done on the single large printed circuit board; pre-aligned RF and IF sections mean that you can play the tuner-without further adjustment-as soon as assembly is complete. Simple, nontechnical instructions take you through the entire assembly, a step at a time. Everything is supplied-all parts, pre-cut wire, solder, output cable, and the attractive French gray steel cabinet. Size, $41 / 4 \times 131 / 4 \times 8^{\prime \prime}$ (plus $3 / 4^{\prime \prime}$ legs). For 110-125 v., 50-60 cycle AC. Shpg. wt., 12 lbs.
83 YX 787. NET.
49.95

## SAVE ON COMPLETE SYSTEMS FEATURING knight-kits:

See pages 28 through 31 for Allied-selected music systems featuring easy-to-build KnightKits. You'll save many dollars by assembling components yourself -and save even more by selecting a system at Allied's special system price! Expertly engineered to give you top value.

## knight-kit

## MONEY-BACK GUARANTEE

Every Knight-Kit meets or exceeds published specsor your money is refunded.

# ■ Knight-kit HI-FI EQUAL TO THE BEST 

## UP-TO-THE-MINUTE FEATURES <br> OUTPUT JACK FOR CONNECTION OF FM MULTIPLEX UNIT

Ready for FM stereo broadcast reception (whenever this system is adopted for general use), the Knight-Kit Basic FM Tuner is now equipped with a multiplex output jack in addition to its main output jack.

## knight-kit Basic FM Tuner Kit <br> NET <br>  <br> - Has Stereo Multiplex Output Jack <br> - AFC "Locks In" on FM Stations <br> - Latest Time-Saving Printed Circuit <br> \$3.90 Down <br> - Pre-aligned RF and IF Coils

A notable achievement in creative engineering, distinctive design and impressive performance, the Knight-Kit Basic FM Tuner Kit is not only the best looking tuner kit that money can buy-but the only FM tuner kit with all these deluxe features: superb styling, which is both attractive and functional; printed circuit for ease of assembly; automatic frequency control, for "lock in"' tuning of stations, with disabling feature for tuning in weak stations adjacent to strong stations; pre-aligned $R F$ coils on rigid forms to eliminate any need for adjustment; IF's pre-aligned so accurately that they need no further adjustment; front ventilation, an integral part of panel design; new FM multiplex output jack, for FM stereo broadcasts. This excellent unit holds its own even with pre-wired tuners costing much more. You'll be proud of its trim appearance and brilliant performance.


## FLYWHEEL TUNING

A gentle touch is all it takes to move the weighted, flywheel dial mechanism. Tuning is effortless and velvet-smooth-you glide from one station to another.

SPECIFICATIONS. Sensitivity: $4 \mu \mathrm{v}$ for 20 db quieting. Output: 2 volts at $1000 \mu \mathrm{v}$ input. IF Bandwidth: 200 kc . Audio Response: $20-20,000 \mathrm{cps} .2$ Outputs: one for amplifier, the other for external multiplex stereo adapter (may be wired as tape recorder output if desired). Controls: Tuning; Off, FM, FM with AFC. Tubes: 6BQ7A, 6BA7, 12AT7, 2-6AU6, 6AL5, 12AU7; 6X4 rectifier. Cascode broadband RF amplifier. Overall size; $41 / 4^{\prime \prime}$ high (plus $3 / 4^{\prime \prime}$ legs), $131 / 3^{\prime \prime}$ wide, $8^{\prime \prime}$ deep.
Complete with all parts, wire and solder, and highly attractive cabinet. Step-by-step instructions and giantsize pictorial diagrams thoroughly cover every step of as-sembly-you'll enjoy building this outstanding hi-fi kit. For operation from 105-125 volts, 50-60 cycle AC. Shpg. wt., 12 lbs.
83 YX 751. NET.
38.95


## 3 PRINTED CIRCUIT BOARDS

Wiring is greatly simplified. Assembly is quick and easy-perfect results too.


## knight-kit 30-Watt Hi-Fi Amplifier Kit



- A-AB-B Speaker Selector Switch
- Harmonic Distortion Never Exceeds $1 \%$
- Response, $\pm 0.5 \mathrm{db}, 15-100,000 \mathrm{cps}$
\$7.70 Down
- Inputs for Any Sound Source

A marvel of engineering skill, the Knight 30 -watt amplifier is the finest complete hi-fi amplifier you can buy in kit form! Its superb specifications and performance put it in a class by itself. Every necessary control is provided in the preamplifier section, including 6 combinations of precise record equalization. Includes 3 printed circuit boards, exclusive printed circuit switches, premium 12AY7 tube and oversized transformers.

SPECIFICATIONS. Power Amplifier Response: $\pm 0.5 \mathrm{db}$, 15 to $100,000 \mathrm{cps}$ at 30 watts. Harmonic Distortion: never exceeds $1 \%$ from $20-40,000 \mathrm{cps}$ at 30 watts. I.M.: $0.74 \%$ at 20 watts. 8 Inputs: Tape Head, Tape Preamp, G.E. and Pickering Cartridges, Ceramic Cartridge, Mike, Auxiliary, Tuner (with level set). 2-5881 output tubes. Controls: Input Selector-Turnover (Tape, Tuner; Mic, Aux, FFRR, RIAA, Eur, AES); 4-pos. Rolloff; Bass; Treble; Level; Off-On/Loudness; Speaker Selector; Tape-Phono Switch; Rumble Filter. Output Imp.: 8 and 16 ohms. $41 / 4 \times 151 / 2^{\times 15} 5^{\prime \prime}$. With tubes, wire, solder, etc. For 105-125 v., 60 cycle AC. 32 lbs . 83 YU 762. NET.


## knight-kit Hi-Fi Preamplifier Kit



- Deluxe Audio Control Center
- No Hum-DC On Tube Filaments
- 16 Combinations of Equalization
- Response: $\pm 0.5 \mathrm{db}, 10-40,000 \mathrm{cps}$

Feature for feature, this preamplifier-equalizer kit stands unrivalled as the best buy in an audio control unit. Printed circuit switches, an exclusive Knight-Kit development-make possible ease of assembly never before achieved in a kit of this kind. All wiring in the new Knight-Kit preamplifier is on two printed circuit boards, except for the power supply and control leads. Other features include: Cathode follower output; separate output to recorder, independent of tone and volume controls; continuous loudness and level controls; 16 equalization combinations; plus many others.

SPECIFICATIONS. Frequency Response: $\pm 0.5 \mathrm{db}, 10-$ 40,000 cps. Harmonic Distortion: Less than $0.15 \%$ at 1 v . output; less than $0.25 \%$ at 3 v . output. Hum Level: 60 db below 3 v . at high-gain inputs; 80 db below 3 v . at low-gain inputs. 8 Inputs (figures denote sensitivity in millivolts for 1 v. output): Tape Head ( 2 mv ); G.E. Phono ( 2 mv ); Pickering Phono ( 5 mv ); Ceramic ( 150 mv); Mic. ( 24 mv); Aux. ( 400 mv ); Tape Prė-amp ( 125 mv ); Tuner ( 125 mv ). Level adjustment for Tuner input. Controls: Selector-Equalizer (Tape, Tuner, Aux, Mic, FFRR, RIAA, Eur, AES); Rolloff (AES, EUR, RIAA, FFRR); Bass; Treble; Level; Off-On/Loudness; Tape Head-Phono; Rumble Filter On-Off.
With all parts, tubes, wire, and solder. $41 / 4 \times 131 / 4 \times 8^{\prime \prime}$. For $105-125$ volts, $50-60$ cycle AC. Wt., $121 / 2 \mathrm{lbs}$. 83 YX 754. NET.
39.95

## New knight-kit 25-Watt Hi-Fi Basic Amplifier Kit



Introducing the new version of the world-renowned 25watt basic amplifier-a triumph of engineering skill and equal to high-fidelity components costing twice as much! Williamson-type circuit delivers over 25 watts of virtually flawless output. Designed for use with any tuner or preamplifier having a full set of controls.

DELUXE FEATURES. Custom-quality, potted output transformer for superior response; printed circuit board for easy assembly; balance control for precise adjustment of output tubes; damping control variable from 0.5 to 50 to assure optimum performance with any speakerprevents low-frequency distortion caused by overdamping or underdamping in speaker systems.
SPECIFICATIONS. Rated Output: 25 watts. Response: $\pm$ $0.5 \mathrm{db}, 9$ to $70,000 \mathrm{cps}$ at $121 / 2$ watts. Harmonic Distortion: $0.11 \%$ at 25 watts. $I M: 0.17 \%$ at 25 watts. Output Imp.: 4, 8, 16 ohms. Tubes: EF86, 12AX7, 2-EL37; GZ34 rectifier.
Styled in black and chrome. With all parts, tubes, wire, solder and instructions. Less cover (below). For 105-125 v., 60 cycle AC. Size, $43 / 4 \times 141 / 2^{\times 71 / 8^{\prime \prime}}$. Shpg. wt., 25 lbs. 83 YU 793. NET.
44.50

METAL COVER FOR ABOVE. Gold finish-contrasts beautifully with gleaming chrome chassis of amplifier. Shpg. wt., 3 lbs.
83 YX 794. NET.
4.75



HERE'S PROOF OF SUPERB HI-FI PERFORMANCE

# SAYE MONEY! BUILD YOUR OWN 



EASY TO ASSEMBLE. No experience is required to easily assemble Knight-Kit speaker systems. Illustrated, clearly written instructions make assembly a marvel of simplicity.

COMPLETE. You'll find everything you need in a Knight-Kit speaker system-highest-quality speakers, pre-finished cabinetry, all hardware, acoustic insulation and instructions.
knight-kit 2-Way Speaker System

$12^{\prime \prime}$ Woofer


Tweeter With Control


Knight KN-800 $12^{\prime \prime} 3$-Way Speaker

## knight-kit "Ducted-Port" 3-Way System

| NE |  |
| :---: | :---: |
|  | - Easy-To-Assemble, Pre-Finished Enclosure |
|  | "Ducted Port" For Excellent Bass |
| Save \$8.00 | Choice of Mahogany, Blonde or Wal |

Save $\$ 8.00$ on this easy-to-assemble 3-way speaker system. Consists of Knight KN-1260K pre-finished enclosure kit and the famous Knight KN-800 12" 3-way speaker. Ideally suited for placement along any wall for excellent high-fidelity reproduction-perfect for use in pairs in moderate-priced stereo systems. Features "ducted port" design; tongue-and-groove joints; vibra-tion-free wood panels; hand-rubbed, fine furniture veneers. Enclosure has sloping front panel with brass divider and tapered legs. $32 \times 171 / 2^{\times 15} 5^{\prime \prime}$. In mahogany, blonde or walnut finish-specify. Shpg. wt. 47 lbs. 79 DZ 262-C2 Only $\$ 7.35$ Down. NET.
73.45

NET $\$ 4.995$<br>\$5.00 Down<br>- $12^{\prime \prime}$ Woofer, Compression-Type Tweeter<br>- Easy To Assemble-Only 7 Pieces<br>- Hi-Fi Response: $\pm 5 \mathrm{db}, 45-14,000 \mathrm{cps}$

Assemble only 7 pieces-mount the speaker components -and enjoy exciting hi-fi sound at remarkably low cost! Perfect for budget-priced stereo systems-provides excellent stereo reproduction when used in pairs. Carefully engineered for outstanding acoustic performance, the Knight-Kit "ducted port" enclosure kit delivers beautifully balanced sound from 45 to $14,000 \mathrm{cps}$. L-pad tweeter control permits easy adjustment of tweeter for best tonal balance. Neat, clean design of the fully assembled enclosure matches any type of furnishing scheme. Grille cloth in neutral tan with gold metallic threading is pre-fitted on front panel. Includes quality $12^{\prime \prime}$ woofer, compression-type tweeter, and level control; pre-finished wood panels; acoustic material; glue; hardware; and step-by-step instructions. Impedance, 16 ohms. Overall size, $26 \times 29 \times 14^{\prime \prime}$. Enclosure in mahogany, blonde or walnut-specify your choice when ordering. Shpg. wt. 33 lbs .
83 YU 789-C2. Only \$5.00 Down. NET
49.95


## knight-kit Folded Horn 3-Way Sysfem

NET - Folded Corner Horn Design<br>$\$ 045$<br>Save $\$ 6.00$<br>- Famous Knight $12^{\prime \prime} 3$-Way Speaker<br>- Dignified Styling-Choice of 3 Finishes<br>- Quick, Easy Assembly-Nothing Else to Buy

Unquestionably the finest value in a 3-way, pre-finished hi-fi speaker system kit. Includes the Knight cornertype KN-1250K enclosure kit and the Knight KN$80012^{\prime \prime} 3$-way speaker-at important savings of $\$ 6.00$ over the cost of individual components. The laboratoryproven folded horn enclosure combines with the renowned Knight speaker to deliver superb response. Designed for corner placement; provides rich monaural reproduction-thrilling stereo when used in pairs. $331 / 2 \mathrm{x}$ $223 / 4 \times 1514^{\prime \prime}$. In mahogany, blonde or walnut-specify when ordering. Shpg. wt. 55 lbs.
79 DZ 273-C2. Only \$8.85 Down. NET.
88.45

## ARE THE FIRST CHOICE OF HOBBYISTS

Fun to build and enjoyable to use! That's why Knight-Kits are the first choice of students, hobbyists and experimenters. Assembly is a marvel of simplicity-parts fit together quickly and easily. Clearly written, detailed instructions plus giant-sized pictorial diagrams guide you along every step of the way-you can't go wrong. You get . . . premium quality parts for absolute dependability . . . the latest advances in equipment design . . up-to-the-minute styling . . . and extra savings, made possible through Allied's volume buying. You'll have only the highest praise for Knight-Kits, in ease of assembly and outstanding performance at low cost.


knight-kit "Span Master" 4-Band Receiver Kit

## NET <br> 

\$2.50 Down

- Continuous Coverage From Broadcast To 30 Mc
- Instant Bandswitching Over All Four Bands
- Calibrated General Coverage and Bandspread Dials
- Efficient $4^{\prime \prime}$ Alnico V Speaker
- Exceptionally Sensitive Regenerative Circuit

New thrills are yours with the advanced-design Knight-Kit "Span Master". Whether you're a beginner, or have years of electronic experience, you'll find the easy assembly a rewarding experience. The completed unit will provide you with standard broadcast-band and exciting shortwave reception originating on land, sea and air-anywhere!

Thrilling world-wide reception plus favorite local broadcasts are yours with this highly sensitive, 4-band regenerative receiver. Easy to assemble and fun to operate, the "Span Master" brings a new world of listening adventures into your home. You can tune in on interesting foreign broadcasts, listen in on ships-atsea and aircraft, hear news-making police and firealarm calls-even receive exciting amateur stations on the $80,40,20$ and 10 meter bands.
Assembling the "Span Master" is a marvel of simplicity -anyone can do it-no previous technical skill is required. World-famous Knight-Kit step-by-step instructions and giant-sized pictorial diagrams guide your every move-it's like having a good instructor at your side! Building your own receiver is a rewarding ex-perience-you'll take pride in your accomplishment and thrill to its superb performance.
The heart of this peak-performing unit is its expertly engineered, exceptionally sensitive regenerative circuit. Bandspread dial and Fine Regeneration control simplify critical tuning-provide excellent high-frequency reception. Each band coil has its own antenna winding to assure maximum sensitivity.

A listing of stations throughout the world is included to aid your selection; ideal reception time is also noted. In addition, the instruction manual includes the International Morse Code to help you learn to receive radiotelegraph messages sent by press stations, military stations, amateurs, etc.
All controls are conveniently located on a smartly styled front panel. Controls include: calibrated Main Tuning, Bandspread Tuning, Bandswitch, Volume, Coarse and Fine Regeneration. Also included are headphone terminals and a speaker cut-out switch to permit private headphone reception if desired. Receiver has a transformer-type power supply to permit more efficient use of tubes for optimum sensitivity. Employs a 6BZ6 and a high-gain 6AW8; selenium rectifier.
No special tools are required-the entire assembly can be done with a soldering iron, screw-driver and pliers. Supplied complete with fabrikoid-covered cabinet, tubes, speaker, wire and solder, all parts and hardware, and marvelously clear instructions. Size: $63 / 4^{\prime \prime}$ high, $13^{11} / 16^{\prime \prime}$ wide and $6^{3} / 16^{\prime \prime}$ deep. For operation from $110-125$ volts, $50-60$ cycle AC. Shpg. wt., 7 lbs.
83 Y 258. NET.
24.95


Enjoy new horizons of excitement with the world-famous "Space-Spanner",
now restyled with a smart new cabinet and a professional-type two-tone control panel. Imagine the thrill of hearing broadcasts from overseas on an efficient short-wave receiver you've built yourself! Then, just flip a switch to tune in the ball game on your favorite local station. It's like having a private "ear to the world"! The sensitive "Space Spanner" circuitacclaimed by thousands of enthusiastic owners-tunes short wave from 6.5 to 17 megacycles, bringing you the 40 and 20 meter amateur bands, international broadcasts, plus maritime, police and aircraft communications, and the National Bureau of Standard time signals. Standard broadcast coverage is complete, from 540 to 1700 kilocycles.
Building the "Space Spanner" is an ideal way to learn about radio-and an economical way to own a fine receiver. You'll enjoy working from the clear, detailed instructions supplied. Big picture diagrams show you exactly where to put every part; an 8-page section explains the principles of radio, and shows how to get the most from your "Space Spanner".
The radio itself is loaded with features: headphone connectors on rear panel allow private listening; speaker cut-out switch provides instant control for private or nonsprivate listening. Built-in 4" PM speaker and 50 C 5 beam power output tube deliver plenty of volume; sensitive circuit employs 12AT7 regenerative detector and audio amplifier; 35W4 rectifier tube. Six controls allow precise, accurate tuning: Band-spread, Main Tuning, Antenna Trimmer, Bandswitch, Regeneration, and Volume.
Everything is considered to help make the building of the "Space Spanner" a rich, rewarding experience: all parts are carefully packaged in transparent plastic bags; resistors are mounted on cardboard strips, complete with circuit symbols clearly marked; wire is pre-cut and color-coded for instant, error-free use; capacitors are stamped with their values to assure easy identification; there's even a generous supply of solder. Premiumquality parts guarantee absolute dependability-your assurance of outstanding performance. You need only a soldering iron, and a few other simple tools, for fast, enjoyable assembly.
Kit is supplied complete with all parts, tubes, cabinet, wire, solder and easy-to-follow step-by-step instructions. Sturdy wood cabinet has handsome, mottled-gray pyroxylin covering. Size, $7 \times 101 / 2 \times 6^{\prime \prime}$. For $110-125$ volts, $50-60$ cycle AC or DC. Shpg. wt., $71 / 2 \mathrm{lbs}$.

ANTENNA KIT. For peak performance of your "'Space Spanner"' or "Ocean Hopper'. Includes $50-\mathrm{ft}$. antenna wire, $25-\mathrm{ft}$. lead-in, insulators, etc. Shpg. wt., $11 / 2$ lbs.
83 Y 100. NET. . . . . . . . . . . . . . . . 1.03
HEADSET. High-quality 2000 -ohm dual headset, for "Ocean Hopper" or "Space Spanner" receivers. Tip jacks fit receiver terminals. Complete with $41 / 2-\mathrm{ft}$. cord. Wt., 12 oz . 59 Y 110. NET. . . . . . . . . . . . . . . . 2.00

SAVE! Build Your Own


## RADIO RECEIVER KITS

## thrilling short-wave!



Listening to short wave stations from all parts of the world is fun! You'll hear foreign broadcasts, amateurs all over the world, ships at sea, police, etc.

Inside view of "Ocean Hopper"-illustrates fully-assembled components on pre-punched chassis. Highest-quality parts assure you of top performance.


## knighf-kit "Ocean Hopper" Receiver Kit broadcast, long wave, and short wave coverage

## NET <br> $\$ 15^{95}$

With Case
Easy to build and fun to use, this top performing regenerative receiver is truly worthy of its name! It puts a world of listening pleasure at your fingertipsliterally hopping oceans to bring in crisp, clear reception from all corners of the earth. The exceptionally wide tuning range of the "Ocean Hopper", using the plug-in coils listed at right, includes all frequencies from 155 kilocycles to 35 megacycles.

Tunes in virtually every type of radio transmission: marine, aircraft, distress call channels, standard broadcast, direction finding, amateur, frequency standard, international broadcast, police and fire departments, etc. A large main tuning knob and electrical bandspread help to make tuning simple and precise. Quality components and careful time-tested design assure you of outstanding results with this famous kit.

Front panel controls include Main Tuning, Bandspread, Antenna Trimmer and Off-On/Regeneration. Tubes are a 12AT6 detector and 50C5 audio output stage; 35W4 rectifier. Kit is supplied with plug-in coil to cover standard broadcast band, wood cabinet with handsome gray pyroxylin covering, pre-punched chassis, tubes, wire, solder, and step-by-step instructions. Less extra plug-in coils (below), headphones and antenna (listed on page 254). Size, $6 \times 91 / 2 \times 5^{\prime \prime}$. For $110-125$ volts, $50-60$ cycle AC or DC. Shpg. wt., 7 lbs .
83 Y 749. NET.
15.95

PLUG-IN COILS. Shpg. wt., each, 2 oz .
83 Y 741 . Long $W$ ave. $155-470 \mathrm{kc}$. NET.
79c
83 Y 742. Short Wave. $1.65-4.1 \mathrm{mc})$
83 Y 743. Short Wave. 2.9-7.3 mc. NET
83 Y 745. Short Wave. $7-17.5 \mathrm{mc}$. $\}$ EACH
65c 83 Y 744. Short Wave. $15.5-35 \mathrm{mc}$.

PACKAGE OF ABOVE COILS. Coil set consisting of 1 long wave and 4 short wave coils. Wt., $11 / 2 \mathrm{lbs}$.
83 Y 748. NET.
2.95
knight-kit Photoelectronic Relay System . . . For Dozens of Uses!


When - light beam striking photocell is broken, relay unit instantly sounds burglar alarm or chime; turns on lights; opens doors; counts items; etc.

RELAY KIT ONLY. Now you can build your own ultra-sensitive photoelectronic relay at very low cost. It's fun to build-and you'll find dozens of uses for it in automatic control of lights, door openers, burglar alarms, counting devices, etc. Ideal for turning on house or store lighting each evening at dusk-turns itself off at dawn.
Employs highly sensitive cadmium-selenide photocell in a thyratron circuit that permits operation up to 250 ft . when used with Light Source (below). Has "Trip" for continuous ringing of alarm even if intruder steps out of beam; and "Auto" if relay is to operate each time beam is brokenfor chimes, lights, door openers, etc. $5 \times 3 \times 5^{\prime \prime}$. For 110-125 volts, 50-60 cycle AC. Shpg. wt., $31 / 2 \mathrm{lbs}$. 83 Y 702. NET.
LIGHT SOURCE KIT ONLY. With bulb and red filter. $6 \times 6 \times 4$ " For 110-125 v., 50-60 cycle AC. Wt., $31 / 2$ lbs.
83 Y 703. NET.
6.75

77 Y 035. Chime For Use With Relay. 2 lbs. NET.
3.67


## EASY TO BUILD-FUN TO USE

You'll point with pride to this smartlooking, high-performance radio that you've built yourself. Assembly is remarkably easy - and it's funl

## - EASY POINT-TO. POINT WIRING

- MINIATURE TUBES
- IDEAL FOR SCHOOL USE

(
knight (2)


## knight-kit "Ranger III" AC-DC Radio Kit TOP-PERFORMING BROADCAST BAND RECEIVER

\author{

- Highly Efficient Superhet Circuit <br>  <br> - Rich, Full-Toned Sound <br> - Smart, Modern Plastic Cabinet <br> - Crystal-Clear Instructions
}

The latest version of a remarkably fine table radio in kit form. High-quality parts and expert design give outstanding superhet reception on the broadcast band. You're sure to enjoy its excellent performance.

Can be assembled with no previous radio experience. The clear, step-by-step instructions and giant-sized diagrams make construction easy and fun. An excellent aid to understanding radio. No special tools or instruments required. The entire job can be done with a soldering iron, screwdriver, and pliers. Construction of this quality radio will reward the builder with years of dependable service-and the pride that comes from building a working radio receiver himself.
Covers the entire broadcast band for exciting reception from your favorite program. Fine quality Alnico V speaker and acoustically designed cabinet for clear, full tone. Sensitive superheterodyne circuit includes automatic volume control to reduce blasting and fading. Cadmium-plated steel chassis. Ball bearing capacitor for smooth, effortless tuning. Smart black plastic case, attractively accented in white to complement any decor.
Multi-purpose miniature tubes include: 12BE6, 12BA6, 12 AV 6 and 50C5. Rectifier is a 35W4. Highly efficient Hi-Q loop antenna for maximum sensitivity. Supplied complete with wire and solder, tubes, cabinet, speaker, all parts, and hardware. Size: $51 / 2^{\prime \prime}$ high, $85 / 8^{\prime \prime}$ wide and $45 / 8^{\prime \prime}$ deep. For operation from 110-125 volts, $50-60$ cycle AC or DC. Shpg. wt., $41 / 2 \mathrm{lbs}$.
83 Y 736. NET.
16.95

LATEST PRINTED CIRCUIT SUPERHET
Advanced-design printed circuitrysimplifies assembly, assures peak performance and reduces wiring time to a minimum.

- PRINTED CIRCUIT BOARD FOR EASY, EFFORTLESS WIRING
- BEAUTIFULLY STYLED




## knight-kit "Ranger III-PC" AC-DC Radio Kit

 PRINTED CIRCUIT BROADCAST BAND SUPERHET\author{

- Up-To-The-Minute Printed Circuitry <br> $\$ 18^{95}$ <br> - Exceptionally Easy to Assemble <br> - Beautifully Styled Plastic Cabinet <br> - Has Clear, Sensitive Reception
}

An easy-to-put-together, top-performing table radio in kit form-fun to use and beautiful to behold. Highestquality parts and skillful engineering combine to make this a truly outstanding radio. You'll be amazed with its excellent tonal quality and crystal-clear reception over the entire broadcast band.
Construction is simplified through the use of a printed circuit board-most of the point-to-point wiring is already completed. Detailed, easy-to-follow instructions and giant-sized diagrams spotlight every step of as-sembly-it's like having a good instructor at your side. A soldering iron and just a few other basic tools are all you need for quick completion of the job-you'll be proud of the results.
In addition to time-saving printed circuitry, this radio also features: highly sensitive superhet circuit with automatic volume control; cadmium-plated steel chassis; smooth-operating ball bearing tuning capacitor; high-quality Alnico $V$ speaker. The smartly-styled plastic cabinet is finished in lustrous ivory with an attractively contrasting brown speaker mesh to blend harmoniously with any decorative scheme.
Utilizes an efficient Hi-Q loop antenna for superior sensitivity. Employs multi-purpose miniature tubes. Supplied complete with cabinet, tubes, wire and solder, speaker, all parts, hardware and instructions. Size: $51 / 4 \mathrm{x}$ $101 / 8 \times 47 / 8^{\prime \prime}$. For operation from $110-125$ volts, $50-60$ cycle AC or DC. Shpg. wt., 4 lbs.
83 Y 738. NET.
18.95

## TABLE RADIOS ... CLOCK RADIO ... RADIO-INTERCOM



ADVANCED-DESIGN CLOCK-RADIO
A rare combination of complete versatility and unsurbassed ease of assembly-brilliantly engineered with years-ahead features.

- MODERN PLUGIN MODULES
- PRINTED CIRCUIT BOARD
- EASIEST TO ASSEMBLE
- TELECHRON CLOCK

- Superb Broadcast Band Reception

Quoliy Clock-Timer Unir

- Unbeatable Ease of Assembly
- Ultra-Smart Cabinet Styling

You'll be amazed how quickly and easily this versatile clock-radio kit goes together-and you'll be delighted with its superb performance. The use of expertly designed module plug-in circuits and a printed circuit board reduce assembly time to the barest minimum.

The efficient superhet radio provides excellent reception of the entire broadcast band. In addition, the unit has a Telechron clock with a versatile sleep-switch timer plus an automatic radio wake-up/alarm switch. Here's what you can do: play radio at any time-go to sleep with music (radio shuts off after desired time lapse up to one hour); wake up to music; wake up to music (followed in 10 minutes by an alarm signal); plug in a coffeemaker to go on automatically at the same time you wake up to music.

No special tools are used for assembly-only a soldering iron, and a few other basic tools are required. Clearly written, step-by-step instructions and giant-sized diagrams show you exactly how to do a professional-looking job. Anyone can build this kit-and it's fun.

Handles appliances rated to 15 amps ( 1800 watts). Beautifully styled plastic cabinet is attractively finished in blue and white. Luminous clock hands. Tubes: 12BE6, 12BA6, 12 AV 6 and 50 C 5 ; rectifier is a 35 W 4 . $6 \times 95 / 8 \times 53 / 8^{\prime \prime}$. With tubes, cabinet, wire and solder, all parts, speaker and hardware. For 110-125 v., 50-60 cycle AC. Shpg. wt., 5 lbs.
83 Y 737. NET.
24.95

## IT'S A RADIO! IT'S AN INTERCOM!

Easy to assemble and fun to operate. Here's a kit that lets you enjoy radio broadcasts and saves you steps by doubling as an intercom!


Knight-kit "Ranger" Radio-Intercom Kit DUAL-PURPOSE-RECEIVER \& 2-WAY INTERCOM

$$
\$ \sum_{\$ 2.75 \text { down }}^{\text {NET }} \begin{array}{ll}
\text { - Selective Superheterodyne Circuit } \\
\text { - Clear, Sensitive Intercom Response } \\
\text { - Time-Saving Printed Circuit } \\
\text { Attractively Styled Cabinets }
\end{array}
$$

Smooth-operating, highly versatile two-station radiointercom kit consisting of a Master and a Remote unit -at remarkably low cost. Easy to assemble and fun to use, this outstanding system has many deluxe features: sensitive superhet circuit for excellent broadcast band reception; efficient 2 -way intercommunication; and handsome, ultra-smart styling.

Both the Master and Remote can originate calls. Radio broadcasts are automatically silenced during conversations on intercom. Master has two separate volume controls: the knob at the front is for radio volume; a knob at the rear is for intercom volume. Conveniently located push-button on top of Master is used to originate calls; Remote station has an easy-action slide switch to call Master. All broadcasts are automatically received by Remote station.
System can accommodate up to 3 Remotes in parallel. Master, $51 / 4 \times 101 / 8 \times 47 / 8^{\prime \prime}$; Remote, $43 / 4^{\times 61 / 2 \times 43 / 8 \prime \text {. Ivory }}$ plastic cases, with brown mesh grille insert. Only the Master station need be connected to an AC or DC power source. With cases, tubes, wire and solder, $50^{\prime}$ cable, all parts and instructions. For $110-125$ volts, $50-60$ cycle AC or DC. Shpg. wt., 8 lbs. 83 Y 739. Master and 1 Remote. NET.
27.50

EXTRA REMOTE STATION KIT. Less cable. 3 lbs . 83 Y 298. NET. 3.95
extra Cable. Shpg. wt., $100 \mathrm{ft} ., 21 / 2 \mathrm{lbs}$.
47 Y 684. NET PER FOOT. ..... 5c


## Fascinating Transistor Lab Value For Hobbyists

Amazing, versatile Knight-Kit 10-Circuit Transistorized Electronic Lab-one of the most rewarding kits ever designed. It's unexcelled in simplicity of construction-truly a marvel of ingenious kit design! One side of the printed circuit board is screen-printed to indicate where all components go-after you solder these basic parts in place, you change from one circuit to the next by merely inserting "plug-in" leads into the proper jacks on the board-no additional soldering! Jacks are already mounted and "plug-in" leads of uniform length already have plugs permanently fastened on the ends. You learn how transistors operate by "plugging in" any one of 10 circuits that really work! An AM radio that gives loud, clear headphone reception-a wireless broadcaster that lets you "broadcast" to any nearby radio-a versatile electronic switch of many uses-a capac-ity-operated relay that may be used as a burglar alarm, etc.
This top-value kit is supplied complete-you get dual headphones (also serve as mike), "plug-in" circuit leads, guide cards, two transistors, solder, relay and photocell-everything you need, with nothing else to buy! You'll be delighted with the big, easy-to-understand instruction manual that comes with this kit. It tells you exactly what to do to complete initial wiring - then gives you an understanding of transistors by explaining just how each of the 10 circuits works. The perfect kit for the beginner-student-hobbyist-or experimenter. Uses for the circuits in the Transistorized Electronic Lab are limited only by the imagination! Battery-powered. With battery and solder. Shpg. wt., 3 lbs. 83 Y 299. NET.
15.75

## AN ELECTRONIC MARVEL! knight-kit IO-CIRCUIT TRANSISTOR LAB KIT

. . . you go from one exciting project to another . . . each circuit has a practical use . . . each circuit helps teach you how transistors work . . .

## SO EASY TO ASSEMBLE

SOLDER THE BASIC PARTS IN PLACE . . CHANGE FROM ONE CIRCUIT TO ANOTHER BY PLUGGING IN THE PROPER LEADS.

BUILD ANY ONE OF THESE WONDERFUL PROJECTS:

- 2-Srage AM Radio
- Photoelectronic Relay
- Wireless Broadcaster
- Code Practice Oscillator
- Electronic Switch
- 2-Stage Audio Amplifler
- Capacity-Operated Relay
- Electronic Timer
- Voice-Operated Relay
- Electronic Flasher

The KNIGHT-KIT 10-Circuif transistor lab kit is an ideal supplement to school electronic courses.

258


## SPECIAL GUIDE CARDS FOR EACH EXPERIMENT

Simply place the guide cards on the board, and plug in the circuit leads where indicated to get a working circuit! Holes for "plug-in" leads are number-coded-it's easy-and it's fun!

## EACH CIRCUIT IS CLEARLY EXPLAINED

Written in easy-tofollow terms, the manual not only tells you exactly what to do to build the basic chassis, but also fully explains the operation of the transistors in each of the circuits.


## SAVE ON THIS 5-TRANSISTOR PORTABLE RADIO



## Easiest-to-Build for Thrilling Radio Reception Anywhere

Pay less than ever for this remarkably efficient personal portable radio! It's easily assembled-and offers outstanding value in performance and appearance. Up-to-the minute circuitry provides excellent reception and remarkably clear tone quality. Streamlined in design and finished in eye-pleasing ivory and gold. The gold finished end plate has a convenient pull-out carrying handle.

## 5-TRANSISTOR SUPERHET RADIO

CLASS B PUSH-PULL AUDIO OUTPUT
QUALITY $31 / 2^{\prime \prime}$ SPEAKER

## EXCELLENT TONE STRIKING BEAUTY

You'll be delighted with the crisp, clear tone quality and the smart appearance of this fine personal portable-and you'll be proud to say that you built it yourself.


knight-kit 5-Transistor Superhet Radio Kit<br>NET<br>- Uses Texas Instrument Co. Transistors<br>$\$ 2595$<br>\$2.60 Down<br>- Average Battery Playing Life, 200 Hours<br>- Pre-Aligned IF Transformers

Excellent design and efficient circuitry are combined in this handsome, new portable radio kit. Ultra-simple layout, plus use of printed circuit board, provide the utmost in accessibility to all parts and battery-and make assembly unusually easy for anyone. No technical skill is required-you can build it in just one evening!

A convincing example of elegant, functional styling and precision design, the Knight-Kit 5-Transistor Superhet Radio Kit easily ranks with the best of battery-operated portable radios. Among its many excellent features, you'll find: 'A big $31 / 2^{\prime \prime}$ speaker, larger than is ordinarily used in portable radios of this type; premium-quality transistors and component parts, your assurance of a finished radio kit equivalent in performance to more expensive, pre-wired units; Class $B$ pushpull audio output stage, for clear voice and music reproduction and extremely low battery drain; built-in ferrite loopstick antenna, for top-notch broadcast reception indoors or out; phone jack output to permit private listening whenever you wish.

Assembling the Knight-Kit 5-transistor portable is simplicity itself-in a matter of hours, and using only the simplest of tools, you can build yourself a smoothoperating, professionally styled radio that will deliver outstanding performance. The extremely efficient circuit design results in very low battery drain-you can get up to 200 hours of playing time from just a single, 9 -volt battery.

The orderly layout of parts, as well as the trim styling of the case, reflects the painstaking care that has gone into the design of the Knight-Kit 5-transistor portable superhet radio. Its smart appearance and highly dependable operation will make you proud to own it, and equally proud to have built it yourself. Carrying weight of only 22 ounces, and pull-out handle make it easy to carry this portable wherever you go.
The printed circuit board simplifies and speeds building, and eliminates chance of wiring error. Two controls: Off-On-Volume and Tuning. Volume control is a handy, recessed thumbwheel. Handsome ivory and gold styling is accented by the use of ebony black panel trim. Size: $33 / 4^{\prime \prime}$ high, $71 / 2^{\prime \prime}$ wide, $134^{\prime \prime}$ deep. With all parts, wire and solder. Less battery, earphone. 2 lbs.
83 Y 771. NET.
25.95

BATTERY FOR ABOVE. 9-volt. Shpg. wt., 4 oz .
83 Y 772. NET.
1.43

EARPHONE FOR ABOVE. For private listening. 5.oz. 59 Y 147. NET.1.97


# NEWEST 

Always the first choice of hobbyists and experimenters，new transistor Knight－Kits are now more popular than ever before．Fun to build and enjoyable to use，the latest electronic advances are always incorporated into Knight－ Kit circuitry and design．

Ease of construction is a hallmark of Knight－Kits．You need only a soldering iron and a few other basic tools．No special tools or skills are required．Parts fit together with ease，and detailed instructions are marvelously clear－ you can＇t go wrong！

EASY－TO－BUILD，TRANSISTORIZED POCKET RADIO


COMPLETE WITH BUILT－IN EAR－ PHONE，ANTENNA AND CASE

A MARVEL OF COMPACTNESS

knight－kit 2－Transistor Pocket Radio Kit

$$
\begin{array}{cl}
\text { NET } & \text { - Receives Local Stations Loud and Clear } \\
\$ \mathbf{~} & \begin{array}{l}
\text { Employs Newest Printed Circuit Board } \\
\text { - Operates from Built-In Loop Antenna }
\end{array} \\
& \text { - Plays for Months from Single Battery }
\end{array}
$$

You＇ll be delighted with the performance of this outstanding pocket radio！The miniature dynamic earphone，patterned after professional hearing－aid types，provides ex－ ceptionally good tonal quality．The two low－drain transistors will enable you to operate it for months and months from a long－life，alkaline－cell battery．

You＇ll enjoy building this extremely efficient，2－transis－ tor pocket radio－and your enjoyment will be doubled when you start listening to its crystal－clear，local broadcast reception wherever you go．Compact and portable，it fits easily into your pocket and button－down flap allows it to be suspended from your belt．Only 4＂ high， $33 / 4^{\prime \prime}$ wide，and $134^{\prime \prime}$ deep！You＇ll find hundreds of uses for this precisely designed，low－cost pocket radio－ perfect for baseball and football games，picnics，hikes and many other outdoor activities，as well as private listening indoors．

Employs an extremely efficient，reflex－type，2－transistor circuit that actually does the work of 3 transistors！ Works beautifully from a built－in，high－gain ferrite core antenna－no external antenna is needed to pick up local stations！You＇ll get months and months of dependable service from the new－type alkaline battery（listed at right，below），since transistors require an incredibly small amount of power．

Other important features of the pocket radio include the use of an air－dielectric，variable capacitor for smooth，accurate tuning．The printed circuit board， with all critical wiring already completed，simplifies assembly，reduces building time，and almost completely eliminates chance of wiring error．Everything you need，down to the finest detail，is supplied．＂Step－by－ step＂instructions are marvelously clear and won＇t let you go wrong．Even with no previous building experi－ ence，the entire radio can be assembled in one evening．

Only two controls：On－Off－Volume and Tuning．Carry－ ing weight is only 11 ounces！Handsome tan carrying case is plastic－impregnated and styled to resemble leather．Size， $4^{\prime \prime}$ high， $33 / 4^{\prime \prime}$ wide， $13 / 4^{\prime \prime}$ deep．Kit includes two transistors，carrying case，earphone with 3 －ft． cord，wire，solder，all parts，and easy－to－follow instruc－ tions．Less battery．Shpg．wt． $11 / 2 \mathrm{lbs}$ ．
83 Y 263．NET．
83 Y 264．9v．Battery．For above． 4 oz．NET．．．．．．．． 1.25


$$
\begin{array}{cl}
\text { NET } & \text { - Outstanding Kit Value } \\
& \text { - Printed Circuit Mounting Board } \\
\text { - High-Efficiency Transistor } \\
& \text { - Operates on Single Penlight Cell }
\end{array}
$$

An amazing radio-small enough to fit into the palm of your hand-and it operates for months and months on just one penlight battery! This popular kit introduces you to the latest marvels of electronics-the transistor and the printed circuit-and delivers excellent headphone reception on the entire AM band. The transistor is highly efficient-uses remarkably little current-lasts indefinitely-and is extremely small in size. The printed circuit eliminates wiring-makes assembly the last word in simplicity. Kit includes specially designed coil for exceptionally good sensitivity and selectivity. A ball bearing variable capacitor assures smooth, effortless tuning. With all parts, hardware, transistor, battery, solder, easy-to-follow assembly instructions, etc. Less headphones ( 4000 ohms impedance or more) and antenna, listed at the bottom of right column. Size, $31 / 8 \times 37 / 8 \times 3^{\prime \prime}$. Shpg. wt., 1 lb .
83 Y 765. NET.
3.95


Remarkable, low-cost crystal set kit. Delivers loud, clear reception of local broadcast stations. Circuit employs a fixed-type germanium crystal diode detector of the type used in high frequency detecting equipment. Crystal is preset and does not require adjustment. Kit includes coil form and wire for winding efficient " $\mathrm{Hi}-\mathrm{Q}$ " coil. Complete with all parts, detailed instructions, wire, solder and baseboard. Less headphones and antenna kit. Shpg. wt., 1 lb .
83 Y 261. NET.
2.35

59 Y 112. 1000 -Ohm Headphones. $11 / 4$ lbs. NET. 1.08 83 Y 100. Antenna Kit. $11 / 2$ lbs. NET.
1.03

FEATURE-PACKED TRANSISTOR RADIO KIT


WITH PLASTIC CASE

knight-kit "Trans-Midge" Radio Kit

$$
\begin{array}{cl}
\text { NET } & \text { - Uses High-Efficiency Transistor } \\
\text { - Exceptionally Sensitive Reception } \\
& \text { - Operates From Single Penlight Cell } \\
& \text { - Has High-Impact Plastic Case }
\end{array}
$$

Here's a tiny, 1 -transistor radio kit that's just slightly larger than a package of cigarettes! Designed to provide a fascinating, fun-filled evening for both experienced and beginning kit builders. You'll be amazed at how easily it goes together and you'll enjoy its exceptionally fine performance. Small enough to fit easily into the palm of your hand, this efficient radio will give clear reception throughout the standard AM broadcast band. Using a high-efficiency transistor, the "Trans-Midge" has excellent selectivity and displays remarkable sensi-tivity-pulls in stations loud and clear. The transistor serves as both a detector and an audio amplifier for greater audio volume. Requires the use of an external antenna (listed below).

Features of this expertly engineered little radio include: efficient, slug-tuned coil for high sensitivity and excellent separation of stations; external knob to permit tuning in stations without opening the case; low-drain transistor which operates for months and months on the single penlight cell supplied; durable, positive-locking, red plastic case. Highest-quality parts are used to assure long, dependable service.

Supplied complete with plastic case, all parts, transistor, wire, solder, battery and step-by-step instructions. Less headphones and antenna kit (see below). Size, $35 / 8 \times 25 / 8 \mathrm{x}$ $15 / 6^{\prime \prime}$. Shpg. wt., 8 oz.
83 Y 767. NET.
2.45


## headphones and antenna

Headphones and antenna kit for transistor radio kits listed on this page. Antenna is also for crystal set. Antenna includes 50 feet of wire, $25-\mathrm{ft}$. lead-in, insulators, ground clamp.

4000-OHM HEADPHONES. Shpg. wt., $11 / 4 \mathrm{lbs}$. 59 Y 149. NET.
ANTENNA KIT. Shpg. wt., $11 / 2 \mathrm{lb}$.
83 Y 100. NET.

## BUILD ANY ONE OF THESE TWELVE FASCINATING DEVICES

Practical Projects Make it Fun to Learn Electronics !

- Audio Code Oscillator
- Audio Amplifier
- Home "Broadcast" Station
- Electronic Flasher
- Broadcast Receiver
- Photoelectronic Relay
- Voice-Operated Relay
- Electronic Timer
- Electronic Switch
- CW "Transmitter"
- Capacity-Operated Relay
- Light Control Oscillator

An easy and enjoyable way to learn the basic elements of electronics.


## All-New



The latest Knight-Kit electronic lab kit-now completely redesigned to bring beginners more fun than ever. A special safety-design transformer reduces all voltages to 25 volts or less-far less voltage than in most battery-powered portable radios.
You can build any one of 12 practical circuits-the manual you get with this ingenious kit tells you exactly what to do and clearly explains how each circuit works. Change circuits by relocating a few wiresno need to change position of components. Connect the wireless "broadcaster" to your phonograph and play records through any radio in the house; the capacity-operated relay serves as an excellent burglar alarm; the photoelectronic relay rings bells, turns on appliances, etc. when actuated by light; use the voiceoperated relay to turn lights or other devices on or off, just by speaking into mike; practice sending code

- Safety Designed-No Voltage Exceeds 25 v.
- Supplied Complete With Mike and Phototube
- Numbered Terminal Strips Make it Easy to Change from One Circuit to Another
- Informative Manual Explains Every Circuit
through a headphone by using the code oscillator circuit; the electronic flasher continuously turns lamps on, off, and on again; have fun "making music" by using hand motions to control the amount of light striking the light control oscillator; the audio amplifier can be used with mike or phonograph to send voice or music over a long wire to headphone at other end; use the electronic switch to sound an alarm when it rains; the broadcast band radio provides clear headphone reception; you'll be able to send code signals to any radio in your house with the CW "transmitter".
With mike, solder, wire, and all parts, except headphone. For 110-125 v., 50-60 cycle AC. Wt., $31 / 2 \mathrm{lbs}$.
83 Y 272 . NET..
14.95

SINGLE HEADPHONE. With $41 / 2 \mathrm{ft}$. cord. 8 oz .
59 Y 112. 1000 Ohms. NET.
1.08


Top-Value knight-kit High-Speed Electronic Photoflash Kit

- Fast, 1/700th-of-a-Second Flash
- Output Is Full 50 Watt/Seconds
- Excellent Daylight Spectral Quality
- Ideal for Color and Black and White


## $\$ 2950$ <br> \$2.95 Down

 is perfect for indoor, outdoor, black-and-white, and color photography. The bulb gives over 10,000 flashes at a fraction of a cent per flash! No more bulky, costly flashbulbs, lost shots, misfires.Freezes fastest action with $1 / 700-$ second flash. Light approaches daylight in spectral quality-permits using daylight-type color film indoors. Film guide number on average black and white film (ASA

80 ) is 200; for color film (ASA 10) guide number is 45 . Output is full 50 watt-seconds.

Each kit comes complete with universal mounting bracket that fits all cameras, all parts, heavy-duty case, pre-cut wire, solder, and step-bystep instructions and diagrams. For use with " X " or " 0 " shutters only. Requires sync cable (obtainable from any photo supply dealer) and either battery or AC power supply (below). Shpg. wt., 4 lbs.
83 Y 244. NET
29.50

AC POWER SUPPLY KIT. Wt., 2 lbs.
83 Y 246. NET.
3.95

BATTERY. Burgess U-200. 300-volt battery. Shpg. wt., 1 lb .
80 Y 626. NET.
7.70

Low-Cost 2-Way Communication<br>for Home, Store, Office or Factory


#### Abstract

ANYONE CAN BUILD IT! THOUSANDS OF USES HANDSOME NEW STYLING




## High-Gain knight-kit 2-Way Intercom System Kit



- Low Cost System-Easy-to-Assemble
- With 50-ft. Cable and All Parts
- Handsome Two-Tone Metal Cabinets
- High Gain-Clear Tone-Sensitive

Complete 2-station intercom kit consisting of a Master and a Remote unit-at remarkably low cost. Has hundreds of uses in the home, office, school, shop, etc. Saves steps between house and garage, backyard, basement, baby's room (picks up the slightest sound), etc.
Provides private or non-private operation at the flick of a switch. Master unit has a "press-to-talk" switch; Remote unit has a "talk-listen" switch. Switch on Remote can be left in "talk" position to permit continuous listening-in.
Master can communicate with Remote regardless of position of switch on Remote unit and can handle up to three Remote units in parallel. Extra remotes can communicate with one another. Combination volume
control and on-off switch, plus pilot light, on Master. Only the Master station needs power connection; Remote units can be located anywhere. Kit has a highgain, 2 -stage amplifier and $4^{\prime \prime}$ PM speakers. The audio amplifier uses a 2 -tube circuit plus a 35 W 4 rectifier.

Cabinets have been completely restyled-now more attractive than ever. Finished in ivory and brown. With all parts to build a Master and a Remote, tubes, $50-\mathrm{ft}$. cable, solder and instructions-anyone can easily build this smooth-working intercom outfit. Each unit, $43 / 4 \times 61 / 2 \times 43 / 8^{\prime \prime}$. For $110-125$ v., $50-60$ cycle AC, or DC. Shpg. wt., 8 lbs.
83 Y 297. NET.
extra remote station kit. For use with above. Less cable. Shpg. wt., 3 lbs.
83 Y 298. NET.
3.95

EXTRA CABLE. Shpg. wt., $100 \mathrm{ft} ., 21 / 2 \mathrm{lbs}$.
49 Y 604. NET PER FOOT..
3c

## Wireless Broadcaster-Amplifier Kit



You get more for your money with this new, versatile combination broadcaster-amplifier kit. Use it with a mike or phono to make announcements or play music through radios anywhere in the house-without any need for direct connection to the sets! May also be used as an audio amplifier by attaching to any PM speaker ( 3.2 to 16 ohms). Has input for magnetic cartridge. Can also be used with crystal cartridge or with a crystal or high-impedance dynamic mike. Puts out a clean, full-toned signal. When used as a wireless broadcaster, the volume may be controlled at broadcaster or at the individual radio receivers. Broadcasting frequency is adjustable from 600 to 1600 kc -easily tuned to any clear frequency on your radio set.
High-gain stage with equalization permits using magnetic cartridge without need for external preamp; equalization may be disconnected for use with mike. Supplied complete with all parts, wire, solder and easy-to-follow instructions. Size, $41 / 2 \times 5 \times 6^{\prime \prime}$. For $110-125$ volts, 50-60 cycle AC, or DC. Shpg wt., 3 lbs . 83 Y 706. NET.
11.95



## QUALITY Eenteremerite FOR THE RADIO AMATEUR YOU GET MORE FOR YOUR HAM DOLLAR IN EVERY WAY

There are no finer values for the Amateur station than Knight-Kit equipment. These outstanding kits are designed to the highest standards of Amateur performance by skilled engineers, who are themselves licensed Amateurs.

When you outfit your station with Knight-Kits you can be sure of equipment that's designed for maximum efficiency, versatility and operating ease-plus the ultimate in dependability. Nowhere can you find greater value.

## TOP-QUALITY HAM RECEIVER WITH MATCHING SPEAKER



## knight-kit Amateur Communications Receiver Kit

An outstanding achievement in communications receiver engineering, this superb kit has gained phenomenal acceptance-there is no other receiver like it! Has all the features, selectivity and sensitivity of high-priced commercial units. Covers 540 kc to 30 mc in 4 ranges; calibrated electrical bandspread on all Ham bands from 80-10; slug-tuned hi-Q coils; continuous VR tuberegulated $B+$ applied to HF oscillator lets you switch from standby to receive with no drift; built-in Q-multiplier peaks desired signal or nulls interference ( $60-\mathrm{db}$ notch really takes out interference) ; delayed AVC; built-in noise limiter; provision for "building in" crystal calibrator listed below. Exceptional sensitivity- $1.5 \mu \mathrm{v}$ for $10 \mathrm{db} \mathrm{s} / \mathrm{n}$ ratio, even on 10 meters! $4 \mu \mathrm{v}$ sensitivity on broadcast band. Selectivity is variable from 300 cps to 4.5 kc at 6 db down. Exalted BFO injection for SSB. Controls: main tuning, bandspread tuning, band selector, Q-multiplier selectivity, Q-multiplier tune, null-off-peak, BFO pitch, RF gain, AF gain, BFO-MVC-AVC-ANL, off-stdby-recv-cal, antenna trimmer and headphone jack. Coaxial, plus screw-terminal antenna connectors for 50 to 300 -ohm lines. Close-tolerance coils assure minimum alignment time. $455-\mathrm{kc}$ IF. $10 \times 103 / 4 \times 16^{\prime \prime}$. With tubes, all parts, wire, solder and instructions. Less speaker and S-meter. For 110-125 v., 50-60 cycle AC. Shpg. wt., 30 lbs.
83 YU 726. NET
104.50

SPEAKER KIT FOR ABOVE. $4^{\prime \prime}$ speaker with special-design cone for peaking of voice frequencies and reducing QRN over ordinary speakers. In cabinet that perfectly matches the receiver. Imp., 8 ohms. Wt., $31 / 2 \mathrm{lbs}$.
83 Y 728. NET
7.50

83 Y 727. S-METER KIT. For above. Shpg. wt., 1 lb. NET. $\qquad$
(1)

IT'S THE BEST! BUILD IT YOURSELF AND SAVE!

EXCLUSIVE PRINTED CIRCUITRY

## Low-Cost knight-kit 100-kc Crystal Calibrator Kit

Crystal frequency standard for any receiver, at very low cost. Gives marker every 100 kc up to 32 mc . Only $11 / 2 \times 11 / 2 \times 3$ ". Requires 6.3 v . at 0.15 amp and $150-300 \mathrm{v}$. DC at $3-6 \mathrm{ma}$. Trimmer for zero-beating with WWV; on-off switch. With tube, crystal, all parts, wire, solder. Shpg. wt., 1 lb . 83 Y 256. NET
10.95


knight-kit VFO Kit

\$2950: Exceptiona Stability<br>- Built-In B+ Supply<br>- Excellent Keying<br>\$2.95 Down

Save On This knight-kit 50-Watt CW Transmitter Kit \$3895<br>\$3.90 Down

A deluxe, high-quality VFO kit at an incomparably low price. Calibrated for $80,40,20,15,11$ and 10 meters; output on 80 and 40 meters. 40 -volt output on 80 meters and 20 -volt output on 40 meters is more than adequate to excite oscillator stage of any transmitter. An ideal companion to the Knight-Kit 50 -watt transmitter at right. Drift-free, series-tuned Clapp oscillator uses $1 \%$ silver mica capacitors. Tank coil is wound on heavy ceramic form.
Features TVI suppression; vernier drive. Frequency stability is achieved by careful design and rigid mechanical construction. Two-chassis design keeps heat from oscillator circuit. Voltage regulated for stable output. Tubes: 6BH6, 6AK6; 6X4 rectifier, 0A2 voltage regulator. Supplied complete with all parts, tubes, wire, solder, and step-by-step instructions. Gray and blue steel cabinet, $6 \times 6 \times 83 / 4^{\prime \prime}$. For operation from 110-125 volts, $50-60$ cycle AC. Shpg. wt., 11 1bs.
83 Y 725. NET.
29.50

Here's a low-cost 50 -watt transmitter kit that features high-quality transmitting components throughout. Uses the popular 807 tube in the final, ceramic coil forms and double-spaced tank capacitor. Heavy, copper-finish chassis aids TVI suppression. Ideal as a "first rig" for the Novice because assembly is simplicity itself. Excellent, too, as a low-power standby rig for the advanced Amateur. The Knight-Kit transmitter kit is a completely self-contained, bandswitching CW transmitter that can be operated crystalcontrolled or with a VFO such as the Knight-Kit VFO at left.
OUTSTANDING CIRCUIT. Features a 6AG7 as a modified-Pierce tuned-plate oscillator-multiplier when crystals are used; as a buffer-multiplier when used with a VFO. 50 watts input to an 807 final. 5 U4G rectifier. Transmitter is completely shielded in rugged metal cabinet for TVI suppression. Firm metal-to-metal seals are provided at all junctions. Filtering and bypassing of AC, keying, meter and heater circuits are provided. Pi-section antenna output permits operation with any type of antenna. Matches antenna impedances from 50 to 2000 ohms. Eliminates need for external type of antenna tuner. Other features include: bandswitching on all bands; cathode keying of oscillator and final; metering of final plate and grid circuits; provisions for external modulator; power socket for supplying 6.3 volts AC and $\mathrm{B}+$ to accessories. In addition to the final plate and grid current meter, the front panel includes the following controls: Oscillator Tuning; Antenna Loading; Grid-Plate Meter switch; and Off-On switch. Key jack, VFO and crystal sockets are also on front panel.
Kit is supplied complete with all parts, tubes, wire and solder. Assembly is simple with the step-by-step instructions included. Less crystal and key. $81 / 2^{x} 101 / \mathrm{x}^{\times 8} 1^{\prime \prime}$. For $110-125 \mathrm{v}$., $50-60$ cycle AC. Wt., 18 lbs. 83 YX 255. NET.
38.95


## knight-kit Z-Bridge Kit

NET - For Measuring SWR $\$ 585{ }^{\text {- Reads Antenna }}$

Impedance

- Coax Input, Output An invaluableaid for achieving peak antenna efficiency. Eliminates guesswork-accurately measures Standing Wave Ratio (SWR) from 1 mc to 150 mc . Also for measuring impedance on frequencies up to 100 mc . Use your own VOM as a null indicator. For sharpest null indications a $5,000 \mathrm{ohm} / \mathrm{v}$ or better VOM is recommended. Has low-loss coaxial input and output connectors. Can be used with lines having impedances between 20 and 400 ohms. Two convenient jacks for metering input and bridge voltage. Accurately calibrated dial gives direct impedance reading. $1 \%$ precision resistor for calibration use and chart for converting meter reading to SWR. $21 / 2 \times 31 / 2 \times 4^{\prime \prime}$. With SWR chart, wire and solder. Less meter. Wt., $11 / 2$ lbs. 83 Y 253. NET.
5.85


## knight-kit Transistor Code Practice Kit

$\begin{array}{cc}\text { NET } & \begin{array}{l}\text { - Transistorized Circuit } \\ \text { - Extremely Compact }\end{array} \\ \mathbf{\$ 9 5} & \text { - Operates for Months }\end{array}$ On Penlight Cell

Advanced-design code practice oscillator at unusually low cost. Uses transistor circuitpowered by a single penlight
 cell! Amazingly low current consumption-one battery operates unit for months. 500 cps tone. Has output jacks for standard headphone tips; screw type terminals for key. Housed in bakelite case with aluminum panel. With all parts, battery, wire, solder, and instructions. Less phones, key. $23 / 8 \times 33 / 4 \times 11 / 2^{\prime \prime}$. Shpg. wt., 1 lb .
83 Y 239. NET.
See page 389 for a complete selection of records specially prepared to teach beginners in Amateur radio to receive the code.


## 

## DO THE EASY ASSEMBLY . . . SAVE OVER $50 \%$

MORE FOR YOUR MONEY. You get more for your money when you buy Knight-Kit test equipment kits. Highest-quality components, professionally styled cabinets and panels, many important "plus" features and genuine ease of assembly assure you of equipment equal to or better than factory-wired units costing at least twice as much! Build any Knight-Kit test instrument-you'll be proud of the results.


TOP PERFORMANCE. You can be sure of top performance and advanced design when you build Knight-Kit test equipment kits. Expert engineering, careful quality control through every stage of development, and long, rigid field testing assure you of the ultimate in reliability and operating ease. Feature for feature, Knight-Kit test instruments are equal or superior to factory-built equipment costing far more.

## LOWEST COST

 TUBE CHECKER!
# Storage Drawer Has "Flip- 

 Cards" With Tube Data And Settings-Checks Nearly All Popular Radio-TV TubesCovers 400 tubes, including latest high-fidelity tube types-quickly pays for itself!

\author{
NET
$\$ 105$ <br> \$2.00 Down <br> \section*{NEW knight-kit "400" Tube Checker Kit-An Amazing Value!} <br> - Lowest Cost Unit of Its Type

- Checks Most Receiving Tubes <br> - Weighs Only $51 / 4$ Lbs.-Take It Anywhere! <br> - Unusually Neat, Compact Styling
}

A tremendous value in an easy-to-build, tube checking instrument, the Knight-Kit " 400 " Tube Checker Kit is the lowest cost unit of its type available today! It fills a real need for experimenters, hobbyists, part-time radio-TV servicemen, students, etc. Covers 400 tubes including the most commonly used hi-fi, radio and TV receiving tubes. Has sockets for 7-pin miniature, 9-pin miniature, octal and loctal-base tubes. Checks for filament continuity, shorted elements and cathode emission. Easy-to-read meter has a red-green "Re-place-Good" scale, plus special scale for checking diodes. Quick-setting, universal-type selector slide switches, used in conjunction with handy "FlipCards", permit rapid selection of any combination of pin connections. Fast and accurate, and light in weight -the " 400 " is an indispensable servicing instrument!

Built-in, slide-out metal drawer, holding "Flip-Cards" in loose-leaf binding, is an integral part of the cabinet -you can't lose the tube charts! Checker includes "Hi-Lo" line-voltage compensator switch. Remarkably compact in size (only $23 / 8^{\prime \prime}$ high, $91 / 2^{\prime \prime}$ wide and $8^{\prime \prime}$ deep), it's perfect for carry-about use almost anywhere-the ultimate in servicing convenience! Carrying weight is only $51 / 4$ pounds.

Easy-to-follow instructions permit assembly in minimum time. Sturdy metal case finished in gray, with front panel color-styled in ivory. Supplied complete with "Flip-Cards", all parts, wire and solder, easy-to-follow instructions. For operation from 110-125 v., $50-60$ cycle AC. Shpg. wt., $61 / 2 \mathrm{lbs}$.
83 Y 707. NET.
19.95

## kniglnt-kit Transistor and Diode Checker Kit

> NET - Checks Transistor Gain Ratio $\$ \mathbf{5 0}$ - Checks Germanium and Silicon Diodes \& Selenium Rectifiers The ever-increasing use of transistors and diodes makes this versatile checker an extremely valuable instrument for radio-TV servicemen, experimenters, engineers, etc. Also useful for continuity and short checks.

Checks leakage-to-gain ratio and noise level of all types of transistors; checks forward and reverse current of germanium and silicon diodes, and selenium rectifiers. Spring-return leakagegain switch; separate sockets for PNP and NPN transistors. $5 \times 3 \times 2^{\prime \prime}$. With battery. Shpg. wt., $21 / 2 \mathrm{lbs}$.
83 Y 149. NET.
.8 .50

knight-kit Printed-Circuit VTVM Kit<br>\section*{$\$ 075$ - 200- $\boldsymbol{\mu}$ a Movement, $41 / 2^{\prime \prime}$ Meter}<br>- Reads AC Peak-to-Peak<br>- Balanced-Bridge, Push-Pull Circuit<br>Only \$2.58 Down<br>- $1 \%$ Film-Type Resistors

Here's a top buy in an extremely stable and highly accurate VTVM. Wiring and assembly are greatly simplified -the entire chassis is a printed circuit board. Performance is equal to factory-wired instruments costing much more. An outstanding choice for radio-TV service shop, lab, amateur use, etc. Uses low-leakage type switches; film-type, $1 \%$ precision resistors. Balanced-bridge, pushpull circuit permits switching to any range without readjusting zero set. Has zero-center scale and directreading db scale; polarity reversing switch. $41 / 2^{\prime \prime}$ meter with sensitive 200 -microamp movement.
SPECIFICATIONS: Input Resistance: 11 megs. $D C$ and $A C$ rms volts: 0-1.5-5-15-50-150-500-1500. A C Peak to Peak Volts: 0-4-14-40-140-400-1400-4000. Resistance: 0-1000$10 \mathrm{~K}-100 \mathrm{~K}$ ohms; 1-10-100-1000 megohms. Decibels: -10 to +5 . Response: 30 cycles to 3 mc .
Supplied complete with tubes, blue case, gray front panel, battery, all parts, pre-cut wire, solder, test leads and easy-to-follow instructions. Size, $73 / 4^{\prime \prime}$ high, $514^{\prime \prime}$ wide, $43 / 16^{\prime \prime}$ deep. For operation from $110-125 \mathrm{v}$., 60 cycle AC. Shpg. wt., 6 lbs.
83 Y 125. NET
25.75

## YOU GET THE MOST FOR YOUR MONEY IN knight-kit TEST INSTRUMENTS



HIGH-FREQUENCY PROBE KIT. Extends AC range of VTVM to 250 mc. Shpg. wt.; $11 / 2 \mathrm{lbs}$.

83 Y 127. NET

The chassis is a printed circuit board-wiring time is reduced to a minimum. VTVM is enclosed in a handsome blue metal case with gray front panel.


## ACCESSORY PROBE KITS FOR knight-kit VTVM

high-voltage probe kit. Extends DC voltage range to 50,000 v. Shpg. wt., $11 / 2 \mathrm{lbs}$. 83 Y 126. NET.
4.75


Single range-function switch speeds assembly and simplifies operation.



## knight-kit 20,000 Ohms/Volt VOM Kit

$\$ 2950$
Only $\$ 2.95$ Down

- Versatile, 32-Range Instrument
- $1 \%$ Precision Resistors
- Single Range-Function Switch
- $41 / 2^{\prime \prime} 50-\mu$ a Meter- $2 \%$ Accuracy

This Knight-Kit VOM offers outstanding quality and performance. Carefully engineered circuit employs $1 \%$ precision multipliers. Has $41 / 2^{\prime \prime}$ meter; movement accurate within $2 \%$ of full scale deflection. 50 -microamp meter sensitivity provides 20,000 ohms-per-volt input resistance on DC to assure accurate measurements in critical circuits. Front panel "zero adjust" control. Single switch for selection of function and range.
SPECIFICATIONS. Ranges: AC, DC and output volts, 0-2.5-10-50-250-1000-5000; Resistance, 0-2000-200,000 ohms and 0-20 megohms; DC ma, 0.1-10-100; DC amps, $0-1-10$; Decibels, -30 to +63 in six ranges. Black bakelite case, $63 / 4 \times 51 / 4 \times 33 / 4$ ". With all parts, test leads, batteries, wire and solder. Shpg. wt., 5 lbs. 83 Y 140. NET.
29.50


Has $41 / 2$-inch meter with large, easy-to-read scales; 400-microamp sensitivity.


## knight-kit 1000 Ohms/Volt VOM Kit



Another great value in an easy-to-build Knight-Kit instrument kit! This 38-range VOM kit provides exceptional accuracy. Separate scales for AC and DC voltage and current, decibels and resistance. $1 \%$ precision resistors. 3-position function switch and 12 -position range switch. $41 / 2^{\prime \prime} 400$-microamp meter.
SPECIFICATIONS. Ranges: AC, DC and output volts, $0-1-5-10-50-100-500-5000$ (with sensitivity of 1000 ohms-per-volt); Resistance, $0-1000-100,000$ ohms and $0-1$ megohm (center scale readings of 60,150 and 1500 ohms); Current, AC or DC, 0-1-10-100 ma and $0-1 \mathrm{amp} ;$ Decibels, from -20 to +69 in six ranges. Black bakelite case, $63 / 4 \times 51 / 4 \times 33 / 4{ }^{\prime \prime}$. With battery, test leads, wire and solder. Shpg. wt., $21 / 2 \cdot 1 \mathrm{bs}$.


A bigger value than ever-gives you more for your money than any other wide-band scope kit in the country. Its performance is equal to or better than commercially wired oscilloscopes costing far more.

Wiring this fine instrument is simplicity itself-two printed circuit boards and a wiring harness cut assembly time to a minimum by eliminating much of the circuit wiring. Features extremely wide sweep range, wide response and very high sensitivity. An ideal unit for color TV servicing and hundreds of other high-frequency applications in laboratories, shops and factories.

Push-pull vertical and horizontal amplifiers with cath-ode-follower inputs assure minimum circuit loading and almost zero wave-form distortion. 2nd anode voltage of 1400 volts provides a high-intensity trace. Excellent synchronization on complex waveforms is achieved by positive and negative locking. Scope gives faithful square wave response.

Includes many features for extreme versatility. Has frequency-compensated input attenuator, one volt peak-to-peak calibrating voltage and internal astigmatism control. Z-axis input permits intensity modulation of trace. Directly coupled positioning controls permit overshoot-free trace positioning. Retrace lines are effectively eliminated by blanking circuit.

SPECIFICATIONS: Vertical Response: $\pm 3 \mathrm{db}, 5 \mathrm{cps}$ to 5 mc ; only 1 db down at $3.58-\mathrm{mc}$ color burst frequency. Vertical Sensitivity: 0.025 rms v /inch. Input Impedance: 2.9 megs and 20 mmf . Horizontal Amplifier: 0.6 rms $\mathrm{v} /$ inch; response down only 3 db at $600 \mathrm{kc}, 4 \mathrm{db}$ at 1 mc ; $15-600,000 \mathrm{cps}$ sweep range. Locks in as high as 9 mc .

Complete with all parts, 5UP1 CRT, punched chassis, case, wire and solder. $141 / 2 \times 91 / 2 \times 16^{\prime \prime}$. Includes step-bystep instructions and giant-size diagrams. For 110-125 v., $50-60$ cycle AC. Shpg. wt., 40 lbs.

83 YU 144. NET
65.75

knight-kit Voltage Calibrator Kit


This easy-to-assemble calibrator permits using any scope as a precision peak-to-peak AC voltmeter-tremendously increases scope versatility. Puts a true square-wave voltage on scope screen. Has range switch and calibrated potentiometer to permit selecting any voltage between .01 and 100 volts, in 4 ranges. Fifth position of range switch feeds external signal directly to scope for comparison. Voltage regulator keeps output voltage constant with a power line variation from 80 to 135 volts. Accuracy of $\pm 6 \%$ on all ranges. Shunt capacitance is only 15 mmf . Direct coupling of output provides ground reference for DC scopes. Size, $73 / 4 \times 51 / 4^{\times 4} 3 / 16^{\prime \prime}$. Complete with all parts; pre-cut wire; solder; giant-size pictorial diagrams; schematics; and easy-to-follow instructions. For $110-125$ volts, $50-60$ cycle AC. Shpg. wt., 5 lbs .
83 Y 136. NET.
12.75
knight-kit RF Demodulator Probe Kit


Use with Knight-Kit oscilloscopes to permit observation of modulation envelopes of RF and IF sig-nals-extends scope range to 250 mc. With all parts, cable, solder, instructions. Wt., 2 lbs.
83 Y 148. NET
3.45

## knight-kit Low-Capacity Probe Kit

For use with Knight-Kit oscilloscopes when observing audio, video, sweep or sync signals. Prevents overload and distortion of signal, 12 mmf input. With solder, all parts, cable. Wt., 2 lbs.
83 Y 147. NET.
3.45



VERSATILE, TOP-VALUE TUBE TESTER
 switch bank in minutes.

## knight-kit Low-Cost Tube Checker Kit


\$2.98 Down

- Large "Good-?-Replace" Meter
- Tests Series-String TV Tubes
- 600 Tube Types Listed
- Designed to Stay Up-To-Date

This expertly designed, up-to-date tube tester kit is an unusually fine choice for the serviceman or experimenter. Tests $4,5,6$ and 7 -pin large, regular and miniature tubes, octals, loctals, 9-pin miniatures and pilot lamps, including series-string AC-DC and TV types. Tube performance is measured by the amount of cathode emission. Easy-to-read $412^{\prime \prime}$ meter has three-color "GOOD-?-REPLACE" scale. Also tests for shorts, open elements and cathode-to-filament leakage.
Provides continuity check for other components, electrical appliances, motors, etc. Has line-voltage indicator and line-adjust control to compensate for line voltage variations; may be adjusted from the front panelassures greater test accuracy and correct voltage for each tube test. Choice of 16 filament voltages from 0.63 to 117 volts to check virtually all receiving tubes.

Special circuit features assure years of dependable service without obsolescence. Blank panel socket accommodates future tube types. Universal-type selector switches permit setting up for any new tube pin connections without wiring changes. Single-unit, pre-assembled 10 -lever function switch simplifies and speeds assembly. Illuminated roll chart lists 600 tube types. With all parts, wire and solder. $5 \times 14 \times 10^{\prime \prime}$. For $110-$ 125 v., $50-60$ cycle AC. Shpg. wt., 14 lbs.
83 YX 143. NET.
29.75

PORTABLE MODEL TUBE CHECKER KIT. With covered plywood case; $61 / 2^{x} 141 / 2^{x} 101 / 2^{\prime \prime}$. Shpg. wt., 15 lbs .
83 YX 142. Only $\$ 3.48$ Down. NET.
34.75

## TV PICTURE TUBE ADAPTER. Valuable service

 aid-ready to use. Permits testing TV picture tubes with Knight-Kit Tube Checker. Shpg. wt., 1 lb .83 Y 141 . NET.
4.25


## Low-Cost knight-kit Flyback Checker Kit



- Widest Range In Its Field
- Exceptional Accuracy
- Large $4 / 2 / 2$-Inch Meter
- Invaluable For TV Servicing
$\$ 2.00$ Down
Race through TV deflection circuit repairs-for bigger-than-ever servicing profits-with the Knight-Kit Flyback and Yoke tester! Use it to check instantly on the condition of all types of horizontal output transformers and deflection yokes, as well as linearity and width coils in TV sets. Provides an accurate check of any standard unit. Positively indicates the presence of shorted turns for any coil with a " $Q$ " greater than 1 , and an inductance between .003 henry and 2 henries. Determines the continuity of any circuit with a resistance between 0 and .5 megohms. Checks a wider range of inductances than any other similar unit! $41 / 2$-inch meter with 400 microamp movement provides clear readings and high accuracy. Circuit uses 6 S4A tube in pulsed oscillator arrangement. Self-contained power supply is of isolation transformer type, for full safety during servicing of any type of TV set. Durable metal case, $73 / 4 \times 55 / 8 \times 5^{\prime \prime}$, has leather handle. Supplied complete with all parts, test leads, solder, wire, 6 S 4 A tube, step-by-step instructions, etc. For operation from 110-125 v., 50-60 cycle AC. Shpg. wt., 6 lbs. 83 Y 118 . NET.
19.50


# knight-kit Resistor-Capacitor Tester Kit <br>  <br> - Shows Capacitance, Resistance <br> - Indicates Power Factor <br> - Balanced-Bridge Circuit <br> - Tests Capacitors at Rated Voltage 

An extremely useful instrument-skillfully engineered for top-notch performance in the service shop and laboratory. Measures resistance and capacitance by the highly dependable bridge method; checks for opens and shorts in paper, mica and ceramic capacitors; and indicates the power factor of electrolytics. Its large, easy-to-read dial, used in conjunction with the "magic eye" null indicator, shows resistance and capacitance at a glance. The "magic eye" is also used in testing for opens, shorts, intermittents, and in checking power factor. Capacitors are tested at actual working voltages.
SPECIFICATIONS. Test Voltages: $50,150,250,350$ and 450 volts. Capacity Ranges: 10 mmf to $.005 \mathrm{mfd}, .001$ to $0.5 \mathrm{mfd}, 1$ to 50 mfd , and 20 to 1000 mfd . Resistance Ranges: 100 to 50,000 ohms and 10,000 ohms to 5 megohms. Accuracy: $\pm 10 \%$., Power Factor Range: $0-50 \%$. Uses 6E5 "magic eye"; also has 6X4 rectifier. In portable metal case with blue-wrinkle finish. Size, $7 \times 10 \times 5^{\prime \prime}$. With tubes, solder, pre-cut wire and instructions. For operation from $110-125$ volts, $50-60$ cycle AC. Shpg. wt. 10 lbs.
83 Y 124. NET.
19.50

knight-kit Resistance Substitution Box Kit

Rotary switch permits rapid setting to exact value needed.

## EACH UNIT INCIUDES LEADS

Find the correct resistance value required in a circuit-in minutes-with this convenient resistance substitution box. Saves time in radio and TV servicing as well as in equipment design. Low resistance range: 15 ohms to 10 K . High resistance range: 15 K to 10 megohms. Slide switch selects either range. Accuracy is within $\pm 10 \%$. 18-position rotary switch permits rapid setting to exact value needed. Switch has extra wafer to simplify wiring. All parts mount in compact case of bakelite with clearly calibrated aluminum panel; size, $5 \times 3 \times 2^{\prime \prime}$. With all parts, $18^{\prime \prime}$ leads, insulated alligator clips, solder, wire and instructions. Shpg. wt., 2 lbs.
83 Y 139. NET.

## knight-kit Capacitance Substitution Box Kif

NET Cuts time and effort in finding correct values for replacement $\$ 5^{95}$ of badly damaged, illegible capacitors. Substitutes a wide range of RETMA values. Ideal for laboratory and service shop. Has 18 standard capacitor values from .0001 mfd to .22 mfd . Accuracy of $\pm 20 \%$. All values are 600 volts, except .15 and .22 which are 400 volts. An 18-position switch permits fast, convenient selection of values. In sturdy bakelite case with attractive anodized aluminum panel. Size, $5 \times 3 \times 2^{\prime \prime}$. Kit is supplied complete with all parts, $18^{\prime \prime}$ leads, insulated alligator clips, solder, wire and step-by-step instructions. Shpg. wt., 2 lbs.
83 Y 138. NET.

Equal to units costing up to twice as much!


## knight-kit TV-FM Linear Sweep Generator

# $\$ 44{ }^{95}$ 

\$4.50 Down

- Extreme Linearity
- Fundamentals to 250 mc
- Output Flat Within 1 db
- Electronic Blanking

An outstanding, low-cost instrument for TV and FM alignment-provides sweep linearity on a par with costly laboratory instruments. Covers 300 kc to 250 mc on fundamentals. Delivers up to 0.15 v . and has coarse and fine attenuators for precise output adjustment. The skillfully engineered sweep circuit provides output which is constant within 1 db over the swept range, on all bands. Step-down dial drive mechanism gives smooth-as-velvet tuning action. Large, clearly calibrated dial is easy to read on all ranges. Circuit utilizes electronic retrace blanking, and a highly effective automatic gain control to keep output voltage constant over swept range. Sweep width is continuously variable from 0 (no sweep) to full 13 megacycles. Built-in crystal marker and input for external marker-built-in and external marker can be mixed. The Knight-Kit signal generator (at right) is an excellent variable marker for use with this unit. With all parts, tubes, precut wire, test cable, solder, and instructions. Less crystal (below). $81 / 2 \times 12 \times 71 / 2^{\prime \prime}$. For $110-125$ v., 60 cycle AC. Shpg. wt., 16 lbs.
83 YX 123. NET
44.95

99 Y 286. 4.5-mc Crystal. NET . . . . . . . . . . . . . . . . . . . . . . 4.80
99 Y 143. 5.0-mc Crystal. NET . . . . . . . . . . . . . . . . . . . . . . 3.95
99 Y 145. 10.7 -mc Crystal. NET
3.95


## A top-qual-

 ity instrument at only one-third the cost of similar wired units!
## knight-kit RF Signal Generator Kit

$\$ \bigcirc 75$ • Precision-Wound Coils<br>- No Calibration Required<br>- Modulated or Unmodulated Output<br>- 400-Cycle Sine Wave Output

Build this wide-range, extremely stable RF signal generator and save two-thirds the cost of a comparable wired instrument. You can quickly build it without difficulty; easy, fully illustrated Knight-Kit instructions enable you to get the job done in the least amount of time. The large, semi-circular dial is calibrated clearly; the signal generator's range is covered in five separate bands, permitting close accuracy in the setting of individual frequencies. You'll find that it's an ideal instrument for alignment of RF and IF stages in radio and TV sets, and for trouble-shooting audio equipment. Also serves as a TV marker generator when used with sweep generator listed at left. Delivers output on fundamentals from 160 kc all the way out to 112 mc ; provides useful harmonic output to 224 mc . Output can be modulated at 400 cycles-has built-in sine-wave audio oscillator with output jack for 400 -cycle output. Features the high-stability Colpitts circuit. Convenient jack for external modulation. Maximum audio output 10 volts. RF output, over 0.1 volt on all ranges. Step and continuous-type attenuator controls permit precise adjustment of output. With all parts, tubes, wire, solder and instructions. $7 \times 10 \times 5^{\prime \prime}$. For operation from $110-125$ volts, $50-60$ cycle. AC. Shpg. wt. 11 lbs. 63 Y 145. NET.

## knight-kit 6V-12V Battery Eliminator

\$3.30 Down

- Most Power Per Dollar!
- Continuously Variable Output Voltage
- Delivers 15 A at $6 \mathrm{~V}-10 \mathrm{~A}$ at 12 V
- May Be Used as Battery Charger

This heavy-duty DC power supply is ideal for testing auto radios, as well as Amateur and commercial mobile radio equipment. Continuously variable output from 0 to 15 volts at higher current than any similarly priced battery eliminator kit. Handles current requirements of any 6 or 12 -volt radio. Dual filter for low-ripple output. Can be used to charge any 6 or 12 -volt battery overnight. Low in price-high in performance-the Knight-Kit battery eliminator is a test and service instrument that will quickly pay for itself.
Provides DC output at $0-8$ volts or $0-15$ volts. Continuous current rating: 15 amps at 6 volts, 10 amps at 12 volts. Intermittent current rating: 17.5 amps at 6 volts, 12.5 amps at 12 volts. Two meters provide current and voltage readings. Meter ranges: $0-15$ volts DC; $0-20$ amps DC. Portable metal case with blue-wrinkle finish and disappearing handle. $9 \times 121 / 8 \times 73 / 8^{\prime \prime}$. With all parts, wire, solder and instructions. For 110-125 v., 50-60 cycle AC. Shpg. wt. 18 lbs. 83 YX 129. NET.
32.95


Make short work of auto radio servicing with this high-current unit! Powers any 6 or 12 v . radio. Also great for mobile gear!


FOR PRECISE TESTING OF AUDIO EQUIPMENT

## knight-kit MONEY-BACK GUARANTEE

Your purchase price is refunded in full if your Knight-Kit does not meet our published specifications for performance.

## knight-kit High-Gain Signal Tracer Kit <br> $\$ 2650$ <br> \$2.65 Down <br> - Usable Gain of 91,000 <br> - Built-in, Calibrated Wattmeter <br> - Measures Stage Gain <br> - Reveals "Dead" Stage

For speedier servicing and bigger profits, use the KnightKit high-gain signal tracer. This easy-to-build, extremely worthwhile unit will save you work and trim valuable time from hundreds of servicing jobs-once you've used this outstanding trouble-shooting instrument, you'll wonder how you ever got along without it.
It's ideal for servicing radios, TV sets and amplifierschecks RF, IF, video and audio circuits. Employs pentode front-end for remarkably high amplificationhas gain of 91,000 -the highest in its price class. "Magic Eye" tube with calibrated attenuators clearly indicate signal presence and permit stage-by-stage gain measurements all the way from the antenna to the speaker. Only, 6 mmf input capacitance. In addition to "Magic Eye" indicator, tracer has $4^{\prime \prime}$ speaker to permit audible signal tracing or use as a general-purpose audio amplifier. 2-position RF-AF probe supplied permits complete testing versatility; one position of probe is for checking RF, IF and video stages; other position is for checking audio-frequency stages.
Noise test-applies DC to volume controls for amplification of noise characteristic. Built-in wattmeter is calibrated from 25 to 1000 watts-wider range than any other kit. Has provision for external oscilloscope or VTVM. Binding posts provide 280 v . B+ for external uses; permit easy output transformer or speaker check in audio amplifiers. Attractively finished blue wrinkle case has contrasting gray panel. Size, $7 \times 10 \times 5$ ". With disappearing carrying handle. With all parts, tubes, probe, pre-cut wire and solder, instructions, pictorial and schematic diagrams. Tubes: 6AU6 high-gain amplifier, 6AV6 amplifier and wattmeter rectifier, 6 V 6 GT power amplifier; 6E5 "magic eye"; 6X4 rectifier. For 110-125 volts, $50-60$ cycle AC. Shpg. wt. 12 lbs.
83 Y 135. NET.
26.50

## knight-kit Audio Generator Kit

## $\$ 32{ }^{95}$ <br> \$3.30 Down

- Latest Circuit Design
- Less Than 0.25\% Distortion
- 600-Ohm Output Impedance
- Range: 20 cps to 1 mc .

The Knight-Kit audio generator kit features an up-todate circuit developed by the U.S. Bureau of Standards. Its excellent specifications and low cost make it ideal for precise testing of high-fidelity amplifiers, tone control circuits and speakers, or for other applications requiring calibrated, continuously variable audio signals. Performance equals or surpasses far costlier factory-built units. Operates into high impedance or 600 -ohm standard broadcast line. Low distortion even at high output into either high-impedance or 600 ohms.
SPECIFICATIONS: Uses 6CB6 Bridge-T type R-C oscillator. Frequency Range: 20 cps to 1 mc in 5 ranges. Output Voltage: $10 \mathrm{v} ., \pm 1 \mathrm{db}$ to 1 mc . Output Impedance: 600 ohms. Distortion: less than $0.25 \%$ from 100 cps through the audible range into high impedance; less than $0.5 \%$ when driving 600 ohm load at maximum output.
Supplied complete with all parts, tubes (6CB6, 26CL6; 5 Y 3 GT rectifier), pre-cut wire, solder and step-by-step instructions plus pictorial and schematic diagrams. Attractive blue metal case, $81 / 2 \times 11 \times 112^{\prime \prime}$, with light gray front panel. For operation from 110-125 v., $50-60$ cycle AC. Shpg. wt., 16 lbs.
83 YX 137. NET.

# knight-kit "In-Circuit" Capacifor Checker Kił 

NET<br>$\$ 12^{50}$<br><br>- 20 mmf to 2000 mfd

An invaluable aid to speedy servic-ing-at only one-third the cost of factory-wired units! Feature for feature, the world's finest economypriced capacitor checker kit. Has widest range- 20 mmf to 2000 mfd -through use of exclusive resonant circuit that tunes out test cable capacitance. Tests capacitors while they are wired in the circuit.

The "magic-eye" indicator shows opens and shorts (not leakage). Checks by-pass, blocking, coupling and filter capacitors. Tests opens and shorts on any capacitor of 20 mmf or over-even if capacitor is in parallel with a resistance as low as 50 ohms! Supplied complete with tubes, wire, solder and easy-to-follow instructions. $73 / 4 \times 51 / 4 \times 55^{\prime \prime}$. Blue and gray finish. For $110-125$ v., $50-$ 60 cycle AC. Shpg. wt., 5 lbs.
83 Y 119. NET
12.50


# Quality Soldering Tools 



## 8250AK HEAVY-DUTY KIT-250 WATTS

- Instant Heat-No Waiting
- Versatile Array of Tips

Extremely versatile heavy-duty soldering kit. Includes: Model 8250A 250-watt gun (with trigger switch control, pre-focused dual spotlights, black plastic housing); 1 coil of acid-core solder for metal work (for radio, TV or electrical work, use rosin core solder, listed on page 276); 1 chisel-point tip for general soldering; 1 smoothing tip for heat-sealing and mending plastic articles. 1 tip for cutting plastic tile and easy putty removal; and 1 wrench for quick, easy interchange of tips. With sturdy metal case, $21 / 4$ $\times 111 / 4 \times 21 / 8^{\prime \prime}$. For $110-120$ v., 60 cycle AC. Shpg. wt., $71 / 4$ lbs.
46 N 677. List, $\$ 14.95$. NET.
IO. 99
3 or More, EACH.
.9 .71

## 8100K MEDIUM-DUTY KIT- 100 WATTS

Complete kit for medium-duty soldering. Includes: Model 8100 100-watt solder gun, soldering aid tool (for holding wire in place while soldering), solder brush (for cleaning solder joints and a coil of rosin-core solder. Gun reaches operating heat in 5 seconds; has two built-in spotlights, trigger switch For operation from 110-120 v., 60 cycle AC. Shpg. wt., 3 lbs.
46 N 640. List, \$7.95. NET. $\qquad$ 5.83

3 or More, EACH.
.5 .19

## LOW-COST MODEL 8100 GUN ONLY

Same 100 -watt soldering gun as supplied in above kit. Heats in 5 seconds. Trigger switch; dual spotlights. For 110-120 v., 60 cycle AC. Shpg. wt., $21 / 4 \mathrm{lbs}$.
50 N 049. List, \$5.95. NET. .
4.46

3-11, EACH... 4.16 12-Up, EACH. . 3.97

8100 K

## WELLER SOLDERING KITS, GUNS AND IRONS

New Weller "Magnastat' temperature-con-temperature-con-
trolled soldering irons for constant, all-day use.


## TEMPERATURE-CONTROLLED IRONS

- Automatically Maintains Right Heat
- No Overheating-Saves Current

Advanced-design soldering irons with builtin temperature control. Automatically maintains correct soldering temperature. Model TC-40 gives controlled 40 watts for light jobs such as printed circuits, etc.; Model TC-60, 60 watts for light to medium-duty work; Model TC-120, 120 watts for medium to heavy-duty jobs. Smaller and lighter in weight than standard uncontrolled irons of weight than standard uncontroiled irons of
the same wattage rating. For $110-120$ v., 50 the same wattage rating. For $110-1$
60 cycle AC. With plug-in cord.

| Stock No. | Model No. | Watts | Shpg. Wt. | NET |
| :---: | :---: | :---: | :---: | :---: |
| 50 N 211 | TC-40 | 40 | 602. | 5.88 |
| 50 N | 2 | 2 | TC-60 | 60 |
| 702. | 6.62 |  |  |  |
| 50 N 213 | TC-120 | 120 | 11 oz. | 7.72 |

## REPLACEMENT TIPS FOR ABOVE IRON

| Stock No. | Model | For Iron | Tip Size | 02 | NET |
| :---: | :---: | :---: | :---: | :---: | :---: |
| SON 214 | WT-40 | TC-40 | $1 / 8^{\circ}$ | 2 | 364 |
| 50 N 215 | WT-60 | TC-60 | 3/160, | 3 | 514 |
| 50 N 216 | WT-120 | TC-120 | 3/8. | 4 | 884 |

## HEAVY-DUTY GUNS

MODEL 8250A 250-WATT SOLDERING GUN. Ideal for production line use, service shop, home workshop, etc. Air-cooled transformers, prefocused dual spotlights. Easily replaced tips. Rugged, high-impact plastic housing. Convenient pistol grip with trigger switch. For operation from 110-120 v., 60 cycle AC. Shpg. wt., 4 lbs. 46 N 678 . List, $\$ 12.95$. NET
8.47

MODEL D-550-200, 275 WATTS. As above, but dual-heat type. Operates at 200 or 275 watts. Shpg. wt., 33/4 lbs.
46 N 641 . List, $\$ 16.25$. NET........IO. 53

## MODEL D-440 MEDIUM-DUTY GUN

Dual-heat soldering gun. Trigger switch selects choice of 100 or 150 watt heat. Specially designed for homecrafter and all hobby uses. When used with cutting and smoothing tips listed below, it performs a wide variety of household applications, including furniture repair, cutting plastic wall tile, etc. For operation from 110-120 v., 60 cycle AC. Shpg. wt., 3 lbs. 46 N 644. List, $\$ 12.95$. NET

VERSATILE ACCESSORY TIPS
Shpg. wt., 3 oz.

| Stock No. | $\begin{aligned} & \text { Mfr's } \\ & \text { Type } \\ & \hline \end{aligned}$ | $\begin{gathered} \text { Descrip- } \\ \text { tion } \end{gathered}$ | Use With Models | $\begin{gathered} \text { NET } \\ \text { EACH } \end{gathered}$ |
| :---: | :---: | :---: | :---: | :---: |
| 46 N681 | 6110 | Cutting | S-400, D-440, | 354 |
| 46 N 682 | 6120 | Smoothing | \& 8100 | 35 ¢ |
| 46 N 683 | 6130 | Cutting | S-500, D-550 | 354 |
| 46 N 684 | 6140 | Smoothing | \& 8250A | 35¢ |

## CHISEL_POINT TIPS

2 per Pkg. Av. shpg. wt. per pkg., 3 oz .

| Stock No. | Mfr's Type | Use With Models | $\begin{aligned} & \hline \text { PER } \\ & \text { PKG. } \\ & \hline \end{aligned}$ |
| :---: | :---: | :---: | :---: |
| 46 N 574 | 7135 | 8100, S-400, D-440 | $25 ¢$ |
| 46 N 573 | 7250 | 8250A, S-500, D-550 | 35¢ |
| 46 N 579 | 7300 | S-107, D-207. Not interchangeable with tlps above. | 25 |

SOLDER GUN REPLACEMENT PARTS
Shpg. wt., 3 oz.

| Stock No. | Mfr's Type | Description | $\begin{gathered} \hline \text { Use With } \\ \text { Models } \\ \hline \end{gathered}$ | $\begin{aligned} & \text { NET } \\ & \text { EACH } \\ & \hline \end{aligned}$ |
| :---: | :---: | :---: | :---: | :---: |
| 46N625 | 7325 | Tip nut. | $\begin{aligned} & \text { WS-100, WDD-135, } \\ & \text { S-400, D-440 } \\ & \text { and } 8100 \end{aligned}$ | . 15 |
| 46 N 630 | 7417 | TIp nut. | WS-200,WD-250 |  |
| 46 N 626 | 7323 | Switch. | S-500, D-550. | 5 |
| 46 N 627 | 7324 | Switch. | All dodels.-heat | 1.22 |

## DRAKE GENERAL PURPOSE \& INDUSTRIAL IRONS



## ECONOMY MODELS

MODEL 5-40 WATTS. Low-cost, light-duty soldering iron. Length, $10^{\prime \prime}$. With $1 / 4^{\prime \prime}$ screw-on pencil tip and stand. For 110-120 v., AC DC. Shpg. wt., 10 oz.

46 N 505. List, \$2.10. NET I. 23
MODEL 315-60 WATTS. General-purpose soldering iron. Excellent for light and medium-duty applications in radio-TV servicing, garages, etc. With screw-on type $3 / 8^{\prime \prime}$ pyramid tip and stand. Length, $111 / 2^{\prime \prime}$. For 110-120 v., AC-DC. Shpg. wt., 12 oz .
I. 65

Small, continuous-duty 60 -watt iron. $9^{\prime \prime}$ long, $1 / 4^{\prime \prime}$ pyramid tip. Baffle plates radiate heat away from handle. With stand. For 110-120 v., AC-DC. Wt., 14 oz. 46 N 538. List, \$6.50. NET....... .
3.82

MODEL 360 "PEE-WEE"-35 WATTS 35-watt iron for delicate work. Supplied with $3 / 16^{\prime \prime}, 1 / 8^{\prime \prime}$ pyramid tips and stand. Cork insulator on handle; heat radiating baffles. $71 / 2^{\prime \prime}$ long. For operation from $110-120 \mathrm{v}$., AC-DC. Shpg. wt., 8 oz.
46 N 532. List, $\$ 5.50$. NET.
3.23

## MODEL 325 STANDARD- 100 WATTS

General-purpose soldering iron. Overall length, $13^{\prime \prime} .3 / 8^{\prime \prime}$ adjustable pyramid tip. Supplied with stand. For operation from 110-120 v., AC-DC. $11 / 4$ lbs.
46 N 523 . List, $\$ 6.50$. NET. $\qquad$ .3 .82

46 N 52 1. List, $\$ 2.80$. NET..

## REPLACEMENT TIPS

Copper replacement tips for Drake irons. *Set of two tips.

| $\begin{gathered} \text { Stock } \\ \text { No. } \end{gathered}$ | $\begin{gathered} \text { Descrip- } \\ \text { tion } \end{gathered}$ | $\begin{gathered} \text { Wt. } \\ 02 . \end{gathered}$ | $\begin{aligned} & \text { For } \\ & \text { Iron } \end{aligned}$ | $\begin{aligned} & \mathrm{NET} \\ & \mathrm{EACH} \end{aligned}$ |
| :---: | :---: | :---: | :---: | :---: |
| 46N537 | 1/4" ${ }^{\text {" }}$ straight pencil* ${ }^{\text {a }}$ | 3 | ${ }^{5} 5$ | 44¢ |
| 46 N 535 |  | 6 | $\begin{aligned} & 225,325, \\ & 326,625 \end{aligned}$ | 444 |
| 46 N 514 | $3 / 8^{\prime \prime}$ pyramid | 6 | ${ }_{315}$ | 536 |
| 46 N 533 | 3/16" pyramid* | 2 | 360 | 186 |
| 46 N 513 | 1/4" ${ }^{1 / 2}{ }^{\text {pramamid }}$, ${ }^{\text {a }}$ | 2 | 400 | 29 |
| 46 <br> 46 | 1/8" straight pencil* | 2 | 350 350 | 158 |



## TEMPERATURE CONTROLS

Temperature controls for printed circuit and other delicate soldering. Variable from $300-600^{\circ} \mathrm{F}$.

| Stock No. | Model | For Iron | 02. | List | NET |
| :---: | :---: | :---: | :---: | :---: | :---: |
| 50 N 221 | 40 | 40 | 12 | \$8.00 | 4.7 |
| 50 N 222 | 60 | 60-watt | 12 | \$9.00 | 5.29 |


(A) MODEL 200 150-WATT THERMOSTATCONTROLLED SOLDERING IRON. Industrial 150-watt iron for continuous use. Quick-heating-only 90 sec . to reach full operating temperature. Built-in thermostat maintains correct temperature, delivering fast power when required or conserving fast power when required or conserving
heat during standby periods. Length, $123 / 4^{\prime \prime}$. With chisel tip. For $100-125$ v., 60 cycle AC Shpg. wt., 12 oz .
46 N 634. List, \$9.95. NET . . . . . . . . . 6. 97
3 or More
.6 .62
[B MODEL 300 225-WATT THERMOSTATCONTROLLED SOLDERING IRON. As above, but 225 watts for heavy duty use. $13^{\prime \prime}$ long. With $3 / 8^{\prime \prime}$ chisel tip. 1 lb . 46 N 560. List, $\$ 14.95$. NET. . . . . . .
3 or More, EACH.
II. 20

TIPS FOR MODEL 300
*For Model 200. Av. shpg. wt., 5 oz.


## Soldering Guns and Irons



WEN 199K SOLDERING GUN KIT

- 3 Different Tips for Varied Jobs
- Lightweight-Only $11 / 2$ Lbs.
- Heavy-Gauge Metal Kit Box

Highly versatile, multi-purpose solder gun kit. Includes the Model 199130 -watt gun, one $5-\mathrm{ft}$. roll of rosin-core solder, three different tips for a wide variety of jobs, plus an attractively styled heavy-gauge metal kit box. Gun reaches
soldering temperature in just $21 / 2$
seconds after squeezing trigger. Tips are quickly interchanged to mẹt specific applications.
Well-balanced, pistol-grip handle assures fa-tigue-free operation. single trigger automati cally controls heat and built-in spotlight. Prefocused spotlight assures shadow-free working $11 / 2$ ibs. Valuable for medium and light-duty $11 / 2$ lbs. Valuable for medium and light-duty soldering jobs in both radio and TV repair and and shock-resistant plastic housing.

Tips include: Model 19-B-4 long-nosed standard tip for repair of household wiring, radio and TV, appliances, lamps, automobile wiring, hobbycraft uses, etc.; Model 19-F-33 flat iron tip specially designed for removing dents and repairing scratches in furniture or woodwork, heat-sealing of wax paper packages and plastic bags, etc.; Model 19-C-1 cutting tip for making any type of cut in plastic, rubber or asphalt fusing and cutting of thermoplastic material, etc.

Gun operates from 110-120 v., 60 cycle AC and is U.L. Approved. Shpg. wt., 4 lbs. 7.33

FAMOUS WEN SOLDERING GUNS


MODEL 199-130 WATTS

- Heats in Just $21 / 2$ Seconds
- High Efficiency-Excellent Balance

Extremely popular, low-cost soldering gun. Heats in just $21 / 2$ seconds. Excellent balance for faster, easier soldering. Efficiency compafor faster, easier soldering. Efficiency compaHas steel nose long-life tip. Spotlight focuses on work. Rated at 130 watts. Lightweight; only $11 / 2$ lbs., for use over long periods of time without fatigue. Heat and shock resistant cherry-red plastic handle. Overall length less tip, $5^{\prime \prime}$. $6^{\prime}$ cord. Underwriters' Laboratories Approved. For operation from $110-120$ volts, 60 cycle AC. Shpg. wt., $21 / 4$ lbs.
. 5.83
REPLACEMENT TIPS

| $\begin{gathered} \hline \text { Stock } \\ \text { No. } \\ \hline \end{gathered}$ | $\begin{aligned} & \text { Mifr's } \\ & \text { Type } \\ & \hline \end{aligned}$ | Description | $\begin{aligned} & \text { NET } \\ & \text { EACH } \end{aligned}$ |
| :---: | :---: | :---: | :---: |
| 46 N 359 | 19-8-4 | Standard Tip | 344 |
| 46 N 328 | 19-C-1 | Plastic Cutting Tip | 416 |

## MODEL 250-250 WATTS

Heavy-duty soldering gun at low cost. Rated at 250 watts. Heats in 3 seconds. Excellent fo radio-TV repair work and provides plenty of heat for heavy soldering jobs. Straight-line design and built-in spotlight for illuminating work area. Nickel-plated corrosion-resistant tip. U.L. approved. For $110-120$ v., 60 cycle AC. Length, $61 / /^{\prime \prime}$. Shpg. wt., 5 lbs.
46 N 325. List, $\$ 12.95$. NET.....
.9 .52
REPLACEMENT TIPS

| $\begin{aligned} & \text { Stock } \\ & \text { No. } \end{aligned}$ | $\begin{aligned} & \text { Mir's } \\ & \text { Type } \end{aligned}$ | Description | $\begin{aligned} & \text { NET } \\ & \text { EACH } \end{aligned}$ |
| :---: | :---: | :---: | :---: |
| 4 | 25 |  | 174 |
| 46 N 327 | 25-X-20 | Feraloy Tip | 344 |
| 46 N 330 | 25-C-1 | Plastic Cutting Ti | 344 |

## GREGG SOLDERING TOOLS



## MODEL G250A 250-WATT GUN

Heavy-duty 250-watt solder gun featuring unique, single-barre design. Delivers large volume of instant heat. Slim, probetype $5^{\prime \prime}$ barrel easily reaches nto tight places-excellent for working on crowded chassis and miniaturized units. Builtn pre-focused spotlight eliminates shadows. High-impact plastic housing with pistol-type grip for excellent balance. Soft-action trigger switch. Comes with 2 quickly interchangeable screw-in tips- 1 pencil-point tip for delicate obs, and one chisel tip 110-120 v., 60 cycle AC. Shpg. wt., 3 lbs. . ${ }^{46}$. 834 . 7 I

## REPLACEMENT TIPS

High-quality replacement tips for Gregg Model G-250A solder gun, listed above. Shpg. wt., 6 oz. 2 per pkg.


## PRINTED CIRCUIT TIP KIT



Screw-in tips for Gregg G250A gun. Simultaneously (A) B D D) $\begin{aligned} & \text { tacts on tube } \\ & \text { socket mounts, }\end{aligned}$ IF transformer lugs, terminal strips, etc. Allows easy removal of multiple contact com-
 tips below. $1 / 21 \mathrm{l}$.
50 N 140 NET.
. 3.18
Separate Tips. May be ordered singly.

| Stock No. | Fig. | Type | For | O2. | EACH |
| :---: | :---: | :---: | :---: | :---: | :---: |
| 5 | A | 5206* | IF | 2 |  |
| 50 N 137 | ${ }^{\text {B }}$ | 5207* | Min. Sockets | 2 | 88c |
| 50 N 508 | ${ }_{\text {D }}$ | $5208{ }^{5}$ | Straight-line | 3 | c |

## WALL "THERMOSTATIC ACTION" SOLDERING TOOLS



## "TRIG-R-HEAT" SOLDERING GUNS

Wall "Trig-R-Heat" guns feature thermostatic action and lightweight, transformerless design. Just squeeze the trigger and the tip heats in seconds to the proper soldering temperatureautomatically providing correct wattage for soldering job, whether heavy or light. The ightweight, balanced guns permit continuous, fatigue-proof operation. Narrow, $61 / 2^{\prime \prime}$ barrel provides good reach into tight or crowded places.

All guns have interchangeable tip-element assemblies. Steel-clad tips assure long service ife. Tip-element assemblies are quickly and easily changed by means of plug-in, one-screw installation. Black plastic housing. For operation from 110-120 volts, AC or DC.

Model 212 LT . Wattage range, 300-650. $1 / \mathbf{2}^{\prime \prime}$ steel-clad tip. Built-in 7 -watt spotlight controlled by a separate, rear-mounted switch. Shpg. wt., ${ }^{11 / 2}{ }^{\text {lbs. }} \mathbf{~ N 4 8 .}$ $\qquad$ .ll. 07

Model 214 LT N. Similar to above, but employs $1 / 4^{\prime \prime}$ tip. Wattage range, $150-400$. Shpg. wt., $11 / 4$ lbs.
46 NET 889. $\qquad$
Model 238LT. Designed for lighter soldering
applications. Wattage range, $75-150$. Employs applications. Wattage range, 75-150. Employs $1 / 4^{n}$ steel-clad tip. Built-in 7 -watt spotlight con-
trolled by a separate, rear-mounted switch. trolled by a separate, rear-mounted switch.
Shpg. wt., 1 lb . Shpg. wt., ${ }^{1}$ N $\mathbf{N E T}$
5.87

Model 238T. Same soldering gun as described above, but less spotlight and rear-mounted switch. Shpg wt., 1 lb .
46 N 846 . NT.......
5.51

Thermostatic action soldering irons. Fine for delicate soldering operations, yet built to withstand "production line punishment." Thermostatic action assures quick heating and higher wattage for heavier soldering jobs; reduced wattage for lighter jobs. Control action prevents tipburning; maintains optimum heat. U.L. Approved. For $110-120$ v., AC or DC. *Pencil types. 14 T is excellent for use with printed circuits and kit soldering jobs.




REPLACEMENT TIPS
$\dagger$ Walloy-Red tips for production line use.

| No. | Size | For | Wt. | NET |
| :---: | :---: | :---: | :---: | :---: |
| 46 N 874 | 1/8" | $18 \mathrm{~T} \dagger$ | 2 oz . | . 78 |
| 46 N 875 | 1/1" | ${ }_{38}^{14 \mathrm{~T} \dagger} \dagger$ | 2 oz . | 1.05 |
| 46 N 876 | 3/8'1 | ${ }^{38} 18 \mathrm{~T} \dagger$ | 3 oz , | 1.18 |
| 46 N 872 | $1{ }^{1 / 1}$ | ${ }_{14}^{18 \mathrm{~T}}$ | 2 oz. 2 oz. | . 23 |
| 46 N 855 | $3 / 8^{\prime \prime}$ | 38 T | 3 oz . | . 53 |

## TIP-ELEMENT ASSEMBLIES

Replacement tip-elements for guns listed at eft. Quickly and easily interchanged. *Fits 212T and 212LTN; †fits, 238LT and 238T.

| No. | Watts | Tip | Wt. | NET |
| :---: | :---: | :---: | :---: | :---: |
| 46 N 870 | *150-400 | $1 / 4^{\prime \prime}$ | 12 oz . | 3.25 |
| 46 N 849 |  | 1/2" | 1 lb . | 5.21 |
| 46 N 897 | + 75-150 | $1 / 4^{\prime \prime}$ | 10 oz . | 2.90 |

## Quality Soldering Equipment

## UNGAR SOLDERING EQUIPMENT



## SOLDERING PENCILS

776 Series. Complete soldering pencils-consist of balanced lightweight plastic handle and ceramic-insulated element-tip unit. Excellent for a wide variety of soldering jobs including printed circuit soldering. Handle can also be used with other element-tip units and elementtiplet combinations. U.L. approved. For operation from 110-120 v., AC-DC.
231/2-Watt Soldering Pencil. No. 776 handle 46 N $580.1-9$ NET EACH 46 N S80. 1-9, NET EACH
10 or More, EACH.
2.16

371/2-Watt Soldering Pencil. No. 776 handle with No. 1236 pyramid element-tip. 8 oz .
46 N $591.1-9$ NET EACH.
.......... 1.91
New 30-Watt Soldering Pencil. No. 776 handle with chisel element-tip. Has unplated tellurium copper tip for cooler running with same high $800^{\circ}$ tip temperature as $371 / 2$-watt 50 units. Shpg. wt., 6 oz.
50 N 100. 1-9, NET EACH
........ 2.35
No. 776 Handle. Cord and handle only; less tip and element. Shpg. wt., 5 oz.
1.18 46 N $581.1-9$, NET
10 or More, EACH. .96

## STANDARD ELEMENT-TIPS

For use with all Ungar handles and solder pistol (see below). Ceramic-insulated. *231/2watt types; heat to $650-700^{\circ}$ in $1 \mathrm{~min} . ~ \dagger 371 / 2-$ watt, silver-plated $800^{\circ}$ units for use in production soldering. Av. shpg. wt., 3 oz .

| Stock No. | Fig. | $\left\|\begin{array}{l} \text { Mfr's } \\ \text { Type } \end{array}\right\|$ | Descrip. | EAC'H | EACH |
| :---: | :---: | :---: | :---: | :---: | :---: |
| $\begin{aligned} & 46 \text { N } 582 \\ & 46 \text { N } 585 \end{aligned}$ | C | $\begin{aligned} & 536^{*} \\ & 539 * \end{aligned}$ | Pyramid Chisel | 98c | 79c |
| 46 N 592 46 N 593 | C | $\stackrel{\text { 1236 }}{1239} \mid$ | Pyramid Chisel | 1.18 | 96c |



880 Industrial Series. Industrial type soldering pencils. Feature special metal heat deflector for lower handle temperature. Cork octagonal washer prevents rolling on table and of handle and element-tip unit. Handle can also be used with or element-tiplet combination. U.L. Approved. or element-tiplet combina
For $110-120 \mathrm{v} ., \mathrm{AC}-\mathrm{DC}$.
471/2-Watt Soldering Pencil. No. 880 handle with No. $4033471 / 2$-watt chisel element-tip. Shpg. wt., $11 / 4$ lbs. $\qquad$ 3.92 10 or More, EACH $\qquad$ .3 .18
No. 880 Handle. Cord and handle only; less 47 N 094.1 .9, NET EACH 5 ..
10 or More, EACH.
NEW TYPE 260 SOLDER PISTOL


Pistol-grip soldering iron for rugged, production line use and also for amateurs, experimenters and builders. Designed for comfortable soldering. Special knob permits quick rotation of ele-ment-tip to best position for application of heat. Consists of No. 660 handle and tellurium copper chisel element-tip ( $800^{\circ}$ F.). Tough phenolic handle also takes any other elementtips and element-tiplet combinations, including $471 / 2$-watt "Super Hi-Heat" types. U.L. Ap-
proved. For $110-120 \mathrm{v} .$, AC-DC. Shpg. wt., 1 lb . 50 N $103.6-\mathrm{U}_{1} . . E A .2 .87$ 1-5, EA... 3.53 No. 660 Handle. 'Pistol-grip handle only; less




STANDARD ELEMENTS \& TIPLETS
Series 300 Tiplets. $1 / \mathbf{8}^{\prime \prime}$ dia., $1^{\prime \prime}$ long. All tiplets are interchangeable; fit 535,1235 or 4035 elements. PL types are iron-plated for long life. *New, needle-point tiplet for very close work. Av. shpg. wt., 2 oz .

| Stock No. | Fig. | $\begin{aligned} & \text { Mfr's } \\ & \text { Type } \end{aligned}$ | Descrip. | $\begin{aligned} & 1-9 ; \\ & \text { EACH } \\ & \hline \end{aligned}$ | $\begin{aligned} & \text { 10-Up, } \\ & \text { EACH } \end{aligned}$ |
| :---: | :---: | :---: | :---: | :---: | :---: |
| 46 N 606 | D | 331 | Pencil |  |  |
| 46 N 607 | E | 332 333 | Offset | 164 | 134 |
| 46N 608 |  |  |  |  |  |
| 46 N 496 | E | PL332 | Offset | 47¢ | $38 ¢$ |
| 46 N 497 | F | PL233 | Chisel |  |  |
| 50 N 101 | G | PL338* | Needle |  |  |

Elements. Heating units for series 300 tiplets above. Fit any Ungar handles. Type 4035 delivers $850^{\circ} \mathrm{F}$. temperature to tiplet; Type $1235,750^{\circ}$; Type $535,650^{\circ}$. Av. shpg. wt. 1 oz

## 

## "SUPER HI-HEAT" ELEMENT-TIPS

47 $1 / 2$-watt, 1 -piece element-tips for extra-heavyduty service and production line soldering. Use with No, 880 handle or No. 660 pistol-grip handle. ${ }^{* 1 / 4^{\prime \prime}}$ chisel. $\dagger^{3 / 8^{\prime \prime}}$ chisel. $\delta 900^{\circ}$ F.; $\ddagger 1000^{\circ}$
F. Av. shpg. wt., 12 oz .

| Stock | Fig. | Mfr's Type | Descrip. |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: |
| 47 | E | 4033*§ | Ch |  |  |
| 左 | F |  | Py |  |  |
| N | E |  | Cha |  |  |

## EXTRA-LONG TIPLETS AND "SUPER HI-HEAT" ELEMENT

Type 4045 Element. $471 / 2$-watt element for use with Series 800 tiplets below. Fit any Ungar handle. Shpg. wt., 3 oz. 91 1-9, EA. 2.35 Series 800 Extra-Long Tiplets. $2^{\prime \prime}$ long; $3 / 16^{\prime \prime}$ $\frac{\text { dia. Fit No. } 4045 \text { element only. Wt., } 2 \text { oz. }}{\text { Stock }}$

| Stock <br> No. | Mfr's <br> Type | Description | $1-9$, <br> EACH | $10-\mathrm{Up}$, <br> EACH |
| :---: | :---: | :---: | :---: | :---: |
| 50 N 106 | PL833 | Straight Chisel | $78 ¢$ | $64 ¢$ |


| 50 N | 106 | PL833 | Straight Chisel | $78 ¢$ |
| :--- | :--- | :--- | :--- | :--- |
| 50 N | $\mathbf{6 4 ¢}$ |  |  |  |

## TYPE 857 DE-SOLDERING TIPLET

Split tip for desoldering tabs from printed circuit boards. 2 oz . 50 N 108.10 -Up, EA. 3844 1-9, EA... 47C

## 507 HEAVY-DUTY SOLDERING KIT



Complete extraand continuity tester. Contains: 776
handle; heavy-duty handle; heavy-duty Element-tip $(825$ F.) for general-purpose use; precision heating element F.) for fine soldering such as printed circuits, etc.; trou ble light with cir cuit tester; 20 terminal connectors; 1 sheet emery paper; solder; insulating tape; and instructions. For operation from 110-120 v., AC 46 N 657. 1-5, NET

ET EACH
4.49 6 or More, EACH.
. 3.99

## KESTER SOLDERS



## ROSIN CORE SOLDER

Plastic rosin-filled thin solder. Flux filling flows easily for neater and quicker soldering. $3 / 32^{\prime \prime}$ solder is recommended for general-purpose radio and lelicate work $40 \%$ tin and $60 \%$ lead.

| Stock No | Size | Spool Wt. | Shpg. Wt. | N E |
| :---: | :---: | :---: | :---: | :---: |
| 46 N 90 | 3/32 ${ }^{\prime \prime}$ | 1 b . | $13 / 4 \mathrm{lbs}$. | 1. |
| 46 N 902 | " | 5 lbs. | 6 lbs . | 5.0 |
| 46 N 930 |  | 1 lb . | $13 / 4 \mathrm{lbs}$. | 1.0 |
| 46 N 931 | 1/16" | 5 lbs. | 6 lbs . | 5. |

## "RESIN FIVE" CORE SOLDER

Features "Resin 5" flux-non-corrosive and non-conductive. Makes soldering easier and faster. Handy coil, $1 / 16^{\prime \prime}$ dia.; spool, $3 / 32^{\prime \prime}$ dia. $40 \%$ tin and $60 \%$ lead.

Coil. 3 oz. NET.....1/C Spool. $13 / 4$ lbs. NET.. 1.05 Printed-Circuit Solder-60/40 Type. Compounded of $60 \%$ tin; $40 \%$ lead. For copperetched printed circuits. $1 / 6^{\prime \prime}$ dia.
46 N $926.1-1 \mathrm{~b}$. Spool. $13 / 4 \mathrm{lbs}$. NET. 1.40

## ACID CORE SOLDER

Acid core solder for all general soldering Acid core solder for an elections. $1 / 8^{\prime \prime}$ dia. Acid flux saves time; makes a lasting job. $40 \%$ tin and $60 \%$ lead.
46 N 905. Handy Coil. 3 oz . NET..... 17 C 46 N 906 . 1-Ib. Spool. $13 / 4 \mathrm{lbs}$. NE்T..|. 05

## SOLDERING PASTE

Gives fine, even distribution of fluxing ingredients. For clean non-corrosive soldering. 2 oz .
46 N 915.10 for 1.05. NET EACH..... I2C

## KESTER TINNING BLOCK

Cleans and tins soldering irons quickly. Replaces sal ammoniac. Will not crumble or cause places sal aimoniac. wt. 11/4 lis.
any corrosion. Shpg or 65 C
46 N 92. NET................... 65
46 N 922. NET..................


## ERSIN MULTICORE SOLDER

5 -core solder for high-speed,
precision soldering. Melts rapdly with less heat. Pure tin, lead, and non-corrosive Ersin flux. $40 \%$ tin; $60 \%$ lead. In 14-gauge (.080 $)$ and 16-gauge .064") 1-lb. spools. Shpg. wt. $11 / 2 \mathrm{lbs}$
46 N 995. 14-Gauge 1-1b. Spool.
28-Up, EA....I.14 1-27, NET EA
.1 .37
46 N 991. 16-Gauge 1-Ib. Spool.
. 1.39
Service Pak. 18-gauge, 60/40 5-core solder. Shpg. wt., 12 N $\mathbf{~} 997$.
.504

## NEW ERSIN "SAVBIT" SOLDER

Copper/tin/lead/alloy solder. Reduces soldering iron wear. Has virtually same melting point and greater strength than tin/lead alloys.

| Stock No. | Size | Spool Wt. | Shpg. Wt. | NET |
| :---: | :---: | :---: | :---: | :---: |
| 50 N 121 | f14 Ga. | 1 lb . | $13 / 4 \mathrm{lbs}$. | 1.70 |
| 50 N 122 | (.080 ${ }^{\prime \prime}$ ) | 7 Ibs. | $81 / 2 \mathrm{lbs}$. | 11.62 |
| 50 N 123 | 16 Ga . | 1 lb . | $13 / 4 \mathrm{lbs}$. | 1.72 |
| 50 N 124 | )(.064") | 7 lbs. | $81 / 2 \mathrm{lbs}$. | 11.76 |

## BLONDE TAPE SOLDER



Tape of $40 / 60$ tin lead solder with rosin flux Just use a match, can torch for rapid solder ing. Tape is wrapped ing. Tape is wrapped joined or metal to be bonded, and heat is applied. Flux is activated at $190^{\circ}$ and dissipates at $210^{\circ}$-forms a bond that will not corrode has same protective qualities as bar or spool solder. $28^{\prime \prime}$ long-enough for 100 connections. Shpg. wt., 2 oz.
46 N 979. List, 25c. NET
....
$.17 c$

NEW UNGAR 270 DE-SOLDERING KIT
Complete set for removing components from printed circuits without damage to board or components. Includes: No. 776 handle (not illustrated); No. 4045 471/2-watt element; rectangular tiplet, $11 / 2 \times 3 / 8$ ${ }_{9}$ for removing resistors, capacitors, etc.; circular tiplet, $\mathbf{1}^{\prime \prime}$ dia., for 9 -pin tube socket removal; circular tiplet $3 / 4^{\prime \prime}$ dia., for 7 -pin sockets;
circular tiplet, $5 / 8^{\prime \prime}$ dia., for 5 -pin sockets; and slotted tiplet for straightcircular tiplet, $5 / /^{\prime \prime}$ dia., for 5 -pin sockets; and slotted tiplet for straight-
ening tabs. In sturdy metal case. For operation from 110-120 volts, AC-DC. Shpg. wh., 11/4 lbs.
50 N 109.6 or More, EACH... $4.52 \quad 1-5$, NET EACH.

# Soldering Irons and Pofs 

## ORYX MINIATURE INDUSTRIAL IRONS



1/4-OUNCE SOLDERING IRONS
Perfect for the most delicate soldering-printed circuits, TV tuners, sub-miniature wiring, hearing aids, etc. Quick heating. low-voltage design. Operate from $6-\mathrm{v}$. AC or DC. Use with stepdown transformer (below) or other $6-\mathrm{v}$. source. All are $1 / 4 \mathrm{oz}$. and $6^{\prime \prime}$ long, *except $3 / 4 \mathrm{oz}$. and $71 / 4^{\prime \prime}$ long. All have replaceable tips, texcept fixed tip. Tips are described in table (below). §Develops $813^{\circ} \mathrm{F}$ for high-temperature applications. $\ddagger$ Develops $1000^{\circ}$ F. Av. wt., 2 oz.

| Stock No. | Model | $\begin{gathered} \hline \text { Tip } \\ \text { Type } \\ \hline \end{gathered}$ | Watts | $\begin{aligned} & 1-11, \\ & \text { EACH } \end{aligned}$ | $\begin{aligned} & 12 \text { or More } \\ & \text { EACH } \end{aligned}$ |
| :---: | :---: | :---: | :---: | :---: | :---: |
| 46 N 817 | ${ }^{+6}$ | fixed | 6 | 4.85 | 4.36 |
| 46 N 818 | 6A | B | 6 | 4.85 | 4.36 |
| 46 N 819 | 9-6 | A | 8.3 | 4.85 | 4.36 |
| 46 N 828 | 811 | D | 10 | 6.81 | 6.32 |
| 46 N 829 | 12-6 |  | 12 | 4.85 |  |
| 46 N 830 | *18 | F | 18 | 7.35 | 6.91 |
| 46 N 909 | $\ddagger 25$ | G | 25 | 7.84 | 7.40 |

## REPLACEMENT TIPS

For above irons, except Model 6. Tips made of special copper alloy and are nickel plated *Pure nickel end for long life. Av. wt., 2 oz. | StockNo. Type For Model Dia. | EACH |
| :--- | :--- | :--- |

| 46 N 831 | A | 6A, 9-6 | 5/32" | . 49 |
| :---: | :---: | :---: | :---: | :---: |
| 46 N 843 | B | 6A, 9-6 | ${ }^{3 / 32^{\prime \prime}}$ | . 49 |
| 46 N 844 | C | 12-6 | 3/16" | . 49 |
| 46 N 845 | D* | 11 | 5/32" | 1.76 |
| 46 N 877 | E* | 11 | $3 / 32^{\prime \prime}$ $3 / 181$ | 1.76 |
| 46 N 898 | $\stackrel{F}{\mathrm{~F}}$ | 18 | $3 / 16^{\prime \prime}$ | 1.22 |
| 46 N 899 | $\xrightarrow[\mathrm{H}]{\text { G }}$ | 18 | 3/6"* | 1.81 |

Step-Down Transformer. For all irons above, except Model 25 . Has holder for iron. $1,10-120 \mathrm{v} ., 60 \mathrm{cycle}$ AC. Wt., 2 lbs .4 .85 46 N 923. NET........................ . . 4.85
Transformer for Model 25. As above, but rated at 25 watts.
46 N 924 NET.
5.83

## LENK SOLDERING IRONS



## ECONOMY PISTOL GRIP IRON

Model 375. Popularly priced, all-purpose $80-$ watt pistol grip iron. Highly dependable, heavyduty element. Heavy chrome-plated barrel. Tip dia. $3^{\prime \prime}$. U.L. Approved. For operation from $110-120 \mathrm{v}$. , AC or DC. Shpg. wt., $11 / 4$ lbs. 2.57
46 N 638 . NET EACH............... 2.57

## REPLACEMENT TIP

For use with Model 375, above. Tip diameter, $33^{\prime \prime \prime}$. Shpg. wt., 4 oz.

## PENCIL TYPE IRONS

Model 251 Pencil Type 25-Watt Soldering Iron. Lightweight, compact and extremely sturdy. Has $1 / 8$ dia. tip; weighs only 4 oz. Tiny Parrel and tip permit easy access to tight spots. cuits. For $110-120 \mathrm{v}$., AC or DC. 8 oz .4 .41
46 N 940 . NET EACH...........4.4
Type 256. As above, but built for heavier work 46 rated 40 watts. Shpg. wt., 8 oz

## REPLACEMENT TIPS

For Model 251 and 256 iron.

| Stock No. | Description | Shpg. Wt. | NET |
| :---: | :---: | :---: | :---: |
| 46 N 942 | $1 / 2{ }^{1 / 2}$ dia. $\times 3^{* \prime}$ | long |  |

## AMERICAN BEAUTY SOLDERING IRONS



Wide selection of American Beauty soldering irons. Models to fit any soldering application. Special, iron-plated tips are available for all models; greatly reduce pitting and redressing-saves time and saves cost of frequent tip replacements. Casing and body of one-piece seamless steel. Lightweight, shatterproof, rubberoid-coated handles. 6-ft. heater cords withstand repeated kink ing and twisting. Irons are rated to withstand an insulation breakdown test of 1100 volts.

## MODEL 3128-60 WATTS

(A) DeDesigned for light work. Includes $1 / 4^{\prime \prime}$ copA per tip. Handy for hard-to-get-at spots. With stand. Length, 121/4". For 110-120 volts, AC or DC. Shpg. wt., 1 lb .
6 or more, EACH.
.4 .25
.4 .25

## REPLACEMENT TIPS AND ELEMENT

For Model 3128 iron. Type 9272 Replacement Element has mica insulation; includes handlespring, tube and terminal assembly.

| No. | Type | Description | Oz. | NET |
| :---: | :---: | :---: | :---: | :---: |
| 46 N 675 | 3728 | Copper tip | 3 | . 30 |
| 46 N 820 46 N 670 | ${ }_{92728}^{3728}$ | Iron-plated tip | 3 |  |

## MODEL 3138-100 WATTS

B An excellent general purpose iron for home B use. Also widely used in TV, radio, telephone and switchboard work and similar applications. $3 / 8^{\prime \prime}$ dia. copper tip. Polished chrome plated metal parts. Has cooling baffle. With stand. Length, $127 / 8^{\prime \prime}$. For $110-120$ volts, AC or DC. Shpg. wt., 21/4 Ibs.
46 N 655 . NET.
.6 .50
REPLACEMENT TIPS AND ELEMENT
For Model 3138 iron.


## MODEL 3158-200 WATTS

C For medium-heavy factory and production C work and for working on industrial electronic equipment. $5 / 8^{\prime \prime}$ diameter copper tip With stand. Length, $135 / 8^{\prime \prime}$. For $110-120$ volt AC or DC. Shpg. wt., 3 lbs.
46 N 650 . NET.
46 N 650. NET.
7.80

## REPLACEMENT TIPS AND ELEMENTS

For Model 3158 iron. Tips are $5 / 8^{\prime \prime}$. Element is made of chrome-nickel wire on mica insulated made of chrome-nickel wh.

| No. | Type | Description | Lbs. | NET |
| :---: | :---: | :---: | :---: | :---: |
| 46 N 652 | 3758 | Copp | 1 | 8 |
| 46 N 822 | ${ }_{927585}^{375}$ | Iron-plated tip |  | 5 |

## MODEL 3178-300 WATTS

(D) Excellent heavy-duty soldering iron. Ideal for service and production work. Standard $14^{3} / 8^{\prime \prime}$; tip dia., $7 / 8^{\prime \prime}$; net wt. $21 / 2$ lbs. With cong stand and tip. For $110-120$ volts, AC or DC. Shpg. wt., 4 libs.
46 N 67 I. NET 6 or more, EACH
10.40 REPLACEMENT TIPS AND ELEMENT
For Model 3178 iron. Shpg. wt., 1 lb .



## MODEL T-30 SUPER HOT SOLDERING IRON

Advanced-design, 30-watt transformer-type soldering iron features exclusive "Red Hot Tip." Excellent heat-stability for heavyduty, precision jobs. Split-collet in handle permits quick, easy change of tip-elements. Pencil-type, lightweight handle. With pre-tinned, long-life $1 / 8^{\prime \prime}$-dia. pyramid tip. Has 7 -ft. cord. 12 v .
transformer in cord isolates iron from AC line. For $110-120 \mathrm{v} ., 50-$ transformer in cord isolates iron from AC line. For 110-120 v., $50-1$
60 cycle AC. Shpg. Wt. 2 lbs. 60 cycle AC. Shpg. Wt. 2 lbs.
50 N $050.6-U p, E A C H . . . . ~$

$\qquad$ 12.40


- For Heavy-Duty Use REPLACEMENT TIPS. For Model T-30 iron above. Wt., 2 oz .
- Maintains Even Heat

| Stock No. | Tip-Element | 1-11,EA. | 12-Up,EA. | Stock No. | Tip-Element | 1-11,EA. | 12-Up,EA. |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| $50 \mathrm{NO52}$ $50 \mathrm{NOS3}$ | $\begin{aligned} & 1 / 8^{"} \text { Pencil } \\ & 1 / 8^{\prime \prime} \text { Chisel } \end{aligned}$ | $\begin{aligned} & 2.15 \\ & 2.15 \end{aligned}$ | 1.70 | $\begin{aligned} & 50 \mathrm{~N} 054 \\ & 50 \mathrm{~N} 055 \end{aligned}$ |  | 2.15 | . 770 |



## AMERICAN BEAUTY "475" TEMPERATURE REGULATING STAND

Thermostatically controlled soldering iron rest. Maintains soldering iron temperature-even while the iron is connected to current and not in actual use. Eliminates tip burning and necessity for frequent retinning. Perfect for produc
tion line and service bench. Plastic body. Sol-
dering iron cradle of copper alloy. Has heater cord and plug-in receptacle. For use with soldering irons from 80 to 660 watts input, up to 240 volts, AC only. Less soldering iron. Shpg wt., $21 / 2$ lbs.
46 N 658 . NET.
.5 .25

## DRAKE SOLDER POTS

Model 200-300 Watts. Heavy-duty produc tion type solder pot. Excellent for dip soldering wires, plugs, coils and printed circuits. $21 / 2^{\prime \prime}$ x2" deep well holds up to 2 lbs. solder. With detachable cord and plug set. Extension lip
protects cord from solder. For $110-120$ v., AC protects cord from solder. For 110-120 v., AC
or DC. Shpg. wt., 6 lbs. or DC. Shpg. wt., 6 lbs.
46 N 555 . List, $\$ 12.00$. NET.
7.06

Model 100-150 Watts. Ideal solder pot for general light-duty work. Excellent for tinning wires, component leads, plugs, etc. $11 / 2^{\prime \prime}$ dia.x1 deep well holds 1 lb . of solder. With cord. For $110-120 \mathrm{v} .$, AC or DC. Shpg. wt., 3 lbs. 5.59
46 N 556 . List, $\$ 9.50$. NET.......... 5.59

## LECTROHM SOLDER POTS

Solder pots for work requiring individual dipping pots. For tinning small wires, leads, etc. Sizes-SP-200: $23 / 4^{\prime \prime}$ ht., $23 / 8^{\prime \prime}$ dia., $7 / 8^{\prime \prime}$ cup depth; SP-250: $33 / 4^{\prime \prime} h^{\prime} ., 2^{\prime \prime}$ dia., $13 / 4^{\prime \prime}$ cup depth.
Complete with 6 foot detachable cord. For 110 Complete with 6 foot detach
volt operation, AC or DC.

Replacement Nickel-Chrome Elements. Shpg. wt., 3 oz. 46 N 882. Type A. For SP-200. NET. . I. 42
46 N 883. Type B. For SP-250. NET. . 1.42

# Power Tool Kits-Quality Grinders 



## HEAVY-DUTY WRENCH-DRILL KIT

MODEL 60. Rugged, exceptionally handy kit for farm, shop and industrial use. Includes powerful impact-wrench with 7 most commonly used nut-driver sockets; 3 -jaw, geartype chuck with $1 / 2^{\prime \prime}$ capacity and steel carrying case ( $101 / 2 \times 113 / 4 \times 161 / 4^{\prime \prime}$ ). Used as impact-wrench it is perfect for production assembly work or auto, truck and machinery repair and maintenance. Couples directly to nut-driver sockets-providing powerful torque. Built-in fingertip reversing switch permits speedy driving or removal of nuts. By use of sturdy gear-type chuck, wrench may be easily converted to $1 / 2^{\prime \prime}$ drill. Can be used with attachments to do the work of a screwdriver, polisher-sander, tapper, hole saw, wire brush, etc. 3 -conductor, $10^{\prime}$ cord. For $110-120$ v., AC or DC. 21 lbs. 50 NU 018 . List, \$99.50. NET.
68.II

## THREE-IN-ONE TOOL KIT

MODEL 20KJS. Three versatile tools in onea powerful electric drill, a handy saber-type jig saw, and a convenient reciprocating-type sander. New Thor high-value tool kit incorporates the Model 20, $1 / 4^{\prime \prime}$ electric drill. Has self-aligning ball-thrust bearings to assure smooth operation and gear-type chuck. This outfit makes it possible to save hours of work. Use it in your shop, hobby-room, or garage for a variety of applications. Supplied with accessories including 7 hardenedsteel drill bits, 1 -wood cutting and 1metal cutting saber-saw blade, 4 abrasive sheets and lambs wool polishing pad. Ruggedly constructed steel case holds entire kit. Size, $9 \times 123 / 4 \times 91 / 2^{\prime \prime \prime}$. Drill Underwriters' Laboratories Approved; operates from 110-120 volts, AC or DC. Shpg. wt., 11 lbs.
50 NX 016 . List, $\$ 37.50$. NET.
24.95

## DORMEYER "MATCHED CRAFT" TOOL SET



MODEL 5-3905. Complete, new 50-piece home workshop set. Drills, saws, polishes, grinds, sands, etc., and contains everything the home craftsman or serviceman could ask for-at an unusually low price! Workshop includes: The Model 5-2400 $1 / 4^{\prime \prime}$ drill; horizontal drill stand; stationary drill press; six $4^{\prime \prime}$ sanding discs ( 60 grit); six $4^{\prime \prime}$ sanding discs ( 120 grit); $4^{\prime \prime}$ sandpaper pattern; $3^{\prime \prime \prime}$ buffing wheel; $4^{\prime \prime}$ rubber backing pad; $3^{\prime \prime}$ grinding wheel; set of seven assorted steel drill bits; 6-piece arbor set with plastic case; 5-1103 saw attachment with rip fence-converts drill to highly useful $41 / 2^{\prime \prime}$ power saw; $41 / 2^{\prime \prime}$ combination saw blade; sturdy, tilting saw table with miter gauge and rip fence-miters, levels, cross-cuts and rips; steel case. Model 5-2400 $1 / 4^{\prime \prime}$ drill included in the set, is an indispensable home and shop tool. Has geared chuck to securely grip drill bits and attachments. Precision cut, hardened steel gears for super-torque drive. Comfortable, extra-long pistol grip provides easier handling and safety. Built-in switch lock; locks drill "on" or releases instantly. Self-lubricating bearings; smooth-operating motor powers all attachments with ease. No-load speed, 2200 rpm. Die-cast, polished aluminum housing. U.L. Approved drill operates from 110 120 v., AC or DC. Wt., $223 / 4 \mathrm{lbs}$.
46 NU 396. List, \$49.95. NET.... . 36.II

SKIL DELUXE $1 / \mathbf{4}^{\prime \prime}$. DRILL KIT


- Speeds Performance on Many Jobs
- Powerful Drill-32 Accessories

MODEL 515. Versatile, new 32-piece drill kit powered by Skil's famous No. 549 1/4" drill with geared chuck. Rugged, 2.5 amp motor handles all accessories with ease. Drills, sands, polishes and grinds, stirs paintpractically a workshop in itself. Readily converts for car polishing. Lambs wool bonnet leaves a high lustre on painted surfaces; wire wheel brush for gleaming rust-free chrome. Kit accessories also include: sturdy horizontal mounting bench for conversion to stationary unit; $3^{\prime \prime}$ grinding wheel for sharpening tools; $5^{\prime \prime}$ rubber backing pad; 5 assorted grit sanding discs; $1 / 2^{\prime \prime}$ adapter with $1 / 4^{\prime \prime}$ shank; set of 13 twist drills, $1 / 16^{\prime \prime}$ to $1 / 4^{\prime \prime}$ by 64ths; 3 wood auger bits, $3 / 8^{\prime \prime}, 1 / 2^{\prime \prime}, 3 / 4^{\prime \prime}$; countersink and paint stirring attachment. Cabinet-styled carrying case can be hung on workshop wall. $13 \times 14 \times 7^{\prime \prime}$. For $110-120$ v., AC or DC. Shpg. wt., 14 libs.

50 NX 226. List, \$42.95. NET.
32.20

## DREMEL MOTO-SHOP KIT



MODEL 57. Versatile, fast-cutting jig saw with power take-off and 23 accessories. "Rocker Action" saw has tilting table, full $15^{\prime \prime}$ throat, 3450 rpm rotary motor and blade safety-guard. Accessories include: flexible shaft with lightweight, plastic handpiece rubber backing pad and adapter; 3 sanding discs; grinding wheel; cloth buffing wheel; wire brush wheel; wheel guard, adapter, and polishing compound stick. Kit also has a 12-piece set for use with flexible shaft. Contains abrasive wheels, collet adapters, router, brush and drill. Excellent for fine, close work with wood or metal. Extremely useful tool for home hobbies and handicrafts. Safe for all age groups. For 110-120 v., 60 cycle AC. Shpg. wt., 17 lbs.
46 NX 952. List, \$49.95. NET. . . . 37.46

## THOR HIGH-QUALITY GRINDERS



HEAVY-DUTY SPEEDGRINDER MODEL 128. Ideal bench grinder for all heavy-duty grinding applications in shops, garages, and homes. Adjustable tool rests with built-in angle guides allow fast and accurate sharpening of drills, chisels, planes and a variety of other cutting tools. Lightweight, die-cast aluminum housing. Rubber feet protect work surface-absorb vibration. Keeps all your tools keen-edged, ready to use. Transparent protective shield incl. Has two grinding wheels: 1-46 grit and 1-75 grit. Wheel size: $6 \times 3 / 4 \times 1 / 2^{\prime \prime}$. Powerful motor is $1 / 4$-hp induction-type. No-load speed, 3450 rpm . Self-aligning, oil-less bearings. On-Off switch. Overall length, $16^{\prime \prime}$. For $110-120$ v., 60 cycle AC only. Wt., 24 lbs . 46 NU 468. List, $\$ 32.50$. NET.
22.35


## HIGH-QUALITY BENCH GRINDER

MODEL 117. Ideal power bench grinder for the small shop, garage, or home work bench. Widely used by model makers, hobbyists, schools, etc. Designed for medium or light work loads. Light in weight for easy portability.
Can be secured to bench or table-top if desired. Grinding wheels: 1-60 grit for coarse grinding; 1-120 grit for smooth. Wheels are $41 / 2 x^{3} / 8^{\prime \prime}$ with $3 / 8^{\prime \prime}$ center hole. Dependable $1 / 15-\mathrm{hp}$ motor. Speed: 3400 rpm noload. Motor, shaft and bearings are completely housed by case which also provides integral wheel guards and tool rests. Has selfaligning, oil-less bronze bearings. On-Off switch. With 6-foot, heavyduty 2 -conductor cord. Height, $6^{\prime \prime}$; width, $8^{\prime \prime}$; depth, $67 / 8^{\prime \prime}$. Rubber feet. For 110-120 volts, 60 cycle AC only. Shpg. wt., 8 lbs. 46 N 373. List, \$17.95. NET.

I2.35

## Power Saws and Accessories



- Excellent for Home or Trade Use
- With Rugged $1 / 4 / 4$ HP Motor

A heavy-duty, power hand saw which fully meets all the requirements for trade use by carpenters and contractors. A fine addition to either a professional or a home craftsman tool kit. Rugged $11 / 4$-hp ( 9 ampere) motor has no-load speed of 5500 rpm . Automatic blade guard with lifter handle for plunge cuts. Spring-loaded, ball-bearing mounted blade guard exposes only portion of blade required while cutting. Large $61 / 2^{\prime \prime}$ blade cuts to $25 / 16^{\prime \prime}$, depth at $90^{\circ} ; 111 / 16^{\prime \prime}$ at $45^{\circ}-\mathrm{cuts}$ " 2 -by- $4^{\prime \prime}$ at $45^{\circ}$. Minimum depth of cut, $1 / /^{\prime \prime}$. Graduated angle adjustment easily adjusts to any angle between $90^{\circ}$ and $45^{\circ}$. Comfortable, easy-grip handle with momentary-action trigger switch with guard. With combination (rip and crosscut) blade, heavy-duty rubber-covered 10 ft. cord with ground wire, and adjustable rip guide. U.L. Approved. For $110-120 \mathrm{v}$., AC or DC. Shpg. wt., 15 lbs .
46 NX 788. List, \$49.95. NET.... 34.25 EXTRA BLADE. Combination rip and crosscut. ${ }^{11 / 2 / 2 \prime}$ dia. Shpg. wt., 10 oz. 50 N 007. NET. 1.88

## SKIL POWER SAW BLADES



## PERMA-GRIT BLADES

(A)CUTTING BLADE. Newly developed type of cutting blade adds greatly to the versatility and efficiency of portable power saws. Speeds up cutting time and decreases chance of accidental damage to material. Tungsten carbide "grit" particles are cop-per-bonded to metal blades. The grit will not roll off or wear out. Blades last for years -never need sharpening. Cut by abrasion. Perfect for cutting thin veneer, plywood, masonite, fiber glass and other splinterprone material. Cuts plywood and veneers without chipping. Ideal for finish carpentry as completed cuts are smooth, ready for installation.

| Stock No. | pe | Fits Saw | Wt. | NET |
| :---: | :---: | :---: | :---: | :---: |
| 45 N 212 | 19911 | 536 | 12 |  |
| 45 N 213 | 19909 | 553 | $11 / 4 \mathrm{lbs}$. |  |

B SANDING BLADES. Can be used for sanding, cutting, shaping, notching and ploughing.

| Stock No. | Type | Fits Saw | Wt. | NET |
| :---: | :---: | :---: | :---: | :---: |
| 45 N 214 | 20155 | 536 | $3 / 41 \mathrm{~b}$. | $\frac{4.98}{4.98}$ |
| 45 N 215 | 20153 | 553 | 1 lb. | 5.98 |

STEEL ALLOY BLADES

(C)
Special nickel, chrome, molybdenum steel alloy. *Fits $5 / 8^{\prime \prime}$ round arbor. $\dagger$ Fits diamond arbor. Shpg. wt., $3 / 4 \mathrm{lb}$.

| Stock No. | Mfr's Type | Description | $\begin{aligned} & \text { Fits } \\ & \text { Saw } \end{aligned}$ | $\begin{aligned} & \mathrm{NET} \\ & \mathrm{EA} . \end{aligned}$ |
| :---: | :---: | :---: | :---: | :---: |
| 45 N 216 | $377 \dagger$ | Combination | 553 | 2.15 |
| 45 N 217 | 17988* | Combination | 536 | 2.15 |
| 45 N 218 | $356 \dagger$ | Cross Cut | 553 | 2.15 |
| 45 N 219 | 18552* | Cross Cut | 536 | 2.15 |
| 45 N 220 | 352† | Rip | 553 | 2.15 |
| 45 N 221 | 18553* | Rip | 536 | 2.15 |



## POWER SAWS AND TABLES

See Allied's low prices on quality-built power saws for both home and shop use.



## MODEL 553 7 $1 / 4^{\prime \prime}$ SAW

- Powerful Home Workshop Power Saw
- Suitable for Heavy-Duty Construction Use Very rugged general purpose power hand-saw-designed for heavy-duty construction use. Plenty of extra cutting capacity. Handles tough framing and rafter cuts. Easily cuts through " $2 \times 4$ 's' even at $45^{\circ}$ bevel. Has powerful $13 / 4$-hp motor. No-load speed, 6000 rpm . Variable torque clutch provides builtin protection against motor burn-out, excessive wear on gears and bearings. Saw cessive wear on gears and bearings. Saw
shaft will spin free if the blade binds or jams in cut-gives extra safety against possible saw "kick-back."
Built-in calibrator for accurate bevel adjustments from $0^{\circ}$ to $45^{\circ}$. Makes accurate $90^{\circ}$ cuts. Easy-to-reach depth-of-cut ad justment locks saw rigid at desired cutting depth. Permits cutting grooves accurately. Telescoping lower guard shields bladeautomatically retracts as blade enters work. $71 / 4^{\prime \prime}$ blade cuts to $23 / 8^{\prime \prime}$ depth at $90^{\circ} ; 17 / 8^{\prime \prime}$ at $45^{\circ}$. Diamond arbor. For 110-120 v., AC or DC. Shpg. wt., $163 / 4$ lbs.
45 NX 222. List, \$89.50. NET. . . 66. 95
MODEL 13282. STEEL CARRYING CASE FOR ABOVE SAW. Has handle; space for spare blades. $121 / 2 \times 113 / 8 \times 123 / 8^{\prime \prime}$. Shpg. wt., 13 lbs. 45 NX 223. List, $\$ 18.00$. NET..... . 13.45


## MODEL 536 61/2" SAW

## - Delivers Plenty of Power on Tough Cuts

- Has Built-In Motor Safety Action

Rugged power handsaw with many professional features. Efficient 1-hp motor delivers power to spare on tough cuts. No-load speed is 6300 rpm . Variable torque clutch provides built-in motor protection-saw shaft spins free if blade binds or jams in cut. Telescoping lower guard shields blade-retracts as blade enters work. $61 / 2^{\prime \prime}$ blade cuts $23 / 16^{\prime \prime}$ deep at $90^{\circ} ; 13 / 4^{\prime \prime}$ at $45^{\circ}$. Cuts " 2344 , 's" at $45^{\circ}$. $5 / 8^{\prime \prime}$ ' round arbor. Easy-toread calibrations allow accurate, adjustable bevel-cut setting from $0^{\circ}$ to $45^{\circ}$. For 110-120 v., AC or DC. Wt., 12 lbs. 45 NX 224 . List $\$ 54.95$. NET. . . . 40.95 MODEL 18606. STEEL CARRYING CASE FOR ABOVE SAW. Has handle; space for spare blades. $11 \times 11 \times 121 / 4^{\prime \prime}$. Wt., $81 / 4 \mathrm{lbs}$.
46 NX 225. List, $\$ 16.00$. NET.... . . 11.90
MODEL 576 SAW TABLE. Sturdy space-saving saw table-mounts on workbench or table top. Converts Skil saws to bench saws. 21x $163 / 8^{\prime \prime}$ table top. $14^{\prime \prime}$ high. By adjusting blade height, can be used for grooving, notching, and dadoing. Has adjustable miter and rip guides. Shpg. wt., $151 / 2 \mathrm{lbs}$.
45 NX 226. List, $\$ 19.95$. NET..... 14.95

## SKIL MODEL 514 JIG SAW

Extremely efficient orbital-action jig saw. Cross-cuts, rips, scrolls, etc. A useful multi-purpose saw for any craftsman. Can be used to cut intricate patterns and fine decorative curves-including inside curves and cutouts. Use it for starting a hole for pocket cuts-no need to drill hole in stock. Powerful $1 / 2^{\prime \prime}$ stroke cuts plastics and metal; will cut $2^{\prime \prime}$ lumber. Supplied with fine blade. For operation from 110-120 volts, AC or DC. Shpg. wt., 5 lbs.
50 NU 074. List, $\$ 47.50$. Only $\$ 3.55$ Down. NET. . 35.45

## REPLACEMENT BLADES

FINE BLADE. Shpg. wt., 3 oz .
50 N 075 . NET $\qquad$ $.69 c$
COARSE BLADE. Shpg. wt., 3 oz .
50 N 076. NET. .
36 c


## WEN MODEL 505K PORTABLE SABRE SAW KIT

Versatile power saw kit for shop and home. Can be used as a rip-saw, coping-saw, band-saw, cross-cut saw, scroll-saw, jig-saw, hack-saw and keyhole saw. Rotary type universal motor delivers 2650 strokes per minute. Length of stroke, $5 / 8^{\prime \prime}$. Cuts wood, hardboard, plaster, leather, $2 \times 4$ lumber, etc. Makes its own starting-holes or inside cuts. Also makes straight, curved, circular or intricate cuts. Overall length of saw: $63 / 4$ " . Kit includes rip-sawing attachment, circle-cutter and 5 blades: both coarse and medium wood-cutting blades; fine scroll blade; non-ferrous metal-cutting blade; extra fine blade for bakelite, ferrous metal, formica, etc. Metal carrying case-holds saw with blade inserted. Motor U.L. Approved. For 110-120 v., AC or DC. Shpg. wt., $61 / 2 \mathrm{lbs}$. 45 N 899 . List, $\$ 32.95$. $\$ 2.45$ Down. NET. .
.24 .50


Hundreds of Uses

MODEL 505 PORTABLE POWER SABRE SAW ONLY. As above. With 3 blades-coarse, medium, fine. Shpg. wt., 4 Ibs. 46 N 362. List, $\$ 29.95$. NET MODEL 5TI STEEL SAW TABLE ONLY. With protractor, jointer, circle cutter, rip fence, 5 blades. $15 \times 15 \times 71 / 2^{\prime \prime}$. Shpg. wt., 12 lbs . 46 NX 339. List, $\$ 12.95$. NET $\qquad$ EXTRA SET OF 3 BLADES. Same as with 505 saw (coarse; medium and fine). Shpg. wt., 4 oz . 46 N 363. List, \$1.20. NET.


## Electric Drills-Bits



## EXTRA TORQUE $1 / 4^{\prime \prime}$ AND $1 / 2^{\prime \prime}$ POWER DRILLS

## MODEL 549 $1 / 4^{\prime \prime}$ DRILL

New, heavy-duty $1 / 4^{\prime \prime}$ drill features large 2.5 amp motor for an extra margin in power. Gives top-performance on all drilling jobs or when used with $1 / 4^{\prime \prime}$ drill accessories. Has over-sized fan for cool-running motor-prolongs the useful life of drill. Precision helical gears transmit power efficiently for smooth operation. Sturdy gear-type chuck fits all tool shanks up to $1 / /^{\prime \prime}$. Rugged aluminum housing with pistol-grip for easy handling. Momentary contact trigger has locking pin. No-load speed, 2500 rpm . Overall length, $83 / 4^{\prime \prime}$. With chuck key. Heavy 3-conductor rubber cord with ground connector. U.L. Approved. For operation from 110-120 v., AC or DC. Shpg. wt., $41 / 2 \mathrm{lbs}$. 50 N 193. List, $\$ 24.95$. NET 1/4" Chuck Key, For gear-type chucks. 4 oz.
18.60

MODEL 542 1/2" DRILL


New, power-packed $1 / 2^{\prime \prime}$ drill with rugged 3.5 amp motor. Handles the toughest jobs in heavy lumber, masonry and metals with ease. Advanced design with 3 separate hanfor work in close quarters. Has highly polished, durable ar work in close quarters. Has high-t posished, dings and aluminum housing. Heavy-duty end-thrust bearings and self-aligning bronze bearings. Precision-helical gears for smooth, efficient power take-off. Gear-type chuck
up to $1 / 2^{\prime \prime}$ shanks. Drills holes in steel up to $1 / 2^{\prime \prime}$ in dia.; $1^{\prime \prime}$ in wood. Pistol-grip handle has momentary-contact switch with locking pin. No-load speed, 500 rpm . Heavy 3 conductor rubber cord. With chuck key. Length 121/2". U . L. Approved. For $110-120 \mathrm{v} .$, AC or DC. Shpg. wt., 11 lbs. 194 . List, \$56.50. \$4.22 Down. NET 1/2"Chuck Koy; For gear-type chucks. 5 .....
50 N 197. NET........................
42.20
$.64 ¢$

## THOR QUALITY ELECTRIC DRILLS



## MODEL 20 BUDGET DRILL

- Excellent Buy in a $1 / 4^{\prime \prime}$ Drill
- A Thousand Uses in Shop or Home

A truly outstanding value in an efficient $1 / 4^{\prime \prime}$ electric drill. For servicemen, hobbyists, etc. Gear-type chuck takes drill shanks up to $1 / 4^{\prime \prime}$ diameter. Drills holes to $1 / 4^{\prime \prime}$ diameter in steel, and to $1 / 2^{\prime \prime}$ diameter in hardwood. Self-aligning, ball-thrust bearings assure smooth operation. Has locking pin on momentary-contact trigger switch. No-load speed, 2400 rpm ; full-load speed, 1500 rpm . With chuck key $7^{7 \prime}$ long. U.L. Approved. For operation from $110-120$ volts, AC or DC. Shpg. wt., $31 / 4 \mathrm{lbs}$.
50 N 009 . List. $\$ 18.95$. NET.
.12 .95

## MODEL 100 DRILL

Efficient and powerful $1 / 4^{\prime \prime}$ electric drill. Designed for rugged use. Series-wound universal motor develops high torque. Reliable 3-jaw geared chuck with tightening key. Chuck takes
drill shanks up to $1 / 4^{" \prime}$ diameter. Speed: 2000 rpm no-load, 1200 rpm full-load. Trigger-type, momentary action switch with locking pin. Length, $81 / 2^{n}{ }^{n}$. U.L. Approved. For 110-120 v. AC or DC. Shpg. wt., 5 lbs.
46 N 370 . List, $\$ 25.00$. NET. $\qquad$

## MODEL 1325 3/8" DRILL

Highest quality, heavy-duty $3 / 8^{n}$ drill ideally suited for home, farm, and industrial work. Has $3 / 8^{\prime \prime}$ geared chuck with key. Momentarycontact trigger switch with locking pin. Ballbearing on chuck spindle; oilless bronze elsewhere. No-load speed, 1000 rpm; full-load speed, 650 rpm. Length, $95 / \mathbf{g}^{\prime \prime}$. Polished, cast aluminum housing. 6 -ft., 3-conductor cord. U.L. Approved. For operation from 110-120 46 AC or DC. Shpg. wt. 5 lbs.
280
28.90

## MODEL 27 DRILL

Highly efficient, power-packed $1 / 4^{\prime \prime}$ drill featuring ball-bearing design for ultra-smooth opera-tion-long useful life. Excellent for wide variety of jobs-maintenance, farm, garage, hobby and repair shop. Rugged geared chuck with key. Fits all bits with shanks up to $1 / 4^{\prime \prime}$ dia. Has antifriction, heavy-duty thrust ball bearing on 2200 rpm no-cast, all-aluminum housing. Speed: type, momentary-contact switch with Trigger type, momentary-contact switch with conventent locking pin. Overall length, $9^{*}$. Equipped with 10 -ft., 3 -conductor cord. U.L. Approved. For operation from $110-120$ v., AC or DC.
Shpg. wt., 5 lbs.
46 N 999 . List, $\$ 27.95$. NET...........|9.II
$\qquad$

## MODEL 1250 DRILL

Top-quality, heavy-duty $1 / 4^{\prime \prime}$ drill with extrarugged motor. Designed to give years of service under the most severe conditions. Features sealed, anti-friction, ball-thrust and needlespindle bearings. Gear-type chuck takes up to $1 / 4^{\prime \prime}$ diameter shanks. No-load speed, 2000 rpm ;
full-load, 1300 rpm . Length, $9^{\prime \prime}$. $10-\mathrm{ft} .{ }^{3} 3$-conductor cord. U.L. Approved. For $110-120$ volts, AC or DC. Shpg. wt.0 5 lbs.
46 N 454 . List, $\$ 44.00$ NET.
32.14

## MODEL 400 1/2" DRILL

Outstanding power and performance are combined in this heavy-duty $1 / 2^{\prime \prime}$ drill. Aluminum housing. Removable sidehandle for close drilling. Heavy-duty radial and end-thrust ball ing bronze No-load speer bearings, self-align$425 \mathrm{rpm} .1 / 2^{\prime \prime}$ geared chuck with key Momentary contact switch with woking pin Momenline cont UL, Approved For $110-120$ volts line cord. U.L. Approved. For 110-120 volts, 46 N 455 . List, $\$ 39.95$. NET.
27.10

## WEN MODEL 808

 $3 / 8^{\prime \prime}$ DRILL

1000 Unique, extremely versa-
tile, 2-speed
drill featuring drill featuring take-offs.
taker Works efficiently with any high or low speed at tachment. Simply insert chuck into high-speed power take-off for effortless drilling through steel, wood, aluminum, brass, or copper; insert chuck into low-speed power take-off for drilling through such materials as masonry and concrete. Removable extra grip-handle included for maximum ease of handling at either speed. Squeeze-type momentary contact switch with "onvenient "lock-on"" button; comfort-grip "D"-type handle. High speed, 3000 rpm ; low
speed, 1000 rpm. Overall length, $121 /{ }^{4}{ }^{4} ; 6$-ft. heavy-duty rubber-covered cord. U.L. Ap-
proved. For operation from $110-120$ volts ACDroved. For operation
46 N 947. List, \$29.95. NET
22.01

## HIGH-SPEED COPE-SAW BITS



A remarkably versatile, all-purpose bit for use with any $1 / 4^{\prime \prime}$ or $1 / 2^{\prime \prime}$ electric drill, including drill presses. Made of the finest abrasive-resistant steel, it drills, saws and reams in practically any material. Easy to use since it drills its own starter hole. Cuts circles, ovals, squares, scrolls and all types of unusual holes. An extremely helpful tool for the serviceman, woodworker, electrician and hobbyist. Excellent for making cutouts in record changer boards, speaker enclosures and equipment panels. The three models listed below have cutting edges especiallial to be cut the recommended types of material to be cut. Av. shpg. wt. ${ }^{3}$ oz.
46 N 795. Wood Bpose Bit.
46 N 796. Wood Bit. 46 N 797. Heavy-Metal Bit. EACH. . 1.77

MILLERS FALLS DRILL BITS


High-speed power bits for drilling large holes in hard and soft woods, plastics, will cut through wire nails without damage. Designed for use with any $1 / 4^{\prime \prime}$ electric drill. Shanks are $1 / 4^{\prime \prime}$, milled for standard three-jawed chucks. Finely tempered high speed steel-holds edges dinary tool steel. Cut fast and clean, even when cutting on an angle. Bits are easily resharpened on a grinding whee. Depth of cut, -1 ieal length of bits, $61 / 2^{\prime \prime}$. No. 8004 Power Bit Set. Set of 4 bits in convenient plastic roll. Sizes: $1 / 2^{\prime \prime}, 5 / 8^{\prime \prime}, 3 / 4^{\prime \prime}$ and $1^{\prime \prime}$. Shpg. wt., 3/4 lb.
46 N 366. List, \$5.25. NET.
3.75

No. 8006 Power Bit Set. Set of 6 bits in
plastic roll. Sizes: $3 / 8^{\prime \prime}, 1 / 2^{\prime \prime}, 5 / 8^{\prime \prime}, 3 / 4^{\prime \prime}, 7 / 8^{\prime \prime}$ and plastic roll. Sizes: $3 / 8^{\prime \prime}, 1 / 2^{\prime \prime}, 5 / 8^{\prime \prime}, 3 / 4^{\prime \prime}, 7 / 8^{\prime \prime}$ and $1^{\prime \prime}$. Shpg. wt., 1 lb .
46 N 367 . List. $\$ 7.80$. NET. . . . . . . . . . 5. 12
No. 835 Power Bit Extension. Tough alloy steel extension shank, $1 / 4^{\prime \prime}$ in dia., $1^{\prime \prime}$ long. Fits all $1 / \mathrm{N}^{\prime \prime}$ power bits. Shpg. wt., 1 lb .
.I. 50

## CENTURY MASONRY DRILL

Type L-56 $18^{\prime \prime}$ Carbide Drill. Extra long for drilling $1 / 2^{\prime \prime}$ holes in brick, concrete, stone, etc. $41 / 4^{\prime \prime}$ flute. Carbide tip provides clearance for expansion shields, plugs, etc. Shank dia., $3 / 8^{\circ}$. Shpg. wt., $11 / 4$ ibs.
5.25

## Power Drill Accessories



Convert your portable power drill into a complete home workshopand at a fraction of the cost of equivalent power tools. The accessories listed below are designed to attach easily and quickly. You can use your drill as a power saw, a power screwdriver, a power planer, a sander as well as a buffer and polisher.

You can drive wood, machine or sheet metal screws; cut holes in chassis bases, panels, ceilings or floors; drill between joists or shelves plane across, with or against wood grain; cut plastics or metals; polish and sand; etc. These precision-made attachments are ruggedly built and designed for years of dependable service.

## ARCO 456 SAW

Low-cost, high-quality saw attachment-designed to convert any $1 / 4^{\prime \prime}$ electric drill into a multi-purpose power saw. Has features normally Has "Dado-Arbor" costing many times more. cut any groove up to $1 / 2^{\prime \prime}$ wide by $1^{\prime \prime}$ deep in one cut any groove up to $1 / 2^{2}$ wide by 1 deep in one
cut; arbor easily red when saw is to be used for accurate straight or angle cutting. Simple to attach. Adjustable for straightcutting to depth of $13 / 4^{\prime \prime}$; rip gauge and beveltilt rip gauge from 0 to $45^{\circ}$. Includes sight for accurate cutting along guide lines. Gear case contains self-lubricating, lifetime bearings. Rugged, right-angle steel gear drive. Has extrabroad base for steadier rest and exceptional ease of handling. Includes safety yoke. Can be used with one hand. An excellent choice for the budget-wise serviceman, home hobbyist,
carpenter or mechanic. Supplied complete with carpenter or mechanic. Supplied complete with
$5^{\prime \prime}$ Arco Safecut" blade. Wt., 4 lbs . 8.63 50 N 000. List, \$12.95. NET., . . . . . . . . 8.63

## "ARCO-SAW" REPLACEMENT BLADES

 High-quality $5^{\prime \prime}$ replacement blades for Arco456 . Tempered tool steel; $3 / \mathbf{8}^{\prime \prime}$ bore. Wt., $1 / 4 \mathrm{lb}$.

| Stock No. | Type | Doscription | EACH |
| :---: | :---: | :---: | :---: |
| 50 NOOI | 250 T | Safecut blade |  |
| 50 N 002 50 | ${ }_{253}^{25 T}$ | Crosscut blade | 1.23 |
| 50 NO 04 | ${ }_{255}^{25}$ | Rip blade | 1.23 |

## ARCO 550 "JIG-SAW"

Versatile jig-saw attachment-has adjustable circle-cutter and rip-gauge. Fits any $1 / 4^{\prime \prime}$ elecdiameter: rips up to $10^{\prime \prime}$ wide Does work of ig, keyhole, coping, rip, crosscut, band and jig, keyhole, coping, rip, crosscut, band and lumber. Air-blower keeps sawdust away from blade. Cuts openings for plumbing, switchboxes, etc., without boring starting hole. An extremely valuable tool for hobbyists, carpenters, cabinet makers, electricians, etc. Has right-angle drive. Blades can be easily changed in seconds with an ordinary screwdriver. Complete with blade. Shpg. wt., $21 / 2 \mathrm{lbs}$. 50 N 231 . List, $\$ 10.95$. NET..
.7 .30 Extra Blades. For above jig-saw attachment. Assortment of six blades- 2 coarse; 2 medium; 2 fine-tooth. For cutting plywood, wallboard, hard and soft woods, etc. Shpg. wt., 2 oz 50 N 232. List, $\$ 1.95$. N ET...

## ARCO SCREW-DRILLS

Combination pilot hole drill and countersink. Drills proper size hole for woodscrews indicated; also drills counterbore. Adjusts to length of screw. anadium steel bit; $1 / 4$ " shank. *Wood-
screw size. Av. shpg. wt., 2 oz.

| No. | Type | *For | 1-5, EA. | 6-Up,EA. |
| :---: | :---: | :---: | :---: | :---: |
| 50 NOIO | 1106 | 46 |  |  |
|  | 1108 1110 | 48 $\# 10$ | 75c | $65 c$ |
| 50 NO 3 | 1112 | ${ }_{\# 12}$ |  |  |

## ROTEX "ROTO-PLANE" ATTACHMENT.

High-quality precision planer attachment for use with $1 / 4^{\prime \prime}$ electric drill. Fine for home craftsmen, carpenter, hobbyists, etc. Planes at any angle; easily glides with, across, or against grain of wood. Depth of cut is completely adjustable ( $0^{\prime \prime}$ to $1 / 16^{6}$ ). Guide edge provides automatic planing at a true 90 degreessimplifies wood jointing. Diagonal shearing action eliminates deflections from knotholes, etc. Specially designed, 6-flute, spiral steel cutter is deep hardened and precision ground. and perfectly barced for fatiguefree wendand perfectly balanced for fatigue-free hand-heavy-duty die-cast aluminum housing. With ings. Attractive baked hammerloid finish. With instructions. Shpg. wt.., 3 1bs.
45 N 872 . List, $\$ 11.95$. NET. . . . 8.78

## ROTEX B-50 HOLE SAW

An adjustable hole-saw attachment featuring a unique dial adjustment. Greatly increases the usefulness of any $1 / 4^{\prime \prime}$ electric drill or drill press. Valuable aid to the hobbyist, serviceman, home craftsman, etc. Easily cuts holes from $11 / /^{\prime \prime}$ to $21 / 2^{\prime \prime}$ in $1 / /^{\prime \prime \prime}$ steps, cleanly and without ragged edges. Just dial the size you want and start cutting! Sturdily constructed of heavy gauge steel for rugged use. Rabbeting or planing can
be done by simply removing starter drill. Will be done by simply removing starter drill. Will
cut to $11 / 8^{\prime \prime}$ depth. Shpg. wt., $11 / \mathrm{l}^{\mathrm{lbs}}$. 5 II cut to $11 / /^{\prime \prime}$ depth. Shpg. wt., $11 / 2$ lbs.
45 N 879 . List, $\$ 6.95$. NET........
5.II

## G-H DRILL GRINDING TOOL

Model 825. Drill-holding jig. Holds drill in correct position for accurate repointing and sharpening. Use with either hand or electric
 ber size-No. 30 to No. 1 ; Letter size-A to $Z$; ber size-No. 30 to No. $1 ;$ Letter size-A to 2 ;
Millimeter size- 3.0 to 19.0 . Positive indexed angle adjustment for almost any type of work: $88^{\circ}$-for thin sheets or hard materials; $68^{\circ}-$ for high production use for drill $1 / 4^{\prime \prime}$ or smaller; $59^{\circ}$-for general purpose drilling; $49^{\circ}$ - soft materials (copper, etc.) and CSK angle for countersinks, wood, hard-rubber, fibre, etc. Attachment is fully, adjustable and ruggedly built. 46 Nhpg. wt., 2 lbs.
5.34

## BABCO SANDING AND POLISHING KIT

Model 407. Complete sanding and polishing kit that can be used with any electric power drill. Takes most of the work out of wood or metal finishing operations. Extremely handy for the home craftsman, hobbyist, handyman, etc. It sands, smooth-buffs and polishes with assorted sanding discs and a genuine, highquality lambswool bonnet. Kit permits completing sanding and buffing operations in a backing pad (fits into chuck of drill), $6^{\prime \prime}$ lambswool bonnet and 7 assorted sandpaper discs. With instructions. Shpg. Wt., 10 oz.

## BABCO 825 5-1 SPEED'REDUCER

A high-quality instantly reversing 5 -to- 1 speed reducer. Will fit any $1 / 4^{\prime \prime}$ electric drill or any drill press. Very useful attachment for any hobbyist, electrician, mechanic, plumber, carpenter, general maintenance worker, etc. 5 -to- 1 gear reduction produces large torque increase; provides more power at slower speed. An excellent tool for a wide variety of jobs. Drives or removes up to No. 14 screws easily. Saves time when assembling right or left -hand threaded parts, drilling masonry, drilling holes in wood, etc. Has $1 / 4^{\prime \prime}$ tap capacity; reversing feature makes this an excellent tool for hole tapping. Complete with $1 / 2^{\prime \prime}$ adapter, $1 / 4^{\prime \prime}$ adapter, screwdriver bit with finder sleeve for medium size slotted screws, sleeves to adapt from chuck of speed reducer to fit tap sizes slotted ${ }^{16}$ and ${ }^{1 / 4}$ phillips type screwdriver bits. Shpg. wt., 1 lib. $\$ 10.05$

## BABCO 741 RIGHT-ANGLE DRIVE

Right-angle drive unit designed for use with electric drills. A low-cost accessory that greatly increases the versatility of any electric drill. Unusually handy for drilling in confined spaces, such as between joists or shelves, crowded radio and TV chassis, etc. Highly recommended for plumbers, servicemen. Amateurs, electricians, the hand for easy guiding of drill and exerting pressure. Easy to attach. Chuck is unscrewed from electric drill and screwed on right-angle drive unit. Drive unit ( $3 / 8^{\prime \prime}-24$ female threaded) is then screwed on to drill spindle. Provides choice of 2 speed ratios-halves drill speed for sanding wood or polishing painted surfaces; doubles speed for efficient sanding of metal surfaces. Shpg. wt., 1 1b
46 N 268 . List, $\$ 4.49$. NET
3.30

## BABCO DRILL PRESS STAND

Model 945. Drill stand-converts any $1 / 4^{\prime \prime}$ pistol grip electric drill into a lever operated drill press. A terrific value! Saves time and labor on many jobs-useful for routing, shaping, sanding, etc. More accurate, less tiring than use of hand-held drill. Your power drill can be quickly and easily installed in the bracket clamp of the stand-removed in seconds when needed for hand work. Base has mounting ears for securing stand to work bench. Bracket adjusts to desired height. Has positive-action locking to hold drill at height selected. Springreturn tension. Has $21 / 4$ stroke. Drill press head stays rigidly in position-only slide moves. Take-up gib on slide maintains precision fit for smooth operation. Handie provides up to adjustment. Depth gauge dial is double actual size; calibrated to pinion gear-makes it easy to gauge depth of hole being drilled. Adjustable depth stop permits drilling holes to identical depths. Base has slot for drill bit clearance and key slots for bolting work to base when necessary. Shpg. wt., 6 (1bs. ${ }^{\text {233 }}$. List, $\$ 13.95$.
.10 .05

# Power Tool Kits-Drill Accessories 



## DREMEL MOTO-TOOL KITS

- Pocket-Size Machine Shops
- For Home or Industrial Use

Moto-Tool Kit No. 2. Offers a powerful tool for industrial and other heavy-duty jobs. Features a sturdy, $27,000-\mathrm{rpm}$ rotary motoroperates dependably under long periods of continuous use. A time-saver in the tool room, industrial lab, production line, etc. Widely used by tool-and-die makers, machinists, hobbyists, glass, etc.
The wide assortment of attachments in this kit includes emery wheel points, wire and fibre bristle brushes, mandrels, drum sander and a variety of high-speed steel cutters. Collet chuck with lock pin, makes it easy to quickly change
attachments. Self-aligning bearings are mountattachments. Self-aligning bearings are mounted in felt oil retainers-require minimum oilmanipulate. Fits the hand, weighs only 13 oz . Kit comes complete in attractive, grayenameled metal box. Size, $3 \times 91 / 4 \times 51 / 2^{\prime \prime}$ deep. With instructions. For $110-120$ volts, AC or DC. Shpg. wt., 4 ibs. $\mathbf{4 6}$. 378 . List, $\$ 27.50$. NET. . . . . . . . 21.49

Moto-Tool Kit No. 1 . As above, but designed for light-capacity grinding, polishing, etc. Pophobbyists. Numerous attachments supplied with this kit make it possible to do precision jobs in much less time. Collet chuck. Complete with 34 accessories. For 110-120 v., AC or DC. Shpg. wt., $31 / 2$ lbs.

## CENTURY "MAGIC BLACK": MECHANICS' DRILL SETS



7-Drill Set


13-Drill Set


Drill Only


Auger Bit Set


Masonry Set

Complete assortment of top-quality drill bits. Feature "Magic Black" temper to insure extra wear and keep points sharp longer.
7-Drill Set. 7 drills, $1 / 16^{\prime \prime}$ to $1 / 4^{\prime \prime}$ in $1 / 3 z^{\prime \prime}$ graduations. Shank sizes same as drill diameters. Supplied in handy, hinged, clear plastic container. All units are conveniently indexed so ately. Shpg. wt., 6 oz.
46 N 784. NET. .
.2 .55
6- Drill Set. Includes 5 drills, $1 / 4^{\prime \prime}$ to $1 / 2^{\prime \prime}$ in $1 / 6^{\prime \prime}$ graduations. Have $1 / 4^{\prime \prime}$ diameter shanks. With handy, indexed container of transparent plastic; drill bits are easily visible for quick selection. 46 N 785 . $\qquad$ 7.70

13- Drill Set. Includes 13 drills, $1 / 16^{\prime \prime}$ to $1 / 4^{\prime \prime}$ in $1 / 6^{4}$ graduations. Packed in Huot Index Drill Case. Opens like a book with every drill instantly accessible and identified. Case size,

46 N 782. NET
5.19
 32nds. Sizes over $1 / 4^{\prime \prime}$ have $1 / 4^{\prime \prime}$ shank. Huot Case has space for 14 more drills in $1 / 4^{\prime \prime}$ graduations. Case, $7 \times 4 \times 15 / \mathrm{s}^{\prime \prime}$. Shpg. wt., 3 lbs.
46 N 786. NET................... . . . .
60-Drill Set. Complete assortment of 60 drills, in drill sizes 1 to 60 . Packed in a steel Huot accessibility. Case opens like book for quick selection of desired bit. Size of case, $43 / 8 \times 35 / 8 \times$ $21 / 8^{\prime \prime}$. Shpg. wt., $11 / 4 \mathrm{lbs}$. 46 N 717. NET

## SPECIAL-PURPOSE DRILL SETS

7 -Piece Auger Bit Set. $1 / 4^{\prime \prime}$ to $1^{\prime \prime}$ in 8ths. Have $1 / 4^{\prime \prime}$ shanks to allow use in standard $1 / 4^{\prime \prime}$ electric drill. In convenient, space-saving plastic roll. Shpg. wt., 11 oz .
.3 .94
4-Piece Masonry Drill Set. $1 / 4^{\prime \prime}, 5 / 16^{\prime \prime}, 3 / 8^{\prime \prime}$ and $1 / 2^{\prime \prime}{ }^{1 / 4^{\prime \prime}}$ shanks fit standard $1 / 4^{4}$ electric drills. Carbide tips for drilling concrete, bricks and plaster. In plastic roll. Shpg. wt., 5 oz.. . 3.17
46 N 718 . NET.................. Chrome Steel Drill Bit Set. Set of 5 chromealloy steel bits for electric drills. For use on $3 / 8^{\prime \prime}, 7 / 16^{\prime \prime}$ and $1 / 2^{\prime \prime}$. Have $1 / 4^{\prime \prime}$ shanks. In hinged, $3 / 8^{\prime \prime}, 7 / 16^{\prime \prime}$ and $1 / 2^{\prime \prime}$. Have ${ }^{1 / 4^{\prime \prime}}$ shanks. In hinged,
clear plastic box. Shpg. wt., 1 lb . 3.18

## "MAGIC BLACK" INDIVIDUAL DRILLS

High-speed drill bits in sizes from $1 / 16^{\prime \prime}$ to $1 / 2^{\prime \prime}$. Feature "Magic Black"' super-hard temper. Drills packaged in plastic. Sizes over $1 / 4^{\prime \prime}$ have
$1 / 4^{\prime \prime}$ shank. Av. shpg. wt., 3 oz.


COASTAL WIRE WHEELS AND BRUSHES

(A)


B

(C)

Wire wheels and brushes for home and industrial use. For any electric drill or grinder that will accept a $1 / 4^{\prime \prime}$ shart. Both wheel and cup type Type Nos. ending with " "C", are coarse. Those ending in " $F$," fine. Excellent for removing rust and oxide coatings before painting or plating. *Similar to Fig. A, but has shank.

| ock | Fig. | Type | Dia | Mtg. | 02. | NET |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| $50 \mathrm{NO23}$ | * | 91CF | $2^{\prime \prime}$ | $1 / 4^{\prime \prime}$ " Shank | 4 | 59 |
| 50 NO 24 | * | 91 CC | $2^{\prime \prime}$ | 1/4" Shank | 4 |  |
| 50 N 026 | * | 91 EF | $3^{\prime \prime}$ | 1/4/" Shank | 6 | . 69 |
| 50 NO 02 | B | 92 C | $2^{\prime \prime}$ | 1/4" Shank | 4 | . 8 |
| N 02 | B | 92 F | $2^{\prime \prime}$ | 1/4/" Shank | 4 |  |
| 200 | A | ${ }^{\text {P9 }}$ P94F | $4^{\text {4* }}$ | 1/2" Bore | 8 |  |
| 50N 202 | A | ${ }^{\text {P996F }}$ | ${ }^{4 \prime \prime}$ |  | 12 | . 25 |
| ON 203 | A | P96C | $6^{*}$ | $1 / 2{ }^{1 / 8}$ Bore | 12 |  |

Muslin Buff. High quality $6^{\prime \prime}$ muslin buffing wheel and bar of jewelers rouge in sealed plastic bag. Ideal for the craftsman or copper, brass, etc. Has $1 / 2^{\prime \prime}$ bore, can be used copper, brass, etc. Has $/ 2$ bore, can be used 50 N 204 . List, $\$ 1.10$. NET . ${ }^{\text {wit., }} 4$ oz. 8 lc 50 N 205. As above, but $4^{\prime \prime}$ dia. 3 oz.
.494
725 Arbor. For holding wire and
buffing wheels shown above. Has $1 / 4^{\prime \prime}$ buffing wheels shown above. Has $1 / 4^{\prime \prime}$ shank, $11 /{ }^{1 / \prime \prime}$ body. Can be used with any $1 / 4^{4}$ capacity electric drill. MaPacked in clear plastic bag. Shpg. 5t., ${ }^{8}$ oz. 206 . List, 60c. NET... . 44 C Bag of $5^{\prime \prime}$ Assorted Sanding Discs. 6 sanding discs in useful plastic bag. 8 oz .
50 N 207 . NET......
50 N 207. NET...
23c

## KNEISLEY MINIATURE DRILL SET



Type KS-1115 Carbon Drill Set. 20 drills- No. 61 through No. 80 (.039 to set for extremely fine drilling jobs. Hardened by unique method, assuring precision production. Finest grade carbon steel used.
Set includes 4 -jaw chuck with includes $1 / 8^{\prime \prime}$ shank for using drills in standard chucks. Molded lucite case. Shpg.
wt., 6 oz. NET.
6.29


## MILLERS FALLS COUNTERSINK

 Modol 710. Made of fine-grade highspeed ateel. For use in any material ordinarily machinable with a high-speed cutter. Cuts fast and clean in soft steel, iron, wood and similar materials. Has 5 carefully ground flutes for fast cutting at $82^{\circ}$ angle for wood and machine screws. Shank, $1 / /^{\prime \prime}$. Fits any brace ordrill. Overall length of unit is $21 / 2^{\prime \prime}$. Shpg. wt., 6 oz.
46 N 156 .
List, $\$ 1.65$. NET. 1.22

## GENERAL HARDWARE

 AUTOMATIC CENTER PUNCHModel 79. Hand pressure on handle triggers powerful spring, which drives punch. Perfect for accurate center punching in tight spots. Extremely valuable aid to adjust tension for light or heavy punch. Size, $1 / 2^{\prime \prime}$ dia. $\mathbf{I}^{\prime \prime}$. Replaceable point. Shyg. wt., 5 oz . ${ }^{2}$. Replaceable 310
46 N 196. 79P. Extra point. NET......... 336

## GENERAL HARDWARE

## SELF-CENTERING PUNCH

Model 806. For use with hardware having counter-sunk mounting holeshinges, of punch its int coter. Jast tap plunger pin and work is accurately marked. Made of cadmium-plated steel; plunger pin is tempered-steel. A handy, timesaving tool for the serviceman, repairman, builder, etc. Shpg. wt., 2 oz.
.38c

## Power Sanders and Accessories

WEN POWER SANDER KITS


## MODEL 404 HEAVY-DUTY KIT

Heavy-duty kit for rough sanding or for fine finishing. 20 sq. inches of sanding surface. Has powerful, smooth operating, vibrator-type motor; 14,400 strokes per min. Positive straightline motion all the way into inside corners. Comfortable grip fits the palm. Self-tightening position. Size of position. Size of sander, $61 / 8 \times 31 / 4 \times 4^{\prime \prime}$. Weighs bration make overhead sanding minimum viComplete with 15 assorted shanding jobs easier. 2 polishing cloths and steel carrying case. For operation from $110-120$ volts 60 cycle AC. Shpg. wt., $61 / 2 \mathrm{lbs}$.
46 N 329. List, \$19.95. NET. $\qquad$ 14.66

## MODEL 303 MEDIUM-DUTY KIT

Smaller version of above. Extremely compact and light in weight-ideal for wide variety of medium and light-duty sanding jobs. Incorporates all of the quality features of the heavyduty Model 404 and has vibrator-type motor of same highly dependable design. 13 sq. inches of sanding surface; weighs only $21 / 2 \mathrm{lbs}$. Size, $315 / 16 \mathrm{x}$ $55 / 3 \times 21^{1 / 2}$. With 12 sheets of assorted sandpaper, 2 polishing cloths and metal carrying case. For operation from $110-120$ volts, 60 cycle AC. ${ }_{46}$ Nhpg. wt., $31 / 2$ lbs.

I2.46

## SKIL PERMA-GRIT TOOLS HAND SANDER KIT



New hand sander featuring remarkably efficient Perma-Grit sanding sheets. Tungstencarbide grit cuts faster and easier than sandpaper. Grit resists clogging. With one fine and one medium-coarse sheet. $23 / 4 \times 51 / 4^{\prime \prime}$ sanding surface. Shpg. wt., $11 / 4$ lbs.
50 N 061 . List, $\$ 2.95$. NET. 1.98

Extra Sheets. For above. Shpg. wt., 3 oz.

| Stock | No. | Type | Description | List | EACH |
| :--- | :--- | :--- | :--- | :--- | :--- |
| 50 N | 150 | 18764 | Very fine |  |  |
| 50 N | 51 | 18973 | Fine grit | $\$ 1.25$ | 84 C |
| 50 N | 52 | 18982 | Medium | $\$$. |  |
| 50 N | 53 | 18763 | Coarse |  |  |

PERMA-GRIT FILES

Feature Perma-Grit tungsten-carbide abrasive for faster, easier filing of wood, plastics and composition. Self-cleaning action. Flat file is coarse on one side, fine on the other. Contour *coarse. Shpg. wt., 8 oz.

 \begin{tabular}{ll|l|l}
50 N 062 \& 18730 \& Flat file <br>
50 N 063 \& 19859 \& *Contour,

 

\hline 50 N 064 \& 19860 \& $\begin{array}{c}\text { coarse } \\
\dagger \text { Contour, fine }\end{array}$ \& 1.95 \& 1.95
\end{tabular}$| .31$

## PERMA-GRIT SAND SHEETS

Long-life tungsten-carbide sand sheets for electric oscillating sanders. Standard size $35 / 8 \times 9^{\prime \prime}$ sheets. Conveniently pre-formed for easy
changing. Shpg. wt., 5 oz .



## MODEL 592 ORBITAL SANDER

Highly versatile orbital sander. The ideal electric sander for the professional wood craftsman, or the do-it-your-self hobbyist. Can be used for coarse or fine-finish sanding; also for polishing May be used for paint and varnish removal.
Shape of sanding surface allows sanding all the way up to vertical edges and into inside corners. Powerful rotary motor delivers 5500 rpm and is practically stall-proof. Die-cast aluminum alloy housing is lightweight and rugged. Has triggertype switch with convenient "lock-on" button. Extra handle permits applying added pressure and provides more control when sanding rough ${ }^{3}$ surfaces. Less sanding sheets. Uses standard $35 / 8 \times 9^{\prime \prime}$ sheets including Perma-Grit sheets, listed below left. Overall size: $61 / 2 \times 95 / 8 \times 35 / 8^{7 \prime}$. For operation from 110-120 volts AC or DC. 50 N 079 . List,

Polishing Pad. For above. Wt., 3 lbs. 50 N 096. List, $\$ 1.50$. NET. . . . . . . . . . . 1.07


Professional-quality, 2-speed belt sander. Has plenty of power for any sanding job. An outstanding tool for hobbyists, carpenters and The high speed is excell. 1100 and 800 f.p.m. of large areas, or rapid sanding to size The low of large areas, or rapid sanding to size. The low speed will give satin-smooth finishes; also ex-
cellent for removing paint or varnish. cellent for removing paint or varnish.
Husky universal motor transmits full power through precision-cut gears and rugged cog belt. Has ball and sleeve bearings for smooth, extremely dependable operation. Uses extrawide $4^{\prime \prime}$ sanding belts. Flush design allows sanding right up to vertical edges. Simple locking device for quick, easy belt changing. Rugged lightweight, die-cast aluminum housing.
Overall size, $63 / 4 \times 63 / 4 \times 121 / 2^{\prime \prime}$. Equipped with 3 wire cord. Less sanding belts. For 110-120 v. 60 cycle AC, or DC. Shpg. Wt., 16 lbs. 63.50
50 NX 077. List, $\$ 89.50$. NET...... 63.
Box of 10 Assorted Belts. Wt., $11 / 2$ lbs. 4.98
50 N 078. NET....................... 4.

THOR POWER SANDERS

- Powerful, Precision-Built Sanders
- Orbital Type-Duplicate Hand-Sanding Motion
- Smooth, Convenient Operation



## MODEL 16 SPEED SANDER

Powerful, heavy-duty, orbital sander. For hundreds of sanding jobs in the home or shop; may also be used for buffing and polishing. Compact also be used for buffing and polishing. Compact lightweight and well balanced-ideal for vertical and overhead sanding. Easily does in minutes, sanding jobs that would require many orbital action duplicates hand sanding motion. Gives smooth surface required for French finishing.
Features rugged $6200-\mathrm{rpm}$ series-wound motor. Has sealed and shielded factory lubricated ball Has sealed and shielded factory lubricated ball
bearings for smooth operation and long life. Venbearings for smooth operation and hong ing; motor
tilating slots in top and sides of housig tilating slots in top and sides of housing; motor Sanding surface: $41 / 2 \times 51 / 2^{\prime \prime}$; requires $41 / 2 \times 61 / 2^{\prime \prime}$ sandpaper. Convenient off-on slide switch on handle. Durable cast aluminum body for mini$\operatorname{mum}_{51 / 4^{\prime \prime}}$ wigh $41 / 2^{\prime \prime}$ wide $91 /$ ng $^{\prime \prime}$. conductor cord. For operationg from $110-120$ v. AC or DC. Shpg. wt., 8 lbs. AC or DC. Shpg. wt., 8 1bs. 47 N 097. List, \$42.95. NET. . . . . . 29.47


## MODEL 15TK SANDER KIT

Versatile kit featuring the 15T sander. Makes any sanding job easier. Orbital motion and large sanding surface ideal for fast smoothing and fine finishing. Sands, finishes and polishes vertically or horizontally. The 15 T can be used 2 -pole $3450-\mathrm{rpm}$ induction motor. Convenient push-button switch onhandle. Rugged cast-aluminum body for light weight and easy handling. Sanding area $41 / 2 \times 51 / 2^{\prime \prime}$ with $3 / 16^{\prime \prime}$ orbit. Requires $41 / 2 \times 61^{1 / 2} 2^{\prime \prime}$ sandpaper sheets. Size of sander: $43 / 4^{\prime \prime}$ high, $4^{1 / 2^{\prime \prime}}$ wide and $9^{\prime \prime}$ long. Kit includes 18 assorted abrasive sheets; 2 free-abrasive felt pads useful for a variety of rubbing and polishing operations with special compounds; one neoprene contour pad (for curved surfaces); one lambs wool polishing cover and durable steel carrying case. For operation from 110-120 volts 60 cycle AC. Shpg. wt., 10 1bs. 46 NX 467. List, $\$ 34.95$. NET. . . . . 23.92
Model 15T Sander Only. 7 lbs.
46 N 375. List, $\$ 24.95 . . .$. ............ . I7.I2

## HUOT DRILL CASES

Sturdy drill cases for compact storage and quick selection of the right drill for the job. Ideal for shop, or home. Prevents misplacing drill bits and protects them from dirt and moisture. Holds drill bits securely even when bits are shortened by long use. Cases are made of
heavy gauge steel. Index clearly shows drill heavy gauge stee
sizes. Less drills.

60-Drill Capacity. Sizes, 1-60. For most-frequently-used small drill bits. Decimal equivalents and machine screw tap information included on heavy steel case. Size, $31 / 4 \times 41 / 2 \times 1^{*}$. Shpg. wt., ${ }^{1}{ }^{1 \mathrm{lb}} \mathbf{~ 7 9 0}$.

15-Drill Capacity. 1/16 to $1 / 2^{\prime \prime}$ in $1 / 3 a^{\prime \prime}$ steps. 4x $7 \times 11^{4 \prime}$. Wt. 2 lbs. 84

29- Drill Capacity. $1 / 16^{*}$ 29- Drill Capacity. $1 / 16^{* \prime}$ and S.A.E. tap info. Shpg. wt., 3 1bs.
50 N 084. NET. . 2.18


13-Drill Capaclty. Sizes, $1 / 6^{\prime \prime}$ to $1 / 4^{\prime \prime}$ in $1 / 4^{*}$


# Selected Quality Tools 

## NEW BURGESS DELUXE ELECTRIC SPRAYER KIT



- Complete, Ready to Use
- Precision-Ground Sapphire Nozzle
- Fast and Efficient, Easy to Use

Model VS-810. Multi-purpose electric sprayer kit designed to handle a variety of spraying jobs. The $\checkmark$ S-810 will spray paints, varnishes, enamels, garden sprays and almost any liquid that can be applied by spraying. Convenient adjuster-knob reguvariable direction heavy to extra-light. Accessory variable direction nozzle permits spraying up or saving feature when spraying ceilings or hard to reach places. A special "fogging" nozzle shoots an extra fine mist stream-desirable when using mothproofers and insecticides.
Completely self-contained, requires no extra compressors or hoses. Operating mechanism sealed in a Trandsome brown, shock-proof, rust-proof housing. 24-ozer type switch for quick positive off-on action. easily replaces large jar for touch-up and other small jobs. No need to dismantle spray gun for cleaning: simply spray solvent through gun and it is automatically cleaned. Gun assembly has a removable strainer over intake tube-keeps out paint lumps and dirt. Has genuine sapphire nozzle that resists abrasive action. Corrosion-proof stainless steel piston will not rust or foul-precision fitted for smooth operation.
Kit includes spray gun with AC cord and $15-\mathrm{ft}$. extension cord, 24 -oz. graduated glass jar, 4 -oz. auxiliary touch-up jar, variable direction nozzle adapter, full set of spare parts including strailer an attractive steel carrying case with folding handle and safety clasp. For operation from 110-120 v. $50-60$ cycle AC. Shpg. wt., 8 lbs .

50 N 234. List, \$29.95. \$2.00 Down. NET
19.97

Model VS-800 Spray Gun Only. Same high quality and workmanship as spray gun in kit above. Includes 24 -ounce graduated jar and AC line cord. Shpg. wt., $31 / 2 \mathrm{lbs}$. 50 N 235. List, \$12.95. NET.

## TURNER PROPANE-GAS "MULTI-TORCH" KIT



Exceptionally safe, highly versatile propane torch kit. Complete with accessories for light and heavy duty soldering, heating and burning like having four tools in one. All brass torch has heavy-duty valve with drag spring on knob for positive control of flame. Quick lighting propane provides a hot, clean flame. All brass flame spreader is easily attached to burner with set screw, spreads flame to full two inches for paint burning or heating asphalt tile. Solid copper, chisel point solder tip screws into all brass socket for easy attach-
ment to burner. Tip heats in seconds for quick soldering. Hot ment to burner. Tip heats in seconds for quick soldering. Hot cutting tip also screws into socket attachment, is userame is
cutting or scoring tile, removes putty like butter. Flame is cutting or scoring tile, removes putty like butter. "'Multisafely, encased, will not damage sash or frame. kit supplied with tank of fuel, heavy-duty burner, soldering tip, flame spreader and cutting tip. In $3 \times 10 \times 61 / 2^{\prime \prime}$ steel storage, case. Shpg. Wt., $61 / 2 \mathrm{lbs}$.
6.95

## NEW CHEMALLOY FLUXLESS ALUMINUM SOLDER



- Solders and Welds Aluminum
- Extremely Strong Joints
- Safe and Easy To Use

New, easy-to-use solder joins aluminum products without need for metal cleaning or special fluxes. Ideal for repairing cracks or holes in plates and castings. Simplifies metal fabricating and work with aluminum chassis. Use heat source like propane torch, hot plate, or heavy or welded, depending on application time of or welded, depending on application time of metals themselves. Any metal that takes soft solder can be joined to aluminum by coating the aluminum with Chemalloy. Can be used with very thin-gauge metal without burning. Special composition curbs any corrosion due to electrical effects and allows use as dry-bearing metal. $500^{\circ}$ for thin-gauge metal, $800^{\circ}$ for heavy work.

| Stock No. | Unit | Temp. | Wt. | NET |
| :--- | :---: | :---: | :---: | :---: |
| 50 N 083 | 2 bars | $500^{\circ}$ | $31 / 2$ oz. | .59 |
| 50 N 085 | 2 bars | $800^{\circ}$ | $31 / 2$ oz. | .59 |
| 50 N 086 | bulk | $500^{\circ}$ | 1 1b. | 1.49 |
| 50 N 087 | bulk | $500^{\circ}$ | 5 lbs. | 6.95 |

## LENK BLOW TORCH



Model 108. Handy, small-size alcohol torch for light jobs. A valuable aid for the average home or light service work. Easily fits into coat pocket or tool chest. Copper heat conductor attached to wick insures instant starting. Curved nozzle on power tube is positioned over top of flame tube. Screw caps on top and bottom of flame tube permit Double barrel, self-generating. Both tubes made of heavy nickel-plated steel for long-lasting service. Screw-on cap protects nozzle when not in use. Burns either commercial or denatured alcohol. Economical fuel consumption. Overall size, ${ }^{51 / 2 \times 2 \times 1^{\prime \prime} \text {. Shpg. wt., } 1 \text { lb. } 2.06} 43$ N 701. NET....................... 2.06

## DELTA HOMECRAFT WORKSHOP SAWS



## 34-600 9" CIRCULAR SAW

- Ripping, Cross-Cutting, Mitering
- Raising, Tilting Arbor
- Self-Aligning Rip Fence

A professional-quality, ${ }^{\prime \prime}$ tilting arbor, circular saw for heavy-duty wood cutting applications. Ideal for the complete home workshop-rugged and cabinet shops. Precision built to exactingspecifications to insure smooth operation and lasting, dependable performance. The $9^{* \prime}$ combination blade makes smooth cuts up to $23 / 4^{\prime \prime}$ deep with ease. Blade can be tilted up to ground and polished, $5 /^{\prime \prime}$ arbor is mounted in lifetime lubricated ball bearings. Height and angle of blade are easily read on calibrated dials. Table top measures 22 by $15^{\prime \prime}$. Unit is equipped with guide bars and selfaligning rip fence that features a micro-set dial for making fine adjustments. Also includes auto-set miter gauge with stop rods and clamp. position. Overall dimensions, $171 / 2^{\prime \prime} \mathrm{high}, 371 / 2^{\prime \prime}$ wide and $36^{\prime \prime}$ deep. Unit is supplied complete with table insert, arbor pulley and wrenches. Less $3 / 4$-hp motor and table; see listings below. Shpg. wt., 105 1bs. . . 76.95 Complete $9^{\prime \prime}$ Tilting Arbor Circular Saw. A complete table saw installation consisting of the Model No. 34-600 $9^{\prime \prime}$ tilting arbor circular saw $50-810$ table stand $34-671$ blade guard, $34-974$ table extensions 5250 motor pulley, and $49-152 \mathrm{~V}$ belt. The ruggedly constructed table is $211 / 2^{\prime \prime}$ high, $15^{\prime \prime}$ wide and $15^{\prime \prime}$ deep. Feet have provisions for bolting table to floor. Table extensions increase table size to 22 by $25^{\prime \prime}$-make table to to handle wide panels. Blade guard has splitter and anti-kickback attachment. Less table casters and $3 / 4$-hp motor. Shpg. wt., 210 lbs.
50 NZ 242 . Only $\$ 12.20$ Down. NET

Motors for Circular and Band Saws. High quality capacitor starting motors for use with the Delta circular and band saws. Can also be used with fans, blowers, pumps, etc. Have sealed ball bearings, cast-iron, drip-proof construction. Double $5 / 8^{\prime \prime}$ shafts for added versa-
tility. With $8-\mathrm{ft}$. cord tility. With 8 -ft. cord, plug and switch. For
operation from $110-120$ v., 60 cycle AC only. 50 NU 243. $3 / 4$-hp Motor. For 3900 $34-600$ saw. Shpg. wt., 35 lbs . NET. . 39.00 50 NU 244. $1 / 3$-hp Motor. For 28-100 saw.
Shpg. wt., 19 lbs. NET


## MODEL 28-100 10" BAND SAW

- Precision, Ball-Bearing Construction
- Tilting Table for Making Bevel Cuts
- Cuts to Center of 20" Circle

A precision-built, $10^{\prime \prime}$ band saw for straight line wood cutting where a big capacity is neededand for curved and intricate cutting. An exceland for curved and intricate cutting. An excelsaw is ideal for the custom furniture builder as well as the home handyman. Built to professional standards to provide years of dependable service. Saw blade travels over three rubber-tired wheels that provide no-slip traction even under heavy loads. Wheels spin on precision ground, life-time lubricated ball bearings that are sealed against dust. Dynamic balancing of the wheels provides smooth, vibrationless operation. Blade rides against precision ground rollers that assure correct blade alignment for accurate cutting. Blade blade. $12 \times 11^{\prime \prime}$ table is adjustable up to $45^{\circ}$ for angle cutting. Stop screw for perfect talle is asjustabre tip for perfect levelling assures true right angle cuts. Sturdy steel housing. listing at left. Shpg. wt., 70 lbs.
50 NZ 245. Only $\$ 5.00$ Down. List, $\$ 64.95$. NET
49.95

Complete $\mathbf{1 0}^{\prime \prime}$ Band Saw. A complete band saw assembly consisting of the Model No. 28-100 $10^{\prime \prime}$ tilting table band saw with accessories as described above plus the following Delta equipment: $50-328$ table stand, 5275 motor pulley, 49-130 V belt and 1334 switch rod. Ruggedly constructed table is $29^{\prime \prime}$ high, $8^{\prime \prime}$ wide and $16^{\prime \prime}$ deep. Less $1 / 3-\mathrm{hp}$ motor, see listing at left. Shpg. wt., 113 lbs.
50 NZ 246 . Onl $\$ 6.50$ Down. NE
... 64.95
Model 28-803 $1 / 4^{\prime \prime}$ Band Saw Blade. Replacement blade for Model 28100 band saw. Made of high quality steel, tempered to correct hardness. 7 teeth per inch for all types of wood cutting. $713 / 4^{\prime \prime}$ long. 2 lbs .
50 N 247 . NET

Model 28-810 Sanding Attachment. Use with abrasive belt below to convert band saw to sander. Complete with flat and curved platens with guides and mounting bracket. Permits satin smooth sanding of curved, irregular surfaces cut on band saw. Shpg. wt., 2 lbs.
50 N 248 . NET
Model 28-811 Abrasive Belt. 80 grit, fine garnet for smooth sanding. $1 / 2^{\prime \prime}$ wide by $70^{\prime \prime}$ long. 5 per package. Shpg. wt. per pkg., 2 lbs.
50 N 249. NET PER PKG.
Allied can supply any Delta home workshop power tools not listed here, on special order. Write for literature and prices.


Compact clamp vise ideally suited for radio work. Securely holds small parts for soldering, filing, cutting, etc. Smooth, easy action. Can be clamped to bench or table up to $2^{\prime \prime}$ thick. Jaws are $13 / /^{\prime \prime}$ wide, open to $13 / 4^{\prime \prime}$, and are
machined to meet squarely for ${ }^{\text {and }}$ firm grip. 46 N $015 .{ }^{23 / 4}$ NET.
. 1.50

## MILLERS FALLS NO. 217 VISE

 sawed or drilled
Sturdy steel jaws are $23 / 8^{\prime \prime}$ wide. Have parallel faces extending to $31 / 3^{\prime \prime}$. Removable swivel jaw is provided for holding odd-shaped parts. Slidebar type handle and fine thread on screw give excellent leverage for solid, reliable grip on work. Shpg. wt.a 5 lbs
N
.7.17

## VLCHEK QUALITY HAMMERS


(A) HB816 Ball Peen Hammer. Top-quality design. 1-lb. head is heat-treated for maximum durability. Highly polished face, poll, and peen. White hickory handle with clear lacquered finish. Length, $14^{\prime \prime}$. Shpg. wt., $11 / 2$ lbs.
50 N 129 . NET.................
2.28

B HM16 Soft Face Hammer. Plastic-faced B hammer for driving bushings and wrist pins, body bumping, straightening bent chassis, etc. Steel head has $13 / 8^{\prime \prime}$ dia. faces of red vinyl and amber tenite. Will not mar aluminum or soft metals. Hickory handle. Length, $14^{\prime \prime}$.
Shpg. wt., 11b.
50 N I6i. NET. . . . . . . . . . . . . . . . 2.53
C] HC813 Claw Hammer. A deluxe claw design and polished face, poll, sides, and back of claw. Unpolished surfaces finished in burgundy enamel. Selected hickory handle finished with clear lacquer. Hardened steel head is double-wedged to handle to prevent loosening. Claws split to fine point to pull small nails. Expertly drawn and tempered for extra strength.
Head weight, 13 oz . Handle length, $13^{\prime \prime}$. Shpg. wt., $11 / 2$ lbs.
50 NET.
162 .
2.65

## GREAT NECK CLAW HAMMER



Model R-16C. Deluxe, well balanced claw hammer. One-piece construction eliminates possibility of head loosening. Precisely tempered claws split to fine point for easily pulling small nails. Mirror-polished, hardened head cannot loosen. Has rubber cushioned handie for secure grip and excellent shock absorption.
Highest quality forged tool steel construction. 45 N 848. .................................... 3.19

SHOP AND BENCH VISES


633 1/2


364

## WILTON QUALITY VISES

Model 665A Vise. An excellent tool for the home workshop. Three rapid-acting viseswoodworking, metal working and pipe vise all rolled into one. Removable fiber-board jaw faces clamp wood without marring. $5^{\prime \prime}$ wide serrated steel jaws provide powerful grip for
metal jobs. Built-in pipe jaws hold pipes of $1 / 8^{\prime \prime}$ metal jobs. Buintin pipe jaws hold pipes of $1 / 2^{\prime \prime}$ dia. Jaws are $31 / 4^{\prime \prime}$ deep. Max to $21 / 2^{\prime \prime}$ dia. Jaws are $31 / 4^{\prime \prime}$ deep. Max. jaw Shpg. wt., 35 ibs. $\qquad$ 17.64

Model $6631 / 2$. As above but $31 / 2$ jaw. Opens to $33 / 4^{\prime \prime} \dot{N}$ Shpg. Wt., 19 lbs.
$50^{\text {N }}$ 148. NET. . .
10.90

Model 6331/2 Vise. Durable "Shop-King" utility vise for all types of metal work. A fine value for the home workshop. Has removable pipe jaws, serrated top jaws, wire cut-off tool and ocking $360^{\circ}$ swivel base. Jaws are $31 / 2^{\prime \prime}$ wide; open to $4^{\prime \prime}$. Pipe jaws accept pipes from $1 / 8$ to $11 / 2^{\prime \prime}$ dia. Smooth action opening and closing -slide-bar spins with one hand. 4 built-in 46 NU 866 . NET. . . . . . . .
9.33

Model 634 Vise. As above, but $4^{\prime \prime}$ jaw. Opens to $41 / 2^{\prime \prime}$. Shpg. we., 30 lbs .
.13 .56

Model 364. Vise and Positioner. Ruggedlybuilt utility vise mounted on famous PowRarm built utility vise mounted on famous Pow Rarm
positioner. Excellent combination for work on positioner. Excellent combination for work on
small electronic assemblies or parts. Singlesmall electronic assemblies or parts. Singlehotating or tilting work to any desired angle. Tightening of lever bar freezes work solidly in place. Provides a second pair of hands for production workers, servicemen or home craftsmen. Permits single clamping of work in vise. men. Permits single clamping is cadmium-plated steel. Capacity, 15 lbs . Vise jaws are smooth steel; $21 / 4^{\prime \prime}$ wide; open to a maximum of $21 / 4^{\prime \prime} .5 \mathrm{lbs}$.
50 N 149 NET
.10 .66
Model 1125. Low-cost, exceptionally useful vise for the home workshop. Quality constructed to handle most types of light, general work. Sturdy one-piece body is equipped with protected screw and removable steel jaws. Jaws
open to a maximum of $21 / 4^{\prime \prime}$. Jaw width, $21 / 4^{\prime \prime}$. open to a maximum of $21 / 4^{\prime \prime}$. Jaw width, $21 / 4^{\prime \prime}$. Smooth action opening and closing controlled by slide-bar which can be spun with one hand.
Easy-turn swivel base allows unit to be swung Easy-turn swivel base allows unit to be swung
instantly to any desired position. Heavy-duty instantly to any desired position. Heavy-duty thumbscrew locks it securely in place. Attractive, baked red enamel base. Shpg. wt., $51 / 4$ lbs.
46 N 896 . NET. . .
3.90
 popular size taps, dies and accessories-39 pieces in all. Contains 1 each tap and die; 4-36, 6-32, 8-32, 10-24,10-32 and 12-24 (Machine Screw
Standard) $1 / 4-20,5 / 6-18,3 / 8-16,7 / 16-14$ and $1 / 2-13$ Standard) $1 / 4-20,5 / 16-18,3 / 8-16,7 / 16-14$ and $1 / 2-13$
NC (U.S. Standard) $1 / 4-28,5 / 16-24,3 / 8-24,7 / 16-20$ NC (U.S. Standard), $1 / 4-28,5 / 16-24,3 / 8-24,7 / 16-20$
and $1 / 2-20$ NF (S.A.E. Standard), $1 / 8^{\prime \prime}$ pipe. and $1 / 2-20$, NF (S.A.E. Standard), $1 / 8$ "pipe.; Includes die stock, tap and reamer wrench, 1 . tap wrench, screwdriver and screw pitch gauge. Dies are -notch adjustable. Green plastic case.
Shpg. wt., 4 lbs.
46 N 245 . NET. Only $\$ 2.14$ Down. . . 21.38

## RADIO TAP AND DIE SET

Model 21. 12-piece set covering basic E. threads most often used in radio work. An excellent, low-cost set for the radio serviceman, hobbyist, experimenter, or engineer. Includes 1 each plug tap and die, sizes 6-32, 8-32, 10-24,
$12-24,1 / 4-20$. Dies are solid type. $1^{\prime \prime}$ dia. High $12-24,1 / 4-20$. Dies are solid type. $1^{\prime \prime}$ dia. High
carbon, tempered steel assures long tap life. carbon, tempered steel assures long tap life. In mahogany box. Shpg. wt., 3 lbs.
46 N 025 NET. . . . . . . . . . . . .

## HIGH-SPEED DRILL BITS

## ©

Model 113. Set of 13 high-speed drill bits, 1/16 to $1 / 4^{\prime \prime}$ in graduations. Carefully tempered and precision-ground to assure long life. Complete with convenient, hinged plastic case. Shpg. wt., 6 oz.
4.45


## F

## SCREW EXTRACTOR SET

GModel 20. For clean, easy removal of G broken screws, bolts, studs and pipes that resist regular methods. A hole is drilled into roke piece, asing correct dril size marked on extractor. Turning extractor counter-clockwise removes broken piece on its own threads. No damage to threaded hole results. Set contains 4 extractors in polished hardwood box. $1 / 4^{\prime \prime}$ pipe. Extractors are tough alloy steel. Shpg. wt., 1 1b. 124 . NET........................ 58

## INDIVIDUAL TAPS AND DIES

High-quality taps and solid dies for all-purpose use. Tough carbon steel. Right-hand thread. use. Tough carb.

| Size | Tap | EACH | Die | EACH |
| :---: | :---: | :---: | :---: | :---: |
| 4-36 | 46 N 700 | 264 | 46 N 706 | 374 |
| 6-32 | 46 N 701 | 264 | 46 N 707 | $37 \%$ |
| 8-32 | 46 N 702 | 264 | 46 N 708 | 374 |
| 10-32 | 46 N 704 | 304 | 46 N 710 | 374 |
| 10-24 | 46 N 703 | 304 | 46 N 709 | 374 |
| 1/4-20 | 46 N 705 | 344 | 46 N 711 | $37 \%$ |

Tap Wrench. "T" handle tap wrench for above taps. Sliding bar handle with spring tenfor one or two hand operation. Wt., 4 oz . for one or two hand operation. Wt., 4 oz.
46 N 73 NET ...........................

Sturdily-constructed "C" clamps of high-grade malleable iron. Extremely useful in shop or home for cabinet work, boat building, wood gluing, etc. Hold separate pieces of work securely in exact alignment for drilling, bending, soldering, or sawing. Have greater than usual throat depth and two heavy reinforcement ridges at corners. Permits deeper reach and greater pressure in clamping. Clamp screws have standard $V$ threads and sliding vise-type handles. Maximum required pressure may be applied by hand alone. Rocking swivel pads at screw ends are excellent for equalizing pressure when clamping on irregular surfaces. Type 141 has screw diameter of $1 / 4^{\prime \prime}$; Type $142,5 / 16^{\prime \prime}$, Type $143,7 / 16^{\circ}$ and Type 242, $3 / 8^{\prime \prime}$. Type 242 is especially rugged for heavy duty applications.

| Stock No. | Mfrs. Type | Capacity | Depth | $\begin{aligned} & \text { Wt. } \\ & \mathbf{O z z}_{2} \end{aligned}$ | $\begin{gathered} \text { NET } \\ \text { EACH } \end{gathered}$ | Stock No. | Mfrs. Type | Capacity | Depth |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 50 N 163 <br> 50 N 64 | 141 142 | ${ }^{1 \prime \prime}$ | 11/88 | 3 4 | $21 \%$ | 50 N 165 | 143 242 | $3^{\prime \prime \prime}$ | ${ }_{174 \prime \prime}{ }^{\prime \prime}$ |



0 NET
$\frac{\text { EACH }}{604}$

## Quality Pliers and Wrenches

## KRAEUTER HIGH-QUALITY INDUSTRIAL TOOLS



A complete selection of famous Kraeuter tools for radio-TV work, servicemen, technicians, production lines-anywhere high-quality, dependable tools are required. Hammer forged from high grade tool steel and precision finished. All have resilient, acid and grease resistant, vinylite "Cushion-Grip" handles and polished heads. Av. shpg. wt., 1 lb.


## KRAEUTER 10" JOINT PLIERS



Type 710. Extremely versatile, slip-joint pliers. Drop-forged tool steel. Five parallel adjustments from $3 / 1^{\prime \prime}$ to $15 / 8^{\prime \prime}$. TMi section for added strength in ower jaw. Milled teeth assure long, Shpg. wt., 10 oz.
46 N 421 . NET.......
.2 .20

## KRAEUTER PATTERN SNIPS

Type K-13. Combination pattern snips. Designed to cut either curved or straight lines in sheet metal, plastics, rubber, leather, etc. Drop forged from top-quality tool steel. Carefully heat-treated. Blades stay sharp and have uniform shearing action over their entire length. Pocket sized-only $7^{\prime \prime}$ long. $15 / 8^{\prime \prime}$ cut. Shpg. wt., 10 oz.
46 N 422. NET.
1.75

## NEW knight TOP-VALUE PLIERS



- Unsurpassed Tool Values
- One-Year Guarantee
- High-Grade Carbon Steel
- Made By Leading Manufacturer

Knight pliers offer exceptionally high quality at an economy price. Made by one of the nation's high grade carbon steel, and carefully heat reated Ideal tools for the engineer, electronics repairman and the hobbyist These pliers have been precision machined, fitted and adjusted. Ween precision machined, years of dependable service. All have semi-polished heads and black handles. Av. shpg. wt., 10 oz .

| Stock No. | Fig. | Description | NET |
| :---: | :---: | :---: | :---: |
| 50 N 131 | R | 61/2' Side-cutting pliers | 1.59 |
| 50 N 132 | S | $6^{\text {" }}$ Chain-nose with cutters | . 54 |
| 50 N 133 | W | 5" Diagonal cutting pliers | . 34 |
| 50 N 34 | W | $6^{* \prime}$ Diagonal cutting pliers | . 59 |
| 50 N 35 | T | 7" Chain-nose with cutters | . 8 |

## KRAEUTER JEWELERS' PLIERS



Precision-made pliers for work on miniaturized electronic assemblies and all types of delicate mechanisms. Widely used by hobbyists, experimenters, watchmakers, etc. Drop-forged rom high-quality tool steel and polish finished. Av. shpg. wt., 5 oz.


## KRAEUTER JEWELERS' PLIER SETS



Type 89. Set consists pliers for clers precision pliers for close, accurate chanical and electronic equipment Most often used types for wiring and assembling. Set includes 1-Type 81 diagonal cutting pliers, 1-Type 84 flat-nose pliers, 1 -Type 83 chain-nose pliers. All are drop-forged from highquality tool steel. Heat treated to withstand shock and abuse. Polished to a gleaming finish. Excellent for the well-equipped service shop. Each tool is $41 / 2^{\prime \prime}$ long. Supplied in black zipper case, Shpg. wt., 1 lb .
46 N 435. NET
.7 .86


Type 90. Complete set of 5 jewelers' precision pliers in durable black zipper storing case. Contains every popular type pliers. Used extensively for delicate, precision work by hobbyists, experimenters, watchmakers, etc. Set consists of 1-Type 81 Type 82 end cutters, 1 -Type 83 chain-nose pliers, 1 -Type 84 flat-nose pliers, and 1-round-nose pliers. High-quality toonsten, treate and poisg. wt., 11/4 lbs.
with cane...... 13.10
46 N 423. NET.............

## DIAMOND TOOLS



## ADJUSTABLE WRENCHES

Type DB-76. Double-ended wrench. Drop forged "Diamalloy" tool steel. Carefully maforged to close tolerances for smooth dependchined to close to sishan in chrome nickel with able service. Finished polished heads and satin finished handle. Capacities are $1 / 2^{\prime \prime}$ and $3 / 4^{\prime \prime} \cdot 1 / 2^{\prime \prime}$ jaws are $1 / 3^{\prime \prime}$ at tip with $5 / 16^{\prime \prime}$ maximum head thickness; $3 / 4^{\prime \prime}$ jaws are $7 / 32^{\prime \prime}$ at tip with $13 / 32^{\prime \prime}$ maximum head thickness. Length, $6^{\prime \prime}$. Shpg. wt., 6 oz. 45 N 770 . NET. ..2.61 Type DB-78. Double-ended as above but with $3 / 4$ to $15 / 16^{\prime \prime}$ capacity. Shpg. wt., 10 oz. 2.94

## TYPE K SLIP-JOINT PLIERS

Slip-joint combination pliers with convenient wire cutting groove. Excellent for all genera purpose work. Precision milled jaws provide a firm, non-slip grip on large or small objects of any shape. Knurled handles for secure grip




## ADJUSTABLE WRENCHES



Type C-79. A handy adjustable wrench with sliding jaw. Will apply non-slipping pressure to large or small nuts and bolts. Excellent tool for any type of shop work where different sizes of nuts are encountered. Knursed sliding jaw to quickly and precisely adusts sliding 3 . any size up to $23 / 8^{\prime \prime}$. Made of drop forged steel for rugged strength. Wickel-chromium plated for of reliable service. Nickel-chromium plated or wt., 14 oz. NET 1.39 50 N 118 . NET
Type C-711: Larger version of above. Capacity $3^{\prime \prime}$ Length $11^{\prime \prime}$. Shpg. wt., $11 / 4$ lbs.
50 N 119 NET......................... 1.62

## VLCHEK TOOLS



## DOUBLE END WRENCH SETS

Type X2564. 5-piece open-end wrench set. Made of tempered carbon steel. Ten openings, $11 / 32$ and $5 / 16,7 / 16$ and $3 / 8,9 / 16$ and $1 / 2,3 / 4$ and $5 / 3,11 / 16$ and $19 / 32^{\prime \prime}$. Sizes marked on wrenches. Rust resistant. $\mathrm{Wt} . \mathrm{t}^{3 / 4} \mathrm{lb}$.
46 N 265 . NET
... 1.38

 ings marked on wrench. Shpg. wt., $11 / 4$ lbs. 1.73 46 N 266. NET.......................... 13 Type X3412. 5-piece combination box and
 $5 / 8^{\prime \prime}$. Sizes marked on wrenches.Wt. $3 / 4 \mathrm{lb} .2 .02$
50 N 120 . NET.......................... 2.02

## STANDARD PUNCH \& CHISEL SET



Type 3256. Excellent low-cost set. Forged from high carbon tool steel. Set contains $1 / 2^{\prime \prime}$ and
 punch. Bright plated. Supplied in clear face plastic pouch. Shpg. wt., $3 / 4 \mathrm{l}$ b. NET
50
. 1.32

## TYPE X860 CENTER PUNCH

High-grade, carbon-steel center punch. Carefully heat treated and tempered for maximum


# Quality Tools 

## greenlee ChAssis punches



Series 730. Permit easy, rapid cutting of round holes in metal chassis for sockets, switches, controls and other equipment. Cuts through metals up to $1 / 8^{\prime \prime}$ thick. Just turn cap screw to cut hole-can be operated with ordinary wrench. No reaming or filling required. All punches require $3 / 8^{\prime \prime}$ hole for lead screw, except
shpg. wt., $11 / 2$ lbs.

| No. | Size | NET | No. | Size | NET |
| :---: | :---: | :---: | :---: | :---: | :---: |
| 46 N 1698 | , | 2.29 | 46 N 002 $\dagger$ | 17/3' | 2.86 |
| 46 N 1778 | $8{ }^{\prime \prime}$ | 2.29 | 46 N 175 | 11/4" | 2.65 |
| 46 N 000 | 11/16" | 2.29 | 46 N 176 | $13 / 8{ }^{\prime \prime}$ | 3.00 |
| 46 N 170 | 3/4" | 2.29 | 46 N 180 | $11 / 2^{\prime \prime}$ | 3.39 |
| 46 N 001 | 13/16" | 2.29 | 46 NO11t | 15/8" | 3.97 |
| 46 N 171 | 7/8' | 2.29 | $46 \mathrm{~N} 110+$ | 13/4* | 4.50 |
| 46 N 172 |  | 2.51 | 46 N -1it | $17 / 8^{\circ}$ | 5.60 |
| 46 N 178 | 11/16" | 2.65 | 46 N $116 t$ | $2^{\prime}$ | 6.04 |
| 46 N 173 | 11/8' | 2.65 | 46 N 181 $\dagger$ | 21/4' | 6.57 |
| 46 N 179 | 15532" | $2.65$ | 46 N $209 \dagger$ | $2^{25} / 33^{\prime \prime}$ | 1.02 |
| 46 N 174 | 13/16" | $2.65$ |  |  |  |

Ball-Bearing Cap Screws. For use with Type 730 punches that have a $3 / \mathbf{" ~ c a p ~ s c r e w . ~ R e d u c e ~}^{\text {ch }}$ friction for easy operation. Shpg. wt., 1 lb .
50 N 168. Type AV249-BB. For $17 / 32^{\prime \prime}, 15 / 3^{\prime \prime}$ and $13 / 4^{\prime \prime}$ chassis punches. NET ..... 2.07 $50 \mathrm{~N} \mid 69$. Type AV304-BE. For $17 / 8^{\prime \prime}, 2^{\prime \prime}$
$21 / 4^{\prime \prime}$ and $2^{25} / 3^{\prime \prime}$ chassis punches. NET.... $2.24^{\prime}$

Replacement Cap Screws. For round hole punches listed above. Av. shpg. wt., 4 oz. 46 N 182. $1 / 4^{\prime \prime}$ screw for $1 / 2^{\prime \prime}$ and $5 / 8^{\prime \prime}$ punches. 46 N $183.3 / 8^{\prime \prime}$ screw for ${ }^{\prime \prime} 1 / 16^{\prime \prime}, 3 / 4^{\prime \prime}, 13 / 16^{\prime \prime}$, and $46 \mathrm{~N} 168,3 / 8^{\prime \prime}$ screw for $1^{\prime \prime}$ to $11 / 2^{\prime \prime}$ punches (except 17/32"). NET.......................... . . $30 \phi$ 46 N $299^{3} 3^{\prime \prime}$ " screw for $17 / 33^{\prime \prime}, 15 / 3^{\prime \prime}$ and $13 / 4^{\prime \prime}$ 46 N 343. $3 / 4^{\prime \prime}$ screw for $17 / 3^{\prime \prime}$ to $2^{25} / 33^{\prime \prime}$ punches.
.534
Series 731 Square Punches. Cut holes in metal up to $1 / 8^{2}$ thick. Require $1 / 2^{6}$ hole. Shpg. 46 wt.' 2 libs. For $1 /{ }^{\prime \prime}$, hole. NET........ 3.66 46 N 276. For $5 / 8^{\prime \prime}$ hole. NET
46 N 276 . For $5 / 8$ " hole. NET .3 .74
.4 .18
Series 732 Key Punches. Cut holes for keyed sockets. Require $1 / 2^{\prime \prime}$ hole except $81 / 4^{\prime \prime}$ hole. Av. shpg. wt., $11 / 2$ lbs.

| No. | Size | NET | No. | Size | NET |
| :---: | :---: | :---: | :---: | :---: | :---: |
| 46 N 2148 | 15/32" | 4.31 | 46 N 189 | 11764" | $\overline{4.66}$ |
| 46 N 184 | 15/6" ${ }^{\prime \prime}$ | 4.09 | 46 N 193 | $12164 "$ | 4.94 |

GENERAL HARDWARE CIRCLE CUTTERS


Cut holes accurately in wood, sheet metal, plastics, etc. Round shank type for use in drill press; square shank type for hand brace. Drill acts as center pilot, keeping cutter in alignment. Horizontal cross-bar and cutting bits are instantly adjustable. Shpg. wt., 8 oz .

| No. | Fig. | Shank | Hole Slze | NET |
| :---: | :---: | :---: | :---: | :---: |
| 45 N 600 | M | Round 1/4" | $7 / 8^{\prime \prime}$ to 4" | 1.69 |
| 45 N 602 | N | Square | $1^{\prime \prime}$ to 51/2" | 2.10 |
| 45 N 603 | M | Round 5/16" | 1" to $51 / 2^{\prime \prime}$ | 2.10 |

Replacement Cutter Blades. For above. 45 N 610. NET EACH................. 44 C

## CLARK HOLE CUTTER

P Type 100. Cuts holes $5 / 8^{\prime \prime}$ to $11 / 2^{\prime \prime}$ in dia., in P metals up to $1 / 8^{\prime \prime}$ thick. $1 / 4^{\prime \prime}$ pilot drill with $1 / 4$ " round shank for electric drills. Fully adustable. Shpg. wt., 5 oz.
45 N 620 . NET
3.67

UTICA HIGH-QUALITY CUTTERS, PLIERS AND SNIPS


All types of electrical wiring, repair work and assembly jobs are easier with fine-quality tools. Utica supplies a wide variety of pliers, cutters and snips that are ideal for use by manufacturers, servicemen, amateurs, experimenters-any who insist upon tools offering the utmost in smooth action, dependability and long life under the hardest use. Precise, scientifically controlled heat treating and hardening of the finest tool steels assure superior and uniform quality. Precision-fit joints provide free, positive action under all conditions of operation. Accurate, easy cutting and gripping are assured by careful alignment of jaws and fortable grip and balance. Av. shpg. wt., 10 oz.

| No. | Fig. | Type | Description | EACH |
| :---: | :---: | :---: | :---: | :---: |
| 46 N 476 | A | 888 | 6 " Curved Needle Nose Pliers | 2.50 |
| 50 N 167 | B | 775 | 51/2" Long Nose Pliers | 2.35 |
| 46 N 475 | B | 777 | $6^{\prime \prime}$ Long Needle Nose Pliers | 2.17 |
| 46 N 477 | C | 82 | 8" Assembly Pliers, Needle Nose | 2.27 |
| 46 N 474 | D | 260 | $7^{\prime \prime}$ End Cutting Nippers | 2.78 |
| 46 N 470 | E | 45 | $6^{\prime \prime}$ Aviation Diagonal Cutters | 2.65 |
| 46 N 471 | G | 40 | $7{ }^{\prime \prime}$ High Leverage Diagonal Pliers | 2.39 |
| 46 N 478 | L | 2291 | $6^{\prime \prime}$ Insulation Skinning Pliers | 2.47 |
| 46 N 425 | F | 101 | $41 / 2^{\prime \prime}$ Midget, Scissors-Type Snips | 2.55 |
| 46 N 426 | J | 896 | $6^{\prime \prime}$ Cutting and Stripping Pliers | 2.87 |
| 46 N 489 | H | 3950 | $6^{\prime \prime}$ Linemen's Side Cutters | 3.21 |
| 46 N 466 | $\mathbf{K}$ | 470-5 | $5^{\prime \prime}$ Printed Circuit Cutting and Crimping Pliers | 3.23 |

UTICA STRAIGHT CUT TIN SNIPS


Type 270. High-quality tin snips for straight cutting, medium-duty applications. $7^{\prime \prime}$ length. Sturdy tempered, forged steel construction. Cutting edge holds sharpness. Powerful, lever action makes cutting easier and faster. Ringtype handles provide firm, comfortable grip. Shpg. wt., 12 oz .
. 1.66

## CLAUSS INDUSTRIAL SCISSORS

Type 925. Electricians' scissors. Made of finest cutting steel. Nickel platof cut $13{ }^{4}$. Ideal for
 $5^{\prime \prime}$,
45 N 896 . NET.... .... $\qquad$
Type 926BS. Same as above, but one blade 45 N 897 . NET
$\qquad$
$\qquad$
$\qquad$ 1.84

Type 4217 Industrlal Shears. Not illus. For shop use. $7^{\prime \prime}$ long. Length of cut, $31 / 4^{\prime \prime} .5 \mathrm{oz}$. 46 N 305. NET............................. 3.12
Type 4218. As above, but $8^{\prime \prime}$ long; $4^{\prime \prime}$ cut. 6 oz.

## L. B. MILLER "MAGIMMICK JR."

A very useful tool when working in restricted space. Consists of permanent magnet mounted on a swivel-joint extension handle. Retrieves nuts, bolts, etc. in hard-to-reach places. Inispensable when working on 100 46 N 084 . NET........................... . . 1.20

## WALSCO PROTECTO-TUBE

Type 18-K. Synthetic plastic high voltage tubing for insulating the handles
 of pliers, screw-
drivers, etc. Tubing is applied by treating with expanding solution which swells tubing for application to tool handles. Tubing then shrinks and remains firmly in place. Contains 12 ft . of tubing and expanding solution. Easy to apply. Shpg wit., 12 oz.
43 N 132 . NET..........

UTICA ADJUSTABLE WRENCHES


Type 91 Adjustable Wrench. Thin pattern design. Easily slip into tight places. Dropdesign. Easily slip into tight places. Dropadjustment holds jaws firmly. Chrome finished head. *Tip thickness.


## ADEL METAL "NIBBLING" TOOL

 "Nibbles" holes, slots or openings in sheet metal. A real time-saver; leaves smooth, flat edge on holes. Easily munches 18gauge steel, or athminuma ther sort metals up to $1 / 66^{\circ}$ thick. Minimum hole size, $7 / 46^{\prime \prime}$ diameter. Durably constructed; N 863. 12-71, EA. 3.60

1-11, EA. . 3.85
Replacement Punch for Above. Easy to intall. Shpg. wt., 2 oz .
"TRU-CUT" LOCK WRENCH


Type 10-DC. Rugged, heavy-duty tool. Applies tremendous pressure with minimum effort-up to 1000 lbs. 1 Non-slip grip holds objects of any shape. Can be used as quickclamp, pipe wrench, toggle press, or hand vise. Finger-tip release opens wrench instantly. sizes up to $11 / 2^{\prime \prime}$. Nickel-plated hardened steel sizes up to $11 / 2$. Nickel-plated hardened steel.
$10^{(1}$ long. Shpg. wt., $11 / 4 \mathrm{lbs}$.
46 N 434 . NET..................... 72 46 N 434. NET.

HANDY STEEL TWEEZER

Finely tempered, nickel-plated steel tweezers. Size, $61 / 2^{\prime \prime}$ long. For all types of delicate work. Holds wires, nuts, screws, etc. Easy to hold. Shpg. wt., 4 oz. 46 N 095. NET...............

53c

## XceLite Nutdrivers \& Screwdrivers



## HEX NUTDRIVER SETS



## MODEL 99PR NUT \& SCREWDRIVER SET

Versatile, chrome-plated 13-piece set in durable, plastic roll-up kit. Includes $3 / 1^{\prime \prime \prime}, 7 / 32^{\prime \prime}$, $1 / 14^{\prime \prime}$,
$9 / 32^{\prime \prime}, 5 / 16^{\prime \prime}, 11 / 32^{\prime \prime}, 3 / 8^{\prime \prime}, 7 / 16^{\prime \prime}$ and $1 / 2^{\prime \prime}$ nut drivers; $9 / 33^{\prime \prime}, 5 / 11^{\prime \prime \prime}, 11 / 32^{\prime \prime}, 3 / 8^{\prime \prime}, 7 / 11^{\prime \prime}$ and $1 /{ }^{\prime \prime \prime}$ nut drivers; ard, No. 1 and No. 2 Phillips); rugged plastic 45 N 738. List, $\$ 13.65$. NET. $\qquad$
Model $99 \times 108^{\prime \prime}$-Extension. For above. 5 oz .

## MODEL 127 NUTDRIVER SET

Color-coded plastic handles indicate socket sizes instantly. Sockets are deep enough to handle two nuts. Depth of shaft hole, $1^{11 / 4^{\prime \prime} \text {. In- }}$ cludes 7 wrenches, sizes $3 / 16^{\prime \prime}$ to $3 / 8^{\prime \prime}$ in $1 / 32^{\prime \prime}$ steps. Sturdy metal holder in red wrinkle finish. Can be fastened to wall for added convenience. Size, $71 / 2 \times 1 / 4 \times 11 / 4^{\prime \prime}$. Shpg. wt., $21 / 4$ lbs.
$45 \mathrm{~N}^{735}$. List, $\$ 8.90$. NET.....
45 N 735. List, $\$ 8.90$. NET. . . . . . . . . . 5.23

## MODEL 137 NUTDRIVER SET

7 color-coded nutdrivers with self-supporting rack. Ideal for workshop table. Colors and sizes: black- $3 / 1$ " $^{\prime \prime}$, red- $1 / /^{\prime \prime}$, yellow- $5 / 1^{\prime \prime}$, green Polished steel shanks. Shpg.' wt., 3 lbs. 45 N 734. List, $\$ 10.25$. NET........... . 6.15

## MODEL 17 NUTDRIVER SET



Seven nutdrivers in the most commonly used sizes for radio-TV work. A valuable addition to any work bench. With durable
color-coded plastic han-color-coded plastic han-
dles and polished alloy dles and polished alloy
steel shanks. Sizes: $3 / 16^{\prime \prime}$, steel shanks.
$7 / 32^{\prime \prime}, ~$
$1 / 4^{\prime \prime}, 9 / 32^{\prime \prime}$,
$5 / 16^{\prime \prime}$,
$1 / 32^{\prime \prime}$ and $3 / 8^{\prime \prime}$. Set includes metal rack for holding nutdrivers in an upright position when not in 45 ~ 733 . List. $21 / 2$ 1bs.
45 N 733. List, $\$ 8.25$. NET.


XCELITE SERVICE MASTER KIT
Type 99SM Service Master Kit. An excludes a complete assortment of wrenches. Includes a complete assortment of wrenches, pliextension. Meets almost every radio-TV servicing need; also an excellent outfit for the craftsman or home handyman.
Set contains: long-nose pliers; diagonal pliers; $6^{\prime \prime}$ adjustable wrench; nine regular nutdrivers in sizes from $3 / 16^{\prime \prime}$ through $1 / 2^{\prime \prime} ; 1 / 4^{\prime \prime}$, stubby nutdriver: $3 / 16^{\prime \prime}$ stubot slod screwdriver. $9 / 2^{\prime \prime}$ sy screwdriver. Not screw scewdrive siotted reamer; $1 / 4^{\prime \prime}-1 / 2^{\prime \prime}$ reamer; $8^{\prime \prime}$ extension; regular handle; stubby handle.
All tools are made of tough alloy steel and have highly polished nickel-chrome finish. A convenient roll-up kit of durable, soft material is in-cluded-has separate pocket for each tool. 43 N 884. List, $\$ 33.50$. NET.
20.10
(A) Round Shaft. Available in lengths from $41^{\prime \prime}$ to $12^{\prime \prime}$.

| Stock No. | $\begin{aligned} & \text { Mfr's } \\ & \text { Type } \\ & \hline \end{aligned}$ | Shaft Size |  | Overall Length | Shpg. Wt. | $\begin{gathered} \text { NET } \\ \text { EACH } \end{gathered}$ |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  | Dia. | Length |  |  |  |
| 43 N 845 | R-182 | $1 /{ }^{\prime \prime}$ | $2{ }^{\prime \prime}$ | $41 /{ }^{\prime \prime \prime}$ | 3 oz . | . 32 |
| 43 <br> 43 | R-184 | 1/8" | ${ }^{4 \prime \prime}$ | 61/2" | 3 oz 4 oz | .36 |
| $4{ }^{4} \mathrm{~N} \mathbf{N} 848$ | R-188 | (18"\% | 8" | - ${ }^{81}{ }^{1 / 2}{ }^{\prime \prime}{ }^{\prime \prime}$ | 4 oz 4 oz. | . 47 |
| 45 N 795 | R-144 | $1 / 4^{\prime \prime}$ | $4^{\prime \prime}$ | $8^{\prime \prime}$ |  |  |
| 45 N 796 | R-146 | 1/4* | 6 " | $10^{\prime \prime}$ | 6 oz . | . 71 |
| 45 N 797 | R-148 | 1/4" | 8' | 12" | 7 oz. | . 76 |

(B) Set-Screw Types. High-quality precision-ground, narrow-blade screwdrivers designed to fit standard set-screws in knobs, pulleys, couplers, etc. Have convenient pocket clips.

(C) Square Shaft. Available in lengths from $75 / 8^{\prime \prime}$ to $18^{\prime \prime}$.

| Stock No. | $\begin{aligned} & \text { Mifr's } \\ & \text { Type } \end{aligned}$ | Shaft Size |  | Overall <br> Length | $\begin{aligned} & \text { Shpg. } \\ & \text { Wt. } \\ & \hline \end{aligned}$ | $\begin{aligned} & \text { NET } \\ & \text { EACH } \end{aligned}$ |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  | Dia. | Length |  |  |  |
| 43 N 829 | S-3164 | 3/16" | $4^{\prime \prime}$ | $75 / 8^{\prime \prime}$ | 4 oz . | 62 |
| 43 N 832 | S-144 | 1 | $4^{\prime \prime}$ | $8^{\prime \prime \prime}$ | 6 oz . | . 73 |
| 43 N 833 | S-146 | $1 / 4^{\prime \prime}$ | $6{ }^{\prime \prime}$ | 10" | 6 oz. | . 76 |
| 43 N 834 | S-148 | $1 /{ }^{\prime \prime}$ | $8^{\prime \prime \prime}$ | $12^{\prime \prime}$ | 7 oz . | . 88 |
| 43 N 837 43 N | S-388 $\mathbf{S}-3812$ |  | ${ }^{8 \prime \prime}$ | 123/8" | 11 b | 1.23 |

XCELITE HEX NUTDRIVERS

XceLite's famous line of quality nut These tools have become standard in the electronics industry, and are offered in a wide range of sizes and styles for every application. Made to exacting specifications, the XceLite nutdrivers employ shafts of highly-polished chrome-vanadium electric furnace steel. Handles are of rugged XceLite plastic, with shafts permanently molded in place-will not work loose. Sockets are precision formed and have no burrs-fit nuts and screw hex heads snugly. nuts simultaneously.
All XceLite nutdrivers have color-coded handles for identification of size at a glance Fig. H shows types having a hollow shaft, for tightening nuts on long screws; Fig. $J$ is standard type. Fig. K. is stubby type for use
where space is limited. Fig. L is a pocket nutdriver with clip and hexagonal handle set of 3 sizes listed is extremely handy for the serviceman. Type HS-18 fits $9 /$ /' $^{\prime \prime}$ volume the serviceman. Type HS-18 fits $9 / 16^{\prime \prime}$ volume con-
trol nuts. Shpg. wt., 6 oz., except $S-8, S-10$, $\mathrm{S}-12$, which are 5 oz .
(D) Phillips Screwdrivers. Alloy steel. *Stubby type. G) Combination-Blade Screwdrivers.


High-quality, rugged screwdrivers in choice of blade sizes and lengths. Highly polished, chrome vanadium steel shafts plastic handles-will not loosen, plastic under rigorous use. Haneven under rigorous use. Han
dles fluted for sure grip.

| Stock | $\begin{aligned} & \text { Mifr's } \\ & \text { Type } \end{aligned}$ | Shaft |  | Overall Length | Shpg. Wt. | $\begin{aligned} & \text { NET } \\ & \hline \end{aligned}$ |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  | Tip | Length |  |  |  |
| $43 \times 876$ | X-101 | No. 1 | $3^{\prime \prime}$ | $63 / 8^{\prime \prime}$ | 5 oz . | . 62 |
| 43 N 877 | X-108 | No. 1 | ${ }^{\prime \prime \prime}$ | $10^{\prime \prime}$ | 5 oz . | . 69 |
| 43 N 878 | ${ }_{\text {X }}^{\mathrm{X}-102}$ | No. 2 | $\mathrm{C}^{\text {4'1 }}$ | 73/4" ${ }^{\prime \prime}$ | 6 oz 88 oz | . 81 |
|  | X-103 | No. 3 |  | $10^{\prime \prime}$ | 10 oz . | 1.06 |
| 43 N 882 | SX-101 | No. 1 | * | 23/4" | 3 oz . | . 60 |
| 43 N 883 | SX-102 | No. 2 | * | 31/4" | 5 oz . | . 66 |

E Clutch Head Screwdrivers. Fit clutch head screws used in sheet E. metal assemblies, electronic gear, etc. Non-friction hold type.

| 50 N 144  <br> 50   <br> N 45  <br> 50 N 46 | $\begin{aligned} & \text { G183 } \\ & \text { G5324 } \\ & \text { G3164 } \end{aligned}$ |  | $4^{\prime \prime}$ <br> $4{ }^{\prime \prime}$ <br> 4 <br> 1 | $61 / 2^{\prime \prime}$ $71 / 2{ }^{\prime \prime}$ $71 / 2^{\prime \prime}$ | 3 oz. 4 oz. 4 oz. | .72 .81 .81 |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |

FF Stubby Screwdriver $1 / 4^{\prime \prime}$ square shaft, polished blade. Ideal for work


| Stock No. | $\begin{aligned} & \text { Mfr's } \\ & \text { Type } \\ & \hline \end{aligned}$ | $\begin{gathered} \text { Blade } \\ \text { Combination } \\ \hline \end{gathered}$ | Overall <br> Length | Shpg. Wt. | $\begin{aligned} & \text { NET } \\ & \text { EACH } \end{aligned}$ |
| :---: | :---: | :---: | :---: | :---: | :---: |
| 45 N 746 | CR1 | 3/6"\% Regular \#1 Phillips | $7{ }^{7 \prime \prime}$ | 4 oz . |  |
| 45 N 747 | CR2 | 1/4" ${ }^{\prime \prime}$ Regular \#2 Phillips | $7{ }^{7 \prime \prime}$ | 5 oz. | 1.26 |
| 45 N 748 | CR3 | 5/16" Regular $\ddagger 3$ Phillips | 7" | 10 oz . |  |

## OFFSET SCREWDRIVERS



Excellent for spots inaccessible to standard types. Heat-treated and tempered steel with iver blade at each end
(M) For Phillips screws, sizes 1 to $9.43 / 4^{\prime \prime}$ long. 45 Shpg. wt.' 4 (oz.
N For standard screws. $1 / 4^{\prime \prime}$. blades. $4^{\prime \prime}$ long.
N
43
N 843.
SheT.... 53c

## JEWELER'S

## SCREWDRIVER SET

Type S-600. Expertly made by General Hardware. Handy set of 6 professional quality screwdrivers. Knurled handles are made of high quality top steel tubing. Each tool has a swivel head, replaceable blade and nickel-plated body. Tempered blades held firmly in place by threaded chucks. Chucks are grooved for identification. Overall length, $334^{\prime \prime}$. Blades: No. 0, $100^{\prime \prime}$; No ${ }^{1, .080^{\prime \prime} \text {; }}$

3.47

## BRIDGEPORT NEOPRENE CUSHION GRIP SCREWDRIVERS

## 

- Non-slip Greater Turning Power
- Fit the Hand Comfortably
- Tough Alloy Steel Blades

An excellent selection of new highly efficient screwdrivers. Feature soft, neoprene rubber covers permanently bonded to tough plastic handles. Non-slip and non-blistering-fit the hand comfortably for greater twisting power. high-grade hardened alloy steel. Winged shanks at handle ends provide maximum strength. Precision cross-ground points fit screw slots tightly Type 2143 has round mechanics blade; Type 2343, square mechanics blade; Type 2243 , round electricians blade. All blades polished to a high luster.

| $\begin{gathered} \hline \text { Stock } \\ \text { No. } \\ \hline \end{gathered}$ | $\begin{aligned} & \text { Mfrs } \\ & \text { Type } \end{aligned}$ | Blade | Shpg. Wt. | $\begin{aligned} & \text { NET } \\ & \text { EACH } \end{aligned}$ |
| :---: | :---: | :---: | :---: | :---: |
| 43 N738 | 2143 | $4 \times 1 / 4^{\prime \prime}$ | 8 oz . | . 92 |
| 43 N 739 | 2143 | 6 $6 \times 1 / 1{ }^{\prime \prime}$ | 10 oz . | 1.10 |
| 43 N 740 | 2143 | $8 x^{3 / 818}$ | 10 oz . | 1.39 |
| 43 N 741 | 2243 | $6 x^{3 / 16^{\prime \prime}}$ | 9 oz . | . 77 |
| 43 N 742 | 2343 | $4 \times 1 /{ }^{\prime \prime}{ }^{\prime \prime}$ | 10 oz . | 1.03 |
| 43 N 743 | 2343 | 6x5/16" | 12 oz . | 1.32 |

"HOLD-E-ZEE" SCREWDRIVERS AND SCREWDRIVER KITS
 Type TK-5 Kit. Versatile, top-quality screw-
driver kit. Especially recommended for the driver kit. Especially recommended for the owner. Kit includes 5 automatic-grip screwowner. Kit includes 5 automatic-grip screw-
drivers: one each-TR-4 with $5 / 33^{\prime \prime}$ hex blade, $4^{\prime \prime}$
long; PR-4, $5 / 32 \times 4^{\prime \prime} ;$ TS $-4,7 / 32 \times 4^{\prime \prime}$; PS-4, $7 / 34^{\prime \prime}$ and TH-6,5/16X ${ }^{\prime \prime}$. PR-4 and PS-4 are for Phillips head screws.
Screwdrivers feature convenient, spring-steel gripper that holds screws for starting in diffi-cult-to-reach places. Shock-resistant, comfortconstruction to prevent blade from twisting. Blades are tempered, chrome-vanadium steel. With handy roll pouch. Wt., $11 / 2$ lbs. 43 N 971 . List, $\$ 5.25$. NET.
3.86

Type RT-52. Handy kit similar to above, but recommended for electronic use. Includes one each: TR-6, $5 / 32 \times 6$; ${ }^{\prime \prime}$. Also TR-4 and $\mathrm{PR}-4$ as described above Shpg. wt., $11 / 4 \mathrm{lbs}$
43 N 972 . List, $\$ 4.50$. NET.
.3.31

## WALSCO HEX \& SPLINE WRENCHES

An extremely useful assortment of hex and spline wrenches. Contains 11 of the most commonly used sizes in elec

tronic equip-
ment. Key-type, L-shaped wrenches fit screws ranging in size from No. 2 to $3 / 8^{\prime \prime}$. 7 are hex or Allen type (see Figure A above). The remainder are 4 different sizes in spline or Bristol keys (see Figure B). Precision-forged from high-grade leatherette case Shpg wt $1 / 2 \mathrm{lb}$. leatherette case. Shpg. wt., $1 / 2 \mathrm{lb}$. 1.32


VACO TIME-SAVING SERVICE TOOL SETS


K-7


RT-14


ZCH-65


TV-27


INSULATED HEX NUT DRIVER SET
Type K-7. Set includes 7 hex-nut drivers with color-keyed shafts. Permits immediate selection of correct hex driver for the job. Completely insulated, all-hollow shafts. Sure-grip plastic tool extra-hard sockets. In conveniled for size and color. Shaft length, $3^{\prime \prime}$. For hex-nut sizes: $3 / 16^{\prime \prime}, 1 / 4^{\prime \prime}, 5 / 16^{\prime \prime}, 11 / 32^{\prime \prime}, 3 / 8^{\prime \prime}, 7 / 16^{\prime \prime}$ and $1 / 2^{\prime \prime}$. 43 N 906 . List, $\$ 9.50$. NET.
7.45

## HANDY COMBINATION KIT

Type RT-14. All blades fit the shock-proof Amberyl handle provided. Kit includes: HanAmberyl hande provided. Kit includes: Han-
 sizes $1 / 8^{\prime \prime}, 3 / 16^{\prime \prime}$ and $1 / 4^{\prime \prime}$. All drivers are of highquality chrome-alloy steel. With 14 -section leatherette tool roll. Shpg. wt., $11 / 2$ lbs. 8.78
45 N 829 . List, $\$ 11.20$. NET........ 8.7

## 27-PIECE TV AND RADIO KIT

Type TV-27. Includes: 1 medium and 1 heavyduty handle; \#1 and \#2 Phillips bits; $1 / \mathrm{s}^{\prime \prime}$,
 $3 / 16^{\prime \prime}, 1 / 4^{\prime \prime}, 5 / 1^{\prime \prime} 1^{\prime \prime} 1 / 33^{\prime \prime}, 3 / 8^{\prime \prime}, 7 / 16^{\prime \prime}$ and ${ }^{1 / 2^{\prime \prime}}$ hex-nut
bits; 1 medium and 1 small offset regular screwdriver; $1 / 4^{\prime \prime}$ stub; $3 / 32^{\prime \prime}$ pocket-clip; $\# 1$ Phillips; $1 / 8^{\prime \prime \prime}$ screw-holding; ${ }^{3 / 32} 8^{\prime \prime}$ insulated-blade; $3 / 16^{\prime \prime}$ screw-holding; $3 / 11^{\prime \prime \prime}$ insulated-blede screwdrivers; $3 / 16^{\prime \prime}$ metal-tip aligner; $1 / /^{\prime \prime}$ x10 $0^{\prime \prime}$ non-
magnetic adjuster; $5 / 32^{\prime \prime}$ fiber television aligner. Shpg. wt., $21 / 2 \mathrm{lbs}$.
45 N 83 I'. List, $\$ 24.70$. NET.
. 19.36
REVERSIBLE PHILLIPS SCREWDRIVER


Type DUP-12. New Phillips model-two tools in one. Reversible blade snaps easily in and out of handle chuck for use on either No. 1 or No. 2 size screws. Shpg. wt., 5 oz .
43 N 744 NET.
. .1 .43
HIGH TENSION TESTING SCREWDRIVER


Type AN-2. Handy pocket-clip model with neon bulb in handle. Glows bright or dim to test nition or any high AC/RF sou 43 N 745 . NET........................ . 78 C Type AN-44. As above. $75 / 8 \times 1 / 4 \prime 1$ dia. blade.
43 N 746 . NET....................... 1.30

## REED \& PRINCE SCREWDRIVERS



Top-quality selection to exactly match increasingly popular Reed and Prince, cross-slot screws. Shock proof, unbreakable plastic handles. Blades of chrome-vanadium steel.
StockNo. Type Length Blade Oz. NET

|  | F-700 |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: |
|  | F-710 |  |  | 3 |  |
| 43 N 749 |  |  |  | 5 |  |
| N 78 | F-720 | 12 |  |  |  |

## INSULATED BLADE SCREWDRIVER

Type VR-261. Useful screwdriver for work in crowded "live", circuitry. Prevents shorts. 6x $1 / \mathrm{s}^{\prime \prime}$ blade fully insulated with break-resistant
plastic. Amberyl handle. Wt., 3 oz.

## SCREWDRIVER KIT

Type ZB-50. Features 5 detachable blades, All the screwdrivers ordinarily needed-in one compact unit. Very strong, oil-tempered chrome vanadium steel. Has $1 \times 35 / 8^{\prime \prime}$ Amberyl handle with clutch. Blades: $1 / 8 \times 4^{\prime \prime}, 3 / 16 \times 4^{\prime \prime}$, $1 / 4 \times 5^{1 .}$ Phillips No. 1 and No. 2, $4^{\prime \prime}$, Leather43 N 875 . List $\$ 3.90$. Ň ${ }^{8}$ OT...
.3 .06

## CLUTCH HEAD SCREWDRIVER KIT

Type ZCH-65. New, roll-up kit of precisionbuilt clutch head screwdrivers. Detachable blades of chrome vanadium steel and sturdy plastic handle. Blade bits fit matching screws perfectly. When used for loosening screws, bits lock in screws-hold them for easy removal from tight places. Bits remove easily from screw recess after driving or clockwise turn. Kit $1 / 8,5 / 32,3 / 16^{4}$ and $1 / 4^{\prime \prime} ; 1$ - $4^{\prime 3} 4^{\prime \prime}$ blang for screw sizes, $1 / 8,5 / 32,3 / 16$ and $1 / 4^{\prime \prime} ; 1-43 / 4^{\prime \prime}$ blade for $5 / 16^{\prime \prime}$ screw. 43 N 787 . ${ }^{8}$ List
4.70

## NUT DRIVER KIT

Type K-505. New, 5-piece set of high-quality nut drivers. Ideally suited for use in shop or home. Perfect for radio-television servicemen. Comfort-grip handles constructed of insulated, shock-resistant Tenite. Has $31 / 4^{\prime \prime}$ all-hollow, heavy-duty steel shafts-easily fits long bolt extensions. Specially treated sockets assure ong-wearing use. Durable plastic kit includes five popular nut-driver sizes: $3 / 16^{\prime \prime} 1 / 4^{\prime \prime}, 5 / 16^{\prime \prime},{ }^{11} / 32^{\prime \prime}$, 43 N 982 . List, $\$ 4.90$. NET
3.82

PHILLIPS SCREWDRIVER SET


Type P550. Set contains five of the most popular Phillips screwdrivers. A necessary time-auto-mechanic, custom installer, etc. Designed o handle most-common applications quickly and efficiently. Easy-grip handles are constructed of shock-proof Amberyl. Long-wearing blades are made of tough, wear-resistant vanadium steel. Sold as complete kit only. Shpg. wt., $11 / 2$ lbs.

| Type | Overall | Blade | For Screws |
| :---: | :---: | :---: | :---: |
| P1 | $61 / 2^{\prime \prime}$ | $3 / 16 \times 3^{\prime \prime}$ | No. 4 and smaller |
| P2 | $75 / 8^{\prime \prime}$ | $1 / 4 \times 4^{\prime \prime}$ | No. 5 to No. 9 |
| P3 | $10^{\prime \prime}$ | $5 / 16 \times 6^{\prime \prime}$ | No. 10 to No. 16 |
| P5 | $37 / 8^{\prime \prime}$ | $1 / 4 \times 13 / 4^{\prime \prime}$ | No. 5 to No. ${ }^{16}$ |
| P6 | $3^{\prime \prime}$ | $3 / 16 \times 11^{\prime \prime}$ | No. 4 and smaller |

43 N 880. List, $\$ 5.72$. NET.
Type PO1 Screwdriver. For Nos. 0 .
ype PO1 Screwdriver. For Nos. 0-1 Phillips type screws. Shock-proof Amberyl handle. 43 N 788. NET.............................55C

## BERYLLIUM-COPPER SCREWDRIVERS

[^17]
## Quality Hand Tools

## MILLERS FALLS HAND TOOLS



Model 1710 Brace. Low-priced brace for A square shank bits. Has adjustable forwardreverse ratchet control for use in limited space. Baill bearing with aligatorjardwood heeep handle. Shog wt. mount. Hardwood head and 50 N 022 . List, $\$ 5.98$. NE $\qquad$ .4 .49

B Model 100 Automatic Drill. Push-type drill with multiple-toothed spiral mechanism and internal spring return. Top part of handle is rounded to fit comfortably into the fluted-shank drills (supplied). Size, $1 / 16^{\prime \prime}$ to $11 / 64^{\prime \prime}$. ${ }_{46}$ Nhpg 038 wt . $11 / 2$ lbs.
5. NET.
......... . .
.4 .30


Efficient tool with 2way handle for use as file or plane. Shapes, de-burrs, finishes ali woods and metals.
Blade $11 / 4 \times 101 /{ }^{\prime \prime}$. Blade $11 / 4 \times 101 / 4^{\prime \prime}$
Aluminum body $111 / 4^{\prime \prime}$ long. With 1227 blade. 10 oz.
2.62 50 N 187.1226 Blade. Med. 2 oz.... NET. 734
50 N 188.1227 Blade. Coarse. 2 oz . NET. 734


Model 170 Automatle Drill. Has con(c) venient, quick-action chuck. Locks or releases with slight forward thumb pressure. Serrated, red plastic hande has 4 compart4 drills: $5 / 64^{4 \prime}, 704^{\prime \prime}, 964^{\prime \prime}$ and $11 / 4^{\prime \prime}$. $101 / 4^{\prime \prime}$ long. Shpg. wt., 36 N 307. List, $\$ 4.00$. NET............ 3.00

D Model 1425 Hand Drill. High quality drill D has double pinion gears for smooth action. Drive gear and pinions have precision-cut teeth. 3 -jaw chuck takes drills up to $1 / 4^{\prime \prime}$ in dia. Nickel plated frame and chuck. Hollow handle stores drills. Shpg. wt., 2 lbs.

MODEL 29 SPIRAL RATCHET SCREWDRIVER (E) Easy action tool. $1 / 4^{\prime \prime}$ bit drives or draws E. 4 to \#8 screws. Reliable ratchet and quickreturn spring. Nickel-plated with hardwood 50 N i 89 . List, $\$ 3.49$. N ETM...
.2 .62

## MODEL 10 HANDY AWL

F Has nicely pointed alloy steel blade, $23 / 4^{\prime \prime}$ F long. Nickel-plated ferrule. Hardwood handle. Overall length 47 " $^{\prime \prime}$. Wt., 1 oz. . . . . 26c
50 N 190 . NET....................

## HANSON ECONOMY HAND DRILL

An exceptionally well-balanced, inexpensive hand drill with knurled, hardened steel chuck. Will take drill bits up to $1 / 4^{\prime \prime}$ in diameter. Hardwood handle, with screw-on cap; has convenient storage space for extra drills. Has wooden side knob. Drill can be used with carbon steel or high-speed steel drill bits for drilling through wood, metal or plastic. All wooden parts are lacquer-finished. Overall length,


## ALL-PURPOSE HAND SAWS



G Coping Saw. Excellent, all purpose coping saw. Natural hardwood, lacquered handie. Special ratchet locks blade in position. 45 Nhpg 878 . $3 / 4 \mathrm{NET}$.

49c
Type 124. Roplacemont Blades. Wt., 2 oz.
45 N 876. Pkg of 2. PER PKG........ 10 ¢
(H) Plstol-Grlp Hacksaw. Sturdily-constructed hacksaw, adjustable for 8 to $10^{\prime \prime}$ blades. Rugged frame is highly polished spring stee. Large thumbscrew for easy tightening of tough molded plastic. Supplied with $10^{\prime \prime}$ blade. Shpg wt., $11 / 21 \mathrm{lbs}$.
46 N 090. NET..

Replacement Blade Set Conins Coarse blade, both $10^{\circ}$. Shpg. wt., 3 oz . 46 N 091. NET, PER SET OF 2.........184


Model C-4. Excellent
value in a value in a
top-quality top-quality
smoothly opsmoothly op-
erating plane. erating plane. hardened and tempered alloy tool steel. Has razorsharp, 2-inch cutter. Lever cap is nickel-plated. Frog fully adjustable to entire width of mouth. polished for maximum accuracy. Conveniently located brass screw permits easy adjustment of cutting blade. Easy-grip handle knob is hardwood, finished in attractive mahogany. Expertly balanced for fatigue-free operation9 flawless planing. A "must' for every tool chest. 9 inches long. Shpg. wt., 4 lbs.
45 N 849 . NT.

299
3.37

(L) Henry Hanson Type 120. For enlarging T-Handle provides firm and other materials. removable for use in drill chuck Precision machined from carbon steel. Point, $1 / 3^{\prime \prime}$ dia.; shank, $1 / 2^{\prime \prime}$ dia., $51 / 2^{\prime \prime}$ long. Wt., 9 oz. $\qquad$ .94c
(M) Master Reamer. Tapered from $1 / 8^{\prime \prime}$ tip to (M/ A ${ }^{\prime \prime}$. Made of finest tool steel. Plastic handle. A very handy tool for the radio and TV Length, 8 ": Shpg. wt., 6 oz.
46 N 244. NET. . . . . . .

Fors berg V-35 Four- Way Koy hole Hacksaw. Handy lightweight saw for all general purpose work. Cuts metal, wood, plaster, conduit, etc. Blade is $71 /{ }^{\prime}$ long, 24 teeth/inchcan be faced in 4 directions. Wt., 6 oz . 29c 46 N 341 . NET......................... 46 N 342. NET EACH.................... I 124
K Millers Falls Model 625 Keyhole Hacksaw. Cuts metal, wood, plaster, etc. Has a replaceable $12^{\prime \prime}$ blade; 10 teeth per inch. positions for easier odd-angle cuts. Handle fits blades below. Shpg. wt., 9 oz .
... 1.65
46 N 102. List, \$2.20. 'NET.
$\frac{12^{\prime \prime} \text { ACCESSORY BLADES }}{\frac{\text { No. }}{\frac{\text { Type }}{46 \text { N } 103}}\left|\frac{\text { Tooth Por Inch }}{24}\right| \frac{\text { Oz. }}{24 \text { (For metal })}} \frac{\frac{\text { EACH }}{3}}{45 ¢}$
.88c

## G-C SPEEDEX WIRE STRIPPERS



Extremely efficient tools of advanced insulation from all types of wires precisely and quickly. Sturdy and easy to use-with narrow, plier grip handles that fit the Model 766 palm comfortably. Simply insert wire into jaws and squeeze handles. One section of jaws holds wire firmly in place, the other strips. Completely eliminates damage from pulling or tugno crushing or nicking of wire Strips wire end no crushing or nicking or wire. Strips wire ends servicemen, electricians, production lines, etc.
Deluxe Models. Equipped with "delayed return action" to prevent crushing of fine stranded wires. Easy to use. Just insert wire into jaws and squeeze handles. Has hardened steel cutting blades. Shpg. wt., $11 / 4 \mathrm{lbs}$.
46 N 225. Type 766. For 12 to 20 wire.
46 N 226. Typ 766A. For 14 to 30 wire.
NET EACH.
. 5.82
Standard Models. Same design as above, but without "delayed return action." A smootherate cost. Hardened blades. Shpg. wt., $11 / 4 \mathrm{lbs}$. 46 N 003 . Type 733. For 12 to 20 wire. 46 N 004. Type 733A. For 14 to 30 wire. NET EACH.
. 4.66


Type $766 K$ Kit. A complete, versatile kit to fill most service and production line needs. Contains the Deluxe Wire Stripper described above and 7 diferent size hardened steel For wire special steel box. For wire sizes from No. 8
up to No. 30 . Inside cover of box contains a guide listing of blades to use for various wire sizes. A practical addition to tool box. Shpg. wt., $21 / 4$ lbs.
46 N 229. NET $\qquad$ ...
.11 .73

## G-C TYPE 737 S-IN-1 STRIPPER



Extremely compact wire stripper. This handy, multi-purpose tool belongs in every radio It can be used as a wire stripit can be used sas a wire sinder, and as a screwdriver. Strips insulation easily without cutting wire. Shpg. wt., 3 oz. . . 29C

## MPC WIRE STRIPPER



An easy-to-use springsteel, wire stripper and cutter. Has screw for adjusting cutting blade gap for any size wire to No. 12. Length, $53 / 8^{\prime \prime}$. Shpg. wt., 5 oz .
46 N 036. NET. .
.66c

## K. MILLER 101-S STRIPPER AND CUTTER



Combination wire stripper and cutter. Easily adjusted to strip insulation from any wire up to No. 8, solid or stranded. Calibrated adjustment permits convenient resetting to exact jaw opening requ lock holds blades closed when not blade. $5^{\prime}$ lo Shpg wt 4 oz. in use. $5^{\circ}$ long. Shpg. wt., $40 z$.
46 N 246. NET.
.1 .17
WALSCO "TWISTO" WIRE STRIPPER


Type 692-00. Wire stripper for rapid removal of toughest serted into chassis without removing wire. Adjustment for wire sizes 12 to 22. Built-in stop for production stripping. Spring steel blades ${ }^{41 / 2^{\prime}}$ long. Shpg. wt.; ${ }^{8} \mathrm{oz}$.
46 N 440 . List, $\$ 4.50$. NET.....
. .2 .65
692-03. Replacement Blades. Wt., 2 oz.
46 N 44 I. List, $\$ 1.00$. NET PER SET.. 596

# Quality Tools and Staplers 

## MILLERS FALLS UTILITY KNIFE

## $-1 / \mathrm{H}$

Model 333．Versatile utility knife of 1000 uses in shop or home．Neatly cuts rubber，veneer， gaskets，linoleum，upholstery，etc．Die－cast， blades，． $018^{\prime \prime}$ thick．Each blade has 3 position ing notches for exposing longer or shorter cut ting edge．Blades are end－to－end reversible－ total of 10 keen cutting edges．Sturdy，rounded handle provides a sure，comfortable grip．Hole at end for convenient hanging． $5^{\prime \prime}$ long．With 5 blades．Shpg．wt．， $1 / 2 \mathrm{lb}$ ． 46 N 308 ．NET．＇

67c
Replacement Blades．Package of 5 blades for above． $.018^{\prime \prime}$ thick．Shpg．wt．， 1 oz．

33c

## CAMILLUS ELECTRICIAN＇S KNIFE



Model 229．Rugged，versatile knife．Excellent for use by the electrician，serviceman or handy man．Two blades：Combination screwdriver cutter－stripper－scraper；spear－shaped， $5 /{ }^{\prime \prime}$ knife blade．Brass locking bar positively prevent screwdriver blade from closing accidentally． high－quality steel．Black plastic，full－grip han－ die．Shpg．wt． 5 oz ． 45 N 895 ．NET．${ }^{\text {dit．}}$ ．
1.56

TUBE PULLERS \＆PIN STRAIGHTENER


G－C Type 5093．Compact tube puller．Alu－ minum body with rubber cup；for 7 －pin min－ iature tubes．Shpg．wt．， 2 oz ．
46 N 094．NET．．．．．．．．．．．．．．．．．．．．．．．．．．．．．． 1.06 G－C Type 8106．As above，but for 9－pin mini－ 46 N 155．NET．
$\qquad$
$\qquad$ 1.06

G－C Type TL－201．Scissors－type tube puller with rubber tips．Unusually handy tool．Shpg． wt．， 12 oz
46 N 092．NET．．．．．．．．．．．．．．．．．．．．．．．．．． 974
Walsco Type 565 ＂Straight＇N＇Pull．＂ 3 tools in one．Straightens 7 or 9 pin miniature tube pins；pulls tubes．Extremely helpful where pins pins；pulls tubent by removal or insertion of tube．Shpg．wt．${ }^{3}$ N oz．

97c

## G－C PIN STRAIGHTENERS

Type 5191．Precision－built steel die．For 7 －pin minia－ ture tubes．Shpg．wt．， 602.
46 N 227．NET．．．．． 734 Type 8105．As above，for 9－ pin tubes
46 N 228．NET．．．．． 734 Type 8655．Not illustrated． For both 7 and 9 －pin minia－ 46 N 230．NET．Wt．， 6 oz．


## G－C＂SPEEDEX＂FUSE PULLERS

High－quality fuse pullers designed for quick removal of cartridge－type fuses．
 Provide maximum safety and ease of operation．Features non－slip construction．Laminated insulation of high di－ electric material prevents shock from danger ous high voltages．
Model 5525．Midget size．For $1 / 4^{y}$ to $1 / 2^{\text {² }}$ fuses． 45 N 836 ．NET $.41 c$
Model 6526．Handy pocket－size puller．For $1 / 2^{\prime \prime}$ to $11 /{ }^{1 / 2}$ ² fuses．Shpg．wt．， 7 oz．

ECONOMY TOOL KITS


## COMBINATION DRIVER SET

（A）A complete nut and screwdriver set，in a A handy pocket－sized roll．Multi－purpose， 10 piece tool set contains 6 nut driver blades， 3 screwdriver blades and a clear amber plastic handle with an aluminum adjustable screw chuck．Blades are made of hardened and tem－ pered tool steel，nickel plated to prevent rust－ ing．Nut driver blades are for hex sizes $3 / 6^{\prime \prime}$ $1 / 4,5 / 16^{\circ}, 1 / 3^{3}, 3 / 8^{4}{ }^{6} / 16^{6} .3$ screwdriver blades： 1 large and 1 small standard screwdriver blade and 1 Phillips screwdriver blade．Each tool kept in place in its own transparent compartment． Plastic roll case has size markings under hex blade compartments for easy identification． Convenient tie string．A low－priced extremely 46 N 463．NET．．．．．．．．．．．．．．．．．．．．．．．．．．．．I． 69

## 5－IN－1 SCREWDRIVER SET

（B）Screwdriver set containing five most－com－ B monly－used screwdriver types．Interchange－ able blades are easily inserted into aluminum screw chuck of the shock proof，unbreakable amber plastic handle．Hardened and tempered tool steel blades are nickel plated．Set contains： $1 / 8 \times 31 / 2^{\prime \prime}$ cabinet blade；${ }^{3 / 16 \times 31 / 2^{\prime \prime}}$ cabinet blade Phillips No． 1 （ $3 / 1 / 6 \times 41 / 4^{n}$ ）blade；Phillips No． 2 （ $1 / 4 \times 41 /{ }^{\prime \prime}$ ）blade． $1 / 4 \times 41 /{ }^{\prime \prime}$ keystone blade；plas－ tic handle．Includes durable plastic roll－up holder with handy tie string．An economical extremely versatile addit．， 8 oz． 46 N 096．NET．．．．．．．．．．．．．．．．．
．64c

## MILLER FALLS CHISEL SET

Model 1434．Kit of 4 ex－ pertly designed wood chis－ els．Carefully balanced chisels feature thin，keen－ edged blades which per－ mit deeper，more efficient cutting action．Long tangs make sharpening easier．Blades are high－ carbon chisel steel，treated and tempered for extreme hardness and durability． Heavy metal bolsters ab－ sorb shock and prevent handle from splitting． Handles are durable， transparent plastic，firm－
ly bonded to blades．Deep cove design for comfortable，sure grip．All chisels have $33 / 16^{\prime \prime}$ handles．Overall length， $67 / 8^{\circ}$ ． Blade widths are $1 / 4^{\prime \prime}, 1 / 2^{\prime \prime}, 3 / 4^{\prime \prime}$ and $1^{\prime \prime}$ ．Attrac－ tive gray and red plastic carrying case has sep－ arate sections for neat orderly storage．Protects cutting edges on chisels．Wt．， $11 / 2 \mathrm{lbs}$.
50 N 217 ．List，$\$ 6.95$ ．NET．．．．．．．． 43

## 10－PIECE RATCHET SOCKET SET

Ratchet set with 8 heavy－duty $\begin{array}{lll}\text { sockets．} 31 / 2^{\prime \prime} & \text { ex－} \\ \text { tension bar for }\end{array}$ hard－to－reach
 places．3－position ratchet：right，
rigid，or left．Five 6－point sockets for hex nut

 $31 / 2^{\prime \prime}$ extension．Unbre
handle．Shpg．wt．， 1 lb．
46 N 464．NET．．．．．．．

．．．．．．．．．．．．．．．．． 1.09

## FLEXIBLE－DRIVE

SOCKET SET
Excellent for use around corners and out－of－the－ way places．Ex－ the radio－TV

service shop．Shaft is made of tough，laminated steel wires．Transmits full twisting power from handle to hex nut．Thick cadmium plating． Shockproof amber handle．83／4＂overall length Includes 6 hex sockets，sizes： $1 / 4^{\prime \prime}, 5 / 16^{\prime \prime}, 11 / 32^{\prime \prime}, 3 / 8^{\prime \prime}$ ，
$7 / 16^{\prime \prime}, 1 / 2^{\prime \prime}$ ．Complete with handy wood case． $7 / 16^{\prime \prime}, 1 / 2^{\prime \prime}$ ．Complete with handy wood case．
Shpg．wt．i 10 oz．
46 N 067. NET．．．．．．．．．．．．．．．．．．．．． 1.96

ARROW STAPLE GUNS MODEL JT－21 JR ECONOMY ST APLER
－Combines Speed \＆ Ease of Operation －Precision Built for De－ pendable Service
Efficient easy－action staple gun at an un－
usually low price．Ideal usually low price．Ideal down twin－line，grille cloth，and acoustic pad－ ding．Excellent for many home uses such as screening，uphol－ stery，shelfing，lining，
etc．Drives staples firmly in place with mini mum squeeze pressure－employs special non－ jamming mechanism．Built－in extractor allows easy removal of driven staples．Gun locks to fit in pocket－prevents accidental operation．All－ steel construction－built for dependable serv ice．Loading capacity of 100 staples．Size， $3 / 4$ $61 / 8 \times 3^{\prime \prime}$ ．Less staples．Shpg．wt．， 1 lb ．
45 N 653 ．List，$\$ 4.95$ ．NET．．．．
4.10

STAPLES FOR MODEL JT－21 JR

| No． | Width | Length | Quantity | Wt． | NET |
| :---: | :---: | :---: | :---: | :---: | :---: |
| 45N 654 | $13 / 33^{\prime}$ | $1{ }^{\prime \prime}$ | 1000 | 4 oz ． |  |
| 45N655 | 13／3 | 5／16 ${ }^{\circ}$ | 1000 | 4 0z． | 494 |

## T－32 MEDIUM－DUTY STAPLER

An efficient，smooth－ ly operating gun for all medium－duty sta－ pling．Excellent for 300 －ohm twin－lead， intercom cable， screens，shades，up－
holstery，light insula－ holstery，light insula－
ing．Non－jamming me erage action for easy single－handed operation One hand is left free for positioning work．Dura－ ble，all steel construction with chrome plating Safety－lock handle．Loading capacity of 150 $.032^{\prime \prime}$ staples． $5 \times 7 x^{3} 34^{\prime \prime}$ ．Wt． 1 13／4 lbs．
46 N 062 ．List，$\$ 10.50$ ．NET．．．．．．
STAPLES FOR MODEL T－32

| No． | Width | Length | Quantity | Wt． | NET |
| :---: | :---: | :---: | :---: | :---: | :---: |
| $47 \mathrm{~N} \mathrm{O96}$ | $7 / 16^{\circ}$ | $\frac{1}{1 / 4^{\circ}}$ | 5000 | 1 lb | $\frac{1}{1.87}$ |
| 46 N 063 | $7 / 16^{\circ}$ | $5 / 16^{\circ}$ | 5000 | 1 lb. | 2.08 |

## T－50 GENERAL PURPOSE STAPLER

Heavy－duty gun takes six staple sizes for many uses．Excellent for screening，insulation，can vas，wire，ceiling tile，upholstery，etc．Double leverage action for powerful drive with mini mum squeeze pressure．Patented non－jamming mechanism．All steel construction with chrome finish．Loads $85-.050^{\prime \prime}$ staples． $51 / 2 \times 71 / 8 \times^{3 / 4^{\prime \prime}}$ Shpg．wt．， 2 lbs．
46 N 292．List，$\$ 12.50$ ．NET．
． 10.41
STAPLES FOR MODEL T－50

| No． | Width | Length | Quantity | Wt． | NET |
| :---: | :---: | :---: | :---: | :---: | :---: |
| 792 | 3／8． | 3／8＇ | 5000 | 1 lb ． | 2.29 |
|  | 88． | 4 | 5000 | 1 lb ． | 2. |
| $45 N 789$ 46 | 年。＂ |  |  |  | 2.20 |
| 46 N 294 | 3／8． | 9／16 | 5000 |  | 2.9 |

## MODEL T－25 CABLE STAPLER

Excellent gun for precise，rapid stapling of all round wires or small objects up to $1 / 4^{\prime \prime}$ diam－ eter．Ideal for telephone，thermostat，intercom， or doorbell wiring．Gun has grooved－guide－ for exact fit of staple over wire．Also has ples．Size， $51 / 2 \times 7 \times 3 / 4^{\circ \prime}$ ．Shpg rounde－crown sta－


STAPLES FOR MODEL T－25

| No． | Width | Length | Quantity | Wt． | NET |
| :---: | :---: | :---: | :---: | :---: | :---: |
| 45 N 790 | $1 / 4^{\prime \prime}$ | 3／8＊＊ | 5000 | 1 lb ． | 3.33 |
| 46 N 492 | 1／4， | 7／16＂， | 5000 5000 | 1 lb ， | 3.33 |
| 45N791 | $1 / 4^{\circ}$ | 9／16＂ | 5000 | 1 lb. | 3.74 |

## MODEL T－75 CABLE STAPLER

Powerful gun for non－metallic sheathed cable or objects up to $1 / 2^{\prime \prime}$ in diameter．Groove in gun envelopes wires and cables to assure clean dam－ age－free stapling．All steel construction with chrome finish．Automatic stop－guard for uni－ form penetration of staples．Load capacity， $53-075^{\prime \prime}$ staples． $53 / 4 \times 7 x^{7} / 8^{\prime \prime} \cdot{ }^{21 / 2}$ lbs． 12.49

STAPLES FOR MODEL T－75

| No． | Width | Length | Quantity | Wt． | NET |
| :---: | :---: | :---: | :---: | :---: | :---: |
| 45N798 | 120， | ${ }^{9} \%^{\circ}$ | 1000 | $13 / 4 \mathrm{lbs}$ | 1.88 |
| 45N799 | 年， | ${ }^{\circ}$ | 1000 | 13／4 lbs． | 1.88 |

## Alignment Tools and Servicing Aids


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| :---: | :---: | :---: | :---: |
| Stock No． | Type | Fig． | Descris |
| 42 N 377 | 8606 | ${ }^{\text {A }}$ | Zenith－Admiral |
| 42 N 380 | ${ }_{8988}^{8282}$ | $\stackrel{8}{\text { B }}$ | Zenith wrench |
| 42 N 385 | 8989 | C | As above，but 1 |
|  |  |  |  |
| 42 N 389 | 8728 | D | As |
| 42 N 378 | 8276 | E | Short duplex ali |
| 42 <br> 42 <br> 4 <br> N <br> 383 | 8275 5097 | ${ }_{\text {F }}^{\text {F }}$ | Zenith universal |
| 42 N 391 | 8274 | ${ }^{\mathrm{H}}$ | $9^{\text {9／}}$ nested core |
| 42 N 379 | 9091 |  | ${ }^{1255^{\prime \prime}}$ hex nylo |
| 42 N 382 | 8271 |  | Stackpole |
| 42 N 394 | 8195 | L | Channel tunin |
| G－C TOP－QUAL |  |  |  |
| gineral precision ME TOOLS |  |  |  |
|  |  |  |  |
|  |  |  |  |
|  |  |  |  |
|  |  |  | $T$ |

Type 9200 Panel Kit．A convenient，wall－ mounting type kit of the most－needed align－ ment tools．Contains 27 different tools for al popular makes of TV sets．Each tool has sepa－ rate slot identified by shape and size number tools in this kit are selected to cover most align－ tools in this kit are selected to cover most align－ finest materials are used throughout－low－loss plastics，tips of hardened spring steel，and extra－hard bone fiber that can be re－ground as tool wears．
Includes：Alignment screwdrivers in various lengths，special short tools，alignment wrenches， ment tools，trimmer and IF aligners，solder probe tool，stainless steel brush and scraper nylon replacement tip，special hex tools，etc Tools are stored in a handsome three－color steel panel，drilled for two－hole mounting． Shpg．wt．， 3 lbs．
42 N 34 í，List，\＄25．50．NET $\qquad$ 14.99

## G－C CHASSIS CRADLE



Model 6212．Easy－ to－use，adjustable securely．A valuable accessory for the serv－ iceman，builder and experimenter．Elim－ inates fumbling with makeshift setups to hold bulky chassis－ prevents breakage of tubes or other above－ chassis parts and equipment．Job is quickly and easily clamped into position．Complete 360 －degree rotation permits tilting work to the most convenient sets，tcean for working on power supplies，T11－ steel construction，Size， $24^{\prime \prime}$ long， $14^{\prime \prime}$ high， $121 /{ }^{\prime \prime}$ construction．Side．Shpg．wt． 7 lbs．long， 14 high， $121 / 2^{\prime \prime}$ wide．Shpg．wt．， 7 libs．
86 N 034 NET．．．．．．．．．．．．


8283
Type 8283 Mastor Doluxe TV Tool Kit． A complete service alignment tool kit for television repair work．Contains 25 high－ quality alignment tools not over $9^{\prime \prime}$ long．Flex－ ible tool－case has heavily stitched edges and foasily carried．Includes：TV K－Tran tool，TV easily carried．Includes：TV K－Tran tool，TV Flexible Wand，TV Short Tool for IF；etc． Leatherette roll case．Shpg．wt．， 1 lb． 12.26
42 N 005 ．List，$\$ 20.85$ ．NET．．．．．．． Type 8280 Deluxe Television Alignment Tool Kit．Handy roll－type durable leatherette The steel tips are all extra thin and are made of steel tips are all extra thin and are made accurate dimensions and high durability．Case accurate dimensions and high durability．Case Duplex Aligner，TV Tuning Wand，TV Core Aligner，TV Oscillator Tool，TV Long Reach Aligner，etc．Shpg．wt．， 8 oz．
42 N 006 ．List，$\$ 12.90$ ．NET $\qquad$ .7 .59

## JFD＂REPAIRACK＂



Model 79－3 Sturdy，cast－ ron rack for upporting chassis．hold any chassis of $1 p$ to 200 lbs Full 360－degree rotation per－ mits position－ ing work to any convenient an－ gle．Designed to accommodate practically any chassis up to $32^{\prime \prime}$ in length．Greatly simplifies servicing jobs on large，heavy chassis．Allows chassis clamps on reph side have Separate chassis clamps on each side have thumb action． $143 /{ }^{3} 32 \times 15^{\prime \prime} . W t .18 \mathrm{lbs}$ 86 NX 038．NET．．．．．．．．．．．．．．．．．． $\qquad$ 19.61

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V
Listed below is a wide selection of hex wrenches，stud－type core aligners，and special tools for al－ most any TV or radio servicing job．

## Quality Tools and Slide Rules



## ALL-PURPOSE SERVICING TOOLS

(A) All-Steel Utility Hammer. Claw handle A for pulling nail armme etc. Made of finest hardened and tempered steel-withstands roughest use. Excellent for use in workshop or home. Ideal size for carrying in tool box or belt. Overall length, $91 / 2^{\prime \prime}$. Shpg. wt., $11 / 4 \mathrm{lbs}$.
43 N 900 . NET..
.83c
B Millers Falls Model 1460 6-ft. Rule. 6B ft. folding rule for the shop worker or handy-man. Has large easy-to-read black numerals on white enamel background. Graduwith in 16 ths. Made of selected hardwood, with concealed brass-plated joints that assure smooth easy action. Shpg. wt., 5 oz.
50 N 147 . NET...........
.64c
C] Hunter TV-12 Tuning SIug Retriever. C. Retrieves Standard Coil slugs without removing chassis from cabinet. Automatic 42 NOI2. NET 4 . $1^{\prime \prime}$ L. Wt., 9 oz .264 Type TV-16. As above but $15^{\prime \prime}$ long.
42 N OI3. NET. . . . . . . . . . . . . . .
2.64

. 3.18
46 N 452. NET. . . . . . . . . . . . . . . . . .
.3 .92
(D) Miller 345 Pick-Up Tool. Invaluable claws-release to close over object. Flexible $14^{\prime \prime}$ shaft. Shpg. wt., 1 lb.

## MILLERS FALLS TORPEDO LEVEL



Model 590. Accurate, lightweight level with one $45^{\circ}$ plumb, one $90^{\circ}$ plumb and one level. Molded, high-strength, glossy, black bakelite body. Top plate of heavy, polished "nickeloid"; Sets fush with body to protect the level glass. cat's-eye type. Impervious to moisture; unaffected by changes in temperature. Bottom has V-groove running its entire length Size $9 \times 11 / 4 \times 3 / 4^{\prime \prime}$. Shpg. wt., 7 oz .
46 N 309 . NET............................ 87

## EXACT "HANDYLEVEL"

## $\square \mathrm{D} 日 \mathrm{D}$

Model PL-24. Here's an exceptionally fine value in a new, quality-constructed level. A very dependable aid for anyone doing construction or repair jobs - excellent for use by carpenters, custom hi-fi installers, cabinetmakers, "do-it-yourself"" enthusiasts, etc. Provides highly accurate leveling in both horizontal and vertical positions. The easy-to-handle, $24^{\prime \prime}$-long frame is made of rugged, lightweight, die-cast aluminum. Features shock-proof Pyrex vials which are permanently sealed in plastic inserts. Vials are large and easy to sight. Size: $24^{\prime \prime}$ long, ${ }^{11} 116^{\prime \prime}$ thick, $1^{15} / 16^{\prime \prime}$ wide. Shpg. wt., $11 / 2$ lbs. ${ }^{1}$ N 927. NET.
2.25

E $\underset{\text { G-C }}{ } \mathbf{5 0 9 0}$ Inspection Mirror. For in wired radio and TV sets, auto radios, Handy for reading parts numbers and inspect ing solder and wire connections in out-of-sight places. $8^{\prime \prime}$ length allows user to get into crowded chassis with ease. Indispensable for radio and TV servicemen, Amateurs, experimenters, etc.

. . . . . . . . 35c
F G-C 8725 IIluminated Inspection MirFid ror. Permits inspection of parts otherwise hidden from sight. Consists of anodized aluminum flashlight with $6^{\prime \prime}$ lucite rod and $1^{\prime \prime}$ hingemounted mirror. Plastic housing prevents shocks. Locking switch allows one-hand opera-
 Burgess Type $Z$ Cell. $11 / 2$-volt cell for use with 42 N 130 , above. Shpg. wt., 3 oz.
53 J 03 I. NET EACH.................... 9 C 53 J 03 I. NET EACH . . . . . . . . . . . . . . . . . 9C
G G-C 9088 Soldering Aid Tool. A "must" wire brush for cleaning wire and terminals wire brush for cleaning wire and terminals bef ore soldering; other end is specially shaped
to hold wires securely during soldering. Solder will not stick to chrome-tipped, probe end of tool. Especially handy for printed circuit repairs, neat solder connections, etc., $8^{\prime \prime}$ long. 42 N OOI. ${ }^{\text {Shet. }}$.
(H) G-C 705 Handy Trouble Light. No radiowithout serviceman or technician should be without this handy light. Illuminates dark corners in chassis-excellent for visual inspec without glare; small size won't get in the way. With bulb and $51 / 2-\mathrm{ft}$. cord. For $110-120 \mathrm{v}$., AC or DC. Shpg. wt., $1 / 2 \mathrm{lb}$.
42 N 120 . NET.
I. 32
(J) Vichek Hex Key Wrench Set. Hardened $\square$ nickel-chrome alloy steel wrenches. Fitted in a steel frame like pocket-knife blades. Each wrench can be used independently in most suitable position. In popular sizes from $.050^{\prime \prime}$ to $3 / 16^{\prime \prime}$. Nickel-plated steel frame. Handy, plastic carrying case. Shpg. wt., 4 oz . K Knob-Puller. A very helpful tool kit item hard-to-grip, push-on knobs. Simply place blades in back of knob, close handles, and pull forward. Prevents damaging either knob or cabinet. Shpg. wt., 4 oz . 46 N 077 . NET.
$\qquad$

Pres-To-Oiler. Press on plunger to release one drop of oil. Prevents over-oiling. Transparent fountain-pen reservoir holds oil supply. Also ideal for dispensing radio and TV chemicals in hard-to-reach places. Contains oil-ready to use. Shpg. wt., 3 oz .
46 N 065. NET. . . . . . . . . . . . . . . . . . . . . 95 C

## STEVENS-WALDEN TOOL SETS

 and $1 / 2^{\prime \prime \prime}$; three combination reamer and screwdrivers; one combination reamer and tool shafts. Also includes $6^{\prime \prime}$ long-nose pliers, and wrench. Valuable tool set for the radio-TV and wrench. Valuable tool set for the radio-TV repairman. 46 N 055 . NET.............. . 13.59

## "MIGIT" RADIO WRENCH SET

Model 3100C14. This compact, 14-piece socket set will cover almost all hex-head bolt and nut sizes encountered in radiotelevision servicing. A highly valuable wrench
 set for repairmen, technicians, etc. Universal joint handle with sliding " T ", bar, and one straight spin type amber plastic handle. Eight hex sockets, $3 / 16^{\prime \prime}$ to $7 / 16^{\prime \prime} ; 3$ double-square sockets. Chrome-plated tools; bright enamel-finished case. Shpg. wt., $11 / 2 \mathrm{lbs}$.
46 N 165 . NET.....
5.52

## ACU-MATH SLIDE RULES


(M)

(M) Model 1311 Professional $10^{\prime \prime}$ Slide Rule. M Extremely accurate, high-quality $10^{\prime \prime}$ slide rule. Deluxe features include: white nitrate plastic sheet face, bonded to corrosionresistant magnesium core; stainless steel brackets; crystal-clear lucite cursor; inlaid calibrations and numerals; Trig and Log Log numerals ${ }_{T}{ }^{\text {in }}, S T, S, D$ and LL1. Other side: LLO2, LLOB, DF, CF, C1F, C1,C, D, LL3, and LL2. Supphed complete with sheath and instruction
booklet. Shpg. wt., 1 1b.
46 N 333 . List, $\$ 13.95$. NET. . . . . . . 9.95
(N) Model $12115^{\prime \prime}$ Pocket Slide Rule. Prerule. Employs same quality construction features as the Model 1311 above, but with fewer scales. Perfect low-cost rule for the student. Scales on one side: K, A, B, C1, C, D and L; $S$ and $T$ on other. Fluid-action, slide assembly; clear lucite cursor. Inlaid, permanently accurate calibrations are quickly and easily read. Supplied complete with simulated-leather sheath and easy-to-follow instruction book. Shpg. wt., 5 oz.
46 N $332 . ~ L i s t, ~$
46 N 33 2. List, $\$ 3.95$. NET.
. 2.99

## MOODY WRENCH AND SCREWDRIVER SETS

## SCREWDRIVER SETS

Type SC-5. Set of miniature screwdrivers contains 5 interchangeable hardened steel blades in sizes $.001^{\prime \prime}, .080^{\prime \prime}, 070^{\prime \prime}$, $.055^{\prime \prime}$ and $.040^{\prime \prime}$. Blades insert quickly and firmly into' screw type chuck. Excellent for camera and watch repairing, model building, radio and appliance repairing. Complete set of five blades, handle and plastic base with transparent dust cover. Base keeps blades in place, easy to find. Shpg. wt., 8 oz.
43 N 859 . List, $\$ 1.50$. 1 -11, EA.......................
12 sets or more, EACH.

## .......

EA.......
TyoePA-5 Combination Phillins Heot

Type PA-5. Combination Phillips Head Screw set and Allen head wrench set. Contains No. 0 and No. 1 Phillips type driver and Nos. 4, 6, and 8 Allen type wrench. With handle, stand and cover. 7 oz . 43 N 857. List, \$2.50. 1-11, EACH .1 .64

## MAGNETIC SOCKET WRENCH SET

Type BW-5. Wrench kit containing five tiny, interchangeable hexagonal socket wrenches with magnetized swivel top handles. Provide easy means of removing or inserting small nuts or screws in hard-to-get-at places-magnet retrieves small, metal parts. Particularly suitable for close work in crowded radio and TV chassis. A highly valuable tool kit for the repairman, hobbyist or experimenter and builder. Wrenches are quickly and easily interchangeable, fit snugly and securely in screw type chuck. Socket wrench sizes: $564^{\prime \prime}, 3 / 32^{\prime \prime}, 7 / 64^{\prime \prime} \cdot 1 /{ }^{1 \prime \prime}$ and
$5 / 32^{\prime \prime}$. Wrenches are made of heat treated steel. Handle is nickel$5 / 33^{\prime \prime}$. Wrenches are made of heat treated steel. Handle is nickel-
plated brass. In transparent plastic container with attractive plated brass. In transparent plastic container with attractive
colored base. Shpg. wt., 5 oz.
43 N 862 . List, $\$ 3.95$. NET. ...............................

# Hardware and Measurement Tools 

## UURKIN TAPE RULES



- Plain Easy-to-Read Graduations
- Attractive Die Cast Cases


## WHITE CLAD MEZURALL TAPE RULES

(A)
White clad $1 / 2^{*}$ wide Mezurall steel tapeconstruct Practical, all purpose tape rues for read jet black markine genal home use. Elasy-to white background on bonderized, tempered steel blade. Self-adjusting end hook for accurate butt end and hook-over measurements. Marked on both edges one side. First 12 inches of upper edge graduated to 32nds; balance to 16 ths .
 W928 8-Ft. Ta pe Rule. Shpg. wt., 5 oz. 50 N 176. List, \$1.35. NET wh., 5 oz. ...97¢ W9210 10-Ft. Tape Rulo. Shpg. wt., 6 oz. 19 W9212 12-Ft. Tape Rule. Shpg. wt., 71/2 oz.
50 N 178 . List, \$1.98. NET.......... 1.32

## MEZURMATIC TAPE RULES

B White clad tape rules with touch control Beavades, ball bearing rewind governors, heavy-duty end hooks and non-slip design cases. Gentle pressure on control button lets blade glide smoothly back into case. Governor controls rewind speed. End hook self-adjusting for accurate measurements. Blade graduated on
top edge in feet and inches to 1 ths bottom top edge in feet and inches to 16 ths, bottom edge in 16ths with the first 12 inches graduated white background
W728 8 Ft. Tape Rulo. Shpg. wt, 7 oz .
50 N 79 . List, \$1.55. NET. wt........ I 1.09 W7211 100 Ft. Tappe Rul. Si......... $11 / 2$ oz. W7212 12-Ft. Tapa Rule. Shpg. wt., 8 oz.
50 N 81 . List, $\$ 2.19$. NET.......... 1.46
CHROME-CLAD MEZURMATIC TAPE RULES
(B) As above with durable, non-glaring, rust B and corrosion resistant, chrome clad blade. Series of electro platings strengthens all metal blades. Final plating is satin chrome white. Contrasts sharply with bold, jet black gradua-
tions on both edges, 16 ths on one edge with tions on both edges, 16 ths on
first $12^{\prime \prime}$ to 32 nds on other edge. 50 N 182 . List, $\$ 2.15$. NET 50 N 183 . List, $\$ 2.50$. NET........, 7 oz.

## BANNER WHITE-CLAD TAPES



High-quality, $3 / 8^{\prime \prime}$ wide steel tapes featuring durable construction and accurate, highly legible markings. The ideal gen-eral-purpose measuring plumbers, surveyors, and for general shop use. Have easy-to-read jet black figures and graduations on a snow white background. The hard, smooth triple-baked synthetic finish on bonderized steel is easy to keep clean, extra mar,-proof

Hook ring on free end for "walk-away" measuring ring on tree person to measure unassisted. Durable, vinyl covered, steel case. Folding flush handle is opened by push pin. Easy action crank mechanism rewinds tape rapidly Shpg. wts., HW225 1 lb.; HW226 2 lbs | Stock No. | Mfr's No. | Length |  |
| :--- | :--- | :--- | :--- |
| 50 N 184 | HW223 | $\frac{\text { List }}{50^{\prime}}$ | $\frac{\text { NET }}{5.29}$ |
| 3.52 |  |  |  |

HANSON ECONOMY 1 " MICROMETER


Pre-Tested and Adjusted
Precision-made micrometer. Has full-range accuracy of $.0005^{\prime \prime}$ Excellent for the Amateur and experimenter. An aid for grind Ing crystals, precise measurement of metal thickness, etc. Carefully designed to assure minimum frame distortion. Employs smooth operating, screw-type anvil to permit simplified zero adjustment. Includes spring-friction stop ratchet are fully chrome-plated to inhibit rust Each miremeter justed micrometer pre-tested and factory ad 46 N 249 . NET.......
294
2.77

BARGAIN HARDWARE KIT


- Versatile Assortment
- Handy Container

Save on this amazingly low priced assortment of rivets, rubber grommets, nuts, screws, lock washers, right angle brackets, self-tapping useful radio and TV hardware. Valuable collection of often needed parts for the electronics repairman, hobbyist and ham operator. Includes nickel and cadmium plated, and solid aluminum pieces. Supplied in convenient transparent plastic container. Shpg. wt., 11/4 lbs.97C
44 N 315 . NET...........................97C
G-C SCREW AND NUT ASSORTMENT


No. 7060. Two-pound assortment of most often used nuts and screws in radio-TV, electronics repairing, experimenting and building. A valuable assortment for the ham, hobbyist, repairman. Also excel lent for household repairs. Nut sizes from 4-40 to 8-32, screw sizes from $1 / 4^{\prime \prime}$ to $1^{\prime \prime}$. All pieces nickel and cadmium plated. Rust resistant. Supplied in handy plastic container. Shpg. wt., $21 / 4 \mathrm{lbs}$.
50 N 030 . NET. .........

87c

## G-C HOME-SHOP ASSORTMENTS



Handy assortments of most-often-needed hardware. Provide many hard-to-get screws, springs, solder lugs, nuts, and bolts often needed by experimenters and servicemen. Packed in sturtents can be quickly identified from any tents can be quickly identified from any angle. Have tight-sealing, hinged covers to keep out
dirt and moisture.
No. 9116 Solder Lug Assortment. Includes generous quantity of different size solder lugs. For all types of electrical connections-particularly suited for radio chassis, control panels, test instruments, laboratory equipment, etc. 43 N 370 . ${ }^{\text {ShET.. }}$

97c
No. 9117 Screw and Nut Assortmont. Contains various size screws, nuts and bolts. Ideal addition to the tool box for repair jobs. Popular sizes used for mounting terminal strips, transformers, tube sockets, relays, switches, etc. 43 N $37 i$. ${ }^{\text {St }}$ NT.

97c
No. 9118 Spring Assortment. Package of different type springs for use with dial cords push-buttons, etc. Includes both extension and 43 N 372. NET............................. . . 97 C

No. 9193 Sheet Metal Screw Assortment. A selection of sheet metal screws for all applications. 700 screws in sizes $4 x^{1 / 2 "}$ to $8 \times 1^{\prime \prime}$. In compartmented plastic box. Shpg. wt., 2 lbs. 3.24
50 N 172. NET. . . . . . . . . . . . . . . . . . 24
No. 9199 Machine Screw Assortment. A complete assortment of round head screws and nuts most often needed in electronics and radioTV repairing. Machine screws from $4-40 \times 1 / 2^{\prime \prime}$
through $8-32 \times 1 / 2^{\prime \prime}$. Hex nuts from $4-40 x^{1 / 4}$ through
through $8-32 \times 1 / 4^{\prime \prime}$. 675 pieces total, in plastic through $8-32 \times 1 / 4^{\prime \prime} .675$ pieces total, in plastic
box. Wt., $11 / 2 \mathrm{lbs}$.
50 N I73. NET. . . . . . . . . . . . . . . . . . . . 3.24
CENTRAL 1 " PRECISION MICROMETER


Model 12RL. A high quality moderately priced $0-1^{\prime \prime}$ microme ter designed for the critical user. An ideal tool for the machine shop, auto shop or the hobbyist. Spindle has ratchet that adjusts to any touch for accurate measurements. Extra space between large graduations for easy, ac curate readings. Has precision ground and frame and knurled, chromium plated thimble Can be locked at any setting. Pre-adjusted with gauge blocks. Wt., 8 oze.
50 N 060 . List, $\$ 13.50$. NET......... 9.95

## Hardware for Plant and Shop



General hardware for radio-TV construction and repair. Available in $32 \phi$ quantities packed in plastic boxes or in lots of 144 and 1000 . Nuts, screws and washers are nickel plated except Fig. C (brass finish.)
(A) Round Head Screws. General-purpose type in most sizes required Plated steel. Shpg. wts.: 3 oz .; 14 oz .; and 5 lbs.

| Slze | 32¢ container |  | 144 Lot Pkg. |  | 1000 Lot Pkg. |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | No. | Quan. | No. | NET | No. | NET |
| 4-36x $1 / 4^{\prime \prime}$ | $44 \times 502$ | 40 | 44 N 741 | . 64 |  | 3.79 |
| 4-36x $1 / 2^{\prime \prime}$ | $44 \times 503$ | 35 | 44 N 744 | . 69 | 44 N 745 |  |
| 4-36x $3 / 4^{\prime \prime}$ | 44 N 504 | 35 | 44 N 747 | . 79 | 44 N 748 | 4.76 |
| 6-32x ${ }^{1 / 4}{ }^{\prime \prime}$ | $44 \times 505$ | 40 | 44 N 703 | . 71 | 44 N 704 | 4.16 |
| 6-32x ${ }^{1 / 2}{ }^{\prime \prime}$ |  | 30 |  | . 81 | 44 N 712 | 4.83 |
| $\begin{aligned} & 6-32 \times x^{3} /^{\prime \prime} \\ & 6-32 \times 1^{\prime \prime} \end{aligned}$ | 44 N 507 | 30 30 | 44 N 716 | . 95 | 44 N 717 | 8 |
| $\begin{gathered} 6-32 \times 1^{17} \\ 6-32 \times 11^{\prime \prime} \\ \hline \end{gathered}$ | 44 N 508 | 30 30 | 44 N 721 | 1.09 | 44N 722 <br> 44 | 6.53 7.83 |
| 8-32x1/4" | 44 N 518 | 30 | 44 N 738 | . 91 | 44 N 739 | 5.43 |
| 8-32x ${ }^{\text {/ }}{ }^{\prime \prime}$ | 44 N 519 | 25 | 44 N 753 | . 98 | 44 N 754 | 5.86 |
| 8-32x ${ }^{\prime \prime}{ }^{\prime \prime}$ | 44 N 529 | 25 | 44 N 756 | 1.06 | 44 N 757 | 6.35 |
| $8-32 x^{3 / 4}$ | 44 N 535 | 25 | 44 N 76 | 1.22 | 44 N 762 |  |
| $8-32 \times 1$ " | 44 N 546 | 20 | 44 N 768 | 1.39 | 44 N 769 | 8.32 |
| 10-32x $1 / 2^{\prime \prime}$ | 44 N 548 | 20 | 44 N 777 | 1.25 | 44 N 778 | 7.48 |
| 10-32x ${ }^{3} /{ }^{\prime \prime}$ | 44 N 549 | 20 | 44 N 780 | 1.46 | 44 N 781 | 8.75 |
| 10-32x1 | 44 N 553 | 17 | 44 N 783 | 1.65 | 44 N 784 | 9.84 |
| (B) Selfwith deep | $\begin{aligned} & \text { o tappi } \\ & \text { driver } \end{aligned}$ |  | tted type required |  | nel | rack |


| Size | 32¢ container |  | 144 Lot Pkg. |  | 1000 Lot Pkg. |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | No. | Quan. | No. | NET | No. | NET |
| $4 x^{1 / 2}$ | $44 \times 564$ | 35 | $44 \mathrm{NBO3}$ | 1.26 | 44 N 804 | 7.57 |
|  | 44 N 565 | 30 | 44 N 808 | 1.26 | 44 N 809 | 7.57 |
| $8 \mathrm{8x} \mathrm{l}^{\prime \prime}{ }^{\prime \prime}$ | 44N <br> 44 | 25 20 | 4444 <br> 44823 | 1.40 | 44N 814 | 8.38 |
| 10x1/2* | 44 N 569 | 15 | 44 N 833 | 2.28 | 44 N 83 | 3.67 |



D


E


Industrlal Users: Allied can make immediate shipment from stock all radio-TV hardware below, in 144 and 1000 quantity lots. Orders can be placed by phone, wire or letter.
C Ornamental Head Screws. For use on panels, etc. Shpg. wts.: C 4 oz .; 13 oz .; 6 lbs .

| 12 | $32 ¢$ con |  | N4 Lot Pkg. |  | Lot Pkg. |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | No | Q |  |  | No. | NET |
|  |  |  | $44$ |  | $44 \text { N } 672$ |  |
|  |  |  |  |  |  |  |
| Bindling Head Machine Screws. For general machine shop use. Plated. Shpg. wts.: 4 oz.; 7 oz.; $21 / 2$ lbs. |  |  |  |  |  |  |
|  |  | 3535 |  |  |  | $\begin{aligned} & \hline 4.15 \\ & 4.41 \\ & 3.06 \\ & 3.70 \\ & 3.96 \\ & \hline \end{aligned}$ |
|  | 44 N 577 |  |  |  |  |  |
|  |  |  |  |  |  |  |
|  |  |  |  |  |  |  |

[E] Hex Nuts. Plated steel. Shpg. wts.: 4 oz .; $8 \mathrm{oz} . ; 3 \mathrm{lbs}$.

|  |  | 30 | 44 | . 87 | 44 | 5.18 |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| $\begin{aligned} & 4- \\ & 6 \\ & \hline \end{aligned}$ | 44 N 579 | 30 | 44 N | . 96 | 44 |  |
|  |  |  | 44 N |  | $44 \begin{array}{r}\text { N } \\ 4\end{array}$ | 7.53 |
| 10-32x ${ }^{3 / 8}$ | 44 N 585 |  |  |  |  |  |
| $\begin{aligned} & 6-32 \times 1 / 4^{\prime \prime} \\ & 8-32 \times 1 / 4 \\ & \hline \end{aligned}$ | 44 N 5886 | 30 30 | 44 <br> 44 N 937 <br> 4 | . 90 | 44 <br> 44 <br> N 953 | 5.40 <br> 5.73 |

FF Split Lockwashors. Tempered steel. Wts.: 2 oz.; 4 oz.; 2 lbs.

| +6 screw | 44N 588 <br> 1 | 65 55 | $\left\lvert\, \begin{array}{ll}44 & N 662 \\ 44 & \text { N } 665\end{array}\right.$ | . 59 | 44 N 6631 | $\begin{aligned} & 3.56 \\ & 2.94 \\ & \hline \end{aligned}$ |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| G Internal Star Lockwashers. Shpg. wts.: 2 oz.; 4 oz.; 11/4 lbs. |  |  |  |  |  |  |
| 6 screw 8 screw |  | 60 60 60 | $\left\|\begin{array}{lll}44 & \mathrm{~N} & 923 \\ 44 & \mathrm{~N} & 928 \\ 44 & \mathrm{~N} & 93\end{array}\right\|$ | .59 .66 .66 | $\|$44 <br> 44 <br> 44 <br> $\mathbf{N}$ <br> $\mathbf{N}$ <br> N | 3.56 <br> 3.90 <br> 3.90 |

O
H
oldor Lugs. Sturdy, tinned solder lug units. Easily accommodate th screw numbers given below; No. 8 holes also take No. 6 screws. ShDg wts.: 2 oz.; 4 oz.; 1 lb.

| Size | 324 container |  | 144 Lot Pkg. |  | 1000 Lor Pkg. |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | No. | Quan. | No. | NET | No. | NET |
| 8. Fig. H. | 44 N 603 | 30 | 44 N 636 | 1.49 | 44 N 637 | 8.93 |
| ${ }^{\text {f }}$ 8. Fig. J. | 44 N 604 | 30 | 44 N 639 | . 65 | 44 N 640 | 9.37 |
| 8. Fig. L. | 44 N 607 | 30 | 44 N 642 | 1.94 | 44 N 643 |  |
| 8. Fig. M. | 44 N 608 | 30 | 44 N 648 | 1.15 | 44 N 649 | 6.85 |

(N) Rubber Grommets. Soft, black stock. Size shown below is chassis $N$ mounting hole required. Shpg. wts.: 2 oz.; 8 oz.; 4 lbs.

P
$T T W$

R Snap Hole Plugs. Fill hole size listed. $3 \mathrm{oz} . ; 11 / 4 \mathrm{lbs}$; 10 lbs.

| Sla | $32 ¢$ contalner |  | 144 Lot Pkg. |  | 1000 Lot Pkg. |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | No. | Quan. | No. | NET | No. | NET |
|  | 44 N 659 | 8 | 44 N 286 | 2.79 |  |  |
| $38^{\circ}$ | $44 \begin{aligned} & \text { N } 679 \\ & 44 \\ & \mathbf{N} 689\end{aligned}$ | 8 | $44 \begin{aligned} & \text { N } 289 \\ & 44 \\ & \text { N }\end{aligned}$ | 3.74 3.97 | 44 N 293 |  |
|  | $44 \begin{array}{r}\text { N } 689 \\ 44 \\ \hline\end{array}$ | 5 | 44 N 295 | 4.70 | 44 N 296 | 28.22 |
| $1{ }^{\prime}$ | 44 N 707 | 85 | 44 N 298 | 6.47 | 44 N 299 | 38.80 |

S. Screen-Vent Snap Hole Plug. Shpg. wts.: 3 oz.; $11 / 4 \mathrm{lbs}$; 10 lbs .
$1^{\prime \prime} \quad \mid 44$ N $396|1| 144$ N $394|27.93| 44$ N 395|167.60
Cable Clamps. Fit cable sizes below. Wts.: 3 oz.; 12 oz .: 5 lbs.

(W) Rubber Foot. Take screws, nails, etc. For wood or metal cabinets. $\boxed{4}$ Shpg. wts.: 3 oz.; 9 oz.; $41 / 4$ lbs.


## HANDY PLASTIC BOXES OF MOST-OFTEN NEEDED SERVICING HARDWARE

Most-often needed hardware used in radio, TV and electronics-packaged in convenient plastic boxes. No loss or spillage.

| Stock No. | Description | Quan.* |
| :---: | :---: | :---: |
| 43 N 332 | Extra small size escutcheon and wood screws. | 25 |
| 43 N 302 | Wood screws w/round and countersunk heads. | 25 |
| 43 N 300 | $1 / 4-1^{\prime \prime}$ mach. screws w/round \& flat heads: | 5 |
| 43 N 301 | Nos. 2 \& $\& 4$ screws \& nuts. | 35 |
| 43 N 367 | TV back-cover screws. | 20 |
| 43 N 304 | Nickel-plated rack screws \& cup washer | 15 |
| 43 N 303 | Sheet metal screws, asst.-6, 8, 10. Round, hex-slotted \& unslotted. | 25 |
|  | Phono needle set screws-2-56, 2-64, 1-72. | 12 |
| 43 N 329 | Spade bolts, $\# 6$ hole size | 15 |
|  | Assorted set screws-6-32, 8-32, 10-32. | 15 |
| 43 N 322 | Self-locking speed nuts. | 30 |
|  | Internal lockwashers, tempered. No. 2 to $3 / 8^{\prime \prime}$. | 50 |
| 43 N 307 | Machine screw nuts-6-32, 8-32, 10-3 | 30 |
| 43 N 308 | Hex \& ring mounting nuts. Used on controls, switches, etc. |  |
| 43 N 330 | Insulating washers. Nos. 6 to $3 / 8^{\prime \prime}$. | 35 |
| 43 N312 | Steel washers for $44,6,8,10,1 / 4^{\prime \prime}$ screws. | 80 |
| 43 N313 | Rings \& C-washers for $3 / 1 / 11^{1 / /^{\prime}}$ shaft | 25 |
| 43 N 316 | Snap-hole plugs-1/4" ${ }^{\prime \prime}$ to $1^{\prime \prime}$. | 6 |
| 43 N 317 | Asst. ventilating hole plugs. | 5 |
| 43 N 341 | TV cord rivets, $1 / 16^{-3 / 66}$ diam., w/washers. | 50 |

*Approximate quantities.
All items are precision-made from high-quality materials to insure de: pendable service. All are assortmonts. Av. shpg. wt., 4 oz.

| Stack | Description | Quan.* |
| :---: | :---: | :---: |
| $43 \times 319$ | Terminal \& solder lugs. |  |
| 43 N 342 | Tinned brass. 86-10. <br> Metal spacers. For $\# 6$ \& 8 screws. | 30 |
| 43 N 343 | Insulated spacers for 46 \& 8 screws. | 12 |
| 43 N 321 | Twin lead wiring nails. | 35 |
| 43 N 320 | Cotter \& hairpins. | 50 |
| 43 N 323 | Cable clamps w/mounting hole for $1 /$ to $^{5 / 46}$ dia. cables. |  |
| 43 N 310 | for $1 / 8$ to $3 / 16^{\circ}$ dia. cables. | 10 |
| 43 N311 | Small size expansion springs. | 10 |
| 43 N 327 | Rubber feet w/wood screws. | 8 |
| 43 N 337 | Small-size dial drive springs. | 10 |
| 43 43 43 N 328 | Large \& small dial drive springs. Cord strain relief for POSJ type wire. | 8 |
| 43 N 325 | Cord strain relief for POSJ type wire. Radio knob springs. | 18 |
| 43 N 344 | Allen wrench set. 4 hex: for $\boldsymbol{+ 4}$ to 10 | Set of 4 |
| 43 N 315 | Rubber chassis mounts. | 10 |
| 43 N 345 | Spline wrenches for set screws to $1 / 4^{\prime \prime}$ |  |
| 43 N 314 | \& cap screws to No. 8 . | Set of 4 15 |
| 43 N 335 | Standard thin dial cord. | 10 ft . |
| 43 N 336 | Standard dial cord. | 10 ft . |
| *Approximate quantities.NETPER BOX....... |  | 32c |
| Western Ave ${ }_{4}$ Chicago 80, Ulinais |  | 295 |

# Quality Terminals-Installation Tools 

## TERMINALS FOR EVERY USE

4



Y明${ }^{2}$ 848




## 

Have a barrel section into which a conductor is staked, and either a ring or spade tongue type terminal connection. Provide quick and easy, tion. Allied can supply any type of Thomas \& Betts terminals (including types not listed below) in 5000 quantity lots. Write our Industrial Division for prices. All Sta-Kon terminals and connectors are U.L. Approved. *With insulation grip. $\dagger$ Self-insulated, with insulation grip. § Insulated connectors. $\ddagger$ Disconnects. 100 per pkg.
 QUALITY SOLDERLESS TERMINALS
Use with Type 1902 crimping tool below, to make quick connections between terminal and wire. *Included in 2195 kit shown below. $\dagger 1 / 4^{\circ}$ male tab. 8 Female tab socket. $\ddagger 1 / 4^{\prime \prime}$ angle male tab. \#Angle female tab socket.
$+\mid F e m a l e ~ t a b ~ s o c k e t ~ o n ~ o n e ~ e n d ; ~ t a k e s ~$
$5 / 32^{\prime \prime}$
snap terminal on other end. Av. shpg. wh., per pkg. of $50,4 \mathrm{oz} .50$ per pkg.

| Stock No. | Fig. ${ }^{\text {² }}$ | $\begin{aligned} & \text { Mfr's } \\ & \text { No. } \end{aligned}$ | Type | $\left\|\begin{array}{c} \text { Wire } \\ \text { Size } \end{array}\right\|$ | $\begin{aligned} & \text { Stud } \\ & \text { Size } \end{aligned}$ | Shpg. Wts. |  | NET PER PKG. |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  |  |  |  |  | Per100 | Per 1000 | 1-9 | 10-Up |
| $\begin{aligned} & 43 N 756 \\ & 43 N 757 \\ & 43 N 758 \end{aligned}$ | H H H | $\begin{aligned} & \text { A18-6 } \\ & \text { A18-10 } \\ & \text { B14-6 } \end{aligned}$ | Ring <br> Ring <br> Ring | $\begin{aligned} & \overline{22-18} \\ & 22-18 \\ & 20-14 \\ & \hline \end{aligned}$ | $\begin{gathered} 6 \\ 10 \\ 6 \end{gathered}$ | $\begin{aligned} & 502 . \\ & 502 . \\ & 602 . \end{aligned}$ | $\begin{array}{ll} \hline 21 / 2 \mathrm{bs} . \\ 21 / 2 & \text { lbs. } \\ 3 & \text { lbs. } \end{array}$ |  |  |
| $\begin{aligned} & 43 N 759 \\ & 43 N 760 \\ & 43 N 761 \\ & \hline \end{aligned}$ | $\begin{aligned} & \mathrm{H} \\ & \mathrm{H} \\ & \mathrm{H} \end{aligned}$ | $\begin{array}{\|l} \text { B14-8 } \\ \text { B14-10 } \\ \text { B14-14 } \\ \hline \end{array}$ | Ring <br> Ring <br> Ring | $\begin{aligned} & 20-14 \\ & 20-14 \\ & 20-14 \end{aligned}$ | $\begin{aligned} & 8 \\ & 10 \\ & 1 / 4 \end{aligned}$ | $\begin{array}{r} 7020 \\ 5 \\ 502 . \\ 1202 . \end{array}$ | $\left\|\begin{array}{\|ll} \hline 31 / 2 & \text { lbs. } \\ 2112 & \text { lbs. } \\ 61 / 2 & \text { lbs. } \end{array}\right\|$ | 3.75 | 3.00 |
| $\begin{aligned} & 43 N 762 \\ & 43 N 763 \\ & 43 N 764 \end{aligned}$ | $\begin{aligned} & \mathrm{H} \\ & \mathrm{H} \\ & \mathrm{H} \end{aligned}$ | $\begin{aligned} & \text { C10-6 } \\ & \text { C10-10 } \\ & \text { C10-14 } \end{aligned}$ | $\begin{aligned} & \text { Ring } \\ & \text { Ring } \\ & \text { Ring } \end{aligned}$ | $\begin{aligned} & 16-10 \\ & 16-10 \\ & 16-10 \end{aligned}$ | $\begin{aligned} & 6 \\ & 10 \\ & 1 / 4 \end{aligned}$ | 9 oz. 10 oz 13 oz. | $41 / 2 \mathrm{lbs}$. $51 / 2 \mathrm{lbs}$. $71 / 2 \mathrm{lbs}$. | 4.69 | 3.75 |
| $43 N 765$ $43 N 766$ $43 N 767$ | $\begin{aligned} & \hline 8 \\ & 8 \\ & \mathbf{j} \\ & \hline \end{aligned}$ | $\begin{aligned} & \text { B14-6G* } \\ & \text { B14-10G* } \\ & \text { A18-6F } \end{aligned}$ | Ring <br> Ring <br> Spade | $\begin{aligned} & 16-14 \\ & 16-14 \\ & 22-18 \end{aligned}$ | $\begin{array}{r} 6 \\ 10 \\ 6 \\ \hline \end{array}$ | $\begin{aligned} & 602 . \\ & 602 . \\ & 502 . \end{aligned}$ | $\begin{array}{\|l\|l} \hline 3 & \text { lbs. } \\ 3 & \text { lbs. } \\ 21 / 2 & \text { lbs. } \end{array}$ | 3.75 | 3.00 |
| $\begin{aligned} & 43 N 768 \\ & 43 N 769 \\ & 43 N 770 \\ & \hline \end{aligned}$ | $\begin{aligned} & \mathrm{J} \\ & \mathrm{D} \\ & \mathrm{D} \end{aligned}$ | $\begin{aligned} & \hline \text { B14-10F } \\ & \text { B14-6FG* } \\ & \text { B14-10FG } \end{aligned}$ | $\overline{\text { Spade }}$ <br> Spade <br> Spade |  | $\begin{array}{r} 10 \\ 6 \\ 10 \\ \hline \end{array}$ | $\begin{aligned} & 7 \mathrm{oz} \\ & 7 \mathrm{oz} . \\ & 8 \mathrm{oz} . \\ & \hline \end{aligned}$ | $\begin{array}{ll} 31 / 2 & \text { lbs. } \\ 3^{1 / 2} & \text { lis. } \\ 4^{\text {lbs. }} \end{array}$ |  |  |
| $\begin{aligned} & 43 N 771 \\ & 43 N 772 \\ & 43 N 773 \\ & 43 N 774 \\ & \hline \end{aligned}$ | $\begin{aligned} & \hline \mathbf{A} \\ & \mathbf{A} \\ & \mathbf{A} \\ & \mathbf{A} \end{aligned}$ | RA18-6 $\dagger$ RA18-10 $\dagger$ RB14-6 $\dagger$ RB14-10 $\dagger$ | Ring <br> Ring <br> Ring <br> Ring | $\begin{aligned} & 22-18 \\ & 22-18 \\ & 16-14 \\ & 16-14 \end{aligned}$ | $\begin{array}{r} 6 \\ 10 \\ 6 \\ 10 \\ \hline \end{array}$ | $\begin{aligned} & 5 \mathrm{oz} . \\ & 5 \mathrm{oz} . \\ & 6 \mathrm{oz} . \\ & 6 \mathrm{oz} . \end{aligned}$ | $\begin{array}{ll} \hline 21 / 2 & \text { bss. } \\ 21 / 2 & \text { lbs. } \\ 3 & \text { lbs. } \\ 3 & \text { lbs. } \end{array}$ | 5.00 | 4.00 |
| $43 N 775$ $43 N 776$ $43 N 777$ $43 N 778$ $43 N 779$ | $\begin{aligned} & \mathrm{c} \\ & \mathrm{c} \\ & \mathrm{C} \\ & \mathrm{c} \\ & \mathrm{c} \\ & \hline \end{aligned}$ | RA18-6F $\dagger$ <br> RA18-10F $\dagger$ <br> RB14-6F $\dagger$ <br> RB14-8F $\dagger$ <br> RB14-10F $\dagger$ | $\overline{\text { Spade }}$ <br> Spade <br> Spade <br> Spade <br> Spade | \% 2 2-18 | $\begin{array}{r} 6 \\ 10 \\ 6 \\ 8 \\ 10 \\ \hline \end{array}$ | $\begin{aligned} & 7 \mathrm{oz.} \\ & 7 \mathrm{oz} . \\ & 8 \mathrm{oz} . \\ & 8 \mathrm{oz} . \\ & 9 \mathrm{oz} . \end{aligned}$ | $31 / 2 \mathrm{lbs}$.  <br> $31 / 2$ $\mathrm{ls}$. <br> 4 lbs. <br> 4 $\mathrm{ls}$. <br> $41 / 2 \mathrm{lbs}$.  | 5.00 | 4.00 |
| $43 N 780$ $43 N 781$ $43 N 782$ $43 N 783$ | $\begin{aligned} & \hline \mathbf{E} \\ & \mathbf{E} \\ & \mathbf{F} \\ & \mathbf{G} \\ & \hline \end{aligned}$ | 2RA18§ RR14§ B14-250F $\dagger$ B14-250T $\ddagger$ |  | $\left\|\begin{array}{l} 22-18 \\ 16-14 \\ 20-14 \\ 20-14 \end{array}\right\|$ |  | 7 oz. 7 oz. 6 oz. 6 oz. | $\begin{aligned} & 31 / 2 \mathrm{lbs.} \\ & 31 / 2 \\ & 3 \\ & 3 \\ & 3 \\ & \text { lbs. } \\ & 3 \\ & \text { ibs. } \\ & \text { ibs. } \end{aligned}$ | $\begin{aligned} & 6.25 \\ & 6.25 \\ & 3.75 \\ & 3.75 \end{aligned}$ | $\begin{aligned} & 5.00 \\ & 5.00 \\ & 3.00 \\ & 3.00 \\ & \hline \end{aligned}$ |

THOMAS AND BETTS WTIIIM INSTALLING TOOL

A high-quality wide-range plier tool, with rugged wire cutters. For use with series A, B, and C uninsulated terminals listed above; also with Thomas \& Betts series AB and PT terminals. Makes electrical wiring, repair and assembly jobs easier. Engineered to provide smooth action and long life. Precision-fit joints provide free, positive action. Accurate cutting and gripping are assured by careful alignment of jaws and cutting edges. Handles are shaped to provide completely comfortable grip and balance. Shpg. wt., ${ }^{1}{ }^{1 \mathrm{lb}} \mathbf{N}$.
3.00

## TYPE WT152 HAND TOOL

Pliers for easy installation of RA, RB and RC series Sta-Kon terminals. Freely moving joints and careful alignment of jaws and cutting edges assure acurate cutting and gripping. Has comfortable handle-grip for minimum fatigue. Shpg. wt., 1 lb .
5.00 43 N 785. NET.

| Stock No. | Fig. | $\begin{aligned} & \hline \text { Mfr's } \\ & \text { No. } \end{aligned}$ | Type | $\begin{aligned} & \hline \text { Wire } \\ & \text { Size } \end{aligned}$ | $\begin{aligned} & \text { Stud } \\ & \text { Size } \end{aligned}$ | NET PER PKG (50 PER PKG) |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  |  |  |  |  | 1 | 2-19 | 20-99 | 100-Up |
| 43N752 | H | 2300* | Ring | 22-16 | 4-6 |  |  |  |  |
| $43 N 753$ | H | 2301* | Ring | 22-16 | 4-6 |  |  |  |  |
| 43N754 | H | 2302* | Ring | 22-16 | 8-10 | 1.18 | 1.09 | . 98 | . 88 |
| $43 N 755$ | H | 2400* | Ring | 16-14 | 4-6 |  |  |  |  |
| 43 N 789 | H | 2401* | Ring | 16-14 | 4-6 |  |  |  |  |
| 43 N 790 | H | 2402* | Ring | 16-14 | 8-10 |  |  |  |  |
| 43 N 791 | H | 2403 | Ring | 16-14 | 12-1/4 | 1.47 | 1.35 | 1.22 | 1.1 |
| $43 N 792$ | H | 2502 | Ring | 12-10 | 8-10 | 1.47 | 1.35 | 1.22 | 1.11 |
| 43 N 793 | H | 2503 | Ring | 12-10 | 12-1/4 | 1.96 | 1.80 | 1.63 | 1.47 |
| 43 N 794 | J | 2600* | Spade | 22-16 | 4-6 | 1.05 | . 97 | . 87 | . 78 |
| 43N795 | J | 2601* | Spade | 16-14 | 4-6 | 1.18 | 1.09 | . 98 | . 88 |
| 43N796 | J | 2602* | Spade | 16-14 | 8-10 | 1.18 | 1.09 | . 98 | . 88 |
| 43 N 729 | J | 2700 | Spade | 22-16 | 4-6 | 1.05 | . 97 | . 87 | . 78 |
| $43 N 797$ | W | 3202 | 5/32 ${ }^{\prime \prime}$ Snap | 18-14 | ... . | . 91 | . 84 | . 76 | . 69 |
| $43 N 798$ | K | 2802 | Flag | 22-16 | 8-10 | 1.18 | 1.09 | . 98 | 88 |
| $43 N 799$ | K | 2902 | Flag | 16-14 | 8-10 | 1.18 | 1.09 | . 98 | . 88 |
| $43 N 717$ | L | 3101 | Butt | 22-16 |  | . 91 | . 84 | . 76 | . 69 |
| $43 N 718$ | L | 3102 | Butt | 16-14 |  | . 91 | . 84 | . 76 | 69 |
| $43 N 719$ | L | 3103 | Butt | 12-10 |  | 1.18 | 1.09 | . 98 | . 88 |
| 43 N 727 | M | 3300* | Hook | 22-16 |  | 1.05 | . 97 | . 87 | . 78 |
| $43 N 730$ | G | 3401 | Tab $\dagger$ | 18-14 |  | 1.18 | 1.09 | . 98 | . 88 |
| 43N731 | F | 3402 | Tab§ | 18-14 |  | 1.18 | 1.09 | . 98 | . 88 |
| 43 N 732 |  | 3501 | Tab $\ddagger$ | 18-14 |  | 1.18 | 1.09 | . 98 | . 88 |
| 43 N 733 |  | 3502 | Tab\# | 18-14 |  | 1.18 | 1.09 | . 98 | . 88 |
| $43 N 734$ | N | 3601 | Adapter** |  |  | 1.96 | 1.80 | 1.63 | 1.47 |
| 43N735 | P | 3602 | Adaptert $\dagger$ |  |  | 1.96 | 1.80 | 1.63 | 1.47 |
| $43 N 736$ | R | 3701 | Adapter** |  |  | 1.78 | 1.65 | 1.49 | 1.33 |
| 43 N 737 | S | 3702 | Adapter $\dagger \dagger$ |  |  | 1.78 | 1.65 | 1.49 | 1.33 |



## TYPE 2195 SERVICE KIT

Handy kit contains $\$ 5.00$ worth of solderless terminals in assorted sizes in addition to Type 1902 crimper-cutter tool described below. The wide selection of types and sizes permit making almost any type of lug connection in radio or TV work; includes lightning spade" and hook-type terminals. Clear plastic container supplied with kit. $83 / 4 \times 6 \times 13 / 4^{4}$. 44 N 479 . NET
8.77

TYPE 1902 CRIMPING TOOL
Crimping and bolt cutter tool designed for electricians, servicemen, etc. Neatly crimps solderless terminals; shears machine screws insulation from \#2, \#20, \#18, \#16 \#14, \#12, nsulatio AWG wire, Stel jaws with red plasand \#10AWG wire. Steel jaws with red plas-
tic handles. Shpg. wt., 1 lb.
44 N 843 . NET................... 3.87

A-MP CRIMPING TOOLS AND SOLDERLESS TERMINALS

## "SUPER CHAMP" CRIMPING TOOL



Type 47100-1. Versatile hand tool for electricians, maintenance men, etc. Crimps insulated solderless terminals, shears machine screws, measures stud sizes, cuts and strips wire. Shears machine screws: 4-40, 6-32, 8-32, 10-32 and $10-24$. Separate notches strip insulation from \#18, \#16, \#14 and $\$ 12$ AWG wire. Measures stud (machine screw) sizes: 4, $6,8,10$, $12,1 / 4^{\prime \prime}, 5 / 6^{\prime \prime}$ and $3 / 8^{\prime \prime}$. Designed for heavy-duty use-made of hardened tool steel, has insulated yellow plastic handles for a secure and comfortable grip. Shpg. wt., 1 lb .
45 N 321 . NET.
.4 .95
Type 49835. Same as above, but for crimping non-insulated terminals.

TERMINAL KIT


Terminal kit containing an assortment of the 12 most popular terminal wiring. 240 insulated, solderless terminals are supplied plus the heavy-du-, ty "Super Champ", crimping and wiring tool described at left. Terminals and tool come in transparent plastic transparent plastic handy storageor carrying box. Ideal for radio-TV and electrical servicemen, automobile repairmen, hobbyists, etc. Eliminates need for solder-ing-will save time and labor on many occasions. Compartmented plastic box makes it at a glance when it is time to order more. Assortment includes ring, spade-butt and nylon closed-end connectors. For all wire sizes from 10 to 22 and most-often used stud sizes. An invaluable outfit for general wiring. Box size, $91 / 2 \times 61 / 2 \times 22^{2}$. Shpg. wt., 2 lbs.
$45{ }^{\text {N }} 322$. NET..............

## GENERAL WIRING TERMINALS

Eliminate soldering. Simple crimping operation provides extremely strong, neat, vibrationproof connection. Inside of connector ribbed for firm grip on wire. Wisulated terminals-plas$\dagger 16$ to 22 . Shpg. wt., 80 oz 100 per pkg.

|  | FIg |  | Typo | Size |  |
| :---: | :---: | :---: | :---: | :---: | :---: |
| 5 N | A | 34149** | Ring |  | - |
| N | A |  | Ring |  |  |
| 45 N 303 | ${ }^{\text {L }}$ | 34158* | Butt | 4-6 |  |
| 45 N | A | 311 | Ring | 8-10 | 5.34 |
| N | C | 341 | Spa |  | 5.34 |
| N | C | 341 |  |  |  |
| 45 N 308 | $\stackrel{L}{L}$ | 34154*+ |  |  |  |
| 45 N 310 | H | 33214 $\dagger$ | Ri | 8-10 | 3.73 |
| 45 N 311 | H | 341 | Rin | 4-6 |  |
| 45 N | ${ }_{\text {E }}^{\text {E }}$ | 31818 | Butt |  |  |
| 45 N | H | 34197 | Ring |  |  |
| 45 N 315 | - | 33477 | Spade | 4-6 | 4.16 |
| N |  | 33219 |  | 8-10 |  |
| 45 N | T | 31 | Kni |  |  |
| 45 | W | 34846 |  |  | . 0 |
| 5 N 320 |  | 0* | Plug Recep. |  | 6.20 |

## Workshop Aids, Plastic Stock

## STURDI-BILT "DROPTOP" SET

Model DT 200TR. Here's an exceptionally valuable workshop aid-provides 1296 square swing-away work table. Work space when and where you need it-provides maximum utility for limited-space areas. Tool rack mounts flush against wall; solidly built work table folds conveniently back Tainst wall when not in use! Tool rack panel can be easily removed from frame for clean-
ing or painting. ing or painting.
Accepts standard tool hooks to accommodate an entire large-size tool set in convenient, easy-to-reach form. Ideal for hanging wrenches, screw and nut drivers, and other workshop tools in neat, orderly fashion. Massive work-table top measures $60 \times 24 \times 112^{\prime \prime}$ thick; constructed of kiln-dried lumber strips, side by side, bonded between layers of high-density wood and smooth, hard plastic. Rugged, yet smart in appearance. Can be mounted on any wood or masonry wall. Complete "Droptop" Work Center includes folding table, tool rack ( $48 \times 27^{\prime \prime}$ ), brackets and hardware. Can be easily set-up in a few minutes. 46 NZ 929 An finish. Shpg. wt. 67 lbs .
.27 .00

## JIFFY TOOL RACK

Lightweight steel tool rack. Holds a large number of tools in a very small space. Uses
 hold all your small tonace to hold all your small tools within easy reach. Right-angle shape. Bottom half, for flush wall mounting, has 9 hooks for general utility use. Upper storage space for screwdrivers, files, inspection mirrors provide convenient storage space for screwdrivers, files, inspection mirrors and other small of rigid, durabse steel. Shpg. wt., 5 oz.
46 N 779 . NET. . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . 49 C

49c

## G-C 8943 "TUX" TOOL HOLSTER

A perfect accessory for servicemen, electricians, and repairmen. Excellent for service calls and antenna installations; the required tool is always available at your side. Attaches to belt by two metal loops. Has two narrow compartments and one full-size compartment. Plenty of room for securely holding most needed tools, such as wrenches, hex nut drivers, pliers, wire-cutter, tube puller, screwdrivers, alignment tools, file, etc. Deep enough to prevent tool-spillage. Made of tough, flexible polyethylene plastic. Holds its shape. Shpg. wt., 6 oz.
46 N 345 . NET........
.2 .32


## VLCHEK PLASTIC BOXES

- Ideal For Storing Small Parts
- Wide Selection of Popular Sizes
- Contents Visible For Quick Selection

Sturdy, clear-plastic, hinged-top storage boxes. Divided types are ideal for keeping parts separated. Excellent for storing resistors, capacitors, nuts, screws, as well costume jewelry, etc. Type P250 he, costuavable cover


Type P250. 1-compartment. Size, $61 / 4 \times 4 \times 15 / \mathrm{s}^{\prime \prime}$. Wt., 6 oz . 38c

Type P212. 5-compartments. 4 are $11 / 2 \times 23 / 8^{\prime \prime}$ plus $11 / 2 \times 33 / 16^{\circ}$ center




Type P210. 9-compartments. 8 are $11 / 4 \times 11 /{ }^{\prime \prime}$. Center compartment, 1 x

Type P201. 12-compartments. Has $2 \times 11 / 4^{\prime \prime}$ compartments; two $11 / 4 \times 4^{\prime \prime}$;

Type P612, 12-compartments. Has 6-111/16x2"; 6-111/16x41/4". Overall,

1.22

5lc


B. Plastic Container. Durable, clear-view plastic containers for small B parts. Ideal for use on the radio-TV service bench for storing resistors, capacitors, screws, nuts, washers, and other frequently needed components. Clear plastic permits quick identification of parts. Smooth operating sliding covers keep out dust. Containers may be stacked or set side
 $\qquad$ 2lc

## AMPHENOL POLYSTYRENE SHEET STOCK \& CEMENT



Extremely low-loss, $4 \times 8^{\prime \prime}$ polystyrene sheets. Excellent for use in AC, DC and RF applications including VHF UC, UFF and SHF Repplicawhere safe, clear insulation is needed. High dielectric strength. Colorless; does not deteriorate under adverse climatic conditions. Retains original dimensions-does not stretch or warp. No moisture absorption. Also fine for dial and gauge glass use. Easy to cut and fit to any size. Can be drilled and tapped.

|  | No. | Type | Size | Wt. | NET |
| :---: | :---: | :---: | :---: | :---: | :---: |
| 71 | H 738 | 19-0628 | $4 \times 8 \times 1 / 16^{\prime \prime}$ | 3 oz . | 204 |
| 71 | H 739 | 19-0938 | $4 \times 8 \times 3 / 32^{\prime \prime}$ | 4 oz . | 244 |
| 71 | H 746 | 19-1258 | $4 \times 8 \times 1 /{ }^{\prime \prime}$ | 5 oz . | 374 |
| 71 | H 749 | 19-1878 | $4 \times 8 \times 3 / 16^{\prime \prime}$ | 6 oz . | 464 |
| 71 | H 748 | 19-2508 | $4 \times 8 \times 1 / 4^{\prime \prime}$ | 8 oz . | $50 \%$ |

## POLYWELD "912" CEMENT

Type 53-912-2. Securely bonds or "welds" polystyrene sheets. Rapid drying. Ideal for coil coating where polystyrene forms are used. Has coating where polystyrene forms are used. Has 2 oz bottle. Shpg. wt., 3 oz .
43 N 139 . NET.
35c

## AMPHENOL CEMENT THINNER

Type 53-916-2T. For thinning Polyweld cement listed above. Does not change loss factor of cement. Rapid acting. Extends useful life of cement. 2 oz. bottle. Shpg. wt., 3 oz.

## POLYSTYRENE SHEETS, RODS AND TUBING

An excellent selection of high-grade polystyrene sheets, rods and tubing. Ideal for AC, DC, and RF applications as well as VHF, UHF and SHF. Rods and tubing are excellent material for making insulators or coil forms. Sheets may be used for shielding or dial and gauge glass.
All have extremely low-loss factor at ultra-high frequencies. Have high dielectric strength, excellent arc resistance and insulating properties. No moisture absorption. Highly stable under varying sions-will not stretch or warp. Easy to cut any size. May be sawed, drilled or tapped. Sheets are transparent. All tubing has satin finish except *clear; all rods are frosted except $\dagger$ clear.

POLYSTYRENE SHEETS

| Stock No. | Slze | Thickness | Shpg. | T |  | Stock No. |  | Size | Thick-ness | Shpg. Wt. |  | NET EA |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  |  |  | $1-9$ | -4 |  |  | 1-9 |  |  |  | 10-49 |
| 714865 | $12 \times 12$ |  | 80 | 4.07 | 3.66 | 71 |  |  | 12x2 |  |  | 1 b . | 7.64 | 6.88 |
| 71 H 866 | $12 \times 12^{\prime \prime}$ |  | 10 oz . | 4.70 | 4.23 |  |  | 12×24" |  |  |  |  |  |
| 71 H 867 | 12×12 ${ }^{12}$ |  |  | 5.39 | 4.85 | 7 |  | $12 \times 24^{\prime \prime}$ |  |  |  |  |  |
| H | $12 \times 12^{\prime \prime}$ |  |  |  |  |  |  | $12 \times 24^{\prime \prime}$ |  |  | s. | 9 |  |

$12^{\circ}$ POLYSTYRENE RODS

| Stock No. | Dia. | Shpg.Wt. | NE | ACH | Stock No. |  | Dia. | Shpg. Wt. | NET EACH |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  |  | 1-9 | 10-49 |  |  | 1-9 |  | 10-49 |
| 71 H875 |  | 2 oz | . 03 | . 02 |  | H880 |  |  | 6 oz . | 47 | 2 |
| 714876 | 3/1 | 3 oz . | . 07 | . 06 |  | H 881 | $5 / 8{ }^{\prime \prime \prime} \dagger$ | 8 oz . |  | . 64 |
| 71 H 877 | $1 / 4$ | 5 oz . |  |  |  | H 882 |  | 8 oz . | . 98 | . 88 |
| 71 H 878 | $5 / 1$ | 6 oz . | .18 | .16 |  | H 883 |  | 88 oz . | 1.39 | . 25 |
| 71 H879 | $3 / 8$ | 6 oz . | . 25 | . 22 | 71 | H 884 |  | 8 oz . | 1.86 | . 67 |

$12^{\prime \prime}$ TUBING

| Stock No. | O.D. | I. D. | $\left\lvert\, \begin{array}{l\|l\|} \text { Shpg. } \\ \text { Wt. } \end{array}\right.$ | NET EA. |  | Stock No. |  | O.D. | I.D. | Shpg. Wt. | NET EA. |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  |  |  | 1-9 | 10-49 |  |  | 1-9 |  |  | 10-49 |
| 71 H885 | \% $1 / 4^{\prime \prime \prime} \dagger$ | 1/8" | 2 oz . | 104 | 94 |  | H889 |  | $5 / 8{ }^{\prime \prime}$ | 3/8"17 | 4 oz . | 314 | 284 |
| 71 H 886 | 5/16"* | 3/16" | 3 oz . | 144 | 134 | 71 | H890 | 3/4" | 5/8" | 4 oz . | 394 | 354 |
| 71 H 887 | 3/8" | $1 / 4 \prime \prime \prime$ | 3 oz . | 184 | 164 |  | H891 | $1{ }^{\prime \prime}$ | 7/8" | 6 oz. | $55 ¢$ | 494 |

## Tool Boxes-Parts Containers



## HAMILTON UTILITY BOX

Model 1501. Sturdily constructed, drawnmetal tool and general-utility box. Extremely compact and easy to carry-fits anyplace. Indispensable for the radio and TV serviceman, kit builder, experimenter, mechanic and home craftsman. Also excellent for gardening, fishing tackle, or general purpose use.
Easily accommodates a soldering iron, screwdriver, pliers, wrenches, test leads, etc. Handy cantilever tray rises and slides aside when lid is raised. Assures easy access to stored articles in bottom of box. Tray has three compartpartments are extremely handy for the storage of hardware and miscellaneous small parts, such as resistors, capacitors, screws, etc.
Case has full-drawn, seamless, rounded corners with a smooth operating, snap-type lock. Lock also has eye for padlock insertion if desired. Cover has positive latching action when closed Folding, fingertip handle is securely attached to cover. Entire construction of box assures extra strength and complete rigidity-ruggedly built to last for years. An excellent value at a remarkably low price. Handsomely finished in high-gloss green baked enamel. Overall size
of box is $41 / 2^{\prime \prime}$ high, $61 / 4^{\prime \prime}$ wide, $141 / 2^{\prime \prime}$ deep. Shpg. wt., 3 Ibs.
86 N $156 . ~ N E T . ~$
1.50

## "HAZ-BIN" SMALL PARTS STORAGE CABINETS



Beautifully Styled-Clear Plastic Drawers Space-conserving cabinets for small parts and hardware storage. Excellent for the radio-TV serviceshop, store, home workshop, etc. Clear plastic drawers, $17 / 16 \times 23 / 4 \times 57 / 8^{\prime \prime}$, are separated plastic drawers, $17 / 16 \times 23 / 4 \times 57 / 8$, are separated into three sections by removable dividers. Confication. Index cards are supplied to fit slots on frontion. Index cards are supplied to fit slots on front of drawers. Cylindrical stub handles pro-
vide easy grip without blocking view of index cards. Backstop prevents accidental pull-out of drawers; contents cannot spill. Additional cabinets can be attached to back, side or top. Rubber feet prevent marring or scratching of tabletop, or shelf. Durable, welded all-steel cabinets; attractive, baked-on, silver-gray Hammertone finish.

| Stock No. | Mfr's Type | No. Draw. | H. W. D. | $\begin{gathered} \text { Wt., } \\ \text { Lbs. } \end{gathered}$ | $\begin{aligned} & \text { NET } \\ & \text { EACH } \end{aligned}$ |
| :---: | :---: | :---: | :---: | :---: | :---: |
| $86 N X 047$ | J-16 | 16 | $81 / 8 \times 121 / 2 \times 6^{\prime \prime}$ | 8 | 6.95 |
| $86 N \times 143$ | J-20 | 20 | $101 / 8 \times 121 / 2 \times 6{ }^{\prime \prime}$ | 9 | 7.95 |
| 86 NX 144 | J-24 | 24 | $12 \times 121 / 2 \times 6^{\prime \prime}$ | 10 | 9.95 |
| $86 N X 048$ | J-32 | 32 | $151 / 4 \times 121 / 2 \times 6{ }^{\prime \prime}$ | 13 | 12.95 |
| 86 NU 039 | J-64 | 64 | 151/4 $\times 251 / 8 \times 6{ }^{\prime \prime}$ | 25 | 24.95 |

QUALITY STEEL UTILITY CHESTS


6116
6119


## UNION "SUPER STEEL" TOOL CHESTS

Sturdy steel chest with removable tray. Has wo heavy-duty drawbolts plus center padlock eye. Continuous hinge welded to cover and case. Heavy-duty steel handle. Blue, hardbaked enamel interior. Exterior has silver gray hammertone finish.

86 NxOIB. NET.
4.89

Type 6119 . Same as above, but overall size is $19 \times 7 \times 7^{\prime \prime}$. Wt., 7 libs.
86 NX OIT. NET. $\qquad$ .5.14

## UNION WATERTIGHT TOOL BOX

Type 5414. Ruggedly constructed, watertight utility chest with two cantilever-mounted trays. Large tray capacity makes it ideal for storing tools or small parts. Upper tray is divided into seven equal compartments; lower tray contains one full length, one $2 / 3$ length and two smanler compartments. Full-grip steel green enamel interior. $714^{\prime \prime}$ wide, $7^{\prime \prime}$ high and
 $\qquad$ 3.16

Type 5419. Similar to above but longer. 9 compartments in upper tray; 6 in lower. Center key lock with bolt catches, on each side. $19^{\prime \prime}$ long, $7 \mathrm{X}^{1 / 4^{\prime \prime}}$ wide, $7^{\prime \prime \prime}$ high. Wt., 7 lbs.
86 NX 154. NET.
4.45


Compact, four-drawer, three-way interlocking cabinets. The ideal solution for storage of small parts, tools, etc. Perfect for limited-space applications. Extremely handy for the radio and television serviceman, mechanic, hobbyist, home craftsman, etc. Each cabinet is a complete unit with four, individual, one-piece cally or horizontally and locked together. For cally or horizontally and locked together. For countersunk workbench or table. Frames have ends. Each drawer is complete with metal snap-in separators for up to four individual compartments. Separators will not shift or slide-each is completely rigid. Drawers have folded, reinforced corners with strong tubular and folded sides. Made of rugged, one-piece, steel frame-will not warp or bend even if dropped. Each has safety-stop to prevent accidental spilling of parts-drawers cannot fall out. Have easily replaced, identifying label. Individual drawer size, HWD, $11 / 16 \times 23 / 4 \times 57 / 8^{\prime \prime}$. Cabinet size, HWD, $13 / 4 \times 111 / 2 \times 6^{\prime \prime}$. Handsomely finished in attractive, neutral gray. Shpg.

1.42


## AKRO-MILS "E-Z FIND FULL-VUE" CABINETS

Extremely convenient cabinets for storing small parts. Drawers are shock-absorbing, crystal-clear Styrene, 17/16 $27 / 8 \times 57 / 8^{\prime \prime}$. Each drawer is divided into 4 compartmentsplied. Smooth-operating drawer pulls out with full-grip plied. Smooth-operating drawer pulls out with full-grip, centered handle. Safety catch prevents drawer spillage. drawer guides give extra cabinet strength. Prevent jamming or sticking. All corners are completely rounded. Cabinet will stand on bench, stack together or hang on wall. 4 ball-feet are stamped into each cabinet base with matching depressions in top. Perfect for radio- Attractive shop, home workshop, hard.

| No. | Type | Drawers | H.W.D. | Lbs. | NE |
| :---: | :---: | :---: | :---: | :---: | :---: |
| $86 \mathrm{NX759}$ | V-12 | 12 | $6 \times 121 / 2 \times 6^{\prime \prime}$ | 6 | 3.9 |
| 86 NX 767 | V-24 | 24 | $101 / 2 \times 121 / 2 \times 6^{\prime \prime}$ | 9 | 6. |
| 86 NX 773 | V-32 | 32 | $14 \times 121 / 2 \times 6^{\prime \prime}$ | 12 | 8.9 |

UNION "STACKMASTER" HEAVY' STEEL CABINETS


Ruggedly constructed multi-drawer steel cabinets for general storage of small items. Ideal units for the home workshop, radio and TV service shops, factory, office, lab, etc. Feature to be stacked in any direction-permits expansion of storage space as need arises. Cabinets can be quickly and easily detached from one another to provide any desired arrangement as additions are made. Cabinet frame is made of heavy-gauge welded steel. Clear, all-plastic drawers have built-in index cardholder and re-
movable partitions. Special safety-stop on movable partitions. Special safety-stop on drawers prevent accidental spilling of ${ }^{3}$ of small
parts. All drawers are $512^{\prime \prime}$ long, $2^{3 / 4^{\prime \prime}}$ wide, parts. All drawers are $51 / 2^{\prime \prime}$ long, $23 / 4^{\prime \prime}$ wide, $11 / 4^{\prime \prime}$ deep. Cabinet frames are finished
some silver Dentone baked enamel.
Model U-24. 24-drawer cabinet. Size, 11x6x $121 / 2^{\prime \prime}$ Shpg. Wt.,9 libs.
Model U-12. 12-drawer cabinet. Size, 53/4x6x $121 / 2^{\prime \prime}$. Shpg. wt., 6 lbs. 86 N 784. NET'
. 3.70
Model U-18. 18-drawer cabinet. $11 \times 6 \times 121 / 2^{\prime \prime}$. 6 middle drawers, $51 / 2^{\prime \prime}$ wide; 12 side drawers, $23 / 4^{\prime \prime}$ wide ( 6 ea. side). 9 lbs .
$86^{\mathrm{NX}} 158$. NET.

UNION 410 4-DRAWER STEEL CHEST


Sturdy all-steel chest for keeping often-used parts within handy reach. Can be used for storing all types of radio and TV hardware or smant for the home workshop, repairshop, hobbyist, experimenter, etc. Has four easyslide drawers,
each $2 \times 9 \times 111 / 2 "$. Each drawer has removable dividers-enough supplied to make anywhere from 2 to 12 comsupplied to make anywhere from 2 to 1 po have label holders for quick, easy identification of contents.
Safety drawer-stop prevents contents of drawers from being accidentally spilled. Cabinet and drawers are constructed of heavy, non-warp steel. Cabinets can easily be stacked for greater storage area-indentations on cabinet hold feet of cabinet above-prevent slipping or falling of stacked units-use on work bench, table, etc. handle Attractively finished in durable silyerhand $A$ Overall size steel chest $10 \times 10 x-$ $111 / 2^{\prime \prime}$. Shpg. wt.., $10^{1 / 2} \mathrm{lbs}$. 4.97
36 NXO19. NET..........
4.97

DIXIE INTERLOCKING DRAWERS


Small steel trays for storage of all types of radio-TV hardware and small parts. May be used separately or ganged together to form space-saving cabinets. Each unit interlocks with others at top, sides and bottom. Drawers may be assembled to fit irregularly shaped spaces unsuited to other cabinets or arranged for best utilization of available space. Each unit measures $27 / 8 \times 21 / 4 \times 5^{\prime \prime}$. Label holders make it 86 N 023 . NET EACH. . . . . . . . . . . . . . . . . 42 C 10 or More, EACH. 38
Dividers. For use with Dixie drawers, above. Shpg. wt., per pkg., 4 oz.

# Steel Cabinets-Stands-Trucks 

## EQUIPTO METAL PRODUCTS

## GENERAL PURPOSE STORAGE CABINETS

No. 11. 18-Drawer Cabinet.
Ideal for storing all kinds of small parts in easily accessible order. Each drawer is equipped with two instantly adjustable or removable cross dividers which may be set at any $1^{\prime \prime}$ interval of drawer length. Drawers have large convenient handles. Will not stick or jam. Instant-visibility label holders on drawers and dividers. Heavy-duty all-steel frame. Olive-green finish. Drawer size, $11 \times 53 / 8 \times 31 / 8^{\prime \prime}$. Overall $12^{\prime \prime}$ deep. Units fit on $12^{\prime \prime}$ shelf and"may"belstacked for greater storage space. Shpg. wt., 62 lbs.

27.90

No. 22. 18-Drawer Cabinot. As above, except $18^{\prime \prime}$ deep, and with $17 \times 55 / 8 \times 31 / 8^{*}$ drawers. Shpg. wt., 95 lbs.
37.90

Type 8711 Lengthwise Divider. For No. 8505 drawer, used in No. 8 and No. 11 cabinets. Length, $11^{\prime \prime}$. Shpg. wt., 9 oz. 6 per pkg.

50c


Type 8720 Cross Divider. For drawers of No. 11 or No. 22 cabinet listed above. Shpg. wt., 6 oz. 6 per pkg.

No. 8. 8-Drawor Cabinet. Gener-al-purpose storage cabinet. Excellent for storing small parts, hardware, tools, supplies, merchandise, etc., in workshops, stores, offices, or anywhere that an attractive, durable storage rack is required. An ideal companion for 18-drawer cabinet to left. Parts with loose wire ends are kept completely safe from accidental damage. Especially suited for radio-
 steel frame holds 8 drawers ore welded steel frame holds 8 drawers on 2 levels. Each drawer has 2 cross dividers, adjustable on $1^{\prime \prime}$ centers, making a total of 24 compartments. Smoothoperating drawers are made of heavy steel-will not stick or jam together. Have full-size handles and slot holders for label cards. Durable $11^{\prime \prime}$ long. Cabinet size, $10^{\prime \prime}$ high, $251 / /^{\prime \prime}$ wide and $12^{\prime \prime}$ deep, $5^{5} / 8^{\circ}$ wide and on shelf or stacked. Shpg. wt., 33 lbs. on shelf or stacked. Shpg. wt., 33 lbs.
15.95

Type 8505 Drawer. Same type drawer as in cabinet above. Popular for use as parts trays on open shelving. With handle. Less dividers (below). Shpg. wt., $21 / 2 \mathrm{lbs}$.
86 N 869. NET
90c
Type 8720 Cross Dividers. For type 8505 drawer above. Fit grooves die-pressed into drawer sides. Slant top for easy labelling. Shpg. wt., 6 oz. 6 por packago.
86 N 872. PER PKG

50c

## "LITTLE GEM" AND COMBINATION CABINETS

"Little Gem" Cablnets. For small parts. Excellent for single use-lock firmly together when stacked. Large, built-in handle. Drawer stop prevents accidental spilling. Dividers instantly adjustable on $11 / 2^{\circ}$ centers. Fit drawer bottom tightly-no creeping of parts under dividers. 12 compartments per drawer-up to 28 with extra dividers. $13 / 8 \times 11^{\prime \prime}$ label holder on front of drawer. $5 / 8 \times 11^{\prime \prime}$ label holder on each compartment. Olive green baked enamel finish Size of each drawer: $11^{\prime \prime}$ long $11^{\prime \prime}$ wide, and $11 / 2^{\prime \prime}$ high.
No. 1. 2-Drawor Cabinot. With dividers providing for 24 compartments. Size: $31 / 4 \times 11 \times 11^{\prime \prime}$. Shpg. wt., 7 lbs.
86 NX 065. NET


No. 12. CombInation Cabinet. For small and medium-sized parts. Cabinet combines the features of with the safety and conver Units for tiny parts storage of "Little for tiny parts storage of "Little holders on each drawer for quick identification of parts. Includes
 14 standard drawers with 3 compartments each and 4 "Little Gem" drawers with 12 compartments each. Size: $34 \times 131 / 4 \times 111 / 2^{\prime \prime}$. Olive-green 86 fZ 096 . NET. 68 lbs.
39.30

## BENCH AND CABINET COMBINATION

No. 233. All-steel combination workbench and storage cabinet for limited space applications. A compact workshop that is ideal for home, shop, or laboratory. Work surface area is $28 \times 15^{\prime \prime}$. Raised rail at rear of work surf ace prevents work or tools from dropping behind cabinet. Storage cabinet is equipped with a removable shelf. Door is reinforced with steel box frame around all four sides. Smooth operating hinges are tamper-proof while door is closed. Door is equipped With an easy-operating latch and a heavy-duty tam-per-proof hatch for padlocking if desired. Size, $34^{\prime \prime}$ Shpg. wt., 60 lbs . $28^{\prime \prime}$ deep. Olive-green finish. 86 NZ 157. NET.
42.30


## STEEL STANDS AND TRUCKS

## STURDY STEEL TRUCKS

Stock handling carts for a wide variety of jobs. Heavy steel construction with round beaded edges for strength and rigidity. Easy rolling, $5^{\prime \prime}$ diameter solid rubber-tired wheels. Wheels are stationary in front, swivel in rear. Designed for use in narrow aisles be tween rows of shelving or any general truck ing use. Durable olive green baked enamel finish. Top tray may be inverted to make flat surface. Trays are $4^{\prime \prime}$ deep. Will safely handle loads up to 600 lbs . Paper-carrying shelf ( 86 N 093 ) listed in table below, fastens to push bar.

| No. | Type | Description | Wt., Lbs. | NET |
| :---: | :---: | :---: | :---: | :---: |
| 86 NZ 090 | 150 | $36^{\prime \prime}$ high, $24^{\prime \prime}$ wide, $36^{\prime \prime}$ long | 70 | 39.90 |
| 86 NZ 092 | 145 | $36^{\prime \prime} \mathrm{high}, 16^{\prime \prime}$ wide, $30^{\prime \prime}$ long | 60 | 29.90 |
| 86 N 093 | 146 | Paper-carrying shelf; 81/2x11" | 5 | 2.50 |

## VIS-A-PART BOARDS

## Stores Small Parts

Convenient wallboard for storage of small parts. Keeps parts in sight for immediate selection. Consists of attractive masonite board with up to 24 glass storage jars. Jars easily slide simple motion. Parts are always withsimple motion. Parts are always withpunched to permit hanging on any punched to permit hanging on any shops, machine shops or home workshops,
shops.



24- Jar Typo. Size, $18 \times 18^{\prime \prime}$. Shpg. wt., 9 lbs.
86 NX 245. List $\$ 6.00$. NET.....


## CHASSIS AND TEST UNIT STANDS

Convenient stands for radio and television chassis, industrial electronic equipment, and test instruments. Excellent for use in service shops, labs and factories. Ideal for moving chassis to service bench. Also excellent for bringing test instruments to industrial equipment. Unusually rugged construction; withstand constant use and maximum weight loads. Can be used in narrow aisles. Convenient bottom shelf provides handy storage space for small tools, extension cords and other accessories. Heavy steel with olive-green enamel finish. Solid rubber wheels, $21 / 2^{\prime \prime}$ diameter. Size, $18^{\prime \prime}$ wide, $24^{\prime \prime}$ in. length. Height: With wheels, $34^{\prime \prime}$; without wheels, $31^{\prime \prime}$.


| No. |  | Type | Description | Wt., Lbs. |
| :---: | :---: | :---: | :---: | :---: |
| 86 NZ 087 | 710 | NET |  |  |
| 86 NZ 088 | 711 | With wheels | With wheels, wood top | 55 |
| 57 | 15.13 |  |  |  |

## PIN-UP BOARD

- Keeps Tools or Parts Handy and in Sight Model 102. Four separate squares of perforated Provide 12 square feet of storage space. A convenient and attractive way to store tools and a great variety of other small accessories. Pinup rack includes 62 specially designed fixtures for hang-
ing saws, hammers, planes

etc. Includes four, 4 -oz. nail and screw jars, two shelf brackets, screwdriver holder. Hardboard is of $1 / 8^{\prime \prime}$ thickness-forms an unusually tough and durable surface. Complete with hooks, mtg. screws, spacers and instruc tions. Shpg. wt., 15 lbs.
86 NX 178. List, $\$ 7.98$. NET.
Model 102W Workshop Unit. Contains all tool hooks, rack, brackets, jars, mounting screws and spacers listed in unit above; but less perforated hardboards. 62 fixtures plus mounting hardware. Wt., 3 lbs. 2.83
50 N 127. List, $\$ 3.85$. NET.... . . . . . . . . . . . . . . . . . . . . . . .


# General Cement Paints \& Chemicals 

FAMOUS, HIGH-QUALITY CHEMICALS, PAINTS \& KITS


No. 43 "Pli-O-Bond" Cement. Thermoplas-
tic cement. Bonds all materials. 43 N 210.2 fl oz. Wt., 6 oz . NET...... 44

No. 31 Radio Service Solvent. Cement thinner for removing old speaker cement, etc. 44 43 N 451.2 f. oz. Wt., 5 oz. NET....... 44

No. 8460 "De-Ox-Id" Kit. Safely cleans and prevents oxidation on circuit contacts. With needle injector for easy application. 2 oz . bottle. Shpg. wt., 13 N 453 . Ib .
. 1.15
No. 19. "De-Ox-Id" Only. Less applicator.
 No. 47 TV High Voltage Corona Dope. Prevents corona shorts. Air-drying
43 N $454 .{ }_{8}$ f. oz. Wt., 6 oz. NET........71
No. 50 "Red-X" TV High Voltage Corona Dope. Red corona dope. 2 fl. oz. Wt., 6 oz. 43 . 71 No. 30 Service Cement. Vibration-proof ce-
ment for radio and epeaker repairs.
 No. 32 Bakelite Cement. For bonding phenolic to phenolic or any other material.
43 N 296.2 fl. oz. Wt., 6 oz. NET..... 44
43 N 458. 8 fl. oz. Wt., $11 / 4 \mathrm{lbs}$. NET... 43 N 459. 1 gal. Wt., 10 lbs. NET.... i 17.64

No. 90 Red Glyptal Insulating Varnish. Protective anti-corona insulation coating. 56
43 N 460.2 f. oz. Wt., 6 oz. NET...... 56


No. 127 Contact and Crystal Cleaner. Safely cleans contacts and crystals. .65 43 N 464 . 16 fl. oz. Wt., $21 / 4 \mathrm{ibs}$. NET...I. 47
No. 35 Rubber-to-Metal \& Phono Drive Cement. For cementing rubber phono and dial drives to shafts and pulleys; also rubber mountings to chassis, etc.
43 N 465.2 f. oz. Wt., 6 oz. NET...... . 44 43 N 466.4 f. oz. W., $1 / 2$ lb. NET....... 71
43 N 467.16 fl. oz. Wt., $21 / 4 \mathrm{lbs}$ NET... 2.15 No. 210 Electronic Contact Cleaner. Red, 43 N I 60.2 fl. oz. Wt., 6 oz...... NET. . 53
 No. 37 "Q-Dope" (Coil Dope). Liquid polystyrene designed for use with RF, VHF, and UHF components.
43 N 472. 2 f. oz. Wt., 6 oz. NET...... 44
43 N 473. 8 fl. oz. Wt., $11 / 4 \mathrm{ibs}$. NET... 43 N 473.8 f. oz. Wt., $11 / 4 \mathrm{ibs}$. NET.... 1.18
No. 41. "Q-Dope" Thinner., Solvent for dissolving polystyrene, " $Q$-Dope", or any other polystyrene dopes and cements. 43 N 479.2 fl. oz. Wt., 6 oz. NET....... 44
No. 49 "TV Tube Koat". Conductive coating for recoating TV picture tubes. 43 N 474 . 2 f. oz. Wt., 6 oz. NET......71 43 N 474. 2 fl. oz. Wt., 6 oz NET......i. $11 / 4$
No. 57 Fungus Varnish. Prevents moisture absorption and fungus growth.
43 N 476.2 f. oz. Wt., 5 oz . NET
43 N 477.8 f. oz. Wt., $11 / 4$ lbs. NET... 1.03 43 N 478.1 gal. Wt., 101 lbs . NET........ 2.94
No. 10 Non-Toxic "Electro-Tet" Cleaner. Chlorothene cleaner. Similar in action to carbon tetrachloride, but safer to use-non-toxic. Non-inflammable, fast-drying. 1 gallon can. Shpg. wt., 10 lbs.
43 N 479. NET..
6.94

NO. 60 "RUF-KOAT" VARNISH


Air-drying wrinkle varnish'for amplifiers, test equipment, chassis, etc. Gives a professional-looking original manufacturers. Can be air-dried or baked.

| ck | Brow | Gray | Size |  | NET |
| :---: | :---: | :---: | :---: | :---: | :---: |
| 43 N 480 | 43 N | 43 N 482 | 4 fl . | 1/2 |  |
| 43 N 483 | 43 N 484 | 43 N 485 | 16 fl | 21/4 |  |
| 43 N 486 | 43 N 487 | 43 N 488 | 32 |  |  |
|  | 43 N |  |  |  |  |

No. 60-X "Ruf-Koat" Undercoat. For use when applying "Ruf-Koat" to porous or pre-viously-finished surfaces. $21 / 4$ lbs. NET. 2.32 43 N 491.16 fl. oz. Wt., $21 / 4$ lbs. NET. 2.32
43 N 492.1 gal. Wt., 10 lbs. NET.... 2.88

## NEW 8667 "ZERO-MIST" SPRAY



Cooling spray for instant isolation of defective intermittent circuit components caused by temperature changes. Enables user to check electronic components in operation withoperating temperature goes up, defective component stops working, thus causing circuit to go out of operation. To find defective component, simply spray each component with "Zero-Mist'. It instantly cools faulty component to former temperature, restoring it to operation. Thus, when circuit begins to operate again, last component sprayed is the bad one. Immediately pinpoints faulty parts and cold joints. In 16 oz . can. Shpg. wt., 50 N 099. NET.
. 1.91


## CABINET REPAIR KIT

A Type 901. Convenient, practical cabinet A repair kit. Includes everything needed for turning out highly professional cabinet refinishing jobs. Use it for repairing dents or scratches on wood, plastic, bakelite or metal, etc. Consists of an assortment of 10 shades of shellac sticks, bottles of light and dark oil stain, metal shading varnish, polish, "Magic scratch Remover, touch-up brushes, steel wool alcohol, spatand wiping cloth. In convenient metal storage box. With complete, easy-to-follow instructions. Shpg. wt., 3 lbs 43 N II5. List, $\$ 8.50$. NET. $\qquad$

## EIA (RETMA) COLOR-CODING KIT

[B] Type 677. Complete kit of all the standB ard EIA colors: black, brown, red, orange, yellow, green, blue, purple, gray and white. 43 N 112 . List, $\$ 2.15$. NET.
800
.1 .26

## LUMINOUS "LITE-KOAT" KIT

C Type 184-0. A long-life non-poisonous luminous coating that emits light in the dark. Coating absorbs light in daytime and 43 N II I 1 . List, $\$ 5.40$. N ET.
.3 .18

## "DIAL-LITE" COLORING KIT

(D) Type 66-5. Long-lasting bright colors for coloring bulbs. Instant drying. Colors: red, green, blue, amber and solvent. Bulbs may be
colored by dipping. Shpg. wt., 4 oz. colored by dipping. Shpg. wt., 4 oz . . . 82c
43 N 110. List, $\$ 1.40$. NET..........

## SCRATCH STICKS

For repairing scratches on wood. Wt., 5 oz . 43 N 113 . Type 909-M. Mahogany 43 N 368. Type 909-W. Walnut. 43 N 369. Type 909-1. Oak.

"SPRA-KOAT" PAINTS
Wrinkle Finish. Air drying wrinkle varnish. For hobbyists, servicemen, etc. Provides finish baked jobs. Perfect for chassis, panels and racks. Makes composition board and bakelite panels appear as wrinkle finish steel panels. Available in black or gray. Contents. 16 oz . In convenient, ready to use, hand-size can. Shpg. wt., $11 / 4 \mathrm{lbs}$.
43 N 028. Type 60-12. Black.
NET EACH.........................
1.99

Telephone Black and Gray. A satin-finish enamel. Telephone black is perfect for power control and meter panels. Telephone gray gives professional appearance to test equipment, etc. Dries quickly after spraying. Provides moisture resistance. For wood or metal. Contents, 16 oz . Shpg. wt., $11 / 4 \mathrm{lbs}$. 43 N 033. Type 62-12. Black.
NET EACH............ . . . . .
I. 99

Hammer Finish. For applying professional hammer finish to panels, racks, chassis and instrument cases. Protects metal from moisture. Perfect for refinishing scratched and scarred metal surfaces. Air-dries quickly. Contents, 16 oz . Shpg. wt., $11 / 4 \mathrm{lbs}$.
$43 \mathrm{~N} 036.84-12$. Blue.
43 N 035.83-12. Brown. NET
1.99
"SPRA-KLEEN" CONTACT CLEANER


Type 8666. Efficient cleaner for electrical contacts-eliminates noise due to dust, dirt and corrosion. No is simply sprayed on contacts or control and mechanism is worked a few times. Spray cleaner on contacts, controls, relays, switches and other sliding contact devices. In handy 6 oz. aerosol spray can. 43 N 025 . NET.

88c


## PRINTED CIRCUIT PAINT

Type 21-2. This is the same pure silver compound used by manufacturers in printed circuit designs. Use it to repair all princuits around eyelets, tivets circuits around eyelets, rivets,
and other parts. Handy for servicemen, experimenters and engineers. Comes with handy brush-in-cap. Shpg. wt., 4 oz .4 .56


## SILICONE RESIN SPRAY

Type 14-6. Use this clear, silicone resin after repairing or replacing parts in printed circuits. Forms a shorts and arcing. Insulates, waterproofs and provides barrier against dust. Application is sim-ple-pressing of button at top of can releases a spray. Used by manufacturers to assure dependable performance of printed circuits. Dries rapidly and requires 6 oz . Shpg. wt., 10 oz . Spray can. Contents 43 N 027. List, $\$ 3.25$. NET.
.2 .39

## CONTROL GUN



Type 9280. Handy device for cleaning and lubricating volume controls. For use with Type 65-16 Control Kleener, listed below. $71 / 4 \times 3 / 4^{\prime \prime}$. Shpg. wt.', 8 oz. ${ }^{2}$ N 045 . List, $\$ 6.25$. NET. .3 .67
Type 9282. Control Gun Adapter. Use with Type 9280 Gun. For extra long shanks. Type 9281. Control Gun Adapter. Converts 43 N 063 List, $75 \phi$. NET.................. 444


## CONTROL KLEENER

Type 65-16. Highly effective lubricating and cleaning compound for use with Type 9280 Control Gun, above. Quickly restores controls to like-new condition. A "must" for every radio and TV serviceman. In $16-\mathrm{oz}$. bottle.
Shpg. wt., $11 / 4 \mathrm{lbs}$. Shpg. wt., $11 / 4$ lbs.
43 N 046. List, $\$ 3.25$. NET. . 2.39

## Chemicals and Paints

## G-C SPRAY GUN TYPE SPRAY CAN HANDLE

Inexpensive spray can handle attaches to any spray can converts the caninto a spray gun!
Pressing trigger of handle ger of handle releases spray from can nozplastic pistol-
 grip. handle grip. handle on can-holds can firmly in place. Handle can be attached or removed in seconds-is easily changed from one can to another. Readily adaptable to fit any standard spray can. Makes can more convenient to handle, less fatiguing to hold. Maintains an even spray and keeps hands clean. Useful in home, shop or office for applying paints, service chemicals, cleaners, special finishes, insecticides, etc. Will help servicemen, technicians and engineers -anyone who frequently uses a spray can. 45 Shin 20 í. ${ }^{3}$ NET

88c

## G-C SPRAY CAN EXTENSION



Extremely useful attachment for spray cansdirects spray exactly where you want it. Ideal for cleaning controls and tuners without remov ing them from chassis. Speeds up bench work. One end of $9^{\prime \prime}$ extension tubing fits over nozzle
of can. Press release on can and spray squirts of can. Press release on can and spray squirts out nozzle at other end of tubing. Al plasticstalled. Shpg. wt., 2 oz . 45 N 202 . NET., 2 oz.

## G-C RECORDING HEAD CLEANER

Specially prepared cleaning fluid for use on recording head of tape and wire the oxide accumulations which form, and which cause gradual loss of recording sensitivity. Cleaning recorder head at regular intervals assures peak quality performance and maximum recording sensitivity
45 N 203.1 fl . oz. Wt., 4 oz . NET 56 C
45 N 204.2 fl . oz. Wt., 5 oz . NET 944

## INSL-X TOOL DIP



A red liquid plastic that hardens into a tough, insulating coating when applied to handles of pliers, wrenches and other tools used in electrical work. Minimizes shock hazard Dielectric strength, 1500 tainer and dip handle of tool into liquid; may be dipped repeatedly liquid; may be dipped repeatedly if heavier coating is desired. Dries
in 24 hours. Resists acids, alkalies in 24 hours. Resists acids, alkalies can, 10 oz ; 32 oz . can $21 / 4 \mathrm{lbs}$.

| Stock <br> No. | Contents | NET <br> EACH | 24 or More, <br> EAC H |
| :---: | :---: | :---: | :---: |
| 42 N 400 | 6 oz. | 2.79 | .81 |
| 42 N 401 | 32 oz. | 2.83 | 2.55 |

## INSL-X E-16 INSULATING SPRAY

Electrical insulation in handy spray can. Has non-clogging spray valve. Insulates parts, wiring, tools, etc. Has same insulating properties as above Dielectric strength, 800-1200 volt per mil. $12-\mathrm{oz}$. can. Shpg. wt., $11 / 2 \mathrm{lbs}$.

| Stock No. | Color | Contents | $\begin{aligned} & \text { NET } \\ & \text { EACH } \end{aligned}$ | $\begin{gathered} 24 \text { or more, } \\ \text { EACH } \end{gathered}$ |
| :---: | :---: | :---: | :---: | :---: |
| 42 N 402 | Clear | 12 oz . |  |  |
| 42 N 403 | Aluminum | 12 oz . | 1.19 | 1.07 |
| 42 N 404 | Black | 12 oz . |  |  |

## QUIETROLE CLEANER AND LUBRICANT

Radio-TV general purpose lubricant and cleaner. Eliminates noise from TV frontend tuners and volume-tone controls without removal from chassis. Non-infammable and non-corrosive liquid; remand effect inderites. Also recommended for use on switches, pushbuttons, bearings, dial shafts, contacts, etc. An indispensable tool box item for the radio-TV serviceman 14 oz . Whith eye dropper. 7 oz.; 4-oz. bottle,
43 N 102. *2-oz. bottle. NET
I. 66

43 N 103. 4-oz. bottle. NET............ 2.49

## KRYLON PLASTIC AND ENAMEL SPRAYS

## CLEAR PLASTIC SPRAY

Can sprays a crystal-clear acrylic that dries in Can sprays a crystal-clear acrylic that dries in
minutes to form a hard, waterproof coating. Coating has high dielectric strength-eliminates corona and arcing when sprayed on high voltage leads and connections. Ideal for use on high voltage coils and leads, in socket of high voltage rectifiers on transformers, ignition wiring, etc. Has a dielectric strength of 400 volts per mil. Spray on bell part of metal picture on radio-TV antennas to prevent rusting and pitting. Makes antennas salt-spray and chemical resistant. Use for weatherproofing outside lead-in connections. Assures added safety and better quality work on all installation and service jobs. Has many uses around shop and home. Comes in ready-to-use, 16-oz. size handy spray can. Shpg. wt., $11 / 2$ lbs
43 N 133 . NET...............
I. 27

## ENAMEL SPRAYS

Highly attractive, non-fading, enamel sprays. Excellent for either interior or exterior useprovide a handsome, durable finish. Available in a wide variety of colors. Extremely quick drying-dries in 3 minutes. Non-clogging spray

valve. 16 -oz. can. Shpg. wt., $11 / 4$ lbs. | valve. $16-\mathrm{oz}$. can. Shpg. wt., $11 / 4 \mathrm{lbs}$. |
| :---: |
| No. |

| No. | Color | No. | Color |
| :---: | :---: | :---: | :---: |
| 43 N 134 | Bright Silver | 43 N 109 | Bright Gold |
| 43 N 064 | Bright Copper | 43 N 107 | Hunter Green |
| 43 N 059 | Flat White | 45 N 208 | Surf Green |
| 43 N 137 | Glossy White | 43 N 054 | Chrome Yellow |
| 45 N 206 | Antique Ivory | 45 N 209 | Pastel Yellow |
| 43 N 106 | Flat Black | 43 N 055 | Regal Blue |
| 43 N 138 | Glossy Black | 43 N 056 | Cherry Red |
| 43 N 053 | Light Gray | 43 N 044 | 0. D. Khaki |
| 43 N 108 | Machine Gray | 43 N 043 | Int'I Orange |
| 45 N 2071 | Dove Gray |  |  |

NET EACH
1.17

Saves time and money for radio-TV ser vicemen. Protects and preserves elec


## ZINC CHROMATE PRIMERS

Handy, "always ready" $16-\mathrm{zz}$. spray-on cans containing zinc chromate metal primers. Choice of yellow or green. Primer is rust inhibitivewill retard rusting action. Dries rapidly to form a strong bond with metal-resists peeling and cracking. Accepts finish coats readily. I masts, etc. Specially prepared-does not settle hard in can. Shpg. wt., $11 / 2$ lbs.
45 N 210. Yellow Primer. NET
1.27

## WALSCO RADIO AND TV CHEMICALS

Carbon Tetrachloride. No. 111. Dissolves dirt and grease. Non-explosive and non-inflam-
mable 4 oz . bottle. Shpg. wt., 12 oz . 53 C
Scratch Removing Polish (Dark). No. 231. For walnut, mahogany, etc. Removes scratches

 but light shade for maple, oak, etc. 4 oz . 38 C 43 N 175. NET

Radio Dial Oil. No. 27. A light-bodied lubricating oil for all electronic and electrical appliances. Free of corrosive acids. Prevents rusting. 2 oz . bottle. Shpg. wt., 6 oz.
43 N 172. N ET. ...........$~$

35c
Polystyrene Coment. No. 57. For bonding Polystyrene parts, coating coils. Brush-in-cap 4 oz. bottle. Shpg. wt., 12 oz.
43 N 174. NET...........
. 1 lc
Super Polish. No. 230. Removes old polish, grease or dirt from cabinets. Forms hard, highgloss film. 8-oz. bottle. Wt., $11 / 41 \mathrm{lbs}$.. .59 C
43 N 179 . NET. . . . . . . . . . . . . .
Insulating Varnish. No. 190. Fast drying; for coils, transformers, solenoids, motors, etc. 2 oz. bottle. Shpg. wt., 6 oz.
43 N 173 . NET.........
. 50 c
Plastic Cement. No. 40. Repairs plastic knobs and cabinets. Also cements metal, glass. Brush43 N i 71 I. NET. Wt., 6 oz.
. $.44 c$

## RAPID "BRUSHPLATER"

For quick, easy elec-tro-plating of small metal items such as hardware, trim, metal knobs, etc. Plating process is exceedingly Simple-just make a tions and brush surface to be plated with metal compound. Includes 1 oz. metal cleaner, 1 oz . metal polish, plating compound $5 / 8^{\prime \prime}$ brush wires and clips, and polishing stick. Requires 2 or 3 No. $6.11 / 2$-volt cells (see page 424). Shpg. wt., 1 ib.

| Stock No. | $\begin{aligned} & \text { Mifr's } \\ & \text { Type } \\ & \hline \end{aligned}$ | Plating Compound | $\begin{gathered} \mathrm{NET}_{\mathrm{ACH}} \\ \hline \end{gathered}$ |
| :---: | :---: | :---: | :---: |
| 43 N 080 | 200 | Nickel |  |
| 43 NO 01 | 202 | Cadmium | 67 |
| 43 N 082 43 | 204 | Copper | . 67 |
| $\begin{aligned} & 43 \mathrm{~N} 084 \\ & 43 \mathrm{~N} 085 \\ & \hline \end{aligned}$ | $\begin{aligned} & 206 \\ & 207 \\ & \hline \end{aligned}$ | Silver <br> 24 K Gold | 2.66 4.61 |

## Fluorescent Fixtures-Lanferns



## STANDARD INDUSTRIAL FIXTURE

Model 2098. 48" Standard Fixture. Uses two 48" Type T-12, 40-watt fluorescent lamps. High-gloss gray enamel for easy cleaning and maximum light reflection. Power factor corrected to reduce inductive effects. Supplied with brackets for hanging from ceiling and knockouts to permit flush or stem mounting. Fixtures may be hung on chains, flush-mounted separately, or mounted end-to-end in a continuous row. Starters located on side for easy replacement without removing lamps or reflector. $481 / 2 \times 111 / 2 \times 5916^{\prime \prime}$. With reflector, starters and ballasts. Less lamps and chains. U.L. Approved. For 105-125 volts, 60 cycles
91 RU 260. NET EACH.
.9.43
3 or More, EACH.
.8 .70

## INDUSTRIAL RAPID-START FIXTURE

Model 2098 RS. As above, but rapid-start type. For 105-125 v., 60 cycle AC. Wt., 17 lbs.
91 RU 315 . NET EACH................|. 18 3 or More, EACH $\qquad$ 10.32

## FLUORESCENT STRIP LIGHTS

Each unit has provision for secure locking to adjacent units. Install anywhere. White, baked enamel finish. With starters. Less lamps. For $110-120$ v., 60 cycle AC. U.L. Approved. See page 3003 for listings of fuorescent lamps.

## 1 LAMP-20 WATT 24"

Model 316. Normal power factor. Perfect for salesrooms, corridors. Shpg. wt., 4 lbs. 2.76 3 or More, EACH.......................... 2.54

## 1 LAMP—40 WATT 48"

Model 318. Single strip for 40 -watt lamp. Normal power factor. Shpg. wt., 6 lbs. 4.59
91 RX 96. NET EACH.............. 4. 3 or More, EACH
. .4 .24

## 2 LAMP-40 WATT 48"

Model 265. High power factor. Gives maximum illumination using two 48" tubes. 8 lbs. 91 RX 197. NET EACH. $\qquad$ 8.91 3 or More, EACH.
.8 .23

## CIRCLINE FLUORESCENT FIXTURES

Model 665C. Low-cost, single-lamp, chromeplated fixture with "instant-start" feature. Provides clear, glareless illumination-equivalent in light produced to a 100 -watt incandescent bulb. An excellent lighting fixture for use in average-size kitchens, basement work areas, small offices, dens, etc. Handsome chrome finish complements any room. Lamp is held securely in place by tempered, spring-steel clips. With $12^{\prime \prime}$-diameter, 32 -watt Circline lamp. U.L. Approved. For 110-120 v., 60 cycle AC. Shpg. wt., 9 lbs.
91 RX 279. NET EACH.
H. .
$\qquad$ 8.26

3 or More, EACH $\qquad$ .7.51

Model 841C. Chrome-plated 2-lamp fluorescent fixture in attractive circular design. Improved light diffusion. With $12^{\prime \prime}$ dia. 32-watt and $8^{\prime \prime}$ dia. 22-watt rapid-start lamps, hardware U.L. Approved. 11 lbs

91 RX 262. NET EACH $\qquad$ 13.35
12.14

Model 847C. Deluxe model with three selfstarting lamps. Chrome plated. With 40, 32 and 22 -watt lamps. For $\mathbf{1 1 0 - 1 2 0} \mathrm{v} ., 60$ cycle AC. U.L. Approved. Shpg. wt., 15 lbs. 21.60 3 or Moro, EACH........ $\qquad$ . 19.64

## RECESSED FLUORESCENT BOXES



Choice of Louver or Ribbed Glass Styles

Mitchell recessed fluorescent boxes combine better lighting quality with modern, attractive styling. They allow more quality with modern, attractive styling. They alhow more any room. New "push button" feature releases frame for easy access to the fluorescent tubes. Permits quick and easy lamp changing and cleaning. Brilliant chrome finish. Available in choice of efficient louver or soft ribbed glass styles. Ideal for family rooms, basements, corridors, powder rooms, etc. Ideally suited for office, store or factory. $5^{\prime \prime} 1 / 2^{\prime \prime}$ deep with ${ }^{1 / 2^{\prime \prime}}{ }^{\text {in }}$ flange. U.L. Approved. For $110-120$ volts, 60 cycle AC.

WALL BRACKET
Model 704. Attractive fluorescent wall bracket for general-purpose use in shop, store or home. panel. Triple-chrome finish. Rotary type on-off switch. $20 \times 23 / 4 \times 2^{\prime \prime}$. With starter. Takes 15 watt bulb. Less lamp and shade. U.L. Approved. For $110-120$ v. ${ }^{60}$ cycle AC. Wt., 3 lbs. 4.58
91 RX 286. NET EACH............ 4. 3 or More, EACH.
.4 .24


Model 705. As Model 704, but has adjustable shade for directing light. Wt., $31 / 2$ lbs. 5.36 3 or More, EACH.
.4.95

(A) Starters

| $\begin{gathered} \hline \text { Stock } \\ \text { No. } \end{gathered}$ | $\begin{aligned} & \text { Mfr's } \\ & \text { Type } \end{aligned}$ | Watts | Each | $\begin{aligned} & \text { Lots of } \\ & \text { 10, EA. } \end{aligned}$ |
| :---: | :---: | :---: | :---: | :---: |
| $78 \mathrm{R850}$ | FS2 | 14,15,20 | $20 ¢$ | 8 ¢ |
| 78 R 851 | ${ }_{\text {FS4 }}$ | 30 or 40 | 204 | 185 |
| 78 R 854 | *FS12 |  | 284 | 254 |
| 78 R 855 | FS22 | $\begin{aligned} & 14,15,18 * \\ & 20-22 \dagger \\ & \hline \end{aligned}$ | 284 | $25 ¢$ |

STARTERS \& SOCKETS

302
See Page 303 for Listing of Fluorescent Tubes

## Desk Lamps-Fluorescent Lamps-Lanterns

## LUXO ADJUSTABLE LAMPS



## MODEL L-1A ALL-ANGLE LAMP

The Luxo lamp, made in Norway, is famous for its precision construction and exceptional flexibility. Provides excellent illumination, instantaneous fingertip adjustment, and absolute rigidity in any position. The perfect lamp for serviceshop and work bench. Swings from a of the floor. May be raised, with foor. May be raised, lowered, or turned arms, $45^{\prime \prime}$ long. Swivel joints are spring-loaded; knurled nut controls overall tension. Porcelainized shade has large vents at top for heat dissipation. On-Off switch conveniently located at top of shade. Supplied with clamp for easy attachment to bench table, etc. Handsome dove gray finish. Durably built and light in weight. U.L. Approved. Uses standard light bulb. Less bulb. Shpg. wt., 5 lbs. 91 RX 296. List $\$ 21.95$. $N E T$.
. 6.46


## MODEL FL-1A FEATHER-TOUCH

 ALL-ANGLE FLUORESCENT LAMPThis all-purpose fluorescent lamp features feather-touch" positioning-may be raised, lowered, or turned with a touch of the fingers. Unique, spring-loaded extension arms always adjustable-may be turned up down or side-ways-always remains at same angle regardwass of arm less of arm positioning. Uses 15 -watt tubes for glare-free light. Shade is $19^{\prime \prime}$ long by $41 /{ }^{2 \prime \prime}$ wide Equipped with clamp for easy mounting on work bench, desk, or table. Handsome dovegray finish. Underwriters Laboratories' Approved. For operation from $110-120$ volts, 60 cycle AC. Less lamps (requires 2 Type T8, $18^{\prime \prime}$ lamps as listed below). Shpg. wt., 9 lbs. 20.96


## MODEL 4303 ALL-PURPOSE LAMP

A well-designed all-purpose lamp. Head tilts vertically $180^{\circ}$ and turns $300^{\circ}$ on its axis. Upper elbow swings in $160^{\circ}$ vertical arc; lower elbow swings in $110^{\circ}$ vertical arc. Extends to $36^{\prime \prime}$. Spring-controlled swivel joints. Push-button off-on switch. Easily installed-two bolts clamp base firmly to surfaces up to $3^{\circ}$ thick. Bronze finish. Requires two T8, 15-watt lamps. Lers lamps (below). Shpg. wt., 10 lbs .
91 RX 225. List, \$20.95. NET....
. 15.40
3 or More, EACH
. 14.38


MODEL 4444 "FLEXARM" TWIN-LIGHT
Versatile flexible-arm desk lamp. Gooseneck shade has $8^{\prime \prime}$ to $14^{\prime \prime}$ swing. Sturdy metal base. Heavy-gauge steel shade, $21 / 8 \times 41 / 2 \times 18^{\prime \prime}$. White enameled reflector. Push-button switch. Requires two T8, 15 -watt fluorescent lamps. Bronze finish. U.L. Approved. For 105-125 v., 60 cycle AC. Less lamps (below). Wt.. 10 lbs .
10.95


MODEL 4324 PORTABLE DESK LAMP Portable desk model. Similar to Model 4303 (left) but with weighted base. For desks where screw clamp cannot be used. Raises and lowers, extends and tilts in any direction. Stays in pobench use industrial prembly lines, etc Gives a light without glare or shadows. Attractive streamline base design has pen and pencil streamline base design has pen and pencil proved. For 105-125 volts, 60 cycle AC. Less lamps (requires 2-T8 15-watt lamps as listed below). Shpg wt., 23 1bs.
91 RU 226. List, $\$ 28.95$. NET. . . . . . 21.28 3 or More, EACH..
. .19 .86


MODEL 5600 "COOL-SHADE" LAMP
Low-cost, fully adjustable bench lamp. Fingertip control-rigid in any position. Shade vented for heat dissipation. Swivels at base. Entirely spring-controlled in base, middle joint and
 bulb. Gray. Shpg. wt., 31/2 lbs .
91 RX 142 . List, $\$ 11.95$. NET
8.77

## "STRAT-O-LITE" INSPECTION LAMP

A carefully designed, easy-to-use, industrial-type magnifier. Has built-in fluorescent lamp for excellent illumination. An ideal unit for close inspection of small-sized objects. Has $41 / 2^{\prime \prime}$ dia. $\times 9^{\prime \prime}$ focal length lens centers in $360^{\circ}$ black shield; provides shadow-free, perfectly enlarged vision. Adjustable arm and swivel joints, permit adjustment to any combination of height, angle, magnification, and light source. Supplied with instant-start fluorescent circline lamp; illuminates at touch of a button. For operation from 110-120 v., 60 cycle AC. Shpg. wt., 11 lbs.
.29 .95


## STANDARD AND CIRCLINE FLUORESCENT LAMPS

A selection of highest-quality standard and Circline fluorescent lamps. The types listed below represent the sizes most frequently employed in office, industrial and home applications. Feature extremely even diffusion, high illumination, and excellent economy of operation. Use only a fraction of the power of incandescent-type bulbs. Provide glare-free, virtually shadowless light from entire surface of lamp. White lamps have light characteristic which approximates that of standard incandescent bulbs. Daylight lamps provide light with a slightly bluish tinge approxinnating natural daylight. Cool-white lamps are 4000 Kelvin. Lamp ife is approximately 2000 hours. *Circline lamps; size shown in table is the bases except Type T-5 (miniature bi-pin) and Circline lamps which have 4 pin bases. 8Rapid-start lamps.

| Stock No. | Type | Wat | Size | Tube Dia. | olor | Std. Pkg. | $\begin{aligned} & \text { Wt. } \\ & \text { Lbs. } \end{aligned}$ | $\begin{aligned} & \text { NET } \\ & \text { EACH } \end{aligned}$ | Pkg.,EA. |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 91 R 521 | T5 | 6 | 81/4 | 5/80 | White | 24 | 1/2 | 1.35 | 1.08 |
| 91 R 511 | T12 | 14 | $15^{\circ}$ | 11/2" | Cool-whit | 24 | 1 | 1.00 | . 80 |
| 91 \% 500 | 18 | 15 | 18** | 1 | Daylight | 24 | 1 | 1.05 | . 84 |
| 91 Br 514 | T12 | 15 | 18** | 11/2" | Cool-whit | 24 | 1 | 1.00 |  |
| 91 RX 502 | 112 | 20 | $24^{*}$ | 11/2* | Daylight | 24 | 11/2 | 1.05 | 84 |
| 91 R 535 | T9* | 22 | $81 / 4$ | 11/8" | Cool-white | 12 | $11 / 2$ | 3.50 | 2.80 |
| 91 R 516 | T10* | 32 | $12^{\prime \prime}$ | 11/4" | Cool-white | 12 | 112 | 3.50 | 2.80 |
| RX 538 | T10* | 40 | $16^{\prime \prime}$ | 11/4" | Warm-white | 12 | 11/4 | 4.70 | 3.76 |
| RX 534 | T128 | 40 | 48" | 11/2" | Cool-white | 24 | 2 | 1.30 | . 04 |
| 1 RX 506 | T12 | 40 | 48" | $11 / 2^{\prime \prime}$ | Daylight | 24 | 2 | 1.25 | 1.00 |



## Auto Antennas and Vibrators



TFL- 1


TCF-4


TCF-3C


L-1000

NEW, LOK-MATIC UNIVERSAL TYPE
Model L-1000. In this new antenna, the interlocking parts drop into place automatically. Provides tighter installation, positive fit and built-in waterseal. Easily installed by one man in minutes, completely from outside! Fits any hole $7 / 8$ to $11 / 4^{\prime \prime}$. Its 3 sections extend to 57 Has $54^{\prime \prime}$ cable. Adjusts up to $43^{\circ}$ angle. Shpg. ${ }^{\mathrm{wt}} \mathrm{g}^{\circ} \mathrm{C}^{11 / 4} 579$ libs.
3.97

## SIDE-COWL TYPE

Model SC-6. Chrome-plated brass, side-cowl antenna. 3 sections-extends to $66^{\prime \prime}$. Low-loss 2 -stanchion mount with bakelite and chrome insulators. New positive shielding eliminates use of shield can. Detachable $36^{\prime \prime}$ polyethylene insulated vinylite covered, high " $Q$ " lead-in. Simple to install. Will fit even on irregular type car bodies. Shpg. wt., 1 lb.
97 CX 215 . List, $\$ 5.45$. NET
3.20

Model SC-8. Popular side-cowl antenna. 4 sections-extends to $100^{\prime \prime}: 2$-stanchion mount 36 " vinylite covered high " $Q$ "' lead-in. Fits irregular car bodies. Shpg. Wt., $13 / 4$ lbs. 4.50
97 CX 216 . List, $\$ 7.65$. NET......... 4.50

## NEW DISAPPEARING TYPE

Mode D-2000. A new model disappearing auto antenna. It collapses to only $1^{\prime \prime}$ high-yet
can be extended to $45^{\prime \prime}$ high. Designed to fit any car. Can be either fender-mounted or cowl-mounted. Has sturdy aluminum housing. $54^{\prime \prime}$ lead-in. Shpg. wt., $13 / 4$ lbs.
92 C 580 . List, $\$ 7.95$. N ET.
4.67


## "DURA-RAMIC" AUTO ANTENNAS

Model TGF-1. Colorful auto antennas-constructed of opaque, corrosion-proof fiberglass. structed of opaque, corrosion-proof fiberglass. Extremely flexible. Made from millions of woven together and resin-im pregnated under pressure. The antenna ele ments are completely imbedded in the protec tive fiberglass. Excellent sensitivity in lowsignal areas. Equal to metallic-type antennas. Features "Eight-Ball" top-cowl mounting. Adjusts to any desired angle. Fits any car. Has $54^{\prime \prime}$ vinylite covered, shielded lead-in. Length, $36^{\prime \prime}$. Available in 7 attractive opaque colors Shpg. wt., 1 lb .
92 CX 002. Red. 92 CX 006. White. $\begin{array}{ll}92 \text { CX 003. Blue. } & 92 \text { CX 007. Yellow. } \\ 92 \text { CX } 004 . & \text { Green. } \\ 92 & \text { CX }\end{array}$ 92 CX 005. Brown. List, \$5.95. NET EACH
3.50

## REPLACEMENT ANTENNA MAST

Model TCFR-1. 3-section replacement mast for weather-worn antennas. Fits over stub of old antenna. Set screws provide secure mounting. Extends to $57^{\prime \prime}$. Shpg. wt., $1 / 2 \mathrm{lb}$.
92 CX 595 . List, $\$ 2.43$. 1.43

## ANTENNA LEAD EXTENSIONS

Additional lead cable lengths for fender and rear mount installations.
Stock No. Mir's Type|Length|Shpg. Wt. NET

| 49 C 557 | C-9 | 18' | 6 oz . | . 53 |
| :---: | :---: | :---: | :---: | :---: |
| 49 C 558 | C-12 | $24^{\prime \prime}$ | 7 oz . | . 71 |
| 49 C 556 | C-42 | $15-\mathrm{ft}$ | 1/2 lb. | 1.91 |
| 49 C559 | C-63 | 18 -ft. | 3/4 1 b . | 3.23 |

## MALLORY REPLACEMENT VIBRATORS

Allied's large on-hand stock means you get fast service on your orders for vibrators. Mallory precision vibrators are fully backed by years of outstanding performance. They offer the dependability, the long brator applications. These carefully designed, all vicision units provide the lowest cost-per-hour of actual
use. Their springs are fabricated of high-grade clock-spring steel; held in perfect alignment by a rugged frame. Flexible 105strand lead wire won't break-connections stay intact. If Mallory type number is not known, write to Allied, stating make, model, tube line-up of set, or part number of the original vibrator -we will promptly recommend the correct Mallory replacement. Av. shpg. wt., 8 oz .

| Stock No. | $\begin{array}{\|c\|} \text { Mfr's } \\ \text { Type(Old) } \\ \hline \end{array}$ | $\begin{gathered} \text { Mifr's } \\ \text { Type (New) } \end{gathered}$ | Volts | Size | List | $\left\lvert\, \begin{aligned} & \text { NET } \\ & \text { EACH } \end{aligned}\right.$ |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 56 P 000 | 4-4 | 4-4 | 6 | $11 / 2 \times 27 / 8^{\prime \prime}$ | \$2.50 | 1.47 |
| 56 P 154 | 12-3 | 12-3 | 12 | $11 / 2 \times 27 / 8^{\prime \prime}$ | 2.45 | 1.44 |
| 56 P 155 | 12-4 | 12-4 | 12 | $11 / 2 \times 27 / 8^{\prime \prime}$ | 2.45 | 1.44 |
| 56 P 054 | 294 | 294 | 6 | $11 / 2 \times 31 / 4^{\prime \prime}$ | 4.90 | 2.88 |
| 56 P 120 | 509P | 509P | 6 | $11 / 2 \times 27 / 8^{\prime \prime}$ | 4.15 | 2.44 |
| 56 P 156 | G567C | G1801/G567C | 12 | $11 / 2 \times 31 / 4^{\prime \prime}$ | 9.95 | 5.85 |
| 56 P 077 | 716 | 716 | 6 | $115 / 16 \times 31 / 2^{\prime \prime}$ | 7.70 | 4.53 |
| 56 P 079 | 725C | $1801 \mathrm{~S} / 725 \mathrm{C}$ | 6 | $11 / 2 \times 31 / 4^{\prime \prime}$ | 8.55 | 5.03 |
| 56 P 080 | G725C | G1801S/G725C | 12 | $11 / 2 \times 31 / 4^{\prime \prime}$ | 9.95 | 5.85 |
| 56 P 110 | 826 C | $1603 \mathrm{~S} / 826 \mathrm{C}$ | 6 | $11 / 2 \times 31 / 4^{\prime \prime}$ | 6.35 | 3.73 |
| 56 P 086 | F826C | F826S/F826C | 32 | $11 / 2 \times 31 / 4^{\prime \prime}$ | 7.70 | 4.53 |
| 56 P Ili | G826C | G1603S/G826C | 12 | $11 / 2 \times 31 / 4^{\prime \prime}$ | 7.70 | 4.53 |
| 56 P 092 | 854 | 854 | 6 | $11 / 2 \times 31 / 4^{\prime \prime}$ | 4.90 | 2.88 |
| 56 P 113 | 859 | 1601/859 | 6 | $11 / 2 \times 27 / 8^{\prime \prime}$ | 4.70 | 2.76 |
| 56 P 132 | G859 | G1601/G859 | 12 | $11 / 2 \times 27 / 8^{\prime \prime}$ | 4.70 | 2.76 |


| Stock No. | $\begin{gathered} \text { Mifr's } \\ \text { TypeOld } \\ \hline \end{gathered}$ | $\begin{gathered} \text { Mfr's } \\ \text { Type (New) } \end{gathered}$ | Volts | Size | List | $\begin{aligned} & \text { NET } \\ & \text { EACH } \end{aligned}$ |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 56 P 118 | W859 | W1601/W859 | 4 | $11 / 2 \times 27 / 8^{\prime \prime}$ | \$4.90 | 2.88 |
| 56 P 094 | 870 | 870 | 6 | $11 / 2 \times 27 / 8^{\prime \prime}$ | 4.90 | 2.88 |
| 56 P 133 | G883 | G1602/G883 | 12 | $31 / 4 \times 1{ }^{\prime \prime}{ }^{\prime \prime}$ | 4.70 | 2.76 |
| 56 P 121 | 903 M | 903 M | 6 | $11 / 2 \times 27 / 8^{\prime \prime}$ | 3.60 | 2.12 |
| 56 P 159 | 1701 | 1701 | 6/12 | $11 / 2 \times 27 / 8^{\prime \prime}$ | 9.60 | 5.64 |
| 56 P 160 | 1751 | ${ }^{1751}$ | 6 | $11 / 2 \times 27 / 8^{\prime \prime}$ | 9.80 | 5.76 |
| 56 P 1 127 | T4002 | T4002 | 2 | $11 / 2 \times 11 / 2 \times 21 / 8^{\prime \prime}$ | 10.70 | 6.29 |
| 56 P 128 | T4003 | T4003 | 2 | 15/16x2 $1 / 8^{\prime \prime}$ | 9.80 | 5.76 |
| $56 \mathrm{P} / 35$ | 4501 | 1501/4501 | 6 | $11 / 2 \times 27 / 8^{\prime \prime}$ | 6.35 | 3.73 |
| 56 P 140 | M4501 | M1501/M4501 | 24 | $11 / 2 \times 27 / 8^{\prime \prime}$ | 6.90 | 4.06 |
| 56 P 144 | G4548 | G1807/G4548 | 12 | $11 / 2 \times 31 / 4^{\prime \prime}$ | 8.55 | 5.03 |
| 56 P 145 | G4549 | G1801/G4549 | 12 | $11 / 2 \times 31 / 4^{\prime \prime}$ | 8.55 | 5.03 |
| 56 P 131 | G4501 | G1501/G4501 | 12 | $11 / 2 \times 27 / 8^{\prime \prime}$ | 6.90 | 4.06 |
| 56 P P 138 | 4548 | 1807/4548 | 6 | $11 / 2 \times 31 / 4^{\prime \prime}$ | 7.70 | 4.53 |
| 56 P 139 | 4549 | 1801/4549 | 6 | $11 / 2 \times 31 / 4^{\prime \prime}$ | 7.70 | 4.53 |

## ICORNELL-DUBILIER INVERTER VIBRATORS

Heavy-duty vibrators for Cornell-Dubilier "Powercon" inverters. Also replace vibrators in many mobile amplifiers. Rugged construction assures years of service. Vibrators with VB and VC in Type No. are mounted in sponge
rubber for minimum noise and maximum stability. Vibrators with VD in Type No. are less sponge rubber; have liner for greater heat dissipation. Tandem types have higher power handling capacity; have two 6-pin plugs on case. Av. shpg. wt., 1 lb .

| Stock No. | $\begin{aligned} & \text { Mfr's } \\ & \text { Type } \end{aligned}$ | Volts | Used in "Powercon" Models | $\begin{array}{r} \text { NET } \\ \text { EACH } \end{array}$ |
| :---: | :---: | :---: | :---: | :---: |
| 82P753 | 6VB6H | 6 | 6DC6, 6/110DH6, 6R5, 6S8, 6SW8 | 7.94 |
| 82 P 789 | $6 \mathrm{VD6H}$ | 6 | 6SH15 6SW15 | 13.82 |
| 82 P 775 | 2529 | 6 | $6 \mathrm{SP2}$, 6LM3 | 2.44 |
| 82 P 777 | 2563 | 6 | 6/12D5, 6L6, 12L8 | 6.09 |
| 82 P 782 | 12VB6H | 12 | 12DC6, 12R8, 12S10, 12SW10 | 7.94 |
| 82 P 783 | *12VD6H | 12 | 12DC12, 12H15, 12RU15 12SH20, 12SW15 | 13.82 |

## in Public Address and Sound Distribution you get 10 with ALLIED'S

 quality
## P.A. equipment

BETTER QUALITY SOUND SUPERIOR DESIGN AND CONSTRUCTION LONGEST OPERATING LIFE

Knight P.A. equipment meets every critical requirement for superior sound coverage. A combination of highest quality components and expert workmanship deliver rugged year-in, year-out operating dependabil-ity-your assurance of supremacy in performance and value.


SAVE ON A COMPLETE SOUND SYSTEM. The cost of a complete Knight Sound System is always less than the total cost of individual components purchased separately. Additionally, only top-quality, nationally known parts and component products are used in the makeup of our P.A. systems. Whatever your plans-coverage of large open spaces or moderate sound distributionKnight public address systems are your best buy.
USE OUR FREE CONSULTING SERVICE. Our audio experts are always ready to help you. Give us approximate audience figures, area coverage dimensions, noise level, and a rough sketch of area to be covered. Careful recommendations are promptly made.
it's easy to select the equipment you need. The sound systems listed on the following pages have been expertly designed to fill most public address applications. In addition, you may select sound distribution components to fit a specific need-it's easy and it's sure. Simply decide how many speakers you will need to cover a particular area (helpful hints can be found on page 324). Then, approximate the necessary wattage -and choose the next larger size amplifier. When selecting sound sources, consult the following pages: for mikes, see page 314 ; for tuners, see pages $38-39$; for record changers, see pages $81-83$. Or-use our free consulting service for recommendations.

YOU GET QUALITY FEATURES . . . HONEST RATINGS IN Knight P.A.


Knight public address amplifiers deliver unsurpassed performance because more quality is built into each unit. The use of more copper and iron in the output transformers provides better sound quality. Tubes are operated within the manufacturer's specifications to assure you long, dependable service. A safety margin is adhered to in the selection of highest quality capacitors and resistors. Careful tube spacing minimizes hum -assures maximum operating stability. In addition to our own rigid specs, Knight P.A. amplifiers, from 16 to 60 watts (and our 60 -watt power booster, too), fully meet stringent Underwriters' Laboratories specifications for complete operating safety.


## EVERY Knilght amplifier is guaranteed for one full year

## BUY ON OUR EASY TERMS

The finest sound equipment in the P.A. field-at the lowest prices-is readily available to you on our Easy Payment Plan. You pay just $10 \%$ down, and the balance in convenient monthly payments. Full Easy Pay details are on page 444.

## 15-DAY MONEY-BACK TRIAL OFFER

We guarantee absolute satisfaction. Order any Knight Sound System you want, either for cash or on our Easy Payment Plan. Test it out for yourself, under your own operating conditions. If, after 15 days, it is not everything we claim it to be-send it back. We'll refund every penny of the purchase price, less only transportation charges.



(4) $\$ 58^{95}$

- 32 Watts, for $90 \%$ of P.A. Needs

Less Record Player

- 1-Magnetic \& 2-External Phono Inputs MODEL K M - 3032. An outstanding P.A. value, the Knight 32-Watt Amplifier is a triumph of skillful engineering. Its highly attractive, tra-compact styling features a tilted control panel for operator onvenience; handsome cabinet with deep-well hand grips for easier carrying. Adaptable to every P.A. use, the 32 -watt amplifier is perfect for music, paging, general coverage under high-noise conditions, and other P.A. uses.
This superior amplifier features: Phono fader control for selection of either of 2 high-level program sources (tape recorder, changer or tuner) and phono, with volume control of each from a single knob; tape output for simultaneous recording and P.A.; impedance selector for greatly simplifying speaker hook-up; trumpet protector feature-protects trumpets from low-frequency burnout. Speaker output taps of $4,8,16,250$ and 500 ohms, as well as 70.7-v. output, permit use of up to 32 speakers! Power Output: Full 32 watts of usable power. Response: $\pm 2 \mathrm{db}, 30$ to $20,000 \mathrm{cps}$. Hum is inaudible; 78 db below rated output. 5 Inputs: $2-\mathrm{Mic}, 2-\mathrm{Phono}$, 1-Magnetic Phono. Controls: Mic (2), Phono Fader, Off-On/Tone, Mic/Magnetic Phono switch; also has hum balance adjust. Tubes: $2-E C C 83 / 12 A X 7,6 A V 6,2-6 L 6 G B ; 5 U 4 G B$ rectifier. Size, $61 / 2 x$ $151 / 2 \times 11^{\prime \prime}$. With all input plugs. Less record player. U.L. Approved. For 110-120 v., 60 cycle AC. Shpg. wt., 26 lbs.
93 SU 507. Only \$5.90 Down. NET
58.95

MODEL KN-3132 32-WATT AMPLIFIER WITH RECORD PLAYER INSTALLED. Shpg. wt., 28 lbs.
93 SU 740. Only $\$ 7.83$ Down. NET.
.78 .25

knight 16-Watt P.A. Amplifier

ONLY
$\$$ \&650

- Top Design-Dependable Performance
ess Record Player
- One Mike, Two External Phono Inputs
- Phono Fader, Tone and Mike Controls - Four Tubes Plus Rectifler

MODEL KN-3016. Designed with the user in mind, the excellent Knight 16-Watt P.A. Amplifier is perfect for smaller auditoriums, halls and church or school recreation rooms, etc. Has tape output jack for simultaneous recording and P.A.; phono fader control. Power Output: Full 16 watts of usable power. Frequency Response: $\pm 2 \mathrm{db}, 30-15,000 \mathrm{cps}$. Hum is inaudible; 72 db below rated output. 3 Inputs: Mic, 2-Phono. Controls: Mic, Phono Fader, Off-On/ Tone; also has hum balance adjust. Output Impedances: 4, 8, 16, 250 and 500 ohms. and $70.7-\mathrm{v}$. output-permits up to 16 speakers. Tubes: 6AV6, ECC83/12AX7, 2-6V6GT; 5 Y3GT rectifier. Size, $61 / 2 \times 151 / 2 \times 11^{\prime \prime}$. With all input plugs. Less record player. U.L. Approved. For 110-120 v., 60 cycle AC. Shpg. wt., 25 lbs.
88 SU 809. Only $\$ 4.65$ Down. NET
46.50

MODEL KN-3116 16-WATT AMPLIFIER WITH RECORD PLAYER INSTALLED. Shpg. wt., 28 lbs.
88 SU 925 . Only $\$ 6.58$ Down. NET
65.75

## knight 60-Watt P.A. Amplifier

## ONLY

$\$ 8400$
Less Record Player

- Tremendous Power-Minimum Distortion

MODEL KN-3060. Designed by experts to give you the most for your P.A. dollar, the new Knight 60 -watt Amplifier is perfect for stadiums, industrial plants, raceways, carnivals, church tower chime systems, schools-wherever maximum coverage is necessary. Although compact in size, there's hardly a big job it cannot do-and though compact in size, there s hardoy a big job it cannot do- and P.A. uses are practically limitless! Tape output jack allows you to make high-quality- tape recordings of all program material going through your P.A. system. Trumpet protector switch protects your trumpets. Phono fader control provides smooth transition from one phono input to the other with center-off position. Magnetic input allows you to plug a hi-fi record changer into the amplifier. Impedance Selector for utmost ease in speaker hook-up. Hum balance adjust.
Power Output: Full 60 watts of usable power. Hum is inaudible; 71 db below rated output. Frequency Response: $\pm 2 \mathrm{db} .20$ to 20,000 cps. 5 Inputs: 2-Mic, 2-Phono, 1-Magnetic Phono. Controls: Mic (2), 1 -Phono Fader, Bass, Treble, Mic/Mag switch, Off-on. Tubes: 2-ECC83/12AX7, 6C4, 2-6CA7/EL34; 5Y3GT, 5U4GB rectifiers. Output Impedances; 4, 8, 16, 250 and 500 ohms, plus $70.7-\mathrm{v}$. output. Size, $67 / 16 \times 171 / 4 \times 11^{\prime \prime}$. All-metal black case with white-and-chrome panel. With set of plugs. Less record player. U.L. Approved. For 110-120 v., 60 cycle AC. Shpg. wt., 37 lbs.
88 SU 81 2. Only $\$ 8.40$ Down. NET.
84.00

MODEL KN-3160 60-WATT AMPLIFIER WITH RECORD PLAYER INSTALLED. Shpg. wt., 39 lbs.
88 SU 928. Only $\$ 10.45$ Down. NET.
104.50


## knight 25-Watt Mobile Amplifier



- Use Indoors from 110 -Volt AC Power
- Use Outdoors from 6 or 12-V. Battery
- Phono Fader, Tone, and 2-Mike Controls - 2 Mike Inputs; 5 Tubes \& 2 Rectiflers trumpet protector switch; battery "saver" switch.
Power Output: Full 25 watts. Frequency Response: $\pm 2 \mathrm{db}, 40-20,000$ cps. Inaudible hum; 75 db below rated output. 5 Inputs: $2-\mathrm{Mic}$, 2-Phono, 1-Magnetic Phono. Impedances: 4, 8, 16, 250, 500 ohms and 70.7-v. output. Controls: 2-Mic, Phono Fader, Off-On/Tone, Standby and Mic/Mag switch. 5 tubes, plus 2 rectifiers. Size, $67 / 16 \times 171 / 4 \times 11^{\prime \prime}$. Light brown hammerloid cabinet with aqua-andwhite panel. With all input plugs. Less record player. For 6 or 12 v . DC or 110-120 v., 60 cycle AC. Shpg. wt., 34 lbs .
93 SU 506. Only $\$ 10.65$ Down. NET.
106.50

MODEL KN-3125. 25-WATT AMPLIFIER WITH RECORD PLAYER IN.
STALLED. Shpg. wt., 37 lbs.
93 SU 738 . Only $\$ 12.65$ Down. NET.
126.50

# gUARANTEED FOR ONE FULL YEAR 

## knight 8-Watt P.A. Amplifier

## $5+303$

- Compact-Remarkably Versatile
\$3.25 Down
ne Mike, Two Phono
- Microphone, Phono and Tone Controls
- Two Tubes Plus Rectifler

MODEL KN-3008. Small in size, but with a large "voice," the Knight 8 -Watt P.A. Amplifier is an unbeatable value. You'll find hundreds of uses for this little "powerhouse"-at carnivals, bazaars, amusement parks; sales demonstrations and auctions; small clubs, class rooms, churches, stores, cafes, rumpus rooms (plug in a record player for parties); etc. Tape output jack allows recording and P.A simultaneously; phono fader control gives you single-knob volume control over two phono inputs. Output: Full 8 watts of usable power. Hum is inaudible; 62 db below rated output. Response: $\pm 2$ $\mathrm{db}, 70$ to $10,000 \mathrm{cps}$. Output Impedances: 4 and 8 ohms. 3 Inputs: 1-Mic, 2-Phono. Controls: Mic, Phono Fader, Off-On/Tone. Tubes: ECC83/12AX7, 6L6GB; 5Y3GT rectifier. Enclosure styled in black and brushed chrome. Size, $41 / 2 \times 10^{5} / 8 \times 73 / 8^{\prime \prime}$. For $110-120$ v., 60 cycle AC. Shpg. wt., 12 lbs.
88 SX 808. Only \$3.25 Down. CASH NET.
32.50

## PUBLIC ADDRESS ACCESSORIES



# knight 60-Watt 

Power Booster
ONLY
\$6.95 Down
MODEL KN-3061. Step up your P.A. system by a full 60 watts of audio power with this versatile booster-amplifier! For use with any P.A. amplifier that delivers 0.4 volt or more at its speaker terminals. Tremendously boosts area coverage, provides husky power reserve and overcomes high noise. Perfect for sports arenas, stadiums, tracks, or large auditoriums, Can be added to church P.A. system to provide the power needed for a chime or carillon installation.
Output: Full 60 watts. Hum: -71 db . Response: $\pm 2 \mathrm{db}, 20$ to 20,000 cps. Input for 60 -Watt Output: 0.4 volt. Output Impedances: 4, 8, 16, 250 and 500 ohms; plus $70.7-\mathrm{v}$. output. Controls: Off-On, Volume; also has hum balance adjustment. Trumpet protector switch; tape output jack. Tubes: ECC83/12AX7,6C4, 2-6CA7/EL34;5Y3GT, 5 U4GB rectifiers, $71 / 4 \times 15 \times 81 / 8^{\prime \prime}$. U.L. Approved. For $110-120 \mathrm{v}$., 60 cycle AC. Shpg. wt., 24 lbs.
93 SU 694. Only $\$ 6.95$ Down. CASH NET
69.50

knight Control
Unit for Paging and Intercom

\$7.75 Down
Exceptionally versatile control unit with complete switching for up to 40 stations, in any combination, for talking listening or transmission of program material; it may be used with any P.A. amplifier. Handles 20 stations; adapter panel (below) permits the addition of 20 more keys. Controls include a volume control, talk-listenprogram switch, and an "all-call", switch. Self-contained speaker may be used as a microphone; a jack is provided for an external microphone. Applications include school, hospital and factory intercorn systems. Requires no power-connects to amplifier input and output. Size, $9 \times 171 / 4 \times 7^{\prime \prime}$. Shpg. wt., $111 / 2$ lbs.
93 SX 056. NET.
77.50

EXTRA 20-KEY PANEL. For control unit above. $13 / 4 \mathrm{lbs}$. 93 SX 057. NET.


## SUPERIOR QUALITY

## knight 35-Watt Professional Amplifier

- Our Most Versatile Amplifler
\$10.98 Down
- 3 Mike, 2 Phono Controls
- 2 Tone; Master Volume Controls
- 5 Ruggedized Tubes \& Rectifler

MODEL KN-3035. Expertly engineered and carefully assem. bled, the Knight KN-3035 35-Watt Professional P.A. Amplifier assures you of dependable performance, simplified operation, and maximum versatility of application. Combines a smart, professional appearance with ease of operation. Features include: Cannon Series XL connectors; volume unit meter with range switch; provision for plug-in lowimpedance mike transformers and also remote mixing of 3 mikes (see below); trumpet protector switch; output impedance selector socket; output tube balancing control; and tape output jack for recording program materjal going through your P.A. system.

Power Output: Full 35 watts output at only $2 \%$ distortion. Hum is inaudible- 71 db below rated output. Frequency Response: $\pm 2 \mathrm{db} 20-20,000$ cps. 6 Inputs: 3-Mic, 2-Phono, 1-Magnetic Phono. Controls: Mic (3), Phono (2), Master Volume (controls all inputs simultaneously), Bass, Treble, Off-On, and hum balance adjust. Output Impedance: $4,8,16,250$ and 500 ohms, plus $70.7-\mathrm{v}$. output. Tubes: $3-$ ECC83, 12AU7, 2-EL34 and 5U4GB rectifier. Rugged, all-metal black case with brushed chrome front panel. Size, 67 伯 $\times 171 / 4 \times 11^{\prime \prime}$. U.L. Approved. For $110-120$ v., $50-60$ cycle AC. Shpg.. wt., $281 / 2$ lbs.
93 SU 055. Only $\$ 10.98$ Down. NET
109.75

PLUG-IN LOW IMPEDANCE MIKE TRANSFORMER. Matches mikes with impedances from $50-600$ ohms. Wt., 1 lb . 93 S 068. NET.
13.50

REMOTE CONTROL UNIT. For use with Model KN-3035 amplifier only. Permits fading and mixing 3 mike inputs up to 1000 ft . away. Supplied with $50-\mathrm{ft}$. cable. Size, $5 \times 21 / 2 \times 1^{\prime \prime}$. Shpg. wt., $11 / 2 \mathrm{lbs}$.
93 S 070 . NET
12.75

## Rack Panel Kits for knight P. A. Units

Give your P.A. equipment professional appearance and centralization by mounting Knight P.A. components in standard relay racks; everything you need is in these new panel kits! Hand somely finished in brushed chrome, easy to keep clean and new-looking. When your Knight units are mounted in this way, they will make a compact, integrated package, provide full ventilation. Matching blank panels also available Each kit includes a brushed chrome Each kit includes a brushed chrome
dress panel, U-pan assembly, a full set
 of knobs, and hardware. See page 236 for standard relay racks.

| Stock No. | Description | Height | Wt.,Lbs. | NET |
| :---: | :---: | :---: | :---: | :---: |
| $935 \times 058$ | For KN-3035 Amplifler | $7{ }^{\prime \prime}$ | $6^{3 / 4}$ | 14.95 |
| 93 SX 059 | For KN-3032 Amplifier | 7"' | $71 / 2$ | 14.38 |
| 93 SX 060 | For KN-3060 Amplifier | $7^{\prime \prime}$ | $71 / 2$ | 14.55 |
| 93 SX 061 | For KN-3061 Booster | 83/4" | 71/2 | 14.10 |
| 93 SX 062 | For KN-110 Deluxe Tuner | $7^{\prime \prime}$ | $61 / 2$ | 11.60 |
| $935 \times 063$ | Phono Drawer on Slides | $101 / 2^{\prime \prime}$ | 14 | 19.65 |
| 93 SX 064 | Blank Panel | $31 / 2{ }^{\prime \prime}$ | 3 | 5.40 |
| 93 SX 065 | Blank Panel | $51 / 4^{\prime \prime}$ | $31 / 2$ | 5.85 |
| 93 Sx 066 | Blank Panel | $7^{\prime \prime}$ | 41/4 | 6.50 |
| 93 SX 067 | Blank Panel | $83 / 4$ " | 43/4 | 6.90 |




TRAVELING DANCE BANDS


SCHOOL GATHERINGS


## Knight Standard 32-Watt Portable System

You Save \$23.33
Combining power with versatility, this deluxe sound distribution system covers $90 \%$ of all portable P.A. requirements-and saves you over $\$ 20.00$ on the total price of the individual components if purchased separately. Two perfectly balanced carrying cases contain the entire system, making it easy to transport and set up in a jiffy. The system is offered with or without the topmounted 4 -speed record player.

SYSTEM INCLUDES: Knight KN-3032 32-Waft Amplifier, with or without Top-Mounted 4Speed Record Player; Electro-Voice Model 664 Dynamic Microphone; Microphone Cable; Atlas CS-33 Microphone Floor Stand; and Two Heavy-Duty $12^{\prime \prime}$ Speakers, each rated at 25 watts, installed in a Carrying Case that comes apart to form two separate baffles for the speakers within.

Use this system for musical background, sound-effects, or announcements. Set it up in minutes-it readily adapts itself to any job, big or small. Afterwards, it's quickly stored, ready for its next job. Ruggedly constructed for long, dependable service.

Wood cases have durable plastic browntweed finish-handsomely contrasted green grille. Each speaker has a 30 -foot cord with plug attached. Speaker case is $191 / 2 \times 16 \times 17^{\prime \prime}$; amplifier case is $111 / 2 \times 17 \times 12^{\prime \prime}$. Record player operates at $162 / 3,331 / 3,45$, and 78 rpm ; has ceramic cartridge with dual sapphire styli. System less record player is for operation from 110-120 volts, $50-60$ cycle AC; system with record player installed is for operation from 110-120 volts, 60 cycle only.

ABOVE SYSTEM, LESS RECORD PLAYER. Includes components listed above; less record player for amplifier. Wt., 96 lbs. 51 PA 506. \$16.00 Down. NET.
159.95

ABOVE SYSTEM, WITH RECORD PLAYER INSTALLED. Greatly increases versatility of P.A. system; permits playing of any recording at any speed. Ceramic cartridge used provides excellent. wide-range reproduction -unaffected by heat and humidity. Ideal for outdoor dances, carnivals and fairs. in stitutional use, churches, or general P.A work indoors or out. Shpg. wt., 100 lbs. 51 PA 608. You Save \$23.63. NET.. 178.95

Less Record Player

You Save \$14.80 done, pick it up and pack it away easilyin one case! There are no loose items to carry around, yet everything you need is in the case: speakers, microphone, microphone floor stand, amplifier, cable-even a 4 -speed record player, if desired!
SYSTEM INCLUDES: Knight KN-3032 32-Watt Amplifler, with or without the Top-Mounted 4-Speed Record Player; Electro-Voice 951 Crystal Cardioid Microphone; Atlas CS-33 Microphone Floor Stand; Mike Cable; and two powerful $12^{\prime \prime}$ P.A. Loudspeakers.
Carrying case separates into two separate baffles when opened. Speaker-amplifier case has attractive blue-green and ivory leatherette covering with matching plastic grille. HWD: $245 / 8 \times 18 \times 11^{\prime \prime}$. System less player is for $110-120$ v., $50-60$ cycle AC; system with player is for $\mathbf{1 1 0 - 1 2 0}$ v., 60 cycle only.
ABOVE SYSTEM, LESS RECORD PLA YER. P.A. components listed above; less record player for amplifier. Shpg. wt., 71 lbs.
51 PA 510 . Only $\$ 12.50$ Down. NET.
124.95

ABOVE SYSTEM, WITH RECORD PLAYYER INSTALLED. Same as above, but with 4 -speed record player mounted on amplifier. Ceramic cartridge, installed in player, is unaffected by heat and humidity. System for general indoor or outdoor P.A. use. Shpg. wt., 75 lbs. 51 PA 607. You Save $\$ 15.10$. NET.

knight 16-Watt DeLuxe Portable P. A. System

Less Record Player - Compact-Easily Fits Into One Case<br>- Powerful, Advanced-Design Amplifler<br>- Two Heavy-Duty 12" Quam Speakers<br>\section*{Only $\$ 10.00$ Down}<br>- Wide-Range Mike with Floor Stand

Here's a deluxe, portable 16 -watt sound system that offers you plenty of power, maximum convenience and top dependability. You save $\$ 8.77$ over the cost of the individual components purchased separately! Everything is in a single case-there's nothing extra to carry or keep track of - the height of functional design. Ideal for auctioneers, salesmen, demonstrators, etc. The perfect answer to all medium coverage public address requirements.
SYSTEM INCLUDES: Knight KN-3116 16-Watt Amplifier, with or without Top-Mounted 4-Speed Record Player; Two Quam 12" Heavy-Duty P.A. Speakers; Atlas CS-33 Microphone Floor Stand; Astatic M332 Microphone; Knight Combination Speaker-Amplifier Case.
The Knight 16 -watt amplifier features low-noise ECC-83 preamp tubes, and a convenient tape recorder output, which may be used in recording programs while P.A. system is in use. The case comes apart to form two independent baffles for the speakers. Handsome blue-green and ivory leatherette covering has matching plastic grille. HWD: $245 / \mathrm{s} \times 18 \times 11^{\prime \prime}$. System less record player is for $110-120$ volts, $50-60$ cycle AC ; with player, 60 cycle only.
ABOVE SYSTEM, LESS RECORD PLAYER. Shpg. wt., 68 lbs.
51 PA 505. Only $\$ 10.00$ Down. NET
99.95

ABOVE SYSTEM, WITH RECORD PLAYER INSTALLED. Record player has ceramic cartridge with dual sapphire styli. Shpg. wt., 73 lbs.
51 PA 606. Only $\$ 11.90$ Down. NET...

knight 8-Waft "Little Giant" Portable System

ONLY

- Lightweight for Easy Portability
- Powerful, Compact Amplifler
- Smartly Styled, Humidity-Proof Mike
- Heavy-Duty 8 " P.A. Speaker

\$5.50 Down

Small in size, but with a large "voice", this 8 -watt "Little Giant" sound system is an unbeatable value in a portable P.A. system-it's a real favorite for small sound installations. Easy to operate, it sets up in a hurry! Surprisingly powerful, it combines unusually low cost with economical service and dependable operation. You save $\$ 2.89$ over total cost of components purchased separately.
Highly recommended for clubs and lounges, waiting rooms, stores, cafes, etc. Here's a practical choice for use in schools or other institutions where a number of groups must share the use of a single system. Everything you need fits into one compact case-carry it anywhere for instant, reliable use.
SYSTEM INCLUDES: Knight KN-3008 8-Watt Amplifier; Knight SpeakerAmplifier Case; Shure Model 215 "Starlite" Crystal Microphone; and Quam 8" Public Address Speaker.
The Knight 8 -watt amplifier has an output jack to permit tape recording while it is being used for P.A. Shure's "Starlite" ceramic mike, with retractable wire stand, provides smooth response. The Quam heavy-duty speaker is designed for clear reproduction and dependable service. Constructed of sturdy lock-corner plywood, the Knight speaker enclosure is attractively finished in brown tweed and tan leatherette with matching plastic grille. For operation from $110-120$ volts, $50-60$ cycle AC. Shpg. wt., 27 lbs. 51 PA 511. NET


## Argos PC-2 Changer Case

Lightweight, portable record changer case, pre-cut for Collaro TSC-740 record changer. Durable $1 / 4^{\prime \prime}$ plywood construction with brass-finished reinforcements. Wear-resistant Tyroxylin covering is beautifully finished in contrasting brown and light tan. Height above mounting board, $65 / 8^{\prime \prime}$. Size,
HWD: $101 / 2 \times 17 \times 151 / 4^{\prime \prime}$. Shpg. wt., 16 lbs.
93 SX 554. NET
13.23

93 SU 639. Changer Case with Blank Mounting Board. NET. . . 13.23
89 RU 521. Collaro TSC-740 Record Changer. 16 lbs. NET . . . 41.65
64 SC 398. E-V 26MDST Cartridge in Collaro Head. 3 oz. NET 22.05

## Pentron Tape Repeater

MODEL A-2. Highly efficient tape message repeater that provides a dynamic audio appeal-where and when you need it. Ideal for personnel instruction-permits operator to control flow of messages by pressing starter button. Plays from 1 to 55 minutes in duration. Speed: $33 / 4 \mathrm{ips}$. Complete with case. $73 / 4 \times 6 \times 67 / 8^{\prime \prime}$. For $110-120$ volts, 60 cycle AC. Shpg. wt., 8 lbs . 91 R 736 . Only $\$ 8.80$ Down. NET.
 87.95 MODEL SM-1 LOADED TAPE MAGAZINE. Standard magazine loaded with $200^{\prime}$ tape. Record tape on any tape recorder. Wt. 2 lbs.
91 R 741 . NET.


## knight PORTABLE P.A.

EVERYTHING FITS IN THE CASE FOR EASY CARRYING . . . NO LOOSE EQUIPMENT TO LOSE OR MISPLACE



## knight 60-Watt Super-Power Paging Systems



- Use as Many as 48 Speakers
- For Private Offices or Classrooms
- Pre-Wired for Quick, Easy Assembly

Only \$20.00 Down

- Grip-to-Talk, Slide-to-Lock Mike Stand

When you need a "big voice" for indoor paging-in a large office, industrial plant, stadium, auditorium or any other large areayou'll get dependable performance from this powerful Knight 60 watt paging system. Ready for quick, simple installation, it employs 6 speaker-baffles, each with separate volume control, for efficient sound dispersion and penetrating power. Using simple, easy-to-hook-up 70.7-v. output; you can also add on speaker-baffle units (up to 48) at any time. No soldering required-a screwdriver is all you need to connect your speaker cable.
System includes: Knight U.L. Approved 60-Watt Amplifier; Shure 520SL Microphone on Stand; 6 Speaker-Baffle Units. Less speaker cable, see page 204. For operation from 110-120 v., 60 cycle AC Shpg. wt., 84 lbs.
51 PA 503. You Save \$11.75. NET
199.95

60-WATT SYSTEM AS ABOVE, WITH 12 SPEAKER-BAFFLE UNITS. 126 lbs. 51 PA 504. You Save \$33.45. NET . . . . . . . . . . . . . . . . . . . . 279.95 60-WATT SYSTEM AS ABOVE, WITH 6 SPEAKER-BAFFLE UNITS AND COLLARO TSC-740 RECORD CHANGER ON BASE. Wt., 103 lbs.
51 PA 604. You Save \$31.23. NET
249.95

60-WATT SYSTEM AS ABOVE, WITH 12 SPEAKER-BAFFLE UNITS AND COLLARO TSC- 740 RECORD CHANGER ON BASE. Wt., 143 lbs.
51 PA 605. You Save \$52.93. NET.
.329 .95


These paging and music distribution systems are also available with the high-quality Collaro TSC-7404-speed record changer. Features: G.E. triple-play cartridge with diamond-sapphire styli. Specify choice of walnut, blonde or mahogany base.


## ADD AS MANY SPEAKERS AS YOU NEED

SPEAKER-BAFFLE COMBINÄTION. Deluxe $8^{\prime \prime}$ speaker with $70.7-\mathrm{v}$. output trans-
 former and volume control-installed in mahogany finished wood baffle. Add as many speakers as you need (within the many speakers as you need (withit of the amplifier) to meet your requirements. For wall mounting. $11 \times 99 / 16 \times 61 / 8^{\prime \prime} .6 \mathrm{lbs}$.
93 D 703. NET.
16.95

## Knight 32-Watt Power Paging Systems

NET

- May Be Used with up to 24 Speakers
 - Grip-to-Talk, Slide-to-Lock Mike Stand
- 1 Speaker per Average Room

Designed for medium power paging in moderately-sized offices, plants or schools. The Knight 32 -watt standard-power paging system combines plenty of power with versatility of operation. Uses pre-wired speaker-baffle units-ready to connect to the 70.7 v. output-no soldering necessary for hook-up. Additional speakerbaffle units or trumpets may be added at any time. Easy, simple connections enable you to put this system into operation with a minimum of time and effort.
System includes: Knight 32-Watt Amplifier, U.L. Approved for operator safety; Shure 520SL Microphone on grip-to-talk stand; and 3 SpeakerBaffle Units. Less speaker cable, see page 204. For 110-120 v., 60 cycle AC. Shpg. wt., 52 lbs.
51 PA 501 . You Save $\$ 11.30$. NET.
124.50

32-WATT SYSTEM AS ABOVE, WITH 6 SPEAKER-BAFFLES. 73 lbs .
51 PA 502. You Save \$16.70. NET.
169.95

32-WATT SYSTEM AS ABOVE, WITH 3 SPEAKER-BAFFLE UNITS AND COLLARO TSC-740 RECORD CHANGER. Shpg. wt., 71 lbs.
51 PA 602. You Save $\$ 30.78$. NET.
174.50

32-WATT SYSTEM AS ABOVE, WITH 6 SPEAKER-BAFFLE UNITS AND COLLARO TSC-740 RECORD CHANGER. Shpg. wt., 92 lbs. 51 PA 603. You Save \$36.18. NET.
219.95

## USE OUR FREE P.A. CONSULTING SERVICE

Knight P.A. systems have been selected to meet practically any P.A. need without modification. If you have some special requirements, we will be glad to quote you prices special requirements, we wim be glad to quote you prices cially tailored to your needs. If you are in doubt about cially tailored to your needs. If you are in doubt about
which system to choose, our audio specialists will aid you which system to choose, our audio specialists will aid you
in making a selection. Write Allied's Sound Division giving a rough sketch of your floor plan and sound needs. Careful recommendations are promptly made.


## knight 32-Watt Industrial Paging System

- May Be Used with as Many as 24 Speakers
- Ideal for Both Indoor of Outdoor Use
- Can Be Quickly and Easily Installed

NET

## Only \$18.00 Down

This Knight 32-Watt Industrial Paging System is especially designed for rugged use. It's ideal for the moderately-sized plant, warehouse or institution. Offering maximum flexibility, the durable, weatherproof University trumpets can be installed practically any-where-indoors or outdoors-and up to 15 feet away from the line-matching transformers. The Shure "Dispatcher" microphone, with grip-to-talk stand and the versatile Knight 32-Watt Amplifier assure instant readiness of operation. This system can easily be expanded-you can add more trumpets or speaker-baffle units (see opposing page) at any time through the use of the simple, efficient 70.7 -volt output. (Line-matching transformers required for trumpets.) Easily installed-microphone complete with connectors attached for quick assembly; your own plant electricians can route and connect your speaker cables and system is ready for operation-no expensive engineering required
System includes: Knight 32-Watt Amplifler, U.L. Approved for operator safety; Shure Model 520SL Microphone with grip-to-talk stand; six University Model MIL Trumpets; and six Knight 70.7-V. Line-Matching Transformers and full instructions for hook-up. Less speaker cable (see page 204). For operation from $110-120$ volts, $50-60$ cycle AC. Shpg. wt., 55 lbs.
51 PA 508. NET
179.95

## ADD EXTRA TRUMPETS AS NEEDED

Need more trumpets? You can add them at any time to either of the systems above. In order to utilize simple 70.7-v. hook-up, use 1 Knight Line-Matching Transformer for each trumpet added. Determine wattage rating needed for each trumpet (maximum, 5 watts) and connect to appropriate terminals.

## knight 60-Watt Industrial Paging System

- May Be Used with as Many as 48 Speakers
- Perfect for Overcoming High Noise Levels
- Ready for Quick, Simple Installation

NET


Designed for that "big job" in public address. the Knight 60-Watt Industrial Paging system provides highly effective sound dispersion over large areas. Extremely desirable for large industrial plants, warehouses, carnivals, railOnly \$29.45 Down road yards, shipping docks, institutions, etc Supplied complete with 12 weatherproof trumpets for ample indoor and outdoor coverage. This system offers you extreme flexibility for expansion.
You can very easily add up to 36 more speaker-baffle units (see preceding page) or trumpets at any time. Simple, effective $70.7-\mathrm{v}$. output arrangement enables you to do this without having to redesign existing arrangement. Trumpets require line-matching transformers (supplied) which may be mounted up to 15 feet away from trumpets. Everything is carefully selected and especially designed for the utmost simplicity-no engineering consultation necessary, no extra parts to buy-mike connectors, etc. are attached. Your own employees can install it in a minimum of time.
System includes: Knight $60-$ Watt Amplifier, U.L. Approved for operator safety; Shure Model 520SL Controlled Reluctance Mike on Stand (heat and humidity-proof mike, with grip-to-talk, slide-to-lock switch); twelve University MIL trumpets; and twelve Knight Line-Matching Transformers. Less speaker cable, see page 204. For 110-120 v., 50-60 cycle AC. Shpg. wt., 90 lbs. You save $\$ 16.98$ on this system! 51 PA 509. NET.
294.50

UNIVERSITY MIL TRUMPET. Efficient 5 -watt trumpet for addition to above systems. 5 -watt reflex-type driver. Range, $400-13,000 \mathrm{cps}$. Impedance, 8 ohms. Shpg. wt., $31 / 4 \mathrm{lbs}$.
95 D 163. NET.
15.29

KNIGHT 70.7-VOLT LINE-MATCHING TRANSFORMER. Shpg. wt., $3 / 4 \mathrm{lb}$. 62 G 081. NET.


## © <br> 

## Outstanding Sound Systems for Auditoriums, Churches, Clubs, etc.



## OPTIONAL RECORD CHANGER

COLLARO TSC-740. 4-speed changer. Has E-V ceramic turnover cartridge with $.0007^{\prime \prime}$ diamond and $.003^{\prime \prime}$ sapphire styli. Worth $\$ 69.45$ if purchased
 separately.


Only \$13.00 Down Speakers, Two Wall Bafles, Shure 55S Dy 12 ic Microphone; Microphone Cable; Atlas CS-33 Microphone Stand.
The Knight 32-Watt amplifier has provisions for future plug-in expansion of the system. The controls and input jacks provided permit the addition of a radio tuner, tape recorder or extra microphone at any time. A special output jack lets you record the program on your present tape recorder without using a separate microphone for the recorder. The deluxe wood wall baffles are finished in walnut to fit most any decor; heavy-duty $12^{\prime \prime}$ speakers. The Shure 55 S microphone is excellent for both voice and music. Has directional pick-up pattern. System includes $30-\mathrm{ft}$. speaker cables and plugs. Systems without phono or record changer are for 110-120 v., 50-60 cycle AC; those with either phono or record changer are for 60 cycle AC only. LESS PHONO OR RECORD CHANGER. Save \$26.44. Wt. 72 lbs 51 PA 515 . Only $\$ 13.00$ Down. NET.
129.95

WITH 4-SPEED PHONO. Save $\$ 26.74$ System as described above, but with 4 -speed record player mounted on amplifier case. Plays $16^{2} / 3$, $331 / 3.45$ and $78-\mathrm{rpm}$. Excellent for providing musical backgrounds for parties, theatrical performances, church events, etc. Gives your P.A. system much greater flexibility-makes it useful for many more occasions. Shpg. wt., 75 lbs.
51 PA 61 1. Only $\$ 14.90$ Down. NET.
148.95

WITH COLLARO TSC-740 CHANGER. Save $\$ 43.38$. Quality 4-speed automatic record changer. Features fully automatic intermixing of $7^{\prime \prime} .10^{\prime \prime}$, and $12^{\prime \prime}$ records. Pick-up arm complete with E-V MDS 26 hi-fi cartridge with diamond needle. Mahogany, blonde or walnut base-specify choice. Shpg. wt., 74 lbs.
51 PA 601. Only \$18.00 Down. NET.
179.95

## knight 16-Watt Permanent System

Less Phono
You'll find exceptional value in this Knight 16-watt sound system for permanent installation. Although moderately priced, it offers outstánding performance, exceptional operating convenience and rugged dependability. Covers audiences of up to 1000 persons and areas of up to 10,000 square feet. May be used with up to 15 speakers. You
Only \$9.00 Down cosit of components purchased separately! save $\$ 14.73$ over the cost of components purchased separately Baffles; Two 12" Quam Heavy-Duty P.A. Speakers; Knight 3-Section Microphone Stand; Astatic M-332 Crystal Microphone.
The Knight KN-3016 16-Watt amplifier is perfect for smaller auditoriums, halls, church rooms, etc. Has phono fader control; tape output jack; other quality features. Wall baffles have mahogany finish. Astatic M-332 mike has all-directional pickup. Systems less phono or record changer are for $110-120 \mathrm{v} ., 50-60$ cycle AC ; those with phono or record changer are for 60 cycle AC only.
LESS PHONO OR RECORD CHANGER. Shpg. wt., 60 lbs. 51 PA 51 3. Only $\$ 9.00$ Down. NET.
89.95

WITH 4-SPEED PHONO. Save $\$ 14.98$. Shpg. wt., 63 lbs.
51 PA 609. Only $\$ 10.90$ Down. NET.
108.95

WITH COLLARO TSC-740 CHANGER. Save $\$ 33.98$. Mounted on Mahogany, blonde or walnut base-specify choice. Shpg. wt.. 60 lbs. 51 PA 600. Only $\$ 1+.00$ Down. NET.

## knight 8-Watt System With Wall Speaker



Only \$4.65 Down
Ideal for smaller permanent sound installations, the Knight "Little Giant'" wall-mount ed P.A. system is excellent for clubs and lounges. classrooms, waiting rooms, stores, cafes, etc. Surprisingly powerful, it combines low cost with economical service and smooth, de pendable operation. Loaded with features that make it perfect for hundreds of smaller P.A. applications. Versatile and unusually low in cost, it sets up in a jiffy-every component in this fine system has been carefully selected to give you the most for your P.A. dollar. Covers areas up to 5000 square feet and audiences up to 500 persons. System includes: Knight KN-3008 8-Waft Amplifier; Shure Model 215 "Starlite" Crystal Microphone; Quam 8" Heavy-Duty P.A. Speaker; and $8^{\prime \prime}$ Speaker Baffle.
The Knight 8-watt amplifier combines versatility and performance into one compact case. Shure's "Starlite" microphone has a builtin wire stand-converts into a self-supporting unit for use on any table or desk. The Quam $8^{\prime \prime}$ heavy-duty speaker delivers wide-range sound for voice or music. The plywood speaker-baffle is finished in dark brown leatherette with matching brown grille. For 110-120 v., $50-60$ cycle AC. Shpg. wt.. 22 lbs.
51 PA 51 2. Only $\$ 4.65$ Dozen. NET
46.50

## 25-WATT MOBILE SYSTEM

PROVIDES UNIVERSAL P.A. COVERAGE
WORKS FROM 6-VOLT, 12-VOLT OR IIO-VOLT POWER


For Cars, Trucks, etc. -


## knight Deluxe Mobile Sound System



Less Phono

The powerful and remarkably versatile Knight 25-watt mobile P.A. system gives you everything you need to handle "big crowd" events requiring full coverage of large areas. The system is made to order for hundreds of activities, both indoor and outdoor. An outstanding system which provides truly dependable mobile and stationary service for al occasions. And it's priced to bring you giant savings over the cost of the individual components if purchased separately.
You can set up this system in a jiffy and operate it anywhere -take power from any 6 or 12 -volt automobile battery, or plug it into a 110 -volt AC source. Works equally well from cars, trucks. buses, boats, as well as in offices, plants, theaters, etc. Area coverage is 85,000 square feet-and you can direct sound to the front or rear in mobile applications, or aim sound toward your audience when using the system indoors. Makes a perfect sound system for auctions, carnivals, outdoor athletic events, advertising promotions, electioneering, sales demonstrations, and for any group or organization now renting public address equipment.
P.A. System includes: Knight 25-Waft Mobile Amplifier, with or without 4 -speed record player installed atop its cabinet; two Electro-Voice Model 848CDP Diffraction Projectors; Shure Model 535 Dynamic Microphone with $20-\mathrm{ft}$. cable and connector. The temperature and humidity-proof Model 535 dynamic mike is specially designed for P.A. use, and can be used for hand-held, desk or floor stand operation; convenient lavalier cord allows suspension of microphone from neck for free use of hands while driving. E-V's 848CDP projectors are renowned for their "soundcasting" ability. Complete with 50 ft . of speaker cable. System operates from 6 or 2 -volt DC or 110-130 v., 60 cycle AC.
LESS PHONO. Save $\$ 39.92$. Wt., 73 lbs .
51 PA 514. Only $\$ 20.00$ Down. NET.
199.95

WITH 4-SPEED PHONO. Save $\$ 40.92$. Wt., 76 lbs .
51 PA 610 . Only $\$ 21.90$ Down. NET.
218.95

## Car-Top Speaker Platform

Exceptionally sturdy, weather-resistant and heavily varnished wood platform. Easily supports even the largest speakers. Attaches by four non-slip vacuum cups. Fits roof contour of any car. Secured with straps and anchored by rub-ber-insulated clips to raingutter over ber-insulated clips to raingutter over
car doors. Easily installed or removed. $71 / 2 \times 46^{\prime \prime}$. Shpg. wt., 9 lbs.
93 DX 220. NET.
6.45

## Bogen FLEX-PAK PUBLIC ADDRESS EQUIPMENT

"DELUXE" 30 AND 60-WATT FLEX-PAK AMPLIFIERS
(A) Leaders in Bogen's "Flex-Pak" Series. Constant voltage output taps and 4 independently controlled mike channels (one convertible to phono). Black and gray finish.
Response: $\pm 1.5 \mathrm{db}, 20-20,000 \mathrm{cps}$. Distortion: Less than $2 \%$. Hum: 60 db below rated output. Controls: 4 -Gain; MikePhono switch; 2-Speech Filters: Off-On/Treble; Bass:AntiFeedback. Output Imp: 4, 8, 16 ohms, balanced $25-\mathrm{v}$. line, $70-\mathrm{v}$. line. $53 / 8 \times 161 / 4 \times 13^{\prime \prime}$. For $110-120$ v.. $50-60$ cycle AC. LX60 60-WATT AMPLIFIER. Shpg. wt., 37 lbs . 91 SU 710 . List, \$290.00. NET
174.00

LX30 30-WATt AMPLIFIER. Shpg. wt., 31 lbs.
91 SU 711 . List, \$225.00. NET.
135.00
"SUPERB" 30 AND 60-WATT FLEX-PAK AMPLIFIERS
(B) Ideal amplifiers for high-quality P.A. work. Has 3 indeDendently controlled microphone channels (one convertible to phono). Phono input is equalized for all car tridges. Black and gray case with leather handle.
Response: $\pm 2 \mathrm{db}, 20-20,000 \mathrm{cps}$. Distortion: Less than $2 \%$. Hum: 60 db below rate doutput. Controls: 3 Gain; MikePhono switch: Speech Filter; Off-On/Treble; Bass. Output Impedances: 4, 8, 16 ohms, balanced $25-\mathrm{v}$. line, $70-\mathrm{v}$. line. 60 -watt, $53 / 8 \times 161 / 4 \times 13^{\prime \prime} ; 30$-watt, $53 / 8 \times 141 / 4 \times 13^{\prime \prime}$. For 110-120 v., 50-60 cycle AC.
L60 60-W ATt AMPLIFIER. Shpg. wt., 37 lbs .
91 SU 713 . List. $\$ 225.00$. NET.
L330 30-WATT AMPLIFIER. Shpg. wt., 29 lbs.
91 SU 71 2. List, $\$ 167.50$. NET.
135.00
100.50
"FLEX-PAK" ACCESSORIES

| Stock No. | Type | Description | Use With | Lbs. | NET |
| :---: | :---: | :---: | :---: | :---: | :---: |
| $915 \times 715$ | LPA-4 | Phono Top | L330 | 6 | 4 |
| 915X717 | LPB-4 | Phono Top | LX60, LX30 |  |  |
| $915 \times 718$ | LK-1 | Locking Plates | L330 | 2 | 4.6 |
| $915 \times 719$ | LK-2 | Locking Plates | $\begin{aligned} & \text { LX60, LXX3 } \\ & \text { L60 or LOM } \end{aligned}$ | 2 |  |
| 995184 | T-155 | Plug-in Mike Trans former. 200 ohms |  | 1 | 0. |

## TYPE LOM PREAMP-CONTROL UNIT

C For critical P.A. or high-quality recording. 5 mike inputs (one convertible to phono). High-impedance output. Output: 30 mw at less than $2 \%$ distortion. Controls: 5 Gain; 4-Speech Filter, Mike-Tuner-Phono; Bass; Treble; Off-On/Master Gain. Response: $\pm 1 \mathrm{db}, 20-20,000$ cps Hum: 60 db below rated output. $53 / 8 \times 161 / 4 \times 13^{\prime \prime}$. For $110-120$ v., $50-60$ cycle AC. 21 lbs .

99 SU 183 . List, $\$ 192.50$. NET.
II5. 50
T 165 OUTPUT TRANSFORMER. 500 -ohm. Wt., 1 lb .
91 S 700. List, \$17.50. NET.
10.50

## ALLIED offers you the widest CHOICE OF MICROPHONES



Here's how to choose the right microphone for your needs.

The data below is supplied to simplify selection of the proper mike for a specific application. If you need additional information, contact our free audio consulting service. Our experts will be glad to help you.

## CRYSTAL, CERAMIC OR DYNAMIC

Crystal mikes are the most popular because of their low cost and wide frequency range. They are recommended for use only in temperate climates since they are permanently damaged by extremes of temperature or humidity. Ceramic mikes offer similar performance, but at lower output; ceramics withstand wide climatic variations.

Dynamic mikes feature smoother, peak-free response throughout their range, thus reducing the tendency towards feedback (howling) in P.A. systems. This also makes dynamics indispensable for high-quality professional use. They are less susceptible to damage from shock and extremes of temperature or humidity. For hi-fi home recording or better P.A. installations, your best values are the dynamic mikes in the $\$ 40$ to $\$ 60$ range.

All-directional mikes (also called omni and non-directional) receive sounds equally well from all directions. They are excellent for use in conference or studio work-require nearly complete acoustical control. All the new pencil-
 type microphones are all-directional. Bidirectional mikes pick up sound from the front and the back only. The most directive mike is the cardioid (uni-directional), which accepts sound from the front only. Used by singers, speakers, etc. where background noise pickup must be minimized. The cardioid is ideal for P.A. since it reduces feedback (howling) from the speaker system. Good crystal cardioids cost about $\$ 30$, good dynamic cardioids about $\$ 50$.

## ABOUT STANDS AND CONNECTORS

All of the microphone stands listed on page 323 have $5 / 8^{\prime \prime}-27$ threaded fittings. This is a standard thread that will fit any threaded mike or adapter. The microphone can be attached to either a desk stand or a floor stand, as re-
 quired. All mikes are supplied less the connecting plug for attaching the cable to the amplifier. This is because the type of connector on the amplifier varies with manufacturer. The connectors mentioned in the descriptions of microphones on these pages connect the cable to the microphone. For a selection of solderless connectors which require only a screwdriver for attaching to mike cable, see page 322 .
USING LONG MIKE LINES. Most P.A. equipment and tape recorders have high impedance inputs. A high impedance mike can be used with a cable up to 45 feet long. For longer lines, use a low-impedance mike and a line-matching transformer. Further details will be found in the free Allied Bulletin, "Installing Long Microphone Lines."

ABOUT DB RATINGS - The db ratings give you an idea of the relative sensitivity of the mike. Since the numbers are negative, -50 db will give a louder output than -55 db . The -45 to -48 db range is used with recorders costing under $\$ 200 ;-52$ to -60 for better P.A. and studio work.


## Famous Turner Quality Microphones

NEW 200 SERIES. Advanced design, high impedance microphones. Ideal for amateur, P.A., tape recording, etc. Rugged die-cast case finished in beautiful satin chrome. Available with choice of two types of elements: dynamic or crystal; and with choice of mounting accessories: lavalier, desk stand or floor stand adapter. All with 12 -foot cable.
DYNAMIC MODELS. Response. $60-13,000 \mathrm{cps}$. Level, -53 db .

| Stock No. | Model | Accessory Supplied | Shpg. Wt. | List | EACH |
| :---: | :---: | :---: | :---: | :---: | :---: |
| 93 S 390 | 201D | Desk Stand | 1 lb . |  |  |
| 93 S 391 | 202D | Floor Stand Adapter | 1 lb . | \$43.00 | 25.28 |
| 93 S 392 | 203D | Lavalier Assembly | 1 lb . |  |  |

CRYSTAL MODELS. Response, $60-10.000 \mathrm{cps}$. Level. $\mathbf{- 5 1 ~ d b}$.

| 93 | 5 | 393 | 201 X | Desk Stand | 1 lb. |
| :--- | :--- | :--- | :--- | :--- | :--- |
| 93 | 394 | 202 X | Floor Stand Adapter | 1 lb. | $\$ 28.00$ |
| 93 |  |  |  |  |  |
| 93 | 5395 | 203 X | Lavalier Assembly | 1 lb. |  |

MODEL 95D DYNAMIC. Attractively styled, all-directional high impedance microphone. Response, $100-10,000 \mathrm{cps}$. Level, -58 db . $73 / 4 \times 11 / 8^{\prime \prime}$. With $20-\mathrm{ft}$. cable. Shpg. wt., $13 / 4 \mathrm{lbs}$.
99 S 526 . List, $\$ 37.50$. NET
22.05

MODEL 80 CRYSTAL, Small, compact high impedance mike. Response, $80-7000 \mathrm{cps}$. Level, -54 db . Size, $41 / 4 \times^{7} / 8^{\prime \prime}$. Supplied with 7 foot shielded cable. Shpg. wt., 9 oz.
99 S 525. List, \$15.95. NET
.9 .38


MODEL 57 DYNAMIC. All-directional. Response, $60-13,000 \mathrm{cps} .150$ ohms or high impedance selectable. Level, -55 db . Size, $83 / 4 \times 11 / 8^{\prime \prime}$. Shpg. wt., 3 lbs.
99 S 505. List, \$65.00. NET.
38.22

MODEL 58 DYNAMIC. All-directional lavalier type. Response, $60-$ $13,000 \mathrm{cps} .150 \mathrm{ohms}$ or high impedance selectable. Weighs only $31 / 2$ oz. Level, -57 db . Size, $4 \times 1^{\prime \prime}$ diameter. Complete with 25 foot shielded cable. Shpg. wt., $11 / 4 \mathrm{lbs}$.
99 S 503. List, $\$ 57.00$ NET
33.52

MODEL 124 DYNAMIC. Lightweight, all-directional; response, 50 $13,000 \mathrm{cps}$. Level, -58 db . High impedance. Size, $61 / 2 \times 15 / 16^{\prime \prime}$. Shpg. wt., $11 / 4$ lbs.
99 S 507. List, \$49.00. NET..
28.81

MODEL 82-3H CRYSTAL. Model 80 (listed above) mike on special "hands free" chest holder. Fully adjustable flexible gooseneck. With 20 -foot shielded cable. Shpg. wt., $11 / 2$ lbs.
99 S 529. List, \$22.75. NET
13.38

L-100 CRYSTAL. Microphone with lapel clip. Response, 50-10,000 cps. High impedance. Level, $-52 \mathrm{db} .2 \mathrm{x}^{11 / 16^{\prime \prime}}$. Wt., $1 / 2 \mathrm{lb}$.
99 S 527. List, $\$ 12.50$. NET.
7.35

MODEL 98 DYNAMIC. Response, $65-11,000 \mathrm{cps}$. Cardioid pattern minimizes feedback. High impedance. Front-to-back ratio, 20 db . Level, $-52 \mathrm{db} .61 / 2 \times 11 / 2 \times 1^{\prime \prime}$. Shpg. wt., 2 lbs.
99 S 509. List, \$59.50. NET. .
34.99

MODEL 142 DYNAMIC. Low-cost lavalier. All-directional. 70-12,000 cps. High impedance. Level, $-59 \mathrm{db} .4 \times 1^{\prime \prime}$. Wt., $11 / 4 \mathrm{lbs}$.
94 S 095. List, $\$ 45.00$. NET...
26.46

POPULAR MIKE STANDS. All desk-type, except *'s3rd Hand"' holder, as supplied with Model 82-3H mike.

| Stock No. | Mfrs. Type | For Use With | Wt., Lbs. | List | NET |
| :--- | :---: | :---: | :---: | :---: | :---: |
| 99 S 506 | BL-6 | Model 57 | 1 | $\$ 7.50$ | 4.41 |
| 99 S 508 | G-8 | Model 124 | 1 | 8.00 | 4.70 |
| 99 S 518 | G-7 | Model 98 | 1 | 8.00 | 4.70 |
| 94 S 080 | $3-H^{*}$ | Model 80 | 1 | 5.00 | 2.94 |


"FUTURA" SERIES DYNAMICS. Beautifully designed dynamic microphones with all-directional pick-up. Impedances can be internally selected without special tools. Employ tough "Mylar" "pop" and "blast" proof diaphragm; die-cast head assembly. Complete with $5 / 8^{\prime \prime}-27$ swivel thread adapter for desk or floor stand mounting; lavalier assembly complete with belt clip and $20-\mathrm{ft}$. shielded cable for "walk-around" use.

MODEL 788 "METRO". Response, $50-13,000$ cps. Impedance and level: 150 ohms, -58 db ; high impedance, -55 db . Off-On switch can be locked in "On" position. Size, $87 / 3 x$ $13 / 8^{\prime \prime}$. Shpg. wt., 12 oz .
99 S 413 . List, \$79.50. NET.
46.74

MODEL 888 "TEMPO". Response, 50-15,000 cps. Impedance and level: 50 ohms, -57 $\mathrm{db} ; 200$ ohms, -58 db ; high impedance, -56 db . Size, $91 / 8 \times 11 / 4^{\prime \prime} .11 / 2$ lbs.
99 S 414 . List, $\$ 110.00$. NET. .
64.68

MODEL 988 "VOGUE". Exceptionally uniform response, $40-20,000 \mathrm{cps}$. Im pedance and level: 50 ohms, $-57 \mathrm{db} ; 150$ and 250 ohms, $-58 \mathrm{db} .911 / 32 \times 19 / 32^{\prime \prime} .11 / 2$ lbs. 99 S 416 . List, $\$ 150.00$. NET.
88.20

A-8 DESK STAND. For above. $5 / 8^{\prime \prime}-27.11 / 2 \mathrm{lbs}$. 94 S 031. List, \$8.25. NET
4.85


MODEL T-3 "PIONEER" CRYSTAL. Attractive all-directional high impedance microphone. Has metal seal crystal for protection against moisture and humidity. Frequency response $30-10,000 \mathrm{cps}$. Level, -51 db . Handy swivel hinge for tilting head. Standard $5 / 8^{\prime \prime}-27$ mounting thread. 15 ft . cable included. Shpg. wt., 2 lbs.
99 S 300. List, \$29.30. NET.
.17 .23
MODEL G STAND. For use with T-3, DN$\mathrm{HZ}, \mathrm{D}-104$, and other mikes. $5 / 8^{\prime \prime}-27$ thread Has convenient grip-to-talk, slide-to-lock switch. Supplied with 6 -foot shielded cable. Shpg. wt., $21 / 4 \mathrm{lbs}$.
94 S 011 . List, $\$ 24.95$. NET.
14.67

MODEL JT-30 "SPOKESMAN" CRYSTAL. Bud-get-priced, high-quality microphone. High impedance. Frequency response. $30-10,000$ cps. Output level, -50 db . With handle and interlocking base. Mike threaded $5 / 8^{\prime \prime}-27$. $12-\mathrm{ft}$. cable. Shpg. wt., $21 / 2 \mathrm{lbs}$.
99 S 302. List, \$18.40. NET.
10.82

MODEL JT-30C "SPOKESMAN". Same as above, but with ceramic element-resists extremes in temperature and humidity. Level, -54 db . With 5 feet of shielded cable. Shpg. wt., 2 lbs.
99 S 422. List, $\$ 18.90$. NET.
.II.II

MODEL M-350S "DYNAMIKE." DYNAMIC. Smart, compactly styled high-impedance mike. Has $360^{\circ}$, all-directional pickup. Wide range response, $50-10,000 \mathrm{cps}$. Output level, -56 db . Complete with Off-On switch; interchangeable plug-socket connector. $5 / 8^{\prime \prime}-27$ mounting. $18^{\prime}$ cable. Shpg. wt., 1 ib.
99 S 4 19. List, \$46.50. NET...
27.34

MODEL M- 350 "DYNAMIKE" DYNAMIC. Same as above, less switch. Wt., 1 lb .
99 S 418 . List, $\$ 41.50$. NET...
24.40

MODEL 54-M3 "UNIVERSAL" CRYSTAL. Alldirectional mike. Response: $30-10,000 \mathrm{cps}$. Level. -51 db . With base. Wt., 2 lbs. 99.S 426. List, $\$ 17.95$. NET..
10.55

MODEL DN-HZ "COMMENTATOR" DYNAMIC. Rugged all-directional high impedance mike. Level, -55 db . Response, 50-7000 cps. Standard 5/8"-27 thread mounting. 10ft. cable. Shpg. wt., $21 / 2 \mathrm{lbs}$.
99 S 304. List, $\$ 39.70$. NET.
23.15

MODEL M-102 "ECONOMIKE" CRYSTAL. Lowcost high impedance mike. Designed for hand-held use. Frequency response: 30$10,000 \mathrm{cps}$. Output level, -46 db . With $5-\mathrm{ft}$. shielded cable. Wt., $11 / 2$ lbs.
5.70


MODEL D-104 "PREMIER" CRYSTAL. High impedance mike. Popular among amateurs. Frequency response, $30-7,500 \mathrm{cps}$. Output level, -45 db . Produces the maximum amount of speech in the voice range. Metal sealed to protect crystal from moisture. Standard $5 / 8^{\prime \prime}-27$ mounting thread. Supplied complete with $5-\mathrm{ft}$. shielded cable. Shpg. wt., $13 / 4 \mathrm{lbs}$.
99 S 309. List, $\$ 31.00$. NET.
18.23

MODEL 10-C CERAMIC. New "tailored-response" microphone for amateur use, as well as industrial paging, etc. Frequency response of $300-3000$ cps make it ideal for SSB or AM use. Provides more talk power with less splatter. High impedance, semidirectional ceramic element will withstand temperature range of $-40^{\circ} \mathrm{F}$. to $+300^{\circ} \mathrm{F}$. and is immune to extremes of humidity. Output level, $\mathbf{- 5 4} \mathrm{db}$. Includes F-11 socket and cable connector with $5 / 8^{\prime \prime}-27$ thread. $5^{\prime}$ cable. Shpg. wt., $11 / 4$ Ibs.
17.46

MODEL 10-D DYNAMIC. Same "tailored response" mike as above, but with highimpedance dynamic element. Response: $300-3000 \mathrm{cps}$; level, -54 db . Complete with F-11 adapter and $5-\mathrm{ft}$. shielded cable. Shpg. wt., $11 / 4$ lbs.
93 S 299. List, \$39.70. NET . . . . . . 23.34

## ALLIED SUPPLIES QUALITY MICROPHONES FOR EVERY PURPOSE

From budget-priced general purpose microphones to the finest of broadcast studio microphones-you'll find them all at Allied. Just look over the wide selection on these and the following pages for the ones you need.


## Slim Crystal Microphones

MODEL M-332. Low-cost high fidelity crystal microphone. Ideal for all-around, general purpose use, such as tape recording, Public Address, and communications work. Can be used indoors or outdoors. Beautifully styled, with satin chrome, pressurecast housing and contrasting black satin grille. All-directional; high input impedance. Uniform and smooth frequency response, $30^{-}$to 15,000 cycles. Output level, -57 db . Supplied complete with lavalier cord assembly for convenient. "no-hand" carrying. Also has stand adapter for $5 / 8^{\prime \prime}-27$ mounting thread. Complete with $8-\mathrm{ft}$. shielded cable. Overall size, $41 / 2 \times 11 / 4 \times 11 / 4^{\prime \prime}$. Shpg. wt., 1 lb .
94 S 091 . List, $\$ 17.90$. NET.
10.53

MODEL M-332-S. Same high quality crystal microphone as above with same specifications, but with built-in Off-On switch. Comtions, but with built-in Off-On switch. Com-
plete with lavalier cord assembly, $5 / 8^{\prime \prime}-27$ stand adapter and 8 feet of shielded cable. Shpg. wt., 1 lb.
94 S 094. List, \$19.90. NET....... . . II. 70

## Cardioid-Pattern Microphones

A cardioid microphone (Unidirectional) has a heartshaped pickup pattern. It is far more sensitive at its front than rear; front-to-rear sensitivity ratio is 7 to 1. Permits a P.A. system to be operated at a higher volume before acoustic feedback occurs.

## "UNIDYNE" DYNAMIC MICROPHONE

MODEL 55S. Rugged, cardioid dynamic microphone designed to withstand severe mechanical shock as well as heat and moisture. Cardioid feature permits placement of microphone at a distance from performer $75 \%$ greater than all-directional microphones. An excellent choice as a singer's or announcer's microphone. Response rom 50 to $15,000 \mathrm{cps}$. Switch selects impedances of $35-50 \mathrm{ohms}$, 150-250 ohms, and high impedance. Output is $-57 . \mathrm{db}$ at high impedance. Swivel mounting. Satin chrome finish. $5 / 8^{\prime \prime}-27$ thread. Detachable, 18 - ft ., 2 -conductor shielded cable. Size, $4 \times 23 / 16 \times 31 / 16^{\prime \prime}$ Shpg. wt., $41 / 4 \mathrm{lbs}$.
99 S 395. List, $\$ 83.00$. NET
48.80

MODEL 556 S. Deluxe version of above. Constructed and tested within extremely close tolerances to give improved frequency response and directivity. Smooth response from 40 to $15,000 \mathrm{cps}$. Live rubber isolation unit in stand connector deadens vibrations from floor. With Cannon XL-3. Shpg. wt., $41 / 2 \mathrm{lbs}$
99 S 396. List, \$135.00. NET.
79.38

## "MONOPLEX" CRYSTAL MICROPHONE

MODEL 737A. High output, cardioid, crystal microphone. Cardioid features (above) make this a superior, moderate cost microphone in P.A. and tape recording applications. Head tilts to change pickup to all-directional. Crystal element is sealed against adverse effects of moisture. Output is -53 db , high impedance. Response: 60 to $10,000 \mathrm{cps}$. Satin chrome finish. $5 / 8^{\prime \prime}-27$ thread. Detachable, $15-\mathrm{ft}$. shielded cable. Size, $4 \times 33 / 32 \times 17 / 8^{\prime \prime}$. Shpg. wt., $21 / 4 \mathrm{lbs}$. 99 S"380. List, \$46.00. NET.
27.05


## Uni-Directional Ribbon Mikes

MODEL 333. An ultra-cardioid microphone made to extremely rigid tolerances and designed for the ultimate in wide response and directional characteristics. Ribbon element. Response: $\pm 2.5 \mathrm{db}$ from 30 to $15,000 \mathrm{cps}$. Minimizes pickup of moving props, scuffing feet, and other background noises. Has Voice-Music switch; also 3-position switch to ground noises. Has Voice-Music switch; also 3 -position switch to
select 50,150 or 250 -ohm impedance. Output, -60 db . Has wind and blast filter, and live rubber isolation unit in stand connector. $5 / 8^{\prime \prime}-27$ thread. Non-reflecting bronze finish. $39 / 16 \times 11 / 8 \times 13 / 4^{\prime \prime}$. Detachable, $20-\mathrm{ft}$. shielded cable with Cannon XL-3. Wt., 4 lbs . 99 S 456. List, $\$ 250.00$. NET.
147.00

MODEL 330. "Unitron" mike, similar to above. Less Voice-Music switch; satin-chrome finish. Shpg. wt., 4 lbs.
94 S 090. List, $\$ 120.00$. NET.
70.56

## Bi-Directional Microphones

Figure " 8 " pattern permits picking up sound from front and rear while rejecting sound from the sides. Ideal for radio and recording studios and for fixed installations on lecterns, pulpits, etc.

## "CONCERT-LINE" RIBBON MICROPHONES

MODEL 300. Deluxe Bi-directional microphone. Shock mount; VoiceMusic switch. Response, $\pm 2.5 \mathrm{db}$ from 40 to $15,000 \mathrm{cps}$. $30-50$ ohms, 150-250 ohms and high impedance. Output is -57 db at high impedance. Bronze finish, $5 / \mathrm{s}^{\prime \prime}-27$ thread. Detachable, $18-\mathrm{ft}$. shielded cable with Cannon XL-3. $6 \times 17 / 16 \times 13 / 32^{\prime \prime}$. Wt., $33 / 4 \mathrm{lbs}$.
99 S 397. List, \$150.00. NET.
88.20

MODEL 315. As above, but less rubber shock mount and VoiceMusic switch. Frequency response, $50-12,000 \mathrm{cps}$. Output, -57 db . Satin-chrome finish. Shpg. wt., $31 / 4 \mathrm{lbs}$.
99 S 398. List, \$89.50. NET
52.63


## 51 "SONODYNE" DYNAMIC

Mike for recorder and P.A. use. Immune to effects of temperature and humidity. Frequency response, $60-10,000 \mathrm{cps}$. Multiimpedance; 35-50 ohms, 150-250 ohm, and high impedance, selected by screwdriver adjustment. Output, -52 db . Satin chrome finish. $5 / 8^{\prime \prime}-27$ thread. Swivel mount. Detachable, $15-\mathrm{ft} ., 2$-cond. shielded cable. $53 / 16 \times 31 / 8 \times 21 / 8{ }^{7}$. Shpg. wt., $31 / 2$ lbs. 99 S 378. List, \$49.50. NET.
29.1I

## 707A CRYSTAL MICROPHONE

Popular, low-cost, semi-directional microphone. Ideal for amateur radio, home recording. etc. Response from 30 to 7000 cps . Output is -50 db , high impedance. Gray enamel finish with chrome trim. $5 / 8^{\prime \prime}-27$ thread. Size, $23 / 8^{\prime \prime}$ dia., $31 / 4^{\prime \prime}$ long. 7 -ft. cable. Shpg. wt., 2 lbs.
99 S 361 . List, $\$ 19.50$. NET
II. 47

## MODEL 520 "GREEN BULLET"

Controlled-magnetic version of above. Response, 100 to 9000 cps . Output, -52.5 db ; high impedance. Green enamel with chrome trim. $5 / 8^{\prime \prime}-27$ thread. Size, $23 / 8^{\prime \prime}$ diameter, trim. $5^{\prime / 8^{\prime \prime}-27}$ thread. Size, $23 / 8^{\prime \prime}$ diameter, $31 / 4^{\prime \prime}$ long. $7^{\prime}$ cable. Wt., $11 / 2$ ibs
99 S 383 . List, $\$ 22.50$. NET...
13.23

"STARLITE" MICROPHONES
MODEL 715. Extremely popular, high-output crystal microphone featuring smart, ultramodern design. Has a semi-directional pickup pattern and smooth response. Ideal for Amateur communications, home recording of voice and music, and inexpensive paging, intercom or public address systems. Com fortably fits in palm of hand. Has a retractable, built-in wire stand that easily converts microphone into a self-supporting unit for table-top or desk. Extremely lightweight; table-top or desk. Extremely lightweight; only $31 / 2$ ounces. Output, -50 db, high im-
pedance. Frequency response, $60-10,000 \mathrm{cps}$. Handsomely styled, impact-resistant, polystyrene case with two-tone finish; gray front and black back; black grille. Overall size, $35 / 32 \times 23 / 16 \times 19 / 32^{\prime \prime} .5-\mathrm{ft}$., single-conductor shielded cable. Shpg. wt., $11 / 2 \mathrm{lbs}$. 94 S 089. List, $\$ 8.00$. NET
4.70

MODEL 215. Smartly styled, modernistic ceramic microphone. Practically immune to moisture and high temperatures. Semidirectional pickup pattern; provides smooth response. Features built-in wire stand described above. Output, - 56.5 db . Response, $\mathbf{6 0 - 1 0 , 0 0 0}$ cps. Black front, gray back. $60-10,000$ cps. Black front, gray back.
Polystyrene case. $35 / 32 \times 23 / 16 \times 19 / 32^{\prime \prime} .5^{\prime}$ singlecond. shielded cable. $11 / 2 \mathrm{lbs}$.
94 S 088 . List, $\$ 8.00$. NET.
4.70

## "COMMANDO" MICROPHONES

MODEL 415. Slim-grip, controlled-magnetic, high-impedance mike. Has all-directional pick-up pattern. Response, $60-10,000 \mathrm{cps}$. Output level is -55 db . Rugged, die-cast metal case is satin-chrome finished. Poly-
styrene cap is gray. With $5 / 8^{\prime \prime}-27$ adapter, styrene cap is gray. With $5 / 8^{\prime \prime}-27$ adapter,
and 7 -ft., single-conductor, non-detachable shielded cable. $6^{13 / 16^{\prime \prime}}$ long, dia. of head, $13 / 4^{\prime \prime}$; dia. of handle, $11 / 16^{\prime \prime}$. Wt. 1 lb . 94 S 085 . List, $\$ 27.50$. NET.
16.17

MODEL 420. All-directional, controlledmagnetic lavalier mike. Frequency response from 60 to $10,000 \mathrm{cps}$. Output is -55 db . Dual impedance; 150 -to- 250 ohms and high impedance. Gray finish polystyrene case. $20-\mathrm{ft}$., 2 -cond., shielded cable, and lavalier $20-\mathrm{ft} .$, 2-cond., shielded cable, an
cord with clip. $311 / 16 \times 11 / 8^{\prime \prime} .1 / 2 \mathrm{lb}$. 94 S 086. List, \$30.00. NET.
17.64 MODEL 430. All-directional, controlledmagnetic mike with press-to-talk switch. Response, $60-10,000 \mathrm{cps}$. Output, -55 db . Dual impedance; 150 -to- 250 ohms and high impedance. Satin-chrome, die-cast metal case. Detachable, $15-\mathrm{ft}$. 2 -cond. shielded cable. $6^{11 / 16^{\prime \prime}}$ long; dia. of head, $13 / 4^{\prime \prime}$; dia. of handle, $11 / 16^{\prime \prime}$. With cover plate (may be attached for "On" operation), $5 / 8$ "-27 adapter. Wt., $11 / 2$ lbs.
94 S 087. List, $\$ 38.50$. NET.
22.64


## All-Directional Microphones

Respond equally well to sounds from all directions ( $360^{\circ}$ ) in a plane perpendicular to the axis of the microphone. Ideal for soloists, orchestras, stage productions, etc. Their small diameter makes them especially suitable for use where microphone must be hand held; or for lavalier use (suspended from neck). Also called omni-directional.

## MODEL 525 STUDIO MICROPHONE

All-directional, professional dynamic microphone. Dynamic range of 125 db . Response, $\pm 2.5 \mathrm{db}$ from 40 to $15,000 \mathrm{cps}$. Switch selects impedance of 50,150 and 250 ohms. Output, -61 db at all impedances. Case is bronze; head is beige. With neckcord for lavalier use, belt-clip, A-25 swivel adapter for $5 / 8^{\prime \prime}-27$ thread stands, and detachable $20-\mathrm{ft}$. shielded cable with Cannon XL-3. 81/2" long and $11 / 8^{\prime \prime}$ diam. Wt., $31 / 4 \mathrm{lbs}$.
99 S 454. List, $\$ 200.00$. NET.
117.60

MODEL 535 SLENDYNE MICROPHONE
Moderately-priced, all-directional dynamic microphone. Especially suitable for public address applications. $60-13,500 \mathrm{cps}$. Builtin switch for selecting output impedances of $50-250$ ohms. and high impedance. Output, -61 db . With swivel adapter. $5 / \mathrm{s}^{\prime \prime}-27$ thread. Detachable, $18-\mathrm{ft}$., 2-conductor shielded cable with Cannon XL-3. $11 / 8^{\prime \prime}$ diameter and $719 / 32^{\prime \prime}$ long. Shpg wt., 3 lbs. 99 S 657. List, $\$ 72.50$. NET.
42.63

MODEL 777 "SLIM-X" MICROPHONE
Multiple-purpose crystal microphone. Can be worn as a lavalier, hand-held or mounted on floor or desk stand (see S-38 and A-25 below). For P.A. use. singers. etc. In vertical position pickup pattern is all-directional. Response, $60-10,000 \mathrm{cps}$. Output, -62 db. High impedance. Satin-chrome finish. Detachable, 7 - ft. cable. With neck-strap and holder for $5 / 81$-27 thread stands. Size, $43 / 8 \times 11^{\prime \prime}$. Shpg. wt., 1 lb.
99 S 61 6. List, $\$ 25.00$. NET
14.70

MODEL 777S. Same as above, but with OnOff switch. Shpg. wt., 1 lb .
99 S 617 . List, $\$ 27.00$. NET
15.88

S-38 BASE. For above. Wt., $11 / 2 \mathrm{lbs}$.
94 S 038. List, \$4.50. NET.
2.65

MODEL A-25 SWIVEL ADAPTER. Fits S-38 stand above. $5 / 8^{\prime \prime}-27$ thread. Swings $90^{\circ}$ in vertical plane. Wt. 8 oz.
94 S 039. List, \$5.50. NET.
3.23

## MODEL S36A STREAMLINED DESK MOUNT

Fits all Shure connector-type mikes. Not for use with Shure Series 505, 100, 76B and 420. Smart, streamline styling. Similar to base of 520 SL , above right. Shpg. wt., $11 / 4 \mathrm{lbs}$. 94 S 035. List, $\mathbf{\$ 6 . 5 0}$. NET.

SHURI


## Communications Microphones

MODEL 520SL "DISPATCHER." Ruggedly built. controlled-magnetic microphone. Designed to handle the most severe field requirements of paging and dispatching systems. Supplied with base. Includes soft-action grip-to-talk, slide-to-lock switch bar that operates microphone and relay circuits. Response, $100-$ 9000 cps . Output, -52.5 db . High impedance. Chrome and green finish. 7 -ft., 2conductor shielded cable. $91 / 2^{\prime \prime}$ high; $5^{\prime \prime}$ base Shpg. wt.. 5 lbs
99 S 388. List, $\$ 45.00$. NET
26.46

MODEL 505B "RANGER". Controlled-magnetic mike. Die-cast case. Gives excellent voice reproduction. $100-9000 \mathrm{cps}$. Output, -50 db at 250 ohms. Blue-gray finish. With mounting bracket and $5-\mathrm{ft}$. 4 -cond.

99 S 392. List, $\$ 32.00$. NET.
18.81

MODEL 505C. Similar to 505B, but high impedance. Output, -50.5 db . With $5-\mathrm{ft}$. 3 -cond. (one cond. shielded) cable. 99 S 389. List, $\$ 32.00$. NET
.18 .81
MODEL 505T. Similar to 505B, but with built-in transistor preamp. 200-4000 cps . Output, -1 db at 500 ohms. Requires 6 v . Output, -1 db at 500 ohms. Re
DC. With C15C cable. $11 / 2 \mathrm{lbs}$.
94 S 417 . List, $\$ 48.50$. NET
28.52

MODEL A86A TRANSFORMER. For running lines from low-imp. mikes to high-imp. inputs. Matches $35-50$ or $150-250$ ohms. $\pm 1$ db. $20-20,000 \mathrm{cps} .27 / 8 \times 15 / 8^{\prime \prime} .2 \mathrm{lbs}$.
41 S 917 . List, $\$ 17.50$. NET.
10.29

$\mathrm{Cl5C}$


## REPLACEMENT PARTS AND CONVERSION KITS

MODEL R5 MICROPHONE CARTRIDGE. Highimpedance, controlled-magnetic type. Response, $100-9000$ cps. Output, -51.5 db . Fits Shure mikes: 505, 510 and 520. May be used for modification of almost any crystal microphone to magnetic type. Depth $27 / 32^{\prime \prime}$; dia. with mtg. ring, $215 / 64^{\prime \prime}$; dia. less $27 / 32^{\prime \prime}$; dia. with mtg. ring,
ring, $17 / 8^{\prime \prime}$. Shpg. wt., 4 oz .
ring, $13 / 8$. Shpg. wt., 4 oz.
6.47

MODEL RT MICROPHONE CARTRIDGE. Highimpedance crystal type. High output and very smooth response. Response, $50-10,000$ cps. Output, -50 db . Used in Shure 707A. 708A and most other Shure crystal mikes. Depth, $3 / 8^{\prime \prime}$; dia. with rubber ring, $23 / 16^{\prime \prime}$; dia. less ring, $1^{31} / 3 z^{\prime \prime} .5 \mathrm{oz}$.
41 S 945 . List $\$ 8.25$. NET
4.85

## MODEL CI5C RETRACTING MICROPHONE

 CORD. Heavy, rubber-covered 4-conductor (not shielded) cable for use in mobile transmitters, etc. Extends to length of 5 -ft.; only $1-\mathrm{ft}$. long when retracted. Color-coded wires with tinned ends. Replaces cables in the following Shure mikes: CB10, CB10B, CB10D. CB10F, CB12, CB12A, CB12C, CB15, CB15B, CB15C, CB15D, and all ' 100 ' series. Shpg. wt., $1 / 2 \mathrm{lb}$.41 S 932. List, \$6.25. NET.
3.67

NEW MODEL R5T MICROPHONE CONVERSION KIT. Converts any Shure handheld communications mike-or any microphone having similar dimensions-into a rugged, high-intelligibility, controlled-magnetic mike. Kit consists of a controlledmagnetic cartridge and a trausistor preamp.
Reduces background noise and provides maximum dependability - an excellent choice for police, taxi, marine, amateur, and commercial two-way radio systems now employing carbon-type microphones.
Output. -4.0 db at 500 ohms. Recommended applied voltage, 6 v. DC. Requires a screwdriver, long-nose pliers and soldering iron for quick installation. With instructions. Shpg. wt., $1 / 2 \mathrm{lb}$. 94 S 418 . List, $\$ 25.00$. NET
14.70

MODEL CIOC RETRACTING MICROPHONE CORD. Tinsel-coiled microphone cord. Ideal for use with any dynamic or magnetic microphone where a shielded cable will pre vent the pickup of hum. Extends to length of 6 ft .; only 1 ft . long when retracted Cord has trimmed and tinned leads and comes supplied with Amphenol MC4M connector attached. Shpg. wt., $1 / 2 \mathrm{lb}$. 94 S 439. List, \$12.00. NET
7.06

## LOW-COST MICROPHONES

MODEL 710 S "REX". Low-cost, semi-directional crystal microphone for home tape re corders, Amateur radio, etc. Response, $60-$ 9000 cps . Output is -50 db . high im pedance. Off-On switch. 7 -ft. cable. Hand some burgundy-red metallic finish. Size $37 / 32 \times 211 / 16^{2} 11 / 8^{\prime \prime} .5 / 8^{\prime \prime}-27$ thread adapter. Shpg. wt., $11 / 4 \mathrm{lbs}$.
99 S 387 . List, $\$ 14.00$. NET
8.23

MODEL 710A "REX". Same as Model 710S microphone described above, but without Off-On control switch.
99 S 386. List, $\$ 12.00$. NET
7.05

MODEL 5IOS "HERCULES". Semi-directional controlled-magnetic microphone for use in areas where heat and humidity are high. Ideal for public address, home recording, etc. Excellent for both indoor and outdoor use. Response, $\mathbf{1 0 0 - 7 0 0 0}$ cps. Output is -52.5 db . high impedance. Off-On switch. 7 -ft. cable. Green metallic finish. Size. $37 / 32 \times 211 / 16 \times 11 / 2^{\prime \prime}$. $5 / 8^{\prime \prime}-27$ thread adapter. Shpg. wt., $11 / 2 \mathrm{lbs}$.
99 S 385 . List, $\$ 19.00$. NET
II. II

MODEL 510C "HERCULES". As above, but without Off-On ccitrol switch. 99 S 384. List, $\$ 17.00$. NET.
9.99


## Variable "D" Cardioid Dynamic Mikes

MODEL 667. Widely used in network TV, the Model 667 is ideal for all applications requiring critically uniform frequency response, high resistance to shock, or where high ambient noise or severe reverberation exists. It is supplied with a special transistor preamplifier providing twenty frequency response characteristics, individual bass and treble control, and four levels of attenuation. Sound enters three apertures in the microphone case, and is then combined in such a way as to assure extremely smooth frequency response and total absence of "proximity effect." Response is uniform, 35 to 16,000 cycles. Output level, variable, -30 to -48 db . Designed to work into 250,150 or 50 ohm circuits. Noise level is -123 dbm ; dynamic range at maximum gain setting is 120 db . Microphone is $13 / 4 \times 71 / 2^{\prime \prime}$; preamp. $9 \times 37 / 8 \times 311 / 32^{\prime \prime}$. Supplied with $50-\mathrm{ft}$. and 20 ft . broadcast-type cables and connectors, $1 / 2^{\prime \prime}$ pipe thread with $5 / 8^{\prime \prime}-27$ adapter. Shpg. wt., 4 lbs.
94 SU 093 . List, $\$ 600.00$. NET
352.80

MODEL 666. Superior dynamic microphone for important broadcast and TV applications; variable "D" construction produces effective cardioid pattern-discriminates against unwanted sound from sides and rear. Response is substantially flat from 30 to $16,000 \mathrm{cps}$; average front-to-back ratio, 24 db . Output level, -55 db ; adjustable to 50,150 or 250 ohms. $13 / 4 \times 71 / 2^{\prime \prime}$. Supplied complete with clamp-on adapter for $1 / 2^{\prime \prime}$ and $5 / 8^{\prime \prime}-27$ stands and detachable $20-\mathrm{ft}$., 3 -conductor shielded cable. Shpg. wt., 1 lb.
99 S 593. List, $\$ 255.00$. NET.
149.94

MODEL 366. BOOM SHOCK MOUNT. For 666 or 667 . Wt., 12 oz . 94 S 057. List, $\$ 40.00$. NET
23.52

MODEL 524 WIND SCREEN. For 666 or 667. Minimizes wind effect during boom movement or when mike is used outdoors. Wt., 2 oz . 94 S 083 . List, $\$ 8.00$. NET
4.70

MODEL 665. Similar in design and function to Model 666 mike, but for less exacting applications. Response, 40 to $15,000 \mathrm{cps}$. Output, -55 db . Recessed switch permits quick selection of 50 or 250 ohms . Dia., $17 / 8^{\prime \prime} ; 73 / 16^{\prime \prime}$ long. 18-ft., 3 -conductor shielded cable and adapter for $1 / 2^{\prime \prime}$ and $5 / 8^{\prime \prime}-27$ stands. Shpg. wt., 2 lbs.
99 S 530 . List, $\$ 150.00$ NET
88.20


MODEL 646. Alk directional, TV and broadcast dynamic mike. This unusually small, 7 -oz. mike can be hung from neck, handheld, used in desk stand or suspended from boom. Particularly suitable wherever concealment of mike, mobility, or freedom of hands is desired. Response, $50-10,000 \mathrm{cps}$. Recessed screw high-frequency adjustment. Out put level, -57 db . Lathe-turned aluminum case in non-reflecting gray. Dia., $1^{\prime \prime} ; 61 / 4^{\prime \prime}$ long. With 30 -ft. cable, carrying bag, neck cord, belt clip. Shpg. wt., 1 lb .
99 S 584. $50-\mathrm{Ohm}$ Impedance. List
NET
99 S 537. 250-Ohm Impedance. Each, \$147.50. EACH.
86.73

NEW MODEL 649A. An ultra-small lavalier mike-only $3 / 4^{\prime \prime}$ in diameter and $37 / 16^{\prime \prime}$ long. Weighs only 3 ounces. Response, 60 to $12,000 \mathrm{cps}$. Output, -60 db . Low-impedance-works into $50-250$ ohm inputs. All other specs same as Model 646. With 30-ft. cable, carrying bag, neck cord and belt clip. Shpg. wt., 1 lb .
93 S 476. List, $\$ 105.00$. NET.
61.74

## Famous "Slim Trim" Dynamic Studio Mikes

MODEL 655C. "Slim-Trim" dynamic mike for highest quality professional recording and broadcasting. Wide frequency response, alldirectional'pickup range, and lightweight (only 7 oz .), make it ideal for TV staging and audience participation. Breath-blast filter head. Response is essentially flat from 40 to $20,000 \mathrm{cps}$. Output level, -55 db . Quickly changed impedances of 50,150 and 250 ohms (connected for 50 ohms when shipped) on terminal board in case. Cast aluminum case is non-reflecting gray. Dia., $11 / 8^{\prime \prime} ; 10^{3} / 8^{\prime \prime}$ long. With clamp-on adapter for $1 / 2^{\prime \prime}$ and $5 / 8^{\prime \prime}-27$ stands; detachable, 20 -ft., 3-conductor, shielded cable. Shpg. wt., $11 / 4 \mathrm{lbs}$.
99 S 579. List, $\$ 200.00$. NET.
. 117.60
MODEL 654. Moderately priced mike, similar to 655 C , but for less critical applications. All-directional. Response, 50 to $15,000 \mathrm{cps}$. Output, -55 db . Switch selects 50 or 250 -ohm impedances. Diameter, $13 / 32^{\prime \prime} ; 101 / 16^{\prime \prime}$ long. $5 / 8^{\prime \prime}-27$ thread. With detachable, 18 -ft., 3 -conductor shielded cable. Shpg. wt., $11 / 4 \mathrm{lbs}$.
99 S 583. List. $\$ 100.00$. NET
58.80

## RUGGED TV \& BROADCAST DYNAMIC MIKE

MODEL 635. Sturdily built and low in price, the Model 635 has a reputation as a studio "workhorse." Response is uniform, 40 to $15,000 \mathrm{cps}$. Level; -55 db . Recessed switch selects 50 or 250 -ohm impedances. Cast zinc, chrome-plated case. $5 / \mathrm{s}^{\prime \prime}-27$ thread. Dia., $2^{\prime \prime} ; 61 / 4^{\prime \prime}$ long. With detachable, 18 - ft ., 3 -cond. shielded cable. Shpg. wt.. $13 / 4 \mathrm{lbs}$.
99 S 327. List, $\$ 82.00$. NET.
48.22

## DESK STANDS FOR PROFESSIONAL MICROPHONES

MODEL 419. Illustrated above with 665 mike. For use with 665 , 664 and 654 microphones. Shpg. wt., 3 lbs. 94 S 082. List, $\$ 10.00$. NET MODEL 420 . Similar to 419 desk stand, with clamp for mounting 666, 655C, 646 and 647 microphones. Shpg. wt.. 4 lbs. 94 S 056. List, $\$ 20.00$. NET


## Variable "D" Dynamic Microphone

## For Finer Public Address,



## Tape Recording \& Communications Use

MODEL 664. Skillfully designed and ruggedly constructed, uni-directional dynamic mike. Picks up from front only-provides high front-to-back discrimination against unwanted sounds, without close-talking boominess. Employs variable "D" (variable boominess. Employs variable " $D$ " variable
distance) construction to produce cardioid pattern. Highly useful for PA where ambient noise and severe reverberations exist.
Gives distinct, natural reproduction of voice and music-increases working distance from microphone-provides greater protection against feedback problems. Equipped with a "pop-proof" wire mesh grille, the 664 minimizes wind and breath blasts-excellent for outdoor public address use in fixed or mobile installations. Diaphragm is shielded from dust and magnetic particles.
Rugged construction and use of non-metallic diaphragm permits smooth response over a wide frequency range. Withstands high humidity, temperature extremes and severe mechanical shock. Virtually indestructible under normal use. Can be used on floor or desk stand, or carried in the hand. Frequency response from 40 to $15,000 \mathrm{cps}$. Output level, -55 db . Has $150-\mathrm{ohm}$ and high-impedance output. Supplied wired for high impedance. $5 / 8^{\prime \prime}-27$ thread. Cast zinc case, finished in glistening chrome. Complete with on-off switch; and detachable, 18 -ft., 2 -conductor cable. Diameter, $17 / 8^{\prime \prime} ; 73 / 16^{\prime \prime}$ long. Shpg. wt., 2 lbs.
99 S 531 . List, $\$ 85.00$. NET.
49.98


## All-Directional Microphones

MODEL 636 "SLIMAIR" DYNAMIC. A very fine all-directional mike for tape recording. Provides excellent reproduction of individual and group singers and speakers; choirs. orchestras, etc. Also can be used for public address-"baton" styling does not hide the speaker's face. Wire mesh blast-filter permits outdoor use. $90^{\circ}$ swivel. Response, substantially flat from 60 to $15,000 \mathrm{cps} .150$-ohm or high impedance (connected for high-impedance output when shipped). Output level, -55 db . Chrome-plated steel case. $11 / \mathrm{s}^{\prime \prime}$ dia., $101 / 4^{\prime \prime}$ long. $5 / 8^{\prime \prime}-27$ thread. On-off switch. With detachable dia., $101 / 4^{\prime \prime}$ long. $5 / 8{ }^{\prime \prime}-27$ thread. On-off switch.
18 -ft. 2 -conductor shielded cable. Shpg. wt., 2 lbs.
99 S 581 . List, $\$ 72.50$. NET.
42.63

MODEL 636G. As above, but finished in gold.
99 S 591. List, $\$ 77.50$. NET.
45.57

MODEL 623 SLIM DYNAMIC. Low-cost, all-directional dynamic mike. Ideal for P.A., recording and communication use. Slim size makes it inconspicuous and easy to handle. Smooth response from 60 to $12,000 \mathrm{cps}$. Output level, -56 db . Choice of 150 -ohm or highimpedance output (connected for high-impedance when shipped). On-off switch. Chrome-plated. Dia., $15 / 16^{\prime \prime} ; 71 / 2^{\prime \prime}$ long. $5 / 8^{\prime \prime}-27$ thread. With detachable, 18', 2 -cond. shielded cable. Wt., 2 lbs. With detachable, $18^{\prime}, 2$-cond.
99 S 595 . List, $\$ 57.00$. NET.
33.52

MODEL 630 HIGH-OUTPUT DYNAMIC. All-directional mike designed for public address, dispatching call systems, industrial applications, recording and general communications service. Uniform response from 60 to $11,000 \mathrm{cps}$. Output level, -55 db . Choice of 250 -ohm or high-impedance output. 250 -ohm mike supplied with detachable 18 -ft., 2 -cond. shielded cable; high-impedance mike with detachable 18 -ft., single-cond. shielded cable. Chrome-plated. On-off switch. Dia., $2^{\prime \prime} ; 61 / 4^{\prime \prime}$ long. $5 / 8^{\prime \prime}-27$ thread. Shpg. wt., 2 lbs.
99 S 347. 250 -Ohm Impedance. List NET
99 S 336. High-Impedance. Each, \$52.50 EACH..
30.87

MODEL 911 "MERCURY" CRYSTAL. For low-cost P.A. applications, home recording, Amateur communications, etc. All-directional pickup pattern becomes slightly directional with increased frequency. Response, 50 to 9000 cps . Output level -50 db . Highimpedance output. Chrome-plated case, $23 / 8 \times 31 / 8 \times 63^{3 / 4}$ long. $5 / 8^{\prime \prime}-27$ thread. With $18-\mathrm{ft}$, detachable cable. Shpg. wt., $21 / 2 \mathrm{lbs}$. 99 S 544. List, $\$ 32.50$. NET
19.11

## Crystal Cardioid Microphone

MODEL 951. Excellent crystal microphone using exclusive variable "D" principle to achieve cardioid directivity and uniform frequency response. Designed to fulfill requirements of wide-range reproduction under a wide variety of P. A. applications; pop-proof wire mesh grille minimizes wind and breath noises. Uniform polar response makes it highly suitable for noisy locations, or where much echo is present. Response, 50 to $11,000 \mathrm{cps}$. Output level, -55 db . Handsome satin-chrome finish, die-cast zinc case. Size, $13 / 4 \times 53 / 8^{\prime \prime}$. With 18 ft ., shielded, single-conductor cable. Shpg. wt., $11 / 2 \mathrm{lbs}$. 94 S 092. List, \$49.50. NET. .
29.11

## Lavalier Microphones

MODEL 647 DYNAMIC. Small, ruggedly designed all-directional mike for general P.A. use. Extremely versatile-can be hand-held, suspended from neck, used on desk stand or suspended from boom. Excellent wherever concealment, mobility or free use of hands is desired. Peak-free response from 60 to $10,000 \mathrm{cps}$. Output level, -57 db . 150 -ohm or high impedance. Black aluminum with chromium trim. Dia., $1^{\prime \prime} ; 5^{\prime \prime}$ long. Supplied complete with neck cord, belt clip, 2 wrenches and detachable, 18 -ft. 2 -conductor cable. Shpg. wt., $11 / 4$ lbs.
99. S 538. 150 -Ohm Impedance. List, NET

99 S 585. High-Impedance. Each, $\$ 82.50$ EACH. .
48.51

MODEL 924 CRYSTAL. Ultra-small, all-directional mike for P.A., home recording, paging and Amateur radio use. Response, 60 to 8000 cps. Output. -60 db . High-impedance. Chrome-plated. $17 / 32^{\prime \prime}$ dia., $35 / 32^{\prime \prime}$ long. With neck cord, clip, 18 -ft. cable. 12 oz .
99 S 594 . List, $\$ 20.00$. NET.
II. 76

> MODEL 418 DESK STAND. Similar to Model 419 illustrated on opposite page. For $951,911,636,635,630$ and 623 microphones. Cast iron, gray finish. Shpg. wt., 4 lbs. 94 S 059. List, $\$ 10.00$. NET..................... . . . 5.88

MODEL 502 MATCHING TRANSFORMER. Allows connecting long-line, low-impedance mikes to amplifiers with highimpedance input. Supplied complete with connector and $2-\mathrm{ft}$. single cond. cable. Shpg. wt., 1 lb .
94 S 084. List, $\$ 17.50$. NET.
10.29

## Mobile Communication and Intercom Microphones

MODEL 648 DYNAMIC. Extremely versatile, all-directional microphone. For broadcast, TV, intercom, paging or P.A. use. Builtin connector and mating $5 / 8^{\prime \prime}-27$ threaded adapter allow mounting on rigid or flexible booms, desk or floor stand. Response is uniform from 50 to $10,000 \mathrm{cps}$. Output, -58 db . Impedance, 250 ohms. Aluminum case; non-reflecting gray. Dia., $1^{\prime \prime} ; 61 / 8^{\prime \prime}$ long. With adapter and 2 wrenches. Less cable. Shpg. wt. $1 / 2 \mathrm{lb}$.
99 S 539. List, $\$ 56.00$. NET.
32.93

MODEL 448 SWIVEL BOOM MOUNT. For use only with Model 648 mike. Holds mike $117 / 8^{\prime \prime}$ off mounting surface. Male connector matches connector on mike. $62^{\circ}$ elbow bend. Extends $4^{\prime \prime}$ below mtg. surface. $21 / 2^{\prime \prime}$ dia. mtg . base. Chrome-plated. $11 / 2$ lbs.
99 SX 540. List, $\$ 24.00$. NET
14.11

MODEL 606 DIFFERENTIAL DYNAMIC. For intercom use. Close-talking, noise-cancelling. Head is fixed at $22^{\circ}$ angle. Response, flat from 100 to 5000 cps . Output level at $1 / 2^{\prime \prime}$. -55 db . High impedance. Chrome-plated case, $2 \times 31 / 4 \times 21 / 2^{\prime \prime}$. $5 / 8^{\prime \prime}-27$ thread. With detachable $18-\mathrm{ft}$. cable. Wt., 2 lbs . 99 S 564. List, $\$ 52.50$. NET....... 30.87

MODEL 600D DYNAMIC. Extra-rugged, handheld microphone for mobile P.A. and communication use. Semi-directional pickup pattern. Response is flat from 100 to 7000 cps. Output level, -55 db . High impedance. Has press-to-talk switch for mike and relay control. Black phenolic case, $21 / 4 \times 2 \times 4^{\prime \prime} .5$-ft. cable. Wt., 10 oz . 99 S 323. List, \$47.50. NET.
27.93 MODEL 210KK SINGLE-BUTTON CARBON, Similar in appearance to the Model 600D but single-button carbon. Provides highly intelligible speech transmission for mobile communication use. Output, -50 db . Black phenolic case. With $5^{\prime}$ cable. 1 lb .
99 S 589. List, $\$ 35.00$. NET
20.58

MODEL 205 KK DIFFERENTIAL CARBON. Closetalking, noise-cancelling, single-button carbon mike. Provides maximum intelligibility under high noise conditions. Blastproof, waterproof, and shock-resistant. Response, when held close to sound source, 100 to 4000 cps . Output level at $1 / 4^{\prime \prime},-50 \mathrm{db}$. Press-to-talk switch. Black phenolic case, $21 / 2 \times 21 / 2 \times 4^{\prime \prime}$. With mounting bracket, $5-\mathrm{ft}$. coiled 3 -cond. cable. Shpg. wt., 1 lb .
99 S 590. List, \$45.00. NET...... . 26.46


## 

## LATEST MICROPHONES AND

## Knight KN-4500 Dynamic Microphone

- Includes Attractive, Matching Desk Stand
- High-Quality Dynamic Element Provides Excellent Voice and Music Reproduction
- Screw-Type Connector \& Phone Plug Adapter
- Fits All Mike Floor Stands on Page 323

An unexcelled value in an all-directional, high-fidelity dynamic microphone. The low-cost. versatile Knight KN-4500 mike comes equipped with desk stand, $10-\mathrm{ft}$. cable, screw-type connector and phone plug adapter. It can be readily connected to $90 \%$ of all tape recorders-standard-thread base ( $5 / 8^{\prime \prime}-27$ ), allows it to be quickly and easily connected to any standard microphone floor stand.

The omni-directional pick-up pattern and wide frequency response of the KN-4500 make it perfect for such general purpose applications as paging and P.A. use, home recording, lecture work, recording of conferences, panel discussions, etc. Its moving-coil dynamic element is virtually indestructible and highly resistant to humidity. Rugged, die-cast metal housing.

Wide-range response, from 60 to $12,000 \mathrm{cps}$ assures natural reproduction of both voice and music. High-impedance output. Size, $15 / 16 \times 71 / 2^{\prime \prime}$; tip-proof, die-cast base is $51 / 8^{\prime \prime}$ in diameter. Strikingly styled in gold and black. Shpg. wt., 4 lbs.
94 S 097. NET.
24.95


NEW MODEL 727 CERAMIC. Response, 608000 cps ; with removable desk stand and floor stand adapter. High impedance. Output level. -55 db . All-directional response, tending to directional at high frequencies. $77 / 8 \times 11 / 2 \times 11 / 4^{\prime \prime}$. Supplied with $5-\mathrm{ft}$. cable. Shpg. wt., $11 / 2$ lbs.
93 S 226. List, $\$ 18.00$. NET.
10.58

MODEL 926 CRYSTAL. Response, $60-8000 \mathrm{cps}$. Rising frequency characteristic for crisp reproduction of speech. $63 / 4 \times 15 / 16^{\prime \prime}$, 18 - ft . cable. Shpg. wt., $11 / 2 \mathrm{lbs}$.
99 S 596. List, \$29.50. NET . . . . . . 17.35
MODEL 920 "SPHEREX' CRYSTAL. $60-7000 \mathrm{cps}$; all-directional. Minimum breath "pop". Output, -50 db . Size, $21 / 4^{\prime \prime}$ diameter. Output, -50 dit. cable. Shpg. wt., 11 lb .
18-ft. cable. Shpg. wt., 1 ib.
99 S 578 . List. $\$ 27.50$. NET
16.17

MODEL 605 DYNAMIC. Rugged, all-directional microphone; $65-8000 \mathrm{cps}$. Size, $2 \times 31 / 4^{\prime \prime}$ long. $18-\mathrm{ft}$. cable. Shpg. wt., 1 lb .
99 S 592. List, \$32.50. NET.
.19.11
MODEL 912 CRYSTAL. Plastic-cased; safe for use with AC-DC units. Response, 70-7000 cps. 5 -ft. cable. Wt., 1 lb .
99 S 598. List, $\$ 10.00$. NET.
5.88
"CENTURY" SERIES. Popular for home recording, paging and P.A. Inner element insulated for safe use in AC-DC circuits. $5 / 8^{\prime \prime}-27$ stand adapter; $5-\mathrm{ft}$. cable. 1 lb .
MODEL 715 "CENTURY" CERAMIC. Humidityproof ceramic element; output, -55 db . Response, $60-7000 \mathrm{cps}$. High impedance


## Confact-Type Microphones for Musical Instrument Amplification




#### Abstract

Contact mikes permit amplification of sound from a single instrument, by attaching directly to its sounding board or body. Excellent supplementary microphones for recording or amplification of solo piano, cello, guitar and similar instruments.


$$
\begin{aligned}
& \text { (A) AMPERITE MODEL SKH. Hi-Z magnetic; response, } 40-9000 \mathrm{cps} . \\
& \text { Output, } 40 \mathrm{db} .3 / 4 \times 3 \times 1^{\prime \prime} .12-\mathrm{ft} \text {. cable. Shpg. wt., } 10 \mathrm{oz} . \\
& 99 \text { S } 406 . \text { List, } \$ 12.00 . \text { NET. . . . . . . . . . . . . . . . . . . . . } 7.06
\end{aligned}
$$

B AMPERITE MODEL KKH. As above, but has volume control ${ }^{-}$ $\qquad$ 99 S 408. List, $\$ 18.00$. NET.
10.58 KONTAK STRAP. (Not illus.) For mounting Amperite SKH or KKH on flat-top guitars. Wt., 4 oz .
41 S 902. NET.
59c
C. E-V MODEL $805.100-5000 \mathrm{cps}$. Hi Z. 15 -ft. cable. 10 oz .

99 S 319 . List, $\$ 20.00$. NET.
II. 76
(D) KNIGHT CONTACT MICROPHONE. An unusual value. Response, 50-10,000 cps. High-impedance magnetic type. With $12-\mathrm{ft}$. cable and screw-type connector. Shpg. wt., 1 lb.
99 S 517 . NET.
5.95
[E] As above, but with built-in volume control.
99 S 516 . NET.
7.50

MODEL $75-M C-1 P$ PHONE PLUG ADAPTER FOR KNIGHT MICRO. PHONES. (Not illustrated). Shpg.wt., 2 oz.
41 H962. NET.


Switchcraft "Mini-Mix" Audio Mixers
Accommodate 2 high-impedance inputs. Allow mixing 2 mikes, contact mike and record player, etc. $21 / 16 \times 1{ }^{13} / 16 \times 11 / 16^{\prime \prime}$. Wt., 4 oz .

| Stock No. | Fig. | Type | Description | NET |
| :---: | :---: | :---: | :---: | :---: |
| 41H953 | A | 310 | Has phone jack inputs with phone plug output. Fits std. jacks. | 4.67 |
| 41H699 |  | 8266 | For 310 above. Adapter for recessed jacks. |  |
| $41 H 954$ | B | 320 | Mixer. Has microphone connector inputs, and outputs with std. mike connectors. | $\begin{aligned} & 2.20 \\ & 4.67 \end{aligned}$ |
| $41 H 658$ | C | 315 | Phono jack inputs with mike connector output. Fits std. connector or No. 44 Adapter. | 4.67 |
| 41 H686 | D | 325 | Mixer. For recorders and amplifiers using Jonestype connectors. Fits recessed connectors on |  |
| 41 H9 |  |  | early Webcor tape recorders, etc. |  |
| 41 H989 | E | 326 | Mixer. 3-cond. jack inputs, with long 2 -cond. plug output. For late-model Webcor recorders. | 5.85 |

## Model D22 Studio-Quality Dynamic Mike

Made by American Microphones, the slender, precisely built D22 microphone has many features that make it an excellent choice for public address, recording and general audio use. Omni-directional pickup pattern. Simple "slide-lock" permits easy removal from stand for carry-about use in the hand or for suspension from around neck. Variable impedance-may be quickly and easily changed from low ( 50 ohms) to high ( $\mathbf{4 0 , 0 0 0} \mathrm{ohms}$ ) impedance by removing nameplate and changing linkage bar to impedance desired.
Response, 40 to $13,000 \mathrm{cps}$. Output, -55 db . Employs micrometal alloy diaphragm. unaffected by temperature extremes. Duraluminum case; gold and black anodized finish. XL-3-11 latchlock plug. $5 / 8^{\prime \prime}-27$ threaded swivel. Complete mike, with swivel and slide-lock, weighs $8 \mathrm{oz} .1 \times 81 / 4^{\prime \prime}$. Shpg. wt., 12 lbs .
91 S 597. List, $\$ 99.50$. NET
58.51

MODEL ND-1-M DESK STAND. Cut-away design permits use of mike in vertical position. Satin black finish. $3^{\prime \prime}$ high. Shpg. wt., 1 lb.
91 S 598. List, $\$ 12.80$. NET

## American TRC Series Low-Cost Dynamic, Crystal and Ceramic Mikes

Versatile, beautifully styled TRC (Tape Recorder-Conference) microphones at unusually low cost. For stationary, hand-held or lavalier use. Have a push-to-talk button in the center of the mike faceplate. Enables the user to use pushbutton for on-off operation while speaking, or switch it to continuously "on"' position for stationary use during conferences, meetings, etc. Clip-on stand allows resting mike on table or desk top; when used as lavalier, stand supports mike slightly away from chest for better lowfrequency response. Mylar plastic diaphragm is unaffected by temperature or humidity extremes. With clip-on stand and $6-\mathrm{ft}$. shielded cable. Less plug. Polished chrome cases, $15 / 16 \times 47 / 8^{\prime \prime}$.

MODEL D204 DYNAMIC. Low impedance. Response, 80 to 8500 cps. Output, - 57 db . Shpg. wt., 9 oz .
91 S 593. List, \$17.00. NET
10.00

MODEL D204TD DYNAMIC. High impedance. -55 db output. 9 oz . 91 S 594. List, $\$ 23.00$. NET
13.52

MODEL B204 CERAMIC. High impedance. Response, 80 to 7500 cps . Output, -60 db . Shpg. wt., 6 oz .
91 S 595. List, \$16.00. NET.
9.41

MODEL X204-M CRYSTAL. High impedance. Response, 80 to 9500 cps . Output, -58 db . Shpg. wt.. 6 oz .
91 S 596. List, $\$ 16.00$. NET

## Quality Microphone Mixers

F KNIGHT TRANSISTOR MICROPHONE MIXER. For feeding up to three microphones into a single microphone input of amplifier or recorder. Includes three controls for individual gain adjustment of each mike. Doubles mike output level; may be used up to 25 ft . from amplifier or recorder. Power is provided by miniature mercury batteries, which provide extremely long service. Compact case easily fits into small area; perfect for mobile operation. Supplied complete with batteries and output cable with screw-on microphone connector. Size, $1 \times 3 \times 8^{\prime \prime}$. Shpg. wt., 1 lb .
93 S 283. NET.
14.95

G KNIGHT COMPACT MICROPHONE MIXER. Adds new versatility G] to any P.A. system at modest cost; permits mixing of three highimpedance microphones or other signal sources, or converts amplifier or recorder with single mike input for use with three microphones, each with its own separate gain control. May be used to mix sound effects and music with dialogue for movies, special effects, or tape recorded sales presentations. Exceptionally compact design. Measures only $11 / 2 \times 35 / 8 \times 73 / 4^{\prime \prime}$. Shpg. wt.. 1 lb .
93 S 282. NET.
8.82
(H) PENTRON CA-14 ELECTRONIC MIXER. Professional-type mixer for (H) amplifiers or tape and disc recorders. 8 db gain on mike inputs compensates for insertion losses; gain is -22 db on phono inputs. May be used to blend four independent channels. 6 high-impedance inputs; 4 for microphone and 2 for phono. Response, $20-20,000 \mathrm{cps}$. Size, $8 \times 6 \times 5^{\prime \prime}$. For operation from $105-125$ volts. 60 cycle AC. Shpg. wt., 5 lbs.
93 S 284. NET.
39.95


## New Hamilton TR-2 Transistorized Mike-to-Grid Matching Network

- Permits Use of Balanced-Line Mikes
- Cable Lengths May Be Up to 1000 Feet

New transistorized matching network for line-to-grid applications. Matches low-impedance dynamic, ribbon or magnetic microphones to high-impedance inputs on home or semi-protessional tape recorders, hi-fi amplifiers. P.A. amplifiers, etc. Replaces matching transformers normally used for this application. The TR-2 supplies additional gain of 30 to 32 db -no loss of high frequencies up to 1000 teet of mike cable. Powered by mercury batteries (last well over a year). Input impedance, 125 ohms; matches mikes of 50 to 250 -ohm impedance. Output impedance, 18,000 ohms. $S / \mathrm{N}$ ratio: 50 db . Hum is zero. Distortion is less than $0.7 \%$. Response, $\pm 3 / 4 \mathrm{db} .20$ to 20,000 cps. Accept Amphenol 91MC3M connector: phono pin plug output jack. $23 / 4 \times 31 / 4 \times 11 / 2^{\prime \prime}$. With batteries. Shpg. wt., 1 lb .
93 S 278. NET.
10.68

## Switchcraft Miniature Mike Connectors

New " Mini-Con' connectors designed for use with single-conductor cable up to $3 / 16^{\prime \prime}$ in diameter (single-conductor and a shield). Ideal for lapel mikes, musical instruments, etc. Half the size of standard mike connectors. Av. net wt., $1 / 4$ oz. Nickel-plated brass body. 5501 F has removable coupling ring for quick change of female to male type. 5501 MP mounts in $3 / 16^{\prime \prime}$ dia. hole. Av. shpg. wt., 2 oz.
(1) 5501 F . STRAIGHT CONNECTOR. Female type coupling ring.

41 H947. NET.
35c
K 5501 M . STRAIGHT MALE CONNECTOR.
(K) 41 H 948 . NET.
$26 c$
[L] $\begin{aligned} & \text { 5501MP. PANEL CONNECTOR. Male type. } \\ & 41 \mathrm{H} 949 \text {. NET . . . . . . . . . . . . . . . . . . . }\end{aligned}$


## Amphenol Microphone Connectors

All microphones listed on the preceding pages are supplied less connector. Choose from this complete selection of Amphenol connectors-you'll find one to meet any application.

SERIES 75. SINGLE-CONTACT TYPES. Standard connectors. $5 / \mathbf{8}^{\prime \prime}$ 27 threads; $* 3 / 8^{*}$ mounting holes. Av. shpg. wt., 3 oz .

| tock No. | Type | Fig | Description | N |
| :---: | :---: | :---: | :---: | :---: |
| 41 H958 |  | A | Combination cable plug \& jack |  |
|  | 75 | $\stackrel{B}{8}$ | C |  |
| 41 H965 | *75-PC1M | C | Ch | 20¢ |
| 41 H 959 | 75-MC1FA | E |  |  |
| 41 H 967 | *75-CL-PC1 | $F$ | Chassis receptacle |  |

SERIES 80. SINGLE AND DOUBLE-CONTACT TYPES. For shielded cables, etc. Center contacts are pin and socket type. *Single-contact type. †Double-contact type is polarized. Av. shpg. wt., 3 oz .

| Stock No. | Type | Fig. | Description | NET |
| :---: | :---: | :---: | :---: | :---: |
| 42 H 080 | *80-F | G | Female cable jack | 404 |
| 42 H 084 | *80-C | H | Female chassis receptacle | 374 |
| $42 \mathrm{HO8I}$ | * 80 -M | J | Male cable plug | 474 |
| 42 H 082 | +80-MC2F | G | Female cable jack | 434 |
| 42 H 085 | +80-PC2F | H | Female chassis receptacle | 404 |
| 42 H 083 | +80-MC2M | J | Male cable plug | 474 |

TYPE 75-CCC1 CAP AND CHAIN. (Not illustrated.) For dust-sealing of chassis-mounted, Series 75 and 80 receptacles. Shpg. wt., 3 oz. 24 . 40 . 38 I. NET......................................................

NOTE: Amphenol Type 75-MC1F (Fig. A) fits all Knight public address amplifiers. When splicing two cords, use two $75-\mathrm{MC} 1 \mathrm{~F}$ connectors - they can be used as plugs or jacks.

SERIES 91. 3- AND 4-CONTACT TYPES. Microphone connectors for portable equipment. Polarized. Clamps eliminate stress on soldered connections, *3-contact type. $\dagger 4$-contact type. Shpg. wt., 3 oz .

| Stock No. | Type | Fig. | Description | NET |
| :---: | :---: | :---: | :---: | :---: |
| 41 H 970 | *91-MC3F | K | Female cable jack | 64d |
| 41 H 972 | *91-PC3F | $L$ | Female chassis receptacle | 514 |
| 41 H971 | *91-MC3M | M | Male cable plug | 644 |
| 41 H 977 | $\dagger 91-\mathrm{MC} 4 \mathrm{~F}$ | K | Female cable jack | 674 |
| 41 H978 | +91-PC4F | $\underline{L}$ | Female chassis receptacle | 524 |
| 41H976 | +91-MC4M | M | Male cable plug | 664 |

"QUIK" SERIES 91. 3- AND 4-CONTACT TYPES. Push together; released by slight pressure on lock button. Gold-plated (over silver) bronze contacts. Polarized. Satin-nickel plated, zinc-alloy shells, *3-contact type. +4 -contact type. Av. shpg. wt., 3 oz .

| Stock No. | Type | Fig. | Description | NET |
| :---: | :---: | :---: | :---: | :---: |
| 42 H065 | *91-853 | N | Male cable plug | 1.06 |
| 42 H 066 | *91-854 | P | Female cable plug | 1.24 |
| 42 H 067 | *91-855 | R | Male chassis receptacle | . 67 |
| 42 H 068 | *91-856 | 5 | Female chassis receptacle | 1.47 |
| 42 H 069 | +91-857 | N | Male cable plug | 1.00 |
| 42 H 070 | +91-858 | P | Female cable plug | 1.35 |
| 42 H 071 | +91-859 | R | Male chassis receptacle | . 72 |
| 42 H 072 | +91-860 | 5 | Female chassis receptacle | 1.57 |



## MICROPHONE CABLE CONNECTORS

W TYPE 2501FL. Single-contact connector with female coupling ring. Built-in cable clamp relieves strain on terminal connec tions. No soldering required-just insert cable and secure wire and braid to screw terminals. Fits male mike connectors. Shpg. wt., 6 oz . 41 H 986 . NET

I. 32
$T$ TYPE 2501FT. Double-female connector I. for single-conductor microphone cables. Provides convenient means of connecting 2 cables terminated in male mike connectors. Precision made for accurate fit. Shpg. wt., 2 oz .
41 H 998. NET
47c
X TYPE 2501FS. Same as 2501 FL, but less cable clamp. Shpg. wt., 5 oz .
41 H 987. NET.
97c


Microphone Accessories
(AA) ATLAS GN-13 FLEXIBLE GOOSE NECK. For any mike stand or fixAA ture. Provides complete flexibility of mike positioning. $5 / 8^{\prime \prime}-27$ male and female threads. $13^{\prime \prime}$ long. Wt., 1 lb .
94 S 027. List, \$2.75. NET.
I. 62
(AA MODEL GN-19 FLEXIBLE GOOSE NECK. $19^{\prime \prime} .11 / 2 \mathrm{lbs}$.
BB ATLAS SO-I SNAP-ON MIKE ATTACHMENT. Shpg. wt., 1 lb .
BB ATLAS SO-1 SNAP-ON MIKEATTACHMENT. Shpg. wt., 1 lb .
2.20

ATLAS CH-1 CABLE HANGER. Fits on all stems $7 /{ }^{\prime \prime}$ to
CC AILAS CN-1
94 S 076 . List, $\$ 2.50$. NET
94 S 076 . List, $\$ 2.50$. NET.
I. 47

DD ATLAS ADT EXTENSION ROD. Rigid, lightweight tubing $3^{\prime \prime}$ long.
Each end has $5 / 8^{\prime \prime}-27$ male thread. Shpg. wt., 3 oz .
41 S 913 . List, 60 c . NET.
35c
DD ATLAS AD8 EXTENSION ROD. $6^{\prime \prime}$ long. Shpg. wt., 4 oz. 41 S 907 . List, 70c. NET
EE ATLAS BC-1 BRACKET CLAMP. $6^{\prime \prime}$ stem. Shpg. wt., 1 lb . 94 S 028. List, $\$ 3.50$. NET

41c

ATLAS SW-1 GYROMATIC SWIVEL. (Not illustrated.) Locks microphone at any desired angle. $41 / 2^{\prime \prime}$ long. Shpg. wt., $11 / 2 \mathrm{lbs}$.
94 S 067. List, \$4.50. NET
2.65

FF MIKE STAND THREADING TOOLS. For tapping stands, tubing,
6 fittings, connectors, etc., with $5 / 8^{\prime \prime}-27$ thread. 5 oz
46 N 187 . Tap. NET
3.53

46 N 188. Die. NET.
4.70

GG EXTENSION CORD. 25 -ft. cable with $75 \mathrm{MC1F}, 75 \mathrm{MC1M}$ conGG nectors. Shpg. wt., 2 lbs.
41 S 911 . NET.
2.79

HH AMPHENOL 75-MCIS SWITCH. Push-to-talk switch with lock.
HH Require no soldering; standard threads. Wt., 6 oz .
41 H 950 . NET.
1.08

JJ " $Y$ " TYPE MIKE CONNECTOR. 2 males, 1 female. 2 oz. 41 H 996 . NET. .

97c
KK "SAVE-UR-MIKE" COVER. Plastic-coated celanese. 2 oz.
41 S 995. NET.
69c
LL SWITCHCRAFT MODEL 329 MIKE VOLUME CONTROL. For high$[L$ impedance microphones having single-conductor detachable cable. Screws in between mike and cable. Wt., 6 oz.
41 H 946 . NET.
4.09

ATLAS MIKE STAND ADAPTERS. Wt., 2 oz . except ${ }^{*}$, 6 oz .

| Stock No. | Type | Fig | Description | N |
| :---: | :---: | :---: | :---: | :---: |
| 415928 | AD1 | MM | adapting RCA mikes. $1 / 2^{\prime \prime}$ male $5 / 8^{\prime \prime}-27$ female. |  |
|  | AD2 |  | $1 / 8^{\prime \prime}$ pipe female to $5 / 8^{\prime \prime}-27$ male. |  |
| $\begin{array}{r}94 \\ 94 \\ 94 \\ \hline\end{array}$ | $\begin{aligned} & \text { AD3 } \\ & \text { AD } \end{aligned}$ | $\stackrel{\mathrm{PP}}{\mathrm{PN}}$ | $1 / 8^{\prime \prime}$ " pipe female to $5 / 8^{\prime \prime}-27$ fem $3 / 4^{\prime \prime}$ " long. $5 / 8^{\prime \prime}-27$ male thread. |  |
|  |  | PP |  | 35 |
|  |  |  | to $5 / 8{ }^{\prime \prime}-27$ female. |  |
| $\begin{aligned} & \mathbf{S} 9 \\ & \mathbf{S} 9 \end{aligned}$ | $\mathrm{A}$ | $\begin{aligned} & \mathrm{SS} \\ & \mathrm{RR} \end{aligned}$ | Mike base flange. Female. $5 /{ }^{\prime \prime}{ }^{n}-27$. | 414 |



## Quality Microphone Floor Stands and Booms

A| 1 BATLAS MS-11C FLOOR STAND. Low-cost microphone stand with high-quality features. Equipped with "Full Grip' clutch mechanism-allows stand to be quickly and quietly adjusted to any height from $35^{\prime \prime}$ to $65^{\prime \prime}$. Excellent for use in school auditoriums, etc., where the microphone must be easily positioned to the proper height for different users. Rugged base includes self-leveling, shock-absorbing pads. Reinforced with three "anti-tip" points in base for added rigidity. Chrome-plated base and stand; retains lasting beauty. Base diameter, $10^{\prime \prime}$. $5 / 8^{\prime \prime}-27$ thread. Shpg. wt., 12 lbs.
94 SX 012 -2. List, $\$ 13.00$. NET
7.64

C ATLAS CS. 33 DEMOUNTABLE FLOOR STAND. Three-section microphone stand designed for both fixed and portable applications. Requires no tools for assembly or demounting. Legs are held in place with "finger-operated" spring lock and can be quickly removed. Adjustable from $26^{\prime \prime}$ to $64^{\prime \prime}$. Collapsed size, $221 / 2^{\prime \prime}$. Self-leveling legs tipped with rubber-prevent skidding. Atractive chrome-plated finish. $5 / 8^{\prime \prime}-27$ thread Shpg. wt., 4 lbs
94 SX 016 -2. List, $\$ 12.50$. NET
7.35

ATLAS MS-25 "AIR-LOCK" FLOOR STAND. Features "air-lock" cushioning of telescoping section. Controlled escape of air allows only slow, quiet collapse into lower section. Microphone stand extends from $37^{\prime \prime}$ to $66^{\prime \prime}$. Heavy base is $17^{\prime \prime}$ dia.; provides firm support for boom arm attachment. Will not tip even with a heavy microphone. Chrome-plated stem. Gray-finished base $5 / 8^{\prime \prime}-27$ thread. Shpg. wt.. 20 lbs 94 SU 029-2. List, $\$ 25.00$. NET.
14.70

EATLAS BS-36 PROFESSIONAL BOOM STAND. Similar to Model MS-25 (left), but with removable $62^{\prime \prime}$ boom arm. Gyromatic swivel joint at end of boom allows microphone to hang in the proper position regardless of how the boom arm is moved. Has "snap-on" hangers for attaching cable to stand. Vertical height adjustable from $48^{\prime \prime}$ to $72^{\prime \prime}$. Shpg. wt., 33 lbs.
94 SU 021-2. List, $\$ 60.00$. NET. . 35.28
F ATLAS BB-1 "BABY BOOM" ATTACHMENT. Quickly converts any floor stand having a $5 / 8^{\prime \prime}-27$ thread to a boom-type stand. Permits a quick, fixed positioning of microphone anywhere within a $5-\mathrm{ft}$. circle. Heavily chrome-plated boom attachment is $32^{\prime \prime}$ long. Gray crackle-finish fittings. Counterbalance weight can be adjusted easily for use with any mike. All swivel parts are precision die castings-provide smooth operation. Shpg. wt., $41 / 2 \mathrm{lbs}$.
94 SX 019 . List, $\$ 7.50$. NET
4. 41


FLEXO MODEL 3 MIKESTER. Has a sturdy $40^{\prime \prime}$ floor stand and two $18^{\prime \prime}$ easy-action swinging arms. Arms can be adjusted to firmly hold the microphone at any angle or distance, up to $36^{\prime \prime}$ in any direction. Weighted, anti-tip cast-iron base; diameter, $131 / 2^{\prime \prime}$. Stem finished in gray enamel. Suitable for mikes weighing up to $4 \mathrm{lbs} .5 / 8^{\prime \prime}-27$ thread. Shpg. wt., 28 lbs.
94 SU 043-2. List, $\$ 32.50$. NET.
19.11

G] FLEXO MODEL 1 MIKESTER. Similar to Geove, but less $40^{\prime \prime}$ floor stand. Has two bolts; unit may be clamped or screwmounted to any surface up to three inches thick. Shpg. wt., $43 / 4 \mathrm{lbs}$.
94 SX 044. List, $\$ 14.00$. NET
8.23

J E-V 425 FLOOR STAND. Features singlebutton control of shaft height. When button is released, shaft locks automatically. Shaft can be rotated without any adjustment. Adjustable from $37^{\prime \prime}$ to $66^{\prime \prime}$.
Legs fold back for storing and carrying. Satin chrome finish. Die-cast base has 17" spread. $5 / 8^{\prime \prime}-27$ thread. Shpg.wt., 9 lbs
94 SX 049. List, $\$ 30.00$. NET
17.64

## knight FLOOR STAND VALUES

- Exceptionally Low in Cost
- For Portable or Stationary Use
- Will Accommodate Most Mikes
- Smooth-Operating Clutch Action
- Chrome-Plated for Long Wear
- Tip-Proof, Cast-Iron Base

K THREE-SECTION MODEL. An outstanding K. value in a highly popular, compact microphone stand-carrying height only $25^{\prime \prime}$. Specifically designed to accommodate all of the desk-type and floor-type mikes listed on preceding pages. Can also be used with lavalier-type microphones having adapter. Ideal for portable applications. Two smooth-operating clutches provide adjustment from $25^{\prime \prime}$ to $61^{\prime \prime}$. Stem is heavily chrome-plated for long wear. Sturdy, detachable, cast-iron base has $10^{\prime \prime}$ diameter. Gray, wrinkle finish. Standard $5 / 8^{\prime \prime}-27$ thread. Shpg. wt., 10 lbs.
94 SX 001-2. NET
7.35

1 ECONOMY MODEL. As above. but twoL section type. Adjustable from $35^{\prime \prime}$ to $64^{\prime \prime}$. Shpg. wt., $101 / 2$ lbs.
94 SX 004-2. NET.
5.85


## Microphone Desk and Banquet Stands

M E-V 428 TOUCH-TO-TALK STAND. Deluxe, versatile microphone desk stand with touch-to-talk feature. Has $61 / 4^{\prime \prime}$ touch-totalk bar on side of stem with locking button at top. Slight pressure will close circuit. SPDT switch for controlling relay or shorting out microphone. Switch assembly removable from base. Satin chrome finish; gray plastic switch lever. Stem height, 7". Sturdy die-cast base; dia., $51 / 8^{\prime \prime}$. $5 / 8^{\prime \prime}-27$ thread. Shpg. wt., 2 lbs .
94 S 053. List, \$17.50. NET
10.29

N ATLAS DS-5 DESK STAND. Low-cost desk stand. Chrome-plated stem. $4^{\prime \prime}$ high. Cast-iron base; $6^{\prime \prime}$ diameter. Rubber base pads prevent marring of table or desk. $5 / 8^{\prime \prime}$ 27 thread. Shpg. wt., 2 lbs. 94 S 077 . List, $\$ 3.00$. NET.

P
ATLAS DS-7 ADJUSTABLE DESK STAND full-sized clutch mechanism for quick smooth change of stand height. 2-section stem uses $5 / 8^{\prime \prime}$ and $7 / 8^{\prime \prime}$ tube combination. All tubular sections finished in chrome. Gray crackle base, $6^{\prime \prime}$ diameter. Rubber base pads prevent scratches. Standard $5 / 8^{\prime \prime}-27$ thread Shpg. wt., 3 lbs.
94 S 014. List, $\$ 5.00$. NET
2.94

R ATLAS DS-10 DESK STAND. Modern, func tional design. Cable concealed in slot underneath center section of chrome trim. Space under base for on-off or press-to-talk switch. Gun-metal enamel finish. Rubber pads prevent marring of table-top or desk. pads prevent marring of table-top
$5 / 8^{\prime \prime}-27$ thread. Shpg. wt., $11 / 2 \mathrm{lbs}$.
$5 / 8-27$ thread. Shpg. wt., $1 / 2$
94 S 073 . List, $\$ 5.00$. NET...
2.94

S ATLAS TB-1 DUPLEX MIKE MOUNT. For 5 use with any floor stand or TS-7 stand below-no extra connectors needed. Permits use of 2 mikes on a single stand with proper spacing to keep the speaker "on the mike." Convenient desk attachment holds written material for ready reference; attachment is removable. Finished in chrome and cadmium plating. $9 \times 11^{\prime \prime}$ desk of molded composition; black finish. $5 / 8^{\prime \prime}+27$.thread Shpg. wt., $21 / 2$ lbs.
94 S 072 . List, $\$ 10.00$. NET..
5.88

ATLAS TS-7 BANQUET STAND. For use with TB-1 duplex mount, above. Ideal for speakers table. Chrome-plated. Height: Extended, $1712^{\prime \prime}$; closed, $101 / 2^{\prime \prime}$. All chrome. Base dia., $10^{\prime \prime}$. Wt., 11 lbs.
94 S 074 . List, $\$ 10.00$. NET.
5.88


FOR QUIET INDOOR AREAS such as offices, classrooms, reception rooms, warehouses, etc., select cone-type speakers. A variety of wall and ceiling type baffles for housing cone speakers is offered on pages 327-328. The most popular speaker sizes are $8^{\prime \prime}$ and $12^{\prime \prime}$. The $8^{\prime \prime}$ speakers provide excellent reproduction of voice and music; however, in applications where extended low frequency response is necessary, $12^{\prime \prime}$ speakers are recommended. The wattage ratings given for speakers indicate the maximum power (volume level) they will handle without distortion. Average size rooms, offices, etc.. normally require no more than 2 watts for adequate sound coverage. Large warehouses, auditoriums, etc., will require as much as 10 watts per speaker. Cone-type speakers are not recommended for use under conditions of high humidity or where corrosive vapors are present.

FOR NOISY INDOOR AREAS AND OUTDOOR USE select a trumpettype speaker. Weather-proof speakers are listed for outdoor applications. The diameter of a trumpet bell determines its bass response-the larger the bell, the greater its bass response. Horn size determines the angle of coverage-as the horn size increases, the sharpness of the dispersion angle and the penetrating power increase. Unless otherwise specified, trumpettype speakers require drivers. There is no advantage in selecting a driver with better low frequency response than the horn it is to be used with. When an impedance matching transformer is needed, select a driver with a built-in transformer to simplify installation. Drivers listed have screw terminals. The University IB8, Jensen VH-91 and Electro-Voice 847 are for use with paging systems in very noisy areas. These are equipped with built-in drivers.

IN AREAS WHERE CORROSIVE VAPORS ARE PRESENT, such as plating mills, foundries, chemical labs, forging and blacksmith shops, etc., select a fiberglas-constructed horn. Allied stocks a wide variety of fiberglas horns to meet any application. Write to our Audio Division for special orders requiring submergence-proof or explosion-proof speakers. Allied's audio experts will furnish literature and recommendations for your specific needs.

HOW MANY SPEAKERS TO USE depends upon the particular area. Average offices require flush-mounted ceiling speakers spaced about 15 feet apart. Large indoor trumpets (using about 15 watts each) should be placed about 25-50 feet apart. In extremey noisy areas, small trumpets (using about 5 watts each) should be placed near each specific location to be covered.

OUTDOOR AREA COVERAGE is influenced by weather conditions and terrain. Where coverage is required for spectator gatherings, place speakers near the audience. For distance coverage, such as used in connection with church towers, use 4 projectors in a cluster-driven by a Knight 60 -watt amplifier. This arrangement will cover from $1 / 4$ to $1 / 2$ mile. To double this radius, 4 times the power would be required. Our audio experts will show you which speakers are best suited for your individual needs.

USE OF TRANSFORMERS is recommended when extensive lengths of speaker cable are employed or when more than four speakers are used in a system. You will find trumpet drivers containing built-in transformers on the following pages. Cone-type speakers with wired transformers are shown on page 329 . Write for our free bulletin "Multiple Speaker Installations.:'


## JENSEN HIGH-QUALITY TRUMPETS

MODEL H-200. Popular 20" profector horn for commercial sound work. Especially effective in indoor or outdoor applications where extensive background noise is present. Has concentrated "throw" for excellent coverage. Maximum angle coverage, $85^{\circ}$. $41^{\prime \prime}$ air column. Response, $150-10,000 \mathrm{cps}$. Mouth diameter, $203 / 4^{\prime \prime}$; length, $147 / 16^{\prime \prime}$. All-metal construction. Handsome beige finish. Less driver (listed below). Shpg. wt., $123 / 4 \mathrm{lbs}$.
93 DU 524. List, $\$ 31.00$. NET
18.23

MODEL RT-20. Rugged, high-power rectangular horn; excellent for car-top and rental service. Ideally shaped for wall corner location; one unit may be used, or two will exactly fit in the $90^{\circ}$ corner with mouth outlines in a continuous arc. Covers $80^{\circ}$ sound angle, $41^{\prime \prime}$ air column. Response, $140-10,000 \mathrm{cps} .26 \times 131 / 2^{\prime \prime}$ mouth; $165 / 16^{\prime \prime}$ long. Fiberglas-reinforced plastic construction; virtually indestructible. Handsome tan finish. Supplied with steel "U" bracket. Less driver (listed below). Shpg. wt., 15 lbs.
93 DU 525. List, \$46.50. NET
27.34

## JENSEN WEATHER-RESISTANT DRIVERS

DRIVERS. High-quality drivers for Models H-200 and RT-20 above. Features include: efficient Alnico $V$ magnetic structures; corrosion and weather-resistant construction; strain relief for wiring reliability; and sturdy, low contact resistance terminals.

| Stock No. | Mfrs. Type | Watts | Ohms | Resp.,CPS | Length | Dia. | Wt., Lbs. | $\begin{aligned} & \text { NET } \\ & \text { EACH } \end{aligned}$ |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 93 D 526 | D-30 | 30 | 16 | $\overline{75-7000}$ | $41 / 16^{\prime \prime}$ | 41/2" | 31/2 | 16.17 |
| 93 D 527 | DD-100 | 100 | 8, 32 | 175-10000 | 55/16" | 81/2" | 8 | 56.74 |

## PROJECTORS-COMPLETE WITH DRIVERS

MODEL VH-9I. Compact projector with excellent speech reproduction qualities. Ideal for placement near areas of extreme noise. Maximum angle coverage, $100^{\circ}$. Frequency response, $300-7000 \mathrm{cps}$. Power rating, 15 watts. Impedance, 8 ohms . Mouth diameter, $87 / \mathrm{s}^{\prime \prime}$. Length, $75 / 8^{\prime \prime}$. Corrosion-resistant metal shell has attractive tan finish. With universal-type mounting brackets. Built-in driver completely protected from effects of weather. Shpg. wt., $33 / 8 \mathrm{lbs}$. 95 D 035 . List, $\$ 35.80$. NET
21.05

MODEL HF-100. Extremely versatile high-fidelity projector for indoor or outdoor use. Reproduces voice and music with exceptional clarity. Frequency response, $\mathbf{6 0 - 1 5 , 0 0 0} \mathrm{cps}$. Power rating, 30 watts, Dispersion, $120^{\circ}$. Mouth diameter. $243 / 8^{\prime \prime}$. Length, $113 / 8^{\prime \prime}$. Impedance, 16 ohms. Reinforced plastic inner section and spun aluminum outer horn resists effects of corrosion. Handsome tan baked enamel finish. With " U " mounting bracket. Shpg. wt., 30 lbs.
81 DU 951. List, \$129.50. NET
77.70

## "SPEECH MASTER" SPEAKERS

MODEL AP-10. Highly efficient $5^{\prime \prime}$ PM desk type speaker in attractive metal enclosure. Widely used for fixed and mobile radio communication, intercom systems, and control centers for commercial traffic dispatching. Provides superior intelligibility in the presence of static and acoustic background noise. Rated, 5 watts. Impedance, 4 ohms. $63 / 4^{\prime \prime}$ high. Heavy cast base has felt pad for table-top protection. In handsome gray finish with contrasting chrome trim ring. With $36^{\prime \prime}$ cord. Shpg. wt., 6 lbs .
82 D 040. List, $\$ 19.30$. NET
II. 35

MODEL RK-61. 2-direction $6^{\prime \prime}$ speaker in metal case. 8 watts. Imp.. 4 ohms. $8 \times 31 / 4^{\prime \prime}$. With $24^{\prime \prime}$ cable. Tan. Wt., $31 / 2$ lbs.
93 D 531 . List, $\$ 12.60$. NET.


## University Weather-Proof Reflex Trumpets \& Heavy-Duty Drivers

(A) Model GH has 85-cps cutoff for music. Models LH and PH A have higher cutoff for general use. Model SMH for voice only. With " $U$ " mtg. bracket, less driver

| Stock No. | Type | Dia. | Length | Low Cutoff | Lbs. | List | EACH |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 95 DZ 158 | GH | 307/8" | 277/8" | 85 cps | 22 | $\$ 65.00$ | 38.22 |
| 95 DZ 155 | LH | 255/8" | $19^{\prime \prime}$ | 120 cps | 161/2 | 44.50 | 26.17 |
| 95 DZ 156 | PH | 201/4" | 153/4" | 150 cps | 113/4 | 31.00 | 18.21 |
| $950 \times 157$ | SMH | 161/2" | $12^{\prime \prime}$ | 200 cps |  | 26.00 | 15.21 |

COBREFLEX-2 WIDE-ANGLE REFLEX TRUMPET. Provides $120^{\circ}$ horizontal sound pattern. $200-\mathrm{cps}$ cutoff. For voice only. With swivel-joint bracket. $91 / 4 \times 181 / 2 \times 101 / 4^{\prime \prime}$. Less driver. $101 / 4 \mathrm{lbs}$. 95 DX 184. List, $\$ 38.35$. NET.
22.54

C MODEL CLH WIDE-ANGLE TRUMPET. Features $41 / 2-\mathrm{ft}$. air column © 120 -cps cutoff. $211 / 2 \times 119 / 16 \times 201 / 16^{\prime \prime}$ dia. Less driver. 15 lbs .
93 DU 376. List, $\$ 44.50$. NET
26.17
(D) MODEL RPH TRUMPET. For ceiling use; $360^{\circ}$ coverage. 140 cps (D) cutoff. 4 -ft. air column. 253/16" dia. Less driver. 19 lbs.

95 DZ 162. List, \$47.00. NET
27.64

MODEL RLH. As above, with $5-\mathrm{ft}$. air column. 25 lbs .
95 DZ 042. List, $\$ 59.00$. NET

PMA ADAPTER. Attachable to " U " bracket for mounting trumpets on $1 / 2^{\prime \prime}$ pipe fittings. Shpg. $w t ., 3 / 4 \mathrm{lb}$.
95 D 160. List. \$2.00. NET
HEAVY-DUTY DRIVER UNITS. PM dynamic type, hermetically sealed units for any trumpet listed at left, or other trumpets. Breakdown and weatherproof. Thread, $13 / 8^{\prime \prime}-18$. MA 25 is designed for use with high cut-off frequency trumpets. SA-HF has higher frequency response. SA- 30 and PA-50 have built-in, multi-impedance line transformers with power taps. Impedances: SA-30-45, 165, 250, $500,1000,2000$ ohms, $30,20,10,5$ and 2.5 watt $70-\mathrm{v}$. line power taps; PA-50-16, 100, 165, 250, 500, 1000, 2000 ohms, 50, 30, 20 10,5 and 2.5 watt $70-\mathrm{v}$. line power taps.

| Stock No. | Type | Fig. | Range, CPS | Watts | Ohms | Lbs. | List | EACH |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 81 D 573 | MA-25 | E | 85-6500 | 25 | 16 | 33/4 | \$27.50 | 16.17 |
| 81 D 571 | SA-HF | F | 80-10,000 | 30 | 16 | $41 / 2$ | 36.00 | 21.17 |
| 81 D 079 | PA-HF | G | 70-10,000 | 50 | 16 | 53/4 | 47.50 | 27.93 |
| 93 D 377 | PA-50 | H | 70-10,000 | 50 | 16 | 61/4 | 57.50 | 33.81 |
| 81 D 582 | SA-30 | J | 80-10,000 | 30 | 16 | 51/4 | 47.50 | 27.93 |

2 YC "Y" CONNECTOR. Permits connection of two driver units to any trumpet listed on this page. Shpg. wt.. 1 lb .
95 D 159. List, $\$ 12.00$. NET
7.06


FULL-RANGE, WEATHERPROOF COAXIAL SPEAKERS. Exceptionally
fine weatherproof coaxial speakers. Full-range voice and music reproduction; high intelligibility; wide dispersion. For bandshells, stadiums, auditoriums, and other indoor or outdoor applications. Special woofer speaker cone is built into an infinite rear baffle chamber-works in conjunction with large folded horn to provide optimum loading of speaker for clean, highly efficient bass response. Have coaxially mounted tweeters with separate drivers.
MODEL BLC. $\mathbf{7 0 - 1 5 , 0 0 0} \mathrm{cps} .2000-$ cycle crossover. Dispersion, $120^{\circ}$ 25 watts. Imp., 8 ohms. $221 / 2 \times 9^{\prime \prime}$. Shpg. wt., 21 lbs.
95 DU 186. List, \$86.00. NET.
50.57

MODEL WLC. Larger version of above. $50-15,000 \mathrm{cps}$. Dispersion, $90^{\circ}$. 30 watts. Imp., 8 ohms. $331 / 2 \times 20^{\prime \prime}$. Shpg. wt., 72 lbs. 95 DZ 181 . List, $\$ 250.00$. NET
147.00

1] MODEL MLC MEDIUM-POWER SPEAKER. Similar to the BLC. For low-level speaker distribution, or to cover medium size areas. Excellent for voice and music. Ideal for general-purpose. indoor or outdoor P.A. applications. Response, $150-15,000 \mathrm{cps}$. Dispersion, $120^{\circ}$. Capacity, 15 watts. Imp., 8 ohms. $123 / 4 \times 91 / 8 \times 105 / 8^{\prime \prime}$. Shpg. wt., 10 lbs.
93 DX 378. List \$54.50. NET
32.05

M CIB WIDE-ANGLE SPEAKER. Perfect for paging, announcing, etc. Has reinforced fiberglass bell. Capacity, 15 watts. 300 to 13,000 cps. Horizontal dispersion, $120^{\circ}$; vertical, $60^{\circ}$. Imp., 8 ohms. $73 / 8 \times 14 \times 12^{\prime \prime}$. With mtg. bracket. Shpg. wt., $51 / 2 \mathrm{lbs}$. 95 DX 199. List, \$42.00. NET
24.70

CMIL. As above, but 5 -watt capacity; 400 to $13,000 \mathrm{cps}$. Size, $67 / 32 \times 91 / 2 \times 87 / 16^{\prime \prime}$. Shpg. wt., 4 lbs.
95 D 149 . List, $\$ 29.75$. NET
17.50

2WP 2-WAY SPEAKER. Dual horns, $\mathbf{8 0 ^ { \circ }}$ opposed for economical coverage of two oppositely located areas. Excellent for use in school or hospital corridors, railroad stations, loading ramps, etc. Use with single MA-25, SA-HF, SA-30 or PA-HF driver. Dispersion, $120^{\circ}$ each horn. Power and impedance ratings depend on type of driver used. With adjustable bracket. $201 / 2 \times 8^{\prime \prime}$ dia. Shpg. wt., 4 lbs.
81 DX 860. List, $\$ 28.00$. NET
16.46

P MODEL IB8 GENERAL-PURPOSE SPEAKER. Reflex-type with built-in
15 -watt driver unit. Compact and highly efficient, it offers maximum speech intelligibility in high-noise areas. $90^{\circ}$ dispersion angle. Range, $300-13,000 \mathrm{cps}$. Input impedance, 8 ohms. $81 / 2^{\prime \prime}$ bell dia. $\times 9^{\prime \prime}$ long. With mtg. bracket. Shpg wt., 4 lbs.
81 DX 575. List, \$34.50. NET
20.29

MODEL MIL LOW-POWER SPEAKER. Similar to IB8 above. Forlowpower systems. Reflex-type 5 -watt driver. Range, $400-13,000$ cps. Dispersion, $120^{\circ}$. Imp., 8 ohms. $7 \times 63 / 8^{\prime \prime}$ dia. Shpg. wt., $31 / 4 \mathrm{lbs}$.
95 D 163 . List, $\$ 26.00$. NET
15.29

R MODEL IBR RADIAL SPEAKER. 15 watts. $360^{\circ}$ coverage. $300-10,000$
cps. 8 ohms. $101 / 4 \times 13^{\prime \prime}$ dia. With ceiling ring. $51 / 4 \mathrm{lbs}$.
81 DX 576. List, \$45.00. NET.
26.46

S MODEL CTR TRANSFORMER HOUSING. Weatherproof, die-cast
S. aluminum housing. For transformers $23 / 8 \times 27 / 8^{\times 2} 2^{7 / 1}$ max., and mtg. ctrs. $11 / 2$ to $23 / 4^{\prime \prime}$. Shpg. wt., 2 lbs.
93 D 379. List, $\$ 8.00$. NET
4.70

1 MODEL PB-1 TRANSFORMER HOUSING. The weatherproof trans
former housing for use with Model MIL, CMIL, IB and CIB speakers. Constructed of durable die-cast aluminum. Offers complete weather protection for any transformer similar to Fig. B, p. 173 , with $2^{\prime \prime}$ mounting centers and not exceeding $115 / 16 \times 15 / 8 \times 15 / 8^{\prime \prime}$. Size, $31 / 8^{\prime \prime}$ high, $25 / 8^{\prime \prime}$ dia. Shpg. wt., 1 lb .
93 D 385. List, \$3.75. NET
2.20

## P.A. ACCESSORIES-PORTABLE P.A. SYSTEMS



## MODEL 848 CDP 30-WATT PROJECTOR

Unique coaxial projector with single driver. Virtually indestructible spun fiberglas construction; greater coverage; wide response for full range sound. Two horns are employed; large horn for low frequencies $-150-1000 \mathrm{cps} . \pm 5 \mathrm{db}$; small horn for highs-1000-12,000 cps. Low-end response is augmented by 100 cps horn taper, insuring at least one-half octave added bass. Horns are coupled to opposite sides of driver diaphragm. Coverage, $120^{\circ}$. Capacity, 30 watts. Impedance, 16 ohms. Weatherproof. Finished in gray. 201/2×101/2" mouth; $20^{\prime \prime}$ deep. Wt., 17 lbs .
81 DU 490. List, \$75.00. NET
44.10

## MODEL 848LT "LONG-THROW" CDP PROJECTOR

Similar to the 848 above, but employs 1000 -cycle concentrating horn to limit sound dispersion to a selected area. Allows pin-pointing sound to a selected audience with increased sound level on axis. Same wide range and smooth response as 848 . Response: 150 to 12,000 cps. Dispersion, $30^{\circ}$. Impedance, 16 ohms. Capacity, 30 watts. HWD: $201 / 2 \times 101 / 2 \times 21^{\prime \prime}$. Shpg. wt., $171 / 2 \mathrm{lbs}$. 82 DU 920. List, \$75.00. NET.
44.10

MODEL 879 JOINING KIT. For assembling two or more, Model 848 or 848LT projectors in multiple arrays. One kit required for each additional projector. Shpg. wt., 1 lb .
81 D 495. List, \$2.75. NET
I. 62

## MODEL 847 CDP 25-WATT PROJECTOR

Smaller version of 848 above. Has two coaxially mounted diffraction horns for $120^{\circ}$ distribution at all frequencies from 250 to $13,000 \mathrm{cps}$. Capacity, 25 watts. Impedance, 16 ohrms. 1500 cps crossover. In gun-metal gray. $113 / 4 \times 73 / 4$ " mouth; $107 / 32^{\prime \prime}$ deep. Wt. 7 lbs. 81 DX 851. List, \$46.33. NET.
27.24

## TRANSFORMERS FOR CDP PROJECTORS

MODEL 876. Mounts on rear of Model 848 and 848LT projectors. Pri. taps for $25,10,5$, and 2.5 watts with $70-\mathrm{v}$. line. Imp. taps of 45 , $200,500,1000$, and $2000 \mathrm{ohms} .31 / 2 \times 51 / 4^{\prime \prime}$. dia Shpg. wt., 3 lbs. 81 D 492. List, $\$ 16.50$. NET
9.70

MODEL 877. As above but with thermal bimetallic relay for overload protection. $31 / 2 \times 51 / 4^{\prime \prime}$ dia. Shpg. wt., 3 lbs. 81 D 493. List. $\$ 17.50$. NET.
10.29

MODEL 870. For use with Model 847 CDP above. Primary taps for $12,8,4,2$, and 1 watt with 70 -volt line; impedance taps for 500 , 2500,5000 , and $45 \mathrm{ohms} .21 / 2 \times 21 / 2 \times 3^{\prime \prime}$. Shpg. wt., 2 lbs . 81 D 852. List, $\$ 12.00$. NET
7.06

NEW ACCESSORIES FOR 848 CDP PROJECTORS
MODEL HC1000 CONCENTRATING HORN. Converts standard 848 to 848LT. Die-cast concentrating horn replaces diffraction horn on Model 848. Diameter, $97 / 8^{\prime \prime} ; 53 / 16^{\prime \prime}$ deep. Shpg. wt., $61 / 4 \mathrm{lbs}$. 82 D 923. List, \$10.00. NET.
MODEL RE35 RANGE EXTENDER. Mounts in horn. Response, 2500 to 18,000 cps. Capacity, 30 watts. Imp., 16 ohms. Includes tweeter, crossover, mtg. bracket, etc. Shpg. wt., $41 / 2 \mathrm{lbs}$.
82 D 924. List, $\$ 40.00$. NET
23.52

## NEW "MUSICASTER" P.A. SPEAKER SYSTEM

New, unique one-piece, weatherproof speaker system. Employs a die-cast aluminum, back-loaded folded horn as an integral part of its structure "extends bass response to 60 cps . Compact and lightweight, the "Musicaster" provides remarkably clean and highly realistic reproduction of voice and music. Die-cast feet allow placement on any flat surface during portable use. Response, 60 to 16,000 cps. Impedance, 8 ohms. Dispersion, $120^{\circ}$. Capacity, 30 watts. HWD, $211 / 2 \times 211 / 2 \times 81 / 2^{\prime \prime}$. Shpg. wt.. 24 lbs .
82 DU 922. List, $\$ 80.00$. NET
47.04

## NEW MODEL 844 COMPLETE PAGING UNIT

General-purpose speaker system at an economical price. The durably built Model 844 consists of a die-cast re-entrant horn, detachable 30 -watt driver and universal mounting bracket. High capacity, rugged construction and excellent reproduction make it ideal for car-top mounting on police and fire vehicles, etc., as well as for use in paging systems. Tropicalized and weather-proofed. Response, 250 to $13,000 \mathrm{cps}$. Capacity, 30 watts. Impedance, 8 ohms. Dispersion, $90^{\circ}$. Diameter, $97 / 8^{\prime \prime} ; 83 / 16^{\prime \prime}$ deep. Shpg. wt., $71 / 2 \mathrm{lbs}$. 82 DX 921 . List, $\$ 34.50$. NET.
20.28

## NEW "WOLVERINE" FULL-RANGE P.A. SPEAKERS

New P.A. speakers, comparable in quality and construction to hi-fi speakers. Employs precisely machined, die-cast frames; Radax 2 cone construction for maximum bass and efficient treble reproduction; edgewise-wound aluminum ribbon voice coils; slug-type magnets; and low-silhouette frames (only $31 / 2^{\prime \prime}$ deep). Include moistureresistant cones and spiders that are completely fungi-proof.
MODEL LS-12 $12^{\prime \prime}$ SPEAKER. Response, 30 to 13,000 cps. Capacity 20 watts. Impedance, 8 ohms. Resonance, 40 cps . Shpg. wt., $51 / 4 \mathrm{lbs}$. 82 DX 850 . List, $\$ 32.50$. NET
19.50

MODEL LS-8 $8^{\prime \prime}$ SPEAKER. Response, 50 to $13,000 \mathrm{cps}$. Capacity, 20 watts. Impedance, 8 ohms. Resonance, 55 cps . Shpg. wt., $41 / 2 \mathrm{lbs}$. 82 D 851 . List. $\$ 30.00$. NET
18.00


## RADIONIC "ULTRASONIC"

MODEL 2400.. Heavy-duty, self-contained portable P.A. system. Easily transmits $1 / 4$ mile. Instant operation. Average battery life, 6-12 months. Supplied with case, speaker, mike, 8 -ft. coiled cord and plug, and four 6 -volt batteries. Has carrying handle and adjustable shoulder strap. Weather and rust-proof steel case; gray hammerloid finish. Case size, $101 / 2 \times 6 \times 41 / 4^{\prime \prime}$. Shpg. wt., 15 lbs. 93 SX 886. List, \$99.50. NET...
66.33

Employs powerful 3-transistor amplifier and 8 standard penlight batteries to provide amazingly loud and clear voice "throw." No warm-up necessary-thermistor allows instant indoor or outdoor use in temperatures from $-20^{\circ} \mathrm{F}$ to $120^{\circ} \mathrm{F}$. Batteries fit into clip inside handle. Entire unit, with batteries, weighs only $31 / 4 \mathrm{lbs}$ ! Spun aluminum horn and housing; red plastic handle. Includes batteries. Shpg. wt., $51 / 4 \mathrm{lbs}$.
93 SX 004. List, \$119.95. NET.... 89.96

## UNIVERSITY "POWRPAGE"

MODEL PP-2. Lightweight, self-powered P.A. system. Has range of up to $1 / 4$ mile. Weighs only $35 / 8$ lbs. with batteries (not included). Batteries fit into handle-employs 6 penlight type. Push-to-talk switch. Has jack to permit use with external 6 -volt or 12 -volt DC supply. Horn is $8^{\prime \prime}$ in diameter. Shpg. wt. 5 lbs.
93 SX 780 . NET
44.10

PENLIGHT BATTERY. 6 required. Each, 2 oz. 53 J 031 . NET EACH . . . . . . . . . . . . . . . . . 9 C


## SURFACE AND RECESSED WALL AND CEILING BAFFLES



CP \& XCP SERIES FLUSH-MOUNTING BAFFLE ENCLOSURES. For mounting AL and RS baffles, below. CP types for new construction; have steel can and plaster ring. All have sound deadening material. Shpg. wt.: CP6 and XCP6, $31 / 2 \mathrm{lbs}$. each; CP8 and XCP8, $41 / 4 \mathrm{lbs}$. each; CP1012 and XCP1012, $71 / 2$ lbs. each.

| Stock No. | Type |  | T |
| :---: | :---: | :---: | :---: |
| 35 | ${ }_{\text {CP6 }}$ | RS6A. | 4.28 |
| 5 DX 236 | CP8 | For AL8A, RS8A. ${ }^{1} 12^{\prime \prime} 1 . D \times 41 / 2^{\prime \prime} \times 13^{\prime \prime} 0 . D$. | 5.29 |
| 95 DX 237 | CP1012 | For AL12A, RS12A. $121 / 2^{\prime \prime}$ I.D. $x 7^{\prime \prime} \times 171 / 8^{\prime \prime}$ O.D. | 7.25 |
| 95 DX 232 | XCP6 | For AL6A, RS6A. $7^{\prime \prime}$ dia.x4" | 3.77 |
| X 233 |  | For AL8A, RS8A. $81 / 2^{\prime \prime}$ d | 3 |
| X 23 |  | For AL12A, RS12A. 121/2" dia.x ${ }^{\prime \prime}$ " deep. |  |

RS \& AL WALL AND CEILING BAFFLES. Aluminum with $1 / 2^{\prime \prime} \mathrm{mtg}$. flange. Have satin finish. RS types for recessed wall mounting; AL for recessed ceiling mounting. Both require baffle enclosures, above.

| Stock No. | Type | Description | Lbs. | NET |
| :---: | :---: | :---: | :---: | :---: |
| 95 DX 240 | RS6-A | For $6^{\prime \prime}$ speakers. $10^{3 / 4}$ | 1 | 2.94 |
| 95 DX 238 | RS8-A | For $8^{\prime \prime}$ speakers. $123 / 8 x^{1 / 2} 2^{\prime \prime}$. | 1 | 3.26 |
| 95 DX 239 | RS12-A | For $12^{\prime \prime}$ speakers. $161 / 2 x^{1 / 2} 2^{\prime \prime}$. | $13 / 4$ | 4.47 |
| 95 DX 226 | AL6-A | For $6^{\prime \prime}$ speakers. $101 /{ }^{\prime \prime}$ ' dia. | $11 / 2$ | 4.41 |
| 95 DX 227 | AL8-A | For $8^{\prime \prime}$ speakers. $125 / 8^{\prime \prime}$ dia. | $13 / 4$ | 7.14 |
| 95 DX 228 | AL12-A | For $12^{\prime \prime}$ speakers. $163 / 4^{\prime \prime}$ dia. | $31 / 4$ | 9.00 |

AL, RS and DD baffles are available in smart new, anodized decorator colors-Gold, Copper, Pink, Blue and Black. When ordering, use the word "Special" in place of Stock No. and specify choice of color. For RS baffles, add $\$ 1.50$ per unit; for AL and DD, add $\$ 2.25$ per unit.


## NEW RECESSED CEILING OR WALL MOUNT BAFFLES

MODEL 67-8 LOUVERED BAFFLE. Similar to air diffusers in appearance. Welded construction; carefully checked for vibration and rattle. For $8^{\prime \prime}$ speakers only. O.D., 12 $2^{\prime \prime}$. Hole size required in ceiling, $101 / 4^{\prime \prime}$. Use with $95-8$ enclosure, below. Wt., $11 / 2$ lbs.
89 DX 971.5 to 19, EACH
4.29
1 to 4, EACH
4.77

MODEL 68-8 LOW-CEILING BAFFLE. Attractive modern styling. Features a brushed aluminum sound diffractor for elimination of beaming in low-ceiling installations. Satin brushed aluminum. For $8^{\prime \prime}$ speakers only. O.D., $123 / 4^{\prime \prime}$. Hole size required in ceiling, $81 / 2^{\prime \prime}$. Use with*95-8 enclosure, below. Shpg. wt., 21 bs .
89:DX 972.5 to 19, EACH . . . . $6.56 \quad 1$ to 4, EACH. . . . 7.29
SERIES 61 TRIM RING BAFFLES. Highly polished, 20 -gauge steel trim ring baffles. Offer attractive flush appearance when installed; will not buckle or "give" when bolts are driven in place. Less speaker . Hole size required in ceiling: $61-8,81 / 2^{\prime \prime}, 61-12,121 / 2^{\prime \prime}$.

| Stock No. | Model | Speaker | Enclosure | O.D. | Lbs. | 1-4, EA | 5-19, EA |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 89 DX 973 | 61-8 | $8^{\prime \prime}$ | 95-8 | $12^{3 / 4^{\prime \prime}}$ | 1 | 3.11 | 2.80 |
| 89 DX 974 | 61-12 | 12" | 95-12 | $17^{\prime \prime}$ | 1 | 4.25 | 3.82 |

## SERIES 95 PROTECTIVE ENCLOSURES

For installation in existing ceilings, enclosures are mounted through 4 holes in flange. For new construction, 4 straps allow use in any thickness of plaster. Undercoated and jute lined. Less speaker.

| Stock No. | Model | For Use Wi | O.D. | Depth | Lb | , | 5-19, EA. |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 39 DX 975 | 95-8 | 61-8, 67-8,68-8 | 97/8' | 41/4" | 7 | 5. |  |
| DX 976 | 95-12 | 61-12 | 145/8" | $7{ }^{\prime \prime}$ | 8 | 7. | 6.64 |

New DD8A Baffle

Lowell


BL Baffles

## SURFACE-MOUNTING BAFFLES

NEW DD8-A SURFACE-TYPE DIRECTIONAL SPEAKER BAFFLE. An ultramodernistic, aluminum wall baffle. Light in weight and easily installed, it's specially designed and highly recommended for use in new homes and apartments, offices with modern decorative motif, etc. (The DD8-A is also available in 5 smart, anodized decorator colors-gold, copper, pink, blue and black. See box at left below) Features a $3 / 16^{\prime \prime}$ expanded aluminum grille, over attractive, neutral plastic grille cloth backing. Interior of the baffle is completely lined with jute to prevent metallic resonance, and is steel-reinforced for added structural strength. Speaker adapter permits quick and easy speaker installation. For $8^{\prime \prime}$ speakers only. Includes mounting hardware and complete instructions. Size: $93 / 4^{\prime \prime}$ high, $133 / 4^{\prime \prime}$ wide, $53 / 8^{\prime \prime}$ deep. Shpg. wt., 4 lbs.
89 DX 970 . NET.
13.87

BL SERIES - NORMAL CEILING HEIGHT BAFFLES. BL baffles are designed to enclose and conceal the speaker without the necessity for cutting holes in the ceiling. Constructed of spun aluminum, they're ideal for use in hotels, restaurants, department stores, lounges, wired music installations or any normal height ceiling area. Provide $360^{\circ}$ music installations or any normal height ceiling area. Provide $360^{\circ}$ sound coverage-quickly and easily installed flush to the ceiling
with 4 toggle bolts. Housing has pressure-relief vents and is internally lined with $3 / 4^{\prime \prime}$ jute to eliminate resonance.

| Stock No. | Type | Description | Lbs. | NET |
| :---: | :---: | :---: | :---: | :---: |
| 95 DX 223 | BL6-A | For $6^{\prime \prime}$ speakers. $7^{1 / 4} \times 12^{1 / 4}{ }^{\prime \prime}$ dia. | $33 / 4$ | 7.6 |
| 95 DX 224 | BL8-A | For $8^{\prime \prime}$ speakers. $81 / 8 \times 143 / 4$ " dia. |  | 12. |
| 95 DZ 225 | BL12-A | For $12^{\prime \prime}$ speakers. $91 / 4 \times 183 / 8^{\prime \prime}$ dia. | $63 / 4$ | 15. |



## Argos wall \& CORNER BAffles

ARGOS BASS REFLEX CORNER BAFFLES. Handsomely styled, extremely versatile bass reflex enclosures. In models for $8^{\prime \prime}$ or $12^{\prime \prime}$ speakers. Incorporate true bass reflex design for rich, full-toned musical reproduction. Excellent for music distribution systems, extension speakers for hi-fi systems, P.A. use, etc. Simple, quick installationspeaker bolts are already installed and other necessary hardware is included. Acoustically padded. Rigidly constructed of reinforced plywood and hardboard, covered with plastic-coated fabric in simulated wood finish. Attractive plastic, matching grilles.

SLANTING BAFFLES. Designed to utilize the walls and ceiling for extending bass frequency response of any speaker. Slanting panel aims sound downward.
MODEL SCB-8. For use with $8^{\prime \prime}$ speaker. Volume, 680 cu . in. Size, HWD: $15 \times 21 \times 10^{\prime \prime}$. Shpg. wt., 5 lbs.
95 DX 580. Mahogany. NET
95 DX 581 . Blonde. EACH
7.74

MODEL SCB-12. For use with $12^{\prime \prime}$ speaker. Volume, 1240 cu. in. Size, HWD: $211 / 4 \times 21 \times 101 / 2^{\prime \prime}$. Shpg. wt., 9 lbs.
95 DU 582. Mahogany. NET
95 DU 583. Blonde. EACH
10.73

B NON-SLANTING BAFFLES. For corner, ceiling-hung, or wall installation. Mounting position may be selected to suit individual requirements.
MODEL CB-8C. For use with $8^{\prime \prime}$ speaker. Volume, 525 cu. in. Size, HWD: $14 \times 121 / 4 \times 6^{\prime \prime}$. Shpg. wt., $41 / 2$ lbs.
91 DX 546. Mahogany. NET
91 DX 547. Blonde. EACH
7.26

MODEL CB-12C. For use with $12^{\prime \prime}$ speaker. Volume, 1520 cu. in. Size, HWD: 201/4×18x9 $9^{\prime \prime}$. Shipg. wt.. 9 lbs.
91 DU 548. Mahogany. NET
91 DU 549. Blonde. EACH.

C] ARGOS DELUXE WOOD WALL BAFFLES. Feature rugged plywood construction; solid oak or walnut front frames. Excellent for all indoor installations, paging systems, etc. Easily installed-speaker bolts are already mounted and other necessary hardware is included. Attractive plastic grilles.
MODEL DWB-8. For $8^{\prime \prime}$ speaker. $101 / 2 \times 93 / 8 \times 61 / 2^{\prime \prime}$. Shpg. wt., 3 lbs. 95 DX 400. Walnut.
95 DX 401 . Limed Oak EACH
5.88

MODEL DWB-12. For $12^{\prime \prime}$ speaker. $14 \times 131 / 4 \times 9^{\prime \prime}$. Shpg. wt., 5 lbs.
95 DX 402. Walnut. NET
95 DX 403. Limed Oak. EACH
ARGOS LOW-COST WALL BAFFLES. Made of wood and hardboard; finished in durable plastic-coated fabric with wood grain finish. Attractive plastic grilles. Complete with wall-mounting bracket and speaker mounting hardware.

| Stock No. |  | Model No. | Size, HWD | $\left\|\begin{array}{c} \text { Speaker } \\ \text { Size } \end{array}\right\|$ | Wt., Lbs. | NET. |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Mahog. | Blonde |  |  |  |  |  |
| 95 D 435 | 95 D 436 | WB-4/5A | 6x6x4 ${ }^{\prime \prime}$ | 4-5" | $11 / 2$ | 2.74 |
| 95 D 437 | 95 D 438 | WB-6A | $81 / 2 \times 71 / 2 \times 5^{\prime \prime}$ | $6^{\prime \prime}$ | 2 | 3.3 |
| 95 D 439 | 95 D 440 | WB-8A | $101 / 2 \times 93 / 8 \times 61$ | $8^{\prime \prime}$ | 3 | 3.97 |
| 95 DX44 | 95 DX 442 | WB-10A | $121 / 4 \times 101 / 2 \times 73 / 4^{\prime \prime}$ | $10^{\prime \prime}$ | 4 | 4.70 |
| 95 D× 44 | 95 DX 444 | WB-12A | $141 / 4 \times 131 / 4 \times 9^{\prime \prime}$ | $12^{\prime \prime}$ | 5 | 5.44 |ECONOMY BAFFLES. For all indoor installations, paging systems, etc. Wall-mounting type. Made of strong plywood, covered with dark brown leatherette. Flocked brown screen grille. Less al mounting hardware.

$8^{\prime \prime}$ SPEAKER BAFFLE. Size, $11 \times 93 / 4 \times 6^{\prime \prime}$. Shpg. wt., 4 lbs.
93 DX 522. NET
2.78
$12^{\prime \prime}$ SPEAKER BAFFLE. Size, $163 / 4 \times 131 / 2 \times 81 / 4^{\prime \prime}$. Shpg. wt., 6 lbs.
93 D 520. NET
3.57

## Wellcor WALL \& CORNER SPEAKER BAFFLES



FINISHED WOOD WALL BAFFLES. Excellent for paging and music distribution use. Have a natural plywood exterior, attractively finished in either mahogany or blonde. Feature rugged, all-wood lock-corner construction; heavy-duty, $1 / 2^{\prime \prime}$-thick plywood sides eliminate baffle vibration during loud passages. Speaker mounting board has hardware already installed, and additional hardware is provided for quickly and easily completing installation of speaker. With acoustically tested, matching grille cloth.

|  | Stock No. | Model No. | Finish | Size, <br> HWD | Speaker Size | $\left\|\begin{array}{c} \mathbf{W}_{t} \\ \text { Lbs } \end{array}\right\|$ | $\begin{gathered} \text { NET } \\ \text { EA. } \end{gathered}$ |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 93 | D $\times 750$ | FWB-8M | Mahogany | 11×99/16 $6^{1 / 818}$ | $8{ }^{\prime \prime}$ | $31 / 2$ | 6.15 |
| 93 | Dx 776 | FWB-8B | Blonde | $11 \times 99 / 16 \times 61 / 8^{\prime \prime}$ | $8^{\prime \prime}$ | $31 / 2$ | 6.60 |
| 93 | D×751 | FWB-12M | Mahogany | 161/4×131/2x9" | $12^{\prime \prime}$ | $51 / 2$ | 8.40 |
| 93 | DX 777 | FWB-12B | Blonde | 161/4×131/2x9 ${ }^{\prime \prime}$ | $12^{\prime \prime}$ | $51 / 2$ | 9.30 |

leatherette-covered wall baffles. Feature same excellent, lockcorner construction as baffles listed above. Covered with heavily embossed. scuff-resistant pyroxylin-coated leatherette fabric. Rigid $1 / 2^{\prime \prime}$ plywood sides prevent speaker vibration or rattle. Speaker mounting bolts installed; includes speaker installation hardware.

|  | Stock No. | Model No. | Finish | Size, HWD | Speaker Size | Wt. Lbs. | $\begin{aligned} & \mathrm{NET} \\ & \mathrm{EA} . \end{aligned}$ |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 93 | D $\times 778$ | LCWB-8M | Mahogany | $11 \times 99 / 16 \times 61 / 8^{\prime \prime}$ | $8{ }^{\prime \prime}$ | $31 / 2$ | 4.08 |
| 93 | DX 752 | LCWB-8B | Blonde | $11 \times 99 / 1{ }^{1} \times 61 / 8^{\prime \prime}$ | $8^{\prime \prime}$ | 3112 | 4.08 |
| 93 | DX 779 | LCWB-12M | Mahogany | 161/4x131/2x9" | $12^{\prime \prime}$ | $51 / 2$ | 5.61 |
| 93 | D× 753 | LCWB-12B | Blonde | $\mid 161 / 4 \times 131 / 2 \times 9^{\prime \prime}$ | 12" | 11/2 | 5.61 |

FINISHED WOOD BASS REFLEX CORNER BAFFLES. New bass-reflex corner baffles designed for easy mounting and excellent sound reproduction. Have bass reflex ports and closed back and top. Lined with heavy fiberglas acoustic padding to prevent vibration. Tilt-downward design directs sound toward listeners with maximum efficiency. Mounting hardware is already installed on speaker board; additional hardware also provided. Baffle exteriors of natural plywood in mahogany or blonde finish; matching grille cloth.

|  | Stock No. | Model No. | Finish | Size, HWD | Speaker Size | Wt. Lbs. | NET EA. |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 91 | DX 800 | FWCB-8M | Mahogany | 18x16x11" | $8{ }^{\prime \prime}$ |  | 11.70 |
| 91 | DX 802 | FWCB-8B | Blonde | 18x16x11" | $8{ }^{\prime \prime}$ |  | 13.20 |
| 91 | DU801 | FWCB-12M | Mahogany | $22 \times 22^{3} 8 \times 16^{\prime \prime}$ | 12" | 12 | 16.95 |
| 91 | DU803 | FWCB-12B | Blonde | [22x223/8×16" | 12" | 12 | 18.60 |

LEATHERETTE-COVERED BASS REFLEX CORNER BAFFLES. Employ the same bass reflex design and rigid construction as the corner baffles listed above, but are covered in pyroxylin-coated, mahogany or blonde leatherette. Speaker mounting bolts are already installed; additional hardware is included. With acoustic insulation, etc.


## Quam Heavy-Duty P.A. Speakers

These heavy-duty permanent magnet speakers are specifically designed to deliver highly dependable service in public address installations. Offer high power handling capacity, excellent tonal quality, and rugged construction throughout. Complete dust-proofing and rigid welding assure permanent alignment of integral parts. Provide excellent frequency response characteristics for very smooth, clean reproduction of voice and music.

Quam speakers feature two exclusive engineering developments. One is the U-shaped field coil pot feature which provides an unbroken flux path of sufficient cross section to carry the full energy of the magnetic field. The second feature is Quam's Adjust-A-Cone suspension consisting of a clamping ring securely fastening the spider to the basket by means of two machine screws rather than cement, as in other speakers. This assures precision centering of the voice coil. Also use high-quality Alnico V magnets. Pot material is selected for low carbon content and high magnetic properties Basket in durable baked aluminum enamel. With bracket for mounting of matching transformer. All have 6-8 ohm voice coils.

|  | Stock No. | Mfr's Type | Size | Max. <br> Watts | Magnet Wt., Oz. | Wt., Lbs. | $\begin{aligned} & \text { NET } \\ & \text { EACH } \end{aligned}$ |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 81 | D 061 | 8A21PA | $8^{\prime \prime}$ | 8 | 2.15 | $11 / 2$ | 4.82 |
| 81 | D 062 | 8A31PA | $8^{\prime \prime}$ | 10 | 3.16 | $21 / 4$ | 5.41 |
| 81 | D 335 | 8 A 4 PA . | $8^{\prime \prime}$ | 12 | 4.64 | $23 / 4$ | 6.00 |
| 81 | D 336 | 8A6PA | $8^{\prime \prime}$ | 12 | 6.8 | $31 / 4$ | 7.11 |
| 81 | D 063 | 10A31PA | $10^{\prime \prime}$ | 12 | 3.16 | $23 / 4$ | 6.32 |
| 81 | D 394 | 10A4PA | $10^{\prime \prime}$ | 14 | 4.64 | $31 / 4$ | 6.88 |
| 81 | D 395 | 10A6PA | $10^{\prime \prime}$ | 14 | 6.8 | $31 / 2$ | 8.00 |
| 81 | D 064 | 10A10PA | $10^{\prime \prime}$ | 20 | 10.0 | $31 / 2$ | 10.58 |
| 81 | D× 065 | 12A31PA | $12^{\prime \prime}$ | 12 | 3.16 | 33/4 | 6.82 |
| 81 | D×337 | 12A4PA | $12^{\prime \prime}$ | 15 | 4.64 | 4 | 7.44 |
| 81 | D $\times 338$ | 12A6PA | 12" | 15 | 6.8 | $41 / 2$ | 8.53 |
| 81 | D× 340 | 12A10PA | $12^{\prime \prime}$ | 25 | 10.0 | $43 / 4$ | 11.17 |

## Bogen VP-17X Transcription Player

Portable, variable speed transcription player. Has built-in 10 -watt amplifier, plus microphone input with separate gain control-makes an excellent portable P.A. system. An extremely versatile combina tion of player, amplifier, and speaker in a portable unit. Useful for instruction, calisthenics, etc. Has outstanding Bogen B50-16 turn table-features continuously variable speed from 16 to 86 rpm Plays all records up to $16^{\prime \prime}$ dia., with splendid sound quality and minimum record wear. Speed adjustment is accomplished through a precision cone drive. regulated by a single lever with lock-in posi tions for accurate, instantaneous selection of conventional speeds ( $78,45,331 / 3$ and $162 / 3 \mathrm{rpm}$ )
Incorporates heavy-duty 4-pole motor, weighted ( $31 / 4 \mathrm{lbs}$.) and balanced turntable: reduces wow, hum and rumble to negligible values-wow to under $0.5 \%$ ! Die-cast pick-up arm has ball-bearing mount and "Feather-Drop" action to protect record and stylus; equipped with G.E. variable reluctance cartridge wit'l dual sapphire styli. With built-in compensated preamplifier for cartridge.
$12^{\prime \prime}$ heavy-duty Alnico $V$ speaker is mounted in removable lid of carrying case; has 25 ft . of cable. Provides sufficient coverage for moderate-size gymnasium or auditorium-has 2 jacks for external speakers. Separate bass and treble controls are provided, as well as an effective scratch and noise filter. Attractive, compact carry ing case is constructed of $3 / 8^{\prime \prime}$ plywood, and is adequately shock mounted. Expanded metal speaker grille; covered in two-tone luggage-type fabric.

Output: 10 watts with less than $3 \%$ harmonic distortion. Response Mike, $\pm 11 / 2 \mathrm{db}, 50-10,000 \mathrm{cps}$; Phono and Radio, $\pm 11 / 2 \mathrm{db}, 40$ $12,000 \mathrm{cps}$. Hum: 60 db below 10 watts. Tone Control: $\pm 15 \mathrm{db}$ at $100 \mathrm{cps} ;-23 \mathrm{db}$ at $10,000 \mathrm{cps}$. Controls: Mike gain, phono gain, treble, bass, off-on. Size: $125 / 8 \times 17 \times 161 / 4^{\prime \prime}$. For $110-120$ v., $50-60$ cycle AC. Shpg. wt., 40 lbs .
95 RU 959. List. $\$ 181.90$. NET
136.43
knight SPEAKERS \& BAFFLES


8-OHM SPEAKER-BAFFLE COMBINATION. Ready-to-use, speakerbaffle combination for extending sound coverage of existing sound systems. For all indoor installations including P.A. systems in schools, industrial plants, large offices, etc. Pre-wired volume control for regulating sound level at speaker. Attractive. sloping-front baffle is made of $1 / 4^{\prime \prime}$ and $1 / 2^{\prime \prime}$ veneered woods. Rabbeted construction. Built-in, heavy-duty $8^{\prime \prime}$ speaker with 4.64 oz . Alnico $V$ magnet. Impedance, 8 ohms. Capacity, 10 watts. Hanging the baffle is as easy as hanging a picture-has slots at rear for screws or nails. Size, $11 \times 99 / 16 \times 61 / 8^{\prime \prime}$. Shpg. wt., 6 lbs.
93 D 704. NET
13.95

AS ABOVE, WITH $12^{\prime \prime}$ SPEAKER. Size, $161 / 4 \times 131 / 2 \times 9^{\prime \prime}$. Shpg. wt., 11 lbs . 91 DX 850. NET
16.70
70.7-VOLT SPEAKER-BAFFLE COMBINATION. A high-quality speaker-baffle combination similar to the deluxe combination above, but with built-in transformer for use with 70.7 -volt speaker distribution systems. For building an efficient sound system, or for increasing the versatility of a present system at low cost. Simply determine wattage rating need for each room-add ratings together -choose an amplifier with a rating which is at least equal to the total rating of the speaker load. $8^{\prime \prime}$ speaker; pre-wired volume control for individual sound level adjustment. Screw-type terminals are marked for $10,5,2.5,1.25$ and 0.62 watt output. Wt., 7 lbs. 93 D 703. NET
16.95

AS ABOVE, WITH $12^{\prime \prime}$ SPEAKER. Size, $161 / 4 \times 131 / 2 x 9^{\prime \prime}$. Shpg. wt., 12 lbs . 91 DX 851 . NET

PRE-WIRED $8^{\prime \prime}$ SPEAKER \& VOLUME CONTPOL ASSEMBIY Same WIRED $8^{\prime \prime}$ SPEAKER \& VOLUME CONTROL ASSEMBLY. Same baffle of your choice. Includes heavy-duty $8^{\prime \prime}$ speaker for efficient reproduction of voice and music; pre-wired volume control on $18^{\prime \prime}$ cable for controlling sound level at speaker. No soldering-just attach speaker line to screw terminals. Shpg. wt., 3 lbs.
92 D 398. NET
6.65

PRE-WIRED $70.7-$ VOLT $8^{\prime \prime}$ SPEAKER \& VOLUME CONTROL ASSEM
BLY. Same components as used in 93 D 703 (at left), but for installation in baffle of your choice. Includes $8^{\prime \prime}$ speaker with built-in transformer for use with 70.7-volt speaker distribution systems; prewired volume control on $18^{\prime \prime}$ cable for individual sound level adjustment. No soldering-just attach speaker line to screw terminal (marked for 10, 5, 2.5, 1.25 and 0.62 -watt output). Wt., 4 lbs.
92 D 399. NET
8.65
P.A. SPEAKER-AMPLIFIER CARRYING CASES. Ruggedly-built combination speaker-amplifier cases. Expressly designed for Knight 8, 16 or 32 -watt amplifiers. Interiors have cable windup brackets and pocket for mike. Attractive leatherette covering with contrasting grille. C SMALL CASE. For system using Knight 8 -watt amplifier and one $8^{\prime \prime}$ speaker. Brown with light green grille. Molded plastic handle HWD: $16 \times 12 \times 51 / 4^{\prime \prime}$. Shpg. wt., 9 lbs.
93 DX 768 . NET
II. 95

D LARGE CASE. For system using Knight 16 or 32 -watt amplifier
and two $12^{\prime \prime}$ speakers. Clips for mike stand. Aqua and ivory Leather handle. HWD: $243 / 4 \times 181 / 4 \times 111 / 4^{\prime \prime}$. Shpg. wt., 20 lbs. 93 DU 767. NET


## MAXIMUM VERSATILITY-FOR ALL INTERCOM NEEDS

- Only Master Stations Require AC Power
- Masters Can Call Any Other Master or Sub
- Subs Can Call Master Stations
- Extra-Power Units Available for Noisy Areas
- Reach 40 Stations With Only 12 Pushbuttons
- "Private" or "Non-Private" Wiring of Subs
- Extra-Power Masters Are Available for Paging
- Some Models Feature Single-Button Paging


## "Chief" Universal Master Stations

[A] "Chief" Master stations can be used in a wide variety of combinations: in a system composed of all Master stations; one Master and one or more Sub-stations; or in a system employing several Masters intermixed with Sub-stations. Systems can be made up having a capacity of $6,12,20$, or 30 stations (up to $60-$ station Masters available on special order). Masters can talk with any other Masters, as well as with Sub-stations. Sub-stations can answer all Masters, but no other Sub-stations. Only Master stations require connection to electrical outlets. Sub-stations can be wired for "private" or "non-private" operation-any Sub can be "nonprivate" to one or more Master stations, and "private" to others. Master stations include pushbutton selector, Push-to-Talk bar, illuminated volume control knob, and junction box with 6 -ft. cable. Handsome walnut or *executive gray bakelite cabinets, $7 \times 12 \times 9$ ". U.L. Approved. For $110-120$ v., $50-60$ cycle AC or DC.

|  | Stock No. | Mfr's Type | Capacity | Shpg. Wt. | List | $\begin{aligned} & \text { NET } \\ & \text { EACH } \end{aligned}$ |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 95 | RX885 | C-4906 | 6 stations | 13 lbs. | \$99.00 | 58.20 |
| 95 | RX 887 | C-4912 | 12 stations | 14 lbs. | 119.00 | 69.95 |
| 93 | RX 435 | *C-4912G | 12 stations | 14 lbs. | 123.50 | 72.65 |
| 95 | RX 888 | C-4920 | 20 stations | 14 lbs. | 140.00 | 82.30 |
| 93 | RX 436 | *C-4920G | 20 stations | 14 lbs. | 144.50 | 85.00 |
| 95 | RU 889 | C-4930 | 30 stations | 16 lbs. | 161.00 | 94.65 |

## "Chief" Extra-Power Master Stations

Use "Redi-Power" Masters in any "Chief" system where extra power is needed to overcome noise. Built-in amplifier provides 20 watts which may be divided among stations, or concentrated on 1 station. Just press the Redi-Power button. For high-power paging use C-20 or HP-3 Sub-station (right). For AC only ; other features same as Masters, above. Walnut-finish bakelite cabinets.
12-STATION REDI-POWER MASTER. Type C-RP-5912. 17 lbs . 95 RU 882. List, $\$ 179.00$. NET PER STATION.
20-STATION REDI-PO WER MASTER. Type C-RP-5920. 17 lbs . 95 RU 883. List, $\$ 200.00$. NET PER STATION.
. 17.50
REDI-POWER MASTER WITH SINGLE-BUTTON PAGING. Type C-RP5911. "11-station capacity. To page pre-selected stations, merely press "Page" button. Has all Redi-Power features. 18 lbs.
95 RU 892. List, $\$ 199.00$. NET PER STATION.

## "Chief" Sub Stations

[B] "Chief" Sub stations are for use with any "Chief" Master B station and work with models listed at left. Subs can answer any Master in the system (whether connected directly to them or not), but cannot talk to other Sub-stations. Subs can originate calls to 1,2 or 6 Masters, depending upon the capacity of the Sub in use. All "Chief"' Subs may be connected non-privately to permit persons at Subs to answer any Master from a distance, without operating controls; or they can be connected privately, to require operation of controls; or they can be connected privately, to requisten electrical outlets and consume no power.
In walnut-finished bakelite or brown-finished metal cabinets (except Subs with letter $G$ in type no.-have executive gray bakelite cabinet). Size: $61 / 4 \times 8 \times 71 / 2^{\prime \prime}$, except push-button Model C- 46 which is $7 \times 12 \times 91 / 4^{\prime \prime}$. $\dagger$ Number of Masters, Sub-stations can call.

| Stock No. | Type | Masters $\dagger$ | Cabinet | W+. | List | NET |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 95 RX 886 | C-41 | one | bakelite | 5 lbs . | \$22.95 | 13.50 |
| 93 RX 440 | C-41G | one | bakelite | 5 lbs. | 25.95 | 15.30 |
| 95 R 863 | C-41 M | one | metal | 3 lbs . | 22.95 | 13.50 |
| 95 RX 890 | C-42 |  | bakelite | 5 lbs . | 29.95 |  |
| 93 RX 441 | C-42G | two | bakelite | 5 lbs. | 32.95 | 19.30 |
| 95 R 864 | C-42M | two | metal | 3 lbs . | 29.95 | 17.50 |
| 95 RX8911 | C-46 | six | bakelite | 9 lbs. | 73.00 | 43.00 |

## High-Power Subs and Originafion Switches

HIGH-POWER SUB-STATIONS. Can answer Master. Originate calls when used with switches, below.
C] HP-3. INDOOR TYPE. $8^{\prime \prime}$ speaker in brown, wrinkle-finish metal baffle. 5 watts. Size, $12 \times 12 \times 8^{\prime \prime}$. Shpg. wt., 9 lbs.
95 RX 849. List, \$28.00. NET.
16.50
(D) "-20. TRUMPET TYPE. 9 ", weather-proof re-entrant horn for
(D) "Chief" and Master-Selective systems. 15 watts. 5 lbs .

95 RX 878. List, \$44.95. NET.
26.50

E ORIGINATION SWITCHES. Wall mounted type. Ideal for use with
E C-20 and HP-3. Type S-100 is for Master-Selective system;
S-101 and S-102 are for "Chief" system. Shpg. wt., 2 lbs.
95 R 845. S-100. List, $\$ 6.00$. NET........ 30
95 R 845. S-100. List, \$6.00. NET.
3.50

95 R $841 . \mathrm{S}-101$. Calls 1 Master. List, $\$ 6.00$. NET.
6.50

## CABLE REQUIREMENTS AND CABLE FOR "CHIEF" SYSTEMS

For connecting Master station to Master station, measure from the first Master to the second Master only, from the second Master to the third Master only, etc.; then add up to determine length. If your "Chief" system is using 6 -station Masters, Type 6212 cable is required for hook-up. Type 6224 cable is required for all other "Chief" Masters-use single length of cable between Masters-use single length of cable between
6 -station or 12-station Masters; double lengths of cable between 20 -station Masters; triple lengths of cable between 30 station Masters.

Use single length of Type 6204 cable for connecting C-41, С-42, С-46, HP-3 and C-20 Sub-stations where origination of call is desired. Measure from Sub to each Master to which Sub-station originates calls. Where origination feature is not required, use single length of Type 6902 cable for connecting C-20 or HP-3 high-power Substations to Master station. Note: All 4 types of cables: 6212, 6224, 6204 and 6902, are of cables: $6212,6224,6204$ and 692 , are suitable for indoor or outdoor applications,
and are specially designed for use with Talk-A-Phone equipment.

TALK-A-PHONE INTERCOM CABLE. Designed for minimum noise pickup. Conductors: Type 6212,12 conductors ( 6 twisted pairs) Type 624 conductors ( 12 twisted pairs); 6204 , 4 conductors ( 2 twisted pairs); 6902, 2 conductors (1 twisted pair).

| Stock No. | $\begin{aligned} & \text { Mfr's } \\ & \text { Type } \\ & \hline \end{aligned}$ | $\begin{aligned} & \text { Lbs., } \\ & 100 \mathrm{Ft} . \end{aligned}$ | $\begin{aligned} & \text { PER } \\ & \text { FOOT } \end{aligned}$ |
| :---: | :---: | :---: | :---: |
| 49 W 606 | 6212 | 5 | 146 |
| 49 W 608 | 6224 | 9 | $28 ¢$ |
| 49 W 607 | 6204 | $21 / 2$ | 64 |
| 49 W 613 | 6902 | 2 | 24 |



Master Selective System all calls are to or from A CENTRAL MASTER

- Subs Can Originate Calls to Master Station
- Use Standard Series for Stores and Offices
- Use High-Output Series for Shops, High-Noise Areas
Low-cost communication between a single Master and up to 10 Subs. Only one Master can be used in this system. Master can select a single Sub or call all Subs simultaneously. Any Sub can call the Master, but cannot talk to other Subs. System cuts out sounds from Subs when not in use, yet Subs can still call Master.
Standard Masters provide adequate volume for systems in average locations. For noisy locations, select High-Output Masters and Subs. Walnut bakelite cabinets, $81 / 4 \times 61 / 4 \times 71 / 2^{\prime \prime}$, except LR-3M and AR-3M Subs in brown metal cabinets, $7 \times 53 / 4 \times 31 / 2^{\prime \prime}$. Shpg. wts.: Masters, 7 lbs.; bakelite Subs, 5 lbs.; metal Subs, 3 lbs.
STANDARD-OUTPUT SYSTEMS. For $\mathbf{1 1 0 - 1 2 0}$ volt, AC or DC.
MODEL LM-5. Master for up to 5 Subs.
95 RX 870. List, \$49.95. NET..... 29.35 MODEL LM-10. Master for up to 10 Subs. 95 RX 869. List, $\$ 65.00$. NET. . . . . 38.20 MODEL LR-3. Sub for LM-5, LM-10.
95 RX 871 . List, $\$ 16.95$. NET..
9.95 MODEL LR-3M. Metal Sub for LM-5, LM-10. 95 R 846 . List, $\$ 16.95$. NET.
.9 .95
HIGH-OUTPUT SYSTEMS. For $110-120$ volt, 50-60 cycle AC only.
MODEL AC-5406. Master for up to 5 Subs. 95 RX 807. List $\$ 65.00$. NET....... 38.20 MODEL AC-5411. Master for up to 10 Subs. 95 RX 808. List, \$79.95. NET. . . . . 47.00 MODEL AR-3. Sub for AC-5406 or AC-5411. 95 RX 838. List, \$17.95. NET...... 10.50 MODEL AR-3M. Metal Sub for AC-5406, AC-5411.
95 R 839. List, \$17.95. NET. . . . . . . 10.50


Master Selective System

## Super-Selective System EVERY STATION CAN CALL EVERY OTHER STATION IN THE SYSTEM



- Consists Entirely of MastersEach Requiring AC Outlet
- Several Conversations Can Be Carried On At One Time
- Absolute Privacy-Conversations Cannot Be Overheard
A versatile intercom system, consisting entirely of Master stations. Allow separate, 2-way conversations to be carried on simultaneously without crosstalk. System can be started with as few as 2 Masters and can be expanded up to 10 Masters. No Subs are used in a Super-Selective System. Any Master may talk to any other Master with absolute privacy. Up to 2000 ft . of cable may be used between stations. Walnut makelite cabinets, $81 / 4 \times 61 / 4 \times 71 / 2^{\prime \prime}$. For 110 120 v., AC or DC. Shpg. wt., 7 lbs. MODEL LS-5. For up to 5 stations. 95 RX 875 . List, $\$ 49.95$. NET....
29.35

MODEL LS-10. For up to 10 stations.
95 RX 874. List $\$ 65.00$. NET...
38.20

## TALK-A-PHONE CABLE

For Master Solective systems, use Type 5303 and measure from Master to each Sub, then total. For Super Selective systems, use Type 5506 Lor LS-5 Masters and Type 9911 for LS-10 Masters. Measure from ist master to For Combination systems, use etc. For Combination systems, use Type 6224 for CL-10 Masters. Measure from 1st Master to 2nd only, 2nd to 3 rd only, etc. For Subs, use Type 6902 and measure from each Sub to nearest M aster only.

| Stock No. | $\begin{aligned} & \text { Mfr's } \\ & \text { Type. } \end{aligned}$ | $1 \begin{gathered} \text { Lbs. } \\ 100 \text { Ft. } \end{gathered}$ | $\begin{aligned} & \text { PER } \\ & \text { FOOT } \end{aligned}$ |
| :---: | :---: | :---: | :---: |
| 49 W 604 | 5303 | 3 | 34 |
| 49 W 606 | 6212 | , | 144 |
| 49 W 608 | 6224 | 12 | 284 |
| 49 W 613 | 6902 | 3/4 |  |
| 49 W 605 49 | ${ }_{9911}^{5506}$ | 12 | 71/2 |

Combination System MASTERS CAN CALL ANY MASTER OR SUB STATION IN THE SYSTEM


- Subs Can Receive Calls, But Cannot Originate Calls
- Persons at Masters or Subs Can Answer From 40 Ft. Away
- Masters Have "Private" or "Non-Private" Feature
An economical intercom system that allows a high degree of flexibility. Masters and Sub-stations can be intermixed in any combination to provide most usefulness. Persons at Masters and Subs can answer calls 40 feet from unit. Masters may talk to each other and to each Sub in the system selectively; or one or more Subs can be exclusive to only one Master. Subs cannot originate calls. Switch allows Masters 'private', feature so that other Masters cannot listen in (but still receive and originate calls); or "non-private" feature. Sub-stations consume no current; Masters operate on 110 120 volts, AC or DC.
COMBINATION SYSTEM MASTERS. Choice of either 5 -station or 10 -station models. Masters have rotary switch for selecting stations, volume control, and Talk-Listen tions, switch. Use a Master to originate calls to
any Master or Sub in the system. In walnut bakelite cabinets, $81 / 4 \times 61 / 4 \times 71 / 2^{\prime \prime}$. U.L. Approved. Shpg. wts.: Type CL-5, $\dot{7}$ lbs.; Type CL-10, $81 / 2 \mathrm{lbs}$.
MODEL CL-5 MASTER. For up to 5 stations. 95 RX 842. List, \$62.00. NET....... 36.40 MODEL CL-10 MASTER. For up to 10 stations. 95 RX 843. List, $\$ 83.00$. NET. . . . . 48.80
COMBINATION SYSTEM SUBS. For use only with CL-5 and CL-10 Masters. Model LR-2 is walnut bakelite; Model LR-2M is brown, wrinkle-finish metal. Sizes: LR-2, $81 / 4 \times 61 / 4$ x71/2"; LR-2M, $7 \times 53 / 4 \times 31 / 2^{\prime \prime}$.
MODEL LR-2 SUB. Shpg. wt., 5 lbs. 95 RX 844. List, $\$ 15.95$. NET.
MODEL LR-2M SUB. Shpg. wt., 3 lbs.
95 R 847. List, $\$ 15.95$. NET.


## OPTIONAL FEATURES FOR TALK-A-PHONE SYSTEMS

PRIVACY EARPHONES. For all stations listed on this and opposite page. When lifted from rest, cuts out built-in speaker. In brown only. Add $\$ 13.50$ per station.
CRADLE PHONE. For Masters and bakelitecase Subs, except CL-5, CL-10 and radiointercom units listed on page 332. Add $\$ 29.35$ per station when ordering.
BUSY SIGNAL. For "Chief" Masters. Gives visual indication that another Master you are calling (similarly equipped), is "busy". Add $\$ 7.00$ per station.

EXECUTIVE GRAY FINISH. All bakelite Talk-
A-Phone units, including Master and Sub stations, are available in distinctive, executive gray finish. This attractive color is highly suitable for any office decor. Add $\$ 2.70$ to the price of each "Chief" Master station; add $\$ 2.70$ to the price of each Model C-46 Sub station; add $\$ 1.80$ to the price of any other bakelite Talk-A-Phone unit. When ordering gray Talk-A-Phone stations not listed on these pages, indicate "Special" in place of Stock No., and allow 10 days for delivery.

Cradle Phone


Privacy Earphone

(2t

## TALK-A-PHONE TRANSISTORIZED HOME INTERCOM \& MUSIC SYSTEM

"HII be right there."


## Master and Staff Stations

Deluxe, all-transistorized home radio-intercom. Accommodates up to eight stations in a system. Each system requires one Central Master, and either one 4 F 6 H 9 -volt battery or one HI-PS AC power supply (listed at right). Any Master or Staff can originate calls to any other station. Masters or Staffs also can monitor any Staff or Sub-Station which is switched to "non-private" operation-a valuable feature for "listening in" on the nursery or sick room. Central Master, any Staff and any Indoor Sub-Station can listen to standard broadcast (AM) radio programs when Central Master Station is equipped with built-in radio (HI-9R listed below).

All Master and Staff stations have $151 / 4 \times 51 / 4^{\prime \prime}$ panel handsomely finished in gold and satin-silver-plus plaster ring for in-wall mounting; may be placed on table-top or shelf, or hung from any overhead cabinet, if desired, by using HI-SM housing assembly.

MODEL HI-9R CENTRAL MASTER STATION. Transistorized built-in AM radio-HI-8 or HI-2 can listen in. Less battery (see 4 F 6 H listed at right). Shpg. wt., 8 lbs.
93 RX 242. List, \$154.00. NET
89.50

MODEL HI-9 CENTRAL MASTER STATION. As above, less radio; has 3 audio stages with push-pull output. 7 lbs.
93 RX 24 1. List, \$99.50. NET.
58.00

MODEL HI-8 STAFF STATION. Has switch for "private" or "non-private" operation. Shpg. wt., 7 lbs.
93 RX 244. List, \$54.00. NET.
31.50


H1-2


Hil
$H 1.9 R$
SM with H1-SM

## Sub-Stations and System Accessories

Indoor and Outdoor Sub-Stations can receive calls from and reply to any Master or Staff, but cannot originate calls. Indoor Subs can switch to "private" or "non-private." Outdoor Subs are "nonprivate"' only; have push-button for connection to home chimes or buzzer, plus illuminated name-plate. Both types of Subs require 2" square $x 2^{\prime \prime}$ deep opening for in-wall mounting. Attractively finished in polished gold and satin silver.

| No. | Type | D | Size | Wt. | ist | NET |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 93 R 245 | HI-1 | 0 | 5 |  | 50 | 15.95 |
|  | HI-2 | Indoor Sub | $55 / 8 \times 35 / 8{ }^{\prime \prime}$ | $11 / 2 \mathrm{lbs}$. | 27.50 | 15.95 |
| R | HI-SM | Housing Assembly | $6 \times 151 / 2 \times 4^{\prime \prime}$ | $21 / 2 \mathrm{lbs}$. | 19.00 | 11.00 |
| R | HI-JB | Junction Box | $13 / 4 \times 83 / 4 \times 83$ | 1 lb . | 7.00 | 4.00 |
| 93 R 249 | PS | AC Power Sup |  | lbs. | 27.50 | 5. |
| 53 J 033 |  | a Burgess | $81 / 2 \times 41 / 2$ | lbs. | 7.10 | 4 |

CABLE REQUIREMENTS. HI-JB junction box not required. Cable for Masters and Staffs: use Type 6224 from first unit to second, second to third, third to fourth, etc. Cable for Sub-Stations: use Type 6206 for Indoor Subs to nearest Master or Staff; Type 6202 for Outdoor Subs to nearest Master or Staff. Cable for Battery or Power Supply: use Type 6202 to Central Master Station. If use of junction box is desired, measure from each station to HI-JB.
49W 608. Type 6224 Cable. Wt., per $100^{\prime}, 12 \mathrm{lbs}$. PER FT. 49W 621. Type 6202 Cable. Wt., per $100^{\prime}, 4 \mathrm{lbs}$. PER FT..

28c 49W 622. Type 6206 Cable. Wt., per $100^{\prime}, 3$ lbs. PER FT..
$31 / 2 c$ $81 / 2 \mathrm{c}$


TALK-A-PHONE Wireless Intercom Systems
NO INSTALLATION REQUIRED. Wireless intercoms are remarkably versatile and exceptionally easy to use just plug them into the wall outlet like a radio-and you're ready to talk and listen. Change locations whenever you wish. No wiring between stawhenever you wish. No wiring between sta-
tions-the power line itself serves as the transmitting cable. The only requirement is that all stations in the system receive power from the same electric-company line. U.L. Approved. For operation from 110-120 volts, AC or DC.
NON-SELECTIVE SYSTEMS. An economical choice if communication privacy is not required. All stations can call any other sta-tion-every station hears all messages. Feature "Sonic Gate" circuit to silence random noises and "Uni-Trans" switch-lock to permit continuous transmission. Bakelite cabinets, $71 / 2 \times 81 / 4 \times 61 / 4^{\prime \prime}$.

TWO STATION SYSTEMS. Shpg. wt., 14 lbs. | Stock No. | Type | Color | List | PER PAIR |
| ---: | :---: | :---: | :---: | :---: |
| 95 RX 821 | LC-33 | Walnut | $\$ 120.00$ | $\mathbf{6 9 . 9 5}$ |
| 95 Rx 822 | LC-33G | Gray | 126.00 | 73.55 |

ADDITIONAL STATIONS. Shpg. wt., 7 lbs.

| Stock No. | Type | Color | List | NET EA. |
| :---: | :---: | :---: | :---: | :---: |
| 95 R× 823 | LC-17 | Walnut | $\$ 60.00$ | 35.00 |
| 95 R×824 | LC-17G | Gray | 63.00 | 36.80 |

SELECTIVE SYSTEMS. For up to 6 channelsor any number of stations can be used by sharing channels. Auxiliary stations operate on 1 fixed channel only (cannot originate calls to master; can call another auxiliary on same channel.

6-CHANNEL MASTERS. $7 \times 12 \times 9^{\prime \prime} .121 / 2 \mathrm{lbs}$.

| Stock No. | Type | Color | List | EACH |
| :---: | :---: | :---: | :---: | :---: |
| 95 RX 826 | LCM-8806 | Walnut | $\$ 122.50$ | 72.00 |
| 95 RX 827 | LCM-8806 | Gray | 127.00 | 74.70 |

SINGLE-CHANNEL AUXILIARIES. Bakelite cabinets, $71 / 2 \times 81 / 2 \times 61 / 4^{\prime \prime}$. Shpg. wt., 7 lbs .

| Stock No. | Type | Color | Channel |
| :---: | :---: | :---: | :---: |
| 95 RX 828 | LCS-801 | Walnut | 1 |
| 95 RX 829 | LCS-802 | Walnut | 2 |
| 95 RX 831 | LCS-803 | Walnut | 3 |
| 95 RX 832 | LCS-804 | Walnut | 4 |
| 95 RX 833 | LCS-805 | Wainut | 5 |
| 95 RX 834 | LCS-806 | Walnut | 6 |

List, \$66.00. NET PER STATION.
38.80



## TALK-A-PHONE <br> Low-Cost Intercom

DELUXE 2-STATION SYSTEMS. Top-quality intercom systems at exceptionally low cost. Presented in smartly styled matching cabinets, sturdily made of durable molded bakelite. Available in attractive walnut or light gray finish.

Provides voice communication between any two points in the home, farm, professional office, store, or other locations. Consists of one Master unit, a Substation, and fifty feet of cable. Up to 2000 feet of cable can be used. When connected "privately" the Master unit cannot listen in on the Substation. Either station may originate calls. When connected "non-privately" the Master staconnected non-privately the Master sta-
tion can listen in on the Substation. Master unit has a volume control. For operation from 110-120 volt AC-DC. U.L. Approved. Size of cabinets, $81 / 4 \times 61 / 4 \times 71 / 2^{\prime \prime}$. Shpg. wt., for the 2 -station system, 11 lbs.

LC-2. 2-STATION SYSTEM. Walnut 95 RX 840 . List, $\$ 51.00$. NET. .
29.95

LC-2G. 2-STATION SYSTEM. Gray.
95 RX 857. List, $\$ 57.00$. NET.
TYPE 5303. Extra 3 -conductor cable. 49W 604. Wt., 100', 4 lbs. Per Ft.

## "MUSIC MONITOR" RADIO-INTERCOM

- Save Steps by Instantly Conversing from Room to Room
- Be Safe by Answering the Doorbell from Master Station
- Enjoy AM Radio Broadcasts While Doing Household Jobs
- "Listen-In" to Nursery from Any Room in the House
- Easy to Install-Requires No Soldering or Conduit
- Economical to Own and Operate-Low Current Drain

Combined radio-intercom system for builtin installation. Provides radio reception for up to six rooms and doubles as an extremely flexible home intercom system. Includes a central Master (one required for system) and up to five Subs (indoor or outdoor types). Flush-mounts in wall for a neat 'customized'" installation. Handsome, antique gold finish blends well with the decor of any surroundings.

It's easy to install a "Music Monitor" intercom system. Detailed instructions describe each step. To further simplify installation, the use of conduit is eliminated; also, no soldering is required.
MASTER STATION. Offers choice of 4 functions: Radio, distributes program to all desired Subs; Radio-Listen, allows monitoring any station by Master or Subs, while still enjoying radio; Listen, for monitoring without radio on; Talk, to allow Master to talk to selected Subs. Only Master is connected to power line-distributes audio power to Subs via low-voltage cable.
SUB-STATIONS. Indoor Subs can monitor or talk to each other, by arrangement with Master. Can disconnect themselves from system for privacy. Outdoor subs, for entrance or patio, can be monitored by any indoor station and can reply when called. Model F3A outdoor sub has moisture-proof design to minimize effects of weather.

MODEL R16 MASTER STATION. Includes complete superhet radio for enjoyable AM broadcast reception. Controls: Tuning, Radio-Volume, Intercom Volume, Function Selector. Has six station-selector switches. Has a heavy-duty $31 / 2^{\prime \prime}$ PM speaker for natural sound reproduction. Frequency range of radio, $530-1650 \mathrm{kc}$. Tubes include: $12 \mathrm{BE} 6,12 \mathrm{BA} 6,12 \mathrm{AV} 6,12 \mathrm{AU6}, 50 \mathrm{C} 5$; 35 W4 rectifier. Overall size, $43 / 4 \times 151 / 2 \times 33 / 4^{\prime \prime}$. For operation from 110-120 volts, 60 cycle AC. Shpg. wt., $81 / 2 \mathrm{lbs}$.
95 RX 955. List, \$79.95. NET
59.95

MODEL F2 INDOOR SUB. With Function Selector (Monitor, Normal, Call) and Privacy Switch. $31 / 2^{\prime \prime}$ heavy-duty speaker delivers clear sound. $43 / 4 \times 91 / 2 \times 21 / 2^{\prime \prime}$ deep. Needs no power. Shpg. wt., $21 / 2$ lbs.
95 R 956 . List, $\$ 11.95$. NET
8.95

MODEL F3A OUTDOOR SUB. No controls. $31 / 2^{\prime \prime}$ PM speaker. $41 / 2 \times 51 / 2 \times 21 / 2^{\prime \prime}$ deep. Requires $33 / 4 \times 43 / 4$ cutout. Shpg. wt., 2 lbs.
93 R 490. List. $\$ 10.75$. NET
8.05

CABLE REQUIREMENTS. Measure from Master to each Sub. Use 4-conductor cable to indoor Subs, 2-conductor to outdoor Subs.

48 W 891. 4 -conductor. Wt., per $100^{\prime}, 31 / 2$ lbs. Per 100 ft .
2.89

48 W 890 . 2-conductor. Wt., per $100^{\prime}, 3$ lbs. Per 100 ft .
1.76

## INTERCOMMUNICATION

AND MUSIC SYSTEMS


Model R16


Model F2


Model F3A


## Fanon Wireless "Baby-Com"

Plays Through Any Radio . . . No Wiring MODEL RB-1. Low-cost, 1 -station wireless intercom for nursery or sickroom use. Provides 'round-the-clock protection for children, and aged or handicapped persons. Ideal as an inexpensive "baby-sitter."
Highly sensitive, the "Baby-Com" picks up the slightest sound and transmits it to any radio in your house. Transmits over distances of up to 250 feet-lets you "listen in" on the house when you are visiting next door or working in the garage. Extremely light in weight-carry it from room to room easily and quickly. Provided with sturdy, comfortgrip handle.
Exceptionally easy to operate-simply plug into AC outlet - no wiring required. Works through any AM radio, including car or battery-operated portables. Frequency is adjustable; tunes to any unused portion of the radio dial. Employs super-sensitive, $4^{\prime \prime}$ PM speaker as a microphone. Metal cabinet is blue with white panel. With On-Off switch and pilot light. $41 / 2 \times 65 / 8 \times 45 / 8^{\prime \prime}$. U.L. Approved. For $110-120$ v., $50-60$ cycle AC. Shpg. wt., 4 lbs.
94 R 970. List, \$19.95. NET
14.95

## Fanon 6 \& 12 Station Systems

Versatility and up-to-the-minute styling in a low-cost intercom. Steel cabinet has gray finish; front panel of white perforated metal. $4 \times 8 \times 4^{\prime \prime}$. U.L. Approved.
MASTER STATION. 1 required for each system. Can call any Master or Remote in privacy. Controls: Volume with AC On-Off; TalkListen; Master or Master-to-Remote Selector. For $110-120$ v., $50-60$ cycle AC or DC. Shpg. wt., $33 / 4 \mathrm{lbs}$.
REMOTE STATION. Has Call-Listen switch for originating calls to its Master only. MODEL FX-6 "EXEC" MASTER. For use with system consisting of up to 6 Masters or for 1 Master and up to 5 Remotes. Can talk to any Master or Remote individually or in groups.
93 R 425. NET
20.95

MODEL FX-12 "MANAGER" MASTER. Use up to $12-\mathrm{FX}-12$ 's or $1-\mathrm{FX}-12$ and 11 FC 's. 93 R 426. NET.
22.50

MODEL FC REMOTE. Wt., $21 / 4 \mathrm{lbs}$. 93 R 427. NET
7.97

CABLE REQUIREMENTS. Use 3 -cond. (right) from Remote to Master; 7-cond. from FX-6 to FX-6; 18-cond. from FX-12 to FX-12.

## Fanon 2-Station System

MODEL TWIN FX-2. Here's the height of convenience in a 2 -station intercom. Combines outstanding performance and decorator styling-all at an unusually low price. Provides intercommunication between any 2 points-even serves as a baby sitter! Includes Master station, Sub-station and 50 ft . of cable (more can be added). Master unit connects to any AC or DC wall outlet. Sub needs no power and can be placed anywhere. If desired, Sub can answer calls from a distance. without operating Talk-Listen switch. In steel cabinet with modern gray finish; contrasting front panel of white perforated metal. U.L. Approved. For $110-120$ volts. $50-60$ cycle AC or DC. Size. $8 \times 4 \times 4^{\prime \prime}$. Shpg. wt., 6 lbs.
95 RX914. NET
18.75

MODEL FS EXTRA SUB. Use 3 -cond. cable to Master. Shpg. wt., 2 lbs.
94 R 923. NET
7.50

INTERCOM CABLE

| Stock No. | Cond. | Wt., $100^{\prime}$ | PER $100^{\prime}$ |
| :---: | :---: | :---: | :---: |
| 47 | W 362 | 3 | 2 |
| lbs. | 2.43 |  |  |
| 47 | W 322 | 7 | $41 / 2$ lbs. |
| 48 | W 894 | 18 | $61 / 2$ lbs. |

# WHEELER <br> SOUND-POWERED TELEPHONES <br>  <br> B <br>  

## Wheeler Sound-Powered Telephones and Systems

An excellent selection of self-contained, sound-powered telephones and systems. All units provide communication over distances to 20 miles-without batteries or other outside power. Current for transmission is generated by the voice; bell-ringing current is generated by operating bell-ringing lever. Less cable. See cable listing in right hand column.

## INDIVIDUAL HANDSETS AND HOLDERS

(A) MODEL SPT-102 HANDSET. Self-contained A telephone handset. Voice generates needed power-requires no batteries or supply line voltage. Up to 12 units may be connected in parallel. Supplied with $31 / 2-\mathrm{ft}$. cable and clips, less wire. Uses 2 -conductor, twisted-pair wire. Shpg. wt., $11 / 2$ lbs.
59 R 350. List, \$13.75. NET EACH...9.62
(A) MODEL SPT-123 HI-LEVEL HANDSET. Same A as above, but extra sensitive. For use where background noise is high.
59 R 360. List, \$15.40. NET
10.78

MODEL SPT-150. Same as SPT-123 but with insulated clips.
59 R 361. List, $\$ 16.00$. NET.
11.20

(B)MODEL F-5308 HANDSET HOLDER. Wall B) mount handset holder with switch hook and terminal board for SPT-102, SPT-150 and SPT-123 handsets. For installations where separate ringing systems are to be used. $27 / 8 \times 55 / 8 \times 3^{\prime \prime}$. $11 / 2$ lbs. 59 R 355. List, $\$ 14.00$. NET.
8.40

MODEL F-4182 HANDSET HOLDER WITH BELL. Same as F-5308, above, but includes bell. Has lever to ring bell at other end of line. Up to 3 may be used in a common ringing system. Shpg. wt., $11 / 2$ lbs.
59 R 356. List, $\$ 19.48$. NET EACH . . . 11.69
MODEL B-5446 HANDSET HOOK. Not illus. Fastens to wall, side-of-desk, etc. 3 oz . 59 R 420. List, $\$ 1.50$. NET
I. 18


## TELEPHONES FOR <br> MULTI-SERVICE SYSTEMS

All-Master System: Consists of up to 12 SPS-205-MI masters. Any can ring and communicate with any other master, or up to 6 may be used on a conference basis. Master-Sub System: Consists of 1 SPS-205MI and up to 11 SPS-205-SI subs. The master can ring and communicate with any sub; subs can ring and communicate with the master directly and can reach other subs by having the master ring the desired sub. Up to 6 stations may be used for conference. Cable Requirements All-Master system: 2 common wires; 1 additional wire for each station (measure from 1st to 2nd. 2nd to 3 rd, etc). Master-Sub System: 3 common wires, and 1 wire from each sub to the master. Wt., 5 lbs., each station.
Stock No. $\mid$ Mfr's Type $\mid$ Fig. List $\mid$ NET 59 R 353 SPS-205-MI (Master) D 61.60 36.96


## 2 \& 3-PHONE SYSTEMS

SERIES SPS. Each has lever for common bell ringing. $205-\mathrm{H}$ similar to 205 , but delivers higher voice level. Use 2-conductor wire for 205 and 205-3; 3-cond. for $205-\mathrm{H}$. Measure from phone 1 to 2 and 2 to 3 .

| Stock No. | $\begin{aligned} & \text { Mfr's } \\ & \text { Type } \end{aligned}$ | Phones | Wt., Lbs. | List | $\begin{gathered} \text { Per } \\ \text { System } \end{gathered}$ |
| :---: | :---: | :---: | :---: | :---: | :---: |
| 59R 351 | 205 | 2 | 7 | 73.15 | 43.89 |
| 59R×352 | 205-3 | 3 | 10 | 101.70 | 65.83 |
| 59R 362 | 205-H\| | 2 | 7 | 86.00 | 51.60 |

## Bogen Telephones

Deluxe phones for office, plant or home. One PRS-1 supply (below) powers system. Push-button, selective ringing with a com-mon-talk line (allows only one conversation at a time). Merely press button for desired station. Can be easily mounted on wall or desk. Handsomely styled in gray plastic. $91 / 2 \times 31 / 4 \times 31 / 4^{\prime \prime}$. Less cable and power supply. Cable Requirements: 3-conductors plus an additional conductor for each station used.
F MODEL TP-1 2-PHONE SYSTEM. Supplied complete with 4 -ft. snarl-proof cord. Shpg. wt., 9 lbs.
93 R 256 . List, \$49.95. NET PER PAIR 37.45 MODEL TP-6 PHONE. For up to 7 -station systems. Shpg, wt., 5 lbs.
93 R 257. List, \$27.95. NET EACH 20.95 MODEL TP-12 PHONE. For up to 13 -station systems. Shpg. wt., 5 lbs.
93 R 258. List, \$29.95. NET EACH 22.45 MODEL PRS-1. Power supply for Bogen phone systems (including TP-1); use one to a system. Wires into any phone. For 110-120 v., 60 cycle AC. 4 lbs.

93 R 259. List, $\$ 30.00$. NET.
22.50

## RECOMMENDED PHONE CABLES

Ideal cable for both indoor and outdoor use with Wheeler and Bogen telephones.

| Stock No. | Cond | Lbs., $100^{\prime}$ | Per Ft. | Per $100^{\prime}$ |
| :---: | :---: | :---: | :---: | :---: |
| $48 W 8826$ | 2 | 3 | $4 \phi$ | 3.38 |
| $48 W 825$ | 3 | 4 | $51 / 2 \phi$ | 5.08 |
| $48 W 892$ | 6 | $31 / 2$ | $5 \phi$ | 3.82 |
| $48 W 893$ | 12 | 6 | $7 \phi$ | 5.44 |
| $48 W 894$ | 18 | $63 / 4$ | $9 \phi$ | 7.79 |

## New Feiler Wireless Intercom Systems

## UNITS JUST PLUG IN... NO INSTALLATION OR WIRES REQUIRED

## ALL-MASTER SELECTIVE SYSTEM: Wireless in-

 tercom system for use in home, office or factory. Consists of up to 8 WM-500 Master stations. Any Master can converse privately with any other Master-4 separate conversations can be carried on at same time. Features:front panel static eliminator; automatic volume contol; up-to-the-minute styling; noise reduction circuits; superior sensitivity; "constant transmit" provision; and separate Off-On switch. Channel selector dial simplifies operation; conference can be carried on when all stations dial same channel. U.L. Approved. For 110-120 v., 50-60 cycle AC or DC. Size and shpg. wt., each Master: $55 / 8 \times 141 / 4 \times 51 / 2^{\prime \prime} ; 14$ lbs.MASTER-STAFF SYSTEM; Wireless intercom system consisting of one WM-500 Master station and up to seven WS-700 Staff stations. Staff stations can originate calls to Master; in addition, Staff stations can receive private calls from Master. All Staff stations have features similar to Masters described at left, but do not have dial selector and automatic volume control. More than 7 Staff stations may be used by sharing channels. System is for use where pering channels. Staft stations do not have to communicate with other Staff stations, but must talk with a central Master location. For $110-120 \mathrm{v} ., 50-60$ cycle AC or DC. Sizeand shpg. wt., each Staff: $55 / 8 \times 141 / 4 \times 51 / 2^{\prime \prime} ; 8$ lbs.

| Stock No. | $\begin{aligned} & \text { Mrr's } \\ & \text { Type } \end{aligned}$ | Station | List | $\begin{aligned} & \text { NET } \\ & \text { EACH } \end{aligned}$ | Stock No. | $\begin{aligned} & \text { Mfr's } \\ & \text { Type } \\ & \hline \end{aligned}$ | Station | List | $\begin{aligned} & \mathrm{NET} \\ & \mathrm{EACH} \end{aligned}$ |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| $91 \mathrm{RX570}$ | WM-500 | 1 | \$125.00 | 74.95 | 91 RX 574 | WS-700-4 | Channel 4 Staff | \$66.70 | . 95 |
| 91 RX | WS-700-1 | Channel 1 Staff | 66.70 |  | RX 575 | WS | Channel 5 Staff | 66.70 |  |
| 91 RX 57 | WS-700-2 | Channel 2 Staff | 66.70 |  | RX | WS-700-6 | Channel 6 Staff | 66.70 |  |
| 91 RX 57 | WS-700-3 | Channel 3 Staff | 66.70 | 39 | RX 5 | WS-700-7 | Channel 7 Staff | 66.70 | 9. |

## LOW-COST 2-STATION WIRELESS SYSTEM

MODEL WD-300-2. A complete 2 -station deluxe wireless "starter" system. Consists of two single-channel stations, similar in features to the WS-700 Staff stations described above. Ideal for home use and paging applications. Additional stations (right) may be added-all stations receive message at the same time any one unit is sending. Exceptionally easy to install-simply plug into any convenient outlet for instant use; no special tools required.

Heavy-duty, durably constructed steel cabinets. Each cabinet, $55 / 8 \times 141 / 4 \times 51 / 2^{\prime \prime}$. Underwriters' Laboratories Approved. For operation from $110-120$ volts, $50-60$ cycle AC or DC. Shpg. wt., 16 lbs.
91 RX 580. List, $\$ 132.50$.
NET PER SYSTEM.
79.50

MODEL WD-300-1. Single station for expand-
ing above system. Shpg. wt., 8 lbs.
91 RX 581. List, \$66.25. NET.


## Automatically Opens Garage Door From Car NET <br> - Simple Push-Button Operation <br> - Handy Time-Delay Light Shutoff <br> - Fully Automatic Safety Devices <br> - Installed Without Special Tools <br> \$13.99 Down

Just touch a pushbutton on your car's dashboard-the garage door rolls up and the light goes on! Press pushbutton again to close and lock the door securely-or use the wall-mounted pushbutton at the garage exit. A tremendous convenience in bad weather-and it also offers protection for members of family coming home late at night. The transmitter sends out a signal when pushbutton on dash is pressed. Receiver in garage picks up signal, turns on the garage light and actuates the lifting mechanism. When pushbutton is pressed the second time, the motor reverses to close the door and lock it securely. Power shuts off automatically if obstruction blocks path of door travel. Door can be operated manually in event of power failure. Has thermal overload switch for complete electrical protection.
Features added convenience of a time-delay light shutoff switch. This handy, built-in unit keeps the light in the garage burning for a few minutes after the door has been shut-gives you plenty of time to enter the house without stumbling through darkness.

Transmitter operates from either 6 or 12 -volt car battery. Crystalcontrolled operation on FCC-authorized frequency of 27.255 mc . Receiver has only three tubes for low power drain and uses lowvoltage control system. Attractive, modern design housing encloses motor and receiver units. With handy pushbutton and 22 ft . of wire to permit operation of door without radio control. Fits overhead, residential garage doors up to 18 ft . wide and 8 ft . high using a horizontal or curved roller track. Designed for use with either 1 -piece or sectionalized doors. Clearance required between ceiling and high arc of door travel, only $2^{\prime \prime}$. All necessary parts and hardware are supplied-plus easy-to-follow instructions for quick, simplified installation. Mechanism and receiver operate from 110-120 volts, $50-60$ cycle AC.

System includes door mechanism, $1 / 4$ - hp motor, transmitter, receiver, antennas, manual pushbutton, overhead light, all hardware, tubes, wire, and instructions. Shpg. wt., 95 lbs .
77 SZ 290. List, \$199.95. Only \$13.99 Down. NET
.139 .90




Built-in overhead light illuminates garage when door is opened-light stays on several minutes after door is locked.

Power shuts off automatically if path of door travel is blockedprevents accidental damage to obstruction or mechanism.

EXIRA TRANSMITIER. F or 2-car families. Permits operation of system from either car. With antenna, mounting hardware, installation instructions, etc. Shpg. wt., 7 lbs .
77 SX 272. List, $\$ 34.50$. Only $\$ 2.45$ Down. NET.
24.50

COMPLETE ALTERNATE SYSTEM. Same as system at left, but operates on another channel. For use where a neighbor already has a radiocontrolled opener. Shpg. wt., 95 lbs.
77 SZ 295. List, \$199.95. Only \$13.99 Down. NET.
139.90
extra transmitter for above. For a second car. Permits operation of system from either car. Shpg. wt., 7 lbs.
24.50 77 SX 296. List, \$34.50. Only $\$ 2.45$ Down. NET.
KEY SWITCH. Operates system manually. Mount on garage wall or install on post in driveway. With 2 keys. Shpg. wt., 8 oz .
77 S 291 . List, $\$ 6.00$. NET. . . . . . . . . . . . . . . . . . . . . . . . 4. 20


High-quality light control unit for outdoor lighting systems. Turns lighting systems on or off when outdoor light intensity changes. Turns on lights when darkness falls regardless of time. No clock to set. Has $7-10$ second delay to prevent actuation by short duration light source. SPST double-break contactor. Controls up to 3000 watts. Meets all CAA requirements. Adjustable turn-on, 25-45 foot-candles. Turn-off is 20 foot-candles higher. Lights remain on in event of circuit failure. Weatherproof housing. 81/4" mtg . ctrs.; $61 / 16^{\prime \prime}$ deep. For operation from 105-130 V., 50-60 cycle AC. Shpg. wt., $91 / 2 \mathrm{lbs}$.
77 P 048 . NET.
53.90

MODEL 63300C STREET LIGHT CONTROL. Similar to above, but turns on light at 1.0-5.0 foot-candles and has SPDT double-break contactor. Rated 2000 watts normally open; 3000 watts normally closed. Turnoff point 1.0 foot-candle above turn-on. Shpg. wt., $91 / 2 \mathrm{lbs}$. 77 P 054. NET.
50.96

## Perma-Power Radio Control System for Industrial Use

- Efficient and Safe-Hundreds of Uses
- For Remote or Portable Control Applications
- Time-Saving, Labor-Saving System Extremely versatile radio-control system only-can be added to present electrically operated garage or plant doors. Actually a radio-controlled switch, the system may consist of any number of transmitters and receivers to actuate mechanisms or remoteof control one or more operations drawing up to 3 amperes cur-rent-may be used with heavier-current devices by the addition of an auxiliary relay or relays.
Radio control provides greater safety, efficiency and operating economy. Eliminates use of cables where they may be difficult or expensive to install, or easily damaged. Typical uses: operating any door or hatch in any type of plant; turning on areaway, parking, store or porch lights; turning on field lights and operating hangar doors from an incoming plane; turning on dock or harbor lights from a boat; operating warehouse doors from a forklift truck, etc.

Transmitter meets all FCC requirements. Employs an extremely stable, crystal-controlled, tone-modulated circuit. Operates from any 6 or 12 -volt system. Receiver operates from $110-120$ volts. $50-60$ cycle AC and includes a built-in relay rated 3 amps at 115 volts. Built-in filter and delay network prevents accidental operation from other signals or electrical disturbances. Constructed of top-quality components. Each unit, $41 / 2 \times 55 / 8 \times$ $43 / 8^{\prime \prime}$; with antenna and all mounting hardware. 77 SX 293. RC 200 RP Receiver. 6 lbs. NET.
40.67

77 SX 294. RC 200 TP Transmitter. 8 lbs. NET.
43.61

Light-duty remote control transmitter and receiver system (NET \$56.00) available on special order. Extra-heavy duty units (including multi-channel transmitters) available on special order. Write to Allied's Technical Service Dept. for "Special Application Data Form."



## AUTOTRON PHOTO ELECTRIC EQUIPMENT

A MODEL IIA STRAIGHT FIXED BEAM LIGHT SOURCE. Has $3 / 4^{\prime \prime}$ dia. straight, fixed beam. May be mounted up to 8 feet away from Models S1A and T1A Photoelectric Controls (below). Housed in dustproof aluminum case, $5 \times 33 / 4 \times 3$ ", with adjustable mounting bracket. Tapped for $1 / 2^{\prime \prime}$ conduit. For operation trom 115 or 230 v ., $50-60$ cycle AC. Shpg. wt., 3 lbs .
77 P 234. NET
14.30

(B)
l3a adjustable focus safety light source. For detecting small objects and movements not large enough to interrupt fixed beams. Focuses down to a spot $5 / 6 \times 1 / 4^{\prime \prime}$ and $43 / 4$ away. Opens up to a straight light beam of $11 / 2^{\prime \prime}$ dia., which may be placed up to 13 feet away from either Model S1A or T1A (below). $51 / 4 \times 315 / 16 \times 913 / 16^{\prime \prime}$. For 115 or 230 v., $50-60$ cycle AC. Shpg. wt., $41 / 2 \mathrm{lbs}$. 77 P 246. NET
29.30

C MODEL SIA DARK-ENERGIZED PHOTOELECTRIC CONTROL. For C industrial counting or detection. Requires 20 foot-candles minimum light. Takes only .06 second after beam is completely interrupted to actuate SPDT relay. Contacts rated at $8 \mathrm{amps}, 115$ volts AC, non-inductive load. Size, $5 \times 33 / 4 \times 5^{\prime \prime}$. For 115 or 230 v ., $50-60$ cycle AC. Shpg. wt., 3 lbs.
77 P 247. NET
38.75
(D) MODEL TIA DARK-ENERGIZED PHOTOELECTRIC TIMING CONTROL (D) Interruption of light beam starts timing period-when time is up, SPDT plate relay energizes. Timing period is adjustable from $1-10$ seconds. Timing accuracy, $3 \%$. Contacts rated at $5 \mathrm{amps}, 115$ v. AC non-inductive load. Size, $51 / 4 \times 315 / 16 \times 75 / 16^{\prime \prime}$. For 115 or 230 v ., v. AC non-inductive load. Size, 5
$50-60$ cycle AC. Shpg. wt., 3 lbs.

77 P 248. NET
57.50

## DETECT-O-RAY EQUIPMENT

E
MODEL L-162C PHOTOELECTRIC SWITCH. Universal photoelectric system in one case. Includes: Light which projects a conventional beam; a filter controlled by a lever which can be shifted to the front of the light if an "unseen" beam is desired; a photo-cell receiver; an amplifier, and a relay for an alarm or similar device. Also has switch to permit choice of intermittent or continuous operation of the actuated device. System is installed on one side of an area to be controlled, and an adjustable mirror (included) is installed on the opposite side. Range: 50 feet, white beam; 35 feet, "unseen" beam. Terminals for 8 or 10 volt AC, $3 / 4 \mathrm{amp}$; or for the heavy-duty relay listed below. $5 \times 61 / 4 \times 71 / 2^{\prime \prime}$. For $110-120 \mathrm{v} ., 50-60$ cycle AC. Indoor use only. Shpg. wt., 7 lbs
77 P 060 . NET
38.86

MODEL L-205C POWER RELAY. Use with above when operating equipment up to 1,000 watts. SPDT. $110 \mathrm{v} ., 50-60$ cycle AC contacts with outlets for normally on or normally off functions. $41 / 4 \times 21 / 2 \times 21 / 2^{\prime \prime}$. For $110-120$ v., $50-60$ cycle AC. Shpg. wt., $11 / 4 \mathrm{lbs}$.
77 P 061. NET
10.81
w ORNER


## WORNER PHOTOELECTRIC SYSTEMS

FMODEL 4000 "WATCHMAN." An economical indoor alarm system. For the home, office, garage, warehouse, workshop. etc. An invisible light beam fully protects the area to be covered. Consists of matching exciter lamp unit and electronically operated relay. A built-in power supply provides 6 volts AC - any type of electrical alarm can be used with the relay unit. Toggle switch permits choice of continuous or intermittent alarm operation; also serves as reset switch if continuous alarm is used. Exciter lamp unit has 2 prefocused f6 lenses for maximum light dispersion: infra-red filter to provide "unseen" beam. Relay unit has extraneous light rejector to maintain daylight range; variable sensitivity control. Range: 35 feet for black light, 50 feet for white light. Both units are in attractive hammerloid cases. Size, $5 \times 5 \times 51 / 2^{\prime \prime}$. For $110-120$ v., $50-60$ cycle AC. Shpg. wt., 14 lbs. 77 PU 232. NET
47.04

MODEL 62 R \& 1 TWO-UNIT SET (not illust.). $62-\mathrm{R}$ receiver and 62-L light source. Useful for many simple operations-detects objects over $2^{\prime \prime}$ square with a directional beam covering distances from a few inches up to 75 feet. Up to 300 relay operations per minute. SPDT relay contacts rated at $5 \mathrm{amps}, 110 \mathrm{v} ., 50-60$ cycle AC , non-inductive. Relay unit has meter jack for easy connection to $0-30$ ma meter to determine correct cut-off and plate current. Light source, $61 / 4 \times 7 \times$ to determine correct cut-off and plate current. Light source, $61 / 4 \times 7 \times$
$4^{1 / 1 / 4} ;$ receiver, $7 \times 61 / 4 \times 41 / 2^{\prime \prime}$. For $110-120 \mathrm{v}$., $50-60 \mathrm{cycle} \mathrm{AC}$. Shpg. wt., 13 lbs.
77 PU 228. NET
76.88

WORNER "FOTOLECTRIC" SYSTEM. Consists of Model 63 Relay, Model 33 Exciter Lamp and Model 23 Photo-cell Receiver. Model 33 has general-purpose (interchangeable) lens which provides a straight directional beam; may be placed up to 10 feet from Model 23 to detect objects of about $2^{\prime \prime}$ square or larger. Both exciter lamp and photo-cell units are housed in identical heavy-duty solid castmetal case to withstand dampness. Lenses for specific applications, time-delay relays and extra-sensitive relays are available on special order. Write to Allied's Industrial Division.

MODEL 63 ELECTRONICALLY OPERATED DPDT RELAY. Responds to current from photocell. Contacts rated at 5 amps , non-inductive; 2 amps inductive at 110 v ., $\mathbf{5 0 - 6 0}$ cycle AC . Operates up to 600 times per minute on complete or partial change of light intensity. Steel case, $91 / 4 \times 111 / 2 \times 5^{\prime \prime}$. For operation from $110-120 \mathrm{v}$., $50-60$ cycle AC. Shpg. wt., 22 lbs.
77 PU 085. NET
101.07

H MODEL 33 EXCITER LAMP. Light source. Projects beam 10 feet. [H Gray cast-iron case. Size, $41 / 4 \times 23 / 4 \times 23 / 4^{\prime \prime}$. For 6 v . operation Takes power from Model 63 relay. Shpg. wt., 3 lbs.
77 P 087. NET.
15.67

MODEL 23 PHOTO-CELL RECEIVER. Housed in same type of case as Model 33. Shpg. wt., 3 lbs.
77 P 090. NET.


## Photoelectric Equipment Designed for Home Use

## FISHER-PIERCE LIGHT CONTROL

Unusually economical, smooth-operating photo-electric switch. Turns electric lights on or off, depending on amount of daylight striking photocell. Simple installationjust plug into outlet and plug lights into control unit. Perfect for store windows, porch lights, outdoor signs, etc. Turns lights on as darkness approaches, turns them off at dawn. Excellent for burglary protection during vacation periods. Not a time switch -responds to light alone. Completely auto-matic-no need to set or reset. Light control is housed in attractive sturdy brown bakelite case. Has convenient bracket for flat surface mounting if desired. Capacity, 300 watts. Complete with 6 -ft. cord set with adapter plug. For interior use only. Size: $31 / 2 \times 41 / 2 \times 31 / 2^{\prime \prime}$. For operation from $110-120$ v., 60 cycle AC. Shpg. wt., 3 lbs.

77 P 235. List, \$15.95. NET
10.94

## WORNER "FOTOLECTRIC" ANNOUNCER

MODEL 61. Chime announces people or vehicles when light beam is intercepted. Consists of "Fotolectric" unit, mirror and chime. Unit has exciter lamp and sensitive photo-cell. Projects beam across passage and receives reflected beam from mirror: may be placed 3 to 10 feet from mirror Size, $81 / 4 \times 61 / 2 \times 23 / 4^{\prime \prime}$. For $110-120$ volts, $50-$ 60 cycle AC. Wt., 8 lbs.
77 P 028. NET
32.34

REPLACEMENT BULB. 32-candlepower. 2000 hour 6-volt bulb. For Models 33 and 61 (above). Shpg. wt., 5 oz .
77 P 023. NET
REPLACEMENT CHIME. For Model 61. May also be used with any other 6 -volt AC power supply. Excellent warning device for home or store. Shpg. wt., 2 lbs.
77 P 035 . NET.

# Select Your TV Antenna From Allied's Complete Top-Quality Lines 

BOOST YOUR VIDEO POWER and enjoy sharper, clearer TV pictures, unmarred by "ghosts" and interference. Allied carries the world's largest stock of antennas and accessories-we have the kind of antenna that will deliver the Video Power your set needs for sharp, clear reception. See pą̧es 337 through 359 for a complete selection of indoor and outdoor antennas, VHF and UHF types, antennas for metropolitan use, and for suburban or remote fringe areas. Make Allied your antenna headquarters-select from nationally known, top-quality brands at lowest prevailing prices-your assurance of maximum value.


Most VHF TV broadcasts (channels 2 through 13) can be reached at distance up to 200 miles when the proper antenna is used. To assist you in selecting an antenna for your particular location, the antennas on this page and the following pages have been identified with $1,2,3$ or 4 stars to indicate range as given below. When in doubt, select an antenna in next higher group.
$\star$ Metropolitan-Suburban (up to 35 miles).
$\star \star$ Semi-Fringe (up to 50 miles).
$\star \star \star$ Fringe (up to 75 miles).
$\star \star \star \star$ Deep-Fringe (up to 125 miles).
Stacking two of the same type antennas will give up to $50 \%$ more signal strength. Stacking is recommended in installations located over 125 miles from the TV station. Obstructions such as tall buildings or hills near your location may necessitate stacking at distances less than 100 miles. All of the TV antennas in this Catalog may be used for reception of both black-andwhite and color TV broadcasts.

## A Weather-Worn Antenna Can Spoil Your TV Enjoyment



Weather-worn Elements Bent Elements


Corrosion Around Connectors

ENJOY THE BEST PICTURE QUALITY your set can deliver-check your antenna before you blame your set for poor reception. "Ghosts," "snow" and other interference may be caused by a weather-worn antenna system. Bent, broken, or corroded antenna elements and connectors can ruin picture quality. Because weathering is so gradual, picture quality may decrease unnoticeably until brilliance and detail are far below standard. However, a new Allied antenna of latest design can restore picture quality-installation is easy and the improvement will amaze you.

DEPEND ON ALLIED for the best antenna. Whether your location calls for a simple indoor antenna or an elaborate fringe-area array, Allied has the antenna you require. Our world's-largest stocks inciude latest anodized types, complete antenna kits, handsome indoor antennas, and a full selection of installation accessories. Feel free to use our consultation service-we will promptly recommend the proper antenna. See pages 337-359 for complete listings.

## $\star \star \star \star$ Kit Featuring All-Channel's "Riviera" VHF Antenna

NET

Famous "Riviera", all-directional antenna plus installation accessories. Ideal for fringe areas where reception is possible from several different directions. Provides "electronic" rotation over $360^{\circ}$ (without a motor-driven rotator) through use of a selector switch located at TV receiver. The 9 -position switch allows selection of the proper set of elements for best signal pickup from any direction. Accessories include chimney mount, two 5 -foot masts, 100 feet of 4 -conductor cable and 8 standoffs. 15 lbs. Express or truck only.
92 CU 137. $\$ 3.13$ Down. NET. . 31.32
"RIVIERA" ANTENNA AND SWITCH. As above, but less installation accessories. Shpg wt., 10 lbs.
98 CU 495. List, $\$ 36.75$. NET. . 19.85
WIRE FOR "RIVIERA" AND "SUBURBAN". 4-conductor lead-in wire. Shpg. wt., 100 ft ., 2 lbs.
47 TX 589. 100-ft. Coil. NET . .8 .90
47 W 599. Over 100 ft., PER 100 FT.. . . . . . . . . . . . . . 8.90


Accessories Supplied with "Riviera" Antenna Kit

9-Position Switch—allo ws selection of antenna elements to obtain clearest picture from any direction


## $\star \star$ "SUBURBAN" ANTENNA

Excellent semi-fringe antenna. 9-position selector switch for peak signal pickup from any direction. Switch-to-set coupler; 2-mast and 2-screw-insulators; $70-\mathrm{ft} .4$-cond. wire. Less mast. 5 lbs.
92 CX 060. List $\$ 21.50$. NET .
. 12.90

## Allied's Fringe-Area Anfenna Kits

# Complete with Mast and All Installation Accessories 

For Color and Black-and-White TV Reception
Completely Packaged—Ready for Quick and Easy Installation


\author{

- Rofator for Anfenna Direction Confrol <br> - Detailed Installation Instructions
}

\author{

- Complefe with All Hardware <br> - Top Quality Throughouf
}

Complete with Installation Accessories


These deluxe, value-packed kits have been selected by Allied's antenna experts to meet practically any TV antenna requirement. Complete in every detail-there's nothing else to buy-and the package prices are actually less than the total cost of the components purchased individually. Provide outstanding fringe-area reception for color and black-and-white receivers, CHOICE OF PACKAGES. Kits for "Semi-Fringe," "Fringe," and "Deep-" Fringe" areas are listed with a choice of 20,30 or 40 -foot masts. The dis 4 tance to TV stations determines which antenna to use, and local terrain (hills, trees, tall buildings, etc.) determines mast height. Rotator permits pointing antenna in any direction for excellent reception of any station. Meter on rotator control box indicates exact antenna direction.
All kits are complete with rugged, weather-resistant antenna; telescoping mast of heavy, galvanized steel; all-angle mast mount; guy wire; 100 ft . of twin line; 50 ft . of ground wire; ground rod; twin-line lightning arrester; guy wire hook-eyes; mast standoff insulators; woodscrew standoff insulators (plus 6 turnbuckles in $40-\mathrm{ft}$. antenna kits). Kits with rotator also include $10-\mathrm{ft}$. antenna mast; 100 ft . of rotator cable; and rotator cable lightning arrester. Complete instructions with each kit. Rotators are for 110-120 v., 60 cycle AC. Shipped by express or truck only.
$\star \star$ SEMI-FRINGE ANTENNA KITS
KIT A-20. Includes two-section, 20 foot telescoping ,, mast; Finco Model B-2 "Geomatic" TV antenna for clear, ghost-free reception on channels 2 to 13 ; exceptionally rugged, CDR Model TR-16 rotator; and accessories. Shpg. wt., 47 lbs. 92 CZ 175. NET
47.09

KIT A-20-L. As above, less rotator. Shpg. wt., 25 lbs.
92 CZ 153. NET.
.14 .06
KIT A-30. Same as Kit A-20, but with 30 -foot mast. Shpg. wt., 63 lbs.
92 CZ 176. NET $\qquad$
KIT A-30-L. As above, less rotator. Shpg. wt., 41 lbs.
92 CZ 154. NET
16.67

KIT A-40. Same as Kit A-20, but with 40 -foot mast. Shpg. wt., 74 lbs.
92 CZ 177. NET.
54.96

KIT A-40-L. As above, less rotator. Shpg. wt., 52 lbs.
92 CZ 157. NET. $\qquad$ 21.24

## $\star \star \star$ FRINGE ANTENNA KITS

KIT B-20. Includes two-section, 20foot telescoping mast; extremely ef fective JFD Model SX711 TV antenna for channels 2 to 13; heavyduty, fully automatic CDR Model AR-22 rotator; and all installation accessories. Shpg. wt., 50 lbs.
92 CZ 178. NET.
.61 .92
KIT B-20-L. As above, less rotator. Shpg. wt., 26 lbs.
92 CZ 158. NET.
23.55

KIT B-30. Same as Kit B-20, but with 30 -foot mast. Shpg. wt., 66 lbs.
92 CZ 179. NET. $\qquad$
KIT B-30-L. As above, less rotator. Shpg. wt., 42 lbs.
92 CZ 159. NET.
26.57

KIT B-40. Same as Kit B-20, but with 40 -foot mast. Shpg. wt., 77 lbs .
92 CZ 180. NET.
.69 .80
KIT B-40-L. As above, less rotator. Shpg. wt., 53 lbs.
92 CZ 161. NET.
31.04
$\star \star \star \star$ DEEP-FRINGE ANTENNA KITS
KIT C-20. Includes two-section, 20foot telescoping mast; deluxe, fiveelement Finco Model B-8 "Geomatic" TV antenna for excellent reception on channels 2 to 13; heavyduty CDR Model AR-22 rotator (for mast, tower or platform mounting) ; and all installation accessories. Shpg. wt., 55 lbs.
92 CZ 181. NET. . . . . . . . . . . . .
68.40

KIT C-20-L. Same as $\mathbf{C - 2 0}$ deep-fringe kit described above, but does not include Model AR-22 antenna rotator. Shpg. wt., 31 lbs.
92 CZ 162. NET
30.03

KIT C-30. Same as Kit C-20, but with 30-foot mast. Shpg. wt., 71 lbs.
92 CZ 182. NET
.71 .81
KIT C-30-L. As above, less rotator. Shpg. wt., 47 lbs.
92 CZ 163. NET. 33.05

KIT C-40. Same as Kit C-20, but with 40 -foot mast. Shpg. wt., 82 lbs.
92 CZ 183. NET.
.76 .28
KIT C-40-L. As above, less rotator. Shpg. wt., 58 lbs. *
92 CZ 164. NET.
.37 .52

## Knight TV and FM Antenna Kits



## FAMOUS Knight COMPLETE TV ANTENNA KITS

## *IN-LINE ANTENNA KITS

 WITH CHIMNEY MOUNT. A complete VHF antenna kit with chimney mount and ac-cessories-at a money-saving price. Provides exceptional picture quality. Ready for quick and easy installation. Includes: An efficient, time-proven, in-line antenna; sturdy 5 -ft. mast; 75 -ft. of $300-\mathrm{ohm}$ twin line; U.L. Approved lightning arrester; five $31 / 2^{\prime \prime}$ woodscrew standoff insulators; two clamp-type mast standoff insulators; and rugged chimney mount. Antenna elements are high-quality $1 / 2^{\prime \prime}$ seamless aluminum tubing. Shpg. wt., 10 lbs.
92 CX 045. 6 or More, EACH. . . 7.36 1-5, EACH. . 8.I8
WITH ROOF MOUNT. As above, but with roof mount. 92 CX 041. 6 or More, EACH. . . 7.06 1-5, EACH.... 7.84
IN-LINE ANTENNA ONLY. Less accessories. 5 lbs. 92 CX 042. 6 or More, EACH. . . 4.37 1-5, EACH.... 4.86

## 丸high-LOW ANTENNA KITS

$\$ 7^{\text {NI }} 7$WITH CHIMNEY MOUNT. Exceptionally popular two-section antenna featuring individually adjustable sections for top performance on high and low VHF bands. Minimizes "ghosts" and "snow." Includes: Sturdy 5-ft. mast; 5 woodscrew standoff insulators; 2 mast standoff insulators; $75-\mathrm{ft}$. of 300 -ohm twin line; U.L. Approved lightning arrester; and antenna. Antenna elements are $1 / 2^{\prime \prime}$ aluminum tubing. Shpg. wt., 10 lbs .
92 CX 048. 6 or More, EACH. . . 7.00 1-5, EACH. . 7.78
WITH ROOF MOUNT. As above, but with roof mount. 92 CX 047.6 or More, EACH. . . 6.38 1-5, EACH.... 7.09
high-LOW antenna Only. Less accessories. 5 lbs . 92 CX 016.6 or More, EACH. . . . 4.30 1-5, EACH.... 4.78

## $\star$ NEW UHF 4-BAY BOWTIE ANTENNA KIT

NET


WITH CHIMNEY MOUNT. Easily-installed 4-bay bowtie antenna kit. Includes: 2-$3-\mathrm{ft}$. masts; 3 woodscrew standoff insulators; 2 mast standoff insulators; $50-\mathrm{ft}$. of $300-\mathrm{ohm}$ twin line; lightning arrester; and antenna. Elements are $1 / 2^{\prime \prime}$ aluminum tubing. $121 / 2 \mathrm{lbs}$.
91 CU 833. 6 or More, EACH . . . 8.25 1-5, EACH . . 9.28
WITH ROOF MOUNT. As above, but with roof mount. 91 CU 834.6 or More, EACH. . . 6.98 1-5, EACH.... 7.76
4-BAY UHF BOWTIE ANTENNA ONLY. Wt., $51 / 2 \mathrm{lbs}$.
91 CU 835.6 or More, EACH. . . 4.33 1-5, EACH.... 4.81

## CONICAL ANTENNA KITS

NET
$\$ 33$$\star$ SINGLE-bAY WITH CHIMNEY MOUNT. Value-packed antenna kit for excellent reception on all VHF TV channels. Kit includes: Conical antenna; sturdy $5-\mathrm{ft}$. mast; $50-\mathrm{ft}$. of twin line; 2 mast standoff insulators; 4 wall standoff insulators; lightning arrester; chimney mount. Everything needed to make a complete, firstclass TV antenna installation is included at one low price. Shpg. wt., 7 lbs.
92 CX 174.6 or More, EACH . . . 5.70 1-5, EACH . 6.33

* SINGLE-BAY WITH ROOF MOUNT. Includes same antenna and accessories, but has all-angle roof mount instead of chimney mount.
92 CX 135. 6 or More, EACH. . . 5.57 1-5, EACH.... 6.19
$\star \star$ 2-BAY WITH CHIMNEY MOUNT. As above, but with 2-bay conical antenna to give added gain and sensitivity required for excellent near-fringe VHF reception. With $10-\mathrm{ft}$. mast. Shpg. wt., 10 lbs .
92 CX 173.6 or More, EACH. . . 8.95 1-5, EACH... 9.95
$\star \star 2$-bAY WITH ROOF MOUNT. As above, but with roof mount. Shpg. wt., 10 lbs .
92 CX 133. 6 or More, EACH. . . 8.64 1-5, EACH.... 9.60
$\star$ SINGLE-BAY ANTENNA ONLY. Less accessories. 3 lbs . 92 CX 136.6 or More, EACH. . . 2.88 1-5, EACH.... 3.20
STACKING KIT. For stacking two single-bay conicals to make a two-bay array. Shpg. wt., 8 oz.
97 CX 389. NET
64c
STACKING KIT. For stacking two 2-bay conicals to make a four-bay array. Shpg. wt., $11 / 4 \mathrm{lbs}$.
97 CX 387. NET.
1.70


## ALL-DIRECTION FM ANTENNA KIT NET

$\$ 784 \begin{gathered}\text { - Superb Reception } \\ \text { Ideal for } \mathrm{Hi}-\mathrm{Fi}\end{gathered}$
Top-quality FM antenna kit. Complete kit includes: rugged, $5-\mathrm{ft}$. mast; $50-\mathrm{ft}$. of 300 -ohm twin line; sturdy mounting base; 1 mast standoff insulator antenna; and all other necessary mounting hardware-at one low price. Provides uniform high gain from all directions-and eliminates need for a rotator. Ideal for locations where FM stations are received from many directions. Has excellent response across entire FM band. $71 / 4 \mathrm{lbs}$.
92 CX 583. 6-Up, EACH . . . . . . 7.06 1-5, EACH. . 7.84


## EMBASSY SERIES

Antenna-Clock. Combines the famous
"Embassy" indoor TV antenna and finest quality Sessions clock in one attractive unit. All-brass telescoping arms easily adjusted for optimum reception, features exclusive 12 -position dual control switch-eliminates or greatly reduces ghosts and interference. Satin-gold trim. With 6 ft . of twin line and $12-\mathrm{ft}$. AC cord. Size, $14 \times 4 \times 31 / 2^{\prime \prime}$. Clock operates from 110 120 v., 60 cycle AC. Shpg. wt., 3 lbs. 71 CX 538. Mahogany finish.
71 CX 542. Maple Walnut finish.
71 CX 571. Ebony finish.
71 CX 599. Ivory finish.
List Each, \$24.95. NET EACH.I3.92

Antenna Only. Extremely popular indoor antenna. Provides excellent reception in metropolitan areas. Exclusive 12 -position switch assures sharp clear pictures on all channels from 2 to 13 with a minimum of ghosts and interference. Four-section, all-brass telescoping arms provide the increased signal gain required for reception in unfavorable locations. Complete with 6 ft . of twin line. Size, $14 \times 4 \times 31 / 2^{\prime \prime} .21 / 2 \mathrm{lbs}$.
92 CX 066. Mahogany finish.
92 CX 574. Maple Walnut finish.
92 CX 067. Ebony finish.
92 CX 058. Ivory finish.
List Each, \$19.95. NET EACH. . 9.95

## REMBRANDT UHF-VHF SERIES

Deluxe indoor antenna featuring "radar loop" design plus all-angle telescoping dipoles. Delivers clear all-
 channel reception. Convenient 12 -position switch permits adjustment of antenna for maximum efficiencyhighly effective in eliminating ghosts and interference. "Radar" loops are inductively coupled to the telescoping dipoles. Dipoles and loops can easily be adjusted to provide best reception. Luminous numerals-easily visible in darkened room. Wide rectangular base prevents tipping. With twin lead. Shpg. wt., $31 / 2$ lbs. 92 CX 062. Model M-100. Mahogany finish.
92 CX 064. Model E-100. Ebony finish.
92 CX 065. Model I-100. Ivory finish.
List Each, \$16.95. NET EACH
9.95


## UHF-VHF "SPIRAL-TENNA"

Model 202. Here's a popular, wellengineered indoor antenna. Gives excellent gain over the entire UHFVHF bands (channels 2-83). Minimizes "ghosts" and interference. Requires no adjustment. Gold finish. Sturdy tip-proof base. Height 14"; width (span), $32^{\prime \prime}$. With 6 feet of 300 ohm twin lead. Shpg. wt., 2 lbs.
98 CX 449.1-5, NET EACH. . . . . . 5.85 6 or more, EACH. . . . . . . . . . . . . 5.26 Model 101 VHF. Similar to Model 202 but VHF only.
97 CX 391. 1-5, NET EACH. . . . . . 5.58
6 or More, EACH.
5.58

## VHF "V" ANTENNA KIT

Model 606. Carefully developed indoor TV antenna for outstanding performance on all channels, 2 through 13. Features the famous "Spiral-Tenna" helical element design. Engineered specifically for picture clarity and a minimum of interference. Just rotate for optimum reception-requires no other adjustment. Tip-proof base has rubber feet to protect set. Supplied knockeddown and ready for quick assembly. With 6 ft . of twin lead. Base, 4 x 6 x $11 / 2^{\prime \prime}$. Wt., 2 lbs.
92 CX 596. NET.

K-G DELTA-BEAM ANTENNAS


DELUXE UHF-VHF MODEL
An extremely efficient all-channel indoor antenna. Provides excellent reception on VHF channels 2-13 and UHF channels 14-83. Combines the engineering principles of the helix coil, folded dipole, straight dipole and delta-match transformer.
Features six-position switch-provides fingertip control for optimum reception on each channel. Switch matches line impedance and tunes antenna to match input of receiver. Also has additional switch which is highly effective in eliminating "ghosts". Double-rod telescoping dipoles. Can easily be adjusted to the length and angle which provides highest gain and best picture.
Strikingly smart gold finish. Tipproof, brown bakelite base has protective rubber pad to prevent marring finish of TV cabinet. Size, $9^{\prime \prime}$ high; each arm extends to $15^{\prime \prime}$. Supplied complete with 6 feet of twin line. Shpg. wt., $21 / 2 \mathrm{lbs}$.
92 C 013. 1-5, NET EACH...... . . 5.85
6 or More, EACH. . . . . . . . . . . . . . 5.26


UHF-VHF ANTENNA KIT
For the do-it-yourself fan-here is an economical, high gain, DeltaBeam indoor antenna in kit form. Easily, assembled without use of tools. Actually combines 4 antenna types-helix coil, folded dipole, straight dipole, and delta-match transformer. Helix coil is made of No. 10 aluminum wire. Elements are of $3 / 8^{\prime \prime}$ O.D. aluminum tubing. When assembled, arms can be swung out and locked in any position. All metal parts are finished in attractive anodized silver. Heavy, $9 / 16^{\prime \prime}$ thick, hardrubber base has felt flocked pad on bottom to prevent marring finish of TV set. Complete with 6 feet of twinline. Shpg. wt., $21 / 2 \mathrm{lbs}$.
92 C 011. NET.
3.63

## Indoor and Window TV Antennas



## TRICRAFT VHF ANTENNA KIT

 Highly efficient VHF indoor antenna for bringing in sharp, clear pictures in metropolitan areas. Carefully engineered helix coil, rigidly mounted on sturdy, mahogany plastic base. For all channels from 2-13. Minimizes "snow," "ghosts," and interference. Requires no adjustment. Tip-proof base. Height, $14^{\prime \prime}$; width (span), $32^{\prime \prime}$. Easy to assemble. Complete with $6-\mathrm{ft}$. length of $300-$ ohm twin-line, tipped with spade lugs, for quick, easy installation. Shpg. wt., 2 lbs.92 CX 126. NET.
4.41

TELCO "HIDE-A-WAY" VHF ANTENNA
Compact, plasticcased "Hide-AWay," antenna. Provides excellent all-channel metro-politan-area reception. Telescoping elements are made of durable, nickel-plated brass tubing. Elements are mounted on ball-joint swivels;
 rotate $360^{\circ}$ for excellent signal pickup from any direction. Case is completely concealed behind TV setall you see are the elements, which may be conveniently retracted. Elements are $37^{\prime \prime}$. Supplied complete with spade-lug-tipped 300 -ohm twin line. Shpg. wt., 1 lb .
92 C 029. 5 -section. NET. 1.88

## knight VHF ANTENNA

Here's a popular indoor television antenna at unusually low cost. Features efficient, timeproven "rabbit ear" design. For use on VHF channels from 2 to 13-quickly and easily adjusted for clear picture with a minimum of
 ghosts and interference. Also excellent for FM reception. Uses sturdy, 3 -section, brassplated telescoping elements for convenient adjustment to desired length. Bakelite base is weighted to prevent tipping. Felt padding on base protects TV set. With 3 ft . of 300 -ohm twin-line. Shpg. wt., 2 lbs.
92 CX 025 . NET.
I. 44

## QUALITY JFD ANTENNAS

## "MERLIN" UHF-VHF ANTENNA <br> - Convenient Back-of-Set Mounting <br> - 12-Position Rotary Selector Switch <br> - Elements Have Ball-Swivel Bases

Highly-efficient, fully-adjustable indoor an-tenna-provides excellent reception on both UHF and VHF channels in strong-signal areas. Features up-to-the-minute back-ofset design-mounts with only the rotary selector switch and elements in view. Employs smooth-working, 4 -section elements that adjust for best picture; each element is
 mounted on a ball-swivel to permit positioning for angle of optimum reception. $38^{\prime \prime}$ elements telescope conveniently out of sight when not in use. Large, easy-to-read dial has twelve positions to provide extra-sharp pictures and clear sound. Lustrous plastic construction blends well with the styling of any TV set. Attaches easily and securely to back of set with screws supplied. Includes 300 -ohm twin line with spade lugs attached and instructions. Shpg. wt., 1 lb .
92 C 572. Model L20. Mahogany. NET EACH.
92 C 573. Model L10. Blonde. NET EACH .
4.95

## "MAGIC GENIE" UHF-VHF ANTENNA

Smartly-styled UHF-VHF indoor antenna similar to the "Merlin" above, but with additional features. Employs a printed circuit unit for superior indoor performance. Offers choice of three methods of mounting-with wood screws, machine screws or special rubber adhesive pad. Pad allows pressing "Magic Genie" onto back of set for simple, secure installation. With twin line and instructions. Shpg. wt., 1 lb .
92 C 227. Model M G850. Mahogany.
92 C 228. Model MG650. Blonde.
92 C 229. Model MG750. Ebony.
NET EACH.

MODEL TA-147 UHF-VHF ANTENNA
Famous indoor antenna featuring smart styling and outstanding performance. Has high signal gain; minimizes interference and ghosts. Employs 6-position impedance matching switch; permits adjustment for maxi-
 mum efficiency on channel being received. Adjustable, 3 -section brass dipoles easily positioned for clearest picture. Base is weighted to prevent tipping. Has felt pad; will not mar finish. Includes 5 ft . of 300 -ohm twin line and spade lug terminals for quick attachment to TV set. Shpg. wt., 2 lbs.
92 CX 124. NET.
3.24
"SONATA" UHF INDOOR ANTENNA Model TA-149. Carefully constructed indoor antenna for excellent reception on channels 14 to 83-combines twin-bowtie dipoles and a screen reflector for superior pic-
 ture clarity. Can be used in any strong-signal area. Interesting design accents the decorative mode of any room. Attractively finished in gold anodizing and jet-black satin enamel. Has tipproof base with four extremely short legs. Supplied complete with $300-$ ohm twin lead, tipped with spade lugs for quick connection to TV set. Overall HWD is $12 \times 12 \times 6^{\prime \prime}$. Shpg. wt., 2 lbs.
92 CX 598. NET.

## MODEL C119 VHF WINDOW ANTENNA

Low-cost, all-aluminum conical window antenna for strong-signal areas. Ideal for apartment buildings, hotels, etc., or wherever roof-top installations are not practical. Easily fits on outer frames of most windows -adjustable from $32^{\prime \prime}$ to $42^{\prime \prime}$ in width. Antenna can be adjusted to proper position for best reception. With mounting hardware-ready for quick, convenient installation. Less 300 -ohm twin line for connection to TV set. Shpg. wt., 7 lbs.


97 CX 084. NET.
5.26

EASY－TO－INSTALL TV ANTENNAS CONSTRUCTED OF ALCOA ALUMINUM

－For up to 150 Miles！ －New 28－Element Design
Deluxe antenna for superior VHF TV reception in deep－ fringe areas－shrinks the miles．Features sharp direc－ tivity，very high gain and wide vertical beamwidth． Extremely rugged construc－ tion minimizes the effects of high winds，storms and heavy icing．Super－sensitive 28 －ele－ ment array employs a spe－ cial helical highband sec－ tion，plus，＇balanced sleeve dipole＂design．Gain is essentially flat， averaging 10 db on high bands and 6 db on low bands．Sharp direc－ tivity contributes to better ghost interference rejection－front－to－ back ratio is from 15 to $25: 1$ on low bands and from 16 to $25: 1$ on high bands．Wide vertical beamwidth assures maintainence of gain in mountainous terrain．All long elements are reinforced with alu－ minum dowels．Heavy－duty tandem U－bolt assembly locks boom to mast－boom has two $1^{\prime \prime}$ tubular braces for extreme rigidity．Anten－ na is completely pre－assembled－just flip elements into heavy lock－ ing brackets．Less mast and 300 －ohm twin line．Shpg．wt．， 15 lbs． 91 CZ 821．List，\＄47．50．NET．．
27.93

大丈大MODEL AX711 GOLD－ANODIZED＂STAR HELIX＂

－Narrow Beam Width
－Good High－Band Gain Provides an extremely high front－to－back ratio for ex－ cellent rejection of unde－ sired signals．Delivers top performance on all VHF channels in semi－fringe areas －can also be used in strong－ signal UHF areas．Has a hard gold－anodized surface for resistance to tarnish and corrosion．Long elements are reinforced with aluminum dowels－heavy－gauge boom is full $1^{\prime \prime}$ square．Designed for reduced wind resistance and ice loading． Antenna is completely pre－assembled－just flip elements into grip－ locking brackets．Constructed of rugged，solid－drawn aluminum． Less mast and 300 －ohm twin line．Shpg．wt．， 8 lbs．
91 CZ 822．List，\＄29．95．NET．
17.61
$\star \star \star$ Model AX711S．Same as AX711 above，except two bays for higher gain．Requires 10 －ft．mast．Shpg．wt．， 16 lbs．
91 CZ 823．List，\＄61．50．NET
36.16

Model SX711．Same as AX711，but without gold anodizing．
92 CZ 113 ．List，$\$ 25.50$ ．NET．．．．．．．．．．．．．．．．．．．．．．．．．
92 CZ 1 12．List，$\$ 52.50$ ．NET．
14.99
30.87

－ 1 ＂－Square Heavy－W all Boom
High－performance stacked array for ex－ cellent fringe－area VHF reception－ may also be used for local UHF recep－ tion．Provides exceptionally high gain on TV channels 2 to 13．Dual reflectors pro－ vide flat response on low channels．Driven elements are of conical shape for greatest bandwidth．Each high－band section con－ sists of 2 driven elements and 2 directors －spaced and phased for peak perform－ ance．Entirely pre－assembled－just flip elements into place．Heavy－gauge brack－ ets tightly grip elements．Long elements are reinforced with heat－treated，alumi－ num dowels to withstand high winds and icing．Extremely rugged aluminum booms are of one－inch－square heavy－wall aluminum．Supplied complete with quarter－wave stack－ ing bars．Less mast and $300-\mathrm{ohm}$ twin line．Requires $10-\mathrm{ft}$ ．mast． Shpg．wt．， 14 lbs．
98 CZ 4665．List，\＄28．45．NET．
16.73
$\star \star$ Model JET213．Similar to JET213S above，but single－bay． Shpg．wt．， 7 lbs．
98 CZ 464．List，\＄13．87．NET．
8.15
$t \rightarrow+t$ MODEL AX811 GOLD－ANODIZED＂WONDER HELIX＂

－Sharp Polar Gain Pattern －Rugged，Streamlined Design High－gain，broadband antenna designed especially for deep－ fringe areas．Exclusive helix helps create a sharp forward polar pattern to reject interfer－ ing signals－uniformly flat gain on channels 2 to 13 ．Gold－ano－ dizing provides an extremely hard surface with high resist ance to tarnish and corrosion－ assures long，trouble－free opera－ tion．Streamlined design，plus heavy，drawn－aluminum construction and aluminum element－doweling minimizes the effects of ice load－ ing and high winds．Shipped preassembled－just flip elements in place．Antenna can also be used in strong UHF signal areas．Less mast and 300 －ohm line．Shpg．wt．， $81 / 2$ lbs．
91 CZ 826．List，\＄44．50．NET．
26.17

Model AX811S．Same as AX－811 above，except two bays for higher gain．Requires $10-\mathrm{ft}$ ．mast．Shpg．wt．， 17 lbs．
91 CZ 827．List，\＄92．50．NET．
54.39

Model WX811．Same as AX811，but without gold anodizing．
92 CZ 195．List，\＄39．50．NET．
23.23

Model WX811S．Same as AX811S，but without gold anodizing．
92 CZ 282．List，\＄82．50．NET．

## SERIES 500 ＂FIREBALL＂GOLD ANODIZED ANTENNAS AND ANTENNA KITS


$\star \star$ MODEL AB500 ANTENNA
－Extremely Rigid Construction
－Minimum Ghost and Noise Pickup Expertly engineered broadband array for su－ perior semi－fringe VHF and local UHF cover－ age．Offers extremely high gain on both low and high VHF TV bands．Separate folded di－ poles for low and high bands with individual reflectors and directors give high directivity and reffectors and directors give high directivity and excellent front－to－back ratio．Tough gold－ano－ rosion resistance．Lightweight construction sim－ plifies installation on high towers．Aluminum phasing harness prevents weather breakdown． Has $15^{\prime \prime}$ aluminum dowels in the center of every element over $30^{\prime \prime}$ long to minimize the effects of icing and high winds．Completely pre－assembled along a rugged $1^{\prime \prime}$－square boom－ just flip elements into place．Large brackets grip elements securely．Less mast and 300 －ohm twin line．Shpg．wt．， $51 / 2 \mathrm{lbs}$ ． 91 CU 828．List，$\$ 21.50$ ．NET
12.64
$\star \star \star$ Model AB500S．Same as AB500 above， except two bays for higher gain．Requires $10-$ ft．mast．Shpg．wt．， 11 lbs．
91 CU 829．List，\＄47．00．NET． $\qquad$ 27.64

Model FB500．Same as AB500，but less anodizing． 92 CU 122．List，$\$ 15.30$ ．NET．．．．．．．．． 9.00 Model FB500S．Same as AB500S，less anodizing． 92 CU 123．List，\＄32．95．NET．．．．．．．． 19.37
＊ $\boldsymbol{*} \boldsymbol{*}$ MODEL AB500CH ANTENNA KIT
－A Complete Kit－Nothing Else To Buy
－Quick，Easy Installation
Here＇s an economical，convenient＂kit with everything you need for a complete＂Fireball＂ TV antenna installation．Quickly and easily installed to provide long，trouble－free perform－ ance．Includes the outstanding AB500 gold－ anodized＂Fireball＂antenna described at left， a rugged gold－anodized mast，a corrosion－re－ sistant steel chimney mount， 50 feet of poly－ ethylene twin line and a set of stand－off insulators． Mast is 4 ft ．long and $13 / 16^{\prime \prime} \mathrm{O} . \mathrm{D}$ ．－made of heavy－gauge aluminum for extreme rigidity． Has hard gold－anodized surface that assures dependability under severe conditions of dirt， salt，spray，etc．Completely pre－assembled＂snap fit＂chimney mount is made of durable galvan－ ized steel with stainless steel straps．Mounting bracket has no hardware－mast quickly snaps into heavy mounting jaws．Each of the two mounting straps is $1443 / 4^{\prime \prime}$ long by $.015^{\prime \prime}$ thick． Mount fits chimneys with perimeters of up to 10 ft ．Insulator set includes four $31 / 2^{\prime \prime}$ wood－screw stand－offs，one $7^{\prime \prime}$ wood－screw stand－off and two mast stand－offs．Shpg．wt．， 10 lbs. 91 CU 830．List，$\$ 34.95$ ．NET．．

FB500CH．Complete＂Fireball＂antenna kit as above，but less gold anodizing．
91 CU 83 1．List，\＄29．95．NET
.17 .61


## "BALINE" YAGI ANTENNAS

Yagi type antennas offer extremely high gain characteristics and exceptionally sharp directivity for maximum signal reception in deep fringe areas. Antennas listed below are completely pre-assembled for quick, easy installation. All feature rustproof, seamless aluminum crossarms with 1" O.D. Low band types (channels 2 through 6) have " $Y$ " support for added rigidity. Yagi type television antennas may be stacked for even greater signal gain by using specified harnesses, listed below. Less mast and 300 -ohm twin line.
(A) $\star \star \star \star$ SINGLE CHANNEL 10-ELEMENT TYPES. Provide $52 \%$ more signal gain than conventional 5-element type yagis. Very sharp directivity. Y-type support strengthens boom-reduces swing and sway; provides steadier TV pictures. Av. shipg. wt., 9 lbs.

| No. | Type | Chan. | List | EACH |
| :---: | :---: | :---: | :---: | :---: |
| 98 CU 231 | 10 Y 2 | 2 | \$27.80 | 16.35 |
| 98 CU 232 | $10 Y 3$ | 3 | 26.35 | 15.50 |
| 98 CU 233 | 10Y4 | 4 | 24.30 | 14.29 |
| $98 . \mathrm{CU} 234$ | $10 Y 5$ | 5 | 24.30 | 14.29 |
| 98 CU 235 | 10 Y 6 | 6 | 21.55 | 12.67 |
| 98 CZ 236 | 10 Y 7 | 7 |  |  |
| 98 CZ 237 | $10 \mathrm{Y8}$ | 8 |  |  |
| 98 CZ 238 | $10 Y 9$ | 9 |  |  |
| 98 CZ 239 | 10 Y 10 | 10 | 11.95 | 7.03 |
| 98 CZ 240 | 10 Y 11 | 11 |  |  |
| 98 CZ 241 | 10 Y 12 | 12 |  |  |
| 98 CZ 242 | 10 Y 13 | 13 |  |  |

(B) $\star \star \star$ SINGLE CHANNEL 5-ELEMENT B TYPES. Wide-spaced, single-driven-element yagis. Consists of 3 directors, 1 reflector and 1 folded dipole. Av. shpg. wt., 5 lbs.

| No. | Model | Chan. | List | EACH |
| :---: | :---: | :---: | :---: | :---: |
| 98 CZ 322 | 5 Y 2 | 2 | \$13.75 | 8.08 |
| 98 CZ 323 | 5 Y3 | 3 | 13.05 | 7.67 |
| 98 CZ 324 | ${ }_{5}^{5 Y} 4$ | 4 | 12.35 | 7.26 |
| 98 CZ 326 | 5 Y 5 | 5 | 11.40 | 6.70 |
| 98 CZ 327 | 5Y6 | 6 | 10.70 | 6.29 |
| 98 CZ 328 | 5 Y 7 | 7 | 6.50 | 3.82 |
| 98 CZ 329 | 5 Y 8 | 8 |  |  |
| 98 CZ 331 | 5 Y 9 | 9 |  |  |
| 98 CZ 332 | 5 Y 10 | 10 |  |  |
| 98 CU 333 | 5 Y 11 | 11 |  |  |
| 98 CZ 334 | 5 Y 12 | 12 |  |  |
| 98 CZ 335 | 5 Y 13 | 13 |  |  |

CASCODE MULTI-CHANNEL TWIN-DRIVEN TYPES. Offer high-gain coverage of all lowband or all high-band channels with a single antenna. Uni-directional response.
[A] $\star \star \star$ MODELIOY26.10-element"Baline" for channels 2-6. Wt. 9 lbs .
98 CZ 455. List, \$37.50. NET. . . . 22.25
(A) $\star \star \star$ MODEL10Y713.10-element"Baline"
for channels 7-13. Wt., 9 lbs.
98 CZ 459. List, \$15.95. NET. ..... 9.38
B $\star \star$ MODEL 6Y26.6-element wide-spaced "Baline" for channels 2-6. Excellent performance in areas of medium signal strength. Shpg. wt., 7 lbs .
98 CZ 450. List, \$21.15. NET...... I2. 44

## BALINE STACKING HARNESSES

Matching harnesses for stacking any of 5 and 10 -element yagi antennas (above and left) for extra gain. *For Types 10Y26 and 5Y26; ffor 10 Y713. Av. shpg. wt., $1 / 2 \mathrm{lb}$.

| No. | Type | For Ch. | EACH |
| :---: | :---: | :---: | :---: |
| 92 CX 253 | YT2 | 2 | 1.03 |
| 92 CX 254 | YT3 | 3 |  |
| 92 CX 255 | YT4 | 4 |  |
| 92 CX 256 | YT5 | 5 |  |
| 92 CX 257 | YT6 | 6 |  |
| 92 C 258 | YT7 | 7 | . 73 |
| 92 C 259 | YT8 | 8 |  |
| 92 C 260 | YT9 | 9 |  |
| 92 C 261 | YT10 | 10 |  |
| 92 C 262 | YT11 | 11 |  |
| 92 C 263 | YT12 | 12 | . 73 |
| 92 C 264 | YT13 | 13 | . 73 |
| 92 CX 265 | *J175 | 2-6 | 1.76 |
| 92 C 266 | $\dagger J 178$ | 7-13 | . 88 |

## QUALITY VHF ANTENNAS

[ $\star$ MODEL Q800. Vee-Beam antenna-covers channels from 2 to 13. Engineered for increased gain, especially on high band. "Quick-Rig"' pre-assembled design for rapid, easy installation-entire array slides out of package readily for flip-assembly; elements automatically lock in place. Simply slip each section of the antenna in place; mechanical grooves and locks secure them permanently. Features corrosion-proof, aircraft aluminum construction throughout. Supplied with $1 / 2^{\prime \prime}$ boom. Includes built-in lightning arrestor. Less mast and 300 -ohm twin line. Shpg. wt., $31 / 2 \mathrm{lbs}$.
98 CU 166. List, \$6.25. NET.
3.67
$\star \star$ MODEL Q801. Stacked Vee-Beam-two bays provide additional 3 db gain. Includes half wavelength, mast-supported jumper harness for 300 ohm impedance match. Gives excellent reception in metropolitan-suburban areas and in near-fringe localities. Its high sensitivity and sharp directivity delivers clear, steady pictures. Less mast and 300 -ohm twinline. Shpg. wt., 7 lbs.
98 CZ 167. List, \$13.50. NET.
7.94

## UHF AND VHF-UHF ANTENNAS

(D) $\star$ UN105. UHF-VHF antenna for D channels 2 to 83. 4-bay for extra gain and signal sensitivity for semi-fringe areas. Features Redwood crossarms. Preassembled. Simply swing sections open and tighten. Has anti-rust, anti-corrosion, all-aluminum elements. Less 300 -ohm line and mast. Wt., $51 / 2 \mathrm{lbs}$.
92 CU 107. List, $\$ 10.95$. NET.... . 6. 44
[E] $\star$ MODEL UHF202. 4 bay, UHF bowE tie antenna for suburban areas. Reflector for high gain on all channels and reduction of snow and troublesome rereduction of snow and troublesome reflections. Features "Custom-Channel" channels for optimum response. Precision spaced elements and phasing harness for maximum gain. Galvanized grid wire screen with $1 / 8^{\prime \prime}$ O.D. solid aluminum rods. Preassembled for fast installation. Less mast and twin line. Shpg. wt., 6 lbs.
92 CX 151 . List, $\$ 9.95$. NET.
5.70

F $\star \star$ MODEL UHF208. 8-bay, UHF bowtie antenna for semi-fringe area reception. Utilizes wire mesh reflector and matched elements to provide optimum gain on all channels. Rigidly constructed; solid aluminum rods and galvanized screen. Preassembled for simplified, rapid installation. Less mast and 300 -ohm twin line. Shpg. wt., 8 lbs.
92 CX 550. List, \$25.95. NET... .
15.26

G $\star \star \star$ MODEL UHF212. 12 bay, UHF bowtie antenna for fringe area reception. Designed to provide extremely high gain over all channels. Screen is engineered for efficient shielding of conical sections. Provides sharp directivity; greatly reduces interference. Pre-assembled for quick, easy installation. Less mast and 300 -ohm twin ine. Shpg. wt., 10 lbs.
92 CU 551. List, \$34.50. NET.. . . 20.29
H $\star$ MODEL UHF410. UHF corner reflector $H$-provides excellent suburban reception. The high front-to-back and front-to-side ratio minimizes co-channel and adjacent channel interference and ends "ghosts.
The twin-angled multi-grid reflectors trap maximum signal strength and reflect it back onto the bowtie dipole with greatly increased intensity. Features extremely sharp directivity. The bowtie dipole provides optimum beam width for maximum gain. Rigidly constructed of solid, lightweight, rust and corrosion resistant aluminum.
Flips open like a book for quick, easy installation. Less mast and 300 -ohm twin line. Shpg. wt., 6 lbs.
92 CX 152 . List, $\$ 9.25$. NET.

# Finney Fringe Area TV Antennas 



## TWIN-DRIVEN "GEOMATIC" VHF ANTENNAS

- High Front-to-Back Ratio From 2-d 3
- Preassembled for Easy Installation
- High Gain-Sharp Directivity
$\star \star \star \star$ Model GB-8. Gold-anodized, deluxes twin-driven "'Geomatic" antenna-provides topnotch performance in deep-fringe areas. Special gold-anodizing process renders surface more resistant to weather and corrosion-effectively lengthens useful life of antenna. Features 3 directors and 2 reflectors for maximum front-to-back ratio and extremely high directivity Very effective in eliminating co-channel interference and ghosts. Ideally suited for color TV "reception-has extremely flat response; less than 1 db variation across any channel. All "Geomatic" antennas have twin-driven elements and exclusive "fidelity phasing"; selflocking and self-aligning construction. Oversize, extra-heavy-gauge aluminum boom plus "lock-tite, no-tilt" saddle bracket assure fast installation and high strength. "Box girder" element brackets prevent bent, twisted, out-of-position elements. Less mast and twin line. Shpg. wt., 10 lbs. Shipped by express or truck only.
92 CZ 594. List, $\$ 45.95$. NET. $\qquad$ 27.02
$\star \star \star \star$ Model B-8. Same as above, without gold anodizing. 10 lbs . Express or truck.
92 CZ 085. List, \$37.50. NET
22.05
$\star \star \star \star$ Model B-7. Has same features as Model B-8 above, except with 1 reflector. Shpg. wt., $61 / 2$ lbs. Shipped by express or truck only.
92 CZ 093. List, \$24.90. NET $\qquad$
$\star \star \star$ Model B-6. Has same features as Model B-8 above, except has 1 reflector and 1 director. Shpg. wt., $51 / 2$ lbs. Shipped by express or truck only.
92 CU 094. List, $\$ 18.90$. NET
11.11


## SINGLE-DRIVEN "GEOMATICS"

All of the antennas listed below incorporate "fidelity-phasing" for extreme efficiency on both high and low VHF bands. Ruggedly constructed and completely preassembled. Not mailable; shipped by express or truck only -see page 442 for details.
$\star \star \star \star$ Model B-5. Highly efficient super fringe antenna. Shpg. wt., $91 / 2 \mathrm{lbs}$.
92 CZ 074. List, $\$ 32.00$. NET..
18.82
$\star \star \star$ Model B-4. Ideal for fringe areas. High gain; sharp directivity. 6 lbs.
92 CU 076. List, \$17.50. NET..... IO. 29
$\star \star \star$ Model B-3. For suburban-fringe areas. A top performer. Wt., 5.lbs.
92 CU 078. List, \$13.50. NET. . . . . .7.94
$\star \star$ Model B-2. Metropolitan, suburban or semi-fringe areas. Shpg. wt., $31 / 2 \mathrm{lbs}$.
92 CU 082. List, $\$ 7.35$. NET. . . . . . 4. 32
$\star \star \star \star$ Model F4. A super-fringe VHF antenna with exclusive "Fidelity-Phasing." This antenna engineering discovery produces superior combined performance on all VHF channels from 2 through 13. Excellent reception even at locations extremely distant from TV stations. Highly suitable for color-TV reception-has very flat frequency response; less than 1 db variation in frequency response on any channel. 4 driven low-band, in-phase folded dipoles, plus 12 driven high-band, in-phase, folded dipoles form a highly effective colinear array.
Fidelity phasing accomplishes both low band dipole and high band colinear operation without complicated phasing harnesses. Extremely high sensitivity and directivity. Rugged, lightweight, aluminum construction. Preassembled for quick, simplified installation. Less mast, 300 -ohm twin line. Wt., 13 lbs. Express or truck.
92 CZ 072 . List, $\$ 46.00$. NET.. .... 27.05

## STACKING KITS

Model A. For stacking all Series B antennas above and at left. Gives increased gain on Chs. 4, 6-12 with Model B-4; Chs. 4-6, 8 13 with Model B-5; Chs. 3, 7-13 with Models B-6, B-7; Channels 7 through 13 on all other models. Shpg. wt., 8 oz.
92 C 086 . List, $\$ 2.00$. NET. $\qquad$ I. 18

Model B. Stacks Models B-2, B-3, B-4, B-5. Boosts Chs. 2-6 with Model B-2; Chs. 2-6, 13 with Model B-3; Chs. 2-6, 12, 13 with Model B-4; Chs. 3-8, 13 with Model B-5. Shpg. wt., 12 oz.
92 CX 075 . List, $\$ 2.50$. NET $\qquad$ . 1.47
Model C. For stacking GB-8, B-8, B-7, or B-6 antennas. Gives increased gain on Chs. 2-6 with Model B-6; Chs. 2-6, 11-13 with Model B-7; Chs. 2-6, 10-13 with Models B-8 and GB-8. Shpg. wt., 1 lb .
92 CX 087. List, \$3.00. NET .
I. 76


344
$\star \star \star \star$ Model B-66-A. Deep fringe antenna featuring very great front-to-back ratio and high gain on all channels. This is achieved through the use of Finney's famous "Fidelity Phasing" and coaxially dual-tuned folded dipoles. Incorporates coaxial capacities which causes dipole to operate as one length on low-band signals and as electrically different length on high-band signalsprovides peak performance on both bands. "'Fidelity phasing"' efficiently combines the low-band folded dipole operation and highband 3-element colinear operation without complicated phasing harnesses. Low-band reflector, high-band colinear reflector and combination director further increase gain and sharpness of directivity. Completely preassembled. Less mast and twin line. Wt., 10 lbs. Express or truck.
92 CU 568. List, $\$ 39.80$. NET. . . 23. 40
Model B-66-C. For maximum F/B ratio on channels 2 and 3, and maximum gain on 2-6. Wt., 10 lbs. Express or truck. 92 CU 569 List $\$ 40.80$

CO-LATERAL UHF-VHF ANTENNAS


## MODEL 400-A ANTENNA

$\star \star \star \star$ This highly efficient deep-fringe double-co-lateral antenna provides outstanding reception on all UHF and VHF channels. It features 32 driven elements which achieve remarkably high gain, extremely sharp directivity, and superior sig-nal-to-noise ratio. Permits excellent reception on VHF channels at distances of 125 miles and more under average receiving conditions. Antenna's lightweight construction simplifies installation on high towers and masts-weighs only 8 lbs. Extremely rugged and weather resistant. All element brackets have aluminum "Box Girder" construction; self-locking and self-aligning to prevent bent, twisted, out-of-position elements. Also features oversize, extra heavy gauge aluminum boom. Has high resistance to wind and ice load damage. Ideal for use with a rotator in fringe areas. Only one lead-in required for both UHF and VHF reception (tubular type recommended). All-aluminum construction with stainless steel hardware for rust-free durability. Preassembled for convenient installation. Requires $10-\mathrm{ft}$. (minimum) mast. Less mast and 300 -ohm twin line. Shpg. wt., 12 lbs. Express or truck. 97 CZ 104. List, $\$ 42.00$. NET..... 24.70
Model 14-S "Fro-Bac" Screen Reflector Kit. For use with Model 400 or Model 400-A antennas to provide increased gain and front to back ratio. Includes the "Fro-Bac" screen (see $400-\mathrm{SA}$, below) and stainless steel hardware for simple, convenient conversion. 80 sq . ft . of reflector surface. 5 lbs .
98 CU 389. List, \$15.00. NET.
8.82


## MODEL 400-SA ANTENNA

$\star \star \star \star$ This antenna is the same as Model 400-A described above, but supplied with "Fro-Bac" full dimensional screen reflector. This special screen results in maximum signal gain plus extremely high front-to-back ratio. Eliminates unwanted rear signal interference and ghosting in fringe areas. Antenna and "Fro-Bac' dimensional screen are both preassembled as one unit ready for quick and easy installation. Reflector screen elements are full length- 80 sq. ft. of highest efficiency reflector surface. Designed for minimum wind resistance and maximum strength. Requires 10 ft . mast. Less mast and 300 -ohm twin line. Shpg. wt., $161 / 2$ lbs. Express or truck.
98 CZ 388 . List, $\$ 54.50$. NET.
32.05

# Fringe and Semi-Fringe TV Antennas 

FAMOUS FINNEY "GEOMATIC" TV ANTENNAS


H-10 SINGLE-CHANNEL ANTENNAS
$\star \star \star \star$ Customized 10 -element yagi. "Geomatic" VHF TV antennas. Provide maximum gain, sharp directivity, and high frontmum gain, sharp directivity, and high front-to-back ratio in deep fringe areas. New,
solid-rod construction for up to $300 \%$ greater wind and ice-load resistance. Preassembled; "box girder" brackets; heavy, square aluminum boom; solid aluminum elements, and saddle brackets. Less mast and 300 -ohm line. Av. shpg. wt., $41 / 4$ lbs.

| Stock No. | Model | For |
| :--- | :--- | :--- |
| 92 CU 552 | $\mathrm{H}-10-7$ | Channel 7 |
| 92 CU 553 | $\mathrm{H}-10-8$ | Channel 8 |
| 92 CU 554 | $\mathrm{H}-10-9$ | Channel 9 |
| 922 CU 555 | $\mathrm{H}-10-10$ | Channel 10 |
| 92 CU 556 | $\mathrm{H}-10-11$ | Channel 11 |
| 92 CU 557 | $\mathrm{H}-10-12$ | Channel 12 |
| 92 CU 558 | $\mathrm{H}-10-13$ | Channel 13 |

List, \$9.95. NET EACH. . 5.85
$\star \star \star \star$ Model H-10-713. New, twin-driven 10 -element yagi. Similar to above, but covers channels $7-13.43 / 8$ lbs.
92 CU 559. List, $\$ 12.95$. NET.
7.61

## H-5 SINGLE-CHANNEL ANTENNAS

$\star \star \star$ Popular, 5 -element, high-band VHF antennas. Have famous "Geomatic" design for high gain and clean directivity. Same superior construction as Series $\mathrm{H}-10$; feature new solid-rod aluminum elements. Av. shpg. wt., $21 / 2 \mathrm{lbs}$.

| Stock No. | Model | For |
| :---: | :---: | :---: |
| 92 CX 560 | H-5-7 | Channel 7 |
| 92 CX 561 | H-5-8 | Channel 8 |
| 92 CX 562 | H-5-9 | Channel 9 |
| 92 CX 563 | H-5-10 | Channel 10 |
| 92 CX 564 | H-5-11 | Channel 11 |
| 92 CX 565 | H-5-12 | Channel 12 |
| 92 CX 566 | H-5-13 | Channel 13 |
| List, \$6.65. NET EACH ................. . 3. 91 $\star \star \star$ Model H-6-713. New, twin-driven 6element yagi. Similar to above, but covers |  |  |
|  |  |  | element yagi. Similar to above, but covers channels $7-13.23 / 4 \mathrm{lbs}$.

92 CX 567. List, \$8.75. NET $\qquad$ 5.14

Model A Stacking Kit. For all Finney Series H antennas above. Shpg. wt., 8 oz.
92 CX 086 . List, $\$ 2.00$. NET.
"GEOMATIC" LOW-BAND ANTENNAS
$\star \star \star \star$ "Customized" Series L "Geomatic" television antennas for outstanding "deep fringe" reception on the low-band channels. Model L-26 covers the entire low band; all others cover specific portions.
All have very high gain, sharp directivity plus high front-to-back ratio. Pre-assembled design to reduce installation time. May be stacked to achieve higher gainsee Model C Stacking Kit. Less mast and 300 -ohm twin line. Av. shpg. wt., $81 / 2 \mathrm{lbs}$.

| Stock No. | Type | Channels |
| :---: | :---: | :---: |
| 92 CZ 283 | L-26 | $2-6$ |
| 92 CZ 284 | $\mathrm{~L}-25$ | $2-5$ |
| 92 CZ 285 | $\mathrm{~L}-24$ | $2-4$ |
| 92 CZ 286 | $\mathrm{~L}-36$ | $3-6$ |
| 92 CZ 287 | $\mathrm{~L}-35$ | $3-5$ |
| 92 CZ 288 | $\mathrm{~L}-46$ | $4-6$ |
| 92 CZ 289 | $\mathrm{L}-45$ | 4 and 5 |

List, \$23.95. NET EACH................|4. 08 Model C Stacking Kit. For all Finney Series L antennas above. Shpg. wt., 1 lb . 92 CX 087. List, $\$ 3.00$. NET.

## TACO BROAD-BAND VHF ANTENNAS

Has
Five
Driven
Elements


## MODEL 1890 "SUPER-TRAPPER"

$\star \star \star \star$ Unique, multi-driven antenna for outstanding performance in deep-fringe areas. Provides high uniform gain on all channels. Features 5 driven elements operating with equal efficiency on both high and low bands. Signal energy of all 5 drivers is always combined in phase regardless of channel being received on TV set. Extremely high front-to-back ratio effectively minimizes co-channel interference.
Has tough aluminum alloy construction and sturdy $11 / 4^{\prime \prime}$ diameter crossarm for long life. Low-loss fiberglas insulators. Easy to in-stall-elements snap into place without tools. Less mast and 300 -ohm twin line. Shpg wt., 9 lbs.
92 CZ 030 . List, \$34.50. NET. . . . . 20.29
Stacking Kits. For providing extra high-band gain or extra low-band gain. Each kit stacks two 1890 antennas.

| Stock No. | Type | Description | Wt. | NET |
| :--- | :--- | :--- | :--- | :--- | $92 \mathrm{CX} \mathrm{031} \frac{1892}{\text { hi-band gain } 1 / 4 \mathrm{lb} .-\frac{1}{.88}}$




## GOLDEN TOPLINER ANTENNAS

$\star \star \star \star$ Model G2570. "Gold-anodized", high-gain antenna for peak reception in deep-fringe areas. Features "power-pack" feed circuit and new "paddle" dipoles. 5 driven elements operate with equal efficiency on all VHF channels; give high gain and uniform response. Sharp directivity minimizes ghosts and interference. Extremely high front-to-back ratio. 15-dip anodizing of aluminum elements reduces effects of salt air, soot, etc. Proven design withstands severe winds and icing. Uses spring-loaded tension-booster locks-elements snap into place without tools. Less mast and 300 -ohm twin line. Shpg. wt., 10 lbs. By express or truck.
71 CZ 681. List, \$43.95. NET. . . . . 25.84
$\star \star \star \star$ Model 2570 . Similar to above, less gold anodizing.
92 CZ 296. List, \$36.75. NET....... . 21. 61
$\star \star \star$ Model G2560. Excellent all-channel VHF TV antenna designed for fringe-area reception up to 75 miles. Employs 6 working elements on the low bands and 13 on the high for full uniform response. Has exclusive phase delay line for improved impedance match to transmission line. Efficient "paddle" type dipoles and "power-pack" feed circuit also assure highest performance. Rugged, aluminum alloy material withstands high winds and ice loads. Elements are all 15-dip gold "anodized" to prevent corrosion. Has spring-loaded tension booster locks-elements snap into place for easy assembly. Less mast and twin line. Shpg. wt., 7 lbs. By express or truck.
71 CZ 682. List, $\$ 29.95$. NET $\qquad$ .17 .61
$\star \star \star$ Model 2560. Similar to above less gold anodizing.
71 CZ 683. List, \$25.75. NET. . . . . . . 15.14

## "TOPLINER" ANTENNAS

92 CX 298. For stacking two G2570, G2560, 2570 or 2560 antennas for extra gain on channels 2-6. Wt., $1 / 2 \mathrm{lb}$. NET.. 1.76

## ANTENNA INSTALLATION KIT

3-Mast Kit. Provides needed installation accessories for use with any TV antenna. Every item supplied in kit is of top-quality construction. Mast sections are galvanized to resist corrosion. Includes everything needed for quick and easy installation of any antenna-perfect for service crews, etc. Contains: 3-3' mast sections; 100 of $300-$ ohm, flat twin-line; 1-lightning arrester; 2-mast standoffs; 5-screw-type standoffs; and $10^{\prime}$ ground wire. Shpg. wt., $73 / 4 \mathrm{lbs}$. 71 CX 687. NET
2.98

## STACKING HARNESSES FO

92 CX 297. For stacking two G2570, G2560, 2570, or 2560 antennas for extra gain on channels $7-13$. Wt., $1 / 2 \mathrm{lb}$. NET. . . . . 88 c

## DAVIS UHF-VHF ANTENNA

$\star \star \star \star$ Model SV-ZR-1 "Zig-Rig." For superior fringe area VHF reception; excellent UHF reception in primary signal areas. Delivers 12 db or more average gain on high channels. Features electronic dipole separators. With 2 sets of matching harness-permits peaking antenna on weakest channel and still maintain excellent all-channel coverage. Partially preassembled. Less mast and 300 -ohm line. Shpg. wt., 12 lbs . By express or truck.
92 CZ 210 . List, $\$ 29.95$. NET.
.17 .61 Model SK-1 Stacking Kif. For horizontal or vertical stacking of SV-ZR-1. $11 / 2$ lbs.
51 CX 054. List, \$3.25. NET
.I. 91


## Amphenol and Walsco TV Anfennas

HIGHLY EFFICIENT VHF \＆UHF AMPHENOL ANTENNAS


114－005

## 太INLINE VHF ANTENNA

Model 114－005．Covers all 12 VHF chan－ nels．Ideal for metropolitan and suburban use．Unusually broad frequency response． Uni－directional pattern and excellent im－ pedance match on high and low－bands re－ duces stray reflections and＂ghosts．＂ Antenna elements constructed of sturdy aluminum tubing．Mast is heavy－gauge steel． Unique design permits large folded dipole （for $54-88 \mathrm{mc}$ band）to operate as reflector for the smaller dipole（ $174-216 \mathrm{mc}$ band）． Includes one $5^{\prime} x^{3} / 4^{\prime \prime}$ mast，guy ring，mount－ ing bracket，hardware，stand－off insulators， 75 feet of high－quality 300 －ohm twin line， and easy－to－follow installation instructions． Shpg．wt．， 7 lbs．Express or truck only． 97 CU 438．List，$\$ 19.50$ ．NET．．．．．．．II． 47
Model 114－009．Same antenna as 114－005 above but less $300-\mathrm{ohm}$ twin line．Shpg． wt．， 6 lbs．Express or truck only．
97 CU 439．List，$\$ 17.00$ ．NET．．．．． 10.00
Model 114－040．Same as 114－005 above， but less mast，twin line and stand－off in－ sulators．Shpg．wt．， 5 lbs．Express or truck． 97 CU 492．List，$\$ 13.95$ ．NET．．．．．．． 8.20

## X $\boldsymbol{X}$ INLINE STACKED ARRAY

Model 114－314．Properly phased for all 12 VHF channels．Each bay consists of 2 folded dipoles and low－band reflector ele－ ment．Low－band folded dipole of each bay acts as reflector for high－band dipole． Matching section has correct impedance for 300 －ohm twin line．Ready for quick and easy installation．With complete instruc－ tions；less 300 －ohm twin line and masts． Shpg．wt．， 12 lbs．Express or truck．
97 CU 454．List，$\$ 29.00$ ．NET．．．．．．I7． 05

## ANTENNA COUPLERS



Antenna coupling net－ works．Eliminate an－ tenna switching and separate lead－in lines． Permit using a single 300 －ohm line to sepa－ rate high and low－band VHF antennas and VHF and UHF antennas．Each coupler listed below consists of an efficient isolation filter for effectively isolating one antenna from the other；preserves the gain to assure good picturedquality．Easily installed on an－ tenna mast．With mounting hardware and installation instructions．Shpg．wt．， $11 / 2 \mathrm{lbs}$ ．
Model 114－094＂Duonet．＂Couples separate high－band VHF antenna with a separate low－band VHF antenna on single 300 －ohm twin line．
51 C 283．List，\＄3．75．NET．．．．．．．．． 2.20
Model 114－061＂Isonet．＂VHF－UHF cou－ pling network．Permits using a single 300－ ohm twin line to separate VHF and UHF antennas．
51 C 273．List，\＄3．75．NET．
2.20

Model 114－074＂Trisonet．＂Permits coupling three antennas（low－band VHF，high－band VHF and UHF）to a single $300-\mathrm{hm}$ trans－ mission line．
51 C 277．List，\＄4．75．NET．
.2 .79


## 丸＂PIGGY－BACK＂VHF ANTENNA

Model 114－026．Amphenol＇s extremely popu－ lar＂Piggy－Back＂VHF antenna－a par－ ticularly fine choice for locations where high and low－band TV signals are received from different directions．Eliminates the need for compromising low－band reception in order to obtain good high－band recep－ tion，and vice－versa．Consists of individual， 2－element high－band and low－band antenna sections to permit separate directional ad－ justments for ，peak performance and min－ imum＂ghosts＂，on channels 2－6（low band） and 7－13（high band）．
Each antenna section employs its own fold－ ed dipole element plus a reflector element to assure excellent signal gain and a very favor－ able front－to－back ratio．Provides clear， sharp reception in metropolitan as well as suburban areas．
Antenna is supplied with the following in－ stallation accessories： 5 － ft ．steel mast， clamps，guy ring，isolating transmission harness，mounting support，stand－off in－ sulators， 75 feet of 300 －ohm twin line and instructions for quick，simplified installa－ tion．Sturdy，weather－resistant construc－ tion．Wt．， 10 lbs．Express or truck．
97 CU 360．List，$\$ 19.50$ ．NET．．．
.11 .47

## \＃UHF CORNER REFLECTOR



Model 114－058．En－ gineered for high gain over channels 14 to 83．UHF cor－ ner reflector design has proven most ef－ ficient antenna for both strong and weak signal areas． Excellent horizontal and vertical charac－ ＂eristics reduce ＂ghosts＂as well as interference due to simultaneous tele－ casting on the same channel or adjacent channels．Spacing and dimensions of the elements and reflec－ tors assure maximum broadband reception from the front with rejection of reflected signals from the sides and back．Ascending signal gain of 8 to 13 db across the entire UHF range．Impedance matches 300 －ohm twin line．Electro－galvanized steel reflectors designed to resist corrosion．Fits masts up to $11 / 2^{\prime \prime}$ O．D．With complete mounting hard－ ware．Less mast and 300 －ohm twin line． Shpg．wt．， 8 lbs．Express or truck．
97 CU 263．List，\＄12．50．NET．．
.7 .35

## MATCHING TRANSFORMER



Matching trans－ former for con－ necting 72 and 300 －ohm imped－ ances．Matches 72 －ohm line to 300 －ohm antenna or receiver inputs； matches 300 －ohm line to 72 －ohm antenna or receiver inputs．Spade lugs for convenient installation．Shpg．wt．， 14 oz.
51 C 292．NET．


## 大 $\boldsymbol{*} \boldsymbol{*}$＂＂POWERAY＂FRINGE－AREA VHF ANTENNA

Model 114－095．Designed for extreme sen－ sitivity，the＂Poweray＂ 2 bay fringe area VHF TV antenna produces outstanding re－ ception even at distances to 75 miles from the transmitter．Features＂Sleeve Dipole＂ design for proper balance of gain and direc－ tivity，plus an extremely close impedance tivity，plus an extremely close impedance
match between antenna，lead－in，and TV receiver．Exceptional gain due to high front to back ratio，sharp directivity，and very high efficiency assure outstanding picture quality on all channels from 2 to 13．High－ directivity eliminates co－channel interfer－ ence，and reduces ground reflections causing ＂ghosts．＂Easily installed－elements swing out and lock with positive spring－lock de－ sign．Heavy－duty，all－aluminum construc－ tion withstands severe weather conditions． Requires $10-\mathrm{ft}$ ．mast．Less mast and 300－ ohm twin line． 14 lbs．Express or truck． 92 CU 089．List，\＄34．75．NET．．．． 20.43 Model 114－743．Stacking Harness．For stack－ ing two 114－095 antennas．Wt．， $1 / 2 \mathrm{lb}$ ．
92 CX 097．．
1.32

## WALSCO＂IMPERIAL＂ VHF TV ANTENNAS



Barrier
Dise
Insulator
$\star \star$ Model 4062－F．Extremely popular＂Im－ perial＂2－bay VHF conical antenna for all TV channels．Advanced design provides very high gain on all channels in fringe and high signal strength areas under all kinds of weather conditions．Has excellent directiv－ ity and sensitivity．
The＂Imperial＂can be used in sea coast or heavy industrial areas．Features a barrier disc type insulator with $2^{\prime \prime}$ of air space be－ tween the terminals．Salt，moisture，soot， corrosion，etc．，will not affect the gain or picture quality．Contact surfaces and ter－ minals will never rust or oxidize．Stainless steel，front－end hardware prevents signal losses through corrosion．
Front－end elements are pre－assembled to holding plates which fasten to insulator with one wing nut．Just fold elements in place and fasten wing nut．Less twin line and mast． 8 lbs．Express or truck． 98 CU 404．List，$\$ 22.25$ ．NET．．．． ． 13.08
$\star$ Type 4060－F．Same antenna as above，but single bay．Shpg．wt．， 4 lbs．
98 CX 405．List，$\$ 10.95$ ．NET．．．．．．6． 44
Stacking Kits．For stacking 4060－F single－bay antennas．Av．shpg．wt．， 1 lb．

| Stock No． | Model No． | Description | $\begin{gathered} \mathrm{NET} \\ \mathrm{EACH} \end{gathered}$ |
| :---: | :---: | :---: | :---: |
| $98 \mathrm{CX406}$ | 4060A－1 | For 2－bay | 88 |
| 98 CX 407 | 4005－5A | For 4－bay | 3.29 |


$\star \star$ MODEL 440. Universal 2-bay UHFVHF antenna. Ideal for fringe and primary, areas. Unidirectional pattern. Special "V', type elements. Excellent directivity and signal-to-noise ratio on both UHF and VHF. Both UHF and VHF signals are picked up at the same cone apex-no filters or isolation networks are required. One transmission line for both bands. Higher frequency signals are further strengthened by the addition of 2 supplementary " $V$ " splines. All aluminum construction. Less mast and 300ohm line. Shpg. wt., 9 lbs.
92 CZ 204. List, $\$ 26.40$. NET
T ..... 15.52
$\star$ MODEL 420. Same antenna as above, but only 1 bay. Shpg. wt., 6 lbs.
92 CU 205. List, \$13.03. NET...
.7 .66

## TACO FM ANTENNAS



## MODEL 644B 6-ELEMENT

 FM ANTENNASingle-bay, 6-element yagi antenna for top FM performance in weak signal areas. Unidirectional design. High F/B ratio. 6 to 9 db gain. Completely assembled. Elements swing out-lock in place. Less mast, $300-$ ohm twin line. Shpg. wt., 7 lbs.
92 CZ 546. List, $\$ 20.20$. NET.
. . II. 88

## MODEL 610 10-ELEMENT FM ANTENNA

Single-bay, 10 -element yagi antenna for outstanding long-distance FM reception. 8 to 10 db gain. Sharp directivity-extremely high F/B ratio. Completely assembled. Arms swing out-lock in place. Less mast, 300 -ohm twin line.. Wt., $101 / 2$ lbs.
92 CU 547. List, \$29.95. NET. . . . I7. 20 MODEL 646 STACKING KIT. Phasing line, insulators, hardware. Permits stacking two 644 B or 610 antennas. Wt., 1 lb.
92 CX 548. List, \$2.65. NET. .
.1 .56

## MODEL 624STL FM ANTENNA

An excellent value in a unique, stacked FM antenna-combines an all-directional pickup pattern with high gain. Consists of two S. type,stacked,folded dipoles connected with a phasing network for optimum efficiency. Reception characteristics are particularly suited to locations where stations must wherestations from beveral different directions. Stacked-
 element design provides unusually good gain across the entire FM band. Sturdy, all-aluminum construction. Antenna is supplied with heavy-duty, $10-\mathrm{ft}$. aluminum mast. Less 300 -ohm twin line. Shpg. wt., $71 / 2 \mathrm{lbs}$.
92 CU 039. List, \$14.95. NET.
8.79


## FINNEY FM ANTENNAS

## MODEL FMT-1 ANTENNA KIT

All-direction FM antenna kit. Provides unusually fine reception over the entire FM band, 88 to 108 mc . Incorporates two sturdy, well designed folded dipoles mounted at right angles to each other for complete $360^{\circ}$ coverage without rotation. Dipoles are matched with a special quarter wave phasing stub for optimum gain in all directions. Simplified installation. Each folded dipole attaches easily to pre-drilled 5 -foot mast. Universal base will mount on any surface from horizontal flat roof to vertical side wall and allow mast to be adjusted to vertical position. Kit includes $50-\mathrm{ft}$. 300 -ohm transmission line; heavy-duty $5-\mathrm{ft}$. antenna mast; universal mounting base; 2 mast stand-off insulators; and 3 screw-eye stand-off insulators. Shpg. wt., 6 lbs.
92 CU 278. List, $\$ 13.95$. NET
8.20

## MODEL FM-2 ANTENNA KIT

A particularly fine choice for use where all signals are received from approximately the same direction. Employs an efficient FM dipole plus a reflector element to achieve high signal gain and good directivity. Gain is 3.5 db . Features rugged, weather-resistant construction throughout. All-aluminum boom and elements are completely preassembled with "snap-out," self-aligning aluminum brackets-designed for quick, simplified installation. Universal base will mount on any surface. Kit is supplied with $5-\mathrm{ft}$. antenna mast, heavy-duty mounting base, 50 -ft. 300 -ohm twin line, 2 mast-type stand-off insulators, and 3 screw-eye standoff insulators. Shpg. wt., $61 / 2$ lbs.
92 CU 279. List, $\$ 13.95$. NET.
8.20

## MODEL FM-3 ANTENNA

(Not illustrated.) An extremely effective broad band fringe-area FM antenna at a very moderate cost. Features a highly directive 4 -element yagi design for outstanding gain on the FM band, 88 to 108 mc . Allaluminum construction with square boom. Special "Lock-Tite-No-Tilt" saddle bracket for permanent horizontal alignment. Uses folded dipole driven element for closer impedance matching and maximum energy transfer. Double wall reinforced elements have snap-out brackets. Elements lock in open position. Less mast and 300 -ohm twin lead. Shpg. wt., 5 lbs.
92 CU 281. List, $\$ 12.50$. NET.
7.35

## MODEL FM-4 ANTENNA

Deluxe, 6-element, high-gain antennaprovides superior fringe-area FM reception; Design is based on the famous "Geomatic" TV antenna principles. Features a specially engineered twin drive element with impedance matching by the well known "TMatch', system. Twin drive allows maximum gain to be realized over the full 88 to 108 mc band. 3 extra wide spaced parasitic director elements, plus the wide spaced parasitic reflector, also contribute substantially to the gain and broad-band features. All of the parasitic elements lock into open position by "snap lock" brackets. On the twindrive dipoles it is only necessary to loosen nuts, swing into open position until brackets snap closed and retighten nuts. Equipped with rugged square aluminum boom and "Lock-Tite-No-Tilt" saddle mounting. Less mast, twin lead. Shpg. wt., $61 / 2 \mathrm{lbs}$.
92 CZ 280. List, $\$ 23.95$. NET..
. 14.08 MODEL FMS STACKING KIT. Permits stacking two FM-2, FM-3 or FM-4 antennas. 1 lb . 92 CX 597. List, \$3.20. NET. .
. 1.88


## AMPHENOL FM ANTENNAS

## MODEL 114-008

 ANTENNA KITAn efficient, sturdily constructed FM antenna. Easily installed unit employs folded dipole plus a reflector element. Use of folded dipole as driven element provides excellent impedance match with 300 -ohm lead in line. Has extremely good gain and directional characteristics across the entire 88 to 108 mc FM band. A very dependable performer for use in areas where most FM stations are received from approximately the same direction. Made of lightweight, durable, $3 / 8^{\prime \prime}$ O.D. aluminum tubing-withstands very severe weather conditions. Swivel bracket allows mast to be installed vertically on any type of roof or side of house.
Supplied complete with a full set of highquality accessories plus easy-to-follow assembly and installation instructions. Accessories consist of: $5 \mathrm{ft} . \times 3 / 4^{\prime \prime}$ O.D. steel mast, 75 feet of 300 -ohm twin line, low-loss standoff insulators, swivel and U-bolt mounts and hardware. Shpg. wt., 7 lbs.
9.55

MODEL 114-010 ANTENNA KIT
Amphenol's highly popular, all-directional FM dipole antenna. Provides gain equal to that of an efficient folded dipole across the entire FM band, 88 to 108 mc . Widely used where stations
 are received from many different directions. Elements are of $3 / 8^{\prime \prime}$ O.D. aluminum tubing -antenna is ruggedly constructed to withstand high winds and icing. Employs 2 folded dipoles mounted at right angles to achieve an essentially circular pickup pattern. Quarter wave phasing stub precisely matches both elements to 300 -ohm twin line.
Supplied complete with full set of accessories for easy, time-saving installation. Includes convenient, hinged base plate for simplified mounting of antenna on either a flat or sloping roof, 75 feet of quality $30 \mathrm{C}-$ ohm twin line, all hardware, and sturdy 5 $\mathrm{ft} . \mathrm{x}^{3 / 4} 4^{\prime \prime}$ O.D. mast. Shpg. wt., 7 lbs . 97 CU 434. List, \$16.25. NET. . .
9.55

## TV Rotators \& Distribution Amplifiers

## CORNELL-DUBILIER-RADIART TELEVISION ANTENNA ROTATORS



MODEL AR-22 ROTATOR

## WITH AUTOMATIC-TYPE CONTROL UNIT

A C Popular, fully automatic rotor for TV antennas up to 150 lbs . For A C mast, tower or platform mounting. Heavy-duty precision gears hold even large TV arrays steady in high winds. Rotor unit employs 12 large ball-bearings in two $61 / 2^{\prime \prime}$ races. Motor reverses instantly-does not drag or coast. Overshoot of desired direction is prevented by magnetic brake. Streamlined bell-shaped housing is die-cast and heavily reinforced. Weather-sealed and factory lubricated for life. Reversible clamps on rotor unit take masts from $7 / 8^{\prime \prime}$ to $2^{\prime \prime} O$.D. Rotor unit has 3 husky guy
wire lugs built-in for convenience in installation.
Control unit dial is marked in compass points: N, S, E, W, NW, NE, SW, and SE. Operation is extremely simple: Set control unit pointer to SW, and SE. Operation is extremely simple: Set control unit pointer to
desired direction, and antenna then automatically rotates to this position
and stops. Eliminates necessity of watching control unit dial until and stops. Eliminates necessity of watching control unit dial until antenna has rotated to desired direction. Control unit is housed in protect TV set finish. Complete with rotor, control unit, and full set of instructions. Requires 4 -wire cable (see listing below). For operation from 110-120 volts, $50-60$ cycle AC. Shpg. wt., 14 lbs.
92 TX 150. List, \$51.95. NET
30.55

## MODEL TR-4 ROTATOR

## WITH METER-TYPE CONTROL UNIT

A D Heavy-duty antenna rotor; same as above except with meter-type control box permits forward or reverse movement of antenna. Dial control box permits forward or reverse movement of antenna. Dial pointer begins to turn as soon as starter lever is actuated, and can be topped any desired direction. Sturdy plastic cabinet with attractive mahogany finish.
29.37

4-Conductor Cable. For use with the AR22 or the TR-4 rotators. 4 4-Conductor Cable. F
97 Ti $365.100-\mathrm{ft}$. coil. NET.
2.70

47 W 576. Over $100^{\prime}$, PER $100^{\prime}$
2.70

## MODEL TR-2 ROTATOR

## WITH ILLUMINATED-COMPASS CONTROL UNIT

A B Heavy-duty rotator, same as the two above but uses illuminated N.E.S.W. light up-clearly indicating direction. Bar lever at front N.E.S.W. light up-clearly indicating direction. Bar lever at front permits start, stop or reversing action.
cable listed below. For operation from $110-120 \mathrm{v}$., $50-60$ cycle AC. With handsome plastic control cabinet. Shpg. wt., 16 ibs.
.27 .02
97 TX 463. List, \$45.95. NET
....................... . . . . . . . . . . 27
8-Cond uctor Cable. For TR-2 rotator above. Handles current for rotor and illumination circuits. Shpg. wt., 100 ft ., 5 lbs.
47 T 586. $100-\mathrm{ft}$. coil. NET..
47 W 593. Over $100^{\prime}$, PER $100^{\prime}$

## WALDOM TV SIGNAL DISTRIBUTION AMPLIFIER



Model DA-1010. Deluxe, electronic TV. signal distribution amplifier for operating up to 10 TV receivers from the same antenna. Provides signal gain averaging 3 db to each TV set on any channel from 2 to 13. Has auxiliary UHF converter input. Any number of sets can receive UHF while others are receiving VHF. Ideal for apartments, motels, dealer stallation. Features high gain and wide stallation. Features high gain and wide
response. 35 db isolation between outresponse. 35 db isolation between outputs prevents interaction of TV sets. Input impedance: 300 ohms , balanced. Output impedances: $10-300 \mathrm{ohm}$, balanced, plus provision for $72-\mathrm{ohm}$ coaxial cable. Ample spacing between output terminals to avoid cross-coupling. Heavy-duty components designed for continuous operation. Housed in sturdy, gray metal cabinet. Size, $71 / 4 \times 121 / 2 \times 31 / 4^{\prime \prime}$. For $110-120 \mathrm{v}$., 60 cycle AC. Wt., 8 lbs . 98 T 494. List, $\$ 102.95$. NET.
60.53


F

## MODEL AR-2 ROTATOR

## WITH AUTOMATIC-TYPE CONTROL UNIT

E C Automatic antenna rotator for precise antenna orientation with E C utmost convenience. Operation is simplicity itself. Control unit dial is calibrated in compass points: N, NE, E, SE, S, SW, W, NW. To change antenna direction, simply set control unit knob to desired compass point or any intermediate point and release knob-that's all. Rotator will automatically turn on and rotate antenna to selected direction, and shut itself off. No need to hold knob and wait while watching a moving indicator. For added convenience in semi-darkened rooms, control dial lights up as soon as knob is moved - provides illumination for accurately selecting desired direction.
Rotator unit is housed in a weather-sealed, factory-lubricated, die-cast aluminum case. Features precision cut gears for smooth operation, plus a separate thrust bearing with six precision roller bearings to relieve lateral strains on rotator mechanism. Self-centering, supporting-mast clamps accept mast up to $2^{\prime \prime}$ in diameter; thrust bearing and antenna-mast collet either direction-makes one complete rotation in 45 seconds. Mechanical brake, released magnetically, prevents overshoot and drift in high winds. Control unit has attractive plastic case. Requires 4-conductor cable (see below). For $110-120$ v., $50-60$ cycle AC. Wt., $131 / 2$ Ibs.
98 TX 414. List, $\$ 49.95$. NET..............................
29.37

## MODEL TR-16 ROTATOR

 WITH METER-TYPE CONTROL UNITGELatest model in the famous C-D line of rotators. Rotor unit is G similar to the one in the Model AR-2 rotator above, but has a new modern style housing. Also has a newly designed meter-type control unit. Hanical brake-releases magnetically. Instantly reversible. Makes complete revolution in 45 seconds. Rugged, precision made gears. New, complete revolution in 45 seconds. Rugged, precision made "gears. New,' control bar. Pressing one end of "key" starts rotator-pressing the other end reverses the direction. Cabinet has been restyled for modern appearance. Slanted front panel allows dial to be more easily read. Rotor unit is easily installed-no loose parts to assemble. Quick mounting antenna mast collet. Completely weather sealed. Self centering sawtooth mast clamps grip antenna mast securely. Fits all standard towers. For use with masts up to $112^{\prime \prime}$ O.D. Complete with thrust bearing and attractive, mahogany finish plastic control cabinet. Less cable. Uses $4-$ conductor cable listed below. For operation from 110-120 v., 50-60 cycle AC. Shpg. wt., 13 lbs.
92 TX 591. List, \$43.95. NET.
25.84

4-CON DUCTO R CABLE. For use with the AR-2 and TR-16 antenna rotators. Cable is flat, with four parallel conductors of seven-strand copper wire. One conductor tinned for identification. Highly-flexible, polyethylene insulation is resistant to damage from heat, humidity and corrosive atmospheric gases. Shpg. wt., $100 \mathrm{ft} ., 3 \mathrm{lbs}$.
97 T 365 , 100-ft. coil NET.
97 T 365.100 -ft. coil. NET....
47 W 576 . Over $100^{\prime}$. PER 100.
2.70

47 W 576. Over 100'. PER 100............................................ . . . . 2.70


## VEE-D-X VBM ANTENNA ROTATOR



Exceptionally rugged unit used to orient antenna in any direction for maximum signal strength. Features die-cast gears for long life and smooth operation. Sintered steel thrust bearing. Motor bearvanced in-line design for greater vanced indline design for greater load.) handling capacity (up to 200 duty 3 -jaw chuck-type clamps on top and bottom. Positive stop eliminates over-travel to permit pinpoint accuracy. Motor is reversible-has automatic built-in mechanical braking action. Mahogany-finish plastic control box with finger-tip control lever. Dial marked cable below. Rotation speed; $11 / 2 \mathrm{rpm}$. For $110-120$ volts, 60 cycle AC. Shpg. wt., 11 lbs.
27.45

4-CONDUCTOR CABLE. For above. Shpg. wt., 100 ft ., 3 lbs .
97 T 365. 100-ft. coil. NET..................
47 W 576. Over 100 ft ., PE R 100 ft.
2.70
2.70

## TV Rotafors, Boosters, Converters

## ALLIANCE TELEVISION ANTENNA ROTATORS

Choice of Three Handsome Control Units



C]



## MODEL T-12 ROTATOR

FEATURING METER-TYPE CONTROL UNIT

## - Clean Straight-lined Styling of Control Unit

- Fingertip Direction of Antenna by Touch-bar

(A) CC. Heavy-duty antenna rotator, same as at left, but with meterwith dial calibrated, N, E, S, W and N. Touch-bar on top of control unit permits instant forward or reverse action. Depressing right end of bar rotates the antenna clockwise-left end, counter-clockwise. Meter pointer begins to move as soon as touch-bar is pressed. Simply release pressure on bar to stop at any desired position for best reception. Control unit in attractive mahogany plastic case measures $41 / 2^{\prime \prime}$ high, $612^{\prime \prime}$ wide, and $21 / 2^{\prime \prime}$ deep. Complete with rotor, control unit and instructions. Less 4 -wire cable (listed below). For operation from 110-120 v., 50-60 cycle AC. 92 Th . ${ }^{\text {wt., }} 12 \mathrm{lbs}$.
92 TX 339 . List, $\$ 34.25$. NET.
22.66

92 TX 940 . With ivory case. List, $\$ 36.25$. NET.
23.98
23.98

## MODEL TBB2 THRUST BEARING BRACKET

E Minimizes strain on rotators by relieving them of entire antenna E] weight. An ideal accessory when using large multi-element and multibay antennas. Increases rotator's weight-load capacity and assures reliable reception in windy weather. Shpg. wt., 3 lbs . 97 T 479 . List, \$4.95. NET.
2.91

4-Wire Cable. For use with all Alliance rotators listed. Four-No. 20 gauge conductors. Shpg. wt., 100 ft ., 3 lbs .
97 T
$365.100-\mathrm{ft}$. coil. NET. . . . . . . . . .
2.70

47 W 576. Over $100^{\prime}$, PER $100^{\prime}$

## POPULAR TELEVISION BOOSTERS

## REGENCY MODEL DB-550 VHF BOOSTER

Expertly designed booster which tremendously improves sensitivity and signal-tonoise ratio on all 12 VHF channels. Provides an average boost in gain of 17.5 db . Excel550 provides greatly improved picture and sound. First stage uses 6 J 6 dual-triode in push-pull; second stage is 12AT7 groundedgrid, push-pull amplifier. Simple singleknob tuning. Ad vanced, triple-tuned circuit employs two stages in cascade, neutralized for maximum stability. Power supply has
 transformer for isolation of unit from power line. On-off switch controls both booster and television set. Input and output imp.: 300 ohms. Mahogany plastic cabinet. $41 / 2 \times 6 \times 41 / 2^{\prime \prime}$. U.L. Approved. For $110-120 \mathrm{v}_{\text {. }} 60$ cycle AC. Wt., 5 lbs.
22.05

## BOGEN MODEL BBI-A VHF BOOSTER

 Advanced circuit, broadband, fringe-area booster. For improved TV picture and sound. Two 6J6 dual triodes with separate circuits for high and low bands. Provide 18 db gain. High signal-to-noise ratio. Positive, no-backlash tuning. One control $6-\mathrm{mc}$ bandwidth. Housed in brown plastic cabinet. Size, $8 \times 47 / 8 \times 43 / 4^{s}$. For operation from $110-120 \mathrm{v}, 60$ cycle AC. U.L. Approved. With 4 feet of $300-$ ohm twin line. Shpg. wt., ${ }^{41 / 2}$ 1bs. 19.11


## REGENCY MODEL RC-103 FM TELEVERTER

Regency converter for quality FM reception through your TV set. Full FM coverage at a raction of the cost of an FM radio! Install n a matter of minutes-simply connect between antenna input and antenna lead-in of your TV set. Select entertainment to suit your mood-change from TV to FM at the lip of a switch.
The RC-103 is a completely transistorized unit that operates on three tiny "penlight" cells for extreme stability and convenience. Battery life approaches shelf life-drain of only $300 \mathrm{microamps} .\mathrm{Handsome} \mathrm{modern} \mathrm{case}$, only 300 microamps. Handsome modern case,
$41 / 2 \times 6 \times 41 / 2^{\prime \prime}$. Less batteries (below). Shpg. wt., $11 / 2 \mathrm{lbs}$. 92 T 349. List, \$19.95. ONLY..
53 J 031 . Battery. 3 required. 3 oz . EACH


## BLONDER-TONGUE UHF TV CONVERTERS <br> MODEL 99R CONVERTER

- Covers All UHF Channels
- Clear Reception-No Drift
- Easy to Install \& Operate

Compact, handsomely styled, lownoise UHF converter designed for use in metropolitan signal areas. One-knob tuning. Choice of Channel 5 or 6 as the IF output to TV set. Extremely sharp input and oscillator tuning for every UHF channel-eliminates mul-
 tiple images and troublesome interfer-
ence. Input circuit is tracked with oscillator to reject spurious signala and suppress oscillator radiation. Oscillator is thermally compensated to absure minimum drift. Precise input impedance match assures maximum signal conversion; no line ghosts or picture smear. In "Oft' position, VHF signals are passed directly to TV set to permit regular VHF reception. 3 Ues 6AF4A oscillator, crystal diode mixer and selenium rectifier. Exact 300 ohm input and output impedance match assures maximum signal power. Simple to instali and operate. Meets new Housed in mahogany-finished plastic cabinet. U.L. Approved. Size, $61 / 4 \times 43 / 4 \times 43 / 4^{\prime \prime}$. For $110-120$ volts, 60 cycle AC. Shpg. wt., 4 lbs.
98 T 586. List, $\$ 22.95$. NET.
. 15.95

## MODEL BTU-2R CONVERTER

- Deluxe Hi-Gain Conversion
- Clean Steady Reception
- Sharp All Channel Tuning

High-gain, low noise UHF converter. Quickly and easily installed between antenna and TV set. Adds all the new and easily. High signal-to-noise ratio and easily. High signal-to-noise ratio guarantees clear, steady pictures, even in weak-signal locations. Fully shielded tuner has 3 gangs with dual-speed channel selector for precise, continUHF transmission lines. Exact 300 -
 ohm impedance match at input and output plus highly efficient triode amplification gives maximum usable signal power. Oscillator drift is minimized by thermal compensation. Highly selective, double-tuned RF preselector stage provides maximum gain and image rejection. Instant
changeover from UHF to VHF. With 6AF4A and $6 \mathrm{AB4}$, crystal diode changeover from UHF to VHF. With 6AF4A and 6AB4, crystal diode and selenium rectifier. Meets new FCC radiation specs. Size: $61 / 4 \times 41 / 4$ $x 43 / 4^{\prime \prime}$. For $110-120$ v. 60 cycle AC. Shpg. wt., 5 lbs.
98 T 099. List, \$39.95. NET.
27.50

## Blonder-Tongue TV Equipment



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Use Allied's free consulting service for friendly, individualized aid in solving your TV and booster problems at home,


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## TV BOOSTERS AND DISTRIBUTION SYSTEMS

## VHF ANTENSIFIER

Model CA-1B. Powerful commercial TV VHF preamplifier. Provides an effective signal gain of 26 db on low band; 24 db on high band. May be used with excellent results at any point of any multiple-receiver distribution system. Ideal as a deluxe preamplifier in homes using several sets or as a line amplifier in master TV systems and community installations. Has precisionengineered matching transformers for use with 75 and 300 -ohm lines input and output. Dual-triodes employed for extremely high signal-to-noise ratio-excellent fidel ity. Sturdy-ventilated metal cabinet. Size, $8 \times 41 / 2 \times 5^{\prime \prime}$. With 2-6J6's and 2-6BQ7A's. For operation from $105-125$ volts, 60 cycles AC. Shpg. wt., 7 lbs.
98 T 218 . List, $\$ 84.50$. NET
55.00

## MLA VHF TV SIGNAL AMPLIFIER

(B)
The "Masterline" VHF TV signal amplifier. Provides an effective signal boost of not less than 37 db . Assures a maximum output of 1.25 volts rms on each band-flat within 2 db . It is excellent where very long transmission lines weaken signal. May be installed in coax line going to single TV set, or used with antenna distribution system such as Model DA8-B above in installations feeding 2 or more TV sets from 1 antenna. Several "Masterlines" may be placed in cascade when extremely long transmission lines are used.
Offers maximum fidelity for color TV as well as black-and-white sets. Gain is adjustable on high and low bands. Response flat within $\pm .5 \mathrm{db}$ over any 6 mc channel. Unit is self-powered and employs seven tubes.
Cascode amplifying circuits assure minimum noise level. 75 ohm coax input and output connectors. Overall size, $9 \times 6 \times 5^{\prime \prime}$ deep. In perforated gray metal cabinet. For operation from $110-120 \mathrm{v} ., 60$ cycle AC. Shpg. wt., 9 lbs.
92 T 090. List, $\$ 142.50$. NET. . . . . 85.50

## B23 TV BOOSTER-COUPLER

(C) Highly efficient booster-coupler unit. Permits using a single TV antenna with up to 3 sets. Provides excellent isolation between sets to assure minimum interaction. Boosts signal strength of VHF stations (channels 2-13) up to 6 db when using one or two TV sets on a single antenna. Wide frequency response assures excellent performance when used with black-and-white and color TV sets as well as FM receivers. Has broadband circuit-requires no tuning. May be quickly and easily installed-simply attach to antenna terminals. Extremely compact chassis; may be installed out-ofsight at rear of one of sets, or may be placed in any other convenient location. Input and output impedance, 300 ohms. Size, $33 / 4 \mathrm{x}$ $61 / 4 \times 21 / 2^{\prime \prime}$. For operation from $110-120$ volts, 60 cycle AC. Shpg. wt., $11 / 2 \mathrm{lbs}$.
92 T 342. List, $\$ 23.95$. NET...
14.95

## VHF DISTRIBUTION SYSTEM

(D) Model DA8-B. Combination booster and D isolation-distribution system for use with up to 8 TV sets. Features exclusive lownoise all-triode circuitry. Requires no tuning, matching devices or preamplifiers. Ideal for use in small apartment buildings, hotels, motels, and other small master TV systems. Permits operating up to 8 TV sets from a single antenna. 22 db minimum isolation between output circuits prevents interaction between TV receivers. Provides 10 db gain to each TV set to assure full-strength signals. System overload is prevented through a 10-1 gain control range. Has inputs for $75-$ or 300 -ohm line. Eight outputs accommodate 75 - or 300 -ohm line; one of these outputs may be used to feed another DA8-B to permit hook-up of additional TV sets. Unit includes power supply, terminating resistors and grounding clamp. Screw terminals permit fast installation. Designed for long life, continuous duty operation. Overall size, $53 / 4 \times 9 \times 51 / 2^{\prime \prime}$. For 105-125 v., 60 cycle AC. Shpg. wt., 7 lbs.
98 T 220. List, $\$ 94.50$. NET . . . . . . 58.50

## MODEL AB VHF BOOSTER

[E] Antenna mounted TV booster. Efficient 25 db gain on all VHF channels. Features exclusive push-pull, cross-neutralized circuitry assuring maximum signal-to-noise ratio. Includes indoor control box with power supply, Steps down the regular line voltage to 24 volts to operate booster. Compensates for AC voltage loss in long lines. Voltage is delivered to booster by same line that carries TV signal. Built-in filter network isolates AC from TV signal. Opperation is automatic-booster turns on and off with TV set. Safety disconnect power plugs eliminate danger of exposed high voltages. Unit has 300 -ohm input and output. Amplifier unit is fully enclosed in sturdy, metal weatherproof housing for installation at antenna. Overall size of amplifier: $7 \times 73 / 4 \times 51 / 4^{\prime \prime}$. Power supply: $5 \times 3 \times 4^{\prime \prime}$. With bracket and strap. For 110-120 v., 5060 cycle AC. Shpg. wt., 10 lbs. 92 T 092 . List, \$99.50. NET. . . . . . 62.00 CONNECTORS, COUPLER \& TAPOFFS [F) Model P-59S Male Connector. For use F on "Masterline" Model MLA signal amplifier. Provides correct 75 -ohm impedance match. P-59S is for RG-59/U coax cable. Shpg. wt., 3 oz .
51 C 11 3. List, $\$ 1.55$. NET EACH. . . . 95c Model P-11S Connector. As above, but for RG-11/U coax cable.
51 C 114 . List, $\$ 1.55$. NET EACH.... 95C
Model MTO-11 Outdoor Cable Tapoff. Spliceless, weatherproof, RG-11/U cable tap. Uniform 17 db isolation, lowest shunt capacity and positive electrical protection through blocking capacitor. Less than $1 / 2$ db line loss. Wt., 6 oz .
51 C 11 8. List, $\$ 7.75$. NET EACH. . 4. 65

## MODEL MA4-1 MIXER-AMPLIFIER

TV signal mixer, for up to five anten-nas. Amplifies and mixes up to five input signals into a common output. For either individual or master antenna systems. Permits the use of four separate high-gain Yagi antennas and one broadband antenna. Requires no rotators or boosters. Provides maximum ghost-free reception because each antenna can be individually oriented to the particular TV station desired when installed. Employs channel strips listed below. Any VHF and UHF antennas can be accommodated at any time with plug-in VHF strips and plug-in UHF converter strips. One input is broadband for signals requiring no preamplification. Remaining 4 single-channel inputs use separate plug-in strip assemblies with gain in excess of 17 db . Impedance: 75 - and 300 -ohms at all terminals. Ventilated gray case. Chassis, $4 \times 6 \times 83 / 4^{\prime \prime}$. For operation from $105-125$ volts, 60 cycle AC. Less plug-in strips (listed below). Shpg. wt., 7 lbs.
98 T 305. List, \$78.75. NET.
.47 .25
STRIPS \& CONVERTERS FOR ABOVE
Model CS-1 VHF Channel Strips. Plug-in strips. For use with Model MA4-1 mixeramplifier above. One strip used for each channel, for gain exceeding 17 db . Each plug-in channel strip has its own 75-and 300 -ohm input terminals. Carefully designed and rigidly constructed in fully enclosed plated steel chassis. Polarized four-prong plug at one end for positive contact. Bakelite terminal strip at other end with binderhead screw terminals for antenna connections. Tubes fully shielded for reduction of noise pickup. Complete with tubes and two tinned spade lugs for low-resistance antenna connection. Tubes are 1-6AB4 and $1-6 \mathrm{CB} 6$. Shpg. wt., 1 lb .

| Stock No. | For Channel | Stock No. | For Channel |
| :---: | :---: | :---: | :---: |
| 98 T 306 | 2 | 98 T 312 | 8 |
| 98 T 307 | 3 | 98 T 313 | 9 |
| 98 T 308 | 4 | 98 T 314 | 10 |
| 98 T 309 | 5 | 98 T 315 | 11 |
| 98 T 310 | 6 | 98 T 316 | 12 |
| 98 T 311 | 7 | 98 T 317 | 13 |

List, \$37.50. NET EACH.
.22 .50
Model UC-1 UHF Converter Units. Three-tube, high-gain, plug-in converter units with 17 db gain. Unusually stable and sensitive. For UHF reception on VHF receivers using MA4-1 mixer-amplifier, above. Converts UHF signals to VHF. Uses 2 input sockets to permit use of 3 additional antennas. 300 -ohm input. Employs 6AF4, 6BK7A, 6CB6 tubes; 1 N 72 germanium crystal diode. Shpg. wt., $11 / 2 \mathrm{lbs}$.
NOTE: Available on special order; when ordering, specify UHF channel and unused VHF channel to be used as IF. List, $\$ 125.00$. NET EACH
75.00

## Jerrold TV-FM Accessories

## "ULTRACON" UHF CONVERTERS



- Continuous Coaxial Tuning
- Low Noise, High Stability

Model TCU. Here's an economical, advanceddesign converter for optimum UHF coverage with any TV set in normal signal areas. Delivers a stable, high-quality output signal on channel
5 or 6 with a minimum of noise.
Features include continuous coaxial tuning with no moving contacts, vernier dial mechanism, low-noise crystal diode mixer, and trim-mer-tuning slug combination that holds alignment even under shock and vibration.
Low output VSWR assures absence of smear. Straight-through switch for VHF. 300 -ohm input and output. 6AF4-A osc., 1N72 mixer. $61 / 4 \times 37 / 8 \times 23 / 4{ }^{4}$. U.L. Approved. For 110-120 v., 60 cycle AC. Wt., 13/4 1bs.
.. 15.95


- Dual-Cavity Coaxial Tuner
- Built-in UHF Antenna For Local Use

Model FTC. Deluxe converter for superior UHF reception with any TV set in signal areas from fringe to local. Low-loss, expertly designed circuit provides an exceptionally high standard of reception. Clean, stable output on channel 5 or 6 .
Features include a sealed dual-cavity coaxial tuner for smooth operation and maximum stablug, low-noise crystal mixer, trimmer-tuning local reception.
Drift is only 0.25 mc with $95-120$ volt line change. 12 db gain at $500 \mathrm{mc}, 5 \mathrm{db}$ gain at 800 mc . Low VSWR (3:1) assures absence of smear. Straight-through switch for VHF. 6AF4-A oscillator, 6CB6 IF, $1 N 72$ mixer diode. 300 -onm
input and output. $71 / 2 \times 5 \times 53 / 4^{\prime \prime}$. U.L. Approved. input and output. $11 / 2 \times 5 \times 5{ }^{3} /{ }^{4} \cdot 4$.L. 4 .


## NEW LOW-COST TV-FM DISTRIBUTION SYSTEM

- Quality TV-FM Reception In Every Room
- Simple Screwdriver Installation
$\underset{\text { TV-FM }}{\text { Here's }}$ a complete, low-cost TV-FM signal distribution system for the home. Provides high-quality TV and FM signals at convenient outlets in each room. Electrical isolation eliminates interference between sets. Installation is quick and easy-all you need is a screwdriver. Employs a minimum of wiring standard twin lead is used throughed for clear, sharp pictures.


## MODEL HSA-46 HOME AMPLIFIER

Low-noise, high-output, printed-circuit amplifier for distributing VHF TV and FM signals from a single antenna over standard twin lead. Permits clear, undistorted reception in both fringe and metropolitan areas-may be used with inputs as high silicon rectifiers for trouble-free continuous service. Has 2-6BK7A silicon rectifiers for trouble-free continuous service. Has 2 , obltat
dual triodes. Provides over 15 db gain, presents $1.8: 1$ output VSWR. 300 -ohm input and output. $91 / 16 \times 55 / 8 \times 31 / 2^{\prime \prime}$. U.L. Approved. For $110-120$ v., $50-60$ cycle AC. Shpg. wt., 3 lbs.
93 T 087. List, $\$ 49.95$. $\$ 3.33$ Down. NET............ 30.30

## DISTRIBUTION SYSTEM TAPS AND ACCESSORIES

Taps and accessories for installation along twin-line. Surfacemounting basic tap (HS-21) provides 10 db receiver-line isolation, except 6 db when used as a termination unit. HS-140 tap, which mounts in a wall aperture or standard plastic outlet box, consists of an HS-21 basic tap, HS-22 mounting ring and HS-23 cover plate, and includes an HS-24 plug.


(C)

(A) 93 T 088. H.
B 93 T 089. HS-22. Ring to flush-mount B HS-21 in outlet box. 2 oz. NET........ $18 \$$
C] 93 T 090. HS-23. Ivory cover plate in
(D) T 091. HS-24. Twin-line plug. AttachD) es without stripping. 1 oz . NET....... $30 \Varangle$ [E] $\begin{aligned} & 93 \text { T } 092 . \text { HS-140. Flush-mounting outlet } \\ & \text { (described above, left). } 2 \text { oz. NET.... } 65\end{aligned}$ 93 T093. HS-36. Strap insulator for installing twin lead indoors. 1 oz. Pkg. of 24... 1.08

## STRIBUTION SYSTEM KIT

Contains all items necessary for a complete, economy-priced signal distribution system in6 Home Amplifier five $\mathrm{H}-140$ ench
outlets, twelve HS-36 strap insulators and 100oot coil of 300 -ohm twin-lead transmission line. Shpg. wt., 6 lbs.
93 TX094. List, $\$ 67.75$. NET.
43.98


Model DSA-132. Antenna mounting permits extremely high amplification without stepping up "snow"-noise ordinarily picked up by lead-in is not amplified. Power supply delivers 24 v . to booster through same line that brings in signal. Covers channels $2-13$, or high or low band only. Choice of 72 or 300 -ohm impedances at input and output. 25 db gain. Can be turned off and on by TV set. Weatherproof booster, $5 \times 5 \times 1014^{\prime \prime}$. Power supply, $21 / 2 \times 51 / 2 \times 714^{\prime \prime}$. For operation from $110-120$ v., $50-60$ cycle AC. Shpg. wt., $123 / 4$ lbs. 09.50 . $\$ 6.57$ Down. NET. $\qquad$
Model DSA-62. As above, but for channels $2-6$ only. Shpg. wt., 81/4 1 lbs .

## SOLDERLESS COAXIAL CABLE CONNECTORS



Carefully machined brass solderless connectors. Can be permanently bonded to coaxial cable with simple crimping tool. All " $F$ "' series units accurately matched to 72 -ohm impedances and can be wrench tightened. VSWR is less than $1.05: 1$ up to 200 mc . All exposed surfaces heavily silver-plated. *With cable ferrules. Av. wt., 3 oz .

| No. | Type | Fig. | Description | NET |
| :---: | :---: | :---: | :---: | :---: |
| 71 C 833 | *F-59 | F | Male conn. For RG-59/U, cable. Mates with F-81 F-61 \& A-61 | . 48 |
| 71 C 834 | F-61 | G | Female chassis fitting. Mates with |  |
| 71 C 835 | F-81 | H | F-59, AF-101, TR-72F. $3 / 8^{\prime \prime}$ mtg. hole. | . 55 |
| 71 C 836 | A-61 | $J$ | AF-101, TR-72F. $3 / 8^{\prime \prime}$ mtg. hole. Adapter. Allows F-59, AF-101 or | . 75 |
|  |  | J | AdR-72F. to mate with C-61 female. | . 05 |
| 71 C 837 | *F-101-59 | K | Adapter. $\mathrm{RG}-11 / \mathrm{U}$ cables to plug end of F-59, AF-101 or TR-72F | 1.46 |
| 71 C 838 | *AF-101 | L | Male conn. For RG-11/U. Mates with F-61, F-81, F-101-59, A-61. | $1.26$ |
| 71 C 839 | TR-72F | M | 72-ohm terminating resistor. Mates with F-61, F-81, A-61, F-101-59. | 1.26 .90 |

## "TRAP-EASE" ANTENNA TRAPS

Tuneable interference trap for elimination of adjacentchannel television interference. Provides up to 50 db attenuation of the interfering signal. Removes the nearby or herringoone" pattern frequently caused nearby sound or video carriers-permits reception of weak, distant stagreater signal usually blocked out by adjacent-channel stations having would normally bring in Works with any dis receiver and antenna that ing adjacent signal were not on the air. Does not affect reception of local stations. 300 -ohm input and output. Attaches quickly to TV set and antenna lead with convenient screw terminals. Size, $71 / 2 \times 31 / 2^{\prime \prime}$ dia. Shpg.


## MATCHING TRANSFORMERS

Model TO-374. Antenna matching transformer designed for outdoor mast mounting. Matches 300 -ohm broadband or yagi antennas to a 72 ohm line. Response is flat from 50 to
250 me to assure highly efficient performance across the entire VHF TV band (channels 2-13). Provides 6 db voltage gain between 72 and 300 -ohm lines. VSWR is $1.26: 1$. Unit is supplied complete with mounting straj and $1.26: 1$. Unit is supplied complete with mounting strap and $\mathrm{F}-59$ coaxia Shpg. wt., 8 oz.
.6 .00
 71 C 83 II. List, $\$ 10.00$. NET.

Model T-375. Matching transformer designed for indoor use. Matches 72 -ohm line to 300 -ohm line. Also isolates antenna when used with AC-DC television sets. Has crimp-on coax bushing. $21 / 4 \times 21 / 4 \times 1^{\prime \prime}$. Shpg. wt., 4 oz .
732 . List


## TV Towers and Accessories

## SPAULDING SELF-SUPPORTING TV TOWERS



- Special Base Requires no Guying or Added Support - No Concrete Foundation Required
- Preassembled Sections for Quick Installation


## XCB SERIES TOWERS

A Expertly engineered high-strength antenna towers featuring A special "culvert base" for quick, one-man installation without concrete. Self-supporting-require no additional guying or support f any kind ideal towers for fringe-area reception locations or

Towers listed contain "most-wanted" features: All-riveted construction for rigid support of any television antenna; $100 \%$ galvanized steel; special design insures easy installation of any rotator in top section.
Every unit is specially constructed to minimize the effects of strong winds, yet light enough for easy handling and quick installation. Each tower package includes heavy-duty culvert-type base with adjustable hinge feet, eight feet of mast, listed quantity of $8-\mathrm{ft}$. tower sections-all necessary parts and clearly written,
follow instructions. All sections are factory assembled.

| Stock No. | $\begin{aligned} & \text { Mrr's } \\ & \text { Type } \end{aligned}$ | Antenna Height | Sections | Wt., | $\begin{aligned} & \text { NET } \\ & \text { EACH } \end{aligned}$ |
| :---: | :---: | :---: | :---: | :---: | :---: |
| 92 CZ 294 | X28CB | 23 ' | 2 | 89 | 29.95 |
| 92 CZ 295 | X 36 CB | $31^{\prime}$ | 3 | 120 | 46.95 |
| 92 Cz 058 | Х44CB | $39^{\prime}$ | 4 | 155 | 59.95 |
| 92 CZ 059 | X52CB | $47^{\prime}$ | 5 | 200 | 72.95 |
| 91 CZ 832 | X60CB | 55' | 6 | 272 | 84.95 |

## EP ECONOMY SERIES TOWERS

'Economy Packs" for ground or guyed roof towers feature $8^{\prime}$ to $48^{\prime}$ heights at remarkable savings. Each pack has one or more $8^{\prime}$ tower sections, a ground plate, and an $8^{\prime}$ mast. Tower sections are rugged zinc-plated steel with com-
pletely riveted construction for maximum trength. Can be bracketed to building if ground plate is used. Require guying every 16 mounting base, below, are extras.

| Stock No. | Type | Ht. | Sections | Lbs. | NET | Stock No. | Type | H. | Sections | Lbs. | NET |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 92 Cz 534 | EP-5 | $40^{\prime}$ | 5 | 88 | 39.33 | 92 CZ 542 | EP-1 | $8^{\prime}$ | 1. | 25 | 13.2 |
| 92 Cz 535 | EP-4 | $32 \prime$ <br> $24^{\prime}$ | 4 | 72 |  |  | EP-R1 | Roof | Base | 2 | 2.8 |
| 92 CZ 540 | EP-3 | $24^{\prime}$ $16^{\prime}$ | 3 <br> 2 | 56 41 | 25.92 20.16 | 92 CX 544 | EP-H1 | House | Bracket | 5 | 3. |

Shipped F.O.B. Frankfort, Indiana. No C.O.D. shipments-Please send full remittance to Allied with your order. Shipping charges will be collected on delivery.

## KTV ANTENNA TOWERS



Complete "free-standing" tower assemblies in 20 to 50 . foot heights. May be ground oundea whout guy wir or aded support-safe ing for pasy installation on roof or ground Have"controlled way" lateral loading bearing joints. Sections secured by olts in welded-on, load-bearng sleeves (see illustration). These relieve joints of load and eliminate holes in tubing. Vertical sections are 16 -gauge steel tubing, zinc electroplated to resist corrosion. Heavy steel one-piece cross ties are welded to outside of vertical ubing. Top section takes masts up to $11 / 2^{\prime \prime}$ O.D. $4^{\prime}$ of bottom section mounts in concrete.
720-K. $20^{\prime}$ tower. $10^{\prime}$ top; 1-10' cz 368. NET... 37.00 730-K. $30^{\prime}$ tower. $10^{\prime}$ top; 2$10^{\prime}$ sections. 92 lbs. 91 CZ 369. NET..... 55.50 740-K. $40^{\prime}$ tower. $10^{\prime}$ top; 310' sections. 126 libs. 74.00 750 - K. $50^{\prime}$ tower. $10^{\prime}$ top; $4-$ $10^{\prime}$ sections. 164 1bs.
91
CZ $371 . ~ N E T . ~$ 91 CZ 371. NET..... 92.50 863-H. Roof mount for above. 91 CX 372 . NET. . . . . 9.00 862-H. Tower base. $31 / 2^{\prime}$ high. Cement mtg. 12 lbs.
91 CX 373 . NET.. .8 .95

Shipped F.O.B. Shelbyville, Ill. No C.O.D. Shipping charges collected on delivery.


IV mast mounts for flat and sloping roofs and side walls. Permit one-man installation of tall, fringe area antennas. Lock in any position.
Made of alumiMume of alloy.

Universal roof mount. Will swivel into any position. Locked securely by special bearing. Adjustable top supports masts from $1^{\prime \prime}$ to $2^{\prime \prime}$ O.D. Shpg. wt., 2 lbs. $\qquad$ 2.76
C. Similar to above but for use with masts 0 from $1^{\prime \prime}$ to $13 / 4^{\prime \prime}$ O.D. Wt., 1 lb .
97 C 175. NET. (D) Universal peak roof mount with patented bearings for adjustment and locking at ny angle $P$ nnall ${ }^{\prime \prime}$ or masts from $1^{\prime \prime}$ to $2^{\prime \prime}$ O.D. Wt., 2 lbs.

## PENN FLOATING GUY RINGS

GRA-140. Cast aluminum, floating guy ring and collar. Fastens to mast with steel set screw. Permits rotating antenna after guy wires are installed. LubriFor 3-guy or 4 -guy installations. For masts to $13 / 8^{\prime \prime}$. Shpg. wt., 8 oz .
$97^{\circ} \mathrm{C}$
178.
1.12

GRA-141. Same as GRA-140 but for masts up to $13 / 4$ " O.D. Shpg. wt., 9 oz. $\qquad$
GRA-142. Same as GRA-140 but for masts up to $2^{\prime \prime}$ O.D. Shpg. wt., 10 oz .
97 C 180. NET.................
. . . . . . . 1.50


E TURNBUCKLES

| Stock No. | Fig. | Closed | Open | $\begin{aligned} & \text { NET } \\ & \text { EA. } \end{aligned}$ | $\left\lvert\, \begin{array}{ll} 10 u p, \\ E A C H \end{array}\right.$ |
| :---: | :---: | :---: | :---: | :---: | :---: |
| 44 C 790 | E | $51 /{ }^{\prime \prime \prime}$ | $75 /{ }^{\prime \prime}$ | 124 | 114 |
| 44 C 791 | E | $63 / 4{ }^{\prime \prime}$ | 91/4" | 204 | 184 |
| 44 C 792 44 C 793 | ${ }_{\text {E }}$ |  | 101/2"1 | 304 <br> 124 <br> 1 | 1274 |
| 44 C 794 | F | $63 /{ }^{\prime \prime}$ | $91 / 4^{\prime \prime}$ | $20 ¢$ | 184 |
| 44 C 795 | $\stackrel{F}{5}$ | $71 / 2 \prime \prime$ | 101/2" | 304 | 274 |
| 44 C 796 | G | $51 / 2 \prime \prime$ $63 / 4$ | 75/8"1 ${ }^{\prime \prime}$ | 124 | 114 |
| 44 C 798 | G | $71 / 2^{\prime \prime}$ | 101/2" | 304 | 274 |

## GROUND RODS

An excellent selection of new, low-cost ground rods. Constructed of moisture-resistant copperplated steel. Special raised lip keeps ground lead connector permanently anchored on rod. With bolt for easy connection.
Size, $4^{\prime} x^{3 / 8 \prime}$. Shpg. wt., $11 / 2$ lbs.
92 C $\times 37$. NET. . . . . . . . . . $.47 c$

Size, $6^{\prime} x^{3 / 8 \prime}$. Shpg. wt., $21 / 4 \mathrm{lbs}$.
92 CU 538 . NET................ -

Size, $8^{\prime} \times 1^{\prime \prime \prime}$ Shpg. wt., 5 lbs .
Size, $8^{\prime} \times 1 / 2^{\prime \prime}$. Shpg. wt., 5 lbs.
92 C $23^{39}$. NET.................. $.59 \nleftarrow$

## GROUND \& GUY WIRE

Aluminum Ground Wire. No. 8 solid aluminum wire. For all grounding applications.

| Stock No. | Coil Length | Wt., Lbs. | NET |
| :--- | :---: | :---: | :---: |
| 49 T 653 | $50-\mathrm{ft}$. | $11 / 2$ | .87 |
| 49 T 650 | $100-\mathrm{ft}$. | $26 / 4$ | 1.50 |
| 49 TU652 | $1000-\mathrm{ft}$. | 26 | 13.10 |

No. 20 Galvanized Guy Wire. Six-strand, No. 20 steel wire. Available in 100-ft. or 1000ft rolls. Shpg. wt., 100-ft. roll, 2 lbs.
58 T 3 I 2. 100-Ft. Roli. NET. . . . . . . . . 62C
71 TU 513. 1000~Ft. Roll. NET. . . . . . 5.74
No. 18 Galvanized Guy Wire. Same as above, but for heavier-duty applications. In $100-\mathrm{ft}$. or 1000 -ft. rolls. Wt., $100 \mathrm{ft} ., 21 / 2 \mathrm{lbs}$.
71 TU 545. 1000-Ft. Roll. NET.
9.16

## ANTENNA MAST SECTIONS

Ends are swaged for simplified installation. Made of heavy-wall steel with electro-galvane ized finish. *Seamless type; others are seamed. All are 11/4" O.D.

| Stock No. | Ht. | Wall | Shpg. Wt. | NET |
| :---: | :---: | :---: | :---: | :---: |
| 97 CU 137 | 5 ft . | .035" | 3 lbs. | 71 |
| 98 CU $366^{*}$ | 5 ft . | .051" | 4 lbs . | 97 |
| 97 Cz 138 | 10 ft . | .035" | 5 lbs . | 1.36 |
| $98 \mathrm{Cz} 367^{*}$ | 10 ft . | .051" | 7 lbs . | 2.04 |

## TV Mounts and Accessories

## TV POWER CORDS AND CONNECTORS



A TV Power Cord and Connector. Idenets. No. 18 conductor: rubber-covered; 6 feet long. U.L. Approved. Shpg. wt., 8 oz. 2 . 26 C

TV Power Cord and Connector. (Not illustrated.) Identical to original equipment on保 U.L. Approved shpg. wt., 10 oz. $19 . . .36 \mathrm{c}$ B Male Connector. Flush mounting; used 49 T 238 . NET sets. Shpg. wt., 2 oz. 49 T 238. NET. $\qquad$

## SENCO TV JUMPER CORD

Model JC2. Universal jumper cord which extends power from back of TV set acrovides serviceman with AC for soldering furniture moving and bulky extensionsto get ACforservextensionstoget AC forservor controlling TV set power from rear. Wt., $1 / 2 \mathrm{lb}$.


## ALL-PURPOSE SERVICE CORD

Female Type. One cord to ervice most TV sets. Plug one end in wall outlet; other ce equipment, plus connec
 tors for TV chassis. Shpg. wt., 1 lo. 52 T 665 . NET. 1.03

## telco lead in tubes



Type 8641. Combination plastic lead-in tube and lightning arrester. Fits walls to $16^{\prime \prime}$ in thickness. Has lightning arrester on outside end; wall plug on inside. Simple installation-lead-in wire is fastened under teeth of lightning arrester and contact is made to inside. Requires
$3 / 4^{\prime \prime}$ mounting hole. Shpg. wt., 1 b . ${ }^{\text {mon }}$. 2.09
$51^{\text {C }} 100$. List, $\$ 3.55$. NET......... 2.09 3/4 Mounting hole. Shpg. wt., 1 lb.

Type 8958. As above, less arrester and plug. Tube takes all types of lines. Wt., $1 / 2 \mathrm{lb}$. 1.37
71 C 559. List, $\$ 2.35$. NET.............

## TACO SELECTIVE ATTENUATOR

Model 835. 300-ohm variable attenuator witch for TV and FM receivers. Cuts down trong incoming signals. Reduces sound and picture distortion caused by overdriving receivers. Positions: 0 db for no attenuation (normal
 minimum; 30 db for minimum. 30 db for maximum. Size, $41 / 2 \times 21 / 4^{\prime \prime}$. Shpg. wt., 5 oz.
92 C 046 . List,

## MILLER ANTENNA TRANSFORMERS

Permits use of low-loss 52 or 72 -ohm coaxial cable on 300 -ohm receiver nputs. 2 required: one at antenna, and one at receiver. Excellent where May be used outdives poor picture. May be used outdoors.
77 G 516 . Type 6161. 52 ohms. NET EACH. Type 6162. 72 ohms.


## COLOR TV DE-GAUSSING COIL

 A valuable aid for every TV serviceman. Extremely effective de-gaussing coil designed espe-Electro-magnetic field neutralizer eliminates stray magnetic fields to allow accurate purity adjustments. With $9-\mathrm{ft}$. cord. For 110-120 volts, $50-60$ cycles 71 CX 666. List, $\$ 19.95$. NET. 11.95


## LOW-COST CHIMNEY MOUNT

C Type 8005. Sturdy chimney bracket. An excellent choice for economy antenna sysone piece to handle with a minimum of loose one piece to handle with a minimum of loose plated and dichromate-dipped for long life. Brackets securely support antenna mast-even under high wind conditions. Easily adjusted to provide snug, firm grip. Will support masts up o $13 / 4^{\prime \prime}$ diameter. Two $12^{\prime}$ straps and hardware included. Shpg. wt., 4 lbs.
97 C 065. List, $\$ 2.65$. NET. $\qquad$ I. 55

## SNAP-IN WALL MOUNT

(D) Type 8306. Husky brackets for firmly D mounting antenna mast to any flat vertical surface. Perfect for buildings with overhanging
eaves. Mast snaps in place until nuts can be eaves. Mast snaps in place until nuts can be tion. Constructed of heavy-gaugenna installaor resistance to moisture and harmfui fumes or resistance to moisture and harmful. fumes.
Holds mast $6^{\prime \prime}$ from wall. For masts up to $13 / \mathbf{n}^{\prime \prime}$ in diameter. Supplied complete with plated mounting screws. Shpg. wt., $21 / 2$ lbs.
98 C 481 . List, $\$ 2.40$. NET........... 1.40 Type 8308. Same as above, but holds mast 8" 98 C 482. List, \$3.90. NET

........ . . . 2.28

## DELUXE SNAP-IN MOUNT

D] Type 8312. Heavy-duty wall brackets. SupD ports mast from side of building. Legs of bracket are spaced $16^{\prime \prime}$ apart to match studs
of homes. Side sway prevented by sturdy of homes. Side sway prevented by sturdy
mounting legs. Vertical support (not shown) eliminates sag. Provides $12^{\prime \prime}$ wall clearance. Made of heavy gauge steel. Doubly protected zinc plated and dichromate dipped for long life. Holds masts up to $13 / 4^{\prime \prime}$ in diameter. Shpg. wt., 5 lbs.
98 C 483 . List, $\$ 4.20$. NET. $\qquad$ 2.45

Type 8318. Same as above, but provides $18^{\prime \prime}$ wall clearance. Shpg. wt., 7 libs. $\qquad$
Type 8324. Same as Model 8312, but provides 98 CX 485. List, $\$ 7.30$. WET. ${ }^{10}$ lbs. $\qquad$

## CHIMNEY MOUNT REPAIR KIT

(E Type 8932. Stainless Steel. Stainless steel strapping with eye bolts, nuts and strap clamps. Replaces rusted or broken strapping on all types of chimney mounts. Heavy-gauge strapping for secure support. Stainless steel will resist weather, salt air and smoke fumes. Shpg. wt., 2 lbs.
2.09

Type 8931. Galvanized Steel. As above, but strapping is galvanized steel. With bolts, nuts 71 C 556 . List, $\$ 1.80$. NET. $\qquad$ .. 1.06

## VENT PIPE MOUNT

F Type 8803. Handy vent pipe mount that in diameter Perfect for or vent from $4^{\prime \prime}$ to $6^{\prime \prime}$ in diameter. Perfect for antenna installations on roofs where chimney is inaccessible. Simple and easy to use. Made of extra heavy gauge
steel for long life. Will support a variety of installations. Handles all masts up to $13 / 4^{\prime \prime}$ in diameter. Securely supports antenna mast. Zinc-plated and dichromate-dipped for double protection against rusting; provides exceptionally long life. Shpg. wt., 31bs.
98 C 480 . List, $\$ 2.70$. NET..

SNAP-IN CHIMNEY MOUNT
G Type 8930. With Stainless Steel StrapG ping. Excellent mount for quick, dependable installation. Extra-heavy construction. Simply snap mast into bracket and tighten olts. Fits masts up to $13 / 4^{\prime \prime}$ diameter. Brackets of heavy-gauge steel, zinc-plated and dichrom-ate-dipped for protection against rusting. With two 12 -ft. lengths of stainless steel strapping. Shpg. wt., 4 libs. NET. 2.75

Type 8610. With Galvanized Steel. As above but has galvanized steel strapping.
97 C 028. List, $\$ 3.30$. NET.......

## EAVE MOUNT



Type 8933. For mounting antenna mast $H$ on eaves of buildings. Lower bracket is $48^{\prime \prime}$ long to straddle side of building; angle-iron bracket mounts close to peak of roof. Weather-proof-zinc plated and dichromate dipped. proof-zinc plated and dichromate dipped $98 \mathrm{CX} 486 . \mathrm{List}, \$ 7.15$. NET........... 4.20

## "NO-GUY" ROOF MOUNT

Type 9060. Steel and cast-iron base for mounting over ridge of peaked roof or on a flat roof. Legs adjustable to angle of roof. Will support average antenna on up to 10 ft . mast without guy wires. For masts up to $11 / 2$ dia.

2.79

## HINGED-TYPE RIDGE MOUNT

K Type 9021. Highly versatile antenna mast K support for mounting on peaked roots, flat roofs or walls. Hinged type brackets adjustable or easy installation on any angle roof. Extra heavy gauge steel using heavy pipe supports. chromate dipped for double protection against 91 C 381 . List, $\$ 2.35$. NET. . . . . . . . . . 1.38

## ANTENNA BASE

L Type 9063. Sturdy antenna base. For masts L. of 10 feet or more and up to $11 / 2^{\prime \prime}$ O.D. Eliminates guy wires in the average installation. Set screws anchor mast and permit orientation. Electro-galvanized; dichromated. 2 -ft. high. Shpg. wt., $61 / 2$ libs.

Type 9144. As above, but 3 feet high and constructed from $1^{\prime \prime}$ electro-galvanized steel tub$92^{\circ} \mathrm{CX} 043$. List, $\$ 8.30$. NET 4.88

Type 9143. Same as Model 9144 but 5 feet 92 CU 044. List, \$15.90. NET.
.9 .35

## LOW COST ANTENNA MOUNT

Type 8800-U. Low cost antenna mast mount designed to provide extra secure support for masts up to $11 / 2$-inch outside diameter. Heavy "U" bolt and clamp with dual serrated jaws hold mast se-curely in position. "Extra leg", and reinforcing ribs give added
strength. Doubly zinc plated
ndich and dichromate dipped for all weather protection. Shpg. wt., $1 / 2$ lb. 482 . List, 66c. NET. . . . . . . . . . . . . 39C

## TV Accessories \& Anfennas



BELDEN, FEDERAL, AMPHENOL AND knight TWIN LINE

## BELDEN TWIN LINE

A Type 8225. Flat 300 -ohm twin line. Finest A) quality $7-28$ stranded copper conductors. High-quality polyethylene jacket has 58 mil web thickness; Shpg. Wt., $100 \mathrm{ft} ., 13 / 4 \mathrm{lbs}$. 1.06 49 T 385.50 , Coil. NET
49 T 386.75 , Coil. NET . 0.4
Type 8230. Weldohm 300-ohm twin-line. tranded copper-coated steel wire. Corper coat ing provides high conductivity; steel core for high strength, Wt., 100 ft ., $2 \mathrm{~A}_{1} \mathrm{lbs}$. 49 T 387. 50, Coil. NET.......
1.11

49 w 383 . Over $100^{\prime}$, Per 100
$0 ; \cdot . . . . .$.Type 8275. 300 -ohm UHF-VHF celluline. Brown cellular plastic core, inert gas-filled. Brown polyethylene-plastic jacket.
per-coated
100
steel
conductors. Shpg. wt., per $00 \mathrm{ft} . \mathrm{F}^{3} \mathrm{lbs}$
49 T 396. 50' Coil. NET. . . . . . . . . . . . . 2.20
49 T 395. 100' Coil. NET
.3 .09
49 T 395. ${ }^{100}$ ' Coil. NET. $10, \ldots, \ldots .4 .07$
(C) Type 8235. 300-ohm, oval twin-line. Very coated, 7 -28; for UHF-VHF use. Coppertough $185-\mathrm{mil}$ web thickness. Flexible and strong. $100-\mathrm{ft}$. minimum. Shpg. wt., per 100 f., 5 ibs.
$49^{\circ}$ T 393. 100' Spool. NET.
.4 .12
$49 \mathrm{w}^{399 .}$ Over 100'; Per $100^{\prime}$
4.12

Type 8222. 72-Ohm Twin Line. High-quality 100 -ft. minimum. Shpg. wt., per 100 ft ., $11 / 2$ lbs. 49 T 392. 100' Spool. NET. $\qquad$ .1 .57
49 w 379 . Over $100^{\prime}$, Per $100^{\prime}$
.1 .57

## FEDERAL TWIN LINE

## D Shielded 300-Ohm Line. For high-inter-

 49 W 498. Per Foot100 ft . or more. Per 100 it .
.13 c

## AMPHENOL TWIN LINE

(E Type 214-271. Tubular 300-ohm twin line. Air-core spacing for extremely high effi-$7-28$ copper conductors. $100-\mathrm{ft}$. minimum. Shpg. wt., per $100 \mathrm{ft}, 3 \mathrm{lbs}$.

NET.
ióo…........
3.41

Type 214-298. Four-Conductor Rotator Cable. Extruded brown polyethylene. 7-28
 49 T 423. 50' Coil. NET .1 .76 49 T 415 . $100^{\prime}$ Coil., NET......
$\qquad$ 2.44
.3 .13
.3 .13
(E Type 214-076. Heavy-duty, extremely durE. able 300 -ohm tubular twin line. May also be used by amateurs-rated at 1 kw RF. Lowloss air-core spacing for high efficiency and of high quality. $100-\mathrm{ft}$. minimum length. Shpg. wt., 100 ft., $31 / 21 \mathrm{lb}$
6.23
.6 .23

49 W 409 . Over $100^{\prime}$, Per $100^{\prime}$ $\qquad$
Ff Type 214-056. Flat 300-ohm polyethylene web thickness. $7-28$ stranded conductors. Wt. per 100 ft., 2 lbs.
49 T 434, 25', Coil. NET. . . . . . . . . . . . . 80 80


F Type 214-100. Flat 300-ohm polyethylene tranded line. 100-mil web thickness. 7-28 stranded copper conductors. Shpg. wt., per $100 \mathrm{ft}{ }^{21 / 2} \mathrm{lbs}$.
49 T $418^{\circ} .75^{\prime}$, Coil. NET.
.1 .45
$49 \mathrm{~T} 418 .{ }^{\mathrm{T}} \mathrm{T}^{100}$ ' Coil. NET. NET

F Type 214-185. Flat, heavy-duty, 300-ohm trength for long life. 185-mil web thickness Brown polyethylene dielectric. $7-26$ stranded copper conductors. $100-\mathrm{ft}$. minimum. Shpg. 49 wer $414.100^{\prime}{ }^{5}$ Coil.
$49 \mathrm{w}^{426 .}$ Over $100^{\prime}$, Per
0,…...
4.88

PERMA-POWER TUBE "BRITENERS" AND ACCESSORIES


## TV TUBE "BRITENERS"

Model C-301 Isolation Type. Versatile brightener with 7.8 v. position, plus normal 6.3 v . position. Simple switch, allows quick selection. For use in TV sets with either wt., 10 oz.
80, G 184. List, \$4.45. NET.
........... . 2.62
Model C-201 Autoformer Type. Ideal
for use in sets having series- or parallelwired filaments. Can be installed on any black-and-white picture tube $8^{\prime \prime}$ or larger. 7.8 v . booster tap. Gold-anodized aluminum housing. Does not relieve cathode-filament shorts. Shpg.
wt., 8 oz.
80 . 18 . List, $\$ 2.49$. NET. . . . . . . . . . 1.46
Model C-401 Autoformer Type. Exceptionally low-cost TV tube brightener. Gives 7.8 volts output. Works on black-and-white electrostatic or electromagnetic focus picture tubes. $8^{\prime \prime}$ or larger. Does not relieve cathodehaving parallel-wired filaments only. Shpg. wt., 8 oz parallel-wired filaments only. Shpg. 80 G 183. List, \$1.49. NET. .

MModel C-211 $110^{\circ}$ Autoformer Type. use with $110^{\circ}$ picture tubes. Boosts output to 7.8 volts. Has switch for adapting to parallel or series-wired filaments. With button base (RCA type). Shpg. wt., 8 oz . NET.
80 G 168 . List, $\$ 3.75$. NET. $\qquad$
Model C-221 $110^{\circ}$ Autoformer Type. Same as above, but with shell base. (Sylvania-Dumont type). Shpg. wt., 8 oz.
80 G 169 . List, $\$ 3.75$. NET. $\qquad$
(N) Model K-101 TV Tube Restorer. Highly rects open cathodes, heater-cathode shorts, open control grids, control grid-cathode shorts, low emission, etc. For either parallel or serieswired sets. Shpg. wt., 1 lb.
80 G 189. List, $\$ 6.65$. NET $\qquad$ 3.90

## LINE VOLTAGE REGULATOR



Model D101. Restores correct height and $\underbrace{}_{\text {voltage causes in in lucations where shrinkage. Regulator }}$

## AMPHENOL TWIN LINE

F. Type 214-318. Flat, 300 -ohm twin line for indoor installation only. 60 -mil web clear polyethylene dielectric. Shpg. wt. per 100 ft ., 5 lbs.
49 Th 481.50 -ft. Coil. NET........... 135
49 T 482. 75-ft. Coil. NET
49 T 483. 100-ft. Coil. NET.,
49 W 484. Over 100, Per 100'
.2 .32
.2 .32
F Type 214-559. "Steelcore" high strength ation. Particularly useful wherever long runs, adverse weather and high winds are encoun-
tered. $7-28$ copperweld conductors, heavy 72 tered. $7-28$ copperweld conductors, heavy $72-$
mil virgin polyethylene. Shpg. wt. per 100 ft .

49 T 458 . 100 -ft. Coil. NET.
1.79
2.28
2.28

## AMPHENOL SILICONE COMPOUND

G Type 53-307. For water-proofing TV twin G line. Maintains a constant impedance in line whether wet or dry. Covers hundreds of
feet of standard 300 ohm twin line. Non-coreet of standard 300 ohm twin line. Non-corShpg. wt., 4 oz.
43 N
135. List, $\$ 2.00$. NET................ 18

## KNIGHT TWIN LINE

[H] UHF-VHF Open Line. 300 -ohm. Loss lengths below. Wt., $100 \mathrm{ft} . \mathrm{f}^{21 / 4} \mathrm{lbs}$.
47 T578.100' Coil. NET
$47 \mathrm{TX} 579.250^{\prime}$ Coil. NET .2.17

300-ohm VHF-TV Twin Line. High-qual ity twin line. 72-mil web thickness. Low oss polyethylene jacket. No. 20 stranded conductors. $100-\mathrm{ft}$. minimum length. Shpg. wt. 100 ft ., 2 libs.
49 T $448.100^{\prime}$ Coil. NET. $\qquad$ .1 .74
49 W 435. Over $100^{\prime}$, Per $\mathbf{1 0 0 0}^{\prime}$. $\qquad$
E UHF-VHFTubular Twin-Line, 300-ohm
E cable. $100-\mathrm{ft}$. minimum length. Shpg. wt. $100 \mathrm{ft},{ }_{4} 2 \mathrm{lbs}$.
49 T $429.100^{\prime}$ Coll, NET.
2.58

49 W428. Over 100, Ner Porió, ….........2.58
plugs into AC outlet; TV set plugs into regulator. 3-position selector switch for boosting or lowering voltage. 300 -watt rating. $43 / 4 \times 43 / 4 \times$ -
$21 / 4^{\prime \prime} \dot{\text { G }}$. Wt., ${ }^{21 / 4}$ libs. List, $\$ 6.95$. NET $\qquad$ 4.09

Model C-402. Autoformer Type. Same as
above, but for use in sets having series-wired 80 G 188. List
354
Depend on Allied for Everything in Radio, Television and Industrial Electronics

Model P8192. Self-contained unit adds life to aging picture tubes when dimness is due to low cathode emission. For all electro-magnetic pix tubes with parallel-connected filaments. Easily installed; mounts anywhere in set without soldering. Hi-Loswitch for two levels of tube brilliance. tached to picture tube. Size, $31 / 2^{2} 11 / 2^{\prime \prime}$. Shpg. wt., 8 oz .
80 G 182. List, \$5.44. NET
3.20

## EBY CRT EXTENSION HARNESS KIT



Model K302. Consists of
3 -ft. anode extension harness; 4-ft. CRT socket hess; 4-rt. CRess for both electroharness for both electro-3-ft. yoke extension harness for sets using octal plug; and socket. In rug
case. Shpg. wt., 10 oz.
41 H 348 . List, $\$ 5.40$. NET
.3.18

## EBY COLOR \& $110^{\circ}$ CRT ADAPTER



Model AD-67. Universal CRT adapter. Adapts any commercial CRT checker or rejuvenator for $110^{\circ}$ or color TV picture tubes. Individually checks each gun of color tube. 3-position selector switch selects correct color


## TV Antenna Accessories

A
Hanger Strap. For mounting masts to odd-shaped objects. Made of heavy $3 / 4^{4}$ gal71 C 400 12, strapping.
71 C $400.12^{\prime}$ coil. Wt., 1 lb. NET....... $49 ¢$
(B) Wall Stand-Off Insulator. For securing Wt.c per pkg., 10 oz. 10 per pkg.
.606
C Ring Clamp. Supports guy wire ring, etc. eters (O.D.) shown below. Shpg. wt., per pkg., 3 oz. 5 per pkg.

| 71 C $609.3 / 4^{\prime \prime}-1^{\prime \prime}$. Per Pkg.. |
| :--- | :--- |
| 71 C $610.1^{4 \prime}-1^{1 / 4^{\prime \prime}}$. Por Pkg. |

$.37 \%$
$.37 \%$
(D) Cable Clamp. Provides a non-slip grip on antenna and tower guy-wires. Eliminates need for splicing or soldering cable loops. Fits cables up to $3 / 6^{\prime \prime \prime}$ dia. Solid steel U-bolt has 3/16"x24 thread. Hex nuts for easy tightening.
Galvanized collar has tapered slots-increases cable grip with each turn of wrench. Size, $7 / 8 x$ $1 \times 7 / 16^{\prime \prime} \cdot$ Shpg. wt., $^{4}$ oz. $\qquad$
[E U-Bolt. Galvanized steel. With nuts and E washers. Fits up to $11 / 2^{\prime \prime}$ (O.D.) masts Shpg. wt., per pkg., 4 oz. 2 per pkg.
71 C 611 . Per Pkg..................


Mast Clamp. Serrated yoke. For 2 masts with max. O.D. of $13 / 8^{\prime \prime}$ each. Galvanized steel. Shpg. wt., per pkg., 4 oz. 2 per pkg.
G Universal Guy Rings. Rest unanchored Shpg ring clamp. Fit mast. O.D. below.
71 C613. $1^{\prime \prime}$. pkger ${ }^{10}$ oz. 5 per pkg.

Huy Wire Hook Eye. Anchors guy wires
H] firmly. Screws into wood Galvanized steel Shpg. wt., per pkg., 10 oz. 5 per pkg. $.20 ¢$
J] Hook Eye. Provides an anchoring point $J$ for guy wires. Screws into wood. $3^{\prime \prime}$ long. Shpg. wt., per pkg., 8 oz. 5 per pkg.
71 C
620 . Per Pkg...........
Hook E J Hook Eye. Anchg, 10 oz .5 per pkg. 71 C62I. Per Pkg............................224
K Drive-in Stand-Off Insulators. UniverK sal. For flat, oval, tubular and coaxial 71 C $626.31 / 2^{\prime \prime}$. Per Pkg......................174

Universal Stand-Off Insulators. For us with flat, oval or tubular twin-lead, and coaxial TV lead-in. Polyethylene insulation Fasten securely by screwing into wood. Av. shpg. wt., per pkg., 10 oz. 5 per pkg.

Universal Hot Nail Stand-Off Insula-
tors. For flat, oval, tubular, and coaxial TV
lead-in line. Holds securely when driven into
wood, mortar, or brick. Length, $31 / 2^{\prime \prime}$. Shpg. wood, mortar, or brick. Length, $31 / 2$. 4 . 284
wt., per pkg., 4 oz. 5 per pkg.

N Open Line Stand-Off Insulator. Has 300, 450 or 600 ohm 71 C 670 . Per Pkg......................... 594
(P) Heavy-Duty Lag Bolts. For rigidly securP ing mast mounts, tower bases, etc., to wood, brick, masonry or other surfaces. Made of heavy cadmium-plated steel. Have $1 / 4^{\prime \prime}$ diameter shank. Tighten with wrench or pliers. Av. shpg. wt., per pkg. 5 oz .10 per pkg.
71 . $605.11 / 2^{\prime \prime}$. Per Pkg................. 388 . $\begin{array}{ll}71 \text { C } 605 . & 11 / 2^{\prime \prime} .\end{array}$ Per Pkg. $^{7} \mathbf{C}$ Per Pkg.

## W) <br>  <br> $x$ <br> Single Screw-Type Stand-Off Insula <br> (AA <br>  <br> $$
\widehat{\mathrm{AA}}
$$



BB
Double Stand-Off Insulators. Wood R screw type. For flat, oval, tubular and coaxial lines. Av. shpg. wt., per pkg., 10 oz 5 per pkg.

Per Pkg. $48 ¢$
Por Pkg.... ............... 484
S oval, tuype Single Stand-Offs. For flat, any mast. Shpg. wt., per pkg., 6 oz .3 per pkg.

71 C 655. $51 / 1^{\prime \prime}$.
71 C $656.72^{\prime \prime}$. Per Pkg. $\qquad$

T Strap-Type Double Stand-Off Insulators. As above, but for two transmission
lines. For flat, oval and round twin-lead or coaxial lines. Av. wt., per pkg., 8 oz .3 per pkg.
71 C 633. $31 / 2^{\prime \prime}$. Per Pkg.
$.40 ¢$
W Snap-on Stand-Off Insulators. For flat, $W$ oval, tubular and coaxial lines. $31 / 2^{\prime \prime}$ long Fit masts (O.D.) below. Av. shpg. wt., per pkg., $8 \mathrm{oz}, 3$ per pkg.

> | 71 |  |
| :--- | :--- |
| 7 | C $636.1^{\prime \prime}$ |
| C 637. | Per Pkg. |
| $116^{n}$. |  | Per Pkg.

> 71 C 637.
71 C $638.111^{\prime \prime \prime}$. Per Per Pkg.
> 194
> 94
$\chi$ tors. For any lead-in. Insulator swings out for insertion of lead-in. Snaps shut with finge pressure. Design assures isolation of lead-in rom metal holder. Av. wt, per pkg., 9 oz
71 per $639.312^{\prime \prime}$.
71 Cer Pkg.
$71040.512^{\prime \prime}$. Por Pkg. $\qquad$ 194
.224
7 C $641.71 / 2$. Per Pkg.
Y Double Screw-Type Stand-Off Insulators. As above, but with two insulators polyethylene insulation. Keeps lines well sep polyethylene insulation. Keeps lines well sepper pkg., 11 oz. 5 per pkg.
71 C 643. $71 / 2^{\prime \prime}$. Por Pkg. $\qquad$ $.55 ¢$

[2]Single Strap-Type Stand-Off Insula 2. tors. For mounting stand-off insulators on masts. Easy installation; no loose parts. With polyethylene low-loss insulator design, electro galvanized steel strap, and heavy gauge steel buckle. Bronzidite plating for maximum protection from corrosion. Installs quickly; no threading required. Av. shpg. wt., per pkg., 11 oz. 3 per pkg.


AA
Dual Strap-Type Stand-Off Insulators. AA With two polyethylene pivot-action lock Wsulators. Electro-galvanized steel strap. tator cable lead $71^{\prime \prime}$, or lead-in plus rotator cable. Length, $71 / 2^{\prime \prime}$. Shpg. wt., per pkg.
 $\qquad$
BB Mast Insulator Clamps. Consist of metal BB strap and nut block for $10-32$ machinescrew type stand-off insulators. No need to dril hole in mast. Wt, per pkg., 5 oz .3 per pkg. 71 C 823. For $11 / 4^{\prime \prime}$ masts.
Per Pkg.
144

. . . . . . . . . . . 14

CC Ground Clamp. For secure ground conCO nection to water pipes up to $11 / 4^{\prime \prime}$ diameter Pointed screw tip for positive bite; screw 51 C 310 . EACH 10 or more, EACH

184
DD Antenna Clip. A very handy accessory ead-in servicemen. Clips standard 300 -ohm oss plastic clip with screw terminals for transmission line. $33 / 4^{\prime \prime}$ long. Shpg. wt., 2 oz . 41 C 132. NET. ................................. 104

## JFD SET \& ANTENNA COUPLERS AND ANTENNA SWITCHES

Model AC Set Couplers. Offered in a choice of 3 quality models to permit connecting 2 , 3 or 4 TV sets to one antenna. With U-bolt to permit convenient mounting on antenna mast, if desired. Input and output impedance, 300 ohms. Shpg. wt., 8 oz.
Stock No Type Description $\mid$ NET

 | 71 | C 662 | AC60 | 3 TV sets to 1 antenna | 2.35 |
| :--- | :--- | :--- | :--- | :--- | :--- | :--- |
| 71 |  |  |  |  |

Model AC Antenna Couplers. Designed for connecting 2 separate TV antennas to single twin-line. Eliminate need for running separate twin lines through the house. Supplied with hardware. Shpg. wt., $3 / 4$ lbs.
Model AC10. Couples 2 antennas; high-band 5 and low-band VHF

Model AC20. Couples 2 antennas. Permits connecting separate UHF and VHF antenna to a single length of twin line.
51 C 266 . List, $\$ 3.75$. NET..

Model AC30. Couples 3 antennas: Low-band and high-band VHF, and UHF. 51 C 267 . List, \$4.85. NET.. "Bat-Handle", 3 -way antenna switch. Enclosed in sturdy, compact plastic housing. Permits instant selection of any one of 3 antennas. 71 Chg. wht. 2 lbs.
AS3 Multiple Antenna Switch. Specially designed to permit instant switching to any antenna in a multiple Yagi installation. Used with up to 3 antennas. Employs smooth-working constant-impedance rotary switch with in sturdy plastic case. Size, $13 / 4 \times 2 \times 5^{\prime \prime}$. Convenient screw terminals for quick, simplified hookup. Chpg. wt., 2 lbs. C 40 . List, $\$ 4.95$. NET. $\qquad$ 2.91

AS4 Antenna Switch. Same as Type A.S3 listed above but for use with up to 4 antennas.
71 C 541. List, $\$ 5.95$. NET..............3.50


AS3\&AS4
Antenna Switch

## TV Antenna Accessories

JFD LIGHTNING ARRESTERS, COUPLERS; WAVE TRAPS

(A) AT107 Lightning Arrester. Ideal for pro-

(A)mission lines. Water-proof porcelain body with nickel-plated hardware. Makes positive contact Has stainless steel strap designed for universal mounting. Complete with 4 -ft. aluminum ground wire. Size, $2 \times 3 \times 11 / 2^{\prime \prime}$. U.L. Approved. 71 Shpg . wt., 15 oz .
71 C 529 . List, $\$ 3.50$. NET. . . . . . . . . . 2.06
(B) AT102 Regular Flat-Line Lightning $\square$ Arrester. Designed to accommodate all ribbon type twin lead. Has special retaining flange to positively prevent twin-lead from working loose. Water-proof porcelain body. Underwriters' Laboratories Approved. Complete with stainless steel hanger strap, 4 -ft. aluminum ground wire and hardware. Shpg. (B) AT103 Lightning Arrester. ${ }^{\circ}$ Like Type B AT102, described above, but for oval-jumbo and tubular twin lead-in line. U. L. Approved Shpg. wt., 15 oz
25. NET $\qquad$ .1 .32
(C) AT105S Unlversal Arroster. Can be made by saw-toothast or pipe. Connls. For flat tubular and open wire lead. Supplied with stainless steel hanger strap. U. L. Approved. $71{ }^{\text {Shpg. wt., }} 530$.
C AT105. As above, less hanger strap. With 71 ground lug and screws. Wt., 12 oz. 518 . Liat, $\$ 1.25$. WIIT............
(D) AT104 Lightning Arrester. For antenna (0) rotator installations. Handles 4-wire lead-ins. 8 precision-spaced teeth make positive contact with conductors. U. L. Approved. With ground lug. Shpg. wt., ${ }^{15}$ OI 519 . List, $\$ 1.50$. $\qquad$ 88c
AT110 Lightning Arrester. For flat or open-type transmission lines. Strain-relief lip for protecting both types of lead-in. Mounts on outside wall or window sill. With ground${ }_{71}$ lug. U. 531 . List, $\$ 1.50$. NET.............. 88 C
E AT110S. Similar to the Type AT110 described above, but supplied with a stainless stee hanger strap. Shpg. wt., 15 oz.
(F) AT131 Lightning Arrester. For flat, tuF. bular, oval, or open-wire transmission lines. Saw-tooth washers assure positive contact without cutting or stripping of wire. Constructed of low-loss material for full signal
strength. With wood screw and strap. U. strength. With wood screw and strap. U. L. Approved. Shpg. wt., 10 oz.
71 C 537. List, 75 c . NET.
$.44 c$
Model RA-2 Two-Set TV Antonna Couplor. For operating two TV receivers from the same antenna. Delivers full signal strength to both receivers. Gives efficient operation on all 300 and OHF channels. Maintains conQuickly and easily attace. Extremely compact. Quickly and easily attached with single mount71 C 660 . List, \$1.65. NET.
.97c


G


H


H] "Tele-Plex" TV Set Couplers. For operation of 2 to 4 TV receivers from a single nto coupler rom each input and plug in 300 -ohm lead ightning arrester. *With arrester. Size, $6 \times 3 \times 3{ }^{\prime \prime}$. With mounting screws and complete instructions. Shpg. wt., 1 lb .

| Stock <br> No. | Mfrs. <br> Type | Used for | NET <br> EACH |
| :---: | :---: | :---: | :---: |
| $98 C 140$ | TCC2L* | 2 2 sets | 7.03 |
| 71 C 658 | SC2 | 2 |  |
| 98 C 141 | TC4L* | up to 4 sets | 6.44 |
| 71 C 659 | SC4 | up to 4 sets | 7.61 |

Model TT2. Economy Coupler. 2-set TV coupler for low-cost installations. Designed to permit convenient operation of 2 TV receivers from a single antenna. Has input for 300 ohm lead in from antenna and 2 outputs for 300 ohm TV antenna inputs. For indoor installation. Has screw-type terminals for connecting twin lines. Less arrester. Shpg. wt., 1 lb .
98 C
143. List, $\$ 3.75$. NET.
.2 .20
Model HP50 Interference Eliminator; Jilters out RF, diathermy, and other TV interference without affecting strength of television signal. Eliminates all interfering frequencies up to 50 mc . Employs expertly-designed lumped-constants circuit, high-Q capactors and air-core coils. A compact, highly efficient unit. Easily installed. Size, $5 \times 3 \times 2^{\prime \prime}$
${ }_{71}{ }^{\text {Shpg }} 67 \mathrm{I}^{\mathrm{wt}}$. List, ${ }^{1 / 2}$ ib.50. NET.
. 2.65

POPULAR LIGHTNING ARRESTERS AND COUPLERS

* 


RCA ARRESTERS \& COUPLER

KType 235A1 Arrester. Expertly designed $K$ low-loss UHF-VHF lightning arrester-no splicing, stripping, or soldering of antenna line necessary. Screw cap type-forces antenna line against staple contacts which pierce insulation and make positive contact which Underwner ing on mast or waprove Strap type for mounting on mast or water pipe. Shpg wt.c 229 . NET. $\qquad$ .82c
L Type 240A1 Coupler. Set Coupler. For $\square$ operating two or more TV sets from one antenna having a 300 -ohm transmission line. Save cost of additional antenna for that second
set. Utilizes resistance elements only-does not set. Utilizes resistance elements only-does not affect impedance characteristics of transmis sion line. Designed to provide necessary isolation between TV receivers to reduce interference caused by interaction of their oscilators 51 C E 246 . NET Shpg. wt., 6 oz .
.I.15

## TELCO LIGHTNING ARRESTER

(M) Type 8642. Extremely versatile, low-cost M. lightning arrester. For use with round, oval, flat, or open ines. Requires wo stripping, cut ting, or splicing of insulation. Toothed circular contacts make firm contact. Underwriters Shpg. wt., 6 oz. $\$ 1.25$. NET.............. . 73 C

## PORCELAIN ARRESTER

 A low-cost, general purpose lightning arrestor. Designed for series in lead-in lines of radio receivers. Ruggedly constructed of high-quality, moisture-proof glazed porcelain. Has high barrier between terminals for extended leakage path. Sturdy hexnut terminals assure solid, permanent connections. 2-hole mounting. U.L. Approved. Shpg. 51 'C 280. NET. $\qquad$ .25c


R

## AMPHENOL ARRESTERS \& COUPLERS

(N) Type 114-328 Arrester. An efficient universal lightning arrester. For flat, tubular, or open line. No stripping, cutting, or splicing of line necessary. Knife-edge contacts, cut through insulation to make positive contact. Low loss, phenolic body. With screws for mounting. Underwriters' Laboratories Approved. Shpg. wt. 5 oz. Type 114-329. As above, with strap mount.
5 I C 289. List, $\$ 1.75$. NET................ 1.03
(P) Amphonol Tele-Couplors. Highly effifrom one VHF or UHF antenna. Permits using a single transmission line to antenna. Bifilar wound network provides high degree of isolation to prevent interaction between sets. Also offers very low insertion loss to insure fuli strength signals to all sets. Weather-proof plastic case with protected screw-type terminals. May be installed indoors or outdoors. Shpg. wt., $1 / 2 \mathrm{lb}$.
Ty pe 114-088. 2 set Telecoupler.
5 1 C 272 . List, $\$ 3.75$. NET..... Type 114-090. Up to 4 set coupler.
. 2.20
. 3.38

(R)
Amphenol Color-Couplers. Highly efficient couplers for connecting two, three or four TV sets to one antenna. Provide effective isolation of sets and low signal loss through proper impedance matching. Work equally well Excellent color TV sets or black and white. Excellent also for matching FM radios to a well as weather-proofing and durability-suit able for either indoor on able for either indoor or outdoor installation. antenna lead-in. 2-screw mounting. Wt. $1 / 4 \mathrm{lb}$. Type 114-097. 2 sets to 1 antenna. 91 C 841. NET. 1.73 Type 114-098. 3 sets to 1 antenna
91 C 842. NET....................... Type 114-099. 4 sets to 1 antenna.
91 C 843 . NET.......................
.2 .32
. 2.91

## JERROLD TV COUPLERS



Isolating Couplers. High quality, exceptionally low-loss couplers. Models for use in either fringe or metro-
politan areas. Permit politan areas. Permit
the operation of 2,3 ,or 4 receivers on the same isolation between AC-DC TV sets and antenna. Effectively suppress oscillator interaction and interference in receivers. 300 -ohm impedance matching is maintained for full signal strength to all sets. Sturdy case is universal mounting type. Fully conceals and protects all connecting lead-terminals. Types MF-2 and MF-4 are designed for fringe area reception. Type M-2 is for coupling in strong signal areas. Each measures $41 / 8^{\prime \prime}$ long, $13 / 8^{\prime \prime}$ wide, and $11 / 4^{\prime \prime}$ deep. Shpg. wt., 6 oz.

| $\begin{gathered} \text { Stock } \\ \text { No. } \end{gathered}$ | $\left\|\begin{array}{c} \text { Mfrs. } \\ \text { Type } \end{array}\right\|$ | Description | $\begin{aligned} & \text { NET } \\ & \text { EACH } \end{aligned}$ |
| :---: | :---: | :---: | :---: |
| 71 C 841 | M-2 | For 2-sets. Blue-Gr | 2.10 |
|  | MF-2 | For 2-sets. Ivory. |  |
| 71 c 843 | MF-4 | For 3 or 4-sets. Iv | 3.45 |

## BLONDER-TONGUE LINE SPLITTER



TR-3A

Model LS4-4. Provides low-cost means of dividing 300 -ohm twin-line into four branches from one input. Enables signal to be distrib uted to four TV sets. Maintains 300 -ohm impedance match. Excellent for multiple in stallations such as in apartments. Size, $23 / 8 \mathrm{x}$

5.30

## BLONDER-TONGUE THERMO RELAY

Model TR-3A. Replacement relay used in boosters and converters which automatically adjustable for time delay of. 1 to 4 seconds will handle up to .5 amp @, 117 v . or $1 / 4 \mathrm{amp}$ @ 220 v ., AC. Uniform operation over current range of $.1-3 \mathrm{amps} 21 / 4 \times 1 \times .3 / 8^{\prime \prime}$. Wt. 2 oz.
51 C 210. List, $\$ 2.00$. NET..........
.1 .30


## MOSLEY TWIN LINE ACCESSORIES

(A) Type F-10 3-Way Switch and Lead(A) in Socket. Switch and single twin-line socket in one flush-mounted unit. With faceplate. Shpg. wt., 12 oz .
40 C 336. With brown plate.
40CC 335 . With ivory plate.
2.31

B Type F-20 3-Way Antenna Switch. SeB lects any of 3 antennas. Constant impedance in all positions. Mounts on back of TV set. Shpg. wt., 12 oz.
40 C 338. Brown plastic case. NET 2.21
C Type F-40 2-Way Antenna Switch. Same C] as Type $\mathrm{F}-20$ above, but for 2 antennas. 40 C 425. Brown plastic case.
40C 426 . Ivory plastic case.
. 1.21
(D) Type 625 Wall-Thru Insulator. For D twin line or RG-59/U coax. Fits any wal up to $13^{\prime \prime}$ thick. Includes polystyrene tube $14^{\prime \prime}$ long, inside plate and outside cap. If desired,
universal TV socket, 343-PK (listed below) universal TV socket, 343-PK (listed below)
may be installed directly on inside plate. Select matching color. Shpg. wt., 1 lb .
40 C 430. Brown plastic ends.
40 C 440. Ivory plastic ends.
. 1.21
Type 625PK. Same as Type 625 above, but with universal TV lead-in socket for inside wall plate. Ivory. Shpg. wt., 1 lb .
40 C 441 . NET. $\qquad$ . 1.85
E] Type 321 Polarized Connector. Efpolystyrene plugs, each with one male and one female. Assures proper polarization. $13 / 8^{\prime \prime}$ long. Shpg. wt., 2 oz.
72 C 711 . PER PAIR.
.37c
FF Type 343-PK Transmission Line Sockside plate of 625 Wall-Thru. With solderless twin line plug and mtg. screws. Shpg. wt., 2 oz.
40 C 413 . Brown plastic case.
40 C 412. Ivory plastic case.
NET EACH. . . . . . . . . . . .

## CINCH-JONES WALL PLATE

 For terminating TV lead-in and rotator cables in standard wall outlet. Wall plates are chromeplated. S-302 for antenna lead-in. wires; $\mathrm{S}-302-8$, for lead-in and 8 wires; $\mathrm{S}-302-8$, for lead-in androtator wires. Shpg. wt., 7 oz .

WPC Style TV Wall Plates
41 C 646. S-302. NET...
.66c


41 C 647 S-302-4 NET 1.22

G Type 27-S Flat-Line Polystyrene screws for positive electrical contact. Size, $3 / 4 x^{3 / 4} x^{1 / 4}{ }^{\prime \prime}$. Shpg. wt., ${ }^{2}$ oz.
72 C 706 . NET EACH....
.....
. Ilc 10 for. .994 100 for $\qquad$ 8.91 [H Solderless Base Sockets. Precision and 8 wire flat or round cable. Use with line plugs listed below. Shpg. wt., 2 oz.

| Stock No. | Type | Description | NET |
| :---: | :---: | :---: | :---: |
| 40 C 437 | 354 | For 4-wire cable <br> For <br> For 8-wire cable | 1.84 |

Line Plugs. Solderless; for 2,4 and 8 wire; Stock No Type Description NET \begin{tabular}{l|l|l|}
\hline Stock No. \& Type \& Description <br>
\hline 40 C 429 \& 303 \& NET <br>
\hline For 2-wire cable \& $19 \varnothing$

 

40 C 429 \& 303 \& For 2-wire cable \& 194 <br>
40 \& C 431 \& 374 \& For 4-wire cable \& 464 <br>
40 C 433 \& 378 \& For 8-wire cable \& 624 <br>
\hline
\end{tabular}

K Line Sockets. Take plugs, above. PolyK styrene; for connecting or terminating multi-wire cable. Shpg. wt., 2 oz .

| Stock No. | Type | Description | NET |
| :--- | :---: | :---: | :---: |
| 40 C 434 | 364 | For 4-wire cable | $60 ¢$ <br> 40 C 436 |



(M)
Type 311 Socket. For use with twin-
line plug above. Standard $1 / 2^{\prime \prime}$ spacing. PolyMine plug above. Standard $1 / 2^{\prime \prime}$ spacing. Polystyrene insulation. Shpg. wt., 2 oz.
72 C 709. NET.........................
(N) Type 304 Mosley Antenna Connector. For connection of lead-in to TV antenna
terminal. Fits Type 311 socket, above. Shpg. terminal. Fits Type 311 socket, above. Shpg. wt., 2 oz. 339 . NET.

19 c
(P) Type 902 Dual-Match TV Coupler. OpP) erates 2 TV sets from 1 antenna. For $300-$ ohm line. Shpg. wt., 3 oz.
40 C 424. NET..
1.82

Type 904. Four-Set Coupler As 902 above, but accommodates up to 4 sets.
40 C 445 . NET.................... 3.86
( ${ }^{\text {Type 263S. "Y-TY" for connecting all }}$ $R$ types of transmission lines to TV antenna elements. Solderless, screw connections $4^{\prime \prime}$ max. width. Wt., ${ }^{6} \mathrm{oz}$.
40 C 443 .

40c
S Type 29-S Tubular To Flat-Line Splicer. For joining tubular or oval 300 -ohm lines to standard flat lines. Clear polystyrene.
40 Chpg 442 . ${ }^{3}$ NET.
13c
T Type F-1PK Flush Socket and Wall 1 Plate. For 300 -ohm twin-line. Fits standard outlet box. Plastic plate. With plug and mtg. bracket. Shpg. wt., 6 oz.

| 40 C 419 . Brown. NET |
| :--- |
| 40 C 4 |

. 1.21
Type F-11PK Dual Flush Socket and Wall Plate. Similar to above, but for 2 twin-line connections, with plug. Shpg. wt., 6 oz .
40 C 4
40 C 416 . Brown. NET
Ivory.
EACH.
1.66

Type F-111pK Triple Flush Socket and Wall Plate. Similar to above, but for 3 twinline connections. With plug. 6 oz .
40 C 428. Brown. NET
. 1.66
Type F-14PK Combination Flush Socket and Wall Plate. Similar to above, but for 300 -ohm twin-line and 4 -wire rotator cable. Plastic plate, with plugs. Shpg. wt., 6 oz . 40 C 415 . Brown. NET
40 C 414. Ivory. EACH.............. 2.17
Type F-114PK Combination Flush Socket and Wall Plate. As above, but for 2 twininnes and 4-wire rotator cable. 40 C 448. Brown plastic. NET 40 C 449. Ivory plastic. EACH...... 2.17
W AC-TV WALL PLATE SOC KETS. Shpg. (W) wt., 6 oz .

AC-1PK. For 2 AC sockets and 300 -ohm twin-line. 407 . NET. .I.16
AC-14PK. As above, plus 4-wire rotor. 2.05
40 C 408. NET......................... 2.05
AC-18PK. Same as Type AC-1PK, plus 8 wire rotor.
40 C 409 . NET.
2.28

41 C 648. S-302-8. NET.. 1.49 CCT Style Plugs for Above
40 H 802. P-302. Antenna plug. NET... $43 ¢$ 40 H 804. P -304 4 -wire rotor plug NET.. 514 40 H 808. P-308 8-wire rotor plug NET. $62 \phi$


[


## TV INTERFERENCE FILTERS

## REGENCY HIGH-PASS FILTER

$X$ Model HP-45. Attenuates signal frequen$X$ cies below 55 mc . Provides effective aid in elimination of TVI. Has " $K$ " type filter with cut-off frequency of 45 mc in a 300 ohm line. Approximately 20 db attenuation at $29 \mathrm{mc} ; 40$ db or more at frequencies of 14 mc and below. Signals above 55 mc are passed through filter without loss. With mtg. bracket. $11 / \mathrm{s}^{7} 7 / 8^{\prime \prime}$. Shpg. wt., 2 oz.
77 C 569. List, \$1.65. NET.
$.97 c$

## JFD INTERFERENCE FILTERS

$Y$ Model WT26. Reduces cross-channel and other interference caused by diathermy machines, amateur transmitters, 1 set oscilto the back of any TV set-no brackets or special installation necessary. For channels 2-6. Special instalation necessary. For channels 2-6. $5 \times 21 / 4 \times 23 / 4^{\prime \prime}$. Shpg. wt., 8 oz. Model WT713. As above, but for channels 7-13.

## AMPHENOL HIGH-PASS FILTER

[2 Model 114-330. Excellent high-pass filter Z for reducing TV interference caused by transmitters, diathermy, ignition, etc. Quicky attenuation of interference below 50 mc .300 ohms. $15 / 8 \times 43 / 4 \times 31 / 8^{\prime \prime}$. Shpg, wt., 6 oz .4 .09

## R. L. DRAKE TVI FILTER

(AA Model TV-300-HP. High-pass interferAA ence filter for any TV set with 300 -ohm antenna input and 20 or $44-\mathrm{mc}$ IF's. Attenuates highly effective on 6 -meter interference. Fully shielded. $21 / 2 \times 21 / 2 \times 11 / 8^{\prime \prime} \cdot 1 / 2 \mathrm{lb} . . . .$.
77 C 567.50

## J. W. MILLER HIGH-PASS FILTER

BB Model 6168. For use at TV set. Reduces BB interference from medical and industrial equipment, transmitters, etc. Cuts off below 40 mc . 300 ohms. Size, $17 / 16 \times 17 / \mathrm{s}^{\times 31 / 2^{\prime \prime} \text {. Shpg. }}$ wt., ${ }^{1 / 2}$ lib. NET.......................... 3.23

## TV Components and Accessories

## "COMFORT LINE" TV TABLES





## "NU-LIFE" CATHODE-RAY TUBE RESTORER



Remarkably versatile unit. Corrects many kinds of shorts and opens and electro-static ocus picture tubes. Permanently elimas: shorted cathode to filament, shorted control grid to open contro grid; or any combination of these. For use with either series or parallel-wired sets. Ingenious terminal board arrangement with plug-in leads allows undamaged elements to take the place of the damaged elements. Simple instructions come with unit. Also provides an easy and in expensive method of restoring picture tub brightnens. Builtin potentiometer allows ad justment ho corr Shpr wt, 12 oz. and slow heating. Shpg. wt., 12 oz
4.95

## RCA TV RECEIVER SERVICE PARTS

Exact duplicate replacement parts for RCA TV receivers with part numbers as given in RCA servicing and replacement manuals. Shpg wt., $11 / 2 \mathrm{lbs}$., except $* 15 \mathrm{lbs} ., \dagger 6 \mathrm{oz} ., 83 \mathrm{lbs}$.

| Stock No. | Mfr's <br> Type | Component | $\begin{aligned} & \text { NET } \\ & \text { EACH } \end{aligned}$ |
| :---: | :---: | :---: | :---: |
| 77 G 186 | 74586* | Power Transformer | 25.23 |
| 77 G 146 | 74588 | Horiz. Output \& HV Transf. | 14.70 |
| 77 G 188 | 74950 | Vert. Deflection Output Transf. | 4.59 |
| 77 G 263 | 749528 | Deflection Yoke | 6.34 |
| 77 G 266 | $75221+$ | Selenium Rectifier | 1.73 |
| 77 G 192 | 75508* | Power Transformers | 14. |
| 77 G 193 | 75519 | Horiz. Output \& HV Transf. | 4. |
| 77 G 268 | 76168 | Focus Magnet | 7.7 |
| 77 G 197 | 76501 | Horiz. Output \& HV Transf. | 4.2 |
| 77 G 255 | 766538 | Deflection Yoke | 6. |
| 77 G 2561 | 77697 § | Deflection Yoke | 6.85 |

## RCA COLOR TV SERVICING AIDS

A "must" for service kits. Types 222X1 and 223X1 are for RCA color TV 1956 sets. Type 220X1 and 221X1 are for 1956 and 1957 sets. Types 224X1, 225X1 and 226X1 are for 1957 color television receivers.

| Stock No. | $\begin{aligned} & \text { Mfr's } \\ & \text { Type } \end{aligned}$ | Component | $\left\lvert\, \begin{aligned} & \text { Wt., } \\ & 0 \\ & \text { Z } \end{aligned}\right.$ | $\begin{aligned} & \text { NET } \\ & \text { EACH } \end{aligned}$ |
| :---: | :---: | :---: | :---: | :---: |
| 77 G 310 | 220X1 | CRT Socket Ext. Cable | 9 | 7.25 |
| 77 G 311 | 221XI | Reflecting Yoke Ext. Cable | 7 | 3.43 |
| 77 G 312 | 222X1 | Converging-Magnet Assembly Ext. Cable | 6 | 3.3 |
| 77 G 313 | 223X1 | Hi-Volt Ext. Cable | 2 | 1.32 |
| 77 | 206P1 | Hi-Volt Interlock Plug | 2 | . 4 |
| 77 G 315 | 224X1 | Converging-Magnet Ext. Cable | 2 |  |
| 77 G 316 | 225X1 | Hi-Volt Ext. Cable | 6 |  |
| 77 G 317 | 226X1 | Grid Shunt | 9 | 4.70 |

## QUAM FOCALIZER UNIT



Type QF-4. For quick, accurate focusing and centering of raster. Fits all picture tubes regardiess of size or anode
voltage. Size, $13 / 4 \times 31 / 4 \times 51 / 2^{\prime \prime}$. Shpg. wt., 1 lb .

## 41 H 133 . NET. <br> .2 .50



BARKHAUSEN ELIMINATOR
Very effective in eliminating Barkhausen oscillations. These oscillations appear as dark vertical lines. Fits around the horizontal output tube. For use on 6BQ6, 6AU5, 6AV5, etc. Shpg. wt., 3 oz. 4I H I29. NET.
.73c

## MILLER ADJUSTABLE ION TRAP



Model 6295. Universal singlemagnet ion trap. Screw adjustment allows magnetic field to be varied between 32-55 gausses. Replaces any single-magnet trap within this gauss range. Greatly reduces your inventory. Extenlation. Shpring permits easy instal-
lation. 60 H 796. List, \$1.25. NET...
.73c


## CLAROSTAT REGULATORS

Type TVA. Protects TV sets from line voltage surges. Reduces surge type. For sets using $200-300$ watts. | Shpg. wt., 5 oz . |
| :--- |
| 31 |
| 085. |

2.06

Type TVB. For sets having a power consumpion of 300 to 375 watts. Diameter, $113 / 16^{\prime \prime}$; ength, $334^{\prime \prime}$. Shpg. wt., 5 oz .
31 E 086. NET
2.35

# AM Antennas, Antenna Kits, TV Tuner 

CONSOLIDATED ANTENNAS


MODEL 615 LONG WAVE,

## SHORT WAVE \& BC ANTENNA KIT

An excellent antenna kit for short-wave reception. Will also perform well on the longwave and broadcast bands. Contains all wire and parts for any one of the following antennas: balanced doublet; double doublet; or invertedL . Includes: 100 ft . of bare antenna wire; 50 ft . of insulated transmission line; 4 insulators; 2 bakelite screw eyes; doublet lightning ar-
restor; lead-in strip; and ground clamp. With restor; lead-in strip; and ground
instructions. Shpg. wt., $31 / 4 \mathrm{lbs}$.
5I C 263. NET.
.4 .26

## MODEL 635 DOUBLET ANTENNA



A highly efficient doublet antenna. Provides band reception. Doublet sections are tuned to provide uniform response throughout the 16-49 meter short-wave band. Kit contains: 2-30 ft . coils of $7 / 24$ bare copper wire; 50 ft . of twisted and braided transmission wire; 10 ft . of ground wire; 3-3 " glass insulators; ground clamp; porcelain lead-in tube; 2 porcelain nailknobs; and easy-to-follow installation instructions. Shpg. wt., $31 / 4 \mathrm{lbs}$.
51 C 264. NET.
.3 .72

## COPPERWELD ANTENNA WIRE

High-quality, copperweld antenna wire. Features copper outer conductor and steel core. May also be used for guying antenna tower.

| Stock No. | Gauge | Feet | Wt., Lbs. | EACH |
| :--- | :--- | :--- | :--- | :--- |
| $49 \mathrm{~T} \mid 33$ | 12 | 100 | 2 | 2.69 |
| 49 T 134 | 12 | 250 | 5 | 6.30 |
| 49 T 440 | 14 | 100 | $11 / 2$ | 2.37 |
| 49 T 141 | 14 | 250 | 3 | 5.12 |
| 58 T 318 | 18 | 250 | 2 | 1.63 |
| 58 T 317 | 18 | 500 | 3 | 2.94 |
| 58 T 315 | 18 | 3000 | 18 | 14.48 |

## STANDARD COIL TUNER

## Model NA-2100

 Neutrode Replacement Tuner.Replaces TAA-050, 21 me pentode and TCA050, 21-mc cascode tuners. Features neu-tralized-triode circuit to provide substantial improvements in gain, signal-to-noise performance. Delivers percellent pictures eve excellent pictures even in fringe areas. Uses Printed circuit board, Has imp converter. circuits and shielding; Hreatly reduced oscillator drift and radiation. IF frequency is preadjusted at factory to approx. 23.5 mc ; can be adjusted over a wide range to suit specific
installation requirements. Requires $125-150 \mathrm{v}$. D.C. plus heater voltage. With full instructions. Shpg. wt., 3 lbs.
60 G 228. NET.
19.35

## TYPE 31M-213 TV TUNER STRIPS

 Replace original Standard Coil strips. Set includes antenna and oscillator strip for VHF (channels 2-13 only). Specify channel number required and tuner series letter stamped on original strips. 4 oz .| Stock No. | For Series | Stock No. | For Series |
| :---: | :---: | :---: | :---: |
| 60 GG 322 | F | 60 GG 326 | R |
| 60 GG 323 | H | 60 GG 327 | Q/R |
| 60 GG 324 60 GG 325 | ${ }_{\mathbf{O}}^{\mathbf{K}}$ | 60 GG 328 |  |

NET EACH

## SUPEREX HIGH-GAIN LOOPSTICK ANTENNAS

A complete selection of low-cost, high-efficiency, ferrite-core antennas. Ideal for replacing old-fashioned loop antennas. Feature extremely high gain and uniform response. Will greatly improve signal to noise ratio, and pull in many hard-to-get stations that can't be heard with ordinary loops. Troublesome orientation or moving of receivers is not required, since reception is equally sensitive from all directions. Extremely compact size and stable performance. Easily mounted. Tune 540 to 1600 kc with 365 or 410 mmf tuning capacitor.
(A) VLT-240 Transistor Vari-Loopstick. Has impedance tap; convenient micrometer ad justment. Easily adjusted for peak efficiency. Simplified, one-hole snap-in mounting. For use with 365 mmf or 410 mmf variable tuning capacitor. Size, $1 / 16 \mathrm{x} 2^{2}$. Shpg. wt., 4 oz. 51 C 029. NET. [B] Ferri-Loopstick. Excellent, low-cost, rereceivers. Needs no orientation. Has "Q" of
$240-275$ for clear, powerful reception. Supplied with clamp for convenient single-hole snap-in mounting. Size $7 / 16 \times 2^{\prime \prime}$ long. Shpg. wt., 4 oz .
$.44 c$
Vari-Loopstick. For AM broadcast reC Vari-Loopstick. For AM broadcast re-
ceivers, including the smanlest portables. Has " $Q$ " of 250. Adjustable ferrite core permits peaking for any portion of tuning range Single-pole snap-in mounting. Size: $7 / 16 \times 21^{\circ}{ }^{\circ}$. 51 C 034 , 4 ET
.59c
Vari-Ten na. For use with older radio sets C equipped with built-in antenna. Features high sensitivity and excellent signal-to-noise ratio. Boosts gain up to 25 times. Single-hole mounting. $1 / 2 \times 21 / 2^{\prime \prime}$. Wt., 4 oz .
5I C 032. NET.
.73c

## REPLACEMENT ANTENNA LOOP

Wound on rigid fiberboard form. Has lug terminals. Replaces antenna coil in battery and midget sets or portables. Turns may be removed to match loop being replaced. Overall size, $6 \times 81 / 4^{\prime \prime}$. Shpg. Wt. 8 oz.
51 C 040 . ${ }^{2}$ to 9 , $\qquad$ 53c
10 or more, EACH. $.48 \$$

## MINIATURE ANTENNA LOOP

For use where space is limited. Covers standard broadcast band with midget variable capaci-
 henries; high " $Q$ " of over 230 . Two 4 " leads.
Overall size, $31 / 8 \times 51 / 4^{\prime \prime}$. Shpg. wt., 8 oz. Overall size, $31 / 8 \times 51 / 4^{\prime \prime}$. Shpg. wt., 8 oz . 40 C
5 C C 035 . 1 to 9 , NET EAC 10 or more, EACH. . .36

## WINDOW LEAD-IN

Made of soft drawn flexible copper, covered with heavy black cotton braid. Thoroughly with heavy black cotton braid. Thoroughly lacquer. For use with broadcast band and short wave antennas having single-wire leadin. Fits under window. Has Fahnestock clip on each end. $12^{\prime \prime}$ long by $1 / 2^{\prime \prime}$ wide. 2 oz .
.9c


For use in strong signal areas where TV signal requires attenuation to obtain optimum performance. H-pad has 4 terminals. Installed in series with 300 -ohm antenna lead-in. Size: $11 / 4 \mathrm{x}^{13} / 16 \mathrm{x}^{3 / 16^{\prime \prime}}$. Shpg. wt., 1 oz .

| No. | Type | Attenuation | EACH |
| :---: | :---: | :---: | :---: |
| 11 L 190 | PCH-10 | 10 db |  |
| 11 L 191 | PCH-20 | 20 db |  |
| $1 L 192$ | PCH-30 | 30 db | 88c |
| 111193 | PCH-40 | 40 db |  |

PCH-100. Set of 4 H-pads, one each of above, in plastic box. Shpg. wt., 2 oz.
PCH-4. Switch with H-Pads above. With mounting bracket. $21 / 2 \times 21 / 2 \times 23 / 4.8 \mathrm{oz}$. 1 . 5.88



D "Energized" Ferri-Loopstick. This 5" D loopstick has a "Q" of up to 350 . Extremely high gain brings in weak, distant stations. Adjustable coil with self-locking vinyl collar per Convenient single-hole mounting. Size: $3 / 8 \times 5^{\prime \prime}$. Shpg. wt., 6 oz.

E] ${ }^{7 "}$ Loopstick. Same as "energized" loopE stick described above, but $7^{\prime \prime}$ long for even greater sensitivity. Has " $Q$ " of up to 425. Shpg | wt., $60 z$. |
| :--- |
| 51 | 1.32

F High "Q" Transistor Loopsticks. Ideal F] universal replacement for most transistor sets. Feature extremely high " $Q$ " core. Have movaide complete and multiple impedance taps gain. Flat design provides excellent pick-up All tune 540 to 1600 kc with standard 365 or 410 mmf tuning capacitor. Complete with in stallation instructions.

| Stock No. | $\begin{aligned} & \text { Mfr's } \\ & \text { Type } \end{aligned}$ | $\mu \mathrm{H}$ | Size | Shpg. Wt. | $\begin{aligned} & \text { NET } \\ & \text { EACH } \end{aligned}$ |
| :---: | :---: | :---: | :---: | :---: | :---: |
| $51 \mathrm{CO25}$ | 2FT-240 | 200-265 | 23/4" | 4 oz . | 1.62 |
| $51 C 026$ | 3FT-240 | 200-265 | 35/8" | 4 oz . | . 62 |
| 51 C 027 | 5FT-240 | 175-260 | 51/4" | 4 oz . | . 62 |
| 510028 | 7FT-240 | 170-265 | 7" | 4 oz . | 76 |

## DELUXE BC-SW ANTENNA KIT



Handy antenna kit for broadcast and short wave reception. Increases "pulling power" of any set. Includes 100 ft ., $7 \times 26$ bare copper antenna wire; 40 ft . rubber covered lead-in; 25 ft . rubber covered ground wire; 2 porcelain insulators; 1 window lead-in; 1 lightning ar-
rester; 2 porcelain nail knobs; 1 ground clamp rester; 2 porcelain nail knobs; 1 ground clamp and full instructions. Shpg. wt., $21 / 2$ lbs. 2.04
Standard BC-SW Antenna Kit. $50 \mathrm{ft} ., 7 \times 26$ bare copper wire; 25 ft . lead-in; 2 antenna insulators; 2 nail knob insulators; 1 window lead-in and 1 ground clamp. Shpg. wt., $11 / 2$ lbs. 1.03

## SERVICE INSTRUMENTS CO. "UP-DOWN" VOLTAGE REGULATORS

Type LB2. An extremely handy, multi-purpose voltage regulator for the servicing bench. Designed to increase lo high line valtage decrease high line voltage. Raises or lowers line voitage 10 volts by simple flick of a switch. Can be used or appliance which has power consumption of 300 watts or less. Restores proper picture width and height, increases brightness, remedies oscillator drift and poor sync, and helps extend
tube life. Size: $21 / 2 \times 37 / 8 \times 37 / 8^{8}$. Rated, 300 watts. For operation from 115 volts. 60 cycles AC Shpg wt., 3 lbs. .5 .85
Type LB2 (N). Same as Type LB2 described above, but has neon indicator which operates when output voltage is too high-indicates when regulator should be turned off. Indicator reaches 126 volts.
63 G 987 . NET.......................... 7.03

# Quality Replacement Speakers 



## FAMOUS QUAM ADJUST-A-CONE SPEAKERS

Rugged construction, trouble-free operation and excellent sound
Oval


Square

## PERMANENT MAGNET SPEAKERS

High-quality PM speakers for replacement and original-equipment applications in radios, phonographs, TV sets, etc. All except 25A07, 3A07 and 4A06 have "Adjust-A-Cone" voice coils; all $31 / 2$ " to $61 / 2$ " speakers, except 4 A 06 , are supplied with universal mounting bracket. *Indicates very shallow frame. Magnets are Alnico-V. Voice coil impedance, 3.2 ohms.

| Stock No. | Mfr's Type | Shape | Size | Max. Watts | Magnet Weight | Wt., Lbs. | $\begin{aligned} & \text { NET } \\ & \text { EACH } \end{aligned}$ |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 81 D 066 | 25A07 | Square | $21 / 2^{\prime \prime}$ | 2.0 | . 6502 | 1/2 | 2.35 |
| 81 D 346 | 3 A 07 | Square* | $31 / 2^{\prime \prime}$ | 25 | . 68 oz . | 1/2 | 2.35 |
| 81 D 309 | 4A06 | Square* | $4^{\prime \prime}$ | 2.5 | . 58 oz . | 1/2 | 1.73 |
| 81 D 320 | 4A07 | Square* | 4" | 3.0 | . 68 oz. | 1/2 | 2.35 |
| 81 D 321 | 4A1 | Square | $4^{\prime \prime}$ | 3.0 | 1.0 | $3 / 4$ | 2.50 |
| 81 D 322 | 4A15 | Square | $4{ }^{\prime \prime}$ | 3.0 | 1.47 oz . | $3 / 4$ | 2.76 |
| 81 D 347 | 46407 | Oval* | $4 \times 6$ " | 3.5 | . 68 oz. | $3 / 4$ | 2.62 |
| 81 D 371 | 46A1 | Oval | $4 \times 6$ " | 3.5 | 1.0 oz . | , | 2.79 |
| 81 D 372 | 46A15 | Oval | $4 \times 6^{\prime \prime}$ | 3.5 | 1.47 oz . | 1 | 3.03 |
| 81 D 323 | 5A07 | Pincushion* | $5{ }^{\prime \prime}$ | 3.5 | . 68 oz . | $3 / 4$ | 2.47 |
| 81 D 324 | 5 Al | Pincushion | $5^{\prime \prime}$ | 3.5 | 1.0 oz . | 1 | 2.62 |
| 81 D 325 | 5A15 | Pincushion | 5 " | 3.5 | 1.47 oz . | 1 | 2.85 |
| 81 D 803 | 52 Al | Pincushion | 51/4' | 4.0 | 1.0 oz . | 1 | 2.73 |
| 81 D 317 | 52A21 | Pincushion | 51/4* | 4.0 | 2.15 oz. | $11 / 4$ | 3.35 |
| 81 D 348 | 57A1 | Oval | $5 \times 7{ }^{\circ}$ | 5.0 | 1.0 oz . | , | 3.17 |
| 81 D 334 | 57A15 | Oval | $5 \times 7{ }^{\prime \prime}$ | 5.0 | 1.47 oz . | 1 | 3.41 |
| 81 D 339 | 57 A 21 | Oval | $5 \times 7$ " | 5.0 | 2.15 oz | $11 / 4$ | 3.79 |
| 81 D 326 | 6 Al | Pincushion | 61/2" | 5.0 | 1.0 oz . | 1 | 2.82 |
| 81 D 327 | 6A15 | Pincushion | 61/2" | 5.0 | 1.47 oz . | 1 | 3.06 |
| 81 D 328 | 6A21 | Pincushion | 61/2" | 5.0 | 2.15 oz . | 11/4 | 3.44 |
| 81 D 332 | 6A31 | Pincushion | 61/2" | 6.0 | 3.16 oz . | 11/2 | 3.97 |
| 81 D 373 | 69 A2 | Oval* | $6 \times 9$ " | 8.0 | 1.4 oz . | 11/2 | 4.41 |
| 81 D 374 | $69 \mathrm{A3}$ | Oval | $6 \times 9$ | 10.0 | 3.2 oz . | $13 / 4$ | 5.26 |
| 81 D 331 | 7 A 21 | Pincushion* | $7{ }^{\prime \prime}$ | 6.0 | 1.4 oz . | 1 | 4.26 |
| 81 D 387 | 7A31 | Pincushion | $7{ }^{\prime \prime}$ | 9.0 | 3.16 oz . | 2 | 5.00 |
| 81 D 329 | 8A21 | Pincushion | $8{ }^{\prime \prime}$ | 7.0 | 2.1502. | $11 / 2$ | 4.23 |
| 81 D 330 | 8A31 | Pincushion | $8^{\prime \prime}$ | 9.0 | 3.16 oz . | $21 / 4$ | 5.00 |
| 81 D 388 | 10A31 | Round | $10^{\prime \prime}$ | 9.0 | 3.16 oz . | 23/4 | 6.17 |
| 81 D 804 | 10A4A | Round | $10^{\prime \prime}$ | 10.0 | 4.46 oz . | $31 / 4$ | 6.88 |
| 81 D 805 | 10A6A | Round | $10^{\prime \prime}$ | 12.0 | 6.8 oz . | $31 / 2$ | 8.00 |
| 81 DX 333 | 12A31 | Round | 12" | 10.0 | 3.16 oz . | $33 / 4$ | 6.67 |
| 81 DX 806 | 12A4A | Round | 12" | 12.0 | 4.64 oz . | 4 | 7.44 |
| 81 DX 807 | 12A6A | Round | 12" | 14.0 | 6.8 oz . | $41 / 2$ | 8.53 |

## QUAM REAR-DECK KITS



Model AS-3. Complete rear-deck speaker kit featuring a $5 \times 7$ " "Adjust-A-Cone" speaker specially designed for automobile use. Speaker provides excellent tonal quality and is ruggedly built to withstand severe road shock. Has $3 / 4^{\prime \prime}$ precisioncentered voice coil and efficient 1.47-oz. Alnico V magnet. Fader control for exact adjustment of balance between radio-mounted speaker and reardeck speaker. Kit is ready for quick, easy installation. Supplied complete with 18 feet of cable prewired to fader control, flocked grille, baffle plate, all necessary hardware and easy-to-follow installation instructions. Shpg. wt., $21 / 4 \mathrm{lbs}$. 81 D 140 . NET. $\qquad$ .7 .03
MODEL AS-2. Deluxe kit with heavy-duty 6x9" "Adjust-A-Cone" speaker. Ample capacity to handle the full output of the most powerful auto sets. Has $2.15-\mathrm{oz}$. Alnico V magnet and $1^{\prime \prime}$ voice coil. Includes fader control, 18 feet of cable, flocked screen grille, baffle plate, sponge rubber gasket, mounting hardware and instructions. Shpg. wt., $31 / 2 \mathrm{lbs}$. 81 D 3900 . NET..
8.20

## TOP-VALUE DANISH 12" SPEAKER



- Twin-Cone Design
- Wide Frequency Range
- Rich Tonal Quality

An outstanding value in an imported $12^{\prime \prime}$ twincone speaker. Designed by Denmark's finest craftsmen-featured by Allied at exceptionally low cost. Ideal for use in limited-budget music systems, and for improving the tone of TV sets, radios, and phonos. Has two carefully coordinated cones driven by the same voice coil. The smaller, auxiliary radiator cone helps attain a wider frequency range than a single-cone speaker of the same size. Provides rich reproduction of low, mid-range, and high frequencies. Efficient Alnico $V$ magnet. Voice coil impedance, 6 ohms. Shpg. wt., 5 lbs.
81 DX 068 . ONLY...
7.95

Pincushion



## "HUMI-GARD" OUTDOOR SPEAKERS

Quam speakers with the exclusive "Humi-Gard" cone of plastic impregnated synthetic fiber fabric. Designed to outlast ordinary moisture-proofed cones, yet provide the response of an untreated paper cone. Resists sand and dirt abrasion. Voice coil impedance, 3.2 ohms. You can save by buying in large quantities. Write for quotations.

| Stock No. | Type | Size | Shape | Max. Watts | Magnet | Wt., Lbs. | NET |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 81 D 30 | 3A070T | 3112 | Square | 2.5 | .68 oz . | $1 / 2$ | 2.35 |
| 81 D 393 | 4A10T | $4^{\prime \prime}$ | Square | 3 | 1.0 oz . | 1 | 2.50 |
| 81 D 306 | 5A150T | $5^{\prime \prime}$ | Pincushion | 3.5 | 1.47 oz . |  | 2.85 |
| 82 D 260 | 6A150T | 6" | Pincushion | 5 | 1.47 oz . | 11/4 | 3.06 |

## ELECTRO-DYNAMIC SPEAKERS

Field coils made from carefully tested materials. 3.2 -ohm impedance. Wattage ratings are conservative. $4^{\prime \prime}, 5^{\prime \prime}, 61 / 2^{\prime \prime}$ and $4 \times 6^{\prime \prime}$ speakers have universal mounting brackets. †Equipped with humbucking coils.

| Stock No. | Mfr's <br> Type | Sizo | Shape | Field Ohms | Max. Watts | Wt., Lbs. | $\begin{aligned} & \text { NET } \\ & \text { EACH } \end{aligned}$ |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 81 D 350 | 4E45 | $4{ }^{\prime \prime}$ | Square | $450 \dagger$ | 3.0 | 1 | 3.09 |
| 81 D 375 | 46E45 | $4 \times 6$ " | Oval | $450 \dagger$ | 3.5 | $11 / 4$ | 3.67 |
| 81 D 352 | 5 E 45 | $5^{\prime \prime}$ | Pincushion | $450 \dagger$ | 3.5 | 1 | 3.23 |
| 81 D 353 | 5E10 | $5{ }^{\prime \prime}$ | Pincushon | 1000 | 3.5 | 1 | 3.23 |
| 81 D 356 | 6EV6 | 61/2" | Pincushion | 6-V. | 5.0 | $11 / 2$ | 3.82 |
| 81 D 357 | 6 E 10 | 61/2" | Pincushion | 1000 | 5.0 | 11/2 | 3.82 |
| 81 D 378 | 69EV6 | $6 \times 9^{\prime \prime}$ | Oval | 6-V. | 8.0 | 2 | 4.41 |
| 81 D 368 | 7EV6 | $7{ }^{\prime \prime}$ | Pincushion | 6-V. | 7.0 | 2 | 4.41 |
| 81 D 361 | 8 E 10 | $8{ }^{\prime \prime}$ | Pincushion | 1000 | 7.0 | $11 / 2$ | 4.41 |
| 81 DX 364 | 12 El 0 | $12^{\prime \prime}$ | Round | $1000 \dagger$ | 12.0 | 5 | 8.23 |

HIGH-IMPEDANCE INTERCOM SPEAKERS
PM speakers designed for replacement in intercommunications systems. Voice coil impedance is 45 ohms.

| Stock No. | Type | Size | Shape | Magnet | Shpg. Wt. | NET |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 81 D 808 | 3A07Z45 | 31/2" | Square | . 6802. | $1 / 2 \mathrm{lb}$. | 2.50 |
| 81 D 809 | 4A1Z45 | $4^{\prime \prime}$ | Square | 1.0 oz . | $3 / 4 \mathrm{lb}$. | 2.65 |
| 81 D 810 | 5A1Z45 | 5' | Pincushion | 1.0 oz. | 1 ib . | 2.76 |

See page 329 for istings of Quam PA speakers.
JENSEN "CONCERT SERIES" PM SPEAKERS


An excellent selection of Jensen's highly popular "Concert Series" PM speakers. Wide choice of sizes cover almost any replacement or original-equipment application. New DP-Alnico V magnets provide exceptionally good efficiency and distinct reproduction. Cones are selected for maximum frequency response characteristics. Rigid frame maintains proper alignment of voice coil and magnet structure. All speakers listed below have 3.2 -ohm voice coil impedance, except Type P275-Y which is 16 ohms (for transistor radios) and Type P8-S, 8 ohms. All except P275-Y and P4-W have bracket for mounting matching transformer.

| $\begin{gathered} \text { Stock } \\ \text { No. } \end{gathered}$ | $\begin{aligned} & \hline \text { Mfr's } \\ & \text { Type } \end{aligned}$ | Size | Shape | Magnet Weight | Watts | $\begin{aligned} & \text { Wt., } \\ & \text { Lbs. } \end{aligned}$ | $\begin{aligned} & \text { NET } \\ & \text { EACH } \\ & \hline \end{aligned}$ |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 82 D 171 | P275-Y | $23 / 4^{\prime \prime}$ | Round | 0.65 oz. | . 15 | 1/4 | 3.67 |
| 82 D 271 | P4-W | $4{ }^{\prime}$ | Square | 1.0 oz . | 2.0 | 11/2 | 2.47 |
| 82 D 272 | P5-W | $5{ }^{\text {P }}$ | Square | 1.002. | 2.5 | $11 / 4$ | 2.68 |
| 82 D 176 | P5-V | $5^{\prime \prime}$ | Square | 1.47 oz . | 3.5 3.0 | ${ }^{13 / 4}$ | 2.85 |
| 82 D 273 | P6-W | $6^{\prime \prime}$ | Square | 1.0 oz . | 3.0 | 2 | 2.85 |
| 82 D 179 | P6-V | $6^{\prime \prime}$ | Square | 1.47 oz. | 4.0 | 2 | 3.12 |
| 82 D 181 | P6-T | $6^{\prime \prime}$ | Square | 3.1602. | ${ }_{5}^{6.0}$ | 2 | 4.59 |
| 82 D 195 | P69-V | ${ }_{\text {cki }}^{6 \times 9}$ | Oval Square | 1.47 1.73 oz. | 5.0 6.0 | 21/2 | 4.41 |
| 82 <br> 82 184 | P8- P8-T | ${ }^{8}$ | Square | 2.502 | 7.0 | 23/4 | 5.23 |
| 82 D 185 | P8-S | $8^{\prime}$ | Square | 4.64 0z. | 80 | $31 / 4$ | 6.67 |
| 82 D 187 | P10-T | $10^{\circ}$ | Round | 2.502. | 8.0 | 5 | 6.32 |
| 82 DX 190 | P12-T | $12^{\prime \prime}$ | Round | 2.502. | 9.0 | 5 | 6.94 |
| 82 DX 270 | P314-T | $14 \times 3{ }^{\prime \prime}$ | Oval | 3.16 oz. | 7.5 | 2 | 7.50 |

## JENSEN SPEAKER VOLUME CONTROLS

L-pads for volume control at individual speakers-no effect on volume of other speakers in system. Smooth, gradual control. Excellent for use in PA, intercom and home music systems. With knob and on-off dial. Shpg. wt., 5 oz .

| Stock No. | Type No. | Ohms | Watts | NET |
| :---: | :---: | :---: | :---: | :---: |
| 33 M 942 | ST-760 | $3-4$ | 5 | 1.97 |
| 33 M 940 | ST-276 | $6-8$ | 5 | 1.76 |
| 33 M 941 | ST-411 | $6-8$ | 15 | 2.76 |
| 33 M 938 | ST-837 | $65-16$ | 15 | 2.76 |
| 33 M 939 | ST-761 | $500-600$ | 15 | 3.65 |

## knight Top-Value Speakers and Grilles

REAR-DECK AUTO RADIO SPEAKER KITS


## DELUXE DUAL-SPEAKER KIT



One of the finest rear deck speaker kits available, this distinctively styled unit features two separate speakers. Provides unusually rich and thrilling auto radio sound; makes it possible for all passengers in car to enjoy enhanced musical reproduction. Consists of a $4^{\prime \prime}$ speaker and a $6^{\prime \prime}$ speaker, mounted side-by-side on a baffle board. $4^{\prime \prime}$ speaker serves as an efficient tweeter for reproducing treble notes. $6^{\prime \prime}$ speaker is used as a woofer for bass response. A highly efficient, built-in high-pass filter, mounted on the baffle board, distributes highs and lows to the proper speaker. The smartly styled grille, in a choice of two attractive finishes, adds a distinctive touch to any car interior. Easy to install, the kit includes a dash-mounted, three-way switch for instant selection of radio-mounted speaker only, rear-deck dual speakers only, or all speakers together. Grille size, $7 \times 1112^{\prime \prime}$. Supplied complete with switch, wire, all hardware and easy-to-follow instructions- everything needed for a quick, simple installation. Shpg. wt., 3 lbs.
81 D 130 . Chrome Grille.
81 D 131. Gray Grille.
NET EACH..............
.II. 34
DELUXE SPEAKER KIT FOR STATION WAGONS


$\$ 938$Smartly styled speaker kit for installation in station wagons. Mounts on roof, adjacent to rear window. Kit features high-quality $6 \times 9^{\prime \prime}$ Alnico $V$ oval speaker enclosed in gold finished, metal-mesh basket. Has modern, contoured appearance to match interior of any station wagon. Delivers rich, full-toned sound. Dash-mounted 3-way switch permits use of front speaker only, rear speaker only, or both together. Eliminates need for unpleasantly loud radio volume to enable all passengers to hear programs clearly. Kit includes mounting brackets to fit any station wagon, pre-wired switch, hardware, and installation instructions. Shpg. wt., $21 / 2$ ibs. 81 D 195. NET.
9.38
knight SPEAKER GRILES ONLY


Distinctive, chrome finish speaker grilles for either $5 \times 7^{\prime \prime}$ or $6 \times 9^{\prime \prime}$ rear deck speakers. Attractive and durable chrome finish stays bright after years of wear. Include all mounting hardware. Av. shpg. wt., 1 lb .
FOR $6 \times 9^{\prime \prime}$ SPEAKER.
82 D 251 . NET....
FOR 5x7" SPEAKER.
82 D 252. NET
.1 .08


## EXTENDED-RANGE SPEAKER KIT

As Low As


High-quality extended-range speaker kit for rear deck mounting. Has duo-type speaker with specially designed, high-frequency cone mounted at its center; provides balanced reproduction of bass and treble. Offers much richer tonal quality and sound dispersion than conventional, single-cone speakers. The duo-speaker employs the natural baffle of the automobile body to deliver pleasingly smooth reproduction throughout the audio range. Handsomely styled grille, available in choice of two finishes, adds a touch of beauty to any car interior.
A dash-mounted, 3-way switch, permits playing the radio-mounted speaker only, duo-speaker only, or all speakers simultaneously. Allows all passengers to hear radio broadcasts at a comfortable listening level -eliminates need for turning up front-seat volume. Kit includes switch, wire, all hardware and complete instructions.

| Stock No. | Size | Grille | Lbs. | EACH |
| :---: | :---: | :---: | :---: | :---: |
| 81 D 132 | 5x7" | Gray | 2 | 5.39 |
| 81 D 133 | $5 \times 7$ " | Chrome | 2 | 5.55 |
| 81 D 135 | 6x9" | Gray | $21 / 2$ | 5.71 |
| 81 D 134 | $6 \times 9$ " | Chrome | $21 / 2$ | 5.88 |

STANDARD REAR-DECK SPEAKER KITS As Low As A value-packed luxury item $\$ 275$ at remarkably low cost. at remarkably low cost. rear-deck speaker kits are ready for quick, trouble-free installation in any car. Provide outstanding sound and add immensely to the listening pleasure of all the passengers in your car, without the need for turning up car radio volume to annoying loudness. Assure excellent tonal quality and greatly improved sound distribution.
Dash-mounted, 3-way control switch permits operation of front speaker only, rear speaker only, or both speakers together. Speakers are top-quality, Alnico V PM type with handsome, protective grille. Kits are available in two popular speaker sizes. Contain everything needed for a neat, custom installation. Your choice of two attractive finishes. Kits include: grille, pre-wired 3 way switch, all wires and hardware, mounting template and complete instructionsnothing else to buy.

| Stock No. | Size | Grille | Lbs. | EACH |
| :--- | :--- | :--- | :--- | :--- |
| 81 | E 558 | $5 \times 7^{\prime \prime}$ | Gray | 2 |
| 3.75 |  |  |  |  |
| 81 | D 559 | $5 \times 7^{\prime \prime}$ | Chrome | 2 |
| 8i | D 501 | $6 \times 9^{\prime \prime}$ | Gray | $21 / 2$ |
| 8I | D 502 | $6 \times 9^{\prime \prime}$ | Chrome | $21 / 2$ |

## TOP BUYS IN COAXIAL SPEAKERS

AS LOW AS A Outstanding values for economy-minded music ${ }^{\$} 6^{28}$ A] lovers. Dependable, high-quality, $8^{\prime \prime}, 12^{\prime \prime}$ and $15^{\prime \prime}$ coaxial speakers. Ideal for use in economy hi-fi systems, as extension speakers in recreation room and den, and for improving the tone of radios and phonographs. Unusually good high-frequency response and faithful bass reproduction. Have 6-8 ohm impedance and "Alnico V" magnets. Tweeters mounted on cross bars attached to speaker frames. Builtin crossover networks.
$8^{\prime \prime}$ COAXIAL SPEAKER. $8^{\prime \prime}$ cone; has 2.15 oz . magnet. $23 / 4^{\prime \prime}$ tweeter with . 68 oz. magnet. Rated at 8 watts. Range: 70-12,000 cycles. Crossover: 3000 cycles. Shpg. wt., 3 lbs.
81 D 607. NET.
6.28
$12^{\prime \prime}$ COAXIAL SPEAKER. $12^{\prime \prime}$ cone; has 6.8 oz. magnet. $5^{\prime \prime}$ tweeter with 1 oz. magnet. Rated at 15 watts. Range: $55-12,000$ cycles. Crossover: 2000 cycles. Shpg. wt., 8 lbs.
81 DX 638 . NET.
9.95
$15^{\prime \prime}$ COAXIAL SPEAKER. $15^{\prime \prime}$ cone; has 6.8 oz. magnet. $5^{\prime \prime}$ tweeter with 1.47 oz. magnet. Power handling capacity: 20 watts. Delivers outstanding bass response. Range: 45-12,000 cycles. Crossover frequency: 1800 cycles. Shpg. wt., 11 lbs .
81 DX 608 . NET.
.15 .27

## REPLACEMENT SPEAKER VALUES

AS LOW AS Excellent quality permanent magnet speakers at
 very low prices. Actually cost less than the price of a re-coning job. Designed for universal replacement use-also recommended for installation in original equipment. They're real money savers for radio and TV servicemen, amateurs and 'do-it-yourself" fans. Ideal replacements for speakers in home radio receivers, auto radios, portables, phonographs and intercommunication equipment. Provide full tonal response for very smooth reproduction of voice and music. Built to RETMA standard dimensions-rugged construction throughout. Rigid frame construction assures permanent alignment of integral parts. Magnet and voice coil are precision centered. $4^{\prime \prime}$ and $5^{\prime \prime}$ speakers have four holes in pot for easy mounting; furnished with universal mounting bracket. Fully dustproofed. Impedance, 3.2 ohms. *Extended-range type for wider response.

| Stock No. |  | Fig. | Size | Magnet Weight | Max. <br> Watts | $\begin{aligned} & \text { Wt., } \\ & \text { Lbs. } \end{aligned}$ | NET EACH |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  | 1 to 5 |  |  |  |  | 6 or More |
| 81 | D 616 |  | C | $4^{\prime \prime}$ sq. | . 68 oz . | 3.0 | 2 | 1.40 | 1.26 |
| 81 | D 617 | B | $5^{\prime \prime}$ | . 68 oz . | 3.5 | 3/4 | 1.70 | 1.53 |
| 81 | D 536 | D | $5 \times 7$ " | 1.0 oz . | 5.0 |  | 2.03 | 1.83 |
|  | D 534 | D | $6 \times 9{ }^{\prime \prime}$ | 1.47 oz . | 8.0 | 11/4 | 2.75 | 2.47 |
| 82 | D 250* | D | $6 \times 97$ | 1.47 oz . | 8.0 | $11 / 4$ | 2.85 | 2.56 |
| 81 | D 507 | B | $8{ }^{\prime \prime}$ | 2.15 oz . | 9.0 | $11 / 2$ | 2.85 | 2.56 |
| 81 | DX 508 | B | 12" | 3.16 oz. | 10.0 | 33/4 | 4.56 | 4.10 |


(B)


C]

(D)

# Knight Quality Phonograph Needles 



## EXACT REPLACEMENT NEEDLES

A wide selection of popular, finest quality replacement needles at lowest cost. All are precision made from carefully selected materials according to rigid Knight specifications. All have sapphire tips, except ${ }^{*}$ osmium. Letters or numbers following the word "Series" in the listings cover all cartridges whose type numbers begin with these letters or numbers. Av. wt., 2 oz.

| Stock No. | Type No. | Fig. | For Cartridge Numbers | Tip | NET |
| :---: | :---: | :---: | :---: | :---: | :---: |
| 68 R 362 | A-67 | A |  | Std. | 1.27 |
| 68 R 363 | A-67LP | A | Series: $62,64,66,68$ | MG | 1.27 |
| 68 68 68 $R$ | A-672 | A | $\left\{\begin{array}{l}\text { Series. } 62,64,66,68 \\ \text { Series: } 57-\mathrm{T}\end{array}\right.$ | ${ }_{\text {All }}$ | 1.27 1.89 |
| 68 R 366 | A-71 | B | Series: 55-T, GCD, 409 | Twin | 1.89 1.89 |
| 68 R 367 | A-70* |  |  | Std. |  |
| 68 R 368 | A-70LP* | C | Series: 14L3, 15L3 | MG | . 79 |
| 68 R 369 | A-702* |  |  | ${ }_{\text {All }}$ | . 79 |
| 68 R 370 | A-73 | BB |  | Std. | 1.27 |
| 68 R 371 | A-73LP | BB | LT-3D, LT-4,LT-4D,LT-4D1, | MG | 1.27 |
| 68 R 372 | A-732 | BB |  | All | 1.27 |
| 68 R 373 | A-74 | D |  | Std. | 1.27 |
| 68 R 374 | A-74LP | D | Series: 402, 51, 53, 59, GC, MG | MG | 1.27 |
| 68 R 375 | A-742 | D |  | All | 1.27 |
| 68 68 68 R P76 | A-75 | - |  | Std. | 1.27 |
| 68 68 68 R 378 | A-75LP | E | $30,41,42,90$ | MG | 1.27 |
| 68 R 379 |  | F | Ser | Std. | $\frac{1.27}{1.27}$ |
| 68 R 380 | A-8ILP |  | 36, 38, 44,46 | MG | 1.27 |
| 68 R 381 | A-812 | F | Magnavox 560052 | All | 1.27 |
| 68 R 382 | CRA-55LP | G | Series: 310, 312, 414, 420, |  |  |
|  |  |  | 422, 424 | MG | 1.27 |
| 68 R 383 | CRA-55 | G | Series: 310,312,420,422,424 | Std. | 1.27 |

## FOR RONETTE CARTRIDGES

| $\begin{array}{lll\|} \hline 68 & R & 383 \\ 68 & R & 382 \end{array}$ | $\begin{aligned} & \text { CRA-55 } \\ & \text { CRA-55LP } \end{aligned}$ | G | Studio O, Studio P, RA-284, T0-284 Series TO-222, T0-400, 7447, DT-60, RA-395 | Std. MG | 1.27 |
| :---: | :---: | :---: | :---: | :---: | :---: |
| $\begin{array}{lll} 68 & R & 715 \\ 68 & R & 716 \end{array}$ | $\begin{aligned} & \text { CRA-56 } \\ & \text { CRA-56LP } \end{aligned}$ | H H | $\left\{\begin{array}{l}\text { TX-88A }\end{array}\right.$ | Std. | 1.27 1.27 |

FOR MAGNAVOX CARTRIDGES

| 68 R 388 | M-50 | J | $\begin{array}{l}560133,560133-4, \\ 560151-5,560151-6, ~ 560158-1 ~\end{array}$ | Twin | 1.89 |
| :--- | :--- | :--- | :--- | :--- | :--- |

FOR SONOTONE CARTRIDGES

| 68 R 343 | S-60LP | K | Series 3P | MG | 1.76 |
| :---: | :---: | :---: | :---: | :---: | :---: |
| 68 R 344 | S-61 | L | Series 3T | Twin | 2.35 |
| 68 R 345 | S-63LP | K |  | MG | 1.47 |
| 68 R 346 | S-632 | K | Series 1P | All | 1.47 |
| 68 R 347 | S-66 | L | Series 2T; 7T; W-9980; (Magnavox560161-1;RCA78748 | Twin | 2.06 |
| FOR ELECTRO-VOICE CARTRIDGES |  |  |  |  |  |
| 68 R 384 | E-90 | M | 10,12,14,30,32,33,34,36,40,42, | Std. | 1.27 |
| 68 R 385 | E-90LP | M | 43,44,46,80,82, 84, 86,96, | MG | 1.27 |
| 68 R 386 | E-902 | M | J Admiral 409A13-1 | All | 1.27 |
| 68 R 387 | E-91 | N | 16TT, 22TT | Twin | 1.89 |

## QUALITY DIAMOND NEEDLES <br> LOWEST PRICES

Valuable diamond needles for greatest record pro-
Precision shape for up to 1000 playing hours! Diamonds listed Diamond lips fit same cartridges as sapphire equivalents listed in tables below. Any needle with sapphire tip can also be supplied with diamond tip. Shpg. wt., 2 oz.

| Diamond Needle |  | Fig. | For | Equidvalent in Table Below | $\left\lvert\, \begin{gathered} \text { NET } \\ \text { EAC.H } \end{gathered}\right.$ |
| :---: | :---: | :---: | :---: | :---: | :---: |
| Stock No. | Type No. |  |  |  |  |
| 68 R 733 | A-67LPD | B | Astatic | A-67LP |  |
| 68 R 700 | A-68SD | B | Astatic | A-68 |  |
| 68 R 734 | A-74LPD | D | Astatic | A-74LP | 4.95 |
| 68 R 701 | A-75LPD | E | Astatic | A-75LP |  |
| 68 R 702 | A-81LPD | F | Astatic | A-81LP |  |
| 68 R 703 | E-90LPD | M | E-V | E-90LP |  |
| 68 R 704 | M-50SD | J | Magnavox | M-50 |  |
| 68 R 737 | PH-13SD | ${ }^{\text {A }}$ A | Philco | PH-13 | 4.95 |
| 68 R 705 | CRA-55LPD | G | Ronette | CRA-55LP |  |
| 68 R 735 | CRA-56LPD | H | Ronette | CRA-56LP |  |
| 68 R 706 | JPS-30LPD | $\stackrel{\mathrm{P}}{\mathbf{S}}$ | Shure | JPS-30LP |  |
|  | JPS-35SD | S | Shure | JPS-35 |  |
| 68 R 707 | JPS-36SD | $\stackrel{\text { S }}{\mathbf{X}}$ | Shure | JPS-36 | 4.95 |
| 68 R 708 68 R 709 | M-70LPD | $\underset{\mathbf{V}}{ }$ | RCA | M-70LP |  |
| 68 R 709 | M-74LPD | Y | RCA | M-74LP |  |
| 68 R 710 | S-60LPD | K | Sonotone | S-60LP |  |
| 68 R 711 | S-61 SD | L | Sonotone | S-61 | 4.95 |
| 68 R 712 68 R 738 | S-66SD | $\stackrel{\mathrm{L}}{\mathrm{C}}$ | Sonotone Web. Elec. | $\begin{aligned} & \text { S-66 } \\ & \mathrm{W}-15 \end{aligned}$ | 4.95 |

## HOW TO ORDER

Allied stocks exact replacement needles for any domestic or foreignmake cartridge. If you do not find a specific replacement listed, specify cartridge and/or needle number. Designate tip radius: standard, . $003^{\prime \prime}$ for 78 rpm ; microgroove, $.001^{\prime \prime}$ for $331 / 3$ and 45 rpm ; all-purpose, . $002^{\prime \prime}$ for all records; twin-tips are $.003^{\prime \prime}$ and $.001^{\prime \prime}$. Single and dual-tip needles are available. Prices: single sapphire, \$1.27; dual-sapphire, \$1.89; single diamond \$4.95; dual-diamond, \$9.95; Sapphire-diamond, \$4.95. Shpg. wt., 2 oz.

FOR SHURE CARTRIDGES

| StockNo. | Type No. | Fig. | For Cartridge Numbers | Tip | NET |
| :---: | :---: | :---: | :---: | :---: | :---: |
| 68 R 397 | JPS-30 | P | $\begin{aligned} & \text { P30, P37, P57, P70, P71, P72, } \\ & \text { P72V, P73, P76, P76V, P77, } \\ & \text { P79, P81, P81AD, P85, P88, } \end{aligned}$ | Std. |  |
| 68 R 398 | JPS-30LP | P | 89, P94. PN30, PC4IV, PC42; | MG | 1.27 |
| 68 R 399 | JPS-312 | P | Philco 35-2671; Series W21, W22,W23,W26,W60,W61,W65, W65B, W66, W68, WC22; Admiral 409A11 and 409A13 | All | 1.27 |
| 68 R 320 | JPS-32 | R | W31AR, W36B, WC24, | Std. | 1.27 |
| 68 R 321 | JPS-32LP | R | WC31AR, WC33B, WC36B, | MG | 1.27 |
| 68 R 322 | JPS-322 | R | PC9, PC10, PC11, PC40 | All | 1. |
| 68 R 739 | JPS-34 | T | PC42AD, W-72 | Std. | 1.2 |
| 68 R 740 | JPS-34LP | T | Admiral 409B19-8, | MG | 1.2 |
| 68 R 741 | JPS-39 | W | WC-6, PC-6, PC-7 | Twin | 1.2 |
| 68 R 323 | JPS-35 | S | PC2,PC-3,PC-4,PC-5,WC10 | Twin | 1.8 |
| 68 R 324 | JPS-36 | S | 3 ML-44 | Twin | 2.5 |
| FOR RCA CARTRIDGES |  |  |  |  |  |
| 68 R 337 | M-70 | X | 9890, 38598, 99550,39851, | Std. | 1.27 |
| 68 R 339 | M-70LP | X | $\begin{aligned} & 39919,70332,70338,70339, \\ & 72551,74067 \end{aligned}$ | MG | 1.27 |
| 68 R 341 | M-74 | $Y$ | 74625, 75475, 75575, | Std. | 1.27 |
| 68 R 342 | M-74LP | $Y$ | 76318, 77779 | MG | 1.27 |

FOR PHILCO CARTRIDGES

| $\begin{array}{ll\|} \hline 68 & \mathrm{R} 389 \\ 68 & \mathrm{R} 742 \\ \hline \end{array}$ | $\begin{aligned} & \text { M-60LP } \\ & \text { PH-13 } \end{aligned}$ | Z | $\begin{aligned} & 45-1609,45-1612 \\ & 76-4649 ; 425-0009,425-0014 \end{aligned}$ | $\begin{aligned} & \text { MG } \\ & \text { Twin } \end{aligned}$ | $\begin{array}{r} 1.27 \\ 1.89 \\ \hline \end{array}$ |
| :---: | :---: | :---: | :---: | :---: | :---: |
| FOR WEBSTER-ELECTRIC CARTRIDGES |  |  |  |  |  |
| 68 R 33 | W-14 | CC | A1, A2,A3, A4, A5, A6, A7, A8, | Std. | 1.2 |
| 68 R 334 | W-15 | CC | A10, A12, AB, AX (010) | MG | 1.27 |
| 68 R 397 | JPS-30 | P |  | Std. | 1.27 |
| 68 R 398 | JPS-30LP | P | F10, F11, F11-1 | MG | 1.27 |

DDCONVENTIONAL SHANK PHONO NEEDLES Designed to fit cartridges with screw-type chuck. Needles have "flat side" on shank for proper positioning. *Nylon needles-have flexible nylon material from tip to shank to reduce pickup of record scratch. Shpg. wt., 2 oz.

| StockNo. | Type No. | Fig. | Tip material | Tip size | NET |
| :---: | :---: | :---: | :---: | :---: | :---: |
| 68 R 391 | NY-253* | EE | Sapphire | Standard | 1.27 |
| 68 R 392 | J-10 | DD | Osmium | Standard | . 59 |
| 68 R 393 | NY-252* | EE | Sapphire | All-purpose | 1.27 |
| 68 R 394 | NY-152* | EE | Osmium | All-purpose | . 79 |
| 68 R 395 | J-152 | FF | Osmium | All-purpose | . 79 |
| 68 R 396 | NY-251* | EE | Sapphire | Microgroove | 1.27 |
| 68 R 743 | J-252 | FF | Sapphire | All-purpose | 1.27 |

## Astatic Replacement Cartridges

## CRYSTAL AND CERAMIC CARTRIDGES




## MICROGROOVE CARTRIDGES

A wide selection of carefully-constructed microgroove cartridges for dependable performance and very clean reproduction in record changers and players. All are crystal type, except *ceramic type, unaffected by heat and humidity. With . $001^{\prime \prime}$ sapphire needle for 45 and $331 / 3 \mathrm{rpm}$ long-playing records.
Model 51-1 fits RCA $45-\mathrm{rpm}$ changer arms. Model 44-1 equalized for Columbia $331 / 3 \mathrm{rpm}$ records; has adapter for RCA 45-rpm changer arms. 40-1 fits most popular players. Model 62-1 used in RCA and V-M Corp. players. Model 414-1, high output cartridge, used in RCA players. Has specially treated crystal to resist heat and moisture. See page 362 for listings of replacement needles of all types. Needle pressure, 10 grams, except $\ddagger 8$ grams, $\dagger 6$ grams. Av. shpg. wt., 4 oz .

| Stock No. | Model No. | Fig. | Replaces Astatic Models | Output | $\begin{gathered} \text { Response } \\ \text { CPS } \\ \hline \end{gathered}$ | List | $\begin{aligned} & \text { NET } \\ & \text { EACH } \end{aligned}$ |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 65R241 | 40-1 $\dagger$ | H | AC series | 1.0 | 50-10,000 | \$6.50 | 3.82 |
|  |  |  | CQ series | 1.0 | 30-15,000 | 7.50 | 4.41 |
| 65 R 234 | 51-1* | J | GC series | 0.7 | 30-15,000 | 7.40 | 4.35 |
| 61 R325 | 62-1 | P | 62-1-M | 3.0 3.0 | $50-50,000$ $30-11,000$ | 4.95 4.45 | 2.91 |

## STANDARD-GROOVE CARTRIDGES

Popular Rochelle-salt crystal and ceramic cartridges, designed for use with $78-\mathrm{rpm}$ changers and players. All are high-output crystal types, except *ceramic type-unaffected by heat or moisture-excellent for use in tropical climates. All models use $.003^{\prime \prime}$ needles. §With osmium needle. All others are supplied less needle; have screw-type chuck for conventional needle. See page 362 for complete screw-type chuck for convent
listing of quality needles.
Model 12-U used in Admiral, RCA, and Webster phonographs; Model 2 used in Magnavox; 12 in Webster; 402 in Admiral. tOutput with capacitor (supplied); delivers 4.0 volts when capacitor is not used. Needle pressure: Models 2 and $4-23 / 4 \mathrm{oz}$.; Models 6, 24 and 26-11/4 oz.; Models 12 and 12-U-1 oz. Model 32-11/2 oz.; and Model 402-12 grams. Av. shpg. wt., 4 oz.

| Stock No. | Model No. | Fig. | Replaces Astatic Models | Output Volts | Response CPS | List | $\begin{aligned} & \text { NET } \\ & \text { EACH } \end{aligned}$ |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 65R158 | 2 | R | B-1, B-2, B-3, B-4 | 2.5 | 50-4000 | \$9.00 | 5.29 |
| 65 R I 56 | 4 | S | L22A, L-26A, L-27A | 1.4 | 50-4500 | 4.45 | 2.62 |
| 65 R 153 | 6 | S | L-40A, L-41A | 0.6 | 50-4500 | 4.45 | 2.62 |
| 65 R 226 | 12 | T | L-10, L-12 | 4.0 | 50-5000 | 4.45 | 2.62 |
| 65 R 227 | 12-U | T | L-12U | $1.25 \dagger$ | 50-5000 | 4.95 | 2.91 |
| 65 R 163 | 24 | S | $\begin{aligned} & \text { L-25A, series L-70, } \\ & \text { L-71, L-75, L-76 } \end{aligned}$ | 1.0 | 50-4000 | 4.95 | 2.91 |
| 65 R 165 | 26 | S | L-46A, L-50A, L-72A | 3.5 | 50-4000 | 4.95 | 2.91 |
| 65 R 231 | 32 | S | $\begin{aligned} & \text { L-24A, L-36A, L-82A, } \\ & \text { L-92, L-92A, } 34 \end{aligned}$ | 3.5 | 50-5000 | 4.95 | 2.91 |
| 65 R 149 | 402*§ | X | 402-M | 0.7 | 50-10,000 | 6.90 | 4.06 |

"SOUND-FLO" CARTRIDGE-NEEDLE COMBINATIONS
Astatic "Soundflo" cartridges. Utilize highly sensitive ceramic element to provide clear, wide-range audio reproduction. Movement is precision engineered for high compliance; permits accurate tracking of wide lateral groove variations. Assures excellent transient response and low distortion. Frequency response extends from 30 to $15,000 \mathrm{cps}$. Tracking force is 6 grams; assures long needle and record life. Cylindrical shaped housing accommodates "plug-in" replacement cartridge-needle combination. Greatly simplifies changing of styli. Flip-over mounting bracket allows quick change to proper stylus, $.001^{\prime \prime}$ stylus for 45 and $331 / 3 \mathrm{rpm}$, long-play records and $.003^{\prime \prime}$ stylus for 78 rpm standard records. "S"' indicates sapphire tip; "D"-diamond tip. *Types 83-1 and 83-1X are direct replacements for RCA 105837. Av. shpg. wt., 4 oz .

| Stock No. | Type | Description | Styli | Volts | List | NET EACH |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 61 R 308 | 81 TB | Cartridge/styli \& mtg. brkt. | S-.001", $\mathrm{S}-003^{\prime \prime}$ | 1.0 | \$ 4.95 | 2.91 |
|  | $81 T$ | Cartridge/styli | S-.001", S-.003" | 1.0 | 3.95 | 2.32 |
| 61 RC 317 | 81TX | Cartridge/styli | D-.001", S-.003" | 1.0 | 16.50 | 9.70 |
| 61 RC 318 | 817 TX | Cartridge/styli \& mtg. brkt, | D-.001", S-.003" | 1.0 | 17.00 | 10.00 |
| 61 R 319 | *83-1 | Cartridge/stylus | S. 0001 | 1.0 | 3.50 | 2.06 |
| 61 RC 320 | *83-1X | Cartridge/stylus | D. 0001 " | 1.0 | 16.00 |  |
| 61 R 321 | 897 | Cartridge/styli | S-.001", S-.003" | 1.3 | 4.95 | 2.91 |
| 61 R 322 | ${ }^{\text {89TB }}$ | Cartridge/styli \& mtg. brkt. | S-.001 ${ }^{\prime \prime}$, S - $0003^{\prime \prime}$ | 1.3 | 5.95 | 3.50 |
| 61 RC 323 | 897X | Cartridge/styli | D-.001", S- $003^{\prime \prime}$ | 1.3 | 17.50 | 10.29 |
| 61 RC 324 | 897BX | Cartridge/styli \& mtg. brkt. | D-,001", S-. $003^{\prime \prime}$ | 1.3 | 18.00 | 10.58 |



## Sonotone \& RCA Cartridges-Pickups

## SONOTONE CERAMIC PHONO CARTRIDGES



Deluxe Series " 3 " cartridges. Provide unusually clean, natural reproduction. Response: $\pm 1.5 \mathrm{db}$ from 20 to $15,000 \mathrm{cps}$; gradual roll-off to $20,000 \mathrm{cps}$. Lack of resonant peaks and low distortion provide exceptional ease of listening. Highly compliant movement assures accurate tracking and low needle and record wear. Tracking force is orily 6 grams. Cartridges are self-equalizing; match modern (RIAA, LP, NARTB, AES, etc.) recording curves without using external record compensators. Also, have sufficient output ( 0.5 v .) to require no preamp. Ceramic elements are unaffected by heat or moisture. Have standard $1 / 2^{\prime \prime}$ and $5 / 8^{\prime \prime}$ mounting centers to fit most phonos. $3 \mathrm{P}-1 \mathrm{~S}$ and 3P-1D are single-needle types; 3T-S and 3T-SD are turnover-stylus types. " S " indicates sapphire tip; " $D$ " indicates diamond. Shpg. wt., 3 oz .


## SINGLE-NEEDLE CARTRIDGES

For exact replacement in many popular phonos. Do not require preamplification or equalization. Ceramic construction provides protection against heat and moisture; also prevents pickup of annoying hum from nearby magnetic fields. Have high compliance for accurate tracking. Sapphire needles, except 1P-1D and 1P-LB-1D which have diamond needles; .001" microgroove; $.002^{\prime \prime}$ all-purpose (microgroove and stand.002" all-purpose (microgroove and standfor $1 / 2^{\prime \prime}$ or $5 / 8^{\prime \prime}$ mtg. centers. 1P-LB-1S, $1 \mathrm{P}-$ LB-2S, and 1P-LB-1D less bracket for narrow pickup arms. Response, $\pm 3 \mathrm{db} 30$ $15,000 \mathrm{cps}$. Output, 1 v. Needle pressure 8-10 grams. Shpg. wt., 3 oz .

| Stock.No. | Type | Styli | NET |
| :---: | :---: | :---: | :---: |
| 65 R 615 | 1P-1S | . $0001^{\prime \prime}$ | 4.41 |
| 65 R 523 | 1P-2S | .002" | 4.41 |
| 61 RC 350 | 1P-1D | . 001 " | 11.47 |
| 61 R351 | $1 \mathrm{P}-\mathrm{LB}-1 \mathrm{~S}$ | .001" | 4.41 |
| 65 R 843 | $1 \mathrm{P}-\mathrm{LB}-2 \mathrm{~S}$ | . $0002^{\prime \prime}$ | 4.41 |
| 61 RC 352 | 1P-LB-1D | . $0001^{\prime \prime}$ | 11.47 |

## 2T TURNOVER CARTRIDGES

Ceramic cartridges used as original equipment in many modern phonographs-improve sound quality when used in older players. Ceramic structure unaffected by humidity or temperature. Comparatively high cartridge output ( 1 v .) eliminates the need of preamplifier. Needle pressure is only $8-10$ grams. High compliance of needle reduces record wear and resultant distortion. Response, $\pm 3 \mathrm{db} 30-15,000 \mathrm{cps}$. Cartridges easily installed; require no cut-out for turnover mechanism. Models 2T-S and 2T-SD have bracket for $1 / 2^{\prime \prime}$ or $5 / 8^{\prime \prime}$ mtg. centers; 2T-LB-S and 2T-LB-SD less bracket for narrow pickup arms. " $D$ " is diamond tip; " S ", sapphire. Shpg. wt., 3 oz.

| Stock No. | Type | Styli | NET |
| :---: | :---: | :---: | :---: |
| 65 R 533 | 2T-S | S-.001", S-.003 ${ }^{\prime \prime}$ | 5.00 |
| 65 RC 844 | 2T-SD | D-.001", S-.003" | 12.94 |
| 65 R 528 | 2T-LB-S | S-.001", S-.003 ${ }^{\prime \prime}$ | 5.00 |
| 61 RC 353 | 2T-LB-SD | D-.001", S-.003 ${ }^{\prime \prime}$ | 12.94 |

## 7T TURNOVER CARTRIDGES

New series of ceramic cartridges. Have unique fluid damping compound for high compliance and low distortion. Response, $\pm 2 \mathrm{db} 20-12,000 \mathrm{cps} .0 .6 \mathrm{v}$. output at needle pressure of 7-9 grams makes preamp unnecessary. Excellent for original equipment applications as well as for replacement purposes in players. Needle replacement simpliposes in ingenious turn-over design. Mounting brackets have elongated holes to permit use with any popular tone arm having mounting centers spaced $7 / 16^{\prime \prime}$ to $5 / 8^{\prime \prime}$ apart. $7 \mathrm{~T}-\mathrm{LB}$ types are ideal for use with unusually narrow tone arms. . 001 " tips are for mi ," crogroove (LP), . 003 " for standard 78's. " S ", in stylus description means sapphire, "D" in stylus description mean

| Stock No. | Type | Styli | NET |
| :---: | :---: | :---: | :---: |
| 61 R 355 | 7T-S | S-.001", S. $-003^{\prime \prime}$ | 5.29 |
| 61 RC 356 | 7T-SD | D-.001", S-.003 ${ }^{\prime \prime}$ | 13.23 |
| 61 RC 357 | 7T-D | D-.001", D-.003 ${ }^{\prime \prime}$ | 20.29 |
| 61 R 358 | 7T-LB-S | S-.001", S-.003 ${ }^{\prime \prime}$ | 5.29 |
| 61 RC 359 | 7T-LB-SD | D-.001", S-.003 ${ }^{\prime \prime}$ | 13.23 |
| 61 RC 360 | 7T-LB-D | D-.001", D-.003 ${ }^{\prime \prime}$ | 20.29 |

## S-SONOTE REPLACEMENT NEEDLES

S-Sapphire; D-Diamond. Interchangeable types: $7 \mathrm{~T}-\mathrm{S}, 7 \mathrm{~T}-\mathrm{SD}, 7 \mathrm{~T}-\mathrm{D}$; 3P-1S, 3P-1D; 3T-S, $3 \mathrm{~T}-\mathrm{SD} ; 2 \mathrm{~T}-\mathrm{S}, 2 \mathrm{~T}-\mathrm{SD} ; 1 \mathrm{P}-1 \mathrm{~S}, 1 \mathrm{P}-1 \mathrm{D}$, $1 \mathrm{P}-2 \mathrm{~S}$. Shpg. wt., 2 oz .

| Stock No. | For | Tip | NET |
| :---: | :---: | :---: | :---: |
| 68 R 319 | $1 \mathrm{P}-1 \mathrm{~S}$ | S-. $001^{\prime \prime}$ | 1.47 |
| 61 R 354 | 1P-1D | D-.001 ${ }^{\prime \prime}$ | 9.11 |
| 65 R 519 | 1P-2S | S-.002" | 1.47 |
| 65 R 534 | 2T-S | S-.001" ${ }^{\prime \prime}$, S-.003" | 2.06 |
| 65 RC 529 | 2T-SD | D-.001"', S-.003 ${ }^{\prime \prime}$ | 9.70 |
| 68 R 317 | $3 \mathrm{P}-1 \mathrm{~S}$ | S-.001" | 1.76 |
| 68 RC 316 | $3 \mathrm{P}-1 \mathrm{D}$ | D-.001" | 9.41 |
| 68 R 318 | 3T-S | S-.001" ${ }^{\prime \prime}$, S-.003" ${ }^{\prime \prime}$ | 2.06 |
| 68 RC 315 | 3T-SD | D-.001"', S-.003" | 9.70 |
| 61 R 361 | $7 \mathrm{~T}-\mathrm{S}$ | S-.001 ${ }^{\prime \prime}$, S-.003" | 2.06 |
| 61 R 362 | 7T-SD | D-.001", S-. $003^{\prime \prime}$ | 9.70 |
| 61 RC 363 | 7T-D | D-.001", D-.003"' | 14.41 |
| 68 R 217 | 8T-S | S-. $0007^{\prime \prime}$, S-. $0033^{\prime \prime}$ | 2.06 |
| 68 R 209 | 8T-SD | D-.0007", $\mathrm{S}-.003^{\prime \prime}$ | 9.70 |

POPULAR ASTATIC PICKUP


Model KR314-T. Lightweight, balanced pickup arm, complete with high output crystal, turnover cartridge. Ideal for replacement in manual record players. Turnover mechanism permits instant selection of $.003^{\prime \prime}$ standard or $.001^{\prime \prime}$ microgroove sapphire needles. Ivory finish. $81 / 2^{\prime \prime}$ long. Wt., 1 lb . 61 R 326. NET.
4.09


## PHONO SWITCHES

[E]
Type 240XI Radio-Phono Switch. For operation of record players through radios that do not have a phono input. Slide switch permits instant change-over from radio to phonograph. Unit is connected between detector and first audio stage in radio. Panel has mounting holes for neat, back-of-thecabinet installation. With shielded cable, phono plug and complete instructions. Shpg. wt., 6 oz.
69 R 505, List, $\$ 2.50$. NET... $\qquad$
Type 202W1 Record Player Selector Switch. For using either of two record players or changers with one radio or amplifier. Slide switch controls both audio output and motor power. Excellent for radiophono combinations to which an external $45-\mathrm{rpm}$ player has been added. Back-ofcabinet mounting. Complete with plugs and instructions. Shpg. wt., 6 oz. 69 R 506. List, \$5.65. NET., . . . . . . centers. Wt., 3 oz.
68 R 205. 8T-4S. List, $\$ 14.50$ NET. . 8.53 68 RC 208. 8T-4SD. List, 24.50 NET |4. 4 I

RCA PHONO COMPONENTS


All are Rochelle-salt crystal type, except *heat and humidity-resistant ceramic element. All are supplied complete with needle. Needle types: $\dagger$ Sapphire standard, $\dagger \dagger$ sapphire microgroove, §§osmium microgroove, §osmium standard and sapphire microgroove, $\ddagger$ sapphire standard and microgroove. Av. shpg. wt., 5 oz.

| $\begin{gathered} \hline \text { Stock } \\ \text { No. } \\ \hline \end{gathered}$ | $\begin{aligned} & \text { Mifr's } \\ & \text { Type } \\ & \hline \end{aligned}$ | Fig. | Used in RCA Models | $\begin{aligned} & s_{t}^{t} \\ & i \end{aligned}$ | $\begin{aligned} & \text { NET } \\ & \text { EACH } \end{aligned}$ |
| :---: | :---: | :---: | :---: | :---: | :---: |
| 65 R 269 | 9890† | A |  | \$8.58 | 5 |
| 65 R 27 | 70338-A $\dagger$ | B |  |  |  |
|  |  |  | $65 \mathrm{U}, 65 \mathrm{U} 1,67 \mathrm{AV} 1,67 \mathrm{~V} 1,75 Z \mathrm{ZU}, 77 \mathrm{~V} 1,7 j \mathrm{~V} 2$ <br> 9 EY 3 9 Y 35 9EY 36 9EYM | 7.25 | 4.26 |
| 65 R 253 | $74067 \dagger \dagger$ | D | 9EY3,9EY35,9EY36,9EYM3,9JY,9JYM,9TW333, 9TW390, 9W101, 9W102, 9W103, 9W105, 9Y7, $9 \mathrm{Y} 51,45 \mathrm{EY}, 45 \mathrm{EY} 15,45 \mathrm{~J}, 45 \mathrm{~J} 2$ | 6.40 | 6 |
| 65 R 25 | $75575 \dagger \dagger$ | D | 2T81, 4T141, 6T84, 6T86, 7T132, 9T89, 9T147, | 6. | 3.76 |
| 65 R 917 | $75976 \dagger$ | A | $58 \mathrm{AV}, 58 \mathrm{~V}, 59 \mathrm{AV} 1,59 \mathrm{~V} 1,66 \mathrm{E}, 610 \mathrm{~V} 1,610 \mathrm{~V} 2,641 \mathrm{TV}$, |  |  |
| 65 R 215 | 7625788 |  | $711 \mathrm{~V} 1,711 \mathrm{~V} 2,711 \mathrm{~V} 3$, QU61, QU62, QU72, QU72A 45 J 3 | 7.50 6.50 |  |
| 65 R 255 <br> 65 R 913 | 777798 | $\dot{C}$ | $\begin{array}{\|c\|} \hline \text { 2ES3,2ES31,2ES38,2JS1, 2S7, 2S10, 2T T1, 2US7, } \\ \text { 3US5, 4T141, 6T84, 6T86, 6T87, 7T143, 9T89, } \\ \text { 9T147, 15E, 21D346, 21D39, 21T242, 21T342 } \\ \text { 4ES31Q,4ES38Q,4JS1Q, 6ESS4, 6ES5,6HF3,6HF4, } \\ \text { 6HF4Q,6HF5,6HF5Q,6JS1Q,6JS2Q,7HFP1,7HFP1O } \end{array}$ |  |  |
|  |  |  |  |  |  |
|  |  |  |  |  |  |
|  |  |  |  | 8.50 | 5.00 |

# Replacement Phono Cartridges 

## SHURE REPLACEMENT CARTRIDGES



High-quality replacement cartriges for most players. All have sapphire . $001^{\prime \prime}$ needle for LP and $.003^{\prime \prime}$ needle for $78-\mathrm{rpm}$. W22T, W22 and W72 are turnover cartridges. W9 uses the newly designed "Twin Lever" needle shift system-flipping the needle lever puts proper needle into playing position-cartridge remains stationary. W9 and W72 are supplied with a "slip-on" capacitor which permits convenient reduction of output voltage to half of that shown. *W72 replaces Webster-Electric Type FX and Series F14, F15, F16, F18, F19, F20, and F21 cartridges. Av. shpg. wt., 4 oz .

| Stock No. | Model No. | Fig. | Replaces Shure Models | Output Volts | Response, CPS | List | $\begin{aligned} & \hline \text { NET } \\ & \text { EACH } \end{aligned}$ |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 65 R 904 | W9 | A | Series P7, P8 | 3.5 | 50-10,000 | \$9.50 | 5.59 |
| 65 R 338 | W22T | B | P76, P77, P79, PC2, PC4, PC40, PC41 | 1.2 | 50-10,000 | 10.00 | 5.88 |
| 65R 342 | W22 | C | Series P72, P76, P77, | 1.2 | 50-10,000 | 9.50 | $\overline{5.59}$ |
| 65R911 | W72* | D |  | 3.0 | 50-5000 | 8.50 | 5.00 |

## CERAMIC CARTRIDGES

Excellent replacement cartridges. All except Type WC25 feature "Twin Lever" needle shift system-flipping the needle lever puts proper needle into playing position-cartridge remains stationary. WC25 is turnover type cartridge. Ideal cartridges for use in areas where temperature and humidity are high. Av. shpg. wt., 4 oz.

| Stock No. | Model No. | Flg. | Replaces Shure Models | Output Volts | $\begin{gathered} \text { Response, } \\ \text { CPS } \end{gathered}$ | List | $\begin{aligned} & \mathrm{NET} \\ & \mathrm{EACH} \end{aligned}$ |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 8 R | WC6 | A | Serles PC6 | 0.5 | 30-15,000 | \$14.50 | 8.53 |
| R726 | WC6-TM | F | PC6SAM \& PC6SEM | 0.5 | 30-15,000 | 14.50 | 8.53 |
| 65 R 313 | WC10 | A | Series P71, P72 | 0.8 | 35-12,000 | 9.50 | 5.59 |
| 65 P902 | WC25 | E | Series PC42 | 0.7 | 50-7000 | 9.50 | 5.59 |

$-41 / 2$ grams. Shpg. wt., 4 oz .

| No. | Model | Fig. | Replaces Shure | Volts | CPS | List | NE |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 68 R 340 | W26 | G | W26A, W26B | 0.9 | 50-8000 | \$6.50 | 3.82 |
| 65 R 319 | WC38 | H | PC10, PC13, WC36B | 0.9 | 50-10,000 | 7.50 | 4.41 |
| 65 R 348 | W66B | , | Series P37 | 2.0 | 50-4500 | 7.00 | 4.12 |

STANDARD GROOVE CARTRIDGES
Ruggedly-built Rochelle-salt crystal cartridges. Model W78 can be used to increase the volume of many 78 rpm phonographs; supplied with "slip-on" capacitor which permits convenient reduction of output voltage to half of that shown. W68 and W78 are supplied with an extra weight-slug to permit increasing the needle pressure if necessary. All cartridges require 28.5 grams needle pressure, except Model W70 which requires $\mathbf{1 0 - 1 5}$ grams. W56N is used in WilcoxGay disc recorders; supplied with stellite $.003^{\prime \prime}$ cutting needle and $.003^{\prime \prime}$ osmium playback needle. Models W68 and W70 are equipped with osmium needles. *Less needle; uses conventional shank type (see page 362). W70 replaces Webster-Electric Type CX and the entire C series. Shpg. wt., 4 oz.

| Stock No. | Model No. | Flg. | Replaces Shure Models | Output Volts | $\begin{gathered} \text { Response, } \\ \text { CPS } \\ \hline \end{gathered}$ | List | $\begin{aligned} & \text { NET } \\ & \text { EACH } \end{aligned}$ |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 65 R 349 | W56N | K | P86R, W56R, W65R | 4.3 | 50-10,000 | $\overline{\$ 10.00}$ | 5.88 |
| 65 R 591 | W68 | J | Serles P89 PP30W, W65B, Serles | 1.6 | 50-4500 | 7.50 | 4.41 |
|  |  |  | P30, W60, W61 <br> (see above) | 3.8 | 50-5000 | 4.95 | 2.91 |
| $\begin{aligned} & 65 \text { R } 592 \\ & 65 \text { R } 590 \end{aligned}$ | $\begin{aligned} & \text { W70 } \\ & \text { W78* } \end{aligned}$ | K | Serles P35, P87, P88, P90,P92,P93,W42,W56, | 3.8 | $50-5000$ $50-6000$ | 5.55 | 3.26 |



## POWER POINT TRANSDUCERS

- High Output, Low Tracking Force
- Less Needle Talk and Record Wear
- Ideal for High-Temperature Areas Miniaturized ceramic cartridges, Equipped with two needle tips which are an integral part of the cartridge. Because of their small size and resulting low inertia, they have high compliance and give top quality tracking performance. Needle talk and record wear are minimized. Provide excellent response from 20 to $12,000 \mathrm{cps}$. Not affected by moisture or temperature. Ideal for use in hot, humid climates. Non-inductive-will not pick up hum from motors and stray fields. All, except 76 S and 76 DS , slip into the Electro-Voice holding mechanisms listed at right. 76S and 76DS replace power points in many Webcor changers. Needles of the same size are simply reversed when one needl vears. Mechanisms fit $1 / 2^{\prime \prime}$ and $5 / 8^{\prime \prime}$ mounting centers. Requires only 5 to 8 grams tracking force. Output, 1 volt. Av. grams tracking
shpg. wt., 3 oz .

| Stock No. | $\begin{aligned} & \text { Mfrs } \\ & \text { Type } \end{aligned}$ | Styll | NET EACH | $\begin{aligned} & \text { 3-Up } \\ & \text { EACH } \end{aligned}$ |
| :---: | :---: | :---: | :---: | :---: |
| 65R518 | 51-1 | . 001 " sapphire |  |  |
| 65 R 444 | 52-2 | . $0011^{\text {b }}$ sapphire | 3.10 | 2.32 |
|  | 52-2 | $.002^{\prime \prime}$ sapphire $.002^{\prime \prime}$ sapphire |  |  |
| 65 R 448 | 53-3 | . 003 sapphire |  |  |
| 65 R 509 | 56 | . $003{ }^{\prime \prime}$ sapphire | 3.10 | 2.32 |
|  | 56 | . $0033^{\prime \prime}$ sappphire |  |  |
| 65 RC 464 | 56DS | .001" diamond |  |  |
|  |  | . 003 " sapphire | 12.94 | 9.70 |
| 65R598 | 76 S | .001" sapphire |  |  |
|  |  | . $003{ }^{\prime \prime}$ sapphire | 3.32 | 2.50 |
| 65 RC 599 | 76DS | $.001^{1 \prime}$ diamond .003" sapphire | 12.94 | 9.70 |



STEREO "POWER POINT" CARTRIDGES

- For Stereo and Monaural Playback
- Excellent Reproduction Quality
- Delivers High Output Voltage

Ceramic cartridge for playing both stereo and monaural records. High compliance and light tracking force minimizes needle talk and record wear. Delivers high output voltage. Not affected by temperature or humidity. Response: 20-16,000 cps. Tracking force: 6 grams. Output: 0.5 volts. Size, $1 / 4^{\prime \prime}$ dia., $3 / 4^{\prime \prime}$ long. S-Sapphire needle. DDiamond needle. . $0007^{\prime \prime}$ plays both stereo and monaural. .003" monaural only. Shpg. wt., 4 oz.


## HOLDING MECHANISMS

For above. Fit any arm. Shpg. wt., 2 oz

| $\begin{gathered} \text { Stock } \\ \text { No } \\ \hline \end{gathered}$ | $\begin{aligned} & \text { Mfrs } \\ & \text { Type } \end{aligned}$ | Description | $\begin{aligned} & \text { NET } \\ & \text { EACH } \end{aligned}$ | $\begin{aligned} & \text { 3UP } \\ & \text { EACH } \end{aligned}$ |
| :---: | :---: | :---: | :---: | :---: |
| 68 R 731 | PT-3 | Turnund | . 78 | . 59 |
| 68 R 732 | PFT-3 | Fixed | . 39 | . 29 |

## JENSEN NU-LIFE REPLACEMENT CARTRIDGE

High-quality replacement turnover cartridges. Each has both .001" and $.003^{\prime \prime}$ sapphire styli. Type 1: high output; replaces Ronette car
 output; replaces Ronette cartridge TO-284-OV; delivers 0.5 V . output, LP; 0.9 V., 78 -rpm. Type 3: medium output; replaces Ronette cartridge Ronette holding or mounting mechanisms. Av. Shpg. wt., 4 oz


Types
$1,2,3$,

| No. | Type | NET | No. | Type |
| :---: | :---: | :---: | :---: | :---: |
| 68 R 721 | 1 | NET |  |  |
| 6.09 | 68 R 723 | 3 | 4.09 |  |

For 78 and $331 / 3$ Wide-Range Response Clear Reproduction

# Phono Accessories-Cartridges 



MODEL DSS. 3 -speed phonograph motor with $10^{\prime \prime}$ turntable. Features 4 -pole, shadedpole motor. For high-fidelity phono systems. For use with all types of phono cartridges, including magnetic. Plays $331 / 3,45$, and 78 rpm records. Turntable is rim driven by idler wheel. Speed selector moves idler wheel to appropriate step on motor shaft for desired speed. Turning speed selector to "off" position automatically turns off motor and disengages the idler wheel from turntable. Other features include: Constant speed; oilless motor and turntable bearings; dynamically balanced rotor. Supplied complete with speed indicator dial. $10^{\prime \prime}$ turntable, $45-\mathrm{rpm}$ record adapter, and "OnOff", switch. Size, less turntable: $43 / 8 x 65 / 8 x$ $61 / 16^{\prime \prime}$. Requires $2^{21} / 3^{\prime \prime \prime}$ below mounting plate. For operation from $110-120$ volts, 60 cycle AC. Shpg. wt., $61 / 2 \mathrm{lbs}$.
85 R 275. List, $\$ 24.50$. N $\qquad$ .14 .70
MODEL SS. (Not illus.) Phono motor with $8^{\prime \prime}$ turntable. Induction-type, 2-pole motor features oilless bearings and balanced rotor. Plays $331 / 3,45$ and 78 rpm records. Idler wheel is disengaged in "off" position. With speed indicator dial, turntable, and $45-\mathrm{rpm}$ record adapter Size, less turntable: 315/16x $4^{13} / 32 \times 43 / 4^{\prime \prime}$. Requires $2^{15} / 32^{\prime \prime}$ below mounting plate. For operation from $110-120$ volts 60 cycle AC. Shpg. wt., 4 lbs. 85 R 276. List, \$10.95. NET........ 6.57

MODEL TR. 3-speed phono motor with $9^{\prime \prime}$ turntable. Constant-speed, 2 -pole motor provides quiet, dependable operation. Speeds of $331 / 3,45$, and 78 rpm from separate pulleys. With speed selector in "off", position, pulleys are disengaged from motor shaft. With speed indicator dial, $45-\mathrm{rpm}$ record adapter, and $9^{\prime \prime}$ turntable. Size, less turntable: $311 / 32 \times 53 / 4 \times 53 / 4^{\prime \prime}$. Requires $178^{\prime \prime}$ below mounting plate. For 110-120 volts, 60 cycle AC. Shpg. wt., 4 lbs.
96 R 367. List, \$12.45. NET. .
. 7.47
battery-operated phono motors. Highquality phonograph motors for portable use. Perform on 4 flashlight cells (below). Have $6^{\prime \prime}$ plastic turntable. Constant speed 2pole motors are rubber grommet mounted for extra cushioning. Enclosed motors have self-lubricated bearings. Type BX has speed shift (lever can be located on either side of turntable) and neutral "off" position. Size, $61 / 2 \times 41 / 2 \times 23 / 4^{\prime \prime}$. Require $2^{\prime \prime}$ below mtg. surface. Shpg. wt., 1 lb .

| No. | Type | Speeds | NET |
| :---: | :---: | :---: | :---: |
| R 203 | BX | $45,331 / 3,162 / 3 \mathrm{rpm}$ | 8.70 |
| 85 R 204 | BX-4 | 45 rpm | 7.65 |

TYPE 2 bURGESS BATTERY. For use with above (4 required). Wt., 6 oz . 53 J 009 . NET EACH.

14c


RA-284-OV
RONETTE "FONOFLUID"

## SINGLE-STYLUS CARTRIDGES

MODEL RA-284-OV. Single-stylus crystal cartridge. Replacement for most 45 and $331 / 3$ rpm player cartridges. "Fonofluid" construction achieves smooth response from 50 to $11,000 \mathrm{cps} .0 .7$ volts output. Requires 4 to 6 grams needle pressure. Supplied complete with hardware and $.001^{\prime \prime}$ sapphire stylus. $5 / 8^{\prime \prime} \mathrm{mtg}$. centers. Shpg. wt., 4 oz.
65 R 015 . List, $\$ 7.25$. NET. $\qquad$ 4.26

MODEL RA-395. High-output single-stylus crystal cartridge. As above, but for use with 1 or 2 -tube amplifiers. Direct replacement for RCA-type cartridges in 45 and $331 / 3 \mathrm{rpm}$ players. Response from 50 to 9000 cps . Output is 5 volts. Requires 4 to 10 grams tracking pressure. $58^{\prime \prime}$ mounting centers. Complete with hardware and .001" sapphire stylus. Shpg. wt., 4 oz.
65 R. 079. List, \$7.25. NET
4.26

MODEL BF-40 STEREOPHONIC. New, "binofluid" stereo crystal cartridge. Compatible with monaural records, it features highcompliance, dual-elements. Requires only 4 to 6 grams pressure for true tracking and clean reproduction. Full-channel separation of 24 to 28 db . RIAA equalized. Reponse, flat from 20 to beyond $15,000 \mathrm{cps}$. Output 0.30 volts per channel. With .0007 " diamond stylus, universal mount. Wt., 2 oz.
68 R 207. List, \$31.00. NET.
. 18.23
MODEL BF-40 WITH SAPPHIRE STYLUS.
68 R 206. List, $\$ 20.00$. NET.

TO-284-OV
TX-88

## PHONO CARTRIDGES

## DUAL-STYLUS CARTRIDGES

MODEL TO-284-OV. Dual-stylus, turnover crystal cartridge with .001 " and $.0025^{\prime \prime}$ sapphire tips. "Fonofluid" construction assures excellent reproduction. Response, $50-11,000$ cps. Stylus pressure 4-6 grams. 0.7 volt output. With hardware. $1 / 2^{\prime \prime} \mathrm{mtg}$. centers. Shpg. wt., 2 oz.
65 R 016 . List, $\$ 9.00$. NET
.5 .29
MODEL TO-400-OV. Dual-stylus turnover cartridge. As above, but front mtg. for automatic changers with narrow pickup arms using bar-type knob. 4 oz .
68 R 360. List, \$9.00. NET. .
....... 5.29
MODEL TO-222. Dual-stylus, turnover-type crystal cartridge with $.001^{\prime \prime}$ and $.0025^{\prime \prime}$ sapphire tips. Similar to TO-284-OV above but has 5 volt output. With $1 / 2^{\prime \prime} \mathrm{mtg}$. centers. Shpg. wt., 4 oz.
65 R 968. List, \$9.00. NET. . . . . . . . . 5.29
MODEL TX-88. New, "superfluid" turnover crystal cartridge. Offers extremely wide frequency response and high tracking accuracy. Requires 2 to 4 grams pressure for manual player pickup arms; 7 to 12 grams pressure for use in changers. Output, 0.4 volts. Response, 30 to 24,000 cps. Selfequalized for RIAA recording curve. Features two separate stylus assemblies: $.001^{\prime \prime}$ sapphire for LP's and $.0025^{\prime \prime}$ sapphire for 78 -rpm records. Has $1 / 2^{\prime \prime}$ mounting centers. Shpg. wt., 3 oz.
68 R 361 . List, $\$ 12.50$. NET.
7.35

## Selected Feature Values

## NEW WALSCO "KLEEN-TAPE"

Tape recorder head cleaner. For fast, efficient cleaning of tape recorder heads without removing head cover. Consists of a tough tape impregnated with special formula head cleaner. Simple to use
-iust put reel on recorder, thread tape corder, thread tape
 to "play", and let tape run through just as any other tape. Then rewind tape to $100-\mathrm{ft}$. plastic reel and job of cleaning and polishing heads is over. Insures clean, distortion-free recordings and playbacks. Long lasting-may be used again and again. Fits all tape recorders using standard size tapes. Shpg. wt., 4 oz.
. 1.73

## knIght CRYSTAL"/MIRE

Attractive crystal mike for excellent performance at extremely low cost. Quality, shock-mounted crystal element provides response from 60 to 8500 cps. Balanced for either hand-held or table-top use without stand or bracket. Ideal for tape recording or amateur use. plastic case. Size: $211 / 10 \times 27 / 161^{\prime \prime}, 5$ plastic case. Size: $2^{11 / 16 \times 27 / 16 \times 1^{\prime \prime} .5-f t . ~ c a b l e . ~}$ 99 S519. NET
2.95

## NEW SENCORE BATTERY TESTER

Model BT101. Battery tester. Tests ail batteries under recommended loads cells, without mercury cells, without damage. Load setting is aetermined from current capavoltage. Rejects critical voltage. Rejects critical
transistor batteries for internal resistance buildup before battery is low -a time-saver in finding cause of unstable troubles in transistor circuits. All error is eliminated before testing battery by adjusting meter to a "no-load" line. Load is then connected by momentary switch. Meter reading will drop if battery is low or bad. Size (HWD), $5 \times 41 / 2 \times 21 / 2^{\prime \prime}$. Shpg. wt., $21 / 2$ lbs.
83 F982. NET..
15.63

## BUD WIRELESS PHONO OSCILLATOR

Model WO-6. Compact, easy-to-operate phono oscillator for use with any record player hav"ing a crystal phono cartridge. "Broadcasts" from record player to any number of standard AM radios up to 50 feet away. No interconnecting wires are needed dio. Just connect to cartridge. dio. Just connect to cartridge. Any unused frequency from
$1100-2150 \mathrm{kc}$ can be used. Regulate tone, volume at radio. $41 / 2 \times 21 / 2 \times 21 / 8^{\prime \prime}$. For operation from $110-120 \mathrm{v.} 50-,60 \mathrm{cycle}$ AC. Shpg. wt., 3 lbs.


## SPEAKER GRILLE CLOTH

Beautiful new patterns in high quality, durable cloth. Perfect for modernizing old cabinets and for construction of new custom enclosures. Acoustically perfect for enclosure use. Supplied neatly folded in plastic bags.


Size Mahogany $\frac{\text { Ivory } \text { Shpg. Wt. NET }}{}$ | $12 \times 12^{\prime \prime}$ | 43 N 605 | 43 N 608 | 2 oz. | .47 |
| :--- | :--- | :--- | :--- | :--- | :--- |
| $13 \times 24^{\prime \prime}$ | 43 N 606 | 43 N 609 | 4 oz. | .79 |


G-C Fabric Cement. Excellent for cementing grille cloth to cabinets, felt to turntables, etc, Dries quickly; does not become brittle. Will not penetrate, shrink or disfigure material. 2 43 N 123 . NET. wt., 8 oz.

## FLOCK-COATED GRILLE SCREENING

Galvanized wire mesh, flocked on both sides. Soft, brown color. Durable and attractive.


## Values in Polaris TV Picfure Tubes

## TERRIFIC SAVINGS-ALL TYPES

Remarkable savings on popular TV
picture tubes. All are high-quality tubes that will give bright, clear pictures. Guaranteed for one full pictures. Guaranteed for one full
year. Take advantage of these low year. Take advantage of these low
prices and order now. Values like this just can't be beat. All have magnetic deflection and magnetic focus except $\ddagger$ magnetic deflection and electrostatic focus. *Aluminized screens. When ordering, give Dept. and Type No. - see page 442 for shipping instructions.


| Stock No. |  |
| :---: | :---: |
| Dept. | Type |
| AU6 | 12LP4A |
| AU6 | 14EP4/CP4/BP4 |
| AU6 | 16AP4A |
| AU6 | 16DP4A |
| AU6 | 16GP4B |
| AU6 | 16RP4/KP4 |
| AU6 | 16RP4A/KP4A* |
| AU6 | 16WP4A |
| AU6 | 17AP4 |
| AU6 | 17AVP4/ATP4 $\ddagger$ |
| AU6 | 17AVP4A/ATP4A* $\ddagger$ |
| AU6 | 17 BP 4 A |
| AU6 | 17BP4B* |
| AU6 | 17 CP 4 |
| AU6 | 17HP4/RP4 $\ddagger$ |
| AU6 | 17HP4B/RP4C* $\ddagger$ |
| AU6 | 17LP4/VP4 $\ddagger$ |
| AU6 | 17LP4A/VP4B* $\ddagger$ |
| AU6 | 17QP4 |
| AU6 | 17QP4A* |
| AU6 | 17TP4 $\ddagger$ |
| AU6 | 19AP4A |

$\left.\begin{array}{|c|l|l|l}\text { NET } \\ \text { EACH }\end{array}\right)$

## PHILMORE BUILDER KITS \& CRYSTAL SETS



Model TR-22 Transistor Radlo KIt. Popular loudspeaker type transistor radio kit. Provides excellent reception of broadcast band. Vides excellent reception of broadcast band. necessary parts and detailed instructions. Less battery (see below). Wt., 1 lb . 83 S 563. NET $\qquad$ I2.94

## Type VS300 RCA Battery. 9-volt battery for

 above. Shpg. wt., 4 oz . 80 J 961 . NET. $\qquad$Mod 100 . sodel 7001 "Supertone" Crystal Sot. Gives splendid results on local stations within a 25 mile radius. Uses smooth-action slider for tuning. Adjustable detector is enclosed in plastic for dust-free operation. Requires no batteries or tubes. Supplied less headphones and anten-
na. Shpg. wt., 12 oz . na. Shpg. wt., 12 oz.
83 S 003. NET....
.1 .45

## CRYSTAL SET ACCESSORIES

(A) Cat Whiskers. Tested spring steel. TemA pered to give proper tension for best results. Shpg. wt., 2 oz.
52 SOII. PKG.
B Detector Mount Kit Complete kit of all
(B) Detector Mount Kit. Complete kit of all Donsists of standard crystal holder crystal. whisker; and swivel arm. Arm is mounted on whisker; and swivel arm. Arm is mounted on most sensitive spot on crystal. Less crystal (see right). Wt., 3 oz .
52 S 003. NET. $\qquad$ . 15 c
Detector Mount Kit on Base. As above, but all parts mounted on base with Fahnestock clips-ready to use. Wt., 5 oz .
.26c
[C Fixed Detector. Permanently adjusted, C. fixed crystal detector mounted in a compact, durable bakelite case. With mounting hardware. Shpg. wt., 3 oz .
52 S 001. NET. $\qquad$
$\qquad$

(A)

Meter-Tested Crystal Highest ena crystal for dependable performance and sensitive reception in crystal receivers of all
types. Tested under laboratory conditions using meter method. Has greater sensitivity than 52 S 005 below. Shpg. wt., 3 oz . 52 S 006. NET.

15c
Economy Crystal. Highly sensitive, general-purpose crystal. Ideal for ali Galena crystal. Securely mounted in lead. Shpg. wt.
52 S 005 . NET. $\qquad$ .7c

## Selected Feature Values



DSC-1

## DSC-1 STEREO CONTROL KIT

Here's an advanced-design kit that provides flexible, centralized control of two preamplifiers stereo operation. Introduces no noise or distortion, and only a negligible amount of signal attenuation. Requires no modification of the reamplifiers-connects between tape output jack on each preamplifier and input jack of its associated amplifier. Can also be used directly with two amplifiers.
Features include a blend control-continuously variable from pure stereo to pure monaural. "In etween positions feed a portion of channel $\mathbf{A}$ omplifier B, and vice versa, to fill in the hole in the middle." Volume control may be switched from the front panel to function as a oudness control. Channel reverse switch operates without unbalancing signal levels. Inmonitor facility. control and stereo tape AB Size, $51 / 4 \times 33 / 4 \times 6^{\prime \prime}$. Shpg. wt., 2 lbs. 12.95

## PS-1 PREAMP POWER SUPPLY KIT

Provides all power necessary for a pair of Dy5 nakit amplifiers in stereo operation. Size, $21 / 2 \mathrm{x}$ $53 / 4 \times 6^{\prime \prime}$. Shpg. wt., $23 / 4 \mathrm{lbs}$.
$83^{\text {S }} 038$. NET.,

## MILLER HIGH-FIDELITY AM TUBELESS TUNER



Model 565. Unique tubeless, highfidelity AM tuner kit. Provides outstanding broadcast reception at
unusually unusually Covers 550 to 1700 kc . Tuned radio frequency (TRF) type circuit offers a response limited only by the audio system used and the quality of the transmitted signal. Tuner is fundamentally a germanium diode detector employing two tuned circuits. Negative mutual coupling between antenna and RF circuit assures exceptionally high efficiency. Audio output voltage
of the tuner is directly proportional to the inof the tuner is directly proportional to the input signa-m-ranges from . 07 to 7 volts on stathe signal strength. Output circuit is equipped with a volume level control. Size of ebony bake98 S 525 . NET. . . . . . . . . . . . . . . . . . . . . 14.70
Model 595. Same as above, but factory-wired 98 and tested. Shpg. wt., 2 lbs.

## There's Mare for the Amateur at ALIIED

## 37 Years of Ham-ło-Ham Service

GIANT TRADE-INS. Now's the time to trade in your old gear and bring your station up to date. Write today-describe your trade-in-you'll get a terrific deal from Allied.
EASY PAYMENTS. Buy from Allied without straining your budget-only $10 \%$ down-no red tape and no finance companies to deal with.
15-DAY TRIAL. Order equipment from Allied and try it under your own conditions. If in 15 days you're not completely satisfied, return it and we will refund the full purchase price, less only transportation costs.


COLLINS KWM-1 TRANSCEIVER
Compact, top-performing 3-band trans-ceiver-designed for mobile or fixed operation. Input power is 175 watts PEP on SSB 160 watts CW. Covers any ten $100-\mathrm{kc}$ bands from 14-30 mc-ten heterodyne crystals supplied cover nine ranges on 20,15 , and 10-11 meters, and one range that includes WWV. Commonly-tuned circuits in receiver and transmitter sections eliminate need for "zeroing in"-transmitting and receiving frequencies are always the same. Features include: dual-conversion receiver, permeabil-ity-tuned VFO (stable within 100 cps ), 100 kc calibrator, mechanical filter for transmitting (SSB) and receiving, voice control, break-in keying, side-tone CW monitor. Carrier and sideband suppression is 50 db . Has antenna changeover relay and 500 -ohm phone-patch output. Antenna input/output, phone-patch output.Antenna input/output, 50 ohms. unbalanced. Less speaker, power
supply (use either the $516 \mathrm{~F}-1$ listed below, or the $516 \mathrm{E}-1$ at right). Size (HWD) : $61 / 4 \mathrm{x}$ $14 \times 10^{\prime \prime}$. Shpg. wt., 22 lbs.
94 SU 877. NET.
820.00

312B-1 MATCHING SPEAKER. Size, $61 / 4 \times 75 / 8 \mathrm{x}$ $10^{\prime \prime}$. Shpg. wt., 7 lbs .
94 SX 870 . NET
25.00

516 F-1 POWER SUPPLY. Supplies all necessary voltages for operation of KWM-1. With cables. For $110-120$ volts, $50-60$ cycle AC. Size, $61 / 4 \times 75 / 8 \times 10^{\prime \prime}$. Shpg. wt., 29 lbs.
94 SU 879. NET.
136.00

351D-1 MOBILE MOUNTING TRAY. For under-the-dash mounting of the KWM-1. Permits slide-in installation and slide-out removal. Cantilever arms fold out of the way after removal of the transceiver. Includes cables. Shpg. wt., 12 lbs.
94 SX 869 . NET.
98.00

## KWS-1 TRANSMITTER

Deluxe bandswitching transmitter with SSB. CW or AM output. 80 through 10 meters. 1 kw PEP on SSB, 1 kw CW. Has built-in VFO, etc. For 115 or 230 v., $50-60$ cycle AC. Wt., 210 lbs.
98 SZ 774. NET.
2095.00

## NEW COLLINS 32S-1

## SSB TRANSMITTER

New ultra-compact SSB-CW transmitter. Input is a husky 175 watts PEP on SSB; 160 watts on CW. Expertly engineered, the $32 \mathrm{~S}-1$ offers exceptional operating convenience and superior all-around performance. It's the ideal companion for the 75S-1 receiver at right.

Outstanding features include: mechanical filter-type SSB generator, permeabilitytuned VFO. upper or lower sideband operation, RF inverse feedback. 10 db audio compression (ALC) and VOX. 2-6146 final. Frequency control system consists of VFO functioning with crystal oscillator that acfunctioning with crystal.oscillator that accommodates 13. heterodyne crystals-this
permits coverage of any $13-200-\mathrm{kc}$ ranges permits coverage of any 13-200-kc ranges
from $3.4-30 \mathrm{mc} .11$ crystals supplied provide complete coverage of $80,40,20$ and 15 meters, and $28.5-28.7 \mathrm{mc}$. (Note that there are 2 open crystal positions that can be used to cover 2 more ranges on $10-11$ meters.)

Overall frequency stability after warm-up is within 100 cps . Provides, 10 db audio compression and 50 db suppression of carrier, unwanted sideband, and oscillator feedthrough and mixer products. Has 600 -ohm phone-patch input. Output impedance is 50 ohms. $67 / 8 \times 141 / 2 \times 115 / 8^{\prime \prime}$. Less power supply (below). Shpg. wt., 17 lbs .
94 SU 865 . NET.
590.00
$516 \mathrm{~F}-2$ POWER SUPPLY. Supplies all necessary voltages for operation of $32 \mathrm{~S}-1$. With cables. For $110-120$ volts, $50-60$ cycle AC. Size, $61 / 4 \times 71 / 2 \times 10^{\prime \prime}$. Shpg. wt., 27 lbs.
94 SU 866. NET.
105.00

516E-1 POWER SUPPLY. For mobile or portable operation of the $32 \mathrm{~S}-1$ and $75 \mathrm{~S}-1$, or the KWM-1 at left. Designed for 12 VDC input. Utilizes 6 power transistors as switching elements at 600 cps , eliminating vibrators and rotating machinery. Provides superior efficiency and minimum maintenance. With cables. Size, $41 / 2 \times 5 \times 9^{\prime \prime}$. Shpg. wt., 18 lbs. 94 SU 878. NET.

## NEW COLLINS 75S-1 SSB RECEIVER

New, advanced-design receiver for SSB, $A M$ and CW. Time-tested Collins features are incorporated to give superior performance throughout its entire operating range: Employs a minimum of highly functional controls for quick, clean operation. May be used alone, or with the $32 \mathrm{~S}-1$ transmitter used alone, or with the $32 \mathrm{~S}-1$ transmitter (at left) to make a compact, efficient sta-
tion. Receiver VFO can be used to control both units for transceiver operation.
Tuning system consists of VFO functioning with crystal oscillator that accommodates 14 heterodyne crystals-this permits coverage of any $14-200-\mathrm{kc}$ ranges from $3.4-30$ mc. 12 crystals supplied provide complete coverage of $80,40,20$ and 15 meters. WWV and $28.5-28.7 \mathrm{mc}$. (Note that there are 2 open crystal positions that can be used to cover 2 more ranges on $\mathbf{1 0 - 1 1}$ meters.)
Features dual conversion with crystal-controlled 1st beating oscillator, bandpass 1 st IF, permeability-tuned VFO (stable within 100 cps ), mechanical filter for high selectivity and sideband selection, $100-\mathrm{kc}$ calibrator and product detector. Other important design characteristics include use of only 150 volts on tube plates and choice of 3 degrees of selectivity- 2.1 or 0.5 kc with mechanical filter, or IF transformers for AM.
Signal-plus-noise-to-noise ratio is 10 db for $1 \mu \mathrm{v} C W$ input. IF rejection is better than 70 db , image rejection is better than 60 db . Internal power supply may be disabled when using $75 \mathrm{~S}-1$ with $32 \mathrm{~S}-1$ transmitter and $516 \mathrm{E}-1$ supply. Less speaker (below). $67 / 8 \times 141 / 2 \times 115 / 8^{\prime \prime}$. For $110-120$ v., $50-60$ cycle AC. Shpg. wt., 21 lbs.
92 SU 383. NET
495.00

MATCHING SPEAKER. $73 / 4 \times 10 \times 8^{\prime \prime}$. Wt., 4 lbs. 92 SX 394. NET.
27.50

312B-4 SPEAKER CONSOLE. Integrates 32 S-1 and 75S-1. Houses speaker, RF directional wattmeter, phone patch and function controls. $73 / 4 \times 8 \times 121 / 4^{\text {月 }}$. Wt., 10 lbs. 92 SU 395. NET................... 185.00


## LOW-COST S-38E RECEIVER

Latest version of the famous S-38 series of shortwave and broadcast receivers-completely restyled for improved operating ease and greater tuning accuracy. Redesigned cabinet offers recessed dial scale, relocated selector switches and convenient placement of control knobs. Offers sensitive coverage from 540 kc to 32 mc in 4 ranges. Tunes standard AM broadcast band and all shortwave frequencies up to 32 mc for police, aircraft, Amateur, foreign and domestic shortwave, and ship-to-shore transmissions. Has separate electrical bandspread dial with $0-100$ scale.

Other features: built-in $5^{\prime \prime}$ PM speaker for excellent tonal quality; tip jacks for headphones to permit private listening; large. slide-rule type dial with 4 separate scales; latest, highly efficient superhet circuit employing 4 tubes plus power rectifier. Controls: Bandspread; Receive/Standby switch; On-Off-Volume; Band Selector; Tuning. Switch on rear panel for speaker or headphones. Gray steel cabinet with silver trim. $127 / 8 \times 7 \times 91 / 4^{\prime \prime}$. For $105-125 \mathrm{v}$. DC, or $50-60$ cycle AC. (See 220 v . adapter cord below.) Shpg. wt., 14 libs.
94 SX 814 . NET
54.95

## S-38E in Furnifure Finishes

The S-38E in metal cabinets with lustrous, simulated wood grain finishes. 91 SX 995. S-38EM. Mahogany NET 91 SX 996. S-38EB. Blonde. $\}$ EA. 59.95

220 -VOLT ADAPTER CORD. Permits 220 v . ACDC operation of S-38E receivers. 5 oz . 49 T 580. NET
I. 32

## FOR AMATEUR AND SWL



## SX-62A ALL-WAVE RECEIVER

The SX-62A offers peak performance on AM broadcast, short wave and hi-fi FM. Precision built to meet the most exacting standards-incorporates every modern refinement in all-wave receiver engineering. Six ranges: $540-1620 \mathrm{kc}$; $1620 \mathrm{kc}-4.9 \mathrm{mc}$; $4.9-15 \mathrm{mc}$; $15-32 \mathrm{mc} ; 27-56 \mathrm{mc}$ (AM-FM); $54-109 \mathrm{mc}(\mathrm{AM}-\mathrm{FM})$. Beautifully styled.

HIGH-FIDELITY AUDIO. Push-pull 6V6 output furnishes 10 watts of audio power. Fourposition tone control; phono jack.

FOR SWL'S AND DX FANS. Red dots identify proper settings of controls for AM and SW reception; green dots for FM. Wide-vision slide-rule dial; band in use is illuminated for quick identification. 60 -to- 1 ratio tuning knob. 500-kc calibrating crystal, with dial pointer for pin-point reset accuracy. Has BFO for reception of code signals. Front Panel Controls: Dial Pointer Reset; Band Panel Controls: Dial Pointer Reset; Band
Selector; Receive/Standby; Calibration Crystal; Noise Limiter; Tuning; On-OffVolume; Reception; Selectivity; Tone; Sensitivity; and Phone Jack.

MODERN CIRCUIT. Three IF and two RF stages provide maximum usable sensitivity. Crystal filter provides 6 -step selectivity. Separate RF and AF gain controls; AVC BFO; ANL; temperature-compensated, voltage-regulated oscillator. 300 -ohm antenna input. 3.2, 8 and 500 ohm outputs. Employs 14 tubes plus regulator and rectifier. Includes external antenna.
Black steel cabinet with gray panel and silver trim. Size, $101 / 2 \times 20 \times 16^{\prime \prime}$. Less speaker. (See R-46B and R-47 matching speakers on (See R-46B and R-4 matching speakers on page 371.$)$ For $105-125$
AC. Shpg. wt., 66 lbs.
97 SZ 540. NET.
375.00

## TOP-VALUE SX-99 RECEIVER

An outstanding value in a medium-pricad communications receiver. Offers features usually found only in high priced communications receivers. Crystal filter-Calibrated electrical bandspread-" $S$ " meter.
FREQUENCY COVERAGE. Full coverage of all frequencies from 540 kc to 34 mc in 4 ranges: the standard AM broadcast band plus 3 short-wave ranges. Provides reception of broadcasts from all over the world.

FEATURES: Bandspread dial calibrated for $80,40,20,15,11$ and 10 meters-pro-" vides increased separation of stations; " S " meter calibrated in units of 6 db to S 9 and in db above $\mathbf{S 9}$ for accurate signal reports; Crystal filter for razor-sharp selectivity; RF stage and two IF stages for very high sensitivity; Terminals for 3.2 -ohm or 500 -ohm speaker. Separate BFO with pitch control; automatic noise limiter and 3-position tone control. 7 tubes; plus rectifier. Steel cabinet in gray and black, chrome trim. $81 / 2 \times 183 / 4 \times 11^{\prime \prime}$. For $105-125 \mathrm{v}$. , $50-60$ cycle AC. Less speaker (see R-46B and R-47 on page 371). Shpg. wt., 36 lbs.

## 98 SU 714. NET

149.95

## POPULAR S-53A RECEIVER

A highly sensitive and selective receiver at low cost. Covers: 6 Amateur bands, Police, Aircraft, Marine, Foreign and domestic shortwave broadcasts and standard broadcast programs. Has high signal-to-noise ratio. Built-in $5^{\prime \prime}$ PM speaker.
TUNES TO 54.5 MC . Range $1,540-1630 \mathrm{kc}$; Range 2, 2.5-6.3 mc; Range 3, $6.3-16 \mathrm{mc}$; Range 4, $14-31 \mathrm{mc}$; Range 5, $48-54.5 \mathrm{mc}$. Provides excellent Amateur 6 -meter reception on Range 5. Edge-illuminated sliderule dial. Panel controls: Main Tuning, Bandspread, Bandswitch, Volume/Off-On, Sensitivity-Phono, Standby, Tone, Automatic Noise Limiter, and Phone-Code switch. Electrical bandspread control, with $0-100$ logging scale plus mc calibration for $48-54.5 \mathrm{mc}$, simplifies tuning on crowded bands. Speaker-Headphone switch, headphone and phono jacks on rear panel.
MODERN SUPERHET CIRCUIT. Uses: 1-6C4 osc. (temperature-compensated for minimum drift), $1-6 \mathrm{BA} 6$ mixer, 2-6BA6 IF's, 1-6H6 detector-AVC-noise limiter. 16SC7 BFO-1st AF, 1 -6K6GT output ( 2.5 watts). Rectifier is 5Y3GT. $5^{\prime \prime}$ PM speaker. Satin black steel cabinet with brushed chrome and silver trim; size of cabinet is $127 / 8 \times 7 \times 73 / 4^{\prime \prime}$ deep. Has a piano-hinge top. For operation from $105-125$ volts, $50-60$ cycle AC. Shpg. wt., 20 lbs.
97 SU 573. NET
89.95

## FAMOUS S-85 RECEIVER

Popular S-85 communications receiver. Supersedes the renowned S-40 series. Completely restyled for improved operating ease and greater tuning accuracy. Puts worldwide communications at your finger tips. Tunes from 540 kc to 34 mc continuously in 4 ranges.
FEATURES: Bandspread dial calibrated for $80,40,20,15,11$ and 10 meters; RF amplifier; 2 -IF amplifiers; BFO with variable pitch control; automatic noise limiter; 3position tone control; built-in $5^{\prime \prime}$ PM speaker; 4 tuning ranges-standard broadcast plus 3 shortwave. Temperaturecompensated oscillator for stability.
TUBES USED: 6SG7 RF amplifier, 6SA7 converter, 2-6SK7 IF amplifiers, 6SC7 BFO and audio amplifier, 6 K 6 GT audio output. $6 \mathrm{H} 6 \mathrm{ANL}-\mathrm{AVC}$-detector; rectifier is 5 Y 3 GT .
FRONT PANEL CONTROLS: Sensitivity, band selector switch, volume, main tuning, bandspread, AVC on-off, noise limiter on-off, AM-CW, tone (high-medium-low) and AC on-off, pitch control, standby-receive. Panel jack for headphones. Steel cabinet finished in gray and black with silver and red trim. Piano-hinged top. Size, $87 / 8 \times 181 / 2 \times 10^{\prime \prime}$. For operation from 105-125 v., 50-60 cycle AC Shpg. wt., 36 lbs.
98 SU 711 . NET.
119.95

MODEL S-86. Same as S-85 in design and appearance, but for $105-125 \mathrm{v}$., DC or $50-60$ cycle AC. Shpg. wt., 32 lbs.
98 SU 71 2. NET.
119.95


Now HT-33A

## NEW HT-33A LINEAR AMPLIFIER

The perfect companion to the HT-32identical in size and styling. Provides the maximum legal input on SSB and CW-up to a full kw on AM linear. Employs a PL172 high-efficiency pentode operating in Class AB1. grid-driven across a non-inductive resistor for maximum stability. Offers everything needed for a clean signal with tremendous "punch"- extra-heavy-duty power supply, better cooling, etc.

FEATURES: 1 -knob bandswitching 80 through 10 meters; 3rd and 5th order distortion products down in excess of 30 db ; passive grid circuit- 50 to 75 -ohm input; built-in RF output meter for fast. easy tune-up; pi-network output; variable output loading, $30-80$ ohms; metered circuits; built-in high-voltage circuit breaker; all leads and circuits RF-filtered for TVI suppression. Front Panel Controls: Meter Selector (CathFront Panel Controls: Meter Selector (Cathode. Grid, Screen, RF, Plate Volts); Firua-
ment Off-On; High-Voltage Off-On; Circuit Breaker; Bias Adjustment; Band Selector; Plate Tuning; Plate Load. Rear Chassis: Coax Input; Coax Output; Filament and Bias Fuse; Cut-Off Bias Relay Terminals. Tubes: PL-172 high-power pentode; 2866AX rectifiers; 4-OA2 screen regulators. $101 / 4 \times 20 \times 17^{\prime \prime}$. For $105-125$ v., $50-60$ cycle $101 / 4 \times 20 \times 17^{\prime \prime}$. For $105-1$
AC. Shpg. wt., 130 lbs .
92 SZ 348. NET.
795.00

## HT-32 TRANSMITTER

High-efficiency transmitter-exciter for SSB-AM, or CW operation. Used alone, the HT-32, with 144 watts P.E.P. input, is an excellent, completely self-contained transmitter for the $80,40,20,15,11$ and 10 meter Amateur bands. As an exciter, the HT-32 is ideal for use with the HT-33A power amplifier (at left), or any other similar unit.
FEATURES: Piezo-electric sideband filters; extremely stable bridged-tee modulator develops almost perfect sideband modulation; precision gear-driven VFO reads directly in kilocycles to within $\mathbf{3 0 0}$ cycles of reference point; distortion products down 30 db ; carrier suppressed 50 db ; unwanted sideband down 50 db ; full voice control; clean, break-in keying; 52 -ohm pinetwork output for harmonic suppression. 15 tubes plus two parallel 6146's in final; 5R4GY HV rectifier; 5 V 4 LV rectifier; OA2 voltage regulator.
CONTROLS: Operation (Power Off, Standby, Mox, Cal. Vox); Audio Level; RF Level; Final Tuning; Function (Upper Sideband, Lower Sideband. DSB, CW); Meter Compression; Calibration Level; Driver Tuning; Band Selector; VFO. Steel cabinet in gray and black with chrome trim. Size, $101 / 4 \times 20 \mathrm{x}$ $17^{\prime \prime}$. For $105-125$ volts, $50-60$ cycle AC. 17". For $105-125$
Shpg. wt., 86 lbs.
94 SZ 807. NET.
675.00

## MATCHING SPEAKERS FOR HALLICRAFTERS RECEIVERS

MODEL R-46B $10^{\prime \prime}$ SPEAKER. For Hallicrafters SX-62A, SX-99, SX-100, SX-101 or other receivers having 3.2 -ohm output. Silverblack steel cabinet, $15 \times 107 / 8 \times 10^{7} / 8^{\prime \prime}$. Employs heavy-duty construction throughout. With $5^{\prime}, 2$-cond. cable. Shpg. wt., 15 lbs.
17.95

98 Sx 758 . NET.

## SX-100 SELECTABLE SSB RECEIVER

The SX- 100 communications receiver offers an array of outstanding features. In addition to selectable sideband operation and double conversion, it features adjustable 50.5 kc 2nd IF. with 4 hi-Q permeability tuned circuits for high selectivity. Covers 538 to 1530 kc and 1720 kc to 34 mc in 4 ranges. Also has 100 -kc crystal calibrator, gear drive on main and band-spread tuning and crystalcontrolled 2nd conversion oscillator. 12 tubes; 5 Y 3 -GT rectifier and OA2 VR.

CONTROLS: Antenna Trimmer, Notch Frequency, Notch Depth, Calibrator Off-On, Sensitivity, Band Selector, Volume, Tuning, AVC Off-On, Noise Limiter Off-On, Bandspread, Selectivity, Pitch, ReceiveStandby. Headphone Jack; 3.2 and 500 ohm output. Black cabinet with chrome trim. Size, $81 / 2 \times 18^{3} / 8 \times 105 / 8^{\prime \prime}$. For $105-125 \mathrm{v}$., $50-60$ cycle AC. Less speaker. (See R-46B, R-47 above.) Shpg. wt.. 43 lbs.
98 SU 769. NET.
295.00
" $\mathrm{S}^{\prime}$ METER KIT. For use with any receiver
having RF or IF stages with AVC. 3 " square; $23 / 4^{n}$ dia. barrel. Wt., 1 lb .
97 S 740 . NET
12.00

MODEL R-47 $4^{\prime \prime}$ SPEAKER. Designed for speech and CW reproduction only- extremely effective on SSB. For use with Hallicrafters SX-99, SX-100 and SX-101. Input impedance is 3.2 ohms. Size of case. $51 / 2 \times 51 / 4 \times 31 / 2^{\prime \prime}$. Shpg. wt., $21 / 2 \mathrm{lbs}$.
92 S 392 . NET.
12.95

NEW SR-34 TRANSMITTER/RECEIVER
Complete AM-CW 2 and 6-meter amateur station in one compact unit. Exceptionally stable and sensitive, it combines all the functions of both receiver and transmitter. Perfect for fixed, portable or mobile use.

FEATURES. Operates from either $115 \mathrm{v} . \mathrm{AC}$, or 6 or $12-\mathrm{v}$. storage battery with efficient. dual-transistor power supply. Receiver is dual-conversion with crystal controlled 2nd oscillator; separate RF and oscillator sections for each band. Has " $S$ '" meter, BFO, ANL, squelch. Sensitivity averages under $1 \mu \mathrm{v}$ for $10 \mathrm{dbS} / \mathrm{N}$ ratio on 2 and 6 meters. Transmitter is crystal controlled-up to 4 Transmitter is crystal controlled-up to 4
crystals may be switch-selected. May be used for "crossbanding"'-transmitter may be tuned to 6 and receiver to 2 , or the opposite. Output: 6-71/2 watts on 2 meters; 7-10 watts on 6 meters. Collapsible antenna; built-in speaker. $81 / 2 \times 147 / 8 \times 135 / 8^{\prime \prime}$. Less crystals and mike. Shpg. wt., 33 lbs.
92 SU 396. NET.
495.00

SR-34-AC ONLY. As above, but for 110-120 v. $50-60$ cycle AC only.

92 SU 397. NET
395.00

## DELUXE SX-101 RECEIVER

The SX-101 is a super-deluxe communications receiver incorporating every essential for first-class coverage of the Amateur bands. It offers an extremely high degree of mechanical and electrical stability; overall performance is outstanding. A dual-conversion, selectable-sideband receiver, it has $1-\mu \mathrm{v}$ sensitivity on all bands and 5 steps of selectivity from 500 to 5000 cps .7 bands cover: $1.8-2.0 \mathrm{mc} ; 3.5-4.0 \mathrm{mc} ; 7.0-7.3 \mathrm{mc}$; $14.0-14.4 \mathrm{mc} ; 21.0-21.5 \mathrm{mc} ; 26.95-27.35 \mathrm{and}$ 28.0-29.7 mc-all Amateur bands from 160 through 10 meters. $10-\mathrm{mc}$ position for zerobeating crystal calibrator with WWV.

DELUXE FEATURES: Crystal-controlled 2nd conversion oscillators; Tee-notch filter; gear drive tuning mechanism with $50: 1$ ratio; vernier dial-pointer adjustment; 100ke crystal calibrator; individually illuminated band scales; dual-scale S-meter with zero point independent of sensitivity control -functions with AVC off or on; directcoupled series noise limiter.

CONTROLS: Tuning; Pointer Reset; Antenna Trimmer; Tee-Notch Frequency; TeeNotch Depth. Sensitivity; Band Selector; AC Off-On/Volume; Selectivity; BFO Pitch; Response (Uppet or Lower-Sideband and Tone); AVC Off-On; BFO Off-On; ANL Off-On; Marker (crystal calibrator) Off-On; Standby-Receive.
Circuit employs 14 tubes plus voltage regulator and rectifier. Size of receiver is $101 / 4 x$ 20x17". Less speaker; see R-46B and R-47 matching speakers listed at left. For operation from 105-125 volts, $50-60$ cycle AC. Shpg. wt., 85 lbs.
94 SZ 802. NET.
395.00


## VIKING "PACEMAKER" SSB TRANSMÍtTER

2000 Watts P. E. P.

## VIKING "THUNDERBOLT" SSB LINEAR AMPLIFIER

MODEL 240-353-2. Compact, bandswitching linear amplifier-provides 2000 watts P.E.P. on SSB to smash through the QRM. Gives maximum "talk power" on all amateur bands, 3.5 to 30 mc . Has a full kw input on CW, 800 watts on AM linear. Completely self-contained-a highly efficient, pletely self-contained-
Drive requirements are 10 watts in class AB2 linear and 20 watts CW. Makes a perfect companion for any of the Viking lowpower transmitters or other similar units. May also be used with medium-power transmitters such as the "Valiant" when power reducer (below, right) is inserted.
Features complete TVI suppression: All outgoing leads have complete shielding and double " $L$ " section filters. Cabinet is electrically sealed with monel braid; cup-type shields seal the meters; all harness leads and filaments are by-passed.
Output circuit employs two 4-400A tetrodes in parallel, bridge neutralized. Pi-network matches 40 to 600 -ohm loads. Two built-in fans cool filament and plate seals for extended tube life. Meters provide a constant check of every important phase of operation. Power supply section includes 4 VR tubes for screen voltage regulation. $115 / 8 \times 21$ $\mathbf{x 1 4 1 / 4 ^ { \prime \prime } \text { . For } 1 1 5 \text { or } 2 3 0 \text { v., } 5 0 - 6 0 \text { cycle AC. }}$ xhpg. wt., 140 lbs .
94 SZ 863. NET.
589.50

MODEL 240-353-1. As above, but in kit form. 83 SZ 894. NET
524.50

## 500 WATTS P. E. P.



MODEL 240-301-2. Completely self-contained AM-CW-SSB transmitter of 90 watts in-put-enough to pack a real on-the-air signal or to drive any amplifier. Bandswitched, 80 through 10 meters. VFO controlled, with VFO always in the $3-4 \mathrm{mc}$ range for maximum stability on all bands. Five crystals provide heterodyning freFive crystals provide heterodyning fre-
quencies to reach the desired bands. SSB is generated by phasing method, with upper sideband or lower sideband at the flick of a switch. Final amplifier is a 6146 with pinetwork tank for loading flexibility and harmonic suppression. Break-in keying with excellent waveform makes for tops in CW operating. Meter on panel for grid and plate current, as well as modulation and carrier balance. Has adjustable voice-control and anti-trap circuits. Completely TVI suppressed. With crystals; less mike and key. For $110-120$ volts, $50-60$ cycle AC. $115 / 8 \times 21 \times 141 / 2^{\prime \prime}$. Shpg. wt., 73 lbs .
94 SZ 850. NET.
495.00

## VIKING "KILOWATT" AMPLIFIER

MODEL. 240-1000. Superbly engineered 1000 watt power amplifier for SSB, AM or CW operation. Provides continuous coverage from 3.5 to 30 mc . Has pi-network output, effective TVI suppression. Two 4-400A's in RF amplifier, two 810 modulators. Mounted in pedestal, $291 / 2 \times 193 / 4 \times 327 / 8^{\prime \prime}$. For 115 or 230 v., $50-60$ cycle AC. Write for brochure. Shpg.wt., 500 lbs.
99 SZ 035. NET.
. 1595.00
MODEL 251-101. Matching desk top, back and 3-drawer pedestal. Specify right or left pedestal. Net F.O.B. Chicago or Cory, Pa., whichever is nearer. Allow 30 days for delivery. Shpg. wt., 155 lbs.
99 SZ 034. NET.
132.00

## VIKING "COURIER" AMPLIFIER

MODEL 240-352-2. High-efficiency new linear amplifier-delivers a solid half-kilowatt P.E.P. SSB or CW, 200 watts AM linear. The perfect rig for operators who want higher power for the crowded amateur bands. Provides continuous, bandswitched coverage of 3.5 to 30 mc . Completely self-contained-everything is built into a single compact case.

Drive requirements are 5 to 35 watts, depending on mode and frequency of operation. Makes an ideal mate for low-power transmitters such as the Viking "Ranger", or may be used with medium-power units by inserting power reducer at right.

Features include: single control for tank coil and plate tuning capacitor, pi-network output to match $40-600$ ohm loads, complete TVI suppression, special design for exceptional stability. Two 811A's in final. $95 / 8 \times 151 / 2 \times 14^{\prime \prime}$. For 110-120 v., 50-60 cycle AC. Shpg. wt., 68 lbs.
94 SZ 861 . NET.
289.50

MODEL 240-352-1. As above, but in kit form.

## VIKING "500" TRANSMITTER

MODEL 240-500-2. A flexible all-band rig for tops in amateur enjoyment. Perfect for SSB -500 watts P.E.P. with a 3-watt auxiliary SSB exciter. Has 500 -watt AM input, 600 -watt CW input. Transmitter is in two units-all controls are in RF section, receiver-size for convenience. Power supply and modulators are in second cabinet. All exciter stages gang-tuned to highly-stable VFO; safety and protective features include cabinet interlocks, voltage failure protection, fuses, time delay. Final amplifier operates into very efficient pi-L network for extreme harmonic suppression. Two meters provide complete monitoring of all transmitter functions. Audio system includes phone patch and low-level clipping. Complete filtering and shielding insure against TVI. Time-sequence keying for fast CW break-in. RF and audio tubes: 6AU6 VFO, 6CL6 buffer, 6CL6 multiplier, 5763 RF driver, $4-400 \mathrm{~A}$ final, 807 clamper, 12AU7 keyer, $12 \mathrm{AX7}$ speech amplifier, 6AL5 audio clipper, 6B4G audio driver, 2811A modulators; plus 4 rectifiers and 6 voltage regulators. Size: RF unit, $115 / 8 \times 21 \mathrm{x}$ $141 / 4^{\prime \prime}$. Power unit, $107 / 8 \times 203 / 8 \times 153 / 4^{\prime \prime}$. Less mike, key, crystals. For 115 or $230 \mathrm{v} ., 50-60$
cycle AC. Wt., 200 lbs.
94 SZ 854-2. NET.
.949 .50
MODEL 240-500-1. As above, in kit form. 83 SZ 846. NET.
749.50

## VIKING "RANGER" TRANSMITTER

MODEL 240-161-2. The latest model of this popular, phone-CW transmitter. Highly effective TVI suppression. Input to final is 75 watts on CW; 65 watts on AM phone. Offers single-knob bandswitching on 160 , $80-75,40,20,15$, and 11-10 meters. Frequency selection with built-in VFO, or crystals. Pi-network output matches 50-500 ohm loads; tunes out large amounts of reactance. Time-sequence (grid-block) keying provides excellent keying characteristic and allows quick, clean break-in operation. The built-in VFO is temperature-compensated for high stability. Separate, accurately calibrated, VFO bandspread scales for each band- $9^{\prime \prime}$ of dial scale on 10 meters. A 6-to-1 planetary drive mechanism allows accurate tuning with velvet smooth control. $100 \%$ AM modulation; response limited to $250-$ 3000 cycles for maximum communication effectiveness. Full meter switching for accurate tune-up. Tubes: 6AU6 VFO, 6CL6 crystal oscillator, 6 CL6 buffer, 6146 final, 6AQ5 clamper, 12AU7 keyer, 12AX7 speech amplifier, 12AU7 audio driver, 2-1614 modulators; OA2 voltage regulator, 5 R4GY high-voltage rectifier, 6AX5GT low-voltage rectifier and 6AL5 bias rectifier. Less crystal, key and mike. Size, $15 \times 115 / 16 \times 9^{\prime \prime}$. For operation from 110-120 v., 50-60 cycle AC. Shpg. wt., 54 lbs.
99 SZ 036. NET.
329.50

MODEL 240-161-1. As above, in kit form. 99 SZ 037. NET
229.50

250-29 POWER REDUCER. Permits using medium-power transmitters to drive Viking amplifiers. $31 / 2 \times 21 / 2^{\prime \prime}$. dia. 1 lb .
99 S 015 . NET.
13.95


JOHNSON

VIKING "NAVIGATOR" TRANSMITTER
MODEL 240-126-2. High-performance trans-mitter-exciter for the amateur who desires a flexible, low-power CW rig. 40 watts input. Bandswitching coverage of the $160,80,40$, $20,15,11$ and 10 meter bands. Built-in. highly stable VFO has excellent keying characteristics; features timed-sequence keying for chirp-free, clean, crisp signals.

Transmitter may be crystal-controlledhas front-panel provision for 2 crystals. TVI suppression includes filtering and bypassing; aluminum cabinet effectively shields unit. Wide-range pi-network output circuit matches transmission line impedances from $40-600$ ohms. Meter on front panel reads final grid and plate currents.
$131 / 4 \times 91 / 8 \times 101 / 16^{\prime \prime}$. With tubes; less crystals and key. For $110-120$ v., $50-60$ cycle AC. Shpg. wt., 27 lbs.
94 SZ 857. NET
199.50

MODEL 240-126-1. As above, but kit form. 83 SZ 892. NET
149.50

## IMPORTANT BONUS NOTE

Big savings are yours when you make Allied your headquarters for amateur equipment. Simply drop a card to Allied's Ham Shack listing the gear you want-our unbeatable Bonus Package Price will amaze you.

## VIKING "6N2" TRANSMITTER

MODEL 240-201-2. Efficient, compact VHF transmitter offering bandswitching coverage of 6 and 2 meters. Makes use of the existing power supply and modulator of the amateur's low-frequency transmitter. Requires 6.3 v . at $3.5 \mathrm{amps}, 300 \mathrm{v}$. DC at 70 ma and 300-750 v. DC at 200 ma , plus 30 or more watts of audio. Input power at full voltage: 150 watts CW or FM, 100 watts AM. Has silver-plated tank circuit, parallel lines for 2 meters, link output, 5894 final. TVI suppressed. For $8-\mathrm{mc}$. input. $131 / 8 \mathrm{~s}$ $83 / 8 \times 81 / 2^{2 \prime}$. Less crystal, key, mike. Shpg. wt., 14 libs.
94 SU 851. NET
169.50

MODEL 240-201-1. As above, but in kit form. 83 SU 844. NET
129.50

VIKING "MOBILE" TRANSMITTER KIT
MODEL 240-141. Up to 60 watts input, 75 through 10 meters. Band switching; all stages ganged to one control. PA trimmer allows wide frequency shift without antenna loading coil adjustment. 52 -ohm output. Requires $300-600 \mathrm{VDC}$ at $200-240 \mathrm{ma}$ and 6 or 12 v . for heaters. Less tubes, mike. $71 / 8 \mathrm{x}$ 67/16x105/16". Wt., 16 lbs.
98 S 056. NET
107.00

MOBILE VFO KIT. MODEL 240-152-1. For above. With tubes. $4 \times 41 / 4 \times 5^{\prime \prime} .4$ lbs. 99 S 018 . NET
33.95

240-152-2 VFO. As above, but wired
99 S 019. NET
52.50


## VIKING 6N2 VFO KIT

MODEL 240-133-1. Compact new 6 and $2-$ meter VFO kit. Replaces $8-9 \mathrm{mc}$ crystals in multiplying 6 and 2 meter transmitters, including those using overtone oscillators Double-bearing ceramic-insulated tuning capacitor, air trimmers, ceramic coil form and heavy aluminum case minimize frequency shift due to vibration. 6BH6 seriestuned oscillator is temperature compensated and extremely stable. Has OA2 voltage regulator. Output frequency range is 7.995 to 9.010 mc . Accurately calibrated lucite dial is edge-lighted for easy reading-10:1 vernier tuning is provided. Requires $250-300$ volts DC at 10 ma and 6.3 volts at 0.3 amp . Hasonly 2 controls; Bandswitch and Tuning. With cables and instructions. Maroon and gray case, $4 \times 41 / 2 \times 5^{\text {" }}$. Wt., 3 lbs.
83 S 899. NET
MODEL 240-133-2. As above, but wired
83 S 869. NET.
34.95
54.95

MODEL 240-122. Extremely stable VFO kit. Designed for Viking I and II, but performs excellently with any transmitter. For 160-10 meters; output on 160 and 40 meters, and 6 mc . OA2 VR. Requires $250-300$ VDC at $15 \mathrm{ma}, 6.3 \mathrm{v}$. at 0.3 amp . With cables. 7x $67 / 8 \times 69 / 16^{\prime \prime} .7$ lbs.
99 S 013 . NET
45.50

MODEL 240-122-2. As above, but wired.
99 SX 014 . NET
69.75

## VIKING MODULATOR KIT

MODEL 250-40. Compact, speech amplifier/ screen modulator kit. For phone operation of low-power CW transmitters such as the "Adventurer," Plugs into accessory socket. High gain for crystal or dynamic mike. 43/4x 43/16 $\times 4^{\prime \prime}$. Less mike. 1 lb .
92 S 366. NET
I2.25


## VIKING "VALIANT" TRANSMITTER

MODEL 240-104-2. A husky compact all-band transmitter-gives you top "watts per dollar" value. A full 275 watts input on CW 200 watts on AM. Can be used with an auxiliary SSB exciter for 275 watts SSB auxiliary SSB exciter for 275 watts pors power. Offers complete b.
160 through 10 meters.

Includes the famous Johnson features-high-stability VFO, timed-sequence keying, effective TVI suppression. In addition, audio clipping and filtering provide maximum "punch" through QRM. Very efficient pi-network matches $50-600$ ohm loads; tunes out large amounts of reactance. VFO and modulator screens are voltage regulated for excellent stability.

Three 6146's in parallel are used in final; two 6146's used as modulators. Size, $115 / 8 x$ $21 \times 141 / 4^{\prime \prime}$. Less crystal, key and mike. For operation from 110-120 v., $50-60$ cycle AC. Shpg. wt., 85 lbs .
94 SZ 853. NET.
439.50

Wired model 240-104-2 above meets FCDA specifications for crystal-controlled operation.

MODEL 240-104-1. As above, but in kit form. 83 SZ 845. NET.
349.50


## VIKING "ADVENTURER"

## TRANSMITTER KIT

MODEL 240-181. Here is the ideal rig tor the novice, as well as the confirmed "brass pounders" who want a compact, low-power CW transmitter, 50 watts input to a type 807 final amplifier.
Features: bandswitching on $80,40,20,15$ and 11-10 meters; grid and plate metering; shielding and filtering for TVI suppression. Wide-range pi-network output permits using even the simplest antennas. Oscillator and final are keyed simultaneously for a crisp, clean signal. Receptacle allows use of built-in power supply ( 450 v . DC• at 150 ma and 6.3 v . at 2 amps ) for accessory equipment (VFO, monitor, etc.).

With easy instructions; less key and crystal. $73 / 8 \times 103 / 8 \times 81 / 8^{\prime \prime}$. For $110-120$ v., $50-60$ cycle AC. Shpg. wt., 16 lbs .
99 SU 024. NET.
54.95


## NATIONAL NC-109 RECEIVER

Top-value, general coverage receiver for SSB, AM or CW. Incorporates a host of deluxe features at moderate cost. Separate product detector and excellent stability assure outstanding SSB reception. Has the exclusive "Microtome" crystal filter. which provides five degrees of selectivity in addition to normal band-width for voice. Sharp phasing notch over 60 db deep effectively rejects interference.

Covers 540 kc to 40 mc in four bands. Calibrated electrical bandspread for amateur 10, 11, 15, 20, 40 and 80 meter bands. Indirectly illuminated lucite dial is designed for legibility; amateur and shortwave bands are clearly marked. 's'" meter on front panel for signal strength indication and more accurate tuning. Gang-tuned RF amplifier stage, plus two IF and two AF stages. Stability is increased by separate HF oscillator tube; ceramic oscillator coil forms and temperature compensation further improve stability. Separate RF and AF gain controls. Has nine tubes, plus rectifier and voltage regulator. 1-2 microvolt sensitivity for 10 db signal-to-noise ratio.

Controls: Main tuning; bandspread tuning; antenna trimmer; band selector switch; RF gain control; AC Off-On and AF gain control; stand-by switch; mode selector switch (ANL, AM, CW, SSB and ACC) tone control; BFO pitch; selectivity; phasing. Size, $10 \times 16^{13} 16 \times 107 \%^{\prime \prime}$ deep. Less speaker. For $110-120$ volts, $50-60$ cycle AC. Shpg. wt., 35 lbs .
94 SU 834. \$20.00 Down. NET. . I99.95
94 SX 835. NTS-1. Matching $8^{\prime \prime}$ speaker.
Shpg. wt., 10 lbs. NET.
17.50



NC-66 With RDF-66 Direction Finder

## NATIONAL NC-188. RECEIVER

Low-cost, general-coverage receiver featuring advanced design and construction combined with streamlined, modern styling. Continuous coverage from 540 kc to 40 mc : SSB, AM, or CW. Calibrated bandspread for $10,11,15,20,40$ and 80 meter amateur bands. Has high sensitivity, plus excellent stability and selectivity. An excellent restability and selectivity. An excellent renateurs and shortwave listeners.
Large, easy-to-read 11 -inch slide-rule dial with combination edge and back lighting for precision tuning. Has gang-tuned RF amplifier stage for increased sensitivity and image rejection; temperature-compensated and ventilated high-frequency oscillator for increased stability. Also includes a seriestype automatic noise limiter, accurately calibrated " $S$ " meter for signal strength indication, two IF amplifiers, and separate front-panel antenna trimmer. Two-stage audio amplifier also provides 1.5 watts output at less than $10 \%$ distortion. Sensitivity is under 2.5 microvolts for a 10 -to- 1 signal-to-noise ratio. Selectivity: 6 db down for 5.2 to-noise ratio. Selectivity:
$\mathrm{kc}, 60 \mathrm{db}$ down for 22 kc .

Tube complement: 6BA6 RF "amplifier, 6BE6 frequency converter, 6C4 HF oscillator, 2-6BA6 IF amplifiers, 6AL5 detector/ AVC/ANL, 12AT7 1st AF and BFO, 6AQ5 AF output; 5Y3GT rectifier.

Controls: main tuning, bandspread tuning, antenna trimmer, band selector, RF gain, AC on/off and AF gain, stand-by/receive switch, noise limiter switch, tone switch, BFO pitch, AM/CW switch.

Antenna input: $\mathbf{5 0 - 3 0 0}$ ohms, balanced or unbalanced. Case has handsome two-tone gray wrinkle finish. Size: $10^{\circ} \mathrm{H}, 16^{13} / 6^{\prime \prime} \mathrm{W}$ W, and $107 / 8^{\prime \prime}$ D. Less speaker (below). For operation from 110-120 v., $50-60$ cycle AC. Shpg. wt., 35 lbs.
94 SU 833. \$16.00 Down. NET . . 159.95
94 SX 835. NTS-1. Matching $8^{\prime \prime}$ Speaker. Shpg. wt., 10 lbs. NET
17.50

## NEW NC-60 SPECIAL RECEIVER

A modern, ultra-compact communications receiver at low cost. Completely restyled and redesigned version of the popular SW54 -features greatly increased sensitivity and full electrical bandspread for precision tuning. Provides continuous coverage of broadcast. amateur and world-wide shortwave bands- 540 kc to 31 mc .
Has a large slide-rule dial with marine, aircraft, amateur and foreign short-wave frequencies clearly marked. Includes frontpanel headphone jack for late listening. built-in speaker. Selectivity: 6 db for 5 kc , 60 db for 70 kc . Controls: tuning, bandspread, off/on-volume, band selector, AM/ CW switch, standby/receive switch.
Antenna input: $50-300$ ohms. Tubes: 12BE6 converter, 12BA6 CW osc/IF amp 12AV6 2nd detector/AVC/1st audio, 50 C , 12avio output, $35 W 4$ rectifier. $75 / 8 \times 131 / 2 \mathrm{x}$ $85 / 8^{\prime \prime}$. For operation from $110-120 \mathrm{v} ., 50-60$ cycle AC. Shpg. wt., 15 lbs .
92 SU 385. \$6.00 Down. NET
59.95

## NATIONAL NC-66 RECEIVER

Versatile 3-way portable receiver-operates on AC, DC or from its own self-contained battery. Ideal as a fixed station amateur, marine or SWL receiver; or as a light weight, easy-to-use portable unit. Five bands provide continuous coverage from 150 kc to 23 mc , including world-wide shortwave and amateur bands, AM broadcasts. wave and amateur bands, AM broadcasts, bandspread permits tuning and logging with accuracy.
Compact case-beautifully styled-also includes two antennas: sensitive ferrite loop for DF frequencies (see below) and broadcast bands, plus a telescoping whip for ham and shortwave bands. Easy to carry anywhere; it's even been salt-spray tested or marine use.
Built-in fixed-tuned CW oscillator for code reception. Quality $5^{\prime \prime}$ PM speaker is housed behind front panel; phone jack on front panel automatically cuts out speaker when phones are used. Dial calibrations are exceptionally clear, with amateur and shortwave bands plainly marked in color. Low filament-voltage tubes provide nearly instantaneous warm-up.
Miniature tube complement: 1 U4 RF amplifier, 1L6 converter, 1U4 CW oscillator/IF amplifier, 105 2nd detector/AVC/1st audio amplifier, 3V4 audio output; selenium rectifier. Chrome-trimmed case measures 911/16 $\times 125 / 16 \times 10^{\prime \prime}$. For $110-120$ volts, $50-60$ cycle $\mathrm{x} 125 / 16 \times 10^{\prime \prime}$. For $110-120$ volts, $50-60$ cycle
AC, or DC, or battery (less battery, below). Shpg. wt., 16 lbs.
94 SX 832. \$13.00 Down. NET. . . 129.95 BATTERY FOR NC-66. Shpg. wt., 61/2 lbs. 80 J 616 . NET.
4.80

## NATIONAL RDF-66 DIRECTION FINDER

A modern radio direction finding instrument for use with the NC-66 receiver. Provides a simple, accurate means of navigation for pleasure craft and small fishing vessels. Built-in tuning meter assures pinpoint accuracy; positive one-null indication. Size, $7 \times 81 / 2 \times 10^{\prime \prime}$. Takes power from NC- 66 . Shpg. wt., 8 lbs.
94 SX 836. \$4.00 Down. NET.
39.95

## WE'RE TRADING HIGH

Shopping for a big trade-in on your old receiver or transmitter? Be sure to drop a card to Allied. Tell us the make and model of the unit you'd like to trade and the equipment you want. You'll not only get a KingSize trade-in offer, but you can order under our Easy Pay Plan. Your old equipment should more than cover the down payment and you can pay the balance while enjoying the latest in station gear. Ask about our Bonus Package Plan.



## NATIONAL NC-183D RECEIVER

Top-performance communications receiver featuring razor-sharp selectivity, extreme sensitivity and "solid-as-a-rock", stability. Covers 540 kc to 31 mc and 47.55 mc in 5 ranges; calibrated electrical bandspread for 80 through 6 meters. Double-conversion above 4.4 mc , with 3 IF stages and 16 tuned circuits. Single conversion below 4.4 mc . circuits. Selectivity positions; 5 crystal and 1 Six selectivity positions; 50 crystal and 1 and 7.0 kc at 60 db . Better than $11 / 2 \mu \mathrm{y}$ sensitivity.
Two RF stages; amplified and delayed AVC; ANL; PP 8-watt audio. 15 tubes plus VR and rectifier. $101 / 4 \times 193 / 4 \times 16^{\prime \prime} /{ }^{\prime \prime}$. For $110-120$ or $220-240$ volts. $50-60$ cycle AC. Less speaker. Shpg. wt., 65 lbs.
97 SZ 666. \$44.90 Down. NET. . 449.00
Matching Speaker. Shpg. wt., 10 lbs.
97 SX 663. \$2.00 Down. NET
19.95

## NEW NATIONAL VFO-62

Deluxe, self-powered VFO designed for extreme stability, convenience and versatility Use with transmitters having 8 -mc oscillator circuits for complete coverage of 6 and 2 meters. Frequency stability better than $0.005 \%$ after warm-up. Can be used with 1 me crystal as a crystal calibrator. Rugged modern gray case, $51 / 4 \times 61 / 2 \times 51 / 2^{\prime \prime}$. For $110-$ 120 v., $50-60$ cycle AC. Wt., 6 lbs. 92 S 386. \$7.00 Down. NET
69.95

## NATIONAL HRO-60 RECEIVER

Latest of the great HRO receivers. Superb "weak signal" sensitivity, remarkable selectivity and extreme stability. Covers 50 kc to 54 mc with suitable coils. Precision tuning dial has effective scale length of 12 ft .1 Dual conversion above 7 mc . Has 2 RF stages, 4 IF stages, 12 permeability-tuned IF circuits and a 6 -step crystal filter. Selectivity variable from 80 cps to 3.5 kc at 6 db points. Plug-in coils supplied provide general coverage from $1.7-30 \mathrm{mc}$ or bandspread on $80,40,20$ and $10-11$ meters (other coils below). 15 tubes plus rectifier and regulatbelow). 15 tubes plus rectifier and regulat-
ors. $193 / 4 \times 101 / 2 \times 171 / 2^{\prime \prime}$. For $115 / 230 \mathrm{v}$., $50-60$ ors. $193 / 4 \times 101 / 2 \times 171 / 2^{\prime \prime}$. For $115 / 230$
cycle AC. Less speaker. Wt., 84 lbs.
97 SZ 722 . \$64.50 Down. NET. 645.00 MATCHING $10^{\prime \prime}$ TABLE SPEAKER. Shpg. wt., 10 lbs.
97 SX 663. \$2.00 Down. NET . . . . . 19.95 HRO-60-XCU-2. Crystal calibrator. Wt., 1 lb . 97 S 717. \$3.00 Down. NET . . . . . . . 29.95 NFM-83-60. NFM adapter. Shpg. wt., 1 lb 97 S 719. \$3.20 Down. NET . . ....... 31.95 HRO-60-AC. 15-meter bandspread coil. $21 / 2$ lbs.
97 S 789. \$3.75 Down. NET . . . . . . . 37.50 HRO-60-E. 900-2050 kc coil. Wt., $21 / 2$ lbs. 98 S 048. \$3.75 Down. NET. . . . . . . 37.50 HRO-60-F. $480-960 \mathrm{kc}$ coil. Wt., $21 / 2 \mathrm{lbs}$. 98 S 049. \$3.75 Down. NET . . . . . . . 37.50 Coil units not listed are available on special order. Allow 30 days for delivery.

NC-303


## NEW NATIONAL NC-303 RECEIVER

Deluxe new version of the renowned NC300 amateur-band receiver. Covers 160-10 meters; 160-11/4 meters and WWV with units below. Dual-conversion with 5 positions of selectivity-sharp down to $400 \mathrm{cy}-$ cles at 6 db . Sideband choice with selectivity switch eliminates retuning. " $Q$ " multiplier provides $60-\mathrm{db}$ tunable notch. Separate noise limiters for AM and CW-SSB. Vernier dial for precision tuning. Excellent stability, sensitivity. $111 / 4 \times 191 / 2 \times 15^{\prime \prime}$. For $110-120 \mathrm{v}$. $50-60$ cycle AC. 64 lbs .

92 SZ 384. $\$ 75.00$ Down. NET . . 449.95 Units below for NC-300, 303. *NC-303 only. CONVERTERS. For above. Shpg. wt., 2 lbs. | Stock No. | Type No. | Band |
| :--- | :--- | :--- |
| 835870 | NET |  |
| NC-300C6A | $\frac{6 \text { meters }}{41.95}$ |  |


100-KC CRYSTAL CALIBRATOR. Wt., 1 lb . 83 S 873. \$2.40 Down. NET......... 23.95 *CRYSTAL/WWV CALIBRATOR $11 / 2$ lbs. 83 S 898. $\$ 3.50$ Down. NET 34.95 NTS-2 MATCHING SPEAKER. Shpg. wt., 12 lbs. 83 SX 897. \$2.20 Down. NET. . . . . . 21.95


## RME DB-23 PRESELECTOR

A high-performance broadband preselector to boost the gain and signal-to-noise ratio of amateur receivers. Covers 80 through 10 meters. Has average gain of 25 db ; improves $\mathrm{s} / \mathrm{n}$ ratio better than 7.5 db . Requires no tuning. 3-6J6's plus rectifier. $5 \times 75 / 8 \times 6^{\prime \prime}$. For $110-120$ vequires no tuning. $50-60$ cycle AC. Shpg. wt., $61 / 2 \mathrm{lbs}$.
98 S 751 . $\$ 4.95$ Doven. NET.
49.50

## RME 4301 SIDEBAND DETECTOR-SELECTOR

For outstanding SSB reception with any receiver that has a 455 kc IF. Plugs directly into the RME Model 4350A. Includes built-in power supply, extremely stable BFO, balanced detector circuit, accurate phase shift network, and adder and subtractor circuits. Front-panel control selects upper or lower sideband, double-sideband exalted-carrier reception or normal receiver operation. Adds up to 15 db to receiver sensitivity. $10 \times 81 / 2 \times 10^{\prime \prime}$. For $110-120 \mathrm{v} ., 50-60$ cycles AC. Shpg. wt., 16 lbs. 99 SX 023. 87.50 Down. NET.
75.00

## RME 4350A RECEIVER

Dual-conversion receiver designed specifically for amateur-band coverage. Offers many deluxe features usually found only in higherpriced units. Has extremely high selectivity and exceptional ease of tuning. Covers 160 through 10 meters.

Features include 4 positions of selectivity ( 3 crystal; 1 non-crystal); up to 35 db of notch rejection with crystal filter; drift of only $0.01 \%$ for first 20 min . with negligible drift after warm-up. $81 / 2^{\prime \prime}$ dial has differential tuning mechanism with choice of $75: 1$ or $1: 1$ ratio. Has jacks for Model 4301 SSB adapter (at left).
Controls: tuning, AF gain, BFO pitch, BFO injection, antenna trimmer, calibration adjust, band selector, RF gain-AC off/on function switch (MGC-BFO, AGC-AM, AGC-SSB, MGC-SSB), standby switch, crystal selectivity, crystal phasing/rejector. ANL switch. $10 \times 161 / 2 \times 10^{\prime \prime}$. For $110-120$ v., $50-60$ cycle AC. Wt., 36 lbs .
94 SZ 889. \$24.90 Down. NET
249.00

99 SX 049. Model 4302 Speaker. $10 \times 81 / 2 \times 51 / 2^{\prime \prime} .6$ lbs. NET . 17.50


HAMMARLUND HQ-110C RECEIVER
A ruggedly constructed, dual-conversion receiver designed specifically for the amateur. Provides an exceptionally high standard of reception on SSB. CW and AM-full dial coverage of $160,80,40$,
$20,15,10$ and 6 meters. Outstanding features include " $Q$ " multiplier for high selectivity, built-in 100 -kc crystal calibrator, separate linear detector for SSB and CW and automatic clock-timer.

Includes the Hammarlund "Auto-Response" feature-varies the audio passband with signal strength for optimum reception. Dialis stabilized for SSB and CW reception. Has 9 tuned circuits in IF strip. antenna trimmer and voltage-regulated, temperature-compensated oscillator. Dual conversion, 6 to 40 meters.
Frequency drift less than $0.01 \%$ after warm-up. Sensitivity: 1.5 $\mu \mathrm{y}$. for a 10 db signal-to-noise ratio. 10 tubes plus rectifier and VR. Size, $97 / 16 \times 91 / 8 \times 161 / 4^{\prime \prime}$. Less speaker (listed below). For $110-120 \mathrm{v}$. . $50-60$ cycle AC. Shpg. wt., 31 lbs.
94 SU 822. \$25.90 Down. NET. . . . . . . . . . . . . . . . . . . . . 259.00
94 SU 821. HQ-110. Above less clock-timer. NET. . . . . . . . 249.00
94 SX 828. S-100 Matching $6 \times 9$ " Speaker. Wt., 10 lbs. NET 14.95


HAMMARLUND HQ-170C RECEIVER
Deluxe, triple-conversion, amateur-band receiver-combines the advantages of the $H Q-110 \mathrm{C}$ and the $\mathrm{HC}-10$ with many "plus". features. Expert design is highlighted by a razor-sharp slot filter; separate linear product detector; $\pm 3-\mathrm{kc}$ vernier tuning for SSB; 7
positions of selectivity and choice of 3 AVC decay speeds. Includes automatic audio passband control, sideband selector, $100-\mathrm{kc}$ calibrator, dial reset vand clock-timer. Notch filter adjustable $\pm 5 \mathrm{kc}$ for over 40 db attemuation. depth control provides up to 20 db additional-notch is 1.5 kc wide at 6 db . Triple-conversion (IF's
at $3055,455,60 \mathrm{kc}$ ) from $6-40$ meters, dual-conversion on 80 and at $3055,455,60 \mathrm{kc}$ ) from $6-40$ meters, dual-conversion on 80 and
160 meters. 15 tubes plus rectifier, VR. $101 / 2 \times 19 \times 13^{\prime \prime}$. Less speaker (below). For 110-120 v., 50-60 cycle AC. Shpg. wt., 45 lbs .
92 SU 347. $\$ 36.90$ Dozen. NET.
369.00

92 SU 477. HQ-170. Above less clock-timer. NET. . . . . . . 359.00
83 SX 599. S-200.Matching Speaker. 11x12x9". $91 / 2 \mathrm{lbs}$. NET. 19.95
HAMMARLUND HC-10 CONVERTER
A complete IF and audio system-use with any superhet having a $450-500 \mathrm{kc}$ IF for outstanding SSB, AM and CW reception. Extremeand $\pm 3 \mathrm{kc}$ vernier similar to those of the HO-170C. 7 selectivity positions. 9 tubes plus rectifier. $91 / 2 \times 91 / 4 \times 71 / 8^{\prime \prime}$. Less speaker (left). For $110-120$ v., $50-60$ cycle AC. Shpg. wt., 17 lbs.
94 SX 823. $\$ 14.90$ Down. NET.

GENERAL-COVERAGE COMMUNICATIONS RECEIVERS


HAMMARLUND HQ-160 RECEIVER
Extremely sensitive and selective general coverage receiver. Covers 540 kc to 31 mc , continuously, in 6 bands. Offers dualconversion with crystal-controlled 2nd conversion oscillator, separate linear detector for, SSB and CW, separate stabilized BFO, " $Q$ " multiplier and notch filter.
Other outstanding features include "AutoResponse" automatic audio passband control, $100-\mathrm{kc}$ calibrator, voltage-regulated and temperature-compensated oscillator, dial reset, IF output jack and electrical bandspread on the amateur bands.
14 tuned IF circuits for excellent skirt selectivity. Dual-conversion on 10,15 and 20 meters. Adjustable notch filter gives up to
60 db attenuation, $\pm 5 \mathrm{kc}$. Low-loss coil forms and rugged construction for high stability, 11 tubes; plus rectifier, VR, $101 / 2 \mathrm{x}$ $19 \times 13^{\prime \prime}$. For $110-120 \mathrm{v} ., 50-60$ cycle AC . Less 94 speaker (below). Shpg. wt., 47 lbs.
.379 .00
83 SX 599. S-200 $6 \times 9^{\prime \prime}$ Matching Speaker. Shpg. wt., $91 / 2$ lbs. NET. . . . . . . . . . . . 19.95

HAMMARLUND HQ-100C RECEIVER Popular communications receiver offering Hammarlund quality at moderate cost. Covclude: "Auto-Response". circuit to adjust audio bandwidth for best reception; " $Q$ " multiplier for selectivity variable from 100 cps to 3 kc ; high sensitivity-less than $2 \mu \mathrm{v}$
for $10 \mathrm{dbS} / \mathrm{N}$ ratio; voltage regulated temperature compensated HF oscillator for extra stability; calibrated electrical bandspread; built-in clock-timer; and " S " meter. Tube lineup: 6BZ6 RF, 6BE6 mixer, 6C4 HF osc., 2-6BA6 1F's, 6AL5 det./ANL, 12AX7 audio amp/Q-mult. / BFO . 6 AQ 5 audio out.;
ulator. Size, $97 / 16 \times 161 / 4 \times 91 / 8^{\prime \prime}$. Less speaker (above, left). For 110-120 v., 50-60 cycle AC. Shpg. wt., 31 lbs.
94 SU 829. \$19.90 Down. NET . . 199.00 HQ-100. As above, but less clock. 94 SU 827. NET.................. . 189.00 HAMMARLUND XC-455 CRYSTAL-CONTROLLED BFO. For single-signal CW. Wt., 1 lb . 94 S 824. NET.

TMC GPR-90 RECEIVER


A precision-built communications receiver designed for the most discriminating user. Employs heavy-duty construction and the finest quality components throughout. Continuously tunable from 540 kc to 31 mc in
six accurately calibrated bands with full slectrical bandspread. Dual-conversion above 5.4 mc for image rejection of better than 60 db .
Utilizes a front-end grounded-grid RF amplifier above 3.3 mc to achieve an extremely low noise figure. Has exceptional selectivity variable in 6 steps ( 5 crystal and 1 non-
crystal) from 200 cycles to 5 kc . Includes variable-bandwidth audio filter, $100-\mathrm{kc}$ crystal calibrator, highly effective ANL, crystal phasing, antenna trimmer and dial locks. Fast-acting AVC keeps output constant even with fading signal.
Sensitivity is less than $5 \mu \mathrm{v}$ from 540 to 1500 kc and $1 \mu \mathrm{v}$ on higher bands at a 10 db . signal-to-noise ratio. Has coaxial IF output for SSB slicer. 2 watts audio output.
Employs 13 tubes, plus rectifier and VR. Size. $10 \times 20 \times 15^{\prime \prime}$. Less speaker. For $105-125$ v.. $50-60$ cycle AC. Shpg. wt., 63 lbs. 94 SZ 895. $\$ 49.50$ Down. NET. . 495.00 MATCHING SPEAKER. For above. 11 lbs . 83 SX 891 . NET. ................... 16.50


50-Watt CW Transmitter Kit
A completely self-contained bandswitching CW transmitter kit-covers $80,40,20,15$ and 10 meters. Can be operated crystalcontrolled. or with a VFO such as the Knight-Kit VFO below: Rated at 50 watts input-actually operates at up to 60 watts input-actually operates at up to 80 and 40 meter bands. Perfect as a "first rig for Novices and as a low-power standby rig for the advanced amateur. Includes: transmitting-type 807 tube in final; built-in pi-section antenna coupler; ceramicinsulated tank capacitor; pre-wound parasitic chokes; ceramic coil forms; RF-type sitic chokes, ceramic coin forms, RF-type panel; grid-plate meter switch; fused power transformer; copper-finished steel chassis for effective TVI suppression; and steel cabinet. With tubes, all parts, instructions. Less crystal and key. $81 / 2 \times 101 / 2 \times 81 / 4^{\prime \prime}$. For $110-$ 125 v., $50-60$ cycle AC. Wt., 19 lbs.
83 YX 255. \$3.90 Down. NET.
38.95

See pages 241-273 for Knight-Kits to suit every need or interest-test equipment-high-fldelity and stereo component kits - experimenter's kits -and many others.


## knight-Kit Amateur Communications Receiver Kit

An outstanding achievement in equipment design, this receiver easily rates as one of the finest kit values ever offered. In addition to printed circuitry in every stage, it employs the exclusive Knight printed circuit bandswitch-available in no other receiver, regardless of cost! Printed circuit boards and bandswitch eliminate critical "lead and bandswitch eliminate critical lo mead every Ham need, this receiver has all the features, selectivity and sensitivity of many higher-priced, factory-huilt units.

OUTSTANDING FEATURES. Covers 540 kc to 30 mc in 4 ranges; calibrated electrical bandspread on all Ham bands from 80-10; slugtuned hi-Q coils; continuous $\mathrm{B}+$ on BFO and HF oscillator lets you switch from standby to receive with no drift; VR-tube regulated $\mathrm{B}+$ on HF oscillator; built-in Q-multiplier peaks signal or nulls interferference ( $60-d b$ notch really takes out interference) ; delayed AVC; noise limiter; 455-kc IF; and provision for installing crystal calibrator listed below. Has exalted BFO injection for SSB. Vernier dials-no strings.

## knight-kit Amateur Accessories

## SELF-POWERED VFO KIT

Deluxe, expertly designed VFO at an incomparably low price. Calibrated for 80 . $40,20,15,11$ and 10 meters; output on 80 and 40 meters. 40 -volt output on 80 meters and 20 -volt output on 40 meters is more than adequate to excite oscillator stage of any transmitter. An ideal companion to the Knight-Kit 50 -watt transmitter, above. Complete with built-in, transformer-type power supply. Features extremely high sta bility, oscillator keying for fast break-in, and compact construction. Drift-free, ser-ies-tuned Clapp oscillator uses $1 \%$ silver mica capacitors. Tank coil wound on ceramic form; padders are air dielectric. Plugs into crystal socket of transmitter. Features: TVI suppression; vernier drive; plenty of bandspread. Two-chassis design' keeps heat from oscillator circuit. Voltage regulated for stable output. Tubes: $6 \mathrm{BH} 6.6 \mathrm{AK} 6 ; 6 \mathrm{X} 4$ rectifier, OA 2 regulator. $6 \times 6 \times 83 / 4^{\prime \prime}$. With all parts, tubes. wire, solder and step-by-step instructions with pictorial and schematic diagrams. For $110-125$ volts, $50-60$ cycles AC. Shpg. wt., 111 lbs . 83 Y 725. $\$ 2.95$ Down. NET

## AMATEUR Z-BRIDGE KIT

An invaluable aid for getting peak efficiency from your antenna. Measures SWR from $1-150 \mathrm{mc}$; line impedance from 20 400 ohms on frequencies to 100 mc . Any sensitive VOM can be used as null indicator. Uses standard coax connectors. Jacks for checking input and bridge voltages; impedance-calibrated dial. $1 \%$ calibrating resistor, plasticized SWR chart. With all parts, wire, solder and instructions. Size, 21/2x31/2x4". Wt., 2 lbs.
83 Y 253. NET
5.85

## 100-KC CRYSTAL CALIBRATOR KIT

100 -k ccrystal frequency standard at very low cost. Gives marker every 100 kc up to 35 mc . An amateur "must' for marking band edges. Mounting flanges permit installation inside of or on back of receiver cabinet. Requires 6.3 v . at 0.15 amps and $150-300 \mathrm{v}$. DC at 3-6 ma-easily obtainable from any receiver. Trimmer for beating with WWV; Off-On switch. With all parts, tube. crystal, wire, solder and instructions. Size. $11 / 2 \times 11 / 2 x$ $3^{\prime \prime}$. Shpg. wt., 1 lb .
83 Y 256 . NET.
10.95

Selectivity is variable from 300 cps to 4.5 kc at 6 db down. Outstanding sensitivity1.5 microvolts for $10 \mathrm{db} \mathrm{s} / \mathrm{n}$ ratio, even on 10 meters! Controls: main tuning; band-spread tuning, band selector, Q-multiplier selectivity, Q-multiplier tune, null-off-peak, BFO pitch, RF gain, AF gain, BFO-MVC-AVCANL, off-stdby-recv-cal, antenna trimmer and headphone jack. Coaxial and screwterminal antenna connectors. Tubes: 6BZ6 RF amp.; 6BH8 mixer and HF osc.; 6AZ8 1st IF and 1st audio; 6AZ8 2nd IF and Smeter amp.; 6 BC 7 delayed AVC, 2nd det., ANL; 6AW8 output and BFO; 12 AX 7 " Q "; mult. $10 \times 103 / 4 \times 16^{\prime \prime}$. With tubes, all parts, wire and solder. Less speaker and S-meter. For 110-125 v., 50-60 cycle AC. Shpg. wt., 30 lbs.
83 YU 726. $\$ 10.45$ Down. NET. . 104.50 S-METER KIT. For above. Shpg. wt.. 1 lb. 83 Y 727. NET.
10.75

SPEAKER FOR ABOVE. In matching cabinet. Special-design cone reduces QRN; peaks voice frequencies. Imp., 8 ohms . Wt. 4 lbs. 83 Y 728 . NET



## MODEL IOOV EXCITER/TRANSMITTER

Deluxè, highly flexible exciter/transmitter for SSB. DSB, AM linear, PM, CW and FSK. Bandswitching coverage of 80 through 10 meters with overlap for MARS. CAP etc. Features single-control operation on each band-only the VFO is tuned, all other circuits are broad-banded. 100 watts P.E.P. SSB input; 170 watts CW, PM, FSK; 100 watts AM linear.

Permeability-tuned heterodyne VFO provides high stability; less than 25 cps drift in any 10 -minute interval after 5 -minute warm-up. Direct-reading dial is calibrated in $1-\mathrm{kc}$ steps-two tuning ratios or maximum convenience. Phasing-type SSB generator gives output with over 50 db suppression of carrier and unwanted sideband. Choice of upper, lower, or double sideband on SSB and AM. "Non-ringing" filter limits audio response to $200-3500 \mathrm{cps}$.
Built-in $2^{\prime \prime}$ scope monitors RF linearity. Specially designed audio limiter makes it im possible to overmodulate the balanced modulator. Meter reads power input, RF output, degree of carrier suppression and line voltage. Seldom-used controls such as Voice-Control Trip Level and FSK Deviation are concealed behind front-panel magnetic doors. Output adjustable down to 10 watts. TVI suppressed; two 6550 's in final. Frequency ranges: $3.5-4.5 \mathrm{mc}, 6.5-7.5 \mathrm{mc}$, 13.5-14.5 mc, 20.5-21.5 mc, 27.7-29.7 mc, Spare switch position provided for 160 me ters. With heterodyne crystals. Gray case $83 / 4 \times 18 \times 15^{\prime \prime}$. For $110-120$ v., $50-60$ cycle AC Shpg. wt., 87 lbs.
94 SZ 892. NET.
595.00

## MODEL MM-2 RF ANALYZER

Extremely useful RF analyzer-consists of a compact $3^{\prime \prime}$ oscilloscope with built-in lowdistortion audio oscillator. Five function positions (manual, sine and speech envelopes, and AF and RF trapezoids) permit convenient analysis of SSB and AM transmitting systems. Displays IF envelope patterns of received signals with plug-in adapters (below). Use with transmitters up to 5 kw on 1 to 55 mc . Useful indications to kw on 1 to 55 mc . Useful indications to
200 mc . $91 / 8 \times 61 / 4 \times 141 / 2^{\prime \prime}$. For $110-120 \mathrm{v}$., 200 mc . $91 / 8 \times 61 / 4 \times 141 / 2^{\prime \prime}$. For 110
$50-60 \mathrm{cycle}$ AC. Shpg. wt., 19 lbs. 94 SU 842. NET
129.50

MM-2 RF ANALYZER KIT. Above in kit form. 83 SU 868. NET
99.50

94 S 818. RM-455 ADAPTER. For receivers with $450-500 \mathrm{kc}$ IF's. 1 lb . NET
9.95

94 S 819. RM-50 ADAPTER. For receivers with 50 kc IF's. 1 lb . NET.
9.95

94 S 837. RM-80 ADAPTER. For receivers with 80 kc IF's. 1 lb . NET
9.95

## MODEL $600 L$ LINEAR AMPLIFIER

Broadband linear amplifier for SSB, CW, PM and AM linear. Delivers 400 watts P.E.P. on SSB, 300 watts on CW and PM, 100 watts on AM. Bandswitching, $160-10$ meters. Has single 813 in Class $\mathrm{AB}_{2}$. Only 8 watts required to drive amplifier to full output. Has broadbanded input and output; requires no tuning. Automatic load mismatch protection. Meter reads power input, RF current, reflected power and grid current. TVI suppressed. 52 -ohm output. Built-in power supply. Size, $83 / 4 \times 18 \times 15^{\prime \prime}$. For operation from $110-120$ v., 60 cycle $A C$. Shpg. wt., 117 lbs.
83 SZ 816 . NET.
495.00

## MODEL 20-A SSB EXCITER

Bandswitching, voice-controlled exciter for SSB, AM, PM and CW. Covers $160-10$ meters. Choice of sideband. Over 40 db sideband suppression. Provides blocking bias. Has $9-\mathrm{mc}$ heterodyne osc-requires external VFO or crystal. $143 / 4 \times 10 \times 83 / 4^{\prime \prime}$. For operation from $110-120 \mathrm{v}$., $50-60$ cycle AC . Shpg. wt., 34 lbs.
83 SU 811 . NET
279.50

MODEL 20-A EXCITER KIT. Above in kit form. 83 SU 810 . NET
219.50

83 S $815.458-K$. Converts $\mathrm{BC}-458$ to VFO for $20-\mathrm{A} .2 \mathrm{lbs}$. NET
17.50

83 S 812 . QT-1 ANTI-TRIP UNIT. Plugs into 20-A to prevent loud signals from tripping break-in circuits. 21 lbs . NET
12.50

## MODEL GC-1 AUDIO AMPLIFIER

Gated-compression amplifier eliminates continual adjustment of receiver gain to boost weak signals or cut down strong signals. For CW, AM, and SSB. Change in output is less than 3 db for signal variations up to 40 db . Insert in speaker line. 4 tubes plus rectifier. $91 / 8 \times 61 / 4 \times 141 / 2^{\prime \prime}$. For $110-120$ v., $50-60$ cycle AC. Shpg. wt., 17 lbs . 83 SX 865 . NET.
59.50

MODEL GC-1 AMPLIFIER KIT. Above, in kit form. Shpg. wt., 17 lbs.
83 SX 866. NET
49.50

## MODEL B SIDEBAND SLICER

Converts receivers with $450-500 \mathrm{kc}$ IF's for outstanding SSB reception. Selects either sideband. Built-in $Q$-multiplier. $51 / 2 \times 83 / 4 \times 13^{\prime \prime}$. For 110-120 v., 60 cycle AC. 17 lbs. 83 SX 817. NET.
99.50

## Gonset-Drake-TMC SSB Gear

NEW GONSET GSB-100 SSB EXCITER Outstanding SSB, PM, CW and AM linear operation with this new, advanced-design exciter. Provides 100 watts P.E.P. input on 80 through 10 meters-each band covered in $600-\mathrm{kc}$ ranges.
Stability of built-in VFO is better than 250 cycles in two hours from a cold start-tuning mechanism has 100:1 gear ratio. Exciter provides choice of sidebands. Has excellent suppression figures: unwanted sideband, 45 db ; carrier. 60 db min. Special phasingfiltering system is used-no critical carrier balancing is involved and voice transmissions sound natural.
Includes adjustable VOX and anti-trip phone-patch provision, and 100 v . final blocking bias. Pi-network output matches $\mathbf{3 0}-200$ ohms. All crystals supplied, except those for 11 meters and the CW portion of 10. Size, $101 / 4 \times 191 / 4 \times 18^{\prime \prime}$. For $110-120 \mathrm{v}$., $50-60$ cycle AC. Shpg. wt., 120 lbs .

## 91 SZ 998. NET

439.50

> Shopping for a big trade-in on your old gear? Just write our Ham Shacktell us what you want and what you have to trade. You'll be surprised at our King-Size trade-in offer and you'll be able to use our Easy Pay Plan.

## NEW DRAKE 1-A SSB RECEIVER

Crystal-controlled triple-conversion receiver for SSB, CW and AM. Seven $600-\mathrm{ke}$ ranges $-80,40,20,15$, and three $10-$ meter ranges. New VFO circuit provides extreme stabil-ity-less than 300 cps drift after 15 minutes. $2.5-\mathrm{kc}$ filter tunes through both sidebands. Product detector for distortion-free reception. Has 100 -ke crystal calibrator. Receives AM by exalted-carrier method. IF frequencies of $2900-3500,1100$ and 50 kc . Selectivity of 2.5 kc at $6 \mathrm{db}, 8.1 \mathrm{kc}$ at 60 db . Sensitivity, better than $1 \mu \mathrm{v}$ for 20 db signal-to-noise ratio. 12 tubes plus rectifier. Built-in speaker. $11 \times 63 / 4 \times 15^{\prime \prime}$. For $110-120$ v., $50-60$ cycle AC. Wt., 20 lbs.

92 SU 312. NET.
299.00

## TMC GSB-1 SSB ADAPTER

Top-performance filter-type slicer for easy, accurate SSB tuning with any receiver having $455-\mathrm{kc}$ IF. Also for AM and CW. Has additional AVC and noise limiter and includes built-in audio amplifier. Electrical bandspread calibrated in cycles eliminates critical adjustments. Range, $452-458 \mathrm{kc}$. Choice of sidebands. Provides audio output into $6,8.16,600$ ohms or headphones. $10 \times 12 \times 15^{\prime \prime}$. For $110-120$ v., $50-60$ cycle 10x12x15". For $110-120$
AC. Shpg. wt., 31 lbs.
91 SU 997 . NET.
149.50


MODEL LA-400B. Here's an excellent grounded-grid linear amplifier for high power at minimum cost. Employs clean, straightforward design, with high-quality components throughout. Just connect a suitable exciter, tune up, and you're on the air with 400 watts P.E.P. input. May be used on SSB, CW, PM, FM, or AM linear.
Rotary inductor allows continuous coverage from 75 through 10 meters. Low-impedance, untuned-type input circuit for maximum operating convenience. Requires 20 watts P.E.P. drive for full output. Pi-network matches $50-300$ ohm loads at maximum efficiency. Meter measures RF voltage input, plate current and RF output current. Has provision for applying blocking bias from exciter.
Power supply built into compact amplifier case. Size, $101 / 2 \times 141 / 2 \times 83 / 4^{\prime \prime}$. For operation from $105-125 \mathrm{v}$., $50-60$ cycle AC. Shpg. wt., 52 lbs.
91. SZ 992 . NET
199.95

MODEL LA-400C. Above in kit form. 91.SZ 993. NET.
149.95


## L-1001-A LINEAR AMPLIFIER

High-power, grounded-grid, linear amplifier -provides 1250 watts P.E.P. input on SSB, 1000 watts on CW and 375 watts on AM linear. Essentially the same as the RF section of the L- $1000-\mathrm{A}$, it permits bandswitching coverage of 80 through 10 meters. Input is broadbanded and needs no tuning. Uses a pair of 813's with pi-network tank for precise adjustment and loading. Requires $40-80$ watts drive ( 20 watts on AM linear), easily supplied by the $5100-\mathrm{B}$ transmitter at right. Matches $50-75$ ohm loads. Has built-in supply to provide filament and bias voltage; less 813's and plate ment and bias voltage; less 813 sand plate
supply (use of 1750 to 3000 volts is sugsupply (use of 1750 to 3000 volts is sug-
gested). Designed for standard rack panel gested). Designed for standard rack panel
mounting. For $110-120$ v., $50-60$ cycle AC. Size. $16 \times 21 \times 15^{\prime \prime}$. Shpg. wt., 44 lbs. 77 SZ 711 . NET.
240.00

## 380-B TR SWITCH

Provides automatic electronic antenna changeover. Handles 1 kw SSB and CW, 300 watts AM phone. Action is instantaneous. Negligible insertion loss. For 52 or 75 ohm lines. Has coax connectors; requires Amphenol 83-1T fitting. $37 / 8 \times 31 / 2 \times 5$ ". For $110-120$ v., $50-60$ cycle AC. Wt., 2 lbs.
98 S 775 . NET.
23.70

Phase
Master" U-B


## NEW "PHASEMASTER" II-B

Deluxe transmitter/exciter for SSB, DSB, PM and CW. 65 watts P.E.P. output. Bandswitching, 160 through 10 meters. Includes built-in VFO ( $100-\mathrm{cps}$ stability), temperature-compensated $9-\mathrm{mc}$ osc., VOX, pi-network, speech filter, TVI suppression. 6146 final. $50-600$ ohm output. $91 / 4 \times 101 / 2 x$ $111 / 4^{\prime \prime}$. For operation from 110-120 v., 50-60 cycle AC. Shpg. wt., 58 lbs.

## 94 SZ 881 . NET

459.00

PHASEMASTER II-A. Above less VFO. 37 lbs .
94 SZ 843. NET
329.50

## "BANDHOPPER" VFO

For phasing-type exciters using $9-\mathrm{mc}$ SSB generation. Covers $160-10$ meters. $100-\mathrm{cps}$ stability. $91 / 16 \times 71 / 16 \times 111 / \mathrm{s}^{\prime \prime}$. For $110-120 \mathrm{v}$. , $50-60$ cycle AC. Shpg. wt., 22 lbs. 94 SU 897. NET
139.50

## "TONE-MASTER"

Transistorized audio sine wave generator. Ideal for two-tone SSB test, etc. Less 2 Burgess Type 7 penlight cells. $41 / 8 \times 25 / 8 \mathrm{x}$ $23 / 4^{\prime \prime}$. Shpg. wt., 2 lbs.

PRECISION ELECTRONIC

EQUIPMENT
P400GG

83 S 861 . NET.
12.95

4380

$380-8$

## 51SB-B SSB GENERATOR

Adapts $5100-$ B transmitter (at right) for outstanding 80-10 meter SSB operation. Completely bandswitching. Includes VOX and anti-trip circuits. Power is obtained from $5100-\mathrm{B}$. TVI suppressed. $111 / 2 \times 10 \mathrm{x}$ $143 / 4^{\prime \prime}$. Shpg. wt., 27 lbs .
97 SU 607. NET.
265.00

## COMPONENTS AND ACCESSORIES

2Q4 AUDIO PHASE-SHIFT NETWORK. Will split any $300-3000 \mathrm{cps}$ audio signal into two components, equal in amplitude, but $90^{\circ}$ $\left( \pm 1.5^{\circ}\right)$ out of phase with respect to each other. In octal-based shell. 1 lb.
99 S 122. NET.
4.65

550-A COAXIAL SWITCH. 5 positions. Handles up to 1 kw RF, AM modulated. 2 lbs. 97 S 608 . NET.
8.25

551-A COAXIAL SWITCH. 2 positions. Handles up to 1 kw , AM modulated. 2 lbs. 97 S 591 . NET.
7.95

FILAMENT CHOKES. For GG amplifiers. *maximum total filament current.

| No. | Mris Type | Amps* | Size | bs. | NET |
| :---: | :---: | :---: | :---: | :---: | :---: |
| 5067 | FC-15 | 15 | 11/2 | 11/2 | 7.50 |
| 73 S 066 | FC-30 | 30 | 2x | 2 |  |

## P-400-GG LINEAR AMPLIFIER

High-performance grounded-grid linear amplifier. A perfect companion for an exciter of the Phasemaster II series, or any other unit with sufficient output. Rated 575 watts P.E.P. input on SSB and 200 watts AM linear, PM or CW. Bandswitching, 80 through 10 meters; plate and grid metering plus power in and power out metering. Delivers full output with 20 watts P.E.P. drive. Extremely stable, grounded-grid triode circuitry. Uses 4-6CN6 hi-mu triodes. Pi-network tank circuit matches wide variety of feed lines. Switching arrangement prevents applying HV before filaments are turned on. Black wrinkle with gray panel; matches Phasemaster II series. $91 / 4 \times 191 / 4 \times$ $111 / 8^{\prime \prime}$. For $110-120$ v., $50-60$ cycle AC . Shpg. wt., 50 lbs.
83 SZ 863. NET.
269.50

## "TIME-MASTER"

Gong sounds every 10 minutes to remind amateur to give his call. No resetting. Ideal for VOX. $41 / 8 \times 25 / 8 \times 23 / 4^{\prime \prime}$. For $110-120$ v.. $50-60$ cycle AC. Shpg. wt., 2 lbs.
83 S 860. NET.
7.95


Self-contained all-band transmitter of superior performance. Operates on 80-75, 40 . 20, 15, and 11-10 meters with crystals or built-in high-stability VFO. Provides 145 watts input on AM, 180 watts CW; also 180 watts input on AM, 180 watts C . ; also 180 watts at left. Gear-driven VFO dial can be read to 1 kc on all bands.
Biasing system allows clean, crisp CW break-in. Final employs two 6146's in parallel, feeding a pi-network tank. Another pair of 6146's function in class AB2 to provide full modulation. Built-in low-pass filter for minimum TVI. 75 -ohm output. Size, $111 / 2 \times 22 \times 143 / 4^{\prime \prime}$. For $110-120$ v., $50-60$ cycles AC. Shipg. wt., 88 lbs.
97 SZ 606. NET.
525.00

## 600 GRID-DIP METER

A valuable instrument in any ham shack or laboratory. Covers 1.75 to 260 mc in 5 ranges with color-coded plug-in coils. Has adjustable 500 -microamp meter, May also be used as an absorption wavemeter or signal generator. $3 \times 3 \times 7^{\prime \prime}$. For $110-120$ v., $50-60$ cycle AC. Shipg. wt., 3 lbs.
84 S 487. NET
45.72


COMMUNICATOR TRANSCEIVERS MODEL 3136 COMMUNICATOR III. Complete 6 -meter station in one portable case. Operates from 110-120 v., 50-60 cycle AC, or 12 v . DC; easily modified for 6 v . DC by changing jumper. Provides complete coverage of the 6 meter band. Highly selective receiver includes low-noise cascode RF stage, AVC, noise clipper, calibrated slide-rule dial, and $4^{\prime \prime}$ speaker. 2 E26 in transmitter delivers 6-8 watts output, heavily AM modulated by
6 L6GB. Gang-tuned circuits with adjustment knobs for all tunable circuits. Meter measures exciter and final output, and receiver signal level. Uses $8-\mathrm{mc}$ crystals ( $1 / 2^{\prime \prime}$ )
or VFO (right). Less crystals (see page 386 ), whip and mike. Size (HWD): $101 / 4 \times 115 / 16^{\mathrm{X}}$ 713/15". Shpg. wt., 23 lbs.
92 SU 304. NET. . . . . . . . . . . . . 269.50
MODEL 3133 COMMUNICATOR III. As above, but for 2 meters. With whip.
269.50

MODEL 3212 LINEAR AMPLIFIER. For use with Model 3136 above. Provides power output of $50-60$ watts. $10 \times 10^{3} / 4 \times 11^{\prime \prime}$. For $110-120$ v., $50-60$ cycle AC only. 30 lbs .

92 SU 306. NET.
.169 .50
MODEL 3211 LINEAR AMPLIFIER. As above, but for use with Model 3133.
92 SU 307. NET.
.169 .50
CIVII DEFENSE MODELS. CD versions of the above units approved for matching funds are available on special order. Allow 4 weeks for delivery.


G-66-B MOBILE RECEIVER
Latest model of this deluxe double-conversion mobile receiver-covers $160-10$ meters and the $B C$ band. High sensitivity, steep skirt selectivity and rugged stability for top supply and speaker. Size, $41 / 2 \times 61 / 2 \times 9^{7 \prime}$. Shpg. wt., 9 lbs.
83 S 831 1. NET................. . . 209.50
MODEL 3069 POWER SUPPLY AND SPEAKER. For G-66 series receivers. For 12 v . DC (easily changed to 6 v . DC) or 115 v ., 60 cycle AC. $41 / 2 \times 61 / 2 \times 45 / 8^{\prime \prime} .81 / 2 \mathrm{lbs}$.
83 S 832. NET.
49.50

MODEL 3098 "THIN-PACK" 12 VDC SUPPLY. For G-66 series. Shpg. wt., 6 lbs. 83 S 596. NET. 380

G-77-A MOBILE TRANSMITTER
Latest model of this compact, bandswitching mobile transmitter, complete with builtin high-stability VFO and separate power supply (not illus.). Covers 80 through 10
meters. Input to 60 watts on AM or CW. Drum-type VFO dial with 40:1 tuning ratio exposes only band in use. Driver-multiplier stages are ganged with oscillator for singleknob exciter control. Press-to-talk system with built-in antenna relay. 6146 final has pi-network output.
Heavy-duty vibrator power supply operates from 6 or $12 v . D C$, or $115 \mathrm{v}, 50-60$ cycle AC. Size (HWD) : transmitter, $41 / 2 \times 61 / 2 \times 9^{7}$; power supply, $71 / 4 \times 71 / 2 \times 9^{\prime \prime}$. Less micropower supply, w., 32 lbs .
phone, Shpg. wt.
83
SU 895 . NET


MOBILE MARINE CONVERTER
MODEL 3163. This easy-to-install converter allows you to monitor the 1.6 to 3.0 mc range with any 12 v . car radio. Perfect for listening to ship-to-ship and ship-to-shore communications; police broadcasts; the $160-$
meter amateur band; and marine weather broadcasts. Requires only $12 \mathrm{v} . \mathrm{DC}-\mathrm{no}$ internal connections to car radio required. Extremely simple to install-just connect the output cable of the converter to the auto radio, connect the broadcast-band anclip the power lead to the ignition or accessory terminal. With cables. Size, $33 / 8 \times 41 / 4 \times$ $41 / 8^{\prime \prime}$. Shpg. wt., 5 lbs . 77 S 688. NET. .
29.50

3-30 MC MOBILE CONVERTER
MODEL 3002. An excellent general-coverage converter-perfect for all-band mobile installations. Covers $3-30 \mathrm{mc}$ continuously in 3 ranges. High sensitivity with a short whip mixer, 6 C 4 oscillator and 6BH6 IF. Compact and easy to install. Requires 135 v . DC at 10 ma and 6 v . at 0.75 amps .1500 kc output. With cables. Overall size, $51 / 4 \times 31 / 2 \mathrm{x}$ $51 / 4^{\prime \prime}$. Shpg. wt., 5 lbs. 84 S 954. NET.
49.50

NEW "SUPER-12" MOBILE CONVERTER MODEL 3261. (Not illus,). Compact, highIy sensitive converter covering $75,40,20$,
15,11 and 10 meters, plus the 19 and $49-1$ meter shortwave bands. An up-to-theminute version of the popular "Super-6." Exceptionally easy to install. Requires no high-voltage $B+$ or internal connections to
auto radio. Operates directly from 12 v . DC auto radio. Operates directly from 12 v . DC
(@12 amps). Has low drift, noise factor and image response. Utilizes low-noise RF stage with front-panel antenna trimmer, lownoise triode mixer and modified Clapp oscil40 and 75 meters. Output, 1430 kc . With all necessary cables. Gray case is $51 / 4 \times 31 / 2 \times 51 / 4^{\prime \prime}$. Shpg. wt., 5 lbs.
83 S 594. NET.
57.50

FM TUNERS
For mobile or fixed installations. Include squelch circuit. Easily connected to AM receiver. Require $150 \mathrm{v} . \mathrm{DC}$ at $14 \mathrm{ma} ; 6.3 \mathrm{v}$. at 1.8 amp . Size (HWD): $51 / 4 \times 31 / 2 \times 51 / 4^{\prime \prime}$. Shpg. wt., 5 lbs.
83 S 822. Model $3009.30-40 \mathrm{mc}$.
83 S 823. Model 3010. $\mathbf{4 0 - 5 0 \mathrm { mc } \text { . }}$
84 S 925. Model 3011. $88-108 \mathrm{mc}$.
83 S 824. Model 3012. $152-162 \mathrm{mc}$.
NET EACH.
69.50

MOBILE ACCESSORIES
MODEL 3001 NOISE CLIPPER. Greatly reduces ignition interference. Easily installed on any receiver with conventional diode 2 nd detector. $2 \times 4 \times 11 / 2^{\prime \prime}$. Wt., 2 lbs .
60 S 596. NET.
TYPE 3006 STEERING-POST BRACKET. For mounting Gonset converters or tuners on right or left side. Wt., 1 lb .
84 S 994. NET.

## FIXED OPERATION

NEW Fixed-Station
Transmither-Receiver

A Complete 10-Meter Station

## GONSET G-28

## FIXED-STATION COMMUNICATOR

MODEL 3204. A complete 10 -meter stationtransmitter, receiver, power supply-in one neat, compact package. Just connect a mike, antenna and AC power, and you're on the air! Transmitter provides 50 watts AM input on 10 meters-dual-conversion receiver gives sensitive, selective coverage of 28-29.7 mc. Utilizes rugged quality construction throughout for outstanding performance. Transmitter. Multiplier stages are ganged and tracked with highly stable, calibrated VFO. Includes front-panel socket for optional crystal control and VFO spotting switch. Integral speech clipping prevents modulation in excess of $100 \%$. Panel meter can be switched to read RF amplifier plate or grid current, or modulator plate current. 6146 final has pi-network output for $50-75$ 6146 final has pi-network output for $50-75$
ohm unbalanced loads; built-in low-pass ohm unbalanced loads; built-in low-pass $12 \mathrm{BV} 7 \mathrm{~A}, 6146,12 \mathrm{AX} 7,2-6 \mathrm{~L} 6 \mathrm{~GB}$.
Receiver. Features dual-conversion, adjustable squelch, highly effective noise limiter and " S " meter. Includes a panel-mounted loudspeaker. Full-vision dial has planetary vernier drive for smooth, easy tuning. Tubes: 6BZ6, 6U8, 6BE6, 6BH6, 6AV6, 6AL5, 12AX7 and 6L6GB.
12 tubes plus 5U4GB rectifier. Size, only $71 / 2 \times 13 \times 121 / 2^{\prime \prime}$. For $110-120$ v., 60 cycle AC. Shpg. wt., 35 lbs.
83 SU 587. NET.
299.50

## NEW TELECOM TRANSISTORIZED POWER SUPPLY



MODEL 2D11. Compact transistorized power supply-completely eliminates moving parts for high reliability, top efficiency and absence of RF interference. Ideal for use with mobile transmitters under 100 watts. Input: 12.6 volts DC @ 15 amps. Output: 500 volts DC @ 200 ma and 250 volts DC (a) 100 ma from $-22^{\circ} \mathrm{F}$. to $104^{\circ} \mathrm{F}$., continuous duty.
Complete electronic overload protection. Full-load specifications: regulation, less than $10 \%$; ripple, less than $0.1 \%$; efficiency, $75 \%$ minimum. $41 / 4 \times 8 \times 4^{\prime \prime}$. Shpg. wt., 4 lbs.

## 83 S 554. NET

68.50

MODEL 2D12. (Not illus.). Designed for operation of mobile receivers, converters and low-power transmitters. Only $2 \times 41 / 2 \times 2^{\prime \prime}$. As above, except: 3 amps input; 250 volts DC output at 100 ma from -22 to $122^{\circ} \mathrm{F}$., continuous duty. 1 lb .
83 S 586. NET.



## PMR-7 RECEIVER

Double-conversion superhet designed for outstanding mobile reception. Sensitivity exceeds that of many fixed-station receivers. Covers 160 through 10 meters and $540-1650 \mathrm{kc}$. Illuminated slide-rule dial has scales for each band.
1st IF is $2238 \mathrm{kc}, 2 \mathrm{nd}$ IF is 262 kc . 2nd osc. is crystal controlled for maximum stability. Adjustable squelch operates on $1 / 2 \mu \mathrm{v}$. Variable beat frequency injection for SSB. Includes noise limiter, variable BFO, RF gain control, delayed AVC and individually shielded coils. Ten tubes-filaments operate from 6 or $12 \mathrm{v}, 41 / 2 \times 7 \times 91 / 2^{\prime \prime}$. Less power supply and speaker. Shpg. wt., 11 lbs.
83 S 842 . NET.
159.00

MODEL PSR-612 POWER SUPPIY. For above. 6 or 12 v. DC input. Size, $41 / 2 \times 41 / 2 \times 91 / 2^{\prime \prime}$. Shpg. wt., 10 lbs .
83 S 843. NET.
34.00

Mounting rack available for PMR-7-write to Allied's Ham Shack

## M-1050 MOBILE POWER SUPPLY

Dual-vibrator mobile power supply for operation of both receiver and transmitter. Provides 3 voltages: 200 v. DC at 100 ma , 400 or 500 v . DC at 175 ma , and 200 or 250 v. $D C$ at 70 ma . Oversize filters assure hash-free receiver power. Includes receiver muting relay. Tap for external antenna relay. Employs standard selenium rectifiers and vibraters. $70 \%$ efficiency. For 6 or 12 v ., and vibraters. $70 \%$ efficiency. For 6
DC input. $61 / 2 \times 10 \times 6^{\prime \prime}$. Wt., 13 lbs. 80 S 156. NET
49.95

MODEL M-1051. As above, but in kit form. 83 SU 112. NET.
39.95


## AF-67 "TRANS-CITER"

Highly versatile, precision-built, bandswitching transmitter/exciter for mobile or fixed-station operation. 60 watts input on AM, CW or NBFM, 160 through 10 meters. Has a built-in, temperature-compensated VFO. Switch allows choice of VFO or crystal operation; socket holds 2 crystals. Complete 5 -position metering. Includes full complement of controls. 6146 final with pi-network output. Requires 475 v. DC at 170 ma, 225 v . DC at 60 ma , and 6 or 12 v . for filaments. Takes high or low-impedance microphone; less mike. Size, $7 \times 111 / 2 \times 111 / 4^{\prime \prime}$. Shpg. wt., 20 lbs.
177.00

98 SU 091. NET.
PS-2V 115 V . AC PO WER SUPPLY. For above. $7 \times 111 / 4 \times 81 / 2^{\prime \prime}$. Shpg. wt., 30 lbs.
98 SU 760 . NET
49.50

CFS-1 CONNECTING CABLE. Connects PS-2V and AF-67. Shpg. wt., 8 oz. 985761 . NET.
4.75

Mounting rack available for AF-67-write to Allied's Ham Shack.

## M-1470 POWER SUPPLY

(Not illus.) Similar to Model M-1050 at left. Dual-vibrator mobile/fixed power supply for operation of both transmitter and receiver. Works from 12 v . DC or $\mathbf{1 1 0 - 1 2 0}$ v. $50-60$ cycle AC. Provides 4 voltages: filtered and hash-free 200 v . at 100 ma for receiver, 150 or 225 v. DC at 70 ma with 400 or 500 v . DC at 175 ma for transmitter. and 12 v . AC at 5 amps (when supply operates on AC). Includes receiver muting relay. Employs standard selenium rectifiers. 60$70 \%$ conversion efficiency. Size, $61 / 2 \times 10 \times 6^{\prime \prime}$. Shipg. wt., 13 lbs .
80 SU 159. NET
69.95


## COMPLETE PORTABLE BC-AMATEUR RECEIVING COMBINATION

ATC-1 AMATEUR-BAND CONVERTER. Unique, transistorized ham-band converterl Entirely self-contained and self-powered, this tiny converter provides amazing performance on SSB, AM and CW in the 80 to 10 -meter bands. Operates with any radio; connects instantly to TCR-2A matching receiver. Includes modified Q multiplier and BFO with variable injection. Has drum-type slide rule dial, break-in jack, high $Q$ permeabilitytuned coils. Less penlight cells. $31 / 4 \times 43 / 4 \mathrm{x}$ $41 / 16^{\prime \prime}$. Shpg. wt., $21 / 2 \mathrm{lbs}$.
99 S 167. NET
79.50

TYPE Z PENLIGHT CELL. For above. Three required. Wt., each. 2 oz.
53 J 031 . NET EACH

TCR-2A ALL-TRANSISTOR RECEIVER. Versatile, ultra-compact portable receiver-complete broadcast-band coverage with a 7 -transistor circuit and built-in speaker for fulltoned, high-volume output. This light, rugged unit can be taken anywhere-use in your home, in a car, or as a personal portable. Provides optimum coupling to the ATC-1 for reception of the 80 through 10 meter amateur' bands. Operates up to 200 hours on a single battery. Includes phone jack. Size is only $31 / 4 \times 43 / 4 \times 41 / 16^{11}$. Less battery (below). Shpg. wt., $31 / 2$ lbs. 99 S 174. NET
39.95

TYPE $2 Z 3$ BATTERY. For above. 5 oz . 53 J 096 . NET.


## NEW MORROW MB-565 MOBILE TRANSMITTER

Ruggedly-constructed AM-CW mobile transmitter. Covers 80 through 10 meters; 90 watts input on CW, 60 on AM. Excellent companion to the MB-6 below, or can be used for outstanding individual performance. VFO has drum-type gear-driven tuning assembly. Switch selects VFO or crystal operation. Uses carbon, crystal or dynamic mike. Pi-network output matches $50-75$ ohm loads; built-in antenna relay. Less power supply (below), mike. Requires 6 or 12 v . AC or DC for filaments, 250 v . DC @. $75 \mathrm{ma}, 300-$ Requires 6 or $12 \mathrm{v.AC}$ or
600 vc . DC
70 77 SU 700. Only $\$ 24.95$ Down. NET.
249.50

## NEW MORROW MB-6 MOBILE RECEIVER

Deluxe dual-conversion mobile receiver-covers 80 to 10 meters. Provides superb performance with MB-565 above, or can be used alone for excellent mobile reception. Sensitivity $1 \mu \mathrm{v}$, for $17 \mathrm{db} \mathbf{S} / \mathrm{N}$ ratio on 10 meters. Temperature-stabilized for SSB. Drum-type dial with gear-driven mechanism. Has $100-\mathrm{kc}$ calibrator, adjustable squelch, crystal-controlled 2nd mixer, RF gain control, noise limiter and antenna trimmer. 13 tubes (many dual-purpose). Less speaker, supply (below). $41 / 8 \times 117 / 8 \times 71 / 4^{\prime \prime}$. Wt., 14 lbs . 77 SU 701. Only $\$ 23.95$ Down. NET.
.239 .50

## MORROW 5BR-2 MOBILE CONVERTER

Superior mobile converter for 80 to 10 meters. Separate, individually tuned coils on each band. All bands spread over full length of slide-rule dial. Temperature compensated. 10 high-" $Q$ " RF and mixer coils; 5 adjustable oscillator coils. Requires 200-225 v. DC at 20 ma and 6 or 12 v . for filaments. $4 \times 55 / 87^{7}$. Complete with mounting bracket and cable. Shpg. wt., 10 lbs. 99 S 133. Only \$9.00 Down. NET.

## POWER SUPPLIES AND ACCESSORIES

92 SU 346. RTV-630 12 VDC Supply. Supplies all power for MB-6 and MB-565. $51 / 2 \times 117 / 8 \times 63 / 4^{\prime \prime}$. Shpg. wt., 20 lbs . NET....... 119.95 77 S 702. 010-020. RTV connecting cables. $11 / 2 \mathrm{lbs}$. NET.... 12.85 92 S 334. RVP-260B $6 / 12$ VDC Supply. Supplies MB-6 and exciter of MB-565. $51 / 4 \times 91 / 4 \times 338^{\prime \prime} .9$ lbs. NET. 49.95 92 SU 335. TV-600A $6 / 12$ VDC Supply. For final and modulator of MB-565. $51 / 4 \times 111 / 8553 / 8^{\prime \prime}$. 17 lhs. NET. ......................... 79.50 84 S 920. SH-7. Spkr. for MB-6. $51 / 2 \times 77 / 8 \times 31 / 2^{\prime \prime} .31 / 2$ lbs. NET 11.50 84 S 933. GC-10. Gen. "hash" filter: 10 M .1 lb . NET. 4.55 84 S 911 . GC-20. Gen. "hash" filter: 20 M. 1 lb. NET......... 4.55


## BANDMASTER T-90 TRANSMITTER

Bandswitching, TVI-suppressed transmitter for mobile or fixed operation. Covers 80 to 10 meters- 75 watts input on AM, 90 watts on CW. Performs excellently alone, or may be used with the identically styled R-9 receiver below. Built-in VFO uses stable voltage-regulated and temperature-compensated circuits. Provision for break-in keying and push-to-talk operation. Switch for initial tuning at reduced power, selector for 3 different excitation levels. Pi-network output matches wide range of load impedances. Takes carbon, crystal, or dynamic mike. Size $63 / 4 \times 123 / 8 \times 101 / 2^{\prime \prime}$. Less power supply and mike. Shpg. wt., 18 lbs.
99 SU 041 . Only $\$ 17.95$ Down. NET.
179.50

99 SU 043. APS-90 115 VAC Power Supply. For above. Size, 63/4x $123 / 8 \times 101 / 2^{\prime \prime}$. Shpg. wt., 35 lbs. NET
79.50

99 SU 044. VPS/T-90 Mabile Supply. For above, 6 or 12 VDC. Size. $65 / 8 \times 11 \times 65 / 8^{\prime \prime}$. Shpg. wt., 21 lbs. NET.
89.50

## BANDMASTER R-9A RECEIVER

Double-conversion receiver för 80, 40, 20, 15, and 11-10 meters. May be used for mobile operation (with power supply listed below), or for fixed operation with self-contained supply. Provides excellent performance with the identically styled T-90 transmitter above, or may be used individually for outstanding amateur-band reception. Has good sensitivity, selectivity and stability. All coils are slugtuned, providing high " $Q$ " circuits. Employs three tuned RF circuits and a separate osciliator coil for each band. IF frequencies are 1600 and 260 kc . Bandwidth: 4 kc at 6 db . 50 -ohm nominal input impedance. 8 tubes. rectifier, regulator. $63 / 4 \times 123 / 8 \times 101 / 2^{\prime \prime}$. Less speaker. For $110-120$ v.. $\mathbf{5 0 - 6 0}$ cycle AC. Shpg. wt., 18 lbs. 99 SU 042. Only $\$ 16.00$ Down. NET.
159.95

VPS-R9 MOBILE POWER SUPPLY. For above 6 or 12 v. DC. With cable, connector. $63 / 4 \times 71 / 2 \times 43 / 4^{\prime \prime}$. Shpg. wt., 12 lbs.
99 SU 045 . Only $\$ 3.05$ Down. NET.
30.50

## BANDMASTER Z-MATCH ANTENNA COUPLER

A highly versatile, efficient antenna coupling and measuring de-vice-combines an antenna matching network, $50-\mathrm{ohm}$ dummy load and a meter to measure forward and reflected power. Covers 3.5 to 30 mc . Designed to match a 50 -ohm input to reactive or nonreactive loads, 10 to 2500 ohms. 500 -watt maximum transmitter input. $63 / 4 \times 121 / 4 \times 111 / 2^{\prime \prime}$. Shpg. wt., $161 / 4$ lbs.
99 SU 050 . Only $\$ 8.90$ Down. NET.
89.00

## NAW Eico transwimer

$720 \cdot K$

- in Xar or Wired form
- Completely TVI Suppressed

Mathes $50-1000$ Ohm Loads.

- No Shock Hozard At Key Terninals
- "Novice Limit" Calibration On Meter


## EICO TRANSMITTING EQUIPMENT

MODEL 720-K TRANSMITTER KIT. Compact, streamlined bandswitching transmitter for 80 through 10 meters. Design is highlighted by extremely conservative component ratings and exceptional stability. Power input, 90 watts. Complete sealing of cabinet and careful by-passing and filtering of all input and output leads provides effective TVI suppression. Oscillator is keyed to permit break-in. 6146 final is protected by clamper. High-efficiency pi-network matches $50-1000$ ohm loads. $5 \times 15 \times 9^{\prime \prime}$. For 110 120 v. 60 cycle AC. Wt., 27 lbs.
83 SU 056. \$8.00 Down. NET.... 79.95 77 SU 706. As above. wired. NET. 119.95 MODEL 730-K MODULATOR KIT. For above. Delivers 50 watts of undistorted audio. Multi-impedance output. Inputs for crystal mike and phone patch. $6 \times 14 \times 8^{\prime \prime}$. Less cage. For operation from $110-120 \mathrm{v} .60$ cycle AC. Shpg. wt., 21 lbs.
83 SU057. $\$ 5.00$ Down. NET . . . . 49.95 77 SU 707. As above, wired. NET. 79.95 77 S 708. Cover for 730-K. 5 lbs. NET 4.50


Compact, low-cost transceiver for 421-449 mc. 0.3 watts AM RF output. Push-to-talk. Built-in speaker. $63 / 8 \times 6 \times 99^{\prime \prime}$. With AC line cord, DC line cord, cera nic mike and antenna. For $110-120$ v. 50-60 cyele AC or 6 v . DC. Shpg. wt., 8 lbs.

92 SU 376. Only $\$ 9.20$ Down. NET 92.00
MODEL AT-30. As above, but for $110-120 \mathrm{v}$. AC or 12 v . DC.
92 SU 377. Only $\$ 9.20$ Down. NET. 92.00


## ANTENNA LOADING COLLS

A 750 "DELUXE ALL-BANDER". Contin A. uously variable loading coil with staggered turn spacing. Covers 10 to 75 meters. Cam contact selects any spot on any turn for precise tuning. For use with Model $88-60$ whip (at
right) or similar units. Includes lock. $23 / 8 \mathrm{x}$ $\underset{133 / 4}{\text { right } / 4}$. Shyg. wt., $21 / 2 \mathrm{lbs}$.
14.65

666 "ALL-BANDER". Similar to 750 loading coil above, except employs vertical roller for quick adjustment (selects any pair or adjacent turns) Shpg. wt., $11 / 2$ lbs
14.65

B B-1080 "SLIM-JIM". All-band base-loadB ing coil. Covers 10 through 80 meters, continuously. Use with $96^{\prime \prime}$ whip-slide in or out of coil to loading point and lock in place.

17.59

C] 900 "A RISTOC RAT", Loading coil tapped $G$ for $10,15,20,40$ and 75 meters. Plug at $88-60$ whip (at right) or similar units $3 \times 6^{\prime \prime}$
 999 "VICTORY". As above, but for top efficiency on 10,15 and 20 meters only. $3 x$ $83^{31}{ }^{n}{ }^{n}$ Shpg. Wt. 59 NET $^{11 / 2}$ lbs.
14.65
[D] "ULTRA-HI-‘Q'" COILS. Newly develDormance Feature a " $Q$ " of well over 515 , Use with $88-60$ whip (at right) or similar units. Shpg. wt., 1 lb .

| Stock <br> No. | Band | Size | NET <br> EACH |
| :---: | :---: | :---: | :---: |
| $92 \mathbf{S 3 5 2}$ | 80 | $21 / 2 \times 8^{*}$ | 5.14 |
| 925353 | 40 | $21 / 2 \times 5^{\pi}$ | 5.14 |
| 925354 | 20 | $21 / 2 \times 3^{\prime \prime}$ |  |

WHIP ANTENNAS
97 CU 155. 100-96S $96^{*}$ WHIP. Stainless steel. $3 / 8^{\prime \prime}$ dia. stud. Less mount. Shipg. wit.
2 lbs. Express or truck only. NET......... 5.14 975X 166. 100-60S 60* WHIP. Same as

## JOHNSON "WHIPLOAD 6" COIL

MODEL 260-26. Bandswitching base-loading coil for 10 meter whips. Features air Covers 10 through 75 meters. Continuous tuning on 75 meters, no tuning necessary on other bands. Permanently protected against weathering by sturdy Fberglas housing 98 Shyg. wt., 3 NEs. 16.95

## BELL CARBON MICROPHONES

MODEL CM-1SC. Deluxe hand-held communications type carbon mike. Response, 200-4000 cps. Single-button carbon with 85 -ohm resistance. DPST push-to-talk switch for mike circuit and external relay. Black plastic case and $4-\mathrm{ft}$. cord. With mtg. bracket. Shpg. wt., $11 / 2$ 1bs.
94 S 898 . NET....... 7.79 MODELCM-1CC. WITH RETRACTABLE CORD As above, but with 5 -ft. coiled cord 94 S899. NET
9.75

98 CU 302. 9-96T LOW-COST 96" WHIP. Cadmium plated. $3 / 8^{\prime \prime}$ dia. stud. Less mount. Wt., 3 lbs . Express or truck only. NET... 3.67 88-60 WHIP. Highly versatile antenna supplied in two sections ( $36^{\prime \prime}$ and $60^{\circ}$ ). Comes meter whip without coils. $3 / 8^{\prime \prime}$ dia. stud. Less mount. Shpg. wt.: 6 lbs.
98 SX 359 . NET.

## VHF MOBILE ANTENNAS

(E) 97 SX 148.113 VHF ROOF-TOP ANE TENNA. For $140-165 \mathrm{mc} .5 / 16^{\prime \prime}$ hole. $10^{\prime}$ SX
NAS 355.613 VHF 1 . NA. As above, but with locking antenna base
97 SX 149. 114 COAXIAL ANTENNA. FOT $140-165 \mathrm{mc}$. Provides an extremely love radiation angle from a closed or open vehicle, or a fixed location. $10^{\prime}$ coax cable. $3 / 8^{\prime \prime}$ dia. stud. Shipg. wt., 5 lbs. NET

## MOUNTS AND SPRINGS

[F] 992S 222. "MASTER-FLEX-R". Strain-
 Mounts are for antennas with $3 / 8^{n}$ dia. threaded stud. Av. shpg. wt., 3 lbs.
G $97 \mathbf{S} 151.232 \mathrm{C}$ MOUNT. Double-taper G) spring swivel-base body mount; with coax fitting. NET
8.57

97 S 157. $232 \times C$ MOUNT. Heavy-duty ver-
sion of 232 C . NET.............. 9.65 98 S 304. $232 \times$ SSC MOUNT. Heavy-duty stainless steel version of Model 232 C listed above. NE

[H] left, but less spring. NET. ........... $\mathbf{9 2} \mathbf{5} \mathbf{7 9}$
(J) 98 S 301.140 J M OU NT. Economy bump-

97 S 160 , $140 X$ MOUNT. Heavy-duty ver-

K 92 S 361.444 MOUNT. Heavy-duty Chain mounting. NET................. 17.44 92 S 362. 445 MOUNT. As above, but less spring and swivel. NET

## ACCESSORIES

97 SX 154.92 18" $^{*}$ WHIP EXTENSION. $3 / 8^{n}$ dia. stud on one end and collet at other. 92S 223. 10-H "TENNAHOLD". Ties down end of whip to clear garage roofs, etc. Fastens to car gutter. Wt., 3 oz. NET............. 98 \& 83 S591. 295 "E-Z-OFF" ANTENNA CONNECTOR. Allows easy removal of whips or coils. Fits between mount (or coil) and whip

L MODEL 2495-6 "MASTER-MATCHER".
L. Remote tuner for any mobile, loaded whip rom 160-10 meters. Dashboard control of loading inductance for peaking antenna to ainy frequency in an amateur band. Field-strength meter on dash unit. Inductor box, $61 / 4 \times 41 / 4 x$ $41 / 4^{\prime \prime}$. Dash control, $41 / 2 \times 31 / 4^{\prime 2} \times 2 / 4^{\prime \prime}$. For 6 v. DC. Slipg. wt., 2 lbs.
24.45

MODEL 2495-12. As above, but 12 v. DC.
(M) MODEL 825 "MICRO-Z-MATCH'". M. Variable inductor for matching any coaxial cable to any mobile antenna. Mounts on stand, ard coax fitting (requires Amphenol 83-1 T-"T", SWR. 4 Permits adjustment io minimum style adjustment. Shpg. wt., 2 ibs. 7.79

## VHF GROUND-PLANE ANTENNAS

N GP-4 G ROU ND-PLANE. For 2 meters. 4 N droop-type radials. Coax fitting. 52 ohms. 98 SX 356 . NET
5.83

P 300 "MASTER-PLANE". A highly effecP tive 2 -meter antenna. Features 4 drooping and 4 adjustable straight radials. With 3-ft. mast and coax fitting. 52 -ohm impedance 98 SX 357 . NET
12.69

## New Mark "Heliwhip" and Mosley "Trapmobile" Antennas

R HW "HELIWHIP" SERIES. FiberglasR molded, continuously loaded miniature whips for all amateur bands. Resemble standard auto antennas. Employ variable pitglas spiral conductor winding along a Fribergas rod-provides essentiaum radiation efficiency. tribution for maximum radiation efficiency.
For mounting on fender, trunk lid, etc. $*$ Bandwidth for $2: 1$ VSWR. + Not illus. Fit standard mounts or HWM-1 flat surface mount (below).

| Stock No. | Type | Band | *Kc | Ft. | Lb | EACH |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 92 SX 322 | HW-10 | 10 M | 1000 | 4 | 3/4 | 15.00 |
| 92 sx 32 | HW-15 | 15 M | 500 | 4 | 3/4 | 15.00 |
| 92 Cx 32 | HW-20 | 20 M | 250 | 6 | 1 | 8.00 |
| 92 CX 32 | HW-40 | 40 M | 100 | 6 | 1 |  |
| 92 CX 32 | HW-80 | 80 m | 60 | 6 | 1 |  |
| 92 CX 333 | $\dagger$ HW-3 | 10-15-20M |  | 6 |  |  |
| 92 S 327 | HW | Ide |  |  |  |  |

S) MA-3 "TRAPMOBILE". Streamlined 3S band mobile whip-requires no switching or retuning to change bands. Operates with top radiation efficiency and low SWR over the full
width of each band. Employs base coil and cenwidth of each band. Employs base coil and center trap to automatically cover 10, 15 and 20 meters. Use with standard base loading coits to Fits std. mounts. $921 / \mathrm{s}^{\prime \prime}$. Shpg.wt., 61 lbs . 19.55
$\mathbf{9 2 ~ C X} 332$. NET...............


# ROTATORS, ANTENNAS, ACCESSORIES 



## NEWI HY-GAIN TOP-VALUE

 ROTATOR SYSTEM- Combination For Only \$149.95
- Holds In Winds Up To 100 MPH
- Easy-To-Read Light Indicator

RBX-1 "ROTO-BRAKE". Rugged, precisionmade rotator-brake. Twin motor unit with stainless steel gears develops 780 in .-lbs torque-brake provides 10,000 in.-lbs braking torque. Rated to 1000 lbs downthrust. Mounts in towers with $10-18^{\prime \prime}$ between uprights. Height: $9^{\prime \prime}$. Less cable (below). For 115-120 v., 50-60 cycle AC. Side-mtg. kits available-write for prices. Shpg. wt., 35 lbs. Shipped by express or truck only. 83 SU $691 . \$ 10.00$ Doren. NET
99.95

CONTROL SYSTEM. Consists of a translucent great-circle world map indicator and control box. Selsyn-controlled wedge of light rotates with beam. Use only with RBX-1 (above). For Central U.S.A. Indicator, $31 / 2 \times 18^{\prime \prime}$ dia. Wt., 3 lbs. Express or truck.
50.00 83 SU 693. Above for E. Coast. NET 50.00 83 SU 694. Above for W. Coast. NET 50.00 49 W 474. 9-Cond. Cable. For above system. 4 lbs. per $100^{\prime}$. NET PER FT.


CDR MODEL HAM-M ROTATOR
Heavy-duty rotator system for control of large antennas in high winds. Features rugged brake and motor with stainless steel gears and 98 ball bearings. Has end-ofrotation power cut-off. Vertical load rating over 1000 lbs-heavy plates distribute stresses. Indicator can be read without starting motor, Meter calibrated with compass points, and in $3^{\circ}$ increments. 365 inch-lbs rotating torque; 3500 inch-lbs braking. Acrotating torque; 3500 inch-lbs braking. Ac-
commodates $7 / 8$ to $2^{\prime \prime}$ O.D. masts. Less cable commodates $7 / 8$ to $2^{\prime \prime}$ O.D. masts. Less cable cycle AC. Shpg. wt., 23 lbs. 92 S $357 . \$ 9.75$ Down. NET.
97.51 47 T $330.100-\mathrm{Ft}$. Coil Belden 84488 -Conductor Cable. For above. $41 / 2 \mathrm{lbs}$. NET
6.12

## Antennas and Accessories

COLLINS DIRECTIONAL RF WATTMETER
MODEL 302C-1. Precision-constructed wattmeter for measuring up to 1 kw forward and reflected power in 52 -ohm coaxial transmis sion lines. Operates over the frequency range of 2 to 30 mc . Can be used to determine line of 2 to 30 mc . Can be used to determine line
SWR, transmitter power output, antenna bandwidth, line attenuation and other system performance characteristics. Consists of directional coupler and meter unit.
Presents negligible insertion losses when left in transmission line as a monitor. Has 100 and 1000 -watt scales, accurate to $\pm 10 \%$. Coupler introduces only $0.1 \%$ power loss and 1.05:1 SWR; will take up to 2 kw for ward power. Size: meter, $3 \times 31 / 2 \times 61 / 2^{\prime \prime}$; coupler, $2 \times 21 / 2 \times 4^{\prime \prime}$. Shpg. wt., 5 lbs. 94 S 859. $\$ 9.20$ Down. NET.
92.00

## DOW-KEY ANTENNA SWITCH

MODEL DKC-TR. Matches 52 and 72 -ohm lines without insertion loss. Features instant recovery, plus a gain of 0 db at 60 mc to +6 db at 3.5 mc . Rated 1 kw , AM modulated. Can be mounted at transmitter output with DKF-2 connector (below). Requires $125-150 \mathrm{v}$. DC at $6.2 \mathrm{ma}, 6.3$ volts at $0.45 \mathrm{amps} .13 / 8 \times 13 / 8 \times 23 / 4^{\prime \prime} .8 \mathrm{oz}$. 75 S 139. NET
12.50

75 P 136. DKF-2 Double Male Connector Shpg. wt., 6 oz. NET
1.45

## COLLINS PHONE PATCH

MODEL 189A-2. For phone patch operation with the KWS-1, 75A-4, KWM-1, 32S-1 and $75 \mathrm{~S}-1$. May be used with other receivers having a 500 -ohm output, and other transmitters having a 600 -ohm phone-patch input. Utilizes a hybrid transformer for VOX operation. Only two connections to phone line are necessary. Above-mentioned Collins units have terminals for connection to phone patch. $5 \times 47 / 8 \times 35 / 3^{\prime \prime}$. Wt., 3 lbs.
94 S 860. $\$ 6.00$ Down. NET.
60.00

## DRAKE HYBRID PHONE PATCHES

MODEL 584-A. High-performance hybrid phone patch for automatic operation with any voice-operated transmit-receive system. Allows nulling receiver output more than 20 db below telephone at transmitter input. Takes crystal mike. Controls: mike/patch selector, transmitter input, receiver output, line null. 4 -ohm receiver input, high-impedance transmitter output. Supplied complete with phone plug and mike connector. $43 / \mathrm{sx}$ with phone plug and n
$5 \times 5^{\prime \prime}$. Shpg. wt., 4 lbs.
77 S 652 . $\$ 3.50$ Down. NET
34.95

MODEE 584-C. As above, but for quick connection to Collins KWS-1, 75A-4, KWM-1, 32S-1, $75 \mathrm{~S}-1$.
77 S 653. $\$ 3.50$ Down. NET
34.95

## MILLEN ANTENNA BRIDGE

MODEL 90672. Accurate, sensitive antenna bridge for measuring 5 to 50 -ohm unbalanced impedances and 20 to 2000 -ohm balanced impedances (with coils below). Use with RF inputs to 150 mc . Special differential capacitor provides high accuracy. $37 / 8 x$ $31 / 8 \times 55 / 8^{\prime \prime}$. Shpg. wt., $21 / 2$ lbs. 83 S 834. 84.50 Down. NET.
45.00

BALUNS. For coupling antenna bridge to balanced impedance, or for coupling transmitter with unbalanced output to balanced line. $4: 1 \pm 5 \%$. 80 -meter coil rated 150 w CW, others 420 w. CW ( 300 -ohm line). $33 / 8 \times 2^{\prime \prime}$ max. dia, Av. shpg. wt., $1 / 2 \mathrm{lb}$.

| No. | Type | Band | EACH |
| :---: | :---: | :---: | :---: |
| 835695 | 46672-10 | $10-11 \mathrm{M}$ | 7.50 |
| 835696 | 46672-15 | 15 M | 7.50 |
| 83 S 697 | 46672-20 | 20 M | 7.50 |
| 835698 | 46672-40 | 40 M | 7.50 |
| 835699 | 46672-80 | $80-75 \mathrm{M}$ | 7.50 |

## AMPHENOL FOLDED DIPOLES

Folded-dipole antennas cut for most popular amateur bands. Excellent broadband characteristics. Antenna sections use highstrength 300 -ohm twin-line with copperclad steel conductors. May be cut for shortwave, FM or other bands. (Use 20 -meter wave, FM or other bands. (Use 20 -meter
dipole for cutting to 15 -meter length, 40 dipole for cutting to $15-$ meter length, $40-$
meter dipole for the 9 or $12-\mathrm{mc}$ SW band.) meter dipole for the 9 or $12-\mathrm{mc}$ SW band.
Supplied with T-block assembly and 75 feet of twin-line feeder.

| No. | Type | Band | Feet | Lbs. | EACH |
| :---: | :---: | :---: | :---: | :---: | :---: |
| $98 \mathbf{S} 318$ | $139-010$ | 10 | 18 | 2 | 5.23 |
| $98 \mathbf{S x} 319$ | $139-020$ | 20 | 35 | 3 | 5.88 |
| $98 \mathbf{S x} 320$ | $139-040$ | 40 | 70 | 4 | 7.64 |
| $98 \mathbf{S X} 321$ | $139-080$ | 80 | 135 | 5 | 11.02 |

## JOHNSON VIKING "MATCHSTICK"

High-efficiency, vertical antenna for 80-75, 40, 20, 15 and 11-10 meters. Features motordriven, remote-controlled switch for matching antenna length to band selected. Radiator is 35 feet long-made of durable. hard-tempered, $2^{\prime \prime}$ O.D. aluminum. Preadjusted at factory. Low SWR on all bands -less than $2: 1$. Impedance is 52 ohms. For transmitter inputs up to 1 kw . With base, base insulator, matching unit, control box and nylon guy ropes. Less control cable and radials. Control box size,. $313 / 16 \times 35 / 8 \times 35 / 16^{\prime \prime}$. For $110-120$ volts, 60 cycles AC. Shpg. wt., 47 lbs. Express or truck only.
92 CZ 234. Only $\$ 12.95$ Down. NET 129.50
CONTROL CABLE FOR "MATCHSTICK" Belden \#8742. Shpg. wt., $31 / 2$ lbs. per 100 .
48W 892. PER FT. 5 C PER 100 FT... 3.82

## AMATEUR BEAMS, VERTICALS AND TOWERS



MODEL TB-7E "TRI-BAND." Rugged, full-size beam for outstanding performance on 10,15 and 20 meters. Employs only one transmis sion line-uses no coils or capacitors. Operates with 3 elements on 10 meters, 2 ele ments on 15 and 20.5 .5 db gain and 19 db $F / B$ ratio achieved on 15 and 20 meters, $\boldsymbol{d b}$ gain and $22 \mathrm{db} \mathrm{F} / \mathrm{B}$ ratio on 10 . Fanned dipole matches 52 -ohm coaxial line Fanned dipole matches 52 -ohm coaxial line handle 2 kw . Built of heavy steel and aluminum to withstand hurricane-force winds Has gusset mounting plate for $2^{\prime \prime}$ masts Boom: $14 \times 2$ O.D. Turning radius: 18 ft 56 lbs. Express or truck only.
92 CZ 358. \$15.80 Dowr. NET... 158.00


## TELREX BEAM ANTENNAS

MODEL 20M-316 20-METER BEAM. Mediumspaced 3 -element array designed to meet rigid commercial specifications. Coaxial half wave balun insures balanced radiation pattern and minimum TVI. Has taper-swaged elements for minimum wind drag. Includes stainless steel fastenings and hairpinresonated elements. Provides 8.7 db gain and $24 \mathrm{db} F / B$ ratio. Has best signal-tonoise and signal-to-interference ratios ever achieved in a unit of this kind for amateur communications. Matches 52 ohm line Gusset mounting plate fits $2^{\prime \prime}$ masts. Boom $18^{\prime} \times 2^{\prime \prime}$ O.D. Turning radius: 19 ft . Shpg. wt., 43 lbs. Express or truck only
92 CZ 272. \$13.00 Down. NET.
130.00

SINGLE-BAND BEAMS. All-aluminum beams for 10,6 and 2 meters-designed to withstand high winds and icing. Precision-tuned and matched for optimum performance. Employ coaxial half-wave baluns to match 52 -ohm line. First numeral in type number indicates frequency band, second numeral, number of elements. F/B ratio and gain are given in db . L is boom length in feet. $R$ is turning radius in feet. Express or truck only.

| No. | Type | F/B | Gain | L | R | Lbs | EACH |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 91 CZ 994 | $10 \mathrm{M}-3$ | 26 | 8.5 | 9 | $81 / 2$ | 14 | 39.50 |
| 92 CZ 250 | $6 M-3$ | 26 | 8.8 | 6 | 6 | 7 | 16.25 |
| 92 CZ 252 | $6 \mathrm{M}-6$ | 22 | 12.7 | $231 / 3$ | 13 | 20 | 57.50 |
| 92 CZ 219 | $2 \mathrm{M}-3$ | 18 | 9.4 | $25 / 6$ | 3 | $21 / 4$ | 5.95 |
| 92 CZ 273 | $2 \mathrm{M}-6$ | 22 | 12.7 | $81 / 2$ | $51 / 2$ | 4 | 12.50 |

## NEW HY-GAIN ANTENNAS

TRI-BAND ROTARY BEAMS. Cover 10,15 and 20 meters-employ aluminum-alloy elements, galyanized steel booms and compact, sealed traps. Match 52 -ohm line. Full-size "Trap Tribanders' (group 152TG) feature a special triaxial gamma-match system for $1: 1$ SWR with low SWR over each band. *8.3 db gain, $15-25 \mathrm{~F} / \mathrm{B} ;+5.8 \mathrm{db}$ gain, $12-20 \mathrm{db} \mathrm{F} / \mathrm{B}$ "Mini-Tribanders" (group 152MT) present better than 2:1 SWR and have superior gain and F/B's. L is boom length. R turn. rad. $1-\mathrm{kw}$ types take 2 kw P.E.P. Express or truck only.

| Stock No. | Type | Elements | Watts | $L$ | R | Shpg. Wt. | EACH |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| $92 \mathrm{CZ} 492-2$ | 152TG-3* | 3 | 1000 | $18^{\prime}$ | $18^{\prime} 31 / 2^{\prime \prime}$ | 63 lbs. | 99.75 |
| $92 \mathrm{CZ} 491-2$ | 152TG-2 $\dagger$ | 2 | 1000 | $7{ }^{\prime}$ | $15^{\prime}$ | 43 lbs . | 69.50 |
| $92 \mathrm{Cz} 498-2$ | 152MT-3 | 3 | 1000 | $12^{\prime}$ | $14^{\prime} 4^{\prime \prime}$ | 57 lbs. | 69.95 |
| 92.Cz 499-2 | $152 \mathrm{MT}-2$ | 2 | 1000 | $6^{\prime}$ | $13^{\prime} 4^{\prime \prime}$ | 34 lbs. | 49.95 |

MULTI-BAND VERTICALS. Pre-tuned verticals for operating on up to 5 bands without switching Weatherproof traps adjustable for phone or CW operation- -26 AV uses decoupling sleeve Less than 2:1 SWR, all bands. Match 52 -ohm line. Take $1 \mathrm{kw}, 2 \mathrm{kw}$ P.E.P. Include basc insulator and mast mount. Have: *‘sapacity hat," $\dagger$ ground plane, §side-ming. kit.

| Stock No. | Type | Bands (Meters) | Height | Shpg. Wt. | NET EACH |
| :---: | :---: | :---: | :---: | :---: | :---: |
| $92 C Z 490$ | $8 * 18-A V$ | $10,15,20,40,80$ | 38 ft. | 20 lbs. | 69.50 |
| 92 CX 488 | $* 14-A V$ | $10,15,20,40$ | 21 ft. | 12 lbs. | 27.95 |
| 92 CX 486 | $12-\mathrm{AV}$ | $10,15,20$ | 14 ft. | 9 lbs. | 19.95 |
| 92 CX 485 | $+26-\mathrm{AV}$ | 2,6 | 5 ft. | 7 lbs. | 16.95 |

92 CX 489. Type 14-RMK Mounting Kit. For 14-AV. Includes 5-ft. mast, radial-guy wires, base mount and hardware. Shpg, wt., 5 lbs. NET
9.95

92 CX 487. Type 12-RMK. As above, but for 12-AV. NET
8.95

SIN GLE-BAND BEAM ANTENNAS. Those for 20 through 6 meters feature triaxial Gamma-match and reactance-cancelling capacitor for $1: 1$ SWR, with low SWR over the entire band. Match 52 -ohm coaxial line. 2-meter type employs adjustable $O$-bar matching for 52 to 450 -ohm line. 10,15 and 20 -meter beams have hot-dipped, galvanized steel booms. $L$ is boom length, R is turning radius. Items with " $Z$ " in Stock No. shipped by express or truck only. Stock No. Type Band Elements DbGain F/B Ratio R L Shpg. Wt. EACH

| 92 CZ 484 | 203G | 20M | 3 | 8.5 | 24 | 19, ${ }^{1 / 1 / 2}$ | $\overline{17^{\prime} 8^{\prime \prime}}$ | 50 lbs . | 59.95 |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 92 CZ 483 | 153G | 15 M | 3 | 8.5 | 24 | $13^{\prime} 6^{\prime \prime}$ | $11^{\prime} 10^{\prime \prime}$ | 32 lbs. | 34.9 |
| 92 CZ 482 | 103G | 10 M | 3 | 8.5 | 24 | 11' | $8^{\prime} 8^{\prime \prime}$ | 21 lbs. | 24.9 |
| 92 cx 481 | 65G | 6 M | 5 | 10.5 | 26 | $7^{\prime \prime} 1^{\prime \prime}$ | $8^{\prime} 8^{\prime \prime}$ | 10 lbs . | 15.95 |
| 92 CX 480 | 210 | 2M | 10 | 12 | 30 | 5 $5^{\prime \prime}$ | $9^{\prime} 4^{\prime \prime}$ | 7 lbs. | 12.95 |

92 CX 493. Stacking Bars. For 2-210 beams. Shpg.wt., 2 lbs. NET.

## E-Z WAY TILT-OVER TOWER



GPRBS 50-60. This tower goes way up to snag DX, but can be cranked down for work on the antenna. Locks at heights up to 58 ft . Made of steel rc 1 and structural pipe, electrically welded and galvanized. Mounts in 5 -ft. deep hole without concrete -no guying. Will support full-sized beam in 50 -mph. winds. Shpg. wt., 480 lbs. Specify rotator to be used (allow $\$ 20.00$ additional for expanded mount for CDR, Telrex 200 or rotators of similar size). Express or truck F.O.B. Tampa, Fla., or Chicago, whichever is nearer. Send full remittance on cash ordersno C.O.D. We can supply E-Z Way Towers from $40^{\prime}$ to $120^{\prime}$-write for details.
92 SZ 246. \$29.50 Down. NET. . 295.00

## MOSLEY ANTENNAS

TA-33. High-gain. broadbanded, 3-element beam-provides top performance on 10. 15 and 20 meters. Up to 8 db gain with 25 db , or better. F/B. Streamlined, weatherproof traps easily take $1 \mathrm{kw} .14^{\prime}$ aluminum boom has full $1 / 8^{\prime \prime}$ wall thickness. Matches 52 -ohm line, less than 1.1:1 SWR at resonance. Fits masts up to $11 / 2^{\prime \prime}$. Turning radius, $151 / 2 \mathrm{ft}$. Wt., 53 lbs. Express or truck only.
92 CZ 360. \$9.78 Down. NET.
97.75

92 CZ 478 . TA-33 "Jr." 3-el. 300-watt beam. Up to 8 db gain, $25 \mathrm{dbF} /$ B. $12^{\prime}$ boom. $143 / 4^{\prime}$ t.r. Express or truck. 28 lbs. NET.... 69.50

V-4-6. Cover 10 to 40 meters with this verti-cal-no bandswitching. Low SWR with flat response. Employs weatherproof traps and base-loading coil. Rated 1 kw . Aluminum tubing telescopes to 20 ft . With mtg. plate, hardware, nylon guy rope. 12 lbs .
92 CX 363. \$2.74 Down. NET.
27.39

76 S 073. D-4BC. $80-75$ meter base loading coil for above. 3 lbs. NET. . . . . . . . . . . 14.65



## JAMES KNIGHTS "STABILIZED CRYSTALS"

TYPE H-73 AMATEUR CRYSTALS. In black phenolic holder. Pin spacing $486^{\prime \prime}$. Pin dia., $.093^{\prime \prime}$. Tolerance, $\pm .03 \%$. Size, $11 / x^{13} / 16 \times 7 / 16^{\prime \prime}$. Specify frequency. Supplied $\pm 5 \mathrm{kc}$ (except * $\pm 30 \mathrm{kc}$ ) of frequency specified. †The H-73 crystals listed under Stock No. 99 S 257 are cut to the exact frequency you specify. Allow 30 days for delivery. Wt., 3 oz .

| Stock No. | Frequency (mc) | Stock No. | Frequency (mc) | EACH |
| :---: | :---: | :---: | :---: | :---: |
| 99 SS 266 | 3.5-3.7 \& 3.75-4.0 | 99 SS 255 | 13.48-13.63* | 2.95 |
| 99 SS 254 | 6.25-6.8 | 99 SS 268 | 14.0-14.8* |  |
| 99 SS 267 | 7.0-7.15 \& 7.2-7.5 | 99 SS 294 | 3.7-3.75 |  |
| 99 Ss 259 | 8.0-8.23 | 99 SS 295 | 7.15-7.2 |  |
| 99 SS 296 | 8.34-9.0 | 199 SS 253 | 1.8-2.0 |  |

99 S 257. $1.8-20.0$ mct. EACH . . . . . . . . . . . . . . . . . . . . . 4.80 TYPE H-173 AMATEUR CRYSTALS. For oscillators with low crystal current. Pin spacing, $486^{\prime \prime}$. Pin dia.,. $050^{\prime \prime} .3 / 4 \mathrm{x}^{3} / \mathrm{x}^{1 / 1 / 4^{\prime \prime}}$. Special order only. Allow 30 days for delivery. Specify frequency. Shpg. wt., 3 oz.

| Stock No. | Frequency | Supplied Within: | EACH |
| :---: | :---: | :---: | :---: |
| 99263 | $21-40 \mathrm{mc}$ | $\pm 15 \mathrm{kc}$ | 4.95 |
| 99 S 264 | 40.54 mc | $\pm 25 \mathrm{kc}$ | 5.95 |

TYPE H-93 FREQUENCY-STANDARD CRYSTALS. Black phenolic base; anodized aluminum can. Silver-plated crystal. Pin spacing, .486" Pin dia., $.093^{\prime \prime}$. Tolerance, $\pm .005 \%$. $2^{\prime \prime}$ long; $11 / 8^{\prime \prime}$ dia. 3 oz . 6.95 99 S 284. 100 kc . 99 S 287. 1000 kc . NET EACH.
6.95 SPECIAL-APPLICATION CRYSTALS. Size, $3 / 4 x^{23} / 3 x^{5} / 16^{\prime \prime}$. Pin spacing. .486". Pin dia., 093. *3rd overtone type. Av. shpg. wt., 3 oz.

| Stock No. | Type | Frequency | Tolerance | Application | EACH |
| :---: | :---: | :---: | :---: | :---: | :---: |
| 995286 | H-17L | 4.5 mc | $\pm .005 \%$ | TV alignment | 4.80 |
| 99 S 258 | H-17L* | 27.255 mc | $\pm .03 \%$ | Radio control | 4.95 |

## BLILEY SPECIALIZED SERVICE CRYSTALS

TYPE MC-9 ALIGNMENT CRYSTALS. For use as marker in sweep generators or for calibration purposes. Phenolic holder, $111 / 64 \times 13 / 16 \times 7 / 6^{\prime \prime}$. Tol., $\pm .02 \%$. Pin spacing, $.486^{\prime \prime}\left(1 / 2^{\prime \prime}\right)$; dia., $.093^{\prime \prime} .3 \mathrm{oz}$.
99 S 143.5 .0 mc . 99 S 145.10 .7 mc . NET EACH.
3.95

TYPE MC. 7 SHIP-TO-SHORE CRYSTALS. Available from 2.0 to 3.5 mc . Tol., $\pm .02 \%$. Holder is $13964 \times 11 / 8 \mathrm{x}^{21} / 32^{\prime \prime}$. Pin spacing is $.750^{\prime \prime}$. Pin dia., $.125^{\prime \prime}\left(1 / 8^{\prime \prime}\right)$. Specify frequency or location of shore station. On special order only. Allow 30 days for delivery. 3 oz .
99 S 165. NET
7.50

MLIEN LOW-LOSS STEATITE CRYSTAL SOCKETS
Phosphor-bronze contacts; tinned lugs. Av. shpg. wt., 2 oz.

| Stock No. | Type | Pin Spacing | Pin Diameter | NET EACH |
| :---: | :---: | :---: | :---: | :---: |
| 72 H035 | 33102 | .487 ${ }^{\prime \prime}$ | . $094^{\prime \prime}$ | 364 |
| 72 H 075 | 33302 | . 487 " | .050" | 24¢ |
| 72 H029 | $3300{ }^{\circ}$ | $3 / 4{ }^{\prime \prime}$ | .125" | 364 |

## MOSLEY ADAPTERS

TYPE 75-5 ADAPTER. Adapts $3 / \mathbf{4}^{\prime \prime}$-spaced holders to $.486^{\prime \prime}$ sockets. 72 C 707. NET
TYPE 5-75 ADAPTER. Adapts $.486^{\prime \prime}$-spaced holders to $3 / 4^{\prime \prime}$ sockets.
72 C 708. NET.


A TUBE COOLING MOTOR AND FAN. Extends tube life by keeping envelope and seals cool. Permits more complete shielding of RF amplifiers, etc., without depending on convection cooling. Shaded-pole induction motor, $2400 \mathrm{rpm} .219 / 32 \times 2{ }^{11} / 3 \times 21 / 8^{\prime \prime}$. 4 -blade fan. dia., $21 / 2^{\prime \prime}$. For operation from 110-120 volts, 50-60 cycle AC. Shpg. wt., $11 / 4 \mathrm{lbs}$.
72 P 715 . NET
2.99
(B EIMAC CONTACT FINGER STOCK. Silver-plated alloy stripping.
B. Makes excellent contact; prevents RF leakage through cabinet doors. Secured mechanically or by soldering. 12 oz .
42 P 086. $3^{\prime}$ long; $17 / 32^{\prime \prime}$ wide. NET.
4.95

42 P 087. $3^{\prime}$ long; ${ }^{31 / 32^{\prime \prime}}$ wide. NET. . 5.40
42 P 088. $3^{\prime}$ long; $13 / 8^{\prime \prime}$ wide. NET . . . . . . . . . . . . . . . . . . . . . . 6.00
(c)

AMPHENOL TYPE $214-076$ TRANSMITTING TWIN-LINE. 300-ohm air-core tubular. 7/26 copper conductors. Rated 1 kw RF. Shpg. wt., 100 ft ., $31 / 2 \mathrm{lbs} .100 \mathrm{ft}$. minimum.
49 TX 416 . 100 ff . coil. NET
6.23

49 W 409. Over 100 ft . Per 100 ft.
AMPHENOL 214-023 TRANSMITTING TWIN-LINE. 75 ohm. Handles up to 1 kw RF power. Propagation factor, $71 \%$. Attenuation: 1.40 db per 100 ft . at 28 mc . Shpg. wt., 100 ft ., 4 lbs.
49 W 495. NET PER FOOT. $7 c$

D HALLICRAFTERS "S" METER KIT. An easily installed " $S$ "' meter for panel mounting. For use with Hallicrafters S-40B, S-20R, S-40A, SX-62, S-77, S-77A, S-85, etc., as well as other receivers. Can be installed in any RF or IF stage with AVC action. $31 / 4 \times 23 / 4^{\prime \prime}$ meter has black dial with white markings. Two-scales; has microvolt scale calibrated from $0-1000 \mathrm{~K}$; " S '" unit scale is calibrated to 80 db over calibrated from 0 . Requires $21 / 2^{\prime \prime}$-diameter round hole for meter barrel and four $1 / 8^{\prime \prime}$ S9. Requires $21 / 2^{\prime \prime}$-diameter round hole for meter barred and individual
holes for mounting studs. Can be separately mounted in meter case (see page 238). Kit consists of 5.0 milliampere meter, 500 -ohm potentiometer for electrical zero-set, one 82 -ohm $1 / 2$-watt $10 \%$ resistor, one 330 -ohm $1 / 2$-watt $10 \%$ resistor, and instructions. Shpg. wt., 1 lb .
97 S 740 . NET.
12.00


TRIPLEIT 3256 FREQUENCY METER. Bandswitchingcovers 80, 40, 20, 15 and 10 meters. Checks fundamental frequency of oscillating circuits, parasitics, harmonics, neutralization, spurious RF, and AM modulation. Germanium crystal and DC milliammeter. Direct panel calibration. Gray enamel finish. Case $71 / 2 \times 21 / 2 \times 21 / 4^{\prime \prime}$. Shpg. wt., 1 lb .
66 F 005 . NET.
19.11

BUD FCC-90A FREQUENCY CALIBRATOR. Consists of 100 -kc crystal oscillator, trimmers, built-in power supply. Produces $100-\mathrm{kc}$ signals across power supply. Produres amateur band through 30 mc . A valuable station accessory-marks band edges. Output lead attaches to antenna post of receiver. $51 / 4 \times 3 \times$ $21 / 4^{\prime \prime}$. For operation from $105-125$ volts, $50-60$ cycle AC, or DC. Shipg. wt., 2 lbs.
73 S 043. NET.
20.07


## SWR Indicators

M. C. JONES MODEL 261.1 "MICROMATCH" ANTENNA COUPLER. For use with Model 262 indicator for measuring RF power and indicator for measuring RF powne Rated for 1 kw at $1: 1$ VSWR. 52 ohm, coaxial UHF type connectors. Range: $5-225 \mathrm{mc}$. Less than 0.1 db power loss. 3 x $43 / 4^{\prime \prime}$. Shpg. wt., 1 lb.
99 S 117 . NET.
22.50

MODEL 262 INDICATOR. Measures relative power, forward or reflected; 0-10-100-1000 watts. $41 / 4 \times 41 / 4 \times 49 / 16^{\prime \prime}$. Shpg. wt., 2 lbs.
99 S 118 . NET.
14.50

UNIVERSAL SERVICE MODEL KW-4M 52-OHM COAX RATIOMETER. New SWR indicator that shows you SWR at all times. Can be permanently installed in line to any coaxfed antenna or antenna tuner. Frequency range: 2 to 200 mc . Power range: 10 to 1000 watts. Shpg. wt., 5 lbs.
94 S 885 . NET.
45.00

94 S 886. As above, but 72-ohm. NET. 45.00

## General Crystal All-Band Antennas and Coils

All-band loading coils and antennas. Permit operation on 80 through 10 meters with one $109-\mathrm{ft}$. dipole and untuned feeder. SWR is $3: 1$ or better when operated within 100 kc of resonance. Peaked for either CW or phone bands. *Transmitter input.
COIL SETS. Complete with instructions.

| Stock No. 1 Type |
| :--- |
| Application | Wt. | Per Pr. |
| :--- |

 $83 \mathrm{~S} 8895 \mathrm{FCC}-\mathrm{C} / \mathrm{kw} \mathrm{CW} .2 \mathrm{lbs} .12 .50$ 83 S $886|\mathrm{HC}-5 \mathrm{~F}|{ }^{*} \mathrm{l} \mathrm{kw}$ phone 3 lbs. 19.95
COMPLETE ANTENNAS. Wired and tested. Include copperclad wire, all insulators, coil set, $88-\mathrm{ft}$. 72 -ohm twin lead. Overall length of dipole, 111 ft . Peaked for phone bands. TYPE 5BA-F. $1 / 4-\mathrm{kw}$ input. Wt., 10 lbs .
92 C 233. NET.
27.50

TYPE HA-5F. 1 kw input. Wt., 11 ibs .
92 C 226. NET.
33.95


(A)
MODEL 250-23 "MATCHBOX" ANTENNA COUPLER. For 80 through 10. Matches balanced antennas from 25 . to 1250 ohms and unbalanced or single wire-antennas from 25 to 3000 ohms. Nominal input impedance 52 ohms, rated at 275 watts. Builtin transmit-receive relay. Has adjustment for matching antenna to receiver. Coaxial input. $97 / 8 \times 101 / 2 \times 7^{\prime \prime}$. Wt., 11 lbs input. $97 / 8 \times 101 / 2 \times 7$.
99 SX 026 . NET.
54.95

MODEL 250-30 KILOWATT "MATCHBOX". Similar to above, but rated at 1000 watts. Handles unbalanced lines from 50 to 1206 Handles unbalanced lines from 50 to 1200
ohms, balanced lines from 50 to 2000 ohms. ohms, balanced lines from 50 to 2000 ohms.
Includes time dolay system for relay, providing "fast-make, slow-break" action. $171 / 4 \mathrm{x}$ $121 / 8 \times 10^{7 / 8 \prime}$. Wt., 27 lbs.
99 SZ 016 . NET
124.50

B MODEL 250-37 DIRECTIONAL COUPLER. For continuous monitoring of SWR and relative power in 52 -ohm lines. Rated 1 kw $1.7-150 \mathrm{mc}$. Use with multimeter, or indicator below. $25 / 16 \times 61 / 4^{\prime \prime} .2$ lbs.
92 S 380 . NET.
II. 75

250-38 INDICATOR. $43 / 8 \times 4 \times 41 / 4^{\prime \prime} .4 \mathrm{lbs}$
92 S 379. NET
25.00

[H] "ORIGINAL." A precision-built. semiautomatic key for all speeds. Minimum effort for smooth, rapid sending. Preferred and used by veteran operators. Chromeplated mechanism. Gray finish cast-iron base. Less cord and wedge. Wt., 5 lbs. 76 S 035. NET
19.95
deluxe "Original." As above, but jeweled bearings, chrome-plated base. Wt., 5 lbs. 76 S 038. NET
23.95
"CHAMPION." Inexpensive, semi-automatic key. Carefully designed for smooth, easy operation. Mechanism is chrome plated; base is gray crackle finish. Less cord and wedge. Shpg. wt., 4 lbs. 76 S 036. NET
15.95

K
STANDARD "BLUE RACER". Small and lightweight. Precision construction throughout for extremely smooth operation. Chrome-plated mechanism. Gray base. Less cord and wedge. Shpg. wt., 4 lbs.
19.95

76 S 045 . NET
DELUXE "BLUE RACER". As above, but jeweled bearings, chrome base. 4 lbs.
76 S 046. NET
23.95

CORD AND WEDGE SET. Shpg. wt., 3 oz .
76 S 156. NET
1.75

CARRYING CASE. Fits all Vibroplex keys except "Blue Racer." Shpg. wt., 2 lbs. 76 S 037. NET
6.75

## Johnson Accessories


(D)

(C)MODEL 250-39 T-R SWITCH. Switches antenna from receiver to transmitter electronically. Rated at 4000 watts peak power. Uses 6BL7 (supplied) for improved receiver isolation. Broadband, double-gated circuit requires no tuning. Coax fittings. Has nylon tip-jack for connecting scope to internal RF-jack for conne. $43 / 16 \times 43 / 8 \times 55 / 6^{\prime \prime}$. For $110-120 \mathrm{v}$., RF probe. ${ }^{43 / 16 \times 43 / 8 \times 55 / 16^{\prime \prime}}$.
$50-60$ cycle AC. Wt., 5 lbs.

## 94 S 858. NET

27.75
(D) MODEL 250-20 LOW-PASS FILTER. TVI
filter with 4 shielded sections. Handles 1 kilowatt, $100 \%$ modulated. 75 db or more attenuation of harmonic and spurious frequencies above 54 mc -insertion loss is less than 0.25 db . Coax connectors. Impedance: 52 ohms. $9 \mathrm{x} 25 / 16^{\prime \prime}$ dia. Shpg. wt., 3 lbs .
98 S 055. NET
14.95

MODEL 250-28 CRYSTAL CALIBRATOR. Accurate and stable $100-\mathrm{kc}$ crystal standard. Produces 100-kc check points up to 55 mc . With 6BH6 tube, crystal, cable and extension leads. $33 / 8 \times 21 / 2 \times 11 / 2^{\prime \prime}$. Requires 6.3 v . @. .15 amp and $150-300 \mathrm{v}$. DC @ 2 ma. Shpg. wt., 1 lb
99 S 039 . NET
17.95

MODEL 250-25 SIGNAL SENTRY. For monitoring of phone or CW transmissions on all bands. Requires no tuning. Can also be used as code practice oscillator. Plug provided fits headphone jack of receiver; headphones plug into jack on Signal Sentry. RF probe coupled loosely to transmitter provides signal. Mutes receiver output; an ideal keying monitor for break-in operation. Requires 250 v . DC at 5 ma. 6.3 v . at $0.6 \mathrm{amp} .37 / 8 \times 35 / 8 \times 33 / 4^{\prime \prime}$. Uses 12 AX 7 and 12AU7. All cables and connectors are included. Shpg. wt., 3 lbs.
99 S 017. NET
22.00

G MODEL 250-24 STANDING WAVE RATIO G BRIDGE. A valuable aid in the adjustment of antenna coupler and transmission line for maximum efficiency. Helps to minimize standing wave ratio to assure effective operation of low-pass filter. 52 ohm input can be changed by replacing resistor) Supplied complete with coax connectors and color coded phone tip jacks for connec tion of 0-1 ma meter (not supplied). Size 25/16x41/32". Shpg. wt., 1 lb .
99 S 028. NET
9.75

Johnson Speed-X Keys ond Buzzers


MODEL 114-320 HEAVY-DUTY KEY. Deluxe key built to very rigid specifications for smooth, comfortable sending. Large. chrome-plated key arm suspended from hardened steel bearings, $1 / 4^{\prime \prime}$ silver contacts. Adjustable spacing and tension. Heavy brass connector concealed under base. Black diecast base. Shpg. wt.. 2 lbs.
76 S 058. NET
4.70

M MODEL 114-110 SOUNDER/KEY. Moderately priced telegraph sounder with smooth operating key. An excellent unit specially designed for Morse-code sending and receiving practice. Rugged, dependable construction, throughout. Provides clear easy-to-read signal. Has steel sounder plate. Brass sounding bar. Bridge has black enamel finish. Mahogany finished wood base. Brass binding posts. Sounder resistance is 4 ohms. Shpg. wt.. 2 lbs.
76 S 066. NET
14.95

MODEL 114-112 TELEGRAPH SOUNDER. Not illustrated. Designed for instant response. Brass sounder provides strong, clear signal. Steel bar frame with black enamel finish. Brass bridge and adjustment screws with lacquer finish. Black lacquered steel sounder plate. On mahogany finished wood base. Non-slip rubber mounting feet; won't mar tabletop. Sounder has 4 ohms resistance. Brass binding posts for convenient connection. Shpg. wt., 3 lbs. 76 S 067. NET
9.95

MODEL 114-500 DELUXE SEMI-AUTOMAT
IC KEY. A smooth operating key with $1 / 8^{\prime \prime}$ contacts. Vibrator arme posts, circuit closing switch and all machine parts are chrome plated. Adjustable from lowest to highest speeds. Has five adjustments with lock nuts -fiber paddles adjust separately to best height. Mounted on black-wrinkle steel base. $61 / 4 \times 31 / 2 x^{1 / 2 "} .5$ lbs.
76 S 068 . NET.
17.95

MODEL 114-501 KEY. New, restyled key. $1 / 4^{\prime \prime}$ contacts and chrome base. 5 lbs.
76 S 06?. NET
20.65

MODEL 114-520 SEMI-AUTOMATIC KEY
A semi-automatic key for smooth, ef fortless radiotelegraph sending. Contact spacing and sliding weight easily adjustable to desired sending speed. Ruggedly constructed for long dependable use. Has $1 / \mathbf{s}^{\prime \prime}$ silver contacts. All hardware is heavily chrome plated. Die-cast base finished in black wrinkle enamel. Rubber feet prevent marring finished surfaces and keep "bug" stationary. Shpg. wt., 4 lbs. 76 S 065. NET.

I3.95
R MODEL 114-400 HIGH-FREQUENCY BUZR ZER. Use with hand key for code practice. A very effective low-cost unit. Ample volume for several listeners. Screw adjustment provides variable tone. Require 3 y. battery combination. Shpg. wt., 5 oz . 76 S 060. NET.
1.85

## VHF GEAR - SELECTED AMATEUR ACCESSORIES


(A) TR-20/50 TRANSMITTER. 20-25 watt transmitter for the 6 -meter A band. Uses $8-\mathrm{mc}$ crystals in Pierce oscillator-eliminates tricky overtone circuits. No frequency multiplication in final stage-reduces radiated harmonics. Has 6AU6 oscillator, 5763 buffer-doubler, 6360 amplifier, 12 AX 7 speech, 2-6AQ5 modulators. Requires 6.3 v @ 3.89 ampand 250 v . DC @ $1 / 4 \mathrm{amp}$. Matches 52 or 72 -ohm coaxial lines. $91 / 2 \times 51 / 2 \times 5^{\prime \prime}$. With crystals. Shpg. wt., 5 lbs.
83 S 856. NET.
59.95

TR-20/144 TRANSMITTER. Same as above, but for 2 meters-has additional 5763 buffer-multiplier.
83 S 854. NET.
59.95

B PTR-2 POWER SUPPLY. For above transmitters and the Tecraft B. converters. Delivers 6.3 volts @ 6 amps .6 .3 volts @ 4 amps . and 250 volts DC@ $1 / 4 \mathrm{amp}$. Has send-receive switch. $53 / 4 \mathrm{x}$ $91 / 2 \times 6^{\prime \prime}$. For $110-120$ v., 60 cycle AC. Shpg. wt., 17 lbs.
83 S 855 . NET
39.95

C M-6 6-METER CONVERTER. The "Mini-Verter" for 6 meters. A 0 natural for mobile use. Chassis is only $21 / 4 \times 5 \times 21 / 4^{\prime \prime}$, excluding tubes and crystal. Uses wide-band circuit to achieve $1-\mathrm{mc}$. coverage of the 6 -meter band. Tune broadcast receiver from 550 kc to 1550 kc to cover $50-51 \mathrm{mc}$. Crystal-controlled oscillator. Requires 6.3 v . @ $3 / 4 \mathrm{amp}$ and 100 v . DC @ 8 ma . Shpg. wt., 3 lbs :
83 S 852. NET
25.95

CC-50 DELUXE 6-METER CONVERTER. Not illustrated. 36 db gain sensi tivity; $1 / 10 \mu \mathrm{v}$ for 6 db SNR. Noise figure: 4 db . Has $4-\mathrm{mc}$ passband,
 Requires 6.3 v .@2 amps and $150-250 \mathrm{v}$. DC @ $43 \mathrm{ma} .50-54 \mathrm{mc}$ coverage. With tubes and crystal. $91 / 2 \times 3 \times 41 / 2^{\prime \prime}$. Wt., 5 lbs . 83 S 858. NET
44.95

CC-144 2-METER CONVERTER. As above, but 2 meters. ( $144-148 \mathrm{mc}$ ) 83 S 857. NET
44.95

CC-108 108-MC DELUXE CONVERTER. Satellite-tracking converter for use with general-coverage receivers. IF output frequency: 14 mc . (Other specs same as $\mathrm{CC}-50$ ).
83 S 859. NET.
44.95

P-1 POWER SUPPIY. Not illus. For Tecraft converters above. Delivers 6.3 v. AC @ 3 amps and 200 v . DC @ 50 ma . Size, $51 / 2 \mathrm{x}$ $91 / 2 \times 5^{\prime \prime}$. For $110-120$ v., 50-60 cycle AC. Shpg. wt., 6 lbs.
83 S 853. NET
19.95

D NEW SWR BRIDGE. Effective to 150 mc . Standard coax connectors. Measures SWR on 52 or 72 -ohm lines. Wt., 1 lb .
83 S 595. NET
8.95


Conelrad units will soon be used for emergency weather warning as well as Civil Defense. Local U.S. Weather Bureaus will warn local radio stations of impending storms. Stations then send out signals to Conelrad sets which trip speakers, lights or alarms to call listener's attention to storm warnings about to be broadcast.
AMECO MODEL CD-1. Low-cost Conelrad monitor. Converts any radio having AVC into effective alarm system. Loss of broadcast station carrier removes AVC from trigger-tube causing warning tone. No broadcast signal is heard during monitoring periods. Function switch mutes radio for monitoring. $61 / 4 \times 33 / 4 \times 2^{\prime \prime}$. For $110-120 \mathrm{v}$. $50-60$ cycle AC. Shpg. wt., $21 / 2$ lbs.
94 S 888. NET.
14.95

REGENCY TRANSISTORIZED MODEL CD-2. Battery-powered Conelrad and broadcast receiver. 3-transistor TRF circuit provides over 500 hours of operation in C-D monitoring position. $3^{\prime \prime}$ speaker is muted in C-D position; audio note is produced only when carrier is interrupted. Less batteries; below. $43 / 4 \times 31 / 4 \times 41 / 16^{\prime \prime} .21 / 2 \mathrm{lbs}$.
99 S 164 . NET.
29.50

53 J 031 . Burgess $Z$ cell. 1 required. 3 oz . NET.
1.9 c
1.30
BUD LF-601 LOW-PASS FILTER. For 52 or 72 -ohm lines. Handles 1 kw of RF. Cutoff: 42 mc . Minimum attenuation of 85 db , above $54 \mathrm{mc}, 93 \mathrm{db}$ above $70 \mathrm{mc} .12 \times 21 / 2 \times 21 / 4^{\prime \prime}$. Wt., $21 / 2 \mathrm{lbs}$. 73 S 047. NET.
17.25
[F BUD HF-600 HIGH-PASS FILTER. High-pass filter for TV set. Rejects signals below 42 mc . Reduces interference from lowfrequency sources. For 300 -ohm line. $31 / 4 \times 21 / 8 \times 11 / 8^{\prime \prime} .6 \mathrm{oz}$.

## 73 S 046. NET

4.85

G B \& W 425 LOW-PASS FILTER. 52 ohms. 1 kw RF, 2 " M "-derived G end sections; 4 constant-K center sections. 85 db attenuation on TV channels. $11 \times 3 \times 2^{\prime \prime} .11 / 2$ lbs.
77 S 613. NET
16.76

MODEL 426. As above, but for 72 -ohm lines.
77 S 614. NET.
16.76
[H] AMECO HP-45 HIGH-PASS FILTER. Attenuates all signals below 45
mc. Reduces TV interference, 40 db attenuation at 14 mc and below; 20 db at 10 meters. 300 -ohms. $11 / 8 \times 7 / 8 \times x^{3 / 4} 4^{7} .3 \mathrm{oz}$.
77 S 673. NET
95c
NEW AMECO HPX-45 HIGH-PASS FILTER. Not illus. Deluxe, 2 -section version of above. Cutoff frequency, 45 mc . Negligible insertion loss. 80 db attenuation at 14 mc and below; 40 db attenuation at 10 meters. For use with 300 -ohm twin line. $21 / 2 \times 2 \times 11 / 2^{\prime \prime}$. Wt., 5 oz .
77 S 686. NET
2.25
(J) AMECO LN-2 LOW-PASS FILTER. Handles up to 200 watts RF For 52 to 72 -ohm coaxial cable. Has $2-\mathrm{SO}-239$ connectors. bracket. etc. Aluminum case. $45 / 8 \times 23 / 8 \times 13 / 4^{4}$. Wt., 1 lb .
77 S 675 . NET
3.75

LN-1 LOW-PASS FILTER. As above, but has RCA-type phono jacks. 77 S 674. NET
2.25

## Books for the Beginning Amateur



GATEWAY TO AMATEUR RADIO. Four A.R. R.L. books for the Novice. How to Become a Radio Amateur. How to get on the air, obtain a license, etc. 148 pages. Learning the Radio-Telegraph Code. Covers sending and receiving. 48 pages. License Manual. FCC exams, answers to probable exam questions, etc. 111 pages. Operating an Amateur Radio Station. Correct operating procedures, etc. 16 pages. Size, $61 / 2^{2} 81 / 2^{\prime \prime}$
37 K 369. Postpaid in U.S.A.
1.50

RADIO AMATEUR'S LICENSE MANUAL. Standard reference for the radio enthusiast preparing for his Amateur license. Covers FCC exams for all Amateur licenses: Novice, Technician, Conditional, etc. Contains up-to-date government regulations. answers to probable license exam questions, and valuable information about regulations. $61 / 2 \times 91 / 2^{\prime \prime} .111$ pages.
37 K 555. Postpaid in U.S.A.
50c
A COURSE IN RADIO FUNDAMENTALS. A study guide, examination book, and laboratory manual with text based on the latest edition of the Radio Amateur's Handbook. Contains 36 study assignments in radio theory. Assignments are arranged in logical order to give the reader a practical course in electronic and radio fundamentals. Each reader a practical course in electronic and radio fundamentals. Each and Magnetism; Ohm's Law; Resonant Circuits; Vacuum-Tube Fundamentals: Modulation; etc. 103 pages. $61 / 2 \times 91 / 2^{\prime \prime}$.

## 37 K 564. Postpaid in U.S.A.

I. 00
learning the radiotelegraph code. Trains students to handle code skillfully and with accuracy, both in sending and receiving. Employs a system of instruction which quickly brings the student an understanding of this new "language." Chapters include: HighSpeed Operation; Operating on the Air; Code Practice; Class Instruction, etc. 48 pages. Size, $61 / 2 \times 91 / 2$.
37 K 562. Postpaid in U.S.A

## Pennwood 24-Hour Station Clock

MODEL 100-1-241/4. Numeral type, 24hour station clock. Ideal for Amateur stations, commercial stations, etc.clearly shows exact time at a glance. Ivory plastic case. $4 \times 73 / 4 \times 4^{\prime \prime}$. For 110 120 v.. 60 cycle AC. Wt. 4 libs. 120 B., 60 cycle AC. Wt., 4 lbs .
78 . NET Incl. F.E.T.. .
MODEL $100-\mathrm{J}-24 \mathrm{H} 1 / 4$. Ebony case. 78 B 340. NET Incl. F.E.T.
15.84
14.85



Cade
Courses

AMECO CODE COURSES. Three courses. Junior Course: five 45 or $78-\mathrm{rpm}$ records or one $331 / 3-\mathrm{rpm} \mathrm{LP}$; from start to $71 / 2 \mathrm{wpm}$. Advanced: six 45 or 78 -rpm records or one $331 / 3$ LP; $81 / 2$ to 18 wpm . Senior: eleven 45 or $78-\mathrm{rpm}$ records or two $331 / 3-\mathrm{rpm}$ LP's; from start to 18 wpm. All courses include a 28-page manual with FCC-type exams.

| Stock No. | Course | Record Speed |  | Shpg. Wt. | NET |
| :---: | :---: | :---: | :---: | :---: | :---: |
| 775616 | Junior | 78 | rpm | 4 lbs. | 6.95 |
| 775647 | Junior | 45 | rpm | $11 / 2 \mathrm{lbs}$. | 5.95 |
| 765075 | Junior | 331/3 | rpm | 1 lb . | 4.95 |
| 775619 | Advanced | 78 | rpm | 4 lbs. | 5.95 |
| 77 S 648 | Advanced | 45 | rpm | $11 / 2 \mathrm{lbs}$. | 4.95 |
| 765076 | Advanced | 331/3 | rpm | 1 lb . | 4.95 |
| 775617 | Senior | 78 | rpm | 7 lbs. | 11.50 |
| 775649 | Senior | 45 | rpm | 4 lbs. | 10.50 |
| 765077 | Senior | 331/3 | rpm | 2 lbs. | 9.50 |


(A) JOHNSON MODEL $114-310$ STANDARD KEY. Precision-built, moderately priced key. Excellent for code practice and for use with transmitters. Heavy die-cast base is durably finished in handsome black wrinkle enamel; mechanical parts are nickel-plated. $1 / 8^{\prime \prime}$ silver contacts. Dual adjustments for tension and contact spacing; adjustable bearings. Includes provision for plugging in semi-automatic keys. Shpg. wt., 2 lbs 76 S 055. NET.
3.10
(B) JOHNSON MODEL 114-300 PRACTICE KEY. A well-built, low-cost general purpose key. Ideal as a code practice key for the beginner. Brown molded phenolic base and knob. Adjustable key arm, spring and smooth-action bearings-easily adjusted tension and contact spacing. $1 / 8^{\prime \prime}$ silver contacts. With beginners code card. Shpg. wt., 8 oz .
76 S 053. NET
2.25
C. JOHNSON MODEL 114-450 BUZZER CODE

PRACTICE SET. Consists of key and constant high-frequency buzzer mounted on brown bakelite base. Screw adjustment provides variable tone. Key has silver contacts. Can be used individually or in pairs facts. Code practice. Requires 3 v . DC ( $2-11 / 2$ for code practice. Requires $3 \mathrm{v} . \mathrm{DC}(2-11 / 2$
v . batteries). Shpg. wt., 2 lbs . v. batteries). Shpg. wt., 2 lbs.

76 S 059. NET.
4.90

NEW-ALLIED'S COMPLETE 10-LESSON CODE COURSE ON SINGLE $12^{\prime \prime}, 331 / 3-$ RPM RECORD. Learn to send and receive well enough to pass novice or general class code examina-tions-with this single record. 5 lessons per side-takes you from start to 15 wpm . Back of record jacket contains International Morse Code table. Includes 20 -page Allied instruction book. Shpg. wt., 1 lb . 77 S 684. NET.
4.49

ALLIED'S 5-RECORD CODE COURSE. "EyeEar' method of learning code at homeeye follows the letters as the ear hears the sounds. Five $10^{\prime \prime}, 78 \mathrm{rpm}$ records recorded on each side. From 2 to 15 wpm in 10 lessons. Includes album and instruction book. Shpg. vt., 6 lbs .
77 S 643 . NET
5.95


## Code Practice Oscillators

(D) JACKSON 562 CODE PRACTICE OSCILLA-
(D) TOR. Low-cost transistor code oscillator for self-practice, teaching or monitoring. For use with external magnetic phones and key. Employs p-n-p junction transistor. With tone adjustment. Less battery, see below. $61 / 4 \times 33 / 4 \times 2^{\prime \prime}$. Shpg. wt., 2 lbs. 77 S 640. NET.
7.79

BATTERY FOR ABOVE. $11 / 2 \mathrm{v} . \mathrm{Wt} ., 3 \mathrm{oz}$.
53 J 009 . NET.
$14 c$
E GONSET 3022 "MONITONE" MONITOR AND CODE PRACTICE OSCILLATOR. COMbination code practice oscillator and phone or CW monitor. Transformer-type power supply. Has built-in speaker and provision for headphones. Separate tone and volume controls. Uses RF pickup link to monitor transmitter keying. Case size is $51 / 4 \times 63 / 4 \times 4^{\prime \prime}$. For operation from $110-120 \mathrm{v}$., $50-60$ cycle AC. Shpg. wt., 4 lbs.
83 S 829. NET
22.50

AMECO CPS-WT CODE PRACTICE OSCIL LATOR. A deluxe practice oscillator with a built-in $4^{\prime \prime} \mathrm{PM}$ speaker. Produces a loud and clear tone with ample volume for group use. Built-in click filter provides smooth, clickless and chirp-free operation. Variable tone and volume controls to suit the individual listener. Can easily be converted to an excellent CW keying monitor. Gray finish. Has rear-mounted screw terminal strip. Size, $61 / 2 \times 5 \times 31 / 2^{\prime \prime}$. For $110-120 \mathrm{v}$.. AC or DC Shpg. wt., 3 lbs .
77 S 629. NET
14.95

G BUD CPO-128A CODEMASTER. High-qualG) ity code practice oscillator with built-in $4^{\prime \prime}$ PM speaker. Earphones and keys may be paralleled for group instruction. Volume and pitch controls. External speaker may be plugged into headphone jack; both headphone and key jacks take phone plug listed below. $61 / 2 \times 51 / 2 \times 31 / 2^{\prime \prime}$. For $110-120 \mathrm{v}$., AC or DC. Shpg. wt., 5 ibs. 73 S 044. NET
18.75

STANDARD PHONE PLUG. For attaching keys and headphones to CPO-128A above. 3 oz . 41 H 641 . NET. CABLE. Extension cord for keys. 2 oz . 48 W 805. NET PER FOOT

## SAVE \$2.48

## ALLIED'S SPECIAL CODE PRACTICE KIT COMBINATION OFFER

A complete code practice equipment package, at a remarkably low price Contains everything needed for beginners just learning the code, or for experienced amateurs who want to improve their "fist". Consists of:
ALIIED CODE COURSE
(5 RECORDS)
$\$ 5.95$
SURPLUS J-38 KEY... . . . . . . . . . . 1.49
DUAL HEADPHONES.......... 2.00
KNIGHT-KIT CODE PRACTICE
OSCILLATOR KIT..........
GATEWAY TO AMATEUR RADIO
(SET OF 4 BOOKS)... 1.50

STANDARD PHONE PLUG..... . 44 5-FT EXTENSION CABLE
FOR KEY..
.10
total value
$\$ 15.43$
SPECIAL INTRODUCTORY PRICE 12.95
YOU SAVE $\$ 2.48$
77 S 683. Wt., 11 lbs .
ONLY..
12.95

## Allied's Own American Bell Quality Headphones

STANDARD DUAL HEADPHONES. Moderately priced. lightweight headphones. Adjustable, flexible headbands. Employ hyflux Alnico magnets and solenoid coils firmly mounted in headphone shell. Molded bakelite cap and case. With $41 / 2 \mathrm{-ft}$. cord; standard phone tip terminals. 2000 ohms. $11 / 4 \mathrm{lbs}$.
59 J 110 . NET
2.00

SINGLE HEADPHONE. Not illustrated. Dependable, econ-omy-priced unit. 2000 ohms. Shpg. wt., 8 oz. 59 J 113 . NET


These high-performance FM receivers provide excellent reception on public service or commercial frequencies. Feature famous Hallicrafters quality at low cost. Couple high sensitivity with adjustable built-in relay-type squelch system.
"CIVIC PATROL" RECEIVERS. Two compact. easy-to-operate $F M$ receivers for superb easy-to-operate FM receiver for superb
reception of commercial or public service reception of commercial or pubic service
frequencies. Model S-94 covers $30-50 \mathrm{mc}$; Model S-95 covers $152-173 \mathrm{mc}$. May be used for reception of police, fire, taxicab, inter-city bus, railroad, private telephone mobile, and other industrial and emergencyservice communications.

Advanced circuit design assures minimum drift, high signal-to-noise ratio and exceptional sensitivity. Has wide-range antenna input impedance for excellent results with any type antenna. Low-noise, ground-ed-grid amplifier. Designed for low oscillator radiation. Adjustable, built-in relay-type squelch system silences entire audio system until signal is receivedaudio system unti signal is received-
permits quiet standby operation. Built-in permits quiet standby operation. Built-in
$\mathbf{5}^{\prime}$ PM speaker. 1.5 watts audio output. Phone tip jacks for headphone operationswitch selects speaker or headphone output. Terminals for single-wire or twin-lead antenna input (external antenna supplied). $0-100$ logging scale. 8 tubes plus selenium rectifier. $7 \times 127 / 8 \times 71 / 4^{\prime \prime}$. For $110-120 \mathrm{v}$., 50 60 cycle AC. Shpg. wt., $121 / 2 \mathrm{lbs}$.
MODEL S-94. Covers $30-50 \mathrm{mc}$ FM
98 SU 708. \$6.00 Down. NET . .... 59.95
MODEL S-95. Covers 152-173 mc FM.
98 SU 721. \$6.00 Down. NET . . . . . 59.95

DELUXE "CIVIC PATROL" RECEIVERS. These outstanding $F M$ receivers cover the same outstanding FM receivers cover the same
frequencies as the S-94 and S-95 (described at left), but they incorporate many deluxe extras for improved performance and operating convenience. Have tuned RF stage for added sensitivity. Feature choice of crystal-controlled (fixed frequency) or tunable operation. Carrier-operated relay with able operation. Carrier-operated relay with external switch contacts for connecting
warning light or buzzer system to alert operator when signal is received.
Have built-in squelch for quiet standby operation. High stability in tunable position no drift in crystal position. High signal-to-noise ratio. Low oscillator radiation. Wide-range antenna input impedance for all types of antennas. $\mathbf{5}^{\prime \prime}$ PM speaker; headphone jack. 3 watts of audio. Tubes: SX-104, 8 plus rectifier; SX- 1059 plus rectifier. Size, $7 \times 127 / 8 \times 73 / 4^{\prime \prime}$. For $110-120 \mathrm{v} ., 50-60$ cycle AC. $7 \times 127 / 8 \times 73 / 4^{\prime \prime}$. For $110-120 \mathrm{v} .40-60 \mathrm{cy}$
Less crystals. Shpg. wt., $181 / 2$ lbs.
Crystals for fixed-frequency operation are available fiom Allied on special order at $\$ 7.72$ each for the $S X-104$ and $\$ 5.29$ each for the $S X-105$. Specify receiving frequency required. Allow 3 weeks for delivery.
MODEL SX-104. For $\mathbf{3 0 - 5 0 ~ m c ~ F M . ~}$ 94 SU 803. \$9.00 Down. NET..
89.95

MODEL SX-105. For $153-173 \mathrm{mc}$ FM. 94 SU 804. \$9.00 Down. NET.
89.95

## MONTIORADIO FM RECEVERS



MODEL MR-10. Deluxe FM receiver for full coverage of $152-174 \mathrm{mc}$. Excellent for emergency, commercial or industrial communications. Features a transformer-type power supply; adjustable, built-in, electronic squelch for absolute quieting; built-in $5^{\prime \prime}$ Squelch for absolute quieting; built-in ${ }^{5}$ rectifier. $77 / 8 \times 111 / 4 \times 61 / 2^{\prime \prime}$. For $110-120 \mathrm{v}$., $50-60$ cycle AC. Wt., 18 lbs.
99 SU 002. \$6.45 Down. NET.
.64 .50
MODEL MR-33. As above, but for $\mathbf{3 0 - 5 0} \mathbf{~ m c}$. 99 SU 003. \$6.45 Down. NET. . . . . 64.50

MODEL PR-31 "POLICE-ALARM." Low-cost FM receiver for dependable reception of 30 50 mc . Temperature-compensated oscillator for high stability. Sensitivity better than $10 \mu \mathrm{v}$. Built-in $5^{\prime \prime}$ PM speaker. 5 tubes; 35W4 rectifier. Antenna impedance, 72 $35 W 4$ rectifier. Antenna impedance, 72
ohms. Size, $7 \times 101 / 2 \times 61 / 2^{\prime \prime}$. For $110-120 \mathrm{v}$. , $50-60$ cycle AC or DC. Wt., 9 lbs.
97 SU 907. \$5.00 Down. NET.
49.95

MODEL PR-9. As above, but for $152-174 \mathrm{mc}$ coverage, and includes $14^{\prime \prime}$ indoor antenna. 97 SU 908. \$5.00 Down. NET. . . . . . 49.95

MODEL DR-200 2-BAND FM RECEIVER. Excellent for central installation with very weak outlying stations. Ranges: $\mathbf{3 0 - 5 0} \mathrm{mc}$ and $152-174 \mathrm{mc}$. Dual-conversion and separate front-end range. Provision for one crystal-controlled frequency in each range, (less crystals). Squelch circuit. Sensitivity for 20 db quieting: $30-50 \mathrm{mc}, 1 \mu \mathrm{v} ; 152-174 \mathrm{mc}, 2 \mu \mathrm{v} .14$ tubes; 5Y3GT rectifier, $8 \times 141 / 4 \times 91 / 2^{\prime \prime}$. Less speaker (see below). For $110-120 \mathrm{v} ., 60$ cycle AC. Shpg. wt., 21 lbs. Crystals for fixed-frequency reception avilable on special order at $\$ 11.95$ each. Specify desired receiving frequency. Allow 3 weeks for delivery.
97 SU 939. \$15.00 Down. NET.
149.95

MODEL DRS-1 $6^{\prime \prime}$ SPEAKER IN METAL ENCLOSURE. $8 \times 71 / 2 \times 71 / 2^{\prime \prime}$. 6 lbs.
97 SU 949. NET
14.95

MODEL CA-2 COAXIAL ANTENNA. Use with 152-174 mc. receivers. 1 lb .
99 S 000. NET.
390
5.00

MODEL A-30 WHIP ANTENNA. For use with the Model DR-200 or the MR-33 receiver for optimum 30 to 50 mc FM reception. Adjustable base. 3 chrome-plated sections; extends to $86^{\prime \prime}$. Less cable. Uses 72 -ohm coaxial cable. Shpg. wt., 1 lb .
99 SU 001. NET.
6.50

VOCALINE 2-WAY RADIO


Operate on 115 VAC, 6 or 12 VDC
MODEL JRC-400 STANDARD. Low-cost, highly reliable 2 -way communication is yours with these Vocaline transceiver units! Ruggedly built, compact and lightweight, you simply plug the transceiver into any 115 v . AC outlet or 6 or 12 -volt DC power source. Press the convenient push-to-talk switch and speak into the hand-held microphone. Your message is clearly received over the built-in speaker of other Vocaline units. Button is released to receive reply. No tun-ing-no adjustment.
Transceivers operate on 465 megacycles (Citizens Radio Band) to provide highly satisfactory communication over limited ranges. Simple application form (included with each Vocaline unit), is filled out and mailed to the FCC. Station license for this equipment is readily granted to any U.S. citizen over 18 years of age.
Offer hundreds of applications to the industrial user-in warehouses or docks, storage yards, construction fields, etc. Power Output: $1 / 3$ watt. Tubes: 6AV6, 6AF4A, 6AS5, Has volume control. Each unit is 9x6x5".
With mike, AC and DC line cords and plug-in antenna. Shpg. wt., $31 / 2 \mathrm{lbs}$.
83 SU 881 . For $115 \mathrm{VAC} / 6 \mathrm{VDC}$.
83 SU 883. For $115 \mathrm{VAC} / 12 \mathrm{VDC}$.

## NET EACH

59.80

MODEL JRC-425 SPECIAL. Same as the Model JRC-400, but has push-to-talk switch on stainless steel microphone and jack for headphones. Less headphones.
83 SU 884. $115 \mathrm{VAC} / 6 \mathrm{VDC}$. 83 SU 885. 115 VAC/12 VDC. NET EACH
83.80

NEW MODEL CUB-1/MT-1. Remote controlled transceiver similar to Model JRC-425, but for base station operation. Built-in antenna on remote transceiver unit MT-1 eliminates signal losses from transmission lines-MT-1 can be mounted as high (up to $500^{\circ}$ ) as possiblefor maximum performance. Controlunit CUB-1 has same features as Model JRC425 with additional variable squelch control and squelch Off-On. Sizes: MT-1, $7 \times 41 / 2 \mathrm{x}$ $21 / 2^{\prime \prime}$; CUB-1, 9x6x53/16". With mike, 100 -ft. control cable. For $110-120$ v.. $50-60$ cycle AC. Shpg. wt., 12 lbs.
83 SU 887. NET.
143.60

MODEL GP4-10 GROUND PLANE ANTENNA. For interior-to-exterior communication with Models JRC-400 and JRC-425. Recommended for use when units cannot be placed in clear location. With hardware and 10 -foot lead-in cable. Shpg. wt., 1 lb .

## 83 S 882. NET.

6.36

Other GP4 antennas with cable lengths up to $100^{\prime}$ available on special order.
MODEL AD-3 DIRECTIONAL ANTENNA. For extending point-to-point communications range up to 10 miles between all transceivers (except CUB-1/MT-1). 7 lbs.
92 SU 369. NET
19.96

## = <br> $\cos \frac{2}{2}$ $2=\frac{2 \pi}{5}$

Viewing Plont
Operations

NEW LING MODEL V-1051 "SPECTATOR". Self-contained, lightweight closed-circuit TV camera. Designed for rugged industrial use-vertical stability is unaffected by pow-use-vertical stability is unaffected by pow-
er line changes. Has $f / 1.9$ lens for excellent er line changes. Has $f / 1.9$ lens for excellent
pictures without special lighting, Can be pictures without special lighting, Can be
used any place where personal viewing would be inconvenient, impossible, costly or dangerous. Keeps an "eye" on production, monitors meters, "guards" entrances, etc. Used by banks for quick check of signatures and balances. Schools can utilize it to provide visual contact of demonstrations provide visual contact of demonstrations
for large groups. Accommodates large overflow crowds in churches, conventions, halls, etc. Permits remote viewing of nursery, play-area or entrances in the home.

May be operated by remote control-control panel is removable for remote operation up to 1000 feet away. Produces a composite video signal for use with any number of vidvideo signal for use with any number of vid-
eo monitors (listed at right). For use with eo monitors (listed at right). For use with
standard TV receivers, the Video Jeep is required. Includes Grade B vidicon with regular guarantee-same brightness and definition as Grade $A$ vidicon, but a few insignificant spots on face. Standard 16 mm "C"' mount lenses. Size, $515 / 16 \times 71 / 16 \times 151 / 2 "$. With $30^{+}$remote cable. For $110-120 \mathrm{v} ., 60$ cycle AC. Shpg. wt., 15 lbs.
91 SU 999. NET
595.00

LING MODEL V-1002 "ELECTRON". Low-cost closed-circuit TV camera. For engineers, hams, experimenters, and for light industrial use. Has fast $f / 1.9$ lens. Removable control panel for remote operation. May be used with TV monitors (below); as well as with a standard TV receiver. Includes Grade B vidicon, standard 16 mm " C ", mount lenses, $30^{\prime}$ cable. For $110-120$ v.. 60 cycle AC. Shpg. wt.. 15 lbs.
92 SU 371. NET
379.00

## MONITORING EQUIPMENT

17" MIRATEL TV MONITOR FOR C.C. TV. Attaches directly to camera-no converters or transformers needed. Similar to illustration, but has control knobs on front panel. Size, $161 / 4 \times 161 / 4 \times 161 / 2^{\prime \prime}$. For $110-120 \mathrm{v} ., 60$ cycle AC. Shpg. wt., 67 lbs.
77 SZ 292. NET
159.00

LING MODEL V-1005 "VIDEO JEEP". Converter for using TV cameras with standard TV receiver and for multiple monitor installations. Shpg. wt., 10 lbs.
92 SU 372 . NET.
59.95

LING MODEL V-1008 BRIDGING TRANSFORMER. Use with each standard TV receiver in a multi-set installation. (One "Video" Jeep still required in system.) Wt., 6 lbs. 92 S 381 . NET
13.50


MODEL TR-426. Highly versatile low-power industrial mobile phone unit. Increases the efficiency of any industrial, maintenance or service vehicle in any industry by providing direct, two-way communication between vehicle and supervisor. It's perfect for use on lift trucks, runabouts, cranes, and other mobile units. Helps boost payload of any vehicle by eliminating wasteful "deadhead" vehicle by eliminating wasteul deadhead
trips. Consists of a complete receiver and transmitter in one compact case. Ruggedly built, and easily installed by anyone, the "Imp" has hundreds of uses in construction work, agriculture, airports, rail yards, loading docks, mines, pipelines, factories, and warehouses, etc. FCC accepted-any commercial enterprise can obtain licensing under Parts 10 (public safety), 11 (industrial), 16 (land transportation), or 9 (aircraft).

Unit operates from 6 or 12 -volt battery or 110-120 volt AC source-can be used as a base station, a mobile phone, or as a mobile P.A. system. Crystal-controlled transmitter section operates on 154.57 mc . Receiver section is fixed-tuned to this frequen-cy-no tuning required; has adjustable squelch circuit. Includes: transmitter-receiver unit; shock-mount base; cable for 6 and 12 volt operation; cable for 110-120 volt operation; carbon mike with push-totalk switch and antenna. Size, $51 / 4 \times 121 / 2 \mathrm{x}$ 81/4". Shpg. wt., 24 lbs. Requires no operator's license-application form for FCC station permit included in carton.
99 SU 009 . NET PER UNIT.
360.00 Units available on special order for $25-50 \mathrm{mc}$, $108-152 \mathrm{mc}$, and $152-174 \mathrm{mc}$. Specify frequency desired-allow 30 days for delivery.

Renowned RCA VoliOhmysts


## Wv-77C

5 4

## WV-98A SENIOR VOLTOHMYST

Includes an outstanding array of "plus" features: easy-reading, zero-center scale; electronic protection against burnout; rugged, 200 -microamp meter movement; $\pm 1 \%$ multiplier resistors; die-cast aluminum case; etc. Has $61 / 2^{\prime \prime}$ meter, accuracy improved to $\pm \mathbf{3} \%$, and single-unit DC-AC-Ohms probe with built-in selector switch. Excellent for measurement of complex TV waveformsreads peak-to-peak voltages to 4200 volts.
7 ranges for each function. Reads AC rms and DC to 1500 volts. Measures resistance from 0.2 ohms to 1000 megohms. AC input impedance of 0.83 megohm and 70 mmf to 1.5 megohms and 60 mmf . Input resistance on DC is 11 megohms. Size, $61 / 2 \times 7 \times 33 / 4^{\prime \prime}$. With WG-299C probe, shielded cable and With WG-299C probe, shielded cable and
instruction booklet. For 105-125 volts, 50-60 cycle AC. Shpg. wt., 7 lbs.

## 87 F 050. NET

79.50

## WV-87B MASTER VOLTOHMYST

This deluxe VTVM has a $71 / 2^{\prime \prime}$ mirroredscale meter. Has the accuracy and stability necessary for many laboratory applications. Its peak-to-peak scales are useful for TV, radar work, etc. Reads peak-to-peak to 4200 volts. Response: $30 \mathrm{cps}-3 \mathrm{mc}$. Has zero-center for FM discriminator alignment. Reads DC current to 15 amps . Measures DC voltage to 1500 in 7 ranges. Reads AC rms to 1500 volts; AC input impedances from 0.83 meg and 85 mmf to 1.5 meg and 75 mmf . DC resistance to 1000 megs in 7 ranges. Accuracy, $\pm 3 \%$ of full scale for DC; $\pm 3 \%$ of full scale for AC. $10 \times 131 / 2 \times 7^{\prime \prime}$. With WG-299C probe and cables. For 105-125 v., 50-60 cycle AC. Wt., 9 lbs.
137.50

## WV-77C JUNIOR VOLTOHMYST

Has easy-to-read $41 / 2^{\prime \prime}$ meter. 5 ranges on all functions. Reads AC rms and DC to 1200 volts. Accuracy on AC and negative DC volts is $\pm 5 \%$; on positive DC volts, $\pm 3 \%$. Measures resistance from 0.2 ohms to 1000 megohms. AC input impedance $0.2 \mathrm{meg}-$ ohms and 75 mmf to 2 megohms and 50 mmf. Input resistance, 11 megs. $8 \times 53 / 8 \times 41 / 2^{\prime \prime}$. With WG-299C probe. For 105-125 volts, $50-60$ cycle AC. Shpg. wt., 5 lbs. 87 F 051 . NET.
59.50

## VTVM \& VOM PROBES

WG-289 HV PROBE. Extends DC voltage range of VoltOhmysts (and other VOM's and VTVM's) to $50,000 \mathrm{v}$. Less multiplier. Shpg. wt., 1 1b.
7.15

WG-290 HV PROBE. As above, but with phone tip connectors. 84 F 076 . NET.
7.15

MULTIPLIERS. For WG-289 \& WG-290. 2 oz.
84 F 079. WG-206. 1090 meg . ${ }^{2}$ NET
$\left.\begin{array}{l}84 \text { F 080. WG-207. } 991 \text { meg. } \\ 84 \text { F 083. WG-210. } 900 \text { meg. }\end{array}\right\}$ EA.. 2.80
WG-299C DC/AC-OHMS PROBE. Replacement unit for VoltOhmysts. 1 lb .
87 F 077. NET
8.75

WG-301A CRYSTAL DIODE PROBE. Slips on WG-299A, B or C. Extends RF to 250 mc . Shpg. wt., 8 oz.
87 F 052. NET
7.75

WG-264 CRYSTAL DIODE PROBE. Slip-on type for older-model VoltOhmysts using WG-218 probe. Shpg. wt., 12 oz .
84 F 084. NET.
7.75

WG-339A. Tube-socket adapter for testing 8-lead circular, subminiature tubes. 2 oz.
87 F 086 . NET . . . . . . . . . . . . . . . . . 3.50

87 FU 066. NET.

## 



## WR-49B RF SIGNAL GENERATOR

Highly accurate RF signal generator. Continuous coverage from 85 $\mathrm{kc}-30 \mathrm{mc}$, in 6 ranges, all on fundamentals. Excellent for aligning AM and FM receivers. Dial calibration accurate within $1 \%$. Built-in 400-cycle oscillator for internal or external modulation. Attenuator for positive control of RF level; approximate range: 2000 to 1. Cathode-follower output stage isolates oscillator from effects of load; assures high stability. RF output voltages at least 0.05 v . rms and 0.01 v . rms at high and low connectors respectively. With cable. $71 / 2 \times 101 / 2 \times 6^{\prime \prime}$. For $105-125$ v., $50-60$ cycle AC. Wt., 10 lbs.
87 FU 079. NET.
79.50

## WR-99A MARKER-GENERATOR

Crystal-calibrated marker-generator for aligning FM and TV receivers and other electronic equipment in the $19-260 \mathrm{mc}$ frequency range. Crystal calibrator provides 240 check points for accurate calibration at 1 or 10 mc intervals. Modulation frequencies: 1,10 , $4.5 \mathrm{mc}, 600$ cycles. Sound and picture carrier markers available simultaneously. Most-often-used IF and RF frequencies are indicated on dial scale. Output: At least $0.1 \mathrm{v} . \mathrm{rms}$ on all frequencies. Double-shielded oscillator for reduced leakage. 10x133/4 $\times 71 / 4^{\prime \prime}$. For Double-shielded oscillator for reduced leakag
$105-125 \mathrm{v} ., 50-60$ cycle AC. Shpg. wt., 18 lbs . 87 FU 069 . NET.
242.50


For measuring intermodulation, response, input and output impedances, resonant frequency of speakers, amplifiers, etc. 4 ranges: 11-110 and $110-1100 \mathrm{cps} ; 1.1-11$ and 11-100 kc. Has separate 60 cycle, variable-amplitude output. Cathode-follower output. " Hi " and "Lo" outputs: 0-2.5 and 0-15 volts (rms). Frequency stability, $3 \%$. Response, $\pm 1 \mathrm{db}$ ( 1100 cps reference). Total harmonic distortion, $2 \%$ (max.) from 30 cps to 15 kc . Hum level, $0.1 \%$ or less. Size, $7 \times 101 / 2 \times 6^{\prime \prime}$. For $105-125$ v., $50-60$ cycle AC. Shpg. wt., 12 lbs. 87 FU 053. NET.
107.50

## WR-70A RF-IF-VF MARKER-ADDER

For RF, IF and video sweep-alignment of black-and-white and color TV sets. Four differently shaped markers: positive peak, negative peak, positive and negative peaks (wide band), and positive and negative peaks (narrow band). Use with marker and sweep generators. Marker signal is added after sweep passes through receivereliminates distortion of marker or sweep curve. 0-60 db attenuation of IF sweep signal for IF or video alignment. With 4 coax cables for connecting to sweep and marker generators, scope, and input and connecting to sweep and marker generators, scope, and input circuits of TV receiver under test. $71 / 2 \times 101 / 2 \times 61 / 4^{\prime \prime}$. For $105-$ output circuits of TV receiver under test.
$125 \mathrm{v} ., 50-60$ cycle AC. Shpg. wt., 12 lbs.
87 FU 055. NET.
74.50

WR-46A



## WR-46A DOT-BAR GENERATOR

Features a high level video output for driving the picture tube directly; or, the video amplifier of color or black-and-white receivers. Provides interlaced pattern of small dots and a choice of vertical or horizontal bars and a crosshatch. Vertical bars adjustable from 8 to 26 bars- 15 horizontal bars only 2 lines wide. Fully adjustable video output voltage. Direct sync from TV signal allows convergence adjustment independent of receiver characteristics. $10 \times 131 / 2 \times 8^{\prime \prime}$. For $110-120 \mathrm{v}$., 60 cycle AC. 20 lbs.

## 87 FU 056. NET

179.50

## WR-69A TV-FM SWEEP GENERATOR

This sweep generator provides test and alignment signals for TV video, IF, and RF channels 2-13-plus IF and RF signals for FM radio. Continuous IF coverage from 50 kc to 50 mc . Sweep width, 12 mc , continuously variable. Output flat within 0.1 db per mc of sweep width. Fundamental oscillator output on TV channels; filtered beatfrequency fundamental output on IF/VF frequency fundamental output on 1 volt RMS or better at all range. Output, , vorit RMS or better at and $\mathrm{x} 71 / \mathbf{4}^{\prime \prime}$. With cables. For $105-125$ volts, $50-60$ cycle AC. Shpg. wt., 17 lbs .
87 FU 070. NET.
295.00

## WP-25A TV ISOTAP

Not illus. Isolation and autotransformer. Checks TV sets at high, medium and low voltage. Selects $105-130$ volts in 5 -volt steps. Outputs: 105,115 and 130 v .@ 500 VA from autotransformer winding; 105, 115 and 130 v . @ 275 VA from isolated secondary. $5 \times 53 / 4 \times 43 / 8^{\prime \prime}$. For $50-60$ cycle AC. With 5 ft . line cord. Wt., 15 lbs.
62 G 516 . NET.
22.00

## WR-61B COLOR-BAR GENERATOR

For checking color TV sets, and for adjust ing color phasing and matrixing. Produces 10 bars of different colors, simultaneously. Provides picture-carrier, color-subcarrier and sound-carrier frequencies on channel 3. Luminance signals at edges of bars for checking registration of luminance and checking registration of luminance and for checking signal ratio through the three chrominance channels to indicate potential troubles. Size: $93 / 4 \times 131 / 2 \times 71 / 2^{\prime \prime}$. For operation from $105-125$ volts, $50-60$ cycle AC. Shpg. wt., 18 lbs .
87 FU 065. NET
259.50

## OTHER RCA INSTRUMENTS

WG-2958 VIDEO MULTIMARKER. For use with sweep generator on black-and-white and color sets. Checks response of chrominance bandpass filter, and alignment of I and Q filters. 7 simultaneous absorption-type markers (mc): $0.5,1.5,2.5,3,3.58,4.1$, and 4.5. Size: $5 \times 23 / 8 \times 21 / 2^{\prime \prime}$. Wt., 1 lb .

87 F 054. NET
32.50

WG-307A TV BIAS SUPPLY. For black-andwhite and color TV. 3 output voltages for RF, IF and AGC adjustable from 0 to 15 v .; 1 output, 100 v., for chrominance circuitry. Size: $21 / 2 \times 3 \times 51 / 4^{\prime \prime}$. For $105-125$ v., $50-60$ cycles AC. Shpg. wt., 2 lbs.
87 F 067 . NET
22.50

WG-304A RF MODULATOR. Crystal-type mixer. For use with WR-69A and WR-99A to check TV response from antenna to picture tube. $15 / 8 \times 4 \times 21 / 8^{\prime \prime}$. Wt., 1 lb .
87 F 057. NET.
28.50


WO-91A $5^{\prime \prime}$ OSCILLOSCOPE
$5^{\prime \prime}$ wide-band oscilloscope for black-andwhite and color TV servicing. Features: Dual-band response; wide-band position flat within $\pm 1 \mathrm{db}$ from 10 cps to 4.5 mc and narrow-band position flat within -6 db from 10 cps to 1.5 mc , and voltage-calibrated, frequency-compensated 3 -to-1 step attenuator. Removable, multi-scale graph screen. Vertical polarity reversal switch. Preset vertical and horizontal sweep positions. Built-in calibration for peak-to-peak voltage measurements. Plus or minus internal sync selector. Sensitivity is 0.05 volt peak-to-peak per inch ( 0.018 volt rms) in narrow-band position and 0.150 volt peak-to-peak per inch ( 0.053 volt rms) in wideband position. Vertical input impedance 75 mmf and 1 meg direct, and 11 mmf and 10 meg low-capacity position, with WG-300B probe supplied. 5UP1 CRT. $131 / 2 \times 9 \times 161 / 2^{\prime \prime}$. For 105-125 v., 50-60 cycle AC. Shpg. wt., 33 lbs .
84 FU 049. NET
239.50

WG-300B DIRECT/LOW-CAPACITANCE PROBE. Shpg. wt., 1 lb.
87 F 059. NET.
14.25

WG-302A DEMODULATOR PROBE. Use with WG-300B to extend scope range to 250 mc . Input, 2.2 mmf . Shpg. wt., 1 lb .
87 F 060. NET
8.50


Ulira-Sensitive Lab-Quality Test Instruments

## WT-100A MICRO-MHO-METER

A remarkably accurate, laboratory-type instrument. Measures tube characteristics under actual operating-voltage and current conditions, with an accuracy comparable to that of tube manufacturer's equipment. Invaluable for design and development work, production-line testing, etc. Measures: true transconductance to an accuracy of better than $\pm 3 \%$; transconductance up to 100,000 than $\pm 3 \%$; transconductance up to 100,000
mhos in 6 ranges; control-grid-to-plate and suppressor-grid-to-plate transconductance.

Measures individual electrode currents. AC heater currents; voltage drop across electron tubes, dry-disc rectifiers and crystal diodes. Built-in calibrating circuit-no null meters or extra devices required. Easy-toread meter for all measurements. Regulated power supply for DC voltages. Blue-gray case, $8 \times 181 / 2 \times 231 / 2^{\prime \prime}$. For $105-125$ v., $50-60$ cycle AC. Shpg. wt., 110 lbs.
87 FZ 087 . NET.
949.00

WV.84B


## WV-84B DC MICROAMMETER

An extremely sensitive, battery-operated unit for measuring minute currents. When used with external multiplier resistors (supplied), becomes a high-resistance voltmeter with an input resistance of at least 100 megohms per volt. Measures resistances from 900 to 90.000 megohms. Reads to 1000 microamps in 6 ranges; reads current below mi-billionth amp. Voltage drop at full scale. $1 / 2$-volt, all ranges. Overall accuracy, $\pm 4 \%$. Negligible loading of circuit under test. Meter protected from burnout. Includes 2 multiplier resistors. Less batteries (requires 2-VS004 11/2-v. and 2 -VS102 $221 / 2-\mathrm{v}$. batteries, below). Blue-gray case, $71 / 2 \times 101 / 2 \times$ 61/4". Shpg. wt., 10 lbs .
87 F 074. NET
110.00

## RCA VS004 $11 / 2$-V. BATTERY. Shpg. wt., $11 / 21 \mathrm{bs}$.

 80J901. NET EACH. . . . . . . . . . . . . . 1.16 RCA VS102 221/2-V. BATTERY. Wt., $11 / 4 \mathrm{lbs}$. 80.J 951 . NET EACH1.77

NEW

WV-74A


## NEW WV-74A AC VTVM

A high-sensitivity instrument for measuring AC voltages as low as 0.001 volt. Tests frequency response of preamps, amplifiers and tone control circuits; measures general audio voltages; traces signals; etc. Extremely wide voltage range-from 10 mv to 100 v.. full scale. Easy-to-read $61 / 2^{\prime \prime}$ meter, with rugged 200 -microamp movement. High inrugged $200-$ microamp movernent. High in-
put impedance of 1 meg shunted by 58 mmf , permits measurement in circuits sensitive to loading. 9 AC voltage ranges in 3 -to- 1 steps:0.01-0.03-0.1-0.3-1.0-3.0-10-30and 100 v. rms full scale. Wide frequency response, flat within $\pm 1 / 2 \mathrm{db}$ from 20 to $500,000 \mathrm{cps}$ on all ranges. Accuracy, $\pm 4 \%$. Reads from -40 db to +40 db in 9 ranges. Built-in amplifier may be used as preamp-only amplifier may be used as preamp-only
$0.5 \%$ distortion; 38 db gain on 10 mv range. $61 / 2 \times 7 \times 33 / 4^{\prime \prime}$. With WG-300B direct/ low-capacitance probe. For $105-125 \mathrm{v}$., 50 400 cycles AC. Wt., 7 ibs. 87 FU 083. NET
99.50


## NEW MODEL 800 TUBE TESTER

Lightweight, portable dynamic mutual conductance tube tester. Weighs only 16 pounds-ideal for professional radio and TV servicemen to use for both on-location and shop-bench jobs. Tests receiving-type tubes under simulated operating conditions; also tests out-of-circuit transistors. Includes tests for latest miniature and sub-miniature-type tubes and 600 -ma series-miniature-type tubes
string-filament tubes.
An improved version of the popular 600 series testers, the 800 features an improved leakage test with direct meter readings. Easily detects hard-to-locate weak tubes. Tests for gas content and for shorts. The easy-to-read triple-scale $5^{\prime \prime}$ lucite-case meter has ranges of $0-3000-6000-15,000 \mathrm{mi}$ cromhos and "REPLACE-?-GOOD" The roll chart groups the most commonlyused tubes separately-making it easy to quickly locate desired tube type. Housed in a red leatherette-covered case
Cover is removable to permit easy access. Size (HWD): $163 / 4 \times 71 / 2 \times 113 / 4^{\prime \prime}$. For operation from $110-120$ volts, $50-60$ cycle AC Shpg. wt., 21 lbs.
87 FU 187. NET.
I59.50


## MODEL 750 TUBE TESTER

Portable dynamic mutual conductance tester for accurately testing all types of radio and TV receiving tubes-including the 600 and TV receiving tubes-including the $600-$ ma series-string types. Also checks ruggedized types used by airlines, hearing aid tubes voltmeter measures $0-200$ volts; DC milliammeter. 0-200 ma. Permits matching of tubes such as 6SN7 for critical circuits. $5^{\prime \prime}$ meter reads $0-1500-3000-6000-15,000-30$,000 micromhos-also 0-200 v. DC and 0-100 ma DC scales. Has two "Replace-Good" ranges. Tests for shorts, gas, noise, and gives probable tube life. Provides a choice of two plate and screen voltages and four AC signal voltages. Size (HWD) : $183 / 8 \times 163 / 4 \times 71 / 2^{\prime \prime}$. For operation from $110-125$ v., $50-60$ cycle AC. Shpg. wt., 24 lbs.
84 FU 633. NET.
269.90

## MODEL 539B TUBE TESTER

Laboratory-type dynamic mutual conductance tube tester. Measures mutual conductance under simulated operating conditions. Tests all receiving-type and voltage regulator tubes, selenium and germanium diodes. Uses 3 meters. Micromhometer with 8 ranges; $60,000-30,000-15,000-6000-3000-$ $600 \mathrm{micromhos} ;$ Rectifier Diode Range; VR Range. Separate AC meter for line voltage check and separate DC volt'meter for grid bias readings. 4 AC signals (. $25, .5,1,2.5 \mathrm{v}$.). Normal and low plate and screen voltages. Normal and low plate and screen voltages.
Reads leakage up to 50 megohms. Tests for shorts, gas, noise and gives probable tube ife. Black leatherette-covered portable carrying case. Size (HWD): $163 / 4 \times 183 / 8 \times 71 / 2^{\prime \prime}$. For operation from $110-125$ volts, $50-60$ cycle AC. Shpg. wt., 39 lbs.
84 FU 608. NET
399.00

## MODEL 533AP TUBE TESTER

Portable tube tester-specially designed for servicing radio-TV and communications equipment. Reads mutual conductance in micromhos-tests tubes under simulated operating conditions. Ranges: 0-3000-6000 $-15,000$ micromhos. Locates shorts and leakages, tests for noise and for gas content. Detects weak, borderline tubes. Predicts probable tube life. Large, $5^{\prime \prime}$ meter with accurately calibrated scale.

Instrument has a line voltage adjustment feature. Tester is calibrated for 60 -cycle use. Top-cap test leads are supplied that plug into grid and plate jacks on the panel. Fused bias potentiometer. Sturdy, black leatherette portable case has detachable cover to permit easy access when tester is in use. $163 / 4 \times 183 / 4 \times 71 / 2^{\prime \prime}$. For $110-120$ volts, 50 60 cycle AC. Shpg. wt., 50 lbs. 84 FU 187. NET.


## MODEL 6000 TUBE TESTER

- Latest Versión of Famous " 600 " Series
- 1-2-3 Push Button Operation Saves Time
- Speedy Transconductance Readings For accurate, high-speed testing. Roll chart groups most commonly-used tubes sepa rately-speeds testing. Features: constant line voltage indication; quick, easy identification of shorted elements; tests for gas content; plug-in socket replacements on socket plate. $5^{\prime \prime}$ meter has 0-3000-6000 -15,000 micromhos and "REPLACE-? GOOD" ranges. With RSP-4 removable socket plate. $163 / 4 \times 71 / 2 \times 11^{3 / 4^{\prime \prime}}$. For $110-120$ v., $50-60$ cycle AC. Wt., 21 lbs .

87 FU 181 . NET.
189.25

MODEL 6005. As above, but with built-in $20,000 \mathrm{ohm} / \mathrm{V}$. VOM and RSP-2M socket plate. Shpg. wt., 22 lbs.
87 FU 182. NET
224.00

CRT TESTER ADAPTER. 1 lb .
84 F 184. NET
394
10.25

## MODEL 121 CARDMATIC TUBE TESTER

- Remarkable Speed and Accuracy
- Just Insert Cards-No Roll Chart
- Cards Automatically Set Up Test Circuit An automatic mutual conductance tube tester featuring simplified card operation for speed and accuracy. Perforated vinyl cards set up entire circuit for complete range of dynamic tests-saves time and rliminates chance for error. Features "Tailored Tests"-checks under actual operating conditions according to application. For example, a 6SN7 can be tested either as an amplifier or a multivibrator, or both together. The "Cardmatic" provides sensitive short and leakage tests, quantitative gas test, and "Knee test" to evaluate sweep circuit performance. Checks sections of twin tubes individually. Complete with 325 attached cards. Case, $193 / 4 \times 8 \times 131 / 4^{\prime \prime}$. For $110-120$ v., 50-60 cycle AC. 40 lbs.
87 FU 186. NET
249.50


## MODEL 660 DOT-BAR GENERATOR

Compact, portable white dot-bar color display generator designed for "on-thespot" adjustment of color TV receivers. Accurate color hue tests may be made even in the absence of a station signal.
All frequencies generated are crystal-controlled and lock together for rigid stability to reduce chance for alignment error. Has an exceptionally stable timer circuit. Features switch selection of RF output up to .05 v . on TV channels 2 to 6.300 white dots, less those in blanking; 20 vertical and 15 horizontal white crosshatch lines, less those in blanking. Color display pattern; crystal accurate in sequence of red, blue and green. RF modulated ( $60 \%$ ) by all video outputs. Housed in sturdy, black leatherette, portable case. With 2 crystals, output cable and instructions. Size, $101 / 2 \times 101 / 2 \times$ $51 / 4^{\prime \prime}$. For operation from $105-125$ v., $50-60$ cycle AC. Shpg. wt., 20 lbs .
87 FU 175. NET
243.00


MODEL 770 LABORATORY SCOPE
Wide-band, $5^{\prime \prime}$ oscilloscope for professional use including color TV servicing. Dual bandwidth for flat response and maximum sensitivity. Wide band: Frequency response 0 to 5 mc within 3 db ; vertical sensitivity, 35 rms mv/inch. Narrow band: Frequency response, 0 to $2.5 \mathrm{mc}, 3 \mathrm{db}$ down;-sensitivity, 10 rms my/inch. Horizontal response. -3 db from 0 to 500 kc sensitivity, 75 rms mv/inch. Sweep frequency from 2 to $30,000 \mathrm{cps} .14 \times 12 \times 18^{\prime \prime}$. For operation from $110-120 \mathrm{v} ., 50-400$ cycle AC. Shpg. wt., 60 lbs.

## 84 FZ 606. NET.

398.00

84F138. Model 34 Demodulator Probe. Extends RF range to $500 \mathrm{mc} .11 / 2$ lbs. NET
5.75

84 F 162. Model TVP-1 Probe. Low impedance. Wt., 2 bs . NET
11.50

## MODEL 675A WIDE-BAND SCOPE

Wide-band, high sensitivity, $5^{\prime \prime}$ oscilloscope for color TV as well as FM and AM use. Features $4.5-\mathrm{mc}$ bandwidth and 20 rms mv/inch vertical sensitivity. Illuminated, calibrated screen with astigmatic focus provides exceptional trace detail. Vertical response within 3 db from 1 cps to 4.5 mc flat through $3.58-\mathrm{mc}$ color burst. Switch for reverse polarity of vertical trace. Voltage calibrator. Horizontal response within 3 db from 1 cps to 450 kc -sensitivity is 250 rms $\mathrm{mv} / \mathrm{inch}$. Sweep frequency, 10 cps to 100 kc . Has input for intensity modulation. $13 \times 10 \mathrm{x}$ $16^{\prime \prime}$. For operation from 110-120 v., $50-400$ cycle AC. Shpg. wt., 43 lbs.
84 FU 634. NET
299.90

## MODEL 760 VIDEO SCANNER

A complete cable-connected TV transmitting station. Instantly scans and produces a video or RF signal from slide. Reproduces your own test patterns. Extremely useful or TV servicing. Can also be used to project advertisements or signs on TV sets in store or in window. Will operate any black-andwhite or color TV receiver. Portable-for on-location servicing.
RF output, 100,000 microvolts-enough to drive several receivers simultaneously. Video output. 2 volts peak-to-peak; choice of positive or negative output. Variable sync level; permits test of how well a TV receiver locks-in on high or low sync levels. Completely crystal controlled. Supplied with bar, dot, standard test pattern, and transparent blank slides. Size, 191/2x17x $81 / 4^{\prime \prime}$. For operation from $105-125$ v., $50-60$ cycle AC. Shpg. wt., 50 lbs.
87 FZ 185. NET
359.90

## 656XC TV COLOR BAR GENERATOR

Accurate white dot crosshatch and color bar generator. Supplies a self-checking standard $100 \%$ NTSC pattern. Crystal-controlled 3.58 mc color burst. Provides demodulator alignment signals; I, Q \& R-Y \& B-Y siguals. Video output, 0-2 volts p-to-p open circuit. RF output, modulated with color bar pattern, on channels 2 to 6 . Produces white dot crosshatch: 20 vertical and 15 horizontal, less those in blanking; 300 dots, less those in blanking; also provides vertical and horizontal lines. Sound carrier for set ting local oscillator. Leatherette-covered ting loca osciliator. Leatherette-covered 60 cycle AC. Shpg. wt., 42 lbs. 87 FU 176 . NET.
495.00

## MODEL 415 VTVM

Compact vacuum tube voltmeter. Ideal for servicing and laboratory use. Features modern "laydown" design. Ranges: AC (rms) ern laydown design. Ranges: AC (rms) Zero center DC ranges for instant polarity identification. DC input impedance is 13.3 megohms. AC input capacity is 10 meg. ohms shunted by 150 mmf .; frequency response, 50 cps to 2.5 mc . Ohmmeter is readable from 0.2 ohms to 2000 megohms. Resistance ranges: 0-2000-20.000-200.000 sistance ranges: $0-2000-20,000-200,000$
ohms and $0-2-200-2000$ megohms. Centerohms and $0-2-200-2000$ megohms. Center-
scale, 10 ohms. With leads. Requires no scale, 10 ohms. With leads. Requires no
batteries. $3 \times 57 / 8 \times 81 / 2^{\prime \prime}$. For $110-120$ v., $50-60$ cycle AC. Shpg. wt.. 6 lbs.
87 F 178 . NET.
82.00

## MODEL TO-5 TEL-OHMIKE

Multi-purpose bridge-type capacitor analyzer. An accurate multi-range capacitance and power factor measuring bridge; an insulation resistance checker for paper, mica, and ceramic capacitors; a leakage current indicator for electrolytics (tests at rated voltages). Measures 1 mmf to 2000 mfd . $87 / 8 \times 145 / 8 \times 61 / 8^{\prime \prime}$. For $110-120 \mathrm{v}$., $50-60$ cycle AC. Shpg. wt., $121 / 2 \mathrm{lbs}$.
66 FX 591. NET.
82.22

## MODEL LF-1 TRANSIMULATOR

For simulating any 1-transistor amplifier, except high-power audio stages. Has all variable components necessary for an RC amplifier. With 5 -way binding posts for coupling and metering circuits. Can be used with PNP, NPN junction or surface barrier transistors; common or grounded emitter, base or collector. Less batteries ( 8 - RCA VSO35; see p. 426 ). $51 / 8 \times 143 / 4 \times 81 / 2^{\prime \prime}$. Shpg wt., $111 / 2 \mathrm{lbs}$.
66 FX 592. NET
77.91


## MODEL 209A VTVM

- Light Loading-Only 7 mmf
- Flat Response to 300 mc
- Big, Zero-Center $9^{\prime \prime}$ Meter

A professional-quality VTVM that includes provisions for measuring inductance and capacitance. Large, zero-center $9^{\prime \prime}$ labora-tory-type meter for maximum visibility. Flat response from 30 cps to 300 mc . High input impedance: DC, 12 megs; AC, 12 megs shunted by 7 mmf ( 3 megs on 1200 v scale). Measurements as low as $1 / 10$ ohm.

Ranges: AC-DC volts, 0-3-12-30-120-300 1200; DC current, 0-3-12-30-120-300-1200 ma; Resistance, 1 ohm to 10.000 megs in 8 ranges; capacitance; 1 mmf . to 1000 mfd . in 7 ranges; inductance, 50 mh to 100 henrie (with conversion chart provided); $\mathrm{db},-20$ to +25 in 3 ranges; AC peak-to-peak, 0-3-12 30-120-300. $131 / 4 \times 16^{1 / 4} \times 7^{7 \prime}$. With AC and DC probes, test leads. For 105-125 v., 50-60 cycle AC. Shpg. wt., 25 lbs.
84 FU 136. NET
140.25

PR-30KVA PROBE. For above. Extends range to 30 KV DC. Shpg. wt., $11 / 2$ lbs.
84 F 149. NET
16.40

## MODEL 455A INDUSTRIAL VOM

Compact, portable VOM. Rugged design withstands hard use. Unique overload circuit cut-out and fuse system protects meter and components against burn-out on any function including ohms. Single switch selects function and range. Sensitivity 20.000 ohms-per-volt AC-DC. Ranges: AC DC v., 0-3-12-30-120-600-1200; resistances, 0 to 100 megs in 4 ranges 5 ohms center scale; current, 0-50 $\mu \mathrm{a}, 0-1-10-100-1000 \mathrm{ma}$, $0-10$ amps. $3 \times 57 / 8 \times 81 / 2^{\prime \prime \prime}$. With test leads. Less batteries. Uses 1 Burgess V20 and 1 No. 2; see page $425.51 / 2 \mathrm{lbs}$.
84 F 609. NET
66.50

CARRYING CASE. For 455 A or $415.1 / 2 \mathrm{lb}$. 84 F 635 . NET.
9.00

## Sprague Test Instruments



TEST EQUIPMENT

## NEW

## Model 1075

## Television Analyst

A miniature TV transmitter, specially designed to reduce time and labor in black-andwhite and color TV trouble-shooting-one of the most valuable servicing aids ever developed. Injects RF, IF, video, or audio signal into TV set for easy isolation of defective stage. Supplied with slide transparencies which provide standard test pattern, crosshatch pattern, and white-dot pattern; generates "rainbow" pattern for color television receivers. Quickly isolates and pin-points TV difficulty.

Standard pattern allows adjusting television set for best linearity, sensitivity, AGC action, bandwidth and resolution, and for proper size and aspect ratio. White-dot and crosshatch patterns are for adjusting color convergence, color demodulators, etc. RF and IF signals are video and audio-modulated; positive and negative video signal. Separate horizontal and vertical drive pulses. Includes $4.5-\mathrm{mc}$ FM sound channel; 400 -cycle tone generator.
Generates RF frequencies for channels 2-13; covers IF range from $25-45 \mathrm{mc}$. May be used as a store sales aid-you can insert your own "sales message" slides and they will appear in black-and-white on any set to which unit is connected. $161 / 2 \times 103 / 8 \times 91 / 2^{\prime \prime}$ For operation from $110-120$ volts, 60 cycle AC. Shpg. wt., 36 lbs.
87 FU 213. \$25.48 Down. NET. . 254.75

## MODEL 400 REJUVENATOR-TESTER

Unique TV picture tube rejuvenator-tester. Checks tube while still in set. Detects opens between base pins and elements; shorts, leakage between elements. Checks cathode emission, grid bias cut-off voltage. Repairs shorts between elements, open connections to elements, and restores weak emission. Predicts probable tube life. $41 / 4^{\prime \prime}$ meter. In portable, leatherette-covered case. $5 \times 71 / 2 x$ $111 / 4^{\prime \prime}$. For operation from 105-125 v., 60 cycle AC. Shpg. wt., $81 / 2$ lbs.
84 FX 643. \$5.88 Down. NET.
58.75

MODEL C40 COLOR ADAPTER. Adapts Model 400 and earlier Model 350 for testing and rejuvenating $110^{\circ}$ and color picture tubes. Checks each gun of color CRT for continuity, inter-element shorts, opens, leakage, etc. Shpg. wt., 1 lb .
87 F 279. NET
9.75

## MODEL 675 AUTOMATIC <br> TUBE \& TRANSISTOR TESTER

Portable, card-controlled "Dyna-Quik" dynamic mutual conductance tester. Card automatically selects connections for quick. accurate test. Utilizes only 60 cards for testing over 500 tube types-over $95 \%$ of all popular TV tubes. Checks each section of multi-section type tubes separately. Tests for shorts, grid emission and probable tube life. $41 / 2$ "' meter has "Good-Bad," 0-6000$18,000 \mu$ mhos scales. 7 and 9 -pin min. tube straighteners. Automatic line compensation. Tests Ico and forward gain ratio of junction, point contact, and barrier transistors; front-to-back ratio of germanium and silicon diodes; and selenium and silicon power rectifiers. $151 / 4 \times 121 / 4 \times 6^{\prime \prime}$. With cards and index. For 105-125 v., 60 cycle AC. Shpg. wt., 14 lbs.
87 FU 284. \$16.66 Down. NET . 166.55

## MODEL 650 TUBE \& TRANSISTOR TESTER

Highly versatile, portable "Dyna-Quik" dynamic mutual conductance tester. Tests transistors and virtually all popular television receiving tubes. Checks each section separately-requires very little switching. Large $41 / 2$ " plastic-faced meter has "GoodBad," 0-6000 and $0-18,000 \mu$ mhos scales. 7 and 9 -pin miniature tube pin straighteners and 16 spare sockets mounted on panel. Automatic line compensator. Detects shorts, grid emission, probable tube life, and gas. Accurately tests tubes under actual operating conditions of the set.

Tests Ico and forward gain ratio of junction, point contact, and barrier transistors; F/B ratio of germanium, silicon and selenium diodes. Has separate sockets for NPN and PNP type transistors. Convenient "Quik-Flip" indexed tube selector provides fast, complete tube socket and setting reference. Ideal tester for service shop and home service calls. Easily portable in sturdy, luggage-type carrying case. $153 / 4 \mathrm{x}$ $15 \times 61 / 2^{\prime \prime}$. For operation from 105-125 volts, 60 cycle AC. Shpg. wt., 22 lbs. 87 FU 280. \$16.66 Down. NET. . 166.55


## 750 TEST EQUIPMENT CALIBRATOR

Combination voltage. resistance, and frequency standard. Quickly checks the accuracy of any test instrument. Provides the following voltages $\pm 1 \%$ or better: DC $-2,5,25,100$ and $300 ; A C-5,25,100$ and 300 . Resistances: $10,100,1000,10,000$, 100.000 ohms and 10 megs. Built in crystal oscillator generates harmonics well over VHF region; tone generator for use alone or for modulating oscillator. Provides tone signal to check audio amplifiers in AM, FM or TV set. Size: $83 / 4 \times 8 \times 51 / 2^{\prime \prime}$. Supplied with $5-\mathrm{mc}$ crystal. For $110-120$ v., 60 cycle AC. Shpg. wt., 8 lbs.
87 F 253. NET.
53.85

## 150 TRANSISTOR TESTER

Clearly measures grounded emitter current gain of all transistors, including power types. Uses 1 ke signal for true small signal measurement. Meter reads $0-50-250$ beta; 0-50$200 \mu \mathrm{a}$ Ico; 0-20 ma for power transistors; and $20-80 \%$ diode front-to-back ratio. Special circuitry prevents damage to test instrument and transistor. Tests power transistors at 100 ma bias current. Tester also protors at choice of 4 collector voltages; mercury cell power supply (cells included). Ruggedly constructed case has convenient handles for easy portability. Size, $14 \times 81 / 2 \times 75 / 8^{\prime \prime}$. Shpg. wt.. 11 lbs.
87 FU 288. NET.
.175 .91

## 100 SHORTED TURNS INDICATOR

New extremely accurate indicator for quickly testing coils. Instantly tests for shorts and open circuits-before coil is mounted onto a relay, transformer, etc. Ideal for production testing, inspection and laboratory use-adaptable for automation. Sensitivity is adjustable to meet individual requirements. Built-in vacuum tube voltmeter shows "Pass-Reject" condition; red panel-light indicator flashes when defective coil is tested. With 3 probe-test rods: $5 / 16^{\prime \prime}$ coil is tested. With 3 probe-test rods: $5 / 1 / 6^{\prime \prime}$ dia.; $5 / 16^{1 / 166^{\prime \prime}}$. Metal case. $14 \times 8 \times 8^{\prime \prime}$. For operation from $110-120 \mathrm{v}$., 60 cycle AC . Shpg. wt., $151 / 2 \mathrm{lbs}$.
87 FU 215 . NET.
See Page 444


MODEL 240 HAMMETER. Popular, low-cost VOM. Sensitivity, 1000 ohms/v on AC and DC. DC volts, $0-3000$. AC volts, $0-3000 ;$ DC ma. 0-750; ohms, 0-3000-300,000. Bakelite case, $3 \times 57 / 8 \times 21 / 2^{\prime \prime}$. Complete with battery. eads. Shpg. wt., 3 lbs.
84 F 787. \$2.84 Down. NET
28.37

MODEL 390 VOLT-AMP-WATTMETER. Accurately measures power consumption of any 60 cycle AC appliance, radio or TV. Speeds trouble-shooting. Ranges: AC volts, $\mathbf{0 - 1 5 0}$ and $0-300 ;$ amps, $0-3$ and $0-15$; watts, $0-300$ $0-600,0-1500$ and $0-3000$. Has $3^{\prime \prime}$ meter Size, $57 / 8 \times 3 \times 21 / 2^{\prime \prime}$. Supplied with break-in plug and leads. Shpg. wt., 4 lbs.
84 f 788. \$4.31 Down. NET
43.07

MODEL 370 AC AMMETER. (Not illus.) Ranges 0-1-2.5-5-10-25 amperes. Built-in current transformer. $3^{\prime \prime}$ meter. Size: $3 \times 57 / 8 \times 21 / 2^{\prime \prime}$ Less leads. For measurement of 60 cycle AC only. Shpg. wt., 3 lbs.
84 F 794.. $\$ 2.15$ Down. NET
21. 51

MODEL 303 VTVM. Compact, accurate VT VM. Ranges: AC and DC volts, 0-1.2-12-60 $300-1200 ; \mathrm{AC}$ volts, 0-1.2-12-60, flat to 100 kc ; resistance, $0-1000-100,000$ ohms and 0-1-10-1000 megs. Also reads decibels from -20 to +63 in 5 ranges. Large $41 / 2^{\prime \prime}$ dial scale with easy-to-read calibrations. Bake lite case, $7 \times 51 / 4 \times 31 / 8^{\prime \prime}$. With DC and ACOhms probes; less RF probe (listed below). For operation from 110-120 volts, 60 cycle AC. Shpg. wt., $61 / 2 \mathrm{lbs}$.
84 F 712 . \$6. $6 \sigma$ Down. NET.
66.64

MODEL 303 RT. As above, but in "roll top" case. Shipg. wt.. 8 lbs .
84F 725. \$7.45 Down. NEI........ . 74.48 HV PROBE. Extends DC volts range to 30,000 volts. Slipg. wt., 1 lb .
84 F 715 . NET.
9.75

RF PROBE. Accurately measures RF volts. Shpg. wt., 1 lb
84 F 716 . NET
7.35

## MODEL 269 MICROAMMETER VOM AND ACCESSORIES

Sensitive, 100,000 ohms/volt multitester Accurate, wide-range VOM for lab or shop. Battery-operated; 33 ranges; $7^{*}$ dial; 2 controls. Ranges: DC current, 0-16-160 micromps. 0-1.6-16-160 milliamps and 0-1.6-16 amps, DC volts, 0-1.6-8-40-160-400-1600 $4000(100,000$ ohms $/$ volt $)$; AC volts, $0-3-8$ -40-160-800; output volts, 0-3-8-40-160; re sistance, $0-2000-20,000-200,000$ ohms, $0-2$ $20-200$ megohms. Size: $8 \times 6 \times 3^{\prime \prime}$. Supplied complete with test leads. $4000-\mathrm{v}$. DC probe batteries and highly informative operator's manual. Shpg. wt., 6 lbs.
84 F 726. \$8.62 Down. NET
86.24
hi-VOLTAGE PROBE. Extends DC range of Model 269 to 40,000 volts. 2 lbs.
84 F 742. NET.
12.25

MODEL 262. Similar to 269, but resistance ranges, $0-500-5000-50,000-500,000$ and 0 5-50-megohms; DC current, 0-80-160 $\mu$ a.; 1.6-16-160 ma and 0-1.6-16 amps. Sens. $20,000 \mathrm{ohms} / \mathrm{v} . \mathrm{DC} ; 5000 \mathrm{ohms} / \mathrm{v}$. AC. Less case. 6 lbs .
84 F 727. 85.83 Down. NET.
58.31

MODEL 5262 CARRYING CASE. Vinyl case for 269 and 262. $7 \times 8 \times 4^{\prime \prime}$. Shpg. wt., 2 lbs 84 F 728 . NET
9.75


MODEL 372 OHMMETER. Accurate, wide range ohmmeter. $3^{\prime \prime}$ meter. Basic movement has a sensitivity of 85 microamperes. Ranges $0-500$ ( 5 ohms center), 0-5000 ( 50 ohms cen ter), 0-50,000 ( 500 ohms center), $0-5 \mathrm{meg}$ ohms ( 50,000 ohms center), 0-50 megohms ( 500,000 ohms center). With batteries and test leads. $3 \times 57 / 8 \times 21 / 2^{\prime \prime}$. Shpg. wt., 3 lbs
84 F 796. \$2.74 Down. NET
27.39

MODEL 373 DC MILLIAMMETER. 0-1-5-10-25 50-100-250-1000 ma. Size: $3 \times 57 / 8 \times 21 / 2^{\prime \prime}$ Shpg. wt., 3 lbs
87 F 117. NET
19.55

MODEL 374 DC MICROAMMETER. 0-50-100-250-500-1000 $\mu \mathrm{a}$. $3 \times 57 / 8 \times 21 / 2^{\prime \prime} .3$ lbs.
87 F 118. NET
22.54

MODEL 375 DC AMMETER. 0-1-2.5-5-10-25 amps. $3 \times 57 / 8 \times 21 / 2^{\prime \prime}$. Wt., 3 lbs.
87 F 119. NET.
19.55

MODEL 385-3L TEMPERATURE METER. For servicing refrigeration equipment. Range: $-50^{\circ}$ to $+70^{\circ}$ F. $3 \times 57 / 8 \times 21 / 2^{\prime \prime}$. 2 lbs .
87 F 120. $\$ 3.33$ Down. NET.
33.27


MODEL 355 MIDGETESTER. Miniature, highly accurate VOM. Fits in palm of hand. 10,000 accurate
ohm/volt sensitivity on AC and DC . Checks motors. relays, control circuits, house volt ages, starting switches, fuses. etc. Accuracy $\pm 3 \%$ on DC; $\pm 5 \%$ on AC .100 microamp self-shielded and shockproof meter movement. Handy ohms zero-adjust thumbwheel on side of case. Ranges: AC and DC volts. on side of case. Ranges: $A C$ and $0-12-60-300-1200$. Resistance: $0-10.000-$ $0-3-12-60-300-1200$. Resistance: 0-10.000-
100,000 ohms. $0-1-10 \mathrm{meg}$. Function and range selection by insertion of leads. Rugged, molded styrene case. Size: $23 / 4 \times 41 / 2 \times 1^{\prime \prime}$. Supplied complete with batteries, test leads and informative operator's manual Shpg. wt., 2 lbs.
84 FC 734 . $\$ 3.43$ Down. NET.... . 34.25
TYPE 6355 CASE. For above. High quality, black leather with zipper. Convenient belt loop. Shpg. wt., 3 oz.
84 F 741 . NET.
2.89

TYPE 8600 SPARE TEST LEADS. For above. Shpg. wt., 1 lb .
87 F 108. NET.
1.71

## NEW

## Series III Model 260 VOM

Latest version of this time-tested VOM. Has polarity reversing switch, 5000 ohms/v. AC sensitivity, rugged printed circuit, fullwave bridge rectifier, response to 500,000 cps. DC sensitivity, 20,000 ohms/v. Ranges DC mv, 0-250; AC and DC v., 0-2.5-10-50 250-1000-500\%; AF output v.. 0-2.5-10-50250; DC $\mu \mathrm{a}, \mathbf{0 - 5 0 ;}$ DC ma, 0-1-10-100-500; DC. amps, $0-10$; resistance, $0-20$ megs in 3 ranges. $51 / 4 \times 7 \times 31 / 8^{\prime \prime}$. With batteries and test leads. Shpg. wt., 5 lbs.
87 F 111 . $\$ 4.30$ Down. NET.
43.07

MODEL 260RT. As above, but in "roll top" case. $63 / 8 \times 9 \times 43 / 4^{\prime \prime}$. Shpg. wt., 9 lbs.
87 F 112 . \$7.90 Down. NET.
48.95
high-voltage probe. Extends DC range to 25,000 volts. Shpg. wt.. 8 oz .
84 F771. NET.
9.75

TYPE 0248 PROBE. Extends DC range to 50,000 volts. Shpg. wt., 8 oz.
87 F 115 . NET.
12.25

TYPE 7500 SPARE LEADS. Wt., 1 lb .
87 F 116 . NET.
2.06

CASES FOR MODELS 260 AND 303. Eveready type case permits using meter in case. Av shpg. wt., 2 lbs .
84 F 721 . Eveready Case. NET $\quad 9.55$
84 F 782 . Standard Case. NET.
7.59


## Model 311 VTVM

Highly sensitive VTVM. Easy-to-read ranges: 0-1.5-5-15-50-150-500-1.500 DC volts; 22 megohms input impedance. AC voltage: 0-1.5-5-15-50-150-500-1500; 2.2 megolims input impedance minimum. Resistance: $0-1 \mathrm{~K}-10 \mathrm{~K}-100 \mathrm{~K}$ ohms and $0-1-10$ 100-1000 megohms. AF voltage: 0-1.5-5-15-$50-150-500-1500,30$ cycles to $100 \mathrm{KC} \pm 5 \%$. Peak-to-Peak: 0-4-14-40-140-400-14004000. Zero center scale for discriminator alignment. Complete with single DC-AC/ ohms probe. Sturdily constructed case, $71 / 2 \mathrm{x}$ $55 / 8 \times 41 / 2^{\prime \prime}$. For $105-125$ volts. $50-60$ cycle AC. Shpg. wt., 8 lbs.
87 F $121 . \$ 6.37$ Down. NET.
63.65

MODEL 0732 HIGH-VOLTAGE PROBE. Extends DC range to $30,000 \mathrm{v} .1 \mathrm{lb}$. 87 F 122. NET
10.73

TEST EQUIPMENT


## MODEL 383-A CAPACOHMETER

"In-or-out-of-circuit" capacitor leakage tester. Indicates leakage and measures capacitance of paper, mica or ceramic capacitors. No unsoldering is necessary. Pulse test quickly detects "borderline" capacitors. $41 / 2^{\prime \prime}$ meter. Indicates leakage in ohms-checks for direct short, open, or intermittent conditions in all types of bypass, coupling and blocking capacitors from 10 mmf to 10 mfd . Also detects leaks in wiring, sockets, transformers, etc. $83 / 8 \times 113 / 8 \times 81 / 2^{\prime \prime}$. With test leads. For $110-120$ volts, 60 cycle AC. Shpg. wt., 11 lbs.

## 84 FX 630 . NET.

88.15

## MODEL 388-3L THERM-O-METER

Thermocouple thermometer. For gases, liquids or solids. Reads $-50^{\circ}$ to $1000^{\circ} \mathrm{F}$, on $7^{\prime \prime}$ scale. Has $71 / 2-\mathrm{ft}$. general-purpose probe (Type 0190), with provisions for 3 probes. Ailows temperature readings in 3 different areas by rotating switch. $6 \times 715 / 16 \times 215 / 16^{\prime \prime}$. With battery. Shpg. wt., 6 lbs.
84 F 744. NET
63.21

MODEL 388. As above, but with provisions for one probe only. Shipg. wt., 6 lbs.
84 F 738. NET
58.31

Type 0187 SURFACE TEMP. PROBE. For 3883 L and 388 above. Shpg. wt., 1 lb . 84 F 745 . NET
6.81

Type 0190 GENERAL-PURPOSE PROBE. For 388-3L and 388. Shpg. wt., 1 lb . 84 F 746. NET
TYPE 5262 CASE. For $388,388-3 L .5 \mathrm{oz}$ 84 F728. NET
9.75

MODEL 389-3L THERM-O-METER. Same as 388-3L but employs thermistor principle of operation. Reads $-50^{\circ}$ to $250^{\circ} \mathrm{F} .6 \mathrm{lbs}$. 87 F 114. NET



## NEW MODEL 466 "HANDISCOPE"

New, low-priced general-purpose $5^{\prime \prime}$ scope. Rugged, compact and easy to carry-ideal for AM, FM or black-and-white TV servicing. Vertical response: $\pm 1 \mathrm{db}$ from 15 to 100 $\mathrm{kc} ; 6 \mathrm{db}$ down at 250 kc ; usable to 1 mc . Vertical sensitivity: $\mathbf{3 0} \mathrm{rms} \mathrm{mv} / \mathrm{inch}$ maẍ. Input resistance and capacitance: 0.1 meg 40 mmf (at atten.x1) $0.5 \mathrm{meg}, 35 \mathrm{mmf}$ (at 40 mmf
atten. x 100 ). Sweep range: 15 cycles to 80 kc . Maximum input voltage, 400 v . peak. Size: $121 / 4 \times 8 \times 161 / 4^{\prime \prime}$. With lead and operator's manual. For $110-120$ v., $50-60$ cycle AC Shpg. wt., 24 lbs.
87 FU $113 . \$ 14.21$ Down. NET . . 142.05

## MODEL 458 COLORSCOPE

$7^{\prime \prime}$ dual bandwidth, oscilloscope. For black-and-white and color TV. Vernier and compensated decimal step attenuator. Horizontal sweep to 250 kc for expanding highfrequency waveform detail and color burst. Intensity modulation input. Graph screen. Frequency response: Wide-band, $\pm 2 \mathrm{db}$ to 5 mc; narrow band, $\pm 1 \mathrm{db}, 10$ cycles to 200 kc . Deflection sensitivity: Wide band, 25 mv rms/inch; narrow band, 10 mv rms/inch. Calibrating voltage, 6.3 volts rms. $100 \%$ response at $3.58-\mathrm{mc}$ color burst. $135 / \mathrm{ax11x}$ $171 / 4^{\prime \prime}$. For operation from $110-120 \mathrm{v} ., 50-60$ cycle AC. Shpg. wt., 32 lbs.
84 FU 63 1. $\$ 22.54$ Down. NET. . 225.35
TYPE 0740 VOLTAGE DOUBLER PROBE. For use with above. Detects the video signal at weak IF points and locates the weak or dead stage. Shpg. wt., $11 / 2 \mathrm{lbs}$. 87 F 104. NET.
10.73

## MODEL 1000 TUBE TESTER

Accurate, plate-conductance tube tester, Tests all receiving tubes, including 9-pin miniature and sub-miniatures with a linear and circular base arrangement. Tests are made under conditions simulating actual use. $41 / 2^{\prime \prime}$ dial indicates percentage of rated plate conductance for an accurate indication of tube condition. Also provides quick, dependable short and leakage tests-shows exact resistance values of shorts and interelement leakage. Each tube element is individually connected to the correct voltage tap-insures against tube damage during testing. Size (HWD): $153 / 4 \times 113 / 4 \times 6^{\prime \prime}$. For operation from 110-120 volts, 60 cycle AC. Shpg. wt., 19 lbs.
84 FU 723. \$13.23 Down. NET. . 132.30

## MODEL 382 ANALYZER

In-circuit horizontal system analyzer and capacitance checker. Only plate cap of output tube need be removed for tests! Checks High-Z systems on good-bad scale; checks Low-Z system on 'comparative logging scale. Tests any transformer or yoke winding for continuity; tests transformers and yokes for opens. Checks individual windings on flyback system for shorts or partial shorts. Measures capacitance and checks for opens in any capacitor of horizontal system. Direct-reading from 10 mmf to 0.1 mfd (checks any capacitor in chassis falling in this range). $41 / 2^{\prime \prime}$ meter. Supplied complete with test leads. Size: $73 / 4 \times 71 / 2 \times 111 / 4^{\prime \prime}$. For operation from $110-120$ volts, $50-60$ cycle AC. Shpg. wt., 12 lbs.
87 FX $103 . \$ 6.86$ Down. NET.
68.55


Telematic $8^{\prime \prime}$ "Tele-Check"

Compact and por table, the "TeleCheck" speeds pix circuit testing

MODEL CR-118. Portable CRT substitution unit. Saves time and trouble by quickly locating and identifying CRT or yoke troubles. Completely self-focusing; no ion trap needed. Works with either electrostatic or electromagnetic focusing TV sets. Can be used with any $52^{\circ}, 66^{\circ}, 70^{\circ}$, or $90^{\circ}$ deflection yokes. 6-foot CRT extension lead permits convenient placement. Universal yoke is interchangeable with yoke of set under repair. Horizontal and vertical lines on front plate help in making accurate picture adjustments. In leatherette covered carrying case with plastic handle. Supplied with $6-\mathrm{ft}$. CRT socket extension leads, anodehandle. Supplied with 6 -tt. CRT socket extension leads, anodeyoke connecting leads and plastic fact $12 \times 111 / 2 \times 15^{\prime \prime}$. Shpg. wt., $111 / 2 \mathrm{lbs}$.
87 FX 297. \$4.50 Down. NEI
44.95

MODEL CR-117. As above, but less 8AXP4. Shpg. wt., 9 lbs.
87 FX 296. \$2.70 Doven. NET
26.95

## Chicago Industrial Test Meters



MODEL 431-A VOM WITH HINGED, REMOV ABLE COVER. Accurate 18 -range volt-ohmmeter. Rugged, military-type aluminum case withstands hard usage. $1 \%$ shunts and multipliers. Has 860 ua meter movement. multipliers. Has $860 \mu \mathrm{a}$ meter movement
Ranges: $\mathbf{A C - D C}$ volts, $0-15-30-150-300-$ $1500-3000$ (at 1000 ohms per volt); DC current. $0-1.5-150$ ma and 0-7.5 amps; resistance, $0-10,000-100,000$ ohms $0-1 \mathrm{meg}$. (center scale readings, 50,600 and 6000 ohms) $61 / 8 \times 31 / 4 \times 53 / 4^{\prime \prime}$. With penlight cells, carrying strap and leads. Wt., $33 / 4$ lbs.
87 F 310 . $\$ 2.06$ Down. NET
20.58

MODEL 431-A-LESS COVER. Wt., $31 / 2 \mathrm{lbs}$.
84 F 309. NET.
19.11

MODEL 312 VOM. Pocket-size, 6 -function VOM. $2^{\prime \prime}$ meter. Reads: DC volts, 0-25-50-125-250. AC volts, 0-25-50-125-250. DC ma. $0-50$. AC ma, 0-50. Resistance, 100,000 ohms full scale, with 2400 ohms half-scale reading. Capacitance, . 05-15 mfd. Resistance ranges operate from AC power-no batteries required. In sturdy bakelite case, $37 / 8 \times 23 / 4 \times 13 / 4^{\prime \prime}$. Less test leads. For operation from $110-120$ volts, 60 cycles AC. Shpg. wt., $11 / 4 \mathrm{lbs}$.
84 F 306. NET
8.82


556-K

$221-K$


TEST EQUIPMENT


Tests all conventional receiving tubes including 600-ma series types.

## MODEL 556-K STANDARD

## MULTIMETER KIT-WITH 41/2" METER

Has 400 -microamp movement. 38 full-scale ranges: DC, AC and output volts, 0-1-5-10 50-100-500-5000 (at 1000 ohms per volt); AC and DC current, $0-1-10 \mathrm{ma}$ and $0-0.1-1$ amp; resistance, $0-500-100,000$ ohms and $0-1$ megohm. Six db ranges. -20 to +69 $1 \%$ resistors. Accuracy: $\mathrm{DC}, \pm 3 \% ; \mathrm{AC}, \pm 5 \%$. With case, wire battery. Less leads and solder. $63 / 4 \times 51 / 4 \times 3^{\prime \prime}$. Wt., 4 lbs.
83 F 173. NET
16.90

MODEL 556. As above, but factory-wired.
84 F 347. NET.
23.50

## MODEL 221-K VTVM KIT

An easy-to-build, sensitive VTVM for making measurements in high-resistance circuits. 20 ranges, with DC input resistance of 25 megohms. $41 / 2^{\prime \prime}$ meter is protected against burnout. Includes zero center for alignment of FM and TV discriminators. Dual-triode balanced bridge, $1 \%$ multiplier resistors. Ranges: AC-DC volts, 0-5-10 $100-500-1000$; extends to 30,000 volts and 200 mc with HVP-2 and PRF-25 probes; resistance, $0-1000$ ohms $0-1-10-100-1000$ megohms; $\mathrm{db}-20$ to +55 . Tubes used: 6 H 6 , 6SN7; and 6X5 rectifier. With leads, less solder. $6 \times 97 / 16 \times 5^{\prime \prime}$. For $105-125$ volts, 50-60 cycle AC. Shpg. wh., 10 lbs.
83 F 152. NET
25.95 MODEL 221. As above, but factory-wired. 84 FX 389. NET
39.95

536-K STANDARD MULTIMETER KIT Has $3^{\prime \prime}$ meter. 31 ranges: AC and DC volts; $0-1-5-10-50-100-500-5000$ at 1000 ohms $/$ volt; resistance, $0-500,0-100,000$ ohms, $0-1$ meg; AC and DC current, 0-1-10 ma and $0-0.1-1$ amps; 6 decibel ranges, -20 to +69 db . With bakelite case, wire, battery and instructions. Less leads and solder. Size: $61 / 4 \times 33 / 4 \times 2^{\prime \prime}$. Shpg. wt., 3 lbs.
83 F 171. NET
12.90

MODEL 536. As above, but factory-wired. 84 F 345. NET
14.90

MODEL 526-K KIT. As above, but with $1 \%$ resistors. Shpg. wt., 3 lbs.
83 F 166. NET
13.90

MODEL 526. As above, but factory-wired. 84 F 390. NET . . . . . . . . . . . . . . . . . . . 16.90

## EICO VTVM PROBE KITS

Av. shpg. wt., 1 lb
83 F-188. Model PTP-25-K.
Peak-to-peak probe kit. NET. . 4.95
84 F 661. Model PTP-25. As above,
but factory wired. NET. . . . . . . 6.95
83 F 189. Model PRF-25-K. RF
Probe Kit. NET
3.75

84 F 662. Model PRF-25. As above,
but factory wired. NET.
4.95

83 F 196. Model PRF-11K. RF Probe Kit. NET. 3.75 83 F 197. Model PRF-11. As above, but factory wired. NET . . . . . . . . 4.95 MODEL HVP-2 HIGH VOLTAGE PROBES For adapting VTVM units to read up to 30,000 volts. Factory-wired and fully tested.
84 F 663. For Models 214, 221. 84 F 669. For Models 232, 249.
NET EACH.

## MODEL 232-K VTVM KIT

A high-quality, moderately-priced service instrument. Balanced-bridge circuit grovides accuracy and stability. Meter movement protected against burn-out. Easy-toread $41 / 2^{\prime \prime}$ scale. $1 \%$ multiplier resistors. Easily calibrated without removal from Easily "calibrated without removal from high impedance input. Half turn of probe tip selects DC or AC/ohms. Measures peak to-peak or rms values of AC waves. Ranges p-p volts, 0-4-14-42-140-420-1400-4200 volts; DC/rms volts, 0-1.5-5-15-50-1.50 $500-1500$ volts; resistance 0 to 1000 meg ohms in 7 ranges. Has zero-center scale for TV and $\mathbf{F M}$ discriminator alignment. Tubes: 12AU7, 6AL5, selenium rectifier. Size: $7 \times 4 \times 5^{\prime \prime}$. Less solder. For 105-125 volts, $50-60$ cycle AC. Shpg. wt., 7 lbs. 83 F 186 . NET
29.95

MODEL 232. As above, but factory-wired. 84 F 659 . NET
49.95

## MODEL 249-K DELUXE VTVM KIT

As Model $232-\mathrm{K}$, but has $71 / 2^{\prime \prime}$ meter. $81 / 2 \times 13 \times 5^{n}$. Less solder. Wt., 9 lbs. 83 F 187. NET.
39.95

MODEL 249. As above, but factory-wired 84 F 660 NET
59.95

## MODEL 214-K DELUXE VTVM KIT

All the versatility and performance-proven features of Model 221, plus the extra convenience and legibility of a big $71 / 2^{\prime \prime}$ meter $131 / 4 \times 9 \times 6^{\prime \prime}$. Shpg. wt., 11 lbs .
83 FX 170. NET
34.95

MODEL 214. As above, but factory-wired. 84 FX 344. NET
54.95

## 666-K TUBE \& TRANSISTOR TESTER KIT

This versatile tester indicates mutual conductance, plate conductance and peak emission capability of tubes-also measures transistor collector current and shows cur rent amplification factor. $200 \mu$ a meter provides direct readings of leakage up to 20 megohms; 5 ranges of meter sensitivity. $12 \times 15 \times 41 / 2^{\prime \prime}$. Less solder. For 105-1.25 v., 5060 cycle AC. Shpg. wt., 18 lbs.
83 FX 198. NET
69.95

MODEL 666. As above, but factory-wired. 87 FX 226. NET. . . . . . . . . . . . . . . . 109.95

## MODEL 625-K TUBE TESTER KIT

Short and open test for each element. Fullvision, $41 / 2^{\prime \prime}$ meter with Replace-Weak-Good scale. An overload bulb indicates transformer overload and also serves as fuse. Rugged steel case. Illuminated, "speed-roll" chart. Lever-action switches for individual testing of every tube element. Knock-out for new tube socket. Less solder. For operation from $105-125$ v., 60 cycle. AC. $121 / 2 \times 91 / 2^{\times 41 / 4^{\prime \prime}}$. 105-125 V., 60 cy
Shpg. wt., 12
lbs.
83 FX 161 . NET.
34.95

MODEL 625. As above, but factory-wited. 84 FX 397. NET.
MODEL L-I. Lid (cover) for $625-\mathrm{K}$ or 625
83 F 880. NET

## MODEL CRA PICTURE TUBE ADAPTER

(Not illus.) Adapts 625 and 666 tube testers for checking all sizes of TV picture tubes. Measures cathode emission. Tests for filament continuity, shorts between elements. With standard 12 -pin socket, octal connector and 4 -ft. cable. Wt., 2 lbs. 84 F 348. NET.
4.50

MODEL CRA-110. Same as above but with "Eightar" 8-contact socket for checking 110 deg. deflection tubes. Shipg. wt., 1 lb . 83 F 879. NET . . . . . . . . . . . . . . . . . . . 3.95

## Model 565-K Multimefer

 Kit- Sensitivity, 20,000 Ohms/V.
- 31 Ranges
- Bakelite Case


Performance-proven, wide-range multimeter for radio-TV servicing. etc. Features easy-to-read, $41 / 2^{\prime \prime}$ meter- 50 -microamp meter movement. High-impact bakelite case with carrying handle.

Has 31 ranges: DC, AC and output volts $0-2.5-10-50-250-1000-5000$ (DC at 20,000 ohms per volt, AC at 1000 ohms per volt) DC current, $0-100$ microamps, $0-10-100$ 500 ma and $0-10 \mathrm{amps}$; resistance, $0-2000-$ 200,000 ohms and 0-20 megohms. Five db ranges, -12 to +55 . Size, $63 / 4 \times 51 / 4 \times 3^{\prime \prime}$. With case, batteries, all parts, wire, instructions. Less leads and solder. Wt., 4 lbs

## 83 F172. NET

24.95

MODEL 565. As above, but factory-wired. 84 F 346. NET
29.95

MODEL $555-\mathrm{K}$ KIT. Same as $565-\mathrm{K}$ above, but with $1 \%$ resistors. Wt., 4 lbs. 83 F 167. NET
29.95

MODEL 555. As above, but factory-wired. 84 F 391 . NET. . . . . . . . . . . . . . . . . . 34.95


## MODEL 460-K 5" OSCILLOSCOPE KIT

- For Black and White and Color TV
- 4-Step Attenuator in DC and AC
- Vertical Sensitivity: $25 \mathrm{mv} /$ inch
- Built-in Voltage Calibrator

Wide-band scope for lab and color TV use. Response flat from DC to 4.5 mc -usable to 10 mc . Accurately reproduces $3.58-\mathrm{mc}$ color TV sync burst. 4 -step attenuator in both DC and AC position. Vertical sensitivity 25 mv /inch. Built-in voltage calibrator. Full-screen DC vertical positioning and 2X full-screen horizontal positioning. Automatic sync limiter and amplifier eliminates sync voltage adjustment. Sweep: 10 cps to 100 kc , plus low frequency sweep with external capacitor. Graph screen has variable illumination. Push-pull vertical amplifier, voltage regulated. Cathode follower inputs. With all tubes, CRT, all parts, instructions. $13 \times 81 / 2 \times 16^{\prime \prime}$. Less solder. For $105-125 \mathrm{v}$., $50-60$ cycle AC. Shpg. wt., 26 lbs. 83 FU 193. NET
79.95

MODEL 460. As above, but factory-wired. 84 FU 668. NET
129.50

368-K


## MODEL 368-K SWEEP \& MARKER GENERATOR KIT

Sweep generator and marker for highly accurate alignment of $F M$, color and black-and-white TV. Covers 3 to 216 mc in 5 ranges. Variable frequency marker provides output from 2 to 75 mc on fundamentals; to 225 mc on harmonics. Sweep width is variable from $0-30 \mathrm{mc}$. Supplied with built-in $4.5-\mathrm{mc}$ crystal marker for oscillator. Provides dual markers for RF or IF alignment. Provision for adding or if alignment. Provision for adding sweep and marker attenuators. Has retrace blanking. Output impedance, 50 ohms. Edge-lit hairlines for high tuning accuracy. 6:1 vernier tuning mechanism. Tubes used: 12AT7, 12AV7, 12AX7, 6AU6, 12B4; 6X4, rectifier, selenium bias rectifier. $83 / 4 \times 131 / 2 \mathrm{x}$ $71 / 4^{\prime \prime}$. With all tubes, parts and instructions. Less solder. For 105-125 v., 50-60 cycles AC. Shpg. wt., 16 lbs.
83 FU 950 . NET.
69.95

MODEL 368. As above, but factory-wired. 87 FU 225. NET
119.95

## MODEL 425-K $5^{\prime \prime}$ OSCILLOSCOPE KIT

For AM, FM and TV. Push-pull outputs in horizontal and vertical amplifiers. Sensitivity, .05-. 1 rms volt/inch. Range, 5 cps to 500 kc . Input imp., 1 meg . Multi-vibrator sweep circuit, 15-75,000 cps. Provision for external sync., $Z$-modulation and direct imput to CR tube plates. Calibrating terminal on panel. Graph screen. With tubes and parts. Less solder. $81 / 2 \times 17 \times 13^{\prime \prime}$. For 105 125 v., $50-60$ cycle AC. 30 lbs . 125 v., 50-60 cycle AC. 30 lbs.
44.95

MODEL 425. As above, but factory-wired. 84 FU 392. NET.
79.95

## MODEL 470-K $7^{\prime \prime}$ OSCILLOSCOPE KIT

Push-pull amplifiers and cathode follower inputs to both vertical and horizontal sections. Wide-range sweep frequency generator ( 15 cps to 100 kc ). Intensity modulation, external sync inputs, saw-tooth and line frequency outputs-all on front panel. Internal voltage calibrator. Frequency response: vertical amplifier, flat within $\pm 2$ db from 10 cps to 1 mc with sensitivity of .01 volt rms/inch; horizontal amplifier, $\pm 2$ db from 10 cps to 500 kc with sensitivity of .3 volt rms/inch. Input impedance: vertical, 3 megs and 35 mmf ; horizontal, 1 meg and 40 mmf . Graph screen. $15 \times 15 \times 10^{\prime \prime}$. With all tubes and parts. Less solder. For 105-125 v., 50-60 cycle. AC. Shpg. wt., 35 lbs. 83 FU 174. NET
79.95

MODEL 470. As above, but factory-wired. 84 FU 343. NET.
129.50

## OSCILLOSCOPE TV PROBES

For signal and waveform tracing, etc. Fully shielded. Av. shpg. wt., 5 oz .
MODEL PSD.K. Demodulator Probe Kit. 83 F 180 . NET 3.75

MODEL PSD. As above, but factory-wired. 84 F 653. NET
5.75

MODEL PD-K. Direct Probe Kit.
83 F 181 . NET
2.75

MODEL PD. As above, but factory-wired. 84 f 654. NET. 3.95

MODEL PLC-K. Low Capacity Probe Kit. 83 F 182. NET 3.75 MODEL PLC. As above, but factory-wired. 84 F 655. NET.
5.75

## MODEL 322-K RF GENERATOR KIT

(Not illus.) Accurate 150 kc to 34 mc generator. Individual calibration for each of 5 bands. Switch selects pure RF, modulated RF or pure 400 cycle AF. Shielded RF and AF attenuators. With 6SN7; 6X5 rectifier Steel case. $10 \times 8 \times 43 / 4^{\prime \prime}$. With instructions. Less solder. For 105-125 v., 50-60 cycle AC. Shpg. wt., 10 lbs.
83 F 168 . NET.
23.95

MODEt 322. As above, but factory-wired. 84 F 396. NET.

MODEL 360-K SWEEP GENERATOR KIT
Every advanced feature needed for quick, easy, and accurate alignment of TV or FM receivers. Use for video IF alignment and response curve adjustment, sound IF and sound detector adjustment. Covers 500 kc to 228 mc . Variable sweep, $0-30 \mathrm{mc}$. Crystal marker oscillator with variable amplitude. Provision for injection of external marker. Phase control. 81/2" vernier tuning dial. Center of each TV channel is marked on front panel. Uses 6C4, 2-6J5, 7193; 6X5GT rectifier. With tubes, parts, instructions. Less $5-\mathrm{mc}$ crystal and solder. 10x8x $63 / 4^{\prime \prime}$. For operation from $105-125 \mathrm{v} ., 50-60$ cycle AC. Shpg. wt., 12 lbs.
83 F 159. NET.
34.95

MODEL 360. As above, but factory-wired. 84 FU 342. NET.
49.95

## MODEL 315-K DELUXE RF SIGNAL GENERATOR KIT

For AM, FM, TV servicing. $1 \%$ accuracy from 75 kc to 150 mc . $9^{\prime \prime}$ illuminated dial. Vernier tuning. Provision for external modulation. Internal $400-\mathrm{cps}$ sine wave generator with attenuator for RF modulation and external audio testing. Uses: 7F7, 6C4; VR150, and $6 \times 5.12 \times 13 \times 7^{\prime \prime}$. Less solder. For 105-125 v., 50-60 cycle AC. 20 lbs. 83 FU 162. NET
39.95

MODEL 315. As above, but factory-wired. 84 FU 395. NET..................... . . . 59.95

## 320-K RF SIGNAL GENERATOR KIT

Well-designed circuit uses a stable Hartley oscillator. Covers 150 kc to 34 mc on funda-mentals-to 102 mc on harmonics. $400-\mathrm{cps}$ modulation. Has $9^{\prime \prime}$ dial calibrated in 7 bands. Complete with tubes, portable case, parts, shielded cable, instructions, etc. Less solder. $10 \times 8 \times 43 / 4^{\prime \prime}$. For $105-125$ v., $50-60$ cycle AC. Shpg. wt., 10 lbs.
83 F 154. NET
19.95

MODEL 320. As above, but factory-wired. 84 F 394. NET
29.95

## 324-K RF SIGNAL GENERATOR KIT

Provides modulated or unmodulated RF signal. For signal tracing and IF-RF alignment of AM, FM, TV receivers. Has expanded frequency range of 6 fundamental bands: $150-400 \mathrm{kc}, 400-1200 \mathrm{kc}, 1.2-3.5$ $\mathrm{mc}, 3.5-11 \mathrm{mc}, 11-37 \mathrm{mc}$ and $37-145 \mathrm{mc}$. One harmonic band covers $111-435 \mathrm{mc}$. Calibration accuracy is $\pm 1.5 \%$. Output impedance, 50 ohms. Internal modulation of 400 cps variable from 0 to $50 \%$; can be used for audio testing. Input has gain control for use with external modulator. Colpitts RF oscillator is directly modulated by cathode follower. Fine and coarse RF attenuators. With tubes and all parts. Less solder. $8 \times 10 \times 43 / 4^{\prime \prime}$. For $105-125$ v., $50-60$ cycle AC. Shpg. wt., 10 lbs.
83 F 192. NET
26.95

MODEE 324. As above, but factory-wired. 84 F 666. NET.
39.95

## Eico Test Equipment Kits



## MODEL 540-K "REDI-TESTER" KIT

A very useful device for simplified repair work on home appliances and for checking automobile electrical systems. It is a combination AC/DC voltmeter, ammeter, ohm meter, wattmeter, and leakage tester. A rotary switch range selector provides easier, surer, and faster operation than comparable units.
Ranges: AC-DC volts, $\mathbf{0} \mathbf{- 7 . 5}, \mathbf{1 5}, \mathbf{1 5 0}, 300$. Current (AC or DC), 0-15 amps. Resistance, $0-1000$ ohms. Leakage test of capacitors above .0005 mfd and resistors between 1000 and 2 megohms. $31 / 2^{\prime \prime}$ meter. Has handsome, etched aluminum panel and black bakelite case. With leads. Less solder. Size, $61 / 2 x$ $33 / 4 \times 3112^{\prime \prime}$. Shpg. wt., 3 Ibs.
83 F 199. NET. $\qquad$ 12.95

MODEL 540. As above, but factory-wired.
84 F 667. NET. .
15.95

## MODEL 944-K FLYBACK TESTER KIT

Quickly and easily spots defective flyback transformers and yokes in black and white and color TV sets. Also checks continuity of yokes, speakers, etc. Features grid-dip principle and separate calibration for air and iron-core flybacks to assure accurate testing. Has easy-to-read $41 / 2^{\prime \prime}$ meter with 3 separate colored scales. Handsome, satin finish aluminum panel. Housed in sturdy gray wrinkle steel case with convenient carrying strap. Size, $81 / 255 \times 5^{\prime \prime}$. Less solder. For operation from 105-125 volts, $50-60$ cycle AC. Shpg. wt., 5 lbs.
83 F184. $\$ 2.40$ Down. NET. ..... 23.95
MODEL 944. As above, but factory-wired. 84 F 657. \$3.50 Down. NET......... 34.95


584-K


488-K

MODEL 584-K BATTERY TESTER KIT Quickly tests all portable radio "A" and "B" batteries in or out of the receiver. Test switch positions (volts): 1.5, 4.5, 6.0, 7.5, $9.0,22.5,45,67.5,75,90$, plus a spare position. $31 / 2^{\prime \prime}$ meter calibrated: Good, Usable and Bad. Black bakelite case and aluminum panel. $61 / 4 \times 33 / 4 \times 2^{\prime \prime}$. Less solder. With test leads. Shpg. wt., 2 lbs.
83 F 195. NET.
9.95

MODEL 584. As above, but factory-wired. 84 F 671 . NET.
12.95

## MODEL 488-K ELECTRONIC SWITCH KIT

Allows simultaneous observation of two patterns on the screen of a scope. Switching rates: $10-100 \mathrm{cps} ; 50-400 \mathrm{cps} ; 250-2000 \mathrm{cps}$; all variable. Freq. resp. $0-30,000 \mathrm{cps} 2 \mathrm{db}$; usable to $300,000 \mathrm{cps}$. Size, $6 \times 8 \times 6^{\prime \prime}$. Less solder and leads. For operation from 105125 v., 50-60 cycle. Shpg. wt., 7 lbs.
83 F 185. \$2.40 Down. NET....... 23.95 MODEL 488. As above, but factory-wired. 84 F 658. $\$ 4.00$ Down. NET. . . . . . . 39.95

## MODEL 377-K AUDIO GENERATOR KIT

Provides sine and square waves. $1 \%$ resistors in Wien bridge-type oscillator circuit. Sine wave: $20-200,000 \mathrm{cps}$ in 4 bands, $\pm 1.5 \mathrm{db}$. from $60-150,000 \mathrm{cps}$, less than $1 \%$ distortion. Square wave: $60-50,000 \mathrm{cps}$ in distortion. Square wave: $60-50,000 \mathrm{cps}$ in
4 bands, $5 \%$ tilt at $50 \mathrm{cps}, 5 \%$ rounding at 4 bands, $5 \%$ tilt at $50 \mathrm{cps}, 5 \%$ rounding at
$50,000 \mathrm{cps}$. Output (sine or square wave) : 10 volts across rated load of 1000 ohms. Cathode follower output. Hum less than $0.4 \%$ of rated output. Calibration accuracy $\pm 3 \%$ or 1 cps , whichever is greater. $61 / 2^{\prime \prime}$ dial has $0-100$ reference scale. $71 / 8 \times 111 / 8 \times$ $75 / 8^{\prime \prime}$. With tubes, wire and instructions. Less solder and leads. For 105-125 v., 50-60 cycle AC. Shpg. wt., 14 lbs.
83 FX 169. \$3.20 Down. NET...... . 31.95 MODEL 377. As above, but factory-wired. 84 FU 349. \$5.00 Down. NET. . . . . . 49.95

## MODEL 630-K CATHODE RAY TUBE CHECKER KIT

Tests all CRT's-in or out of the TV set. Uses balanced bridge circuit to measure peak beam current (which is proportional to screen brightness). Neon lamp acts as a sensitive bridge balance indicator. Balancing control dial is calibrated to indicate tube condition directly. Supplied with two test sockets, each with $21 / 2 \mathrm{ft}$. of cable, for duodecal (12-pin) and diheptal (14-pin) tubes. Adapter cables plug into an octal socket on the panel. Cables are stored in case. Less solder. $61 / 2 \times 91 / 2 \times 3$ ". For $105-125$ volts, $50-$ 60 cycle AC. Shpg. wt., 6 lbs.
83 F 177. NET
13.95

MODEL 630. As above, but factory-wired.
84 650. NET ................. 18.95


145A-K


352-K

## MODEL 145A-K SIGNAL TRACER KIT

For trouble-shooting any radio or TV set. Quickly checks IF, RF, video and audio circuits. Features: built-in speaker, audio amplifier with volume control; noise locator circuit. May be used with scope or VTVM for visual tracing. With probes. Less solder. $713 / 16 \times 59 / 16^{\prime \prime} \times 51 / 16^{\prime \prime}$. For $105-125 \mathrm{v}$., $50-60$

83 F 158. \$2.00 Down. NET.
. 19.95
MODEL 145A. As above, but factory-wired. 84 F 385. \$2.90 Down. NET. ........ 28.95

## MODEL 352-K BAR GENERATOR KIT

For adjusting vertical and horizontal linearity. Produces 16-23 vertical and 13-22 horizontal bars (number of bars is adjustable). Video carrier oscillator is tunable over channels 2-6. 3-way antenna clip. Less solder. $71 / 2 \times 5 \times 41 / 2^{\prime \prime}$. For 105-125 v., 50-60 cycle AC. Shpg. wt., 4 Ibs.
83 F 178 . NET.
.14 .95
MODEL 352. As above, but factory-wired. 84 F 651 . $\$ 2.00$ Down. NET.


## MODEL 1060-K DELUXE BATTERY ELIMINATOR KIT

## - Battery Charger or Eliminator

- For All 6 \& 12-Volt Auto Radios

A powerful unit for operating any auto radio, including transistor models. Includes Model $1055-\mathrm{K}$ L-C filter to aid servicing of Model 1055-K L-C filter to aid servicing of
transistor sets. Can be used as a battery charger or eliminator. Features: 2 DC ranges with extra filtering and continuous adjustment by a variac; separate voltmeter and dual range ammeter; heavy duty selenium rectifiers; fused primary; automatic reset overload relay in secondary.
Specifications: low range, 0-8 v., 10 amps continuous, 20 amps intermittent, $\mathbf{0 . 3} \%$ ripple at $2 \mathrm{amps}, 1.5 \%$ at 10 amps ; high range, $0-16$ v., 6 amps continuous, 12 amps intermittent, $1.5 \%$ ripple at 2 amps, $2 \%$ at 6 amps; voltmeter range, 0-20 v.; ammeter, $0-10,0-20 \mathrm{amps}$. With steel case, parts, and instructions. Less solder. Size: $83 / 4 \times 101 / 2 \mathrm{x}$ $73 / 4^{\prime \prime}$. For $105-125$ volts, $50-60$ cycle AC. Shpg. wt., 19 lbs.
83 FX 875. \$3.90 Down. NET. . . . . 38.95
MODEL 1060. As above, butit factory-wired. 83 FU 876. $\$ 4.80$ Down. NET. . . . . 47.95

## MODEL 1050-K 6-12 VOLT BATTERY ELIMINATOR KIT

Power supply for 6 or 12 volt auto radios. Same battery eliminator and charger as Model 1060-K above, but less Model 1055-K L-C filter. Shpg. wt., 15 lbs .
83 FX 175. \$3.00 Down. NET
29.95

MODEL 1050. As above, but factory-wired. 84 FU $341 . \$ 3.90$ Down. NET....... 38.95


## MODEL 147-K DELUXE SIGNAL TRACER KIT

- For Visual or Aural Monitoring
- Has "Magic Eye" and 5" Speaker

Versatile transformer-operated instrument. High and low-gain RF channels with internal wide-frequency range demodulator permits direct observation of signal. Has output for VTVM or oscilloscope. May be connected as substitute speaker, output transformer, or amplifier. Heavy filtering and humbalance control. Both visual and aural monitoring of all RF and AF channelsmagic eye and 5" PM speaker. Calibrated wattmeter circuit indicates wattage consumption in unit under test. Has noise localizer circuit. Aluminum panel, gray wrinkled steel case. Size, $9 \times 10 \times 5^{\prime \prime}$. With probes. Less solder. For 105-125 volts, 50-60 cycle AC. Shpg. wt., 10 lbs.
83 F 190 . $\$ 2.50$ Down. NET. .
24.95

MODEL 147. As above, but factory-wired. 84 F 664 . \$4.00 Down. NET........ 39.95

# Eico and Pyramid Test Equipment 



950B

## MODEL 950B-K RESISTANCECAPACITANCE BRIDGE KIT

- R-C-L Comparator Range
- 0-500 VDC For Capacitors
- Direct-reading Scales

A precision instrument for the laboratory or service shop. Permits quick, accurate testing of component values. Combines a resistance-capacitance bridge and R-C-L comparator in one unit.
Measures and tests resistors from 0.5 ohm to 500 megohms in 4 ranges, and capacitors from 10 mmf to 5000 mfd in 4 ranges on direct-reading scale. A ratio scale is provided for comparison of resistance, capacitance, or inductance values to any external standard. Reads ratios from .05 to 20 (400 to 1.) "Magic eye" tube serves as null indicator. Continuously variable 0-500 volt DC source permits checking capacitors at rated voltage. Tests capacitors for shorts, leakage and, in the case of electrolytics, power factor.
With case, panel, parts, tubes, wire, and instructions. Less solder and leads. Size, $10 \times 8 \times 43 / 4^{\prime \prime}$. For $105-125$ volts, $50-60$ cycle AC. Shpg. wt., 10 lbs.
83 F 164. NET.
19.95

MODEL 950B. As above, but factory-wired. 84 F 387. NET. . . . . . . . . . . . . . . . . . 29.95

## MODEL 1171-K RESISTANCE

 DECADE BOX KITSupplies resistance values from 0 to 99,999 ohms with $1 / 2 \%$ accuracy in 1 -ohm steps with 5 decades. Uses $1 / 2 \%$ 1-watt resistors. Has 5 separate 10-position switches. Ideal low-cost unit for the experimenter and builder. Comparator position and binding posts for instant substitution of actual equivalent component. Steel case, $31 / 2 \times 12 \times 3^{\prime \prime}$. Less solder, leads. Shpg. wt., 3 lbs. 83 F 165. NET.
.19.95
MODEL 1171. As above, but factory-wired. 84 F 388. NET.

POPULAR EICO TEST EQUIPMENT


## MODEL 1100-K RESISTANCE SUBSTITUTION BOX KIT

- Values from 15 Ohms to 10 Megs
- All I-Watt Resistors

Enables rapid substitution of resistances for service or experimental applications. Aids in determining the value of unmarked or damaged resistors. Range from 15 ohms to 10 megs in decade multiples of $15,22,33$, 47,68 and 100 ohms. 36 RETMA (EIA) 1 watt $10 \%$ resistors. 5 -way binding posts. watt (HWD): $33 / 4 \times 1 / 2 \times 1 / 2 \times 312^{\prime \prime}$. Less solder, Size (HWD): $33 / 4 \times 61 / 2 \times 3 / 2$
leads. Shpg. wt., 2 lbs .
83 F 179. NET.
5.95

MODEL 1100. As above, but factory-wired. 84 F 652. NET.
. 9.95

## MODEL 495-K SCOPE VOLTAGE

 CALIBRATOR KITInjects a calibrated, semi-square wave on the scope screen for comparison with any waveform. Ranges: 0 to 1, 1, 10 and 100 volts peak-to-peak, continuously calibrated. Accuracy: $\pm 5 \%$ of full scale on each range. Accuracy: $\pm 5$ ot of transfer of signal under Switch permits transter of signal under
observation directly to scope. $5 \times 75 / 8 \times 4^{\prime \prime}$. Less solder, leads. For 105-125 v., 50-60 cycle. Shpg. wt., 4 lbs. 83 F176. NET.
12.95

MODEL 495. As above, but factory-wired. 84 F 384. NET.
17.95


## MODEL 1140-K SERIES/ PARALLEL R-C BOX KIT

- Top Versatility at Lowest Cost
- Ideal for Lab or Service Shop A highly versatile combination of Models $1100-\mathrm{K}$ and $1120-\mathrm{K}$ substitution units. Permits selection of any resistance alone, any capacitance alone, or any combination of resistance or capacitance in either series or parallel. Allows development of differentiating, integrating and other wave-shaping R-C networks. (See descriptions of the $1100-\mathrm{K}$ and $1120-\mathrm{K}$ for specifications.) Less solder and leads. Shpg. wt., 3 lbs. 87 F 350 . NET.
. 13.95
MODEL 1140. As above, but factory-wired. 87 F 351 . NET....................... 19.95


## MODEL 1120-K CAPACITOR SUBSTITUTION BOX KIT

For rapidly substituting a wide range of RETMA (EIA) capacitances. Values from 0.0001 to 0.22 mfd in 18 steps. $\pm 10 \%$ accuracy. Employs both ceramic and molded capacitors-most rated 600 v ., others 400 v . Has 5 -way binding posts. $33 / 4 \times 61 / 2 \times 31 / 2^{\prime \prime}$. Less solder and leads. Shpg. wt., 2 lbs.
83 F 191. NET.
5.95

MODEL 1120. As above, but factory-wired. 84 F 665. NET.

## MODEL 710-K GRID-DIP METER KIT

 CAPACITOR BOX KIT

Useful in every laboratory for determination of proper capacitance values by substitution. Range: 100 mmf to .111 mfd in steps of 100 mmf ; voltage rating, 350 volts DC continuous. Mica capacitors are $\pm 1 \%$. Zero capacitance approx. 7 mmf . Positive detent, ceramic wafer switches. Low-loss lucite terminal board. $9 \times 31 / 2 \times 31 / 2^{\prime \prime}$. Less solder and leads. Shpg. wt., 3 lbs.

I4.95
MODEL 1180. As above, but factory-wired. 84 F 656. NET.
19.95

Extremely compact, accurate
 grid-dip meter kit-may also be operated as oscillating detector or wavemeter. Covers 300 kc to 250 mc in 7 overlapping ranges. Features precision 500 microamp meter and 7:1 planetary drive. Coils prewound, with winding inside form-low-band coils slugtuned. Less solder. $21 / 4 \times 29 / 16 \mathrm{x}$ $67 / 8^{\prime \prime}$. For $110-120$ v., $50-60$ cycle AC. Wt., 3 lbs.
29.95

87 F 352. NET.
MODEL 710. As above, but factory-wired.

## PYRAMID AMPROBES—"SNAP-AROUND" METERS



Amprobes measure current without breaking the circuit or the insulation of conductors. Press the trigger to open probe jaws, then close around conductor. Meter instantly gives correct reading. Features one-hand operation with fully insulated jaws for safety and convenience. Full-size models employ magnifying window for easy reading from any angle in poor light; indicator needle can be locked and read away from the conductor when using meter in difficult locations. Voltage is measured with test leads which automatically insulate plugs when leads are removed. Have dustproof D'Arsonval movements. Accuracy is $\pm 3 \%$ of full scale. Units are designed for 60 -cycle operation, and will give dependable results from 50 to 70 cps . Model RS-3 will measure resistance.
(A) MODEL RS-1. Switch permits range selection by a flick of the amps and 0-150-600 volts, AC. Impact-proof case has non-slip ribbing. Circular conductor capacity: 11/1" ${ }^{\prime \prime}$ dia. Scale length: $2.25^{\prime \prime}$. Overall length: $73 / 32^{\prime \prime}$. With test leads and leather case. 2 lbs . 87 F 268. NET.
39.85

A MODEL RS-3. Similar to Model RS-1 at left. Reads 0-5-15-40-100(A) 300 amps and $0-150-300-600$ volts, AC. Resistance range is 25 ohms mid-scale. Tiny battery attachment plugs in for resistance measurements. Only one scale plus ohms scale visible at a time. Supplied with battery, test leads, leather case. Wt., 2 lbs. 87 F 376 . NET.
52.50

B AMPROBE JUNIORS. Small versions of Amprobe "snap around" B meters. Circular conductor capacity: $1 / 2^{\prime \prime}$. Scale length: $1 . \mathbf{8}^{\prime \prime}$. Overall length: $43 / 4^{\prime \prime}$. With test leads, less case (below). 1 lb .

| No. | Model | Amps | Volts | No. | Model | Amps | Volts |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 84 F 369 | 10 | $0-10$ | $0-125-250$ | 84 F 897 | 525 | $0-25$ | $0-150-600$ |
| 84 F 373 | 25 | $0-25$ | $0-125-250$ | 84 F 898 | 550 | $0-50$ | $0-150-600$ |
| 84 F 374 | 50 | $0-50$ | $0-125-250$ | 84 F 899 | 500 | $0-100$ | $0-150-600$ |
| 84 F 379 | 100 | $0-100$ | $0-125-250$ |  |  |  |  |

NET EACH..
19.85

MODEL P. 1 LEATHER CARRYING CASE. For Amprobe Juniors. 12 oz.
84 F 488. NET.
.2 .85
C MODEL A-40 ENERGIZER. Serves as plug to divide 2 -conductor cords at outlet (convenient when using Amprobes for current measurement). Increases ammeter sensitivity to 10X. Test jacks permit measuring line voltage under load. With carrying case. Shpg. wt., 8 oz.
84 F 489. NET.
3.75

## Radio City Products Test Equipment



750



## MODEL 124 FLYBACKER

An extremely valuable, versatile TV test unit. Permits testing flyback transformers and yokes without disconnecting them from the circuit. Shows leakage and shorts in all capacitors; tests for continuity in all flyback transformers, deflection yokes, width coils, solenoids, relays, etc. Instantly shows up a single shorted turn in a flyback transformer or yoke. Tests high-impedance sections of all transformers. Over 200 volts applied to components under test. 5 easy-to-read scales. 4 illuminated GOOD-BAD scales-calibrated direct reading numbered ${ }^{5 \prime \prime}$ scle for transformers. In steel case. 10x6x $5^{\prime \prime}$. For operation from 105-125 volts, 50-60 cycle AC. Shpg. wt., 8 lbs.
84 F 625 . NET.
41.94

## MODEL 555 OSCILLOSCOPE

Wide-band 5 -inch oscilloscope for black-and-white and color TV servicing. Pushpull, 3 -stage vertical amplifier has $25 \mathrm{mv} /$ inch sensitivity; frequency response up to 4 mc. Horizontal amplifier rated at 0.3 volts/ inch sensitivity; frequency response up to 700 kc . Features: Multivibrator-type sweep generator; compensated stop attenuator, Z -axis modulation, internal and external sweep synchronization; built-in $60-$ cycle phasing with adjustable front panel control; retrace blanking; built-in spot size control and versatile 5 -way binding posts. Metal cabinet. Size: $91 / 2 \times 121 / 2 \times 18^{\prime \prime}$. For operation from 105-125 volts, $50-60$ cycle AC. Shpg. wt., 23 lbs.
87 FU 202. NET.
87.71


## MODEL 325 TUBE TESTER

- Dynamic Mutual Conductance Tester
- Tests Tubes Under Working Conditions
- Checks NPN and PNP Transistors
- Easy-To-Read, Illuminated Meter

Dynamic mutual conductance tester for accurately checking tubes and transistors. Tests all NPN or PNP transistors, most radio and TV receiving tubes-including hearing aid and "magic eye" types, pilot lights, and many industrial and transmitting types. Checks tubes under actual operating conditions-adjustable controls for heater, plate, screen and grid voltages simulate actual tube operation. Tests for shorts and leakage between each element. Also tests picture tubes when used with PTA adapter, listed in left column.
Illuminated $41 / 2$ " meter indicates "GOOD-?-REPLACE," plate conductance, grid conductance, and transistor gain. Lever switches prevent obsolescence. Transistor current gain is measured under full load by a unique constant-current bridge circuit. Separate controls for transistor tests; special diode limiter protects meter against shorted transistors. Safety buttons protect meter against misuse. Easy-to-read, fastaction roll chart. Built-in pin straighteners for both 7 and 9 -pin tubes. Housed in a sturdy steel cabinet with etched aluminum panel-ideal for counter or portable use. Size, $151 / 4 \times 14 \times 53 / 8^{\prime \prime}$. For 105-125 v., $50-60$ cycle AC. Shpg. wt., 17 lbs. 84 FU 682. NET.
127.35

## MODEL 4801000 OHM PER VOLT VOM

## - Low-Cost, Highly Versatile Multitester

Moderately priced, $\mathbf{1 0 0 0}$ ohm per volt, multitester. Features $3^{\prime \prime}$ square meter with 800 microampere D'Arsonval movement. Ruggedly constructed for long, dependable service. Completely housed in an all molded bakelite case and panel; panel has easy-to-read, recessed lettering. Combination selector switch and multijack circuitry minimize operational errors. Ideal for use in the shop, laboratory, and service-
 man's kit. DC voltage ranges: $0-5-50-250-500-1000$ volts. AC ranges of $0-10-100-500-1000$ volts. Output voltage readings over same ranges as $A C$. Milliammeter reads 0-1-10-100 ma and 0-1 ampere. Ohmmeter has 4 resistance ranges: $\mathbf{0 - 1 0 , 0 0 0 - 1 0 0 , 0 0 0 ~ o h m s . ~} 0-1$ megohm and $0-10$ megohms external. Provides decibel readings from -10 to +55 db . Size, $7 \times 43 / 8 \times 25 / 16^{\prime \prime}$. With batteries. Shpg. wt., $21 / 4 \mathrm{lbs}$.
84 F 621 . NET.
15.63

## PRECISION 202 SIGNAL TRACER

- Quickly Checks All Stages In Radios and TV Sets
- Provides Both Visual and Aural Tracing
- Features "Magic Eye" and Built-In Speaker

Moderately-priced, all-purpose signal tracer for rapid servicing of radio and television receivers, audio, hi-fi, public address, and other types of electronic equipment. Quickly and easily checks all stages from antenna to speaker or picture tube. Permits location of intermittent components, open circuits and similar causes of poor performance. Both visual and aural signal tracing can be done with sensitive "magic-eye" and built-in 5 " speaker. 3-stage preamplifier has cascode circuit with feedback. Preamplifier output provides wide band response and voltage gain of 400 for scope or VTVM. Preamplifier is flat from 2 cps to 300 kc to indicator eye or scope output. 3-position attenuator gives accurate stage to stage gain measurements. Gain control adjusts indicator eye and speaker sensitivity only. 4-position selector switch for selecting: RF probe (listed below); audio probe; noise test with applied break-down voltage; wattmeter circuit for checking power consumption of set under test. Size, $71 / 2 \times 101 / 2 \times 612^{\prime \prime}$. With audio probe. For 110-120 v., 60 cycle AC. Shpg. wt., 11 lbs.
84 FX 197. NET.
36.75

MODEL B RF DEMODULATOR-AMPLIFIER PROBE. For use with Model 202. For extremely high gain and frequency response to 300 mc . Shpg. wt., 1 lb .
87 F 258. NET.

# Triplett Test Equipment 



MODEL 310 MINIATURE VOM

- Ultra Compact-Easy To Use
- Provides Complete AC-DC Readings

Versatile, miniature VOM with 18 ranges. Extremely compact-hardly bigger than a package of cigarettes-it's ideal for on-thespot testing. Self-shielded for checking in strong magnetic fields. Ranges: DC volts, 0-3-12-60-300-1200 at 20,000 ohms/volt; AC volts, 0-3-12-60-300-1200 at 5000 ohms/ volt; DC $\mu \mathrm{a}, 0-600$; DC ma, $0-6-60-600$; ohms $0-20,000-200,000 ;$ megohms, $0-2-20$. Accuracy, $3 \%$ DC. Clear, unbreakable plastic meter window. $41 / 4 \times 23 / 4 \times 13 / 6^{\prime \prime}$. Supplied complete with leads, batteries and instruction manual. Shpg. wt., 1 lb . 84 FC 674. NET.
33.8I

## MODEL 10 ADAPTER

Miniature AC ammeter clamp-on adapter for use with above or any VOM having a 3 v. AC scale at 5000 ohms per volt. Clamp-on jaws fit around any single conductor to permit direct reading of 0-6-12-30-60-120-300 amps AC, without breaking circuit or piercing insulation. $41 / 4 \times 31 / 4 \times 11 / 4^{\prime \prime} .23 / 4 \mathrm{lbs}$.
87 F 152. NET.
14.2I

66 F 590. Model 379 Leather Case. Holds Models 310 and 10.8 oz. NET. . . . . . . . 5.39

## MODEL 101 LINE SEPARATOR

Divides 2-conductor lines. Provides 10X and 20X sensitivity as well as direct readings with Model 10. Ranges (maximum), 0-0.3-0.6-1.2-1.5-3-6-12-30 amps. Shpg. wt., 6 oz.
87 F 153. NET.
5.39


MODEL 630 VOM
"Unit construction" provides direct connections without cabling, thus reducing chance of shorts. All resistors, shunts, etc. are housed in molded base which is integral with switch.

- Easy-To-Read $51 / 2^{\prime \prime}$ Meter
- Uses $1 \%$ Precision Resistors

Popular, accurate VOM for industry, etc. Has $51 / 2^{\prime \prime}$ meter with $43 / 8^{\prime \prime}$ scale. Uses $1 \%$ resistors, each sealed in its own molded compartment. "Unit construction"- all resistors, shunts, rectifier, and batteries are housed in molded base integral with the switch. Ranges: DC and AC volts, 0-3-12-$60-300-1200-6000$, DC at 20,000 ohms per volt, AC at 5000 ohms per volt; DC current, $0-60$ microamps, $0-1.2-12-120 \mathrm{ma}$. and $0-12$ amps; resistance, $0-1000-10,000$ ohms and $0-1-100$ megs; db. -30 to +70 in 7 ranges; output v., 0-3-12-60-300-1200-6000. Flushmounted knob controls 20 -position switch which selects both circuit and range. Plastic case. $71 / 2 \times 51 / 2 \times 37 / 32^{\prime \prime}$. With batteries and $50^{\prime \prime}$ leads and instructions. Wt., 6 lbs.
84 F 568. NET.
43.6I


## MODEL 630-A VOM

Lab type VOM. Features series ohmmeter circuits; $1 / 2 \%$ resistors; mirrored scales. Accuracy: $11 / 2 \%$ on ohms and $0-1200 \mathrm{DC}$ volts; $4 \%$ on 6000 DC volts and all AC ranges. Ranges: DC and AC volts 0-3-12-60-300-$1200-6000$ (DC at 20,000 ohms per volt, AC at 5000 ohms per volt); DC current, 0-60 microamps. 0-1.2-12-120 milliamps, and 012 amps ; resistance, $0-1000-10,000$ ohms, and $0-1-100$ megohms; $\mathrm{db}-20$ to +70 in 7 ranges; output volts, 0-3-12-60-300-1200. Has $51 / 2^{\prime \prime}$ meter with $43 / 8^{\prime \prime}$ scale. $71 / 2 \times 51 / 2 \mathrm{x}$ $37 / 32^{\prime \prime}$. With batteries and $48^{\prime \prime}$ leads. Shpg. wt., 6 lbs.
84 F 574. NET.
53.41

## MODEL 631 VTVM-VOM

Battery-operated, 34-range VTVM and VOM. Easy-to-read VTVM ranges: 0-1.2-6-30-120 DC volts; 11 megohms input impedance, VOM ranges: DC volts, 0-3-12-60-$300-1200$ at 20,000 ohms/volt; AC volts, and audio output volts, 0-3-12-60-300-1200 at 5000 ohms/volt; DC microamperes, 0-60; DC ma. 0-1.2-12-120-1200 at 250 mv ; DC amps, $0-12$ at 250 mv ; db, -20 to +56 ; ohms, $0-1500-15,000$; megohms, 0-1.5-150. $33 / 8^{\prime \prime} \times 51 / 2 \times 71 / 2^{\prime \prime}$. With batteries and $48^{\prime \prime}$ leads with alligator clips. Shpg. wt., 5 lbs. 84 F 546. NET.
63.21

## MODEL 630-NA VOM

Offers unusually high accuracy. 70 ranges: $\pm 11 / 2 \%$ on DC to $1200 \mathrm{v} . ; \pm 3 \%$ on AC to 1200 v . Features: DC volts: 8 ranges to 6000 ( $10,000 \mathrm{ohms} / \mathrm{v}) ;$.8 ranges to 3000 ( 20,000 ohms $/ \mathrm{v}$. ). AC volts: 6 ranges to 6000 ( 5000 ohms $/ \mathrm{v}$.) ; 6 ranges to 3000 $(10,000 \mathrm{ohms} / \mathrm{v}$ ). DB: -20 to +70 in 12 ranges. DC microamps: 1 range to 120 ( 240 $\mathrm{mv}) ; 2$ ranges to $600(120 \mathrm{mv})$. DC milliamps: 4 ranges to 1200 ( 240 mv ); 3 ranges to $600(120 \mathrm{mv})$. DC amps: 1 range to 12 $(240 \mathrm{mv})$; 1 range to $6(120 \mathrm{mv})$. Resistance: 3 ranges to 100,000 ohms; 3 ranges to 100 megohms. Output: All 12 AC volt ranges. $71 / 2 \times 51 / 2 \times 311 / 32^{\prime \prime}$. Mirror scale. With leads, batteries. Shpg. wt., 6 lbs.
84 F 512 . NET.
.73.0I

## MODEL 625-NA VOM

Wide-range VOM. Large mirror scale. DC volts, 0-1.25-5-25-125-500-2500 at 20,000 ohms/volt and $0-2.5-10-50-250$ -$1000-5000$ at 10,000 ohms/volt; DC current, $0-50 \mu \mathrm{a}, 0-1-10-100-1000 \mathrm{ma}$. and 0-10 amps; resistance, $0-2000-200,000$ ohms, $0-40$ megs. AC volts, 0-2.5-10-50-250-1000 $0-40$ megs. AC volts, 0-2.5-10-50-250-1000-
5000 at 10,000 ohms/volt. $51 / 2 \times 21 / 2 \times 6^{\prime \prime}$. With batteries and leads. Wt., 6 lbs.
84 F 575 . NET.
53.41

MODEL 629 CASE. Leather case with handle. Shpg. wt., 1 lb .
84 F 561 . NET
.7 .06

## Tripleft, Millen \& Pyramid Test Equipment



3441-A


690

MODEL 3441-A TV-FM OSCILLOSCOPE
Wide-range $5^{\prime \prime}$ TV-FM oscilloscope. Suitable for color TV. Push-pull vertical and horizontal output amplifiers. 4.5 megacycle bandwidth, $\mathrm{mv} / \mathrm{inch}$ maximum. Horizontal response, 20 cps to 150 kc Peak-to-peak, $23 / \mathrm{g}^{\prime \prime}$ vonse, 20 reads $0-1000$ volts in 8 ranges. Phased 60 -cycle horizontal sweep and return trace eliminator for use with sweep generators. Phone jack on panel for audio check of waveform under observation; for audio circuit tracing. Variable sawtooth output from 10 to 60,000 cycles. Output variable, 0-70 volts peak-to-peak. Polarityreversing switch. With coaxial cable. Metal case finished in black; aluminum panel. Size: $1511 / 32 \times 16 \times 111 / 32^{\prime \prime}$. For $110-120$ volts, $50-60$ cycle AC. Shpg. wt., 42 Ibs.
84 FU 530 . NET...
.244.5I
9989 Crystal Probe. For use with above. 84 Fhpg. wht., 8 NET.
10.29

## MODEL 690 TRANSISTOR TESTER

New, compact and rugged, battery-operated transistor tester. Provides leakage and gain tests for all low and medium-power PNP and transistor settings-"off", position prevents drain on batteries in case leads are accidentally shorted. Separate Calibrate and Gain buttons. Precision meter has two easy-to-read, tri-color scales. Leakage range, $0-500$ microamps, base to collector (emitter open). Current gain, 0-1.00. Transistor socket and set of external leads are provided for use with any basing arrangement. includes $50^{\prime \prime}$ leads and batteries. Molded plasic case, $6 \times 51 / 2 \times 21 / 2^{\prime \prime}$. Removable black leather carrying handle. Shpg. wt., 3 lbs.
.28.91
Model 629 Carrying Case. Handsome, black cowhide leather carrying case for the Model 690. Flap has swivel fastener. Shpg. wt., 1 lb.

TRIPLETT TEST EQUIPMENT




## MODEL 666-R VOM

Compact, pocket-sized volt-ohm-milliammeter. Easy to carry and easy to use, it's ideal for radio-TV servicing, etc. Single, recessed rangefunction switch selects all ranges-minimizes Handy, recessed ohms-adjust thumbwheel. $3^{\prime \prime}$ meter. Sensitivity, 1000 ohms-per-volt. Accuracy, $\pm 3 \%$. Ranges: DC and AC volts, $0-10-50-$ acy, $\pm 3 \%$. Ranges: DC and AC voits, $0-10-50-$ $0-1$; ohms, $0-3000-300,000$; megohms, $0-3$. Output volts; $0-10-50-250-1000$; , ack with capacior in series with AC ranges. Employs replaceable, pre-calibrated AC rectifier. Banana jacks at top of panel. Molded black plastic case, $57 / 8 \mathrm{x}$ $31 / 16 \times 29 / 16^{\prime \prime \prime}$. With batteries and $48^{\prime \prime}$ test leads, alligator clips, etc. Shpg. wt., 4 lbs.
84 F 557 . NET.

Model 669 Case Black cowhide case for Mod $666-\mathrm{R}$ or $666-\mathrm{HH}$ VOM'S. Shpg. wt., 1 lb. 84 F 560. NET. . . . . . . . . . . . ............. . 5.98

## MODEL 3423 TUBE TESTER

Accurate, versatile tube tester. Tests by proportional mutual conductance method-simulates actual tube operating conditions. Tests receiving tubes, subminiatures, ballasts, lowpower transmitting types, etc. Includes tests or series-string tubes. Reads mutual conductance directly in micromhos; also BAD--2Gios scale. Tesistors Direct leakage measuredodes and transistors. Direct leakage measureone element and all other elements. Has $0-100$ one element and an other elements. Has $0-100$ and continuity of motors, etc. Checks for shorts and leakage between elements. Indicates gassy and noisy tubes. Filament voltage adjustable from 0.63 to 117 in 19 steps. Wood case covered in gray leatherette with white trim. Hinged, removable lid. Size, $143 / 4 \times 18^{25} / 32 \times 6^{13} / 32^{\prime \prime}$. For operation from 110-120 v., $50-60$ cycle AC. 84 Fipg 541 . NET.
195.51

## MODEL 3413-B TUBE TESTER

- Top Performance at Low Cost
- Dual Sensitivity Neon Short Tesf
- Easy-to-Read, 3-Color 6" Meter

An extremely versatile tube tester. Checks all radio receiving tubes, including series-string tadio receiving tubes, ballasts, miniatures, and hearing aid types, Dalasts, miniatures, and hearing aid types. inter-element short or leakage while cathodes are hot. Filament voltages from 0.63 to 110 in 19 steps. Flexible, 3 -position lever switches for complete coverage of present and uture tube types. Line voltage indicator permits observation and adjustment for line fluctuations. Checks TV picture tubes when used with T-2247-BV adapter listed below. Shows shorts, open circuits and condition of tube elements, connections, taps, etc.
Provides continuity test for electrical appliances, motors, etc. $6^{\prime \prime}$ meter with 3-color scale. Accurate BAD-?-GOOD tests. Built-in, Speed-Roll chart. Counter-portable metal case; $\mathrm{x} 1^{\prime \prime} / \mathrm{s}^{\prime \prime}$. For operation from $110-120$ volts, $50-60$
cycle AC. Shpg. wt., 28 lbs.
84 FU 591 . NET......... $\qquad$ .77.91
T-2247-BV Adapter. Adapts models 3413-B and 3423 for picture tubes. Shpg. wt., 1 1b. 29

## MODEL 666-HH VOM

(Not illustrated) similar in appearance to the Model 666-R, but does not have recessed knobs. A low-cost, compact 1000 ohm-per-volt VOM. A low-cost, compact 1000 ohm-per-volt vom. ment. Ranges: AC and DC volts, $0-10-50-250-$ ment. Ranges: AC and DC volts, $0-1000-5000$ at 1000 ohms-per-volt; DC ma, $0-$ $10-100-500 ;$ ohms, $0-2000-400,000$. Accuracy, $\pm 3 \%$. Only 3 jacks necessary for all ranges. Black plastic case, $57 / 8 \times 31 / 16 \times 29 / 1^{\prime \prime}$. Includes battery and $48^{\prime \prime}$ leads. Shpg. wt., 4 lbs. 84 F 555. NET.
26.95


3438
3432-A

## MODEL 3438 DOT GENERATOR

High-quality dot-bar generator for checking video, RF, IF, sync and color circuits. Provides standard vertical and horizontal sync pulses; horizontal bars ( $480-600 \mathrm{cps}$ ) and vertipattern; and square block cross hatch. Crystal pattern; and square block cross hatch. Crystal approx. $330^{\circ}$ of the color spectrum with any combination of the function selector. Will produce red, blue and green color spectrum and colors corresponding to $\mathrm{R}-\mathrm{Y}, \mathrm{B}-\mathrm{Y}, \mathrm{I}$ and Q axis. Has both positive and negative video outputs. Completely self-contained. Includes shielded, coax output cable. $61 / 4 \times 111 / 32 \times 1511 / 32$. For operation from $110-120$ v., 50-60 cycle AC. Shpg. wt., 16 lbs.
84
598.
224.91

MODEL 3432-A SIGNAL GENERATOR
Quality signal generator for AM-FM radio, lack-and-white and color TV servicing. Cathode follower output provides good stability by acting as buffer to the oscillator. Copper-andteel shielded RF circuits. Covers complete range from 160 kc to 110 mc ( 220 mc using harmonics) with etched dial. Jacks provided for either internal tion variable $0-100 \%$ at 400 cps Ranges selected by 7 -position switch. Coaxial output cable Size: $1511 / 32 \times 111 / 32 \times 61 / 4^{\prime \prime}$. For $110-120$ v., $50-60$ cycle AC. Shpg. wt., 12 lbs. 84 FU 677 . NET.
.97 .51


Model 90901 1" Scope. For Amateur or industry. Use as: Modulation indicator, null indicator, Lissajous screen, etc. Controls: Intens., Vert. Ctr., Hor. Ctr. Sens.: Vert., rms $\mathrm{V} / \mathrm{mm}$; Hor., $2.5 \mathrm{rms} \mathrm{v} / \mathrm{mm}$. Requires $600-950 \mathrm{v}$. DC @ 3.2 ma . and 6.3 v . @ $0.6 \mathrm{a} .23 / 4 \times 23 / 4 \times 45 / 8^{\prime \prime}$. With 1 CP1 tube. Shpg. wt., 2 lbs. 38.25
84 F 907. NET. . . ................... 38.20
Model 90651 Grid Dip Meter. Useful as oscillator, detector, wavemeter, etc. $2^{\prime \prime}$ meter. 7 direct reading freq. scales and $0-100$ scale. Plug-in
coils supplied cover 1.7 to $300 \mathrm{mc} .7 \times 33 / 16 \times 38^{\prime \prime}$. coils supplied cover 1.7 to 300 mc . $7 \times 33 / 16 \times 33 / 88^{\prime \prime}$.
For $110-120$ v., $50-60$ cycle AC. Terminals for battery operation. Shpg. wt., $31 / 2 \mathrm{lbs}$. 6150 84 F 962 . NET.. . . ..................
61.50

## LOW FREQUENCY COILS FOR GRID DIP METER

| No. | Type | Range KC | EACH |
| :---: | :---: | :---: | :---: |
| 84 F 966 | 46702 | $925-2000$ |  |
| 84 | F 967 | 46703 | $500-1050$ |
| 84 | 698 | 46704 | $325-600$ |
| 84 F 972 | 46705 | $220-350$ |  |

Model 46721 Probe. For above. Wt., 6 oz.
84 F996. NET.......................... 1.95


Model CRA-2 Capacitor- Resistor Analyzer. An extremely versatile, multipurpose capac-itor-resistor analyzer. Perfect for the lab, radioTV servicing and industrial applications. Makes quick "in-circuit"' checks for open and shorted capacitors, intermittents, etc. Also measures resistance, capacitance, power factor, leakage and insulation resistance.
A combination Wien and Wheatstone bridge accurately measures capacitance from 10 mms to Calibrated potentiometer measures frequency tor of wet or dry etectrolytic capacitors in bridge circuit from 0 to $65 \%$ covering every practical rated working voltage range. Two resistance ranges in Wheatstone bridge circuit measure resistance from 100 ohms to 25 meg ohms at line frequency. Highly accurate, $41 / 2^{n}$ meter provides readings in two ranges of insula-tion-resistance measurements for ceramic mica, air and paper dielectric capacitors. Two milliammeter ranges give direct leakage-cur rent readings (from 0 to 50 ma ) with rated working voltage ( $0-600$ ) applied to the capac itor. Rotary switch selects test function and range. Push-button for safe discharge of ca-
pacitors. $12 \times 161 / 2 \times 9^{\prime \prime}$. For $110-120$ v., $50-60$
pacile AC. Shpg. wt., is lbs.
84 FU 642 . NET........

## Precision Test Equipment




## MODEL E-200C DELUXE SIGNAL-MARKER GENERATOR

Highly sensitive, deluxe signal-marker generator for AM, FM and TV alignment. For use with the E-400 below, or any other highquality sweep signal generator. The E-200C is individually calibrated on each band against laboratory crystal standards. Features $1 \%$ accuracy on 10 easy-to-read ranges. Frequency coverage: 88 kc to 440 mc ; to 110 mc on fundamentals. Large $61 / 2^{\prime \prime}$ dial has $0-1000$ vernier scale, direct-reading to 1 part in 1000 . Employs "unitoscillator' turret construction assuring utmost mechanical stability. Outputs: unmodulated RF; 400-cycle modulated RF; externally modulated RF; and 400-cycle sine wave audio output. Supplies 0-50 volts AVC-AGC voltage. Dual RF attenuators for smooth, stepless control of RF signal. Fully shielded components, and transformer; AC line is RF filtered. With coax cable, "Lo-Hi" connectors, and illustrated manual, "Servicing by Signal Substitution." Hooded, blue-gray steel cabinet. Satin-brushed aluminum panel. Size, 111/2x $13 \times 65 / 8^{\prime \prime}$. For $110-120 \mathrm{v} ., 50-60$ cycle AC. Shpg. wt., 17 lbs .
87 FU 000. Only $\$ 9.31$ Down. NET
93.10

## MODEL E-400 DELUXE SWEEP GENERATOR

Deluxe portable sweep generator for television and FM servicing. Frequency range is $3-900 \mathrm{mc}$; to 240 mc on fundamentals; saves time on front-end alignment-read directly on panel dial-channel numbers 2 through 13 directly calibrated on dial. Has narrow and wideband sweep-frequency widths: $0-1 \mathrm{mc}$ and $0-15 \mathrm{mc}$. Built-in baseline reference. Self-contained multiple crystal marker-calibrator. Supplied with 2 crystals ( 2 mc and 4.5 mc ). Special socket accommodates 4 crystals. Full vision, $61 / 2$ inch dial. Phasing control. Internal retrace blanking circuit simplifies alignment-eliminates Internal retrace blanking circuit simplifies alignment-eliminates filled, low-loss sockets; etc. Supplied complete with test cables, tubes, comprehensive instruction manual, and 2 crystals. In customstyled, handsome blue-gray, hooded steel cabinet; two-color satin brushed aluminum panel and contrasting dark blue control knobs. Deluxe cabinet, $111 / 2 \times 13 \times 65 / /^{\prime \prime}$. For operation from 110-120 volts, 50-60 cycle AC. Shpg. wt., 24 lbs. 87 FU 001 . \$15.68 Down. NET...
.156 .80


960


ES-550

## MODEL 960 TRANSISTOR \& CRYSTAL DIODE TESTER

New, expertly engineered portable transistor and crystal diode tester. Designed in accordance with recommendations of leading transistor manufacturers. Provides comprehensive tests for I Icbo, gain, leakage, shorts, etc., on low, medium and high-power transistors of PNP and NPN types, as well as newest tetrode transistors. Direct reading in terms of true collector current on $51 / 2^{\prime \prime}, 100$-microamp meter. Five Icbo ranges; 17 collector potential steps from 0.5 v . DC to 100 v . DC. Five separate injection currents for low, medium and high-power types. Reliable check of emitter collector leakage current provides basis for accurate gain tests. 17 DC voltages for reverse current tests of crystal diodes; separate forward tests. All transistor test settings listed on high-speed roll chart. Patch cord element selector system for future semiconductor types. In sturdy, fabric-covered carrying case, $18 \times 101 / 2 \times 61 / 4^{\prime \prime}$. Etched, 3-color aluminum panel. For operation from $110-120$ volts, $50-60$ cycle AC. Shpg. wt., 15 lbs.
87 FU 029. Only $\$ 8.72$ Down. NET
87.22

## MODEL ES-550 DELUXE 5" OSCILLOSCOPE

Excellent for servicing and lab work, including color TV; offers a $5-\mathrm{mc}$ bandwidth. Push-pull vertical amplifier has 10 mv /inch sensitivity; response within $1 \mathrm{db}, 10 \mathrm{cps}$ to $3.5 \mathrm{mc} ;$ ( 3 db at 5 mc ). Pushpull horizontal amplifier rated $100 \mathrm{mv} / \mathrm{inch}$ sensitivity; response within $1 \mathrm{db}, 20 \mathrm{cps}$ to $1 \mathrm{mc}(3 \mathrm{db}$ at 2 mc ). Sweep frequency, 10 cycles to 100 kc ; also 30 and 7875 cycles synchronized sweep. Negative and positive internal sweep. Vertical pattern reversal switching. Direct reading, peak-to-peak voltage calibrator. Z-axis input terminal for blanking, timing and marking. $81 / 4 \times 141 / 2 \times 181 / 2^{\prime \prime}$. For $110-120$ volts, $50-60$ cycle AC. Shpg. wt., 47 lbs .
87 FU 002. $\$ 23.03$ Down. NET.
230.30

MODEL SP-5 PROBE SET. 4 probes (high-Z low-capacity, crystal, isolating, shielded); coax cables; connectors. For use with above scope. Shpg. wt., 3 lbs.
84 F 491 . \$2.60 Down. NET
25.97

TUBE AND TRANSISTOR CHECKERS


660

## MODEL 660 TUBE AND TRANSISTOR TESTER

Highly versatile tube and transistor tester. Has provisions for measuring the reverse current between collector and base with emitter open (Icbo), shorts and leakage on all RF, audio, power and tetrode transistors -both NPN and PNP types. Crystal diodes tested in special circuit for both forward and reverse current. Employs all receiving tube testing features of the Model 640 at right. Has special circuit for testing picture-producing beam current on all TV picture tubes when used with Model PTA and PAA picture tube adapters (listed under Model 10-60, at right). Rugged 24position rotary switch for selection of filament voltages from $3 / 4$ to 117 volts. $51 / 4^{\prime \prime}$ meter; accuracy to $\pm 2 \%$. Smooth action, 3 -window roll chart has "Tube Finder" feature. Leatherette-covered carrying case with handy tool compartment; hinged, removable cover. $18 \times 101 / 2 \times 61 / 4^{\prime \prime}$. For operamovable cover. $18 \times 101 / 2 \times 61 / 4$. For opera-
tion from $110-120$ volts, $50-60$ cycle AC. tion from $110-120$
Shpg. wt., 16 lbs.
87 FU 028. \$10.68 Down. NET....IO6. 82


640

$10-60$

## NEW MODEL 10-60 ELECTRONAMIC TUBE AND TRANSISTOR CHECKER

New, highly versatile instrument. Offers all of the comprehensive transistor and crystal diode testing features of the Model 960 tester above, plus complete testing of all modern tube types including subminiatures. Tests voitage reguiator tubes for both voltTests voitage regulator tubes for both volt-
age regulation and current limits. Ultrasensitive gas test readings directly on $50-$ microamp, $51 / 1^{\prime \prime}$ meter. Checks actual beam current of TV picture tubes with PTA and PAA adapters, below. Special low-voltage short-check circuit guards against damage to tubes under test. Stainless steel pin to tubes under test. Stainless steel pin
straighteners for 7 and 9 -pin tubes. 5 -winstraighteners for 7 and 9 -pin tubes. 5 -win-
dow geared roll chart. $20 \times 15 \times 7$. For 110 120 v.. $50-60$ cycle AC. 26 lbs.
87 FÜ 030. \$19.11 Down. NET.
191.10

PICTURE TUBE ADAPTERS. For checking TV picture tubes with Precision tube testers. Type PTA is for all except $110^{\circ}$ tubes; PAA for $110^{\circ}$ tubes only. Shpg. wt., 1 lb . 84F 492. Type PTA. NET. ............. 7.59
87 F 031. Type PAA. NET.
4.90

# Precision and Seco Test Equipment 

## PRECISION TEST EQUIPMENT



98-MCP


## MODEL 98-MCP DELUXE VTVM

Deluxe, wide-range, laboratory-type VTVM with specially designed P-P circuit. Has easy-to-read $7^{\prime \prime}$ meter with $200 \mu$ a sensitivity; accuracy $\pm 2 \%$. Ranges: Zero-center DC, AC rms and DC volts, 0-1.2-6-12-60-300-1200. P-P AC volts, 0-3.2-16-32-160 800-3200. Zero-center DC input resistance, 26.6 megohms. Resistance, 0-1000-100,000 ohms; 0-1-10-100-1000 megohms. DC current, 0-300 microamperes; 0-1.2-6-30-120$600 \mathrm{ma} ; 0-1.2-12 \mathrm{amps} .6 \mathrm{db}$ ranges, -20 to +63 db . Metal cabinet, $111 / 2 \times 13 \times 65 / 8^{\prime \prime}$. With 3-way probe. For 110-120 volts, 60 cycle AC. Shpg. wt., 18 lbs.
87 FZ 014 . \$11.71 Down. NET. . . . . . . II7.II
MODEL TV-8 SUPER-HIGH VOLTAGE PROBE. For Model 88 or $98-M C P$ VTVM. Extends DC range to $60,000 \mathrm{v} .2$ lbs.
84 F 681 . NET. $\qquad$ .14 .45
MODEL RF-10A HIGH-FREQUENCY PROBE. For $98-\mathrm{MCP}$ listed above. Extends response to 300 mc . Shpg. wt., 2 lbs.
84 F 4 19. NET.
.14 .11

## MODEL 68 VTVM

Highly dependable AC-operated VTVM. Accurate and versatile. Has 5 zero-center Accurate and versatile. Has 5 zero-center
ranges for $F M$ discriminator balancing, etc. ranges for $\mathrm{F} M$ discriminator Large, $51 / 4^{\prime \prime}$ wide-angle meter with 400 -microampere sensitivity. Accuracy $\pm 2 \%$. Uses $1 \%$ resistors. High input resistance of 13.3 megohms on DC ranges. DC volts, 0-3-12-60-300-1200. Resistance: $0-1000-100$, 000 ohms; 0-1-100-1000 megohms. AC volts, 0-3-12-60-300-1200. Peak-to-peak volts, 0-8-32-160-800-3200.
Steel cabinet $57 / 8 \times 73 / 4 \times 31 / 2^{\prime \prime}$. With battery and 3 -way probe. For $110-120$ volts, 60 cycle AC. Shpg. wt., 7 Ibs.
87 F 018 . \$5.34 Down. NET....... 53.41


88


110
68

## MODEL 110 MULTIMETER

Highly useful, expertly constructed pocketsize VOM. Combines full-range instrument performance with small-sized convenience. Valuable aid to the radio-TV serviceman. Easily fits into tube caddy or tool kit-"onhand" at all times. Ideal for field use, service calls, etc. Ranges: DC volts, 0-1.5-6-30-150-600-3000 ( 20,000 ohms per volt); AC volts, $0-1.5-6-30-150-600-3000$ ( 5000 ohms per volt); DC current, 0-60-600 microamps and 0-6-60-600 ma; resistance, $0-2000-200,000$ ohms and $0-20$ megohms; db , from -20 to +70 . $31 / 2^{\prime \prime}$ meter with long, easy-reading scales; sensitivity 50 mi croamps. Full scale accuracy $\pm 2 \%$. Supplied complete with vinyl-plastic cover; heavy-duty, banana-plug test leads; and batteries. Size (HWD), $53 / 8 \times 31 / 2 \times 111 / 16^{\prime \prime}$ deep. Shpg. wt., 3 lbs.
87 F 023. $\$ 3.38$ Down. NET.
33.81

## MODEL 88 VTVM

Highly sensitive vacuum tube voltmeter for laboratory and service-shop use. Employs full-bridge VTVM circuit with $1 \%$ multipliers and shunts for extremely accurate readings. Extra-large, wide-angle $51 / 4^{\prime \prime}$ meter with easy-to-read, 3-color scales. 200 microamp sensitivity, $\pm 2 \%$ accuracy. Reads AC rms in 6 ranges: 0-1.2-6-12-60-$300-1200$ volts. 6 peak-to-peak AC volt ranges: $0-3.2-16-32-160-800-3200$. 5 resistance ranges: $0-1000-10,000$ ohms; $0-1-100-$ 1000 megohms. 6 zero-center DC ranges: 1000 megohms. 6 zero-center $1200-300-60-12-6-1.2-0-1.2-6-12-60-300-$ 1200 v . with $262 / 3 \mathrm{meg}$ input resistance. Also $6-D C v$. and $6+D C$ v. ranges: 0-1.2-6-12-60-300-1200, with $131 / 3 \mathrm{meg}$ input resistance. In phenolic case $53 / 8 \times 7 \times 31 / 8^{\prime \prime}$. With ohmmeter battery and probe. For 110-120 volts, $50-60$ cycle AC. Wt., 8 lbs.
volts, $50-60$ cycle AC. Wt.
84 F 680 . $\$ 7.30$ Down. NET....... . . 73.01


## MODEL 120 MULTI-RANGE TESTER

- Extra-Large $51 / \mathbf{4}^{\prime \prime}$ Meter
- DC Polarity Reversing Switch
- 20,000 Ohms/Volt DC Sensitivity
- High-Frequency AC/DB Ranges

Highly sensitive VOM. Has more ranges than most meters of its type and size. $1 \%$ multipliers and shunts; two jacks serve all standard ranges; $\pm 2 \%$ accuracy at full scale; many other features. Ranges: $\mathrm{AC},+\mathrm{DC},-\mathrm{DC}$, and output v., 0-1.2-3-12-60-300-600-1200-6000 with 5000 ohms per volt on AC and 20,000 ohms per volt on DC; DC current, 0-60-300 $\mu$, 0-1.2-12-120-600 ma. 0-12 amps; resistance, 0-200-2000-200,000 ohms, 0-2-20 megs; 8 db ranges, -20 to +77 . $51 / 4^{\prime \prime}$ meter. With batteries and test leads. $53 / 8 \times 7 \times 3{ }^{\prime \prime} .5$ lbs.
84 F 490 . $\$ 4.41$ Down. NET. . 44.05 MODEL 120M. As above, but $1 / 2 \%$ multipliers and $1 \%$ meter with mirrored scale. Shpg. wt., 5 lbs.
87 F 080. \$5.19 Down. NET.. . . 51.89 MODEL LC-3 CASE. Custom ever-ready type. Shpg. wt., 3 lbs.
84 F 496. NET. $\qquad$
MODEL TV-2B HV PROBE. Extends DC range to $30,000 \mathrm{v}$. Wt., 2 lbs .
84 F 495. NET.
14.45

MODEL ST-1 RETRACTABLE STAND. For Models 88, 120. Shpg. wt., 1 lb.
87 F 020. NET
.98 c

## FILAMENT \& CONTINUITY TESTER

MODEL SS-10. Tests tube filaments, fuses and pilot lamps. Also checks continuity of transformer windings, appliances, etc. Has sockets for octal, loctal, and miniature 7 and 9 pin tubes. Built-in tube pin straighteners. With batteries. $53 / 8 \times 31 / 2 \times 1^{\prime \prime} .1 \mathrm{lb}$.
87 F 026 . NET.
6.37


## NEW MODEL 208 VTVM

Easy-to-use VTVM offering many deluxe features. Superior design includes: "shift-lever" function selector; $200 \mu \mathrm{a}, 41 / 2$ " sloping panel meter-protected against burn-out; $1 \%$ film-type resistors; special RETMA (EIA) standard value ohms scale; separate HV-RF jack; coaxial inputs; independent line voltage check; meter damped in "off"' position; balanced-bridge, push-pull circuit. Accuracy is within $3 \%$ on all scales. $11-\mathrm{meg}$ DC input resistance. Reads AC RMS and DC volts: $0-1.5-5-15-50-150-500-1500(50 \mathrm{kv}$ DC with 1100 meg probe, not supplied). Ohms: $0-1000-10,000-100,000$. Megohms: 0-1 $-10-100-1000$. Center scale reading of 10 . Size, $31 / 2 \times 51 / 4 \times 81 / 2^{\prime \prime}$. With leads and battery. For operation from 110-120 v., 50-1200 cycle AC. Shpg. wt., 5 lbs.
87 F 243. \$7.30 Down. NET
73.01

## NEW MODEL PS-2 TRANSISTOR RADIO BATTERY ELIMINATOR <br> For servicing transistor radios, amplifiers, etc. Supplies continuously variable, filtered DC, 0-15 v. Maximum output, 100 ma . Cannot be damaged by short circuit. No motorboating-less than 2 ohms internal impedance. Output is isolated from power line by transformer. With $40^{\prime \prime}$ leads. $11 / 2 \times 41 / 2 \times 5^{\prime \prime}$. For 105-125 v., 50-60 cycle AC. Shpg. wt., $11 / 2 \mathrm{lbs}$. <br> 87 F 244. NET <br> 13.67

## NEW MODEL GCT-8 GRID CIRCUIT TESTER

Lightweight, versatile grid circuit tube tester. Perfect for use with any tube tester. Checks practically all of the popular 2-12 v. tubes -including many industrial types. Simultaneously tests control grid emission, filament continuity, gaseous condition, and for 9 types of shorts (grid-to-cathode, cathode-to-heater, grid-to-heater, grid-to-plate, plate to heater, grid-to-screen, screen-to-heater, heater-to-suppressor, and grid-to-suppressor). 10 sockets; 1 spare for new tube types. Size, $61 / 2 \times 21 / 2 \times 61 / 2^{\prime \prime}$. For operation from $105-115 \mathrm{v}, 60$ cycle AC. Shpg. wt., 4 lbs.
87 F 242. $\$ 2.94$ Down. NET
29.35

## MODEL 107 ULTRA-COMPACT PORTABLE TUBE TESTER

Remarkably compact, precision tube tester, Provides all essential tests for wide range of tube types, including sub-miniature types. "Good-?-Bad" meter shows results of dynamic mutual conductance test and cathode emission test; electron-eye indicates "control-gridemission" test. Also checks for filament continuity, element leakage, open elements, and gassiness. Only $6 \times 9 \times 131 / 2^{\prime \prime}$; weight is only a fraction over 11 pounds! Handy "flip-chart" tube index. For 110120 volts, 60 cycle AC. Shpg. wt., $141 / 2 \mathrm{lbs}$. 87 FU 295. $\$ 13.67$ Down. NET.
.136.71

# Precise Test Equipment-Kits or Wired 



## 111 TUBE TESTER-KIT OR WIRED

MODEL 111-K. Advanced-design tube tester kit. Checks both emission and mutual conductance separately-roll chart indicates the most important single test for normal applications. Tests all receiving tubes; also tests CRT's with PTA-K adapter. Features rotary type switches; gas check; singleswitch short check; latest type anti-backlash roll chart. Tests each tube element for shorts against other elements. Allows filament current and tube bias to be measured directly on the meter. Has spare switch to accommodate future tube types. Sturdy, wooden carrying case. Handsome, etched aluminum panel. Easy-to-follow step-bystep instruction manual. Size, $14 \times 16 \times 6^{\prime \prime}$. For operation from 110-120 volts, 60 cycle AC. Shpg. wt., 25 lbs.
83 FU 133. NET $\qquad$ 79.95

MODEL IIIW. As above, but factory-wired. 84 FU 692. NET
139.95

MODEL PTA-K. CRT ADAPTER KIT. For above. 84 F 693. NET
.2 .95
MODEL PTA-W. As above, but factory-wired. 84 F 694. NET.


Ideal, spacesaving power kit-takes the place of 11 separate pieces of equipment.

## 713 POWER LAB-KIT OR WIRED

MODEL 713-K, Extremely versatile benchtype power supply kit-ideal for service shops and labs. Combines variable low and high-voltage AC and DC supplies, a wattmeter, voltmeter, AC and DC ammeter, and an isolation transformer in one compact unit. Performs function of 11 different pieces of equipment. DC power available is 0-30 v. at 10 amps and $110-180 \mathrm{v}$. at .75 amps . ( 1 amp intermittent). AC power available is $0-24 \mathrm{v}$. at $20 \mathrm{amps} ; 90-140 \mathrm{v}$. at 10 amps $0-24 \mathrm{v}$. at $20 \mathrm{amps} ; 90-140 \mathrm{v}$. at 10 amps
$(1000$ watts continuous) and 20 amps ( 2000 watts intermittent) (no isolation) and $90-$ 140 v . at $3 \mathrm{amps}, 300$ watts (with isolation). Meter reads AC and DC current to 20 amps, AC and DC voltage to 180 v . and power to 2000 watts. $12 \times 81 / 2 \times 51 / 4^{\prime \prime}$. For $110-$ 120 v., 60 cycle AC. Wt., 22 lbs.
83 FU 904. NET
62.95

MODEL 713-W. As above, but factory-wired.
87 FU 266. NET. . . . . . . . . . . . . . . . . 79.95
MODEL 711-K KIT. Similar to $713-\mathrm{K}$, but isolation to 100 watts. Shpg. wt., 15 lbs. 83 FU 903. NET. . . . . . . . . . . . . . . . . . 49.95
MO'DEL 711-W. As above, factory-wired.
87 FU 265. NET......... . . . . . . . . . . . . 64.95


## NEW 904 VTVM-KIT OR WIRED

MODEL 904-K. An expertly designed VTVM kit with outstanding new features. Fullsized $41 / 2^{\prime \prime}$ meter has special constructionpermits tilting dial up, down, or sideways for accurate readings at any angle. Dial includes zero-center scale for FM and TV discriminator alignment. A special switching circuit permits checking zero adjustment even when prods are connected to circuit under test. Fully regulated B+ and $B-$ prevent changed readings when switching ground lead polarity. Etched circuit board also aids stability-simplifies kit assembly. DC input has coax connector Meter protected against overload. Precision $1 \%$ ceramic resistors. Specifications: 11 megohm DC input impedance; $\pm \mathrm{DC}$ and AC rms v.: 0-1.5-5-15-150-500-1500; AC AC rms v.: $0-1.5-5-15-150-500-1500$; AC
peak to peak: $0-4-14-40-140-400-1400-4000$. Resistance: $0-1000-10 \mathrm{~K}-100 \mathrm{~K}$ ohms; 0-1-10 100-1000 megohms. Complete with test leads. Size: $91 / 2 \times 6 \times 55^{\prime \prime}$. Wt., 10 lbs.
83 F 905 . NET.
34.95

MODEL 904-W. Similar to above, but factory wired and tested.
83 FU 906. NET
44.95


## MODEL 300-K 7" SCOPE KIT

High-quality $7^{\prime \prime}$ scope kit. Vertical response, $\pm 3 \mathrm{db}$ up to 5 megacycles with sensitivity of 10 millivolts. Frequency-compensated vertical and horizontal stepping attenuators. Push-pull DC amplifiers; push-pull horizontal. Astigmatic focus control. Linear sweep from 1 cycle to 80 kc . Internal square wave calibrator with pot. Electronic magnifier circuit allows any portion of signal to be magnified up to 10 times. Screen is edge lighted-may be switched on or off. 5 -way binding posts for easy hookup. Has plug gate and sawtooth outputs on front panel. Bridge type positioning on vertical and horizontal does not vary tube characteristics. Extra-heavy, fused power supply. Rugged steel cabinet. Size, $11 \times 14 \times 17^{\prime \prime}$. With all parts less solder. For $110-120$ v., 60 cycle AC. Shpg. wt., 35 lbs. 83 FU 131. NET.
99.95

MODEL 960 CAPACITY ATTENUATOR PROBE. For use with Models 300 and 308 oscilloscopes. Range, through 100 mc . Input capacity, 7 mmf. Shpg. wt., $11 / 2$ lbs.
84 F 691 . NET.
5.95

## MODEL 308-K 81/2" SCOPE KIT

Unusually fine, easily assembled, $81 / 2^{\prime \prime}$ scope kit at very moderate cost. Many deluxe features; excellent for any radio-TV servicing or laboratory application. Edge-illuminated $81 / 2^{\prime \prime}$ screen and magnifier positioner permit extremely accurate waveform analysis. Bridge type horizontal and vertical positioning does not vary tube characteristics. A third anode intensifier ring, as well as a separate high voltage supply provide increased picture sharpness and tracing speed. Has push-pull inputs for internally mixing 2 signals or observing push-pull waveforms. Exceptional vertical response; $\pm 1.5$ db to 5 mc . Sensitivity, $10 \mathrm{mv} / \mathrm{inch}$. Return trace eliminator. Linear sweep, 1 cycle to 80 kc . Square-wave calibrator with potentiometer. External, internal negative or positive sync. or internal 60 or 120 cycle sync. Rugged steel cabinet. Size, $11 \times 14 \times 19^{\prime \prime}$. With all parts, cycle sync. Rugged steel cabinet. Solze, 11xi4x19.
wire, tubes and instructions; less solder. For operation from 110-120 volts, 60 cycle AC. Shpg. wt., 36 lbs.
83 FU 132. NET.
129.50



630-KA


## Selected Test Equipment

WINTRONIX ANALYZERS FOR SIMPLIFIED SERVICING


INDUCED WAVEFORM ANALYZER

- Quick, Dependable Trouble-Shooting From Top of Chassis
- Makes Every Tube a Test Point

MODEL 850. This extremely versatile unit adapts your scope for quick, easy troubleshooting from the top of the chassis. Perfect for use with black and white and color TV sets (UHF and VHF), radios, amplifiers and many other pieces of electronic equipment.
Incorporates turret-type tuner with coils for selective pickup of TV channels and IF frequencies. Built-in RF detector and highgain amplifiers. Has 4 input positions. First input covers the TV channels from 2 to 13 (turret selects individual channels) and 21 and 41 -mc IF signals. Second input covers 3.58 mc (color-burst) and 4.5 mc IF signals. Third input gives general coverage of audio, video, RF and pulse signals. Last position for direct connection to scope.
Capacitive-pickup probes supplied cover all sizes of tubes, including multi-section types. Analyzer is usable to 890 mc (channel 83). Instruction book includes correct waveforms. $7 \times 101 / 2 \times 66^{\prime \prime}$. For $105-125$ v., $50-60$ cycle AC. Shpg. wt., 12 lbs.
87 FU 239. \$17.00 Down. NET.. .I69.95

## DYNAMIC AGC CIRCUIT ANALYZER

MODEL 825. Advanced-design instrument quickly pinpoints troubles in the AGC circuit of a TV set. Provides RF at the frequency of channel 2 or 3 , with 15 ke sync pulse modulating signal. Also supplies AGC bias from +1 to -15 volts DC for insertion into set under test. Checks for continuity of AGC circuit; monitors DC value of AGC voltage and peak-to-peak value of gate pulse. Adjustable for signal ranges to $100,000 \mu \mathrm{v}$. (1000-25,000; 25,000-50,000; 50,000-100,000). Has $41 / 2^{\prime \prime}$ clear plastic meter, with 5 scales. Meter ranges: VTVM 20-0-20 volts DC, VTVM $600-0-600$ volts DC, $0-250$ volts AC'RMS, $0-800$ volts p -p, $0-10$ megohms. Case size, $7 \times 101 / 2 \times 66^{\prime \prime}$. For operation from 105 125 v., $50-60$ cycle AC. Wt., 12 lbs. 87 FU 240. $\$ 8.00$ Down. NET
79.95

## AEROVOX L-C CHECKER



MODEL 97. Versatile instrument for service shops and laboratories. Measures "in-circuit" capacitance, checks relative " $Q$ " and indicates leaky capacitors (under $100-\mathrm{meg}$ ohm insulation resistance. Determines resonant frequencies from 150 kc to 44 mc . May be used for RF-IF alignment of allwave and shortwave receivers, and IF alignment of FM receivers. Indicates RF choke resonance points, and checks transmitter stages for parasitic current loops. Can be used for adjusting traps. filters, etc. Measures capacitance from 200 mmf to 3 mfd in 5 ranges. Size, $13 \times 81 / 2 \times 6^{\prime \prime}$. With cables. For 110-120 v., 60-cycle AC. Wt., 9 lbs.
87 FU 294, \$7.00 Down. NET. ... 69.95

## HI-FI AUDIO SYSTEM ANALYZER

- Comprehensive Hi-Fi Servicing With One Compact Unit - Quickly Pays for Itself

MODEL 800. Here's the modern approach to hi-fi servicing- 6 audio instruments in one convenient unit. Combines a harmonic and IM distortion meter, VTVM, signal generator, wattmeter, and db and noise meter. All instrument functions integrated for quick, easy servicing-only 2 cable connections necessary.
Harmonic and IM distortion ranges: 0-100 30-10-3\%; AC VTVM: ranges: 0-.01-.03-.1-.3-1-3-10-30-100-300 v. RMS; response, 10 cps to $100 \mathrm{kc}, \pm 1 \mathrm{db}$. Audio generator: $20-30,000 \mathrm{cps}, 3$ ranges; $0-5 \mathrm{v}$ output. Wattmeter: $0-.15-1.5-15-150 \mathrm{mw}$ and $0-1.5-150$ W ; response, 10 cps to $55 \mathrm{kc}, \pm 1 \mathrm{db}$; spkr. loads, $4,8,16$, or 600 ohms. Db meter: -65 to $52 \mathrm{db}, 10$ ranges.
Size, $7 \times 101 / 2 \mathrm{xa}^{\prime \prime}$. With cables. For $105-125$ v., $50-60 \mathrm{cycle} \mathrm{AC}$. Wt., 12 lbs .

87 FU 327. \$17.00 Down. NET. . .I69.95



## JACKSON TEST EQUIPMENT

## MODEL 648A DYNAMIC TUBE TESTER

Easy-to-operate tube tester applies separate loads and voltages, selected to match normal operating conditions, to each tube element. Sequence switching with push-buttons makes set-up time less than the warmup time of most tubes. 3-column roll chart with middle column in inverted order speeds location of set-up data for any tube. Data for newly announced tubes published monthly in PF Reporter. Checks inter-element leakage from 250 K to 2 megohms. Life-line indicator tells when tube is nearing the end of its life. Meter reads good-bad and per cent of relative transconductance. Portable case, $161 / 2 \times 133 / 4 \times 6^{\prime \prime}$. For 110 120 v., 60 cycle AC. Shpg. wt., 23 lbs. 87 FU 130. \$12.74 Down. NET $\qquad$ . 127.35


## MODEL 710 SELENIUM RECTIFIER TESTER

Compact instrument for accurately testing all selenium rectifiers rated 20 to 650 ma , 25 to 300 v . AC. Gives positive indicationGood or Replace-on $3^{\prime \prime}$ meter. Shows voltage drop across rectifier under load. Line-
adjust control for precise readings. Case size, $31 / 4 \times 71 / 8 \times 41 / 4^{\prime \prime}$. Supplied with test leads. For operation from $110-120$ volts, $50-60$ cycle AC. Shpg. wt., 5 lbs. 84 F 458. $\$ 2.89$ Down. NET.

BARKER AND WILLIAMSON TEST EQUIPMENT


MODEL 200 AUDIO OSCILLATOR Highly stable, accurately calibrated audio oscillator designed for service or experimental applications. RC type for making frequency response, distortion, and other audio measurements. Ranges: $30-300$, 300-$3000,3000-30,000$ cps. Output: 10 volts 3000, $30000-30,000$ cps. Output: 10 volts monics from $30-15,000 \mathrm{cps}$, with $500-\mathrm{ohm}$ load. Response: Better than $\pm 1 \mathrm{db}$ from 30-15,000 cps. Calibration accuracy, $3 \%$ of scale reading. Rugged steel case is $133 / 4 \mathrm{x}$ $71 / 4 \times 9112^{\prime \prime}$. For operation from $105-125$ volts, $50-60$ cycles AC. Shpg. wt., 17 lbs. 84 FU 482. \$13.80 Down. NET. . 38.00 Output


For Critical Distortion Measurements

Provides Stable, dis-tortion-Free


## MODEL 400 DISTORTION METER

Sensitive field or laboratory instrument for checking residual noise and harmonic content in low-level audio stages. Covers fundamentals from 30 to 15,000 cycles, harmonics to 45,000 cycles. May also be used as an audio voltmeter and db meter in the range of 30 to 45,000 cycles. Voltage range: $0-.003-.01-.03-11-.3 \mathrm{v}$. AC. 0.3 v . minimum input for noise and distortion readings. Calibration accuracy: distortion, $\pm 0.5 \mathrm{db}$; voltage, $\pm 5 \%$ of full scale at 1000 cycles. $41 / 2^{\prime \prime}$ meter. $91 / 2 \times 13^{3} / 4^{\times 71} 4^{\prime \prime} .105-125$ v., $50-60$ cycle AC. 17 lbs.
84 FU 483. \$16.80 Down. NET. . . 168.00

## Selected Test Equipment

## SENCORE "TIME-SAVER" TEST EQUIPMENT



## FC-4 TUBE FILAMENT CHECKER

- Dependable, Low-Cost Tester
- Checks Series-String Tubes
- Includes Neon Voltage Indicator Handy filament checker for quickly locating bad tubes in series-string TV receivers, such as G.E., Admiral, Motorola, Crosley, etc. Test is extremely simple. Power cord is disconnected from television set and plugged into checker. The tube in question is inserted into one of 4 sockets-if neon lamp goes out, filament is good. Also checks voltages ( $100-600 \mathrm{v}$.) and tests for continuity of appliances, motor windings, etc. Size, $31 / 4 \times 4 \times 11 / 4^{\prime \prime}$. With leads. For $110-120 \mathrm{v}$., AC or DC. Shpg. wt., 1 ib .
84 F 697. NET.
2.89


## BE-3 TV BIAS SUPPLY

Isolated variable bias supply. Provides all DC battery voltages for TV alignmentespecially useful for AGC trouble-shooting. Output, 0 to 18 volts DC, positive or negative, with AC ripple of less than $0.1 \%$. Includes $28^{\prime \prime}$ leads. $21 / 2 \times 4 \times 4^{\prime \prime}$. For $110-120$ v., 60 cycle AC. Shpg. wt., 2 lbs. 84 F 696. NET.

## LC-3 TUBE-CAPACITOR CHECKER

Versatile checker for detecting leakage in capacitors or between tube elements. Tests 144 tube types; checks CRT's without removal from cabinet or chassis. Designed to prevent obsolescence-features handy roll chart with tube listings; new chart available from manufacturer as tubes are released. Indicates grid-to-cathode leakage in tubes up to 100 megohms; heater-to-cathode leakage up to 50,000 ohms. Tests capacitors by applying 50 volts. Indicates leakage up to 50,000 ohms in electrolytic capacitors and up to 100 megohms in paper types. With leads. $7 \times 6 \times 31 / 2^{\prime \prime}$. For $110-120$ v., $50-60$ cycle AC. Shpg. wt., $31 / 2$ lbs.
83 F $981 . \$ 2.84$ Down. NET.
28.37

## TRC-4 TRANSISTOR \& DIODE CHECKER

Battery-operated transistor, crystal diode, and selenium rectifier checker. Tests transistors for opens, shorts, leakage and current gain; includes gain test for power types. Gives forward and reverse current ratio of diodes and rectifiers. With leads and battery. $41 / 2 \times 5 \times 21 / 4^{\prime \prime}$. Shpg. wt., 2 lbs.
87 F 287. NET.


TRC-4


H-36

Handy for shop or outside service. 3-pole, 12-position switch selects any one of 36 components. Has $12-1$-watt resistors, 10 to 5 K ohms; $12-1 / 2$-watt, 10 K to 5.6 megs; $10-600 \mathrm{v}$. capacitors, 100 mmf . to .5 mfd ; 1 ea. 10 and 40 mfd .450 v . electrolytics. Simply insert R or C value into circuit with test leads. If a part is already in the circuit, disconnect one end. With leads and case. Size: $2 \times 43 / 4 \times 33 / 4^{\prime \prime}$. Shpg. wt., 2 lbs. 87 F 269. NET.
.I2.49

## VB-2 "VIBRA-DAPTOR"



Permits any tube tester to check vibrators. Plug VB-2 into tube tester, and set for $6 \mathrm{AX4}$ for 6 -volt vibrators or 12AX4 for 12 -volt vibrators. Has sockets for 3- or 4-prong vibrators. Two lamps on the adaptor indicate condition of the vibrator. Uses 2 \#51 lamps, recessed for protection. Steel case with instructions on front. Size, $33 / 4 \times 13 / 4 \times 13 / 4^{\prime \prime}$. Shpg. wt., 5 oz. 87, F 278. NET....................... 2.69

## CORNELL-DUBILIER TEST EQUIPMENT



## MODEL BF-90 "HANDICHECK" CAPACITOR CHECKER

Quickly and conveniently check capacitors of all types without removing them from the circuit. "Magic-Eye" indicates shorted, open, or intermittent condition. 60 cycle test for direct or intermittent short; 20 mc test for open or intermittent capacitors. Checks capacitors from 30 mmfd to 2000 mfd for open, short or intermittent condition even when connected across resistances as low as 50 ohms. Capacitors from .1 mfd to 2000 mfd can be checked for short circuit even when connected in parallel with a resistance as low as 1 ohm. Size: $7 \times 10 \times 51 / 2^{\prime \prime}$. With leads and test clips. For 110-125 volts, 60 cycle AC. Shpg. wt., 8 lbs.
Q4F 5
37.95

## BF-60 CAPACITOR-RESISTOR BRIDGE

Precision instrument for industrial and electronic labs. Checks for opens, shorts, intermittents, capacity and power factor of electrolytics as well as insulation resistance of papers, micas and ceramics. Measures capacity between wires and shielding, transformer windings, wires in cables, etc. Capacity ranges are: $10 \mathrm{mmf}-.005 \mathrm{mfd}, .001-5$ mfd , 1-50 mfd, 20-1000 mfd. Resistance ranges: $100-50,000$ ohms and 10,000 ohms to 5 megohms. Sturdy case with handsome, hammered-enamel finish. Size: $51 / 2 \times 7 \times 10^{\prime \prime}$. For operation from 110-125 volts, 50-60 For operation from $110-125$
cycle AC. Shpg. wt., 10 lbs .
84 FU 457. \$4.72 Down. NET.
410
47.15


BF-60


## CAPACITOR DECADES

Provide accurate standards over a wide range of capacity. Rated at 600 volts DC and 220 volts AC. May be used singly or in groups of two or more decades. With calibration chart giving exact capacity values for all scale markings, extending use to more precise measurements. Types CDA-5, $\mathrm{CDB}-5$, and $\mathrm{CDC}-5, \pm 5 \%$; $\mathrm{CDB}-3$ and CDC-3, $\pm 3 \%$ tolerance. CDA-5 has mica capacitors; others have oil-impregnated paper capacitors. $33 / 4 \times 5 \times 31 / 2^{\prime \prime}$. Wt., 4 lbs.

| Stock <br> No. | Mifr's <br> Type | Range <br> Mfd | Mfd./ <br> Step | NET, <br> EACH |
| :---: | :---: | :---: | :---: | :---: |
| 84 F 452 | CDA-5 | $.0001-.011$ | .0001 | 12.25 |
| 84 F 453 | CDB-5 | $.01-1.1$ | .01 | 12.25 |
| 84 | F 455 | CDB-3 | $.01-1.1$ | .01 |
| 84 F 454 | CDC-5 | $1.0-10$ | 1.0 | 21.55 |
| 84 F 456 | CDC-3 | $1.0-10$ | 1.0 | 23.71 |

## RESISTANCE DECADES

Dependable source of resistance for substitution use. Each decade permits selection of 110 resistance values. Series connected, they cover a range from 1 ohm to $1,111,110$ ohms in 1 -ohm steps. Have 2 rotary switches with 11 positions for quick change in resistance values. Less leads. $35 / 8 \times 5 \times 3$ ". Wt., $13 / 4 \mathrm{lbs}$.

| Stock No. | $\begin{array}{\|l\|} \hline \text { Mfr's } \\ \text { Type } \end{array}$ | Range Ohms | $\begin{aligned} & \text { Ohms } \\ & / \text { Step } \end{aligned}$ | $\begin{aligned} & \mathrm{NET} \\ & \mathrm{EACH} \end{aligned}$ |
| :---: | :---: | :---: | :---: | :---: |
| 84 F 615 | RDA | 1-110 | 1 | 13.08 |
| 84 F616 | RDB | 100-11,000 | 100 | 13.47 |
| 84 F617 | RDC | 0,000-1,100,000 | 0,000 | 13.47 |

## BF-70 CAPACITANCE-RESISTANCE ANALYZER

Accurately checks capacitors and resistors. Wien bridge circuit assures permanent accuracy; readings not affected by line voltage variations. Measures capacity from . 00001 to 2000 mfd in 4 ranges. Checks power factor of electrolytics from 0 to $50 \%$. Indicates insulation resistance of paper, mica, and ceramic capacitors. Built-in VOM for leakage measurement. VOM ranges: DC volts, 0-15-150-750; DC ma, 0-1.5-15-75; DC resistance, $\quad 2.5-2500$ ohms, $250-250,000$ ohms, 250,000 ohms to 25 megs. Metal case. Gray. $11 \times 10 \times 51 / 2^{\prime \prime}$. For $110-125$ v., $50-$ 60 cycle AC. Shpg. wt., 11 lbs.
84 FU $613 . \$ 7.87$ Down. NET. . . . . 78.65

## BF-80 FLYBACK-YOKE CHECKER

For rapidly locating defects in flyback transformers and yokes. Employs an oscillator circuit incorporating a 6V6 tube. Extremely sensitive-detects short circuited vacuum tube elements and windings. Will detect a single shorted turn. Also indicates open circuits in transformers, yokes, coils and switches. $41 / 2^{\prime \prime}$ microammeter; 50 mi croamp full-scale sensitivity. Meter scale indicates "GOOD" and "REPLACE"; scale is also numbered for quantitative readings. Sturdy metal case; recessed carrying handle. $51 / 2 \times 7 \times 10^{\prime \prime}$. With test leads. For operation from $110-125 \mathrm{v} ., 60$ cycles AC. operation from 110
Shpg. wt., $91 / 2 \mathrm{lbs}$.
84 FU 618. \$5.11 Down. NET. $\qquad$ .51.10

## Phaostron Testers and Meters

## MODEL 666 VOM

- Meter Overload Protection Feature
- Illuminated Dial for Easier Reading

Features signal light to show overload or incorrect polarity. Fused to protect against burnouts. Large, $47 / 8^{\prime \prime}$ color-coded scales are illuminated. Anti-magnetic, chrome and black DC; 2,000 ohms-per-volt AC. AC current ranges: 0 -1.5-5-15-50-150-500-1500 ma and 0-15 amps. DC current ranges: $0-50-150-500$ microamps. 0-1.5-15-50-105-500-1500 ma and $0-15$ amps. Resistance: $0-1000-100,000$ ohms, $0-1-10 \mathrm{meg}-$ ohms, AC and DC volts: $0-1.5-5-15-50-150-500-1500$ volts, 6 decibel ranges: -10 to +56 db . With probes, batteries, power cord, carrying case. Plugs into $105-125 \mathrm{v}$. AC or DC outlet for illumination of meter. Size, $65 / 8^{\prime \prime}$ wide, $71 / 2^{\prime \prime}$ high, and $33 / 4^{\prime \prime}$ deep. Shpg. wt., $61 / 2$ lbs.
87 F 275 . NET.................
.63.21


## PORTABLE 6" LAB STANDARD METERS

Extremely accurate, portable secondary-standard meters. Metal-cased with double-shielded meter movements for excellent protection from stray magnetic fields. Overload network prevents burnouts. Has mirrored scale; leather carrying case with strap (may be removed and carried by handle on meter itself); test lead jacks and 3-way binding posts. Zero adjust. Accuracy, $\pm 1 / 2 \%$, except $* \pm 1 \%$. Scale size, $4.37^{\prime \prime}$. With test
leads. $\dagger$ Range switch. $33 / 4 \times 65 \times 71 / 2^{\prime \prime}$. Shpg. wt., 5 lbs.

| Stock No. | Description | Ranges | NET |
| :---: | :---: | :---: | :---: |
| 67 F 733 | DC Milliameter | 0-1 | 58.80 |
| 67 F 736 | AC Voltmeter* | ${ }_{0}^{0-150}$ - | 58.80 |
| 67 F 737 | DC Current Meter $\dagger$ | 0-50-150-500 microamps; |  |
| 67 F 738 | DC Voltmeter $\dagger$ | li.5-5-15 milliamps | 137.20 91.14 |
| 67 F739 | DC Voltmeter $\dagger$ | 0-5-15-50-150-500-1500 | 91.14 |



## MODEL 555-A MULTIMETER

Highly accurate volt-ohm-milliammeter. Has very large ( $47 / 8^{\prime \prime}$ ) meter cale, yet it's ultra-compact. Extremely rugged, black metal case with polished bezel. Has double magnetic shielding for maximum accuracy of calibration under all circumstances. Color-coded meter scale for easy reading. Sensitivity, 20,000 ohms-per-volt DC; 2000 ohms-per-volt AC current ranges: $0-1$.5-5-15-50-150-500-1500 milliamperes and $0-15$ amperes. $0-50-150-500$ microamps; AC current ranges: $0-1.5-5-15-50-150$ $500-1500$ milliamperes and $0-15$ amperes. Resistance ranges: $0-1000$ 100,000 ohms; $0-10$ megohms. DC volts: $0-1.5-5-15-50-150-500-1500$ volts. AC Volts: $0-1.5-5-15-50-150-500-150$ volter 1000 times overload by rectifier network. Supplied complete with probes and batteries. Size, $45 / 8 \times 61 / 8 \times 21 / 8^{\prime \prime}$. Shpg. wt., 5 lbs.
44.05

MODEL 555-CC LEATHER CARRYINGCASE. Shpg. wt., 6 oz. $7 .$.

## CUSTOM METAL-CASED PANEL METERS

6" Rectangular Custom Panel Meters. (Not illustra ted.) Combine dependable performance with high-style iunctional design. Steel-case, magnetically shielded from stray magnetic fields-may be mounted on any panel without affecting calibration. Mirrored scales overcome parallax. Large, clear, easy-to-read scale. Permanent DC accuracy: $0-20,0-50$ microammeters, $\pm 2 \%$; all others $\pm 1 \%$ Flange size, $417 / 3 \times 61 / 2^{\prime \prime} ;$ barrel depth, $7 / /^{\prime \prime}$. barrel
dia. $21 / 16^{\prime \prime}$. Solid black finish. Av. shpg. wt., $23 / 4 \mathrm{lbs}$.

41/2" Rectangular Custom Panel Meters. Designed for long service and reliable performance. Feature drawn metal cases for shielding from stray magnetic fields-calibration is unaffected by type of panel. Large, easy-to-read scales. Permanent DC accuracy, $\pm 2 \%$. Flange, $413 / 64 \mathrm{x}$ $4^{21} / 32^{\prime \prime}$; barrel depth, ${ }^{15} 16^{\prime \prime}$; barrel dia., $2^{5 / 8^{\prime \prime}}$. Black finish. Av. shpg. wt., $21 / 4$ lbs. $41 / 2^{\prime \prime}$ meters finished in black with polished chrome bezel available on special order. Write for prices and delivery.


## DC VOLTMETERS

## DC MILLIAMMETERS

| Range Volts | 41/2\% Rectangular |  |  |  | $6^{\prime \prime}$ Rectangular |  |  |  | $\begin{gathered} \text { Range } \\ \mathrm{Ma} \end{gathered}$ | 41/2" Rectangular |  |  |  | $6^{\prime \prime}$ Rectangular |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | Stock No. | NET EACH |  |  | $\begin{aligned} & \text { Stock } \\ & \text { No. } \end{aligned}$ | NET EACH |  |  |  | Stock | NET EACH |  |  | $\begin{aligned} & \text { Stock } \\ & \text { No. } \end{aligned}$ | NET EACH |  |  |
|  |  | 1-9 | 10-24 | 25-Up |  | 1-9 | 10-24 | 25-Up |  |  | 1-9 | 10-24 | 25-Up |  | 1-9 | 10-24 | 25-Up |
| $\begin{aligned} & 0-10 \\ & 0-15 \\ & 0-50 \end{aligned}$ | $\begin{aligned} & 67 F 709 \\ & 67 F 758 \\ & 67 F 710 \end{aligned}$ | 16.46 | 14.82 | 13.99 | $\begin{aligned} & 67 \text { F } 725 \\ & 67 F 768 \\ & 67 \text { F } 726 \end{aligned}$ | 21.61 | 19.45 | 18.36 | $\begin{aligned} & 0-1 \\ & 0-5 \\ & 0-10 \end{aligned}$ | $\begin{aligned} & 67 F 704 \\ & 67 F 756 \\ & 67 \text { F } 757 \end{aligned}$ | 15.24 | 13.72 | 12.96 | $\begin{aligned} & \hline 67 \text { F } 720 \\ & 67 \text { F } 766 \\ & 67 \text { F } 767 \end{aligned}$ | 20.43 | 18.38 | 17.36 |
| $\begin{aligned} & 0-150 \\ & 0-300 \\ & 0-500 \end{aligned}$ | $\begin{aligned} & 67 F 711 \\ & 67 F 712 \\ & 67 F 713 \end{aligned}$ | 16.46 | 14.82 | 13.99 | $\begin{aligned} & 67 \text { F } 727 \\ & 67 \text { F } 728 \\ & 67 \text { F } 729 \end{aligned}$ | 21.61 | 19.45 | 18.36 | $\begin{aligned} & \hline 0-50 \\ & 0-100 \\ & 0-500 \end{aligned}$ | $\begin{aligned} & 67 \text { F } 705 \\ & 67 \text { F } 706 \\ & 67 \text { F } 707 \end{aligned}$ | 15.24 | 13.72 | 12.96 | $\begin{aligned} & 67 F 721 \\ & 67 F 722 \\ & 67 \text { F } 723 \end{aligned}$ | 20.43 | 18.38 | 17.36 |


| $\begin{aligned} & \text { Range } \\ & \mu \mathrm{a} \end{aligned}$ | 41/2" Rectangular |  |  |  | $6^{\prime \prime}$ Rectangular |  |  |  | Range $\mu \mathrm{a}$ | 41/2" Rectangular |  |  |  | $6^{\prime \prime}$ Rectangular |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | StockNo | NET EACH |  |  | Stock No. | NET EACH |  |  |  | $\begin{aligned} & \text { Stock } \\ & \text { No. } \end{aligned}$ | NET EACH |  |  | Stock No. | NET EACH |  |  |
|  |  | 1-9 | 10-24 | 25-Up |  | 1-9 | 10-24 | 25-Up |  |  | 1-9 | 10-24 | 25-Up |  | 1-9 | 10-24 | 25-Up |
| $\begin{aligned} & 0-20 \\ & 0-50 \end{aligned}$ | 67 F 746 67 F 700 | 24.69 21.36 | 22.22 | 20.99 | 67 F 796 | 38.07 35.62 | 34.26 32.06 | 33.02 30.28 | $\begin{aligned} & 0-500 \\ & 50-0-50 \end{aligned}$ | 67 F 778 <br> 67 F 779 | 5.88 8.86 | 14.49 16.97 | 13.49  <br> 16.03 67 |  | 22.83 | 20.55 30.73 | 19.40 29.03 |
| $0-100$ | $67 \mathrm{~F} 701$ | 18.86 | 16.97 | 18.03 | 67 F 717 | $35.15$ | 30.73 | 39.03 | $100-0-100$ | 67 F 779 | 8.86 6.46 | 14.97 | 13.9367 |  | 24.06 | 21.66 | 20.45 |
| 0-200 | 67 F 777 | 16.46 | 14.82 |  | 67 F 787 | 24.06 | 21.66 | 20.45 | 500-0-500 | 167 F 703 | 5.24 | 13.72 | 12.96167 |  | 20.43 | 18.38 | 17.36 |
| DC AMMETERS |  |  |  |  |  |  |  |  | VOLUME UNIT METERS-SCALE A |  |  |  |  |  |  |  |  |
| Range <br> Amps. | 41/2" Rectangular |  |  |  | $6^{\prime \prime}$ Rectangular |  |  |  | $\begin{aligned} & \text { NET } \\ & \text { EACH } \end{aligned}$ | $\begin{aligned} & 21 ⁄ 2_{1 "} \text { Rnd. } \\ & 67 \text { F } 946 \end{aligned}$ | $\begin{gathered} 21 / 22^{\prime \prime} \text { Sq. } \\ 67 \text { F } 947 \end{gathered}$ |  | $\begin{aligned} & 31 / 2_{\prime \prime}^{\prime \prime} \text { Rect. } \\ & 67 \mathrm{~F} 999 \end{aligned}$ | $\begin{aligned} & 411 / 2^{\prime \prime} \text { Rect. } \\ & 67 F 715 \end{aligned}$ |  | $\begin{aligned} & 6^{\prime \prime \prime} \text { Rect. } \\ & 67 \text { F } 731 \end{aligned}$ |  |
|  | $\begin{aligned} & \text { Stock } \\ & \text { No. } \end{aligned}$ | NET EACH |  |  | Stock No. | NET EACH |  |  |  |  |  |  |  |  |  |  |  |
|  |  | 1.9 | 10-24 | 25-Up |  | 1-9 | 10-24 | 25-Up |  |  |  |  |  |  |  |  |
| 0-1 $0-10$ $0-50$ | $\begin{aligned} & 67 F 759 \\ & 67 F 708 \\ & 675777 \end{aligned}$ | 15.24 | 13.72 | 12.96 | $\begin{aligned} & 67 \text { F } 769 \\ & 67 \text { F } 724 \\ & 67 \text { F } 786 \end{aligned}$ | 20.43 | 18.38 | 17.36 | $\begin{aligned} & 1-9 \\ & 10-24 \\ & 25-U p \end{aligned}$ | 20.14 18.12 17.10 | 20. 18. | 12 |  | $\begin{array}{r} 24.35 \\ 23.87 \\ 20.70 \end{array}$ |  | .58 <br> .02 |  | $\begin{aligned} & 0.77 \\ & 7.69 \\ & 6.15 \end{aligned}$ |

## JERROLD FIELD STRENGTH METERS

- Direct Reading
- Reads Down to $5 \mu \mathrm{v}$
- Covers 54-220 Mc.

Model 704-B Portable VHF Field Strength Meter. Useul for field intensity surveys, balancing TV distribution systems, testing color response of antenna systems, checking per ent of amplitude modulation of FM carriers or RF signal generators, measuring radiation, studying antenna patterns, locating and measuring nense losse, callurating signal gene mumerous other traps and numerous other applica


Frequency range: Continuously tuneable, 54 to 220 mc . Sensitivity: from 5 microvolts to 3 volts. Accuracy: $\pm 2$ db over entire range. Ranges: $0-100-300-1000-10,000-30,000$ microvolts RF; with use of built-in precision attenuator, measures 0-0.1-0.3-1-3 volts RF. Selectivity: 0.6 mc bandwidth at 3 db down. Image rejection: 90 db below signal level.
Db meter scale on dial with dbj scale on range switch for easy conversion to dbj (gain). Audio and video output jacks. $12 \times 123 / 4 \times 8^{\prime \prime}$. For $105-125 \mathrm{v}$. 50-60 cycle AC. Shpg. wt., 24 lbs. 87,FU 293. Only $\$ 36.50$ Down. NET IET. 365.00

- Direct Reading
- Lightweight-4 $1 / 2 \mathrm{Lbs}$.
- For TV Channels 2-13

Model TMT Portable TV Field Strength Meter. TranField Strength Meter. Transistorized portable field strength meter for television signal measurements. Extremely versatile applications such as: Checking applications such as: Checking calls; antenna orientation;
 measurement of television signals in TV distribution systems
and for signal probing from roof tops, vehicles, on hillsides and other locations where portability and battery operation are necessary.
Tuning knob is directly calibrated in TV channels-covers channels 2 to 13. In operation, the meter is relatively immune to noise and interfering ignals-responds only to the channel to which the meter has been tuned thus eliminating false readings. Has both 75 and 300 ohm inputs for coaxial or twin lead.
Ranges: With 75-ohm input, 0-1000-3000-10,000-30,000-100,000-300,000 $1,000,000-3,000,000$ microvolts; with 300 -ohm input, $0-2000-6000-20,000$ $60,000-200,000-600,000-2,000,000-6,000,000$ microvolts. Meter is also calibrated in db. Accuracy: $\pm 3 \mathrm{db}$. Gives up to 200 hours operation with 4 flashlight cells (not supplied-use Burgess Type 2R, see page 424)
Shpg wt., $51 / 2$ lbs. 10.95 Down. NET.
87 FU 388 . Only $\$ 10.9$
109.50

## Triplett Glass Front Panel Meters



SPECIFICATIONS: Accuracy, within $2 \%$ of full scale. DC meters have D'Arsonval moving coil movements. Jeweled bearings and hardened alloy steel pivots assure highly dependable service. Metal dial faces, finished in white enamel, will not warp, crack or discolor under normal conditions. Have molded zero-adjusters and cushioned ceramic pointer stops. All parts are heat-treated to eliminate strains and stresses, and to assure accurate alignment. Rigidity and alignment of bearing supports provide protection against vibrations. Steel parts are rustproofed. Black bakelite cases. Av. shpg. wt., $11 / 2$ lbs. When ordering, include Range and Model Number of meter. ${ }^{*}$ In size table indicates depth of meter but does not include terminals.
ATTENTION INDUSTRIAL BUYERS: Allied can make prompt shipment of Triplett meters in any quantity. For prices on quantities of 50 or more-contact our Industrial Division.

## METER DIMENSIONS <br> ROUND FLUSH MOUNTING

| Model No. | Flange | Body Dia. | * Depth | Scale Length |
| :---: | :---: | :---: | :---: | :---: |
| 221 T | 211/16" | 27/32" | 15/16" | $1.76^{\prime \prime}$ |
| 2315 | $211 / 1{ }^{\prime \prime}$ | $2733^{\prime \prime}$ | 15/16" | $1.58{ }^{\prime \prime}$ |
| 321 T $\mathbf{3 3 1 5}$ | 31/2" | 23/4" | 15/16" | ${ }^{2.249 \prime}$ |
| 361 | $31 / 2^{\prime \prime}$ | $23 / 4{ }^{\prime \prime}$ | 1156"17 | 2.22" |

## RECTANGULAR FLUSH MOUNTING

| $\begin{gathered} \text { Model\| } \\ \text { No. } \end{gathered}$ | Flange | Body Dia. | *Depth | Scale Length |
| :---: | :---: | :---: | :---: | :---: |
| 227 T | $23 / 8{ }^{23 / 80^{\prime \prime}}$ | ${ }^{25 / 52^{\prime \prime}}$ |  | 1.76" |
| ${ }_{3275}^{2375}$ | 23/8x23/3" | ${ }_{2}^{253 / 2{ }^{\prime \prime}}$ | ${ }^{13 / 88^{\prime \prime}}$ | 怣 |
| 3375 | 3x ${ }^{\circ}$ | 23,4** | $13 / 8{ }^{\prime \prime}$ | ${ }^{2} .22^{\prime \prime}$ |
| 430 <br> 30 |  | 233/4* | 11/1/6" | 3.6" ${ }^{4.0{ }^{\prime \prime}}$ |


| DC MILLIAMMETERS |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Range | $2_{21 / 2^{\prime \prime} \text { R } 21 \text { Rnd. }}$ | $\left\lvert\, \begin{gathered}227 \mathrm{c} \\ 21 / 2^{\prime \prime} \text { Rect. }\end{gathered}\right.$ | $1+09$ <br> EACH | $\left\lvert\, \begin{gathered}10 \text { to 24, } \\ \text { EACH }\end{gathered}\right.$ |  | $3^{3 \prime}{ }^{327}$ Rect. | $\left\lvert\, \begin{gathered}321 \mathrm{~T} \\ 31 / 2^{\prime \prime} \text { Rnd. }\end{gathered}\right.$ | 1\%09, | $\mid{ }_{\text {EACH }}^{10}{ }^{\text {to } 24}$ |  | $44_{4}^{420} \text { Rect. }$ | 1tor ${ }^{\text {EACH }}$ | $\left.\right\|^{10} \mathrm{EACH}^{24}$ | $\begin{gathered} 25+\mathrm{to} 49, \\ E A C H \end{gathered}$ |
|  |  | 66 $F$ 170 <br> 66 $F$ 71 <br> 66 $F$ 185 <br> 66   | 9.70 | 8.73 | 8.25 | 66 F 20  <br> 66 F 21 <br> 66 F 11  <br> 66   | $\begin{array}{ll} 66 & F \\ 66 & 100 \\ 66 & F \\ 66 & F \\ \hline \end{array}$ | 10.29 | 9.26 | 8.75 | $\begin{array}{\|l\|l\|} \hline 66 & \mathrm{~F} \\ 66 & \mathrm{~F} \\ 66 \\ 66 \mathrm{~F} & 197 \\ \hline \end{array}$ | 11.37 | 10.23 | 9.66 |
| 0-5 $0-10$ $0-15$ |  | 66 $F$ 72 <br> 66 $F$ 73 <br> 66 $F$ 74 <br> 66   | 9.70 | 8.73 | 8.25 | (er\|l|l| |  | 10.29 | 9.26 | 8.75 | 66 F 37  <br> 66 F 38 <br> 66 F 39  <br> 66 F   | 11.37 | 10.23 | 9.66 |
| 0-25 $0-50$ $0-75$ |  | 66 F 75  <br> 66 F 76 <br> 66 F 86  <br> 66   | 10.09 | 9.08 | 8.58 | 66 $F$ 25 <br> 66 $F$ 26 <br> 66 $F$ 19 <br> 665   | 66 F 05 <br> 66 $F$ 06 <br> 66 F 16 <br> 66   | 10.68 | 9.61 | 9.07 | 66 F <br> 66 F <br> 60 <br> 66 F <br> 68 <br> 6 F | 11.76 | 10.58 | 10.00 |
| $0-100$ <br> $0-150$ <br> $0-200$ | 66 F <br> 66 F <br> 68 <br> 66 F 59 | 66 $F$ 177 <br> 66 $F$ 78 <br> 66 $F$ 79 <br> 66   | 10.09 | 9.08 | 8.58 | $\begin{array}{\|l\|l\|} \hline 66 & \mathrm{~F} \\ 66 & 27 \\ 66 \mathrm{~F} & 28 \\ \hline \end{array}$ | $\begin{array}{\|l\|l\|} \hline 66 & F \\ 66 & 107 \\ 66 & F \\ \hline \end{array}$ | 10.68 | 9.61 | 9.07 | $\begin{array}{l\|l\|l\|} \hline 66 & F & 142 \\ 66 & F & 43 \\ 66 F & 144 \\ \hline \end{array}$ | 11.76 | 10.58 | 10.00 |
| $0-250$ $0-300$ $0-400$ | $\begin{array}{ll\|l\|} \hline 66 & F & 60 \\ 66 & F & 61 \\ 66 & F & 67 \end{array}$ | $\begin{array}{\|l\|l\|} \hline 66 & \mathrm{~F} \\ 66 \mathrm{~F} & 81 \\ 66 \mathrm{~F} & 187 \end{array}$ | 10.09 | 9.08 | 8.58 | $\begin{array}{lll} 66 & F & 130 \\ 66 & F & 31 \\ 66 & F & 35 \end{array}$ | $\left\lvert\, \begin{array}{ll\|l\|} \hline 66 & F & 10 \\ 66 & F & 1 \\ 66 & F & 1 \\ \hline \end{array}\right.$ | 10.68 | 9.61 | 9.07 | $\begin{array}{lll} 66 & F & 45 \\ 66 & F & 46 \\ 66 & F & 99 \\ \hline \end{array}$ | 11.76 | 10.58 | 10.00 |
| $0-500$ $0-750$ $0-1000$ | $66 F$ 62 <br> 66 F 63 <br> 66 F 64 | $\begin{array}{\|cc\|c} 666 \\ 66 & \mathrm{~F} & 82 \\ 66 \mathrm{~F} & 84 \\ 6 \end{array}$ | 10.09 | 9.08 | 8.58 | $\left\lvert\, \begin{array}{ll} \hline 66 & F \\ 66 & 132 \\ 66 & F \\ 66 & 3 \\ \hline \end{array}\right.$ | $\begin{array}{\|llll} 66 & F & 1 \\ 66 & F & 1 \\ 66 & F & 1 \\ 4 \end{array}$ | 10.68 | 9.61 | 9.07 | 66 F 47 <br> 66 F 48 <br> 66 F 49 | 11.76 | 10.58 | 10.00 |

## DC MICROAMMETERS

| Range |  | $\left\lvert\, \begin{gathered}227 \mathrm{t} \\ 21 / 2^{2} \text { Rect. }\end{gathered}\right.$ |  | 10to 24, | $\begin{aligned} & 25 \mathrm{to}^{49} \\ & \text { EACH } \end{aligned}$ | $3^{3 \prime}{ }^{327}$ Rect. | $\begin{gathered} 321 \mathrm{~T} \\ 31 / 2^{\prime \prime} \text { Rnd. } \end{gathered}$ |  | EACH | 25 to ${ }^{\text {E }}$ + ${ }^{\text {a }}$ | 41/2 $2^{\prime \prime}$ Rect. | ${ }_{\text {EACH }}{ }^{\text {to }}$ | $\begin{gathered} 10 \mathrm{EO} \mathrm{CO}^{24} \\ \mathrm{E} \end{gathered}$ | $\begin{aligned} & 25 \mathrm{to} 49, \\ & \text { EACH } \end{aligned}$ |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 0-20 | 66 F 054 | 66 F O15 | 17.25 | 15.52 | 14.66 | 66 F 059 | 66 F 049 | 17.84 | 16.05 | 15.16 | 66 F 065 | 18.91 | 17.02 | 6.08 |
| 0-50 | 66 F 055 | 66 FOl 6 | 14.60 | 13.14 | 12.41 | 66 F 060 | 66 F 050 | 15.09 | 13.58 | 12.83 | 66 F 066 | 6.17 | 14.55 | 3.75 |
| 0-100 | 66 F 056 | 66 F Ol 7 | 12.74 | 11.47 | 10.83 | 66 F 061 | 66 F 051 | 13.23 | 11.91 | 11.25 | 66F F 067 | 14.31 | 2.88 | 2.16 |
| $0-200$ <br> $0-500$ | 66 F 057 66 6 | (66FO18 | 10.88 10.39 | 9.79 9.35 | 9.25 8.83 | 66 F 062 66 F 063 | $\begin{array}{llll}66 & F & 052 \\ 66 & \text { F } & 5\end{array}$ | 11.47 10.88 | $\begin{array}{r}10.32 \\ \hline\end{array}$ | 9.75 |  | 12.54 11.96 | 1.29 0.76 | 0.66 <br> 0.16 |

## DC AMMETERS

| Range | $\begin{gathered} 221 T \\ 21 / 2^{\prime \prime} \text { Rnd. } \\ \hline \end{gathered}$ | $\begin{gathered} 227 \mathrm{~T} \\ 21 / 2^{\prime \prime} \text { Rect. } \end{gathered}$ | $\begin{aligned} & 1 \text { to } 9 \\ & \text { EACH } \end{aligned}$ | $\begin{gathered} 10 \text { to } 24, \\ \text { EACH } \end{gathered}$ | $\begin{aligned} & 25 \text { to } 49 \\ & \text { EACH } \end{aligned}$ | $\begin{gathered} 327 \mathrm{~T} \\ 3^{\prime \prime} \text { Rect. } \end{gathered}$ | $31 / 2^{\prime \prime} \text { Rnd. }$ | $\begin{aligned} & 1+09 \\ & \text { EACH } \end{aligned}$ | EACH | $\begin{aligned} & 5 \text { to } 49, \\ & E A C H \end{aligned}$ | 41/2" Rect. | $\begin{aligned} & 1 \text { to } 9 \\ & \text { EACH } \end{aligned}$ | $\begin{aligned} & 0 \text { to } 24, \\ & \text { EACH } \end{aligned}$ | $\begin{aligned} & 25 \text { EACH } 49 \\ & \hline \end{aligned}$ |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 0-1 | 66 F 510 | 66 F 525 | 9.70 | 8.73 | 8.25 | 66 F 450 | 66 F 440 | 10.29 | 9.26 | 8.75 | 66 F 460 | 7 | 3 | 9.66 |
| 0-5 | 66 F 511 | 66 F 526 | 10.49 | 9.44 | 8.91 | 66 F 451 | 66 F 441 | 10.98 | 9.88 | 9.33 | 66 F 461 | 12.05 | 0.85 | 0.25 |
| 0-10 | 66 F 512 | 66 F 527 | 10.49 | 9.44 | 8.91 | 66 F 452 | 66 F 442 | 10.98 | 9.88 | 9.33 | 66 F 462 | 12.05 | 0.85 | 0.25 |
| 0-15 | 66 F 513 | 66 F 528 | 10.49 | 9.44 | 8.91 | 66 F 540 | 66 F 560 | 10.98 | 9.88 | 9.33 | 66 F 465 | 12.05 | 0.85 | 0.25 |
| 0-25 | 66 F 514 | 66 F 529 | 10.49 | 9.44 | 8.91 | 66 F 453 | 66 F 443 | 10.98 | 9.88 | 9.33 | 66 F 463 | 12.05 | 0.85 | 10.25 |
| 0-30 | 66 F 515 | 66 F 530 | 10.49 | 9.44 | 8.91 | 66 F 541 | 66 F 561 | 10.98 | 9.88 | 9.33 | 66 F 466 | 12.05 | 0.85 | 0.25 |
| 0-50 | 66 F 517 | 66 F 532 | 10.49 | 9.44 | 8.91 | 66 F 542 | 66 F 562 | 10.98 | 9.88 | 9.33 | 66 F 467 | 12.05 | 0.85 | 0.25 |
| 0-100 | 66 F 518 | 66 F 533 | 17.25 | 15.52 | 14.66 | 66 F 543 | 66 F 563 | 17.84 | 16.05 | 15.16 | 66 F 468 | 18.91 | 7.02 | 16.08 |
| 0-200 | 66 F 519 | 66 F 534 | 17.25 | 15.52 | 14.66 | 66 F 544 | 66 F 564 | 17.84 | 16.05 | 15.16 | 66 F 469 | 18.91 | 17.02 | 6.08 |
| 0-300 | 66 F 520 | 66 F 535 | 18.72 | 16.85 | 15.91 | 66 F 545 | 66 F 565 | 19.31 | 17.38 | 16.41 | 66 F 458 | 20.38 | 18.35 | 7.33 |
| 0-500 | 66 F 521 | 66 F 536 | 23.52 | 21.17 | 9.99 | 66 F 546 | 66 F 566 | 24.11 | 21.70 | 20.49 | 66 F 459 | 25.19 | 22.67 | 21.41 |

## AC AMMETERS

| Range |  | $\begin{array}{c\|} 2375 \\ 21 / 2^{\prime \prime} \text { Rect. } \end{array}$ | $\begin{aligned} & 1 \text { to } 9, \\ & \text { EACH } \end{aligned}$ | $\begin{gathered} 10 \text { to } 24, \\ E A C H \end{gathered}$ | $\begin{array}{\|c\|c\|} \hline 25 \mathrm{to} \mathbf{4 9}^{\prime} \\ \text { EACH } \end{array}$ | $\begin{gathered} 3375 \\ 3^{\prime \prime} \text { Rect. } \end{gathered}$ | $\begin{gathered} 331 S \\ 31 / 2^{\prime \prime} \text { Rnd. } \end{gathered}$ | $\begin{aligned} & 1 \text { tog } \\ & \text { EACH } \end{aligned}$ | $\begin{gathered} 10 \text { EAC } \\ \text { EAC } \end{gathered}$ | EA | $41_{2}^{430} \text { Rect. }$ | EACH | EACH | EACH |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| -1 | 66 F 340 | 66 F 350 |  |  |  | 66 F 320 | 66 F 300 |  |  |  | $66 \text { F } 330$ |  |  |  |
| 0-3 | 66 F 342 |  | 9.70 | 8.73 | 8.25 | $\begin{aligned} & 66 \mathrm{~F} \\ & 66 \mathrm{~F} 2 \mathrm{z} 2 \end{aligned}$ | 60 F 301 | 10.29 | 9.26 | 8.75 | 666F332 | 11.37 | 10.23 | 9.66 |
| 0-5 | 66 F 343 | 66 F 353 |  |  |  | $66 \mathrm{~F} 323$ | $\begin{array}{r} 66 \text { F } 303 \\ \hline \end{array}$ |  |  |  | 66 F 333 |  |  |  |
| 0-10 | 66 F 344 | 66 F 354 |  |  |  | 66 F 324 | 66 F 304 |  |  |  |  |  |  |  |
| 0-15 | 66 F 347 | 66 F 357 |  |  |  | 66 F 328 | 66 F 308 | 10.29 | 9.26 | 8.75 | 66 F 338 | 11.37 | 10.23 | 9.66 |
| 0-25 | 66 F 345 | 66F355 | 9.70 | 8.73 | 8.25 | 66 F 325 |  | 10.29 | 9.26 | 8.75 | 66F335 | 11.37 | 10.23 | 9.66 |
| $0-50$ $0-75$ | 66 F 346 | 66 F 356 |  |  |  | 66 F 326 66 F 327 | ( 66 F 306 | 10.29 | 9.26 0.67 | 8.75 10.08 | 66 66 66 F 3336 | 11.37 | 10.23 11.65 | 9.66 11.00 |

## AC MILLIAMMETERS

| Range | $\xrightarrow{2315}$ | $\begin{gathered} 237 \mathrm{~S} \\ 21 / 2^{\prime \prime} \text { Rect. } \end{gathered}$ | EACH |  | $\begin{aligned} & 25 \text { to }^{49} \cdot \\ & E A C H \end{aligned}$ | $3^{3 \prime}{ }^{3375} \text { Rect. }$ | $\begin{gathered} 331 S \\ 31 / 2^{\prime \prime} \text { Rnd. } \end{gathered}$ | 1409 EACH | 10 to 24 EACH | EACH ${ }^{\text {to }}$ | $\mid 41_{2}^{\prime \prime 2} \text { Rect. }$ | 1409 EACH | $\left.\right\|^{10} \mathrm{EAO}^{\mathrm{to}} 24,$ | $5 \mathrm{to} 49$ $E A C H$ |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 0-10 | 66 F 570 | 66 F 580 |  |  |  | 66 F 490 | 66 F 470 |  |  |  | 66 F 496 |  |  |  |
| 0-15 | 66 F 571 665572 | 66 F 581 | 9.70 | 8.73 | 8.25 | 66 66 6 F 481 | 66 66 6 F 4776 | 10.29 | 9.26 | 8.75 | 66 66 6 6 4446 | 11.37 | 10.23 | 9.66 |
| 0-50 | 66 F 573 | 66 F 583 |  |  |  | 66 F 492 | 66 F 472 |  |  |  | 66 F 448 |  |  |  |
| 0-100 | 66 F 574 | 66 F 584 |  |  |  | 66 F 493 | 66 F 473 |  |  |  | 66 F 497 |  |  |  |
| $0-200$ $0-250$ | $66 F 575$ | 66 F 585 |  | 8.73 | 8.25 |  | 66F477 | 10.29 | 9.26 | 8.75 | 66F449 | 11.37 | 10.23 | 9.66 |
| $0-250$ $0-500$ | 66 F 576 66577 | 66 F 586 | 9.70 | 8.73 | 8.25 | 66 F 494 66 F 495 | \| $\begin{aligned} & 66 \\ & 66 \\ & 66\end{aligned} 4744$ | 10.29 | 9.26 | 8.75 |  | 11.37 | 10.23 | 9.66 |

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## Triplett Glass-Front Panel Meters

## DC VOLTMETERS

1000 OHMS PER VOLT-WITH CARBON, FILM-TYPE RESISTORS
Economical units. For use where high humidity is not encountered. $\dagger$ Have external resistors. Specify Range and Type No. when ordering.


1000 OHMS PER VOLT-WITH WIRE-WOUND MULTIPLIER RESISTORS
Have moisture-resistant, vacuum-sealed, wire-wound resistors. †Have external resistors. Specify Range and Type No. when ordering.

| $\begin{aligned} & \hline 0-1 \\ & 0-3 \\ & 0-5 \\ & 0-10 \\ & \hline \end{aligned}$ | 66 F 900 66 F 739 66 F 740 66 F 741 | 66 F 920 66 F 750 66 F 751 66 F 752 | 10.49 | 9.44 | 8.92 | $\begin{array}{lll} 66 & F & 940 \\ 66 & F & 762 \\ 66 & F & 763 \\ 66 & F & 430 \\ \hline \end{array}$ | $\begin{array}{lll} 66 & F & 960 \\ 66 & F & 424 \\ 66 & F & 425 \\ 66 & F & 420 \end{array}$ | 10.98 | 9.88 | 9.33 | $\left\lvert\, \begin{array}{lll} 66 & F & 980 \\ 66 & F & 770 \\ 66 & F & 771 \\ 66 & F & 435 \end{array}\right.$ | 12.05 | 10.85 | 10.25 |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| $\begin{aligned} & \hline 0-25 \\ & 0-50 \end{aligned}$ | $\begin{aligned} & 66 \text { F } 743 \\ & 66 \text { F } 744 \end{aligned}$ | $\begin{aligned} & \hline 66 \text { F } 754 \\ & 66 \text { F } 755 \\ & \hline \end{aligned}$ | 12.84 | 11.55 | 10.92 | $\begin{array}{\|lll} \hline 66 & F & 765 \\ 66 & F & 766 \\ \hline \end{array}$ | $\begin{array}{lll} 66 & F & 427 \\ 66 & F & 428 \end{array}$ | 13.33 | 12.00 | 11.33 | $\begin{array}{lll} 66 & F & 773 \\ 66 & F & 774 \\ \hline \end{array}$ | 14.41 | 12.97 | 12.25 |
| $\begin{aligned} & \hline 0-100 \\ & 0-150 \\ & \hline \end{aligned}$ | $\begin{aligned} & 66 \text { F } 745 \\ & 66 \text { F } 746 \\ & \hline \end{aligned}$ | $\begin{aligned} & 66 \text { F } 756 \\ & 66 \text { F } 757 \end{aligned}$ | 13.33 | 12.00 | 11.33 | $\begin{array}{\|lll} 66 & F & 767 \\ 66 & F & 431 \\ \hline \end{array}$ | $\begin{aligned} & 66 \text { F } 429 \\ & 66 \text { F } 421 \\ & \hline \end{aligned}$ | 13.92 | 12.52 | 11.83 | $\begin{array}{ll} 66 & F \\ 775 \\ 66 & F \\ \hline \end{array}$ | 14.99 | 13.49 | 12.75 |
| $0-300$ <br> $0-500$ | 66 F748 $66 F 749+$ | $\begin{aligned} & \hline 66 \text { F759 } \\ & 66 \text { F760 } \end{aligned}$ | 16.27 18.23 | 14.64 16.41 | 13.83 15.49 | 66 F 432 66 F 433 | 66 F 422 <br> 66 F 423 | $\begin{aligned} & 16.86 \\ & 18.72 \\ & \hline \end{aligned}$ | 15.17 16.85 | 14.33 15.92 | $\left\lvert\, \begin{array}{lll} 66 & F & 437 \\ 66 & F & 777 \end{array}\right.$ | $\begin{aligned} & 17.93 \\ & 19.80 \\ & \hline \end{aligned}$ | $16.14$ | $\begin{aligned} & 15.25 \\ & 16.83 \\ & \hline \end{aligned}$ |

## AC VOLTMETERS

| Range | $\begin{gathered} 231 S \\ 21 / 2^{\prime \prime} \text { Rnd. } \\ \hline \end{gathered}$ | $\begin{gathered} 237 \mathrm{~S} \\ 21 / 2^{\prime \prime} \text { Rect. } \end{gathered}$ | $\begin{aligned} & 1 \mathrm{tog} 9 \\ & \text { EACH } \\ & \hline \end{aligned}$ | $\begin{gathered} 10 \text { to } 24, \\ \text { EACH } \end{gathered}$ | $\begin{aligned} & 25 \text { to } 49, \\ & E A C H \end{aligned}$ | $3^{3 \prime 3} \text { Rect. }$ | $\begin{gathered} 331 \mathrm{~S} \\ 31 / 2^{\prime \prime} \text { Rnd. } \end{gathered}$ | EACH | $E A$ | EA | $4_{41 / 2^{\prime \prime}}^{430} \text { Rect. }$ | $\begin{aligned} & 1 \text { to } 9, \\ & \text { EACH } \\ & \hline \end{aligned}$ | EAC | EACH |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 0-3 | 66 F 259 | 66 F 279 |  |  |  | 66 F 218 | 66 F 209 |  |  |  | 66 F 239 |  |  |  |
| $0-5$ $0-10$ | 66 66 F 250 |  | 9.70 | 8.73 | 8.25 |  |  | 10.29 | 9.26 | 8.75 | 66 66 F 23 6 | 11.37 | 10.23 | 9.66 |
| 0-15 | 66 F 252 | 66 F 272 |  |  |  | 66 F 222 | 66 F 202 |  |  |  | 66 F 232 |  |  |  |
| 0-25 | 66 F 253 | 66 F 273 |  |  |  | 66 F 223 |  |  |  |  |  |  |  |  |
| $0-50$ $0-100$ | 66 F 254 66 F 255 | 66 F 274 | 9.70 | 8.73 | 8.25 | $\begin{aligned} & 66 \text { F } 224 \\ & 66 \text { F } 225 \end{aligned}$ | $\begin{aligned} & 66 \text { F } 204 \\ & 66 \text { F } 205 \end{aligned}$ | 10.29 | 9.26 | 8.75 | $\left.\begin{array}{\|llll} 06 & F & 33 \\ 66 & F & 235 \end{array} \right\rvert\,$ | 11.37 | 10.23 | 9.66 |
| 0-150 | 66 F 256 | 66 F 276 | 10.68 | 9.61 | 9.08 | 66 F 226 | 66 F 206 | 11.1 | 10.05 | 9.50 | 66 F 236 | 12.25 | 1.02 | 0.41 |
| 0-250 | 66 F 260 | 66 F 280 | 11.17 | 10.05 | 9.50 | 66 F 219 | 66 F 210 | 11.76 | 10.58 | 10.00 | 66 F 240 | 12.84 | 1.55 | 0.92 |
| 0-300 | 66 F 257 | 66 F 277 | 11.76 | 10.58 | 10.00 | 66 F 227 | 66 F 207 | 12.25 | 11.02 | 10.41 | 66 F 237 | 13.33 | 2.00 | 1.33 |
| 0-500 | 66 F 258 | 66 F 278 | 15.39 | 13.85 | 13.08 | 66 F 228 | 66 F 208 | 15.97 | 14.38 | 13.58 | 166 F 238 | 17.05 | 5.35 | 4.49 |

## VOLUME UNIT METERS

Highly damped volume unit meters for measurement of sound or noise levels. Used extensively for broadcast monitoring, in public address and communications systems, etc. Ballistic characteristics comply with standardized specifications of CBS, NBC and Bell Telephone Labs. All have Type "A" scale markings-calibrated from -20 to 3 VU on top arc and 0 to 100 (for percent modulation) on bottom arc. Internal impedance is 3900 ohms . Steady state reference is 1 milliwatt. Designed for use on 600 ohm lines. Metal dials have black and red calibrations. Bakelite cases. *Illuminated. $\dagger$ Portable in $3 \times 3 \times 13 / 8^{\prime \prime}$ bakelite case; has $18^{\prime \prime}$ cord, phone plug and jack.

| $\begin{gathered} 327 \mathrm{~T} \\ 3^{\prime \prime} \text { Rect. } \end{gathered}$ | 1 to 9, EACH | $\begin{aligned} & 10 \text { to } 24, \\ & \text { EACH } \end{aligned}$ | $\begin{gathered} 25 \text { to } 49, \\ E A C H \end{gathered}$ |
| :---: | :---: | :---: | :---: |
| 66 F 075 | 18.72 | 16.85 | 15.92 |
| 66 F 076* | 20.48 | 18.43 | 17.41 |
| 66 F 077 $\dagger$ | 22.54 | 20.29 | 19.16 |
| $\begin{gathered} 420 \\ 41 / 2^{\prime \prime} \text { Rect. } \\ \hline \end{gathered}$ | $1 \text { to } 9$ $\mathrm{EACH}$ | $10 \text { to } 24$ $\mathrm{EACH}$ | $\begin{gathered} 25 \text { to } 49 \\ E A C H \end{gathered}$ |
| 66 F 071 | 23.52 | 21.17 | 20.00 |
| 66 F 072* | 26.75 | 24.07 | 22.75 |

## DECIBEL METERS ( +6 to -10 db )

Power level indicators. For measuring sound or noise level in broadcasting, public address and recording systems. Read up 6 and down 10 db . Have standard damping. Zero db is 1.73 volts. Calibrated for use with 500 -ohm line. Reference level is 6 milliwatts. Internal resistance is 5000 -ohms. Have zero adjustment. White enameled metal dial with black lettering. In black bakelite molded cases. *Illuminated.

| $\begin{gathered} 327 \mathrm{~T} \\ 3^{\prime \prime} \text { Rect. } \\ \hline \end{gathered}$ | 1 to 9, EACH | $\begin{gathered} 10 \text { to } 24, \\ E A C H \end{gathered}$ | $\begin{gathered} 25 \text { to } 49, \\ E A C H \end{gathered}$ |
| :---: | :---: | :---: | :---: |
| 66 F 263 | 14.99 | 13.49 | 12.75 |
| 66 F 264** | 16.95 | 15.25 | 14.42 |
| $\begin{gathered} 420 \\ {\left[41 / 2^{\prime \prime}\right. \text { Rect. }} \end{gathered}$ | $\begin{aligned} & 1 \text { to } 9, \\ & \text { EACH } \\ & \hline \end{aligned}$ | $\begin{gathered} 10 \text { to } 24, \\ \text { EACH } \end{gathered}$ | $\begin{gathered} 25 \text { to } 49, \\ E A C H \end{gathered}$ |
| 66 F 265 | 16.76 | 15.08 | 14.25 |
| 66 F 266* | 18.03 | 16.23 | 15.35 |

## DC MILLIVOLTMETERS

| Range | $\begin{gathered} 327 \mathrm{~T} \\ 3^{\prime \prime} \text { Rect. } \end{gathered}$ | $\begin{gathered} 321 \mathrm{~T} \\ 31 / 2^{\prime \prime} \text { Rnd. } \end{gathered}$ | 1 to 9 . EACH | 10 to 24 , EACH | 25 to 49. <br> EACH | $41 / 2^{\prime \prime}{ }^{420} \text { Rect. }$ | 1 to 9, EACH | 10 to 24, EACH | 25 to 49, EACH |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 0-50 $0-100$ | $\begin{array}{\|c\|c\|} \hline 66 \text { F } 078 \\ 66 \text { F } 079 \end{array}$ | $\begin{aligned} & 66 \text { F } 088 \\ & 66 \text { F } 089 \end{aligned}$ | 10.29 | 9.26 | 8.75 | $\begin{aligned} & 66 \\ & 66 \\ & 66 \end{aligned} 098$ | 11.37 | 10.23 | 9.66 |

## ZERO-CENTER DC MICROAMMETERS




## TYPE 361 WATTMETERS

For shop, field and laboratory. Use as appliance tester, wattmeter, voltmeter, ammeter, etc. Accuracy guaranteed within $2 \%$ for either DC or single-phase AC to 133 cps.

| Stock No. | Watts | Volts | Amps | $1-9$, EACH | $10-24$, EACH | $25-49$, EACH |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 66 F 286 | $0-150$ | 150 | 1 | 2 | 23.52 | 21.17 |
| 66 F 285 | $0-300$ | 150 | 2 | 20.00 |  |  |
| 66 F 287 | $0-750$ | 150 | 5 |  |  |  |

## NEW TRIPLETT UNIMETERS

Versatile new Unimeters feature use of 2 Basic Movements with "slide-in" Dial Components for almost any type meter.

BASIC MOVEMENTS
MODEL 327-U. 0-1 DC MA BASIC MOVEMENT. Top-quality, $31 / 2^{\prime \prime} D^{\prime}$ Arsonval movement-self-shielded and dustproof. Turning a single thumbscrew secures range insert.
87 F 336. NET. $\qquad$
$\qquad$ .10 .78 MODEL 327-U. 0-50 DC UA BASIC MOVEMENT. Extremely sensitive movement. Similar to above but designed for use with *micro-range $^{\text {Dial Components below. }}$
87 F 341 . NET. . . . . . . . . . . . . . . . . . . . . .
87 F 341 . NET... $\qquad$ .. I5. 58


## DIAL COMPONENT UNITS

Expertly-designed voltmeter and ammeter ranges. Slide easily into basic movements above. 10-second assembly. Each has precise accuracy with required shunts, multipliers or rectifiers. Used with 0-1 DC ma Basic Movement except *(0-50 DC $\mu \mathrm{a}$ movement).

| No. | Range | Description | No. | Range | Description | No. | Range | Description |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 87 FF 337 | 0-1 | DC MA | 87 FF 337 | 0-500 | DC MA | 87 FF 339 | 0-25 | DC Ammeter |
| 87 FF 337 | 0-5 | DC MA | 87 FF 338 | 0-10 | DCVM $1000 \Omega / v$ | 87 FF 339 | 0-50 | DC Ammeter |
| 87 FF 337 | 0-10 | DC MA | 87 FF 338 | 0-25 | DCVM $1000 \Omega / \mathrm{v}$ | 87 FF 340 | 0-10 | ACVM |
| 87 FF 337 | 0-15 | DC MA | 87 FF 338 | 0-50 | DCVM $1000 \Omega / \mathrm{v}$ | 87 FF 340 | 0-150 | ACVM |
| 87 FF 337 | 0-25 | DC MA | 87 FF 338 | 0-150 | DCVM $1000 \Omega / v$ | 87 FF 340 | 0-300 | ACVM |
| 87 FF 337 | 0-50 | DC MA | 87 FF 338 | 0-300 | DCVM $1000 \Omega / v$ | 87 FF 342 | 0-50 | DC $\mu$ a* |
| 87 FF 337 | 0-100 | DC MA | 87 FF 338 | 0-500 | DCVM $1000 \Omega / \mathrm{v}$ | 87 FF 342 | 0-100 | DC $\mu$ a* |
| 87 FF 337 | 0-150 | DC MA | 87 FF 339 | 0-1 | DC Ammeter | 87 FF 342 | 0-200 | DC $\mu \mathrm{a}^{*}$ |
| 87 FF 337 | 0-200 | DC MA | 87 FF 339 | 0-5 | DC Ammeter | 87 FF 342 | 0-500 | DC $\mu \mathrm{a}^{*}$ |
| 87 FF 337 | 0-250 | DC MA | 87 FF 339 | 0-10 | DC Ammeter |  |  |  |
| 87 FF 337 | 0-300 | DC MA | 87 FF 339 | 0-15 | DC Ammeter |  | , |  |

NET EACH.
2.45

## Triplett Panel Meters

## TYPE PL PLASTIC-FRONT PANEL METERS



Advanced-design panel meters with wrap-around fronts of clear, unbreakable plastic. Have many advantages over conventional style panel meters. Full open dial provides much longer, more readable scale in same size case. Attractive design enhances appearance of test instruments and panels. All have stud mountings. Raised plastic "coverglass" allows full lighting from an extremely wide angle. White enamel finish metal faces with black scales and characters. Accuracy within $\pm 2 \%$ on full scale. DC types have

D'Arsonval movements with extra-light moving coil. AC types have air-damped, iron-vane movements. All types have jewel bearings and highly polished pivots. Template provided with each meter for accurate cut-out. Spade-type pointers; molded zero adjusters; and ceramic stops. Av. shpg. wt., $1 \frac{1}{2} / \mathrm{lbs}$. Be sure to include Range and Model Number on all meter orders. For prices on Triplett meters not listed in the tables below, or prices on meters in quantities of 50 or more, write to our Industrial Division.

DC MICROAMMETERS

| Range | 221-PL 21/2"Rnd. | NET EACH |  |  | $\left\|\begin{array}{c} 227-\mathrm{PL} \\ 2^{1 / 2} 2^{*} \\ \text { Rct. } \end{array}\right\|$ | NET EACH |  |  | 321-PL 31/2"Rnd. | NET EACH |  |  | $\left\lvert\, \begin{gathered} 327-\mathrm{PL} \\ 31 / 2^{\prime \prime} \end{gathered}\right.$ | NET EACH |  |  | 420-PL <br> 41/2" Rct. | NET EACH |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  | $1-9$ | 10-24 | 25-49 |  | $1-9$ | 10-24 | 25-49 |  | 1-9 | 10-24 | 25-49 |  | 1-9 | 10-24 | 25-49 |  | 1-9 | 10-24 | 25-49 |
| $\overline{0-50}$ | 66 F 807 | 5.09 | 13.58 | 12.83 | 66 F 809 | 5.09 | 13.58 | 12.83 | 66 F 836 | 5.58 | 14.02 | $\overline{13.24}$ | $\overline{66 ~ F ~ 873}$ | 15.58 | 14.02 | $\overline{13.24}$ | 66 F 874 | 16.17 | 14.55 | 3.74 |
| 0-100 | 66 F 808 | 3.23 | 11.91 | 11.25 | 66 F 810 | 3.23 | 11.91 | 11.25 | 66 F 837 | 3.72 | 2.35 | 11.66 | 66 F 876 | 13.72 | 12.35 | 11.66 | 66 F 875 | 4.31 | 2.88 | 2.16 |
| 0-200 | 66 F 737 | 1.37 | 10.23 | 9.66 | 66 F 738 | 1.37 | 10.23 | 9.66 | 66 F 838 | 1.96 | 0.76 | 10.16 | 66 F 877 | 11.96 | 10.76 | 10.16 | 66 F 871 | 12.55 | 1.30 | 0.66 |

## DC MILLIAMMETERS

| Rang |  | NET EACH |  | $\mid{ }_{2 / 2}^{27 /-\mathrm{PL} \text { Ret }}$ | NET EACH |  |  |  | NET EACH |  |  |  | ACI |  |  |  | NEt EACH |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  |  |  |  |  |  |  |  |  |  |  | 10-27 |  | 1.9 |  |  |  |
| - | ${ }^{\text {che }}$ | 10.19 | 9.173 ${ }^{\text {a }} 5$ |  |  | 0.19 | 9.173 |  | 8.66 | ( | 0.78 | 9.70 | 9:16 |  | ${ }^{78}$ | 9.709 | 9.15 | ${ }_{66}^{665}$ | . 76 | . 5 | 9.66 |
| $\frac{0}{0.200}$ |  | 0.58 |  |  |  |  |  |  |  | 0.05 |  |  |  | $\frac{10.05}{10.05}$ |  |  |  |  |  |
| $\begin{aligned} & 0.300 \\ & 0.500 \end{aligned}$ | ${ }^{6665889}$ | 0.58 | 9:53 9 | 66F5 | 10.58 | 9.53 | 9.00 | $\left.\right\|_{66} ^{66} 8848$ | :17 | 0:05 | 9.50 | ${ }_{66}^{66} \mathrm{~F} 798$ | 177 | 0:05 | 9.5 | ${ }_{66}^{665883}$ | ${ }^{6}$ | 0.58 | 0.00 |

## AC VOLTMETERS

| Range | $\left\|\begin{array}{c} 231-\mathrm{PL} \\ 21 / 2^{\prime \prime} \mathrm{Rnd} \end{array}\right\|$ | NET EACH |  |  | $\begin{array}{\|c\|} 237-\mathrm{PL} \\ 212^{*} \\ \hline \end{array}$ | NET EACH |  |  | $\left\lvert\, \begin{gathered} 331-\mathrm{PL} \\ 3^{1} / 2^{\prime} \mathrm{Rnd} \end{gathered}\right.$ | NET EACH |  |  | $\left.\begin{array}{\|c\|} 337-\mathrm{PL} \\ 31 / 2 \end{array} \right\rvert\,$ | NET EACH |  |  | $\left\lvert\, \begin{gathered} 430-\mathrm{PL} \\ 41 / 2{ }^{2} \mathrm{Rct} \end{gathered}\right.$ | NET EACH |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  | 1-9 | 10-24 | 25-49 |  | 1-9 | 10-24 | 25-49 |  | 1-9 | 10-24 | 25-49 |  | 1-9 | 10-24 | 25-49 |  | 1-9 | 10-24 | 25-49 |
| 0-50 $0-150$ | 66 F 825 | 11.17 | 10.05 | 9.50 | 66 F 826 | 11.17 | 10.05 | 9.50 | 66 F 859 66 F 860 | 10.78 1.66 | 9.70 0.50 | 9.16 9.91 | 66 F 780 66 F 781 | 10.78 11.66 | 9.70 0.50 | 9.16 | 66 F 799 | 11.37 <br> 12.25 | 0.23 1.02 | 9.66 0.41 |
| 0-300 | $6{ }^{\text {c }}$ |  |  |  | - | , 17 | O.05 |  | 66 F 861 | 12.74 | 1.47 | 10.83 | 66 F 782 | 2.74 | 1.47 | 10.83 | 66 F 889 | 3.33 | 2.00 | 1.33 |

## AC AMMETERS

| Range | $\begin{gathered} 231-\mathrm{PL} \\ 21 / 2^{\prime} \mathrm{Rnd} . \end{gathered}$ | NET EACH |  |  | $\left\lvert\, \begin{gathered} 237-\mathrm{PL} \\ 21 / 2 \cdot \mathrm{Rct} . \end{gathered}\right.$ | NET EACH |  |  | $\left\|\begin{array}{c} 331-\mathrm{PL} \\ 31 / 2^{\prime} \mathrm{Rnd} \end{array}\right\|$ | NET EACH |  |  | $\left\|\begin{array}{c} 337-\mathrm{PL} \\ 31 / 22^{2} \text { Rct. } \end{array}\right\|$ | NET EACH |  |  | $\left\|\begin{array}{c} 430-\mathrm{PL} \\ 41 / 22^{2} \mathrm{Rct} \end{array}\right\|$ | NET EACH |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  | 1-9 | 10-24 | 25-49 |  | 1-9 | 10-24 | 25-49 |  | 1-9 | 10-24 | 25-49 |  | 1-9 | 10-24 | 25-49 |  | 1-9 | 10-24 | 25-49 |
| $\begin{aligned} & \overline{0-5} \\ & 0-10 \\ & 0-25 \\ & 0-30 \\ & 0-50 \end{aligned}$ | 66 F 828 66 F 829 66 F 833 66 F 835 66 F 832 | 10.19 | 9.17 | 8.66 | $\begin{aligned} & 66 \mathrm{~F} 784 \\ & 66 \mathrm{~F} 783 \\ & 66 \mathrm{~F} 786 \\ & 66 \mathrm{~F} 792 \\ & 66 \mathrm{~F} 785 \end{aligned}$ | 10.19 | 9.17 | 8.66 | 66 F 865 <br> 66 F 866 <br> 66 F 867 <br> 66 F 868 <br> 66 F 869 | 10.78 | 9.70 | 9.16 | 66 F 787 <br> 66 F 788 <br> 66 F 789 <br> 66 F 790 <br> 66 F 791 | 10.78 | 9.70 | 9.16 | 66 F 892 <br> 66 F 893 <br> $66 \mathrm{~F}_{2} 858$ <br> 66 F 862 <br> 66 F 896 | 11.37 | 10.23 | 9.66 |


| Range | $\begin{gathered} 221-\mathrm{PL} \\ 21_{2}^{\prime} \mathrm{Rnd} \\ \hline \end{gathered}$ | NET EACH |  |  | $\begin{gathered} 227-\mathrm{PL} \\ 21 / 2 * \mathrm{Rct} \end{gathered}$ | NET EACH |  |  | $\begin{array}{\|c\|} 321-\mathrm{PL} \\ 3^{\prime} 2^{\prime} \mathrm{Rnd} . \\ \hline \end{array}$ | NET EACH |  |  | $\left\|\begin{array}{c} 327-\mathrm{PL} \\ 312^{*} \mathrm{Rct} \end{array}\right\|$ | NET EACH |  |  | $\left\|\begin{array}{c} 420-\mathrm{PL} \\ 41_{2}{ }^{-R c t} \end{array}\right\|$ | NET EACH |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  | 1-9 | 10-24 | 25-49 |  | 1-9 | 10-24 | 25-49 |  | 1-9 | 10-24 | 25-49 |  | 1-9 | 10-24 | 25-49 |  | 1-9 | 10-24 | 25-49 |
| $\begin{aligned} & \overline{0-5} \\ & 0-10 \\ & 0-50 \end{aligned}$ | 66 F 822 66 F 823 | 10.98 10.98 | 9.88 | 9.33 | 66 F 830 | 10.98 | 9.88 | 9.33 | $\begin{array}{lll} 66 & \text { F } & 55 \\ 66 & F & 856 \\ 66 & F & 857 \end{array}$ | 11.47 | 10.32 | 9.75 | 66 F 880 66 F 881 | 1.47 | 10.32 | 9.75 | 66 F 885 66 F 886 | 12.05 | 10.85 | 10.25 |

## AC MILLIAMMETERS

| Range | $\begin{array}{r} 331-\mathrm{PL} \\ 312^{*} \\ \hline \end{array}$ | NET EACH |  |  | $\begin{aligned} & 337-\mathrm{PL} \\ & 311^{\prime \prime} \text { Rect. } \end{aligned}$ | NET EACH |  |  | 430-PL <br> 41/2" Rect. | NET EACH |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  | $1-9$ | 10-24 | 25-49 |  | 1-9 | 10-24 | 25-49 |  | 1-9 | 10-24 | 25-49 |
| 100 | 66 F 863 | 10.78 | 9.70 | 9.16 | 66 F 864 | 10.78 | 9.70 | 9.16 | 66 F 854 | 1.37 | 10.23 | 9.66 |

## DC VOLTMETERS

1000 OHMS PEP VOLT-ELLM-FYPE AULTIPLIER RESTSTOKS



## DB METER

Decibel meter. 6 milliwatts. 5\% accuracy. Has internal resistance of 5000 ohms. 1.73 volts at zero db. $31 / 2^{\prime \prime}$ round.

| $\begin{array}{c}\text { Stock } \\ \text { No. }\end{array}$ | Type <br> 66 F 8 1 | $\begin{array}{c}\text { Range } \\ 321-\mathrm{PL}\end{array}$ | $\begin{array}{c}\text { Calibration } \\ +6 \text { to }-10 \mathrm{db}\end{array}$ | $\frac{\text { NET EACH }}{\text { for } 500 \text { ohm line }}$ |
| :---: | :---: | :---: | :---: | :---: |
| $\frac{1-9}{15.68}\left\|\frac{10-24}{14.11}\right\| \frac{25-49}{13.33}$ |  |  |  |  |

## VOLUME UNIT METER ("A" SCALE)

Volume unit meter. 3900 ohms impedance. Steady state reference,
1 milliwatt. For 600 -ohm line. Also has $0-100 \%$ scale.


THERMO-AMMETERS (RF)

| Range | ${ }^{31 / 21-P L}$ | NET EACH |  |  | $\begin{aligned} & 347-\mathrm{PL} \\ & \mathbf{3 1 / 2 ^ { \prime }} \text { Rooct. } \end{aligned}$ | NET EACH |  |  | $\begin{aligned} & 440-\mathrm{PL} \\ & 41 / 2^{\prime \prime} \text { Roct. } \\ & \hline \end{aligned}$ | ET EAC |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  | 1.9 | 10-24 | 25-49 |  | $1-3$ | 10-24 | 25-49 |  | $1-9$ | 10-24 | 26-49 |
| 0-5 | 66 F818 | 11.86 | 10.67 | 10.08 | 66 F 817 | 11.86 | 10.67 | 10.08 | 66 F 819 | 12.45 | 11.20 | 10.58 |

## Simpson Rectangular Panel Meters

Superior-quality panel meters. Models 27, 29, 37, 39, 47, 49 and 142 have D'Arsonval movements. Models 57 and 59 have iron-vane movements. Housed in black molded bakelite cases; have recessed zero adjustments. Scale arc is $100^{\circ} . \pm 2 \%$ accuracy, except rectifiertype $\pm 5 \%$. With mounting hardware and template. Shpg. wt., 1 lb . Include Range and Model No. on all orders.

| METER DIMENSIONS |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: |
| Model | Flange | Body Dia. | Body Depth | Scale |
| 27 | 3.12x3.00" | 2.75 " | $1.36{ }^{\prime \prime}$ | 2.56 " |
| 29 | 4.20x4.66" | 2.75" | 1.00 " | $3.91{ }^{\prime \prime}$ |
| 37 | $3.12 \times 3.00^{\prime \prime}$ | 2.75* | $1.36{ }^{\prime \prime}$ | 2.56 " |
| 39 | $4.20 \times 4.66^{\prime \prime}$ | 2.75* | 1.00 " | $3.91{ }^{\prime \prime}$ |
| 47 | $3.12 \times 3.00^{\prime \prime}$ | 2.75 " | $1.36{ }^{\prime \prime}$ | 2.56" |
| 49 | $4.20 \times 4.66^{\prime \prime}$ | 2.75" | 1.00 " | $3.91{ }^{\prime \prime}$ |
| 57 | $3.12 \times 3.00^{\prime \prime}$ | $2.75{ }^{\prime \prime}$ | 1.45* | $2.56{ }^{\prime \prime}$ |
| 59 | $4.20 \times 4.66^{\prime \prime}$ | $2.75{ }^{\prime \prime}$ | $1.09{ }^{\prime \prime}$ | 3.91 " |
| 79 | $4.20 \times 4.66^{\prime \prime}$ | 2.00" | 1.68" | $3.91{ }^{\prime \prime}$ |
| 142 | 3.94x4.25 ${ }^{\prime \prime}$ | 3.25* | $1.00^{\prime \prime}$ | 3.50" |


$31 / 2^{\prime \prime}$
Rectangular

$4^{1 / 2 \prime \prime}$
Rectangular

| Model 27 |  |  |  |  | Model 29 |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Stock No. | NET EACH |  |  | Range | Stock No. | NET EACH |  |  |
|  | 1-9 | 10-24 | 25-Up |  |  | 1-9 | 10-24 | 25-Up |
| 67 F 520 <br> 68 F 800 <br> 67 F 521 <br> 67 F 522 <br> 67 F 530 | 10.44 | 9.40 | 8.87 | $\begin{aligned} & \hline 0-1 \\ & 0-3 \\ & 0-5 \\ & 0-10 \\ & 0-15 \\ & \hline \end{aligned}$ | 67 F 420 68 F 801 67 F 421 67 F 422 67 F 430 | 11.61 | 10.46 | 9.87 |
| 67 F 523 67 F 524 67 F 531 67 F 525 | 10.73 | 9.66 | 9.12 | $\begin{aligned} & \hline 0-25 \\ & 0-50 \\ & 0-75 \\ & 0-100 \end{aligned}$ | $\begin{aligned} & 67 \text { F } 423 \\ & 67 \\ & 67 \\ & 67 \\ & 6724 \\ & 67 \end{aligned} \mathrm{~F}_{3} 425$ | 12.20 | 10.99 | 10.37 |
| $\begin{aligned} & 67 \text { F } 532 \\ & 67 \text { F } 526 \\ & 67 \text { F } 533 \\ & 67 \text { F } 527 \end{aligned}$ | 10.73 | 9.66 | 9.12 | $\begin{aligned} & \hline 0-150 \\ & 0-200 \\ & 0-250 \\ & 0-300 \\ & \hline \end{aligned}$ | $\begin{aligned} & 67 \text { F } 432 \\ & 67 \text { F } 426 \\ & 67 \\ & 67 \text { F } 433 \\ & 67 \end{aligned}$ | 12.20 | 10.99 | 10.37 |
| $\begin{aligned} & 67 \text { F } 528 \\ & 67 \text { F } 529 \end{aligned}$ | 10.73 | 9.66 | 9.12 | $\begin{array}{\|l\|} \hline 0-500 \\ 0-1000 \\ \hline \end{array}$ | $\begin{aligned} & 67 \text { F } 428 \\ & 67 \text { F } 429 \\ & \hline \end{aligned}$ | 12.20 | 10.99 | 10.37 |

*Have external multiplier resistors. 3 to 300 v . units are $\mathbf{1 0 0 0}$ ohms per volt, 500 to 5000 v . units are 2000 ohms per volt.

|  | Model 27 |  |  |
| :---: | :---: | :---: | :---: |
| Stock No. | NET EACH |  |  |
|  | 1-9 | 10-24 | 25-Up |
| 67 F 515 | 11.17 | 10.05 | 9.50 |
| 67 F 516 |  |  |  |
| 67 F 500 |  |  |  |
| 67 F 502 | 11.17 | 10.05 | 9.50 |
| 67 F 517 |  |  |  |
| 67 F 518 |  |  |  |
| 67 F 507 |  |  |  |
| 67 F 504 | 11.17 | 10.05 | 9.50 |
| 67 F 519 67 F 505 |  |  |  |
| 67 F 508 |  |  |  |
| 67 F 509 | 11.76 | 10.58 | 10.00 |
| 67 F 510 | 13.96 | 12.57 | 11.87 |
| 67 F 514 |  |  |  |
| 67 F 511 |  |  |  |
| 67 F 512 |  |  |  |
| 67 F 513 |  |  |  |


| Range | Model 29 |  |  |  |
| :---: | :---: | :---: | :---: | :---: |
|  |  | NET EACH |  |  |
|  | No. | 1-9 | 10-24 | 25-Up |
| $\begin{aligned} & 0-3 \\ & 0-5 \\ & 0-8 \\ & 0-10 \end{aligned}$ | $\begin{aligned} & 67 \mathrm{~F} 415 \\ & 67 \mathrm{~F} 416 \\ & 67 \mathrm{~F} 401 \\ & 67 \mathrm{~F} 402 \end{aligned}$ | 12.35 | 11.11 | 10.50 |
| $\begin{aligned} & 0-15 \\ & 0-25 \\ & 0-50 \\ & 0-100 \end{aligned}$ | 67 F 403 67 F 417 <br> 67 F 418 <br> 67 F 405 | 12.35 | 11.11 | 10.50 |
| $0-150$ <br> $0-200$ <br> $0-250$ <br> $0-300$ | $\begin{aligned} & 67 \mathrm{~F} 406 \\ & 67 \mathrm{~F} 419 \\ & 67 \mathrm{~F} 407 \\ & 67 \mathrm{~F} 488 \end{aligned}$ | 12.35 | 11.11 | 10.50 |
| 0-500 | 67 F 409 | 12.79 | 11.51 | 10.87 |
| $* 0-1000$ $* 0-1500$ $* 0-2000$ $* 0-3000$ $* 0.5000$ | 67 F 410 <br> 67 F 411 <br> 67 F 412 <br> 67 F 413 <br> 167 F 414 | 15.14 | 13.63 | 12.87 |

DC AMMETERS

| Mode' 27 |  |  |  |  | Model 29 |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| $\begin{gathered} \text { Stock } \\ \text { No. } \\ \hline \end{gathered}$ | NET EACH |  |  | Range | $\left\|\begin{array}{c} \text { Stock } \\ \text { No. } \end{array}\right\|$ | NET EACH |  |  |
|  | 1-9 | 10-24 | 25-Up |  |  | 1-9 | 10-24 | 25-Up |
| 67 F 535 67 F 536 67 5 537 $67{ }^{538}$ 67 F 539 | 10.58 | 9.53 | 9.00 | $\begin{aligned} & \hline 0-1 \\ & 0-2 \\ & 0-3 \\ & 0-5 \\ & 0-10 \\ & \hline \end{aligned}$ | 67 F 435  <br> 67 F 436 <br> 67 F 437  <br> 67 F 438 <br> 67 F 439  | 11.76 | 10.58 | 10.00 |
| 67 F 540 67 F 542 68 F 802 68 F 803 68 F 804 | 10.58 | 9.53 | 9.00 | $\begin{aligned} & \hline 0-25 \\ & 0-50 \\ & 0.75 \\ & 0-100 \\ & 0-150 \\ & \hline \end{aligned}$ | $\left\|\begin{array}{l} 67 \text { F } 440 \\ 67 \text { F } 442 \\ 68 \text { F } 805 \\ 68 \text { F } 806 \\ 68 \text { F } 807 \end{array}\right\|$ | 11.76 | 10.58 | 10.00 |
| DC MICROAMMETERS |  |  |  |  |  |  |  |  |
| Model 27 |  |  |  |  | Model 29 |  |  |  |
|  |  |  |  | Range | $\begin{gathered} \text { Stock } \\ \text { No. } \end{gathered}$ | NET EACH |  |  |
| Stock No. | 1-9 | 10-24 | $\underline{25-U p}$ |  |  | 1-9 | 10-24 | 25-UP |
| 68 F 808 | 20.58 | 18.52 | 17.49 | 0-15 | 68 F 809 | 22.49 | 20.24 | 19.12 |
| 67 F 544 $67 \times 545$ | 18.23 | 16.41 | 15.49 | 0-25 | 67 F 444 | 20.29 | 18.26 | 17.25 |
| 67F545 | 15.43 | 13.90 | 13.12 | $0-50$ $0-100$ | 67 F F 445 | 16.76 15 | 15.08 | 14.25 |
| 67 F 47 | 11.61 | 10.46 | 9.87 | 0-200 | 67 F 447 | 12.94 | 11.64 | 11.00 |
| 67 F 548 | 11.02 | 9.93 | 9.37 | 0-500 | 67 F 448 | 12.35 | 11.11 | 10.50 |
| 67 F 684 | 15.58 | 14.02 | 13.25 | 25-0-25 | 67 F 691 | 16.90 | 15.22 | 14.37 |
| 67 F 685 | 13.67 | 12.31 | 11.62 | 50-0-50 | 67 F 692 | 15.29 | 13.76 | 13.00 |
| 67 F 686 <br> 67 F 68 | 11.76 10.58 | 10.58 | 10.00 | $100-0-100$ $500-0.500$ |  | 13.23 | 11.91 10.58 | 11.25 10.00 |

## MODEL 27 DC GALVANOMETERS

500-0-500 Microamp. Provides a highly accurate indication of the magnitude of small currents. Calibrated 50-0-50. Approximate internal resistance is 46 ohms. Outside dimensions and scale length listed at the top of the page. Shpg. wt., 1 lb .
67 F 591. I-9, NET EACH
10-24, EACH..............9.53 $\quad$ 25-Up, EACH. . . . . . . . . . . . . . . . . . . . . 9.00
IO.58
75-0-75 Microamp. Same as above, except 75-0-75 microampere range, 2000 -ohm approximate internal resistance. Shpg. wt., 1 lb . 67 F 592. 1-9, NET EACH.
10-24, EACH............. 11.24

AC MILLIAMMETERS

| Model 57 |  |  |  | Range | Model 59 |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | NET EACH |  |  |  | Stock No. | NET EACH |  |  |
| $\begin{aligned} & \text { Stocl } \\ & \text { No. } \end{aligned}$ | 1-9 | 10-24 | 25-Up |  |  | 1-9 | 10-24 | 25-Up |
|  | 10.14 | 9.13 | 8.62 | $\begin{aligned} & 0-50 \\ & 0-100 \\ & 0-250 \\ & 0-500 \end{aligned}$ |  | 11.91 | 10.72 | 10.12 |

AC VOLTMETERS

| $\begin{gathered} \text { Stock } \\ \text { No. } \end{gathered}$ | Model 57 |  |  |  | Model 59 |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | NET EACH |  |  | Range | Stock No. | NET EACH |  |  |
|  | 1-9 | 10-24 | 25-Up |  |  | 1-9 | 10-24 | 25-Up |
| 67 F 558 |  |  |  | 0-1.5 | 67 F 458 |  |  |  |
| 67 F 5550 | 10.14 | 9.13 | 8.62 | 0-3 |  | 11.76 | 10.58 | 10.00 |
| $\begin{aligned} & 67 \text { F } 559 \\ & 67 \text { F } 551 \end{aligned}$ |  |  |  | $\begin{aligned} & 0-5 \\ & 0-10 \end{aligned}$ | $\left.\begin{aligned} & 67 \text { F } 459 \\ & 67 \text { F } 451 \end{aligned} \right\rvert\,$ |  |  |  |
| 67 F 552 | 10.14 | 9 |  |  | 67 F 452 |  |  |  |
| 67 F 560 | 0.44 | 9.40 | 8.87 | 0-25 | 67 F 460 | 11.76 | 10.58 | 10.00 |
| 67 F 553 | 10.44 | 9.40 | 8.87 | 0-50 | 67 F 453 |  |  |  |
| 67 F 555 | 11.32 | 10.20 | 9.62 | 0-150 | 67 F 455 | 12.35 | 11.11 | 10.50 |
| 67 F 561 | 11.32 |  | 9.62 | 0-250 | 67 F 461 | 12.35 | 11.11 | 10.50 |
| 67 F 556 | 11.32 | 10.20 | 9.62 | 0-300 | 67 F 456 | 12.35 | 11.11 | 10.50 |
| 67 F 557 | 16.02 | 14.43 | 13.62 | 0-500 | 167 F 457 | 17.20 | 15.48 | 14.60 |

AC AMMETERS

| Stock No. | Model 57 |  |  | Model 59 |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | NET EACH |  |  | Range | $\begin{array}{\|c\|} \hline \text { Stock } \\ \text { No. } \\ \hline \end{array}$ | NET EACH |  |  |
|  | 1-9 | 10-24 | 25-U ${ }^{\text {p }}$ |  |  | 1-9 | 10-24 | 25-Up |
| $\begin{aligned} & \hline 67 \text { F } 575 \\ & 67 \text { F } 577 \\ & 67 F 578 \\ & 67 \text { F } 579 \end{aligned}$ | 10.00 | 9.00 | 8.50 | $\begin{aligned} & 0-1 \\ & 0-3 \\ & 0-5 \\ & 0-10 \end{aligned}$ | $\begin{array}{rl} 67 & \mathrm{~F} \\ 6755 \\ 67 & \mathrm{~F} \\ 6777 \\ 67 \mathrm{~F} & 478 \\ 67 & \mathrm{~F} 79 \end{array}$ | 11.91 | 10.72 | 10.12 |
| 67 F 582 67 F 580 67 F 581 <br> 67 F 581 <br> 68 F 81 | 10.00 10.29 11.17 10.00 | 9.00 9.26 10.05 9.00 | 8.50 8.76 8.50 | $0-15$ $0-25$ $0-50$ | $\left\lvert\, \begin{aligned} & 67 \mathrm{~F} 482 \\ & 67 \mathrm{~F} 480 \\ & 67 \mathrm{~F} 481 \\ & 68 \mathrm{~F} 811\end{aligned}\right.$ | 11.91 12.49 14.55 | 10.72 1.25 3.10 10.72 | 10.12 00.62 12.37 10.12 |
| RF AMMETERS (INTERNAL THERMOCOUPLE TYPE) |  |  |  |  |  |  |  |  |
| Model 37 |  |  |  | Model 39 |  |  |  |  |
|  | NET EACH |  |  | Range | Stock <br> No. | NET EACH |  |  |
| No. | 1-9 | 10-24 | 25-Up |  |  | 1-9 | 10-24 | 25-Up |
| $\begin{aligned} & 67 \text { F } 585 \\ & 67 \text { F } 586 \\ & 67 \text { F } 587 \\ & 67 \text { F } 588 \\ & 67 \text { F } 589 \end{aligned}$ | 12.49 | 11.25 | 10.62 | $\begin{aligned} & \hline 0-1 \\ & 0-1.5 \\ & 0-2 \\ & 0-3 \\ & 0-5 \end{aligned}$ | $\left\|\begin{array}{lll} 67 & \text { F } 485 \\ 67 & \text { F } 486 \\ 67 & \mathrm{~F} & 487 \\ 67 & \mathrm{~F} & 488 \\ 67 & \mathrm{~F} & 489 \end{array}\right\|$ | 15.14 | 13.63 | 12.87 |

RECTIFIER-TYPE AC VOLTMETERS-1000 OHMS PER VOLT

| $\begin{gathered} \text { Stock } \\ \text { No. } \\ \hline \end{gathered}$ | Model 47 |  |  | 1 | Model 49 |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | NET EACH |  |  | Range | $\left\lvert\, \begin{gathered} \text { Stock } \\ \text { No. } \end{gathered}\right.$ | NET EACH |  |  |
|  | 1-9 | 10-24 | 25-Up |  |  | 1-9 | 10-24 | $25-U_{p}$ |
| $\begin{aligned} & 67 \text { F } 569 \\ & 67 \text { F } 570 \\ & 67 \text { F } 571 \\ & 67 \text { F } 572 \end{aligned}$ | 15.29 | 13.76 | 13.00 | $\begin{aligned} & 0-1 \\ & 0-5 \\ & 0-10 \\ & 0-15 \end{aligned}$ | $\begin{aligned} & 67 \text { F } 490 \\ & 67 \mathrm{~F} 491 \\ & 67 \mathrm{~F} 492 \\ & 67 \mathrm{~F} 493 \end{aligned}$ | 16.90 | 15.22 | 14.37 |
| $67 F 573$ 67 F 583 $67 F 584$ | 15.29 | 13.76 | 13.00 | $\begin{aligned} & 0-50 \\ & 0-150 \\ & 0-300 \\ & \hline \end{aligned}$ | $\left\lvert\, \begin{aligned} & 67 \text { F } 494 \\ & 67 \mathrm{~F} 496 \\ & 67 \mathrm{~F} 497 \end{aligned}\right.$ | 16.90 | 15.22 | 14.37 |

## VU METERS

Volume unit meters for power amplifiers and broadcast equipment. Scales show level both in VU and percentage modulation. D'Arsonval movement. Highly damped. Accuracy, $\pm 5 \%$. Dials have $100^{\circ}$ arc. VU scale A, -20 to +3.3900 ohm internal impedance across 600 ohm lines (zero reference, 1 milliwatt). *Illuminated type ( $25 / 8^{\prime \prime}$ deep). Av. shpg. wt., $11 / 4 \mathrm{lbs}$.

| Stock No. | Model | NET EACH |  |  |
| :---: | :---: | :---: | :---: | :---: |
|  |  | 1-9 | 10-24 | 25-Up |
| 67 F 597 | 47 | 18.82 | 16.93 | 16.00 |
| 67 <br> 67 | 142* | 20.00 | 18.00 20.64 | 17.00 |

## MODEL 79 WATTMETERS

Self-contained, dynamometer-type meters for measurement of DC and single-phase AC power to 250 cps . Can be used with power factors below $50 \%$ if maximum ratings are observed. Particularly useful in appliance, heating and air-conditioning servicing. Dimensions and scale length listed at top of page. Shpg. wt., 1 lb.

| $\begin{gathered} \text { Stock } \\ \text { No. } \end{gathered}$ | Range, Watts | Max. Amps | Max. Volts | NET EACH |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  |  |  | 1-9 | 10-24 | 25-Up |
| 68 F812 | 0-75 | 1.0 | 150 | 30.7 | 27.65 | 26.11 |
| 68 F813 | 0-300 | 4.0 | 150 | 30.72 | 27.65 | 26.11 |
| 68 F814 | 0-1500 | 10.0 | 300 | 33.07 | 29.76 | 28.11 |
| 68 F815 | 0-3000 | 20.0 | 300 | 33.07 | 29.76 | 28.11 |

## Simpson Panel Meters \& Instruments

"WIDE-VUE" PANEL METERS

- Ulira-Modern Styling
- Wide-Angle Readability
- Longer Meter Scales

Precision-built "Wide-Vue" panel meters. Have durable, open-faced plastic cover for wide-angle readability and maximum protection to the meter face. Feature longer scales than conventional-type meters- $31 / 2^{\prime \prime}$ "Wide-Vue" meter scale is over $1 / 2$ " longer than standard $31 / 2^{\prime \prime}$ meter scale. All DC meters except 0-25, 0-50 DC microammeters have "self-shielded" core magnet meter movement. This movement is not affected by steel panels or proximity to magnetic fields. $0-25,0-50 \mathrm{DC}$ microammeters have external magnet type movement; AC meters have moving-vane type movement. Both calibrated for non-magnetic panels. $31 / 2^{\prime \prime}$ meters have $39 / 64^{\prime \prime}$ scale; $41 / 2^{\prime \prime}$ meters have $315 / 16^{\prime \prime}$ scale. Polished and shock-mounted jewels. Size of $312^{\prime \prime}$ meters: $31 / 4^{\prime \prime}{ }^{\prime \prime}$ square flange; body diameter, $247 / 6^{\prime \prime}$; body depth, $1^{15} / 64^{\prime \prime}$. Size of $41 / 2^{\prime \prime}$ meters: flange, $4^{\prime \prime}$ high, $4^{11} / 16^{\prime \prime}$ wide; body diameter, $23 / 4^{\prime \prime}$; body depth, $113 / 64^{\prime \prime}$. Accuracy $\pm 2 \%$. With mounting hardware and template. Av. shpg. wt., 1 lb.

DC VOLTMETERS

| Model 1327-31/2" |  |  |  | Model 1329-41/2" |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Stock No. | NET EACH |  |  | Range | Stock No. | NET EACH |  |  |
|  | 1-9 | 10-24 | 25-Up |  |  | 1-9 | 10-24 | 25-Up |
| $\begin{array}{lll} \hline 68 \text { F } 149 \\ 68 & \text { F } 150 \\ 68 & F & 151 \end{array}$ | 11.76 | 10.58 | 10.00 | $\begin{aligned} & 0-10 \\ & 0-15 \\ & 0-50 \end{aligned}$ | $\left\lvert\, \begin{array}{lll} 68 & \mathrm{~F} & 157 \\ 68 \\ 68 & \mathrm{~F} & 158 \\ 68 & \mathrm{I} \end{array}\right.$ | 12.94 | 11.64 | 11.00 |
| $\begin{aligned} & 68 \\ & 68 \\ & 68 \\ & 68 \\ & 68 \\ & \hline \end{aligned}$ | 11.76 | 10.58 | 10.00 | $\begin{aligned} & 0-100 \\ & 0-150 \\ & 0-300 \\ & \hline \end{aligned}$ | $\begin{aligned} & 68 \\ & 68 \\ & 68 \\ & 68 \\ & 68 \\ & 68 \\ & \hline \end{aligned}$ | 12.94 | 11.64 | 11.00 |
| DC MILLIAMMETERS |  |  |  |  |  |  |  |  |
| 68 F 181 | 11.02 | 9.93 | 9.37 | 0-1 | $6_{68}^{68} 186$ | 11.76 | 10.58 | 10.00 |
| 68 F 182 | 11.02 | 9.93 | 9.37 | ${ }_{0}^{0-50}$ | $6_{68}^{68} 187$ | 11.76 | 10.58 | 10.00 |
| 68 <br> 68 <br> 68183 <br> 184 | . 32 | 10.20 10.20 | 9.62 | ${ }_{0}^{0-50}$ | $\left\lvert\, \begin{aligned} & 68 \text { F } 188 \\ & 68 \text { F } 189\end{aligned}\right.$ | 12.35 | 11:11 | 10.50 0.50 |
| 68 F 185 | 11.32 | 10.20 | 9.62 | 0-150 | 168 F 190 | 12.35 | 11.11 | 10.50 |
| DC AMMETERS |  |  |  |  |  |  |  |  |
| 68 F 165  <br> 68 $F$ 166 <br> 68 $F$ 168 <br> 68 F 170  <br> 68 F 171  | 11.17 | 10.00 | 9.50 | $\begin{aligned} & 0-1 \mathrm{DC} \\ & 00-5 \mathrm{DC} \\ & 0-10 \mathrm{DC} \\ & 0-15 \mathrm{DC} \\ & 0-25 \mathrm{DC} \\ & \hline \end{aligned}$ |  | 12.35 | 11.11 | 10.50 |
| DC MICROAMMETERS |  |  |  |  |  |  |  |  |
| 68 F 191 | 18.23 | 16.41 | 15.49 | 0-25 | 68 F 195 | 20.29 | 18.26 | 17.25 |
| 68 F 192 | 15.43 | 13.90 | 13.12 | 0-50 | 68 F 196 | 16.76 | 15.08 | 14.25 |
| 68 F 193 | 14.11 | 12.70 | 12.00 | $0-100$ 50 | 68 F 197 | 15.73 | 14.16 | 13.37 |

AC VOLTMETERS

| Model 1357-31/2" |  |  |  | Model 1359-41/2" |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Stock No. | NET EACH |  |  | Range | Stock No. | NET EACH |  |  |
|  | 1-9 | 10-24 | 25-Up |  |  | 1-9 | 10-24 | 25-Up |
| $\begin{aligned} & 68 \text { F } 154 \\ & 68 \text { F } 156 \end{aligned}$ | 11.91 | 10.72 | 10.12 | $\begin{aligned} & 0-150 \\ & 0-300 \end{aligned}$ | $\left\|\begin{array}{c} 68 \mathrm{Fr} \\ 68 \mathrm{~F} \\ 684 \end{array}\right\|$ | 12.94 | 11.64 | 11.00 | AC AMMETERS



## EDGEWISE PANEL METERS



Newly developed edgewise type panel meters for use where space is limited. Require only $50 \%$ of the panel area of a conventional $21 / 2^{\prime \prime}$ meter, but have the same scale length. If meters are mounted one above the other, quick, accurate comparative readings may be taken. When meters should have approximately the same indication, the meter showing a major deviation will quickly show up. Also feature "self-shielded" core magnet meter movement-calibration remains unaffected by stray magnetic fields. Scale length, $17 / 8^{\prime \prime}$. Accuracy: $\pm 2 \%$ of full scale. DC voltmeters have 1000 ohms/volt sensitivity. Dustproof, molded lucite case is $123 / 32 \times 21 / 2 \times 31 / 2^{\prime \prime}$. Requires only $11 / 16 \times 29 / 16^{\prime \prime}$ cutout for rear mounting. Ail have soider iug terminais except $\hat{0}-\mathbf{5}$, $0-10$ DC ammeters which have stud-type terminals. White meter face with black numerals. With all mounting hardware. Av. shpg. wt., $3 / 4 \mathrm{lb}$.

| Stock No. | $\begin{aligned} & \text { Mfr's } \\ & \text { Type } \end{aligned}$ | Range | NET EACH |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: |
|  |  |  | 1-9 | 10-24 | 25-49 |
| 67 F 677 | 1502 | 0-50 DC Voltmeter | 12.35 | 11.11 | 10.50 |
| 67 F 678 | 1502 | 0-150 DC Voltmeter | 2.35 | 11.11 | 10.50 |
| 67 F 679 | 1502 | 0-500 DC Voltmeter | 2.49 | 11.25 | 10.62 |
| 67 F681 | 1502 | 0-5 DC Ammeter | 3.08 | 11.77 | 11.12 |
| 67F682 | 1502 | 0-10 DC Ammeter | 13.08 | 11.77 | 11.12 |
| 67 F 683 | 1502 | 0-1 DC Milliammeter | 12.79 | 11.51 | 10.87 |
| 67 F 688 | 1502 | 0-10 DC Milliammeter | 12.79 | 11.51 | 10.87 |
| 67 F689 | 1502 | 0-100 DC Milliammeter | 12.79 | 11.51 | 10.87 |
| 67 F690 | 1502 | 0-500 DC Milliammeter | 12.79 | 11.51 | 10.87 |
| 67F695 | 1502 | 0-50 DC Microammeter | 17.79 | 16.01 | 15.12 |
| 67 F 696 | 1502 | 0-100 DC Microammeter | 15.73 | 14.16 | 13.38 |
| 67 F697 | 1507 | VU Meter "A'" Scale | 22.64 | 20.38 | 19.25 |
| 67 F698 | 1507 | VU Meter "B' Scale | 22.64 | 20.38 | 19.25 |

## LABORATORY TYPE INSTRUMENTS



## MODEL 9 PORTABLE DC LAB UNITS

Precision portable laboratory instruments. Meet practically every demand for highly-accurate laboratory and industrial measurement. Provide a high degree of accuracy plus the stamina to maintain that accuracy. With large $41 / 2^{\prime \prime}$ mirrored, hand-drawn scale; knife-edge pointer. D'Arsonval movement is accurate to within $\pm 0.5 \%$ of full scale. Cases formed of durable, heavy molded black bakelite. With strap for easy carrying. Binding post terminals. Zero adjustment. Less leads. Size, $7 \times 51 / 4 \times 31 / 8^{\prime \prime}$. Shpg. wt., 6 lbs.

Model 9 Triple-Range Voltmeter. For 0-15-150-300 volts DC. 87 F 136. NET.
Model 9 Triple-Range Voltmeter. For 0-150-300-600 volts DC. 87 F 137. NET
Model 9 Milliammeter. For measuring 0-1 ma. DC.
87 F 138. NET.
Model 9 Double-Range Milliammeter. For 0-10-100 ma. DC.
87 F 139. NET.
53.90

Model 9 Triple-Range Ammeter. For 0-2.5-10-25 A DC.
87 F 140 . NET.

## MODEL 10 PORTABLE AC LAB UNITS

These precision-engineered instruments have the same deluxe features as the above Model 9 units, but have moving iron-vane movements for a high degree of overload protection and accuracy coupled with maximum ruggedness of mechanical design. Accuracy, $\pm 1 \%$ of full scale. Shpg. wt., 6 lbs.
Model 10 Triple-Range Voltmeter. For 0-150-300-600 v. AC.
87 F 141. NET..
59.24

Model 10 Ammeter. For 0-30 amperes AC.
87 F 142. NET
43.07

## MODEL 880 DYNAMOMETER UNITS

These reliable instruments offer the same extra features as the above Models 9 and 10, but with dynamometer movements for AC-DC operation. Calibration accuracy of $\pm 1 \%$ at DC and frequencies from $25-125 \mathrm{cps}$. Size, $7 \times 51 / 4 \times 31 / 8^{\prime \prime}$. Shpg. wt., 6 lbs.
Model 880 Double-Current Range Wattmeter. Ranges: 0-500-10002000 watts AC-DC. For use with 150 or 300 volts maximum; normal, continuous-duty current ranges: 5 amps ( 7.5 amps peak) and 10 amps ( 15 amps peak). All normal and maximum ranges clearly marked on range selector switch and on dial face for added safety. Dial scale is calibrated in watts.
87 F 143 . NET
75.41

Model 880 Triple-Range Voltmeter. For 0-75-150-300 v. AC-DC.
87 F 144. NET.
75.41

Model 880 Triple-Range Voltmeter. For 0-150-300-600 v. AC-DC.
87 F 145 . NET.
75.41


## 57ET ELAPSED TIME METERS

120-Volt Type. Elapsed time panel meters for keeping life and performance records based on operating time. Self-starting synchronous clock motor. Counter indicates up to 9999.9 hours, then recycles to 0 . Matches Simpson standard $31 / 2^{\prime \prime}$ meters exactly in panel appear-
ance. Flange size, $31 / \mathrm{s}^{\prime \prime} 3^{\prime \prime} ;$ body diameter, $2^{3} / 4^{\prime \prime}$; body depth, $2^{19} / 32^{\prime \prime}$. For 120 v., 60 cycle AC. Shpg. wt., 2 lbs.
87 F 146 . NET. $\qquad$
87 F 147. NET
16.90

## INTERNATIONAL RECTIFIER "ZENIAC" ZENER DIODE SUBSTITUTION BOX

## - Quick, Easy Selection

- Any One of 11 Basic Zener Diodes
- Costs Little More Than Diodes Alonè

New silicon zener voltage-regulator diode substitution box. Uses time-proven decade-type substitution box principle for rapid, accurate substitution of a wide range of zener diodes. Enables the design engiwide range of zener diodes. Enables the design engiimental, "breadboard" circuits. Offers a selection of any one of eleven basic zener diode types, ranging from the 1 N 1518 (rated from 3.6 to 4.3 volts) to the 1N1528 (rated from 24-30 volts). Power dissipation, 1 watt. 11-position rotary switch; 5 -way instrument binding posts. Size, $6 \times 31 / 2 \times 21 / 4^{\prime \prime}$.
Shpg. wt., $11 / 2$ lbs.
87 F 148. NET....
.II5.50

# Panel Meters and Accessories 

## VOLTAGE AND BATTERY TESTERS

## EMICO AC VOLTAGE TESTER

Handy, low-cost, AC line-voltage tester. Gives accurate, instant aneous check at receptacle. Has 2 -prong male plug to fit conventional outlets-no test leads are required. Features $90^{\circ}$ swivel head for easier reading at angle. Range: $\mathbf{0 - 1 5 0}$ volts. Scale has 5 -volt graduations between 50 and 150 volts. Meter size: $2^{\prime \prime}$. Damped movement. Overall accuracy: $5 \%$ of full scale. Black metal case. Shpg. wt., 8 oz. 67 F 626 . NET.
2.94


EMICO HEARING AID BATTERY TESTER $2^{\prime \prime}$ DC voltmeter. Designed to check hearing aid batteries. Separate ranges for " $A$ " and " $B$ " types assure reliable, accurate readings. "A" scale reads $0-2$ volts in .1 -volt divisions: " $B$ " scale reads $0-50$ volts in 2 -volt divisions. Metal case. Will not drain batteries. Supplied with test leads. Shpg. wt., 8 oz .
67 F 627 . NET.
.2 .94


## STERLING BATTERY TESTERS

Pocket size battery testers in sturdy, watch-type nickel-finished cases. For checking hearing aid batteries, "B" batteries, dry cells, etc. White dial face. $21 / 4^{\prime \prime}$ dia., $5 / 8^{\prime \prime}$ thick. Av. shpg. wt., 6 oz . TYPE 31A HEARING AID BATTERY TESTER. Tests $221 / 2,30$ or $45-\mathrm{v}$. " $B$ " and $11 / 2-\mathrm{v}$. " $A$ " batteries. Scales: 0-50 v., 0-2 v. With plug and leads.
78 F 031 . NET.

2.50



FOR PORTABLE BATTERIES TYPE 37A. 0-2-50 volts.
78 F 024. NET.......... . 2.20
TYPE 38A. 0-2-100 volts.
78 F 025. NET.......... . 2.35
TYPE 39A. 0-2-150 volts.
78 F 026 . NET........... 2.35
TYPE 40A. 0-10-150 volts.
78 F 027. NET.

## FOR DRY CELL BATTERIES

TYPE 24. Meter scale: 0-35 amperes.
78 F 028. NET.
.1 .79
TYPE 34C. Meter scale: $0-50$ volts. 78 F 029. NET. . . . . . . . . 2.09
TYPE 45. Meter scales: 0-35 amperes and $0-50$ volts.
78 F 030. NET. . 2.77


Copper-oxide rectifiers for relay and meter circuits and replacement purposes. Easy to select correct replacement-body color indicates circuit type. Maximum AC input, all units, 5 volts. Series 500: For up to 100 ma max. Reverse voltage: 2.25 DC. Frequency response: $0-1 \mathrm{mc}$. Diameter $.500^{\prime \prime}$ with $.166^{\prime \prime}$ center hole. $0.038^{\prime \prime}$ thick. Copper oxide with 24 K gold contacts. $3^{\prime \prime}$ lead wires. Phillips head 6-32 mounting stud. Synthetic lacquer-enamel finish. Series 160: For up to 10 ma max. Reverse voltage: 2.25 DC . Frequency response: 0.75 mc . Diameter: $0.166^{\prime \prime}$; $.038^{\prime \prime}$ thick. Copper-oxide with 24 K gold contacts. Have $3^{\prime \prime}$ lead wires. Two holes for No. 2 mounting screw. Sealed in housing with polystyrene base; moistureproofed. Series $160-\mathrm{C}$ : Same as Series 160 except stack is housed in welded brass case. Has convenient, clip-type mount. Synthetic lacquer finish. Av. shpg. wt., 5 oz.

| Stock No. | Type | Serles | Body Color | Internal Circuit | No. of Terms. | $\begin{aligned} & \text { For- } \\ & \text { ward } \\ & \text { DC MA } \end{aligned}$ | Av. Output DC MA | $\begin{aligned} & \text { NET } \\ & \text { EACH } \end{aligned}$ |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| $68 \mathrm{FO41}$ | M | 500 | Yellow | 1 | 4 | 60 | 100 | 2.06 |
| $68 F 043$ | HS | 500 | Black | 2 | 3 | 60 | 50 | 1.50 |
| 68FF047 | H | 500 500 | Red Green | 3 <br> 4 | $\begin{array}{r}3 \\ 2 \\ \hline\end{array}$ | 60 60 | 50 50 |  |
| 68 F 040 | B | 160 | Yellow | 1 | 4 | 10 | 10 | 2.06 |
| 68 F 044 | BHS | 160 | Black | 2 | 3 | 10 | 5 | 1.50 |
| 68 F 046 | BT | 160 | Red | 3 | 3 | 10 | 5 | 1.50 |
| 68 F 037 | BH | 160 | Green | 4 | 2 | 10 | 5 | 1.18 |
| 68 F 038 | B-C | 160-C | Yellow | 1 | 4 | 10 | 10 | 2.06 |
| 68 F 045 | BHS-C | 160-C | Black | 2 | 3 | 10 | 5 | 1.50 |
| 68 F 048 | BT-C | 160-C | Red |  | 3 | 10 | 5 | 1.50 |
| 68 F 049 | BH-C | 160-C | Green | 4 | 2 | 10 | 5 | . 18 |

INSTRUMENT RECTIFIERS. Booklet by H. B. Conant. Includes graphs, curves, plus other helpful data.
37 K 170. Postpaid in U.S.A....
I5c

## RADIOACTIVE MATERIAL

Radioactive source for testing radioactivity detectors. Detection unit will give a positive indication if it is operating correctly. Radioactivity is at a perfectly safe level. Excellent for classroom use. Embedded in plastic disc, $2^{\prime \prime}$ in diameter. Shpg. wt., 3 oz . 77 P 069. NET.

## EMICO PANEL METERS

Sturdy panel meters. Black enamel steel cases. Have screw terminal binding posts and lugs for soldered connections. Model NF-2C (round); flange, $21 / 4^{\prime \prime}$; overall depth, $11 / 4^{\prime \prime}$. Model RF-2C (square): flange, $21 / 4^{\prime \prime}$; overall depth, $13 / 16^{\prime \prime}$. With mtg. bracket. Both types mount in $21 / 16^{\prime \prime}$ hole. $5 \%$ accuracy. Av. shpg. wt., 9 oz.


NF-2C


RF-2C

| Model NF-2C |  |  |  |  | Model RF-2C |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Ma | Stock No. | 1-24, EA | 5-49, EA | -99, EA. | Stock No. | 1-24, EA. | 5-49, EA | -99, EA |
| $\frac{}{0-1}$ | $\begin{aligned} & \hline 67 \text { F } 609 \\ & 67 \text { F } 600 \end{aligned}$ | 3.53 2.06 | 3.18 1.85 | 3.00 1.75 | $\begin{array}{\|l\|} \hline 67 \text { F } 614 \\ 67 \text { F } 615 \\ \hline \end{array}$ | $\begin{aligned} & 3.58 \\ & 2.11 \\ & \hline \end{aligned}$ | 3.22 1.89 | 3.04 1.79 |
| $\begin{aligned} & \overline{0-20} \\ & 0-30 \\ & 0-50 \\ & 0.100 \end{aligned}$ | 67 F 601 <br> 67 F 602 67 F 603 <br> 67 F 604 | 1.71 | 1.54 | 1.46 | $\begin{aligned} & 67 \mathrm{~F} 616 \\ & 67 \mathrm{~F} 617 \\ & 67 \mathrm{~F} 618 \\ & 67 \mathrm{~F} 619 \end{aligned}$ | 1.81 | 1.63 | 1.54 |
| $\begin{aligned} & 0-150 \\ & 0-200 \\ & 0.300 \\ & 0-500 \end{aligned}$ | 67 F 605 <br> 67 F 607 <br> 67 F 608 | 1.71 | 1.54 | 1.46 | $\begin{aligned} & \hline 67 \mathrm{~F} 620 \\ & 67 \mathrm{~F} 621 \\ & 67 \mathrm{~F} 622 \\ & 67 \mathrm{~F} 623 \end{aligned}$ | 1.81 | 1.63 | 1.54 |

DC AMMETERS

| Amps. | Stock No. | 4, EA | 49, EA | -99, EA. | Stock No. | 1-24, EA. | 49, EA | 99, EA. |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| $\begin{aligned} & \begin{array}{l} 0-10 \\ 3-0.3 \\ 20-0 \\ 30-0.0 \end{array} \\ & \hline 00-0-30 \end{aligned}$ | $\begin{aligned} & 67 F 650 \\ & 67 F 651 \\ & 67 F 652 \\ & 67 F 653 \end{aligned}$ | 1.71 | 1.54 | 1.46 | $\boxed{67 F 656}$ 67 F 657 67 F 658 67 F 659 | 1.81 | 1.63 | 1.54 |

AC VOLTMETERS

| Volts | Stock No. | 1-24, EA. | 25-49, EA | 50-99, EA. | Stock No. | 24, EA. | 25-49, | 99, EA. |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 0 0-15 | 67 F | 4 | 2.56 | 2.42 | 67 F 670 | 2. | 2. | 2.50 |
| 0-150 |  | 3.4 | . 69 | 2.92 |  |  |  | 3.00 |
| 0-300 | 67 F 667 | 4.02 | 3.62 | 3.42 | 67 F 672 | 4.07 | 3.66 | 3.4 |

## DC VOLTMETERS

| Volts | Stock No. | 24, EA. | -49, EA | -99, EA. | Stock No. | 1-2 | 25-49, E | , |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| $\begin{aligned} & 0-3 \\ & 3-0-3 \\ & 0-10 \\ & \hline \end{aligned}$ | $\left\lvert\, \begin{aligned} & 67 \text { F } 630 \\ & 67 \\ & 67 \\ & 67 \\ & \hline \end{aligned}\right.$ | 1.71 | 1.54 | 1.46 | $\left\lvert\, \begin{array}{ll} \hline 67 & F 635 \\ 67 & F \\ 67 & F 36 \\ \hline \end{array}\right.$ | 1.81 | 1.63 | 1.54 |

## AC AMMETERS

| Amp | Stock No. | 1-24, EA. | , | 0-99, EA. | Stock No. | EA. | 25-4 | 0-99, EA |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| $\begin{aligned} & 0-5 \\ & 0-10 \end{aligned}$ |  | 2.84 | 2.56 | 2.42 | $\begin{array}{\|l\|l\|} \hline 67 \text { F } 648 \\ 67 \text { F } 649 \end{array}$ | 2.94 | 2.65 | 2.50 |

## AC MILLIAMMETERS

Ma Stock No. 1-24 EA. 25-49 EA. $\mid$ 50-99, EA. $\mid$ Stock No. 1 1-24, EA. $\mid 25-49$, EA. $\mid$ 50-99, EA.


Write for Prices on Quantities of 100 or More Emico Panel Meters

## JBT QUALITY METERS

## MODEL 31-EX ELAPSED TIME METER

Records operating time of AC equipment in .1 hour steps to 9999.9 hours, then automatically resets. Flange, $31 / 2^{\prime \prime}$. Mounts in $23 / 4^{\prime \prime}$ hole; overall depth, $31 / 4^{\prime \prime}$. For 110-120 v., 60 cycle AC. Shpg. wt., $11 / 4$ lbs.
. 15.63
 66 F 689. NET.

## AC FREQUENCY METERS

Vibrating reed meters. *Measures frequency in 1 -cycle steps; tin 5 -cycle steps. $\pm 0.3 \%$ at $77^{\circ} \mathrm{F}$. Flange, $31 / 2^{\prime \prime}$; body, $211 / 6^{\prime \prime}$; overall depth, $31 / 64^{\prime \prime}$. For $100-130$ volts. Shpg. wt., 12 oz.
66 F 685. Model 34 -FX. 56-64 cycles*. NET. . . 26.70
66 F 694. Model 33-FX. 380-420 cyclest. NET.


MODEL 23-JP-1 TEMPERATURE METER
Accurate, portable temperature meter. Tests oven thermostats in appliances. Permit accurate adjustment by showing oven temperatures as they change. $23 / 8^{\prime \prime}$ scale reads from $0-650^{\circ} \mathrm{F}$. in $10^{\circ}$ divisions. Automatically compensated for ambient temperature changes. Meter is mounted on a black metal panel. With attached $51 / 2-\mathrm{ft}$. calibrated thermocouple, clip, and convection shield. Black top-grain leather case. Size, $41 / 2 \times 23 / 4 \times 41 / 4^{\prime \prime}$. Shpg. wt., $21 / 4 \mathrm{lbs}$. 66 F688. NET....
25.48


## BENCH-TYPE METER CASE

Compact, sloping-front metal case with rounded top corners. Excellent for housing auxiliary test and measurement meters. Top binding posts. Black wrinkle finish. Holds meter at ideal angle. Size, $33 / 4 \times 4^{\prime \prime} .23 / 4^{\prime \prime}$ diameter hole. Less meter. Shpg. wt., 1 lb . 66 F 506. NET
. 1.29


## Telex Headphones and Accessories



Famous, lightweight Telex headsets-used throughout the world on all types of audio equipment requiring private, continuous listening. Telex headsets are manufactured with the finest materials, and incorporate the most recent engineering advances.

Suitable for all applications requiring comfort, sensitivity and durability in a headset; ideal for communications work, offices, hospitals, Amateur radio, hard-of-hearing, and other uses. Cords are listed for those headsets supplied without cords.

## METAL MONOSET

(A)
A Exceptionally comfortable, lightweight headphones, designed to eliminate fatigue and strain when headphones must be worn continuously for long periods. Total weight is only 1.2 ounces. Magnetic type receiver for crystal clear reproduction and rugged dependability. Light, metal housing with comfortable ear pieces. White plastic ear plugs remove easily for cleaning. Less cord. Shpg. wt., 8 oz .
59 J 281. Model 18165. 2000 ohms.
59 J 280 . Model 18110.128 ohms. List Each, $\$ 9.00$. NET EACH....... . . 5.40 WITH CORD. Monosets as above, with 5 -foot cord and standard plug. Shpg. wt., 12 oz. 59 J 222 . Model 18184. 2000 ohms. 59 J 223 . Model 18183.128 ohms. List Each, $\$ 12.50$. NET EACH........ .
7.50

## TWINSET

(B] An important innovation in headset de-sign-nothing touches the ears with the Telex Twinset! Sensitive receivers, rest lightly at the temples; tubular "pipes" send sound directly into ears. Perfect for long, fatigue-free listening; weighs only 1.6 ounces. *Approved by the Civil Aeronautics Authority. Supplied with two extra eartips. Less cord. Shpg. wt., 8 oz.
59 J 285 . Model 3776*. 1000 ohms
59 J 286 . Model 3781.64 ohms.
List Each, $\$ 17.50$. NET EACH........IO. 50 WITH CORD. Twinsets as above, with 5 -foot cord and plug. Shpg. wt., 12 oz.
59 J 224. Model 3775*. 1000 ohms. 59 J 225. Model 3791. 64 ohms. List Each, \$21.00. NET EACH....

I2.60

## HI-FI DYNASET

Model 6701. Under-the-chin dynamic headset of superior quality. Receiver consists of a tiny, $3 / 4^{\prime \prime}$-diameter 6 -ohm loudspeaker built into the plug. Extremely sensitive; frequency response extends from 50 to 8000 cycles at 25 mw . Speaker diaphragm directs sound, through 60 -inch flexible tubing, into headset. Light gray finish. Shpg. wt., 6 oz .
59 J 239. List, \$14.75. NET.. . . . . . . 8. 85

## MAGNETIC PILLOW SPEAKER

(D) Exceptionally small; for radio and TV listening through a pillow without disturbing others. For home or institutional use. Red waterproof plastic. $5 / 8 \times 21 / 4^{\prime \prime}$ dia. Less cord. Shpg. wt., 6 oz.
59 J 290. Model 4531. 2000 ohms.
59 J 291. Model 4501. 128 ohms
List Each, \$7.20. NET EACH..... . .
.4 .32
WITH CORD. Pillow speakers as above, with 5 -foot cord and plug. Shpg. wt., 10 oz .
59 J 226. Model 4530. 2000 ohms. 59 J 227. Model 4500.128 ohms. List Each, $\$ 10.70$. NET EACH

## MIDGET EARSET

[Extremely lightweight individual ear-sets-weigh only $1 / 2$ ounce! Carefully designed holder is scientifically contoured to fit the ear comfortably. Unit utilizes high-quality receiver which reproduces speech with great clarity and fidelity; frequency response is from 50 to 4000 cycles. Available with metal ear bow also, where extreme ruggedness is desired. With or without cord and plug. Wt., 5 oz . without cord, 6 oz . with cord and plug.

LESS CORD

| Stock No. | Type | Description | Ohms |
| :---: | :---: | :---: | :---: |
| 59 J 228 | 18050 | Plastic ear bow | 15 |
| 59 J 265 | 18051 | Plastic ear bow | 128 |
| 59 J 267 | 18053 | Plastic ear bo | 1000 |
| 59 J 229 | 18137 | Plastic ear bow | 2000 |
| 59 J 237 | 9376 | Metal ear bow | 15 |
| 59 J 274 | 9329 | Metal ear bow | 128 |
| 59 J 273 | 9336 | Metal ear bow | 1000 |
| 59 J 244 | 18139 | Metal ear bo | 2000 |
| List Each, \$6.50. NET EACH. ......... 3.90 WITH CORD |  |  |  |
|  |  |  |  |
| Stock No. | Type | Description | Ohms |
| 59 J 202 | 18134 | Plastic ear bow | 5 |
| 59 J 203 | 18056 | Plastic ear bow | 128 |
| 59 J 204 | 18058 | Plastic ear bow | 1000 |
| 59 J 207 | 18138 | Plastic ear bow | 2000 |
| 59 J 208 | 18092 | Metal ear bow | 15 |
| 59 J 209 | 9334 | Metal ear bow | 128 |
| 59 J 211 | 9335 | Metal ear bow | 1000 |
| 591212 | 18140 | Metal ear bow | 2000 |

List Each, $\$ 10.00$. NET EACH . . . . . . . 6.00

## DYNAMIC PILLOW SPEAKER

F Model 8110. An under-the-pillow loudspeaker with great power-handling ability; provides exceptionally clear, natural tone without any disturbance to others who may be sleeping nearby. Ideal for institutional use, or private listening at home to radio or TV set. 3.2 ohm voice coil matches most small radios and portable TV sets. With 5 -foot cord and standard phone plug. $33 / 4^{\prime \prime}$ dia. $11 / 8^{\prime \prime}$ thick. Wt., 6 oz .
59 J 276 . List. $\$ 10.20$. NET. . $\qquad$ 6.12

MODEL 8130. As above, but 10,000 ohms.
59 J 277. List, \$12.10. NET. . . . . . . . 7.26

## MUFF-TYPE HEADSET

(G)Sensitive headset with plexiglas ear cushions for comfort. Cushions and receivers are mounted on stainless steel headband; weight 1.6 ounces. Receiver is housed in special molded plug-directs sound through flexible tubing to ears. Complete with tubing and plug. Shpg. wt., 6 oz .
59 J 213 . Model 18078. 15 ohms.
59 J 279. Model 8825. 128 ohms.
59 J 283. Model 9316.2000 ohms. List. $\$ 18.45$. NET EACH.

## USEFUL TV "LISTENER"

Model 9900. Use wherever individual listening is desired-ideal for families with children, hard-of-hearing, etc. Can be used by 2 people at the same time. Has volume control for earset; switch on control unit turns TV speaker on or off. $31 / 2 \times 1^{\prime \prime}$. Control unit is equipped with $10^{\prime \prime}$ cord; earset, $4^{\prime}$ cord. Shpg. wt., 8 oz .
59 J 263 . List, $\$ 16.25$. NET.
.9 .75

## TELE-FI HEADSET

New, lightweight headset is ideal for applications where clarity and intelligibility of speech are important. Unique design provides a delay of 1 millisecond between earpieces; resultant sound greatly enhances clarity of speech. Excellent for secretaries, switchboard operators, TV monitors, etc. Receiver may be detached from dual set and mounted on plastic ear bow in seconds, for one-ear use. Weighs only $1 / 2$ ounce. With cord and plug. Shpg. wt., 6 oz. 59 J 214 . Model 18135. 15 ohms.
59:J 257. Model 18035. 128 ohms.
59 J 258 . Model 18020. 1000 ohms. 59 J 217. Model 18160. 2000 ohms. .7.4I

## CORD AND MINIATURE PLUG

K MODEL 9200. $5-\mathrm{ft}$. cord with $90^{\circ}$ plug. K. Length of plug, $3 / 4^{\prime \prime}$. Dia., $9 / 64^{\prime \prime}$. For computers, dictating machines, and similar equipment. Shpg. wt., 5 oz.
59 J 252. List, $\$ 3.15$. NET.
.I. 89

## CORDS, EXTRA TIPS AND ACCESSORIES

*Has built-in volume control. 4 oz.

| No. | Description | For Use With | NE |
| :---: | :---: | :---: | :---: |
| 59 J 270 | Type 3280 standard cord | Twinset \& Magnetic pillow Speaker | 2.10 |
| $\overline{59 J 272}$ | *Volume control cord w/5,000 ohm pot. | $\begin{aligned} & 59 \mathrm{~J} 224 \\ & 59 \mathrm{~J} 285 \end{aligned}$ | 5.94 |
| 59J 245 | *Volume control cord w/20,000 ohm pot | $\begin{array}{lll} 59 \text { । } 222, & 59 \text { J } 226, \\ 59 \text { J } 281,59 \text { J } 290 \end{array}$ | 5.94 |
| $\overline{59 \mathrm{~J} 246}$ | *Volume control cord w/1,000 ohm pot |  | 5.94 |
| 59 J 297 | Type 18036 Plastic Earframe | Tele-Fi \& Plastic Midget Earset | 48 |
| 59 J 269 | Type 8555 5-ft. Extension Cord | Monoset, Twinset \& Magnetic Pillow Speaker | 2.1 |
| 59 J 242 | Type 9245 Panel Mounted Jack | $\begin{aligned} & 59 \mathrm{~J} 252 \text { Cord } \\ & \text { Plug } \end{aligned}$ | . 24 |
| 59 J 243 | Type 9231 Miniature Straight Plug | $\begin{aligned} & 59 \text { J } 252 \text { Cord/ } \\ & \text { Plug } \end{aligned}$ | . 36 |
| 59J254 | Type 12102 Jack | $\begin{aligned} & \text { "TV Listener," } 9231 \\ & \text { Straight Plug } \end{aligned}$ | . 24 |
| 59 J 253 | Type 9241 std. cord w/std. phone plug | Allsets, except Twinset \& Magnetic Pillow Speaker | 2.10 |
| $\begin{aligned} & \hline 59 \mathrm{~J} 295 \\ & 59 \mathrm{~J} 296 \\ & \hline \end{aligned}$ | $\begin{aligned} & \text { Ear Tips } \\ & \text { Ear Tips } \end{aligned}$ | All Twinsets All Monosets | . 09 |

## American Bell \& Cannon Headphones

## C. F. CANNON HEADPHONES AND ACCESSORIES

BRANDES BS-2 "SUPERIOR" PHONES. A high-quality, rug-gedly-built, $2000-$ ohm headset which has been a favorite for years. Outside terminal type; metal cases, bakelite caps. Diaphragm caps. Diaphragm
 Has double coils, one in each receiver. Flexible metal headband. Easily adjustable for maximum comfort. $41 / 2$-foot cord. Shpg. wt., $11 / 4 \mathrm{lbs}$.
59 J 130. NET.
2.44

BRANDES "ADMIRAL" PHONES. Similar to above but with inside terminals. 59 J 135. BA-2. 2000 ohms. NET
2.44

59 J 136 . BA-3. 3000 ohms. NET..... 2.73 59 J 137. BA-5. 5000 ohms. NET..... . 3.53 REPLACEMENT CAPS AND DIAPHRAGMS. For "Superior" and "Admiral" phones, above. 59 J 138. Caps. Wt., 2 oz. EACH...... 21 c 59 J 140 . Diaphragms. 2 oz . Pkg. of 2.13 c

## CANNON-BALL "MASTER" PHONES. Highquality headset for communications and general-purpose applications. Cases are metal, with bakelite caps. Terminals are inside of case for maximum safety. from tampering. Chrome steel mag- <br>  nets produce strong field, and resist corrosion. With cord. Wt., $11 / 4 \mathrm{lbs}$. $59 \mathrm{~J} 215 . \mathrm{MC}-2.2000$ ohms. NET.... 2.44 59 J 125. MC-3. 3000 ohms. NET...... 2.65 $59 \mathrm{~J} 126 . \mathrm{MC}-5.5000 \mathrm{ohms}$. NET . . . . 3.38

CANNON-BALL CC-2 "CHIEF"; PHONES.Sensitive and practical headset for all headset for all side terminal connections. $21 / 16^{\prime \prime}$ diaphragms; bakelite case and cap. Vinyl plastic covered headband. 2000 ohms. With 2000 ohms. With
 $41 / 2-\mathrm{ft}$. cord. Shpg. wt., $11 / 4 \mathrm{lbs}$.
59 J 172. NET.
2.35

REPLACEMENT CAPS AND DIAPHRAGMS. For "Master" and "Chief" phones, above. 59 J 127. Caps. Wt., 2 oz. EACH. . . . 21 c 59 J 129 . Diaphragms. 2 oz. Pkg. of 2.13 c CANNON TV HEADPHONE KIT


High-quality listening device to aid hard-ofhearing, or provide private, "silent" listening when others might be disturbed by loudspeaker operation. Volume control and Speaker-Phones switch"onjcontrol box. Supplied with $15-\mathrm{ft}$. cord, and two pairs of headphones. Shpg.twt., 3 lbs.
59 J 175. NET
8.82

SINGLE HEADSET KIT. Same kit as above, but

59 J 176 . NET.
.6 .61
CONTROL BOX ONLY. Shpg. wt., 9 oz .
59 J 177. NET.......................... . . 4.41
11 -OHM DUAL HEADSET. Shpg. wt., $11 / 4 \mathrm{lbs}$.
59 J 173._NET.
..................... 2.23

ALLIED'S OWN AMERICAN BELL HEADPHONES<br>- Designed for Comfort<br>- Excellent Tonal Fidelity<br>- Remarkably Low Cost



Exceptionally sensitive headphones at remarkably low cost. For communications use, short-wave listening, code practice or class use. Produced by one of America's leading manufacturers. Noted for their remarkable tonal fidelity and sensitivity. Have adjustable flexible headbands for utmost wearing comfort and long life. Hyflux Alnico magnets for high efficiency and sustained power. Internal terminal connections. Cap and case are molded bakelite. All headphones supplied with $41 / 2$-foot cord of mercerized cotton-covered tinsel. With standard phone tip terminals. Available in single or dual types; low-impedance models may be inserted in audio circuits directly at loudspeaker tap.

## STANDARD DUAL HEADSETS

(A)Have double headband with firmly gripping, easily adjustable yokes. $17 / 8^{\prime \prime}$ diaphragm. Cords are cotton-covered tinsel. Shpg. wt., $11 / 4$ lbs.
59 j 110.2000 Ohms. NET
2.00

59 J 111.3000 Ohms. NET
.2 .08
59 J 149. 4000 Ohms. NET
2.15

## 59 J 141.11 Ohms. NET.

## INSTITUTIONAL DUAL HEADSETS

Especially designed for schools, hospitals and other institutions where dependable, lightweight headphones are essential. Also ideal for use with crystal sets, battery radios and low-cost hearing aids. Every feature required for institutional use has been incorporated: Durable bakelite cases and caps which are easily cleaned; inside terminal connections, to prevent tampering; diaphragm is $17 / 8^{\prime \prime}$ in diameter; Hyflux Alnico permanent magnets assure excellent sensitivity. Provide crisp, clear reproduction of voice and music. $41 / 2-\mathrm{ft}$. braided cord. Comfortable, vinyl-plastic headband is easily adjustable. Shpg. wt., $11 / 4 \mathrm{lbs}$.
59 J 100. 2000 Ohms. NET.
.2 .12
59 J 101.3000 Ohms. NET.
.2 .20

## SINGLE HEADPHONES

B Dependable, economy-priced single phones. Suitable for hard-of-hearing installations, receivers, crystal sets, Geiger counters, etc. Diaphragm is $17 / 8^{\prime \prime}$ in diameter. Has spring-metal headband which is permanently attached to back of case. Equipped with $41 / 2-\mathrm{ft}$. cotton covered cord. Shpg. wt., 8 oz.
59 J 11 2. 1000 Ohms. NET. 1.08

59 J 113.1500 Ohms. NET.
1.15

## HEADPHONE REPLACEMENT PARTS

Replacement parts for the American-Bell headphones listed on this page. Made to the same high standards as the original parts to assure maximum efficiency.
DIAPHRAGM. Shpg. wt., 2 oz.
59 J 104. Pkg. of $2 \ldots .$.
BAKELITE CAP. Shpg. wt., 2 oz.
59 J 106. NET EACH. .
13 c

DOUBLE HEADBAND WITH YOKES. Adjustable vinyl-covered double headband with .2 yokes. Shpg. wt., 9 oz.
59 J 174 . NET.
$63 c$

## AMERICAN BELL TRANSISTOR RADIO EARPIECES

Quality, lightweight earpieces; ideal for use with portable equipment. Replace earpieces used in popular transistor radios indicated in table below. Supplied in individual plastic box, complete with 3 -ft. cord and plug. Wt., 5 oz.


## $\frac{\text { Stock No. }}{59 \text { J } 147}$

59J193
59 」 109
$\frac{59 \mathrm{~J} 142}{59 \mathrm{~J} 145}$
59」133
59J116
NET EACH...

SEPARATE EARPIECE. Receiver and comfortable earpiece. Equipped with cord but less plug. Impedance, 8000 ohms. Excellent tonal quality. Shpg. wt., 4 oz.
59 J 119. NET..
1.97

## EARPIECES FOR TV

For private listening to TV sets. Gives crisp, clear reproduction. May be worn for hours without fatigue. Shpg. wt., 5 oz.
59 J 117. For use with Emerson TV sets. With plug. NET...........
2.42

59 J 123. For use with Motor-
ola TV sets. With plug. NET......... 2. 42
59 J 192 . For all TV sets except Emerson and Motorola. Alligator clips con-
nect to voice coil. 8 oz. NET..........
EARPIECES WITH PL-55 PLUGS
High-sensitivity ear pieces. Supplied complete with standard PL-55 plug attached $5-\mathrm{ft}$. cord. Shpg. wt., 5 oz .
59 J 166.15 ohms 59 J 134.2000 ohms 59 J 124.120 ohms 59 J 167.8000 ohm: 59 J 131.1000 ohms NET EACH.
2.42

## CANNON-BALL RADIO HEARING AID

Popular, low-priced hearing aid for any radio set or TV set, easily attached to any loudspeaker. Excellent for private listening, or listening at late hours without disturbing others. Employs a specially-constructed low-impedance headphone which matches the output of radio or TV set. Built-in selector control switch permits listening with speaker only, headphone only, or both speaker and headphone simultaneously. Supplied complete with control box, connecting cables for attachment to speaker, and attachment of headphone to control box, easy-to-follow instructions and diagram. Shpg. wt., 1 lb .
59 J 118 . NET.
3.38


# Headphones and Accessories 



## MYTRON HEADPHONES

（A）BA－200 Headphones．Very sensitive headphones with high imped－ ance（ 45,000 ohms at 1000 cps ．）．Frequency response， 100 to 8000 cps ．Cone type diaphragm．Molded plastic case shaped for maximum comfort．Require small DC blocking condenser for DC circuits．With $5-\mathrm{ft}$ ．cord and headband．Wt．， 2 lbs．
59 J 151 ．NET．
12.64

Model BA－200B Headphones．Like BA－200 above；but equipped with cord wired for binaural use．Impedance， 90,000 ohms（at 1000 cps ）． Shpg．wt．， 2 lbs．
59 J 152．NET．
I3．82
BA－201 Headphone．Similar to model BA－200 but，single head－ phone． 90,000 ohms（ 1000 cps ）．Shpg．wt．， 1 lb.
59 J 156 ．NET．
.7 .94
C Lorgnette BA－202 Phone．For group hearing aid systems．Extends $\square$ to $17^{\prime \prime} .90,000$ ohms．With $5-\mathrm{ft}$ ．cord．Shpg．wt．， 1 lb ．
59 J 157．NET． $\qquad$ .9 .80
Hi－Fi Headsets．Double headphone sets that feature uniform fre－ quency response，low distortion，and excellent bass response．Light－ weight for maximum comfort．Impedance indicated is at 1000 cps ． ＊For binaural use．Average shpg．wt．， 3 lbs．

| Stock No． | Type | Impedance | Response | NET |
| :--- | :---: | :---: | :---: | :---: |
| 59 J 158 | BA－205 | 75,000 ohms | $100-10,000 \mathrm{cps}$ | 19.40 |
| 59 J 153 | ＊BA－205B | 150,000 ohms | $100-10,000 \mathrm{cps}$ | 20.58 |
| 59 J 63 | BA－206 | 50,000 ohms | $60-8000 \mathrm{cps}$ | 20.38 |
| 59 J 154 | ＊BA－206B | 100,000 ohms | $60-8000 \mathrm{cps}$ | 21.56 |

D N－98 Headphones．Designed for general laboratory use where high impedance and sensitivity are necessary．Have a frequency response of from 100 to $10,000 \mathrm{cps}$ ．Impedance at 1000 cps is in ex－ cess of 50,000 ohms．Phones employ crystal elements for high sensi－ tivity．Blocking capacitor required in presence of DC．With $41 / 2-\mathrm{ft}$ ． flexible cord attached．Shpg．wt．， 1 lb ．
59 J 186 ．NET．
ET．．．． .9 .26

EN－130 Headphones．Extended frequency，crystal－type head－ phones，similar to model N－98 above；designed for high fidelity listening．Have remarkably wide response of from 60 to $13,000 \mathrm{cps}$ ． Impedance is $50,000 \mathrm{ohms}$ at 1000 cps ．Have cushioned headband for maximum comfort．Blocking capacitor required in presence of DC．With $41 / 2-\mathrm{ft}$ ．cord．Shpg．wt．， 1 lb. 59 J 187．NET．
10.20

## S．G．BROWN TYPE K HEADPHONES

F
Professional－type，high－fidelity dynamic headphones for broad－ cast use，monitoring，etc．Can be connected to any sound system， amplifier，radio，phonograph，recorder，or similar equipment．Head－ phones are actually 2 miniature high－fidelity loudspeakers－re－ markable tonal fidelity and sensitivity．Uses moving－coil type arma－ ture assemblies for maximum response and fidelity；bakelized conical diaphragm；flux density， 6000 lines．Headbands and receiver cases are constructed of highly－polished dural for long life．Head－ bands are adjustable．Response： $50-10,000 \mathrm{cps}$ ．Rubber ear cushions； $61 / 2-\mathrm{ft}$ ．cord． 52 ohms ．Made in England．Shpg．wt．， $11 / 2 \mathrm{lbs}$ ． 59 J 337 ．NET．
600－OHM HI－FI HEADPHONES．As above，but 600 ohms． 59 J 338．NET．

## TRIMM HEADPHONES AND ACCESSORIES



G
＂Military＂Type．Constructed to meet mil－ itary headphone specifications．Imped－ ance， 20,000 ohms；DC resistance，2，000 ohms．Metal shell with bakelite cap． 6 ft ． cord．Inside terminals．Rubber－covered headband．Shpg．wt．， $11 / 2 \mathrm{lbs}$ ．
59 J 040 ．NET． $\qquad$ ．II． 76
（H）＂Featherweight＂Type．Weigh less than 5 H ounces．Black bakelite caps and shells． Forged magnets；pole pieces of permalloy． Impregnated coils．Supplied with flexible $6-\mathrm{ft}$ ．moisture－proof cord．Shpg．wt．， 9 oz. 59 J 000 ．Standard． 4000 ohms ． 59 J 001 ．Special． 24,000 ohms． NET EACH．
59 J 013 ．Replacement Caps．For
＂Featherweight＂phones．EACH．．．．．．47c 59 J 042 ．Diaphragms．For＂Mili－ tary＂and＂Featherweight＂types．EA．I5c

## LORGNETTE TYPE EARPHONE

Hand－held type hearing aid．Same construction as＂Featherweight＂ phones above．Excellent for use in churches，and small theaters．Ear－ phone size， $21 / 8^{\prime \prime}$ dia．$\times 3 / 4^{\prime \prime}$ thick． Handle extends to $14^{\prime \prime}$ ．Imped－ ance， 4500 ohms：DC resistance， 1000 ohms．Supplied with flexible， braided $6-\mathrm{ft}$ ．cord with phone tips．Shpg．wt．， 10 oz．
59 J 036. NET
.4 .85

＂Professional＂Type．Magnetic head－ phones for general use．Bakelite caps and shells．Forged magnets of chrome steel， impregnated coils． $5-\mathrm{ft}$ ．cord．Inside termi－ nals．Have plastic－covered headband．Shpg． wt．， $11 / 4$ lbs．
59 J 020． 3000 ohms．NET
59 J 021.4000 ohms．EACH
3.41

59 J 030．Replacement Caps．EACH．．． 38 c 59 J 03 1．Extra Diaphragms．EACH．．．． 12 c

K Acme＂Deluxe＂Type Headphones．Sensi－ $\boxed{K}$ tive headphones designed for every use． 2000 ohm impedance．Sturdily constructed for dependable performance under all con－ ditions． $41 / 2-\mathrm{ft}$ ．cord．Shpg．wt．， 8 oz ． 59 J 070．NET
．．．．．．．．．．．．．．．．．．．．
Extra Diaphragms．For above． 2 oz.
59 J 012 ．EACH．
.2 .12

5月12．EACH．．．．．．．．．．．．．．．．．．．． 12 1 c

## INDIVIDUAL VOLUME CONTROL



Consists of phone jack and volume control mounted in compact box．Ideal for group hearing aid systems in theaters，churches， schools，etc．Resistance： 10,000 ohms．Size： $33 / 4 \mathrm{x}$ 21／8×11／4＂．Shpg．wt．， 1 lb． 59 J 056．Brown wrinkle． 59 J 057 ．Ivory wrinkle． NET EACH． $\qquad$
2.94

## HEADPHONE CORDS



Wide selection of low loss headphone cords． Copper inner conductor covered with woven cotton braid．For phones on this page and pages 418 and 419．All cords have 2 phone tips at one end；＊terminals at opposite end of cord．Shpg．wt．， 2 oz.

41／2 Ft．Double Cords

| Stock No． | ＊Terminals | For Use With | $\begin{aligned} & \text { NET } \\ & \text { EACH } \end{aligned}$ |
| :---: | :---: | :---: | :---: |
| 591220 | Eyelet type．For in－ side terminals． | $\begin{aligned} & \hline 59 \text { J } 100,-101, \\ & -110,-11,-125, \\ & -126,-172,-135, \\ & -136,-137,-215 \end{aligned}$ | 50 c |
| $\frac{591205}{591206}$ | Eyelet type． | $59] 130$ |  |
| 59 J 206 | Has phone tips on both ends | Govt．and military types | 50 c |
| 591002 | Small blunt tips | 59 J 070 |  |


| 5 Fi．Double Cords |  |  |  |
| :---: | :---: | :---: | :---: |
| $\begin{aligned} & 59 J 006 \\ & 59 \mathrm{j} 181 \end{aligned}$ | Large blunt tips Eyelet type | $\begin{aligned} & 59 \text { J 020, -021 } \\ & 59 \text { J } 151,-158 \text {, } \\ & -163 \end{aligned}$ | 54c |


| 6 Fi．Double Cords |  |  |  |
| :---: | :---: | :---: | :---: |
| $\begin{array}{r} 59 J 004 \\ 591007 \\ \hline \end{array}$ | $\begin{aligned} & \text { Eyelet type } \\ & \text { Large blunt tips } \end{aligned}$ | $5 \begin{aligned} & 59 \text { J } 000,-001 \\ & 59 \text { J } 040 \end{aligned}$ | 58c |

## 8 Fi．Double Cords

| $59 J 219$ | Has phone <br> tips on both ends | Govt．and <br> Military type |
| :---: | :--- | :--- |


| Single Cords |  |  |  |
| :---: | :---: | :---: | :---: |
| 59 J 200 | 4 ft ．cord with eye－ let type | 59 J 112，－113 |  |
| 59 J 182 | 6 ft cord with eyelet type | 59 J 157 | 50¢ |



## PHO CUSHION

Molded rubber ear cushions slip over phones．Provide maximum wearing comfort． Wt．， 6 oz ．
59 J 168. NET，PAIR．． 64 C 10 or More Pairs， PER PAIR． .58 c

## Headsets, Converters and Chargers

## GENERAL PHONES MODEL CLC-B

 HIGH-FIDELITY BINAURAL HEADSETFor Private Stereophonic Listening


This newly developed, binaural headset is perfect for private listening to stereophonic hi-fi systems-preserves the full 3-dimensional stereo effect and reproduces with outstanding clarity and realism.

Features variable-reluctance design for extremely wide, remarkably smooth responsetremely wide, remarka
from 30 to $16,000 \mathrm{cps}$.

Hermetically sealed, molded-rubber ear cushion; unaffected by dust, dirt and humidity. Matches impedance of any high-fidelity amplifier from 3.2 to 16 ohms. Comfortable and light in weight. With 4 -ft. nylon-covered cord. Shpg.
wt., 11/4 lbs.
59 J 339 . NET. . . . . . . . . . . . . . . . . 29.40 59'J 339 . NET

## FEDTRO "PRIVATE-LEE"

 RADIO-TV EARPHONE SETConnects
to Any
Radio or TV


An excellent private-listening outfit, easily connected to any radio or TV. Permits listening without disturbing others; also fine for the hard-of-hearing. For home use, hospitals and other institutions, beauty parlors, etc.
Consists of comfortable, lightweight earpiece, plus ivory-plastic control box with volume control and connecting $17-\mathrm{ft}$. cable.
Control box has two jacks for earpiece-one jack automatically shuts off speaker to permit istening on earpiece only; the other jack is used when sound is desired from both the earpiece and the speaker. Easy-to-follow instruc-
tions. Shpg. wt., 1 lb . ions. Shpg. wt., 1 lb .

The famous line of Cornell-Dubilier "Powercon" DC to AC converters. Efficient vibrator-type recommended for operating AC appliances from DC power sources. All units have well-regulated Now have a higher rating for intermittent overloads. Wattage figNow have a higher rating for intermittent overloads. Wattage figures or intermittent use are rated for power, "actors from hash". Model 12SS14 comes Superior filtering assures output free of hash . Model 12 SS (4 comes in case battery). Frequency stability regardless of load. Instant starting under load-no warm-up period needed. Output has complete RF filtering for clear TV, short-wave, AM and FM broadcast reception.


Choice of 17 sizes for wide variety of applications. *For small port-
able types. Converters listed according to inputs: 6 volt battery, 12 volt battery or 110 volts DC. Models 110 H 25 and 110 H 35 are approved for TV sets and are TVI-proofed.

| Stock No. | $\begin{aligned} & \text { Mir's } \\ & \text { Type } \end{aligned}$ | TypicalApplications | $\left\lvert\, \begin{aligned} & \text { Input } \\ & \text { V. DC } \end{aligned}\right.$ | $\begin{gathered} \text { Watts } \\ \text { Cont.Inter. } \end{gathered}$ |  | Size | Wt., Lbs. | List | NET |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 80 P 300 | 6SP2 | Electric shaver | 6 | 20 | 20 | $25 / 8 \times 21 / 2 \times 37 / 33^{\prime \prime}$ | 2 |  | 5 |
| 80 P 301 |  | Phono motor,amplifier | 6 | 60 | 80 100 | 51/2x61/4x8" | 12 |  |  |
| 80 PPU 304 | 6SH15 | Radio, phono, recorder | 6 | +80 | 175 |  | 35 | 79.68 | 46.85 |
| 80 P 263 | 6/12D6 | Dictating Machines* | 6/12 | 60 | 75 | $51 / 2 \times 73 / 4 \times 61 / 4$ | 111/2 | 50.00 | 29.40 |
|  | 12 SP 2 | Electric shaver | 12 | 20 | 20 |  | 2 | 13.40 | 7.88 |
| 80 P 306 | 12 M 6 | Radio, phono,amplifier | 12 | 60 | 80 | $45 / 8 \times 315 / 16 \times 55 / 16^{\prime \prime}$ |  |  | 0.29 |
| 80 P 307 | 12 L 8 | Radio, phono, recorder | 12 | 80 | 100 | $51 / 2 \times 61 / 4 \times 8^{\prime \prime}$ | 12 | 44.95 | 6.43 |
| 80 P 308 | 12 S 10 | Radio, recorder, PA | 12 | 100 | 125 | $51 / 2 \times 61 / 4 \times 9^{\prime \prime}$ | 14 | 72.50 | 42.63 |
| 80 PZ 199 | 12 SS14 | TV, recorder, PA | 12 | 140 | 175 | $91 / 2 \times 91 / 2 \times 14^{\prime \prime}$ | 60 |  |  |
| 80 PU 309 | 12 H 15 | Radio, recorder, PA | 12 | 150 | 175 | $61 / 2 \times 71 / 2 \times 11^{\prime \prime}$ | 20 |  |  |
| 80 PU 198 | 12 SH 20 | TV, recorder, PA | 12 | 200 | 250 | $8 \times 91 / 2 \times 13^{\prime \prime}$ | 35 | 129.50 | 76.15 |
| 80 P 310 | 1101 M5 | Phono, amplifier | 110 | 50 | 60 | $31 / 2 \times 3 \times 413 / 6^{\prime \prime}$ | 4 | 28.5 | 6.76 |
| 80 P311 | 110L10 | Radio, recorder, PA | 110 | 100 | 150 | $51 / 2 \times 61 / 4 \times$ | 12 | 57. | 33.81 |
| 880 PU 312 | 110 H 25 | TV, recorder, PA | 110 110 | 250 350 | 325 450 |  | 20 | 89 |  |

## TERADO 6 AND 12 V. DC TO 110 V. AC CONVERTERS

Convenient DC-to-AC converters for operating 110 -volt AC electrical deverter plug fits automobile cigarette lighter socket, except for models marked f, which clip directly to the battery terminals with clips provided. The units permit operation of portable TV sets, radios, tape recorders, soldering irons, incandescent lights, electric razors, etc. Check wattage requirements of equipment, and voltage of auto battery,

- Use Electricity From Car


| Stock No. | Mfr's <br> Type |
| :---: | :---: |
| 80 P 194 | 50102 |
| 80 P 196 | 50103 |
|  | 50115 |
| 80 P 273 | 50116 |
| 80 P 270 | 50120 |
| 80 P 271 | 50127 |
| 80 P 276 | $50137 \dagger$ |
| 80 P 277 | $50138 \dagger$ |
| 80 P 287 | 50135 |
| 80 P 197 | $50134 \dagger$ |
| 80 PU 193 | 50153 |

\(\left.\left|\begin{array}{c|c}Input <br>
DC Volts <br>
\hline 6 <br>
12 <br>
\hline 6 <br>
12 <br>
\hline 6 <br>
12 <br>
\hline 6 <br>
12 <br>
\hline 60 cycles <br>
\hline 110 <br>
\hline 12 <br>
\hline 6 <br>
12 <br>

\hline 12\end{array}\right|\)| 110 |
| :---: |
| 110 |
| 110 |
| 110 |
| 110 |
| 110 | \right\rvert\,

$\left|\begin{array}{c|c}\text { Watts } \\ \hline \text { Cont. } & \text { Inter. } \\ \hline 10 & 15 \\ 15 & 20 \\ \hline 35 & 40 \\ 40 & 50 \\ \hline 60 & 75 \\ 75 & 85 \\ \hline 75 & 100 \\ 100 & 125 \\ \hline 55 & 75 \\ 85 & 110 \\ \hline 55 & 75 \\ 85 & 110 \\ \hline 175 & 200\end{array}\right|$

- Picnic or Camp in Comfort


50153
50103

59 J 255. List, \$12.95. NET............ 7.61


> SCHAUER QUALITY BATTERY CHARGERS

| Size | $\left\|\begin{array}{l} \text { Wt. } \\ \text { Lbs. } \end{array}\right\|$ | NET |
| :---: | :---: | :---: |
| $2 \times 3 \times 4$ | 2 | 7.77 |
| $21 / 2 \times 21 / 2 \times 41 / 2^{\prime \prime}$ | $\begin{aligned} & 31 / 4 \\ & 31 / 4 \end{aligned}$ | $\begin{aligned} & 13.17 \\ & 13.17 \\ & \hline \end{aligned}$ |
| $6 \times 5 \times 4{ }^{\prime \prime}$ | 8 8 | $\begin{aligned} & 28.17 \\ & 28.17 \end{aligned}$ |
| $6 \times 5 \times 4{ }^{\prime \prime}$ | 9 9 | $\begin{aligned} & 38.97 \\ & 38.97 \\ & \hline \end{aligned}$ |
| $6 \times 5 \times 4$ " | 9 | 32.97 |
| $4 \times 5 \times 6$ " | 9 | 31.17 |
| $6 \times 6 \times 11^{\prime \prime}$ | 24 | 59.97 |

## 10-AMPERE CHARGERS

Dependable, safe chargers utilizing the finest available materials and components; designed avalablecially to re-charge heavy-duty batteries as used in trucks, tractors and farm and mobile equipment. 10 ampere charging rate permits ver-night charging of most batteries. Ideal for quick charging during intervals when equipment is not in use, but must be ready in a hurry. Widely used for re-charging taxicab batteries, or other vehicle batteries which are required to power other electronic equipment in addition to automotive requirements. Has automatic safeguard provision for full, instantaneous protection against short circuits and overloads. Charging rate gradually is decreased as batteries approach full charge. Full-wave charging output for high operating efficiency. Has accurate ammeter, which indicates exact rate of charge. Supplied with cords and clips. $71 / 4 \times 61 / 4 \times 61 / \mathrm{s}^{\prime \prime}$. For operation from $110-120 \mathrm{v}$. ., 60 cycle AC. Shpg. Wi., 10 lbs . Model C3. For 6 -volt batteries.
80 P 163 . List, $\$ 26.95$. NET...
17.83

Model C312. For one 12 -volt or two 6 -volt batteries in series. Otherwise as above.
80 - 164 . List, $\$ 32.95$. NET........... 21.80

## 4-AMPERE CHARGERS

Model A3612. Compact, 4 -ampere, 6 -volt and 12-volt battery charger. Recharges the average battery overnight. Has a selector switch for changing from 6 -volt to 12 -volt operation. or long life, yet built of quality components Has autome and thoroughly reliable serainst short circuits and overloads. Rectifiers are selenium for long, efficient service. 4-ampere charging rate tapers to 2 amperes as battery charges. Has clip terminals. Quickly connected no need to disconnect the battery or remove it from car. Size, $61 / 4 \times 43 / 4 \times 41 / 4$. For $110-120 \mathrm{v}$., 60 cycle AC. Shpg. wt., $4^{3 / 4}$ lbs.
80 P 284 . List, $\$ 19.95$. NET....
13.20

Model A3. Efficient, 6 -volt overnight battery charger. Has a tapered 4 -amp. to 2-amp. charging rate. Includes full-wave charging output which makes possible higher efficiency of operation. Rectifiers are selenium for dependable service., Equipped with built-in "Charger and protection from battery failure. With cables and clips. Size, $61 / 4 \times 43 / 4 \times 41 / 4^{\prime \prime}$. For $110-$ 120 v .60 cycle Ac ${ }^{2}$ 120 v. 60 cycle AC. Shpg. wt., 4 lbs. 9.23


## Power Supplies \& Rectifiers

## ELECTRO-PRODUCTS POWER SUPPLIES



Model KPS-2 DC Power Supply Kit. A highly efficient easy-to-build unit. For servicing transistor portables and $6 / 12 \mathrm{v}$. auto sets. Two output ranges with separate current meters and output terminals. De ivers $0-20$ volts at 75 ma and $0-16$ at 5 amps. Variable transformer provides smooth voltage adjustment. $0-20 \mathrm{v}$. range has $75-\mathrm{ma}$ meter and fused secondary for transistor protection. $0-16 \mathrm{v}$. range has 10 -amp meter. Maximum ripple: $0-20$ v. range, $0.15 \%$ at $75 \mathrm{ma} ; 0-16 \mathrm{v}$. range, $0.5 \%$ at 5 amps . Special pi-type filter. Selenium rectifiers have conduction cooling for long life. Includes fused primary. With assembly instructions. Sturdy metal case. $81 / 2 \times 8 \times 53 / 4^{\prime \prime}$. For $110-120 \mathrm{v} .50-60$ cycle AC. Shpg. wt., 15 1bs.
80 PX 038 . NET
39.95

Model PS-2. Same as above, but factory wired and tested.
80 PX 039. NET.
Model EFB DC Power Supply Specially designed for exacting ments of transistor work. Ideal for servicing transistor auto sets, as wel as standard 6 and 12 -volt vibrator-powered equipment. Continuously variable voltage control. 0-16 volts for current loads up to 8 amps; 0-32 volts for loads up to 5 amps. Current and voltage indicated on pane meters with $2 \%$ D'Arsonval movements. Less than $0.1 \%$ AC ripple at maximum ratings; less than $.01 \%$ at loads up to 100 ma . Bridge-type selenium rectifiers have conduction-cooling design for long life. Employs pi-type filter with 2 chokes and 2 capacitors. Also has built-in "hash" filter. Fuseholder and 5 -way binding posts are conveniently located on front panel. Rugged, blue Hammerloid steel cabinet. $7 \times 12 \times 81 / 2^{\prime \prime}$. For $110-$ 120 v. 50-60 cycle AC. Shpg. wt., 35 lbs.
120.00


Model K-612T DC Power Supply Kit. Deluxe, easy-to-build unit. Designed for servicing transistor auto sets, as well as standard 6 and 12 -volt vibrator-powered models-also suitable for transistor portables. Two continuously variable ranges: $0-8$ volts and $0-16$ volts. 10 amps continuous duty up to 12 volts; up to 20 amps intermittent. Less than $0.5 \%$ ripple up to 5 amps; $2 \%$ at up to 10 amps. Four bridge-type selenium rectifiers with conduction cooling. Choke-input filter with $10,000 \mathrm{mfd}$. capacitor. Two panel meters for constant check on voltage and current. 0-8 Rugged steel cabinet with blue Hammerloid finish. Size, $7 \times 12 \times 81 / 2^{\prime \prime}$. For Rugged steel cabinet with blue Hammerioid
$110-120 \mathrm{v} .50-60$ cycle AC. Shpg. wt., 22 lbs. 80 PU 070 . NET
.44 .95
Model D-612T. Same as above but factory wired and tested.
80 PU 283. NET............................................................
Model NFB Power Supply. Deluxe unit for continuous heavy-duty operation; ideal for work on aircraft electronic equipment. Output continuously variable, $0-36$ volts for loads to 15 amps. D'Ársonval meters. Ripple: Less than $0.75 \%$ @ 15 amps . Filter circuit has two chokes and 6000 mfd of capacitance. Regulation: $16 \%$ no load to full load. Circuit breaker for overload protection. Variable autoformer for smooth output Bridge-type germanium rectifiers Blue Hammerlo 15 amper output. Bridge-type germanium rectifiers. Blue Hammerloid steel cabShpg, wt., 86 lbs.
80 pz 282 . NET.
210.00

Model NFBR. Same as NFB unit above, but for rack mounting. Has $1 / 8^{\prime \prime}$ steel panel $19 \times 101 / 2^{\prime \prime}$. Shpg. wt., 100 lbs .
235.00

## MALLORY POWER SUPPLIES

Highly efficient selenium-rectifier battery chargers. May also be used as power supplies for electro machines, relays, solenoids, etc Charging rate decreases as battery becomes charged, except with 6SAC4. Equipped with socket for use with R675 charging cord below. All have DC cord with batcharging cord below. All have DC cord with batPilot light dims as battery becomes charged and blinks if charger connections are shorted or reversed. For 6 v . batteries except *12 v. For 105-125 v. 60 cycle AC.

| Stock No. | Mfr's <br> Type | DC Amps |  | Max DC Amps Continuous | Sizes <br> H. W. D. | $\begin{aligned} & \text { Wt. } \\ & \text { Lbs. } \end{aligned}$ | List | $\begin{aligned} & \text { NET } \\ & \text { EACH } \end{aligned}$ |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  | Max | Taper |  |  |  |  |  |
| 80 P 086 | 6SAC4 | 4 | 4 | 3 | 45/8x41/4x | 51/4 | \$19.95 | 13.03 |
| 80 P 093 | 6SAC6 | 6 | 4 | 5 | 6 $7 / 8 \times 47 / 8 \times 43 / 4$ " | 6 | 22.95 | 4 |
| 80 P 094 | 6SAC10 | 10 | 7 | 8 | $71 / 8 \times 61 / 2 \times 53 / 4{ }^{\prime \prime}$ | 9 | 33.95 | 22.18 |
| 80 P 087 | 12SAC5* | 5 | 3 | 4 | $71 / 8 \times 61 / 2 \times 53 / 4$, | - | 33.95 | 22.18 |

Type R675 Charging Cord with Universal Lighter Plug. Charges car battery through cigarette lighter. 6-ft. cord. Shpg. wt., 6 oz .

PORTABLE AND MOBILE HIGH-VOLTAGE DC VIBRAPACKS


Mallory vibrapacks provide high-voltage DC from low-voltage storage batteries. Excellent as source of "B" power for portable radios, transmitters and receivers, mobile P.A. systems, etc. Have filter for vibrator hash. All are tube-rectifying types for use in circuits where self-bias is obtained through a resistor or choke between B-negative and ground. VP6-260, VP12-260 and VP24-260 can be converted to 200 v . DC output at 60 ma with simple wiring change. All require external filter circuit. Size, $53 / 8 \times 33 / 4 \times 41 / 2^{\prime \prime}$.

| Stock No. | Mfr's <br> Type | $\begin{array}{\|c\|} \hline \text { ngput } \\ \text { vDC } \end{array}$ | Output VDC | $\begin{aligned} & \text { Max. } \\ & \text { Ma. } \end{aligned}$ | Wt. Lbs. | List | $\begin{aligned} & \text { NET } \\ & \text { EACH } \end{aligned}$ |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 80 P 118 | VP6 -260 | 6 | 260 | 60 | 5 | \$28.95 | 17.02 |
| 80 P 119 | VP12-260 | 12 | 260 | 60 | 5 | 28.95 | 17.02 |
| 80 P 133 | VP24-260 | 24 | 260 | 60 | 6 | 30.95 | 18.20 |
| 80 P 116 | VP6 -325 | 6 | 325 | 100 | 6 | 29.95 | 17.61 |
| 80 P 117 | VP12-325 | 12 | 325 | 100 | 6 | 29.95 | 17.61 |
| 80 P 134 | VP24-325 | 24 | 325 | 100 | 6 | 32.95 | 19.37 |



## 12RS6DF BENCH POWER SUPPLY

Dual-range power supply for servicing car, truck and transistor radios. Range "A" supplies $0-16 \mathrm{v}$. at 6 amps continuously, or 14 amps intermittently. Range " $B$ '' provides 0.8 . at 10 amps continuously or 20 amps intermittently. $21 / 4^{\prime \prime}$ voltmeter and ammeter; ranges: $0-10 \mathrm{v}$. DC and $0-20$ amps DC. Provision for plugging in external ammeter. Includes built-in filter pack similar to Type MA-6-provides filtered output up to 6 amps at less than $0.5 \%$ ripple; 6 volts at less than 1 V . rms ripple; 12 volts at less than 0.5 v . rms ripple.
With automatic overload protection. Size, $63 / 4 \times 10^{3} / 8 \times 51 / 2^{\prime \prime}$. For $110-120$ v., 60 cycle AC. Shpg. wt., $121 / 2 \mathrm{lbs}$.
58.75


## 12RS14D "RECTOPOWER" BENCH SUPPLY

## Efficient versatile power supply. Provides filtered

 and continuously adjustable power for electronic equipment operating on 6 or 12 volts. Supplies 6 volts at 25 amps continuous or 40 amps intermittent; 12 volts at 14 amps continuous or 20 amps intermittent. Automatic voltage regulating system maintains constant output under varying load. Includes DC Voltmeter and DC ammeter. Overload protection. Has large-capacity electrolytic capacitors that provide power storage for operation of tifiers. Size, $11 \times 101 / 2 \times 81 / 4^{\prime \prime}$. For operation from $110-120$ volts, 60 cycle


## MALLORY DRY-DISC RECTIFIERS

Magnesium-copper sulphide rectifiers for use in low voltage DC power supplies of all types. Used in battery chargers, eliminators, model train supplies, etc. Singleperature extremes bridge type. $-90^{\circ}$ to $+265^{\circ} \mathrm{F}$.). Constant output without adjustments. "Self-healing; rectifying film. $\ddagger$ At full load. Type of mounting: *Insulated bolt; tgrounded foot; sinsulated stud. J suffix indicates universal design for all types of mounting.

| Stock No. | Mfr's <br> Type | Max. ACV Input | DC Volts Output $\ddagger$ | Cont. Duty Amps | $\begin{aligned} & \text { Size } \\ & \text { H. W. D. } \end{aligned}$ | Replacement in Equipment | Wt. Lbs. | List | $\begin{aligned} & \text { NET } \\ & \text { EACH } \end{aligned}$ |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 56P174 | 1B4R* | 3.2 | 1.7 | 1.5 | $7 / 8 \times 9 / 16 \times 1^{\prime \prime}$ | GTC Battery Eliminator | $1 / 4$ | \$2.90 | 89 |
| 56 P 175 | IB8R* | 6.4 | 3.4 | 1.5 | 7/8 $\times 9 / 16 \times 13 / 8$ | GTC Battery Eliminator | $1 / 4$ | 3.45 | 2.25 |
| 56 P 176 | [B12R* | 9.7 | 5.2 | 1.3 | $7 / 8 \times 9 / 16 \times 13 / 4$ | Electric Fence Supplies | 1/4 | 3.95 | 2.59 |
| 56 P 179 | IB12L5* | 9.7 | 5.0 | 4.5 | $25 / 8 \times 21 / 8 \times 21 / 2^{\prime \prime}$ | Mallory 6AC4-2 Charger | 1/2 | 7.10 | 4.65 |
| 56 P 180 | IB12C5* | 9.7 | 5.0 | 5.3 | $25 / 8 \times 21 / 8 \times 3{ }^{\prime \prime}$ | Mallory 6AC6-3 Charger | 3/4 | 8.95 | 85 |
| 56 P 170 | [B12C1J* | 9.8 | 5.1 | 3.2 | $15 / 8 \times 11 / 4 \times 23 / 4^{\prime \prime}$ | Mallory 3C, 6AC4 Booster | $3 / 4$ | 7.25 | 4.74 |
| 56P 177 | IS16CB7* | 12.8 | 6.6 | 6.0 | $3 \times 21 / 2 \times 3 \times 14^{\prime \prime}$ | $\begin{aligned} & \text { Mallory 5535B, 6AC6, } \\ & \text { IS16CB7M } \end{aligned}$ | $11 / 2$ | 12.00 | 7.84 |
| 56 P 181 | IS16B78 | 12.8 | 6.5 | 8.3 | $3 \times 21 / 2 \times 51 / 2^{\prime \prime}$ | 6-AC-10-2, 107, IS16B7M | 2 | 13.60 | 8.89 |
| 56 P 182 | IS16B9§ | 12.7 | 6.4 | 11.6 | $41 / 4 \times 31 / 2 \times 51 / 2^{\prime \prime}$ | Mallory 6AC10 |  | 15.50 | 10.13 |
| $56 P 171$ | F16C3 $\dagger$ | 13.0 | 6.8 | 3.9 | $21 / 8 \times 13 / 4 \times 3^{\prime}$ | Mallory 55.35 | 1 | 10.70 | 6.99 |
| 56 P 184 | F20C7 $\dagger$ | 16.2 | 8.4 | 4.8 | $33 / 46 \times 21 / 2 \times 43 / 8$ | ATR Battery Eliminators | 1 | 15.40 | 10.06 |
| 56 P 186 | IS24C7]8 | 19.4 | 10.1 | 4 | \|33/16 $\times 21 / 2 \times 43 / 4$ | Mallory 12-AC-5-2 | 21/2 | 15.45 | 0.09 |

## MALLORY MA-6 FILTER PACK



Model MA-6 Filter Pack. Designed for use wimh 12RS6D or other power supplies where additional filtering is required. Particularly useful when servicing transistor radios. Rated to handle output currents up to 6 amperes. Output ripple is less than $0.5 \%$ when used with 12RS6D.
Equipped with an acEquipped with an acwhich is placed in the circuit by depressing the automatic spring return switch located on the front panel. Matches the 12RS6D in appearance. Housed in handsome Hammertone case. Size, $47 / 8 \times 53 / 4 \times 61 / 2^{\prime \prime}$. Shpg. wt., $51 / 4$ lbs. 17.15
80 P 292. NET............................ 17 Model A-4 Filter Pack. Similar to model MA-6, but provides filtering for output currents of up to 4 amperes. Does not have meter Shpg. wt., $31 / 2$ lbs. Shpg. wt., 31/2 lbs.
80 P293. NET.
10.53

## Converters and Power Supplies



## 6-12 V. DC POWER SUPPLIES

(A) Type 610C-ELIF. Features either 6 volts A @ 10 amperes continuous, or 12 volts @ 6 amperes continuous. Has voltmeter and ammeter. Toggle switch selects 6 or 12 volts output. 8-position voltage selector control. For $105-125$ v. ${ }^{50-60}$ cycle AC. Gray steel case, $61 / 2 \times 91 / 8 \times 81 / 2^{\prime \prime}$. Shpg. wt., 22 lbs.
80 PU 243. NET.
.42 .95
A Type 620C-ELIT. Heavy-duty model. Uses (A) dual rectifiers-full wave assures noise less operation. Rated output: 6 voits at 20 am peres armeter 8 and ammeter. Gray steel case with handle. $127 / 8 \times 81 / 2^{\prime \prime}$. For $105-125$ volts, $50-60$ cycle AC. Shpg. wt., 33 lbs. 80 PU 234. NET
59.95

## 6 AND 12 V. SHAV-PAKS

(B) Miniature inverters especially designed to B operate standard AC electric shavers from 6 and 12 -volt storage batteries in autos, mens, trucks, boats and planes. Idealte sales receptacle. Both 6 and 12 -volt models provide 115 volts 60 cycle AC output at 15 watts. In attractively finished Hammerloid steel case. $4 \times 25 / 8 \times 23 / 4^{4}$. Shpg. wt., $21 / 2 \mathrm{lbs}$.
Model 6-SPB. For 6-volt operation. 81 P 944. List, \$9.95. NET.
6.63

Model 12-SPB. For 12 -volt operation.
6.63

## 6-12 V. BATTERY CHARGER

Model 612CA6. Charges 6 or 12 -volt storage batteries through cigarette lighter receptacle of
any vehicle. 6 amp any vehicle. 6 amp charge rate tapers to
3 amp. Circuit-break3 amp. Circuit-breaker eliminates need for
 ground vehicles. Has On-Off and Voltage Selecground vehicles. Has On-Of and rectifier. 81/2x
tor switches. Full-wave selenium
$51 / 2 \times 37 / \pi$. For operation from $110-120$ v., $50-60$ cycle AC. Fhpg wt. 8 lbs.
81 P 946. List, $\$ 27.95$. NET......... 20.96

## CARTER CONVERTERS

Super Converters For Tape \& Wire Recording
Rotary converters specially designed to operate tape and wire recorders from a DCpendable construction peatures cross-stacked armature laminations for reduction of eddy

current and hysteresis losses. Heavy, tripleinsulated magnet wire. Ideal power factor for recorder loads assures proper recording and playback performance. Efficiency, $60 \%$. Single-phase output only, with approximately $20 \%$ regulation, no load to full load. Output: 115 volts, 60 cycles AC. Supplied complete with plug-in AC receptacle and DC connect
cord. Size, $5 \times 81 / 4 \times 41 / 2^{\prime \prime}$. Shpg. wt., 15 lbs .
Type B1080CBW. 12 volts DC to 115 volts AC, 80 watts. Designed for all mobile applica-tions-ideal for railroad and marine use. Features drip-proof ventilated construction. Extra-ong-life brushes. $70 \%$ power factor up to 80 watts for operating most recorders. Easily carried from place to place; provided with extrastrong leather strap. Wt., 15 lbs.
80 P 058 . List $\$ 108.00$. NET.
79.38

Type B1010CBW4. 12 v . DC to 115 v . AC.
130 watts. Size $5 \times 81 / 4 \times 41 /^{\prime \prime}$. Shpg. wt., 15 lbs . 130 watts. Size, $5 \times 81 / 4 \times 41 /{ }^{\prime \prime}$. Shpg. wt., 15 lbs.
80 P 059 . List, $\$ 123.00 \mathrm{NET}^{2} . . . . . . .90 .40$
Type A1010CBW4. Same as above, but 6 v input. Shpg. wt., 15 lbs .
input. Shpg. Wt., 15 lbs .
80 P 069. List, $\$ 123.00$. NET.
....... 90.40

## ATR INVERTERS AND POWER SUPPLIES

## DC TO AC UNIVERSAL INVERTERS

Universal inverters for operating 110 -volt, 60 cycle AC equipment from DC voltages in autos, buses, trucks, boats, trains, planes and DC TV sets, radios, PA systems, electric razors, test equipment, etc. Units are carefully engineered and ruggedly constructed to provide long life operation. All feature complete RF interference suppression and exceptional frequency stability. Have operating efficiency in excess of $75 \%$. Four-point voltage regulator corrects output voltage for minimum and maximum loads, and also helps compensate for input voltages lower or higher than normal. Inverters are recommended for use with loads
having power factors in excess of $70 \%$. Built-in toggle switch selects most efficient operation for
 use with TV sets or tape recorders. Inverters are not recommended for use with large motor driven appliances such as refrigerators, washing machines, etc. All have On-Off switches. Housed in attractive gray Hammerloid metal cabinet with convenient leather carrying strap. Sizes: Standard Model RSF, 81/2x97/8x51/4"; Heavy-Duty Model RHG, $67 / 8 \times 111 / 4 \times 81 / 2^{\prime \prime}$; Extra-Heavy-Duty Model HSJ, 24 -volt ry operation. Before ordering inverter, be sure to check wattage rating of specific equipment with which inverter will be used

| Stock No. | $\begin{aligned} & \text { Mfr's } \\ & \text { Type } \end{aligned}$ | Input DC Volts | Output\| 60 Cycle | Watts |  | Wt., Lbs. | List | $\begin{aligned} & \text { NET } \\ & \text { EACH } \end{aligned}$ |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  |  |  | Cont. | Inter. |  |  |  |
| 81 PU922 | 6U-RSF | 6 | 110 v . | 80 | 100 | 22 | \$75.00 | 50.00 |
| 81 PU923 | 6U-R SF-P | 6 | 110 v . | 80 | 100 | 22 | 75.00 | 50.00 |
| 81 PU924 | 6U-RHG | 6 | 110 v . | 125 | 150 | 27 | 89.95 | 59.97 |
| 81 PU925 | 6U-HSJ | 6 | 110 v . | 150 | 175 | 37 | 125.00 | 83.34 |
| 81 PU926 | 12U-RSF | 12 | 110 v . | 100 | 125 | 22 | 75.00 | 50.00 |
| 81 PU927 | 12U-RSF-P | 12 | 110 v . | 100 | 125 | 22 | 75.00 | 50.00 |
| 81 PU928 | 12 U -RHG | 12 | 110 v . | 150 | 175 | 27 | 89.95 | 59.97 |
| 81 PU929 | 12U-HSJ | 12 | 110 v . | 200 | 250 | 37 | 125.00 | 83.34 |
| 81 PU 930 | 28U-RSF* | 28 | 110 v . | 100 | 125 | 22 | 89.95 | 59.97 |
| 81 PU931 | 28U-RHG* | 28 | 110 v. | 150 | 175 | 27 | 105.75 | 70.50 |
| 81 PU 932 | 28U-HSJ* | 28 | 110 v . | 200 | 250 | 37 | 145.00 | 96.67 |
| 81 PU933 | $32 \mathrm{U}-\mathrm{RSF}$ | 32 | 110 v. | 100 | 150 | 22 | 89.95 | 59.97 |
| 81 PU 934 | 32U-RHG | 32 | 110 v . | 180 | 200 | 30 | 105.75 | 70.50 |
| 81 PU935 | 32U-HSJ | 32 | 110 v . | 225 | 325 | 37 | 145.00 | 96.67 |
| 81 PU936 | 50U-R SF | 50 | 110 v . | 100 | 150 | 22 | 89.95 | 59.97 |
| 81 PU937 | 110U-RSF | 110 | 110 v . | 150 | 250 | 22 | 75.00 | 50.00 |
| 81 PU938 | 110AU-RHG | 110 | 110 v . | 250 | 325 | 27 | 89.95 | 59.97 |
| 81 PU939 | 110BU-RHG | 110 | 110 v . | 350 | 450 | 30 | 105.75 | 70.50 |
| 81 PU940 | 110U-HSJ | 110 | 110 v . | 400 | 600 | 37 | 145.00 | 96.67 |

## PORTABLE PLUG-IN TYPE INVERTERS

Lightweight inverters for operating 110 v . AC equipment from $D C$ voltage sources. Feature excellent frequency stability and high efficiency. 6 and 12 -volt units plug into cigarette lighter receptacle of any vehicle; others are equipped with standard 2 -prong plugs. All are designed especially for use with dictating machines; record players, electric razors, tape recorders and large motor driven appliances such as refrigera tors, washing machines, etc. Gray $51 / 44^{3 / 4} \times 2^{3 / 4^{\prime \prime}}$; RME and RMF $83 / 8 \times 8 \times 3 /^{\prime \prime} *$ R
 rating of equipment before ordering.

| Stock No. | $\begin{aligned} & \text { Mfr's } \\ & \text { Typp } \end{aligned}$ | DCVolts | Output 60 Cycle | Watts |  | Wt., Lbs. | List | $\underset{\text { EACT }}{\text { NET }}$ |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  |  |  | Cont. | Inter. |  |  |  |
| 80 P 246 | 6DME | 6 | 110 v . | 30 | 40 | 5 | \$19.95 | 13.30 |
| 80 P 289 | 6C-DME | 6/12 | 110 v . | 30 | 40 | 5 | 23.50 | 15.67 |
| 80 P 247 | ${ }_{6}^{6-R M F}$ | 6 | 110 110 v | 60 60 | 88 | 12 | 45.00 | 30.00 |
| ${ }_{80} 818449$ | 12-DME | ${ }^{6} 12$ | 110 v . | 40 | 50 | 5 | 19.95 | 13.30 |
| 80 P 266 | 12T-RME | 12 | 110 v . | 90 | 125 | 12 | 42.50 | 28.33 |
| 81 P942 | 28-RME* | 28 | 110 v . | 80 | 100 | 12 | 57.50 | 38.34 |
| 81 P 943 | 32-RME | 32 | 110 v . | 80 | 100 | 12 | 57.50 | 38.34 |
| 80 P 218 | 110-RME | 110 | 110 v . | 100 | 150 | 12 | 47.50 | 31.67 |



## PERMA-POWER QUALITY PRODUCTS

Versatile Power Supply and Radio Battery Eliminator


## RADIO BATTERY ELIMINATOR

- Ideal for Any $11 / 2$-Volt Radio
- Provides Hum-Free Operation
- Universal Sockets-Installs Easily

Model "A". Converts battery-operated radios and other appliances requiring low power for and other appliances requiring low power for Uses efficient selenium rectifiers; output is well-filtered direct current.
Maintains rated power under widely varying tube loads. "A" power: 1.35 volts to 1.5 volts DC , depending upon current drain; " $B$ " power: any 4,5 or 6 -tube radio with filaments designed for 1.5 -volt battery operation.
Fits easily in back of case of battery radios, as well as in battery compartments of most portables. Extremely compact- $21 / 8^{\prime \prime}$ high, $6^{3} / 4^{\prime \prime}$ wide and $41 / 2^{\prime \prime}$ deep. Variety of sockets permit use with most portable radios. U.L. Approved. Shpg. wt., 4 lbs.
80 P 176 . List,
\$20.95. NET
I2.32

## TRANSISTOR POWER SUPPLY

- Tests Transistor Portable Radios
- Operates Low-Power Circuits
- Highly Accurate, D'Arsonval Meters Model A-400. Exceptionally precise, versatil, power supply for testing, servicing and operat ng an types of low power transistorize Continously variable output uses autoforme control; two voltage ranges for exact setting o voltage required. Continuous current monitor ing of single transistor or entire set.

Meters have precision D'Arsonval movement Input Voltage: 115 v., $50-60$ cycles. Outpu Voltage: $0-15$ and $0-30$ volts DC. Output Cu ent: 0-15 and 0-60 ma. Ripple less than $0.002 \%$ $10 \times 61 / 2 \times 53 / 4^{\prime \prime}$. Shpg. wt., 16 lbs.
80 P 191 . NET.
. 63.2
Model A-410. As above, but output curren 0-20 and 0-200 ma. Shpg. wt., 16 lbs.
80 P 099. NET......................

## Burgess Porfable Radio Batteries

## LATEST LISTINGS FOR PORTABLE RADIO BATTERIES



Power-packed Burgess batteries are carefully manufactured to assure peak performance. The selection below covers types for nearly all portable radio needs, and Allied's extremely rapid stock turnover assures you of fresh batteries. Where type numbers in last four columns are separated by a diagonal mark, either number may be replaced by the Burgess battery shown at left. If you are not able to find the batteries which you require, give the make and type number of the original batteries, make and model
 number of your set, and we will supply the Burgess equivalent.

PORTABLE "A" BATTERIES

| Stock No. | $\begin{gathered} \text { Burgess } \\ \text { Type } \end{gathered}$ | Std. Pkg. | $\underset{\text { Price }}{\text { List }}$ | NET EACH |  | Volts | Size | Shpg. <br> Wt., <br> Lbs. | Replaces |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  |  |  | Single Lots | Std. Pkg. |  |  |  | Eveready | RCA | Philco | Zenith |
| 53 J 029 | D | 12 | \$0.20 | . 14 | . 13 | $11 / 2$ | 115/16x ${ }^{63 / 64^{\prime \prime}}$ dia., | 1/4 | 935 | VS035 | C | 27 |
| 53 J 069 | 2D | 1 | . 90 |  | . 63 | $11 / 2$ | $29 / 16 \times 19 / 32 \times 231 / 32^{\prime \prime}$ | 1/2 | 720 | VS069 |  |  |
| 53 J 000 | 2 F | 1 | 1.00 |  | . 70 | $111 / 2$ | 219/3x ${ }^{13 / 8 \times 4 / 1 / 4^{\prime \prime}}$ |  | W353 | VS141 |  |  |
| 53 J 001 | ${ }_{28}^{2 F 4}$ | 48 | 3.55 |  | 2.49 | ${ }_{1} 11 / 2$ | 4x213/16x57/6" ${ }^{2 \prime \prime}$ | $21 / 2$ | 718 950 | VS010 | P912 |  |
| 80 J 641 | 21R | 12 | . 40 | 31 | . 28 | $11 / 2$ | $\frac{1 / 8 \times 1{ }^{1 / / 64^{\prime \prime}} \mathrm{dia} \text {. }}{}$ | $1 / 2$ | 964 | VS236 | P77 | $\frac{25}{}$ |
| 53 J 049 | 37 | 1 | . 98 |  | . 65 | $11 / 2$ | $61 / 8 \times 15 / / 6^{\prime \prime}$ dia. |  |  |  |  |  |
| 53 J 003 | 4 F | 6 | 1.50 | 1.16 | 1.05 | $11 / 2$ | 25/8x25/8x43/3; | 11/2 | 742 | ViSö0 | $\bigcirc$ | $\ddot{794}$ |
| 53 J 045 | ${ }_{6}^{5 R}$ | 12 | . 20 | . 14 | . 13 | $11 / 2$ |  |  |  |  |  |  |
| 80 J 629 | 6 F | 1 | 2.15 | $\ldots$ | 1.51 | $11 / 2$ | $43 / 32 \times 23 / 4 \times 41 / 11^{\prime \prime}$ | 21/4 | 743 | VS007 |  | Z96 |
| 53 53 5 J 0066 | ${ }_{8}^{8 \mathrm{~F}}$ | ${ }_{24}^{1}$ | 2.85 .60 | . 46 | 1.99 .42 | $11 / 2$ |  |  | 741 960 P | VS070 | $\cdots$ | Z1/Ż955 |
| 53 J 047 | 9 R | 12 | . 17 | . 13 | . 12 | $11 / 2$ | $163 / 64{ }^{355} / 4^{\prime \prime}$ dia. | $1 / 4$ | 1015 E |  | ..... |  |
| 53 J 042 | B5 |  | 1.80 | 1.39 | 1.26 | $71 / 2$ | $329 / 32 \times 7 / 8 \times 22^{27 / 32^{\prime \prime}}$ | 1/2 | 713 | VS129 |  |  |
| 53 J 043 | C5 | 6 | 1.35 | 1.05 | . 95 | $71 / 2$ | $27 / 32 \times 1{ }^{15 / 6 \times 31 / 32^{\prime \prime}}$ | $3 / 4$ | 717 | VS065 | P31 | 2750 |
| 53 J 070 | D3 | ${ }_{6}^{6}$ | . 98 | . 76 | .69 | $411 / 2$ | 37/8x15/16x215/1619 | 3/4 | 726 | VS072 |  | 2450 |
| 80 J 624 | F3 | 6 | 1.05 | . 81 | . 74 | $411 / 2$ | $4 \times 17 / 16 \times 41 / 8^{\prime \prime}{ }^{\prime \prime}$ | $11 / 4$ | 736 | VS067 |  | 2736 |
| 53 J 011 53 5013 | ${ }_{\text {G3 }}$ | 6 | 1.35 1.20 | $\begin{array}{r}1.05 \\ \hline 18\end{array}$ | . 95 | $61 / 2$ |  | $11 / 2$ | 744 | VS009 | ${ }_{\text {P100 }}^{\text {P4F4R }}$ | Z83A |
| 53 J 071 | T5 | 3 | 1.65 | 1.29 | 1.17 | $71 / 2$ | ${ }_{217} 17 / 3 \times 2191 / 3 \times 2 \times 29 / 32^{\prime \prime}$ | $11 / 2$ | W360 |  |  |  |
| 80 J 625 | Z4 | 1 | . 90 |  | . 63 | 6 | $13 / 16 \times 13 / 16 \times 27 / 37^{\prime \prime}$ | $1 / 4$ | 724 | VS068 |  |  |


| PORTABLE "B" BATTERIES |  |  |  |  |  |  |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 80 J 535 | A30 | 2 | 3.25 | 2.50 | 2.27 | 45 | $39 / 16 \times 21 / 4 \times 45 / 1{ }^{\prime \prime}$ | 13/4 | W359 | VS014 | P210 | Z530 |
| 80 J 536 | B30 | 2 | 3.85 | 2.97 | 2.70 | 45 | $41 / 16 \times 217 / 32 \times 55 / 16^{\prime \prime}$ | $21 / 4$ | 484 | VS012 | P305 | Z550 |
| 80 J 631 | K45 | 6 | 3.15 | 2.43 | 2.21 | $671 / 2$ | $2^{11 / 16 \times 15 / 16 \times 21 / 4^{\prime \prime}}$ | $1 / 2$ | 457 | VS082 |  | Z457 |
| 80 J 546 | M30 | 6 | 3.15 | 2.43 | 2.21 | 45 | $51 / 2 \times 13 / 4 \times 39 / 16^{\prime \prime}$ | 2 | 482 | VS013 | P45 | Z783 |
| 80 J 632 | N60 | 6 | 4.25 | 3.28 | 2.98 | 90 | 311/16x19/32 $319 / 32^{\prime \prime}$ | 1 | 490 | VS090 | P132 | Z490 |
| 80 J 693 | N60X | 1 | 4.25 |  | 2.97 | 90 | $17 / 8 \times 15 / 16 \times 7^{\prime \prime}$ | 11/8 | 495 |  | P190 | Z495 |
| 80 J 642 | P45 | 6 | 3.10 | 2.39 | 2.17 | 671/2 | $129 / 32 \times 1 \times 59 / 32^{\prime \prime}$ | $3 / 4$ | 477 | VS218 | P149 | Z477 |
| 80 J 645 | P 45 M | 6 | 4.00 | 3.03 | 2.75 | $671 / 2$ | $129 / 64 \times 1 \times 59 / 32^{\prime \prime}$ | $3 / 4$ | 477 | VS215 | P175 |  |
| 80 J 665 | P60 | 6 | 3.75 | 2.89 | 2.63 | 90 | $129 / 32 \times 1 \times 713 / 32^{\prime \prime}$ | 1 | 479 | VS219 | P176 | Z90 |
| 80 J 646 | U30 | 1 | 2.50 |  | 1.75 | 45 | $13 / 32 \times 19 / 32 \times 117 / 32^{\prime \prime}$ | $1 / 4$ | 415 | VS086 | P150 | Z415 |
| 80 J 692 | UX45 | 1 | 2.95 |  | 2.07 | 671/2 | $13 / 16 \times 15 / 16 \times 33 / 8^{\prime \prime}$ | 1/2 | 416 | ..... | P217 | .... |
| 80 J 539 | W30PI | 1 | 3.33 |  | 2.33 | 45 | $231 / 32 \times 17 / 32 \times 329 / 32^{\prime \prime}$ | $3 / 4$ | 733 |  |  |  |
| 80 J 545 | XX30 | 6 | 2.45 | 1.89 | 1.72 | 45 | $217 / 32 \mathrm{X}^{31} / 32 \times 321 / 32^{\prime \prime}$ | $3 / 4$ | 455 | VS055 | P105 | Z455 |
| 80 J 544 | XX45 | 6 | 3.50 | 2.70 | 2.45 | 671/2 | $23 / 4 \times 1{ }^{111 / 32 \times 343 / 64{ }^{\prime \prime}}$ | 3/4 | 467 | VS016 | P67 | Z67 |
| 80 J 613 | XX50 | 6 | 3.95 | 3.05 | 2.77 | 75 | $127 / 32 \times 15 / 16 \times 6{ }^{15} / 11^{\prime \prime}$ | $11 / 4$ | 437 | VS217 | P144 | Z144/Z437 |
| 80 J 588 | XX69 | 1 | 5.95 |  | 4.19 | 1031/2 | $111 / 32 \times 111 / 32 \times 1{ }^{23} / 32^{\prime \prime}$ | $11 / 4$ | W361 |  |  |  |
| 80 J 537 | Z30 | 2 | 3.95 | 3.04 | 2.76 | 45 | $3 \times 25 / 16 \times 41 / 16^{\prime \prime}$ | $11 / 2$ | 738 | VS015 | P7R30/P104 | .... |



PORTABLE BATTERIES FOR TRANSISTOR RADIOS

| 53 J 089 | 130 | 12 | . 20 | .15 | . 14 | 11/2 | $15 / 16 \mathrm{x}^{63} / 4^{\prime \prime}$ dia. | 1/4 | 635 | VS035 | C/1311 | Z7 |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 80 J 684 | 2N6 | 1 | 1.85 | .... | 1.30 | 9 | $23 / 4 \times 13 / 8 \times 13 / 8^{\prime \prime}$ | $1 / 4$ | 246 | VS305 | P178 | ... |
| 80 J 664 | 2U6 | 1 | 1.65 |  | 1.16 | 9 | $17 / 8 x^{39} 64 \times 1^{\prime \prime}{ }^{\prime \prime}$ | 1/4 | 216 | ..... | $\cdots$ | .... |
| 53 J 096 | $2 \mathrm{Z3}$ | 12 | 1.59 | 1.22 | 1.11 | $41 / 2$ | $13 / 8 \times 13 / 8 \times 23 / 4^{\prime \prime}$ | 3/8 |  |  | $\div$ | . . . |
| 78 J 243 | 7 | 24 | . 125 | . 09 | . 08 | $11 / 2$ | $13 / 4 \times 13 / 32^{\prime \prime}$ dia. | 1/8 | 912 | VS074 | K | .... |
| 53 J 090 | 230 | 48 | . 25 | .17 | . 155 | 11/2 |  | 1/5 | A100 | VS336 | P920 |  |
| 80 J 683 | 4D4 | 1 | 3.95 | . | 2.76 | 6 | $75 / 16 \times 2 \times 217 / 32^{\prime \prime}$ | $21 / 2$ | 274 |  |  |  |
| 53 J 091 | 930 | 12 | . 17 | .13 | . 12 | $11 / 2$ | $1^{31} 132 \mathrm{x}^{35} / 64^{\prime \prime} \mathrm{dia}$. | 1/10 | 1015E | VS034 | P15 | Z8 |
| 80 J 690 | A4 | 1 | 1.00 |  | . 69 | 6 | $211 / 32 \times 19 / 32 \times 19 / 32^{\prime \prime}$ | $1 / 4$ | . . . | ..... | .... | .... |
| 80 J 694 | C6X | 1 | 1.60 | $\ldots$ | 1.10 | 9 | $25 / 16 \times 11 / 32 \times 61 / 16^{\prime \prime}$ | 3/4 | ... |  | .... |  |
| 53 J 087 | D5 | 1 | 1.45 | $\cdots$ | 1.00 | $71 / 2$ | $29 / 16 \times 2 \times 233 / 32^{\prime \prime}$ | 7/8 | 707 | VS315 | P26 | 2707 |
| 80 J 666 | D6 | 1 | 1.65 | .... | 1.16 |  | $35 / 32 \times 2 \times 29 / 16^{\prime \prime}$ | 1 | 276 | VS306 | P88 | Z276 |
| 80 J 691 | D6PI | 1 | 1.65 | $\ldots$ | 1.16 | 3, 6, 9 | $727 / 32 \times 17 / 16 \times 219 / 32^{\prime \prime}$ | $11 / 2$ | 2506 | VS301 | .... | .... |
| 53 J 093 | D6S | 1 | 1.50 |  | 1.05 |  | $21 / 4 \times 11 / 4 \times 729 / 33^{\prime \prime}$ | 11/8 |  |  |  |  |
| 53 J 092 | M6 | 1 | 1.50 |  | 1.05 | 9 | $113 / 16 \times 113 / 16 \times 27 / 16^{\prime \prime}$ | 2/5 | 266 | VS322 |  |  |
| 80 J 689 | NE | 48 | . 125 | . 09 | . 08 | $11 / 2$ | $11 / 64 \times 7 / 16^{\prime \prime}$ dia. | 1/4 | .... |  |  | $\cdots$ |
| 53 J 086 | P6 | 1 | 1.10 |  | . 77 |  | $31 / 32 \mathrm{x}^{31} / 32 \mathrm{x} 1^{31 / 32^{\prime \prime}}$ | $1 / 4$ |  |  |  | . . |
| 53 J 088 | P6M | 1 | 1.35 |  | . 93 |  | $31 / 32 \mathrm{x}^{31} 132 \times 1^{63} / 64^{\prime \prime}$ | 1/8 | 226 | VS300 | P91 |  |
| 80 J 679 | XX9 | 1 | 1.35 |  | . 95 | 9, 131/2 | $19 / 32 \mathrm{x}^{29} / 32 \times 217 / 32^{\prime \prime}$ | $1 / 4$ | 239 | VS304 |  |  |

## BATTERIES FOR ALL PURPOSES

Allied's rapid turnover stock always assures you of factory-freshness. If you do not find the batteries you require, give make and type of batteries, make and model of set, and we will supply the equivalents.

"FEATHERWEIGHT" "B" BATTERIES-INCLUDING HEARING AID TYPES

| Stock No. | $\begin{aligned} & \text { Burgess } \\ & \text { Type } \end{aligned}$ | Std. Pkg. | $\underset{\text { Price }}{\text { List }}$ | NET EA. Std. Pkg. | Volts | Size | Shpg.Wt. oz. | Zenith | Replaces |  | Acousticon |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  |  |  |  |  |  |  |  | Sonotone | $\begin{aligned} & \text { Ever- } \\ & \text { eady } \end{aligned}$ |  |
| 53 J 072 | XX15 | 1 | \$1.80 | 1.27 | $221 / 2$ | $111 / 32 \times 15 / 16 \times 37 / 8^{\prime \prime}$ | 4 |  |  | 425 P | 22 EW |
| 53 J 073 | XX22 | 1 | 2.05 | 1.44 |  | $21 / 32 \times 31 / 32 \times 31 / 8^{\prime \prime}$ |  |  |  | 433 P | 33 EW |
| 53 J 074 | X X 30PI | 1 | 2.50 | 1.75 | 45 | 217/32 ${ }^{31 / 32 \times 41 / 37^{\prime \prime}}$ | 12 | Z 30 | 230 | 455 P | 45EW |
| 53 53 5 | K-10 | 1 | 1.50 | 1.05 |  | $11 / 4 \times 7 / 8 \times 1{ }^{17 / 37^{\prime \prime}}$ | 2 |  |  | 417 |  |
| 53 J 095 | K-15 | 1 | 1.65 | 1.16 | $221 / 2$ | $11 / 4 \times 1 / 8 \times 29 / 33^{\prime \prime}$ | 2 |  |  | 420 |  |
| 53 J 075 | K20 | 1 | 1.95 | 1.37 | 30 | $2^{23 / 32 \times 15 / 16 \times 11 / 4^{\prime \prime}}$ | 3 |  |  | 430 |  |
| 53 J 076 | U10 | 1 | 1.15 | . 81 | 15 | $1 \mathrm{x}^{39} 96 \times 17 / 16^{\prime \prime}$ | 2 | Z 11 | 2ii | 411 | $711{ }^{\text {G }}$ |
| 53 J 077 | U15 | 1 | 1.50 | 1.05 | $221 / 2$ | $1 \times^{3} 964 \times 1{ }^{11} 1^{1 / 32^{\prime \prime}}$ | 2 | Z 12 | 212 | 412 | 712 H |
| 53 J 078 | U20 | 1 | 1.75 | 1.23 | 30 | $1 \mathrm{x}^{3} 964 \times 21 / 33^{\text {m }}$ | 2 | Z 13 | 213 | 413 | 713G |
| 53 J 080 | Y10 | 1 | 1.15 | . 81 |  | 19/32 ${ }^{19} 93 \times 123 /{ }^{23}{ }^{\prime \prime}$ | 3 |  | 25 | 504 | 715 G |
| 53 J 081 | Y15 | 1 | 1.50 | 1.05 | $221 / 2$ |  | 3 | 26 | 26 | 505 | 722G |
| 53 J 079 | Y20 | 1 | 1.85 | 1.30 | 30 | $19 / 32 \times 13 / 16 \times 113 / 16^{\prime \prime}$ | 3 |  | Z7 | 506 |  |
| 53 J 084 | Y20S | 1 | 1.85 | 1.30 | 30 | $19 / 32 \times 19 / 32 \times 29 / 16^{\prime \prime}$ | 3 |  |  | 507 |  |

## STANDARD DRY BATTERIES

Suitable for all radio and laboratory requirements. Burgess quality construction and insulators allow use of very active ingredients, providing maximum useful terminals: P.I.-plug-in terminals; S.C.-spring-clip terminals. All others have screw terminals.
"A" BATTERIES

| Stock | Burgess |  |  |  |  | NET | . |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| No. | Type | Volts | Size | Wt., Libs. | Pkg. | $\begin{array}{\|c\|} \hline \text { Single } \\ \text { Lots } \end{array}$ | Std. <br> Pkg. |
| 80 J 621 | 2 BBP | $11 / 2$ | $119 / 32 \mathrm{x}^{27 / 32 \times 211 / 16^{\prime \prime}}$ | 1/4 | 6 | 1.16 | 1.05 |
| 53 J 017 | 2 F 2 H |  | $25 / 8 \times 258 \times 41 / 16$ | $11 / 2$ | 5 | 1.09 | . 99 |
| 53 J 037 53 | ${ }_{2}^{2 F 2 B P P}$ | 3 |  | $1^{11 / 2}$ | 5 | . 878 | . 23 |
| 80 J 604 | 2Z2PI |  |  |  |  |  |  |
| 53 J 038 | 422 | 3 |  | 1/4 | 10 | . 67 | 1 |
| 53 J 035 | 432 | $41 / 2$ | $21 / 4 \times 1^{31} / 32 x^{21 / 32^{\prime \prime}}$ | $1 / 4$ | 10 | . 65 | . 59 |
| 53 J 023 | 44 | $11 / 2$ | $129 / 32$ dia. $\times 45 / 32^{\prime \prime}$ | $3 / 4$ | 1 |  | . 95 |
| $53 J 085$ | 532 | 41/2 | 215/32x ${ }^{13 / 16 \times 22^{23} / 33^{17}}$ |  | 1 |  | . 62 |
| 80 J 591 | B2BP |  |  | /4 |  |  | .94 |
| $53 \mathrm{JO18}$ | F2BP | 3 | $2^{2} 1 / 33 \times 1{ }^{3} / 8 \times 4{ }^{1 / 39^{\prime \prime}}$ | 1 | 5 | . 87 | . 79 |
| $53 \mathrm{JO16}$ | F4BP | 6 | 25/8×25/8x4 | $11 / 2$ | 1 |  | . 79 |

"B" BATTERIES

| Stock No. | $\begin{gathered} \text { Burgess } \\ \text { Type } \end{gathered}$ | Volts | Size | Shpg. Wt., Lbs. | Std. Pkg. | $\left\|\begin{array}{\|c\|} \hline \text { Net } \\ \text { SgI. } \\ \text { Lots } \end{array}\right\|$ | $\begin{aligned} & \text { Each } \\ & \text { Std. } \\ & \text { Pkg. } \end{aligned}$ |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 80 J 504 | 10308 PI | 45 | $8{ }^{1 / 32 \times 41 / 3 \times 73 / 16^{7}}$ | $111 / 2$ | 1 |  | 4.40 |
| 80 J 505 | 10308 SC | 45 | $881 / 32 \times 41 / 32 \times 73 / 16^{\prime \prime}{ }^{\prime \prime}$ | $113 / 4$ | 1 |  | 4.40 |
| 80 <br> 80 | ${ }_{2308 S C}$ | 45 |  | 13 | 1 |  | 4.88 3.50 |
| 80 J 510 | 4156 | 221 | 317/32 $\times 21 / 8 \times 2{ }^{29 / 32^{17}}$ | 1 | 1 |  | 1.61 |
| 80 J 51 | 5156PI | $221 / 2$ | $47 / 64 \times 23 / 8 \times 255 / 4^{\text {f }}$ | $13 / 4$ | 1 |  | 2.32 |
| 80 J 512 | 5156SC | $221 / 2$ | $41 / 8 \times 21 / 2 \times 234^{\prime \prime}$ | 13/4 | 5 | 2.55 | 2.32 |
| 80 J 508 | 5308 | +45 | 41/16x2916x51/8" |  | 1 |  | 3.05 |
| 80 J 626 | U-200 | 300 | $23 / 4 \times 29 / 32 \times 37 / 8^{\prime \prime}$ |  | 1 |  | 7.70 |
| 53 J 097 | D30 | 45 | $51 / 16 \times 21 / 32 \times 75 / 16^{\prime \prime}$ | 41/2 | 1 |  | 2.98 |
| $53 J 098$ | Z30T | 45 | $3 \times 25 / 16 \times 41{ }^{\prime \prime}{ }^{\prime \prime}$ | $11 / 2$ | 1 |  | 2.62 |
| 80 J 519 | W30BPX | 45 | $3 \times 11 / 4 \times 325 / 3{ }^{\prime \prime}$ | $1^{3 / 4}$ | 1 | - | 2.27 |
| 80 J 634 | Z60BP | ${ }_{90}^{45}$ |  | 11/2 | 1 | 70 | 2.45 8.90 |

"C" BATTERIES

| Stock No. | $\begin{aligned} & \text { Burgess } \\ & \text { Type } \end{aligned}$ | Volts | Size | Shpg. Wt., Lbs. | Std. Pkg. | Net <br> Sgl. <br> Lots | Std. Pkg. |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | 2370 | 41 | $315 / 16 \times 13 / 8 \times 2$ | $3 / 4$ | 5 | 1.17 | 1.06 |
| 80 J 513 | 2370 PI | $41 / 2$ | $41 / 64 \times 1^{27} / 64 \times 22^{63 / 64 "}$ | $1 /$ |  | 1.39 | 1.26 |
| 80 J 515 | 5360 | $41 / 2$ | 213/32 ${ }^{2} 7 / 32 \times 22^{1} 1 / 32^{19}$ | 1/4 | 10 | . 80 | . 73 |
| 80 J 514 | 5540 | $71 / 2$ | $4 \times 7 / 8 \times 23 / 4^{\prime \prime}$ |  | 5 | 1.34 | 1.22 |
| 80 J 623 | A98P | $131 / 2$ | $23 / 32 \times 23 / 32 \times 213 / 37^{\prime \prime}{ }^{\prime \prime}$ | 1/2 | 1 |  | 2.94 |
| 80 J J 516 | B5P ${ }_{\text {W5P }}$ | $71 / 2$ | ${ }^{45 / 32 \times 113 / 3 \times 22^{29 / 33^{\prime \prime}}}$ | 3/4 | 1 | 1.47 | 1.94 |

SPECIAL PURPOSE BATTERIES

## TAPE RECORDER BATTERIES

Extremely compact, highly dependable batteries. Designed specifically for use in pocket tape recorders. *Flat contact. †Snap type.

| Stock No. | $\begin{aligned} & \text { Type } \\ & \text { No. } \end{aligned}$ | Volts | Size | Wt., Lbs. | $\begin{aligned} & \text { NET } \\ & \text { EACH } \end{aligned}$ |
| :---: | :---: | :---: | :---: | :---: | :---: |
| $\begin{aligned} & 53 \mathrm{~J} 100 \\ & 53 \mathrm{~J} 101 \end{aligned}$ | $\begin{aligned} & 2 \mathrm{X} 62 \mathrm{X} \\ & 2 \mathrm{X} 7 \dagger \\ & 3 \mathrm{XX} 7 \end{aligned}$ | $\begin{aligned} & 11 / 2,9 \\ & 10^{11 / 2} \\ & 10^{1 / 2} \end{aligned}$ | $\begin{aligned} & 21 / 2 \times 125 / 32 \times 211 / 33^{\prime \prime \prime} \\ & 21 / 2 \times 125 / 3 \times 21 / 3^{\prime \prime} \\ & 13 / 8 \times 19 / 32 \times 35 / 8^{\prime \prime} \end{aligned}$ | $1 / 2$ $1 / 2$ $1 / 2$ | $\begin{aligned} & 1.82 \\ & 2.00 \end{aligned}$ |

## CAMERA MOTOR AND SOUND PROJECTION BATTERY

External power source for operating motion picture cameras as well as sound projection equipment. Spring-clip terminals.

| StockNo. | $\begin{aligned} & \text { Type } \\ & \text { No. } \end{aligned}$ | Volts | Size | $\begin{aligned} & \text { Wt., } \\ & \text { Lbs. } \end{aligned}$ | Std. Pkg. | NET EACH |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  |  |  |  |  | $\begin{gathered} \text { Single } \\ \text { Lots } \end{gathered}$ | Std. Pkg. |
| $53 \mathrm{J102}$ | 10338 | 491/2 | $81 / 4 \times 43 / 3 \times 711 / 16^{\prime \prime}$ | 121/2 | 3 | 6.60 | 6.00 |

## FLASHLIGHT BATTERIES

Top-quality cells for all popular sizes of flashlights. Chrome-protected for long service. Type 2 cells are sealed in steel and fully leakproof. All others are also protected against leakage; sealed in plastic and -foe standard flashlights; Type Z-for standard penlights; Type 7-for slim penlights; Type N-for miniature and novelty lights.
 miniature and novelty lights.

| Stock No. | $\begin{aligned} & \text { Burgess } \\ & \text { Type } \end{aligned}$ | Size | $\begin{aligned} & \text { Wt., } \\ & \text { Oz. } \end{aligned}$ | Std. Pkg. | LIST | NETEACH |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  |  |  |  |  | $\begin{aligned} & \text { Sgl. } \\ & \text { Lots } \end{aligned}$ | $\begin{aligned} & \text { Std. } \\ & \text { Pkg. } \end{aligned}$ |
| 53 J 029 | 1 | $115 / 16 \mathrm{x}^{63} 64^{\prime \prime}$ | 4 | 12 | . 20 | . 14 | .13 |
| 53 J 009 | 2 | $23 / 3 \times 121 / 6^{\prime \prime}$ | 6 | 50 | . 20 | . 14 | . 13 |
| 78 J 243 | 7 | $1{ }^{13 / 4 \times 13 / 32^{\prime \prime}}$ | 2 3 | 12 | . 125 | . 09 | . 08 |
| 53 53 5 | N | 111/44x ${ }^{1 / 16^{\prime \prime}}$ | 3 3 | 12 | . 125 | . 09 | . 08 |

IGNITION, TELEPHONE AND ALARM BATTERIES
Designed for emergency illumination, portable lighting, alarm systems. Used by railroads, police, fire departments and emergency crews. Dependable, leakproof metal container. Types 4 F 2 H and 4 FH recommended for general ignition, telephone and lantern service, etc.

| Stock No. | Burgess Type | Volts | Size |
| :---: | :---: | :---: | :---: |
| $53 \mathrm{JO24}$ | 4 FH | ${ }_{3}^{11 / 2}$ | $25 / 8 \times 25 / 8 \times 4^{\prime \prime}$ |
| $53 J 027$ | 4F2H |  | 329/32x211/16x513/3" |
| 80 J 601 | 4 F 5 H | $71 / 2$ |  |
| 53 J 033 | 4 F 6 H | 71/2 | 81/2x ${ }^{31} 1 / 32 \times 513 \times 16^{\prime \prime}$ |
| 80 J 638 | 6-Ign. | $11 / 2$ |  |
| 80 J 639 | 6-Tel. |  | $\begin{aligned} & 21 / 2 \times 658^{\prime \prime \prime} \\ & 21 / 2 \times 658^{\prime \prime} \end{aligned}$ |
| 80 <br> 80 | ${ }_{\text {S461 }}^{\text {6-Ind. }}$ | ${ }_{6}^{11 / 2}$ | 21/2 $\times 65 /{ }^{\prime \prime}$ $101 / 2 \times 23 / 4 \times 713 / 32^{\prime \prime}$ |

## LANTERN BATTERIES

For use with railroad-type lanterns. Type $F 4 H$ has positive coilspring contacts-a favorite of railroadmen. Type TW1S for underwater use.

| Stock No. | $\begin{gathered} \text { Burgess } \\ \text { Type } \end{gathered}$ | Voits | Size | Wt., Lbs. | Std. | NET EACH |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  |  |  |  |  | Single | Pkg. |
| $3 \mathrm{~J} 027$ | 4 F 2 H |  | 32 |  |  |  | . 3 |
| $53 \mathrm{~J} 028$ | $\mathrm{F}_{\mathrm{F}} 4 \mathrm{H}$ | 6 |  |  | 12 | 87 |  |
| 53 <br> 53 |  | 6 | $8 \times$ |  | 1 |  |  |
|  | TW1 | 6 | $53 / 8 \times 27 / 8 \times 4$ |  | 1 |  |  |
| 3 J 10 | TW1S | 6 | $53 / 8 \times 27 / 8 \times 415 / 1$ | 31/4 | 1 |  |  |

PHOTO-FLASH BATTERIES
8 Designed for high initial current discharge.

| $\begin{aligned} & \text { Stock } \\ & \text { No. } \end{aligned}$ | $\begin{array}{r} \text { Type } \\ \text { No. } \\ \hline \end{array}$ | Volts | Size | $\|\mathrm{Std} .\|$Pkg. | $\begin{aligned} & \text { Shpg. } \\ & \text { Wt. } \\ & \hline \end{aligned}$ | NET EACH |  | Replaces Eveready |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  |  |  |  |  | Single | Pkg. |  |
| $53 \mathrm{JO40}$ | 1208 | $11 / 2$ | 15/16x ${ }^{11}$ | 12 | 4 oz . | 14 | 13 | 835 |
| 53J039 | 2208 | $11 / 2$ | $225 / 6 \times 1{ }^{11} / 38^{\prime}$ | 12 | 6 oz . | $\pm 14$ | .13 | 850 |
| 53 J 41 | 9208 | 11/2 | $1^{131 / 3 x}{ }^{35} / 4^{\prime \prime} 4^{\prime \prime}{ }^{\prime \prime}$ | 24 | ${ }^{4} \mathrm{oz}$. | $101 / 2$ | . $0911 / 2$ | 815 |
| 53 J 070 | D3 | 41/2 | 37/8x15/16 $\times 215 / 16^{\prime \prime}$ | 6 | 3/4 lb . | . 76 | . 69 | 726 |
| $80 J 631$ | K45 | 671/2 | 211/16x15/16x21/4" | 6 | 1/2 lb. | 2.43 | 2.21 | 457 |
| $80 J 546$ | M30 | 45 | 319 $3 \times 13 \times 1 / 4 \times 51 / 2$ | 6 | 2 lbs . | 2.43 | 2.2 | 482 |
| 80 J 681 | $N 150$ | 225 | 39/16x23/4 $\times 43 / 4{ }^{0}$ | 1 | 11/2 lbs. |  | 5.56 | 492 |
| 80 J 632 | N60 | 90 | 311/16 $191932 \times 319 / 32^{\prime \prime}$ | 6 | 1 lb . | 3.28 | 2.98 | 490 |
| 53 J 076 | U10 | 15 | $1 \times 39 / 64 \times 17 / 11^{\prime \prime}$ | 1 | 20 oz |  | . 81 | 411 |
|  | U15PF \$ | 221/2 |  |  |  |  | 1.05 | 412 |
| 80 J 678 | U160 | 240 | 29/16x15/16x413/3 | 1 | 3/4 lb. |  | 5.56 | 491 |
| 53 J 078 | U20 | 300 |  | 1 | ${ }_{2}^{2 \mathrm{oz}} \mathrm{l}$ |  | 7.70 | 413 |
| 80 J 626 | U200 | 300 | $23 / 4 \times 29 / 32 \times 37 / 8^{\prime \prime}$ | 1 | 1 lb . |  | 7.70 |  |
| $80 J 68$ | U320 $\times 150$ | 510 |  |  |  |  | 11.16 | 497 |
| 80 J 677 | $\times \times 150$ $\times \times 45$ | 225 | $41 / 4 \times 25 / 8 \times 41 / 4$ | 1 | $21 / 2 \mathrm{lbs}$. |  | 6.96 |  |
| 80J 544 | XX45 Y10PF | $671 / 2$ 15 |  | 6 1 | $3 / 4 \mathrm{lb} .$ | 2.70 | 2.45 .81 | 467 504 |
| 53 J 081 | Y15PF | 221/2 |  | 1 | $3 \mathrm{oz}$. |  | 1.05 | 505 |

FARM RADIO PACKS

| Stock No. | Type | Volts | Size | Wt., Lbs. | $\begin{aligned} & \text { NET } \\ & \text { EACH } \end{aligned}$ |
| :---: | :---: | :---: | :---: | :---: | :---: |
| $80 \mathrm{JX572}$ | 17GD60 | 11/2,90 | 1511/16x43/8x71/16" | 20 | 7.21 |
| $80 J 635$ $80 J 636$ | 4SD60 S6D 60 | $11 / 2,90$ $71 / 2,9,90$ | 1011/16845/16x613/16" | 15 17 | 7.21 8.75 |

## RCA Batteries



## RCA PORTABLE, TRANSISTOR \& INDUSTRIAL BATTERIES

RCA batteries are scientifically designed to give maximum performance. The extensive selection of long-life RCA batteries in the listing below covers types for hundreds of industrial applications and virtually all portable radios in use today. If you cannot determine which batteries you require, give us the make and type number of the original batteries, plus the make and model number of your set. Because of our rapid stock turnover, you can always be sure of fresh batteries when you order from Allied. $\dagger$ Sealed in steel containers. §Other voltage taps: $11 / 2,3,41 / 2,6 . \ddagger 0$ ther voltage taps: $3,41 / 2,6,9,101 / 2,161 / 2$.

PORTABLE "A" BATTERIES

| Stock No. | $\begin{aligned} & \text { RCA } \\ & \text { Type } \\ & \hline \end{aligned}$ | Std. Pkg. | $\begin{gathered} \text { List } \\ \text { Price } \end{gathered}$ | NET EACH |  | Volts | Size | $\begin{aligned} & \text { Wt., } \\ & \text { Lbs. } \end{aligned}$ | Interchangeable With |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  |  |  | Single Lots | Std. Pkg. |  |  |  | Burgess | Eveready | Philco | Zenith |
| 80 J 900 | VS002 | 6 | 1.20 | . 94 | . 85 | $41 / 2$ | $411 / 16 \times 13 / 8 \times 4{ }^{\prime \prime}$ | 11/4 | G3 | 746 | P100 | Z83A |
| 80 J 901 | VS004 | 6 | 1.50 | 1.16 | 1.05 | $11 / 2$ | $41 / 16 \times 25 / 8 \times 25 /{ }^{\prime \prime}$ | $11 / 2$ | 4F | 742 | P94 | Z94 |
| 80 J 902 | VS009 | 6 | 1.35 | 1.05 | . 95 | 6 | $315 / 16 \times 25 / 8 \times 25 / 8^{\prime \prime}$ | $11 / 2$ | F4P1 | 744 | P4F4R |  |
| 80 J 947 | VS034 | 12 | . 125 | . 09 | . 08 | $11 / 2$ | 9/16x2" | $1 / 4$ | $Z$ | 915 | AA | Z8 |
| 80 J 948 | VS035 $\dagger$ | 12 | . 20 | . 135 | . 125 | $11 / 2$ | $1 \times 15 / 16^{\prime \prime}$ | $1 / 4$ | 1 | 935 | C | 27 |
| 80 J 903 | VS036 $\dagger$ | 48 | . 20 | . 135 | . 125 | $11 / 2$ | 15/16 $\times 23 / 8^{\prime \prime}$ | 1/2 | 2R | 950 | P912 | Z2NL |
| 80 J 962 | VS065 | 12 | 1.35 | 1.05 | . 95 | $71 / 2$ | $31 / 16 \times 2 \times 25 / 16^{\prime \prime}$ | $13 / 4$ | C5 | 717 | P31 | Z750 |
| 80 J 963 | VS067 | 6 | 1.05 | . 81 | . 74 | $41 / 2$ | $4 \times 13 / 8 \times 41 / 8^{\prime \prime}$ | 1 | F3 | 736 | P38 | 2736 |
| 80 J 965 | VS068 | 24 | . 90 | . 69 | . 63 | 6 | $13 / 16 \times 13 / 16 \times 23 / 8{ }^{\prime \prime}$ | $1 / 4$ | Z4 | 724 |  |  |
| 80 J 966 | VS069 | 12 | . 90 | . 69 | . 63 | $11 / 2$ | $29 / 16 \times 15 / 16 \times 27 / 8^{\prime \prime}$ | 3/4 | 2D | 720 |  |  |
| 80 J 967 | VS072 | 12 | . 98 | . 76 | . 69 | $41 / 2$ | $315 / 16 \times 15 / 16 \times 2{ }^{15 / 16^{\prime \prime}}$ | 1 | D3 | 726 |  | Z450 |
| 80 J 904 | VS073 | 48 | . 125 | . 09 | . 08 | $11 / 2$ | 7/16x13/16" | 1/8 | N | W463 |  |  |
| $80 \$ 897$ | VS074 | 12 | . 125 | . 09 | . 08 | $11 / 2$ | 7/16x11/4" |  |  | 912 |  |  |
| 80 J 912 | VS236 $\dagger$ | 12 | . 40 | .31 | . 28 | $11 / 2$ | $13 / 8 \times 43 / 16^{\prime \prime}$ | 1/2 | 21R | 964 | P77 | Z5 |
| 80」 294 | VS315 | 6 | 1.45 | 1.10 | 1.00 | $71 / 2$ | $29 / 16 \times 21 / 32 \times 213 / 16^{\prime \prime}$ | $1{ }^{1 / 2}$ | D5 | 707 | P26 | 2707 |


|  |  |  |  |  |  |  |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 80 J 906 | VS013 | 6 | 3.15 | 2.43 | 2.21 | 45 | $39 / 16 \times 1^{13 / 16 \times 51 / 2^{\prime \prime}}$ | 2 | M30 | 482 | P45 | Z783 |
| 80 J 907 | VS014 | 6 | 3.25 | 2.50 | 2.27 | 45 | $37 / 16 \times 21 / 4 \times 4916{ }^{\prime \prime}$ | $13 / 4$ | A30 | W359 | P210 | Z530 |
| 80 J 908 | VS015 | 6 | 3.95 | 3.04 | 2.76 | 221/2-45 | $3 \times 21 / 4 \times 4^{\prime \prime}$ | $11 / 2$ | Z30 | 738 | P104 |  |
| 80 J 909 | VS016 | 12 | 3.50 | 2.70 | 2.45 | $671 / 2$ | $23 / 4 \times 13 / 8 \times 33 / 4^{\prime \prime}$ | 1 | XX45 | 467 | P67 | 267 |
| 80 J 910 | VS055 | 12 | 2.70 | 2.08 | 1.89 | 45 | $211 / 16 \times 1 \times 311 / 16^{\prime \prime}$ | 3/4 | XX30 | 455 | P105 | Z455 |
| 80 J 889 | VS082 | 12 | 3.15 | 2.43 | 2.21 | 671/2 | $21 / 2 \times 13 / 8 \times 2^{13} / 16^{\prime \prime}$ | $3 / 4$ | K45 | 457 |  | Z457 |
| 80 J 913 | VS084 | 12 | 1.50 | 1.16 | 1.05 | 221/2 | $1 \times 5 / 8 \times 2^{\prime \prime}$ | 1/4 | U15 | 412 | P612 | Z12 |
| 80 J 969 | VS086 | 12 | 2.50 | 1.93 | 1.75 | 45 | 11/16x9/16x39/16" | 1/4 | U30 | 415 | P150 | Z415 |
| 80 J 911 | VS090 | 12 | 4.25 | 3.28 | 2.98 | 90 | $311 / 16 \times 13 / 8 \times 33 / 4{ }^{\prime \prime}$ |  | N60 | 490 | P132 | Z490 |
| 80 J 898 | VS215 | 24 | 3.50 | 2.70 | 2.45 | $671 / 2$ | $129 / 32 \times 1 \times 57 / 16^{\prime \prime}$ | 5/8 | P45M | 477 | P175 |  |
| 80 J 968 | VS217 | 12 | 3.95 | 3.05 | 2.77 | 75 | $113 / 16 \times 13 / 8 \times 61 / 4^{\prime \prime}$ | 1 | XX50 | 437 | P144 | Z437 |
| 80 J 999 | VS218 | 12 | 3.10 | 2.39 | 2.17 | $671 / 2$ | $57 / 16 \times 1 \times 1{ }^{129 / 32}$ | 1 | P45 | 477 | P149 | 2477 |
| 80 J 984 | VS219 | 12 | 3.75 | 2.89 | 2.63 | $90^{1}$ | $11 / 32 \times 11 / 32 \times 715 / 32^{\prime \prime}$ | 1 | P60 | 479 | P176 | 290 |
| 80 J 297 | VS316 | 6 | 4.25 | 3.27 | 2.97 | 90 | $115 / 16 \times 1{ }^{15} / 32 \times 7 / 8^{\prime \prime}$ | 1 | N60X | 495 | P190 |  |
| 80 J 296 | VS318 | 6 | 2.95 | 2.28 | 2.07 | 671/2 | $121 / 64 \times 63 / 64 \times 31 / 2^{\prime \prime}$ | 1 | . . . . . | 416 | . . . . |  |

PORTABLE "AB" BATTERIES

| $80 J 916$ | VS019 | 6 | 7.25 | 5.59 | 5.08 | 71/2-9 | $43 / 4 \times 23 / 4 \times$ | 6 | F6A60 | 753 | P841A | 2979 |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 80 J 920 | VS047 | 6 | 7.75 | 5.97 | 5.43 | 9-90 | $135 / 8 \times 23 / 4 \times 49 / 16^{\prime \prime}$ | 8 | G6B60 | 752 | P60B6F6 | 2985 |
| 80 J 921 | VS050 | 6 | 6.25 | 4.82 | 4.38 | 6-71/2-75 | $89 / 16 \times 27 / 8 \times 311 / 16^{\prime \prime}$ | 4 | T5Z50 | 755 | P350 |  |
| 80 J 933 | VS057W | 6 | 6.75 | 5.20 | 4.73 | 71/2-9-90 | $811 / 16 \times 23 / 16 \times 33 / 4{ }^{\prime \prime}$ | 4 | T6Z60 | 756 | P371 |  |
| 80 J 928 | VS058 | 6 | 6.85 | 5.28 | 4.80 | 9-90 | $91 / 2 \times 23 / 4 \times 43 / 81$ | 5 | F6A60P | 757 |  | Z909 |
| 80 J 888 | VS059 | 6 | 6.85 | 5.28 | 4.80 | 9-90 | $811 / 16 \times 23 / 16 \times 33 / 4^{\prime \prime}$ | 5 | T6Z60P | 727 |  | 2962 |
| 80 J 896 | VS060 | 6 | 6.25 | 4.82 | 4.38 | 71/2-75 | $311 / 16 \times 27 / 16 \times 89 / 16^{\prime \prime}$ | $31 / 2$ | T5Z50P | 785 |  | 2775 |

TRANSISTOR BATTERIES

| 80 J 961 | VS300 | 24 | 1.75 | 1.35 | 1.23 |  | $1^{31 / 32 x^{31} / 32^{\prime \prime}}$ | 1/4 | P6 | 226 | P91 |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 80 J 991 | VS301 | 12 | 1.65 | 1.28 | 1.16 | 3,6,9 | $23 / 4 \times 19 / 16 \times 8^{\prime \prime}$ | $11 / 4$ | D6P1 | 2506 |  |  |
| 80 J 837. | VS304 | 12 | 1.35 | 1.05 | . 95 | 9,131/2 | $23 / 4 \times 11 / 8 \times 13 / 4^{\prime \prime}$ | $1 / 4$ | XX9 | 239 |  |  |
| 80 J 838 | VS305 | 12 | 1.85 | 1.43 | 1.30 |  | $23 / 4 \times 13 / 8 \times 13 / 8^{\prime \prime}$ | $1 / 4$ | 2N6 | 246 | P178 |  |
| 80 J 839 | VS306 | 6 | 1.65 | 1.28 | 1.16 | 9 | $35 / 32 \times 21 / 32 \times 29 / 16^{\prime \prime}$ | , | D6 | 276 | P88 | Z276 |
| 80 J 840 | VS307 | 12 | 1.44 | 1.11 | 1.01 | 51/2 | $19 / 32 \mathrm{x}^{31 / 32^{\prime \prime}}$ | $1 / 8$ |  |  |  |  |
| 80 J 841 | VS308 | 12 | 1.28 | . 99 | . 90 | 4 | $11 / 16 \mathrm{x}^{31 / 32^{\prime \prime}}$ | 1/8 |  |  |  |  |
| 80 J 842 | VS309 | 12 | 1.61 | 1.24 | 1.13 | 9 | $129 / 32{ }^{35} / 6_{4}^{\prime \prime}$ | $1 / 16$ |  |  |  |  |
| 80 J 843 | VS310 | 12 | 1.29 | 1.00 | . 91 | 51/2 | $11 / 4 x^{35} / 64^{\prime \prime}$ | 1/32 |  |  |  |  |
| 80 J 844 | VS311 | 12 | 1.10 | . 85 | . 77 | 4 | $11 / 32 \times 35 / 64^{\prime \prime}$ | $1 / 32$ |  |  |  |  |
| 80 J 845 | VS312 | 12 | 2.75 | 2.04 | 1.85 | 8 | $1 \times 15 / 1{ }^{\prime \prime}$ | 1/8 | 2U6 | 216 |  |  |
| 80 J 846 | VS313 | 20 | . 75 | . 56 | . 51 | 1.4 | 9/16x131/32" | $1 / 16$ |  | E9 |  |  |
| 80 J 847 | VS314 | 12 | 1.10 | . 85 | . 77 | 9 | $1 \times 1 \times 1{ }^{15} /{ }^{\prime \prime}$ | 1/8 |  | 226 |  |  |
| 80 J 298 | VS321 | 12 | 2.75 | 2.12 | 1.93 | 4 | $213 / 16 \times 13 / 4 \times 811 / 32^{\prime \prime}$ | 3 |  | 2731 |  |  |
| 80 J 299 | VS322 | 12 | 1.50 | 1.15 | 1.05 | 9 | $1^{21 / 64 \times 2}{ }^{13} / 32^{\prime \prime}$ |  | M6 | 266 |  |  |
| 80 J 095 | VS336 | 48 | . 25 | .17 | . 155 | 11/2 | $1{ }^{13 / 16 \times 113 / 16 \times 27 / 16^{\prime \prime}}$ | (1/5 | 230 | A-100 |  |  |
| 80 J 949 | VS400 | 10 | 2.65 | 1.98 | 1.80 | 4 | $131 / 32 \times 11 / 32^{\prime \prime}$ | $1 / 4$ | ..... | E233 |  |  |


| $80 J 870$ | VS006C | 12 | 1.15 | . 84 | . 765 | $11 / 2$ | $25 / 8 \times 65 / 8^{\prime \prime}$ | $21 / 4$ |  | GL6 |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 80 J 871 | VS026 | 3 | 5.00 | 3.85 | 3.50 | 221/2-45 | $81 / 16 \times 33 / 16 \times 73 / 16^{\prime \prime}$ | $71 / 2$ | 2308 PI I | W365P | $\ddot{\mathrm{P}} 30 \mathrm{D}$ | 3544 |
| 80 J 937 | VS028 | 5 | 1.05 | . 80 | . 73 | $41 / 2$ | $27 / 8 \times 7 / 32 \times 22^{13 / 32^{\prime \prime}}$ | 1/2 | 5360 | 781 |  |  |
| 80 J 938 | VS029 | 10 | 1.75 | 1.34 | 1.22 | 71128 | $215 / 16 \times 113 / 16 \times 37 / 8^{\prime \prime}$ | $11 / 2$ | 5540 | 773 | P5B |  |
| 80 J 942 | VS039 | 3 | 4.75 | 3.49 | 3.17 | 6 | $103 / 8 \times 27 / 8 \times 73 / 8^{\prime \prime}$ | 11 | S461 | 1461 | P64 |  |
| 80 J 992 | VS040C | 10 | 1.19 | . 87 | . 79 | 6 | $211 / 16 \times 211 / 16 \times 45 / 16^{\prime \prime}$ | $11 / 4$ | F4H |  | P4F | Z107G |
| 80 J 950 | VS040S | 10 | 1.19 | . 87 | . 79 | 6 | $211 / 16 \times 211 / 16 \times 43 / 16^{\prime \prime}$ | $13 / 4$ | F4BP |  |  |  |
| 80 J 993 | VS070 | 25 | . 60 | . 46 | . 42 | $11 / 2$ | 15/16x41/16 ${ }^{\prime \prime}$ | $1 / 2$ | 8R | 1060 |  | Z1 |
| 80 J 890 | VS083 | 12 | 1.15 | . 89 | . 81 | 15 | $11 / 32 \times 5 / 8 \times 17 / 16^{\prime \prime}$ | $1 / 8$ | U10 | 411 |  | Z11 |
| 80 J 914 | VS085 | 12 | 1.75 | 1.35 | 1.23 | 30 | 29/16 $\times 5 / 8 \times 11 / 32^{\prime \prime}$ | $1 / 4$ | U20 | 413 |  | Z13 |
| 805989 | VS093 | 3 | 11.00 | 8.47 | 7.70 | 300 | $25 / 8 \times 23 / 16 \times 313 / 16^{\prime \prime}$ | 11/4 | U200 | 493 |  |  |
| 80 J 986 | VS101 | 8 | 1.15 | . 87 | . 79 | $11 / 2$ | $25 / 8 \times 13 / 8 \times 49 / 16^{\prime \prime}$ |  | 22 FBP | W354 |  |  |
| 80 J 951 | VS102 | 6 | 2.35 | 1.77 | 1.61 | $221 / 2$ | $33 / 8 \times 21 / 8 \times 23 / 4^{\prime \prime}$ | $11 / 4$ | 4156 | 763 |  |  |
| 80 J 957 | VS106 | 10 | 1.15 | . 84 | . 765 | $11 / 2$ | $211 / 16 \times 211 / 16 \times 43 / 16^{\prime \prime}$ | $11 / 2$ | 4 FH | 735 |  |  |
| 80 J 952 | VS112 | 5 | 4.35 | 3.36 | 3.05 | 221/2-45 | $57 / 16 \times 25 / 8 \times 41 / 8^{116}$ | $31 / 4$ | 5308 | W376 |  |  |
| 80 J 988 | VS114 | 5 | 3.50 | 2.70 | 2.45 | 221/2-45 | $3 \times 17 / 8 \times 415 / 16^{\prime \prime}$ |  | Z30NX | W350 |  |  |
| 80 J 873 | VS127W | 3 | 6.30 | 4.85 | 4.41 | 221/2-45 | $8 \times 4 \times 73 / 8^{\prime \prime}$ | 11 | 10308SC |  |  |  |
| 80 J 959 | VS130 | 8 | 1.50 | 1.17 | 1.06 | 11/2-3-41/2 | $315 / 16 \times 13 / 8 \times 3{ }^{\prime \prime}$ | 1 | 370 ST |  |  |  |
| 80 J 960 | VS131 | 5 | 3.30 | 2.55 | 2.32 | 221/2 $\ddagger$ | $41 / 8 \times 21 / 2 \times 35 / 16^{\prime \prime}$ |  | 5156SC | 778 |  |  |
| 80 J 987 | VS133 | 5 | . 90 | . 68 | . 62 | $41 / 2$ | $31 / 16 \times 13 / 16 \times 23 / 8{ }^{\prime \prime}$ |  | 532 | 703 |  |  |
| 80 J 892 | VS134 | 10 | . 75 | . 56 | . 51 | 3 | 17/16x ${ }^{3} / 4 \times 29 / 16^{\prime \prime}$ | $1 / 2$ | 422 | 750 | $\ldots$ |  |

# Batteries, Bias Cells, Clips \& Plugs 

## MALLORY MERCURY BATTERIES \& BIAS CELLS

## MERCURY TRANSISTOR RADIO BATTERIES



Mallory mercury batteries offer characteristics which assure peak performance of portable radios. They feature uniform discharge voltage, exceptionally long storage life, and are unaffected by extremes of temperature and humidity. They are ideal as secondary voltage standards,
and for hundreds of other applications where operating voltage is critical. Directly interchangeable with many available from the manufacturer, Allied will stock them. Av. shpg. wt., 2 oz.

| Stock No. | Mallory Type | Std. Pkg. | NET EACH |  | Volts? | $\begin{gathered} \text { Size } \\ \text { (Dia. } \times \mathrm{Hf} . \text { ) } \end{gathered}$ | Interchangeable With |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  |  | Single Lots | Std. Pkg. |  |  |  |  |  |  |  |
|  |  |  |  |  |  |  | Eveready | Burgess | RCA | Philco | Zenith |
| $80 \mathrm{J727}$ | ZM-9 | 2 | . 56 | . 51 | $11 / 2$ | $17 / 32 \times 1{ }^{13 / 32^{\prime \prime}}$ | E9 | Z | VS-034 | AA | Z8 or Z9 |
| 80 J 749 | DM-9N | 2 | . 59 | . 54 | $11 / 2$ | $17 / 32 \times 113 / 32^{\prime \prime}$ |  |  |  |  |  |
| 80 J 787 | TR-145R | 2 | 1.60 | 1.45 | $71 / 2$ | $21 / 32 \times 13 / 4^{\prime \prime}$ |  |  |  |  |  |
| 80 J 785 | TR-146R | 12 | 2.04 | 1.85 | 9 | $1 \mathrm{x}^{17 / 32 \times 115 / 16^{\prime \prime}}$ | E146 | 2U6 | VS-312 |  |  |
| 80 J 849 | TR-233R | 10 | 1.98 | 1.80 | 4 | $11 / 64 \times 1{ }^{131 / 32}{ }^{\prime \prime}$ | E233 |  | VS-400 | P696 |  |
| 80 J 788 | TR-246R | 10 | 2.20 | 2.00 | 9 | $13 / 16 \times 211 / 11^{\prime \prime}$ | 246 | 2N6 | VS-305 | P178 |  |
| 80 J 784 | RM-42R | 10 | 2.48 | 2.25 | $11 / 2$ | $11 / 5 \times 23 / 8^{\prime \prime}$ |  |  |  |  |  |

## MERCURY "A" BATTERIES

Extremely long shelf life and uniform discharge voltage. Resistant to humidity. + With $1 / 2^{\prime \prime}$ tab on positive terminal. Shpg. wt., 2 oz .

| Stock No. | Mfr's <br> Type | $\begin{gathered} \text { Size } \\ \left(\text { Dia. } \times H_{t}\right) \\ \hline \end{gathered}$ | Volts | Std. Pkg. | NET EACH |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  |  |  |  | Single | Std.Pkg. |
| 80 J 878 | RM1R | $5 / 8 \times 5 / 8^{\prime \prime}$ | 1.34 | 4 | . 42 | . 38 |
| 80 J 879 | RM3R | $1 \times 5 / 8^{\prime \prime}$ | 1.34 | 4 | . 59 | . 54 |
| 80 J 880 | RM4R | $17 / 32 x^{5 / 8 \prime}$ | 1.34 | 4 | . 76 | . 69 |
| 80 J 881 | RM12R | 5/82115/16" | 1.34 | 2 | . 90 | . 82 |
| 80 J 740 | RM4RT $\dagger$ | $13 / 16 x^{11 / 16 "}$ | 1.34 | 4 | . 84 | . 76 |
| 80 J 742 | RM42RT $\dagger$ | $13 / 16 \times 23 / 8^{\prime \prime}$ | 1.34 | 10 | 2.55 | 2.32 |
| 80 J 743 | RM400R | $716 \times 1 / 8^{\prime \prime}$ | 1.34 | 6 | . 28 | . 25 |
| 80 J 884 | RM401R | $7 / 16 \times 11 / 8^{\prime \prime}$ | 1.34 | 2 | . 37 | . 34 |
| 80 J 744 | RM450R | $7 / 16 \times 9 / 16^{\circ \prime}$ | 1.34 | 4 | . 37 | . 33 |
| 80 J 882 | RM502R | 1/2x115/16" | 1.34 | 2 | . 68 | . 62 |
| 80 J 147 | RM520R | 15/32 ${ }^{1 / 4}{ }^{\prime \prime}$ | 1.34 | 4 | .16 | . 15 |
| 80 J 883 | RM625RT $\dagger$ | 5/8 ${ }^{15} 14^{\prime \prime}$ | 1.34 | 4 | .40 | .36 |
| 80 J 745 | RM601R | $5 / 8 \times 11^{\prime \prime}$ | 1.34 | 2 | . 56 | . 51 |
| 80 J 746 | RM625R | $5 / 8 \times 1 / 4^{\prime \prime}$ | 1.34 | 4 | . 33 | . 30 |
| 80 J 747 | RM630R | $5 / 8 \times 1 / 4^{\prime \prime}$ | 1.34 | 4 | . 33 | 30 |
| 80 J 748 | RM640R | 5/8x7/16" | 1.34 | 4 | . 35 | . 32 |
| 80 J 148 | RM675R | 29964 ${ }^{13 / 64}$ | 1.34 | 6 | . 29 | . 26 |

## BIAS CELL CLIPS

Clips to hold grid bias cells listed at right. $11 / 2^{\prime \prime}$ tinned leads. Cells easily inserted; removed. 2 oz .

| Stock No. | Mfr's Type | Used With | Capacity | List | EACH |
| :---: | :---: | :---: | :---: | :---: | :---: |
| $\begin{aligned} & 9 \text { M } 952 \\ & 9 \text { M } 953 \\ & 9 \text { M } 954 \end{aligned}$ | $\begin{aligned} & \text { GB-15 } \\ & \text { GB-16 } \\ & \text { GB-17 } \end{aligned}$ | $\mathrm{BC}-3$ or $\mathrm{BC}-5$ | $\begin{aligned} & \text { 2-cell } \\ & \text { 4-cell } \\ & \text { 1-cell } \end{aligned}$ | $\begin{aligned} & 40 \mathrm{c} \\ & 40 \mathrm{c} \end{aligned}$ | 26c |

## WILLARD RECHARGEABLE BATTERIES

Type 25-2. For Portable Radios. Supplies 2 volts for in GE Models 250 and 260. Size (HWD): $6 \times 21 / 2 \times 234^{\prime \prime}$ Shpg. wt., $31 / 4 \mathrm{lbs}$
98 JU 023 . List, $\$ 11.15$. NET.
. 8.08
Type ER 6-2B. For Photo-Flash. Supplies 2 volts for 6 ampere-hours. 125 to 250 flashes per cycle of charge. Gives split-second shutter synchronization. Plain post terminals. $111 / 16 \times 23 / 8 \times 41 / 4^{\prime \prime}$. Wt., $11 / 2 \mathrm{lbs}$. $\qquad$ .5.52


Type ER-34-2. For Portable Radios. Supplies 2 volts for 34 amperehours. Battery has plain posts. $41 / 2 \times 41 / 2 \times 311 / 16^{\prime \prime}$. Wt., $51 / 4 \mathrm{lbs}$. 98 JU 025. List, $\$ 14.85$. NET.

## PLUGS FOR BATTERIES


*With 3 small prongs only. $\dagger 5$ prongs, 5 Fahnestock clips. 83 prongs. Av. shpg. wt., 1 oz. 2 per pkg.

| Stock No. | Fig. | For Burgess Batt. | For RCA Battery | Per Pkg. |
| :---: | :---: | :---: | :---: | :---: |
| 54 J 021 | ${ }_{\text {A }}$ | 2F4, F4P1 | VS009 | 64 |
| 54 J 022 | B* | XX15, XX22, X 30 P 1 |  | 144 |
| 54 J 023 | C | 6TA60, 4SD60, |  |  |
| 54 J 024 | D |  | VS054 $\mathrm{VS004}, \mathrm{VS069}$. | 84 |
| 54 J 024 | D | ${ }_{2}{ }^{2} \mathrm{D}, 8 \mathrm{R}$, ${ }^{\text {d }}$ | VS070, VS141 | 54 |
| 54 J 026 | F | D3, F3, G3 | VS067, V'S072 | 109 |
| 54 J 027 | G | B-5, C-5, T-5 | VS065 | 74 |
| 54 54 | E | $\begin{aligned} & \text { 2TXX40, 4GA42 } \\ & \text { F6A60, G6M60, } \end{aligned}$ |  | $14 ¢$ |
|  |  | $\begin{aligned} & \text { OAOU, GMOU, } \\ & \text { S6Z60, T5Z50, } \\ & \text { T6Z } \end{aligned}$ | VS018, VS019 <br> VS050, VS057W | $10 \%$ |
| 54 J 034 | B | A30, B30, M30, |  |  |
| 54 J 036 | $\dagger$ | $\begin{aligned} & \text { W30P1, Z30 } \\ & 5156 \mathrm{P} 1 \end{aligned}$ | VS014, VS015 | $\begin{array}{r} 14 \% \\ 406 \\ \hline \end{array}$ |
| 54 J 035 | § | 2370P1 | VS030 |  |
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| 78 J 269 | j ${ }^{-}$ | $\begin{aligned} & 10308 \mathrm{P} 1,{ }_{2308 \mathrm{P} 1}{ }^{21308 \mathrm{P} 1,} \text {, } \end{aligned}$ | VS026 | 94 |

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| RM502R,ZM-9 | $\begin{aligned} & 915,1015 \mathrm{E}, \\ & 505 \end{aligned}$ | .49 .64 |
| TR233R | $\begin{aligned} & \overline{\mathrm{E} 233,635}, \\ & 935 \end{aligned}$ | .30 .38 |
|  | 912 | . 23 |
| TR152R | W468,E401 | . 23 |
| TR132R,TR163R, |  |  |
| TR115R | E132 | . 30 |
| RM42R | $\overline{\mathrm{D}-99, \mathrm{~A}-100}$ | 30 |
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|  | 411 | 30 |
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|  | 413 | 30 |
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MOSLEY QSO INDEX. A handy Amateur tation accessory which permits the Amateur The index is arranged according to dis contacts. letters of the worked station E tobles the Am etters of the worked station. Enables the Amateur to quickly determine whether a given name of the operator of the other station. Has spiral plastic binding-lies flat; turns quickly. 20 pages. Size, $81 / 2 \times 11^{\prime \prime}$.

BEAM ANTENNA HANDBOOK. By William S. Orr, W6SAI (Radio Publications). A 'must' for any who has or is building a beam. A complete volume on parasitic antennas. Disacteristics, sun-spots, angle of radiation, and ground reflections. Covers antenna principles, the parasitic director and reflector, antenna height, transmission lines, and matchng devices. Provides a wealth of design information for beam antennas, including allmetal arrays, antenna construction and evaluation, antenna installation, and test equipment. Includes hundreds of tables, diagrams and photographs. Handbook is indexed and has 128 pages. Size $51 / 2 \times 81 / 2^{\prime \prime}$
2.70

SO YOU WANT TO BE A HAM. (Howard Sams publication). By Robert Hertzberg. Excellent information for those interested in Amateur radio and who would like to get started in this fascinating hobby. Provides the reader with an understanding of the licensing regulalions governing Amateurs, and how to get your of Amateur transmitting and receiving types of Amateur transmitting and receiving equipments the various phases of Amateur activities, such as 'ragchewing', DX, experimenting, etc. such as ragchewin
186 pages. $51 / 2 \times 81 / 2$
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2.50

## COMMERCIAL Q \& A BOOKS

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37 K 638. Postpaid in U.S.A.
6.47

RADIO OPERATING QUESTIONS AND ANSWERS. (McGraw-Hill Pub.). By J. L. Hornung. For those preparing to take radio operator license examinations. Latest, up-to-the tion elements. An indispensable reference for new license applicants, or those applying for endorsements for existing licenses. Over 2000 questions and answers on theory, apparatus, circuits, laws and regulations. Partial list of contents: Basic Radio Laws; Basic Theory and Practice; Radio-Telephone; Advanced RadioTelegraphy; Operating Abbreviations, etc. 571 pages. Size, $51 / 2 \times 8^{\prime \prime}$. Illustrated.
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COMMERCIAL RADIO OPERATOR'SLICENSE GUIDES. By Martin Schwartz (AMECO). Manuals for those planning to take FCC commercial radio operator examinations. Contains the questions likely to be asked on the exams, with the appropriate answers, given in a ment 4 , in adremember style. Mantal a detailed and simplified answer for each study question, contains a sample FCC-type El. 4 exam (using multiple-choice questions). (Elements 1 and 2 are required for the 3 rd class radio-telephone examination, 1 to 3 for 2 nd class radiotelephone, 1 to 4 for 1 ist class radiotelephone.) Size, $38 \dot{\mathrm{~K}} 866$.
38 K 866. Elements 1-2. 48 pages. NET. 73 C 38 K 867. Element 3. 121 pages. NET

HOW TO LISTEN TO THE WORLD. By O. Lund Johansen (World Radio-Television Handbook). Helps short-wave listeners to get the best out of their receivers and antennas. rofusely illustrated with userul drawings and tables. Chapters include fundamentals of short waves, antennas, shack arrangements, how to dentify languages, differences in time, how to tions, how to describe various kinds of music, QSL bureaus, etc. 54 pages. $61 / 4 \times 81 / 2^{\prime \prime}$. 60 C GETTING STARTED IN AMATEUR RAGIO. By Julius Berens, W2PIK (Rider). An DIO. By Julius Berens, W2PIK (Rider). An excellent an amateur radio operator. Written in an come an amateur radio operator. Written in an leads the reader through every step necessary lo obtain a license. Chapter topics include what ham radio is, how to best learn the code, what ham radio is, how to best learn the code, tions. Book also contains sample license exminations and study questions with clear, aminations and study questins
detailed answers. $51 / 2 \times 81 / 2^{\prime \prime} .144$ pages. 2.35 VHF HANDBOOK. By William I. Orr, W6SAI and H. G. Johnson, W6QKI (Radio Publications). A comprehensive manual covering all facets of VHF for the amateur. Book is detailed and authoritative-covers both practical and theoretical aspects of the VHF field. Twelve chapters, including titles such as: Ionospheric Propagation, Component Considerations, Circuitry, Antenna Constructions, Receiver Design, Receiver Construction, TransTest Equipment, etc Size, $51 / 2 \times 81 /{ }^{\prime \prime}$. 210 pages.
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HF-81K


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The post office charges a fraction of a pound as a full pound. For example, if the total weight is 5 pounds and 1 ounce to Zone 4, postage would be for 6 pounds (59\%).

| $\begin{aligned} & \text { WEIGHT } \\ & \text { POUNDS } \\ & \hline \end{aligned}$ | Chicago | 1st \& 2nd Zone, up to 150 mi . | 3rdZone 150 to 300 mi . | $\begin{gathered} \text { 4th Zone } \\ 300 \text { to } \\ 600 \mathrm{mi} . \end{gathered}$ | 5th Zone 600 to 1000 mi . | $\begin{gathered} 6 \text { th Zone } \\ 1000 \text { to } \\ 1400 \mathrm{mi} . \\ \hline \end{gathered}$ | 7th Zone 1400 to 1800 mi . | 8th Zone Over 1800 mi . |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 1 | . 18 | . 23 | . 23 | . 24 | . 26 | . 28 | . 30 | . 32 |
| 2 | . 20 | . 27 | . 29 | . 31 | . 36 | . 40 | . 46 | . 51 |
| 3 | . 21 | . 31 | . 34 | . 38 | . 45 | . 52 | .61 | . 69 |
| 4 | . 23 | . 35 | . 39 | . 45 | . 54 | . 64 | . 76 | . 87 |
| 5 | . 24 | . 39 | . 44 | . 52 | . 63 | . 76 | . 91 | 1.05 |
| 6 | . 26 | . 43 | . 49 | . 59 | . 73 | . 88 | 1.06 | 1.23 |
| 7 | . 27 | . 47 | . 54 | . 66 | . 82 | 1.00 | 1.22 | 1.41 |
| 8 | . 29 | . 51 | . 60 | . 73 | . 91 | 1.12 | 1.37 | 1.59 |
| 9 | . 30 | . 55 | . 65 | . 80 | 1.00 | 1.24 | 1.52 | 1.77 |
| 10 | . 32 | . 59 | . 70 | . 87 | 1.10 | 1.36 | 1.67 | 1.95 |
| 11 | . 33 | . 63 | . 75 | . 93 | 1.19 | 1.48 | 1.82 | 2.13 |
| 12 | . 34 | . 67 | . 80 | 1.00 | 1.28 | 1.60 | 1.98 | 2.31 |
| 13 | . 36 | .71 | . 85 | 1.07 | 1.37 | 1.72 | 2.13 | 2.49 |
| 14 | . 37 | . 75 | . 90 | 1.14 | 1.47 | 1.84 | 2.28 | 2.67 |
| 15 | . 39 | . 79 | . 96 | 1.21 | 1.56 | 1.96 | 2.43 | 2.85 |
| 16 | .40 | . 83 | 1.01 | 1.28 | 1.65 | 2.08 | 2.58 | 3.03 |
| 17 | . 42 | . 87 | 1.06 | 1.35 | 1.74 | 2.20 | 2.74 | 3.21 |
| 18 | . 43 | . 91 | 1.11 | 1.42 | 1.84 | 2.32 | 2.89 | 3.39 |
| 19 | . 45 | . 95 | 1.16 | 1.49 | 1.93 | 2.44 | 3.04 | 3.57 |
| 20 | . 46 | . 99 | 1.21 | 1.56 | 2.02 | 2.56 | 3.19 | 3.75 |
| For Each Extra Lb. | Add $11 / 2 \mathrm{c}$ Over 20 | Add 4 c pounds | Add 5c hlpped | Add $7 c$ press or | Add $91 / 4 \mathrm{c}$ ruck. See | Add $12 c$ column | Add $151 / 4 \mathrm{c}$ <br> left. | $\begin{array}{r} \hline \text { Add } \\ 18 \mathrm{c} \end{array}$ |

EXPRESS: Please remit full amount for merchandise, but do not send any money for express charges with your order. All transportation charges are collected on delivery at no extra cost to you. All "U" and "Z" items (see column at left) are usually shipped by express. In addition, to assure safe arrival, we ship by express many hi-fi units, communications equipment, sound systems, transmitting and TV tubes, recorders, test units, and other fragile merchandise. If there is no agent at your location, please specify your nearest express office. Express rates include insurance.

HOW TO ESTIMATE EXPRESS CHARGES
(Rates are about $10 \%$ higher to eastern states.)

| Weight Pounds | Maximum Distance in Miles |  |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | 50 | 150 | 300 | 500 | 750 | 1000 | 1500 | 2250 |
| 5 | 2.01 | 2.01 | 2.01 | 2.01 | 2.01 | 2.08 | 2.22 | 2.41 |
| 10 | 2.01 | 2.01 | 2.08 | 2.24 | 2.37 | 2.51 | 2.77 | 3.17 |
| 15 | 2.01 | 2.08 | 2.30 | 2.53 | 2.72 | 2.92 | 3.33 | 3.94 |
| 20 | 2.03 | 2.23 | 2.52 | 2.82 | 3.08 | 3.35 | 3.90 | 4.70 |
| 25 | 2.12 | 2.37 | 2.72 | 3.11 | 3.45 | 3.79 | 4.45 | 5.46 |
| 35 | 2.32 | 2.66 | 3.16 | 3.69 | 4.16 | 4.63 | 5.57 | 6.99 |
| 45 | 2.51 | 2.93 | 3.60 | 4.27 | 4.89 | 5.49 | 6.70 | 8.52 |
| 55 | 2.69 | 3.22 | 4.02 | 4.87 | 5.60 | 6.34 | 7.82 | 10.04 |
| 70 | 2.98 | 3.66 | 4.67 | 5.73 | 6.68 | 7.62 | 9.51 | 12.33 |
| 80 | 3.17 | 3.95 | 5.11 | 6.32 | 7.38 | 8.47 | 10.63 | 13.85 |
| $\begin{aligned} & \text { For Each } \\ & 100 \text { Lbs. } \end{aligned}$ | 3.55 | 4.51 | 5.98 | 7.48 | 8.83 | 10.17 | 12.86 | 16.90 |

AIR SHIPMENTS: We will ship your order by Air Parcel Post, Air Express or Air Freight if you instruct us to do so. Air Parcel Post rates are given below. Consult your local express office for Air Express charges, and your nearest commercial airport office for Air Freight rates. Air Parcel Post size and weight limits are 70 lbs . and $100^{\prime \prime}$, length and girth combined.

## AIR PARCEL POST RATES

| ZONES | 1,2 \& 3 | 4 | 5 | 6 | 7 | 8 | U. S. Territories, Possessions and APO \& FPO Addresses, 80 c per lb. |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 1 st Lb. | 60c | 65 c | 70c | 75c | 75 c | 80 c |  |
| $\begin{aligned} & \text { For Each } \\ & \text { Extra Lb. } \end{aligned}$ | $\begin{aligned} & \text { Add } \\ & 48 \mathrm{c} \end{aligned}$ | $\begin{aligned} & \text { Add } \\ & 50 \mathrm{c} \end{aligned}$ | $\begin{aligned} & \text { Add } \\ & 56 \mathrm{c} \end{aligned}$ | $\begin{aligned} & \text { Add } \\ & 64 \mathrm{c} \end{aligned}$ | $\begin{aligned} & \text { Add } \\ & 72 \mathrm{c} \end{aligned}$ | $\begin{aligned} & \text { Add } \\ & 80 \mathrm{c} \\ & \hline \end{aligned}$ |  |

FREIGHT: If speed is not essential, freight is cheapest on heavy shipments. Minimum charge is for 100 pounds. For truck freight, you may specify the truck line you prefer.

## IMPORTANT ORDER INFORMATION

Every item you buy from us must satisfy in every way-or we want you to return it at once for exchange, repair or refund. See Page 1 for full details of our guarantees which protect you on every purchase.

## CASH TERMS

Our general terms of sale are cash with order. You save payment of C.O.D. fees by including full remittance with your order. Every penny not used is refunded. If desired, we will ship C.O.D. See opposite page for C.O.D. orders.

## NEW EASY PAY TERMS

The new minimum is only $\$ 20.00$ and you can buy anything in this catalog (except tubes and parts) for only $10 \%$ down. Your application form is on the back of our order blanks. Get what you want now on easy terms. See Page 444 for details.

## OPEN ACCOUNTS

We ship on open account to wellrated firms, schools, institutions and government agencies. Firms without a published rating may apply for an open account by submitting three trade or bank references. Terms are net, 10 days, E.O.M.

## ABOUT OUR PRICES



## IF IT IS NECESSARY TO WRITE TO US . . .

On cash orders, we return your original order and all related papers. Before writing us, please check explanations on your order and attached papers. If you do find it necessary to write us, please include all order papers and correspondence that apply. If you do not have the order papers, be sure to give in detail the stock numbers and descriptions of the items ordered and the same name and address as on your original order. On Easy Payment or Open Account orders, only your invoice or account number is necessary.

## HOW TO RETURN MERCHANDISE

Please include your instructions with your shipment, pack the merchandise carefully and insure.
On parcel post, place your instructions, all order papers and correspondence in an envelope inside your package. On the outside, mark "First Class Mail Enclosed" and affix additional first class postage for the enclosure.
On express shipments, place all papers in a stamped and sealed envelope inside the package. Date this envelope and draw several lines across postage stamp with a pen.
Your name and address should be plainly marked on your enclosure as well as on the outside of your package. Note: Merchandise not regularly stocked, but obtained especially for you, may not be returned for refund or exchange.

You Pay NET Catalog Prices. Catalog prices are net, f.o.b. Chicago, except where otherwise indicated. All trade and cash discounts have already been deducted from every price. Our NET catalog prices are the prices you pay.

Your Order is Shipped at the Current Price. Prices in this book replace prices in all previous Allied catalogs and are subject to change without notice. Orders will be filled at prices in effect at time of shipment.

You Get Immediate Benefit of Any Price Reductions. If prices are reduced during the life of this catalog, we always give you the advantage of the lower prices and refund the difference. We reserve the right to add any Federal, State or Local taxes now in effect or which may be levied after this book is printed.

## TELEPHONE ORDERS



## Phone: HAymarket 1-6800

We have a specially trained staff to handle your telephone orders. If you are in a hurry for any merchandise, telephone your order. It will be filled and shipped promptly. For extra-fast service, specify Air Shipment (see opposite page).

## VISIT OUR CENTRAL SALESROOMS AND HI-FI STUDIOS

Salesrooms where you can obtain all merchandise listed in this catalog, as well as High Fidelity demonstration studios, are located in our main building at 100 N. Western Ave. You are invited to come in to see us. Enjoy a thrilling Hi-Fi demonstration, check the Knight Kits wired for your inspection, and examine tape recorders, tools, test instruments, sound equipment, and the great variety of other merchandise we have on display.
Our location at Western Avenue and Washington Blvd. is only a short distance from Chicago's Loop.


100 N. WESTERN AVE. CHICAGO 80, ILH.

# NOW... ENJOY INCREASED BUYING POWER WITH Allied's New Easy Payment Plan <br>  


all merchandise in this catalog, except parts and tubes, is sold on our new easy pay plan. use separate order blank for parts and tubes on regular terms.

## ALLIED'S NEW EASY PAYMENT TERMS

Minimum Order- $\$ 20.00$ total cash value.
Down Payment-10\%. A bigger down payment will reduce carrying charge and monthly payments. No down payment required on add-ons for less than \$100.00.
Carrying Charge-See table. No carrying charges if paid in 60 days. See below.
Monthly Payments-See table. All monthly payments are for equal amounts, except last payment, which is for the odd amount remaining due. Minimum $\$ 5.00$ per month.

## NO CHARGES IF PAID IN 60 DAYS

You may take the full time to pay if you wish, but if you complete payments on your contract within sixty days after shipment you will receive a full refund of carrying charges. A partial refund is made for full advance payment after sixty days.

## HOW TO BUY ON EASY PAY PLAN

Use your Allied order blank to enter the merchandise you want to buy on easy terms. Fill in the answers to the simple questions on the back of the order blank and sign it. Attach your remittance for the down payment ( $10 \%$ or more) and mail your order. It will be shipped as soon as your credit is approved. The first payment is not due until at least 30 days after shipment. Your invoice will have full details. No red tape-no finance companies to deal with-no hidden charges. Any responsible person of legal age, with a steady income, can get credit approved. Additional order blanks and our Easy Pay Bulletin explaining our Payment Plan in detail, will be sent on request.

## "ADD-ON" PURCHASES

Once your credit is established with Allied, you can "add on" to your account with purchases of $\$ 20$ or more without any down payment if the "add on" is for less than $\$ 100.00$. Simply list the items you want (except tubes or parts) on one of our order blanks, write "add to my account" and give your account number. Please be sure to sign the Easy Payment agreement on the reverse side. After the amount of your new purchase and carrying charge are added, you pay on only one account. In most cases, you will continue to pay the same amount monthly. If your new unpaid balance is substantially different from the original amount, a new monthly payment will be set up.

| Easy Payment Table |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: |
| If Unpaid Balance is | Carrying Charge | Monthly Payment | If Unpaid Balance is | Carrying Charge | Monthly Payment |
| Up to \$ 20.00 | \$ 2.00 | \$ 5.00 | \$130.01 to \$140.00 | \$14.00 | \$11.00 |
| 20.01 to 30.00 | 3.00 |  | 140.01 to 160.00 | 16.00 | 12.00 |
| 30.01 to 40.00 | 4.00 |  | 160.01 to 180.00 | 18.00 | 13.00 |
| 40.01 to 50.00 | 5.00 |  | 180.01 to 200.00 | 20.00 | 14.00 |
| 50.01 to 60.00 | 6.00 | 6.00 | 200.01 to 225.00 | 22.50 | 15.00 |
| 60.01 to 70.00 | 7.00 | 7.00 | 225.01 to 250.00 | 25.00 | 16.00 |
| 70.01 to 80.00 | 8.00 |  | 250.01 to 275.00 | 27.50 | 17.00 |
| 80.01 to 90.00 | 9.00 | 8.00 | 275.01 to 300.00 | 30.00 | 19.00 |
| 90.01 to 100.00 | 10.00 | 9.00 | 300.01 to 350.00 | 35.00 | 21.00 |
| 100.01 to 110.00 | 11.00 | 10.00 | 350.01 to 400.00 | 40.00 | 24.00 |
| 110.01 to 120.00 | 12.00 |  | 400.01 to 450.00 | 45.00 | 27.00 |
| 120.01 to 130.00 | 13.00 |  | 450.01 to 500.00 | 50.00 | 30.00 |

NOTE: On orders over $\$ 500.00$, send down payment of $10 \%$ or more. Payments and carrying
charge will be in proportion to amounts shown on chart.

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| Separating Stations | - Printed Circuit RF \& IF's |  |

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    A-61 \& A-402 crossovers, mid h-f A-61 \& A-402 cr
    balance controls
    P15-LL woofer, RP-201 \& RP-302 tweeters, A-61 \& A-402 crossovers, ST-901 \& ST-917 balance controls ST-901 \& ST-917 balance controls
    P12-NF woofer, P8-UM mid-range P12-NF wooter, P8-UM mid-range
    unit, RP-103A tweeter, ST-946 balance control and A-645 crossover P15-LF woofer, RP-41 m-f unit, RP 302A super tweeter, 2-ST-947 balance controls and A-640 crossover P15-LF woofer, P8-RM mid-range unit, RP-41 m-f driver, RP-302A supertweeter, 2-ST-947 balance controls and A-2440 crossover
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    Two KT-44 speaker Two KT-44 speaker system kits
    (as described above), plus two DC-4 Stereo Director chassis

    ### 2180.00

    | 37 | 179.50 |
    | :--- | :--- |

    $41 \quad 192.50$
    192.50
    $48 \quad 160.00$
    $99 \quad 385.00$

    | NET |
    | :---: |
    | 99.50 |
    | 73.00 |
    | 72.50 |
    | 184.50 |
    | 169.50 |
    | 80.00 |
    | 179.50 |
    | 192.50 |
    | 160.00 |
    | 385.00 |

[^2]:    Allied always has the latest in new
    tubes. As new tube types are
    released, Allied will stock them.

[^3]:    Industrial Buyers, write or phone Allied's Industrial Division for Quantity

[^4]:    U Ten-Turn "Microdials." For above. Have 2 concentrically mountor counting turns. Built-in fing inctrements of each turn and the other for counting turns. Built-in fingertip brake. May be locked in any position. For panels to $3 / 16^{\prime \prime}$ thick. Type 1320 has bright chrome cover and hrome $1 /{ }^{\prime \prime}{ }^{\circ}$ diameter, $13 / /^{\prime \prime}$. Overall depth, $1^{3 / 16^{\prime \prime}}$. Shpg. wt., 4 oz
    29 M 696. Model 1320. EACH
    5.85

    K Model 1307 Direct Reading Microdial. For use with Micropots above. Three digit readings give close indexing accuracy. For operaion at speeds up to 100 rpm . Rotation is continuous in either direction Built-in, finger-tip brake-may be locked in any position. Size: $15 / 8 \times 2^{\prime \prime}$ 29 M 678. NET $\qquad$

[^5]:    Industrial Users: Allied can make immediate shipment on C-D Type MP capacitors at OEM prices in quantities of 25-49 or 50-99. Contact our Industrial Division.

[^6]:    For OEM prices on Type 102D and 150D Tantalex Capacitors listed above (in lots of 25 to 49 or 50 and up), write to our Industrial Division.

[^7]:    For OEM prices in quantity lots of 25-49 and $50-u p$, write our Industrial Division.

[^8]:    For OEM prices in quantity lots of 25-49 and 50-up, write our Industrial Division.

[^9]:    For OEM prlees on Aerovox Ciorafil capaclitors (in lote of 26-49, 50-99 and capacitors (in lote of 26-49; 60-99 and 100-499),
    Divislon.

[^10]:    Industrial users: Allied can promptly supply industrial capacitors in
    any quantify at OEM prices. Write to Industrial Division for in-
    formation and prices. One order to Allied will cover all your needs.

[^11]:    No. Type| Description Size|NET $\frac{8 L 390}{\text { PL-3 }} \frac{\text { P.E.C., on motor }}{\frac{\text { P }}{17 / 16^{\prime \prime}}} \frac{\text { NE }}{12 \phi}$
    

     | $8 L$ | 396 | $\mathrm{HB}-4$ | Horiz. bracket |
    | :--- | :--- | :--- | :--- |

[^12]:    1-24, NET EACH.
    25-99, EACH..

[^13]:    37 G 037 Stancor TV Replacement Guide. Free with order.

[^14]:    Amphenol Cable Clamp. Type 79-CC4. For use with above connectors. Relieves strain on soldered connections. Shpg. wt., 5 oz . 50 to 149. EACH NET EACH

[^15]:    DD Type 241 Insulated Tip DD Jack．Molded nylon head and insulating washer．Nickel－ plated brass body．Mounts in $5 / 16^{\circ}$ hole．Shpg．wt．， 2 oz ．

    | 4 | H 024. |
    | :---: | :---: | :---: |
    | 4 | Hed |

    4 H O25．Black NETEACH 41 H 027．Green 18c
    41 H 028 ．Blue
    60－99，EA．I $5 ¢$ 10－49，EA． 164

[^16]:    C Series 11 F. Small, low-cost DC relay. 50 amp. $15 / 32 \times 15 / 16 \times 1^{\prime \prime}$ high. Shpg contacts rated 1 75 P 0

    | 75 | P 069 | $11 F-1000-G / S I L$ |
    | :--- | :--- | :--- |
    | 75 | 1000 |  |
    | 75 | $11 F$ | $100-G /$ SIL |
    | 2300 |  |  |


    | P 074 | $11 F-6000-G / S I L$ | 2300 |
    | :--- | :--- | :--- |
    | P 075 | $11 F-9000-G / S I L$ | 6000 |

    C Series 11 FZ. Small, low cost AC relay for rated 1 amp at 120 V. AC. $1 \times 15 / 32 \times 15 / 32^{\prime \prime} .3 \mathrm{oz}$.

    | No. | Mfr's Type | Ohms | V. AC | NET |
    | :---: | :---: | :---: | :---: | :---: |
    | 76 P 547 | 11FZ-40-ACS /SIL | 40 | 6 | 2.00 |
    | 76 P 548 | 11FZ-150-ACS/SIL | 150 | 12 | 2.00 |
    | 76 P 549 | 11FZ-550-ACS/SIL | 550 | 24 | 2.00 |
    | $76 P 567$ | 11FZ-2300-ACS/SIL | 2300 | 48 | 2.00 |


    | 76 P 568 | 11FZ-9000-ACS/SIL | 9000 | 120 | 2.35 |
    | :--- | :--- | :--- | :--- | :--- |

[^17]:    For adjusting PM focus units on TV sets. Extra-long sizes permit back-of-the-set adjust.ments without removing the back cover. Quickly make close tolerance adjustments. Non-magnetic; do not affect picture. Neariy as hard as steel. Provide rong service,

    | Stock No. Type | Lgth. | Blade | Oz. | NET |  |
    | :--- | :--- | :---: | :---: | :---: | :---: |
    | 43 N 896 | VB26 | $83 / 4^{\prime \prime}$ | $6 \times 1 / 8^{\prime \prime}$ | 3 | 0.99 |
    | 43 N 897 | VB48 | $1158^{\prime \prime}$ | $8 \times 1 / 4^{\prime \prime}$ | 4 | 2.37 |
    | 43 N 898 | VB210 | $123 / 4^{\prime \prime}$ | $10 \times 1 / 8^{\prime \prime}$ | 4 | 1.08 |

[^18]:    Additional RCA 1 literature on page
    117. Popular RCA replacement components are isted on page 358. Make Allied your headquarters for RCA parts.

[^19]:    - Fully Potted Transformer
    - Plenty of Reserve Power
    - Superior Hi-Fi Response An extremely high-quality basic amplifier kit. Delivers plenty of power for clear, natural reproduction. Also, provides extra power needed for electrostatic and other
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    83 SU 955. Only $\$ 5.80$ Down. NET......................... . 57.95
    87 SX 235. E-2 Cover. For HF-50K or HF-60K. 3 lbs. NET.. 4.50

[^20]:    NOTE: Allied's Easy Payment Plan is offered to residents of the United States, Canada, Hawaii, and Puerto Riç. It does not cover shipments to other U, S. Possessions or Territories, or other countries,

