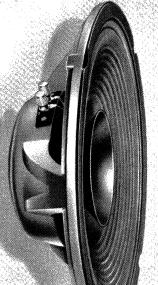


1959

# ALLIED presents the new WOLVERINE



SPEAKER SERIES by Electro Voice

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



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

\$1050

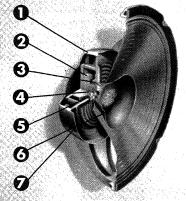
An incomparable value, the new Wolverine LS-12 12" speaker is so reasonably priced, you can purchase *two* of these precisely built units for stereo use, at less than you would pay for other single speakers. Features Radax construction,

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" in diameter and provides response of 50 to 13,000 cps. Shpg. wt., 4½ lbs.

Choose from Three Magnificent Custom-Styled Speaker Systems

В





Cut-away view clearly shows the outstanding design of E-V Wolverine speakers. Check the:

- (I) Heavy-Duty Die-Cast Frame
- ② Efficient, 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" Deep—Easy to Mount

A WOLVERINE "LINDON" SHELF-TYPE ENCLOSURE WITH LS-8 8" SPEAKER

A

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, 11x23½x10". Specify mahogany, blonde or walnut woodgrained finish. Shpg. wt., 20½ lbs. 82 DU 860C. NET. ... \$52.50

### B WOLVERINE "LORAINE" FOLDED-HORN ENCLOSURE WITH LS-12 12" SPEAKER

### © 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, 25x20x14". Specify mahogany, blonde or walnut woodgrained finish. Shpg. wt. 29½ lbs.

# WOLVERINE "STEP-UP" KITS

C



## EXPAND YOUR SPEAKER SYSTEM TO TWO OR THREE-WAY OPERATION

MODEL MF-1 MID-RANGE KIT. For 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 MRIO 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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See Pages 61-67 for Complete Listings of E-V Hi-Fi Components



# **ALLIED** Guarantees Your Complete Satisfaction

We guarantee to bring you the world's largest stocks of quality electronic equipment at lowest prices.

We guarantee to give you the benefit of any price reductions made after this catalog is printed.

We guarantee that our merchandise conforms to the standards of the Electronic Industries Association and will perform as intended for such apparatus.

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.

### You Get Every Buying Advantage at ALLIED

We save you time and money because our complete stocks permit you to fill all of your electronic needs conveniently and economically from one source. And you always buy at ALLIED at the lowest prevailing market prices.

We ship speedily and safely from the world's largest stocks of electronic equipment. Your orders are speeded to you by a skilled organization with a record of 38 years of dependable service.

We satisfy you completely with expert personal help, intelligent service and the full resources that have made us the World's Leading Electronic Supply House.

### 15-DAY TRIAL, MONEY-BACK GUARANTEE

Order any high-fidelity component, recorder, test instrument, P. A. amplifier, communications unit or any other equipment—on our regular terms. Try it under your own operating conditions. Then, if within 15 days you are not completely satisfied, return the equipment to us, and we will refund your full purchase price, less only transportation charges. This Guarantee is further backed by the standard Electronic Industries Association Warranty against defects in materials and workmanship.

Evenything in Electronics from the Depositable Source

### **ALLIED RADIO**

100 N. WESTERN AVE., CHICAGO 80, ILL.

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For Easy Payment Plan See Page 444

> For How to Order See Page 442



WORLD'S LARGEST 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 1½ 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 & TECHNICAL 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.



FASTEST SERVICE IN ELECTRONIC SUPPLY

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.

# ALLIED is America's High Fidelity 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.

### THE LEADER IN STEREO

Allied has complete stocks of newest stereo equipment

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

BECAUSE WE OFFER EVERY BUYING ADVANTAGE YOU WANT

# world's largest selection of systems and components

This 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 accessories—all are included here in a wide range of prices, always in stock, ready for prompt shipment to you.

### 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.

# 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.

### . - material state of the state

15-day trial, money-back guarantee

Any high-fidelity system or separate component you buy at Allied may be tested under the terms of our trial guarantee. Place your order on our regular cash terms or use our Easy Pay Plan. Then check performance in your own home. If within 15 days you are not fully satisfied, return the equipment to us. We will refund your full purchase price (less only transportation charges). Every hi-fi unit is also covered by the regular EIA warranty against defects in material and workmanship—for your complete protection.

# 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.

### CONDENSED HI-FI INDEX

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Select your hi-fi from the world's finest equipment
GET THE MOST FOR YOUR MONEY AT ALLIED

# ALLED brings you STERED—the new realism 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 V-shaped 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 ... and finally, to left and right channel speakers. Fully compatible, stereo cartridges also play conventional LP records monaurally.

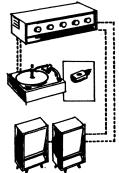
STEREO BROADCASTING. Stereo records and tapes, (and live performances in stereo), may be simultaneously broadcast over an FM and AM station, FM and TV station, or two FM stations. To enjoy the stereo effect, both channels must be received separately, and the sound fed through two amplifiers and two speakers.

### this is a BASIC hi-fi system



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.

### this is a STEREO hi-fi music system



Actually, the fundamental operation is the same as in the basic hi-fi system, but most of the components are "doubled". As the stereo record is turned, the stereo cartridge picks up two recordings and plays each through a separate amplifier, or into a stereo amplifier (which is really two amplifiers built into a single chassis). Each amplifier feeds its channel of sound into its respective speaker system.

Just as a tuner may be added to your system for stereo radio broadcasts, so may you add a tape deck for playing stereo tapes.

# makes it easy for you to own and enjoy 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 Hi-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-firecord 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

NAME OF TRANSPORTED AND A CONTRACTOR OF THE PARTY OF THE

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 waiting 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.

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

Plug the amplifier into an AC outlet—and thrill to magnificent music from your Allied Hi-Fi System.

### COLOR-CODED CABLES



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

### **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.

### EVERY SYSTEM IS COMPLETE



You get everything you need in one shipment—nothing else to buy—all 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 32-96—make 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.

15-Day Free Trial and Money-Back Guarantee on All Hi-Fi Equipment and Systems



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.

> 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 Save up to \$49.34

- Centralized Control Facilities Superb Stereo-At Lowest Cost
- New, Matched Stereo Components
- Stereo Cartridge—Diamond Needle • 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" 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....

FM-AM-PHONO SYSTEM. Save \$49.34! 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....

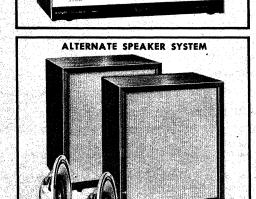
### WITH ALTERNATE SPEAKER SYSTEM

PHONO SYSTEM. Save \$41.60! Includes: 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, in Plug-In Head, with .0007" Diamond and .003" Sapphire Needles; and two new Electro-Voice LS-12 12" "Wolverine" Speakers in-stalled 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 

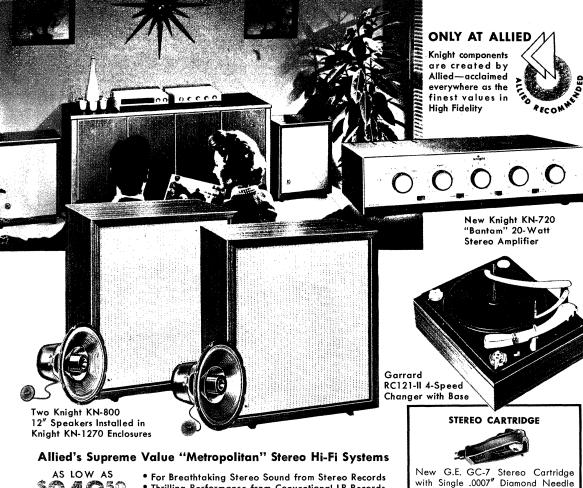
FM-AM-PHONO SYSTEM. Save \$48.851 As above, but with 

® Registered Trade Mark of Allied Radio Corporation





wo E-V LS-12 "Wolverine" 12" Speakers Installed in Knight KN-1270 Enclosures



Save Up to \$61.08

- For Breathtaking Stereo Sound from Stereo Records
- Thrilling Performance from Conventional LP Records
- New Stereo Magnetic Cartridge with Diamond Needle Matched, 12" 3-Way Speakers Installed in Enclosures

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-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" 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-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 Down, NET 249.50 FM-AM-PHONO SYSTEM. Save \$50.981 All components above, plus Knight KN-130 Stereo FM-AM Tuner. 151 lbs. 36 HF 505. \$32.10 Down . . NET 321.00

### 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 KN-800 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 component's 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

See Pages 56-60 for Listings of Knight Speakers & Enclosures

### **OPTIONAL STEREO TUNER**



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

### ALTERNATE SPEAKER SYSTEM



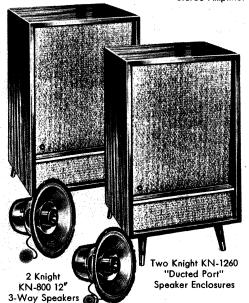
3-Way Speaker Systems

# ALLIED'S DELUXE STEREO MUSIC SYSTEMS .

LUXURY PERFORMANCE AT SUBSTANTIAL SAVINGS



New Knight KN-734 Deluxe 34-Watt Stereo Amplifier









### **Deluxe 34-Watt Stereo Hi-Fi Systems**

AS LOW AS

- Deluxe-Quality Stereo Components
- Plays All LP's—Stereo or Monaural
   Stereo Cartridge—Diamond Needle
- Centralized Stereo Controls
   Matched 3 Way Speakers in Fine
- Save Up to \$45.63 Matched 3-Way Speakers in Fine Furniture Enclosures

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 KN-1260 Enclosures; all interconnecting cables and instructions.

### WITH ALTERNATE SPEAKERS

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 Knight STEREO COMPONENTS

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

• Superb Stereophonic Performance

Grand Co

Finest Knight Stereo Units
 Deluxe Garrard Record Changer

Save Up to \$53.63

 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 system—and 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 Pluglin Head, with Single, .0007" Diamond Stylus; two Knight KN-800 12", 3-Way Speakers installed in two Knight KN-1215 "Dual-Duct" Enclosures; color-coded cables and plugs, and complete instructions.

### WITH ALTERNATE SPEAKERS

Knight Speakers are Described on Pages 56 and 57















AS LOW AS \$46950

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 "Dual-Duct" 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-rpm cartridge). Delightful stereo sound is provided by the KN-810 speakers in the 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. 

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. 

### Stereo Phono System For Custom Installation

Save \$28.71

\$30050 For installation in your own equipment 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" 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 110-120 v., 60 cycle AC. Shpg. wt., 132 lbs.

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......... 516.00

Express Shipment Recommended For Hi-Fi Equipment

### ALLIED'S "BEST BUY" STEREO 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

\$2.9 \ 30.79 Save \$33.79

- Versatile & Popular Tape Deck Unit
- New Knight Stereo Amplifier
- 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-1270 Bass Reflex Enclosures; and all interconnecting cables, plus 7" take-up reel.

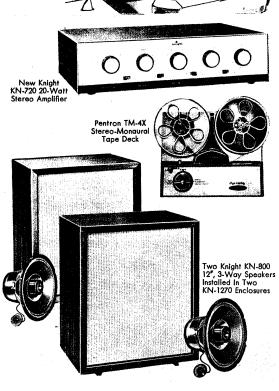
### Stereo Tape System With Bell Tape Deck

\$4 (7.9.50 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.

See Page 99 for Listings of Stereo Tapes











### 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.

### Superb "Metropolitan" Hi-Fi Phono System

ONLY \$15.95 Down

- Top-Value Knight 10-Watt Amplifier
- World-Famous British Changer Stereo Cartridge—Diamond Needle
- Highly-Popular Knight 12" Speaker
- Attractively Styled Speaker Enclosure

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 micro-groove 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-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 

### Radio-Phono Music Systems

FM-PHONO SYSTEM. Save \$26.481 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 

FM-AM PHONO SYSTEM. Save \$29.53! 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 



Rugged Knight "Mini-Fi" Amplifier

• 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" 10-Watt Amplifier, Collaro TSC-740 4-Speed Changer with Base; new Electro-Voice 26MDST Ceramic Stereo Cartridge installed in plug-in head, and with .0007" Diamond and .003" Sapphire Needles; new Knight KN-808 Full-Range 8" Speaker installed in the Argos TSE-1 Shelf-Type Ducted Enclosure. E-V's cartridge plays stereo, microgroove LP and 78-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. 

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

ONLY

You Save \$36.00

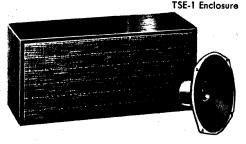
- System Occupies Minimum Space
- Highly Esteemed "Mini-Fi" Amplifier • Stereo Cartridge—Diamond Needle
- Top-Rated 4-Speed Record Changer Outstanding Speaker System

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 Electro-Voice 26MDST Ceramic Stereo cartridge installed in plug-in head, with .0007" Diamond and .003" Sapphire Needles; new Knight KN-808 Full-Range 8" 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 KN-808 speaker employs a specially suspended cone for amazing sound. Changer base and enclosure in mahagany, limed oak or walnut wood-grained finishes—specify choice. For 110-120 v., 60 cycle AC. 66 lbs. 

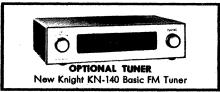
PHONO SYSTEM WITH E-V SPEAKER. Save \$40.931 As above, but with Electro-Voice SP12-B 12" Speaker in place of the Knight KN-808 speaker. Shpg. wt., 81 lbs. 

See Page 444 for Allied's Easy Payment Plan



New Knight KN-808

8" Speaker in Argos





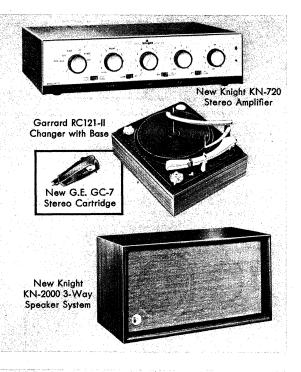


### SPECIAL-VALUE 版和認識計 HI-FI PHONO SYSTEMS...BUY NOW...

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-Watt System

ONLY

**\$2000** 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-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 

### Top-Value knight "Bantam" 20-Watt System

ONLY

- "Bantam" 20-Watt Stereo Amplifier
- G.E. Cartridge—Diamond Needle
- Garrard Changer with Base

You Save \$23.63

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 KN-800 speaker and KN-1260 enclosure offer rich, natural sound. Enclosure styling is suitable to any room decor. Changer base and enclosure in mahogany, 

One Substitution Allowed in Allied H-Fi Systems



### CONVERT TO STEREO ANYTIME!

### FOR SUPERB HIGH-FIDELITY 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

**5300**00 Save \$18.06

- Deluxe 34-Watt Stereo Amplifier
- Pickering Cartridge & Diamond
- Garrard Changer with Base
- Popular Knight 12" Speaker Installed in Corner Horn Enclosure

Thrilling sound from records—forward-looking design—and 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-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. 

### knight 34-Watt System With Deluxe Speaker

ONLY

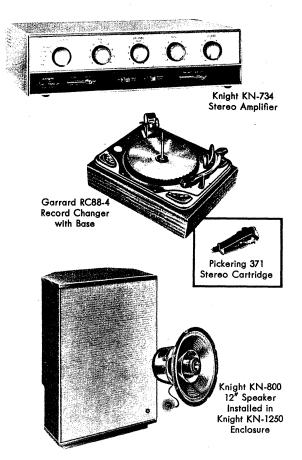
Save \$18.73

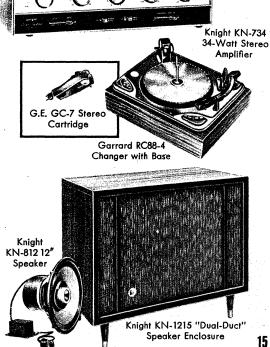
- Deluxe 34-Watt Stereo Amplifier
- New G.E. Cartridge—Diamond Needle
- Garrard RC88-4 Changer with Base
   Deluxe Knight 12" Speaker Installed in
- Highly Attractive Enclosure

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-Watt 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" 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-rpm cartridge installed). The 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., 

Allied is Headquarters for High-Fidelity Equipment



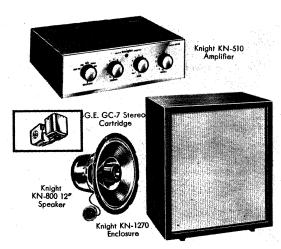


### NOW! ADD STEREO TO YOUR PRESENT HI-FI SYSTEM

ENJOY ALL THAT FULL DIMENSIONAL HIGH-FIDELITY HAS TO OFFER



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



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

### Low-Cost knight "Add-On" Stereo System

ONLY 57450

- You Save \$17.61
- Knight KN-510 10-Watt Amplifler
- Knight KN-808 8" Hi-Fi Speaker
- Argos TSE-1 Speaker Enclosure
- E-V 26MDST Stereo Cartridge
- Pickup Arm Conversion Kit

### Economical knight Stereo "Add-On" System

ONLY

\$ 2450

You Save \$14.46

- Knight KN-510 10-Watt Amplifler
   Knight KN-510 10-Watt Amplifler
- Knight KN-800 12" Speaker
- Knight KN-1270 Enclosure
- G.E. GC-7 Stereo Cartridge

Pickup Arm Conversion Kit

# 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 installed—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



MODEL SM-7 STEREO-MONAURAL-REVERSE SWITCH. For stereo systems which do not have a stereo preamp. Provides instant switching from monaural to stereo—plus channel reversing. 1½x2x2". Wt., 1 lb.

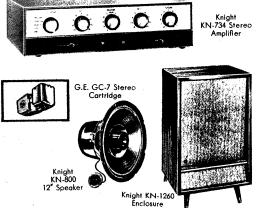


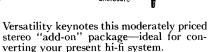
UNIVERSAL STEREO CONVERSION KIT. Stereo conversion kit for converting changers (other than Garrard) for stereo. See page 17 for listings covering Garrard changers. Supplied with add-on systems which do not include stereo-wired changers.

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 \$ 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. 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.



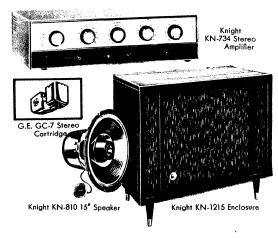


### Versatile knight Stereo "Add-On" System

- KN-734 34-Watt Stereo Amplifier
- KN-800 12" 3-Way Hi-Fi Speaker
- KN-1260 Ducted-Port Enclosure
- G.E. GC-7 Stereo Cartridge

You Save \$19.51 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 

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. 



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

### Deluxe knight Stereo "Add-On" System

- KN-734 34-Watt Stereo Amplifler
  KN-810 15" 3-Way Hi-Fi Speaker

بالمناز ووالمواج والمربي ستعمل والووي فاستدا بمعاوية سنوا فيجسو والمرادات والمواج ويسهره

• KN-1215 Dual Ducted-Port

Enclosure • G.E. GC-7 Stereo Cartridge

You Save \$32.01 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" 3-way speaker. With 91 S 592 changer conversion kit. Speaker enclosure in mahogany, 

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 lb. 

MODEL SCK-2. Complete conversion kit as described above, but for the Garrard RC121-II changer. Less cartridge. Shpg. wt., 3/4 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. 

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....

GARRARD-G.E. G.E. 4G-040 cartridge with .003" sapphire needle (78-rpm) in Garrard head. No. 1 fits RC121, RC88, 69 SC 982. No. 2. NET.....

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











### RECOMMENDED STEREO CONVERSION SYSTEMS

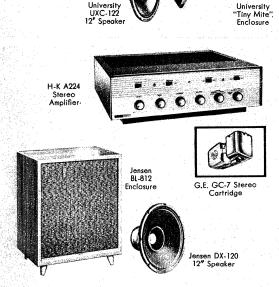
### JUST ADD TO YOUR PRESENT HI-FI SYSTEM

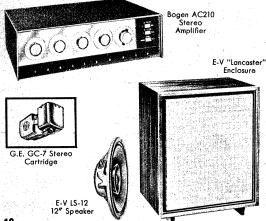
If you now have a monaural hi-fi system, you may easily convert it for playing stereo discs by adding a stereo cartridge to your changer or turntable, plus another amplifier and speaker for reproducing the second sound channel.

### 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.

# Harman-Kardon AX20 "Add-On" \_0 0 0 O Amplifier G.E. GC-7 Stereo Cartridge University





### "Add-On" System with H-K AX20 Amplifier

ONLY \$**179**50

Add this system to your present hi-fi phono system for dazzling stereo sound -at savings of \$32.03. System includes: You Save \$32.03 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 Mite" 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.

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.

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

ONLY \$18950

You Save \$32.01

Use your present hi-fi system with these "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.

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. 

### "Add-On" System with Bogen AC210 Amplifier

ONLY \$15450

Combine your present hi-fi phono system with these excellent "add-on" components—the system price saves you \$40.51. Includes: Bogen AC210 20-Watt You Save \$40.51 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. 

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. 

See Page 444 for Allied's Easy Payment Plan

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

ONLY \$周过()00

Realize the full possibilities of lifelike stereo reproduction by combining your present high-fi-You Save \$61.29

delity system and this superb
"add-on" system—at savings of
\$61.29. System includes: Scott
130 Stereo Preamp with Case; Scott 250 40-Watt Basic Am-

plifter; Pickering 371 Stereo Cartridge with Diamond LP Needle; Universal Stereo Conversion Kit (see page 16); Stephens 1217 Speaker Enclosure with the 120FR 12" Full-Range 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. 

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.

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

ONLY \$31000

You Save \$43.44

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

price, you pocket savings of \$43.44 over total cost of components. System includes: Pilot 210 Stereo Preamp; Pilot SA-232 32-Watt Basic Stereo Amplifler; Pickering 371 Stereo Cartridge with Diamond LP Needle; Universal Stereo Conversion Kit (see page 16); Jensen CN100 3-Way 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.

SYSTEM AS ABOVE, WITH CHANGER. Save \$47.61. Same as system described above, but with stereo-wired Garrard RC88-4 4-speed record changer and base. Cartridge is installed in changer. Specify enclosure finish when 

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

\$41100

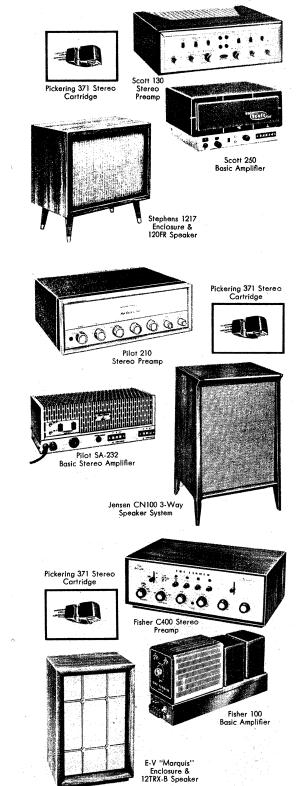
You Save \$48.31

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;

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. 

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. 

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.



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

23.47

129.36 123.48

369.00

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-rpm accessory cartridge installed. As in all Allied phono systems, a plastic record changer cover and color-coded cables are includ-

Speaker Systems May Be Substituted in Stereo Systems

2-Jensen TR10 Speaker Systems kardon

### **COMPONENTS**

### Stereo FM-AM-Phono System with TP200

H-K TP200 Stereo FM-AM Tuner-Preamp	\$189.95
H-K 250 Dual 25-Watt Stereo Basic Amplifler	. 99.95
Garrard RC121-II 4-Speed Changer & Base	. 46.16
G.E. GC-7 Stereo Cartridge-Diamond LP Needle.	. 23.47
2-Wellcor S8-12 Speaker Enclosures	. 103.50
2-University UXC-122 12" 2-Way Speakers	64.68
TOTAL REGULAR CATALOG PRICE	\$527.71
ALLIED SYSTEM PRICE	485.00
YOU SAVE\$	42.71

SYSTEM PRICE

\$48.50 Down

Exceptional versatility and thrilling performance keynote this complete stereo system. Contains everything needed for breathtaking stereo reproduction from records and radio—at giant sayings

ords and radio—at giant savings 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.

### 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 参わらくの

\$25.90 Down

A superb hi-fi phono system at special savings of \$59.13. Features the H-K AX20—a complete control center consisting of two preamplifiers and a single 20-watt amplifier on a single chassis. System coords and pays stores discased

tem plays microgroove 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





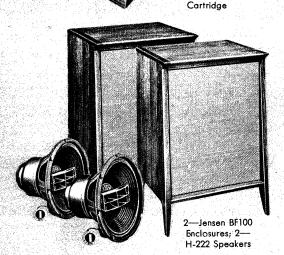
### MONEY-SAVING HI-FI SYSTEMS FEATURING HARMAN-KARDON COMPONENTS

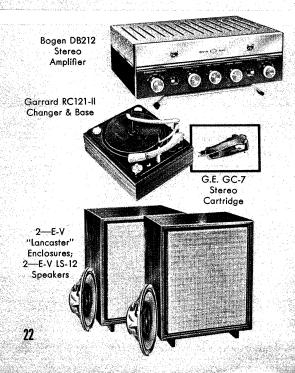
You can convert these systems to stereo at any time—just add another amplifier and speaker system.

Amplifier	Changer	Cartridge	Speaker System	Finishes	Lbs.	Stock No.	NET EACH
A224 With Case	Garrard RC121-II With Base	G.E. GC-7 Stereo	Jensen Bl-812 & DX120 Speaker	Specify Mahogany or Walnut Veneer	74	36 HF 716	235.00
A10	Collaro TSC-740 With Base	G.E. GC-7 Stereo	F-V "Corone!" & LS-8	Specify Mahogany, Iimed Oak or Walnut Veneer	54	36 HF 717	149.50
A250 With Case	Garrard RC88.4 With Base	G.E. GC-7 Stereo	University EN-12 & UXC-123	Specify Mahogany, Blonde or Walnut Veneer	119	36 HF 718	<b>375.0</b> 0



Pickerina 371 Stereo







### SAVE ON THESE STEREO SYSTEMS

### System Featuring Bogen DB230 Amplifier

Bogen DB230 60-Watt Stereo Amplifier & Case	<b>\$177.</b> 50
Garrard RC88-4 4-Speed Changer & Base	58.26
Pickering 371 Stereo Cart.—Diamond LP Needle	29.85
2—Jensen BF100 Speaker Enclosures	139.00
2—Jensen H-222 12" Coaxial Speakers	125.00
TOTAL REGULAR CATALOG PRICE	\$529.61
ALLIED SYSTEM PRICE	429.00
YOU SAVE\$	100.61

SYSTEM PRICE

Save \$100.61

Everything you need for breathtaking stereophonic sound from stereodiscs—at savings of \$100.61 over total cost of individual com-

satility, the amplifier becomes two 30-watt amplifiers for stereo reproduction or one powerful 60-watt amplifier for monaural use. Beautifully designed enclosures have hand-rubbed furniture veneers. See page 17 for 78 rpm cartridge. For 110-120 v., 60 cycle AC. Specify mahogany or walnut finish. Shpg. wt., 192 lbs. 

FM-AM-PHONO SYSTEM. Save \$120.61! As above, but with the Bogen ST662 stereo tuner for thrilling stereo broadcast reception. Specify choice of mahogany or walnut enclosure finish when ordering. Shpg. wt., 215 lbs. 

### System Featuring Bogen DB212 Amplifier

Bogen DB212 24-Watt Stereo Amplifier & Case	\$122.50
Garrard RC121-II 4-Speed Changer & Base	46.16
G.E. GC-7 Stereo Cartridge—Diamond LP Needle.	23.47
2-E-V "Lancaster" Speaker Enclosures	96.00
2—E-V LS-12 "Wolverine" 12" Speakers	39.00
TOTAL REGULAR CATALOG PRICE	\$327.13
ALLIED SYSTEM PRICE	259.95
YOU SAVE\$	67.18

SYSTEM PRICE

\$25095

Save \$67.18

Thrill to the finest musical entertainment with this low-cost, complete stereo phono systemyours at giant savings of \$67.18. Features the versatile Bogen

DB212 amplifier—a 24-watt amplifier that becomes two 12-watt amplifiers at the flick of a switch. Ultra-compact in design, the highly attractive enclosures have beautiful wood grained finishes to match any decorative mode. Two perfectly matched 12" high-fidelity speakers, installed in the enclosures, deliver rich, full-range sound. Plays all microgroove records—see page 17 for plug-in head with 78 rpm accessory cartridge installed. The system can also accommodate a tuner and a tape recorder. 

# FEATURING BOSEN 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 UXC-122 12" 2-Way Speakers.......74.68 TOTAL REGULAR CATALOG PRICE.....\$293.09 YOU SAVE.....\$63.14

SYSTEM PRICE 5**229**95 \$23.00 Down

Save \$63.14 on this complete, budgetsparing stereo system. Compact, handrubbed veneered enclosures. For 110-120 v., 60 cycle AC. Specify mahogany, 

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. 

### Hi-Fi System with AC10 "Challenger" Amplifier

Bogen AC10 "Challenger" 10-Watt Amplifier....\$ 55.00 Collaro TSC-740 4-Speed Changer & Base...........46.60 G.E. GC-7 Stereo Cartridge—Diamond LP Needle...23.47 Stephens 80FR 8" Full-Range Speaker Installed.....31.50 TOTAL REGULAR CATALOG PRICE.....\$204.57 YOU SAVE.....\$45.07

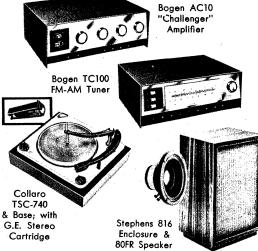
**5150**50 \$15.95 Down

SYSTEM PRICE Space sparing, economical hi-fi phono system—at savings of \$45.07. Plays microgroove records and new stereo discs monaurally-add another amplifier and speaker to play stereo discs stereophon-

ically. Compact enclosure is finished in hand-rubbed veneers. For 110-120 v., 60 cycle AC. Specify mahogany or walnut. Wt., 128 lbs. 

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. 

Bogen AC210 5000 Stereo Amplifier Bogen TC200 Stereo Tuner Webcor Changer & Stereo Cartridge University "Tiny Mites" & UXC-122 Speakers



### SAVE UP TO \$95.189-HIGH-FIDELITY SYSTEMS FEATURING BOGEN AMPLIFIERS

Amplifier	Changer	Cartridge	Speaker System	Finishes	Lbs.	Stock No.	NET EACH
DB230 With Case	Garrard RC88-4 With Base	Pickering 371 Stereo	Single Jensen CN100	Specify Mahogany or Walnut Veneer	125	36 HF 707	<b>329.95</b> SAVE 85.16
DB212 With Case	Garrard RC121-II With Base	G.E. GC-7 Stereo	Single E-V "Lindon" & LS-8	Specify Mahogany, Blonde, or Walnut Grained Finish	64	36 HF 708	194.50 SAVE 50.13
AC210 With Case	Collaro TSC-740 With Base	G.E. GC-7 Stereo	Single University UXC-123 "Debonaire"	Specify Mahogany, Blonde or Walnut Veneer	78	36 HF 709	229.95 SAVE 64.53
DB130 With Case	Garrard RC88-4 With Base	G.E. GC-7 Stereo	Single E-V "Aristocrat" 12TRX-B	Specify Mahogany, Limed Oak or Walnut Veneer	107	36 HF 710	<b>279.95</b> SAVE 69.02

### ALLIED-RECOMMENDED MONEY SAVING HI-FI SYSTEMS







\* 6COMMETO

Bell 3030 Steres Amplifier

### 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	\$550.68
ALLIED SYSTEM PRICE	469.00
YOU SAVE\$	81.68



\$46.90 Down

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.

### **Phono System Featuring Bell 2325 Amplifier**

Bell 2325 20-Watt Amplifler	\$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-Way Speaker	64.68
TOTAL REGULAR CATALOG PRICE	\$314.82
ALLIED SYSTEM PRICE	269.00

YOU SAVE.....\$ 45.82

SYSTEM PRICE \$269.00

\$26.90 Down

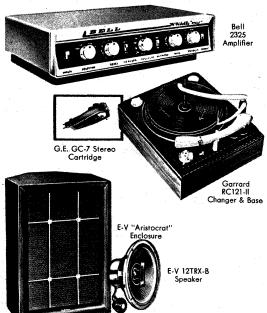
Featuring perfectly matched components, this handsome hi-fi phono system brings you sparkling sound from records—at savings of \$45.82. Plays microgroove records and new stereo

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. 

See Page 444 for Allied's Easy Payment Plan





# FEATURING Bell COMPONENTS

rnono system reaturing bell 2313 Amplitier
Bell 2315 12-Watt Amplifler\$ 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\$286.68
ALLIED SYSTEM PRICE

YOU SAVE.....\$37.68

SYSTEM PRICE

\$24.90 Down

Save \$37.68 on this budget-priced hi-fi music system. Enclosure has hand-rubbed furniture veneers. For 110-120 v., 60 cycle AC. Specify mahogany or walnut finish. Shpg. wt., 106 lbs.

# Phono System Featuring Bell 2215 Amplifier Bell 2215 10-Watt Amplifier \$ 55.00 Collaro TSC-740 4-Speed Changer & Base 46.60 G.E. G.E. GC-7 Stereo Cartridge—Diamond LP Needle 23.47 E-V "Lindon" Speaker Enclosure 34.50 E-V Wolverine LS-8 8" Full-Range Speaker 18.00 TOTAL REGULAR CATALOG PRICE \$ 177.57 ALLIED SYSTEM PRICE 149.50 YOU SAVE \$ 28.07

SYSTEM PRICE

\$14.95 Down

Enjoy excellent hi-fi with this space-sparing phono system—you'll save \$28.07. Plays microgroove records and new stereo discs monaurally—add another amplifier and speaker to play

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

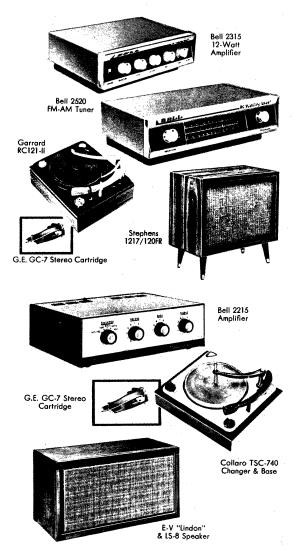
Bell 3030 30-Watt Stereo Amplifier	. \$169.95
Garrard RC88-4 4-Speed Changer & Base	58.26
G.E. GC-7 Stereo Cartridge—Diamond LP Needle	e 23.47
Jensen TR-10 3-Way Speaker System	114.50
TOTAL REGULAR CATALOG PRICE	. \$366.18
ALLIED SYSTEM PRICE	. 325.00
YOU SAVE	\$41.18

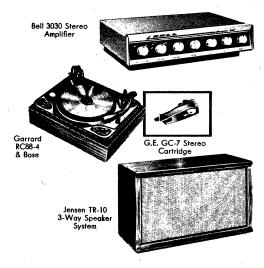
SYSTEM PRICE

\$32.50 Down

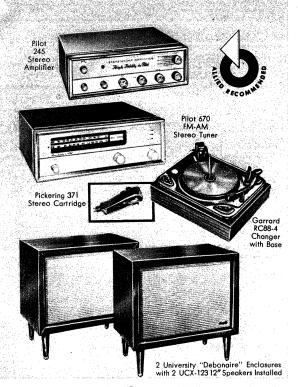
Superiority of performance and compactness of design keynote this perfectly matched hi-fi phono system—at giant savings of \$41.18. Plays microgroove records and new stereo discs mon-

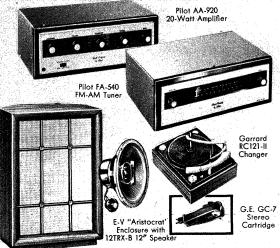
WRITE FOR SYSTEM PLAN PRICES. If you wish to select a high-fidelity system with components of your own choosing simply list the make and model number of





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





### ALLIED RECOMMENDED HI-FI SYSTEMS FEATURING PILOT COMPONENTS

STEREO SYSTEM AT BIG SAVINGS!

Phono System With Pilot 245 Stereo Ampl	ifler
	58.26 29.85 £3.48
TOTAL REGULAR CATALOG PRICE\$5 ALLIED SYSTEM PRICE	
YOU SAVE\$	57.53

\$**469**00 \$46.90 Down

SYSTEM PRICE Complete stereo/monaural control facilities—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 Garrard plug-in head, has .0007" diamond needle for playing stereo and monaural LP records. (See page 17 for accessory plug-in head with 78-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. 

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

### Phono System With Pilot AA-920 Amplifier

Pilot AA-920 20-Watt Amplifier with Case	\$ 99.50
Garrard RC121-II 4-Speed Changer & Base	46.16
G.E. GC-7 Stereo Cartridge-Diamond Needle	23.47
Electro-Voice "Aristocrat" Enclosure	70.56
Electro-Voice 12TRX-B 12" Speaker	64.68
TOTAL REGULAR CATALOG PRICE	\$304.37
ALLIED SYSTEM PRICE	265.00
YOU SAVE	\$ 39.37

\$26500

\$26.50 Down

SYSTEM PRICE G.E.'s new stereo cartridge employs single .0007" diamond stylus for stereo and monaural records. (See page 17 for accessory plug-in head with 78-rpm cartridge.) Changer base and enclosure in

FM-AM-PHONO SYSTEM. Save \$50.37! As above, but with Pilot FA-540 FM-AM Basic Tuner. Wt., 113 lbs. 

### 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	Garrard RC88-4 with Base-	G.E. GC-7 Stereo Diamond	Stephens B100 with 150CX 15" Speaker	Changer base and enclosure in mahogany and walnut —specify choice	146 lbs.	36 HF 729	\$430.00 SAVE \$60.23
AA-920 20-Watt with Case	Garrard RC88-4 with Base	G.E. GC-7 Stereo Diamond	Electro-Voice "Lancaster" with E-V LS12 "Wolverine" 12" Speaker	Changer base and enclosure in mahogany, limed oak and walnut wood- grain finishes —specify choice	73 lbs.	36 HF 730	\$224.50 SAVE \$24.23
AA-903B 14-Watt with Case	Garrard RC121-II with Base	G.E. GC-7 Stereo Diamond	Wellcor S812 with University UXC-122 12" Speaker	Changer base and enclosure in mahogany, limed oak and walnut —specify choice	79 lbs.	36 HF731	\$209.00 save \$24.67

### ALLIED-RECOMMENDED STEREO HI-FI SYSTEMS







### Stereo Phono System With Scott Amplifier

Scott 299 40-Watt 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" Speakers	259.00
TOTAL REGULAR CATALOG PRICE	\$746.01
ALLIED SYSTEM PRICE	646.00
YOU SAVE \$	100 01

\$60.600 \$64.60 Down

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

(See page 17 for accessory plug-in head with 78-rpm cartridge). Amplifier case, changer base and speaker enclo-

### Stereo Phono System With Fisher Amplifier

_	Stereo Litotto System Mini Listiei Wilh	illiei
	Fisher X-101 40-Watt Stereo Amplifler & 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	525.00
	YOU SAVE	\$76.56

\$52500

SYSTEM PRICE Jensen's CN-100 speaker systems deliver splendid stereo sound from new stereo sound from new stereo sound from new stereo records; employ 12" woofer, 8" mid-range unit and tweeter. The X-101 amplifer provide 220 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 

### MORE VALUES IN HI-FI SYSTEMS FEATURING SCOTT AND FISHER COMPONENTS

	Amplifier	Çhanger	Cartridge	Speaker System	Finishes	Shpg. Wt.	Stock No.	NET PRICE
_	Scott 299 Stereo with Case	Garrard RC88 with Base	Pickering 371 Stereo Diamond	University "Debonaire" with UXC-123 12" Speaker	Amplifier case, changer base and enclosure in mahogany, blonde or walnut —specify choice	154 lbs.	36 HF748	\$369.00 SAVE \$63.47
	Scott 99-D 22-Watt with Case	Garrard RC88 with Base	G.E. GC-7 Stereo Diamond	E-V "Marquis" with 12TRX-B 12" Speaker	Amplifier case, changer base and enclosure in ma-hogany, limed oak or walnut —specify choice	106 lbs.	36 HF734	\$299.00 SAVE \$39.05
. ]	Fisher X-101 Stereo with Case	Garrard RC88 with Base	G.E. GC-7 Stereo Diamond	Jensen TR-101 "Tri-Ette" 3-Way Speaker System	Amplifier case, changer base and enclosure in ma- hogany or walnut —specify choice	100 lbs.	36 HF 735	\$369.00 SAVE \$41.68

### SAVE WITH THESE DO-IT-YOURSELF MUSIC SYSTEMS

SAVE TWO WAYS!

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!

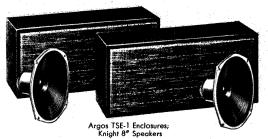


Knight-Kit

Knight-Kit 12-Watt **Amplifiers** 

Control Collero and Base







### **Lowest Cost STEREO System**

ONLY

- You Save \$21.06
- British-Made 4-Speed Changer
- Stereo Cartridge—Diamond Needle
  Versatile Stereo Control Unit
- Two Powerful 12-Watt Amplifiers

• 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; 2— Argos TSE-1 Shelf-Type Speaker Enclosures in your choice of finish; 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 leatherette—specify. For operation from 110-125 v., 60 cycle AC. Shpg. wt., 128 lbs. 

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

ONLY

You Save \$8.35

- Top-Performing 12-Watt 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 top-economy "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 Amplifler 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 Two-Way High-Fidelity Speaker System Kit.

Full, one knob centralized control is provided by the stereo control unit. Pre-finished enclosure kit is available in your choice of mahogany, blonde or walnut—specify 

See Page 444 for Allied's Easy Payment Plan

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**

Said.

You Save \$28.51

- Versatile Stereo Preamplifier
- Super-Power Stereo Amplifier
- World-Famous 4-Speed Changer
- Stereo Cartridge-Diamond Needle
- 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 KN-1260K Ducted-Port Speaker Enclosure Kits; 2—Knight KN-800 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., 

### **Deluxe Convertible Phono System**

- Enjoy Brilliant Hi-Fi Response
- Just Add Another Speaker and Amplifier 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. 

See Pages 249 and 250 for Knight-Kit Tuners

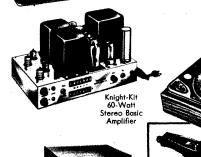


**EASY** TO **ASSEMBLE** 



DELUXE STEREO IN MONEY-SAVING DO-IT-YOURSELF FORM

Knight-Kit



000

Pickering 371 Stereo Cartridge

Garrard RC88-4

and Base

-Knight KN-1260K Enclosure Kits; -Knight 12" 3-Way



DELUXE HI-FI SYSTEM CONVERTIBLE TO STEREO



G.F. GC-7 Stereo Cartridge

> Knight Enclosure Kit; Knight 12" 3-Way Deluxe Speaker



### **BIG SAVINGS ON DO-IT-YOURSELF HI-FI SYSTEMS**

### 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!

# New Knight-Kit 12-Watt Amplifier With Cover Collaro TSC-740 Record Changer With Base G.E. GC-7 Cartridge Knight-Kit 2-Way Speaker System Kit With Pre-Finished Enclosure Knight-Kit 30-Watt Pickering 371 Stereo Cartridge Garrard RC88-4 Changer & Base Knight KN-810 3-Way, 15" Speaker

Knight KN-1215K "Dual-Ducted Port" Enclosure Kit

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

ONLY

512950

Save \$14.42

- New Knight-Kit 12-Watt Amplifler
- Collaro 4-Speed Changer & Base
   New G.E.Cartridge—Diamond Needle
- 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 Amplifler 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.

### Deluxe Do-It-Yourself Hi-Fi Phono System

ONLY • Knight-Kit 30-Watt Hi-Fi Amplifler

Top-Rated Garrard Changer & Base
New Pickering Stereo Cartridge with
Diamond Needle

Save \$20.01 • Deluxe Knight Speaker & Enclosure Kit

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

### FEATURING A RECEIVED

### Economy Do-It-Yourself Hi-Fi Phono System

ONLY

Save \$16.08

- Knight-Kit 18-Watt Amplifler Kit
- Famous Garrard Changer & Base
- G.E. Stereo Cartridge—with Diamond Needle
- New E-V 12" "Wolverine" Speaker
- Knight "Ducted Port" Enclosure

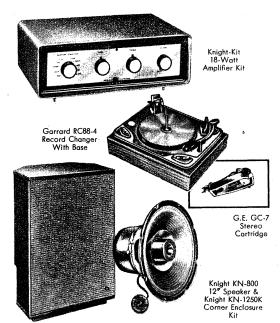
Selected by Allied's experts for the exceptional quality of its components, this system saves you \$16.08! You'll the amplifier and enclosure kits easy to buildyou'll enjoy outstanding performance from the completed system. Includes: Knight-Kit 18-Watt Amplifier Kit; Garrard RC121-II Changer with Base; new G.E. GC-7 Stereo 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" 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. 

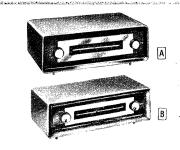


### Popular Do-It-Yourself Hi-Fi Phono System

- Knight-Kit 18-Watt Amplifler Kit • Top Garrard Changer with Base
- G.E. Stereo Cartridge—with Diamond Needle
- Famous Knight 3-Way 12" Speaker • 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 Amplifier 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 Knight-Kit 18-watt amplifier, one of our most popular units, offers superb music reproduction. G.E.'s CC-7 cartridge, installed in plug-in head and with .0007" 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.) The highly rated KN-800 speaker and KN-1250K enclosure team up to provide sparkling sound. Changer base and enclosure kit in mahogany, 





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

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 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 lbs. 

31



created by

### priced to save you money

If you have been denying yourself the pleasure of high-fidelity musical enjoyment because of budget restrictions, remember that Allied's low-cost Knight components are designed expressly for you—to give you, the customer, maximum value and guaranteed protection for your hi-fi dollar.

### built to custom-quality standards

From the drawing board to the finished product, Knight high-fidelity audio components embody the same careful attention to detail... precise inspection of every stage . . . and rigid laboratory checking . . . that goes into the most expensive reproducing units.

### GUARANTEED ONE FULL YEAR

### 15-Day Trial, Money-Back Offer

Any Knight hi-fi component you buy may be tested under the terms of our trial guarantee. Place your order on our regular cash terms or use our Easy Pay Plan. Then check performance in your own home. If within 15 days you are not fully satisfied, return the unit to us. We will refund your full purchase price, less only transportation charges. For your complete protection, regular EIA warranties also apply.

CREATED BY ALLIED

# knight

Royalty of Value in hi-fi

EASY TERMS AVAILABLE

### designed by ALLIED

... and precision-built by skilled craftsmen—your positive assurance of brilliant hi-fi reproduction and the ultimate in dependability and performance. Allied's long leadership as supplier of hi-fi units and systems to music lovers the world over, enables us to produce the unit you want.

### styled for pride of ownership

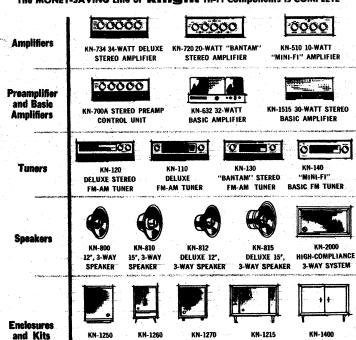
Compact and attractive, Knight components are styled to provide lasting beauty and to blend happily with any furnishing scheme, in any room. Their distinctive styling, combined with the ability to reproduce music with lifelike realism, will make you proud to own these remarkable units.

### The MONEY-SAVING Line of Ichigint Hi-Fi Components is COMPLETE

MORE FOR YOUR HI-FI DOLLARS. More in performance . . . more in styling

... more in genuine quality ... and more features for true listening pleasure. Built to Allied's highest standards, royal-value Knight custom com-

ponents offer you the best in musical reproduction at moderate cost.



BASS REFLEX

**ENCLOSURE\*** 

"DUAL DUCT"

ENCLOSURE

EQUIPMENT

CABINET

CORNER HORN "DUCTED PORT"

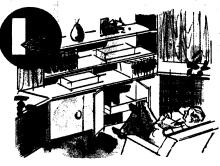
**ENCLOSURE** 

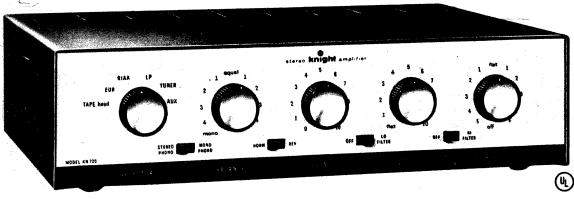
ENCLOSURE

\*(Not Sold as Kit)

### DAME MOST WITH **knight quality** STEREO

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 reproduction from any stereophonic or monaural source-records, tapes or radio broadcasts—choose new Knight stereo components.





KN-720

**Guaranteed For One Full Year** 

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

**NET** 

\$8.00 Down

- 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: ±1 db, 20 to 20,000 cps. Distortion: harmonic, 1% at 1000 cycles measured at 10 watt output; 1M, 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, 3 1/4 1/4 11". U.L. Approved. For 110-120 volt, 50-60 cycle AC. Shpg. wt., 15 lbs.  FEATURE-PACKED knight

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 10watt-per-channel stereo am plifier or 20-watt monaural amplifier. Input-paralleling switch permits instant switch ing 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 broadcast reception—plus regular monaural sound sources.



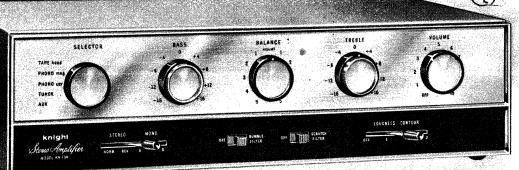
BEAUTIFUL STYLING. The "Bantam" amplifler features a rich, leather-tone brown finish, front panel styled in brushed brass and glistening black trim. Its case and color styling are a perfect match to the Knight KN-130 "Bantam" Stereo FM-AM Tuner, described on page 38. Both of these high-quality components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

> kaa pogas û Kirough Itî, Lar Hilisti recoming saded, money-saring steres music systems featuring now Enight constable solu-

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### ALLIED'S EXCLUSIVE knight® 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.



GUARANTEED FOR ONE FULL YEAR

# SUPER-VALUE STEREO AMPLIFIER

### MOST FOR YOUR MONEY

### STEREO OR MONAURAL USE

Special output transformers permit use of the KN-734 as a stereo amplifler with two 17-watt channels; or as a monaural 34-watt amplifler. 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 signal— Tape Head, Magnetic Cartridge, Ceramic or Crystal Cartridge, Tuner and Aux.



### WIDE-RANGE BALANCE CONTROL

Makes any room perfect for stereol Balances the volume of both speakers to provide stereo acoustic effect from any listening position. Boosts volume of speaker that may be unfavorably located.



### 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.

### NEW knight KN-734 Deluxe 34-Watt Stereo Amplifier

\$19050

\$12.95 Down

Separate Bass and Treble Controls for Each Channel
Complete Stereo and Monaural Control Facilities

KN-734

Plug-In Jack for Remote Control Accessory

Plug-In Jack For Using Binaural Headphones
 Color-Styled in Belge Vinyl Plastic, Bonded to Case

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: ±1 db, 30-20,000 cps. Distortion (Harmonic and IM): less than 2% at rated output. Hum & Noise: 80 db below full output. 10 Inputs (5 pairs): Tape Head, Magnetic Phono, Ceramic or Crystal Phono, Tuner, Auxiliary. Sensitivity (for rated output): 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. 4½x15½x13½". U.L. Approved. For 110-120 v., 50-60 cycle AC. Shpg. wt., 35 lbs.

BINAURAL HEADPHONES. The KN-734 has a jack for plugging in binaural headphones (see pages 420, 421 for a number of excellent sets).

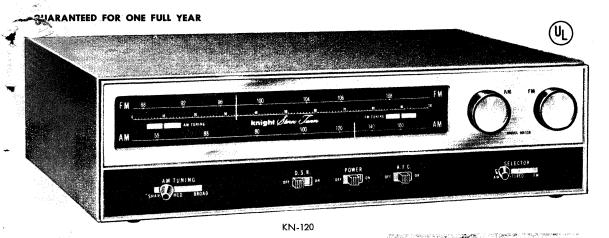
#### MONEY-SAVING STEREO HI-FI COMPONENTS

**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!**



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



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

NET

\$ 2950

\$12.95 Down

- For Stereo FM-AM Reception & FM or AM Separately
- Phenomenal Dynamic Sideband Regulation Feature
- New Tuning Beam Indicator Tubes for FM and AM
- Each Tuner Sweep-Aligned at Factory
- Tuned RF on FM and AM Dual Limiters on FM

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 for 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.

FM Section. Tuned RF stage, two limiters and a discriminator, AFC. Sensitivity:  $2\frac{1}{2}$   $\mu v$  for 20 db quieting. Less than 0.25% IM distortion at 30% modulation for RF inputs over 20  $\mu v$ . AM Section. Tuned RF stage. Sensitivity:  $4~\mu v$  for 20 db signal-to-noise ratio. 10-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. 4%x15%x 13%". U.L. Approved. For 110-120 v., 50-60 cycle AC. 21 lbs.

#### SAVE! Deluxe Stereo Amplifier and Tuner Combination Offer

KN-734 & KN-120

\$24A00

You Save \$15.00

Two of the finest stereo components available—at 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

See Pages 8-9 for Stereo Systems Featuring Deluxe Knight Units

#### YOUR BEST BUY IN AN FM-AM

STEREO JUNEA

#### **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



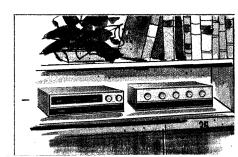
True stereo design! Separate, weighted flywheel tuning for FM and AM; separate tuning indicators; and separate output level controls. It's like having two fine tuners in one compact case!

#### SWEEP-ALIGNED AT FACTORY



Since alignment is a critical factor in the quality of FM reception, every KN-120 tuner is visually sweep-aligned at the factory—an extremely accurate procedure.

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





#### ME DELUXE STEREO HI-FI

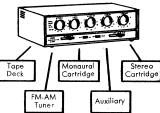
Enjoy the splendor of stereophonic musical entertainment in your own home for far less than you thought possible—with deluxe Knight stereo components. These superb units are your finest values . . . by any standard of comparison!



**VERSATILE, LOW-COST** 

STEREO CONTROL CENTER

COMPLETE CONTROL OF STEREO PROGRAM SOURCES



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.



#### MATCHES ANY CARTRIDGE

Control at rear for adjusting magnetic phono input impedance-assures maximum fidelity with any magnetic cartridge.



GUARANTEED FOR ONE FULL YEAR

KN-700A



#### NEW knight KN-700A Deluxe Stereo Preamp Control Center

NET

Separate Tone Controls For Each Channel



- Instant Fingertip Switching of Entire System to Stereo or Monaural, Left to Right Channels
- Master Volume and Balance Controls
- DC on All Tube Filaments for Hum-Free Operation

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: ±1.0 db, 20 to 20,000 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. 4 1/2 1/3 1/4 x 8 1/2". U.L. Approved. For 110-120 v., 60 cycle AC. Wt., 13 lbs.

92 SU 424. NET.................

#### **NEW knight** KNR Stereo Remote Control Unit

ONLY

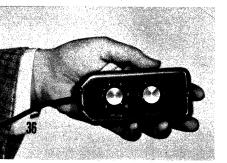


92 S 426. NET.....

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 (Monau-

ral, Stereo). Case in brown; white and gold panel—finished to match the KN-700A. Supplied with 20-ft. remote control cable. HWD: 23/8x51/8x11/4". Shpg. wt., 21/2 lbs.

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.

#### **DAZZLING 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 now with latest Knight stereo components.





#### knight KN-632 32-Watt Basic Amplifier

**NET** 

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

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 ½ of 1%. Most important, in everyday music listening at ordinary room volume, the response of the KN-632 gives you music reproduction with diamond-like 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:  $\pm 0.5$  db, 20 to 40,000 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 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, 16 ohms. 7%x14%x5%". U.L. Approved. For 110-120 volts, 60 cycles AC. Shpg. wt., 25 lbs. 92 SU 404, NET .....

#### knight KN-1515 Stereo Basic Amplifier

\$7.45 Down

- Advanced, Single-Chassis Design
- Use It as 30-Watt Monaural Amplifier
- Use It as Two 15-Watt Amplifiers
- Convert It to Stereo or Monaural Use 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: ±0.5 db, 20 to 20,000 cps. Distortion: harmonic, 0.5% at mid-frequencies at 15-watt outputnever exceeds 1½%, 20-20,000 cps; IM, 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: 6x13 1/2x 

#### SAVE Stereo Preamp With 2 Basic Amplifiers



ONLY

Save \$10.00

Start on your stereo music center now, with the Knight KN-700A Stereo Preamp Control Center and two Knight KN-632

Basic Ampliflers. You make an appreciable \$10.00 savings on the package! Add two speakers and stereo record changer or stereo tape deck for a complete stereo music system. Add a stereo FM-AM tuner later, for stereo radio broadcasts. You'll be thrilled with this dazzling new sound! Shpg. 36 SZ 802-3. All 3..... 228.95

#### Stereo Preamp with Stereo Amplifier

and the Control of th

Two of the newest ONLY

Knight components —the remarkable KN-700A Stereo Pre-Save \$8.00 amp Control Center and the KN-1515
Stereo-Monaural Basic 30-Watt ampli-

fier—at a savings of \$8.00! Add only two speakers and any stereo sound source—stereo tape deck, stereo record changer, stereo FM-AM tunerfor thrilling stereophonic sound. You'll marvel at the easy-to-use control facilities—and you'll be delighted with the sound! Wt., 34 lbs.
36 SU 801-2. Both Units...156.45

### TOP-VALUE Knight STEREO TUNER More for your money in latest stereo high-fidelity! A notable achievement in a first-class stereo component, the new Knight KN-130 "Bantam" Stereo FM-AM Tuner brings you reception of stereo FM-AM broadcasts, FM broadcasts only, or AM broadcasts only. Highly efficient ... remarkably low in cost ... and guaranteed by Allied for one full year! (U<u>L</u>) STERED stereo knight tuner 100 65 TUNING SELECTOR MODEL KN 130 OFF AFC Knight Stereophonic Tuner

# REMARKABLE VALUE STEREO TUNER AN ALLIED EXCLUSIVE

COAXIAL TUNING CONTROLS



Convenient, three-way tuning—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

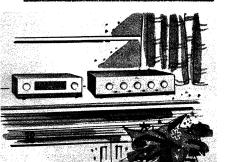


Highly efficient limiter-discriminator FM circuitry. Offers good noise rejection and excellent sensitivity for clear reception of weak or distant FM stations.

#### AFC FOR "LOCK-IN" TUNING



As you dial near an FM station, 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

\$7950

\$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" tuners—ready 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.

FM Sensitivity: 4 microvolts for 20 db of quieting. AM Sensitivity: 10 microvolts for 20 db signal-to-noise ratio. FM Bandwidth: 180 kc. FM Response: ±0.5 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, 3%x11%x9". U.L. Approved. For 110-120 v., 50-60 cycle AC. Shpg. wt., 13 lbs.

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

BOTH FOR ONLY

\$ 4945

You Save \$10.00

Take advantage of this excellent opportunity to get started in stereo with the new Knight "Bantam" twins—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.

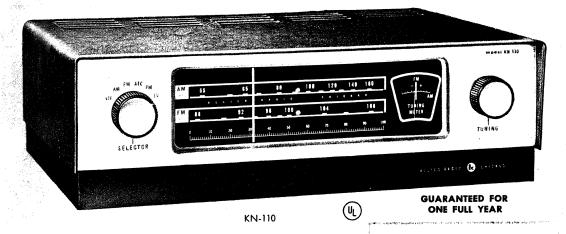
See Pages 6-7 for New Stereo Systems Featuring "Bantam" Units

### 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.

#### SAVE! DELUXE MAN FM-AM BASIC TUNER

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

NEI TAMARA ST

- Deluxe Styling and Custom-Quality Throughout
- Tuned RF Stage on FM and AM for High Sensitivity
- AFC Automatically "Locks-In" FM Stations
- Tuning Meter Simplifies Tuning on FM and AM
  Dual Limiters in FM Circuit for Maximum Noise Rejection

  Tuning Meter Simplifies Tuning on FM and AM

  Tuning Meter Simplifies Tuning on FM and AM

  Tuning Meter Simplifies Tuning on FM and AM
- 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 AFC—automatic 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-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, 2½ microvolts for 20 db, 4 microvolts for 30 db quieting; AM, 5 microvolts for 20 db signal-to-noise ratio. IF Bandavidth (FM): 200 kc. Controls: Function Selector (Off, AM, FM-AFC, FM, TV) and Tuning. Distortion: Less than 2% at 1.5 v. output. 11 tubes, plus rectifier. Size, 4x13½x10". 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" 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 offil)



#### SIMPLE FUNCTION SELECTION

Clearly marked selector switch turns set on and chooses AM, FM with AFC lautomatic frequency controll, 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 reception 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 top-rated KN-110 FM-AM tuner offers top performance at low cost.



#### 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







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. 33/4x6x31/2". 13/4 lbs.

.....14.95 92 S 427, NET....

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

\$4.00 Down

• True Hi-Fi Performance & Control Flexibility

• Excellent for Budget-Priced Music Systems

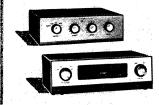
- Employs Newest Circuitry and Latest Tube Types • Flat Frequency Response: ±1 db, 20-20,000 cps
- Newest Color Styling-Blends With Any Decor

• 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:  $\pm 1$  db, 20 to 20,000monic, less than 2%; 1M, less than 3%. Response: ±1 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. 3%" high (including feet), 11½" wide, 9" deep. U.L. Approved. For 110-120 y., 60 cycle AC. Shog wt 10 lbs v., 60 cycle AC. Shpg. wt., 10 lbs. 92 SX 409, NET....

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



BOTH ONLY \$10045

components-at combination savings of \$10.00! Includes: Save \$10.00 Knight KN-510 "Mini-

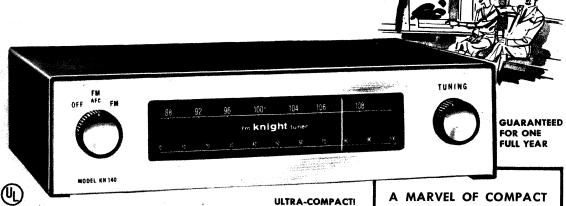
Two first-quality

Fi" Amplifier and the new KN-130 FM-AM 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.



#### NEW **knight** KN-140 Basic FM Tuner—A Rare Buy!

ONLY

\$5.00 DOWN

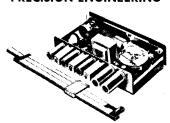
- Actual Size: 21/4" High, 9" Wide, 7 1/8" Deep!
- Tunes the Full FM Band-88 to 108 Mc
- Automatic Frequency Control "Locks In" Stations
- Tape Recorder Output for "Off-the-Air" Recordings
- Weighted Flywheel Tuning; Illuminated Dial Scale
- Attractive, "Leather-Tone" & Brass Styling

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: 5μν 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,  $2\frac{1}{4}$ " high, 9" wide,  $7\frac{1}{8}$ " deep. U.L. Approved. For 110-120 v., 50-60 cycle AC. Shpg. wt.,  $7\frac{1}{2}$  lbs. 92 SX 425. NET......

## 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.

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

**BOTH ONLY SAVE \$8.00** 

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



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.

# LATEST STEREO HI-FI COMPONENTS

# 299

### NEW 299 DELUXE 40-WATT STEREO AMPLIFIER

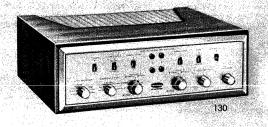
\$1995

Skillfully engineered and unusually versatile, the Model 299 offers dual 20-watt power sections, dual preamps and latest stereo features. Use it for stereo discs or stereo tapes; for stereo FM-AM broadcasts; for reproduction of 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.

phasing on stereo discs and tapes; 2-cnannel balance control; etc.

Response: 20 to 30,000 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/ax15x12".
Less case; see page 43. For operation from 105-125 v., 50-60 cycle
AC. Shpg. wt., 35 lbs.

199.95 91 SU 657, NET.....



#### **NEW 130 DELUXE STEREO PREAMPLIFIER**

One of the most advanced preamps available.

(-1.54 + 1.54 + 1.56 ) × 10.

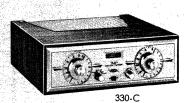
\$16995

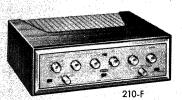
One of the most advanced preamps available.

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 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. instantly tell mode of operation.

Output: 2½ v.; maximum, 10 v. Response: 19 to 35,000 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. 4½x15½x12½x. Less case; see table on page 43. For operation from 105-125 v., 50-60 cycle AC. Shgg. wt., 15 lbs.

169.95 91 SU 658. NET...









#### 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. FM Section: 2 µv sensitivity for 20 db quieting; 1 µv with 72-ohm antenna. Wide-band design; 2-mc detector; automatic gain control. 80 db rejection of spurious response from cross modulation by rious response from cross modulation by strong local signals permits using this tuner in any location, even close to FM transmitters. AM Section: 1 µv sensitivity for usable audio output; new, extremely effective detector; 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. system or tape recorder.

11 tubes; 2 diodes; 6X5 rectifier. 43/4x151/4x 121/2". Less case; see page 43. For 105-125 v., 50-60 cycle AC. 17 lbs. 

#### **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-A, B; 210-C. Group II: Scott 121-A, B, C; 210-D, E. Group III: Any hi-fi system with separate preamps and basic amplifiers. with separate preamps and basic amplifiers froup 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-ft. shielded cables for all 

#### 210-F DYNAURAL 36-WATT AMPLIFIER

A widely approved, top-quality amplifier. Converts to stereo use with the 135 Stereo-Daptor 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 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 cps. Harmontols: Distortion: 0.5%. Hum: -80 db. Controls: Selector-Equalizer (Orig Lon, RIAA, Orig Col, NARTB Tape and 3 special curves for 78-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; Loudness-Volume; Speaker Selector; On-Off; Distortion Filter; Tape Monitor, 4, 8 and 16 ohms.

#### NEW 250 40-WATT BASIC AMPLIFIER

An excellent, laboratory-quality 40-watt An excellent, laboratory-quanty 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 cps with con-Response: from 12 to 00,000 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 institutions of 0.2 and 0.5 most below the control of the cont put 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.

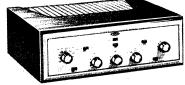
Two 6CA7 output tubes. With case. Size, 6½x13x11". For 105-125 v., 50-60 cycle AC. Shpg. wt., 22 lbs. 91 SU 677. NET. 129.95

#### DELUXE HIGH-FIDELITY MUSIC COMPONENTS

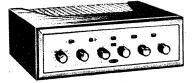




300



99-D



209

#### 300 FM-AM BASIC TUNER

Less Case

Outstanding in performance and workmanship, this FM-AM basic tuner conforms to Scott's traditional standards of

#### 

#### 99-D DELUXE 22-WATT AMPLIFIER

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 "Quik-Set" control set-

features, such as: tings; speaker switch for selecting either of two speakers or both speakers at once; tape recording monitor-playback switch for use 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 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; Input Level; Bass; Treble; Off-On. 43/x15x12". Less case; see below. For operation from 105-125 v., 50-60 cycle AC. Shpg. wt., 20 lbs. AC. Shpg. wt., 20 lbs.

#### 

#### **NEW 209 DELUXE 36-WATT AMPLIFIER**

\$1395
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 power-reserve; unique, new Acoustic Level control for optimum adjustment to any room conditions and speaker efficiencies; high sensitivity for excellent operation with tape retivity for excellent operation with tape re-corder heads and cartridges having very low output; special DC bias supply for preamp and output tubes to assure minimum distortion at full power output; complete tape recorder facilities: etc. Output: 36 watts. Response: 19 to 35,000 cps. Harmonic watts. Response: 19 to 35.000 cps. Harmonic Distortion: less than 0.5%. Hum: -80 db. Controls: Selector-Equalizer (Eur 78, Orig Lon, Orig AES, RIAA, Orig Col, NARTB Tape. Tuner, Tape. Typ. Bass; Treble; Loudness; Loudness-Volume; Speaker Selector; Scratch Filter; Rumble Filter; Acoustic Level; Monaural/Stereo-Daptor; Tape Monitor. 4, 8 and 16 ohms. 5½x15½x. 12½". Less case, below. For 105-125 v.. 50-60 cycle AC. Wt., 25 lbs. 91 SIJ 633 NFT

#### 

#### 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 out-put 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; 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 db rejection of spurious response. Separate tape recorder and multiplex output. Sensitivity: 2µv for 20 db of quieting; 1µv with matched 72-ohm antenna. Max. Audio Output. 4 v. for 75 kc deviation. Controls: Off-On/Level; Tuning. 6 tubes; 2 diodes; 6X4 rectifier. Size, 4¾x13¼x9¾". Less case; see listing in table below. For operation from 105-125 volts, 50-60 cycle AC. Shpg. volt. 15 lbs. 15 lbs

#### 310-B BASIC FM TUNER

Frequently used in professional broadcast monitors, the 310-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; pro-vide exceptional rejection of ignition noise and cross modulation. Extremely effective automatic gain control circuit prevents dis-tortion on strong local signals and makes manual control of sensitivity unnecessary. Absolutely free of drift.

Temperature-compensated, Has 150-kc IF passband and 2 mc limiters and detector; 3 stages of full limiting. Interstation Noise Suppressor eliminates FM "hiss". Signal Suppressor eliminates FM "hiss". Signal strength meter. Low-impedance output permits use of long leads. Tape recorder output. Sensitivity: 1½ µv on 300-0hm input with 20 db of quieting. 85 db rejection of cross modulation. Max. Audio Output: 4 v. for 75-kc deviation. Controls: Tuning, Fine Tuning, Level, Noise Suppressor. Employs 9 tubes; 3 diodes; 6X5 rectifier. Size, 43/4x 13/4x93/4". Less case; see listing below. For operation from 105-125 v., 50-60 cycle AC. Shpg. wt., 14 lbs.



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: \*hand-Two types of cases are available: "nand-rubbed wood in mahogany, blonde or walnut finishes; †steel case with imita-tion-leather finish. All cases have venti-lating louvers to allow circulation of air. Av. shpg. wt., 1½ lbs., except Types E, EW, EWB and EWW, ½ lb.

No.	Туре	HWD	Finish	For:	EACH
94 SX 577	C†	43/4x151/2x12"	Leather	99-D,210-F,300,330-C,299,209,130	9.95
94 SX 578	D†	43/4x131/4x101/2"		310-B,311-C	9.95
91 S 632	E†	51/2x7x51/8"	Leather	135 Stereo-Daptor	4.95
94 S X 580	CW*	51/8x151/2x121/4"	Mahog.	99-D,210-F,300,330-C,299,209,130	19.95
94 SX 590	DW*	51/8x131/8x91/2"	Mahog.	310-B,311-C	19.95
94 S X 581	CWB*	51/8x151/2x121/4"	Blonde	99-D,210-F,300,330-C,299,209,130	19.95
94 S X 591	DWB*	51/8x131/8x91/2"	Blonde	310-B,311-C	19.95
9i SX 678	CWW*	51/8x151/2x121/4"	Walnut	99-D,210-F,300,330-C,299,209,130	
91 SX 679	DWW*	51/8x131/8x91/2"	Walnut	310-B,311-C	19.95
91 \$ 675	EW*	51/2x7x51/8"	Mahog.	135 Stereo-Daptor	11.95
91 5 676		51/2x7x51/8"	Blonde	135 Stereo-Daptor	11.95
91 \$ 680	EWW*	51/2x7x51/8"	Walnut	135 Stereo-Daptor	11.95

#### LATEST STEREO HI-FI COMPONENTS





#### Harman-Kardon's Perfectly Matched Stereo Components

#### A-224 "TRIO" STEREO AMPLIFIER

NET **\$99**95

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

rai ampliner; and a 24-wart ampliner winch serves as \$10.00 Down a single stereo channel, plus a complete stereo pramp 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 trois, 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: ±½ 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. 4%x1313/6x111/2". For 110-120 v., 50-60 cycle AC. Shpg. wt., 18 lbs. 99.95

91 SU 643, NET.. 91 SX 652. Cage for Above. Black finish. Wt., 3 lbs. NET ... 7.00

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

\$11495

\$11.50 Down

Companion unit to the A-224 "Trio" amplifier, the "Duet" offers superb performance either as Companion unit to the A-224 "Trio" ampliner, 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 five pairs of stereo FM-AM stations. Trim applied to the dial face of the T-244 stations.

identification of five pairs of stereo FM-AM stations. Trim appearance and brushed copper and black styling make the T-224 perfect for use with the A-224.

FM Section. Low-noise front end consisting of grounded-grid RF 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: 2½ microvolts for 20 db of quieting. Selectivity: 240 kc bandwidth, 6 db down. Distortion: less than ½% 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: 1½ volts for 100% modulation; ½ volt for 30% modulation; ½ volts for 30% modulation. 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/x131/scx12/4". 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.....

#### Deluxe Harman-Kardon Stereo Components

#### A-250 "EPIC" STEREO AMPLIFIER

New, highly advance d stereo amplifier. Offers: two 25-watt channels for stereo use; 50-watt output for monaural use; or conversion system for use with existing mon-aural music systems. Exclusive H-K cir-cuitry employs both positive and negative

cuitry 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: ±½ db, 15-30,000 cps at 1 watt. Output Impedances: 4, 8, 16, 32 ohms per channel. Hum: —85 db. Controls: Treble/Off-On; Bass; Loudness: Balance; Mode (Stereo Normal, 1994) Monaural ness; Balance; Mode (Stereo Normal, Stereo Reverse, Monaural Right, Monaural 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). 44x1576x1376. Less cage. For 110-120 v., 50-60 cycles AC. 35 lbs.

Cage for Above. Shpg. wt., 3 lbs. 91 SX 646. NET......12.50

#### 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 romonaural 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 cooper and black styling. stereo stations. Dual cathode-follower outputs. Brushed copper and black styling. FM Section. Sensitivity: 2½ µv for 20 db of quieting. Selectivity: 240 kc bandwidth, 6 db down. Hum: 60 db below 100% modulation. AM Section. Sensitivity: 10 µv. Selectivity: 10 kc bandwidth, 6 db down. Front Panel 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, 43/4x151/4x 13". For operation from 110-120 v.. 50-60 cycle AC. Shpg. wt., 20 lbs. ........189.95 91 SU 647. NET....



A-250 "Epic" Stereo Amplifier

TP-200 "Concerto" Stereo Tuner

COMPLETE STEREO SYSTEMS. 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.

#### 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 identi-cal 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.

#### **NEW GUIDE LINE HI-FI COMPONENTS**

harman kardon

NEW STANDARDS OF QUALITY & STYLING IN ECONOMY-PRICED COMPONENTS



FA-10 FM Tuner-Amplifier



F-10 Basic FM Tuner



A-10 10-Watt Amplifier

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

**NET** \$11495 \$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 con-trol section—on one chas-

trol 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. 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 select and heautiful 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 µv for 20 db of quieting. Selectivity: 200 kc bandwidth, 6 db down. Hum: 60 db below 100% modulation. Audio Specs. Uses 2—EL84 output tubes. Output: 10 watts at less than 1% harmonic, and less than 2% less than 1% harmonic, and less than 2%, IM distortion. Response: ±½ db, 15-30,000 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, 4½xx13½x11", For 110-120 v., 50-60 cycle AC. Shpg. wt., 18 lbs. 91 SU 607. NET.....

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

Perfect for converting existing monaural Perfect for converting existing monaural hi-fi 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.

another basic amplifier for stereo use. Output: 20 watts. Response: ±½ db, 15 to 30,000 cps at 1 watt. Distortion: harmonic, less than 1%; 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; Equalization. Less cage, below. 4x12½x11½. For 110-120 v., 50-60 cycle AC. 18 lbs.

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, 5x10x4". For operation from 110-120 v., 50-60 cycle AC. Shpg. wt., 14 lbs. 

#### F-10 "TEMPO" BASIC FM TUNER

\$**69**<sup>95</sup>

Modestly priced, basic FM tuner that sets new standards of performance, crafts-

\$7.00 Down broadband Foster-Seeley discriminator. Employs an extremely quiet front end consisting of a tuned triode, grounded-grid am-plifier and triode mixer.

Distortion is remarkably low and capture Distortion is remarkably low and capture ratio is excellent. Automatic frequency control provides "lock-in" tuning of FM stations—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 µv for 20 db of quieting. Selectivity: 200 kc bandwidth. 6 db down. Discriminator Peak-to-Peak Separation: 600 kc. Distortion: Less than 1% harmonic and IM at 30% modulation. Hum: 60 db below 100% modulation. Output Level: 1/2 v. for 100% modulation; 1/2v. for 30% modulation. Controls: On-Off; Tuning. High-impedance output. Tubes: 2—ECC85, 3—6AU6, 6AL5; selenium rectifier. 300-ohm antenna input. Size, 4x12/½x50½°. For operation from 110-120 v., 50-60 cycle AC. Shpg. wt., 10 lbs.
91 SX 606. NET. 69.95

#### TX-20 "SERENADE" BASIC FM-AM TUNER

New, advanced FM-AM basic tuner with many excellent features. FM section employs a pentode limiter, wide-band Fosterploys a pentode limiter, wide-band Foster-Seeley discriminator and automatic fre-quency control. AM circuit is superhet with automatic volume control. FM Sensitivity: 1 μ γ το 20 db of quieting. AM Sensitivity: 10 μν. 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; sele-nium rectifier. With copper and black cage. Size. 4½x12½εx8½". For 110-120 v., 50-60 cycle AC. Shpg. wt.. 11 lbs. 91 SU 670. NET....

#### 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 µv for 20 db of quieting. Less cage, below. 4¾x15¾6x13″. For 110-120 v., 50-60 cycle AC. Wt., 13 lbs. 91 SU 648. NET.....

#### F-250 "LYRIC" BASIC FM TUNER

Not illustrated. Same size and FM circuit 

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

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

Embodies every important characteristic of a fine high-

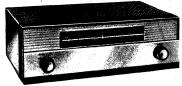
\$4095 fidelity amplifier, at unusually low cost. Perfect for use in pairs for stereo music installations. Frequency response and hum specifications are excellent; controls are flexible enough to accommodate except his formula to accommodate exc date accessory hi-fi equipment that is commonly used in home music systems. Has RIAA-equalized magnetic phono input and NARTB-equalized tape head input. Full-range 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, pen-Circuit features 2—EL84 output tubes, pentode connected, for clean and undistorted audio reproduction. Frequency Response: ±½ db, 15 to 30,000 cps at 2 watts; ± db, 45 to 20,000 cps at 10 watts. Rated Output: 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 NARTR-equalized Tape Head). NARTB-equalized Tape Head).

Tape output jack on rear of chassis, affected by tone controls. Tubes: 2—12AX7, 2—EL84; EZ80 rectifier. Size, 4x121/6x61/8". 



AX-20 "Add-On" Stereo Amplifier



TX-20 Basic FM-AM Tuner



T-250 Basic FM-AM Tuner



#### **NEW SM-245 STEREO AMPLIFIER**

**NET** 

carefully engineered, \$18.95 Down
\$18.95 Down
\$18.95 to watts output per channel for stereo and 32 watts output for monaural use. Versatile control facilities permit stereo or monaural operation from

permit stereo or monaural operation from all inputs; monaural operation from either Channel A or Channel B input. Features in-clude: automatic shutoff position on the power switch for turning off the amplifier after the last record plays; stereo or monau-ral operation for both speaker systems; left to right stereo reverse switch; stereo balance control. Also has dual mike inputs for stereo control. Also has dual mike inputs for stereo recording; low-impedance, dual tape outputs for stereo recording. Tape signals are independent of volume and tone controls. Low-level audio tube filaments are DC-powered to eliminate hum. Equalized tape head input for playback of recorded tapes.

Output: 16 watts per channel; 32 watts for monaural use. Response: ±1 db, 20 to 20.000 cps. Distortion: harmonic, less than 1%; IM, less than 1½% at full output. Hum & Noise: 80 db below rated output. Hum beat the second of th 

#### TOP-QUALITY STEREO COMPONENTS



#### NEW FA-690 STEREO TUNER/PREAMP

**NET** \$**269**<sup>50</sup>

\$26.95 Down

Deluxe, remarkably versatile stereo component. The FA-690 combines a stereo FM-AM tuner with a dual preamp section containing every conceivable stereo or monaural control facility! FM Tuner

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 µv for 20 db quieting. Inter-station noise muting with control for mut-ing defeat; center-of-channel tuning meter insures precise station tuning. FM multi-plex 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 front-panel bandwidth control; 10-ke whistle filter. Sensitivity: 2 µv. Separate AM tuning meter. Built-in, ferrite core antenna.

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 B); AM Bandwidth (Narrow, Broad) Selector (Mic, Tape Head, Phono, FM-AM, Multiplex, Tape Rec.). 18 tubes; 5 diodes; EZ81 rectifier. 5x145/x117. For 105-120 v., 60 cycle AC. Shpg. wt., 22 lbs.



#### **NEW SP-210 STEREO PREAMPLIFIER**

Reatures two identical preamp sections for the ultimate in convenient stereo control. Matched companion to the Pilot SA-232 and \$8.95 Down 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 cominment after last record has played A

of equipment after last record has played. A Quadri-Volume control, consisting of 4 volume controls on a single knob permits synchronized attenuation of both channels. Externely well-filtered DC filament supply for tremely 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 outputs—audio and tape. Tape recording output is low-impedance to permit use of long cable lengths. Separate bass and treble controls are calibrated for RIAA, LP, NAB and AES phono equalization curves. Also has NAR-TB-equalized tape head inputs.

MODEL P-10 POWER SUPPLY. For above. 4x4x7½". For 105-120 v., 60 cycle AC. 6 lbs. 91 \$ 641. NET......19.50



NEW FA-680 STEREO FM-AM TUNER

Deluxe tuner employing the same FM-AM circuitry as the FA-690 above, but less the preamp section. Features separate tuning meters for FM and AM, cathode follower output, built-in FM and AM antennas, etc.

FM Section. Wide-band FM detector, 3 IF

# SP-216 Stereo Preamp

#### **NEW SP-216 STEREO PREAMPLIFIER**

Provides complete stereophonic or monaural audio control. Outstanding features include: two illuminated VU 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 system after last record plays. Dual mike inputs for stereo recording; stereo or monaural operation from all ing; series or inolativa operation from an 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 



#### **NEW SA-232 STEREO BASIC AMPLIFIER**

NEW 3A-232 STEKEO BASIC AMPLIFIER Employs two basic amplifier sections. Output: 16 watts per channel; 32 watts for monaural use. Frequency Response: 20 to 20,000 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 presume. 514:1316x 

**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 

FM Section. Wide-band FM detector, 3 IF stages, 2 limiters. Sensitivity: 1 μν for 20 db of quieting. Interstation noise muting with optional muting defeat; center-of-channel FM tuning meter; bullt-in line cord FM antenna. AM Section. High-gain pentode RF amplifier; 2 IF stages; narrow and broad bandwidth control for maximum AM fidelity; AM tuning meter; 10-kc whistle filter. Sensitivity: 2 μν. Controls: FM Tuning; AM Tuning; Automatic Shutoff/On-Off; FM Muting; AM Bandwidth; Selector (Mic. Tape Head, Phono, FM-AM, FM Multiplex, Tape Rec). Highly attractive styling. 14 tubes; 3 diodes; EZ81 rectifier. Sta14½x10½°, For 105-120 v., 60 cycle AC. Shpg. wt., 20 lbs.
91 SU 681. NET. 199.50

#### HIGH-FIDELITY COMPONENTS





#### NEW FA-670 BASIC FM-AM TUNER

**NET** \$17950 An excellent basic tuner featuring a new, skilful-ly designed circuit for

\$17.95 Down

\$18.95 Cetion. Low-noise, FM Section. Low-noise, FM Section.

NEW FM-660 BASIC FM TUNER. Not illustrated—similar to the FA-670 above. Has same FM circuitry, features and specifications of the FA-670. 8 tubes; 3 diodes; EZ81 rectifier. Size, 5x14½x10½°. 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 **\$109**50

\$10.95 Down

compact basic FM-AM 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; tuned RF amplifier stage for excellent sensitivity and selectivity; built-in line cord antenna. FM Sensitivity: 3.0 microvolts for 20 db of quieting. AM Features: Tuned RF amplifier stage; 10-kc whistle filter; efficient, built-in ceramic powdered-iron antenna; AM Sensitivity: 3 microvolts.

A cathode follower output permits installa-

AM Sensitivity: 3 microvots.

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 EMB1 tuning eye and 6X4 rectifier. Size, 43/4x13x83/4". For 105-120 volts, 60 cycle AC. Wt., 14 lbs. 94 SU 369. NFT 109-50 94 SU 369. NET......109.50

#### AA-920 20-WATT AMPLIFIER

NET

High-performance 20-watt

her support of the presence of

Power Output: Rated, 20 watts; 40 watts peak. Response: ±1 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 ohms. The puts: Radio, Aux, Tape Amp—470,000 ohms; Magnetic Phono, adjustable from 6800 to 100,000 ohms. Tape Head. 100,000 ohms. Company of the 16 of December 1

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" high, 13/4" wide, 9" deep. For 105-120 volts, 60 cycle AC. Shpg. wt., 22 lbs.

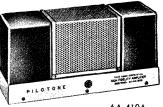


#### AA-903B 16-WATT AMPLIFIER

A deluxe 16-watt amplifier featuring a full set of controls. Advanced circuit features low distortion, unusually low hum and noise, and exceptional stability. Has equali-

noise, and exceptional stability. Has equalization for all types of recordings, plus an equalized tape head input permitting playback directly from a tape deck.

\*\*Rated Output: 16 watts. \*\*Frequency Response:\*\* db, 20-20,000 cps. \*\*Harmonic Distortion:\*\*Less than 1% at 16 watts. \*\*I.M.: 1.5% at 16 watts. \*\*Hum: 80 db below full output. \*\*Inputs: Radio, Aux, Tape Head, Tape Amp, Phono. Output Imp. 4. 8. 16 ohms. Controls: Loudness; Volume; Treble; Bass; Function-Equalization Selector (Radio, Aux, Tape Head, LP, RIAA, AES, NARTB); Scratch Filter; Rumble Filter. Tape output jack, independent of volume, loudness and tone controls, on rear panel. Variable input loading for various magnetic Variable input loading for various magnetic Variable input loading for various magnetic plane. phono cartridges assures maximum fidelity with any cartridge. EL84 output tubes. 43/4x13/4x9". For 105-120 v., 60 cycle AC. Shpg. wt., 17 lbs. 98 SU 584. \$8.00 Down. NET.... 79.95



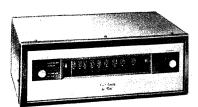
AA-410A

#### 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 con-trols. 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: ±0.1 db, from 20 to 20,000 cps at rated output. Harmonic Distortion: Less than 1% at full rated output of 20 watts. Intermodulation Distortion: Less than 1.5% at rated output (60 and 3000 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 output tubes. Transformers are sealed and finished in black enamel 5½" high, 4" deep, 14½" wide. Chassis has removable feet. For operation from 105-120 volts, 60 cycle AC. Shpg. wt., 19 lbs.

94 SU 367. \$5.95 Down. NET.... 59.50



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. 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: Selectivity: 6 db down at 200 kc. Controls: Selectivity: 6 db rown at 200 kc. Controls: Selectivity: 6 db controls. Tuning: 7 tubes, plus EM81 tuning eye and 6X4 rectifier. Panel is finished in brushed brass and deep burgundy. Size, 4½x13x8½%. For operation from 105-120 v., 60 cycle AC. Shpg. wt., 14 lbs.

94 SU 368. \$8.95 Down. NET.... 89.50

#### **NEW BELL** STEREO AMPLIFIER



**NET** 

**\$107**75

\$10.78 Down

#### TOP-QUALITY





• Single-Dial "Magic Touch" Control 3-Position Speaker Selector Switch

Rumble and Scratch Filter Switches

Latest Low-Silhouette Styling

MODEL 2325 20-WATT HI-FI AMPLIFIER

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

nents. 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.

Low-silhouette enclosure is attractively finished in saddle tan.

Power Output: 20 watts; handles 40-watt peaks. Frequency Response:

±0.3 db, 20 to 20,000 cps. Distortion: Harmonic, less than 0.3%;

IM, less than 0.5%, Hum: 75 db below 20 watts. 7 Inputs: 2—low-level 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, high-level 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.

for tape recording. 2 separate outputs for speakers to be switched. Tubes: 3—ECC83, 12AV6, 2—6L6GB; 5U4GB rectifier. Size, 4½x 16x11". For 110-120 v., 60 cycle AC. Shpg. wt., 24 lbs.

#### **MODEL 3030 30-WATT STEREO AMPLIFIER**

**NET** \$16655 \$16.66 Down

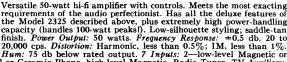
- Versatile Hi-fl Control Center
- Ideal for Stereo or Monaural
- NARTB-Equalized Tape Head Input
- Attractive Low-Silhouette Styling

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, such knob to shu off or pull to start your swstem playing simply push knob to shut off, or pull to start your system playing no 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.

91 SU 656. NET...... 166.55

**NET** 



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: ±0.5 db, 20 to 20,000 cps. Distortion: Harmonic, less than 0.5%; 1M, less than 1%. Hum: 75 db below rated output. 7 Inputs: 2—low-level 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 switch; Bass; Treble; Level; Selector-Equalizer (Tape. 78, RAIA, 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, 6AN8, 2—6CA7; GZ34 rectifier. Size, 51/4x16x11". For 110-120 v., 60 cycle AC. Shpg. wt., 35 lbs.

**MODEL 2360 50-WATT HI-FI AMPLIFIER** 

94 SU 737, NET.....

94 SU 738. NET.....

.....107.75



Model 2360

Model 2521



Model 2215

#### **NEW MODEL 2521 TUNER-AMPLIFIER**

NET

NET

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; multiplex outlet for "all-FM" stereo broadcasts; electronic tuning bar; etc.

Sensitivity: FM, 3.5 μν for 20 db quieting; AM, 20 μν. Output: 15 watts at less than 1% distortion. Response: ±0.5 db, 20-20,000 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. 4½x16x12½".

For 110-120 v., 60 cycle AC. Shpg. wt., 21 lbs.

91 SU 672. NET.....

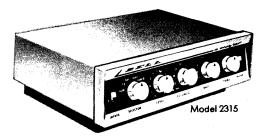
NEW MODEL 2215 "PACEMAKER" 10-WATT AMPLIFIER

\*\*NEW MODEL 2215 "PACEMAKER" 10-WATT AMPLIFIER

Here's a beautifully styled 10-watt amplifier with controls that really sets the pace for high performance at low cost. Includes: built-in pre-amp with phono equalized to RIAA curve; separate bass and treble tone contest; 10 watts of full-range, low-distortion power. Output: 10 watts; handles 20-watt peaks. Response: ±1 db, 20-20,000 cps. Distortion: 2% to watt of watts. Hum: -65 db. Inputs: Magnetic and Ceramic Phono. Tape Head, Tuner, Aux. Controls: Selector (Tape, EUR, RIAA, Tuner, Aux.); Volume; Bass; Off-On/Treble. Output Impedances: 4, 8, and 16 ohms; high-impedance for tape recorder. Tubes: 2—6V6GT, 6CQ8, ECC83; 6X5GT rectifier. Handsome saddle-tan finish. 3½x11½x9". For 110-120 volts, 60 cycle AC. Shpg. wt., 10 lbs.

See Pages 24 and 25 for Money-Saving Systems Featuring Bell Components

#### HIGH-FIDELITY MUSIC COMPONENTS





#### MODEL 2315 12-WATT HI-FI AMPLIFIER

**\$68**55 \$6.86 Down

- Compact in Size—Fits Anywhere
- Convenient "Magic Touch" Control
- 3 Positions of Record Equalization
- Offers Clean, Wide-Range Response

Ultra-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" high, the Model 2315 can be placed on a table, shelf, mantel, Only 4 high, the Model 2313 can be placed on a table, snerr, 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: built-in preamplifier with three positions of record equalization and equalized tape head input; inputs for all associated hi-fi equipment simply 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: Power Output: 12 watts; handles 20-watt peaks. Frequency Response: ±0.5 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—6VGCT, 3—ECC83/12AXT; 5Y3GT rectifier. Two convenience AC outlets. Size, 4x13½x9°. For 110-120 volts. 60 cycle AC. Shog. wt., 15 lbs. For 110-120 volts, 60 cycle AC. Shpg. wt., 15 lbs. 94 SX 736. NET.. .....68.55

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

\$9310

\$9.31 Down

- AFC "Locks-In" FM Stations
- Convenient "Floating Touch" Tuning
- Armstrong Circuit with Dual Limiters • Space-Sparing Low-Silhouette Design

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 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 kc; AM, 6 db at 11.7 kc. Frequency Response: FM, 20-20,000 cps ±1 db; AM, 20-5000 cps 3 db. Power Output: 2 volts at 30% modulation. Controls: Selector (Off. AM, FM with AFC, FM without AFC), Tuning, 7 tubes plus rectifier. Size. 4/x/a13x10/2. With antennas for AM and FM. For 110-120 v., 60 cycle AC. 14 lbs. 93.10 94 SU 735. NET....

# Ome Facts About STER

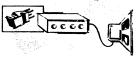
It's easy to choose the equipment you need for your hi-fi system. There are three kinds of systems that can be made up from components in this catalog: a monaural, or standard system, easily convertible to stereo; an "add-on" package to convert your present high-fidelity system to stereo; and a complete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



HI-FI MONAURAL PHONO SYSTEM. The standard, or conventional, high-fidelity system consists of a record changer with cartridge (or turntablearm-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

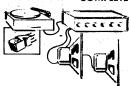
you decide to convert to stereophonic reproduction.

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 turntablearm-cartridge combination. Stereo tape decks and stereo tuners are additional sources for breathtaking stereo sound.



## FISHER

#### TOP-QUALITY HIGH-FIDELITY COMPONENTS



#### Superb NEW Stereophonic Components

#### **NEW X-101 STEREO AMPLIFIER**

\$**189**50 \$18.95 Down

Masterfully designed, dual 20-watt stereo ampli-fier 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 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; 

#### **NEW 101-R STEREO FM-AM TUNER**

NET

New stereo FM-AM tuner of superior quality and design, and remarkable ver-

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 µv for 20 db of quieting. Low-impedance audio output stage.

AM Section: Tuned RF stage, temperaturecompensated converter stage, two IF stagcompensated converter stage, two IF stages, delayed automatic gain control circuit; 10-kc sharp cut-off filter. Separate "Micro-Ray" tuning indicator. Sensitivity: 3½ µv for ½-v. output. Front 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. 4½6x15½x 13". For operation from 105-125 v., 50-60 cycle AC. Shpg. wt., 20 lbs. 91 SU 683, NET..... 229.50



#### **NEW 400-C STEREO PREAMPLIFIER**

\$169<sup>50</sup>

Superbly designed, the 400-C Stereophonic Master Audio Control offers virtually unlimited flexibility. Provides 16 input inch so representations of the state of

\$16.95 Down jacks on rear apron for any combination of stereo and monaural applications. Four output jacks, and a total of 9 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 amplifier-2; 1ape; Mic; Monitor; Luner; Aux 1; Aux 1; Aux 2. 4 Outputs (2 pairs): Main (for 2 amplifier-speaker systems in stereo, monaural or 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 adjustments. Response: flat from 20 to 25,000 cps. Distortion: less than 0.15% for 5-v. output. Hum & Noise: absolutely inaudible—better than 85 db for high-level inputs. 6 tubes: EZ80/64/4 rectifier, plus selenium rectifier. Less cabinet, below. 413(x15)(x59). For operation from 105-125 v., 50-60 cycle AC. Shgg, wt., 10 lbs. 

#### 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 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-v. output; 0.3% for 3-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. Gnipuls: 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, ECC81/12ATT; selenium rectifier. Less cabinet, below. 25/2x12/4x8". For 105-125 v., 50-60 cycle AC. Shpg. wt., 8 lbs.

#### NEW PR-66 STEREO PREAMPLIFIER

Low-cost, dual-channel preamp with RIAAequalization for low-level stereo phono car-tridges. No controls; for remote installation. 91 S 686. NET.....

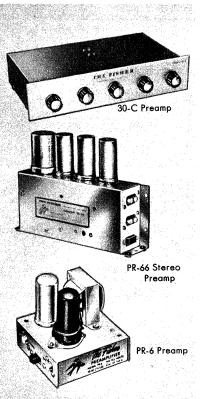
#### PR-6 LOW-COST PREAMPLIFIER

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, 3½x3½x35½°. For 105-125 v., 50-60 cycle AC. Shop, wt. 1½ lbs. Shpg. wt., 11/2 lbs. 98 S 528, NET...

#### WOOD CABINETS FOR FISHER COMPONENTS

Hand-crafted, hand-rubbed hardwood cabinets for Fisher instruments. Designed to grace and-cratted, hand-rupped nardwood capinets for Fisher instruments. Designed to grade 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—mabogany, blonde and walnut. Specify choice of finish.

Stock No.	Model	For	Size	Wt.	NET
91 SX 687C	TA5	TA-500 Tuner-Amplifier	91/8x1411/32x1315/16"	5 lbs.	22.95
91 SX 688C	RT9	90-R and 90-T Tuners	161/4x11x81/4"	8 lbs.	22.95
91 SX 689C	FM9	FM-90X Tuner	91/8x1411/32x10"	41/2 lbs.	19.95
91 SX 690C	4C	400-C Stereo Preamplifler	153/4×91/16×57/8"	7 lbs.	17.95
91 SX 691C	10R	101-R Stereo Tuner	151/16x121/2x6"	8 lbs.	22.50
91 SX 692C	10X	X-101 Stereo Amplifier	1315/16x121/2x6"	8 lbs.	24.95
91 SX 693C	3C	30-C Monaural Preamplifier	1213/16x171/8x31/4"	4 lbs.	12.95



#### **DELUXE HIGH-FIDELITY COMPONENTS**

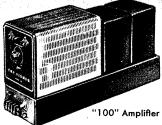
#### TA-500 FM-AM TUNER-AMPLIFIER

NET A modern classic in design and elegant styling.

\$24950 Combines a highly sensitive FM-AM tuner, powerful 30-watt amplifier, and master audio control und 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 microvolts 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 

# 



## FISHER



#### **NEW Fisher Units For Finest Performance**

#### **NEW "100" 30-WATT BASIC AMPLIFIER**

NET \$**||9**50 One of the finest basic amplifiers available in this price range. The "100" is a unit of such conserva-

\$11.95 Down
provide years
formance and
forma provide years of clean, trouble-free per-formance and absolute reliability. Delivers 30 watts of power, with 70-watt peak-power handling capacity to accommodate surges in volume and transients without any trace of clipping, ringing or raggedness. Can reproduce the entire dynamic range of an orchestra with effortless ease. Remarkably pure tonal output.

Output: 30 watts; 70-watt peaks. Response: Output: 30 watts; 70-watt peaks. Response: =½ db, 20 to 20,000 cps at 30 watts. Distortion (at 30 watts): harmonic and 1M. less than 1%. Hum & Noise: better than 88 db below 30 watts. Output Impedances: 4, 8 and 16 ohms. Controls: Z-Matic Variable Damping (for precise matching to any speaker system); Input Level adjustment; Phase Inverter Balance adjustment; and Speaker Impedance Matching switch. Tubes: ECC81/12AT7. ECC82/12AU7, 2—EL37; 5V4G rectifier. X151½x4½". For 105-125 v., 50-60 cycle AC. Wt., 23 lbs.

#### 90-T FM-AM TUNER

NET
\$23950
Superb. laboratory-quality FM-AM tuner for the finest hi-fi systems. Features "Micro-Ray" indicator for FM-AM tuning, cator for FM-AM tuning, cator for FM-AM tuning, and tuning for interstation silence control for emphasizing solo passages, and 4 inputs including tape playback head.

FM Section: Gold cascode RF amplifier stage for maximum sensitivity (0.85  $\mu$ v for 20 db of quieting). Entire front end features silver-plated shielding against noise and interference. Dual dynamic limiters; wide-band ratio detector for distortion-free re-ception of weak stations. Pushbutton mutception of weak stations. Pushbutton muting of interstation noise. AM Section: Sensitivity better than 3 µv for rated output. Separate AM front end; two IF amplifier stages with pushbutton-selected bandwidth; 10-kc whistle filter. Audio Controls: 8-pos. Selector; Presence; Rumble Filter; Noise Filter; Bass; Treble/On-Off; Master Volume; 4-position Loudness Contour; FM-AM Tuning. 15 tubes; 6 crystal diodes; and rectifier. Less cabinet; see page 50. 7x15/xt 107/x". For operation from 105-125 v., 50-60 cycle AC. 23 lbs.
94 SU 340. NET. 23 9-50

94 SU 340, NET..... 239.50

#### 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—½ 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 ½ µv; ¾ µv for 20 db of quieting; 1¼µv 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, 6½x13½x28¾. Less cabinet; see page 50. For operation from 105-125 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-R offers the critical listener the ultimate in A triumph of engineering excellence, the 90-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 limiters; wide-band ratio detector. Sensitivity, 0.85  $\mu$ v for 20 db of quieting. AM Section: Sensitivity better than 3  $\mu$ 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; 6V4 rectifier. Size, 7x151/8x107/8". Less cabinet; see page 50. For 105-125  $\nu$ , 50-60 cycle AC. Shpg. wt., 21 lbs. 94 SU 341. NET....

#### NEW "200" 60-WATT BASIC AMPLIFIER

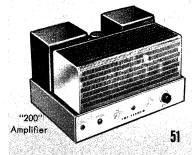
Tremendous reserve power, dependable performance and clean, undistorted reproduction with this new amplifier—60-watt output, with 160-watt peaks, is more than ample even for normally overwhelming orchestral passages! Drives even the lowest efficiency speaker system without overload, clipping or distortion. 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: ±½ db, 20 to 20,000 cps. Distortion: harmonic, less than 0.3% at full rated output; 1M, less than 0.5%. Hum & Noise: —90 db. Output Impedances: 4, 8 and 16 ohms; plus 70.7-v. output. Controls: Z-Matic Damping; Input Level; Bias; Speaker Impedance; Phase Inverter Balance. Two EL34/6CA7 output tubes. 83/x14/x12½". For 105-125 v., 50-60 cycle AC. Shpg. wt., 50 lbs. 92 SU 416. NET....

For Music Systems Featuring Fisher Units, See Page 27



FM-90X FM Tuner





# Bogen QUALITY STEREO COMPONENTS DB230

#### **Deluxe Stereo Pair**

#### **NEW DB230 STEREO AMPLIFIER**

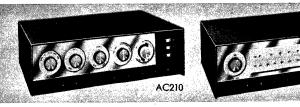
Deluxe stereo amplifier-preamplifier for controlling all stereo sources—tapes, records, FM-AM radio broadcasts, etc. Rated at 30 watts per channel, the DB230 delivers an output of 60 watts for monaural sound sources, with 120-watt peaks! Deluxe features include: feedback tone control circuits for low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

Response: ±½ db, 20-20,000 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 Off. On; Channel 2 Tape Preamp On-Off; Balance; 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, 5½x15x13½%. For operation from 110-120 v., 50-60 cycle AC. Shpg. wt., 39 lbs.

#### **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 broadtion 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 Model ST-662 stereo tuner in monaural high-fidelity music systems.

Sensitivity: FM, 2½ microvolts for 30 db of quieting; AM, (with built-in loopstick antenna), 100 microvolts for 20 db signal-to-noise ratio. Audio Output; 1 volt cathode to-noise ratio. Audio Output: 1 volt cathode follower. Controls: Tuning; Selector Off-On, Stereo, AM, FM, AFC out). Outputs: AM, FM, Monaural, Multiplex. Tubes: 6AB4, 2—12AT7, 3—6AU6, 2—6BA6, 6BE6, 2—EM840 tuning eye indicators; 2—matched 1N542 crystal diodes; 1N541 crystal diode; EZ80 rectifier. Includes line-cord antenna for FM; loopstick antenna for AM. 43/4x15x12½". Less cage; takes BEG type on page 53. For 110-120 v., 50-60 cycle AC. Shpg. wt., 19 lbs. 180 50



#### "Challenger" Stereo Components

#### **NEW AC210 STEREO AMPLIFIER**

Outstanding performance, more features and glamorous color styling—are yours with this skillfully designed stereo amplifier-preamplifier. 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 system with the second 20-watt channel of a stereo system is the second 20-wat channel of a stereb sys-tem—its complete set of stereo controls per-mits use with any existing monaural basic amplifier! Speaker phasing switch allows perfect stereo sound "spread"—no "holes" in the total stereo acoustic effect. Rich gold-and-black color styling.

Output: 10 watts per channel for stereo; 20 watts for monaural use. Response: ±1 db, 20 to 20,000 cps. Harmonic Distortion: less than 1% at rated output. Hum & 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): Output: 10 watts per channel for stereo; 20 91 SU 661. NET ...... 99.95

#### NEW TC200 STEREO FM-AM TUNER

TC200

Wonderful three-way listening with Bogen's TC200 "Challenger" Stereo FM-AM Tuner! 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 steree troop of excellent auxility. delity stereo team of excellent quality.

FEATURES. Highly sensitive circuit offers clear reception of weak and distant stations. clear reception of weak and distant stations. Excellent selectivity eliminates interference from adjoining stations. Automatic frequency control on FM greatly aids in "locking-in" FM station of your choice. Automatic volume control on FM and AM prevents overload. Advanced circuitry of the TC200 features use of crystal diodes for freedom from hum and distortion.

from 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 Off-On; 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; 1N541 crystal diode; E320 rectifier. Built-in line cord antenna for FM; AM ferrite loopstick antenna. Provision for adding external AM and FM antennas. AM lettre loopstex amenia. Flovison to adding external AM and FM antennas. Size, 4\%\s15\%\x11\%. With case; color-styled in gold-and-black. For 110-120 v., 50-60 cycle AC. Wt.. 16\% lbs.



#### **NEW DB212 STEREO AMPLIFIER**

Moderately priced stereo amplifier-pream-Moderately priced stereo amplifier-pream-plifier 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 speaker phasing switch for eliminating "hole-in-middle" effect during stereo use.

Output: 24 watts (2—12-watt channels). Response: ±1 db, 20-20,000 cps. Harmonic Distortion: 0.5% at rated output. Noise & Hum: -80 db. Controls: Selector (Tape, Phono, Radio Tuner, Aux); Function (Monaural: Channel 1, Channel 2, Channels 1 and 2; Stereophonic: Normal, Inverted); Volume; Bass; Treble; Hi-Filter; Lo Filter; 2-pos. Speaker Phasing; Off-On. NARTB-tape and R1AA-phono equalization. Output Impedances: 4, 8 and 16 ohms per channel. Four 6V6 output tubes. Size. 4½x15x12½". Less cage; takes BEG type on page 53. For operation from 110-120 v., 50-60 cycle AC. Slpg. wt., 20 lbs. 



#### NEW STIO-AG "ADD-ON" STEREO ADAPTER-AMPLIFIER

Designed to convert your present monaural hi-fi system into a 2-channel stereophonic 



#### **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 



#### **NEW DB125 AMPLIFIER**

An outstanding 25-watt amplifier, featuring complete control facilities, newest cir-cuitry, and deluxe styling. Has variable damping control, 3-position speaker selector damping control, 3-position speaker selector switch, controlled positive feed-back circuit for extremely low distortion, etc. Output: 25 watts. Response: ±½ db. 20-2000 cps. Distortion: harmonic, less than 0.3%; 1M, 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. Outbut Inneedness: 4.8 and adjustments. Output Impedances: 4, 8 and 16 ohms; tape output. 2—6973°s in output. Less cage: takes AEC type below. 434x12x 12". For operation from 110-120 v., 50-60 cycle AC. Shpg. wt., 18 lbs. 99.50

#### **NEW DB114 AMPLIFIER**

New DB114 AMPLIFIER

Not illustrated—similar to DB125 above. Has stereo input for adding STA-1 adapter. Output: 14 watts. Distortion: Harmonic, less than 0.5%; IM, less than 1%. Response: ½ db, 20.20,000 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. 4½x12x12½". 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



#### **NEW AM91 BASIC AM TUNER**

#### HIGH-FIDELITY COMPONENTS





Bogen

#### 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 make-up 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 stages. Temperature-compensated oscil-It stages. I emperature-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-kc whistle filter; automatic volume control; special-design, built-in ferrite loopstick antenna; and cathode follower output. Unique FM-AM tuning indicator.

#### **TOP-RATED DB130-A AMPLIFIER**

Tior-rated bb130-A AMPILIFIER

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.





#### Low-Cost "Challenger" Matched Components

#### **NEW AC10 AMPLIFIER**

True high-fidelity performance and control Irue nign-ndeitty performance and control flexibility at low cost. One of the best buys in budget-priced hi-fi components, the AC10 "Challenger" 10-watt amplifier offers many fine features. Separate bass and treble controls; loudness-contour selector for choosing the most suitable volume levels without less of high earlier treasurations. without loss of high or low frequencies; inwithout loss of light of low frequencies, in-stant selection of popular tape and record equalization positions; and excellent re-sponse 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 contrast-ing black and gold panel.

Output: 10 watts; 20-watt peaks. Response: ±1 db, 20-20,000 cps. Distortion: 1% at rated output. Hum & Noise: -75 db. 5 Inputs: Tuner, Magnetic Phono, Crystal Phono, Tape, Auxiliary. Controls: Rumble Filter: Loudness; Selector-Equalizer (Tape, 78, R1AA, Phono, Tuner Aux.); Volume-On-Off; Bass; Treble. Output Impedances: 4, 8 and 16 ohms. 2-6AQ5 output. Size. 4V, x12\/\(\alpha\)x8\/\(\alpha\)". With cage. For 110-120 v., 50-60 cycle AC. Shpg. wt., 10 lbs. 

#### **NEW TC100 BASIC FM-AM TUNER**

A perfect companion to the AC10 amplifier a perfect companion to the Actor ampline in styling, price and performance, the TC100 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 auto-matic volume control. Automatic frequency control on FM pin-points and holds the desired station—automatically finds the opti-mum signal of an FM station as you dial in mum 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.

#### METAL CAGES FOR BOGEN COMPONENTS

# MeIntosh







C-8S "ADD-ON" Stereo Preamp

MR-55 FM-AM Tuner

MC-30 30-Watt Amplifier

MC-60 60-Watt Amplifier

#### **NEW C-85 "ADD-ON" STEREO PREAMP**

New audio control unit that

**NET** 

offers unusual flexibility of

offers unusual flexibility of
\$9900 equalization and tone compensation. For use with his
five systems that employ a
\$9,90 Down separate preamplifier. The
C-8S offers bass and treble
control for the 2nd channel; provides master 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 

#### **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., 7½ lbs. 

WOOD CABINETS FOR C-8S AND C-8 UNITS. Size,  $4\frac{3}{4}$ x11% [6x7 $\frac{3}{4}$ %". Shpg. wt., 1½ lbs. 93 SX 898. Mahogany. NET 93 SX 709. Blonde. EACH.....10.00

#### NEW MR-55 BASIC FM-AM TUNER

**NET** \$249°°

\$24.90 Down

For the audio connoisseur. Two years in the making, the MR-55 sets new standards in distortion-free FM-AM reception. AM Section.

\$24,90 Down ception. AM Section. Sensitivity: 1½ µv. Distortion: 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 AM sensitivity; 3 positions of bandwidth. Front end has 21 kc constant bandwidth, band pass input. Whistle filter.

FM Section. Sensitivity: 3 µv 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-mc limiter and detector bandwidth. Ultra-

WOOD CABINETS FOR MR-55. Shpg. wt., 5 lbs. In choice of mahogany, blonde or walnut—specify flnish when ordering.

91 SX 695C. NET EACH......25.00

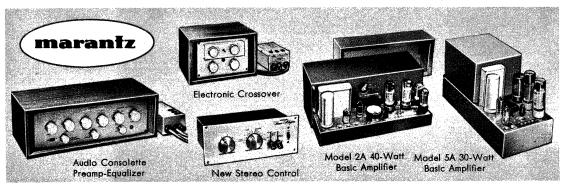
#### MC-30 30-WATT BASIC AMPLIFIER

DELUXE HIGH-FIDELITY

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: ±0.1 db, 20 to 30,000 cps. Distortion: Harmonic, less than 1/3% at 30 watts; IM, less than 0.5%. Hum & Noise: -90 db. Output Impedances: 4, 8, 16, 600 ohms and 70.7 v. 2—1614's in output. Black and chrome styling. 8x13x8". For 110-120 v., 50-60 cycle AC. Shpg. wt., 36 lbs. 93 SU 895, \$14.35 Down. NET. 143, 50 Offers flawless audio reproduction. Special 93 SU 895. \$14.35 Down. NET. 143.50

MC-60 60-WATT BASIC AMPLIFIER

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:
=0.1 db, 20 to 30,000 cps at 60-watt output. Distortion: harmonic, less than 0.3%
at 60-watt output; IM, less than 0.5%.
At mbest output Impedances: 4, 8, 16, 600
ohms and 70.7 v. Input Impedance: ½ meg
for ½-volt input and 0.13 meg for ½-volt
input. Tubes: 2—12AXT, 12AUT, 12BHT.
2—6550 output tubes; 2—5U4GA rectifiers.
Chrome and black styling. Size 8x14½x10°.
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 deposited-carbon resistors, silvered mica capacitors, terminal board construction, etc. Spectacularly low distortion and noise. Hum. Inaudible, full gain. Response: ±1 db, 2060,000 cps. IM: 12 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; On-Off. Less cabinet. 45%x14½x6%. For 110-120 v., 50-60 cycle AC. 13 lbs.

91 SU 605. \$15.30 Down. NET. 153.00 Superbly designed unit. Employs deposited-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. 

#### **ELECTRONIC CROSSOVER**

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.) contion. Has level and crossover (12 pos.) controls for both bass and treble channels. IM: less than 0.1% @ 2 v. out. Power supply, 294x342x6". 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. 

#### **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. 31/4x91/2x41/2". 7 lbs. 92 \$ 812. \$4.50 Down. NET. .... 45.00

#### **40-WATT BASIC AMPLIFIER**

MODEL 2A. Deluxe, 40-watt ultra-linear amplifier. Switch permits 20-watt triode operation to protect low-power speaker sysoperation to protect low-power speaker systems. Built-in meter and switch for Bias. DC Balance, AC Balance, Variable damping. Hum: -90 db. Response: ±1 db, 15-45,000 cps. Distortion: Harmonic, under 0.5% to 10 kc; IM, 0.5% at 40 watts. Impedances: 4, 8, 16 ohms. 6½x15x9½". For 110-120 v., 50-60 cycle AC. 46 lbs. 99 SU 006. \$19.80 Down. NET. 198.00

#### **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/ex15/4x6". Less cage, below. Shpg. wt., 35 lbs.

92 SU 810. \$14.70 Down. NET. 147.00

92 \$ 811. Cage for above, 1 lb. NET. . 7.50

#### MUSIC COMPONENTS



Stereo Amplifier



S-2000 FM-AM Tuner

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

Converts any monaural high-fidelity system converts any monattra ingn-indently system to stereo operation, with complete stereo/monaural control facilities. Can be used with basic amplifier, or any other amplifier Features dual switching, single preamp and single 20-watt amplifier section. Controls include the land transparent (section 2016). clude dual-loudness, stereo normal/reverse switch and phase-inversion switch. Mode seswitch and phase-inversion switch. Mode selector (stereo, stereo reverse, monaural 1; monaural 2, monaural 1 and 2), also operates group of indicator lights. All other conates group of indicator ignts. All other controls are identical to the S-1000 II 36-watt amplifier below. Output: 20 watts; 40-watt peaks. IM Distortion: less than 1½% at full rated output. Response: =1½ db, 20-20,000 cps at full output. Hum & Noise: 80 db below rated output. RIAA phono input; NAPTH tops head input; 3 high loval is NARTB tape head input; 3 high-level inputs. Less case, at right below. 4x14x10½". For operation from 110-120 v., 60 cycle AC. Shpg. wt., 23 lbs.
91 SU 673. \$10.95 Down. NET. . 109.50

#### S-1000 II 36-WATT AMPLIFIER

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 lover. Employs inverse feedback circuitry, and special output transformer to attain undistorted power output (below ½% at 36 watts) Output: 36 watts; 72-watt peaks. Response: ±½ db, 20 to 20,000 cps at 36 watts. Hum & 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. II Controls: Push-button switches for Presence, Scratch Filter, Rumble Filter and Phono Level; slide switches for Tape Monitor 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. 4x14x10½". Less case, right. For tubes. 4x14x10½". 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 BASIC TUNER

Features highly sensitive circuitry, automatic frequency control on FM, "feather-ray" tuning eye for pin-point FM-AM station selection and directable rod AM antion selection and directable rod AM antenna. FM Section: Unusual sensitivity of 0.95 µv for 20 db quieting. Circuit employs triode mixer, IF amplifier, 3 cascaded limiters, Foster-Seeley balanced discriminator and cascode RF amplifier. AM Section: 2 µv 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 Narrow; slide switch for FM-AFC On-and-Off. Cathode follower output; FM multiplex output. 10 tubes; 6X4 rectifier, 6BR5/EM80 tuning eye. 4x14x101½". Less case, right. For 110-120 v., 60 cycle AC. 18 lbs.

94 SU 332. \$13.95 Down. NET. 139.50

94 SU 332. \$13.95 Down. NET. 139.50

#### NEW S-1060 60-WATT AMPLIFIER

(Not illustrated) Exactly matches the S-1000 (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 include "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: tube balance control. (See the S-1000 II at left for listing of controls.) Output: 60 watts; 120-watt peaks. Response: ±1½ db. 20 to 20,000 cps at 60-watt output. IM Distortion: less than 1½% at full 60-watt output. Hum & Noise: 80 db below 60 watts. Inpuls: 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 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

#### **Madison-Fielding Stereo Components**

#### MODEL 330 STEREO FM-AM TUNER

NFT \$15**0**00

one compact chassis. Can be used individually for AM or FM reception, or by turning a Less case switch, provides ster-eophonic reception of stereo FM-AM broadcasts. Features ex-clusive "Dual Stereoscopic" tuning indica-

Two sensitive tuners on

tor 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).

FM Section. Sensitivity: 2 uv for 20 db quieting. IF Bandwidth: 355 kc at 3 db points, 420 kc at 6 db points. Highly stable points, 420 kc at 6 db points. Highly stable circuit; automatic frequency control for drift-free operation. AM Section. Sensitivity: 3 μν. Circuit employs AVC; separate tuned RF stage for maximum selectivity. Controls: AM Tuning; FM Tuning; Selector (AM, FM, Stereo); On-Off. Dual level controls. Two cathode follower outputs. 10 tubes. Size. 6½x15x12½". Less case, below. For 110-120 v., 50-60 cycle AC. 25 lbs.
91 SU 609, \$15.00 Down. NET ...150.00

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.....

#### 320 40-WATT STEREO AMPLIFIER

\$1**70**00

Less case

Brilliantly engineered unit featuring two 20-watt channels; 40-watt output for monaural 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 mon-Output: 20 watts per channel; 40 watts mon-aural. Response: ±½ db, 20 to 20,000 cps. Hum & 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, Monvolume; selector (Monaural Tapen, Monaural Tuner, Monaural Tape, Stereo Preamp, 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—6BQ5A output tubes. 6½x15x12½". For 110-120 v., 50-60 cycle AC. Wt., 25 lbs. 91 SU 610. \$17.00 Down. NET. 170.00

.....20.00





#### S-3000 BASIC FM TUNER

NET

A skilfully designed, highly recommended unit that

NET

\$9950
Less case

amplifier. Outstanding sensitive FM circuit employed in the sense for each of the sensitivity makes for

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: 4x14x101/2. 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. 

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



# FAMOUS TOP-VALUE **knight** 3-WAY SPEAKERS KN-810

#### 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" and 15", 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**



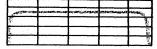




Mid-Range

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 \$**ДД**95 \$4.50 Down

KN-800

- 3 Independent Radiating Elements for Uniform Response • Full 134-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" 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 wooler magnet used to drive bass and mid-range cones, weighs a full 134 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-810 15" SPEAKER. Response, 30 to 15,000 cps. Resonant frequency, 40 cps. Diameter, 15 1/2"; depth, 9". Shpg. wt., 15 lbs. 



Hyperbolic Cone for Smoother Frequency Response

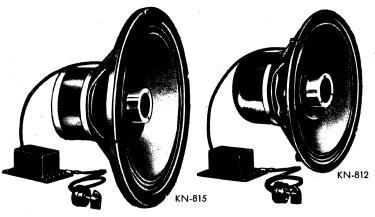
#### NEW knight Wide-Range 8" High-Fidelity Speaker

ONLY **\$0**95

Manufactured to Allied's specifications by skilled British craftsmen, the precisely built KN-808 8" 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 cps. Power handling capacity, 15 watts. Cone resonance, 55 cps. Alcomax 3 magnet material (similar to Alnico V). Magnet wt., 7½ oz. Impedance, 16 ohms. Depth, 3¾". 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" and 15" High-Fidelity Speakers

AS LOW AS

\$6.95 Down

 Massive Magnet Structures—Rigid Die-Cast Frames
 Compression-Type Exponential Tweeter Provides Sparkling Response Well Past the Limits of Audibility

Genuine L-C Crossover—Clean Separation of Lows & Highs
 Vacuum-Formed Woofer Cone; High-Compliance Suspension

Remarkable values by any standard of comparison, these new Knight deluxe 12" and 15" 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 (180°), provides silk-smooth treble to inaudibility. Flawless reproduction is yours with either of these fine speakers—each is guaranteed for one full year!

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" 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, 7%". Impedance, 16 ohms.

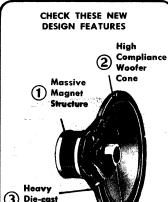
#### SAVE . . . Buy **knight** Speakers in Pairs For Stereo

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.	TWO FOR:	
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 Systems—	90	159.00	10.00
	specify mahogany, limed oak or walnut veneer			1
	specify manogany, limea dak or wainti veneer			

#### THE BEST HI-FI SPEAKER VALUES ANYWHERE!

Frame



Ultra-Sonic
High-Frequency
Tweeter

Heavy magnets (3½ & 6¼ 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.

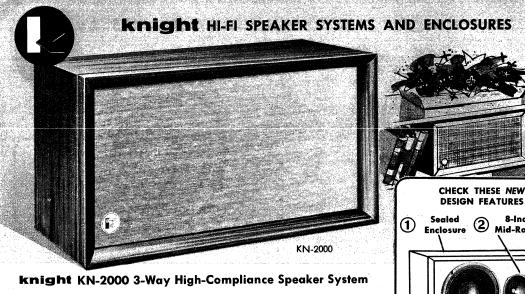
Heavy, die-cast frame assures permanent alignment of voice coil, free of vibration.

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

### DELUXE PLUG-IN CROSSOVER NETWORK



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 high-frequency level control.



NET \$**84**50

\$8.45 Down

- 12" High Compliance Woofer With Long Throw Voice Coil
   8" Sealed-Back Mid-Range Speaker and Compression Tweeter
- L-C Crossover Network and High Frequency Level Control
- Acoustic-Lined Sealed Enclosure In Choice of 3 Finishes

Superbly designed, ultra-compact 3-way high-compliance speaker system at surprisingly low cost. Consists of a hermetically sealed bookshelf-type enclosure, 12" high-compliance woofer, 8" 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" high-compliance woofer has a long-throw voice coil which permits 1" linear excursions for exceptional bass response; features virtually freecone suspension. Features a 1¼ lb., high efficiency Indox V ceramic magnet for high flux density. An 8" 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 cps.

Enclosure is constructed of ¾" 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: 13½x26½x12¾". 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

DESIGN FEATURES

1 Sealed 2 B-Inch Enclosure 2 Mid-Range

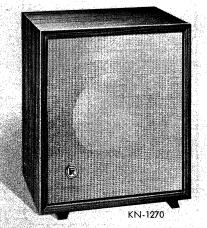
3 12-Inch Woofer 4 Assembly

Ultra-compact, tightly sealed, acoustically damped enclosure. Finished on four sides in hand-rubbed furniture veneers.

Quality constructed special-design 8" mid-range speaker—self-enclosed at rear in metal casing.

12" 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

\$2650 \$2.65 Down Sturdy 5%" Selected Plywood Construction
 Compared to Limited Server Head

Compactly Designed for Limited-Space Use

• Choice of 3 Handsome Wood-Grained Finishes

Extremely attractive, low-cost, factory-assembled bass-reflex enclosure for 12" speakers. Delivers remarkably smooth bass reproduction. Compact—perfect for use in limited-space applications; ideal for use in pairs in economical stereo systems. Only 24x19 ½x 13¾". Choice of three wood-grained finishes. Specify mahogany, limed oak or walnut. Shpg. wt., 40 lbs.

COMBINATION SAVINGS. Specify mahogany, limed oak or walnut.

Stock No.	Description	Lbs.	Save	NET
79 DZ 271 C	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.





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!

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

\$36<sup>50</sup> \$3.65 Down

Easy-to-assemble, pre-finished enclosure kit for 12" speakers. Employs ducted-port design for performance equal to conventional bass reflex enclosures of much greater size. Its many features include: tight tongue-and-groove joints; non-res-

onant 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, 32x17½x15". Specify mahogany, limed oak or walnut. Shpg. wt., 35 lbs.

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

KN-1260K KN-1260

#### 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.

#### knight KN-1250K Folded-Horn Speaker Enclosure Kit

\$4950 \$4.95 Down

- Accommodates Either a 12" or 15" Speaker and Tweeters
   Folded Corner Horn Design for Superb Bass Response
- Handsomely Styled, Pre-Finished Exterior and Trim

• 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" or 15" 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 screw-driver is required for easy assembly. Includes all parts, hardware and instructions. 33½x22¾x15¼″. Specify mahogany, limed oak or walnut veneer when ordering. Shpg. wt., 45 lbs.

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

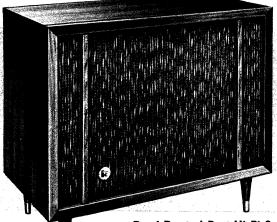
Stock No.	Description	Lbs.	Save	NET
79 DZ 273C2	KN-800 Spkr. & KN-1250K Encl. Kit	57	\$6.00	88.45
79 DZ 274C2	KN-810 Spkr. & KN-1250K Encl. Kit	60	6.00	98.45





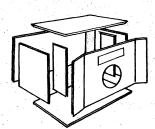
**NEW knight** Matching Speaker and <u>Equipment</u> Cabinets

- 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" or 15" Speaker





MATCHES ANY DECORATIVE SCHEME



KN-1215 KN-1215K

Assembles quickly—a screwdriver is all you need

#### **Dual Ducted-Port Hi-Fi Speaker Enclosure**

• Specially Designed for Exceptionally Smooth Bass Response

• Has Adapter Board for Easy Mounting of Tweeter Components

Size: 27x32x16". Choice of mahogany, limed oak or

AS LOW AS

A striking example of distinctive styling and superb craftsmanship, the KN-1215 enclosure will accommodate any 12" or 15" speaker. Also available in easyto-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" 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.

walnut—specify. Shpg. wt., 75 lbs.
79 DZ 265C. KN-1215K Enclosure Kit. NET...

79 DZ 264C, KN-1215 Assembled Enclosure, NET. . . . . 69.50 SPEAKER-ENCLOSURE COMBINATIONS. Knight enclosure in assembled or kit form with Knight 12" or 15" 3-way speaker (see page 56)—at big savings. \*Speaker installed. Available in mahogany, limed oak or walnut—

please specify. Stock No. Description Save NET Lbs. 79 DZ 255 C-2 79 DZ 257 C-2 79 DZ 257 C-2 79 DZ 254 C 79 DZ 256 KN-1215 Kit and KN-810 KN-1215 and KN-800\* KN-1215 and KN-810\* 6.00 88.45 98.45 90 6.00 12.00 12.00

#### Deluxe Hi-Fi Components Cabinet

AS LOW AS

Kit Model

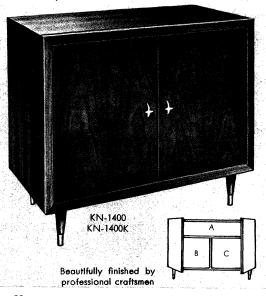
Attractively styled to blend with the decor of any room, the Knight KN-1400 equipment cabinet is available fully assembled or in pre-finished kit form. Combines versatility with functional design; houses all components of a

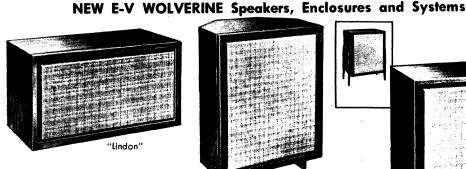
music system—record changer on base (compartment B), tuner and amplifier (A); records (C)—everything except the speaker! Rigidly constructed of beautifully matched panels with highly durable finish.

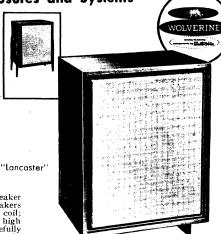
Features include: exceptionally rigid construction; durable, tongue-and-groove joints; carefully selected woods: smartly tapered legs with brass ferrules; easy-grip, brass door handles; vented rear panel to permit free flow of air; lustrous, hand-rubbed furniture finish in choice of three handsome veneers; and three compartments protected by full-length doors employing smooth-action, magnetic latches.

Size of compartments: A—6x321/2x14 1/8"; B—13x18 1/4 x 14%"; and C-13x13%x14%". Overall size of cabinet: HWD, 27x33½x16". In mahogany, limed oak or walnut specify when ordering. Shpg. wt., 65 lbs. 79 DZ 267C. 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.

"Loraine"

#### "LINDON" ENCLOSURE

#### "LORAINE" ENCLOSURE

Folded-horn corner enclosure featuring com-

#### "LANCASTER" ENCLOSURE

Attractively styled, space-sparing enclosure Attractively styled, space-sparing enclosure for lowboy or highboy use. Ideal for along-the-wall placement. Delivers impressive performance 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" speaker. Features direct radiator, controlled baffle for extended bass. Also has snap-in speaker mounting board and pre-cut ports for easy installation of speakers. Study plywood installation of speakers. Sturdy plywood construction; handsome wood-grained finish. Ideally suited for use in pairs in stereo 

#### 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 feather all processors bandware and the complete of the 

### 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" listed above.

Has features found in more expensive speakers. A heavy-duty, die-cast frame maintains precision alignment of critical maintains precision alignment of critical parts. Radax construction (separate radia-tor cone for treble) provides crisp, full-range sound. Edgewise-wound voice coil for high efficiency. Additional features include a re-inforced fiberglas voice-coil form and fungiresistant cone material.

Power handling capacity, 20 watts, Cone resonance, 40 cps. Impedance, 8 ohms. 121/4" diameter, 31/2" deep. Requires 11" baffle opening, Shpg. wt., 51/4 lbs. 

LS-8 8" SPEAKER. Excellent full-range 8" high-fidelity speaker. Has same quality fea-tures 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 cps. Cone resonance, 55 cps. Power handling capacity, 20 watts Voice coil impedance, 8 ohms. Size: 8½x 3½". Requires 7½" baffle opening for mounting. Shpg. wt., 4½ lbs. ..18.00 82 D 851. NET.....

MF-1 MID-RANGE KIT. Excellent mid-range components for use in high-fidelity 3-way speaker 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 enand "Loraine" speaker systems and en-closures listed above. Provides remarkably smooth response from 1000 to 15,000 cps.

HF-1 HIGH-FREQUENCY KIT. Quality highfrequency components at moderate cost. Consists of Model TW-35 wide-angle, horn-type 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 cps.

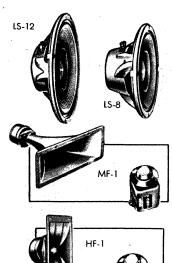
#### Speaker Systems

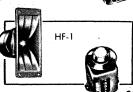
"LANCASTER" AND LS-12. Smartly styled, space-sparing speaker system. Includes enclosure described at left and full-range 12" speaker, below. Comes complete with speaker installed. Choice of 3 wood-grained finishes to blend with any surround 

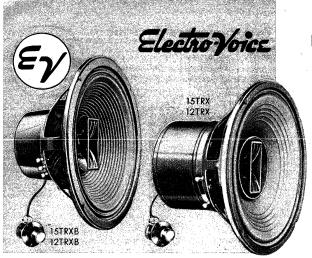
"LORAINE" AND LS-12. Excellent speaker system for corner placement. Includes enclosure (left) and 12" speaker (below). Supplied complete with speaker installed. Available in choice of three handsome wood-grained finishes. Specify choice of mahogany, blonde or walnut. 

"LINDON" AND LS-8. Ultra-compact speaker system featuring enclosure described at left and 8" speaker below. With speaker installed. Available in 3 lustrous, wood-grained finishes to match any decorative mode. Specify mahogany, blonde or walnut. Shpg. wt., 20½ 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 15TRXB. Moderate cost high-fidelity 15" speaker employing 13/6 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, ±31/2 db, 30-18,000 cps (in Regency or Empire Enclosure). Power handling capacity, 20 watts. Resonance, 38-48 cps. Impedance, 16 ohms. 75/6" depth. Shpg. wt., 17 lbs.

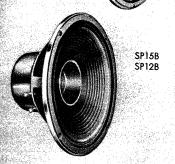
81 DX 761. NET.....

MODEL 12TRXB. 3-way speaker as above, but 12". Has 13½ 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). ±3½ db. 35-18,000 cps. 6½" depth. Impedance, 16 ohms. Shpg. wt., 14 lbs.

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

MODEL 12TRX. As above, but 12". Has 3½ lb. double power Indox V ceramic magnet. Total flux: 176,000 maxwells. Radax-type speaker, T35 tweeter, X36 crossover network, and AT37 HF control. Frequency response, ±3½ db, 30-19,000 cps (in Aristocrat enclosure). Power handling capacity, 25 watts. Depth, 8". Impedance, 16 chws. Shore with 20 lbs. 16 ohms. Shpg. wt., 30 lbs.







#### Top-Quality Radax Coaxial Hi-Fi Speakers

81 DU 235. NET.....

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 SP12. Popular, moderately-priced 12" speaker with 3000 cps crossover. Bass cone resonance, 35-45 cps. Uses "Whizzer" high-frequency, wide-dispersion radiator for extended treble. 100° dispersion. Has highly efficient 3-lb. Alnico V magnet. Total flux: 176,000 maxwells. Response, ±5 db, 30-13,000 cps. 2" aluminum voice coil. Rated, 25 watts. Impedance, 16 ohms. 734" depth. Shpg. wt., 23 lbs.

MODEL SP15. Deluxe 15" Radax speaker with 2½" aluminum voice coil. Provides exceptionally fine bass, mid-range and treble reproduction. Ideal for home music systems. 5½-1b. double power Indox V ceramic magnet (total flux: 24½,000 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° treble dispersion. Frequency response, ±5 db. 30-13,000 cps. Rated, 30 watts. 16 ohms. Crossover, 3000 cps. Requires 13½ dia. baffle opening; 9" depth behind mtg. panel. Shpg. wt., 38 lbs.

MODEL SP15-B. 15" Radax speaker similar MODEL SPI5-B. 15" 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 cps. Impedance 16 ohms. Requires 13½" baffle opening; 7½" depth behind mounting panel. Shpg. wt., 15 lbs.  MODEL 57/12. 12 speaker as anove, but 1-lb. ceramic magnet. Flux: 100,000 maxwells. Considered a "best buy" by many hip publications. Capacity, 20 watts. Resonance, 40-50 cps. Response, ±5 db, 30-13,000 cps. 16 ohms impedance. Crossover, 3500 cps. 6" depth. Wt., 12 lbs. 

MODEL \$P88.8" version of above. Excellent for limited space hi-fi applications. Low cone resonance of 65-75 cps and "Whizzer" high-frequency propagator provide good balance. 1-lb. magnet. Total flux: 100,000 maxwells. Capacity, 20 watts. Response, ±5 db, 50-13,000 cps. Crossover frequency, 4000 cps. 16 ohms impedance. 45%" depth. Shpg. wt. 9 lbs. 

MODEL SP12B. 12" speaker as above, but

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 3-way sound systems. Cones employed are way sound systems. Cones employed are treated for moisture and fungus resistance. 12WK and 15WK 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, †except Alnico V magnets. \$Magnet weight in lbs.

Stock No.	Mfr's Type	Mag. Wt.§	Res. Freq.	Watts	Lbs.	NET EACH
81 DX 397	12BW	1	40-50	20	12	34.30
81 DU 285	†12W	3	35-45	22	23	64.68
82 DU 801 81 DX 762		3 1	30-40 38-48		23 15	64.68 42.14
81 DU 286 81 DU 428		51/4 51/4	25-35 29	30 30	38 38	87.22 87.22

MID-RANGE AND HIGH-FREQUENCY COMPONENTS

**High-Frequency Tweeters** 

MODEL T35 "SUPER-SONAX" VERY-HIGH FREQUENCY TWEETER. Delivers remarkably 

MODEL T35B VHF TWEETER. Same as Model T35 above but for systems with speakers rated under 20 watts. Has molded-phenolic rated under 20 watts. Has monded-pinenonic impregnated, linen diaphragm. Dispersion, 180°; cutoff, 1500 cps. Impedance, 16 ohms. X36 crossover network required (see listing, below). Pot size, 2½" diameter; 3" depth overall. Shog. wt., 3 lbs. 

MODEL T350 VERY-HIGH FREQUENCY DRIVER. Ideal for use in deluxe multi-way speaker systems having extended bass range. Pro-vides extended treble response beyond audibility. Employs diffraction horn principle with special Avedon Sonophase throat design tor 180° dispersion pattern. Capacity, 50 watts; handles 100-watt peaks. Impedance, 16 ohms. Frequency response: ±2 db, 2000 to 21,000 cm. Magnet wt. 11b. Rec. 

MODEL T3500 "IONOVAC" IONIZED AIR, VERY-HIGH FREQUENCY TWEETER. Employs ionized air for dazzling reproduction of treble frequencies. Frequency response: ±2 db, 2000 to 40,000 cps. Recommended crossover, 3500 cps. Dispersion pattern. 180°. Power capacity, 50 watts; handles 100-watt peaks. 16 ohms. Driver assembly, 9x3/½x7"; electronic unit, 5½x5x13½". Baffle opening, 1½x6". 15 lbs. 82 DU 338. NET. 147.00 

# T35 T35B T3500

#### Mid-Range Horns, Drivers and Crossover Networks

MODEL TIOA HIGH-FREQUENCY DRIVER. For 

MODEL T25A HIGH-FREQUENCY DRIVER. 

MODEL T250 HIGH-FREQUENCY DRIVER. For 

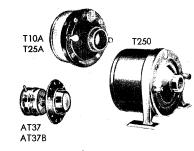
MODEL AT37 LEVEL CONTROL. 16-ohm L-pad, for adjustment of mid-range and tweeter output. Mahogany finish. 6 oz. 

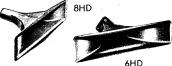
MODEL AT37B LEVEL CONTROL. As above, but for blonde cabinets.  MODEL 8HD DIFFRACTION HORN. For use with T10A, T25A or T250 drivers, 600 cycle cutoff, 800 cycle crossover frequency. Rugged, die-cast construction. Size, 15x4½x 8½%. Shpg. wt., 4 lbs. 

MODEL 6HD DIFFRACTION HORN. Popular horn for T10A. T25A or T250 drivers. Utilizes 400 cps cutoff, 600 cps crossover. Constructed of fiberglass. Size, 20x3½x12½″. 

CROSSOVER NETWORKS. Attenuation, 12 db per octave in ½-section types; 6 db in ¼-section types, 1mpedance, 16 ohms. All crossover networks are half-section types, except X825, ¼; X2635, ¼ and ½.

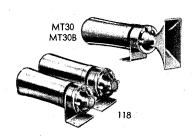
Stock No.	Mfr's Type	Crossover	Wt., Lbs.	NET EACH
82 D 802	X325	300	4	31.36
81 D 415	X825	800	3	18.62
81 D 293	X8	800	6	31.34
81 D 416	X6	600	6	38.22
81 D 289	X336	300-3500	9	38.22
81 D 436	X36	3500	3	9.31
81 D 404	X2635	200-600-	-	
		3500	10	73.50





#### Mid-Bass and Treble Driver-Horn Assemblies

MODEL MT30B. As above, but has 828 HFB driver. 20 watts. 1/2 lb. magnet. For use with  MODEL 118 MID-BASS DUAL-DRIVER ASSEM-BLY. 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 828HF 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, 21½" long, 6½" high for clearance. Shpg. wt., 15 lbs.



MID-RANGE AND HIGH-FREQUENCY COMPONENTS PACKAGES							
Stock No.	Туре	Description of Components	Lbs.	NET			
BI D 835	BB1	For 2-way systems (LF driver with treble driver), and coaxial speakers having 1-2-lb. magnets. Includes T35B VHF driver, X36 crossover, AT37 level control, wiring harness.	5	36.2			
BI D 858	BB2	For 2-way systems (LF driver with treble driver), and coaxial speakers having 3-lb. magnets or greater. Includes T35 VHF driver, X36 crossover, AT37 level control, wiring harness.	5	49.0			
II DU 834	BB3	For existing LF drivers and coaxial speakers having 1-2-lb. magnets. Includes T10A driver, 8HD horn, X825 crossover, AT37 level control, wiring harness.	11	84.2			
31 DU 859	BB4	For existing LF drivers and coaxial speakers having 3-lb. magnets or greater. Includes T25A driver, 8HD horn, X8 crossover, AT37 level control, wiring harness.	13	11.1.7			
32 DX 342	ВВ5	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.	13	73.5			
12 DU 345	BB8	For mid-bass and treble frequencies from 200 to 10,000 cps. Ideal for use with deluxe full- range drivers having 3-lb. magnets or more, such as SP12, SP15, 12TRX, 15TRX and high-efficiency systems. Plans for simple plywood horn extension are provided. Includes					
NO D7 004	1025	MT30 driver-horn assembly, X325 crossover, AT37 level control, wiring harness.	15	79.3			
32 DZ 804	103E	18WK driver; 118 assembly; T250 HF driver, with 6HD horn; T350 driver; X2635 crossover; 3—AT37 controls. Full-range system as used in Patrician.	105	444.9			



#### HI-FI SPEAKER SYSTEMS

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 Electro-Voice is offered in a choice of two cabinet styles—traditional "Patrician IV" and contemporary "Patrician 600". Both employ the superior 103E 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 selected hardwood veneers and inlays, and exquisitely finished. Power handling capacity is 35 watts, 70-watt peaks. Impedance: 16 ohms. Supplied with components installed. Shipped F.O.B. Chicago or Dowagiac, Mich., whichever is nearer.

Stock No.	Model	Speaker Package	Finish	Size (HWD)	Shpg. Wt., Lbs.	NET EACH
79 DZ 32: 79 DZ 32: 79 DZ 32:	IV	103E 103E 103E	Mahogany Limed Oak Walnut	62x39x29"	390 390 390	973.14 998.62 998.62
79 DZ 320 79 DZ 320 79 DZ 320	600	103E 103E 103E	Mahogany Limed Oak Walnut	58½x38x30″	335 335 335	825.16 843.78 843.78

#### "Georgian 600" 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 Kijpsch-licensed "K"-type folded horn for excellent reproduction. Contains an outstanding speaker package for full, faithful reproduction.

Includes the 15WK special low-frequency speaker, crossing over at 300 cps through the X336 network to the MT30 mid-bass horn assembly; high frequencies are covered

by the T350 Ultra-Sonax tweeter, an advanced-design speaker employing an unsually 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), 48/zx28/zx23/4". Sppg. wt., 225 lbs. Shipped F.O.B. Chicago or Dowagiac, Mich., whichever is nearer.

82	DΖ	312.	Mahogany, NET480.20
			Limed Oak, NET 489.02
3 2	DZ	314.	Walnut, NET

#### "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 indirect-radiator speaker package.

A 12WK woofer provides excellent bass response from 30-300 cps. X336 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 brilliance. Rated 30 watts program material, 60 watts peak. Impedance: 16 ohms. All components installed. Size (HWD), 42x29x 22½", 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. NET365.54

#### "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), 453/4x26/4x23". Shpg. wt., 183 lbs. Shipped F.O.B. Chicago or Dowagiac, Mich., whichever is nearer.

82 D	)Z 31	5. Mahog	any. NET.	416.50
82 D	DZ 31	6. Limed	Oak. NET.	424.34
82 E	)Z 31	7. Walnu	л. NET	424.34

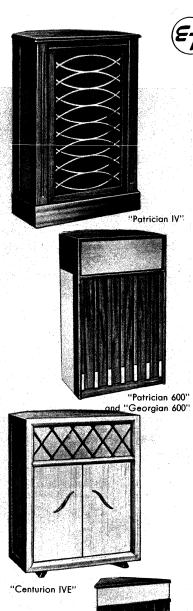
#### **NEW Space-Saving "STEREON" Speaker Systems**

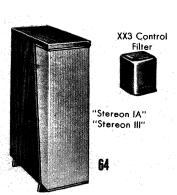
New, space-sparing, dollar-saving method of stereo reproduction uses your present speaker system, plus a "Stereon" for full, breathtaking stereophonic sound. Takes advantage of the fact that no stereo effect exists when listening to tones below 300 cps by directing all bass from both channels to your standard monaural speaker system. 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-effi-

XX3 "STEREON" CONTROL FILTER. Distributes audio to single or multiple "Stereon" system. Input impedance: 8 ohms, each channel. 5½x4¾x5¼". Shpg. wt., 8 lbs. 79 D 322. NET. 29.40

See Pages 62 and 63 For Descriptions of the Components In These Systems





"Cardinal IV"

#### HI-FI SPEAKER SYSTEMS

## Electro Voice

#### "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 15W 15" wooder. 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 331/2x19". 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 cps. 138 lbs.

ENCLOSURE ONLY. Takes 12" or 15" speaker, or 2 or 3-way system. Shpg. wt., 87 lbs.

FL	ENCLOSURE ONLY		"REGENCY-15TRX"		"REGENCY III"	
Finish	Stock No.	NET EACH	Stock No.	NET EACH	Stock No.	NET EACH
Mahogany Limed Oak Walnut	81 DZ 422 81 DZ 423 81 DZ 864	127.40 137.20 137.20	81 DZ 836 81 DZ 837 81 DZ 868	273.42 283.22 283.22	81 DZ 496 81 DZ 497 82 DZ 327	385.14 394.94 394.94

#### "Empire" Speaker Systems and Enclosures

"EMPIRE IA." 3-way system in tastefully designed Empire lowboy enclosure. Compact, highly 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. Size: 29\%x32x16". Shpg. wt., 90 lbs.

"EMPIRE—SP15B." Here's an excellent starter system, easily expanded; consists of SP15B 15" 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" or 15" speaker, or 2 or 3-way system. Available in 3 handsome finishes. Shpg. wt., 56 lbs.

F: - 1	ENCLOSURE ONLY		"EMPIRE-	SP15B"	"EMPIRE IA"		
Finish	Stock No.	NET EACH	Stock No.	NET EACH	Stock No.	NET EACH	
Mahogany	81 DZ 769	97.02	81 DZ 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 12W 12° bass woofer; T25A HF driver with 8HD 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/x19x165/6". Shpg. wt., 74 lbs.

"ARISTOCRAT—12TRXB." Top-quality system using the highly popular 12TRXB 12" 3-way speaker; adjustable high-frequency control for matching of system to individual room acoustics. Covers entire audible range. Shpg. wt., 58 lbs.

ENCLOSURE ONLY. Takes 12" speaker, or 2 or 3-way system. Available in 3 handsome finishes. Shpg. wt., 44 lbs.

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

#### **NEW "Marquis" Speaker Systems and Enclosures**

"MARQUIS iA." Enjoy outstanding high-fidelity reproduction with this along-the-wall 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 12BW wooder. T10A high-frequency driver with 8HD diffraction horn, T35B tweeter, X825 and X36 crossovers, and 2—Type AT37 level controls. Impedance: 16

ohms. Rated 20 watts program material. 40-watt peaks. Size (HWD), 295/4x19x141/2". Shpg. wt., 85 lbs.

"MARQUIS—12TRXB." "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" speaker, or 2 or 3-way system. Shpg. wt., 50 lbs.

••						
Finish `	ENCLOSURE ONLY		"MARQUIS-12TRXB"		"MARQUIS IA"	
rinisn	Stock No.	NET EACH	Stock No.	NET EACH	Stock No.	NET EACH
Mahogany	79 DZ 310	61.74	79 DZ 316	126.42	79 DZ 313	226.38
Limed Oak		67.62	79 DZ 317	132.30	79 DZ 314	232.26
Walnut	79 DZ 312	67.62	79 DZ 318	132.30	79 DZ 315	232.26

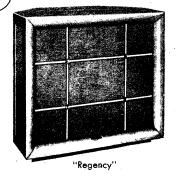
#### "Baronet" Speaker Systems and Enclosures

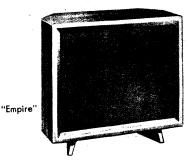
"BARONET III." Top-performance speaker system in folded-horn corner enclosure. Its performance equals that of many larger units. Makes use of floor and walls of room to effectively extend the horn. Includes SP8B 8" Radax speaker, T35B tweeter, X36 crossover and AT37 level control. Impedance: 16 ohms. Rated 20 watts, 40-watt peaks. 227%x147/x1374". Shpg. wt., 33 lbs.

"BARONET—SP8B." Compact "Baronet" enclosure with an SP8B 8" speaker. Provides excellent reproduction—bass response extends down to 35 cps. Shpg. wt., 29 lbs.

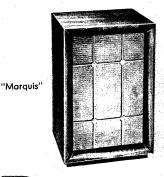
ENCLOSURE ONLY. Takes either an 8" speaker or 2-way system. Available in 3 handsome finishes to match the decorative scheme of any surrounding. Wt., 20 lbs.

Finish	ENCLOSURE ONLY		"BARONET	-SP8B"	"BARONET III"		
1 1111511	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	109,27	
Limed Oak	81 DU 419	48.02	81 DU 755		81 DZ 873	113.19	
Walnut	81 DU 861	48.02	81 DU 866	76.93	81 DZ 874	113.19	





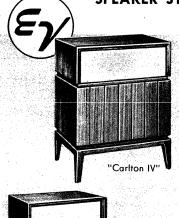


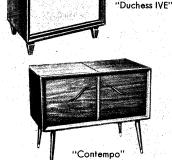


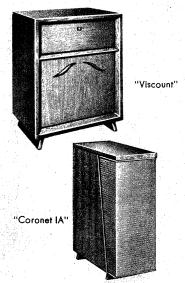


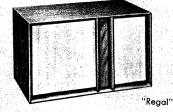
"Baronet"

#### SPEAKER SYSTEMS, ENCLOSURES AND EQUIPMENT CABINETS









#### THE "CARLTON IV" SPEAKER SYSTEM

Deluxe 4-way speaker system installed in a distinctively styled, contemporary enclos-ure. 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: 15WK 15" "K" type low-frequency driver, crossing over at 300 cps through X336 net-

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 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: 33½" high, 26¼" wide, 19½" deep. Shpg. wt., 130 lbs.

82	DZ	390. Mahogany. NET	351.82
82	DΖ	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" or 15" extended-range speaker by itself; then later, add other components to form 2 or 3 with the second of the components to form 2 or 3 with the second of the components to form 2 or 3 with the second of the components to form 2 or 3 with the second of the components to form 2 or 3 with the second of the components to form 2 or 3 with the second of the components to form 2 or 3 with the second of the components to form 2 or 3 with the second of the components to form 2 or 3 with the second of the components to form 2 or 3 with the second of the components to form 2 or 3 with the second of the components to form 2 or 3 with the second of the components with the components with the second of the components with the componen 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/x25x19" deep. Smartly styled to blend beautifully with the decor of any surrounding, the "Duchess" enclosure is available in three attractive finencrosure is available in three actuality infishes. 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. Walnut. NET...... 98.00

"DUCHESS IVE." 4-way speaker system installed in enclosure, above. Includes the 12WK, BB8 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, am-plifier 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" or 6" below the bottom of the lid; dimensions are 181\%" wide x 17" deep. Tuner/amplifier section has mounting board 1\%" below lid—components mount vertically so that control of care for more invented. below lid—components mount vertically so that controls face up for maximum convenience. Dimensions are 14" high x 181/8" wide x 17" deep. Overall cabinet size is 295/x381/x191/4" deep. Tapered legs are 155/8" long. Available in choice of handsome 

#### "VISCOUNT" EQUIPMENT CABINET

The "Viscount" is a deluxe, highly func-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" wide x 17" deep. Mounting board is adjustable, and may be set at positions of either 31½" or 6" from the bottom of the lid. Tuner/amplifier mounting board is 8½" deep x 22" wide, tuner/amplifier section size is 14½" high x 22" wide x 17" deep. Overall cabinet size is 34½x26x 19½" deep. Cleat-type legs are 3" high. Shpg. wt., 80 lbs.

#### NEW "CORONET IA" ENCLOSURE AND SPEAKER SYSTEM

"CORONET" SPEAKER ENCLOSURE ONLY. Diminutive "Coronet" is a dramatic accomis a dramatic accomplishment of balanced reproduction in compact, space-saving form. Smooth, clean design 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" full-range speaker or 2-way system for excellent, distortion-free 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, 25x9/x17/x deep. Available in mahagan, limed oak or walnut finish—specify when ordering. Shpg. wt., 19/2 lbs.
79 DU 303-C. NET. 34.79

#### **NEW "REGAL" SPEAKER SYSTEMS**

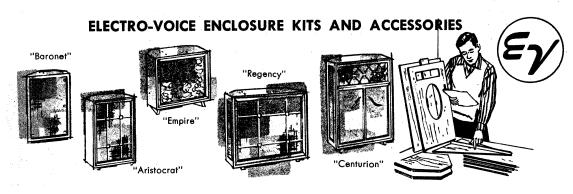
The extremely compact enclosure employed in the "Regal" speaker systems is an out-standing achievement in the design of modstanding achievement in the design of mod-ern furniture. Its simple yet striking styling will provide the perfect accent to your room decor. The "Regal" enclosure is made throughout of selected woods, and its bold lines are richly brought out by a lustrous bend wibbed ferich 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  $13\frac{1}{2}$ x24x $13\frac{1}{2}$ " (HWD). Available in mahogany, limed oak or walnut finishes—specify when ordering.

"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



#### **Attractively Styled Speaker Enclosure Kits**

Complete kits for assembling the famous Electro-Voice high-fidelity 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 wanted, step-by-step instructions. An initial parts are turn 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 bits loss metal trim (Bretal ballets). 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 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" 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 Enclosure	Takes:	Assembled Size (HWD)	Wt., Lbs.	NET EACH
Centurion	79 DZ 319	KD3	K-type indirect radiator folded corner horn	15" speaker, or,2, 3, or 4-way system	42x26¾ x23½"	64	85.26
Regency	81 DZ 786	KD4	Folded horn (corner or wall)	12" or 15" speaker, or 2 or 3-way system	29% x32x19"	55	71.54
Empire	81 DZ 787	KD5	Indirect folded horn (corner or wall)	12" or 15" speaker, or 2 or 3-way system	29% x32x16"	45	49.98
Aristocrat	81 DU 788	KD6	Folded corner horn	12" speaker, or 2 or 3-way system	29% x19x15¾"	36	38.22
Baronet	79 DU 320	KD7	Folded corner horn	8" speaker or 2-way system	25½x16x12"	16	25.48

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

Custom, metal trim and grille sets for Electro-Voice Centurion, Regency 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" by 25" dimensions, handles are 5" long and 34" wide. Attractively finished 

MODEL AK5. Trim kit styled for the Regency KD4 enclosure kit. Consists of lacquered, antique-brass finish crossbar grille. Size is 24" by 29½". Shpg. wt., 3 lbs.

81 DX 798, NET.....

MODEL AK6. Similar to Model AK5 described above, but for use with the Model 

#### 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 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 clude drawings, photos and hints to simplify building. (These booklets are identical to those supplied with the Electro-Voice en-closure kits listed above.) Postpaid in U.S.A.

	Stock No.	Plan	For	NET 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 INTERIOR ASSEMBLY KITS

MODEL KDI "PATRICIAN IV." (Not illustrated.) E-V's famous "K" horn with augmented bass section. Scaled up approximately 30% to deliver an added full octave of bass. Low in cost, the KD1 kit offers all the added to the section of the Research of the Resea 

79 DZ 321. NET....

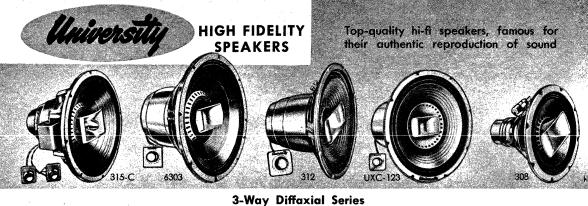
FINISHING KITS. Kits for finishing the enclosures at the top of this page are listed on p. 92.

#### 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				
Enclosure	Woofer	Mid-Range Package	High-Frequency Package		
Baronet, KD7 Kit	SP8B	3	BB1		
Aristocrat, Marquis, KD6 Kit	12BW	BB3	BB1		
Regency, Empire, KD4 Kit, KD5 Kit	15BW	BB3	BB1		
Duchess, Centurion, KD3 Kit	12WK	BB8	BB2		



UNIVERSITY'S DIFFAXIAL DESIGN. Most of the speakers listed below employ Univer-sity's famous Diffaxial design. This feature assures outstanding tonal balance by pro-viding exceptionally smooth, wide-angle dispersion of treble frequencies. These fre-quencies are normally projected straight ahead by the loudspeaker; as a result, they are not heard at the proper volume at are not heard at the proper volume at all points in the room. However, Univerait 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-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., 6½ lbs. Capacity, 50 watts. Impedance, 8-16 ohms. 12" deep. Shops. wt., 34½ lbs. 

MODEL 6303 15" DIFFAXIAL. Excellent 3-way 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" cone, Diffusicone element and supertweeter), provide brilliant high-fidelity sound. Frequency response extends from 30 cps to beyond audibility.

Mechanical crossover at 1000 cps; elec-Mechanical crossover at 1000 cps; electrical crossover network at 5000 cps. Includes brilliance control on 3-ft. cable with brass plate and knob. 2-lb. Alnico V permanent magnet. Power capacity, 30 watts. Impedance. 8-16 ohms. 15½" diameter; 10" deep. Shpg. wt., 12 lbs.

MODEL 312 12" DIFFAXIAL. Brilliant 12" Diffaxial speaker for exceptional, widerange reproduction. Has 12" woofer, Diffusione mid-range unit, and HF-206 super-

MODEL UXC-123 12" 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 

MODEL 308 8" 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" woofer for excellent bass response. Has Diffusicone mid-range unit, compression type tweeter and built-in 5000-cps electrical crossover. Frequency response, 50-15,000 cps. Magnet wt., 11/4 lbs. Impedance 8-16 ohms. Power handling capacity, 25 watts. 87/32" diameter; 61/4" deep. Shpg. wt., 5 lbs.

38.95 95 D 189. NET.....











2-Way Diffaxial Series

MODEL DIFFUSICONE-15 15" DIFFAXIAL, Low-cost, 2-way, Diffaxial 15" speaker. Diffusicone element assures wide-angle dispersion of treble frequencies. Dual horn-loading at the apex of the cone extends mid- and high fractions. 

MODEL DIFFUSICONE-12 12" EXTENDED-RANGE DIFFAXIAL. 12" version of above. For the low-cost high-fidelity system. Smooth, wide-angle dispersion achieved by patented University diffusicone element. Power han-

MODEL UXC-122 12" DIFFAXIAL. Low-priced 12" Diffaxial speaker. Employs Diffusicone high-frequency element with a 1000-cycle mechanical crossover. Coaxial horn-loading at apex of cone extends mid and treble response. Low frequencies are reproduced by pecially molded, one-piece woofer dia-hragm. Delivers excellent reproduction phragm. phragm. Delivers excellent reproduction across entire audio range. Response, 45 to 13,000 cps. Capacity, 25 watts. Impedance, 8-16 ohms. Size, 12/g" diameter; 43/g" depth. Employs 1-lb. Alnico V permanent magnet. Shpg. wt., 5/4 lbs. 95 DX 584. NET. .....32**.**34

MODEL DIFFUSICONE-8 8" DIFFAXIAL. Lowcost, 2-way 8" 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 raachieved 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. 87/se" diameter. Depth. 3½", Shpg. wt., 3½ lbs. 95 D 183. NET.... 25.48

#### 12" Coaxial Speaker

MODEL 6201. Highly popular, top-quality 12" 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, 1½-lb. Alnico V magnet and 1-piece molded woofer diaphragm provide expentionally, smooth Alnico V magnet and 1-piece molded wooter diaphragm provide exceptionally smooth low-frequency transient response. Includes brilliance control with 3-ft. cable. Excellent frequency response—45 to 15,000 cps. Capacity, 25 watts. Impedance, 8-16 ohms. 83/8" depth. Shpg. wt., 101/4 lbs. .....50.96 95 DX 176. NET.....

#### 12" Extended-Range Speaker

MODEL 6200. Economy-priced 12" speaker. Special, shallow design for flush mounting in ceilings, walls, etc. Excellent for high-fidelity use, radio-phono replacement, public 

#### WOOFERS, TWEETERS, DRIVERS & CROSSOVERS

#### Low-Frequency Woofers

MODEL C15W 15" WOOFER. Features special-design voice coil permitting greater cone excursion for deep bass. Dual spider piston and 6-lb. 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, 10½". Shgs. wt. 26¾ lbs.

MODEL C63 W 15" 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. 1½-lb. magnet. Response, 30 to 6000 cps. Capacity, 30 watts. Includes brilliance control. Impedance, 8 ohms. Depth, 10". Shpg. wt., 10 lbs. 81 DX 563. NET....

.....48.02

MODEL C12W 12" WOOFER. Features built-

MODEL C8W 8" 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 three-way 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" deep. Shpg. wt., 3 lbs.

See Page 71 for University high-compliance woofers

#### 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° horizontal and 50° vertical dispersion. Driver mechanism handles 25 to 50 watts of program material. Response, 3500 cps to inaudibility. Requires N-1 or N-2B crossover network. Impedance, 8 ohms. 6x33/6x69/k°. Shpg. wt., 3½ lbs. 95 D 190. NFT 32.34

95 D 190. NET.....

MODEL T-30 MID-RANGE AND HIGH-FRE-QUENCY 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 cps. Capacity, 50 watts in multi-speaker systems. Impedance, 8 ohms. 13/8"-18 throat; 31/2" diameter; 33/4" deep. Wt., 23/4 lbs.

MODEL T-50 HYPERSONIC DRIVER. Heavy duty 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, 13/6".18 throat; 41/4" dia; 41/6" deep. Wt., 5 lbs.

81 D 948. NET......48.5I

MODEL COBREFLEX HORN. Perfect for use 

MODEL 4401 TWEETER. A quality tweeter at low cost. Sturdy, one-piece die-cast horn using "reciprocating flare" principle for 120° horizontal and 50° vertical dispersion. Employs efficient driver mechanism and lightweight duralumin voice coil susand igntweight duratumin voice coil suspension in hermetically sealed unit. Response, 2000 to 15,000 cps. Requires N-1 or N-2B crossover networks. Capacity, 25 watts. Impedance, 8 ohms. Size, 2½x6x-6½." Shpg. wt., 2 lbs. 

MODEL UXT-5 SUPER TWEETER. A compact, super-tweeter assembly. Unusually smooth response at 5000 cps crossover point, or 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 cps. 120° horizontal and 50° vertical dispersion. Capacity; 25 watts in 2-way systems, 50 watts in 3-way systems. Impedance, 8 ohms. 4½x2½x4\*. Shpg. wt., 1¾ lbs.

81 D 564 NFT 20.58

MODEL H-600 MID-RANGE AND HIGH FRE-QUENCY HORN. Excellent, top-rated 600-cycle cutoff, wide-angle horn. One-piece, die-cast design. Recommended for use with N-2A crossover network and the Model T-30 or T-50 driver units. Offers outstand-ing performance at low cost. Combines "re-

#### **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 cps at 8 ohms; 1250 2500 and 5000 at 16 ohms; also 5000 and 10,000 cps at 4 ohms. For use with N-2A crossover in 3-way systems. Fits panels to 1", 35/ax3/4x3". Shpg. wt., 13/4 lbs.

MODEL N-2A CROSSOVER NETWORK. For any combination of speakers, in a great variety of voice coil impedances and cross-over points. Can be used with N-1 or N-2B over points. Can be used with N-1 or N-2B for 3-way speaker systems. 6 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, 3½x 3½x3″. Shpg. wt.. 2½ lbs. 95 D 194. NET..... .....17.64

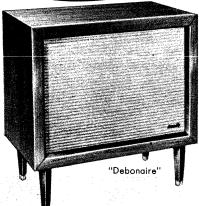
MODEL N-2B CROSSOVER NETWORK. For use with any combination of speakers, in varied voice coil impedances and popular varied voice coil impedances and popular crossover points. Can be used with the N-2A for 3-way speaker systems. 6 db, 2-way network. Used in pairs as 12 db network, or singly as 12 db low or high-pass filter. Crossovers; 1250, 2500 and 5000 cps at 8 ohms; 2500 cps dt 60hms; 2500 cps dt 60hms; 2500 cps at 4 ohms. Less brilliance control; use AP-8 below, 33/6x33/xx3". 21/4 lbs.

MODEL N-3 "ACOUSTIC BATON" 3-WAY CROSSOVER NET WORK. Adjustable network for 3-way speaker systems. Connections for 

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" in thickness. Impedance: 8-16 ohms. Shpg. wt., 7 oz. 95 D 132. NET....

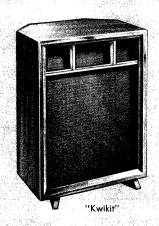
Universi C15W C63W UXT-5 Cobreflex





# Thiny-Mite!





#### SPEAKER ENCLOSURES AND SYSTEMS

#### **NEW "Debonaire" Enclosure and Systems**

Smartly styled, high-fidelity lowboy enclosure and complete lowboy speaker systems. Only 25½x27½x16" (including legs), these units are ideal for use in small rooms. Enclosure can house 12" or 15" 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.	Mfr's Type	Description	Finish	Wt., Lbs.	NET EACH
82 DZ 433 82 DZ 434 82 DZ 435	EN-1215	Debonaire enclosure for use with 12" or 15" speaker. Complete with provisions for mid-range and tweeter units	Blonde	56	61.74 67.62 67.62
82 DZ 436 82 DZ 437 82 DZ 438	S-3	Debonaire enclosure with C-12W 12" woofer, H-600 mid-range horn/T-30 driver & UXT-5 super tweeter	Blonde	68	192.08 195.02 195.02
82 DZ 439 82 DZ 440 82 DZ 441	) \ S-4	Debonaire enclosure with Diffusi- cone-15 two-way 15" speaker and H-600 mid-range horn/T50 Hy- personic driver	Blonde	}71	193.55 196.49 196.49
82 DZ 442 82 DZ 443 82 DZ 444		Debonaire enclosure with UXC-123 12" diffaxial speaker. Speaker has completely wired brilliance control.	Blonde	65	124.46 130.34 130.34

#### "Tiny-Mite" Speaker Enclosures and Systems

TM-812 "TINY-MITF" 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" or 8" speaker; baffle board is cut for 12" speaker, with optional adapter board cut for 8" speaker. Construction is of heavy ¾" 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, 21¼" high, 15½" wide, 12½" deep. Shpg. wt., 26 lbs.

, 200.		
95 DU 104.	Mahogany, NET	.42.63
95 DU 107.	Blonde. NET	45.57
81 DU 818.	Walnut, NET	45.57

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.

			897. Mahogany. NET	83.30
8	1	DU	898. Blonde. NET	86.24
8	1	DU	899. Walnut. NET	86.24

"TINY-MITE" WITH UXC-122 INSTALLED. Highly effective system using 12" 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.

trong on pg, or roo.				
81 DU 568. Mahogany. NET	7	5.0	)7	,
81 DU 569. Blonde. NET		77.	9	Ì
-81 DU 888. Walnut. NET				

#### "Companionette" 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 C3W 8" woofer, 4401 wide-angle tweeter and 2000-cycle crossover network. All components are installed—and ready to use. Frequency response of system extends from 50 to 15,000 cycles.

Only 10" high, 10" deep and 24" long—perfect 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 desired. Matching grille cloth has attractive swirl pattern. Shpg. wt., 21 lbs.

Swiii patterii. Supg. wt., 21 103.
MAHOGANY FINISH.
81 DU 583. NET
BLONDE FINISH.
81 DU 584. NET62.72
WALNUT FINISH.
81 DU 816. NET62.72

#### "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 ¾" 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 level. Heavy wood panels provide high rigidity. Exterior and interior parts fit snugly together; smooth, professional finishing is

assured by absence of protruding edges or irregularities in edges of panels. KEN-12 has baffle board for 12" 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" (or 12" speaker with adapter below), and same mid-range and high-frequency components as KEN-12. With grille cloth.

grille cloth.
KEN-12.29½x21½x15½". Wt. 45 lbs. 81 DU 828. NET
KEN-15. 351/4x29x181/2". Wt. 68 lbs. 81 DZ 829. NET
ADAPTER BOARD. Permits mounting 12 speaker in KEN-15. Wt., 1½ lbs.
82 DX 200 NFT 1 1

# SPEAKER SYSTEMS AND HIGH COMPLIANCE WOOFERS

#### 2-Way Speaker Systems

MODEL S-10L—LOWBOY. Two-way, high-fidelity speaker system in handsome shelf-type 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"-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" removable base. Overall size (less base) is only 14x25x141/4". Shpg. wt., 51 lbs.

MODEL S-10H—HIGHBOY. Speaker system as described above, but for use where minimum width is available. 25x14x14½".

S-10L Lowboy				S-10H Highboy	
Stock No.	Finish	NET	Stock No.	Finish	NET
82 DZ 418 82 DZ 419 82 DZ 420	Mahogany Blonde Walnut	136.22 140.14 140.14	82 DZ 445 82 DZ 446 82 DZ 447	Mahogany Blonde Walnut	136.22 140.14 140.14

#### 3-Way Speaker Systems

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

System includes: C-15HC 15" high-compliance woofer (described below), Diffusicone-8 8" 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 1½" removable base. Size (less 1½" base), 26½x19½x17½". Shpg. wt., 80 lbs.

MODEL S-11L—LOWBOY. Speaker system as described above, but for use where minimum upright space is available. 191/2x267/ex171/2".

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

#### C-12HC and C-15HC High-Compliance Woofers

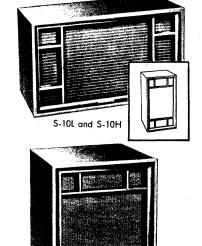
Moderately priced, high-compliance woofers designed for ultra-linear response. Deliver rich, remarkably clean reproduction throughout the lower frequency range. Have unusually low cone resonance.

Feature Hiflux Uniferrox-7 magnet material in a specially constructed suspension structure—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 C-12HC and the C-15HC speakers should be used in properly designed enclosures. Recommended enclosure plans are supplied with each unit.

MODEL C-12HC 12" SPEAKER. High-compliance, 12" woofer providing excellent performance when used with amplifiers delivering 15 watts or more. Delivers clean response below 2500 cycles. Resonance, 18 cps. Depth, 5½". Slngs. wt., 8½ lbs.







S-11H and S-11L

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

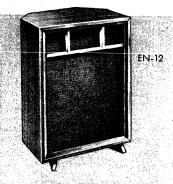
Carefully matched combinations of speaker components, available in a variety of sizes. Include "add-on" groups of components for modernizing existing installations, and complete sets of components. Especially suited to custom installation in walls or doors, or in specially designed enclosures. Each set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

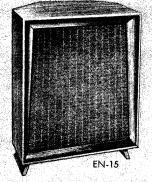
Each full-range speaker component package offers superior coverage of the audible range, when properly baffled. High-frequency and mid-range packages add new brilliance to older high-fidelity systems. Crossover networks are furnished as required, eliminating any necessity for further matching of components.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

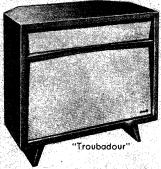
Stock No.	Mfr's Type	Description	Wt., Lbs.	NET EACH
95 D 109	UN-1	High-Frequency Components Package; HF-206 tweeter, N2B, AP8	7	49.93
81 DX 995		Mid-Range Components Package; T-30 mid-range driver H-600 reciprocating-flare horn, N2A crossover network, AP8 balance control.	8	68.55
81 DU 996	UN-3	Mid- 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" Two-Way Components Package; C8W woofer, 4401 tweeter, N1 crossover network with balance control.	8	41.16
81 DU 998		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

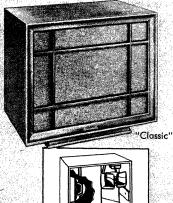
FOR FULL DESCRIPTION OF COMPONENTS USED IN PACKAGES ABOVE, SEE PAGE 69











S-9

#### 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 en-closure. 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" extended-range speaker; or multiple procedures and the strong stron at ngh-amplitude low-frequency signals. For any 12" extended-range speaker; or multiple speaker systems using 12" 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" high, 21½" wide and 15¾" deep. Choice of 3 handsome finishes. Shpg. wt., 60 lbs.

81	DZ 822.	Mahogany. NET	.74.48
81	DZ 823.	Blonde. NET	77.91
81	DZ 819.	Walnut. NET	77,91

EN-12 WITH UXC-123 INSTALLED. 12" University "Diffaxial" speaker with reciprocating-flare super-tweeter. Reproduces entire musical 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.

1	DZ 820.	Mahogany.	NET	37.20
1	DZ 821.	Blonde, NET	r '	140.63
1	DZ 887.	Walnut. NET		140.63

S-5 "SENIOR" 3-WAY ISYSTEM. For highest S-5 "SENIOR" 3-WAY [SYSTEM. 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 supertweeter, for superb reproduction. Handles up to 30 watts of integrated program material. Shpg. wt., 72 lbs.

81	DZ 893.	Mahogany, NET196.00
81	DZ 894.	Blonde. NET 200.90
81	DZ 895.	Walnut, NET200.90

#### UNIVERSITY EN-15 SPEAKER ENCLOSURE AND SYSTEM

EN-15 ENCLOSURE. Improved version of an EN-15 ENCLOSURE. Improved version of an advanced design folded-horn enclosure. For use with 12" or 15" speaker. Mounting board is pre-cut for 15" speaker, with removable adapter cut for 12" speaker. For mid-range it accommodates an 8" speaker or the H-600 horn with T-30 driver; for the H-600 horn with the T-50 driver.

Internal construction is similar to EN-12. 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. 37x29x20". Shpg. wt., 98 lbs.

81	DZ 914.	Mahogany, NET	122.50
		Blonde, NET	
81	DZ 817.	Walnut, NET	1 <b>32.3</b> 0

S-6 "MASTER" 3-WAY SYSTEM. Provides exoccupies relatively small space; tonal range exceeds the limits of human hearing. System includes EN-15 enclosure, C15W 15" woofer, T-30 driver unit with H-600 horn for midrange, and HF-206 Hypersonic tweeter for excellent high frequency exceeds their 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. 37x 29x20". Shpg. wt., 128 lbs.

81	DZ 824.	Mahogany. NET 303.	80
		Blonde. NET313	
81	DZ 841.	Walnut. NET 313	.60

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

EN-15LH ENCLOSURE. Solidly built, smartly styled lowboy enclosure featuring hornstyleu lowboy enclosure featuring horn-loaded construction. Ideally suited for use with 12" or 15" 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 manufacture. Choice of 3 finishes. Size: 29" high, 34" wide. 19" deep. Shpg. wt., 84½ lbs.

82	DZ 427	. Mahogany, NET	136.71
		B. Blonde. NET	
82	DZ 429	Walnut, NET	141.61

S-12 "TROUBADOUR" 3-WAY SYSTEM, Su-5-12 "INOURADOUR" 3-WAY 5YSIEM. Superb 3-way 15" speaker system housed in the highly efficient enclosure described at left. Includes C-15 15" woofer, T-30 driver unit with H-600 wide-angle horn for midrange, and HF-206 Hypersonic tweeter for superior high-frequency reproduction.

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, 29x34x19". Shpg. wt., 118 lbs.

82 DZ 430.	Mahogany, NET	336.63
	Blonde. NET	
82 D7 432	Walnut NFT	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 work; has rresence 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" woofer for direct projection of bass frequencies toward the listener. Offered in 3 finishes. 34½x 40½x25½". Shpg. wt., 230 lbs.

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

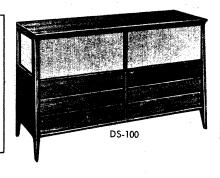
S-9 UTILITY "CLASSIC" SYSTEM. High-quality 

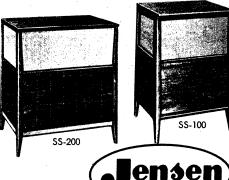
EN-CB UTILITY "CLASSIC" ENCLOSURE ONLY. Assembled, unfinished enclosure, less speak-

#### JENSEN HIGH-FIDELITY SPEAKER SYSTEMS AND ENCLOSURES



Place enclosure wherever you please — "Stereo Director" rotates for optimum sound at your favorite listening position.





#### **NEW** "STEREO DIRECTOR" Speaker Systems

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 excelent, 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 cps. Impedance, (each channel): 16 ohms. Power capacity (each channel): 30 watts. Size (HWD), 31½x52x18¼". Shpg. wt., 125 lbs.

79 DZ 141. Mahogany. NET EACH...369.50 79 DZ 142. Walnut.

SS-200 "CUSTOM" SINGLE 4-WAY SYSTEM Finest 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 de-liver thrilling, life-like stereophonic sound. Advanced-design "Stereo Directors" pro-vide 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 Speakers used (K1-44 kH) 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), 36½x32½x23". 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 

#### **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 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 chms. Capacity: 40 watts. Size (HWD), 30½x34½x18¾". Shpg. wt., 107 lbs. 79 DZ 110. Mahogany. NET 79 DZ 111. Wolput FACH 294.50

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

EACH....129.75 79 DZ 119, Walnut.

CN-100 3-WAY SYSTEM. Provides performance completely beyond its cost and size. Employs KT-33 speaker kit (p. 75). 20-15.000 cps. 16 ohns. 30 watts. 60 watts peak. Size, 31½x21x18½". Shpg. wt., 61 lbs. 79 DZ 112. Mahogany. NET

79 DZ 113, Walnut.

MODEL BF-100 ENCLOSURE. Same as enclosure of CN-100 system. Has tube-loaded port for extended bass. Takes 12" speaker, or 2 or 3-way systems. Shpg. wt., 41 lbs. 79 DZ 104. Mahogany. NET

79 DZ 105. Walnut. EACH....69.50

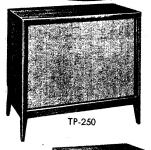
MODEL BF-100/H-222. Above enclosure with H-222 (p. 74) installed. Shpg. wt., 54 lbs. 79 DZ 102. Mahogany. NET 79 DZ 103. Walnut. EACH.....132.00

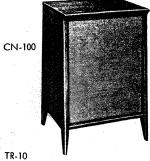
TR-10 "TRI-ETTE" 3-WAY SYSTEM. Diminutive speaker system of exceptional quality—performs on a par with much larger units. Unique "Flair-Line" styling and the rich beauty of natural woods combine to complement any decor. May be placed either on its side or end. Has thick fiberglas lining. Speakers used (KT-33 kit) are described on page 75. 25-15,000 cps. 16 ohms. 30 watts, 60 watts peak. 131/x25x113/". Less base, below. 45 lbs. 

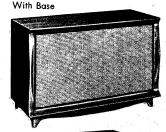
#### Quality Enclosure and Speaker System

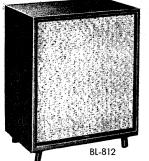
MODEL BL-812 ENCLOSURE ONLY. Clean-cut MODEL BL-812 ENCLOSURE ONLY. Clean-cut lines and classic styling characterize the BL-812 enclosure. Superior performance is attained through use of the unique "Bass-Ultraflex" acoustic design. Compact size makes it perfect for use where a larger enclosure cannot be installed. Accommodates any 8" or 12" speaker—also has cutouts to permit installation of Jensen 2-way system kits. Fine hardwood veneers.  $24\frac{1}{4}$ x19x $12\frac{3}{8}$ ". Shpg. wt., 26 lbs. 82 DU 362. Mahagany. 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.... 87.00











MODEL G-610A 15" TRIAXIAL. An outstanding 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 mid-frequency and high-frequency changes. mid-frequency and high-frequency channels.
Includes dual crossover network with wired 

MODEL G-600 15" TRIAX. Embodying the same operating principles as the G-610A, the G-600 is a low-cost version with somewhat lighter construction. Highly efficient woofer employs a 3½ lb. magnet. Response, 30 cps to beyond audible range. Boremounted compression driver for mid-frequencies, has separate horn for 900-4000 cps range. New super-tweeter handles range 

MODEL K-80 8" COAXIAL SPEAKER, A lowcost coax speaker that features electrically and acoustically independent woofer and tweeter units. Perfect for use wherever a  MODEL K-210 12" COAXIAL SPEAKER. Economy-priced, 12" coax speaker. Its low cost and truly excellent audio reproduction make 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° speakers. Offers the same 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 direct-radiator tweeter unit and built-in electrical conserver network. Frequency response 45. 

MODEL H-222 12" COAXIAL SPEAKER. Highly popular 12" coaxial speaker. Provides un-usual clarity of sound and wide range. Comusual clarity of sound and wide range. Compression-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 cps. Features improved, two channel electrical crossover network. Crossover frequency. 2000 cps. Tweeter horn passes through the core of a heavy-duty 1½ 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 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 precially decigned as that its contraction. 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 employ magnets weighing ½ lb. Impedance. (both unit) \$ ohme. (both units), 8 ohms.

MODEL UX-80 8" SPEAKER. Frequency re-

MODEL UX-120 12" SPEAKER. Frequency response, 40 to 12,000 cps. Power handling capacity, 14 watts. Shpg. wt., 5½ 1bs. 

DX-120 DUAX 2-ELEMENT 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 compression-type tweeter described on page 75.

Resonance. 48-50 cps. Frequency response, 40 to 13,000 cps. Power handling capacity, 20 watts. Employs magnet weighing 1 lb Impedance, 16 ohms. Depth. 7¾". Shp. wt., 7½ lbs. 

"P"-SERIES WOOFERS. Low-frequency units, for use in 2 and 3-way speaker systems. Impedance of both units, 16 ohms.

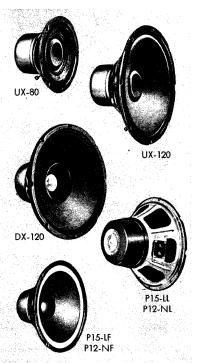
Impedance of both units, 10 onms. MODEL P15-LL 15" WOOFER. Provides smooth, bass range up to 600 cycles (2000 cps in 2-way systems). Frequency response is 30 to 2000 cps in bass-ultraflex enclosures, bass reflex enclosures, etc. Capacity, 35 watts. Employs 3½-lb. magnet. Viscous, edge-damped diaphragm. Resonance 35-37 cps. Depth, 8½", Shpg. wt., 18 lbs. 

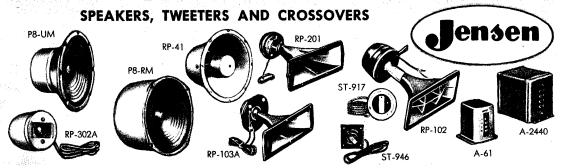
NEW "FLEXAIR" WOOFERS. Designed to ex-

tend 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" WOOFER. Has frequency

MODEL P15-IF 15" WOOFER. Has frequency range (in Jensen Bass-Superflex enclosure). 16-2000 cps. Special damped suspensions permit double-peak excursions of 1" without distortion. Free-air resonance. 16 cps. Capacity, 40 watts. Impedance, 16 ohms. Shpg. wt., 181/4 lbs.
79 DX 129. NET. 69.75

MODEL P12-NF 12" WOOFER. Frequency range (in Jensen Bass Superflex enclosure). 20-2000 cps. Free-air resonance. 20 cps. Capacity, 30 watts. Impedance, 16 ohms. Shpg. wt., 83/4 lbs. 





NEW MODEL P8-UM 8" MID-RANGE SPEAKER. A low-cost, 8" direct-radiator, mid-range speaker. For reproducing the 600 to 4000 speange. Employs closed housing for isolation; has DP-Alnico-5 magnet. For speaker systems up to 30 watts. Depth, 4½". Impedance, 16 ohms. Shpg. wt., 3 lbs. 750 D131 MET. 

NEW MODEL P8-RM 8" MID-RANGE SPEAKER. NEW MODEL P8-RM 8" MID-RANGE SPEAKER.
An 8", 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 ½-lb. DP-Alnico-5 magnet. For systems up to 40 watts. Depth. 4"3/6". Imp., 16 ohms. Wt., 4 lbs.
79 D 132 NFT 

NEW MODEL RP-41 MID-RANGE HORN UNIT. 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, 103/6". Depth, 71/4". Baffle cutout, 81/2" in dia. Shpg. wt., 5½ lbs.
79 DX 133. NET. ... ... 42,50 

NEW MODEL RP-103A COMPRESSION TWEETER. New, compression-driver, horn-loaded high-frequency unit for tweeter use in 2-way and 3-way speaker systems. For use with 2000 and 4000 cycle crossover netwith 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 2x6", 3x7½x6%". Wt., 3¼ lbs. 

MODEL RP-201 MID-RANGE UNIT. Reproduces 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, largle of coverage, 115°. Capacity, 35 watts. For use with A-61 network, at right. Impedance, 16 ohms. Size: 43/x11/2x14″. Shpg. wt., 9 lbs. 

MODEL RP-102 TWEETER. Advanced-design,

high-frequency unit for use in 2-way speaker high-frequency unit for use in 2-way speaker systems crossing over at 2000 cps. Response, with A-204 crossover network, 2000 cps. Cast aluminum 6-cell Hypex horn, with cloth-base plastic diaphragm for internal damping. Capacity, 30 watts. Impedance, 16 ohms. Size, 4" high. 77/4" wide, 91/4" deep. Shpg. wt., 61/2 lbs. 82 DX 368 NET..... 28.35

NEW MODEL RP-302A SUPER TWEETER. Jensen's latest and finest unit. Compression-driver, 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 

BALANCE CONTROLS. Adjustable, wirewound L-pads, with bar knob and round brass escutcheon. Mount in 111/6" hole. Have 36" leads. Impedance, 16 ohms. Power capacity, 35 watts. Shpg. wt., 12 oz.

MODEL ST-917. For mid-frequencies. 

# 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 KT-31 and KT-32, and the new 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

St	ock No.	Model	Description	Components	Lbs.	NET
	DU 377		2-Way Concerto	P15-LL woofer, RP-102 h-f tweeter, A-204 crossover, ST-901 bal. control	29	99.50
	DX 378		2-Way Concerto 2-Way Spkr. Kit	P12-NL woofer, RP-102 h-f tweeter, A-204 crossover, ST-901 bal. control P12-NF Woofer, RP-103Ah-f tweeter	. 19	73.00
	DU 376		3-Way Imperial	A-204 crossover, ST-946 bal. control Special P15-LL woofer M-1131	18	72.50
02	50 3,0	121-01	5-way imperial	equalizer, RP-201 & RP-302 tweeters, A-61 & A-402 crossovers, mid h-f		
				balance controls	43	184.50
82	DU 382	KT-32	3-Way Triplex	P15-LL woofer, RP-201 & RP-302 tweeters, A-61 & A-402 crossovers,		
79	DU 120	KT-33	3-Way Spkr. Kit	ST-901 & ST-917 balance controls P12-NF woofer, P8-UM mid-range unit, RP-103A tweeter, ST-946 bal-	43	169.50
79	DU 124	KT-34	3-Way Triplex II	ance control and A-645 crossover		80.00
79	DU 122	KT-44	4-Way Spkr. Kit			177.50
79	DZ 121	KT-233	Stereo TWINkit	trols and A-2440 crossover	41	192.50
79	DZ 123	KT-244	Stereo TWINkit	Stereo Director chassis	48	160.00
				Stereo Director chassis	99	385.00

NEW BALANCE CONTROLS. For recessed mounting in  $1^{11}/_{16}''$  hole. Have  $2^{1}/_{2}''$  square escutcheon plate and bar knob. Impedance, both units, 16 ohms. Wt...  $\frac{1}{2}$  lb.

NEW MODEL ST-946. For adjusting out-

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. 

MODEL A-61 CROSSOVER NETWORK, Twochannel, 600-cycle type. Im ohms. 51/4x63/4x43/4". 51/4 lbs. Impedance, 16 

MODEL A-204 CROSSOVER NETWORK, Two-

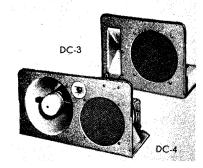
MODEL A-402 CROSSOVER NETWORK. above, but crossover point is 4000 cps. 3 lbs. 82 D 375. NET......10.90

MODEL A-640 3-WAY CROSSOVER NETWORK. For 3-way systems. Crossover frequencies, 600 and 4000 cps. Cutoff slope, 12 db/octave. Power rating, 40 watts. 16 ohms. 5½x7x45½". Wt., 6 lbs. 

NEW MODEL A-645 3-WAY CROSSOVER NETWORK. For 3-way systems. Crossover frequencies, 600 and 4000 cps. Power rating. 30 watts. 16 ohms. 2x4x51/4". 21/2 lbs. 79 D 138, NET......15.00

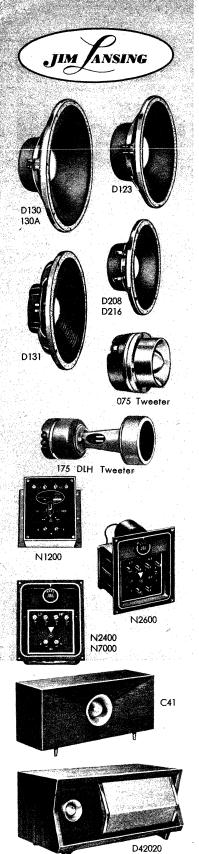
NEW MODEL A-2440 4-WAY CROSSOVER NETWORK, For 4-way systems. Crossovers: 200, 400 and 4000 cps. Power rating, 40 watts. 16 ohms.  $5\sqrt{4}$ x7x45%". Wt. 6½ lbs. 79 D 140, NET....

#### NEW Stereo Director Chassis



NEW MODEL DC-3 STEREO DIRECTOR CHAS-SIS. 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.....

NEW MODEL DC-4 STEREO DIRECTOR CHAS-NEW MODEL DC-4 STEREO DIRECTOR CHAS-SIS. For mounting low, mid and high-frequency units of the KT-44 speaker com-ponents package. Forms a Stereo Director assembly as used in the Model SS-200 4-way system (see page 73). 10 lbs. 



#### 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" aluminum voice coil and hydraulically formed, 4" 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.

#### **Full Range Speakers**

D130 15" SPEAKER. Heavy-duty, precision built speaker. Provides remarkably distinct built speaker. Frovinces 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 ±5 db, 30 to 17,000 cps. Capacity, 25 watts. Voice coil diameter, 4". Magnet weight 4 lbs. Free cone resonance, 37 cps. Voice coil impedance, 16 ohms. Depth, 5½". Shpg. wt., 23 lbs. 

D131 12" SPEAKER. One of the finest 12" hi-fi speakers available. Excellent for use alone, or as a woofer in 2 or 3-way systems. Com-bines excellent design and construction to 

# D123 12" SPEAKER. An extended-range 12" speaker with ultra-shallow frame design. Only 35%" deep, it's perfect for custom in the-wall mounting, or compact cabinet installation. Response, ±5 db, 30 to 15,000 cps. Voice coil diameter, 3". Capacity, 20 watts. Free cone resonance, 35 cps. Impedance, 16 ohms. Magnet weight, 134 lbs. Shpg. wt., 12 lbs.

82 DX 112, NET.

D208 8" SPEAKER. Same excellent features as the D130 and D131, but for smaller installations. Response, 40 to 13,000 cps. Capacity, 12 watts. Free cone resonance. Sc ps. 2" voice coil, Impedance, 8 ohms. 1 lb. magnet. Depth, 27%". Wt., 6 lbs. 82 D 126. NET... ....29.70

D216. 8" SPEAKER. Same as D208, but has 16 ohms impedance. 

#### **Crossover Networks** Woofer, Tweeters and

130A 15" WOOFER. Superb 15" 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 frequenreproduces all bass and mid-range frequencies falling in this range with remarkable fidelity. Matched for use with the Model 175DLH 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, ±5 db, 30 to 1500 cps. Voice coil diameter, 4". Capacity, 25 watts. Free cone resonance, 36 cps. Magnet weight, 4 lbs. Voice coil impedance, 16 ohms. Depth, 5½". Shpg. wt., 23 lbs. 

175DLH HIGH-FREQUENCY DRIVER-HORN-LENS ASSEMBLY. Provides highly precise reproduction above 1200 cps; unequalled transient response. Combines a high-frequency sient 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° 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 paragety. 

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 discibility according to the control of 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". Dispersion, 90°. Voice coil impedance, 16 ohms. Baffle hole diameter, 33/6"; length, 31/4". Shor, wt. 8 lbs. 

CROSSOVER NETWORKS. All have nominal impedance of 16 ohms, except N2600 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 cps. 43/4x6x31/2". Wt., 33/4 lbs. 82 D 199. NET...... 24.60 N2400. As above, but less dual-impedance

feature. Shpg. wt., 3½ lbs. N7000. For use with 075 tweeter. Crossover, 7000 cps. 31/4x31/4x23/4". Wt., 3 lbs. 

N1200. For use with 175-DLH driver-horn-lens assembly and 130A woofer. Crossover, 1200 cps. 43/4x6x61/4". Shpg. wt.. 9 lbs. 

#### New Tweeter System and 2-Way Speaker System

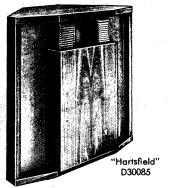
C41 "ANGELUS" TWEETER SYSTEM., Smartly styled and highly functional high-frequency system. Compact enclosure houses the 075 "Ring Radiator" tweeter and N2400 cross-over network. The combination of these 2 over network. The combination of these 2 excellent components enables the user to extend the treble 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 

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 tem 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-design, extended-range 8" speaker; 075 "Ring Radiator" tweeter with level control; and N2400 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 cps. Power handling capacity, 12 watts. Impedance. 16 ohms. 11½" high, 24" wide, 12" deep. Shpg. wt., 35 lbs.

82 DU 233. Mohogony. NET..... 166.20
82 DU 235. Wolnut. NET..... 170.40

82 DU 235. Walnut. NET.....170.40



"HARTSFIELD" D30085 SPEAKER SYSTEM. Im-"HARTSHELD" 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, N500H dividing network, plus the "serpentine" acoustical lens-horn assembly. Capacity, 60 watts. 16 ohms. HWD 4534", 47", 24V/2", 250 lbs. Shipped F.O.B. Chicago or Los Angeles, whichever is neare. 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-ft. exponential folded horn 

82 DZ 206. Light Walnut. NET. . . 166.00

D34001 COMPLETE SPEAKER SYSTEM. cludes 130A 15" woofer, 175DLH dr cludes 130A 15" woofer, 175DLH driver-horn-lens assembly. N1200 crossover, in-stalled 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 con temporary low-boy design. Can be placed anywhere. Contains built-in, 6-ft. exponenanywhere. Contains Duitt-III, b-II. exponential horn, with mouth area of four square feet. Removable 5" legs. HWD: 2834x377/ax 20". 90 lbs. Shipped F.O.B. Chicago or Los Angeles, whichever is nearer.

82 DZ 201. Mahogany. NET. 151.00 82 DZ 203, Light Walnut, NET....166.00

D40001 COMPLETE SPEAKER SYSTEM. In-LOWITEIT STEAKER SYSIEM. Includes 130A 15" woofer, 175DLH 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, 

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, grace rooms and apartments; use in pairs for stereo. Takes 8". 12" or 15" woofer. HWD: 29½x 19½x15%". 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

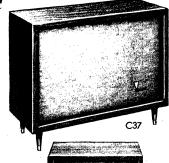
C38 ENCLOSURE ONLY. Space-saving, low-boy bass reflex enclosure. Smart styling and rich, hand-rubbed finish complement any room interior. Takes 8", 12" or 15" woofer. Compact size allows it to be used almost anywhere. 26" high, 23¾" wide, 15¾" deep. Shpg. wt., 47 lbs.
82 DZ 114. Mahogany. NET..... 63.00

82 DZ 168. Light Walnut. NET..... 69.00

D38002 COMPLETE SPEAKER SYSTEM. Includes Model D123 as 12" 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





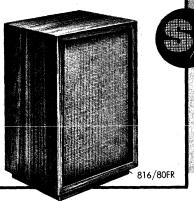




#### James B. Lansing Speaker System Kits for Custom Installation

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 com-ponents 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" system	D216 8" speaker, 075 tweeter. N2400 crossover network	12	111.60
82 DU 838	JL-2	2-way, 12" 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" system	130A 15" speaker, 175DLH high-frequency driver-horn lens assembly, N1200 crossover network	44	240.7
82 DZ 836	JL-5	3-way, 15" system	130A 15" speaker, 175DLH high-frequency driver-horn lens assembly, N1200 crossover network, 075 tweeter, N7000 crossover network	55	320.55
82 DX 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 at-tractively finished Model 816 bass reflex en-

closure with the high-compliance, internally air-damped 80FR 8" speaker installed. May be used in a corner or against any wall with-

vibration or rattling. The speaker employs

advanced-design, free-cone suspension for exceptionally clean reproduction. Response of system extends from 40-15,000 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: 24½x15¾x11¾". Shpg. wt., 49 lbs.

79 DU 381. Mahogany. ) NET 79 DU 382. Walnut. | EACH... 79.50

out impairment of tonal quality. Tastefully styled, the enclosure is constructed of genuine hardwood to eliminate

# SERIES 100 SPEAKER SYSTEMS

A-100/ 120CX B-100/ 150CX

A-100/120CX. Combination of Model 120CX A-100/120CX. Combination of Model 120CX coaxial 12" speaker (includes built-in 5KT "Toroid" tweeter) and highly efficient Model A-100 enclosure. Speaker is installed, wired and ready to use. Delivers clean response from 30-25,000 cps. Available in choice of mahogany or walnut. Size: HWD, 33\(\frac{1}{4}\)x17\(\frac{1}{4}\)". Shpg. wt., 110 lbs.

79 DZ 377. Mahogany. ) NET 79 DZ 378. Walnut. | EACH. .162.00

B-100/150CX. Superb 2-way 15" speaker system consisting of Model B-100 bass reflex enclosure and Model 150CX coaxial speakenclosure and model 190CA coaxia speak-er. Free-cone construction combines with built-in 5KT "Toroid" tweeter to deliver remarkably smooth response over the entire range from 20-25,000 cps. System comes completely wired, ready to play. Size: HWD, 33\/4x31\/4x173\/4". Shpg. wt., 120 lbs.

79 DZ 379. Mahogany. NET 79 DZ 380. Walnut. EACH. 219.00



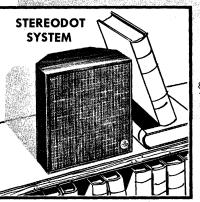
**LOW-BOY BASS-PLANE SYSTEM** 

1217/120FR. Optimum performance and at-1217/120fR. Optimum performance and attractive low-boy styling with this speaker system. Consists 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 quality hardwood, the enclosure assures superb reproduction, unmarred by cabinet reso-nance. Available in handsome mahogany or walnut to enhance the decor of any room. Handles 30 watts; 60 watt peaks. Imp., 16 ohms. Magnet weight, 9½ lbs. Size: HWD, 25½x29½x11¾". Shpg. wt., 72 lbs.

79 DZ 383. Mahogany. ) NET 79 DZ 384. Walnut. | EACH . 147.50 79 DZ 384. Walnut.

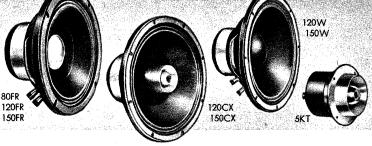


- Extremely Compact Speaker System • Place Anywhere—Shelf, Table, Etc.
- Blends Beautifully with Any Motif

Use your present hi-fi speaker system as the cos your present m-n speaker system as the foundation for a brilliantly-performing stereo speaker system with these ultra-compact "Stereodots." Consists of two special 8" speakers installed in each constant of the special structure. pact "Stereodots." Consists of two special 8" speakers installed in enclosures, complete with one filter network and mid-channel level control. Each enclosure is only 9" high x 9" wide x 6" deep—an ideal pair for limited-space applications.

Expertly designed to provide exciting listening, the "Stereodots" deliver amazingly realistic reproduction from 200 to 15,000 cycles; your present speaker system serves as middle channel and also handles bass. Rated 25 watts program material, 50 watts peak. Impedance, 16 ohms. Available in choice of mahogany or walnut to complement any decorative scheme. Sold only in pairs. Shpg. wt., per pair, 24 lbs.

79 DU 391, Mahogany, PER PR., 169,50 PER PR. 169.50 79 DU 392. Walnut.



**NEW STEPHENS TRUSONIC SPEAKER SYSTEMS** 

#### FREE-CONE FULL-RANGE SPEAKERS

80FR 8" HIGH-FIDELITY SPEAKER. High-compliance, internally air-damped 8" speaker. Delivers clean, full-range sound from 40-15,000 cps. Capacity: 25 watts; 50 watts peak. 2" diameter, edge-wound aluminum voice coil. Maxwells, 80,000. Impedance, 16 ohms. Shpg. wt., 61/2 lbs.

120FR 12" HIGH-FIDELITY SPEAKER. Similar to above, but handles 30 watts. Response, 30-15,000 cps. 130,000 maxwells. Voice coil dia., 2½". Shpg. wt., 15 lbs. 

150FR 15" HIGH-FIDEUTY SPEAKER. Similar to above, but handles 35 watts. Response. 20-14,000 cps. Maxwells, 180,000. Voice coil dia., 3". Shpg. wt., 25 lbs.

79 DU 385. NET.......87.00

#### FREE-CONE COAXIAL SPEAKERS

120CX 12" HIGH-FIDELITY SPEAKER. Excellent 12" coaxial speaker featuring free-cone suspension for remarkably clean response from 30 to 25,000 cycles. Consists of woofer and built-in 5KT "Toroid" tweeter—complete with brilliance control network for crystal-clear reproduction. Voice coil dia., 2½". Dispersion, 100°. Maxwells, 130,000. Power handling capacity, 30 watts. Shpg. 79 DU 389, NET...... 97.50

150CX 15" HI-FI SPEAKER. Superior perform-150CX 15" HI-FI SPEAKER. Superior performance over the entire audio spectrum from 20 to 25,000 cycles with this 15" coaxial speaker featuring free-cone suspension. Has built-in 5KT "Toroid" tweeter with brilliance control network. Voice coil dia., 3". Capacity, 35 watts. 100° dispersion. Maxwells. 180,000. Shpg. wt., 30 lbs.

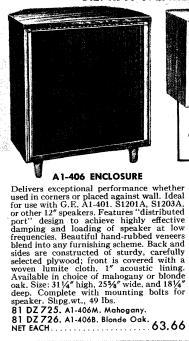
#### HIGH-FIDELITY WOOFERS AND TWEETER

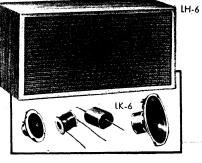
120 W 12" WOOFER. Free-cone woofer delivering smooth response from 30-5000 cps. Has 24-oz. magnet. Capacity: 30 watts program; 60 peak. 15 lbs. 

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

5KI "TOROID" TWEETER. Very efficient, low-distortion tweeter for crystal-clear treble response from 5000 to 25,000 cps. Ideal for use in 2 or 3-way speaker systems. Features built-in high-pass filter and adjustable brillians agenticated and the statement of the 

#### G.E. HI-FI SPEAKERS AND SPEAKER COMPONENTS





#### "STEREO CLASSIC" SPEAKER SYSTEM



79 DU 201. LH-6-B. Blonde Oak. LK-6 "STEREO CLASSIC" SPEAKER COMPON-

LK-6 "STEREO CLASSIC" STEARING 79 DX 202. NET.....

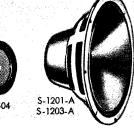


#### "STEREO CLASSIC" HI-FI CABINET

"STEREO CLASSIC" HI-FI CABINET
A beautifully designed equipment cabinet featuring top-quality construction and exceptional versatility. Has two compartments behind dual doors and two recordstorage compartments behind two sliding panel doors. Record-changer compartment is 14½x20x16"; tuner and amplifier compartment (complete with wood shelf for desired positioning) is 14½x17½x16" (14¾6" behind front panel supplied for custom mounting); each record-storage compartment is 6½x18¾x14½". With self-leveling, glide type legs with brass ferrules. 31x39¾x 17¾6". Wt., 70 lbs.
79 DZ 203. EQ-1. Mahogany.
79 DZ 204. EQ-2. Blonde Odk.

79 DZ 204, EQ-2. Blonde Oak. . 107.75 NET EACH....

A1-403 A1-404







MODEL A1-403 12" WOOFER. Efficient 12" 

MODEL A1-404. TWEETER. Compact tweeter with 100° dispersion. Matched for use with above or similar woofers in 2-way speaker systems. Response, 1500-15,000 cps. Capacity, 25 watts. Imp., 8 ohms. 4\(\frac{1}{2}\)\(x^2\)

MODEL A1-421 CROSSOVER NETWORK. (Not when used with any 8-ohm tweeter and 8-ohm woofer. (Not required with A1-403. above.) Impedance, 8 ohms. Capacity, 25 watts. 6x4x4". Shpg.wt., 3 lbs. 

MODEL S-1201-A 12" SPEAKER. This unusually 

MODEL S-1203-A SPEAKER. Same as Model S-1201-A described above, but has 9 oz. magnet. Shpg. wt., 6 lbs. 

MODEL 850-D SPEAKER. An unusually fine, low-cost 8" speaker for replacement use in radios and TV sets. Also ideal for limited-space hi-fi systems. Response, 50-12,000 cps. Aluminum-base voice coil. 6.8 oz. magnet. Capacity. 15 watts. Impedance, 8 ohms. Shpg. wt., 3 lbs.  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 advanced to the bar of the bar dition, the baffle plate has a highly attractive golden finish that provides a luxurious grille effect when custom mounted. 

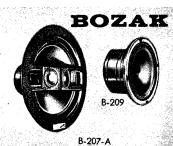
electrical crossover network into one easy-

to-install unit.

**Bozak High-Fidelity Speaker Components** 

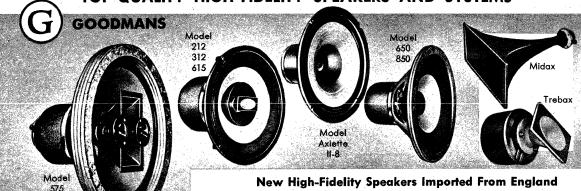
B-209 6" SPEAKER. Wt., 7 lbs. B-199A 12" SPEAKER. Wt., 8 lbs. N-10102 CROSSOVER NETWORK. HWD: 5½x8x6". Shpg. wt., 5 lbs. 81 D 952. NET. ...... 27.50 E-300 SPEAKER ENCLOSURE. HWD: 301/2x 24x17". Shpg. wt., 50 lbs.
81 DZ 094. Mahogany. ) NET
81 DZ 095. Birch. | FACH 75 00

( EACH .. 75.00 81 DZ 096. Walnut.



See Page 444 for Allied's Easy Payment Plan

## TOP-QUALITY HIGH-FIDELITY SPEAKERS AND SYSTEMS



#### TETRAXIOM 575 15" 4-WAY SPEAKER

NET \$22.79 Down

355

An outstanding 4-way speaker, custom-engin-eered to deliver superb reproduction. Has four electrically and acous-tically independent ele-ments built into a single

unit. Response, 20 cps to beyond audible range. Employs heavy woofer, horn-loaded Midax mid-range unit and 2 Trebax high-frequency horns. Includes dual crossover rrequency norms. 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" for woofer, 1½" for Midax, 1" for 

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. XO-950/5000. Crossovers at 950 and 5000 cps. Wt.,  $7\frac{1}{2}$  lbs.

#### TRIAXIOM 3-WAY HI-FI SPEAKERS

Expertly designed 12" and 15" 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-fre-quency Trebax horn for wide-angle disperquency frebax norm 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"; for Trebax horn, 1". Resonance: 35 cps for 12" speakers; 25 cps for 15" [Impedance 16 chms. for 15". Impedance, 16 ohms.

MODEL 212 12" SPEAKER. Capacity, 25 watts. Total flux, 178,000 maxwells. Magnet wt., 134 lbs. Depth, 7'. Wt., 20 lbs. 79 DX 160. Only \$6.81 Down. NET. 68.II

MODEL 31 2 12" SPEAKER. Capacity, 35 watts. Total flux, 240,000 maxwells. Magnet wt., 3½ lbs. Depth, 8¾". Wt., 31 lbs. 79 DU 161. Only \$9.07 Down. NET 90.65

MODEL 615 15" SPEAKER. Capacity, 50 watts. Total flux, 308,000 maxwells. Magnet wt., 6 lbs. Depth, 10". Wt., 46 lbs. 79 DU 162. \$14.41 Down. NET. 144.06

#### AXIETTE II-8 8" HI-FI SPEAKER

Highly efficient, wide-range 8" speaker at moderate cost. Delivers clean, remarkably smooth response over the entire audio spec-trum from 30 to 18,000 cps. Features hypertrum from 30 to 18,000 cps. reatures hyperbolic free edge cone suspension and heavyduty, die-cast frame construction for optimum performance. Capacity, 15 watts. Resonance, 55 to 65 cps. Requires 7" baffle hole diameter. Depth, 4". Impedance, 16 ohms. Shpg. wt., 5 lbs.

79 D 163. Only \$2.65 Down. NET. 26.46

#### AUDIOM 12" AND 15" SPEAKERS

An excellent selection of peak-performing hi-fi speakers. Each unit

features custom craftsmanship and rigid, die-cast frame construction—your assurance of remarkably clean, flawless reproduction.

> Advanced-design 12" and 15" woofers delivrange 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 650 12" SPEAKER. Voice coil diameter, 3". 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". Total flux, 240,000 maxwells. Power capacity, 40 watts. Resonance, 25 cps. Shpg. wt., 27 lbs.
> 79 DU 165. Only \$7.64 Down. NET 76.44

#### TREBAX 50 HI-FI TWEETER

Economically priced, high-frequency pres-Economically priced, nigh-frequency pressure driver with built-in elliptical born 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" aluminum voice coil and diabeter in a colf districtions constitution. phragm in a self-aligning assembly with an air chamber and phase equalizer. Impedance, 16 ohms. Depth, 4". 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 3driver and norn. Handles S0 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, 12½". 13 lbs.

79 DX 167. Only \$4.75 Down. NET 47.53

#### Acoustic Research High-Fidelity Speaker Systems **AR-2 SPEAKER SYSTEM** AR-1 SPEAKER SYSTEM

Model AR-2

• Advanced Acoustic Design

 Provides Ultra-Clean Bass Space-Sparing Construction

Beautiful Furniture Finish

Low-cost woofer-tweeter NET system for medium-priced hi-fi systems. Mounted in a sealed, fiberglas-filled cabinet of braced 347 hardwood veneer. Employs the sealed-in air of **\$96**00 \$9.60 Down

cabinet as a pneumatic spring for the speakcabinet as a pneumatic spring for the speak-er cone during large excusions on very low bass notes. Requires 10 clean walts. Features 10° woofer and tweeter assembly composed of two 5" tweeters. Does not require a separ-ate tweeter. Response (at 10 walts): ±5 db, 42-14,000 cps, down 10 db at 30 and 16,000 cps. Dispersion: 90° 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—13½x24x11". Shpg. wt., 35 lbs.
82 DU 038. Mahogany. Net ..... 96.00 82 DU 039. Blonde Birch. NET.... 96.00 Radically different system featuring air-damped, 12" woofer, plus 8" mid-range and high-frequency unit and crossover network. Employs the same specially developed acous-Employs the same specially developed acoustic suspension and pneumatic damping operation as the Model AR-2 described at left—does not use conventional elastic suspension. Frequency Response: ±1½ db, 38 to 1000 cps; ±5 db, 30 to 13,000 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 25x113/8". Shpg. wt., 55 lbs.

82 DZ 033, Mahogany, NET..... 185,00 82 DZ 034. Blonde Birch. NET..... 1 85.00 

82 DZ 043. Mahogany. NET......145.00 82 DZ 044. Blonde Birch. NET..... 145.00 82 DZ 254. Walnut. NET.......154.00



#### RC88-4 "TRIUMPH" CHANGER

NET

\$5341 \$5.34 Down

Deluxe British-made changer combining latest design refinements with traditionally precise Garrard craftsmanship. Wired for stereo and monaural. Plays 16½, 33½, 45 and Automatic operation is

rpm records. quick and gentle; smooth-acting slide switch converts changer to manual operation in-stantly. Weighted turntable is covered by protective rubber pad; idler-wheel drive disengages when changer is off. Heavy-duty engages when changer is off. Heavy-duty 4-pole motor and oversize traction wheel for silent, hum-free operation. Minimum mtg. space: 15½" W. 13½" D, 3½" below and 5½" above mounting board. With 2 plug-in heads, automatic spindle. spindle for manual play, 45-rpm manual spindle adapter, line cord and plug, output cable and phono plug. Less cartridges and 45-rpm automatic spindle. For 100-130 v., or 200-250 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-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 walnut wood-grained finish. 4 lbs. BASE FOR RC88-4, RC98-4. 31/4x153/4x131/4". 89 RX 600C. Specify Finish. EACH. 4.85 BASE FOR RC121/II, 33/4x141/8x123/4 89 RX 601C. Specify Finish. EACH. 4.51 BASE FOR 4HF. 41/2x171/2x143/4". 89 RX 603C. Specify Finish. EACH. 4.95 BASE FOR 301. 63/8x21x163/4". 89 RX 604C. Specify Finish. EACH. 21.75 BASE FOR T Mk II. 33/4x143/4x123/4". 89 RX 602C. Specify Finish. EACH... 4.51 WOOD MOUNTING BOARDS. Unfinished mounting boards drilled and cut for mount-

ing Garrard units. Shpg. wt., 11/2 lbs.					
Stock No.	For	EACH			
95 RX 666 94 RX 496 96 RX 913 94 RX 956 89 RX 605	RC88-4,RC98-4 RC121/II 301 T Mk II 4HF	1.50 1.50 4.95 1.50 1.50			

45-RPM AUTOMATIC SPINDLES. For automatic changing of 45-rpm records with large center holes. Shpg. wt., 10 oz. 95 R 664. For RC88-4. NET 94 R 594. For RC121/II.... ..each 3.72 EXTRA PLUG-IN HEAD. Wired for stereo. Less cartridge. Shpg. wt., 6 oz.

89 R 550. For Garrard RC88-4, RC98-4 and 89 R 551. For RC121/II, 4HF. NET.... 1.47

#### RC121/II "RENOWN" CHANGER

**NET** 

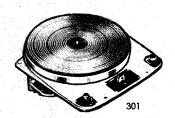
\$4|65

Latest version of Gar-rard's highly popular economy model, which has many of the RC88-4's fine features; excellent for

station purposes. Completely wired for both stereo and monaural reproduction. Full manual operation, plus positive automatic intermix of 12", 10" and 7" records of the same speed. Action of changing mechanism is smooth and easy; records slip outor tubber-matted turnable silently. 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: 14½" W, 13" D; requires 4¾" above and 3½" below mounting board. Supabove and 3% below monthing orati. Supplied with plug-in head, line cord and plug, and output cable with phono plug. Less cartridges and 45-rpm automatic spindle. For operation from 100-130 volts, or 200-250 volts, 60 cycle AC. 14 lbs.

RC121/II/GC-7. Same as changer described above, but with G.E. Type GC-7 magnetic stereo cartridge installed. Cartridge has a 



#### 301 "PROFESSIONAL" TURNTABLE

NET \$**87**22

\$8.72 Down

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.

The finest product of Gar-

rard craftsmanship, this

An integral lubrication system forces addian integral monitation system forces adultional lubricant, under pressure, into mechanism at the flick of a knob. A resistor-capacitor network prevents shutoff noise from being transmitted through the sysfrom being transmitted through the system and amplified; a shutoff brake prevents "free-wheeling" of turntable after it is switched off. Dynamically-balanced, precision-machined turntable of cast aluminum is entirely non-magnetic. Less than 0.2% wow; flutter is less than 0.5%. Vibration-proof mounting on special springs.

Size, 16x13¾"; requires 2½" above, 3½" below mounting board. For operation from 100-130 or 200-250 v., 60 cycle AC. Shpg. wt., 20 lbs. 96 RZ 912. \$8.72 Down. NET.....87.22

**NET** \$5831 \$5.83 Down

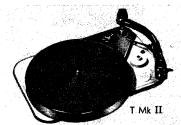
A deluxe manual record player with 12" turntable and transcription tone arm mounted on a single unit plate. Factory-wired to reproduce both stereo and monaural discs. Plays

16½3, 33½, 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 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".

Handsomely finished in black, white and Handsomety finished in black, white and chrome to blend with any custom installation. Min. mounting space: 17¼" W, 13¼" D, 3½" above and 3¾" below mtg. board. Less cartridge. For 110-130 or 200-250 volts, 60 cycle AC. Shpg. 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

player now including these player now including these plays 16½, 33½, 45 and 78 rpm recordings; completely wired for both stereo and monaural reproduction; heavy, rubber-padded steel turntable; accurate-tracking pickup arm; safety arm rest and lock for maximum ease of nortability

A famous Garrard manual

of portability.

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: 14½" D, 3" above and 2½" below mounting board. Less cartridge. With 2 plug-in heads (1, when purchased with cartridge installed). For 100-130 or 200-250 v., 60 cycle AC. Shore, wt. 14 lbs. 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.



#### "Imperial" Series 1931 4-Speed Diskchangers

AS LOW AS Latest version of the world-famous "Imperial" Diskchangernow completely wired for both stereo and monaural reproduc-

now completely wired for both stereo and monaural reproduction. Feature precision workmanship, four playing speeds, and ultra-convenient operation. "Magic Mind" allows intermix of 33½ and 45-rpm records in 7°. 10° and 12″ sizes—it \$4.41 Down changes records and selects 33½ or 45-rpm speed automatically. Also intermixes 10° and 12″ 78-rpm records automatically. Other features include: stereo-monaural switch; automatic motor shut-off after last record; powerful 4-pole motor; top-of-arm stylus pressure adjustment; illuminated speed selector; 9½″ rubber-matted turntable; manual tone arm handle. Attractive golden beige and brown finish. Mounting space: 14½% wide, 13½″ deep; 5½″ above. 4″ below board. With two 36° phono cables, AC cord and plug. Less base, below. For 110-120 volts, 60 cycle AC. 11½ lbs.

Rec. 7 memories research stylus productions and the production of the production of

TRI931-27. 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.....

#### "IMPERIAL" DELUXE FEATURES



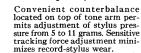
#### Stereo-Monaural Switch

Exceptionally valuable convenience feature. Simply flick a switch for full-range and best fidelity when playing monaural records through your stereo or monaural hi-fi system.

#### Illuminated Speed Selector



#### Weight Adjustment



#### Versatile Tone Arm

Incorporates quality features found in professional-type tone arms. Includes: easy-grip han-dle; lightweight construction; and attractive styling. The tone arm handle permits you to carefully set arm on record when using the "Imperial" for manual play operation—prolongs rec-ord life and needle service.

## "Custom" 1941 and 1942 Series 4-Speed Diskchangers

"Custom" Series on Metal Base

Stereo-Monaural Switch for Peak Performance

AS LOW AS

Economy version of the "Imperial" series above. "Magic Mind" feature provides fully automatic intermix of 33½ and 45-rpm records of all sizes.

Saforial Uses exclusive Webcor precision-built motor to assure smooth, constant turntable speed. Additional features include: stereo-monaural switch; adjustable stylus pressure: automatic shut-off after last record; 8" rubber-matted, dynamically balanced turntable. Four speeds played are 33½, 45 and 78 rpm—plus 16½ 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, 9x14¾x deep; re-

tor. All units have handsome golden beige and brown finish. Size, with base, 9x14\frac{1}{3}\frac{1}{2}\frac{1

T\$1942-21. As above, but has 4-pole motor and includes G.E. CL-7 magnetic stereo cartridge. Has .0007" sapphire needle for stereo and monaural LP's. Shpg. wt., 15 lbs. 50.35 89 RX 517. Only \$5.04 Down. NET.....

TR1941-1, Same as Model TS1942-1, above, less base. Shpg. wt., 101/2 lbs. 

TR1941-21. Same as Model TS1942-21, above, less base. Shpg. wt., 101/2 lbs.

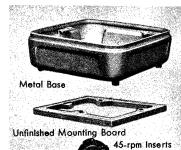
#### WEBCOR DISKCHANGER ACCESSORIES

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 

PRE-CUT MOUNTING BOARD. Pre-cut, heavy plywood mounting board for Webcor "Imperial" and "Custom" series record changAUTOMATIC 45-RPM SPINDLE. Automatically changes 45-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-rpm changing action. Wt., 8 oz. 

45-RPM SPIDER INSERTS. Lightweight metal inserts, easily snapped into place in large center-hole of 45-rpm records. Small centerhole in adapter permits use of 45 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.

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. 78c





45-rpm Spindle

Plug-In Shell



#### "CORONATION" TSC-740 CHANGER

Quality 4-speed changer, wired for stereo or Quality 4-speed changer, wheel for stereo or monaural use. For automatic record chang-ing, stack 7", 10", and 12" records in order of decreasing size—"Sensi-magic" feature determines record size before setting record down. Features: two-piece transcription-type arm; 4-pole motor; choice of 16½, 33½, 45 and 78 rpm speeds; automatic shut-off type arm; 4-pole motor; choice of 16½, 33½, 45 and 78 rpm speeds; automatic shut-off after last record; heavy, rim-weighted turntable; "muting switch" and "pop-filter". 2-tone finish. 12x13½"; requires 5" above, 2½" below mounting board. Less cartridge; less base. For 110-120 volts, 60 cycle AC. Shog wt 15 lbs. Shpg. wt., 15 lbs.
89 RX 521. Only \$4.17 Down. NET. 41.65

TSC-740-GC-7. As above, with G.E. GC-7 stereo cartridge(diamond LP needle). 89 RX 522. Only \$6.51 Down. NET. 65.12

#### **COLLARO ACCESSORIES**

BASES. 153/4x131/4x4". Av. wt., 3 lbs. Specify mahogany, limed oak or walnut finish.

89 RX 607C. For Changers. 89 RX 608C. For TP-59. 89 RX 609C. For 4TR200

UNFINISHED MOUNTING BOARDS.  $15\frac{3}{4}x$   $13\frac{1}{4}x\frac{1}{2}$ ". Shpg. wt.,  $1\frac{1}{2}$  lbs.

91 RX 556. For Changers. NET 89 RX 610. For TP-59. 

45-RPM SPINDLE. For changers, 1½ lbs. 93 R 483. NET..... EXTRA PLUG-IN HEAD. For TSC-740, TSC-840, TP-59. 6 oz. 

#### "CONTINENTAL" TSC-840 CHANGER

Deluxe 4-speed record changer for stereo Deluxe 4-speed record changer for stereo or monaural reproduction. Features rapid loading of 7", 10", and 12" records—and permits them to be intermixed! Has newly designed two-piece transcription-type arm free of audio spectrum resonances. Other features include: Less than 0.25% flutter; micro-finished motor shaft; 4 speeds—78; 45, 331/4, and 16<sup>3</sup>/<sub>4</sub> rpm; rim-weighted, balanced fly-wheel action; extra heavy-duty hands shaded role motor manual switty 4-pole, shaded-pole motor; manual switch for turntable operation; "muting switch"; "pop filter", automatic shut-off; removabe rubber mat; automatic sint-on; remova-ble rubber mat; automatic idler disengage-ment. Attractive two-tone finish. Size, 12" wide by 13½" deep. Requires 5" above, 2½" 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 (Not Illus.) Economy-priced 4-speed record changer wired for stereo or monaural use. Similar to TSC-740, but has one-piece transcription-type tone arm. Will accept all standard hi-fi cartridges. Two-tone finish 12x13½"; requires 5" above, 2½" below mtg. board. Less cartridge and base. For 110-120 v., 60 cycle AC. Shpg. wt., 151bs.

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

# **New Turntables**

MODEL TP-59 TURNTABLE WITH ARM Low-cost, 4-speed manual player for stereor monaural use. Plays 16½, 33½, 45 and 78-rpm records. Features include: heavy, 12" rubber-covered turntable; 4-pole dynamically balanced motor; transcription-type tone arm with plug-in shell; automatic start and stop mechanism. Accepts all standard stereo and monaural hi-fi cartridges. Size: 13½x12", 3" above, 3½" 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

89 RX 525. Only \$2.89 Down. NET 28.91

#### **MODEL 4TR200 TURNTABLE**

Moderately priced, professional-quality 12" turntable. Features a non-magnetic, rubber-matted turntable weighing 8½ lbs. Precision machined and engineered for extremely low levels of wow and flutter. Plays all four speeds—16½, 33½, 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 during speed change. Attractive black panel.

Size, 12½x12½"; 3" above, 3½" below mtg. board. For 110-120 v., 60 cycle AC. Shpg. wt., 12 lbs.

89 RX 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 mon-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. 8½x13½x 12½%. With base and AC cord. For 110-120 v., 60 cycle AC. Shpg. wt., 14¼ lbs. 89 RX 528. Only \$4.48 Down. NET 44. 80

MODEL 1201. As above, but less base. 85/16X 133/4X123/8". Shpg. wt., 101/4 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	. 2.31
FIBER SPIDERS. Shpg. wt., 3 oz. 96 R 244. NET PER PKG. OF 12	25c
MOUNTING BOARD. 151/8x151/8". 3 lbs 95 RX 511. NET	
METAL BASE. Shpg. wt., 3 lbs. 95 RX 510. NET	.4.15
EXTRA PLUG-IN-HEAD. Wt., 6 oz.	55c

#### **MODEL 1202 RECORD CHANGER**

Basic 4-speed hi-fi record changer for magnetic pickup. Completely wired for stereo or monaural use. Features include a con-venient stereo-monaural switch. Engineered for low levels of wow and flutter.

Plays 331/3, 45 and 78 rpm records automat-Plays 33½, 45 and 78 rpm records automatically. Also includes 16½ rpm "talking book" speed. Individual records of any speed may also be played manually. Capacity: 12—10", 10—12" or 14—7" records. Has convenient, positive intermix feature of 10—12" and 10" records of the same speed. Exclusive Tri-O-Matic spindle gently lowers records to record shelf. Automatic shutoff: pickup arm comes to rest and 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. Constant-speed 4-pole motor provides quiet operation. Rubber turntable mat prevents record slippage. Styled in black and white with gold trim. 8\%\simes\13\%\x12\%". With one plugin shell. Less base, cartridge and AC cord. For 110-120 v., 60 cycle AC. 10\%\text{1bs}.

89 RX 529. Only \$4.00 Down. NET 40.00

MODEL 1228. As above, with base. Size, 8\frac{83}{4}\times13\frac{3}{4}\times12\frac{3}{4}''. Wt., 14\frac{14}{4} lbs.
89 RX 530. Only \$4.48 Down. NET. 44.80





#### **NEW STEREOPHONIC CARTRIDGES**

#### PLAY BOTH STEREO AND MONAURAL RECORDS

- Smooth, Precise Tracking
- Minimum Record Wear
- Wide Audio Response Range

Already famous for quality in the field of high fidelity. General Electric now introduces three outstanding new magnetic stereophonic cartridges. Manufactured to the highest standards. Feature extremely high compliance, wide response, low distortion and effective channel separation.

Excellent compliance assures optimum sterexcellent compliance assures optimum ster-eo pickup—stylus tip tracks with amazing precision. Effective stylus mass is only 2 milligrams for greatly reduced record and stylus wear. 20 db channel separation guar-antees clean, well-defined reproduction.

antees clean, well-denined reproduction. Feature: low IM and harmonic distortion, an easily replaceable stylus and a double mu-metal shield to prevent hum pickup. Output is 6 mv (nominal) per channel at 5.5 cm/sec. Can be used with both 3 and 4-wire systems. Mtg. ctrs.: ½" and ½6".

GC-7 "GOLDEN CLASSIC." Has 0.0007" diamond ctribus 20 to 1.7 000 green property of the control of

79 RC 701, NET......16.61

#### REPLACEMENT STYLI FOR ABOVE

S-Sapphire; D-diamond. Av. wt., 2 oz. Stock No. Type For 79 RC 702 ST7D GC-7, CL-7 79 RC 703 ST7S CL-7 79 RC 706 ST5D GC-5 Tlp NET D-.0007" S-.0007" D-.0005" 9.75 2.45 11.71

#### SERIES VR II HI-FI **MAGNETIC CARTRIDGES**

Here's the popular VR II group of monaural variable-reluctance cartridges, world-famous for brilliant audio reproduction. Feature full-range response, high compliance, low-tracking force and replaceable. "Clip-In-Tip" styli. Employ rugged, lightweight contractions to the state of the state struction to withstand a lifetime of constant usage. Compact design for easy installation in any pickup arm.

High compliance assures excellent tracking High compliance assures excellent tracking with reduced record and stylus wear. Tracking force is only 4-6 grams in a professional-type arm (6-8 grams in a changer using a triple-play cartridge). Frequency response is smooth over the entire range of 20 to 20,000 cps. Cartridges are fully shielded in mu-metal and incorporate specially wound coils to suppress hum and noise pickup.

Output (nominal) is 22 my at 10 cm/sec (1000 cps). Clip-in styli are easily and independently replaceable. Mounting centers: ½" and ½". In tables below, "S"—sapphire; -diamond. Av. shpg. wt., 3 oz.

#### TRIPLE-PLAY TYPES

Stock No.	Type )	Stylus Tips	NET
72 RC 851 72 RC 852 72 RC 853	4G-052	S001" S003" D001" S003" D001" D003"	19.55

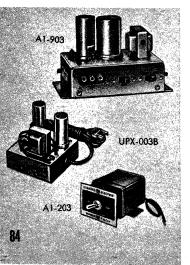
#### SINGLE STYLUS TYPES

Stock No.	Type	Stylus Tip	NET
72 RC 854 72 RC 855 72 RC 856 72 RC 857	4G-040 4G-041 4G-063 4G-061	S003" S001" D003" D001"	7.35 7.35 17.59

#### REPLACEMENT STYLI FOR VR II SERIES

Stock	No.	Type	Stylus	Radius	NET
72 R 72 R 72 R	859	4G-01S 4G-02S 4G-03S	Sapphire Sapphire Sapphire	.0025"	1.96
72 RC	862	4G-01D 4G-02D 4G-03D		.0025"	9.75 9.75 9.75

#### PREAMPLIFIERS AND RUMBLE FILTER



A1-203 "TRANSISTUBE" PREAMP. Allows using mike or any magnetic cartridge with amplifiers not having necessary inputs. Extremely hers not having necessary inputs. Extremely low hum, noise and microphonic levels. Uses 12AX7 and NPN transistor. RIAA cartridge equalization. Includes gain control. Has 3 input impedances, 2 sensitivity positions. 10 my sensitivity for 1 v. output. 3½x33½x6". With 2-ft. cable. For 110-120 v., 50-60 cycle AC. Shpg. wt., 3½ lbs. 81 S 857. NET. 21.51

UPX-003B PREAMP. Permits use of mike or 

A1-903 RUMBLE FILTER. Effectively filters out turntable rumble and vibration, and sub-audio surges that might damage speaker. 

#### NEW TM-2G 12" PICKUP ARM

Professional-quality pickup arm for optimum performance with stereophonic recordings. Expert engineering also makes it ideal for critical monaural use. Accommodates all G.E. stereo and VR II cartridges.

Outstanding feature of the TM-2G is its su-Outstanding feature of the 1 M-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 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.

#### G. E. MODERNIZATION ASSEMBLIES & STYLI FOR RPX SERIES

#### REPLACEMENT "CLIP-IN-TIP" STYLI

For stylus replacement in single or triple-play RPX "Clip-In-Tip" cartridges. 2 oz. Stock No. | Mfr's Type | Stylus | Radius Radius 65RC 992 65RC 993 65RC 994 RPJ-01D RPJ-02D .001 Diamond 0025**\*** 003\* Diamond RPJ-03D Diamond 9.75 NET FACH 65 R 995 65 R 996 65 R 997 RPJ-01S RPJ-02S Sapphire .001 Sapphire Sapphire RPJ-03S .003 

#### 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; be replaced when worn, "S"—S "D"—Diamond, Shpg. wt., 2 oz. Chulus Ties Twa

SIOUR NO.	i ype	Stylus lips	HEI
65R 988	RPJ-010A	S001" S003"	3.50
65 RC 991		D001" D003"	19.55
65 RC 989		D001" S003"	11.71
65R 987		S001" S0025"	
65 RC 990	RPJ-011A	D001" D0025"	19.55

#### SINGLE-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

65 R 281 65 R 261	RPJ-005 RPJ-006	Sapphire Sapphire	.001"
65 R 295	RPJ-001	Sapphire	.003"
NET EACH			2.06
99RC 815 99RC 817 99RC 816	RPJ-004 RPJ-002 RPJ-003	Diamond Diamond Diamond	.001" .0025" .003"
NET FACH			10.29

RKP-009B REPLACEMENT PARTS KIT. For triple-play cartridges. Includes washers, spring and knobs. Shpg. wt., 4 oz. 72 R 744. NET.....

#### **REK-O-KUT TURNTABLES AND ACCESSORIES**







REK-O-KUT

#### "RONDINE JR." MODEL L-34

NET **\$59**95

Dual-speed, low-priced 331/3 and 45-rpm 12" turntable designed to professional specifications. Ideal for high-ficelity installations as well as commercial radio station \$6.00 Down

\$6.00 Down as commercial radio station use. Noise level 40 db below 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, 15x12". Requires 13%" clearance above and 5" below motor panel. For 110-120 volts, 60 cycle AC. Shpg, wt., 15 lbs.

#### "RONDINE JR." MODEL L-37

Employs same quality engineering as Model 

#### **NEW "RONDINE" K33 TURNTABLE KIT**

- 30-Minute Assembly
- Rek-O-Kut Quality
- Amazing Value

UNFINISHED BASE FOR K33. Pre-cut. Size, 6x161/2x17". Shpg. wt., 5 lbs. 89 RX 614. NET......15.90

#### "RONDINE DELUXE" MODEL B-12H

NET

Precision-engineered,

\*\*NET \*\*PONDINE\*\*\* \*\*NORE\*\*\*

\*\*Ponding\*\*

\*\*Ponding\*\*

\*\*Ponding\*\*

\*\*Ponding\*\*

\*\*Ponding\*\*

\*\*Precision-engineered, professional-quality three-speed 12" turntable. Employs superior craftsmanship through out—all critical parts are case-hardened and ground to a micro-finish. Single knob selects from speeds of 33½, 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 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 45-rpm hub adapter that retracts when not in use. Size, 17½x16". Requires 3" clearance above and 6½" below motor panel. For operation from 110-120 volts, 60 cycle AC. Shpg. wt., 19 lbs.

\*\*Ponding\*\*

\*\*Precision-engineered, professional-quality three-speed 12" turntable. Employs superior craftsmanship through cast-aluminut parts are case-hardened and parts are case-hardened and

## NEW "RONDINE" MODEL B-12GH

#### 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-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. With one head. Shpg. wt., 2 lbs.
72 RX 750. S-120. 12" arm. NET.. 27.95
72 RX 751. S-160. 16" arm. NET... 30.95

STEREO CONVERSION KITS. Quickly and easily convert your Rek-O-Kut monaural arm for use with stereo cartridge. Tools included. Shog. 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 ½" 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" arms, except \*16". Av. shpg. wt., 13 lbs.

Stock No.			HWD	NET
95 RX 716				23.90
95 RX 717				28.95
95 RX 634			4½x16%x17"	
95 RX 635				28.95
89 RX 612		N33H	6x16%x17"	19.95
89 RX 613				28.95
94 RU 925			6x17½x21"	32.95
94 RU 926	Blonde	*B-12GH		35.95

#### **WELLCOR BASES FOR REK-O-KUT TURNTABLES**

Expertly designed turntable bases for use with either a 12" or 16" pickup arm. Made of selected ¾" hardwoods and fine furniture veneers, hand-rubbed to a lustrous finish. Motor board "floats" on sponge rubber. Mitered joints provide extra rigidity. Felt-covered feet prevent marring of furniture; are adjustable to permit leveling.

Size (HWD). 63/8x21x163/4". Completely 

#### **NEW "RONDINE" MODEL N33H**

NET

\$6995 \$7.00 Down

Quality 331/3-rpm 12" turn-table precision-built to Rek-O-Kut standards. Designed to provide outstanding performance in any music sys-tem. Motor is a self-lubricating hysteresis-synchro-nous unit of modern design—has a special winding to reduce coasting of turntable.

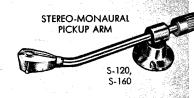
Table is driven by specially woven fabric belt to minimize vibration—belt thickness is carefully controlled to micro-tolerances. Belt tension is adjustable for least noise. Turntable is of solid, lathe-turned cast aluminum—tapered for easy handling of records. Noise level is 53 db below average recording 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 15½x15°. Turntable requires a clearance of 5° below the motor panel and a clearance of 2° above. For operation from 110-120 volts, 60 cycle AC. Shpg. wt., 15 lbs.

89 RX 535. NET.... .....69.95

> **REK-O-KUT TURNTABLE** NOW AVAILABLE IN KIT FORM!







Stereo Conversion Kit For Monaural Arms

CONTRACTOR STATE



# PICKERING

#### HIGH-FIDELITY COMPONENTS





Model 370-1D "Fluxvalve" Monaural Cartridge



#### NEW MODEL 371 STEREO CARTRIDGE

- For Stereo & Monaural Discs
- Standard 1/2" Mtg. Centers
- Precise Miniature Design

Traditional Pickering quality and excellence of design is embodied in the new Model 371 of design is emodified in the new Model of insterior stereo cartridge. Fully compatible, the 371 offers outstanding performance on all stereo records, as well as on conventional microgroove (LP) recordings. Miniature in size, it will fit all record changers, manual players and transcription turntables employing pickup arms with standard 1/2" mtg. centers. Has two balanced signal outputs for connec-Has two balanced signal outputs for connection to the low magnetic input of a stereo preamplifier (may be connected in parallel for use with a conventional single-channel preamplifier). Output level is adequate for all preamps and there is no need to employ a transformer or other "gain" stage device. Exclusive magnetic-discriminator provides excellent inter-channel isolation with negligible crosstalk gible crosstalk.

Frequency response is flat within 2 db over the entire stereo recording range, with comthe 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 00007 diamond stylus installed in "T-Guard" stylus assembly. Shop wt 2 og 2. stalled in "T-Shpg. wt., 2 oz.

371 CARTRIDGE IN PLUG-IN HEAD. For Garrard RC88-4, 98-4 changers and TM-II players. Shpg. wt., 5 oz. 64 RC 899. NET.....

#### MODEL 370-1D MONAURAL CARTRIDGE

For playing all microgroove, monaural records. Originally developed for professional applications, the Model 370-1D is a superior magnetic cartridge with extremely wide response. Fits all hi-fi changers and all light-weight pickup arms. Its exceptional compli-ance 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 assembly—a quick-change, easy-to-slip-in unit which 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" diamond stylus—will accommodate any of the styli listed in the table below. Frequency response from 10 to 30,000 cos. Outnut is response from 10 to 30,000 cps. Output is 25 millivolts; tracking pressure from 2 to 6 grams, depending upon arm used and type of recording. Shpg. wt., 3 oz.

# 

FOR "FLUXVALVE" 371, 370, 350 AND 194 CARTRIDGES. Ingeniously mounted styli, on specially formed plastic inserts. Easily and quickly changed without tools or disassembly; styli reseat perfectly for continued high performance. Shpg. wt., 2 oz.

REPLACEMENT STYLI

Stock No.	Type	Tip	NET
99 RC 849	D3510	.001" Diamond	18.00
99 RC 896	D3527	.0027" Diamond	
99 RC 897	S3527	.0027" Sapphire	
99 RC 799	D3505	.0005" Diamond	24.00
94 RC 734	D3707C	.0007" Diamond	18.00

#### **NEW 800 "GYROPOISE" TURNTABLE**

Unique new turntable, developed specifically for stereo and monaural microgroove records. Features one speed—33½ rpm. Completely eliminates vertical rumble revolves in magnetic suspension, with precise accuracy, on a bearing of air. No mechanical linkage whatsoever; no vertical bearing! Flutter and wow are virtually elimibearing Flutter and wow are virtually eliminated through use of unique, super-cushion idler. Noise: better than 65 db below reference level. Speed Accuracy: ±0.2% total speed variation. Employs a built-in precision leveling adjustment with indicator. Foam rubber turntable mat; takes records to 12" in circ. Evilonment process. in size. Fully synchronous motor. Panel size, 13½x13½"; 1½" above panel, 3" below panel. Complete "300" chassis includes 3-lb. turntable and turntable mechanism. Less base, arm and cartridge. For 110-120 v., 60 cycle AC. Shpg. wt., 13½ lbs.

89 RX 532. NET..... WOOD BASES FOR "800" TURNTABLE. HWD: 5\%x14\%x14\%". Specify mahogany, blonde or walnut finish. Wt., 5\% lbs. 

NEW MODEL 196 UNIPOISE ARM WITH STEREO "FLUXVALVE" CARTRIDGE. Employs a 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 15½x15½. Length of arm, 11½%. Single thumbscrew and bolt installation. Convenient stylus 

#### **FAIRCHILD HIGH-FIDELITY COMPONENTS**

#### **SERIES 412 TURNTABLES**

MODEL 412-1 33/3-RPM TURNTABLE. Offers superlative specifications. Uses time-proven double-belt drive and self-lubricating hys-

NEW MODEL 412-2—331/3 & 45-RPM TURN-TABLE. Not illustrated—similar to above. Employs double-belt drive and self-lubri-cating. hysteresis-synchronous motor. Has cating, hysteresis synchronous motor. Has built-in 45-rpm spindle adapter—pulls up for 45-rpm records, pushes down when not in use. Single knob selects either of two speeds, 33½ or 45 rpm. Speed regulation is maintained within ±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 cycle AC. Shpg. wt., 30 lbs.

91 RIJ 569 NFT

HARDWOOD BASES FOR FAIRCHILD TURN-TABLES. Shock-mounted; vibration-free. 71/2 x211/4x141/2". Specify mahogany, blonde or walnut finish. Shpg. wt., 15 lbs. 

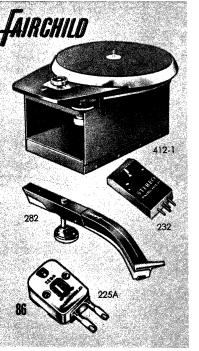
**NEW MODEL 232 STEREO CARTRIDGE** 

Deluxe new, rotating coil stereo cartridge. Offers flawless reproduction from stereo records and conventional microgroove (LP) records. Has single, 0006" diamond stylus. High compliance for excellent tracking accuracy. Low-impedance output assures minimum hum pickup. Excellent inter-channel separation. Output, 5 millivolts per channel. ½" or ½" mounting centers. 4 oz. 79 RC 211. NET. 49.50

NEW MODEL 282 STEREO PICKUP ARM NEW MODEL 282 STEREO PICKUP ARM Designed especially for the 232 stereo cartridge above; also accepts other standard size stereo or monaural cartridges. Takes records to 12°. Features convenient, plug-in slide carrier to which cartridge can be attached 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 NFT

42 50 

MODEL 225A "MICRADJUST" CARTRIDGE. Pro-MODEL 225.4 "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 1½x¾x½r²/6" in size. Response: ±2 db. 20-20,000 cps. Output, 5 millivolts. Impedance, 200 ohms. With .001" diamond stylus. Show wt 4 ox diamond stylus. Shpg. wt., 4 oz. 65 RC 007. NET..... .....3**7.5**0



# THORENS



CD-43 Wired for Stereo

**NEW MODEL CD-43 CHANGER** 

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 Pause-Timer. Base size: 12x15". Requires 3½" below mtg. board; 6" above. With mtg. template, 2 phono cables, 2 plug-in heads. Less cartridge, base. AC-line cord and 45-rpm spindle. No adapter needed for 50 cycle operation. For 100-120 v. and 200-250 v., 50-60 cycle AC. Shpg. wt., 25 lbs.

78.35

NEW MODEL CB-33N MANUAL PLAYER. Not

illus. Low-cost, 3-speed manual player with many deluxe features. Wired for stereo use.



#### **NEW MODEL TD-124 TURNTABLE**

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, 14/xx113/"; requires 31/4" below mtg. base. Less base and cartridge. With AC cord and output cable. For 110-120 v., and 200-250 v., 50-60 cycle AC. 17 lbs.

THORENS ACCESSORIES. For all units described above.

Stock No.	For	Description	Wt.	NET
96 R 829	CD-43	Automatic 45-rpm spindle	1 lb.	5.83
96 RX 808	CD-43, CB-33N	Wood base (mahogany)	5 lbs.	5.88
96 RX 809	CD-43, CB-33N	Wood base (blonde)	5 lbs.	5.88
96 RX 823	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) Wood base (blonde) Wood base (mahogany) Wood base (blonde) Unfinished mounting board Unfinished mounting board	5 lbs.	9.00
93 RX 397	TD-124		5 lbs.	9.00
93 RX 336	TD-134		5 lbs.	9.00
93 RX 337	TD-134		5 lbs.	9.00
93 RX 487	TD-134		3 lbs.	4.50
93 RX 338	TD-134		3 lbs.	4.50

#### **METZNER "STARLIGHT" TURNTABLES AND ACCESSORIES**

#### **NEW 672A TURNTABLE SYSTEM**

System consists of the new Model 60A turn-table, new Model 07 "Stereaunetic" pickup arm, and new Model 002 wood base styled in decorator blonde. Arm accommodates the 

NEW MODEL 60A TURNTABLE ONLY. Described in system above. Less base and arm. 113/x 131/4"; requires 11/2" above, 4" below mtg. board. For 110-120 v., 60 cycle AC. 14 lbs. 72 RX 830. NET......64.50

#### NEW 07 "STEREAUNETIC" ARM

#### **NEW MODEL 80 TURNTABLE**

Beautifully styled and modestly priced turnrpm; control knob is calibrated for instant selection of 16, 33, 45 and 78-rpm speeds. Built-in illuminated stroboscope for exact speed settings. Employs constant speed, 4-pole, shaded-pole motor and worm-gear drive needed in discort bourse. Sintered pole, shaded-pole motor and worm-gear drive enclosed in die-cast housing. Sintered bronze motor bearings. Aluminum turn-table has mass concentrated at outer rim for maximum stabilizing flywheel effect. Cork pad; retractable 45-rpm center hub.

Rumble & Noise: better than 40 db below 

WOOD BASES FOR TURNTABLES Pre-cut for Model 60A and 80 turntables. Specify mahogany, blonde or walnut finish.

Allied Radio Corporation, 100 N. Western Ave., Chicago 80, Illinois

# Bogen

**MANUAL PLAYERS** 

B50-16LCS



NEW 850-16LCS. Latest version of the highly popular, B50 turntable series—wired for stereo use. Variable speed from 16 to 86 rpm with notches for 1643, 3313, 45 and 78-rpm speeds. Takes records up to 16". Heavyduty, 4-pole motor; weighted and balanced turntable. Die-cast pickup arm; takes any monaural or stereo cartridge. Minimum mtg. space: 15x12", 4" above and 2" below mtg. board. With plug-in head, 2 audio output cables. Less cartridge and base (below). 

NEW 850-16ZD. As above, but with new G.E. GC-7 magnetic stereo cartridge. 89 RX 911, NET......64.35

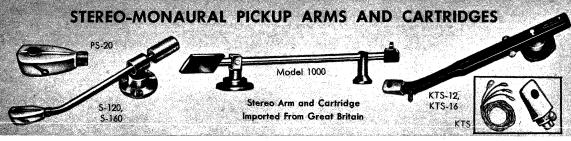
NEW 821-LCS. Not illustrated—similar to above. Low-cost, 4-speed manual player, wired for stereo use. Takes discs to 12". Each speed may be varied ±5%. 4-pole induction motor. With pickup arm and plugin head; less cartridge and base (below). For 110-120 v., 50-60 cycle AC. 12 lbs.

**BOGEN ACCESSORIES** EXTRA PLUG-IN HEAD. For all units above. 91 R 565. NET. 2.75 WOOD BASE FOR B50 UNITS. In mahogany, blonde or walnut—specify choice. Wt., 5 lbs. 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



87

07 Stereaunetic Arm



#### **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 cartridge. With 1 head. 21/4 lbs. 72 RX 750. S-120. 12" arm. NET. .. 27.95

72 RX 751. S-160. 16" arm, NET.... 30.95

STEREO CONVERSION KITS. (Illus. on p. 85.) Quickly convert your Rek-O-Kut monaural arm for stereo. 2 lbs.

72 R 716. SC-12. For A-120. NET... 17.95 72 R 717, SC-16, For A-160, NET...19.95

#### 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" polished diamond stylus. Tip mass of less than 1 milligram guarantees extremely precise tracking with minimum record wear record wear

Compliance of 3.5x10<sup>-6</sup> assures excellent fidelity. Frequency response is 20 to 18,000 cps. ±2 db. Channel separation is better than 20 db. Tracking force, 3.5 grams. Output per channel. 4 mv at 5 cm/sec. Overall length, 12½". Height adjustable from 1¾ to 2½". With arm rest. 1½ 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 money-saving kit form—all you need for assembly is a screwdriver. Employ simple one-piece construction with no loose parts. Precisionconstruction with no loose parts. Precision-made vertical and lateral pivot systems per-mit remarkably free arm motion. Arm channel structures change width between pivot and head to prevent audible reso-nance. Selector index permits adjustment of force for all popular cartridges. Include finger lifts. Have three wires. 2½ lbs. 72 R 748. KTS-10. 16". 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. 







#### SHURE M3D STEREO CARTRIDGE

The new M3D "Professional Dynetic" Ine 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 tremely high compinance 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" diamond.

Channel separation; more than 20 db at 1000 cps. Vertical and lateral compliance: 4x10-6 cm/dyne. Frequency response: 20 to 15,000 cps, ±3 db. Recommended tracking force: 3 to 6 grams. Output: 5 mv. Mounts on standard ½" mounting centers. Has 4 output terminals. 3 oz.

79 RC 215. Only \$4.41 Down. NET 44.10

#### 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". Adjustable height, 4 leads, 134 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 cps. Lateral compliance, 8x10-6 cm/dyne. Tracking force, 2 grams. Stylus is .0007" diamond. Excellent channel separation. 6 mv output @ 10 cm/sec. Fits std. changers and arms. 4 terminals; fits ½" 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 quality 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 cps, ±2 db. Vertical and lateral compliance, 4x10-4 cm/dyne. Channel separation, better than 20. db. Tracking force. 3-6 grams. Output, 5 my. Styli are .003" sapphire and .0007" diamond. Cartridge has 4 output terminals, mounts on standard ½-inch mounting centers. Shpg. wt., 3 oz.

72 RC 718. Only \$2.94 Down. NET 29.35

502-D. .0007" diamond repl. stylus, 2 oz. 



#### GARRARD TPA/12 STEREO PICKUP ARM

Completely new Garrard low-cost transcrip-Completely new Garrard low-cost transcription arm for use with either stereophonic or monaural recordings up to 16" 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 prounting ment. 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. 

#### The Stereo Cartridge and Your Music System

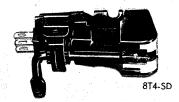
With the major companies in full pro-With the major companies in full production of stereophonic records and phono cartridges, you can enjoy music that has a new realism—a breathtaking quality of depth and direction—at moderate cost. You can begin with a monaural phono installation and later purchase an add-on system to convert to stereo or you may wish to get a 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-CARRIDGES AND IHE MONAURAL SYS-TEM. If you already own a monaural phono system or are planning to assem-ble one, and possibly add a second channel for stereo later, the use of a stereo phono cartridge is recom-mended. Its increased flexibility of stylus motion (compliance) and de-creased tip radius will make monaural recordings sound far better and will assure 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 revent the extreme wear that 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.

#### STEREO CARTRIDGES AND TURNTABLES



#### **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" diamond and .003" sapphire.

Frequency Response: 20 to 12,000 cps. gradual roll-off beyond. Channel separation: 20 db. 5 to 7 grams tracking force. Compliance: 2x10-6 cm/dyne. 0.3 volts output. Has 4 terminals; mounts on ½6" and ½" centers. Shpg. wt., 3 oz.

8T-SD. Replacement stylus for above. 2 oz. 



#### **RONETTE STEREO CARTRIDGES**

MODEL BF-40 "BINOFLUID". Superior crystal MODEL BF-40 "BINOFIUID". Superior crystal cartridge for crisp stereo or monaural sound. Designed for minimum record wear. Has .0007" diamond stylus (easily replaceable, use .00075" stylus below). Channel separation: 24-28 db. Response: 20 to 15,000 cps. Tracking force: 4 to 8 grams. Vertical and lateral compliance: 3.5x10-6 cm/dyne. Output: 0.35V. Has 4 terminals: mounts on 1/2" centers. Wt., 3 oz.

"STEREO OV". Turnover version of above. .00075" diamond, .0025" sapphire. 

DIAMOND STYLUS. .00075" repl. 2 oz. 

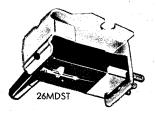
SAPPHIRE STYLUS. .0025" repl. 2 oz. 68 R 214. NET......1.00

#### 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 for monaural operation of the system, while in 







#### **ELECTRO-VOICE STEREO CARTRIDGES** MODEL 26MDST. The new 26MDST ceramic

MODEL 26MDST. The new 26MDST 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 pluginto any magnetic input. Has turnover stylus. 0007" diamond and .003" 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: 2x10-6 cm/dyne. Mounts on 1/16" or 1/2" centers. Shpg. wt., 3 oz.
72 RC 745. NET. 22.05 MODEL 26DST. As above, but matches ce-

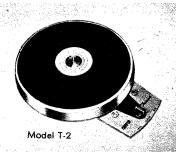
MODEL 21MD. Same as Model 26MDST, but with .0007" diamond stylus only. MODEL 21D. As above, but matches ceramic

phono input. D1-1. .0007" diamond repl. stylus. 2 oz. 72 RC 797. NET. 9.70

\$3-3. .003" sapphire repl. stylus. 2 oz. 2.06



# Model T-18A



#### GRAY TURNTABLE & ARM

MODEL 33H 12" TURNTABLE. Deluxe, preci-MODEL 33H 12" TURNTABLE. Deluxe, precision-built 33½-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 ½" steel base plate pre-drilled for Gray 212 pickup arm. 16x14½"; requires 1½" above (using the 212 arm), 3" below mounting board. For 110-120 v., 60 cycle AC, 18 lbs.

93 RX 386. Only \$8.00 Down. NET 79.95

BASES FOR ABOVE. Shpg. wt., 4 lbs.

) NET

93 RX 387. Mahogany. 93 RX 388. Limed Oak. 93 RX 389. Walnut. § EACH 21.95

MODEL 212 PICKUP ARM. Incorporates "viscous-damped" (fluid controlled) suspension for faithful transcription—only the stylus 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" long. Shpg. wt., 2 lbs. 99 RX 474. Only \$3.40 Down. NET 34,00



#### PRESTO CUSTOM-QUALITY TURNTABLES

MODEL T-18A "PIROUETTE". Superior-performance 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 and trumble. Motor is a +-pole, synchronous type with high starting torque. Turntable has a 5-position speed control (45, Off, 33½, Off, 78)—idlers are completely disengaged in "Off" positions to prevent flat spots.

Heavy cast-aluminum table is carefully bal-Heavy cast-aluminum table is carefully bal-anced for rumble-free operation—employs a single-ball support. Includes a 45-rpm rec-ord adapter which conveniently retracts in-to 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:  $11\frac{7}{8}x14\frac{1}{4}x5\frac{7}{8}$ ". Requires  $3\frac{3}{4}$ " clearance below and  $2\frac{1}{8}$ " clearance above the panel. Mounts in an easily made  $6x8\frac{1}{4}$ " rectangular cut-out. For 110-120 volts, 60-cycle AC. Shpg. wt., 16 lbs.

MODEL T-2 "PROMENADE". Low-cost, professional-quality 12" turntable. Has a heavyduty 4-pole motor to insure minimum speed variation. Quickly changes from 33½ to 45 rpm with a flick of the shift lever. Well-balanced aluminum turntable and simple but rugged drive system eliminate wow, flut-ter and rumble. Interchangeable idler wheels disengage in "Off" position.

Has a permanently affixed strobe disc. 45-rpm 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.

111/8x141/4x57/6" overall. Requires 21/8" above and 33/4" below panel. For 110-120 v., 60 cycle AC. Shpg. wt., 15 lbs. 

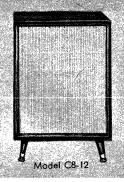
BASES FOR PRESTO TURNTABLES. Carefully designed mounting bases—excellent for shelf, cabinet or table. Wt., 5 lbs.

See Page 98 for Selected Stereo Records

# HI-FI SPEAKER ENCLOSURES AND ENCLOSURE KITS







#### NEW MODEL BS BOOKSHELF SPEAKER ENCLOSURE

Model BS

Distinctively styled high-fidelity speaker enclosure for use with any 8" speaker. Only 11" high, 24" long and 10½" 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 ½" 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 371. Mahogany Finish.	. NET	<b>27.</b> 00 °
79 DX 372. Limed Oak Finish	. NET	30.00
79 DX 373. Walnut Finish. NE	ετ	30.00

#### NEW MODELS \$8-12 AND \$12-15 SPEAKER ENCLOSURES

Ducted-port speaker enclosures and kits. Feature: 3/4" plywood; hand-rubbed, fine furniture veneers; acoustical padding; 4" self-leveling legs. S8-12K and S12-15K kits, unfinished mahogany veneer.

Stock No.   Ty	pe For Speaker	Finish	HWD	Lbs.	EACH
79 DZ 357 S8-	-12 8" or 12"	Mahogany	221/2 x191/4 x16"	37	51.75
79 DZ 358 S8-			22½ x19¼ x16"	37	57.00
79 DZ 359 S8-			22½ x19¼ x16"		57.00
79 DU 360 S8-	-12K 8" or 12"	Unfinished	22½ x19¼ x16"	37	45.00
79 DZ 361 S12-	-15 12" or 15"	Mahogany	28x24x21"	55	72.00
79 DZ 362 S12-	-15   12" or 15"	Limed Oak	28x24x21"	55	79.50
79 DZ 363 S12-		Walnut	28x24x21"	55	79.50
79 DZ 364 S12-	-15K 12" or 15"	Unfinished	28x24x21"	55	63.00

#### **NEW MODEL CS12-15 SPEAKER ENCLOSURE**

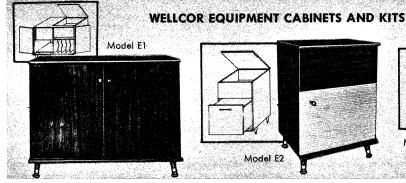
79	DZ 365.	Mahogany Finish, NET	
79	DZ 366.	Limed Oak Finish, NET79.50	
79	DZ 367.	Walnut Finish, NET	

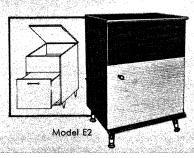
#### **NEW MODEL C8-12 SPEAKER ENCLOSURE**

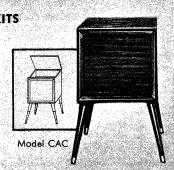
Excellently designed ducted-port enclosure of rigid construction. Has speaker mounting board cut for any 12" speaker, with removable adapter for 8" speaker. Made of seasoned ¼" plywood throughmedium and high-frequency reverberations. Over three cubic feet capacity—brings out full response of speaker. Attractively finished in choice of mahogany, limed oak or walnut to complement any furnishing mode. Smartly tapered 4" self-leveling legs are beautifully accented by lustrous brass ferrules. Complete with provision for adding tweeters and horns. 22½x19¾x13¾6". Wt.. 25 lbs.

79 DIJ 368 Mehogany Grained Finish NET. 33.7.5

36.00 79 DU 369. Limed Oak Grained Finish. NET..... 







#### NEW ET 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 com-ponents, 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. Smooth-operating hinged lid on record player compartment permits easy access.

Size of compartments: record changer or turntable compartment, 10x20½x171½6″; tuner-amplifier compartment, 13x20½x171½6″; tape recorder compartment (complete with slide-out shelf), 10½x20½x171½6″,—plus a large, five-partitioned compartment for record external Machine reclaiment for record storage. Matches enclosures listed above. 28x44x21". 135 lbs.

79 DZ 350. Mahogany. NET. 157.50 79 DZ 351. Limed Oak. NET. 172.50 79 DZ 352. Walnut. NET. 172.50

#### **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 preamp complete with face panel. Distinctive, wrap-around 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, 181/4"; drawer, 13x211/4x16". 101/4x221/4x

Available in choice of mahogany, limed oak 

79 DZ 354, Limed Oak, NET. . . . 141.00 79 DZ 355. Walnut. NET......141.00

MODEL E2K EQUIPMENT CABINET KIT. As 

#### **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, limited on the consularity and for 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, 11½" 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" high by 17" wide by 171/2" deep. Overall height with legs, 26 1/2". Shpg. wt., 25 lbs.
79 DU 374. Mahogany. NET...... 28.50

79 DU 375. Limed Oak. Net..... 30.75 79 DU 376, Walnut, NET......30.75

#### 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 -ready for painting or staining to match any decorative scheme.

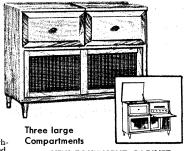


#### NYLCO EQUIPMENT CABINET

A beautifully designed cabinet for high-fidelity equipment, completely assembled, sanded and ready for finishing. Made from solid, ¾, unfinished redwood, this smartly solid. At luministed redwood, this smaller 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 smooth-action 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 dis-tinctive styling of cabinet.

Takes a handsome furniture finish-adds richness to any furnishing mode. Constructrichness to any turnishing mode. Construct-ed of selected-top-quality materials through-out—made to exacting specifications. Inte-rior dimensions: overall inside height is 23¾" and adjustable shelf may be set at 4 different levels; 34" wide. 14½" deep. Overall size of cabinet: 15¾" deep, 35½" wide; 31" high with legs, 26" high without legs. Shpg. wt., 43 lbs.



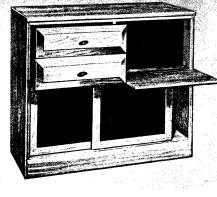
#### **NEW EQUIPMENT CABINET**

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 handsome professional-quality piece of furniture. Completely assembled, attractive cabinet

Features lift-top lid for easy access to record changer or turntable compartment. Tuner-amplifier compartment, reached by convenampiner 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" high, 16½" wide, 15½" deep; tuner-amplifier compartment, 7" high, 16½" wide, 15½" deep; record storage compartment, 15½" high, 33%" wide, 15½" deep. Overall size of cabinet: 16x35x30" including legs. Shpg. wt., 39 lbs.

79 DZ 253, NET..... 33.30

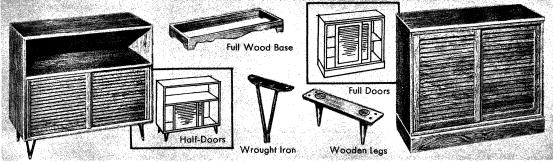


#### "ARISTO" EQUIPMENT CABINET

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 smooth— may 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, 10½" high, 16½" wide. 15½" deep; tuner-amplifier compartment, 10½" high, 16½" wide, 15½" deep; cecord storage compartment, 13¾" high, 33½" wide, 15½" deep. Supplied with a factory-fitted face panel to permit custom mounting of tuner and amplifier. Overall size: HWD, 30x35x 16". Shpg. wt., 43 lbs.



#### HALF-DOOR HI-FI CABINET

Handsome equipment cabinet with sliding louvered doors covering bottom half of cabinet only. Fully assembled, but unfinished—sanded, 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 9½" high, 335½" wide, 14½" deep—perfect for housing record changer and tuner-amplifier. Bottom compartment is 12½" high, 33½" wide, 14½" 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. 2434x353/ax16". Shpg. wt., 47 lbs. ..17.91 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, 3½x35½x16″. Shpg. wt., 3 lbs.

95 DX 536, NET.

TWIN WROUGHT IRON LEGS. Complete with lustrous brass ferrules to enhance ap ance. 51/4" 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 excellent balance. Sanded; unfinished. Size, 51/4" high, 16" deep. Set of 2. Wt.. 3 lbs.

95 DX 535. NET.....

#### FULL-LENGTH DOOR CABINET

Tastefully designed unfinished cabinet with luxurious louvered sliding doors. An excel-lent unit for budget-priced and limited-space 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 grained—ready 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: 9½x335½x14½″; bottom compartment: 12½x335½x14¾″. Overall size: 24½x35½x16″. Less base (see description at left). Shpg. wt., 48 lbs.

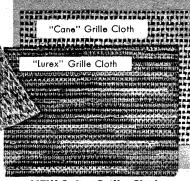
95 DZ 508. NET.....



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: M—mahogany; B—blonde; W—walnut. Shpg. wt., per yard, 6 oz.

	Tuna			Stoc	NET	
Description	Type No.	Fig.	*	In Lengths Over 1 Yd.	36″×36″	Per Yd.
Mahogany	211	A	M,B	86 S X 994	86 S X 976	2.45
Gold and Bronze	213	A	M,W,B	86 SX 997	86 S X 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	86 SX 999	86 S X 982	3.42
Mahogany with Gold thread	217M	A	M,B	89 S X 050	89 S X 059	3.42
Black and White; Gold thread	413M	A	W,B	89 S X 051	89 S X 060	3.42
Gold; slight Brown thread	511	A	M,W,B	86 SX 996	86 S X 978	2.45
Blonde; Gold & Brown thread	515M	A	W,B	86 SX 998	86 S X 981	3.42
Soft Brown; Gold Squares	711M	A	W,B	89 S X 052	89 SX 061	3.42
Tan; slight Brown thread	811	A	W,B	89 SX 053	89 S X 062	2.45
Brown & Tan plaid; with Gold	1214M	A	M,B	89 SX 054	89 S X 063	3.42
Dark Mahog. with Gold Cobweb	300	В	M,W,B	89 S X 003	86 S X 988	4.15
Black with Gold Cobweb	453	В	В	89 SX 001	86 SX 986	4.15
Mahogany Boucle	290B	С	M,B	89 S X 055	89 S X 064	4.15
Tan & Gold Boucle	814BM		W,B	89 S X 056	89 S X 065	4.15
Brown-Tan-White Tweed	805	D	W,B	89 S X 057	89 S X 066	4.15
Solid Charcoal	452		В	89 S X 000	86 S X 980	2.45
Simulated Straw	857		W,B	89 S X 058	89 S X 067	3.42

K



#### **NEW Solar Grille Cloth** "CANE" GRILLE CLOTH

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 

86 SX 975. To 101/2 yds. PER YARD. 1.59

#### "LUREX" GRILLE CLOTH

89 SX 047. Over 1 yd., PER YARD ... 4.41

#### **Custom Installation Accessories**

#### CUSTOM CHANGER BASES

WELLCOR MODEL W-1 UNCUT. Changer record box with blank top—can be cut to accommodate any make record changer or player. Made of smooth-sanded, ready-to-finish birch wood. Has top-quality, premounted steel ball-bearing phonograph slides. 3½x16½x14½". Wt., 8 lbs. WELLCOR MODEL W-1 UNCUT. Changer 

PRE-CUT FOR WEBCOR CHANGERS. As above, but for Webcor Series 1600, 1800, 1900 

PRE-CUT FOR GARRARD CHANGERS. Same size as above. 95 RX 543. For RC88-4, RC98-4.

93 RX 496. For RC121/MKII. 

#### **PHONO DRAWER SLIDES**

F STANDARD DRAWER SLIDES. For installing record changers or turntables in cabinets. Heavy steel; with ball-bearings. Slides are 15" long with a normal travel extension of 11". Can be attached to bottom or sides of phono drawer or base. Brackets have slotted STANDARD DRAWER SLIDES. For installing holes to permit leveling. 4 lbs. 86 R 195. NET.....

STANDARD DRAWER SLIDES. As above, but 13" long. Shpg. wt., 4 lbs. 86 R 194, NET..... 

#### G-C DECORATIVE METAL GRILLE

G Heavy metal grille with brushed-brass finish. Adds decorative touch. Diamond pattern, 21/2x1/3". Av. wt., 4 lbs. 

#### **ELECTRO-VOICE FINISHING KITS**

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......4.90

#### FIBERGLAS ACOUSTIC INSULATION

[J] Eliminates reverberation and distortioncausing standing waves inside speaker enclosures. Supplied in 1" thickness and 16" width for convenient installation. Shpg. wt., 2 lbs.

89 SX 951. 16-Ft. Length. NET...... 2. 25

#### SPEAKER REDUCER RINGS

For using smaller speakers in larger enclosures. Made of ½" plywood and cut to exact size. With speaker mounting nuts, bolts and washers.

MODEL R/R 12/18. For mounting 8" speaker in 12" speaker baffle or cabinet. 1 lb. 82 D 298. List, \$2.00. NET.......89c

MODEL R/R 15/12. For mounting 12" speaker in 15" speaker baffle or cabinet. 11/2 lbs. 82 DX 299. List, \$2.75. NET....... 1.19

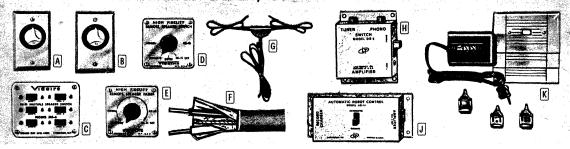
#### SPEAKER MOUNTING BOLTS

Carriage bolts for mounting speaker to wood panel. Bolt head is flat—when countersunk will not show through grille cloth. Size /4x2" long. With square nuts. 4 per pkg. Shpg. wt., 4 oz. 

#### **LEVEL & LEVELING SCREWS**

WELLCOR W-3. Precision, chrome-plated

# HIGH-FIDELITY CABLES, CONNECTORS AND SWITCHES



#### LAB-TRONICS MULTI-SPEAKER SWITCH

MODEL L1601. For selecting any one of 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 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". Size, 23/4x41/2x 15/4". Shpg. wt., 8 oz. 

#### LAB-TRONICS SPEAKER CONTROL

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, 314." Screw terminals. Size, 234x41/2x158". Shpg. wt., 8 oz.

94 S 451. L-1612/8. 8 ohms. 94 S 452. L-1612/16. 16 ohms. 

## VIDAIRE SPEAKER FADER

MODEL RF-10. For remote control of a 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/x21/x11/4". Shpg. wt., 8 oz. 

#### **ROFLEX SHEATHED CABLE**

For long speaker lines in indoor or out-

#### VIDAIRE REMOTE SPEAKER SWITCH

MODEL MS-6-FOR UP TO 6 SPEAKERS. Highly versatile, remote speaker switch. Permits centralized control for as many as six remote speakers. Variety of uses—has six SPDT switches which provide uses—nas six SFD1 switches which provide 42 possible operating combinations—any combination of the six speakers can be played, or all can play simultaneously. Easily mounts on panel of hi-fi or publicaddress system for convenient operation. Designed for use with any size speaker and any speaker impedance. Gold-embossed brass plate blends with any surroundings. Size,  $3\frac{1}{4}x2\frac{3}{8}$ ". Shpg. wt., 8 oz.

MODEL RS-10—FOR 2 SPEAKERS. Connects 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 finished. With knob, and instructions. Size, 2½x2½x1¾". Shpg. wt., 8 oz.

94 \$ 438. NET.....

94 S 474. NET...

#### FM TWIN-LINE ANTENNA

Low cost, folded dipole type indoor antenna designed for FM reception. Eliminates need for outdoor antenna in many locations. Perfect for use where concealed antenna would be desirable, or where outdoor antenna installation is not feasible. Simply place under rug, behind cabinet or in any other out-of-the-way location. Antenna consists of 200 che. tenna consists of 300 ohm twin-line with 6 ft. lead-in wire. Shpg. wt., 6 oz. 

#### LAB-TRONICS TUNER-PHONO SWITCH

H MODEL DS-5. Low-cost, convenient accessory 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. 2x2x1". 6 oz. 

#### 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 \( \frac{1}{6}\) 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". Phono pin plug on each end	.61
99 S 856	C102	L	36". As above	.70
99 S 857	C103	L	72". As above	.88
94 S 456	C202	M	36". Phono pin plug and jack	.79
94 S 457	C203	M	72". As above	.97
89 S 957	P7210	N	10'. Straight phone plug and alligator clips	1.41
94 S 470	C106	P	36". Phono pin plug; other end stripped & tinned	.56
94 S 467	C107	P	72". Phono pin plug; other end stripped & tinned	.73
89 S 956	P6110	W	10'. Phono pin plug and spade lugs	.88
89 S 952	C4406	R	72". Phono pin plug and shielded phone plug	1.18
89 5 954	C4610	T	10'. Shielded phone plug & jack	2,20
89 S 953	C4006	S	72". Straight shid, phone plug; end stripped & tinned	1.03
89 S 955	P6210	X	10'. Phono pin plug and alligator clips	1.12
94 S 472	P502	1	20'. 2-cond. speaker cable with spade lugs on each end	.94
94 \$ 458	C400		Double phono pin jack adapter	.59
89 S 958	E803	Z	36". Mike connector and phono pin plug	1.03
89 S 959	E806	Z	72". Mike connector and phono pin plug	1.21
89 S 960	SP8403	AA	*36". Stereo cable; stereo dual plug each end	2.35
89 5 961	SP8410	AA	*10'. Stereo cable; stereo dual plug each end	2.65
89 S 962	SP8003	BB	*36". As above, but one end stripped & tinned	2.06
89 S 963	SP8010	BB	*10'. As above, but one end stripped & tinned	2.35

#### LAB-TRONICS ROBOT SWITCH

MODEL AS-10. For use with record changers having automatic shut-off feature. Robot switch has two mounted, female 110v. sockets. Changer plugs into one recep-tacle; 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, 5x2x1". With line cord and plug. For 110-120 v. AC only. Shpg. wt., 1 lb. 91 \$ 579. NET.....

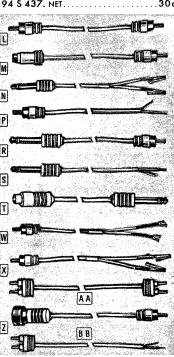
#### REMCON REMOTE SWITCH KIT

Enjoy the luxury of remote Off-On con-Enjoy the luxury of remote Off-On conincted 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 by control unit). Parallel wiring—as many switches as desired may be added. With instructions. For 110-120 v., 50-60 cycle AC. Shpg. wt., 1½ lbs.

94 S 435. Net. 9.95

#### Accessories for Remcon Switch

100' 3-COND. CABLE. 2 lbs.	
47 T 360, NET	2.43
TYPE S-1 EXTRA SWITCH. 4 oz.	
94 S 436. NET	35 с
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, 22x161/4x9".

95 R 649, NET.....

#### STYLUS INSPECTION MICROSCOPE

B Pocket-size stylus inspection micro-scope. For checking stylus tip to detect imperfections and signs of wear. Approxi-mately 75-power magnification. An easy-to-use "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, 3¾" long x ½" dia. Shpg. wt.. 8 oz. 

#### WALCO PLASTIC DISC COVERS

Protective sleeves for 10" and 12" records. Made of durable polyethylene plastic with thermoset seams to resist tearing. 

#### ESL "DUST BUG" RECORD BRUSH

94 R 528. For Turntables, NET....... 5.75

#### WALCO CLIP-ON RECORD BRUSH

E 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. 

#### "KLEENEEDLE" BRUSH

#### WALCO ANTI-STATIC RECORD SPRAY

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. 

#### 4-SPEED STROBOSCOPIC CARD

Use with any 50 or 60-cycle neon, argon or fluorescent lamp, or low-wattage inandescent lamp, or owwarding in-candescent lamp. Accurately checks 163/3, 33/3, 45 or 78 rpm record speeds. Quickly tells you when equipment needs adjustment. tens 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. 

#### ANTI-STATIC RECORD CLOTH

il 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. 112 square inches of soft, chamois-like 

#### **ACOUSTIC ISOLATION PAD**

Designed to minimize acoustic feed-back, reduce excess noise and protect furniture finishes from heat. Place under record changer bases, tape recorders, amplifiers, etc., to absorb vibration. Made of 

#### PROTECTIVE TURNTABLE MATS

12" Diameter. Low-priced, foam rubber record player mat. Fits any turntable or changer. Cushions record drop on automatic changers. 12" dia; 36" thick. 4 oz. 69 R 233. NET......69c

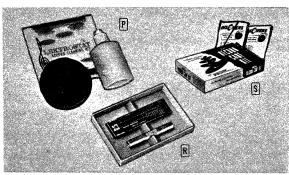
#### **NEW WEATHERS "DISCUSHION"**

#### WALCO TURNTABLE LEVEL

N For accurate levelling of turntables and 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.....

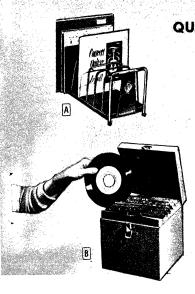
SELECTED RECORD CARE KITS

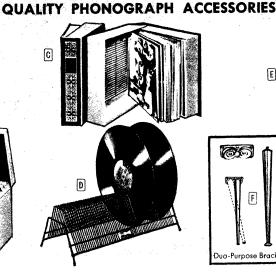


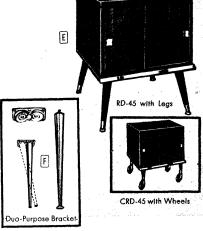
NEW LEKTROSTAT RECORD CLEANING KIT. For thoroughly and safely removing grease, lint and dust from record grooves. Kit contains plastic bottle (1¼ fluid oz.) of anti-static detergent fluid, and tufted wiping pad. Solution is applied to record; then wiped with pad. Shpg. wt., 5 oz.

64 R 866. NET.....

"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.







#### 7", 10" & 12" RECORD RACK

RECORD STORAGE AND CARRYING CASES

B 7" & 12" RECORD CASES. Smartly styled record carrying cases for travel or home storage. Handsome, sturdy, and easy to carry. Perfect for owners of portable public address music systems; for schoolroom use; etc. Extra-strong, light metal construction. 7" case holds 80 records, 12" case holds 36 records, 12" 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-P127 case has sponge rubber strips which provide additional record protection. Durable two-tone wrinkle finish in highly attractive green and gray.

#### 3.95 94 RX 942.

G WEATHERS STYLUS GAUGE. Simple-to-operate, 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 the revolving record ceases, the scale on the 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

GARRAD

GARRARD

popular, excurately measure on marked in lator one gram into parts are lig sealed for additional control of the proposition of the p

#### **RECORD ALBUMS**

C STANDARD. Protect your records with this low cost, sturdy 12-pocket album. Wine color fabrikoid cover. With record index. Shpg. wt., 11/4 lbs.

96 R 850. 10" Size. EACH	.68c
3 or More, EACH	
96 RX 851. 12" Size. EACH	.85c
3 or More, EACH	76c

SPANISH-GRAINED. Beautiful maroon leatherette cover. Records are held in 12 heavy Kraft-paper envelopes in binder. Gold stamped back. Complete with handy index. Show wt. 2 lbs.

96 R 856. 10" Size. EACH	.90c
3 or More, EACH	
96 RX 857. 12" Size, EACH	1.06
3 or More, EACH	

FOR 7" RECORDS. Holds twelve 7" records, in individual flaps. Covers in attractive simulated leather with gold stamping. With record index. Shpg. wt., 1 lb.

#### RECORD HOLDER

PLAT-TOP RECORD HOLDER. Low-cost uniquely styled record holder. Accommodates sixty 7", 10" or 12" records with or without jackets. Contemporary flat-top design in attractive brass finish complements any style of room decoration. Only 16½" 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, 16½x8x 5½". Shpg. wt., 3 lbs.

94 RX 942. NET. 2.25

#### RECORD STORAGE CABINET

E UNIVERSAL WOODCRAFTERS, MODEL RD-45. An extra-spacious phonograph table and record storage cabinet with sliding doors, at a remarkably low price. Strongly constructed of 5½" plywood with ½" 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", 10" and 12" records.

7", 10" and 12" 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" high. Top surface size: 22" wide, 20" 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 853, Blonde.

EACH..... 19.95

F 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 screw. Handsowne brase finish

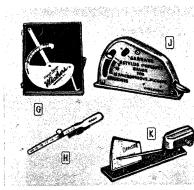
legs, 4 duo-purpose brackets (for mounting legs in straight or angle position), and screws. Handsome brass finish.

79 D 196. 3%" Kit. Wt., 2 lbs. NET... 3.19

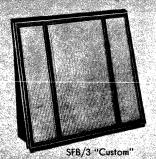
79 D 197. 6" Kit. Wt., 3 lbs. NET... 3.39

79 DX 198. 12" Kit. Wt., 4 lbs. NET... 3.98

79 DX 199. 14" Kit. Wt., 5 lbs. NET... 4.19

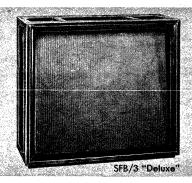


## WHARFEDALE - RJ - LEAK BRITISH INDUSTRIES GROUP PRODUCTS





SPEAKER SYSTEMS





#### SFB/3 "CUSTOM" SPEAKER SYSTEM

**NET** \$195<sup>02</sup>

\$19.50 Down

Imported, skillfully designed speaker system. Employs a resonance-free baffle, sand-filled to effectively damp all vibration. Open design

allows omni-directional sound—permits using the "custom" anywhere—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 recorner from speakers provide frequency response from 30 to 20,000 cps. Has 12" woofer for bass; 10" speaker for mid-range; 3" tweeter for crisp, clean treble. Carefully selected, highest quality woods, handsomely finished to only note the decor of one companies the decor of one companies. enhance the decor of any room. Available in mahogany, blonde or walnut finish—specify your choice when ordering. Impedance, 15 ohms. Size (HWD), 31x34x12". Shpg. 

#### SFB/3 "DELUXE" SPEAKER SYSTEM

NET

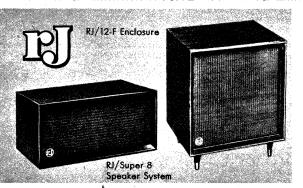
A deluxe 3-way speaker system with same speak-er components as "Cus-

\$24.40 Down action in 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 ormi-directional sound. Speaker components include Wharfedale's 12" low-frequency woofer, 10" midrange speaker and 2" in the components include Wharfedale's 12" low-frequency woofer, 10" midrange speaker and 2" in the components include Wharfedale's 12" low-frequency woofer, 10" midrange speaker and 2" in the components include Wharfedale's 12" low-frequency woofer, 10" midrange speaker and 2" in the components and a components include Wharfedale's 12" low-frequency woofer, 10" midrange speaker and 2" in the components as "Custom" system at left, Also employes a sand-filled baffle to eliminate resonate. Provides clean, the components as "Custom" system at left, Also employes a sand-filled baffle to eliminate resonate. Provides clean, the components as "Custom" system at left, Also employes a sand-filled baffle to eliminate resonate. Provides clean, the components in 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 of the components and the components are components and the components and the components are components and the components are components and the components and the components are components are components and the components are components are components and the compone dale's 12" low-frequency woofer, 10" mid-range speaker and 3" tweeter—specifically designed to work together as a single unit in this particular enclosure. Exceptional smoothness and excellent response (30 to 20,000 cps), for full-range sound. In mahogany, blonde or walnut finish—specify choice. Impedance, 15 ohms. 31½x35½x choice. Impeuant 13". Wt., 105 lbs. 79 DZ 156C. NET..... 244.02

#### W/AF/1 SPEAKER SYSTEM

\$14.16 Down

The street is the superbound of the superbound or s 



#### RJ/SUPER 8 SYSTEM WITH 8" WHARFEDALE SPEAKER

UNFINISHED RJ/SUPER 8 SYSTEM. As above, but in unfinished birch hardwood. Sanded, ready for finishing. RJ-8 ENCLOSURE ONLY. Unfinished; less speaker. 20 lbs. ...28.50

#### RJ/12-F FLOOR-MODEL SPEAKER ENCLOSURE ONLY

79 DU 150. Only \$2.85 Down. NET.....

Accommodates any 12" 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, 20x20x16". MODEL RJ/12-S UNFINISHED DOUBLE-SHELF ENCLOSURE. For any 12" speaker. Fits into double-shelf space of a bookcase. Unfinished birch hardwood, sanded. 24x21x10". Less speaker. 32 lbs. 79 DU 153, Only \$3.85 Down, NET....



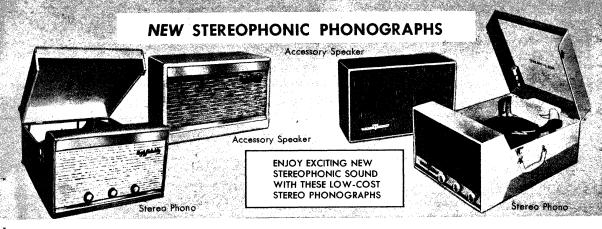
#### NEW LEAK "STEREO POINT ONE" STEREO PREAMP

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 complaying left channel alone, right channel alone, both channels combined (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); dual-ganged 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. 10½x3¾x5%. 5 lbs. 107.3 lbs. 107.3 lbg. NBI. 107.3 lbg. NBI. 107.3 lbs. 91 SU 696. Only \$10.73 Down. NET ...

#### NEW LEAK "STEREO 50" 50-WATT STEREO BASIC AMPLIFIER

Output: 25 watts per channel; 50-watt output for monaural use-Output. 23 watts per channel, 30-watt output for insulating users #esponse: ±0.5 db, 20-20,000 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. 17x13x9". For 100-125 v., 50-100 cycle AC. Shpg. wt. 30 lbs. 91 SU 697. Only \$18.52 Down. NET...

"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. 15x11x9". 18 lbs.



#### TOP VALUE PORTABLE STEREO PHONOGRAPH

\$**59**<sup>95</sup>

V-M Changer With Stereo-Monaural Switch

 Includes Stereo Balance Control 2nd Speaker

• 2-5 1/4" Speakers; 2 More in Accessory Unit

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", 10" and 12" records in 1643, 3314, 45 and 78-rpm speeds. Intermixes 10" and 12" records of the same speed; shuts off automatically after last record is played. Silent turntable drive mechanism assures constant speed with minimum worn; amploys ball bearings for rumble free performance. mum wow; employs ball bearings for rumble-free performance.

Other features include: special-design amplifier with voltage-doubler circuit. Provides 4-watt output per channel when being used stereophonically; or a peak of 8 watts for monaural user. Two built-in 51/4' 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/x161/x201/2". Less accessory speaker unit and 45-rpm spindle, below. For 110-120 v., 60 cycle AC. Shpg. wt., 33 bs. 59.95 

ACCESSORY SPEAKER UNIT. Use with above for stereo sound. Consists of two 5¼" speakers in a case that matches the phonograph. Includes 15-ft. cable and plug for inserting into phonograph. Size: 9¾x16½x7". Shpg. wt., 12 lbs.

96 R 329. NET ..

#### **DELUXE PORTABLE STEREO PHONOGRAPH**

\$6850

- BSR Changer With Stereo-Monaural Switch
- Built-In 6" Woofer and 3" Tweeter— **Identical Speakers in Accessory Unit** 2nd Speaker

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", 10" and 12" records at 16½, 33½, 45 and 78-rpm speeds. Intermix feature for 10" and 12" records of the same speed. An interchangeable needle is provided with the phonograph for playing 78-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 

#### **NEW SINGLE-PLAY** MONAURAL PHONOGRAPH



New, low-cost single-play portable monaural phonograph. Perfect for dens, recreation rooms, etc. Features 4" PM speaker for surprisingly 'large' sound from a unit this small. Plays 7", 10" and 12" records singly, at 33½, 45 and 78-rpm speeds. Retractable 45-rpm spindle. Lightweight pickup arm has high-output turnover cartridge with 43-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: 53/4x12/yx 10". U.L. Approved. For 110-120 v., 60 cycle AC. Shpg. wt., 9 lbs. 

Houses 2-4" Speakers New portable stereo phonograph that's all ready to set up and provide thrilling **NET** 





COMPLETE PORTABLE STEREOPHONIC PHONOGRAPH

Stereo Phono

\$**69**<sup>95</sup> stereo sound from new stereo records! Features

\$7.00 Down dual amplifier section (2 watts peak per channel), with each channel wired to its own set of speakers. The phonograph itself employs two 4" speakers: second set of 4" speakers is housed in the removable phonograph cover. 15-ft. cable on cover permits placement of second set of speakers for optimum stereo sound. Pickup arm has ceramic stereo car-tridge with dual sapphire needles. Plays stereo records stereophonically—monaural Stereo records stereopnonically—monaura LP records monaurally—and standard 78's. V-M changer features heavy-duty motor for constant speeds and rumble-free operation. Plays 7". 10" and 12" records at 16\(\frac{1}{2}\), 33\(\frac{1}{2}\), 45 and 78-rpm speeds. Intermixes 10" and

12" records of the same speed. Stacks up 7" 12 records of the same speed. Stacks up / and 10" records (of the same speed) in any sequence—indexing of the tone arm is con-trolled automatically. Changer and ampli-fier both shut off automatically after last record has played. Ganged volume and tone controls for regulating sound of each chan-nel from single control knob. Lid and phono nel from single control knob. Lid and phono cabinet of wood, covered in strikingly attractive, blue and charcoal gray plastic fabric, with gold plastic trim. Lid snaps onto phono to form one carrying case. Phono size: 9x19x19"; lid size, 4x19x14½". Less automatic 45-rpm spindle, below. U.L. Approved. For 110-120 v., 60 cycle AC. Shgs, wt., 30 lbs.

**45-RPM AUTOMATIC SPINDLE.** Eliminates need for spiders. Wt., 8 oz. 



# SELECTED TITLES IN HIGH-FIDELITY

# STEREO RECORDS

20%

New stereo records—at a big 20% savings off regular list price. Offer brilliantly realistic stereophonic sound—each record is a thrilling adventure in 3-dimensional music. All records are 12°, 33½ 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.

<b>ZU</b> %	standards. Note: Stereo records must be played with a : When ordering stereo records, give Stock Number, R and Record Title. Av. shpg. wt., 10 oz.	stereo cartridge ecord Number
OFF LIST		
	ABC PARAMOUNT Record Title	
WALTZES OF STRAUSS	IN HI-FI. The Valentino Orchestra. Blue Danube, etc. urt Buhrman at the Organ. Blue Moon, Diane, Anniv. Waltz, etc. TES THE COLLEGES. Washington & Lee Swing, On Wisconsin, etc. 3-LEASE. Don Costa's Free Loaders. Five Foot Two, Margie, etc. HE ROARING 20'S. With Don Costa's Orchestra. NG SONGS. Sung by the Blazers; mixed collegiate favorites.	Record No.
NOSTALGIA IN HI-FI. B	urt Buhrman at the Organ, Blue Moon, Diane, Anniv. Waltz, etc.	ABCS-143 ABCS-209
EMPIRE CITY SIX SALU	TES THE COLLEGES. Washington & Lee Swing, On Wisconsin, etc.	ABCS-210 ABCS-212
YDIE GORME VAMPS T	5-LEAGE. DON COSTA'S Free Loaders. Five Foot Two, Margie, etc.	ABCS-212 ABCS-218
ORE COLLEGE DRINKI	NG SONGS. Sung by the Blazers; mixed collegiate favorites.	ABCS-218
EAVENLY SOUNDS IN I	HI-FI. Ferrante and Teicher; duo-piano team. Stardust, etc.	ABCS-221
ORLD WAR II SONGS I	N HI-FI. The Four Sergeants. The Marine Hymn, etc.	ABCS-222
HE NEW BILLY TAYLOR	ARDEN, Authentic Uriental music and artists,	ABCS-224
I-FI PARADISE Roy Sm	eck. Moonlight Bay, Paradise, My Blue Heaven, etc.	ABCS-224 ABCS-226 ABCS-234
B B B A I 6 Shecif	IN H. Ferfante and Teicner; duc-plano team. Stardust, etc.  NH-FI. The Four Sergeants. The Marine Hymn, etc.  SARDEN. Authentic Oriental music and artists.  TRIO. B. Taylor, piano; Earl May, bass; Eddle Thigpen, drums.  eck. Moonlight Bay, Paradise, My Blue Heaven, etc.  Tony Scott Quartet swings South Pacific selections.  y Record No. and Title. NET EACH.	ABUS-235
70. Speedy	BEL CANTO	
LAIN VANILLA. The Dis	cleland music of Larry Fotine's Beale St. Buskers.	SR-1001
OI KA TIME. Razzberry	lons by the Polynesians; 2 by Buddy Collette's Quintet. Revnolds and His Polka Rand, Miyed Polka favorites	SR-1002 SR-1003
AZZ ON THE BOUNCE. S	Side 1: Curtis Counce Quintet, Side 2: B. Colette Quintet.	SR-1004
STENING TO LARRY. L	cleland music of Lary Frotine's Beale St. Buskers.  Reynolds and His Polkes Band, Mixed Polks favorites.  Reynolds and His Polks Band, Mixed Polks favorites.  Reynolds and His Polks Band, Mixed Polks favorites.  Reynolds and His Syncopated Music.  SY RESINT #AVORITES. H. Marshard's Society Dance Orchestra	SR-1005
8 RR 415, Specif	VS RESURT FAVORITES. H. Marshard's Society Dance Orchestra  V Record No. and Title. NET EACH	SR-1006
	CONCERT-DISC	
E-PERCUSSION. The Pe	rcussive Art Ensemble, conducted by Richard Schory.	CS-21 CS-22 CS-23
ELECTIONS FROM MY F	/OLS. I AND II. Ping-pong game, air hammer, fireworks, etc. AIR LADY & GIGI. Radiant Velvet Strings; C. Giovannini.	CS-23
ANCING AND DREAMIN	G. The Jav Norman Quintet. Somebody Loves Me. Solamente, etc.	CS-24
UTCRACKER SUITE. Sy	mphony of the Air. Selections from this favorite work.  MIKE. Big Mike Simpson & His Band; Tempo Nuevo.  dernes. Five Foot Two, Besame Mucho, Foggy Day, etc.	CS-25
PPOSITE SIDES OF THE	MIKE. Big Mike Simpson & His Band; Tempo Nuevo.	CS-26 CS-27
		CS-27
VORITE SHOW TUNES	The Sorkin Strings play Surrey with the Fringe on Top, etc. TER—SONGS OF AMERICA. The John Halloran Choir. SSO IN D MINOR/BACH: PRELUDE IN E MAJOR/ETC. Sorkin Symph. STIN LOVELACE. Bach's Prelude and Fugue in A Minor, etc.	CS-29
NGS OF STEPHEN FOS	TER—SONGS OF AMERICA. The John Halloran Choir.	CS-30
VALDI: CONCERTO GR	OSSO IN D MINOR/BACH: PRELUDE IN E MAJOR/ETC. Sorkin Symph.	CS-30 CS-31
ARIMRA TROPICALEL	STIN LOVELACE. Bach's Prejude and Fugue in A Minor, etc. ose Bethancourt and His Orchestra. La Comparsa, Inspiracion, etc.	CS-32 CS-33
	Record No. and Title. NET EACH	
	CONTEMPORARY	-
USIC TO LISTEN TO BA	ARNEY KESSEL BY. B. Kessel, A. Previn, S. Manne, B. Collette.	S-7001
ROY WAI KS! The Leron	Winnegar Seviet   Wolk Along Walk On oto	S-7002 S-7003
AL JOEY. Andre Previn,	Shelly Manne, Red Mitchell. Jazz treatment of "Joey" tunes.	5.7004
REHOUSE FIVE PLUS T	nine & His Friends, Modern jazz performances.  Vinnegar Sextet. Walk Alone, Walk On, etc.  Vinnegar Sextet. Walk Alone, Walk On, etc.  Windows Red Mitchell, Jazz treatment of "Joey" tunes.  WO GOES TO SEA. Poorta, Minnie the Mermaid, Over the Waves, etc.  TINE FLAT JGLINKA: QUARTET IN F. Westwood String Quartet.	S-7005 S-7006
ENDELSSOHN: QUAKTE	I IN E FLAT/GLINNA: QUARTET IN F. Westwood String Quartet.	
B RR 419. Specify	Record No. and Title. NET EACH	4 . 7 6
ASTERPIECES OF THE	THEATRE, Boston Recording Festival Orch, Willis Page, Cond.	2064-SD 2070-SD
AIL DYNAMICS, Locomo	live and train sounds; right-of-way rainy night recording. ill Floyd at the Wurlitzer of Paramount theatre in N.Y.	2070-SD 2150-SD
8 HH 424. Specify	Record No. and Title. NET EACH	
	D. Stereo demonstration record; glant Mexican marimba, etc.	2004-SD
3 RR 423. Specify	Record No. and Title. NET  MERCURY	3.18
VANA IN HI-FI. Richar		SR-60000
T'S DANCE, David Carro	oll's Orchestra playing Let's Dance, My Sin, etc.	SR-60001
KAH VAUGHAN & BILL MERICA'S MOST DANCI	d Hayman's Orchestra playing Rhapsodero, Cordoba, etc. oll's Orchestra playing Let's Dance, My Sin, etc. Y ECKSTINE SING THE BEST OF IRYING BERLIN. EABLE MUSIC. Griff Williams and His Orchestra.	SR-60002 SR-60007
3 RR 427. Specify	Record No. and Title. NET EACH	
	OMEGA DISK	- Les
IAMPAGNE MUSIC, Lloy	d Mumm's Orchestra, Bubbles in the Wine, Louise, etc. Y. Dick Marx, piano; Buddy Collette, flute; etc. Show tunes.	0SL-1 0SL-2
		0SL-2
ZZ ROLLS ROYCE. Light	house All-Stars plus 10 on Bob Cooper compositions. Claude Bolling's Big Band. St. Louis Blues, etc.	OS15
LLING WITH BOLLING.	Claude Bolling's Big Band. St. Louis Blues, etc.	OSL-6
NGLE ECHOES. Chaino	and His African Safarl. Wild percussion recording. s sonic masterpiece. Cento Soli Orchestra of Paris. UE. A thundering orchestral display. Cento Soli Orchestra.	0SL-7
I KUUUNKA, STRAVINSKY MPHONIF FANTASTINI	s some masterpiece. Cento Son Orchestra of Paris.	0SL-8 0SL-9
NEMA ITALIANO. Pola	Chapell sings tunes from Italian films. Anna, La Strada, etc.	OSL-10
	Chapell sings tunes from Italian films. Anna, La Strada, etc. Frank Comstock's Orchestra. Top vocal group.	0SL-11
RR 426. Specify	Record No. and Title. NET EACH	4 <b>.</b> 76
UNDS OUT OF THIS W	ORLD. Stereophonic demonstration record.	OSD-1
3 RR 425. Specify	Record No. and Title. NET	4 <b>.</b> 76
•	URANIA	
	WINTER	

#### 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.

68 RR 420. Specify Record No. and Title. NET EACH ...

SAINT-SAENS: SYMPHONY NO. 3 IN C MINOR, OP. 78. Vienna Philharmusica Orch.
OFFENBACH: GAITE PARISIENNE. Rene Llebowitz, Cond. London Philharmonic Orch.
STRAUSS SPARKLES IN HI-FI. Waltzes, marches, polkes. Vienna Philharmusica. Orch.
ROSSINI-RESPIGHI: LA BOUTIQUE FANTASQUE. Complete bailet. London Philharmonic
SOCIETY DANCES TO MILT SHAW & HIS ORCHESTRA AT THE ST. REGIS. Dance melodies.

USD-1001 USD-1002 USD-1003 USD-1004 USD-1005

#### 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 7½° 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**

Tape Title	Tape No.	Stock No.	NET
SYMPHONY FOR GLENN, Hamburg Philharmonia, orig. Miller tunes.	ST-8	68 RR 503	
MY FAIR LADY AND THE KING AND I. Symphonic impressions.	ST-19	68 RR 502	7.96
AROUND THE WORLD IN 80 DAYS. Music from the original score.	ST-20	68 RR 503	
SYMPHONY FOR TOMMY DORSEY. Famous Dorsey arrangements.	ST-27	68 RR 503	9.56
SOUTH PACIFIC. Symphonic impressions from this famous show.	STB-36	68 RR 608	7.96
PLAIN VANILLA, Dixieland jazz; Larry Fotine's Beale St. Band	STB-38	68 RR 608	7.96
PAL JOEY, Bobby Sherwood's Orchestra plays "Joey "tunes.	STB-39	68 RR 608	
SILK STOCKINGS AND PAJAMA GAME, Two famous musicals.	STB-40	68 RR 608	
HENRY KING AND HIS ORCHESTRA. Latin-American dance tunes.	STC-41	68 RR 609	
THE MUSIC MAN. The New World Theatre Orchestra.	STC-37	68 RR 609	6.36

#### CONCERTAPE

FAVORITE SHOW TUNES, NO. 1. Leonard Sorkin Strings. FAVORITE SHOW TUNES, NO. 2. Leonard Sorkin Strings. DANCING AND DREAMING. Jay Norman Quintet. Smooth treatment. RE-PERCUSSION. Percussive Art Ensemble; impressive sound.	22-2 22-6 24-2 25-1	65 RR 673 65 RR 673 65 RR 673 68 RR 599	9.56 9.56
MUSIC OF JOHANN STRAUSS. Musical Arts Sinfonietta. SOUND IN THE FOUND. VOL. I. Stereo demonstration tape. TEMPO NUEVO. The Concertape Orch. Melodies in the Latin mood. SOUND IN THE ROUND. VOL. II. Highly realistic, everyday sounds. MY FAIR LADY. Radiant Velvet Strings; songs from this hit show.	101-A 501 503 504 513	65 RR 672 65 RR 669 65 RR 669 65 RR 669 65 RR 669	6.36 6.36 6.36

#### MERCURY

A MIRACLE IN SOUND. Selected excerpts from Mercury tapes.	DEMS-2	68 RR 567 4.76
STEREO DANCE PARTY. Ralph Marterie's Orchestra. Dance tunes.	MS2-13	68 RR 579 7.16
OFFENBACH: GAITE PARISIENNE. Antal Dorati; Minn. Symph. Orch.	MCS5-15	68 RR 578 9.56
RAVEL: BOLERO/BIZET: L'ARLESIENNE SUITE NO. 2.	MCS5-50	68 RR 578 9.56
LET'S DANCE. David Carroll's Orchestra. Let's Dance, etc.	MDS2-3	68 RR 510 10.36
SONGS FROM GREAT FILMS. The Herman Clebanoff Strings.	MDS2-35	68RR510 10.36
PERCUSSION IN HI-FI. David Carroll's Orchestra. "Showy" Sound	MDS2-37	68 RR 510 10.36
GERSHWIN: RHAPSODY IN BLUE. Eugene List; Eastman-Rochester Orchestra.	MWS5-47	68 RR 572 5.56
LET'S HAVE A PIZZA PARTY. The Gaylords on favorite "pops."	MVS2-33	68 RR 568 6.36
MUSIC OF JOHANN STRAUSS. Antal Dorati; Minneapolis Symphony.	MVS5-41	68 RR 570 6.36

#### OMEGATAPE

THEMES FROM AROUND THE WORLD IN 80 DAYS. MUSIC FOR LOVERS ALONE. Bobby Hammack at the Piano. SOUTH PACIFIC. Words & music. Hollywood Radio City Orchestra. HI-10'S IN HI-FL With Frank Comstock's Orchestra. TOAST TO TOMMY AND JIMMY DORSEY. Members of original Dorsey orchestra. STEREO HOLIDAY. 12 complete selections from current Omega tapes.	ST-59 ST-2015 ST-2023 ST-7006 ST-7027 STD-10	68 RR 541 64 RR 864 64 RR 864 65 RR 611 65 RR 611 68 RR 518	9.56 9.56 9.56

#### "Q" TAPE

STEREO DEMONSTRATION TAPE. Excerpts from current "Q" tapes. SOUTH PACIFIC. New World Theatre Orchestra.	Q-X 350	68 RR 613 2.36 68 RR 614 3.98
DANCE TIME IN STEREO. New World Theatre Orchestra. LOVER'S HOLIDAY, Paris Theatre Orchestra: romantic melodies.	351 352	68 RR 614 3.98 68 RR 614 3.98
SWAN LAKE BALLET. Nord Deutches Symphony Orchestra.	353	68 RR 614 3.98
POLKA TIME. Razzberry Reynolds and His All-Star Polka Band. GLENN MILLER MOODS. Hamburg Philharmonia Orchestra.	354 355	68 RR 614 3.98
GAY 90'S IN STEREO. Gaslight era music. New World Theatre Orchestra. SOUSA ON PARADE. Stirring military music. Hamburg Marching Band.	356 357	68 RR 614 3.98 68 RR 614 3.98
SIDEWALKS OF NEW YORK, New World Theatre Orchestra.	358	68 RR 614 3.98
DREAMLAND. The Paris Theatre Orchestra; more romantic tunes.	359	68 RR 614 3.98

#### RCA

LAVALLE IN HI-FI. Paul Lavalle, His Woodwinds and His Band. LET'S DANCE WITH THE THREE SUNS. Popular trio; danceble music. "PREZ." Perez Prado and His Orchestra. Melodles with Latin beat. RAINTREE COUNTY. Original sound track recording from the film. STRAIGHT DOWN THE MIDDLE. The Sauter-Finegan Orchestra.	CPS-72 APS-101 APS-105 CPS-108 CPS-113	68 RR 513 8.76 68 RR 601 5.56 68 RR 601 5.56 68 RR 513 8.76 68 RR 513 8.76
THE HOLY CITY. Jerome Hines with Concert Orchestra and Choir.  OANCING THROUGH SPACE. Features 10 "name" bands.  HAVE A WONDERFUL WEEKEND. Mitchell Ayres and His Orchestra.  MUSIC FOR DINING. The Melachrino Strings. Diane, Too Young, etc.  TCHAIKOYSKY; SLEEPING BEAUTY BALLET. London Symphony Orchestra.	CPS-114 CPS-143 CPS-131 CPS-144 GCS-151	68 RR 513 8.76 68 RR 513 8.76 68 RR 513 8.76 68 RR 513 8.76 65 RR 608 15.16

#### URANIA

STEREO DEMONSTRATION TAPE. Mixed selections & 250-cps test note.	UST-D2	68 RR 545	5.56
SOCIETY DANCES ATTHE ST. REGIS. VOL. 1. Milt Shaw's Orchestra.	UST-601	68 RR 604	
RAZZAMATAZZ. Phil Moody, honky-tonk piano. Nick Fatool, drums.	UST-901	68 RR 549	
STEREO DANCE DATE. Aime Vereecke and His Orchestra. SAINT-SAENS: SYMPHONY NO. 3 IN C MINOR, Franz Eibner, Organ. STRAUSS SPARKLES IN HI-FI. VOL. I. Vienna Philharmusica Symphony BREAKING THE SOUND BARRIER. VOL. I. American Percussion Society.	UST-904 UST-1201 UST-1202 UST-1204	68 RR 549 68 RR 546 68 RR 546 68 RR 546	9.56 9.56

#### **WESTMINSTER-SONOTAPE**

TCHAIKOVSKY: NUTCRACKER HIGHLIGHTS. London Philharmonic; A. Rodzinski. RAVEL: BOLERO. Herman Scherchen conducting Vienna St. Op. Orchestra. VERDI: AIDA (TRIUMPHAL MARCH AND BALLET MUSIC). Vienna Op. Orchestra. ROSSINI: WILLIAM TELL OVERTURE. Vienna State Opera Orchestra.	SWB-7001 SWB-7006 SWB-7011 SWB-7042	68 RR 520 68 RR 520 68 RR 520 68 RR 520	5.56 5.56
TABU, Ralph Font and His Orchestra. Latin-American music. LATIN-AMERICAN ADVENTURE. Ferrante and Teicher piano team. BELLS OF ST. MARYS. Carlllon and organ; sacred music. LEIBERT TAKES A MOLIDAY. Dick Leibert plays Wurlitzer. RELAX WITH STEREO. RESTFUL CLASSIGAL MUSIC. Cure for tension.	SWB-7043 SWB-8005 SWB-8011 SWB-8012 SWB-8021	68 RR 520 64 RR 880 64 RR 880 64 RR 880 64 RR 880	9.56 9.56 9.56



# Stereo Tape and Record Catalog

Vours 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

\$15%

- Silk, Satin & StringsBig Beat With Mike
- Lighting the Torch
   Symphony of the Dance

An outstanding value for stereo fans! Concertape'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.
68 RR 600. 4-Reel Pkg. ONLY....15.96



AUDIO BOOK "TALKING BOOK" RECORDS

Enter the thrilling world of great literature with Audio Book records—an outstanding selection of 16<sup>4</sup>/<sub>2</sub>-rpm recordings, including many especially for children. Each "book" is complete and unabridged, with readings performed by outstanding artists. All are on 7" discs with a 1½" 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 16<sup>2</sup>/<sub>2</sub>-rpm phonograph, or, with the adapter below, on any 33½-rpm unit. Indicate Stock No., Book No. and Title.

Title	Lbs.	Book No.	Stock No.	NET
STORYTIME FAVORITES. 26 popular stories for children. Tenderly told by Jane Webb. (2 records)		C-301	68 RR 410	1.96
ALICE IN WONDERLAND. Join Alice on her visit to Wonderland. Jane Webb plays Alice. (3 rec.)		C-300 C-302	68 RR 403 68 RR 403	2.62 2.62
WIZARD OF OZ. A carefree excursion into pure whimsy. By Maryin Miller and Jane Webb. (5 rec.)		C-303	68 RR 411	3.97
CHILD'S GARDEN OF VERSES, 52 poems by Robert Louis Stevenson, Read by Elinor G. Hoffman, (1 rec.)		C-304	68 RR 404	.99
RIP VAN WINKLE and THE LEGEND OF SLEEPY HOLLOW. Told by Elinor Gene Hoffman. (1 rec.)		C-305	68 RR 404	.99
THE KING OF THE GOLDEN RIVER and THE GREAT STONE FACE. Two ageless legends. (1 rec.)  GULLIVER'S TRAVELS. The adventures of Gulliver come alive when told by Hal Gerard. (1 rec.)		C-306 C-307	68 RR 404 68 RR 404	.99 .99
THEASURE ISLAND. Hans Conried in a vivid reading of this immortal yarn. (8 records).		C-309	68 RR 442	5.97
GREAT TALES AND POEMS OF EDGAR ALLAN POE, 8 complete stories, plus poems, (4 records)	1	GL-600	68 RR 405	3.28
FAMOUS POEMS. 74 best loved poems for family enjoyment. Read by Marvin Miller. (4 rec.)	1		68 RR 405	3.28 3.28
BENJAMIN FRANKLIN. Complete and unabridged "Autobiography." Read by Michael Rye. (8 records)		***************************************	68 RR 408	5.97
DR. JEKYLL and MR. HYDE. Gene Lockhart reads Stevenson's story of good and evil. (4 records)			68 RR 405	3.28
<b>RALPH WALDO EMERSON.</b> Lew Ayres reads a prize collection of essays, addresses and poems. (5 rec.)			68 RR 409	3.97
WILLIAM SHAKESPEARE. Ronald Colman's reading of all 154 of Shakespeare's sonnets. (3 records)		GL-607 GL-608	68 RR 406 68 RR 408	2.62 5.97
GREAT ESSAYS. Marvin Miller reads 41 of the world's most popular essays. (8 records)	11/2	GL-610	68 RR 441	4.64
ADVENTURES OF SHERLOCK HOLMES, 4 adventures masterfully read by Basil Rathbone. (5 records)		GL-611	68 RR 409	3.97
THE COMPLETE NEW TESTAMENT, Authorized King James version, (26 records)	61/2	R-901	68 RR 401	19.97
THE OLD TESTAMENT. Gen., Judges, Ruth, Esther, Psa., Prov., Eccl., Sol., Isaiah. (26 records) THE COMPLETE NEW TESTAMENT; Catholic Edition, Read by Rev. R. I. Gannon, S.J. (30 records)	71/2		68 RR 401 68 RR 402	19.97
STORIES FROM THE NEW TESTAMENT. 26 favorites tories read with charm. (2 records)	1/2	R-908	68 RR 407	1.96
STORIES FROM THE OLD TESTAMENT. 21 treasured stories especially for young people. (2 records)		R-909	68 RR 407	1.96

#### **TEST RECORDS**

COOK 50NAB. 12". 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. 33½ and 78 rpm. Wt.-10 oz. 4.98

CLARKSTAN 102M. 12" (1 side) 33½-rpm. Use with oscilloscope for checking 33½-rpm equipment. Sweeps 70 to 10,000 cps ±1 db. 20 times per second. Marker pulses at 1. 3. 5. 7 and 10 kc. Curve is modified NARTB. Shpg. wt., 10 oz.

#### TEST TAPES

LIVINGSTON LX-IE. For stereo (offset and inline), and dual and full-track monaural machines. Helps check speed, flutter, response, alignment, etc. 7½ ips. 12 oz.

WESTMINSTER SWB-AL-101. Tests your inline stereo tape machine completely. Includes musical selections. Unusually comprehensive instructions. 7½ ips. Wt., 12 oz. 64 RR 886. NET. 9,56

#### AUDIO BOOK SPEED ADAPTER

MODEL A-100. Permits playing any of the 16½-rpm Audio Book records on a conventional 33½-rpm turntable or record changer. No mechanical changes to the record player are necessary—just place the speed-reducing adapter on the table.

# General Information

# ON TAPE RECORDING EQUIPMENT

#### 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.

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.

#### DECKS AND RECORDERS



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 a "Tape" input (one not specifically 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, Concertone 63K, Pentron NL-4, Sterecorder 555A and Magnecordette will record stereophonically.



#### **New "Mercury" Stereo System Combination Offer**

List. \$254.95

Only \$15.99 Down

A complete tape system for stereo or mon-

A complete tape system for stereo or mon-aural playback and monaural recording—at \$20.00 combination savings. Consists of NL1-SX "Mercury" stereo recorder and PS-5 speaker-amplifier unit. Features pro-visions for playback of both 2 and 4-track stereo tapes and recording of 2-track mon-aural tapes. Has built-in 4-watt amplifier.

speaker, preamp for second stereo chan-

nel, precision 4-pole motor, automatic brak-

Response: 40-11,000 cps at 7½ ips; 40-7000 cps at 3¾ ips. Signal-to-Noise Ratio: 45 db. Inpuls: Mike-Mag Phono, Tuner-Aux.

Outputs: second stereo channel, external amplifier, external speaker. 14x17x11".

ing, and neon level indicator.

- 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

The PS-5 matching speaker-amplifier is used in playing the second stereo channel of the NLI-SX recorder. Has two-way speaker system (6" woofer, 4" tweeter, LC crossover) and 5-watt amplifier. 9½x12¾x12¾.". Complete with mike and reel of tape. For operation from 110-120 v., 60 cycle AC. Shpg. wt., 41 lbs.

92 RU 720-2. Both Units, Only .... 159.90 NL1-SX "MERCURY" RECORDER ONLY. With mike and reel of tape. Shpg. wt., 29 lbs. 

PS-5 SPEAKER-AMPLIFIER ONLY. 12 lbs. 



# NL-1 "Mercury" Recorder

Lowest price ever on the popular Pentron NL-1 "Mercury" two-speed portable tape recorder. Operates at 7½" and 3¾" speeds and features automatic braking, plus precision 4-pole motor. Includes 4-watt amplifier and 6" PM speaker. Single control selects record, play, fast forward, or fast rewind operation. Response: 40-11,000 cps at 7½ ine. Inputs for mike or magnetic plones. 

**DELUXE STEREO SYSTEMS** 



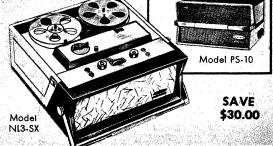
#### New "Champion" Stereo System Combination

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 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 cps at 7½ ips; 40-7000 cps at 3¾ ips. Signal-to-Noise Ratio: 48 db. Flutter: under 0.4% at 7½ ips. Inputs: Microphone or magnetic cartridge; tuner or aux. Outputs: second stereo channel; external amplifier; external speaker. 10 1/4 x14x16 1/4

In portable cabinet; with mike and reel of tape, For 110-120 v., 60 cycle AC. Shpg. wt., 33 lbs. 

91 RU 754. NL-2. As above; monaural only. 31 lbs. . . . . . 159.95



## 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-fi 10-watt amplifier with push-pull output; highly accurate professional-type VU meter for gauging record level; four top-qualith-lif- ispeakers (2—6" woofers, 6" mid-range, exponential tweeter, double LC crossovers at 600 cps and 2000 cps). Response: 40-15,000 cps at 7½ ips; 40-7,500 cps at 3½ ips. Signal-to-Noise Ratio: 50 d0 17½x17½x11". In handsome portable case with heavy-duty all-metal handle.

The PS-10 speaker-amplifier matches the attractive styling of the 

Includes mike and reel of tape. For operation from 110-120 v., 60 

91 RU 881, NL3-SX "Aristocrat" Stereo Recorder Only. With micro-

91 RU 756, Nt-3, As above; monaural only, 38 lbs...... 199.95

91 RU 885, PS-10 Speaker-Amplifier Only, 25 lbs.............. 69.95

Allied Radio Corporation, 100 N. Western Ave., Chicago 80, III.

#### PENTRON

## STEREO-MONAURAL RECORDER & ACCESSORIES



#### A COMPLETE PORTABLE STEREO/MONAURAL TAPE SYSTEM

- Make and Play Excitingly Real Stereophonic Recordings
- Play Conventional and 4-Track **Stereo Tapes**
- Complete Erase Facilities
- Each Speaker System is in Half of a Split Case. Halves Lock Together for Portability Microphones

#### FEATURING TWO 10-WATT AMPLIFIER SECTIONS

Interlocking

Speaker

Systems

\$**349**<sup>95</sup>

\$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

10-watt amplifiers and two 4x6" oval speakers that may be used for monitoring, or eliminating the stereo "center hole."

Features include micro-switch end-of-reel 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 cps @ 7½ ips, 40-10, 000 cps @ 3½ ips. Signal-to-Noise Ratio: 50 db. Flutter: under 0.3% @ 7½ ips. Equalization: NARTB playback @ 7½ ips. 2 input jacks with switching accommodate

stereo or monaural magnetic phono, high-impedance mike and tuner inputs. Has four output jacks for two external amplifiers and two speakers.

1034x171/6x173/6" overall. For 110-120 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" woofer, 6" midrange, 4" tweeter and 2 LC crossovers. Systems lock together, face-to-face, forming an easy-to-carry, completely enclosed case. Match NL-4. With 2—10' cables. Size (locked): 16x14x9". Shpg. wt., 20 lbs.

91 RU 883. List, \$75.00. NET .... 59.95

RC-6 REMOTE PLAYBACK CONTROL. Has balancing control, channel-reverse switch, master volume control. 15' cable. 1 lb. 91 R 886. List, \$15.00, NET.......9.95



PLAYS AND RECORDS STEREO

AND MONAURAL TAPES-PLAYS

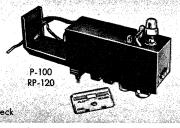
**NEW 4-TRACK RECORDINGS** 

Remarkably versatile, the "Emper-or II" tape recorder offers obsoles-cence-proof tape recording and play-

back 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 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.

> STEREO AND MONAURAL TAPE DECKS AND PREAMPS





BELL TAPE DECKS. High-quality tape decks featuring DC dynamic braking, three 4-pole motors, automatic tape shut-off, and operation 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" reels.

Specifications: Frequency Response: 40 to 10,000 cps ±2 db; 30 to 15,000 cps ±4 db (record and playback). Signal-to-Noise Ratio: Better than 50 db. Flutter: Less than ¼ of 1% at 7½ 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: 7½ and 3¾ 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  $15^3\%x13^5\%$ ; requires  $5\frac{1}{2}$  below,  $1\frac{7}{6}$ % above mounting surface. For operation from 110-120 volts, 60 cycle AC. Shpg. wt., 21 lbs.

Stock No. | Model Operation 10% Down NET 91 RU 859 T-210 Monaural record, erase and playback 91 RU 870 T-211 Stereo playback 91 RU 871 T-212 Mon. record-playback; stereo playback 91 RU 872 T-213 Mon. and stereo record-playback \$10.78 107.75 12 74 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/x171/x161/2. For 110-120 v. 60 cycle AC. Wt., 54 lbs. 

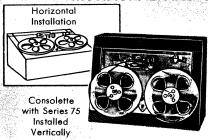
MODEL T-216. As above, but for monaural recording and stereo or monaural playback. Includes T-212 Tape Deck; 1—RP-120 and 1—P-100 Preamp; and Carrying Case. Shpg. wt., 54 lbs.

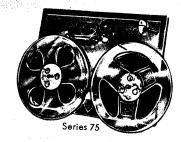
MODEL P-100 PLAYBACK PREAMP. Provides NARTB tape equalization and high-gain amplification, with less than 0.1% distortion at 1-volt output. 53 db gain at 1000 cycles; output from maximum-level tape recording, 2.3 volts, when used with Bell tape decks. For operation from 110-120 v., 60 cycles AC. Shpg. wt., 534 lbs. 

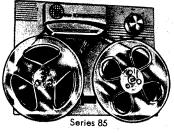
CARRYING CASE. Professional-style carrying case for Bell tape decks and preamps. Covered with charcoal ray pyroxylin; contrasting trim. 83/2x17/4x161/2". Shpg. wt., 13 lbs. 91 RU 875, NET.....

#### MONAURAL AND STEREO TAPE DECKS AND PREAMPS

# VIKING







#### **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 121/2x83/4" area; 11/2" above, 31/2" below mtg. board.

SPECIFICATIONS: Frequency Response: ±3 db, 40-14,000 cps. Signal-to-Noise Ratio: 55 db or better. Flutter: 0.2% average. Tape Speed: 7½ ips; convertible to 3¾ ips from underside of mounting plate. Speed change knob on front of deck. Maximum Reel Size: 7". Playback Head Output: 2.5 millivolts. Gap Width: 0.00015". For operation from 110-120 volts, 60 cycle AC. Shpg. wt., 11 lbs.

MODEL FF75LP. Monaural playback.

MODEL FF75ES. Stereo (inline) erase-record and playback. Features tape lifter and pressure pads.

MODEL FF75R-LP. Monaural erase-record. Features tape lifter and 

#### **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 fast rewind—outer ring selects forward, stop or cue); footage counter; and tape lifters and pressure pads. Require 13x9½" area; 1½" above, 3½" below mtg. board.

SPECIFICATIONS: Frequency Response: ±3 db, 30-14,000 cps. Signal-to-Noise: 50 db. Flutter: 0.2% average. Tape Speed: 7½ ips or 3¾ ips; 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.....

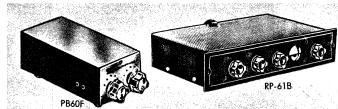
MODEL 85ESQ. Monaural-stereo erase-record-playback. Has inline record-playback heads and independent dual-track erase heads; inline four-track heads are included for playback of four-track, 3¾ ips tapes. Inline head provides 45 db interchannel cross-talk rejection. Requires two RP62's (below) for stereo recording. 

#### **CONSOLETTES AND ENCLOSURES FOR SERIES 75 AND 85**

91 RX 865. 400 Consolette. Metal base for any Viking Series 75 deck 

91 RX 866. 401 Enclosure. Amplifier enclosure to match above. Accommodates one RP-61B. Tan finish. Shpg. wt., 43/4 lbs. NET. . 7.50 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-61B and 2 PB60F preamps. Wt., 141bs. NET 34.00





#### **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 85SR tape deck to add tape to your system. Otherwise, add a PB60 preamplifier

FOR MONAURAL RECORDING AND PLAYBACK. Use either an FF75-LP or 85SR tape deck and one RP-61B or RP62 record-playback 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 85SR 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. 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 cps. ±2 db. Variable equalization control. 65%x33%x21%". For 110-120 v., 60 cycle AC. Wt., 7 lbs. 99 R 182. Only \$2.95 Down. NET.....

MODEL RP-61B RECORD-PLAYBACK 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/ax 21/4x634". For 110-120 v., 60 cycles AC. Wt., 71/2 lbs. 91 R 733. Only \$7.75 Down. NET.....

MODEL RP62 RECORD-PLAYBACK PREAMP. As above, but has brushed chrome panel to match Series 85 decks. Wt., 7½ lbs. 91 R 891. Only \$7.75 Down. NET.....

MODEL RP61 VU RECORD-PLAYBACK PREAMP. Same as RP-61B, above, 

D381A REEL RETAINERS. Molded rubber reel retainers for securing reels when deck is used in vertical position. Wt., 5 oz. 

D305 DECK MOUNTING FLANGE. For custom mounting any Series 75 or Series 85 deck. Mounts flush with flange. Neutral tan. Size: 103/4x141/4". Shpg. wt., 8 oz. 91 RX 887, NET..... 



#### MODEL 910 UNIVERSAL "A" STEREO RECORDER

\$495°° \$49.50 DOWN

 Reproduces 2 and 4-Track Stereo Records and Plays Back Monaural

Automatic Shut-Off At End of Tape

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 tape—simply 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.

MODEL 2010 MATCHING AMPLIFIER-SPEAKER. Ingeniously engineered single-case unit, providing substantially flat speaker output, 65-10,000 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: ±0.5 db, 20-20,000 cps. Noise Level: -70 db. Controls: Volume, Tone. Rated Output: 10 watts. Inputs: Tape, Tuner, Phono, TV. &" PM speaker of special Ampex design. Auxiliary AC outlet. 9x17½x15". For 110-120 v., 60 cycle AC. Shpg. wt., 35 lbs.

#### **MODEL 601 BROADCAST QUALITY RECORDERS**

\$595°° \$59.50 DOWN

- Superb Fidelity—Precise Timing
   Direct Reading, Illuminated Meter
- 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: 7½ ips. Reel Size: 7" maximum. Response: 30-15,000 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" ret. Power Drain: 61 watts. Less mike. Size, 8x13¾x16½". For 110-120 volts, 60 cycle AC. Shpg. wt., 35 lbs.
95 RZ 978. Dual-Track. NET. 595.00

95 RZ 982. Dual-Track. For custom mounting. Size: 5x121/2x151/2". 95 RZ 983. Full-Track. For custom mounting. Size: 5x121/2x151/2". 

MODEL 601-2 STEREOPHONIC RECORDER. As above, but with stereo heads (in-line) dual preamps and meters. 8x13x24½". With case. For 110-120 volts, 60 cycle AC. Shpg. wt., 54 lbs. 

LOW-IMPEDANCE INPUT TRANSFORMER. Plug-in type for use with Series "600". Shpg. wt., ½ lb. 

MODEL 620P AMPLIFIER-SPEAKER. 10-watt amplifier and special 8" speaker. Two may be used with 601-2 for stereo. Speaker response 65-10,000 cps. Amplifier response, ±0.5 db. 20-20,000 cps. 13x16x 8". For 110-120 v., 60 cycle AC. Sppg. wt., 28 lbs. 95 RU 980. Only \$18.95 Down. NET.....

#### MAGNECORDETTE 101 Stereo Recorder

**\$449**95

\$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 professional-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. Monaural-stereo switch and recording indicator located on transport panel. Perfectly matched with speaker-amplifiers, below.

- Provides Professional-Quality Stereo Fidelity
- Dual Meters for Stereo Recording Balance
- Two Ampliflers Mounted on a Single Chassis

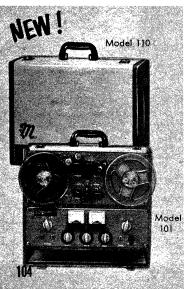
SPECIFICATIONS: Playback-Record Function: Stacked stereo; half-track monaural. Tape Speeds: 7½ and 3¾ ips. Frequency Response: ±2 db, 50-12,000 cps at 7½ ips. ±2 db, 50-6000 cps at 3¾ ips. Reel Size: 5 and/or 7". 2 Inputs: accommodates mike. tuner, TV or phono. Preamp Output: cathode follower, each preamp. Two meters monitor channels. Complete with handsome gray and white case. Less speaker-amplifiers and mikes, 15¾x17¾x11½". For 110-120 v., 60 cycle AC. Shpg. wt., 72 lbs.
91 RZ 856. \$45.00 Down. NET. 449.95 91 RZ 856. \$45.00 Down. NET. 449.95

MAGNECORDETTE MODEL 110 SPEAKER-AMPLIFIER

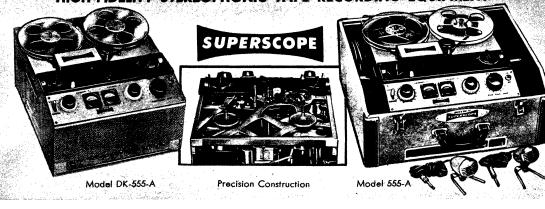
Combination speaker-amplifier in a portable carrying case. Consists of an 8" full-range speaker mounted in a highly attractive case designed to match Model 101 (listed above) in appearance. Ideally suited for monaural playback—two required for stereo reproduction. duction. Delivers remarkably clear response across the entire audio spectrum.

SPECIFICATIONS: Frequency Response: 20-20,000 cps. Controls: Volume, Bass and Treble. Signal-to-Noise Level: 60 db. Handsomely styled, durably constructed case is charcoal gray and oyster white. Luggage-type handle permits easy portability. 157%x 1713/6x117/6". Shpg. wt., 30 lbs. 91 RU 857. \$13.00 Down. NET. 129.95

See Page 444 for Allied's Easy Payment Plan



#### HIGH-FIDELITY STEREOPHONIC TAPE RECORDING EQUIPMENT



#### **NEW DK-555-A STERECORDER**

Dual-speed stereo recording and playback unit for custom mounting. Has same rugged construction and outstanding features as 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. 8½x15½x13½". For 110-120 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" extended range speakers, individually mounted in 2 Lansing-designed enclosures. Handsome enclosures combine to form a matching out closures combine to form a matching portable case—perfect companion-piece for the tape transport. Size of speaker case: 11½x: 19½x15½". 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**

**NET** \$**595**00

\$59.50 DOWN

- Has 2 Recording Preamps—2 Playback Ampliflers
- Separate Volume and Tone Controls for Each Channel
- Selector for Stereo or Monaural Record-Playback

Enjoy the fascination and excitement of recording and listening to your own stereo-phonic 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 recordallows instant change to either stereo record-playback 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. SPECIFICATIONS: Frequency Response: ±2 db, 30-16,000 cps at 7½ ips; ±2 db, 50-12,000 cps at 3¾ ips. Takes 7" 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). fiers. 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. 10½x19 x15½". Less speakers. For 110-120 volts, 60 cycle AC. Shpg. wt., 48 lbs. 91 RU 788. NET .... 595.00

#### **NEW Stereo and Monaural Tape Equipment** MODEL 63K RECORDER

AMERICAN CONCERTONE

\$755°° \$75.50 DOWN

- Records and Plays Back Both Stereo and Monaural
- Dual-Speed—7½ and 15 ips—Push-Button Controls
- Handles Up To 101/2" Reels—Front Panel Torque Switch

Expertly constructed, dual-speed stereo tape recorder in handsome carrying case. Records Expertly constructed, dual-speed stereo tape recorder in handsome carrying case. Records and plays back both stereo and monaural tapes; handles up to 10½" 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: ±2 db, 50-12,000 cps at 7½ ips; ±2 db, 50-15,000 cps at 15 ips. Signal-to-Noise Ratio: 50 db at 7½ ips; 50 db at 15 ips. Flutter and Wow: 0.15% RMS at 7½ ips; 0.25% RMS at 15 ips. 21 np uts: high-impedance 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). 6x14½x16¼". For operation from 110-120 v., 60 cycle AC. Shpg. wt., 45 lbs. 91 RU 794. NET.....

#### **MODEL 62K RECORDER**

Similar to Model 63K described above, but for monaural record-stereo playback. Consists of tape transport with single record amplifier and dual playback preamplifiers. With case. 6x14\(\frac{1}{6}\)x16\(\frac{1}{6}\). For 110-120 v., 60 cycle AC. Shpg. wt., 45 lbs. 91 RU 793. \(\frac{8}{6}\)5.50 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. 6x141/ax161/4". For 110-120 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 Plays stereo and monaural tapes at 7½ or 3¾ ips. Features push-button controls, automatic cut-off switch, torque-control switch, output level control, etc. Handles upto 10½" reels. Frequency Response: ±2 db, 50-12,000 cps at 7½ ips; ±2 db, 50-7500 cps at 3¾ ips. 6x16¾x14½". With rack-mount adapter. Less mike. For 110-120 volts, 60 cycle AC. Shpg. wt., 38 lbs.
91 RU 795.¾44.50 Down. NET. 445.00

MODEL 4B. Remote control with 12' cable. For use with Series 60. Wt. 5 lbs. 91 R 797. \$5.25 Down. NET...... 52.50 MODEL 260. Speaker and 17-watt amplifier for Series 60 recorders. In case,  $6x14\frac{1}{8}x$   $16\frac{1}{4}$ ". Shpg. wt., 18 lbs. 91 RU 791. \$14.95 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 trans-

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.....



# knight® TOP-QUALITY RECORDING TAPES

knight Tapes Offer You Exceptional Quality at New Money Saving Prices

FULL 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 experts your 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.



WILL NOT CUP 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 "cupping"-response is superior.

## knight "PLUS-PLAY" 1-Mil Mylar Tape

AS LOW AS

\$173 5-Lot Price

- Meets Critical Professional Specifications
- 50% More Recording Time Than Standard Tape
- Factory-Fresh and Splice-Free—Cellophane Sealed

Allied's finest quality recording tape—provides 50% greater recording time than standard tapes—and has Mylar plastic base for extreme strength and break-resistance. Mylar is the most permanent medium yet developed for magnetic recording. Characteristics meet the most critical professional requirements and government specs. Factory-fresh and splice-free, each reel is sealed in cellophane and packaged in a hinged box suitable for filing. Your cost is far below that of other high suplity recording topes. is far below that of other high-quality recording tapes.

The Mylar base of this outstanding tape provides exceptional reliability, even under adverse conditions—virtually unaffected by extremes in heat, cold and humidity. Mylar makes Knight "Plus-Play" superior to ordinary recording tape.

Stock No.	Feet	Reel	Lbs.	I-4, EACH	5-Up, EACH
92 R 939	900	5"	3/4	1.92	1.73
92 R 940	1800	7"	11/4	3.33	2.99

#### knight "PLUS-PLAY" 1-Mil Acetate Tape

AS LOW AS

Provides Extended Playing Time—Up to 3 Hours

\$|39

• Has 50% More Footage than Conventional Tape

Offers Excellent Fidelity At Minimum Cost



One of the most popular recording tapes available today. Offers superior quality, greatly extended playing time (as much as three hours per reel) and genuine savings. Much thinner than standard tape. 'Plus-Play' tape is wound 1800 feet to a 7-inch reel, to provide 50% more footage than conventional tape. This additional length permits uninterrupted recordings of entire concerts, conferences, or other events, on a single tape.

Knight "Plus-Play" tape offers maximum fidelity at minimum cost. Thinner base and special coating processes are employed to make its greater length possible. Uniformly coated with red oxide on cellulose acetate—delivers excellent response. Supplied on transparent molded plastic reels.

Stock No.	Feet	Reel	Lbs.	I-4, EACH	5-Up, EACH
96 R 981	900	5"	3/4	1.55	1.39
96 R 982	1800	7"	11/4	2.77	2.49

#### knight STANDARD 1½-Mil Acetate Tape

AS LOW AS

\$119

- Excellent Performance At Unusually Low Cost
- Delivers Noise-Free Reproduction—Uniform Output
- Guaranteed Splice-Free for Dependable Service

5-Lot Price

Allied's own top-quality, acetate-base recording tape—unusually low in cost, and carefully manufactured to fulfill the most critical recording requirements. Delivers outstanding results in professional as well as home recording applications. Its pure, red-oxide recording surface is precision-applied to assure excellent high-frequency response, noise-free reproduction, uniform output, as well as minimum abrasive action.

You can be sure of the exceptional quality of this value-packed recording tape--its performance is comparable with that of any other brand of tape available, regardless of price. Supplied on clear plastic reels.

Stock No.	Feet	Reel	Lbs.	1-4, EACH	5-Up, EACH
96 R 698	600 1200	5"	1/2	1.32	1.19
96 H 699		1	<u> </u>		1.69



1-Mil Mylar Tape



1-Mil Acetate Tape



11/2 -Mil Acetate Tape







Low-Print

7.70

8.75

10.71

9.64

16.40

STANDARD TAPE—11/2-MIL ACETATE. Plastic reels except \*NARTB aluminum (3" center opening). Av. shpg. wt., 8 oz.

No.	Type	Footage	Reel	List	EACH	Lot Price
96 R 562	151	150'	3"	\$0.70	.46	.41†
96 R 561	351	300′	4"	1.35	.88	.79†
96 R 560	651	600′	5"	2.25	1.47	1.32+
96 R 356	1251	1200'	7"	3.50	2.29	2.06+
96 R 357	2551R*	2500'	101/2"	10.90	7.12	6.41

tNET EACH, 10 or more. INET EACH, 5 or more.

"LONGER-RECORDING" TAPE—1-MIL ACETATE. 50% more recording time. Plastic reels except \*NARTB alum. (3" ctr. opening). 8 oz.

No.	Туре	Footage	Reel	List	EACH	Lot Price
92 R 935	941	900'	5"	\$3.50	2.29	2.06†
92 R 936		1800′	7″	5.50	3.60	3.23†
92 R 937	3641R*	3600′	101/2"	12.85	8.40	7.56‡

†NET EACH, 10 or more. ‡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" center opening). §Plastic reel in self-mailer carton. 12 oz.

No.	Туре	Footage	Reel	List	EACH	Lot Price
96 R 838	261§	225'	3"	\$1.00	.66	.59†
96 R 955	961	900'	5"	3.60	2.35	2.12†
96 R 956	1861	1800'	7″	6.20	4.05	3.65†
96 R 958	3661R*	3600′	101/2"	14.40	9.80	8.82‡

†NET EACH, 10 or more. INET 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 R 736		96 R 738		600′	5"	1.47	1.32
96 R 737	1251G	96 R 739	1251B	1200′	7"	2.29	2.06

LOW-PRINT TAPE. Minimizes print-through of signal while tape is in storage. \*1½-mil acetate. †1½-mil Mylar. Av. shpg. wt., 12 oz. Stock Mfr's I-4, EACH IO-UP Foot-Reel List No. Size EACH Type age 1251-M\* 7" 92 R 931 92 R 930 1200 \$4.30 2.80 7.35 2.53 7.35 2.80 2551R-M\* 101/2" 12.50 8.16

12004

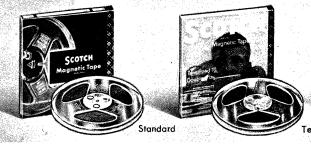
2500'

101/2" TEMPERED MYLAR TAPE. Has twice the strength of conventional 1/2-mil tape. Plastic reel. Av. shpg. wt., 8 oz. Reel Type Stock No. Length List 1-9, EA. 10-Up, EA.

2400' TAPE RECORDER REELS. 101/2". With box. \*3" center. Wt., 8 oz.

 N	٥.	Type	Description	List	1-4, EA.	5-Up, EA.
		10FS	NARTB aluminum* Fiberglass, RETMA adapterless 5/16" 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





92 R 932

92 R 933

92 R 959

92 R 960 2431T

1271-M

1231T

2571R-M†

MINNESOTA MINING

4.53 9.64

MAGNETIC TAPE

TYPE 111 STANDARD TAPE—1½-MIL ACETATE. General-purpose acetate base recording tape of high quality. Supplied on high-strength molded plastic reel, except \*aluminum NAB reel (3-inch center opening). Av. shpg. wt., per reel, 8 oz.

Stock No.	Mfr's Type	Foot-	Reel Size	List	I-II, EACH	12-Up, EACH
92 R 991	111-1.5	150'	3"	\$ .70	.46	.41
92 R 992	111-3	300'	4"	1.35	.88	.79
92 R 993	111-6	600′	5"	2.25	1.47	1.32
92 R 994	111-12	1200'	7"	3.50	2.29	2.06
92 R 995	111-24R*	2400'	101/2"	10.90	7.13	6.41

TYPE 190 EXTRA-PLAY TAPE—1-MIL ACETATE. Thin acetate base provides 50% more playing time on standard size reels. \*NAB aluminum reel (3" center opening). Av. shpg. wt., 12 oz.

Stock No.	Mfr's Type	Foot- age	Reel Size	List	I-II, EACH	12-Up, EACH
92 R 996	190-9-100G	900'	5"	\$3.50	2.29	2,06
	190-18-100G	1800'	7"	5.50	3.60	3.23
92 R 998	190-36R-100G	3600'	101/2"*	12.85	8.40	7.56

TYPE 150 EXTRA-PLAY TAPE-1-MIL MYLAR. Extra-strong Mylar plas-11YPE 150 EATRA-FLAY 1ATE—1-MIL MILAK. EATLA-SLONG MYRIA plassic base tape; perfect for the discriminating tape recording fan and an excellent value at these low prices. The well-known durability of Mylar tape and its immunity to stretching or breaking make it ideal for use in recording lengthy musical programs, long conferences, etc. Plastic reels except \*NAB aluminum 10½" reel (3" center opening). Av. shpg. wt., 12 oz.

Stock No.	Mfr's Type	Foot- age	Reel Size	List	I-II, EACH	12-Up, EACH
92 R 900	150-9	900'	5"	\$3.60	2.35	2,12
92 R 901	150-18	1800′	7"	6.20	4.04	3.65
92 R 903	150-36R*	3600'	101/2"	14.40	9.41	8.47

TYPE 120-12 HIGH-OUTPUT TAPE—1½-MIL ACETATE. 8 to 12 db higher output. 1200'. Plastic 7" reel. Shpg. wt., 12 oz. 92 R 999 12-UP, EACH......3.24 1-11, NET EACH......3.60

Low-Print

TYPE 41- $\frac{1}{2}$ S SPLICING TAPE. Coated one side with non-run adhesive. 150",  $\frac{1}{2}$ " wide, on handy dispenser. Shpg. wt., 3 oz. 96 R 232. NET.....

LOW-PRINT TAPE—1½-MIL ACETATE. Minimizes print-through during storage. 7" reel, 1200'; 10½" reel, 2400'. Shpg. wt., 12 oz.

Stock No.	Type	Reel Size	1-11, EA.	12-Up, EA.
92 R 917	131-12	7"	2.88	2.59
92 R 918	131-24R	101/2"	8.40	7.56

TYPE 200 TENSILIZED TAPE. Super-strength, long-play tape. Polyester 34-mil base. 7" reel; 2400'. Shpg. wt., 12 oz. 92 R 934. 24-Up, EACH......5.14 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″	25é	17€	15¢
96 R 349	4"	55¢	37¢	33¢
96 R 236	5″	65¢	44¢	39¢
96 R 194	7″	75¢	50¢	45¢

ONE-REEL MAILING BOXES. Shpg. wt., 3 oz.

Stock No.	Reel Size	List	1-11, EACH	12-Up, EACH				
96 R 324	5"	15¢	10¢	9¢				
96 R 323	7″	20¢	13¢	12¢				
96 R 322	10½″	30é	20¢	18¢				

#### **RECORDING TAPE AND ACCESSORIES**





#### Reeves SOUNDCRAFT Recording Tape

"LIFETIME" TAPE—1½-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 96 R 969 92 R 954		600' 1200' 2400'	5" 7" 101/4"	2.78 4.58	2.50 4.12 9.17

"RED DIAMOND" STANDARD TAPE—1½-MIL 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		150'	3"	.46	.41
96 R 961	SPN-3	300′	4"	.88	.79
96 R 962	SPN-6	600'	5"	1.47	1.32
96 R 963	SPN-12	1200'	7"	2.29	2.06
92 R 950	SPN-24RF*	2400'	101/2"	7.12	6.41

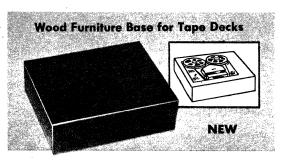
"PLUS-50" TAPE—1-MIL MYLAR. 50% more footage. Micropolished. Mylar base. Plastic reels except \*RETMA fiberglass. 8 oz.

St	ock No.	Mfr's Type	Footage	Reel Size	1-11, EA.	12-Up, EA.
	R 952		225'	3"	.66	.59
	R 972		900'	5″	2.45	2.20
		PL-18	1800′	7″	4.24	3.82
92	R 953	PL-36RF*	3600'	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

COMBINATION OFFERS-REELS OF TAPE IN CHESTS. \*8x73/4x71/2".

No.	Mfr's Type	I		Lbs.	List	NET EACH
96 R 964	SPNC-7	"Red Diamond"	5-1200'	8	17.50	11.45
96 R 953			5-1200'	8	31.50	22.90
96 R 952	PLC-7	"Plus-50"	51800'	9	30.00	21.20
96 R 959	7STC	Tape Chest Or	ıly*	4	1.50	1.10



Expertly designed, carefully made furniture bases for shock-mounting of tape decks. Correct size for Viking, Bell and Pentron decks. Constructed of selected ¾" 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, 6½", width, 21".; depth, 16¾". Base is completely pre-assembled. Shpg. wt., 15 lbs.

91 RU 563C.	Mahogany			21.75
	Limed Oak			
91 RU 563C.	Walnut			21 <b>.</b> 75
HEAVY BUTY B	DANGER CUREC FO	20 4001	40# 1	N7

#### 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.

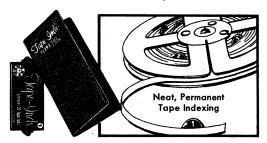
Stock	Mfr's	Таре	Reel	Mils	List	NET	EACH
No.	Type	Footage	Size	Mils	LIST	1-11	12-Up
92 R 963		900′	5"	1	\$3.50	2.29	2.06
92 R 964		600′	5"	11/2	2.25	1.47	1.32
92 R 965		1800'	7"	1	5.50	3.60	3.23
92 R 966	- 256C1	1200′	7"	11/2	3.50	2.29	2.06

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	Mfr's	Tape	Reel	Mils	List	NET EACH		
No.	Type	Footage	Size	Milis	Lisi	1-11	12-Up	
92 R 967		1200'	5"	1/2	\$4.55	2.97	2.68	
92 R 968	253C1	900′	5"	1	3.60	2.35	2.12	
92 R 969		600′	5"	11/2	4.10	2.68	2.41	
92 R 970	257C1	2400'	7"	1/2	7.85	5.34	4.61	
92 R 971	258C1	1800'	7"	1	6.20	4.05	3.65	
92 R 972	259C1	1200′	7″	11/2	6.65	4.34	3.91	

TYPE 502C1. As above, but holds five 7" reels of tape. Size is 75%x 43%x73%" deep. Shpg. wt., ½ lb.
92 R 962. List, \$1.40. NET. . . . . . . . . . . . . . . . . . 82c

#### **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). Sppg. wt., 2 oz.

92 R 973. NET.

TAPE INDEX FOLDER. Reinforced plastic filing folder—holds ten tape selection cards. Size, 7x31/8". Shpg. wt., 4 oz.

98c

# FOR BETTER, MORE VERSATILE RECORDING Head Installed





#### 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 property of the corrections converting to the corrections. form 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 amplifier-speaker system not having tape-head inputs.
- A STEREO TAPE HEAD ASSEMBLIES. Compact playback-record heads—mount on side of tape unit with detachable bracket. Tape is or tape thin with detailment of acket. Tape is routed through stereo assembly and then through present tape guides. May also be used monaurally. Response: 30-12,000 cps ±3 db \*at 7½ ips, †at 3¾ ips. 50 db crosstalk rejection. (Use SK-50 for the 4-track pre-recorded stereo tapes.) 15/23x13/16/16/16 oc.

92 RC 976. SK-100\*. 2-track, NET 23.50 92 RC 977. SK-50†. 4-track, NET . . . 26.00

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. 14.00

92 RC 979, EK-50, 4-track, NET..... 14.00

C PL-100 PLAYBACK AMPLIFIER. Designed to match high-impedance magnetic tape to match night-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 NARTB and RIAA. 

- 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 RA-100'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 installation without erase requires 1 pin-plug cable; a monaural installation with erase requires 2. The numbers are doubled for stereo, with the addition of 1 cable for stereo recording. See page 93 for cables (Stock No. 99 \$ 855).

RA-100 RECORDING AMPLIFIER. Universal recording amplifier-can be adjusted for 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 monitors leads.

Low-level Input: mike, tape head or magnetic phono cartridge. High-level Input: tuner or ceramic cartridge. Outputs: audio and 65 kc bias to recording head (currents adjustable), high (6K to 10K) or low (20 to 30 ohms) impedance to erase head. -55 db signal-tonoise ratio. 296x596x8". For 110-120 v. 60-cycle AC. Shpg. wt., 6 lbs.

49.50 92 R 981. NET...

#### Magnetic Telephone Pickups



High-impedance coil units designed to permit recording both sides of a telephone conversation. Ideal for home or 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.

- E ELECTRO-DUCER TELEPHONE PICKUP. For all types of telephones. Has removable coil. 1x6½x9½". 12 ft. cable. 1¼ lbs. 99 \$ 482. List, \$12.50. NET.....
- ELECTRO-SCRIBER TELEPHONE PICKUP. For standard rectangular-base cradle telephones. Heavy rubber construction. With 8 ft. cable and 3-prong Jones plug. 13/4 lbs. 99 \$ 489. List, \$12.50. NET.....
- G MAGNETIC RECORDING INDUSTRIES VM938 PICKUP. For any telephone. 13/x3/4x4". 5' cord, less plug, 8 oz. 99 S 478. NET....
- KORD-O-KOIL MAGNETIC PICKUP. For cradle telephones only. Size  $5\frac{1}{2}x\frac{9}{8}x9\frac{1}{4}$ ". Attractive leatherette finish. Complete with 6-ft. cord and phone plug. Shpg. wt.,  $1\frac{3}{4}$  lbs. .....5.88 99 \$ 486. List, \$10.00. NET.....



\$**7**95

- For Perfect Tape Head Alignment
- For Precision Tape Editing
- For Research, Home and Industry

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 de-

92 R 806. 1/2-Pt. of Iron Suspension. 3/4 lbs. NET.....3.00



#### knight KN-4500 DYNAMIC MICROPHONE

NET **\$24**95 \$2.50 DOWN

- Made by a Famous U.S. Manufacturer
- Perfect for Group Recording
- **Greatly Improves Recording Quality** Fits 90% of Home Tape Recorders

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-ft. cable and shielded screw-type microphone 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 60 to 12,000 cps, assures realistic, natural quality of both voice and music. High impedance output; output level is -56 db. 15/6x1/8″ long. Handsomely finished in black and gold. Shpg. wt., 2½ lbs.

94 \$ 097. Only \$2.50 Down. NET...

#### COMPLETE SELECTION OF QUALITY



#### HANDY KIT FOR TAPE RECORDISTS

NET \$**7**35 A complete kit of helpful, time-saving accessories 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 between selections to permit accurate interval timing.

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 lbs.

94 R 921. NET.....

# Microtran Tape Eraser

# Jiffy-Rase" Tape Eraser



10-Reel Rack

5-Reel Case

110

5-REEL TAPE CARRYING CASE. Rugged tape 5-REEL TAPE CARRYING CASE. Rugged tape case designed for maximum portability—holds five 7" 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 73/4x75/8x33/8". Shpg. wt., 1 lb. 99 R 172 NFT

99 R 172, NET.

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". Shpg. wt., 2 lbs.

#### 92 R 914. List, \$3.98. NET...... 2.40

#### 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, distortion free tapes; des for these who have tion-free tapes; also for those who have Pentron, Viking, or other tape decks with-out stereo erase. Exceptionally easy to operate—simply rotate reel of tape over unit. Tape is quickly demagnetized—cleaner than 

#### TAPE CASES AND RACK

10-REEL TAPE CARRYING CASE. Handsome, lightweight tape carrying case—stores ten 7" reels of tape. Sturdily constructed of wood with a cleanly styled, simulated-leathre, brown and white covering. Has securely fastened carrying handle and clasp lock. Includes protective feet to prevent marring furniture. Measures only 8½x8½x8¾%. Shpg. wt., 3¼ lbs.

#### WIRE RECORDER WIRE AND HEADS

"JIFFY-RASE" BULK TAPE ERASER

Highly efficient, easy-to-use bulk tape eras

Highly efficient, easy-to-use bulk tape eraser—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 clean, noise-free erasure. Tape is restored 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 screw-drivers, pliers, or any other tools in which magnetism is undesirable. 5" O.D. x 3½" H. For 110-120 v., 60 cycle AC. 7 lbs.
96 R 569. \$2.10 Down. NET...... 20.98



WEBSTER-CHICAGO 2904 WIRE RECORD-ING HEAD, Not illus-trated. Replacement head for all Webster-Chicago wire recorders. Records, plays back and erases. Less head cover and mounting screw. Complete with instructions. Wt., 11 oz.

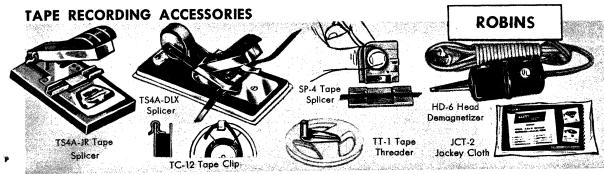
96 R 049. List, \$7.50. NET.... 5.88

#### **ECHO RECORDING WIRE**

High-quality .0036" stainless steel wire on die-cast spools. With plastic leaders.

Stock No.	Spool Size	Shpg. Wt.	NET EACH
96 R   45	¼ hour	6 oz.	1.69
96 R   46	½ hour	8 oz.	2.56
96 R   47	1 hour	11 oz.	4.25

EMPTY METAL SPOOL, Holds 1-hr, wire supply. Shpg. wt., 8 oz. 



TS4A-JR TAPE SPLICER. Compact tape splicer designed for rapid tape editing and repair-ing. Employs replaceable cutter cartridge ing. Employs replaceable cutter cartridge with two operating positions—miter cut and trimming cut. First position cuts tape diagonally, second position presses splicing tape over diagonal cut and trims concave indentation on either side of splice to prevent binding in recording mechanism and layer-to-layer adhesion. Uses ½" splicing tape. Size. 2x3". Shgs. wt., 7 oz. 92 R 983. List, \$6.50. NET...... 4.78

TS4A-DLX TAPE SPLICER. As above, with attached splicing tape dispenser and toggle-action hold down fingers. Supplied with rigid plastic dust cover and splicing tape. Size, 214x53/6". Shpg. wt., 12 oz.

92 R 984. List, \$11.50. NET...... 8.46 TS4A-STD TAPE SPLICER. As above, less splicing tape and holder. 8 oz.

92 R 985. List, \$8.50. NET..........6.25

#### **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 

TT-1 TAPE THREADER. Place your tape against the reel, slip on threader, turn crank a few times, and tape is securely threaded on the reel. For reels to 7". Shpg. wt., 2 oz. 96 R 713. List, 98c. 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 recorder. Reduces squeal, chatter, and head and tape wear. Cloth is washable. 3 oz. 92 R 988. List, \$1.00. NET........59c

ST-500 SPLICING TAPE. Roll of quality splic-

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.......98c

#### Selected Tape Recording Accessories

AUDIO COLORED PLASTIC REELS. Attractive olored plastic reels (less tape) available in blue, green, yellow and red, as well as standard clear plastic. All are available in 5" and 7" sizes. Reels are supplied in boxes. Av. shpg. wt., 4 oz.

Size	Stock No.									
	Ciear	Red		Green	Blue					
5″ 7″	96 R 748 96 R 749	96 R 740 96 R 741	96 R 742 96 R 743	96 R 744 96 R 745	96 R 746 96 R 747					
5" REEL. List, 60c. NET EACH										

AUDIO TYPE 400 HEAD DEMAGNETIZER. Quickly demagnetizes tape recording heads to achieve reduced noise level and distor-tion. 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 of recording heads. Extremely easy to use—just place pole tips against head for a moment and slowly remove. AC magnet dia., 1½". 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. ½x2" labels. Attach to reel for quick identification. Shpg. wt., per pkg., oz. 30 per pkg. 96 R 564, List, 20c, NET PER PKG..... 12c

JIFFY-SPLICE TAPE SPLICER. Holds magnetic 

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 intervals for 3.75", 7.5" and 15" per second. 150-ft. roll. 3 0.2.

92 R 905. NET......57c

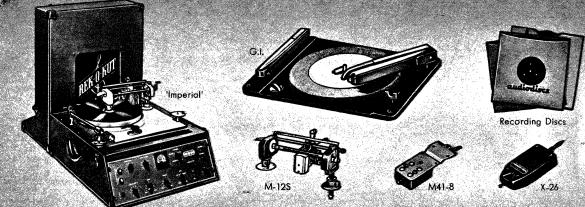
#### SHURE EXACT-REPLACEMENT TAPE RECORDER HEADS

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" leads.

Stock No.	Mfr's Type	Fig.	Coil Impedance	Replaces Older Type	Wt.,	List	NET EACH
65 R 366 65 R 584	815 815H	A A	Low High	TR5, TR5H TR5D, TR5K, TR5C	4	\$15.00 15.00	8 82
65 R 588 92 R 982	816 TR21C-J	B C	High High	TR6C TR16A, 817	4 6	12.00 14.00	7.05 8.23
65 R 586 65 R 413	TR5B* TR16	A C	Low High	TR5B	10 6	17.00 9.00	9.99 5.29
65 R 439	TR26	С	High	TR26	6	11.00	6.47

Fig. A: upper-track record, playback, erase type. Fig. B: upper-track record, playback type. Fig. C: 0.093" upper-track record playback type.

Type 400 Head Demagnetizer Plastic Tape Reel Tape Splicer 30AL Labels Tapemaster **VU Meter** Leader and Timing Tape 111



#### Rek-O-Kut "Imperial" Professional Recorder

Precision Rek-O-Kut disc recorder equipped with the M-12S over-Precision Rek-O-Kut disc recorder equipped with the M-12S overhead recording lathe. Unit will accommodate all standard vertical-mounting 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" playback pickup arm accommodates records up to 16" in diameter. Supplied complete with cutting head (Model R-S6); frequency response, 50-10.000 cps. Less microphone. Uses standard short-shank cutting needle. For 105-125 v., 60 cycle AC. Shpg. wt., 80 lbs. 95 RZ 742. NET.....

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.....

MODEL M-12S-210 MICROGROOVE LEADSCREW. For Model M-12S recording lathe. 210 lines per inch. Shpg. wt., 1 lb.

95 R 743. NET..... MODEL M-12S-240 MICROGROOVE LEADSCREW. As above except 240 lines per inch. Shpg. wt., 1 lb.

95 R 744. NET..... MODEL TR-43H DUAL-SPEED RECORDING TURNTABLE. Dual speed, 12" aluminum turntable. Plays 33½ and 78 rpm. Tapped for M-12S cutter. With heavy-duty, hysteresis synchronous motor. Includes 45-rpm idler. Less cutter. Shpg. wt., 21 lbs. 91 RZ 749. NET.......

#### G. I. Recorder-Phono Assembly

MODEL GI-R851-LP. Low-cost recorder-phono assembly for cutting and playing recordings. Easily mounted in cabinet, carrying case, etc. Cuts discs up to 10" in diameter at 160 lines per inch (standard groove only) at 33½ 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" W, 11½" D; height, 6½", 2¾" above, 3½" 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.

35.70 96 RX 106. List, \$59.50. NET.....

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. 

#### 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, 13/8×5/8x3/4". Complete with 24" leads. Shpg. wt., 1 lb.

65 R 125. NET....... ......

TYPE M41-8 MAGNETIC. Impedance, 8 ohms; connects directly to amplifier output. Upper frequency limit, 7000 cps. Drive voltage, 3 v. (rms). Size, 13/4x11/6x33/4". 24" leads. Shpg. wt., 1 lb. 65 R 128. NET.....

KNIGHT STEEL CUTTING NEEDLES, Short shank. Have .003" tip. Average cutting life, 20 minutes. Provide quiet cutting for fine recording. Shpg. wt., 3 oz. 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.....

#### 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-rpm recordings.

Stock		Size	Labol	Label Base		Lbs	Std.	NET EACH	
No		3126	ranci	Dase	Ea.	Pkg.	Pkg.	Single Lots	Std. Pkg.
69 R	085	7"*	Red	.050"	5 oz.	5	25	.91	.82
69 R	069	8″	Red	.040"	5 oz.	5	25	.71	.65
69 R	070	10"	Red	.040"	6 oz.	81/2	25	1.01	.91
69 R	071	12"	Red	.050"	9 oz.	131/2	25	1.67	1.50
69 RX	072	16"	Red	.050″	1 lb.	25	25	3.01	2.70
69 R	089	8″	Yellow	.040"	5 oz.	5	25	.61	.55
69 R	090	10"	Yellow	.040"	6 oz.	81/2	25	.81	.72
69 R	091	12"	Yellow	.050"	9 oz.	131/2	25	1.30	1.18
69 RX	092	16"	Yellow	.050″	1 lb.	25	25	2.42	2.18
69 R	065	6½"	Blue	.027"	3 oz.	61/2	50	.32	.29
69 R	066	8″	Blue	.027"	4 oz.	71/2	50	.46	.41
69 R	067	10"	Blue	.027"	5 oz.	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. NET FACIL

Stock No.	Size	Base	Wt., Ea.	Lbs., Pkg.	Std. Pkg.	Single Lots	
69 R 260 69 R 261 69 RX 262		.040″ .050″ .050″	5 oz. 8 oz. 26 oz.	8 14 16	25 25 25	1.11 1.73 3.17	1.00 1.56 2.86
THE PLAYBA				cast-qua	ality do	uble-faced	discs.

69 R 69 R 69 R	263 265 266	6½″ 10″ 12″	.040" .040" .050"	3 oz. 5 oz. 8 oz.	4 8 14	25 25 25	.59 1.01 1.67	.53, .91
THE A	JDITIO	N. For	record	ling in	the hom	ie. Dou	ble-faced	discs.
60 R	268	61/4"	040"	3 07	4	25	52	47

#### 69 R 040" 5 07. 8 oz.

#### SEMI-PROFESSIONAL & HOME-TYPE RECORDING DISCS

For home, semi-professional and school use. Aluminum base (except †paper bond base), cellulose acetate coated. Red Label is semi-professional grade with excellent sound qualities.

					1			NEI	EACH	
Stock No.		Size	Label	Base	Wt., Ea.	Std. Pkg.	Wt., Std. Pkg.	Single Lots	Std. Pkg.	
69 R I	09	61/2"	Orange	+	3 oz.	6	½ lb.	25¢	15¢	
69 R I	40	61/2"	Red	.021"	3 oz.	5	½ lb.	30¢	27¢	
69 R I	41	8"	Red	.021"	4 oz.	5	3/4 lb.	40¢	36¢	
69 R I	42	10"	Red	.021"	4 oz.	5	1 lb.	60¢	54¢	
69 R I	43	12"	Red	.021"	6 oz.	5	2½ lbs.	73¢	66⊄	
69 R I	95	61/2"	Purple	.012"	3 oz.	5	½ lb.	23¢	21¢	
69 R I	96	8"	Purple	.012"	4 oz.	5	3/4 lb.	33¢	30¢	
69 R I	97	10"	Purple	.012"	4 oz.	5	1 lb.	47¢	42¢	

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. 31c NET PER PKG. 35c

#### Disc Cutting Needles

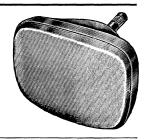
AUDIOPOINTS. High-quality recording needles. \*For non-professional and Presto Model K recorders. †For professional recorders. 65 R 960 has 87° included angle; 65 R 961, 70°. All .003" except 65 R 966, .001". Shpg. wt., 2 oz.

Stock No.	Mfr's Type	Description	NET EACH
65 R 960*	14	Sapphire, short dural shank	4.85
65 R 967*	20	As above, for microgroove	
65 R 961†	14	Sapphire, long dural shank	
65 R 966†	20	As above, for microgroove	
65 R 962*	202	Sapphire, short brass shank	3.88
65 R 963†	202	Sapphire, long brass shank	
65 R 964*	34	Stellite, short brass shank	1.47
65 R 965†	34	Stellite, long brass shank	

## RCA TV Picture Tubes



Fully guaranteed for 1 year. Number prefix in tube type indicates screen size. All tubes have magnetic focus and deflection except ‡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.		NET			Shpg. Wt.		NET
Dept.	Tube Type	Lbs.	List	EACH	Dept.	Tube Type	L.bs.	List	EACH
AU3 AU4 AU3 AU3 AU3	8DP4‡ 10APB4B 10BP4A 10FP4A* 12KP4A*	4 5 13 13 17	\$32.00 23.25 22.50 27.50 31.75	23.52 17.10 16.53 20.19 23.20	AU3	19AP4B 20DP4A/20CP4A 20DP4C/20CP4D* 20HP4A/20MP4‡ 20HP4D‡*	24 29 29 29 29	\$52.50 40.25 48.00 42.00 49.75	38.68 29.60 35.15 30.90 36.46
AU3 AU4 AU3 AU3 AU3	12LP4A 14ASP4 <u>t</u> * 14ATP4 <u>t</u> * 14EP4/14CP4/14BP4 14HP4 <u>t</u>	17 17 12 14 14	27.25 43.50 36.00 29.25 29.25	19.93 31.88 26.46 21.56 21.56	AU3 AU3 AU3	21ACP4A/21AMP4A/21BSP4* 21ALP4A/21ALP4B‡* 21AP4 21ATP4/21ATP4A‡* 21ATP4/21AUP4‡	33 33 25 33 33	48.00 49.75 50.75 49.75 42.00	35.15 36.46 37.24 36.46 30.90
AU3 AU3 AU3 AU3 AU3	14QP4A;* 14RP4 14RP4A* 14WP4/14ZP4* 16AP4A	10 12 12 12 12 17	38.00 29.25 36.00 36.00 48.25	27.76 21.56 26.46 26.46 35.41	AU3 AU3	21AVP4B/21AUP4B/ 21AVP4A/21AUP4A;* 21AWP4* 21BTP4;* 21CBP4A;*	33 33 31 33	49.75 48.00 49.75 49.75	36.46 35.15 36.46 36.46
AU3 AU3 AU3 AU3 AU3	16DP4A 16GP4B 16LP4A 16RP4/16KP4 16RP4A/16KP4A*	23 16 25 21 21	45.75 48.25 44.50 33.25 40.50	33.64 35.41 32.66 24.50 29.72	AU3 AU3	21CEP4;* 21CWP4;* 21DAP4 21DFP4;* 21EP4A	28 31 26 33 36	55.00 49.75 55.00 55.00 42.00	40.38 36.46 40.38 40.38 30.90
AU3 AU3 AU4 AU3 AU3	16TP4 16WP4A 16ZP4 17AVP4/17ATP4; 17AVP4A/17ATP4;*	21 21 24 17 17	33.25 44.50 44.50 35.25 42.50	24.50 32.66 32.66 25.80 31.04	AU3 AU5	21EP4B* 21FP4A; 21FP4C;* 21KP4A; 21MP4;	34 36 34 34 25	49.75 43.75 51.50 54.75 52.50	36.46 32.21 37.76 40.25 38.68
AU3 AU3 AU3 AU3 AU3	17BJP4;* 17BP4A 17BP4B* 17BVP4;* 17BZP4;*	17 21 21 14 14	42.50 33.25 40.50 47.75 47.75	31.04 24.50 29.72 34.95 34.82	ATT3	21WP4 21WP4A* 21XP4A* 21YP4‡ 21YP4A‡*	31 31 33 33 33 33	40.25 48.00 49.75 42.00 49.75	29.60 35.28 36.46 30.90 36.46
AU3 AU4 AU3 AU3	17CDP4;* 17CFP4;* 17CP4 17GP4;	14 16 16 16	47.75 42.50 43.75 48.25	34.82 31.04 32.14 35.41	AU3 AU3 AZ3	21ZP4A 21ZP4B* 24ADP4/24VP4A/ 24CP4A/24TP4	33 33 43	40.25 48.00 69.00	29.60 35.15 50.64
AU3 AU3 AU5 AU3	17HP4/17RP4; 17HP4B/17RP4C;* 17KP4; 17LP4/17VP4;	23 23 22 23	35.25 42.50 35.75 35.25	25.80 31.04 26.14 25.80	AU3 AZ3 AZ4	24AEP4;* 24AHP4;* 24DP4A/24YP4;* 27EP4*	43 37 43 61	71.25 76.75 71.25 118.75	52.26 56.52 52.26 87.22
AU3 AU3 AU3 AU3	17LP4A/17VP4B‡* 17QP4 17QP4A* 17TP4‡	23 23 23 16	42.50 33.25 40.50 43.75	31.04 24.50 29.72 32.14	AZ4	27MP4* 27RP4* 21AXP22A‡* (Color) 21CYP22 (Color)	42 61 38 53	163.50 118.75 160.00 160.00	126.49 87.22 137.20 137.20

#### WESTINGHOUSE 8" TV RECEIVER CHECK TUBE



- Fits Most Sets Self-focusing
- Saves Time

Here's an extremely versatile 8" rectangular universal picture tube
—a great aid in television servicing. An ex-

ceptionally 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 the necessity of 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. 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°, 66°, 70°, or 90° 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 XP4. NET......

Model 8YP4 Receiver Check Tube. Same as above, but with 110° magnetic deflection. Shpg. wt., 6 lbs. AU5 8 YP4. NET......28.91

#### SPECIAL AUDIO TUBES

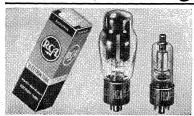
High quality tubes, specifically designed to deliver outstanding performance in audio circuits. Many of the tubes listed below are very widely used in the newest and most advanced types of high-fidelity equipment. Because they are manufactured to conform to rigidly controlled specifications, you have 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.



N/A											
Stock No.	Tube Type	Equiv. Tube	NET EACH								
E1-1614 E1-1620	1614 1620	6J7	3.11 6.36								
E1-1621 E1-1622 E1-5881	1621 1622 5881	6F6 6L6 6L6	2.40 3.15 3.50								
AMPEREX											
E4-6CA7 E4-EL84 E4-ECC81 E4-ECC82 E4-ECC83 E4-EF86	6CA7* EL84* ECC81* ECC82* ECC83* EF86*	EL34 6BQ5 12AT7 12AU7 12AX7 6267	3.60 1.20 1.43 1.15 1.15								
	GENA	LEX									
E3-KT66 E3-Z729 E3-KT88 E3-KT88MP	KT66* Z729 KT88 KT88, Matched pr.	6L6 5879	3.50 2.95 4.95								
	TUNG	SOL	111.03/11.								
E3-5881 E3-6550	5881* 6550	6L6	3.50 4.95								
Allied tubes. release		the latest ube type will stock	es are								

RCA

	MULLARD											
Stock No.	Tube Type	Equiv. Tube	NET EACH									
E3-GZ32 E3-EL34 E3-EL34MP	GZ32 EL34* EL34.	6CA7	3.19 4.65									
E3-GZ34 E3-EL37	Matched pr. GZ34 EL37	5U4GA/B 6L6	10.05/Pr. 3.15 4.31									
E3-EL37MP E3-EABC80 E3-EBF80 E3-EZ80 E3-ECH81	EL37 Matched pr. EABC80 EBF80 EZ80 ECH81	6AK8 6N8 6V4 6AJ8	9.38/Pr. 2.74 2.25 1.13 2.63									
E3-EZ81 E3-ECC81 E3-ECC82 E3-ECL82 E3-ECC83	EZ81 ECC81* ECC82* ECL82 ECC83*	6BW4 12AT7 12AU7	1.23 1.68 1.38 2.63 1.38									
E3-EL84 E3-EL84MP E3-ECC85 E3-EF86 E3-EF89	EL84* EL84 Matched pr. ECC85 EF86* EF89	6BQ5 6AQA 6267	1.35 3.90/Pr. 1.71 1.88 2.25									
E3-EC90 E3-EK90 E3-EB91 E3-ECC91 E3-EF94	EC90* EK90 EB91* ECC91* EF94*	6C4 6BE6 6AL5 6J6 6AU6	1.31 1.69 1.09 1.99 1.29									



RCA RADIOTRONS—THE GREAT NAME IN ELECTRONIC TUBES. Premium-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 RCA—other 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, 2½ lbs.

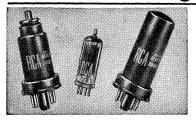
#### Extra Savings When You Buy More Than 5 Tubes

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	List		NET EACH Quantities		Tube	List		NET EACI Quantities	
Туре	Price	1 to 5	6 to 49	50 or More	Туре	Price	1 to 5	6 to 49	50 or Mor
Z4	\$1.65	.92	-81	-73	3Q5GT	\$3.60	2.01	1.76	1.58
Z4G	2.00	1.12	.98	.88	354	2.45	1.37	1.20	1.08
N3 N5GT	3.05 3.20	1.70	1.49	1.34	3V4 4AU6	2.35 2.15	1.31	1.15	1.03
N7GT	3.70	1.79 2.07	1.57 1.81	1.41	4BC5*	2.15	1.20 1.31	1.05	1.03
\H4*	2.95	1.65	1.44	1.30	4BC8	4.05	2.26	1.98	1.78
J5*	3.10	1.73	1.52	1.37	4BN6	3.05	1.70	1.49	1.34
X2	3.05	1.70	1.49	1.34	4BQ7-A	4.00	2.23	1.96	1.76
33GT/1G3GT	2.90 3.60	1.62 2.01	1.43	1.29	4BS8 4BU8	3.85	2.15 1.56	1.89	1.70
D8GT*	4.80	2.68	2.35	2.11	4BX8*	3.45	1.93	1.69	1.52
N5	2.20	1.23	1.08	.97	4BZ6	2.25	1.26	1.10	.99
4GT*	2.75	1.54	1.35	1.21	4BZ7	4.05	2.26	1.98	1.78
I4G* I5GT	2.50 3.05	1.40	1.23	1-11	4CB6 4CS6*	2.30 2.35	1.29 1.31	1.13	1.02
13*	2.90		1.49	1.34	4CY5*	2.50	1.40	1.15	1.03
3GT*	2.90	1.62	1.43	1.29	4DT6	2.25	1.26	1.10	.99
<b>K3GT*</b>	2.90	1.62	1.43	1.29	5AM8	3.20	1.79	1.57	1.41
.4	2.60	1.45	1.27	1.14	5AN8	3.55	1.98	1.74	1.57
6	3,35	1.87	1.64	1.48	5AQ5	2.20	1.23	1.08	.97
A4* A6	4.45 4.10	2.49 2.29	2.18 2.01	1.96	5AS4A 5AS8	2.10 3.45	1.17 1.93	1.03 1.69	.93 1.52
B4	4.45	2.49	2.18	1.81	5AT8	3.25	1.82	1.59	1.43
C5	4.05	2.26	1.98	1.78	5AU4*	3.40	1.90	1.66	1.49
C6	4.10	2.29	2.01	1.81	5AV8	4.05	2.26	1.98	1.78
D5 E3	4.25 4.25	2.37	2.08	1.87	5AW4*	2.50 2.65	1.40	1.23	1-11
G5	4.25	2.37 2.26	2.08 1.98	1.87	5AZ4 5B8	3.90	2.18	1.30	1.17
H4	3.95	2.21	1.94	1.75	5BE8*	3.30	1.84	1.62	1.46
N5	3.95	2.21	1.94	1.75	5BK7A	3.40	1.90	1.66	1.49
5GT	3.65	2.04	1.79	1.61	5BQ7A	4.00	2.23	1.96	1.76
5GT*	$\frac{4.05}{2.55}$	2.26 1.43	1.98	1.78	5BR8 5BT8	3.30	1.84 1.84	1.62	1.46
4	3.65	2.04	1.79	1.61	5CG8	3.25	1.82	1.59	1.43
5	2.55	¥1.43	1.25	1.12	5CL8	3.15	1.76	1.54	1.39
4	2.40	1.34	1.18	1.06	5CM8*	3.55	1.98	1.74	1.57
4	2.35	1.31	1.15	1.03	5CQ8	3.35 2.85	1.87 1.59	1.64	1.48
15	2.05 3.65	1.15	1.00	1.61	5C <b>Z</b> 5 5DH8*	3.55	1.98	1.40 1.74	1.26
<b>'</b> 2	2.00	1.12	.98	-88	5J6	2.80	1.56	1.37	1.23
/6*	3.75	2.10	1.84	1.66	5T4	7.25	4.05	3.56	3.20
(2A	3.05	1.70	1.49	1.34	5T8	3.40	1.90	1.66	1.49
(2B .3	3.05 6.30	1.70	1.49	1.34	5U4G* 5U4GA*	2.05 2.00	1.15	1.00 .98	.90 .88
F4-A	3.95	3.52 2.21	3.09 1.94	2.78 1.75	5U4-GB	2.00	1.12	.98	-88
33*	2.90	1.62	1.43	1.29	5U8	3.35	1.87	1.64	1.48
N4	2.55	1.43	1.25	1.12	5V3*	3.65	2.04	1.79	1.61
Y5	2.80	1.56	1.37	1.23	5V4GA	3.30	1.84	1.62	1.46
A5*	2.80 3.60	1.56 2.01	1.37	1.23	5V6GT 5X4G	2.20	1.23 1.65	1.08	1.30
3	3.40	1.90	1.66	1.49	5X8	3.30	1.84	1.62	1.46
F4A	4.05	2.26	1.98	1.78	5Y3GT	1.70	.95	.83	.75
L5	1.85	1.03	-91	-82	5Y4GT	2.35	1.31	1.15	1.03
U6	2.15 1.75	1.20	1.05	.94	5 <b>Z</b> 3 5 <b>Z</b> 4	3.00 4.55	1.68 2.54	1.47	1.32
V6 2	6.20	98	.86	2.74	6A3*	$-\frac{4.33}{5.05}$	2.82	2.23	2.01
A6*	2.05	3.46	3.04 1.00	.90	6A6*	3.05	1.70	2.47 1.49	1.34
C5	2.30	1.29	1.13	1.02	6A7	4.60	2.57	2.25	2.03
N4*	2.55	1.43	1.25	1.12	6A8	4.75	2.65	2.33	2.10
N6	3.05	1.70	1.49	1.34	6A8G	4.75	2.65	2.33	2.10
U8 Y6	2.80 2.35	1.56	1.37	1.23	6A8GT 6AB4	4.75 2.15	2.65 1.20	2.33	2.10
<b>Z</b> 6	2.35	1.31	1.15	1.03	6AB5/6N5	3.70	2.07	1.05	1.63
B6	2.25	1.26	1.10	.99	6AB7	5.00	2.79	2.45	2.20
F6	2.55	1.43	1.25	1.12	6AC5GT	4.35	2.43	2.13	1.92
S6	2.45	1.37	1.20	1.08	6AC7	4.05	2.26	1.98	1.78
0K6* 0T6	$\frac{2.40}{2.20}$	1.34	1.08	1.06	6AD7G 6AF4-A	5.90 3.95	3.30 2.21	2.89 1.94	1.75
.F4	4.20	2.35	2.06	1.85	6AF6G	3.60	2.21	1.76	1.58
24	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	List		ET EACH	of:	Tube	List		NET EACH	
Туре	Price	1 to 5	6 to 49	50 or More	Туре	Price	1 to 5	6 to 49	50 or More
6AG7 6AH4GT	\$4.60 3.30	2.57 1.84	2.25 1.62	2.03	6CH8 6CK4*	\$3.60 2.80	2.01 1.56	1.76 1.37	1.58
6AH6	4.60	2.57	2.25	2.03	6CL6	3.80	2.12	1.86	1.57
6AH6V* 6AK5	4.65 4.65	2.60 2.60	2.28 2.28	2.05 2.05	6CL8 6CM6	3.15 2.55	1.76	1.54	1.12
6AK6	2.85	1.59	1.40	1.26	6CM7	2.80	1.56	1.37	1.23
6AL5 6AL7GT	1.85 5.45	1.03 3.04	.91 2.67	.82 2.40	6CM8* 6CN7	3.55 2.60	1.98	1.74	1.57
6AM4 6AM8A	5.60 3.25	3.13	2.74	2.47	6CQ8 6CR6	3.30 2.40	1.84	1.62	1.46
6AN4	4.95	2.77	1.59 2.43	2.19	6CS6	2.35	1.34	1.18	1.06
6AN8	3.50	1.96	1.72	1.55	6CS7	2.80	1.56	1.37	1.23
6AQ5A 6AQ6	2.15 2.20	1.20	1.05	.94 .97	6CU5 6CU6/6BQ6GA*	2.30 4.35	1.29 2.43	2.13	1.02
6AQ7GT 6AR5	2.60	1.45	1.96	1.76	6CU8 6CX8*	3.65	2.04	1.79	1.61
6AS5	2.40	1.34	1.18	1.06	6CY5	2.75	2.04 1.54	1.79	1.61
6AS8 6AT6	3.30 1.90	1.84	1.62 .93	1.46 .84	6CY7* 6CZ5	2.95 2.80	1.65	1.44	1.30
6AT8A	3.20	1.79	1.57	1.41	6D6	4.35	2.43	2.13	1.92
6AU4GTA 6AU5GT	3.35 4.25	1.87 2.37	1.64 2.08	1.48	6DA4* 6DB5*	2.70 2.70	1.51	1.32	1.19
6AU6 6AU6A*	2.10	1.17	1.03	.93 .93	6DC6	2.75	1.54	1.35	1.21
6AU8	2.10 3.45	1.17	1.03	1.52	6DE6 6DG6GT	2.45 2.55	1.37	1.20	1.08
6AV5GA	3.80	2.12	1.86	1.67	6DK6*	2.35	1.31	1.15	1.03
6AV6 6AW8A	1.65 3.55	.92 1.98	.81 1.74	.73 1.57	6DN6* 6DQ5	6.25 7.65	3.49 4.27	3.06 3.75	2.75 3.37
6AX4GT 6AX5GT	2.65 2.90	1.48	1.30	1.17	6DQ6-A 6DS5	4.15 2.65	2.32 1.48	2.03 1.30	1.83
6AX8*	3.50	1.96	1.72	1.55	6DT5*	2.90	1.62	1.43	1,29
6AZ8 6B7*	4.20 3.70	2.35 2.07	2.06 1.81	1.85	6DT6 6DT8	2.15 3.75	1.20	1.05	.94 1.66
6B8	4.70	2.63	2.30	2.07	6E5	3.00	1.68	1.47	1.32
6BA6 6BA7	3.65	2.04	1.79	1.61	6EA8*	3.15 2.35	1.76	1,54	1.39
6BA8A	3.70	2.07	1.81	1.63	6F5	3.10	1.73	1.52	1.37
6BC4 6BC5	4.80 2.30	1.29	2.35 1.13	1.02	6F6 6F6G	3.60 3.60	2.01	1.76	1.58
6BC7	3.80	2.12	1.86	1.67	6F6GT	3.65	2.04	1.79	1.61
6BC8 6BD6	3.95 2.30	2.21 1.29	1.94	1.75	6F7 6F8G	6.65 5.10	3.71 2.85	3.26 2.50	2.93 2.25
6BE6 6BF5	2.25 2.75	1.26	1.10	.99 1.21	6G6G 6H6	4.05 2.75	2.26 1.54	1.98	1.78
6BF6	1.80	1.01	.88	.79	6J5	2.55	1.43	1.25	1.12
6BG6GA	6.45 6.45	3.60 3.60	3.16 3.16	2.84 2.84	6J5GT 6J6	2.55 2.80	1.43	1.25	1.12
6BH6	2.70	1.51	1.32	1.19	6J6A*	2.80	1.56	1.37	1.23
6BH8 6BJ6	3.45 2.55	1.93	1.69 1.25	1.52	6J7 6J7GT	3.65 3.65	2.04	1.79	1.61
6BJ8 6BK4	2.90 7.50	1.62	1.43	1.29 3.31	6K5GT*	3.00	1.68	1.47	1.32
6BK5	3.50	4.18 1.96	3.68 1.72	1.55	6K6GT 6K7	2.30 3.75	1.29 2.10	1.13	1.02
6BK7B 6BL7GTA	3.35 3.95	1.87	1.64	1.48 1.75	6K7GT 6K8	3.75 4.45	2.10 2.49	1.84 2.18	1.66
6BN4	2.50	1.40	1.23	1.11.	6L6	6.10	3.41	2.99	2,69
6BN6 6BN8	3.05 2.70	1.70	1.49	1.34	6L6GB	4.20 4.35	2.35	2.06	1.85
6BQ5 6BQ6GTB/6CU6	2.60 4.35	1.45 2.43	1.27 2.13	1.14	6N7 6N7GT	4.00 4.35	2.23	1.96	1.76
6BQ7A	3.95	2.43	1.94	1.75	6P5GT*	2.80	1.56	1.37	1.23
6BR8 6BS8	3.30 3.75	1.84	1.62	1.46	6Q7 6Q7GT	3.40 3.20	1.90	1.66	1.49
6BU8	2.80	1.56	1.37	1.23	6R7	3.60	2.01	1.76	1,58
6BV8* 6BW4*	1.85	1.62	.91	82	6R8* 6S4-A	3.85 2.05	1.15	1.89	.90
6BW8*	3.30	1.84	1.62	1.46	6 <b>S</b> 7	4.20	2.35	2.06	1.85
6BX7GT 6BY5-GA	4.00 4.20	2.23 2.35	1.96 2.06	1.85	6S8GT 6SA7	2.75 3.25	1.54	1.35	1.21
6BY6 6BY8	2.30	1.29	1.13	1.02	6SA7GT 6SB7Y	3.25	1.82	1.59	1.43
6B <b>Z</b> 6	2.25	1.48	1.10	.99	6SC7	4.50 3.10	1.73	1.52	1.99
6BZ7 6BZ8/X155*	3.95 4.25	2.21 2.37	1.94 2.08	1.75	6SD7GT*	4.05 2.70	2.26	1.98	1.78
6C4	1.80	1.01	.88	.79	6SF5GT	3.20	1.79	1.57	1.41
6C5 6C5GT	2.75 2.90	1.54	1.35	1.21	6SF7 6SG7	3.90 3.45	1.93	1.91	1.72
6C6 6C8G	4.35 5.10	2.43	2.13 2.50	1.92	6SH7	3.50	1.96	1.72	1.55
6CB5A	7.50	2.85 4.18	3.68	3.31	6SJ7 6SJ7GT	2.75 3.20	1.54	1.35	1.41
6CB6 6CB6A*	2.25 2.25	1.26	1.10	.99	6SK7	3.05	1.70	1.49	1.34
6CD6GA	5.80	1.26 3.24	1.10 2.84	2.56	6SK7GT 6SL7GT	3.05 3.25	1.70	1.49	1.43
6CE5* 6CF6	2.35 2.55	1.31	1.15	1.03	6SN7GTA* 6SN7GTB	2.60 2.65	1.45	1.27	1.14
6CG7	2.45	1.37	1.20	1.08		IG TUBES CO			
6CG8A	3.15	1.76	1.54	1.39	<u> </u>				



#### TUBE LISTINGS CONTINUED FROM PAGES 114 AND 115

#### 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 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).

NET FACH

Tube Type	List Price	In	NET EAC Quantitie		Tube Type	List Price
1,700	11100	1 to 5	6 <b>to</b> 49	50 or More		
SQ7	\$2.70	1.51	1.32	1.19	12AE7*	\$3.10
SQ7GT SR7	2.70	1.51	1.32	1.19	12AF6 12AF6A*	2.25 2.25
557	2.70 3.45	1.93	1.69	1.19	12AH7GT	3.80
T4	4.25	2.37	2.08	1.87	12AJ6	1.70
T8*	3.35	1.87	1.64	1.48	12AL5	1.90
T8A	3.35	1.87	1.64	1.48	12AL8	4.05
U5	3.20	1.79	1.57	1.41	12AQ5	2.40
U7G*	2.55	1.43	1.25	1.12	12AT6	1.85
J8A	3.30	1.84	1.62	1.46	12AT7	3.05
V3A V6	4.35 4.35	2.43	2.13	1.92	12AU6 12AU7A	2.15 2.45
VEGT	2.15	2.43 1.20	2.13	1.92	12AV5GA	3.85
V8*	3.95	2.21	1.94	1.75	12AV6	1.65
W4GT	2.40	1.34	1.18	1.06	12AV7	3.20
W6GT	2.85	1.59	1.40	1.26	12AW6	3.00
X4	1.65	.92	.81	.73	12AX4-GTA	2.60
X5GT	2.05	1.15	1.00	.90	12AX7	2.50
X8 Y6G	3.20 4.50	1.79	1.57	1.41	12AY7 12AZ7	5.15 2.75
A4	3.25	2.51	1.59	1.99	12B4-A	2.70
44 45	3.25	1.82 2.15	1.89	1.43	12B4-A 12BA6	2.00
<b>A</b> 6	3.15	1.76	1.54	1.39	12BA7	3.95
47	3.50	1.96	1.72	1.55	12BD6	2.25
<b>4</b> 8	4.45	2.49	2.18	1.96	12BE6	2.15
AD7	6.45	3.60	3.16	2.84	12BF6	1.80
AF7 AG7	3.85	2.15	1.89	1.70	12BH7-A	3.05 3.80
AH7	3.85 3.85	2.15 2.15	1.89	1.70	12BK5 12BL6	2.15
AU7	2.65	1.48	1.30	1.17	12BQ6GTB/12CU6	4.45
34	3.05	1.70	1.49	1.34	12BR7	2.60
B5	4.75	2.65	2.33	2.10	12BV7	3.05
B6	3.25	1.82	1.59	1.43	12BY7-A	3.10
B7	3.30	1.84	1.62	1.46	12BZ7	3.05
38	3.55	1.98	1.74	1.57	12C5/12CU5*	2.35
C4* C5	5.00	2.79	2.45	2.20	12C8	5.65 2.50
26 26	3.35	1.87 1.84	1.64	1.48	12CA5 12CN5	2.25
Č7	3.05	1.70	1.49	1.34	12CR6	2.40
<b>5</b> 5*	4.05	2.26	1.98	1.78	12CT8*	4.05
<b>E6</b> *	4.05	2.26	1.98	1.78	12CU5	2.35
<u> </u>	4.45	2.49	2.18	1.96	12CU6/12BQ6GA*	4.45
-7 -0	3.65	2.04	1.79	1.61	12CX6	2.25
78 G7	4.60 4.00	2.57	2.25	2.03	12 D4 12 DB5*	2.75 2.75
47	- (	2.23	1.96	1.76	12DE8*	2.90
17	3.90 5.15	2.18 2.88	1.91 2.52	1.72 2.27	12DE8* 12DF7*	2.60
K7	4.45	2.49	2.18	1.96	12DK7*	2.95
_7*	4.25	2.37	2.08	1.87	12DL8	3.90
٧7	3.40	1.90	1.66	1.49	12 DQ6-A	4.25
27	4.10	2.29	2.01	1.81	12 DS7	3.50
R7 /7	5.15	2.88	2.52	2.27	12DT5*	2.95
/	4.65 4.75	2.60	2.28	2.05	12DT7* 12DT8	2.90 3.75
K7	5.85	2.65 3.27	2.33 2.87	2.10	12D18 12DW8*	3.13
(4	2.75	1.54	1.35	1.21	12 DZ6	2.30
:4	2.75	1.54	1.35	1.21	12EH5	2.35
AU8*_	3.55	1.98	1.74	1.57	12EK6	2.30
AW8A	3.70	2.07	1.81	1.63	12EM6*	2.90
3A8A*	3.65	2.04	1.79	1.61	12EN6*	2.70
3H8* CG7	3.55	1.98	1.74	1.57	12F8	2.60 2.75
CM7	2.50 2.85	1.40 1.59	1.23	1.11	12H6 12J5GT	2.75
CN7*	2.60	1.45	1.27	1.14	12J7GT	4.20
CS7*	2.95	1.65	1.44	1.30	12J8	3.30
CX8*	3.70	2.07	1.81	1.63	12K5	2.75
CL8*	3.15	1.76	1.54	1.39	12K7GT	4.05
J8A*	3.30	1.84	1.62	1.46	12K8	4.75
0C8* 0DE7	4.25 2.95	2.37	2.08	1.87	12L6GT 12Q7GT	2.50 3.30
ASGT		1.65		1.30		
ABG I BAB5	4.75 2.45	2.65 1.37	2.33	1.08	12R5 12S8GT*	2.60 2.90
AC6*	2.20	1.23	1.08	.97	12SA7	3.25
2AD6	2.25	1.26	1.10	.99	12SA7GT	3.25
PAE6	1.85	1.03	.91	.82	12SC7	3.30

Tube	List		NET EACH Quantities	
Туре	Price	1 to 5	6 <b>to</b> 49	50 or More
12AE7*	\$3.10	1.73	1.52	1.37
12AF6 12AF6A*	2.25 2.25	1.26	1.10	.99
12AH7GT	3.80	2.12	1.86	1.67
12AJ6	1.70	.95	.83	.75
12AL5	1.90	1.06	.93 1.98	.84 1.78
12AL8	4.05 2.40	2.26	1.98	1.78
12AG5 12AT6	1.85	1.34 1.03	1.18 .91	1.06 .82
12AQ5 12AT6 12AT7	3.05	1.70	1.49	1.34
12AU6	2.15	1.20	1.05	.94
12AU7A	2.45	1 37	1.20	1.08
12AV5GA 12AV6	3.85 1.65	2.15	1.89	1.70 .73
12AV7	3.20	1.79	1.57	1.41
12AW6	3.00	1.68	1.47	1.32
12AX4-GTA	2.60	1.45	1.27	1.14
12AX7	2.50	1.40	1.23	1.11
12AY7 12AZ7	5.15 2.75	2.88 1.54	2.52 1.35	1.21
12B4-A	2.70	1.51	1.32	1.19
12BA6	2.00	1.12	.98	.88
12BA7	3.95	2.2,	.98 1.94	.88 1.75
12BD6 12BE6	2.25 2.15	1.26	1.10	.99
12BF6	1.80	1.20	1.05	.94
12BF6 12BH7-A	3.05	1.01	.88 1.49	.79 1.34
12BK5	3.80 2.15	2.12	1.86	1.67
12BL6	2.15	1.20	1.05	.94
12BQ6GTB/12CU6	4.45	2.49	2.18	1.96
12BR7 12BV7	2.60 3.05	1.45	1.27	1.14
12BY7-A	3.10	1.73	1.49 1.52	1.34
12B <b>Z</b> 7	3.05 2.35	1.70	1.49	1.34
12C5/12CU5*		1.31	1.15	1.03
12C8	5.65	3.16	2.77	2.49
12CA5 12CN5	2.50 2.25	1.40 1.26	1.23	.99
12CR6 12CT8*	2.40	1.34	1.10	1.06
12CT8*	4.05	2.26	1.98	1.06
12CU5	2.35	1.31	1.15	1.03
12CU6/12BQ6GA* 12CX6	$\frac{4.45}{2.25}$	2.49 1.26	2.18	1.96
12 D4	2.75	1.54	1.10	.99 1.21
12 DB5*	2.75 2.75	1.54	1.35 1.35	1.21
12 DE8*	2.90	1.62	1.43	1.29
12DF7* 12DK7*	2.60 2.95	1.45	1.27	1.14
12DL8	3.90	1.65 2.18	1.44	1.30
12 DQ6-A	4.25	2.37	2.08	1.87
12DS7	3.50	1.96	1.72	1.55
12 DT5*	2.95	1.65	1.44	1.30
12D17*	2.90 3.75	1.62 2.10	1.43 1.84	1.29
12DT7* 12DT8 12DW8*	2.90 3.75 3.10	1.73	1.52	1.66
12 <b>DŽ</b> 6	2.30	1.29	1.13	1.02
12EH5	2.35	1 131	1.15	1.03
12EK6 12EM6*	2.30 2.90	1.29	1.13	1.02
12EN 6*	2.70	1.51	1.43	1.29
12F8	2.60	1.45	1.27	1.14
12H6	2.75 2.70 4.20	1.54	1.35	1.21
12J5GT 12J7GT	2.70	1.51 2.35	1.32	1.19
1237G1 1238	3.30	1.84	2.06 1.62	1.85
12K5	2.75	1.54	1.35	1.21
12K7GT	4.05	2.26	1.98	1.78
12K8	4.75	2.65	2.33 1.23	2.10
12L6GT 12Q7GT	2.50 3.30	1.40	1.23	1.11
12R5	2.60	1.45	1.62	
12S8GT*	2.90	1.45	1.27 1.43	1.14
12SA7	2.90 3.25 3.25	1.82	1.50	1.43
12SA7GT	3.25	1.82	1.59	1.43
12SC7	3.30	1.84	1.62	1.46

#### QUANTITY PRICES ALSO APPLY TO ASSORTED TUBES

Tube Type	List Price	1:	NET EAC		Tube	List		NET EACH	
ı ype	Price	1 to 5	6 to 49	50 or More	Туре	Price	1 to 5	6 to 49	50 or More
12SF5	\$2.75	1.54	1.35	1.21	25L6	\$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
12SF7 12SG7	3.95 3.30	2.21	1.94	1.75	25W4GT	2.70 2.90	1.51	1.32	1.19
125G7 125H7	3.60	1.84 2.01	1.62 1.76	1.46	25W6GT* 25 <b>Z</b> 5	2.90	1.62	1.43	1.29
12SJ7	2.90	1.62	1.43	1.29	25Z6GT	2.90	1.62	1.43	1.29
12SJ7GT*	3.20	1.79	1.43	1.41	26*	4.35	2.43	3.13	1.92
12SK7	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* 12SQ7	2.70	1.51	1.32	1.19	35C5	2.15	1.20	1.05	.94
125Q7 125Q7GT	2.65 2.65	1.48 1.48	1.30	1.17	35L6GT 35W4	$\frac{2.45}{1.40}$	1.37 .78	1.20 .69	1.08
12SR7	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	35 <b>Z</b> 3	2.75	1.54	1.35	1,21
12W6GT	3.00	1.68	1.47	1.32	35 <b>Z</b> 4GT	2.35	1.31	1.15	1.03
12X4	1.80	1.01	.88	.79	35 <b>Z</b> 5GT	1.85	1.03	.91	.82
12 <b>Z</b> 3*	3.50	1.96	1.72	1.55	36*	4.35	2.43	2.13	1.92
13 D R7*	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 14B6	3.80 3.30	2.12 1.84	1.86	1.67	41 42	3.50 3.45	1.96	1.72	1.55
14C7	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
14Q7	4.10	2.29	2.01	1.81	50B5	2.65	1.48	1.30	1.17
14R7	5.15	2.88	2.52	2.27	50C5	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 17C5*	4.60	2.57	2.25	2.03	50L6GT	2.45	1.37	1.20	1.08
17C5* 17D4GT*	2.35 2.75	1.31	1.15	1.03	50X6 50Y6GT	3.20 2.95	1.79	1.57	1.41
17 DQ6A	4.25	2.37	2.08	1.87	50Y7GT	3.05	1.70	1.44	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
19AU4	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	71A*	5.10	2.85	2.50	2.25
19BG6-GA 19C8*	6.50 4.45	3.63 2.49	3.19 2.18	2.87 1.96	75 76*	$\frac{5.10}{1.80}$	2.85 1.01	2.50 .88	2.25
19J6	3.15	1.76	1.54	1.39	78	5.10	2.85	2,50	2.25
1978	3.15	1.76	1.64	1.48	80	2.90	1.62	1.43	1.29
19X8	3.70	2.07	1.81	1.63	84/6 <b>Z</b> 4	2.70	1.51	1.32	1.19
21 EX6*	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* 25BQ6GTB/25CU6	3.65 4.60	2.04	1.79 2.25	2.03	117 <b>Z</b> 3 117 <b>Z</b> 6GT	2.50 4.35	1.40	1.23	1.11
25C5	2.15	2.57 1.20	1.05	.94	5642*	4.35 5.00	2.43 2.79	2.13	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
25 D N6	5.55	3.10	2.72	2.45	6973	4.50	2.51	2.21	1.99
25EC6*	5.70	3.18	2.79	2.51	7025	2.95	1.65	1.44	1.30
25EH5	2.30	1.29	1.13	1.02	7027	5.25	2.93	2.57	2.31

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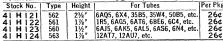
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F











#### **EXPLANATION OF COLUMN HEADINGS AND SYMBOLS**

Column Headings:  $P_t$  indicates Max. Collector Dissipation @ 25° except ††80° C. BV indicates Breakdown Voltage. Is indicates Max. Collector Current.  $F_a$  indicates Alpha Cut-Off Frequency, except †min. cut-off.

TEXAS INSTRUMENT NET EACH Stock Туре P<sub>t</sub> Mw Fα Description 1-99 100-249 10.00 6.65 16.95 11.30 16.95 11.30 22.05 14.70 l<sub>e</sub> Ma 8 EC 128 2N117; 8 EC 129 2N118; 8 EC 130 2N118A; 8 EC 131 2N119; Small signal; NPN Small signal; NPN Small signal; NPN Small signal; NPN 150 45 45 45 45 1† 2† 8† 2† 150 150 150 150 25 25 8 EC 238 2N120‡ 8 E 110 2N145 8 E 111 2N146 8 E 112 2N147 25.60 17.05 2.75 \*\* 3.20 \*\* 3.60 \*\* 150 65 65 65 45 20 20 20 25 5 5 5 7 Small signal: NPN IF converter; NPN IF converter; NPN IF converter; NPN 8 E 109 8 E 104 8 E 105 IF converter; NPN Audio; PNP Audio; PNP 2.45 1.45 1.40 2N172 2N185 65 150 16 - 20 - 20 60 - 150 2 N238 50 8 EC 135 2N243‡ **750** 60 Med. power; NPN 21.40 14.25 31.2020.80 4.90 \*\* 3.15 \*\* 4.80 \*\* 8 EC 136 8 E 116 8 E 106 750 30 25W 2N244‡ Med. power; NPN HF; PNP 60 60 ACC 50 - 25 2N248 2N250 Power; PNP Power; PNP — 3A — 3A - 30 8 E 107 2N251 25W - 60 IF converter; PNP IF converter; NPN IF converter; NPN Audio; PNP 8 E 100 8 E 113 8 E 114 8 E 108 2N252 2N253 2N254 2N294 30 65 65 300 - 16 12 20 - 25 - 5 5 5 2.90 2.25 2.60 1.45 \*\* AAAA 30 30 30 150 IF converter; PNP IF converter; PNP IF converter; PNP 2.75 2.90 2.90 9.45 8 E 101 8 E 102 2N308 AAAL -- 20 -- 20 8 E 103 8 E 183 2N310 - 30 2 N3328 45 25 1† Small signal; NPN 6.30 16.20 10.80 16.20 10.80 21.60 14.40 25.60 17.05 Small signal; NPN Small signal; NPN Small signal; NPN Small signal; NPN 8 EC 184 2N333 8 8 EC 185 2N334 8 8 EC 186 2N335 8 8 EC 187 2N336 8 45 45 45 45 LLLL 150 2† 150 150 150 150 25 25 19.15 12.75 25.80 17.20 19.80 13.20 19.95 13.30 Switching; NPN Switching; NPN Med. power; NPN Med. power; NPN 8 EC 188 2N337 § 8 EC 189 2N338 § 8 EC 190 2N339 § 8 EC 191 2N340 § 125 125 1000 1000 40 45 20 25 60 10† 55 85 50 24.00 16.00 20.10 13.40 30.75 20.50 2.40 \*\* Med. power; NPN Med. power; NPN Med. power; NPN Gen. purpose; NPN 8 EC 192 2N341§ 8 EC 193 2N342§ 8 EC 194 2N343§ 1000 125 60 40 1000 1000 1000 150 60 2N3438 2N364 60 30 60 8 E 118 50 Gen. purpose; NPN Gen. purpose; NPN Gen. purpose; PNP Gen. purpose; PNP 3.55 5.95 1.55 2.10 8 E 119 8 E 120 8 E 121 30 30 2N365 150 50 3 3.5 2N366 2N367 2N368 150 150 150 0.7 - 30 50 8 F 122 - 30 - 50 2.40 \*\* 69.00 46.00 55.20 36.80 4.00 \*\* 8 E 123 8 EC 216 8 EC 218 Gen. purpose; PNP High power; NPN High power; NPN Power; PNP 2N369 150 - 30 - 50 1.3 AEEC 2N389‡ 2N424‡ 2N456 85 85 50W 60 80 - 40 8 E 220 -5A 5.60 \*\* 12.40 \*\* 24.1016.05 30.7520.50 Power; PNP Power; PNP Med. power; NPN Med. power; NPN 50W 50W 4W 4W -60 -80 8 E 221 8 E 234 2N457 CCLL - 5A 8 E 234 2N458 8 EC 227 2N497§ 8 EC 228 2N498§ 200 60 100 200 14 12.50 \*\* 26.85 17.90 34.25 22.95 16.00 \*\* HF; PNP Med. power; NPN Med. power; NPN VHF tetrode; PNP 8 E 233 2N623 8 EC 235 2N656‡ 8 EC 236 2N657‡ 8 EC 117 3N25 40 4W 4W 25 -30 60 100 LLLD ż'n'n 10 200 200 - 15 25.05 | 6.70 31.05 20.70 29.20 | 9.45 31.50 21.00 HF; NPN HF; NPN HF; NPN HF; NPN 125 125 125 125 125 8 EC 195 3N32 30 10 . . . . 8 EC 196 3N33 8 EC 197 3N34 8 EC 219 3N35 30 10 10 30 30 100 Gen. purpose; NPN Phototransistor; NPN Small signal; NPN Small signal; NPN 4.80 \*\* 10.40 \*\* 10.15 6.75 17.10 | 1.40 8 E 237 204A 8 E 115 800 8 EC 124 903‡ 8 EC 125 904‡ 2.5 AB 150 60 50 65 150 150 20 30 30 8 EC 126 904A‡ 8 EC 127 905‡ 8 EC 217 910‡ 8 EC 132 951‡ 8† 2† 7 Small signal; NPN Small signal; NPN Small signal; NPN 17.10 11.40 23.40 15.60 26.25 17.50 20.85 13.90 150 30 150 30 25 150 750 30 50 25 60 Med. power; NPN 8 EC 133 9521 8 EC 134 9531 8 EC 137 9701 Med. power; NPN Med. power; NPN Power; NPN 21.15 14.10 22.95 15.30 60.00 40.00 750 750 50 40 80 8.75W 120

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NET EACH Steck | Type Pt Mw ΒV le Ma NET EACH
1-99 100-999
22.00 | 32.01 | 24.63
36.01 | 27.70
| 12.61 | 9.70
| 17.62 | 13.55
21.61 | 16.63
31.01 | 23.85 Fig. Fα Description No. EC 574 HA7501 8 EC 575 HA7502 8 EC 576 HA7503 8 EC 577 HA7505  $\begin{bmatrix}
-60 \\
-60 \\
-110 \\
-35 \\
-35
\end{bmatrix}$ Audio; PNP Audio; PNP Audio; PNP Audio; PNP 0.8 0.9 0.5† 0.5† 500 500 500 500 8 EC 578 HA7506 8 EC 579 HA7507 8 EC 580 HA7508 500 500 0.5† Audio; PNP 1.5† Audio; PNP 0.5† Audio; PNP 500 - 60

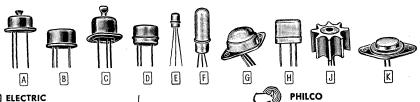
Symbols: ‡silicon; §silicon in JETEC can; all others germanium.\*RCA drift type. Av. shpg. wt., 2 oz. \*\*For prices on quantity lots of 100 or more, write Allied's Industrial Division. @ RCA

			<b>(199</b>	R	CA			
Stock No.	Туре	Fig.	P <sub>t</sub> Mw	BV V	lc Ma	F <sub>a</sub> Mc	Description	NET EACH
5 E 855 5 E 854 5 E 856 5 E 857	2N77 2N104 2N105 2N109	G H J H	35†† 150 35†† 150	-25 -30 -25 -25	-15 -50 -15 -70	0.7 0.7 0.75	Audio; PNP Audio; PNP Audio; PNP Audio; PNP	1.86 2.25 2.90 1.70
5 E 858 5 E 859 5 E 860 5 E 894	2N139 2N140 2N175 2N206	H H G	80 80 50 75	-16 -16 -10 -30	-15 -15 -2 -50	68 10 0.85 0.78	IF; PNP Converter; PNP Audio; PNP Audio; PNP	1.93 2.06 2.42 5.47
5 E 876 5 E 877 5 E 878 5 E 879	2N215 2N217 2N218 2N219	G G G	San San San	ne as 2 ne as 2 ne as 2	N109 N139 N140 I	but has i but has i out has f	flexible leads flexible leads flexible leads lexible leads	2.09 1.70 1.93 2.06
5 E 884 5 E 885 5 E 887 5 E 895	2N220 2N247* 2N269 2N270	G K G K	80 120 250	- 35 - 20 - 25		30 12	RF; PNP Switching; PNP Audio; PNP	2.25 3.22 3.78 1.89
5 E 888 5 E 889 5 E 893 5 E 967	2N274* 2N301 2N301A 2N351	G C L	80 11W†† 11W†† 10W††	- 35 - 40 - 60 - 40	-10 -2A -2A -3A	30	RF; PNP Power; PNP Power; PNP Power; PNP	3.22 2.97 4.83 3.22
5 E 974 5 E 975 5 E 976 5 E 961	2N356 2N357 2N358 2N370*	L L K	100 100 100 80	20 20 20 20	500 500 500 — 10	3 6 9 30	Switching; NPN Switching; NPN Switching; NPN RF; PNP	5.64 7.08 9.66 3.22
5 E 962 5 E 963 5 E 969 5 E 971	2N371* 2N372* 2N373* 2N374*	K K K	80 80 80 80	-20 -20 -25 -25	-10 -10 -10 -10	30 30 30 30	Osc.; PNP Mixer; PNP IF; PNP Converter; PNP	3.22 3.22 2.25 2.33
5 E 968 5 E 896 5 E 897 5 E 898	2N376 2N384* 2N398 2N404	CGLL	10W†† 120 50 120	- 40 - 30 - 105 - 25	-100	100	Power; PNP VHF; PNP Switching; PNP Switching; PNP	3.38 6.44 2.42 4.03
5 E 965 5 E 899 5 E 953 5 E 950	2N405 2N406 2N407 2N408	H G H G	150	-20	N405, L — 70∣	out has f	Audio; PNP lexible leads Audio; PNP lexible leads	1.13 1.13 1.36
5 E 954 5 E 951 5 E 955 5 E 952	2N409 2N410 2N411 2N411	H G H	80 San 80	— 12 ne as 2   — 12	15 N409 15	6.8 but has f 10	IF; PNP Texible leads Converter; PNP Texible leads	1.61 1.70 1.70
5 E 970 5 E 977 5 E 978 5 E 982	2N544 2N578 2N579 2N580	K L L	80 120 120 120	-18 -20 -20 -20		30 5 8 15	RF; PNP Switching; PNP Switching; PNP Switching; PNP Switching; PNP	2.42 4.99 7.08 9,57
5 E 979 5 E 983 5 E 980 5 E 984	2N581 2N582 2N583 2N584	LLGG	80 120 80 120	- 18 - 25 - 18 - 25	100 100 100 100	8 18 8 18	Switching; PNP Switching; PNP Switching; PNP Switching; PNP	3.06 7.25 2.81 6.44
5 E 981 5 E 972 5 E 966	2N585 2N586 2N591	K J	120 250 50	- 45 - 32	200 250 40	5 0.7	Switching; NPN Switching; PNP Audio; PNP	3.63 2.97 1.20

	RAYI	R	AYTH	EON	1		
5 E 956   2N10 5 E 921   2N13 5 E 922   2N13 5 E 923   2N13	1A A 2A A	100 100 100 100	-30 - -20 -	- 10 - 100 - 100 - 100	1.2 0.8 1.2 0.8	Audio; PNP Audio; PNP Audio; PNP Audio; PNP	4.55 2.83 2.83 2.97
5 E 799 2N13 7 E 744 2N15 8 EC 000 2N32 5 E 867 2N36	5 C 7A‡	100 8.5W 337 168	-30 - -50 -		1 145Kc 0.3 1.2	Audio; PNP Power; PNP Gen. purpose; PNP Audio; PNP	2.90 3.35 14.87 1.32
8 E 006 8 E 007 5 E 8 I 8 8 E 008 2 N41 2 N41	3 L 4 L 6 L	168 150 150 150	- 18 - - 15 - - 12 -	- 400 - 200 - 200 - 200	1.2 3 5 10	Audio; PNP RF; PNP RF; PNP RF; PNP	1.16 1.88 2.07 6.44
7 E 425 2N41 8 E 009 2N42 8 E 010 2N42 8 E 011 2N42	2 L 5 L	150 150 150 150	- 18 -	- 200 - 100 - 400 - 400	20 0.8 4 6	RF; PNP Audio; PNP Computer; PNP Computer; PNP	8.26 2.14 4.79 4.96
8 E O I 2 2N42 8 E O I 8 2N48 5 E 957 2N48 5 E 958 2N48	4 J 2 L	150 168 50 50	40 12 -	- 400 400 20 20	0.6 3 5	Computer; PNP AF Amplifier IF; PNP IF; PNP	7.26 1.82 1.65 1.74
5 E 959 2N48 5 E 960 2N48 8 EC 014 2N61 8 EC 015 2N62	6 L 9‡	50 50 337 337		- 20 - 12 100 100	9 9 0.2 0.35	IF; PNP Converter; PNP Gen. purpose; NPN Gen. purpose; NPN	1.82 1.82 14.87 26.43
8 EC 016 2N62 8 EC 017 2N62 5 E 811 CK72 5 E 822 CK72 5 E 809 CK76	22‡ 21 22	337 337 180 180 150		100 100 10 10 100	0.5 0.25 13 .5 2.5	Gen. purpose; NPN Gen. purpose; NPN Audio; PNP Audio; PNP IF-AF; PNP	39.65 29.74 2.40 .99 1.50

## Latest Transistors

COLUMN HEADS AND SYMBOLS: COLUMN HEADS AND SYMBOLS:
pt: Max. Collector Diss. at 25°
C. except \$30° C.; #40° C.; \*\*50°
C.; \$\$80° C. BV: Breakdown
Voltage; Ic: Collector Current;
Fa: Typical Alpha Cut-Off Freq.
except \*Max.; ‡‡Min. †MilitaryApproved. ‡Surface Barrier,
are germanium except ##silicon.
††Heat sink. 2 oz.



GENE	2Δ1	673	FIF	CTR	C

GENERAL SO ELECTRIC												
Stock No.	Туре	Fig.	Pt Mw	BV V	l c Ma	F <sub>a</sub> Mc	Description	NET' EACH				
7 E 443 8 E 050 8 E 068 7 E 444	2N43 2N43A USAF/2N43A† 2N44	A A A	240 155 155 240	- 30 - 25 - 25 - 30	- 300 - 300	1.3 1.3 1.3 1	Audio; PNP Audio; PNP Audio; PNP Audio; PNP	4.77 4.80 6.42 3.16				
8 E 069 7 E 448 7 E 442 7 E 938	USAF/2N44A† 2N78 2N107 2N123	A C A	155 65 50 150	- 25 15 - 12 - 15	20 10 125	1 9 0.6 8	Audio; PNP Computer; NPN Audio; PNP Computer; PNP	5.69 3.64 .97 5.37				
7 E 484 7 E 485 7 E 486 7 E 941	2N135 2N136 2N137 2N167	A A C	100 100 100 75	- 20 - 20 - 10 30	- 50 - 50 - 50 - 75	3 5 7 9	RF IF; PNP RF IF; PNP RF IF; PNP Computer: NPN	2.10 2.51 6.07 6.31				
7 E 488 7 E 489 7 E 490 7 E 441	2N168A 2N169 2N169A 2N170	CCCC	65 65 65 25	15 15 25 6	20 20 20 20	8 9 9	IF; NPN IF; NPN IF; NPN Audio; NPN	2.02 1.92 1.96 1.26				
7 E 415 7 E 417 7 E 419 7 E 420	2N186A 2N187A 2N188A 2N189	A A A	200 200 200 75	25 25 25 25	- 200 - 200 - 200 - 50	0.8 1 1.2 0.8	Audio; PNP Audio; PNP Audio; PNP Audio; PNP Audio; PNP	1.92 1.96 1.99 1.73				
7 E 421 7 E 422 7 E 423 7 E 942	2N190 2N191 2N192 2N241	A A A	75 75 75 100	- 25 - 25 - 25 - 25	- 50 - 50 - 50 - 200	1 1.2 1.5 1.3	Audio; PNP Audio; PNP Audio; PNP Audio; PNP	1.74 1.78 1.84 1.89				
7 E 943 7 E 944 7 E 945 7 E 499	2N241A 2N265 2N292 2N293	AACC	200 75 65 65	- 25 - 25 15 15	- 200 - 50 - 20 - 20	1.3 1.5 5	Audio; PNP Audio; PNP RF IF; NPN RF IF; NPN	2.04 1.87 1.82 1.99				
7 E 948 7 E 978 7 E 979 7 E 980	2N319 2N320 2N321 2N322	B B B B	240 240 240 140	- 20 - 20 - 20 - 16	- 200 - 200 - 200 - 100	2 2.5 3 2	Audio; PNP Audio; PNP Audio; PNP Audio; PNP	1.96 1.99 2.04 1.74				
7 E 982 7 EC 991 7 EC 992 7 EC 993	2N324 2N332## 2N333## 2N335##	B B B	140 150 150 150	- 16 45 45 45	- 100 25 25 25 25	3 30 33 38	Audio; PNP Amp&Computer NPN Amp&Computer NPN Amp&Computer NPN	17.30 22.05				
8 E 051 8 E 052 8 E 053 8 E 054	2N394 2N395 2N396 2N397	B B B	150 150 150 150	- 10 - 15 - 20 - 10	- 200 - 200 - 200 - 250	5.5 7 7 10	Computer; PNP Computer; PNP Computer; PNP Computer; PNP	3.89 3.33 5.29 7.94				
8 E 055 7 EC 994 7 EC 995 7 EC 996	2N450 2N489## 2N490## 2N491##	8 B B B	150 350 350 350	30 45 55 45	30	25 0.9* 0.7* 0.8*	RF; NPN Unijunction PN sw. Unijunction PN sw. Unijunction PN sw.	3.17 15.00 15.00 15.00				
7 EC 997 7 EC 998 7 EC 999 8 E 056	2N492## 2N493## 2N494## 2N508	B B B	350 350 350 140	55 45 55 — 16	— 100	0.7* 0.7* 0.65* 3.5	Unijunction PN sw. Unijunction PN sw. Unijunction PN sw. Audio; PNP	15.00 15.00 15.00 1.87				
8 E 064 8 E 065 8 E 066 8 E 067	2N524 2N525 2N526 2N527	B B B B	225 225 225 225 225	- 45 - 45 - 45 - 45	- 500 - 500 - 500 - 500	2 2.5 3 3.3	Audio; PNP Audio; PNP Audio; PNP Audio; PNP	2.99 3.16 3.49 4.07				
7 E 983 7 E 984	4JD1B3 4JD1B4	A	200 200	- 30 - 30	1000 1000	0.8 0.8	Symmet sw.; PNP Symmet sw.; PNP	6.47 6.87				



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Stock No.	Туре	Fig.	Pt Mw	BV	lc Ma	F <sub>a</sub> Mc	Description	NET EACH
5 E 930	2N176	K	40W §	40	3A	7 kc	Power; PNP	2.78
5 E 936	2N350	ĸ	40W 8	40	3A	8 kc	Power: PNP	2.85
5 E 937	2N351	ĸ	40W §	- 40	3A	7 kc	Power; PNP	3.00
5 E 931	2N375	K	40W §	- 80	3A	10 kc	H.V. Power; PNP	5.55
5 E 938	2N376	K	40W §	-40	3A	6 kc	Power; PNP	3.15
5 E 462	2N425	В	150	- 30	400	4	Switching; PNP	4.35
5 E 463	2N426	В	150	- 30	400	6	Switching; PNP	4.50
5 E 464	2N427	В	150	- 30	400	11	Switching; PNP	6.60
5 E 465	2N428	В	150	- 30	400	17	Switching; PNP	9.00
5 E 450	2N464	В	150	45	100	0.7	Switching; PNP	1.65
5 E 451	2N465	В	150	45	100	0.8	Audio; PNP	1.73
5 E 452	2N466	В	150	<b>— 35</b>	100	1	Audio; PNP	1.80
5 E 453	2N467	В	150	<b>-35</b>	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	40W §	- 30	3A		Power; PNP	1.35
5 E 940	2N555	K	40W §	- 40	3A	8 kc	Power; PNP	1.95
5 EC 947	2N618	K	40W §	80	3A	8.5 kc	H.V.Power&SwPNP	6.37
5 E 943	2N627	K	50W §	- 40	10A	7.5 kc	Switching; PNP	5.25
5 E 944	2N628	К	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	50W §	- 100	10A	7.5 kc	Switching; PNP	21.00
5 E 454	2N650	В	200	- 45	250	2	Audio: PNP	1.87
5 E 455	2N651	В	200	45	250	2.5	Audio; PNP	2.10
5 E 456	2N652	В	200	45	250	3	Audio; PNP	2.40
5 E 457	2N653	В	200	- 30	250	2	Audio; PNP	1.65
5 E 458	2N654	В	200	- 30	250	2.5	Audio; PNP	1.80
5 E 459	2N655	В	200	30	250	3	Audio; PNP	1.95
5 E 466	2N669	K	10W§	40	3A	5	Power; PNP	3.15
5 E 932	M N-32	K	40W §	40	3A	15 kc	Power; PNP	3.30

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Stock No.	Туре	Fig.	Pt Mw	BV V	l c Ma	F <sub>a</sub> Mc	Description	NET EACH
8 E 305 8 E 311 8 E 312 8 E 313	2N128 2N207 2N207A 2N207B	F E E	30 50 50 50	10 12 12 12	- 5 - 20 - 20 - 20	65* 2 2 2 2	IF, RF; SBT‡  Audio; PNP  Audio; PNP  Audio; PNP	6.30 2.80 3.00 3.40
8 E 307 8 E 308 8 E 309 8 E 306	2N223 2N224 2N226 2N240	E E E F	200 250 250 250 30	18 25 30 6	- 150 - 150 - 150 - 150	0.51	Audio; PNP Audio; PNP Audio: PNP Computer; SBT‡	1.65 1.95 1.65 7.35
8 E 302 8 E 303 8 E 304 8 E 317	2N344/SB101 2N345/SB102 2N346/SB103 2N352	F F G	20# 20# 20# 25W	- 5 - 5 - 5 - 40	- 5 - 5 - 5 - 2A	50 50 75 16 kc	IF, RF; SBT; IF, RF; SBT; IF, RF; SBT; Power; PNP	3.45 4.35 5.85 2.80
8 E 318 8 E 319 8 E 320 8 E 324	2N353 2N386 2N387 2N393	G G F	30W 12.5W 12.5W 50	40 60 80 6	- 2A - 3A - 3A - 50	16 kc 7 kc 6 kc 60*	Power; PNP Power; PNP Power; PNP Switching; Micro-Alloy	3.75 6.75 9.75 9.40
8 E 310 8 EC 322 8 EC 323 8 E 325	2N462 2N495## 2N496## 2N499	F F F	150 150 150 75	- 40 - 25 - 10 - 30	- 200 - 50 - 50 - 50	0.8 15* 15* 320*	Bilateral; PNP IF, RF; PNP Switching; PNP VHF; MADT	6.00 21.00 26.55 8.25
8 EC 326 8 EC 327 8 EC 328 8 EC 329	2N500 2N501 2N502 2N503	F D D	75 50 60 60	- 20 - 15 - 20 - 20	- 50 - 50 - 50 - 50	500* 375* 700* 425*	UHF Osc.; MADT Switching; MADT UHF; MADT RF; MADT	10.90 14.25 12.40 11.25
8 E 330 8 E 314 8 E 315 8 E 316	2N504 2N534 2N535 2N536	F E E	50 25** 50 50	- 35 - 50 - 20 - 20	- 50 - 25 - 20 - 30	100* 2 2 1	IF, HF, MADT Audio; PNP Audio; PNP Switching; PNP	6.00 2.80 2.80 3.40
8 E 331 8 EC 321 8 E 334 8 E 335 8 E 336	2N588 2N589 2N597 2N598 2N599	F G D D	80 37.5W 250 250 250	- 20 - 100 - 30 - 30 - 30	- 50 - 3A - 400 - 400 - 400	7.5	IF, VHF; MADT Power; PNP Switching; PNP Switching; PNP Switching; PNP	6.00 13.50 4.35 5.85 8.85
8 E 337 8 E 338 8 E 339 8 E 301 8 E 300	2N670 2N671 2N672 SB100 SB200	D	300 1W 300 10# 10#	- 40 40 25 4.5	- 2A - 2A - 2A - 5	0.65 0.5 600 45* 22.5*	Pulse Amp.; PNP Pulse Amp.; PNP Pulse Amp.; PNP IF, RF; SBT‡ HF; SBT‡	3.90 5.25 3.90 3.90 2.25

Sp	CVI	٧A	М	,

Stock No.	Туре	Fig.	Pt Mw	BV	lc Ma	F <sub>a</sub>	Description	NET EACH
7 E 342	2N34	H	50	- 40	50	0.4	Gen'l Purp.; PNP	3.30
7 E 342	2N35	Н	50	40	1000	10 kc##	Gen'l Purp.: NPN	1.16
7 E 343	2N68	ï	1.5W	- 30	1.5A	0.4	Power; PNP	5.36
7 E 344	2N94	Ĥ	50	20	1.57	3	RF. IF: NPN	1.65
7 E 346	2N94A	H	50	20	50	3	RF. IF: NPN	5.78
7 E 345	2N94A 2N95	l "i	1.5W	30	1.5A	0.4	Power; NPN	5.36
7 E 335	2N101	,	1W	- 30	1.57	0.4	Power: PNP	4.95
7 E 336	2N101 2N102		îw	30	800	0.4	Power; NPN	4.95
8 E 650	2N109		50	- 25	70	9.1	Audio: PNP	1.74
7 EC 339	2N109 2N141	1	1.5W	- 60	800	0.4	Power: PNP	10.31
7 EC 349	2N142	زا	1.5W	60	800	0.4	Power: NPN	10.31
8 E 651	2N143		1W	- 60	800	0.4	Power: PNP	9.90
	2N144		1W	60	800	0.4	Power; NPN	9.90
8 E 652 8 E 653	2N155	K	8.5W++	- 30	3A	6 kc##	Power; PNP	3.05
8 E 655	2N176	ĺκ	10W§§††	- 30	3A	4 kc‡‡	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	2N194 2N212	Н	50	12	50	6	Converter; NPN	1.98
7 E 399	2N212	НH	50	40	100		Audio: NPN	1.29
7 E 863	2N214	l н	180	40	100	10 kc++	Audio; NPN	1.49
8 E 657	2N214MP						Pair	
7 E 864	2N216	H	1 50	1 18	1 10	13	IF; NPN	1 1.73
8 E 658	2N217	1 "	50	- 25	50	0.4	Audio; PNP	1.73
8 E 659	2N228	Ή.	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	2N233	H	50	10	50	3	Gen'l Purp. RF; NPN	.90
8 E 660	2N233A	Н	50	18	30	3	Gen'i Purp. RF; NPN	1.29
8 E 661	2N235B	ĺκ	25W††	- 40	3A		Power; PNP	3.38
7 E 348	2N242	K	25W††	- 45	2A	7 kc11	Power: PNP	3.05
7 E 867	2N255	K	6.25W††	- 15	3A	0.2	Power; PNP	1.32
8 E 662	2N257	K	25W††	- 40	2A	7 kc##	Power: PNP	3.23
8 E 664	2N296	K	25W††	- 60	2A	4 kc‡‡	Power: PNP	6.19
8 E 665	2N306	H	50	20		0.6	Audio: NPN	.99
7 E 866	2N307	K	10W††	- 35	1A	3 kc‡‡	Power; PNP	1.50
8 E 666	2N307A	K	17W	- 35	2A	3.5kc‡‡	Power; PNP	2.15
8 E 667	2N312	D	100	15	200		Computer sw.; NPN	8.25
8 E 668	2N356	D	100	20	500	3	Computer sw.; NPN	5.78
8 E 669	2N357	D	100	20	500	3	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	411	Computer sw.; NPN	5.78
8 E 673	2N388	D	150	25	200	8	Computer sw.; NPN	7.43
8 E 674	2N401	K	25W††	40	3A		Audio; PNP	3.22
8 E 675	2N420	K	25W††	<b>— 40</b>	5A		Switching; PNP	4.52
8 E 676	2N515	H	50	18	10	311	IF; NPN	1.73
8 E 677	2N516	H	50	18	10	311 311	IF: NPN	1.73
8 E 678	2N517	H	50	18	10	3‡‡	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	l	Computer sw.; NPN	5.36

## **Diodes and Rectifiers**

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#### PACIFIC SEMICONDUCTORS

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units are silcon, except \*germanium.

Gen. Purp. Point-Contact Diodes: VMI is max. inverse wkg. volitage @ 25° C. Oper. temp. range: - 78° to +90° C. Max. size: .265x.140°. Gen. Purp. Diodes: IMAR1 is max. av. rectified current @ 25° C. Max. av. rectified current @ 150° C. Max. size: .265x.140°. Fast-Recovery (Diffusion Comp. 200 na. Max. power dissipation: 0.5 watts @ 25° C. Oper. temp. range: -80° to +200° C. Max. size: .265x.140°. Piodes: Tis max. recovery time. IMR1 is max. reverse current @ 25° C. Oper. temp. range: -65° to +150° C. Max. size: .265x.140°. Submin. Rectifiers: Oper. temp. range: -65° to +150° C. Max. size: .265x.140°. Submin. Rectifiers: Oper. temp. range: -65° to +100° C. (1N group): Rated 400 na @ 25° C. 150 ma @ 150° C. IMR4 is max. reverse current @ 100° C. VRM5 is peak recurr. inverse voltage @ 150° C. Max. size: .265x.140°. Max. size: .265x.140°. Min. Rectifiers: Oper. Inverse voltage. Max. Max. size: .265x.140°. Min. Rectifiers: Rated 500 ma @ 25° C. 200 ma @ 150° C. VRM 56 is max. RMS input voltage @ 150° C. VRM5 is peak recurr. inverse voltage @ 150° C. Max. size: .265° C.

Stock Type Fig. Description-Application 1-99 | 100-999 \*Gen.-Purp. Point-Contact Diode (60v. VMI)
\*Gen.-Purp. Point-Contact Diode (150v. VMI)
\*Gen.-Purp. Point-Contact Diode (80v. VMI) 1N34A 1N55B .44 1.96 1.05 .38 1.24 34 1.50 1.50 30 .95 Ē 1N67A 1N90 1N99 \*Gen.-Purp. Point-Contact Diode (60v. VMI) \*Gen.-Purp. Point-Contact Diode (60v. VMI) \*Gen.-Purp. Point-Contact Diode (60v. VMI) \*Gen.-Purp. Point-Contact Diode (80v. VMI) Gen.-Purp. Diode (90 ma IMARI) .66 .78 .45 1.18 3.18 B .60 .35 .90 2.45 1N126 R 1N198 1N456 Gen.-Purp. Diode (75 ma IMARI) Gen.-Purp. Diode (55 ma IMARI) Gen.-Purp. Diode (40 ma IMARI) Gen.-Purp. Diode (60 ma IMARI) Gen.-Purp. Diode (50 ma IMARI) 3.67 4.05 4.30 1.59 2.39 B B 2.85 3.10 3.30 260 261 262 263 264 1N458 18459 1N461 1N462 1.25 Gen.-Purp. Diode (200 ma IMARI) Gen.-Purp. Diode (400 ma IMARI) High-Conductance Diode (500 ma IMAR6) High-Conductance Diode (700 ma IMAR6) High-Conductance Diode (500 ma IMAR6) 2.86 2.65 1.65 2.43 2.74 1N463 2.18 265 266 1N464 1N482 1N482A 1N484 High-Conductance Diode (70 ma IMAR6) High-Conductance Diode (50 ma IMAR6) High-Conductance Diode (70 ma IMAR6) High-Conductance Diode (50 ma IMAR6) High-Conductance Diode (70 ma IMAR6) 3.21 2.86 3.63 3.53 4.23 2.45 2.75 2.70 3.25 1N484A 1N485A 1N486 1N486A High-Conductance Diode (70 ma IMAR6)
High-Conductance Diode (50 ma IMAR6)
High-Conductance Diode (50 ma IMAR6)
High-Conductance Diode (70 ma IMAR6)
Fast-Recov. (0.15 µsec T, 1µa IMR1 @ 10v.)
Fast-Recov. (1 µsec T, 20 µa IMR1 @ 35v.) 6.54 6.27 8.16 1.67 2.01 5.00 4.80 6.25 1N487A 1N488 1N488A Fast-Recov. (1µsec T, 20 µa IMR1 @ 75v.)
Fast-Recov. (1µsec T, 20 µa IMR1 @ 125v.)
Fast-Recov. (1µsec T, 20 µa IMR1 @ 125v.)
Fast-Recov. (1µsec T, 20 µa IMR1 @ 100v.)
Fast-Recov. (0,3 µsec T, 1 µa IMR1 @ 100v.)
4,70
Submin. Rectifier (15 µa IMR4 @ 225v.) VPR16)
3,14 1N627 1N628 1N629 1.80 2.20 2.20 3.60 2.40 BBB E 294 1N643 E 284 1N645 Submin. Rectifier (15 µa IMR4 @ 300v. VPR16) 4, 24
Submin. Rectifier (20 µa IMR4 @ 400v. VPR16) 5, 49
Submin. Rectifier (20 µa IMR4 @ 500v. VPR16) 5, 80
Submin. Rectifier (25 µa IMR4 @ 500v. VPR16) 8, 40
Fast Recov. (0.5 µsec T, 5 µa IMR1 @ 75v.) 285 286 287 1N646 1N647 1N648 В BBBB E 288 1N649 1N663 | S | Submin. Rectifier (35v. VRMS4, 50v. VPR14) | 1.05 | Submin. Rectifier (70v. VRMS4, 20v. VPR14) | 1.05 | Submin. Rectifier (70v. VRMS4, 20v. VPR14) | 2.28 | Submin. Rectifier (45v. VRMS4, 50v. VPR116) | 1.05 | Submin. Rectifier (45v. VRMS6, 50v. VPR116) | 1.05 | Submin. Rectifier (14v. VRMS6, 20v. VPR16) | 1.05 | Submin. Rectifier (14v. VRMS6, 20v. VPR16) | 1.05 | Submin. Rectifier (14v. VRMS6, 20v. VPR16) | 1.05 | Submin. Rectifier (14v. VRMS6, 20v. VPR16) | 1.05 | Submin. Rectifier (14v. VRMS6, 20v. VPR16) | 1.05 | Submin. Rectifier (14v. VRMS6, 20v. VPR16) | 1.05 | Submin. Rectifier (14v. VRMS6, 20v. VPR16) | 1.05 | Submin. Rectifier (14v. VRMS6, 20v. VPR16) | 1.05 | Submin. Rectifier (14v. VRMS6, 20v. VPR16) | 1.05 | Submin. Rectifier (14v. VRMS6, 20v. VPR16) | 1.05 | Submin. Rectifier (14v. VRMS6, 20v. VPR16) | 1.05 | Submin. Rectifier (14v. VRMS6, 20v. VPR16) | 1.05 | Submin. Rectifier (14v. VRMS6, 20v. VPR16) | 1.05 | Submin. Rectifier (14v. VRMS6, 20v. VPR16) | 1.05 | Submin. Rectifier (14v. VRMS6, 20v. VPR16) | 1.05 | Submin. Rectifier (14v. VRMS6, 20v. VPR16) | 1.05 | Submin. Rectifier (14v. VRMS6, 20v. VPR16) | 1.05 | Submin. Rectifier (14v. VRMS6, 20v. VPR16) | 1.05 | Submin. Rectifier (14v. VRMS6, 20v. VPR16) | 1.05 | Submin. Rectifier (14v. VRMS6, 20v. VPR16) | 1.05 | Submin. Rectifier (14v. VRMS6, 20v. VPR16) | 1.05 | Submin. Rectifier (14v. VRMS6, 20v. VPR16) | 1.05 | Submin. Rectifier (14v. VRMS6, 20v. VPR16) | 1.05 | Submin. Rectifier (14v. VRMS6, 20v. VPR16) | 1.05 | Submin. Rectifier (14v. VRMS6, 20v. VPR16) | 1.05 | Submin. Rectifier (14v. VRMS6, 20v. VPR16) | 1.05 | Submin. Rectifier (14v. VRMS6, 20v. VPR16) | 1.05 | Submin. Rectifier (14v. VRMS6, 20v. VPR16) | 1.05 | Submin. Rectifier (14v. VRMS6, 20v. VPR16) | 1.05 | Submin. Rectifier (14v. VRMS6, 20v. VPR16) | 1.05 | Submin. Rectifier (14v. VRMS6, 20v. VPR16) | 1.05 | Submin. Rectifier (14v. VRMS6, 20v. VPR16) | 1.05 | Submin. Rectifier (14v. VRMS6, 20v. VRMS6, 20v. VRMS6, 20v. VRMS6, 20v. VRMS6 | Submin. Rectifier (14v. VRMS6, 20v E 279 PS005 E 279 PS020 E 280 PS050 E 281 PS060 E 282 PS105 E 283 PS120 .80 1.75 3.90 4.50

#### PACIFIC "VARICAP" VOLTAGE-VARIABLE CAPACITORS

B. Compact, sliton PN junction device permits varying circuit capacitance through control of bias voltage. Functions like capacitor and resistor in series from 5-500 mc, with capacitance varying essentially as 1/v when biased in reverse direction. Capacitance varying essentially as 1/v when biased in reverse direction. Capacitance and resistance are virtually independent of frequency; and capacitance values remain nearly constant over operating range of -65° to +150° C and over a long period of time. Hermetically sealed—have glass-to-metal fused and metal-to-metal welded seals. Color coded. Min. lead length: 1/4°. Max. size: .265x .140° dia. Av. shpg. wt., 2 oz.

	St	ock	T	Capacitance*	Max. Oper.	Series I	Res. (Ohms)	Typical O	NET	EACH
	N	0.	Type	@ - 4 v.	Voltage	Max.	Typical	@ 50 mc	1-99	100-999
8	E	296		15 mmf	100		30	7.5		
8	Ē	750	V20	20 mmf	- 20	18	8.5	18.7		1
8	E	297	V27	27 mmf	20	14	7.5	15.7	0 40	2.06
	E	751	V33	33 mmf	- 20	12	6.6	14.6	£,07	2.00
8	E	298	V39	39 mmf	20	10	5.4	15.1		
ĕ	E	752	V47	47 mmf	<b> 20</b>	7.5	4.4	15.4		l .
8	E	299	V56	56 mmf	- 15	7.0	4.2	13.5		ł



Group no.: I—gen, purp. diode; III—computer diode; III—VR diode; IV—rectifier. VP is peak inverse voltage, except breakdown voltage (@ 25° C) for III (\*min.-max., +±5% tolerance), and peak recurr. inverse voltage (@ 25° C) for IV. Specification "S" (@ 25° 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.
-			rig.				
88888 888 888 888 888 888 888 888 888	179 180 173 167 168	1N538 1N539 1N540 1N588 1N589	оссее	IV IV IV IV IV	200 300 400 1500 1500	750 ma 750 ma 750 ma 25 ma 50 ma	2.50 2.90 4.14 8.10
88888 EEEEE	169 170 174 175 176	1N590 1N591 1N645 1N646 1N647		IV IV I I I	1500 1500 225 300 400	125 ma 125 ma 400 ma 400 ma 400 ma	14.00 14.00 3.28 4.44 5.77
**************************************	177 178 222 223 224	1N648 1N649 1N659 1N660 1N661	ממממם	I II II II	500 600 50 100 200	400 ma 400 ma 0.3 μsec 0.3 μsec 0.3 μsec	7.10 8.42 4.00 4.13 4.97
COC   COC	181 182 229 240 230	1N1095 1N1096 1N1124 1N1124R 1N1125	GG F F F	IV IV IV IV IV	500 600 200 200 300	750 ma 750 ma 3.0 A 3.0 A 3.0 A	7.50 2.70 2.70 3.38
	241 231 242 232 243	1N1125R 1N1126 1N1126R 1N1127 1N1127	11111	IV IV IV IV IV	300 400 400 500 500	3.0 A 3.0 A 3.0 A 3.0 A 3.0 A	3.38 4.73 4.73 6.76 6.76
88888 EEEEE	239 244 171 172 141	1N1128 1N1128R 1N1130 1N1131 600C	F F 	IV IV IV IV I	600 600 1500 1500 27	3.0 A 3.0 A 300 ma 300 ma 25 ma	8.32 8.32 11.20 11.20 1.94
***************************************	142 145 146 147 151	601C 608C 610C 612C 620C	00000	I I I I	45 10 15 22 100	25 ma 75 ma 60 ma 50 ma 30 ma	3.60 3.25 3.30 3.40 3.65
	153 154 156	622C 624C 650C 651C 652C	00000	I I III III III	150 220 3.7-4.5* 4.3-5.4* 5.2-6.4*	25 ma 20 ma 150 mw 150 mw 150 mw	3.70 3.75 4.35 4.35 4.35
**************************************	157 158 159 160	653C 650C0 650C3 651C0 651C5	00000	III III III III	6.2-8.0* 3.7† 4.0† 4.5† 5.0†	150 mw 150 mw 150 mw 150 mw 150 mw	4.35 4.85 4.85 4.85 4.85
8 E E E	163 164 165	652C0 652C5 653C0 653C4	ပြပ္ပေပါ	III III III	5.5† 6.0† 6.5† 7.0†	150 mw 150 mw 150 mw 150 mw	4.85 4.85 4.85 4.85
888 EEE	166 225 226	653C9 654C9 655C9	CCC	III	8.0† 9.0† 10.0†	150 mw 150 mw 150 mw	4.85 4.85 4.85

## RAYTHEON

#### **RAYTHEON DIODES**

All are bonded silicon, except \*point-contact germanium; †gold bonded germanium. Low shunt capacitance. Have wire leads. Av. shpg. wt., 3 oz.

Stock	Mfr's	Fig.	Peak Inv.	Min. Forward	Max. Inv.	Temperature 1	NET
No.	Type	rig.	Voltage	Current(ma) at 1v	Current(ma)	Range (C°)	EACH
5 E 845	*1N34	J	60	5	.8@50V	-50 to +100	.52
5 E 9 15	1N38	1 3	120	3.0	.6@ 100V	-50  to  + 100	.36
5 E 916	1N60	1	25		.2@-10V	- 50 to + 100	.36
5 E 785	*1N66	J	60	5	.8@-50V	- 50 to + 100	.52
5 E 786 5 E 828		J	80	4	.05@-50V	-50 to +100	1.40
5 E 828		j	100	3	.6@ 100V	-50  to + 100	.99
5 E 917	1N82A		5.0	Noise figure		-50  to + 100	1.05
5 E 810	*1N294	J	60	5	.8@50 <b>V</b>	-50  to + 100	.65
5 E 812	*1N295	J	40		.2@-10V	-50  to + 100	.34
5 E 726	*1N297	1	80	3.5	.1@50V	- 50 to + 100	.98
5 E 84 I	1N300	H	15	8	.001@ 10V	-55  to + 150	5.78
5 E 900	1N300A	Н	15	30	.001@ 10V	- 55 to + 150	6.61
5 E 842		H	70	5	.05@-50V	-55  to + 150	5.78
5 E 901		H	70	18	.05@-50V	-55  to + 150	6.61
5 E 843 5 E 903	1N303	H	125	3	.1@ 100V	- 55 to + 150	5.78
5 E 903	1N303A	Į H	125	12	.1@-100V	-55 to $+150$	6.61
5 E 835 5 E 904	+1N305	H	60		.02@-50V	-55  to + 100	3,30
5 E 904	11N306	H	15		.002@-10V	- 55 to + 100	3.30
5 E 838	11N307	Ĵ	125	100		- 55 to + 100	3.30
5 E 832	*CK715	1	40	10	_	- 50 to - 100	.65

#### K RCA POINT-CONTACT GERMANIUM DIODES

Stock No.	Mfr's Type	Description	Peak Inv. V.	Av. Fwd. Ma @ 25°C.	Wt., Oz.	EACH
5 E 870		Gen. Purp.	60	50	3	48¢
5 E 874		Large Signal	100	50	3	97¢
5 E 875	1N54A	High Back Res.	50	50	3	97¢

## Rectifiers and Diodes

#### HOFFMAN SILICON DIODES AND RECTIFIERS

- Ready for Delivery at OEM Prices
- In Stock-In Quantity

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 which make them suitable for voltage regulation, reference, or switching. Also includes general purpose, glass-cased general purpose, glass-cased septend purpose, considered to replacement use. Extremely stable and reliable; designed to meet close tolerances. Av. shpg. wt. 3 oz. For further descriptions and specifications, write Altied's Industrial Division. Any type not listed is available on special order. Write for literature and prices.



Same Day Shipment



	cial order	. Writ	le for literature d	ind prices	· .									
Stock No.	Туре	Fig.	Description	EACH	Stock No.	Туре	Fig.	Description	EACH	Stock No.	Type	Fig.	Description	EACH
8E351 8E352 8E353 8E354	1N137A 1N138A 1N200 1N201	A A A	General purpose	2.75 2.75 3.25 3.25 3.25	8 E 4 I O 8 E 4 I I 8 E 3 7 7 8 E 3 7 8	1N463 1N464 1N465 1N466	E E A	Glass; general purpose	3.50 3.30	8 E 454 8 E 455 8 E 456 8 E 457	1N1320 1N1321 1N1322 1N1323	A A A	Zener single anode; medium voltage	3.50
8E355 8E356 8E357 8E358	1N202 1N203 1N204 1N205	A A A	General purpose	3.25	8 E 379 8 E 380 8 E 381 8 E 382	1N467 1N468 1N469 1N470	A A A	Zener; low voltage	3.75	8 E 458 8 E 459 8 E 460 8 E 461	1N1324 1N1325 1N1326 1N1327	A A A	Zener single anode; medium voltage	3.50
8E359 8E360 8E361 8E362 8E363	1N206 1N207 1N208 1N209 1N210	A A A	General	3.25	8 E 392 8 E 393 8 E 394 8 E 395 8 E 396	1N471 1N472 1N473 1N474 1N475	A A A A	Zener double anode; low voltage	5.20	8 EC 463 8 EC 464 8 EC 465 8 EC 466	1N1351 1N1352 1N1353 1N1354 1N1355	++++	Zener; power voltage regulator	10.00
8E364 8E365	1N211 1N212 1N213 1N214	A	purpose		8 E 423 8 E 424 8 E 425 8 E 426	1N536 1N537 1N538 1N539	B B	Medium-power	1.50 1.50 1.80	8 EC 467 8 EC 468 8 EC 469 8 EC 470	1N1356 1N1357 1N1358 1N1359	++++	Zener; power	10.00
8E367 8E368 8E369 8E370	1N215 1N216 1N217	A A A	General purpose	3.25	8 E 427 8 E 412 8 E 413	1N5 40 1N6 25 1N6 26	B B E	Glass; fast	2.45 3.70 1.80 2.10	8 EC 471 8 EC 472 8 EC 473	1N1360 1N1361 1N1362 1N1363	F	Zener; power	11.00
8 E 371 8 E 372 8 E 373 8 E 374	1N218 1N219 1N220 1N221	A A A	General purpose	3.25 3.25 4.50 4.75	8 E 4 I 4 8 E 4 I 5 8 E 4 I 6 8 E 4 2 8	1N6 27 1N6 28 1N6 29 1N1 095	EEE	recovery	2.10 2.55 2.90 3.10 5.60	8 EC 474 8 EC 475 8 EC 476 8 EC 477	1N1364 1N1365 1N1366	F F	regulator	11.00
8E375 8E383 8E384 8E385 8E386	1N222 1N225 1N226 1N227 1N228	A A A	Zener double anode; medium	5.00	8 E 432 8 E 433 8 E 434 8 E 435	1N1115 1N1116 1N1117 1N1118	B F F F	Medlum-power rectifier	2.90 3.30 4.15 5.80	8 EC 478 8 EC 479 8 EC 480 8 EC 481	1N1367 1N1368 1N1369 1N1370 1N1371	F F F	Zener; power voitage regulator	11.00
8E388 8E389 8E390	1N229 1N230 1N231 1N232	A	Zener double	6.25	8 E 436 8 E 437 8 E 438 8 E 439	1N1251 1N1252 1N1253 1N1254	D D D	Medium-power rectifier	1.50 1.50 1.80 2.45	8 EC 482 8 E 483 8 EC 484 8 EC 485 8 EC 486	1N1372 1N1373 1N1374 1N1375	F	Zener; power voltage regulator	13.00
8E391 8E429 8E430	1N233 1N253 1N254	A F	voltage   Medium-power	2.90	8 E 440 8 E 604 8 E 441 8 E 442	1N1255 1N1255A 1N1256 1N1257	D D D	Medium-power rectifier	3.70 3.70 5.60 8.00	8 EC 401 8 EC 402 8 E 417	1N1530 1N1530A GZ-1	G G	Zener reference unit Glass;	18.00
8E 431 8E 397 8EC 398	1N255 1N429	F A C	Zener reference	9.00	8 EC 443 8 EC 444 8 EC 445	1N1258 1N1259 1N1260	D D	Medium-power	11.00	8E418 8E419 8E420	GZ-2 GZ 3 GZ-4	E E E	zener low voltage	4.00
8 EC 399 8 EC 400 8 E 376	1N430A	Č C	General purpose	27.00 36.00 5.00	8 E 447 8 E 448	1N1261 1N1313 1N1314	A	]	14:00	8 E 421 8 E 422 8 E 487	GZ-5 GZ-6 HB-1	E E A	Glass; zener low voltage	4.00
8E403 8E404 8E405	1N456 1N457 1N458	FEEF	Glass;	4.05	8E 449 8E 450 8E 451	1N1315 1N1316 1N1317	AAAA	Zener single anode; medium voltage	3.50	8 E 488 8 E 489	HB-2 HB-3 HB-4	A	General purpose	.44
8E 406 8E 408 8E 409	1N458 1N459 1N461 1N462	E	genera) purpose	4.60 4.80 2.15 3.20	8 E 452 8 E 453	1N1318 1N1319	Ä			8 E 490 8 E 491 8 E 492	HB-5 HB-6	A A	General purpose	.44

#### SYLVANIA CRYSTAL AND MICROWAVE SILICON DIODES

#### **GERMANIUM CRYSTAL DIODES**

VS/			GERMA	MUIN	CRYSTAL	DIODES	•				
			npact, highly e					rectifiers, herme			
~			odes have hundi		sealed in glass-to-metal moisture-proof car-						
mantificati	appli	cation	ns. May be us les up to 200 mc-	ed for	tridges—withstand extended exposure to hu-						
application	on or nec	ector	s in TV and com	muni-	midity. Items below which are only designated by a voltage rating are general purpose types.						
cations re	ceivers, t	ransn	nitters, etc.		"Min." in description means miniature. 2 oz.						
Stock No.	Type	Fig.	Description	NET	Stock No.	Туре	Fig.	Description	NET		
7 E 236	1N34A	K	60-volt	.50	8E704	1N127A		Min. 100 vott	1.16		
7 E 220	1N35	H	Matched pair		8 E 705	1N128	Ĵ	Min. high back	.91		
			1N34A	1.57	8E706	1N191	J	Min. computer	1.07		
7E426 8E744	1N38A 1N38B	K	}100-volt	.83	8 E 707	1N193	K	)	6.60		
			, , , , , ,		8 E 7 0 8	1N194	K	High temperature	9,90		
7 E 235 8 E 685	1N39A 1N48	K	200-volt	2.48 .68	8E709 8EC710	1N195 1N196	K		7.84		
8 E 686	1N52A	l k	85-volt	.58	8E711	1N198A	1	Min.—75° C.	1,16		
7 E 427	1N54A	lκ	High back res.	.58 99	8E712	1N252	1 1	Min. 20-v.switch'g	3:87		
7 E 428	1N55A	K	150-volt	1.82	8 E 7 13	1N279	ĺ	Min. 30-v. high	3.07		
7 E 289	IN56A	K	High conductance	.69			١.	conductance	1.24		
7 E 237	1N58A	l K	100-volt	1.22	8E714	1N283	1	Min. 20-v. high			
7 E 292 8 E 687	1N60 1N63	K	Video detector High back res.	.36 1.40			<u> </u>	conductance	2.48		
8 E 688	1N64	l .:	Video detector	1.36	8E715 8E716	1N295 1N417	K	Video detector	.37		
8 E 689	1N65	K	70-volt	.58	8 E 7 17	1N41/ 1N418	l k	Computer	2.06		
8 E 690	1N67A	l î	Min, high back	1.07	8 Ē 7 i 8	1N419	l k	Computer	1:98		
8E 691	1N69A	K	60-volt	.38	8E719	1N448	K	Very low	1.24		
8E692	1N70A	K	100-volt	.78	8 E 720	1N450	ΙŘ	∫impedance	3.87		
8EC 693	1N77A		}Photodiode	13.20	8E721	1N457	j	Min. 70-volt	3.87		
8 EC 694 8 E 695	1N77B 1N81A	٠ĸ.	Low voltage	13.20	8 E 722 8 E 723	1N459 1N462	1	Min. 200-volt Min. 70-volt	4.56		
7 E 440	1N82	l R	1	.94					2,51		
8E 696	1N82A	l k	UHF mixer	1.07	8 E 724 8 E 725	1N463 1N482	1	Min. 200-volt Min. 25-v. high	2.91		
8 E.697	1N90	1	Min. general		0 6 7 2 5	111402	, ,	conductance	1.70		
0 = 10 / 1	200	1 -	purpose	.50	8E726	1N483B		Min. 50-v. high	1		
8 E 698	1N98	Į į	Min. high back	1.24				conductance	3.87		
8 E,699	1N118	J	Min. high conductance	1.07	8E727	1N486A	1	Min. 160-v. high			
0 = 700	7 N 7 10	<del></del> -			0.5500	T.N.C.0.4	١. ١	conductance	4.48		
8E700	1N119 1N126	K	60-v. computer	1.02	8 E 728	1N634	J	Min. very low impedance	1.16		
8 E 702	IN126A	1 1	Min. 60-volt	:58	8E729	1N636	ا د ا	Min. 20-volt	1:38		
8 E 703	1N127	ز ا	Min. 100-volt	1.20	8 E 730	1N1093	Ιĸ	Computer	1.19		



#### MICROWAVE SILICON DIODES

Point contact silicon diodes designed for use as non-linear circuit elements in micro-wave ap-plications—used in UHF-VHF TV converters. Av. shpg. wt., 2 oz.

TAY OHIDE.	W L., 2 UZ			
Stock No.	Туре	Fig.	Description	NET
7 E 274 8 E 73 I	1N21B 1N21BM	E	3000 mc mixer Matched pair	1.23
8 <b>E7</b> 32	1N21BR	L	of 1N21B Reversed polarity of 1N21B	3.70 1.85
7 E 275	1N21C 1N21CR	Ł	3000 mc mixer	2.05
			Reversed polarity of 121C	3.15
8E734	1N21D	L	Low noise type 3000 mc mixer	5.35
8 EC 735	1N21DR	L	Reversed polarity	
		١.	of 1N21D	8.10
8 EC 736 8 EC 737	1N21E 1N21ER	Ł	3000 mc mixer Reversed polarity	7.00
0 EC / 3/	THETER	-	3000 mc mixer	10.50
7 E 278	1N23A	L	10,000 mc mixer	1.24
7 E 279	1N23B	ŀ	10,000 mc mixer	1.25
8 E 738	1N23BR	L	Reversed polarity 10.000 mc mixer	1.85
8E739	1N23C		10,000 mc mixer	2.05
8 E 740	1N23CM	Ł	Matched pair	2.05
0 - 1 - 10	211230111	1 -	of, 1N23C	5.20
8E741	1N23D	L	10,000 mc mixer	5.20 5.35
8E742	1N23E	L	Low noise type	
		١.	10,000 mc mixer	7.40
7 EC 281	1N26	Ł	24,000 mc mixer	11.55
8 EC 743	1N78A	<u> </u>	16,000 mc mixer	16.50

## 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 range of operating conditions. All Hughes diodes are clearly marked with 3 bands on cathode end and letter "H" on anode end. Germanium diodes: shunt capacitance, 0.5 mmf nom.; ambient operating temperature range, -70° to +90° C.—all specifications at 25° C.; 1N126, 1N127, 1N128, 1N198 are JAN types; HD 2051, electrical equivalent to 1N634, \*Silicon junction diodes: Highly efficient operation throughout wide temperature range of -80° to +200° C.; max. power dissipation at 25° C. is 200 mw; †Silicon rectifiers have type number beginning with HR; 1 sec. surge is 10x av. rect. fwd. current; max. av. reverse current is 10 microamps. †@ 1.1 v. §Av. rect. fwd. current. Av. shpg. wt., 2 oz. **HUGHES DIODES** 

current. A	v.	supg.	wt.	, z oz	
	_				_

current.	Av. snpg.	wt., 2	oz.				
Stock No.	Туре	Fig.	Min. Fwd. Ma @ 1V.	Inv. V.	Max. Inv. Ma@25° C.	1-99	ACH 100-999
7 E 575 7 E 576 7 E 577 7 E 578	1N55B 1N67A 1N68A 1N89	A A A	5 4 3 3.5	150 80 100 80	500 @ 150v. 50 @ 50v. 625 @ 100v. 100 @ 50v.	5.04 .80 1.04 .85	3.88 .71 .80 .65
7 E 579 7 E 580 7 E 581 7 E 582	1N90 1N95 1N96 1N97	A A A	5 10 20 10	60 60 60 80	500 @ 50v. 500 @ 50v. 500 @ 50v. 100 @ 50v.	.39 .52 .59 .88	.30 .40 .45
7 E 583 7 E 584 7 E 585 7 E 586	1N98 1N99 1N100 1N116	A A A	20 10 20 5	80 80 80 60	100 @ 50v. 50 @ 50v. 50 @ 50v. 100 @ 50v.	.94 1.24 1.43 .78	.73 .95 1.10 .60
7 E 588 7 E 589 7 E 590 7 E 591	1N118 1N126A 1N127A 1N128	A A A	20 5 3 3	60 60 100 40	100 @ 50v. 850 @ 50v. 300 @ 50v. 10 @ 10v.	.81 .45 1.04 .68	.63 .34 .80 .53
7 E 592 7 E 594 7 E 673 5 E 400	1N191 1N198 1N456* 1N456A*	A B B	4 40 100	80 25 25	50 @ 50v. .025 @ 25v. .025 @ 25v.	.98 1.25 3.09 4.06	.75 .90 2.38 3.13
7 E 674 5 E 401 7 E 675 5 E 402	1N457* 1N457A* 1N458* 1N458A*	8 8 8	20 100 7 100	60 60 125 125	.025 @ 25v. .025 @ 60v. .025 @ 125v. .025 @ 125v.	3.58 4.35 3.93 4.75	2.75 3.35 3.03 3.65
7 E 676 5 E 403 7 E 670 5 E 404	1N459* 1N459A* 1N461* 1N461A*	8 8 8	3 100 15 100	175 175 25 25	.025 @ 175v. .025 @ 175v. .5 @ 25v. .5 @ 25v.	4.19 4.94 1.24 2.28	3.23 3.80 .95 1.75
7 E 67 I 5 E 405 7 E 672 5 E 406	1N462* 1N462A* 1N463* 1N463A*	B B B	5 100 1 100	60 60 175 175	.5 @ 30v. .5 @ 60v. .5 @ 175v. .5 @ 175v.	1.82 2.96 2.21 3.35	1.40 2.28 1.70 2.58
7 E 677 5 E 407 5 E 408 5 E 409	1N464* 1N464A* 1N482* 1N482A*	8 8 8 8	3 100 100† 200	125 125 36 36	.5 @ 125v. .5 @ 125v. .25 @ 30v. .25 @ 30v.	2.76 3.22 2.08 2.63	2.13 2.48 1.60 2.03
5 E 4   0 5 E 4   1 5 E 4   2 5 E 4   3	1N483* 1N483A* 1N484* 1N484A*	B B B	100† 200 100† 200	70 70 130 130	.25 @ 60v. .025 @ 60v. .25 @ 125v. .25 @ 125v.	2.76 3.28 3.02 3.61	2.13 2.53 2.33 2.78
5 E 4   4 5 E 4   5 5 E 4   6 5 E 4   7	1N485* 1N485A* 1N486* 1N486A*	B B B	100† 200 100† 200	180 180 225 225	.25 @ 175v. .025 @ 175v. .25 @ 225v. .05 @ 225v.	3.15 3.77 3.77 4.84	2.43 2.90 2.90 3.73
5 E 4   8 5 E 4   9 5 E 4 2 0 5 E C 4 2	1N487* 1N487A* 1N488* 1N488A*	8 8 8	100† 200 100† 200	300 300 380 380	.25 @ 300v. .1 @ 300v. .25 @ 380v. .1 @ 380v.	5.82 7.28 6.18 12.35	4.48 5.60 4.75 9.50
7 E 595 7 E 596 5 E 422 7 E 599	HD2051 HD2120 HD2125 HD2135	A A A	4 5 3 5	100 60 100 60	50 @ 50v. 500 @ 50v. 50 @ 50v. 100 @ 50v.	2.02 .46 1.43 1.20	1.55 .35 1.10 .93
7 E 597 7 E 598 7 E 685 7 E 687 7 E 688	HD2150 HD2155 HD6751* HD6753* HD6754*	A	100 50 100 100 100	80 60 175 275 325	50 @ 50v. 500 @ 50v. 100 @ 150v. 100 @ 250v. 100 @ 300v.	1.95 .59 2.70 4.10 4.42	1.50 .45 2.08 3.15 3.40
7 E 689 7 E 691 7 E 692 7 E 693 7 E 694	HD6755* HR10211: HR10213: HR10215: HR10251:	B B B B	100 150 § 150 § 150 § 200 §	375 175 275 375 175	100 @ 350v.	5.36 2.11 3.51 4.94 2.60	4.13 1.46 2.70 3.80 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 qualities. Operating temperature range. - 78° C. to +135° C.; maximum storage temperature, 150° C. Av. shpg. wt., 2 oz.

Stock	Mfr's		k Current	Rev. V. for	NET EACH		
No.	Type	μa @ 25° C	μa @ 100° C	100 μa	1-99	100-999	
7 E 682	1N625	1@-10V	30@-20V	30	1.66	1.28	
7 E 690	1N626	1@-35V	30@-35V	50	1.98	1.53	
7 E 683	1 N627	1@-75V	30@-75V	100	-2.28	1.75	
7 E 679	1N628	1@-125V		150	2.54	1.95	
7 E 681	1N629	1@—175V	30@-175V	200	2.80	2.15	

#### **COMPLETE SEMICONDUCTOR STOCKS**

- OEM Prices
- Large & Complete Stocks
- Same Day Shipment Newest Types
- Write, 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 Symbols: PIV—peak inverse voltage; \*silicon rectifiers, all others germanium; stand temperature, all other ratings at ambient temperature. Av. ships. wt., 2 oz. Types 1N93, 1N315, 1N536, 1N540 are also available on special order in models which meet military specifications. Write Allied's Industrial Division for price and delivery.

Stock No.	Туре	Fig.	PIV	Max Ma @		Max 1-Sec. Surge	Storage Max. °C.	NET EACH
7 E 491	1N91 1N92	D D	100	150	55	25A	85	18.
7 E 492		B	200	100	55	25A	85	1.86
7 E 493	1N93	Č	300	75	55	25A	85 85	2.60
7 E 479	1N151		100	500	55	25A		
7 E 476 8 E 057	1N153	C G G	300	500	55	25 A	85	3.53 2.45
8 E 057	1N253	١	95	1000	135†	15A	175	2.45
8 E 058	1N254	افا	190	400	135†	15A	175	2.74 5.49
8 E 059	1N255	G	380	400	135†	15 A	175	5.49
8 EC 070	1N256	G E E	570	200	135†	15A	175	11.27
8 E 071	1N315	G I	100	100	85	5A	95	2.94
8 E 072	1N440B*	E	100	500	100	15A	175	2.35
8 E 073	1N441B*		200	500	100	15 A	175	2.35 2.74
8 E 074 8 E 075	1N442B*	E	300	500	100	15A	175	3.43 4.83
8 E 075	1N443B*	E E	400	500	100	15A	175	4.83
8 E 076	1N444B*	E	500	425	100	15A	175	6.86
8 E 076 8 E 077	1N445B*	E	600	350	100	15A	175	9.80
7 E 93 I	1N536*	E	50	500	100	15A	175	1.13
7 E 497	1N537*	E	100	500	100	15A	175	1.32
7 E 498	1N538*	Ē	200	500	100	15A	175	1.72
7 E 932	1N539*	Ē	300	500	100	15A	175	2.65
7 F 933	1N540*	F	400	500	100	15A	175	3.23 5.68 2.35 2.74
7 E 933 7 E 990	IN1095*	E	500	425	100	15A	175	5.28
7 F 934	1N1115*	Ğ	100	1500	85†	15A	175	5.35
7 E 934 7 E 935	1N1116*	Ğ	200	1500	85+	15A	175	5.24
7 5 936	1N1117*	G	300	1500	85†	15A	175	2 43
7 E 936 7 E 937	1N1118*	Ğ	400	1500	85+	15A	175	3.43 5.49
8 E 060	1N1301*	Ĕ	50	15A	85+	300A	200	6.47
8 E 061	1N1302*	F	100	15A	160+	300A	200	8.72
8 EC 062	1N1304*	F	200	15A	160†	300A	200	
8 EC 063	1N1304*	F	300	15A	160+	300A	200	11.66
8 E 078	1N1487*	1 1	100	250	125	15A	150	17:08
8 E 079	1N1488*	E	200	250	125	15A	150	1:37
8 E 080	1N1489*	1 5	300	250	125	15A	150	1.96
8 E 08 I	1N1490*	L L	400	250	125	15A	150	2.84
8 E 082	1N1491*	E	500	250	110	15A	150	4.07
8 E 083	1N1492*		600	250	95	15A	150	6.08
8 E 084 8 E 085	1N1692*	D	100	250	100	20A	115	.73
8 E 085	1N1693*	D	200	250	100	20A	115	.98
8 E 086	1N1694*	D	300	250	100	20A	115	1:22
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; IM—maximum forward; FR—maximum frequency. Av. shpg. wt., 2 oz.

Stock No.	Туре	Fig.	PIV	Iм	FR	NET
8 E 333	1N147A	H	2 v.	55 ma	1000 mc	1.00
8 EC 332	1N263		1 v.	50 ma	12,000 mc	12.50

#### IRC SELENIUM DUAL DIODES

Exact replacement, highly stable, selenium dual diodes. For use in horizontal phase detectors in television receivers. Av. shpg. wt., 4 02.
7 E 752. Type D4. Common-cathode. List, \$1.65. NET. 97¢ 7 E 753. Type D5. Series-connected. List, \$1.65. NET. 97¢

#### J AMPEREX GERMANIUM DIODES

Point-contact germanium diodes hermetically sealed in glass. Ratings for 25° C. Peak rect. current, 150 ma; av. rect. current, 50 ma. PlV indicates peak inverse DC voltage. Av. shpg. wt., 3 or.

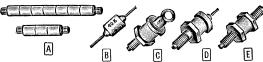
	Indicates p	Cum III 1 CI		TOLLUSC:	arve omps.	· c., o oz.		
ļ	Stock No.	Туре	PIV	NET	Stock No.	Туре	PIV	NET
	5 E 805	1N34A	75	.66	5E881	1N87	30	.39 1.58
	5E806	1N38A	120	1:18	5E882	1N119	75	1.58
	5 E 807	1N54A	1 75	1 1.10 1				ł

#### GERMANIUM DIODE BOOKS

ELECTRONIC SHORTCUTS FOR HOBBYISTS. By Sylvania engineers. Tells how to build 24 devices using germanium diodes. Has 40 pages 6x9. pages. 6x9". 37 K 074. Postpald in U.S.A....... 

## Sarkes Tarzian Rectifiers

#### SILICON RECTIFIERS



Outstanding new development in the field of power conversion and semi-conductors. 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 that the conversion and shock or where high power capacity in a small size that the conversion of the convers

Stock No.	No.	Mir's Type	Fig.	Max. *PIV	RMS   Volts	DC Amps	L x Dia.	EACH
						DO Allips		
4 A 731	1N1086	20L	Α	200	140	1.5	11/8 x 1/2"	4.07
4 A 732	1N1088	40L	A	400	280	1.5	11/8 x1/2"	5.96
4 A 733	1N1053	10P1	В	100	70	1.5	7/16× 7/16°	7.35
4 AC 734	1N1056	30P1	В	300	210	1.5	7/6X 7/16"	12.44
4 AC 735	1N1078	15Q4	Ē	150	150	15.	121/32X27/32*	13.82
4 AC 736		30Q4	E	300	210	15.	121/32X27/32"	19.30
4 A 737	1N1082	20M	Α	200	140	.5	1x13/32"	1.23
4 A 850	1N1083	30M	A	300	210	.5	1x13/32"	1.32
4 A 739	1N1109	120SM	A	1200	840	.425	115/16X13/32"	6.30
4 A 740	1N1110	160SM	A	1600	1120	.4	213/32X13/32"	8.40
4A851	1N1111	200SM	A	2000	1400	.375	21/8 x23/8"	10.48
4 A 741	1N1113	280SM	A	2800	1960	.325	313/16X13/32"	14.70
4 A 852	1N1440	20K	В	200	140	.625	5/8 x 3/8"	1.23
4 A 853	1N1442	40K	В	400	280	.625	5/8 X 3/8	1.47
4 A 854		K-200	B	360	260	.200	%x3/8"	.88

#### **NEW HERMETICALLY SEALED SILICON RECTIFIERS**

Miniaturized silicon rectifiers—hermetically sealed for full protection against moisture or dust. Stable under extreme conditions of temperature, altitude and shock. Thermal range:  $-55^\circ$  to  $100^\circ$  C. without derating. Capacitive loads require 20% derating for all types.

Stock No.	Jetec No.	Mfr's Type	Fig.	Max. PIV	RMS Volts	Max DC Amps	Overall Size L x Dia.	NET EACH
4 A 855	1N1029	10N1	В	100	70	.5	7/16X3/8"	4.68
4 A 856 4 A 857	1N1032 1N1036	30N1 15N2	B	300 150	210 105	.5 1	7/16×3/8* 9/16×3/8*	6.56 5.54
4 A 858	1N1039	40N2	D	400	280	1	%6x3/8"	8.33
4 A 859 4 A 860	1N1041 1N1043	10N3 20N3	C	100 200	70 140	1	13/16X3/8" 13/16X3/8"	4.68 5.93
4 A 861	1N1047	10N4	Ē	100	70	i	7/16×1/2"	4.68
4 A 862	1N1050	30N4	E	300	210	1	7/16X1/2*	6.56
4 A 863 4 AC 864	1N1059 1N1062	10P2 30P2	D	100 300	70 210	5	7/16 X 1/2 " 7/16 X 1/2 "	7.35 12.44
4 AC 865	1N1067	20P3	Č	200	140	5	7/16X3%	10.58
4 AC 866 4 AC 867		20P4 10O4	E	200 100	140 70	5 15	15/32X9/16" 25/32X27/32"	10.58
4 MV 86/	1 11410//	1 1004		1 100	1 /0	1 10	1 ~~/32×~ //32	111.34

#### **HIGH CURRENT SILICON RECTIFIERS**

Stock	Jetec	Mfr's	Max	RMS	Max	Overall Size	NET
No.	No.	Type	PIV	Volts	DC Amps	L x Dia.	EACH
4 A 868	1N1159	20RN*	200	140	20	1% x % *	5.98
4 A 869	1N1163	20SN*	200	140	35	2x % *	7.54
4 AC 870	1N1167	20VN†	200	140	100	2% x1% *	21.07
4 AC 874		10WN†	100	70	150	2¾ x1¼*	25.18
4 AC 872		10XN†	100	70	200	2¾ x1¼*	29.45
4 AC 871		30WN†	300	210	150	2¾ x1¼*	46.06
4 AC 873		30XN†	300	210	200	2¾ x1¼*	57.33

#### **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-5017: replaces tube types 80, 82, 83, 83V, 523; Type S-5017: C24, 5X4, 5X4, 6X5, 6X5; Type S-5018: 5AU4, 5AW4, 5AW5, 5X24; Type S-5019: 5R4; Type S-5033: 6AU4, 6AX4, 6BL4, 6W4, 12AX4, 17AX4, 2SW4. All plug-ins fit standard octal sockets except type S-5011 (4-contact socket). \*Hermetically sealed. 4 oz.

type S-501	1 (4-contac	t socket)	. ≁Hei	metica	any seared	. 4 oz.	- 19
Stock	Jetec	Mfr's	Max	RMS	Max	Overall Size	NET
No.	No.	Type	PIV	Volts	DC Amps	L x Dia.	EACH
4 A 646	1N1150A	S-5011	1600	1100	, .750	2½ x1½"	12.74
4 A 647	1N1237	S-5017	1600	1100	.750	219/32x13/16"	12.74
4 A 648	1N1238	S-5018	1600	1100	.750	219/32x13/16"	12.74
4 A 649	1N1239	S-5019*	2800	1950	.5	3½ x15/16"	20.04
4 A 875	1N1262	S-5033	4500	1600	.5	3¾ x1½"	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 the diode. Corrosion-resistant gold-plated clip solders easily. Has provision to prevent turning on chassis. Molded phenolic base (MIL-P-14, Type CFG). 1\( \frac{1}{9} \)(\text{k} \times \frac{3}{9} \times \frac{1}{9} \)(\text{wt.}, 2 \times 2



0

"Centre-Kooled" selenium rectifiers—premium quality at low cost. Widely used as replacements in radio and TV sets, intercoms, bias supplies, amplifiers, etc. Also excellent for original equipment. Supply plate, filament 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	Mfr's	DC	Size	1 to 4,	5 or More,
No.	Type	Ma		EACH	EACH
4 A 631	50	50	1¾6x <sup>2</sup> ¾2x <sup>1</sup> ¾2"	.65	.59
4 A 616	65	65	1x1x <sup>1</sup> ¼6"	.82	.74
4 A 617	75	75	1x1x <sup>1</sup> ¾6"	.91	.82
4 A 618	100	100	1¼x1¼ x <sup>1</sup> ¾6"	1.06	.95
4 A 619 4 A 620 4 A 621 4 A 622	100A 150 200 250	100 150 200 250	1x1x1" 1¼x1¼x11¼x1 11½x11½x1 11½x11½x11" 11½x11½x15%6"	.82 1.15 1.41 1.47	.74 1.03 1.27 1.32
4 A 685	250A	250	1 1/4 x1 1/4 x1 7/8"	1.29	1.16
4 A 623	300	300	1 1 1/2 x 1 1 1/2 x 1 7/8"	1.56	1.40
4 A 686	300A	300	1 1 3/2 x 1 1 3/2 x 1 1 5/6"	1.38	1.24
4 A 624	350A	350	1 1 1/2 x 1 1 1/2 x 2 3/32"	1.47	1.32
4 A 627	400	400	2x2x15/6"	1.71	1.54
4 A 687	400AD	400	14/5x14/5x11/4"	1.65	1.48
4 A 625	500	500	2x2x17/8"	1.97	1.77
4 A 688	500AD	500	14/5x14/5x15/6"	1.71	1.54

#### MINIATURIZED SILICON RECTIFIERS



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, one 10-0hm one-watt resistor. Shpg. wt., 4 oz.
4 A 696. 10 to 49, EACH....83¢ 1 to 9, NET EACH.......93¢

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 from breakdown, easier future replacement. Excellent for use by TV servicemen for modernization of older model TV sets or other types of electronic equipment. Also excellent as part of original equipment where miniaturization and reliability are required. Rectifiers clip in or out like fuses. Conversion kit includes 2—M500 silicon rectifiers, dual mounting clip, and all necessary hardware. 3/x11%ex1". Wt., 6 oz.

4 A 699 NET 3.76



Single Mounting Clip. Overall size, 3/4x115/16x1/2". Shpg. wt., 2 oz. 4 A 669, NET..... Dual Mounting Clip. Overall size, 3/4x115/6x1". Shpg. wt., 4 oz. 4 A 670, NET....

#### **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. "Centre-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. †Bridge-connected. Av. shpg. wt., 10 oz.



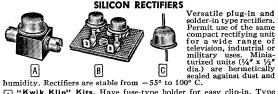
Stock	Mfr's	Max.	Max. AC	DCV	Size	NET
No.	Type	Amps.	Input V.	Output		EACH
4 A 700	*D-10	2	13	6-10	3x2½x3"	3.82
4 A 701	*D-12	6	13	6-10	4x2½x4"	5.19
4 A 702	*D-14	12	13	6-10	5x2¾x6"	6.47
4 A 703 4 A 704	*D-16 †D-17	22.5 2 4	13 26 26	6-10 6-20 6-20	4½x2½x12″ 3x3¾6x3″ 4x3¾6x4″	6.52 8.57
4 A 705	†D-19	6	26	6-20	4x4x4"	9.06
4 A 706	†D-20	8	26	6-20	5x33/6x6"	
4 A 707	†D-21	12	26	6-20	5x4x6"	11.51
4 A 711	†D-23	22.5	26	6-20	4½x4x12"	20.48
4 A 708	†D-24	2	52	20-40	3x45%x3"	11.42
4 A 709	†D-25	4	52	20-40	4x45/8x4"	15.58
4 A 712	†D-26	6	52	20-40	4x65/6x4"	16.12
4 A 713	†D-30	22.5	52	20-40	41/4x65/6x12"	37.39
4 A 714	†D-39	1	130	60-100	2x53/6x2"	17.25
4 A 715	†D-40	2	130	60-100	3x813/6x3"	22.73
4 A 7 I 6	†D-45	.5	156	100-120	1.6x6x1.6"	12.74
4 A 7 I 7	†D-46	1	156	100-120	2x6x2"	19.99
4 A 7 I 8	†D-47	2	156	100-120	3x101/4x3"	26.41
4 A 719 4 A 720	†D-48 †D-49	6	156 156	100-120 100-120	4x10 /4x4"   4x15%6x4"	39.10

Industrial Buyers, write or phone Allied's Industrial Division for Quantity
OEM Prices on all Sarkes Tarzian Rectifiers

## Silicon and Selenium Rectifiers

#### I T & T-FEDERAL RECTIFIERS

#### SILICON RECTIFIERS



"Kwik Klip" Kits. Have fuse-type holder for easy clip-in. Type HF504K is rated at 500 ma DC at 130 v. rms. Peak inverse voltage, 400 v. Includes 2 rectifiers. Type HF154K 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. 3.67

4 A 901. Type HF164K. List, \$1.60. NET ... 93¢

B Universal Replacement Kits. Have 4-way mounting design. Type 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 ma, DC. Has one rectifier. Shgp. wt. 2 oz. 4 A 902. Type HE504U. List, \$6.40. NET ... 3.77 4 A 902. Type HE164U. List, \$6.40. NET ... 93¢

A xial Lead Types. For direct-soldering into circuits. 1½" leads. F type HA504 is rated at 500 ma DC at 130 v. rms. Peak inverse voltage, 400. Type HA154 is similar but rated at 150 ma DC. 2 oz. 1.57

4 A 905. Type HA154. List, \$1.60. NET ... 93¢

Parallel Lead Types. For above Universal Replacement Kit. Type HE504 is replacement unit for HE504U. Type HE154 is for HE154U. 1½" leads. Shpg. wt. 2 oz. 4 A 905. Type HE604 List, \$2.75. NET ... 6.2

4 A 907. Type HE154. List, \$1.60. NET ... 93¢

#### **PACKAGED-POWER RECTIFIERS**



Exceptionally rugged, high current output type selenium rectifiers. Especially suitable for industrial use but can be used for practically any AC or DC conversion need. Current output on some types as high as 24 amperes. Single phase, full wave bridge type except \*single phase full wave centertap. Ratings slown are for 35° C. ambient temperature. tap. Ratings snown Av. shpg. wt., 8 oz.

Stock	Mfr's	Max. DC Output		Max AC	0:	NET EACH		
No.	Туре	Volts	Amps	Input V.	Size	1-9	10-24	
4A781	010*	10	3	13	3x3x1½"	4.70	4.49	
4A 782	012*	10	6	13	4x4x1¾*	5.88	5.61	
4A783	014*	10	12	13	6x5x1¾*	9.41	8,95	
4A784	016	10	24	13	10x6x23/8"	18.70	17.77	
4 A 785	211	20	3	26	3x3x21/16"	7.35	7.00	
4A786	213	20	6	26	4x4x211/16"	8.62	8.19	
4 A 787	215	20	12	26	6x5x2¾**	13.72	13.04	
4A788	217	20	24	26	10x6x3½*	26.46	25.14	
4A789	310	40	3	52	3x3x39/16"	11.09	10.54	
4 A 790	312	40	6	52	4x4x5*	13.99	13.29	
4A791	314	40	12	52	6x5x51/4"	22.58	21.45	
4 A 794	414	60	12	78	6x5x75/16"	31.36	29.80	
4 A 797	514	80	12	104	6x5x95/16"	40.12	38.11	
4A908	711	100	1	130	2x2x5%*	11.07	10.52	
4 A 909	712	100	2.4	130	3x3x65%*	22.77	21.64	
4A910	810	120	.3	156	1¼ x1¼ x4¾ *	8.78	8.34	
4A911	811	120	.6	156	1½x1½x4%*	9.96	9.46	
4A912	812	120	1	156	2x2x67/16"	12.76	12.12	



#### SELENIUM RECTIFIERS MINIATURE TYPE

An excellent selection of top-quality selenium rectifiers at unusually low prices. Fully miniaturized for limited space applications. Ideal for replacement use and for original equipment. Types 1016 and 1017 are bridge-connected. Internal voltage drops: Type 1001—1.2 volts; Types 1015, 1016, 1017—2.4 volts; Types 1002A, 1004A, 1004A, 1101A, 1005, 1159—7 volts; Types 1007, 1008, 1009, 1014—9 volts; Maximum rms input voltage. Rectifiers with type number have locking lug. \*Vultra-compact tubular rectifier; enclosed in paper tube. Has 1½\* leads for easy installation. Average shop. wt., 5 oz.

Stock	Mfr's	DC	† RMS	Size	NET	EACH
No.	Туре	MA	TRIVIS	Size	1-4	5-Up
4 A 662 4 A 606 4 A 602 4 A 668 4 A 913	1159 1002A 1003A 1001 1007	20 65 75 75 75	130 130 130 20 160	*½" dia.x¾" 1x1x%6" 1x1x3¼" 1x1x3¼" 1x1x3½" 1x1x2½6"	.74 .74 .78 .40 2.22	.67 .67 .70 .36
4 A 9 1 4 4 A 9 1 5 4 A 600 4 A 66 1 4 A 60 3	1008 1014 1004A 1101A 1005A	100 100 100 100 100 150	172 160 130 130 130	11364x11364x21/16" 1362x1362x1" 1362x11364x34" 1x1x11/8" 1362x11364x1"	2.72 1.28 .96 .92 1.00	2.45 1.18 .86 .87
4 A 916 4 A 917 4 A 666 4 A 660	1015 1009 1016 1017	150 200 300 600	25 172 25 25	1x1x1" 11 <sup>7</sup> / <sub>32</sub> x1 <sup>1</sup> / <sub>32</sub> x2 <sup>2</sup> / <sub>32</sub> " 11 <sup>3</sup> / <sub>4</sub> x1 <sup>9</sup> / <sub>32</sub> x3/ <sub>8</sub> " 11 <sup>7</sup> / <sub>32</sub> x1 <sup>1</sup> / <sub>32</sub> x3/ <sub>4</sub> "	1.22 3.70 1.28 1.46	1.10 3.33 1.15 1.31

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,  $4\frac{1}{4}x^2\frac{1}{2}x^3$ . Shpg. wt., 6 oz. 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 

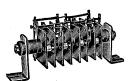
#### HI-DENSITY TYPE RECTIFIERS

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 where space is very limited. Maximum rms input volts, 130. Maximum peak inverse volts, 380. Internal drop 7 volts. All have locking lug. Av. shpg. wt., 4 oz.

Stock	Mfr's	DC	l	NET	ET EACH		
No.	Type	MĂ	Size	1-4	5-Up		
4 A 9   8	1234A-H	65-75	11/6x11/6x21/2"	.65	.58		
4 A 9   9	1235A-H	100-150	1x1x3/4"	.89	.79		
4 A 675	1236A-H	250-300	11/4x11/4x13/8"	1.17	1.05		
4 A 676	1241A-H	350-400	117/32x17/32x11/4"	1.53	1.38		
4 A 677	1237A-H	450-500	117/32x117/32x13/8"	1.76	1.58		
4 A 920	1242A-H	550-600	15/8x15/8x11/2"	1.94	1.74		



#### GENERAL ELECTRIC RECTIFIERS



SILICON RECTIFIER STACKS SILICON RECIIFIER SIACKS
GE's famous 4JA411 series. Feature
excellent regulation, high efficiency
and low leakage. Forward voltage
drops less than 1 volt per cell, efficiency
up to 99%. Almost negligible reverse
losses make them excellent for all magnetic amplifier applications. Have wide
range of operating temperature (-65°
to 170° C.). Compact space-saving den2-bolt mtg. Av. shog. wt., 12 oz. sign, require no fins or insulation. 2-bolt mtg. Av. shpg. wt., 12 oz.

AC Input Volts DC Output Stock No. NET EACH Mfr's Volts , Amps AB1AD1 AB1AD2 BB1AD1 BB1AD2 4 A 950 4 A 951 4 A 952 4 A 953 62 62 125 125 2½x1½x3½" 2½x1½x5½" 2½x1½x3½" 2½x1½x3½" 8.62 15.48 10.09 18.13 70 140 140 2½x1½x3½″ 2½x1½x5½″ 2½x1½x5½″ 2½x1½x5½″ 2½x1½x3½″ 2½x1½x3½″ 4 A 954 CB1AD1 4 A 955 CB1AD2 4 A 956 DB1AD2 4 A 957 EB1AD1 4 A 958 CB2AD1 210 210 280 350 420 188 188 250 314 376 12.35 22.24 31.06 24.50

#### **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 IN1005, IN1007, and IN1013 require single mounting hole. Type 1N573 requires two mounting holes—intended for original equipment. All half-wave except \*dual rectifier wired as voltage doubler. Av. shpg. wt., 3 oz.

Stock No.	Mfr's Type	Max. AC Input V	Peak Inverse V	DC Output Ma.	Full Load Voltage Drop	NET EACH
4 A 742 4 A 743	1N1005 1N1007 IN1008	130 130	380 380	250 350	.15 .3	1.52
4 A 689 4 A 744 4 A 745	1N1013* 1N573	130 130 130	380 380 380	400 250 250	.3 .15	2.15

#### HIGH CURRENT SILICON RECTIFIERS



- Built for Long Useful Life Withstand High Temperatures
- Easy-Installation Design

Expertly designed silicon power rectifiers. Withstand maximum surge currents of 900 amps, 60 cps. Operating temperatures as high as 200° C. Capable of handling DC outputs up to 85 amps per rectifying unit at lower temperatures. Cathode connection is by threaded 19½ stud; anode connection is terminal lug for nut and bolt. Current specifications are at 120° stud temperature. 41½ 1½ dia. Wt., 4 oz. NA s-1-

No.	Туре	PIV	@120°	EACH
4 A 959	4JA60A	100	70A	21.07
4 A 960	4JA60B	200	70A	29.15
4 A 961	4JA60C	l 300 l	70A	38.95
4 A 962	4.IA60D	400	70A	51.94
4 A 963	4JA60F	50	70A	14.70
4 A 964	4JA62A	100	40A	14.70
4 A 965	4JA62B	200	40A	19.35
4 A 966	4JA62C	300	40A	25.97
4 A 967	4JA62D	400	40A	40.67
4 A 968	4JA62F	j 50	40A	11.27

#### ALLIED IS SEMICONDUCTOR HEADQUARTERS

- OEM Prices
- Latest Types Available
- Same-Day Shipment
- Famous-Name Brands
- Largest Stocks
- 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





UNMOUNTED

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 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. All outputs in table below taken at 100 foot candle illumination with 100-ohm load. Wt., 2 oz.

Stock No.	Туре	Size	Style	μа	NET
7 E 732	A-2M	%2" dia.	Mounted	13	5.14
7 E 733	A-5	1 1/8" dia.	Unmounted	250	1.96
7 E 734	A-10	1 3/4" dia.	Unmounted	500	4.41
7 E 735	A-15	2" dia.	Unmounted	750	5.88
7 E 736	B-2	23/32×7/6"	Unmounted Unmounted Unmounted Unmounted Unmounted Mounted	75	.98
7 E 737	B-5	17/6×441/64"		220	1.96
7 E 738	B-10	111/6×7/8"		350	2.45
7 E 739	B-15	111/6×111/6"		750	5.88
7 E 740	B-10M	111/6×7/8"		350	6.96

#### 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  $\mu$ a at 100 v. at 2 footcandles; time constant, 100 footcandles at 10 ms, 1 footcandles time constant, 100 footcandles at 1½ ms, 1 footcandles; time constant, 100 footcandles at 1½ ms, 1 footcandle at 15 ms. Sizes: ½" diameter by ½" long. Shpg. wt., 3 oz. 7 E 881. CL-2. NET



3.50

#### 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, ½ 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 depends upon intensity of incident illumination. Very durable—unaffected by moisture or exposure to weather. 1x1x3/2". Fits standard octal socket, Wt., 4 oz.

77 E 063. NET



#### HOFFMAN SILICON SOLAR CELL

Type S-1A. Silicon junction solar energy converter. Developed by Bell Telephone Labs. Offers countless uses. Extremely compact, only 1½" diameter by ½" 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. Will operate on infrared light. High stability and rugged construction—cannot oxidize or corrode. No deterioration due to atmospheric conditions. Completely unaffected by moisture or humidity. May be banked in series or parallel arrangements in order to obtain increased voltage or current output.



#### PHOTOCELL-SUN BATTERY HANDBOOK

An excellent handbook for technicians, experimenters and engineers. Thoroughly describes the applications and basic circuits in which photocells and sun hatteries can be effectively used. Typical chapters include: Light-Powered Devices, Photometers, Unusual Relays, Light Beam Communication. 9 chapters, 58 pages. Size, 5½x9".

1.50

#### INTERNATIONAL RECTIFIER HIGH-VOLTAGE SELENIUMS



High-voltage, cartridge-type selenium rectifiers. For replacement in TV cameras, Geiger counters, computing machines, etc. For applications requiring high DC voltages at comparatively low current. Handle up to 5 ma. Cartridge terminals fit in standard 30-ampere size fuse clips. Meet JAN specifications to withstand humidity, altitude, vibration and shock. Designed for long life, extreme dependability. Dia., %6". Av. shpg. wt., 8 oz.

25-49
5.18
7.28
9.38
-

#### INTERNATIONAL RECTIFIER

#### **INDUSTRIAL POWER RECTIFIERS**

- Long Life, Compact Size, Light Weight
- Heavy Current Overload Capacity
- Low Power Consumption—High Efficiency

• Low Power Consumption—High Efficiency

Sclenium power rectifiers. For all equipment having high current requirements. Outstanding features:
Heavy current overload capacity—up to 10 times rated load for intermittent duty; stable characteristics, with voltage regulation to within 10% or less and unity power factor. Have low forward resistance and negligible leakage and aging. Comparatively low power consumption due to high efficiency—from 65% to 92%. Suitable for design and replacement purposes in industrial and laboratory equipment. Typical uses include: Heavy duty electroplating, general purpose power supplies, magnetic amplifiers, motion picture projectors, cathodic protection and battery chargers. Rugged metallic construction with interlocking assembly revents plate rotation and lug misalignment. Have moisture and fumeresistant protective coating and self-healing rectifying layer for long life. Wide operating temperature range; all ratings constant up to frequency of 1000 cps. Spring contact assembly compensates for alternate expansion and contraction due to large temperature differentials. Ratings may be increased through the use of fan cooling or oil immersion. Explanation of symbols in table: "Center-tapped common cathode. †Full wave bridge-connected. §Half-wave type. For brices on quantity lots of 25 or more, write or phone Allied's Industrial Division.

Stock	Mfr's Code	DC	Output	AC Input	1	Shpg.	N	ET EAC	H
No.	No.	Volts	Amps.	Volts	Size	Wt.	1-4	5-9	10-24
4 A 800	C1C1SDAGX		.7	26CT	11/2 x11/2 x11/8"	3 oz.	2.65	2.25	1.99
4 A 801	L1C1SDAGX	10*	1.5	26CT	2x2x13/4"	3 oz.	3.35	2.85	2.51
4 A 802	D1C1SDAGX	10*	3	26CT	3x3x2"	1 (b.	4.60	3.91	3.45
4 A 803	B1B1SDAGX	20†	.4	26	11/4 x 11/4 x 11/2 "	3 oz.	3.35	2.85	2.51
4 A 804	C1B1SDAGX		.7	26	11/2 x11/2 x11/2 "	3 oz.	3.70	3.15	2.78
4 A 805	LIBISDAGX		1.5	26	2x2x11/8"	1 lb.	4.90	4.17	3.68
4 A 833	DIBISDAGX		3	26	3x3x25/8"	2 lbs.	6.80	5.78	5.10
4 A 806	FIB1SDAGX	20†	9.5	26	6x5x31/4"	21/2 lbs	14.50	12.33	10.88
4 A 807	B2B1SDBGX		.4	52	11/4 x11/4 x25/16"	3 oz.	5.20	4.42	3.90
4 A 808	C2B1SDBGX		.7	52	11/2 x11/2 x25/16"	3 oz.	5.85	4.97	4.39
4 A 809	L2B1SDBGX		1.5	52	2x2x3"	21/2 lbs	7.95	6.76	5.96
4 A.810	D2B1SDBGX	40†	3	52	3x3x41/16"	2½ lbs	11.20	9.52	8.40
4 A 811	P2B1SDBGX		5.5		4x4x41/16"	21/2 lbs		12.20	10.76
4 A 812	H2B1SDBGX		15		71/4 x61/4 x51/8"	41/2 lbs	31.85	27.07	23.89
4 A 815	B5B1SDBGX		.3		11/4 x11/4 x49/16"	3 oz.	10.85	9.22	8.14
4 A 816	C5B1SDBGX		.6	130	11/2 x11/2 x49/16"	21/2 lbs	12.20	10.37	9.15
4 A 817	C6B1SDBGX	120+	.6	156	1½ x1½ x5%"	1 lb.	14.30	12.16	10.73

#### BATTERY CHARGING TYPES

Stock	Mfr's Code	DC	Output	AC Input		Shpg.	NET	T EACH	1
No.	No.	Volts	Amps.	Volts	Size	Wt.	1-4	5-9	10-24
4 A 818	D-116G	108	2	26	3x3x1/2"	3 oz.	1.65	1.40	1.24
4 A 819	D-117P	108	2.7	26	4×4×1/2"	1 lb.	2.00	1.70	1.50
4 A 820	D-241G	108	6	26	6x5x½"	1 /b.	2.75	2.34	2.06
4 A 821	D-240G	10§	19	26	7¼ x6¼ x½"	1 lb.	3.65	3.10	2.74

#### MINIATURE SELENIUM RECTIFIERS

- For Small Power Applications
- Single Plate--Compact
- Voltage Regulation From 15-20%

Miniature selenium rectifiers. Used for small power applications where relatively low voltage is required. Uses include bias supplies, DC filament supplies, solenoid and relay power supplies, 2 and 6-volt battery chargers for self-charging portables, trickle battery chargers, etc. All types rated at 25 volts RMS max. "H" in type number indicates single plate half wave rectifier; "B" in type number indicates full wave, bridge rectifier. "Series "H" rated for minimum resistive load shown. Av. shpg. wt., 2 oz.

Stock	Mfr's	Max. DC	Min. Series	Size	NET
No.	Type	Ma.	Load Ohms		EACH
4 A 822 4 A 823 4 A 824 4 A 825	Q1H* A1H* B1H* C1H*	65 100 150 250	47 22 15 5	43/64×43/64×7/16" 1×1×7/16" 113/64×113/64×7/16" 11/2×11/2×7/16"	.39 .44 .50
4 A 826	M1H*	500	5	2x2x7/6"	1.00
4 A 827	Q1B	100		43/64x43/64x7/6"	1.05
4 A 828	Q4B	100		43/64x43/64x15/16"	1.98
4 A 829	A1B	180		1x1x3/4"	1.26
4 A 830	B1B	300		113/4x113/4x3/4"	1.51
4 A 831	C1B	600		11/2x11/2x3/4"	2.06
4 A 832	M1B	1200		2x2x3/4"	2.32

#### TV-500 "UNISTACK" SILICON RECTIFIER

- Universal Replacement for Rectifiers Up to 500 Ma
- Supplied Complete With All Mounting Hardware
- Servicemen Can Centralize Stocks, Reduce Inventory

Universal replacement silicon rectifier—directly replaces any present radio or television power supply requiring up to 500 milliamperes. Complete with all necessary hardware—stud, nut and universal mounting bracket for convenient mounting in any receiver. Absolutely no conversion is necessary for installation. Enables the serviceman to centralize his stocks of television rectifiers into a stock of just one type, thus making possible quick replacements without waiting. without waiting.

Without Waiting.

Easily lends itself to various power supply applications, such as half-wave, voltage doubler, or voltage tripler uses. Maximum RMS AC voltage, 170 volts. DC output voltsed to further volts. DC output current, 500 milliamperes maximum. Has eyelet construction; with locking lug which may be bent out of the way or clipped off in ont needed. Also useful for amateur and experimental applications. Positive terminal lug is clearly marked for easy identification. Overall size, less lugs, 2x2x1%e". Shpg. wt., 2 oz.

4 A 730. 1 to 4, NET EACH.

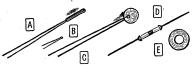
2.20

5 or More, EACH.

2.01

## Industrial & Service Items

#### NEW FENWAL THERMISTORS



- High Negative Temperature Coefficient
- Precision-Engineered for High Reliability
- Extremely Stable; High Shock Resistance
- For Measurement and Control Applications

Thermal resistors—resistors with a high negative temperature coefficient. Ideal for temperature measurement, temperature control, liquid level measurement, time delay, remote control, switching, power measurement and power level control, thermal consultation of the control switching, power measurement and power level control, thermal conductivity instruments and others. These high-quality thermistors are precision-engineered components, carefully designed to exacting specifications. Feature reliability, extreme stability, and high shock resistance. Have practically unlimited life under normal operating conditions. All bead types listed below are glass-coated—useful for insertion probes, UHF power measurements, etc. Washer types have hole in center—may 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° C.; washers up to 150° C.; beads up to 600° F. Av. shpg. wt., 1 oz. Thermal resistors—resistors with a high negative temperature coefficient.

Stock	Mfr's	Similar	Carlo	Ohms at	Res. Ratio	NET	EACH
No	Туре	to Fig.	Style	25° C.	0° C.: 50° C.	1-9	10-19
9 E 909		В	Bead	100,000	10.3:1	2.70	2.16
	GA51P2	A B	Bead	100,000	10.3:1	2.65	2.12
	GB32J2	В	Bead	2000	7.3:1	2.70	2.16
9 E 912		A	Bead	2000	7.3:1	2.75	2.20
	GC32L1	В	Bead	2000	5.7:1	3.75	3.00
	KA31L1		Disc	1000	9.1:1	.85	.68
	LB21J1	С	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
	RB41L1	D	Rod	10,000	7.1:1	1.35	1.08
	WA21W1	D E E	Washer		9.1:1	1.25	1.00
9 E 925	WB11W1	E	Washer	10	6.9:1	1.25	1.00



Model G-200 Experimenter's Thermistor Kit. All of above—12 thermistors (worth \$22.55) for use in circuit design, experimental work, or for familiarization with thermistors. Each thermistor is packed with complete data including resistance-temperature and voltage-current curves; ratio of resistance from 0° to 50° C; alpha temperature coefficient at 25° C; dissipation constant, and time constant. Shpg. wt., 10 oz.

9 E 926. NET

#### **TELEMETER MAGNETICS FERRITE CORES**



 Extremely Small, Compact Both Memory and Switching Types

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 applications include use in digital computers, high-speed counter, radiation counters, shift registers, juke boxes, information storage buffers, industrial controls and numerous other similar devices. Types TM501-10, TM501-40, TM802-10, TM802-40, TM802-10, TM802-10, TM802-50, TM3751-10 and TM3752-50 are ferrite switch cores. \*Indicates: 1.2 oersteds coercive force; 1.85 oersteds optimum turn-over magnetomotive force; 1800 gauss saturation 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 | Mfr's | Outside | Switch Time, | NET

Stock No.	Mfr's Type	Outside Diameter	Switch Time, Microseconds	NET PER BOX
9 E 888 9 E 889 9 E 890 9 E 891 9 E 892	†TM3752-50 †TM1802-50 †TM1002-40 †TM802-40 †TM501-40	.375" .180" .100" .080" .050"	5 5 5 5 5	25.00 25.00 11.25 11.25
9 E 893 9 E 894 9 E 895 9 E 896 9 E 897	*TM3751-10 *TM1801-10 *TM1002-10 *TM802-10 *TM501-10	.375" .180" .100" .080" .050"	1.2 1.2 1.2 1.2 1.2	25.00 25.00 11.25 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-piece molded phenolic base. Individual terminal separators are also of molded phenolic. Polished 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. Available with 1-6 rows, 20 terminals per row. Base dimensions: 3x6½ inches. Height depends on number of rows. Av. shpg. wt. 1½ lbs.

Stock No.	Mfr's Type	Rows of Terminals	No. of Terminals	Height	NET
40 H 694 40 H 695	PJ-101 PJ-102	1 2	20 40	1 <sup>29</sup> / <sub>32</sub> " 2 <sup>1</sup> / <sub>4</sub> "	3.45 4.65
40 H 696 40 H 697 40 H 698	PJ-103 PJ-104 PI-105	3 4	60 80 <b>100</b>	219/ <sub>32</sub> " 215/ <sub>16</sub> "	5.85 7.05 8.25
40 H 699	PI-105	6	120	39/32" 35/4"	8.45

#### **EL-TRONICS HUMIDITY SENSER**

- Extremely Fast Response
- Highly Stable to 140° F.
- Simplifies Humidity Control

An extremely reliable humidity sensing element. Made of a conducting plastic which changes resistance in the presence of water vapor. Easy to wire im—only 2 connections. Very stable in ambient temperatures to 140° F. Readings are 100% repeatable and accurate within 3%. Fast acting—response in 1 minute for 20% humidity change: 3 minutes for 90% change. Only %x1\%r; \%r tink. With specifications, relative humidity/resistance graph and sample circuitry. Operates from 6-20 volts AC. Shg. wt., 2 oz. 



#### CLAROSTAT UNIVERSAL RESISTOR TUBES

Clarostat resistor tubes for voltage-reducing applications. For replacement of all AC-DC tubes beginning with letters BK, BL, K, L and M; and corresponding numbers and letters given below. Order tubes according to letter and numeral designation of tube being replaced. For example, to replace a BK-23-A tube, or an M-55-D tube, the Clarostat Type 23-55-A would be used, etc. Shpg. wt., 6 oz.

Stock	Mfr's	Tube Num-		NET
No.	Type	bers From:		EACH
9 E 853	23-55-A	23 to 55	A, B, C, D	1.91
9 E 855	23-55-F	23 to 55	F, G, H	
9 E 856	60-92-A	60 to 92	A, B, C, D	



#### JFD TV, ADJUSTABLE AND STEP-DOWN BALLASTS

TV Ballasts. Quality plug-in ballasts for AC-DC TV sets. Perforated shells for maximum dissipation and radiation of heat. Large insulating surfaces and heavy resistance elements provide highly dependable service. Shpg\_wt., 6 oz.

Stock No.	Mfr's Type	For	Stock No.	Mif's Type	For	NET EACH
9 E 860 9 E 861	17A470303 17A485459	Motorola Motorola	9 E 862 9 E 863	397022 397023	Emerson Emerson	2.94

Adjustable Types. For virtually all replacement needs. 8-prong. 6 oz. 9 E 885. Replaces ballasts beginning with K, L, M, BK, BL, BM having numbers 6-42, ending with A, B, C, D, F, G, or H. 2.06 9 E 886. Replaces ballasts beginning with K, L, M, BK, BL, BM having numbers 45 through 105 and ending with A, B, C, D, F, G, H. S-1, 2 or 3.



#### **AMPERITE REGULATOR TUBES**

#### For Replacement Use in Industrial Electronic Equipment

Amperite regulator tubes have achieved wide acceptance for current-voltage regulating applications in industrial electronic equipment. 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 type numbers. Av. shpg. wt., 4 oz.

Stock No.	Type	EACH	Stock No.	Туре	EACH
9 E 981 9 E 984 9 E 979 9 E 985	1H22 3-4 3-14 6-4	1.76	9 E 987 9 E 991 9 E 993 9 E 999	6H6 9-4 4H4C 10-25	1.76



#### CONSOLIDATED AC-DC RESISTANCE LINE CORDS

Heavily insulated resistance line cords. Have color-coded tinned leads. Supply proper voltage for tubes wired in series across 115 volt lines. 135, 160, 180 and 200 ohm cords can also be used for 1-lamp, 15 and 20-watt fluorescent units. For 3-way battery portables. 6' long. Shpg. wt., 6 oz.

Stock No.	Mfr's Type	Ohms	NET EACH
49 T 522	2401	135	
49 T 520	2402	160	
49 T 519	2412	180	
49 T 5 i 8	2411	200	7lc
49 T 517	2403	220	
49 T 516	2410	250	
49 T 515	2404	290	
49 T 524	2408A	300	
49 T 512	2405	330	-71
49 T 511	2407	350	7lc
49 T 510	2406A	390	
49 T 525	2414A+	560	

220-110 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. T 580. NÉT.....

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. 

#### "MAKE-UR-OWN" RESISTANCE CORDS

25 feet for..... 

## **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 CRITICAL USES



High-reliability 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.

					, , , , , , , , , , , , , , , , , , ,					, ,	
D	Stock No.	Mfr.	NET EACH		Stock No.	Mfr.	NET EACH		Stock No.	Mfr.	NET EACH
Dept.	Tube Type			Dept.	Tube Type			Dept.	Tube Type		
E1 E1		RCA RCA	1.26 3.70	E2 E3	RK 3B24 W GL 3B24 W	RAY GE	10.50 10.55	E4 E3	6CA7 EL 6C/L	AMP	3.60 21.90
E1		RCA	1.27	EI	3B25	RCA	7.00	E2	6C4 W	RAY	8.90
El	OA4G	RCA	1.68	E1	3B28	RCA	7.00	E3	6D4	SYL	2.85
E3		SYL	7.30	E1	3BP1A	RCA	23.25	E1	6F4	RCA	7.00
E1		RCA	1.32	E3	EL 3C	ELEC	11.80	E3	EL C6J	ELEC	28.90
E2		RCA RAY	4.10 1.65	E3 E1	EL 3C/L 3C23	ELEC RCA	13.20 11.98	E1 E3	C6J/5C21 EL C6J/A	RCA	28.90 29.30
E1		RCA	1.40	E4	3C23	AMP	11.98	ΕĬ	C6J-A/5685	RCA	29.30
E1	ОСЗ	RCA	1.27	E3	GL 3C23	GE	11.98	E3	EL C6J/K	ELEC	28.90
E2		RAY	1.27	E3	3CX100A5	EIM	32.15	E3	EL C6J/KL	ELEC	31.70
E1 E2		RCA	1.27	E]	3D22A	RCA	21.20	E3	EL C6J/L	ELEC	31.70
E4	OE3/85A1	RAY AMP	1.27 2.50	E1 E3	3E29 C3J	RCA CE	20.25 14.40	ĒĪ	6 J4 6 J4 W A*(6 J4)	RCA RCA	4.33 5.90
E4	OG3/85A2	AMP	2.50	E3	EL C3J	ELEC	14.10	ĒΪ	65J7Y	RCA	1.60
E2	OZ4A/CK1003	RAY	.95	E1	C3J/5632	RCA	15.50	E3	6SJ7 WGT	SYL	2.60
E2		RAY	3.05	E3	EL C3J/A	ELEC	19.80	E3	6SL7 WGT	SYL	3.25
E2 E2		RAY	4.50 2.05	EI	C3J-A/5684	RCA	19.80	E2 E3	6S N7 WGT	RAY	2.60
E3		RAY ELEC	7.60	E3 E1	EL C3J/L 3JP1	ELEC RCA	16.90 27.50	E3	6SU7GTY 6V6GTY	SYL	4.25 1.45
E3	1885	VIC	8.50	ET	3KP1	RCA	24.75	E2	6X4W	RAY	2.00
E3	1B86	vič	7.50	Εi	3KP4	RCA	25.75	E2	6X5 WGT	RAY	2.00
E3		ELEC	9.80	E3	3 NP4	(NA Phil		E3	7AK7	SYL	7.45
EI	1C21	RCA	3.85	E1	3RP1	RCA	17.65	EZ3	GL 7C29	GE	189.50
E3		CE	3.32	EZ3	3X2500A3	EIM	198.00	EX3	7JP1/7VP1	SYL	29.00
E3 E1	1D21/SN4 1EP1	SYL RCA	7.10 21.35	EZ3 E1	3X2500F3 4-65A	EIM RCA	198.00 20.00	EX1 EZ1	7JP4 7TP4	RCA RCA	21.69 68.50
E3		ELEC	13.40	Εi	4-125A/4D21	RCA	30.25	EŽI	7VP1	RCA	35.00
E3	EL C1J/A	ELEC	15.90	E3	4-125A	EIM	30.25	EZ1	10SP4	RCA	82.25
E3	EL CIK	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	12A6	RCA	2.09
E1	1P21 1P22	RCA RCA	58.50 16.90	E3 E4	4-400 A	PEN	48.00 48.00	E1 E3	12AT7WA* EL C16J	RCA	4.75 56.90
Ĕi l	1P28	RCA	31,35	EZ3	PL 4-400A 4-1000A	EIM	132.00	E1	C16J/5665	RCA	56.90
El	1P29	RCA	4.20	E3	WL 4B24/3C	WES	11.20	E3	KY21A	EIM	25.00
El	1P37	RCA	3.45	E3	4CX250B	EIM	45.00	E3	RX21A	EIM	24.00
E]	1P39	RCA	2.15	E3	4CX300A	EIM	48.00	E3	CE 23A	CE	2.50
E1 E3	1P40 CE 1P/40	RCA CE	3,20 3.00	EU4 E4	4CX1000A 4D21A	PEN	156.00 31.25	E3	25T FG 27A	EIM GE	15.00 40.25
ΕĬ	1P41	RCA	3.80	E2	RK 4D32	RAY	30.95	E3	28D7	SYL	2.85
El	1P42	RCA	12.50	El	4E 27/8001	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	172	CHA	6.40	E3	4E27A/5-125B		40.00	E3 E3	EL 34	WULL	4.65
E3 E1	2-01C 2AP1A	RCA	15.25 18.00	E3 EZ3	EL C4J/F 4 W20000A	ELEC	20.10 1850.00	E3	EL 34 MP GZ 34	MULL	10.05 pr. 3.15
E3	2AS15A	THER	7.50	EI	4X150A	RCA	38,95	E3	35T	EIM	20.00
ΕĬ	2BP1	RCA	18,20	Ē3	4X250B	EIM	42.50	Ē3	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 E4	TZ 40 EFP 60	TAY	10.20
E3 E3	2C39B 2C39 WA	EIM	32.15	EZ1 EZ1	5ABP1	RCA	39.75 42.65	E2	RK 61	RAY	8.75 3.70
E3	2C39 WA 2C40	SYL RCA	27.50	EZI	5 A B P 7 5 B P 1 A	RCA	42.65 32.75	E3	KT 66	GEN	3.70
ΕÏ	2C43	RCA	24.55	EŽI	5CP1A	RCA	31.65	E4	75 NB3	AMP	10.00
E3	2C51	TUNG	5.50	EZ1	5CP7A	RCA	38,35	E3	EABC80	MULL	2.74
E3	2C53	(Nat. Ur		EZ1	5FP4A	RCA	45,70	E3	EBF 80	MULL	2.25
E3	CE 2D	CE	5.47	El	5R4GY	RCA	1.90	E3 E3	EZ 80 ECC 81	MULL	1.13
E1 E4	2D21 2D21	RCA AMP	1.62 1.61	E2 E3	5R4GY 5R4GYA	RAY GE	1.90 1.90	E4	ECC 81	MULL	1.68 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	5UP1	RCA	22.65	E3	EM 81	MULL	1.91
EI	2E24	RCA	4.65	EZ1	5UP7	RCA	32.00	E3	EZ 81	MULL	1.23
E2	2E26	RAY	3.85	E]	6AC7 W*(6AC7)		3.95	E3 E3	FG 81A	GE	27.77
E1 E2	2E26 2E30	RCA RAY	3.85 2.60	E1 E2	6AG7Y 6AJ5	RCA RAY	2.55 4.35	E4	ECC 82 ECC 82	MULL	1.38
E2	2E31	RAY	2.25	E2	6A N5	RAY	3.75	E3	ECL 82	MULL	2.63
E2	2E32	RAY	2.25	E3	6AR6	TUNG	5.75	El	83	RCA	1.57
E2	2E36	RAY	6,23	El	6AS6	RÇA	3.46	E3	ECC 83	MULL	1.38
E2	2G21	RAY	6.23	E2	6AS6	RAY	3.46	E4	ECC 83	AMP	1.15
E2 E1	RK 2K25 2K26	RAY	28.30 48.20	E1 E2	6AS7G 6AS7G	RCA RAY	4,45 4,45	E3	EL 84 EL 84 MP	MULL	1.35
E1	2X2A	RCA	2.55	EI	6AU6WA*	RCA	3.60	E4	EL 84/6BQ5	AMP	3.90 pr. 1,20
EI	2X2A 3A4	RCA	1.20	E3	6AU6WA*	GE	3.60	E3	ECC 85	MULL	1.71
Εī	3A5	RCA	1.62	E3	EL 6B	ELEC	13.00	E3	EF 86	MULL	1.88
E2	3A5	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	LIS	TINGS OF SPECIAL	PURPOS	E TURES
E2	- 3B4 WI 2B22/1C	RAY WES	2.75 9.80	E3	EL C6C	ELEC	56.10 19.80		NTINUED ON PAG		
E3	WL 3B22/1C	IAAES	9.80	E3	EL DC	ICTCC	17.60	<u> </u>			

# Amperex Elect. Corp. Continental Electric Co. Chatham/Tungsol Eitel McCullough Electrons, Inc. General Electric Genalex Mullard Products Nat'l Electronics, Inc. Radio Corp. America Raytheon Mfg. Co. Sylvania Electric Taylor Tubes, Inc. Taermosen, Inc. Thermosen, Inc. Thermosen, Inc. Thermosen Inc. Victoreen Instrument Westinghouse CHA EIM ELEC GE GEN MULL NAT PEN RCA RAY SYL TAY THER TUNG UE VIC WES

## Special Purpose Tubes for

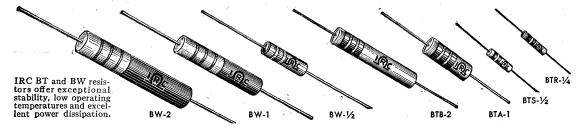
Immediate Delivery From Stock. The listing on these pages (127, 128 and 129), is a complete selection of tubes for broadcast, industrial and research use. Included are power tubes, rectifiers, cathode-ray, photo-electric and miniature tube types. Almost 700 types of special-purpose tubes are listed, representing the products of leading manufacturers in the electron tube industry (see table of manufacturers at left). Each tube will provide maximum efficiency and dependable service. Allied supplies all tubes at the lowest current prices from the largest distributor stocks in the country. MP after tube type indicates matched pair.

Dept.	Stock No. Tube Type	Mfr.	NET EACH	Dept.	Stock No.	Mfr.	NET EACH	Dept.	Stock No. Tube Type	Mfr.	NET EACH
E4	E 88CC/6922	AMP	4.75	E3	NL 760L	NAT	31.70	E3	R 1130B	SYL	20.40
E3 E3	KT 88 KT 88 MP	GEN GEN	4.95 11.65 pr.	E3 E1	NL 760P 801A	NAT RCA	29.40 9.85	E3 E3	R 1131C 1222A	SYL SYL	19.20
E3	EF 89 '	MULL	2.25	E1	802	RCA	9.85	E3	1229	SYL	2.45 6.40
E3	EC 90	MULL	1.31	E1	805	RCA	20.00	E3	1280	SYL	1.50
E3 E3	EK 90 EZ 90	WULL	1.68 1.20	E1 E4	80 <i>7</i> 80 <i>7</i>	RCA AMP	2.85 2.90	E1 E1	1612 1614	RCA RCA	3.70 3.1
E4	90 NB	AMP	20.00	E1	809	RCA	6.40	El	1616	RCA	11.3
E3 E3	EB 91 ECC 91	MULL	1.09 1.99	E1 E1	810 811A	RCA RCA	25.55 6.50	E1 E1	1619 1620	RCA RCA	3.80 6.30
E3	EF 94	MULL	1.29	ET	812A	RCA	6.50	ET	1621	RCA	2,40
E3	100TH	EIM	20.50	E1	813	RCA	22.65	E1	1622	RCA	3, 1
E4 E1	AX 105/FG 105 172	AMP RCA	49.50 82.35	E1	814 815	RCA RCA	23.55 23.55	E1 E1	1624 1625	RCA RCA	4.70 3.40
EZ3	PL 172	PEN	135.00	Ēi	816	RCA	2.65	Èi	1626	RCA	2.20
<b>E</b> 3	WL 172	WES	82.35	EI	828	RCA	27.50	E1	1629	RCA	1.90
E3 E4	PL 177A E 180F/6688	PEN	22.50 8.00	E4 E1	828 829B	RCA	27.50 18.90	E1 EZ1	1635 1850 <b>A</b>	RCA RCA	2.37 640.00
E3	T 200	TAY	32.45	E1	832A	RCA	15.85	E1	1946	RCA	12.3
E3	CE 203	CE	13.44	EZ1	833A	RCA	55.00	El	1949	RCA	12.65
E3 E3	CE 206 CE 213A	CE	9.43 8.90	EZ4 E1	833A 836	AMP RCA	55.00 9.20	E1 E1	2020 2022	RCA RCA	92.00
E3	242C	UE	25.00	Ei	836 837	RCA	7.85	Ei	20 <i>22</i> 2050	RCA	3.45 1.85
EZ3	250TH	EIM	33.00	E1	845	RCA	20.85	E2	2050	RAY	1.83
E4	HF 300	AMP	39.50	EZI	857B	RCA	235.00	E3	2050 W	CHA	7.13
E3	304TH 304TL	EIM	60.50 60.50	EZ4 E1	857B 866A	AMP RCA	218.50 2.65	E2 EX4	2051 ZB 3200	RAY AMP	1.90 385.00
E3	SA 309	SYL	20.00	E3	GL 866A	GE	2.65	E3	R 4330	SYL	29.10
E3 E3	GL 393A	GE CHA	13.25	E4 E2	866A/866AX RK 866A	AMP	2.65 2.65	E3 E2	GL 5516 CK 5517	GE RAY	7.95
E3	394A 395A	CHA	7.50 4.40	E3	866 JR	TAY	2.15	E3	GL 5544	GE	3.80
	QK 404 See ty	pe RK71		Ēĭ	868	RCA	3.75	E4	5545	AMP	29.40
		pe 5847		E3	GL 868/PJ23	GE	3.75	El	5550	RCA	49.00
E3	GL 441 WL 481B	GE WES	4.50 9.00	EX4 EX4	869B 869BL	AMP AMP	138.00 138.00	E3 E1	GL 5550/GL415 5551A	GE RCA	49.00 65.00
E3	502A	GE	2.03	EI	872A	RCA	9.90	E4	5551A/P	AMP	65.00
E1	502A	RCA	2.03	E4	872A/872AX	AMP	9.35	E3	GL 5551A/P	GE	67.00
E2	CK 506AX	RAY	2.30	E1 E2	884	RCA RAY	1.85	EZ3 EZ1	WL 5551A 5552A	WES RCA	65.00
E2 E2	CK 510AX CK 512AX	RAY	2.95 2.55	E2 E1	884 885	RCA	1.85 2.00	EX4	5552A/P	AMP	99.00 99.00
E2	CK 526AX	RAY	2.76	EZ4	889A	AMP	221.00	EZ3	GL 5552A/P	GE	101.25
E2	CK 533AX	RAY	2.52	EZ1	892	RCA	270.00	EZ3	WL 5552A	WES	99.00
E2 E2	CK 534AX CK 536AX	RAY	2.59 2.69	EZ4 EZ1	892 892R	AMP RCA	270.00 425.00	EZ1 EZ4	5553B 5553B	RCA AMP	245.00 216.00
E2	CK 542DX	RAY	5.82	EZ4	892R	AMP	425.00	EZ3	GL 5553B	GE	245.00
EX1	575A	RCA	22.15	El	902A	RCA	19.70	EZ3	GL 5554/FG259B	GE	195.00
E1 E3	579B WL 579B	RCA WES	18.00 18.00	E1	91 <i>7</i> 918	RCA RCA	5.00 3.85	E1 E3	5556 GL 5556/PJ8	RCA GE	21.00 21.00
E3	592/3-200A3	EIM	37.50	E1	919	RCA	5.00	El	5557	RCA	9.50
E3	NL 604	NAT	11.80	E1	920	RCA	5.70	E4	5557/FG17	AMP	8.50
E3	NL 604L	TAM	13.20	E1	921	RCA	3.30	E3 E1	GL 5557/FG17	GE	9.50
E3 E3	NL 606 NL 606L	NAT	19.80 21.90	E1 E1	922 923	RCA RCA	2.85 2.85	E3	5558 GL 5558/FG32	RCA GE	17.50 17.50
E3	KU 610	WES	27.00	E3	GL 923	GE	2.85	El	5559	RCA	23.00
E3	NL 615	NAT	9.75	E1	925	RCA	3.20	E4	5559	AMP	22.00
E3 E3	NL 617 NL 623	NAT	15.00 13.35	E1 E1	926 927	RCA RCA	3.30 3.75	E3 E1	GL 5559/FG57 5560	GE RCA	23.00 33.00
E3	WL 627	WES	27.00	E1	928	RCA	4.60	E3	GL 5560/FG95	GE	33.00
El	629 WI 432B	RCA	15.00	El	929 930	RCA	2.00	E1 EZ3	5563A GL 5564/GL507	RCA	47.00
E3	WL 632B NL 635	WES	33.00 13.00	E1 E1	930 931A	RCA RCA	10.45	EZ3	GL 5564/GL507 5581	RCA	740.00
E3	NL 635 NL 635L	NAT	14.50	Ei	931A 934	RCA	3.65	Ēi	5582	RCA	3.10 4.95
E3	NL 635P	NAT	14.40	E1	935	RCA	9.95	El	5583	RCA	4.30
E3 E1	NL 649/5834 672A	NAT RCA	9.20 38.00	E1 E1	954 955	RCA RCA	8.05 4.80	EX4 E3	5604 GL 5632/C3J	GE AMP	570.00 13.90
E3	WL 672A	WES	38.00	EI	956	RCA	8.70	EI	5636*	RCA	9.05
EX1	673	RCA	22.15	Ēİ	958A	RCA	8.70	E3	5636*	GE	9.05
E3	WL 676	WES	58.00	El	959 991	RCA	8.90	E3	5647 5651	SYL	9.65
E1	677 WL 678	RCA WES	58.00 47.00	E1 EZ3	1000T	RCA EIM	.87 137.50	E2	CK 5651	RCA RAY	1.78 1.78
E3	NL 710/6011	NAT	14.00	E2	CK 1006	RAY	6.50	E2	CK 5651 WA	RAY	4.20
E3	NL 714	NAT	9.50	E2	CK 1020	RAY	10.80	E1	<b>5654</b> *(6AK5)	RCA	3.60
E3 E3	Z 729 NL 740	GEN NAT	2.95 19.40	E2 E2	CK 1021 CK 1026	RAY	10.80 3.50	E3 E2	5654*(6AK5) CK 5654	GE RAY	3.55 3.60
E3	NL 740L	NAT	21.40	E2	CK 1026 CK 1037 See t	ype CK		EI	5654/6AK5W*		5,45
E3	NL 740P	NAT	20.10	E2	CK 1038	RAY	8.30	E2	CK 5654/6AK5W	RAY	3.60
<b>E</b> 3	NL 760	NAT	28.90	EZ3	NL 1051	NAT	65.00	E3	5662	GE	1.45
128							D.: O				

## Industry and Broadcast Use

#### **TUBE LISTINGS CONTINUED FROM PAGES 127 AND 128**

-4,	Stock No.	, i.e.	NET		Stock No.	112	NET	1	Stock No.	Mfr.	NET
Dept.	Tube Type	Mfr.	EACH	Dept-	Tube Type	Mfr.	EACH	Dept.	Tube Type	Mfr.	EACH
E3	5663	GE	2.10	E3	5932	SYL	11.30	E3	6463	GE SYL	2.15
EZ3 E1	WL 5668 5670 *(2C51)	WES RCA	307.00 4.80	E3 E3	5933 WL 5934	SYL WES	12.35 18.00	E3 E2	6476 CK 6485	RAY	16.95 2.05
E3 E2	5670 *(2C51) CK 5670	GE RAY	4.45 4.80	E1 E2	5963 CK 5963	RCA RAY	1.40 1.40	E2 E1	CK 6519 6524	RAY RCA	3.05 16.00
E2	CK 5672	RAY	2.45	EI	5964	RCA	1.40	E3	6550	TUNG	4.95
E1	5675 CV 5474	RCA RAY	13.20 3.05	E1	5965	RCA	2.40 2.40	E1	6570 6655	RCA RCA	8.20 56.25
2	CK 5676 CK 5678	RAY	2.45	E3 E2	5965 CK 5965	GE RAY	2.40	E1	6660/6BA6	RCA	1.11
3	5679	SYL	1.35	E2	CK 5975	RAY	4.20	E1 E3	6661/6BH6	RCA GE	1.44
3	5686* 5686*	RCA GE	3.71 3.75	E2 E3	RK 5976 5998	RAY TUNG	68.00 11.85	E1	6661/6BH6 6663/6AL5	RCA	1.44 1.02
3	5687 5687	RCA TUNG	4.25 4.25	E1 E3	6005* (6AQ5) 6005/6AQ5W	RCA GE	4.50 4.60	E3 E1	6663/6AL5 6669/6AQ5	GE RCA	1.02 1.16
2	CK 5687	RAY	4.25	E4	6007	AMP	1.50	E3	6669	GE	1.16
3	GL 5687 5690*	GE RCA	4.50 12.95	E3	GL 6011 WL 6011/710	GE WES	14.00 14.00	E1 E3	6677/6CL6 6677	RCA GE	1.95 1.95
:1	5691*	RCA	8.45	E1	6012	RCA	7.10	E1	6679/12AT7	RCA	1.60
1	5692* 5693*	RCA RCA	8.15 6.40	E3 E1	6014/C1K 6021*	NAT RCA	12.90 5.75	E3 E1	6679/12AT7 6680/12AU7	GE RCA	1.60 1.32
1	5696	RCA	1.90	E3	6021*	GE	5.75	E3	6680/12AU7	GE	1.32
2	CK 5702 CK 5702 WA	RAY RAY	4.20 8.25	E2 E2	CK 6021 CK 6029	RAY	5.75 5.00	E1 E3	6681/12AX7 6681/12AX7	RCA GE	1.34 1.34
2	CK 5703	RAY	2.35	E1	6072* (12AY7)	RCA	4.70	E1	6694A	RCA	5.60
2	CK 5703 WA 5718*	RAY	7.50 4.85	E3 E1	6072* (12AY7) 6073* (OA2)	GE RCA	3.00	EZ4 E3	6786 6802	SYL	14.50
1	5719*	RCA	4.20	E1	6074* (OB2)	RCA	3.45	E3	GL 6807	GE	29.30
3	GL 5720/FG33 5722	GE SYL	34.75 6.40	E1	6080 6080 W A	RCA	5.25	E3 E1	GL 6808 6816	GE RCA	29.40 60.00
1	5725* (6AS6)	RCA	4.15		*(6AS7G)	RCA	11.40	EI	6883	RCA	5.00
2	CK 5725 5726* (6AL5)	RAY RCA	3.65 1.70	E1 E3	6082 6087* (5Y3GT)	RCA GE	5.30 6.30	E1 E1	6884 6893	RCA RCA	60.00 4.25
3	5726* (6AL5)	GE	1.70	E2	CK 6088	RAY	2.75	E1 E3	6895	RCA	25.00
2	CK 5726 5726/6AL5 W*	RAY	1.70	E1 E2	6101* (6J6) CK 6111	RCA	7.00 6.25	E4	GL 6897 6939	GE AMP	32.15 14.00
	(6ÅL5)	RCA	2.10	E2	CK 6112	RAY	6.25	El	6957	RCA	3.70
1	5726/6AL5 W/ 6097*(6AL5)	RCA	3.25	E1 E2	6130/3 <b>C45</b> CK 6135	RCA RAY	17.80 2.60	E4 E1	6977 7054	AMP RCA	2.80 1.55
1	5 <b>72</b> 7*	RCA	2.80	E1	6136* (6AU6)	RCA	3.60	E1 E1	7055 7056	RCA RCA	1.05
3	5727*(2D21) 5727/2 <b>D21</b> W	GE	2.80	E3 E1	6136* (6AU6)	GE RCA	3.60 5.00	ĒĪ	7057	RCA	2.00
	*(2D21)	RCA	2.80	E4	6146	AMP	4.90	E1 E1	7058 7059	RCA RCA	1.35 1.75
3	5727/2D21 W 5734	GE RCA	2.80 18.00	E2 E4	CK 6146 6155	RAY AMP	4.90 30.25	E1	7060	RCA	2.10
Z3	WL 5736 5749 *(6BA6)	WES RCA	170.00 2.70	E4	6156	AMP	41.25	E1 EZ3	7061 GL 7085/356	RCA GE	600.00
3	5749 *(6BA6)	GE	2.70	E1 EZ1	6159 6166	RCA RCA	5.00 1020.00	E1	7094	RCA	31.95
3	5750 *(6BE6) 5750 *(6BE6)	RCA GE	3.80 3.80	E2 EZ1	CK 6174 6181	RAY	3.80 925.00	E4 E2	7136 RK 7158	RAY	25.00 67.90
1	5751 *(12AX7)	RCA	3.70	Eî	6186/6AG5 WA	1	j	EI	7163	RCA	2.85
3 2	5751 *(12AX7) CK 5751	RAY	3.70 3.70	EI	*(6AG5) 6189/12AU7	RCA	4.00	EZ1 E1	7200 7212	RCA RCA	255.00 15.45
2	CK 5755	RAY	10.40		<b>WA</b> *(12AU7)	RCA	4.70	E1 E1	8005 8008	RCA RCA	16.20
Z1	5762/7 <b>C24</b> 5763	RCA RCA	230.00 2.37	E1 EZ1	6197 6198	RCA RCA	2,80 230,00	E4	8008 XA8008	AMP	9.90 9.35
2 2	CK 5763 CK 5783	RAY RAY	2.37 4.20	EZ I	6198 <b>A</b> 6199	RCA RCA	230.00 52,50	E1	8013A	RCA RCA	14.85
2	CK 5783 WA	RAY	8.30	ET	6201* (12AT7)	RCA	4.75	E3	8020 GL 8020	GE	24.00 24.00
2	CK 5787 CK 5787 WA	RAY RAY	5.00 10.80	E3 E3	6201* (12AT7) 6202* (6X4)	GE GE	4,75 3,60	E1 E1	9001 9002	RCA RCA	4.90 3.25
Z3	GL 5788	GE	476,25	E3	6203*	GE	4.50	EI	9003	RCA	4.90
$\frac{3}{1}$	WL 5796 5814A*(12AU7)	WES	16.40 3.85	E1 E1	6211	RCA RCA	72,00	E1 E1	9004 9005	RCA RCA	4.15 4.60
3	5814A*(12AU7) 5814A*(12AU7A)		3.85	E2	CK 6247	RAY	11.20	Ei	9006	RCA	2.35
zı	5819 5820	RCA RCA	56.90 1200.00	EZ3	GL 6251 6252	GE AMP	2300.00 25.00		DCA THE HT	ED A TIID	E
24	5822AP	AMP	116.00	E3	6265* (6BH6)	GE	4.50	37 A	RCA TUBE LIT		
1 3	5823 5824	RCA GE	1.57 3.60	E4 E4	6268 6279	AMP AMP	32.50 45.00	abilit	y Directory. Guide for replacement of	to selecti	on of RCA
1	5825	RCA	20.85	E1	6293	RCA	6.20	No c	harge.	aon recer	ing tubes
2	CK 5829 5840*	RAY RCA	4.20 7.00	EX1	6326A 6328	RCA RCA	515.00 12.15	37 A Sche	159. Type PCH10 dule. 6 pages. Latest	01B, Us	er Price
3	5841	VIC	6.50	EZ4	6333	AMP	260.00	37 A	137. Type CRPD-1	05. Phot	osensitive
3 4	5844 5847	GE AMP	2.40 20.00	E3 E3	6336 6336 <b>A</b>	CHA	17.65 24.40	inform	ces and Cathode- Ra nation on 106 RCA tu	y Tubes. bes inclu	. Technical ding single
Z4	5868 5876	AMP RCA	55.00 13.55	E1 E3	6342 GL 6346	RCA GE	72.00 65.00	twin	and multiplier phot, monoscopes, etc. 24	otubes. 7	ΓV camera
2	CK 5879	RAY	1.75	E3	GL 6347	GE	99.00	37 A	138. Type RIT-104	. Receiv	vina-Tvpe
1	5881	RCA TUNG	3.50 3.50	EZ3 E1	GL 6348 6350	GE RCA	245.00 2.35	Tube Valua	s for Industry and ble data on 130 RG	Commu	nications. including
3	5881 CK 5886	RAY	5.00	E4	6360	AMP	4.00	specia	al red, premium, pendarge, etc. 20 pages. N	cil, comp	uter, glow-
2	CK 5889	RAY	12.45	E3	6386* CV 6397	GE RAY	8.15 8.30	37 A	576, Type PG-101-	C. Powe	rand Gas
1	5893 5894	RCA AMP	19.40 25.00	E2 E1	CK 6397 6417	RCA	2.37	transi	Bulletin. Data on a mitting, industrial, R	F heating	, and other
3	GL 5894 5896*	GE GE	32.40 4.60	E2 E2	CK 6418 CK 6419	RAY	3.05 2,20	specia	al tubes. 24 pages. No	charge.	•
3	5899*	GE	7.40	E2	CK 6437	RAY	8.30	nical	data and base diag	grams for	r 48 RCA
1 1	5915	IRCA I	1.55	EXI	6448	RCA	5300.00	Amat	eur tubes. 4 pages. N	o charge	D



#### 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, 23/2x3/2"; BTS, 13/2x1/4"; BTA, 23/2x1/4"; BTB, 11/4x1/4". 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-½, ½x¾/″; BW-1, 1¼x¼″; BW-2, 1¾x ²½/″. 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	5.6 meg
0.33	1.5	6.8	33	150	680	3300	15,000	68,000	0.33 meg	1.5 meg	6.8 meg
0.39	1.8	8.2	39	180	820	3900	18,000	82,000	0.39 meg	1.8 meg	8.2 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.

Stock	Mfr's	MIL	Values	NET	5	Stock	Mfr's	MIL	Values	NET	5
No.	Type	Equiv.		EACH	FOR	No.	Type	Equiv.	(See Chart Above)	EACH	FOR
1 MM 010	BTR-1/4	RC09	10 Ω to 22 megs	12c	46c	1 MM 061	BW-1/2	RU-3	0.27 to 8.2 Ω	24c	.94
1 MM 000	BTS-1/2	RC20	10 Ω to 22 megs	12c	35c	1 MM 060	BW-1/2	RU-3	10 to 820 Ω	20c	.78
1 MM 020	BTA-1	RC30	10 Ω to 22 megs	18c	53 c	1 MM 080	BW-1	RU-4	0.47 to 4700 Ω	30c	1.18
1 MM 050	BTB-2	RC41	100 Ω to 22 megs	24c	94 c	1 MM 100	BW-2	RU-6	1 to 8200 Ω	40c	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 BTA 1-Watt Fixed Composition

#### Type BTS 1/2-Watt Fixed Composition Values

Values	Lots of 100, Per 100	Lots of 500, Per 100	Lots of 1000, Per 100	Stock No.	MIL Equiv.	Values	Lots of 100, Per 100	500,	Lots of 1000, Per 100
10 Ω to 22 megs	4.30	3.20	2.85	1 MM 021	RC30	10 Ω to 22 megs	7.10	5.40	4.80

#### BT AND BW 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

TYPE BW 5% FIXED WIRE-WOUND (Low Power) 5-lot price applies to purchase of one resistance value only.

5-lot pr	5-lot price applies to purchase of one resistance value only.					5-lot price applies to purchase of one resistance value only.					
Stock No.	Mfr's Type	MIL Equiv.	Values	NET EACH	5 FOR	Stock No.	Mfr's Type	MIL Equiv.	Values	NET EACH	5 FOR
1 MM 015	BTR-1/4	RC09	10 $\Omega$ to 22 megs	24c	.94	1 MM 066	BW-1/2	RU-3	0.24 Ω to 9.1 Ω	48c	1.88
1 MM 005	BTS-1/2	RC20	$10 \Omega$ to 22 megs	24c	.94	1 MM 065	BW-1/2	RU-3	10 Ω to 820 Ω	30c	1.18
1 MM 025	BTA-1	RC30	10 $\Omega$ to 22 megs	36c	1.41	1 MM 085	BW-1	RU-4	0.47 Ω to 5100 Ω	45c	1.76
1 MM 035	BTB-2	RC41	$100~\Omega$ to 22 megs	48c	1.88	1 MM 105	BW-2	RU-6	1.0 Ω to 8200 Ω	60c	2.35

Stock

No.

1 MM 001

MIL

Equiv.

RC20

#### 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 (½ watt); F (1 watt); or H (2 watts). Meet MIL 10500B specs. Ratings, 40° C. Specify values when ordering. Shpg. wts. ½ watt, 3 oz.; 1 watt, 4 oz.; 2 watts, 6 oz. Write for prices on larger quantities.

#### EIA (RETMA) VALUES

Ohms	Ohms	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†	3.3	18.0
220	680	4300	27,000	.12 meg	.51	3.6	22.0
240	820	4700	30 000	.16 meg	.56	3.9	24.0
250*	910	5000*	33,000	.18 meg	.62	4.0*	27.0
270	1200	5100	36,000	.22 meg	.68	4.3	30.0
300	1600	5600	39,000	.24 meg	.82	4.7	ı
330	1800	6200	40.000*	.25 meg	.91	5.0	1

C	_		N/ 1	NET	EACH
Stock No.	Туре	MIL Type	Values	1-24	25-99
MM 490	DCC	RN20X	51 ohms to 1.8 megs ex- cept * or †	43¢	34¢
I MM 450 I MM 451	DCF DCF	RN25X RN25X	100 ohms to 5 megs 5.1 megs to 10 megs	65¢ 72¢	34¢ 52¢ 57¢
I MM 470	DCH	RN30X RN30X	220 ohms to 10 megs except * 12 megs to 30 megs	76¢ 84¢	62¢ 68¢

#### MIL-OHM VALUES

Ohms	Ohms	Ohms	Ohms	Ohms	Megs	Megs	Megs
75	150	1100	7500	15,000	.1	.20	1.3
100	200	1300	10,000	20,000	.11	.75	1.5
110	750	1500	11,000	75,000	.13	1.0	2.0
130	1000	2000	13,000		.15	1.1	1

Stock	-	MIL	14 1	NET	EACH
Ño.	Туре	Type	Values	1-24	25-99
MM 491	DCC	RN20X	75 ohms to 2.0 megs	39¢	31¢
I MM 452		RN25X	100 ohms to 2.0 megs	59¢	47¢
I MM 472	DCH	RN30X	200 ohms to 2.0 megs	71¢	56¢

#### **AEROVOX CARBOFILM RESISTORS**

For circuits requiring accuracy and stability. Carbon deposited on ceramic rod. Silver-plated contacts. Size and voltage: CP-½ watt. 194x11/4,", 1500 volts; CPL-½ watt, 194x11/4,", 2500 volts; CP-1 watt, 194x11/4,", 2500 volts. Specify values when ordering. Av. shpg. wt., 2 oz. Write for prices on larger quantities.

Ohms	Ohms	Ohms	Ohms	Ohms	Ohms	Megs	Megs
100	470	2200	9100	47,000	240,000	1.0	5.1
110	510	2400	10,000	51,000	270,000	1.1	5.6
120	560	2700	11,000	56,000	300,000	1.2	6.2
130	620	3000	12,000	62,000	330,000	1.5	6.8
150	680	3300	15,000	68,000	360,000	1.8	7.5
180	750	3600	18,000	75,000	390,000	2.0	8.2
200	820	3900	20,000	82,000	430,000	2.2	9.1
220	910	4300	22,000	91,000	470,000	2.4	10.0
240	1000	4700	24,000	100,000	510,000	2.7	
270	1100	5100	27,000	110,000	560,000	3.0	
300	1200	5600	30,000	120,000	620,000	3.3	
330	1300	6200	33,000	150,000	680,000	3.6	
360	1500	6800	36,000	180,000	750,000	3.9	
390	1800	7500	39,000	200,000	820,000	4.3	
430	2000	8200	43,000	220,000	910,000	4.7	

Stock	Mfr's			NET	EACH
No.	Type	Watts	Values	1-24	25-99
2 MM 150	CP-1/2	1/2	100 ohms to 4.7 megs	39¢	32¢
2 MM 155	CPL-1/2	1 i	5.1 megs to 7.5 megs	45¢	40¢
2 MM 160	CP-1	1	100 ohms to 4.7 megs	57¢	48¢
2 MM 170	CP-1	1	5.1 megs to 10.0 megs	66¢	53¢

#### **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° F. Rating, 500 v. No. 18, 1½" tinned copper leads. Size, ½" dia., ½"/s/" long, NA-15, ½-watt precision resistors are available in values (listed in table below) up to 1.0 meg. Have No. 20, 1½" tinned copper leads. Rating, 350 v. Size, ½" dia., ½"/z" long. Specify value. Shpg. wt., 2 oz.



Ohms	Ohms	Ohms	Ohms	Ohms	Ohms	Ohms	Megs
1	150	2000	5500	15,000	85,000	400,000	1.0
5	200	2500	5950	20,000	90,000	450,000	1.5
10	300	2950	7450	25,000	100,000	490,000	2.0
15	400	3500	8500	30,000	150,000	500,000	2.5
20	500	4000	8950	40,000	200,000	600,000	3.0
25	1000	4450	9950	50,000	240,000	750,000	3.5
50	1450	4950	10,000	60,000	250,000	800,000	4.0
100	1500	5000	13,500	75,000	300,000	900,000	5.0
	1	- 1	1			MET F	ACH

Stock	Mfr's	Watts	1/-1	NET	EACH
No.	Туре	watts	Values	1-24	25-Up
2 MM 300 2 MM 301 2 MM 350	NR-25	1 1 1/2	1 ohm to 1.0 meg 1.5 megs to 5.0 megs 1 ohm to 1.0 meg	59¢ 76¢ 47¢	41¢ 55¢ 33¢

#### **IRC MIL-10509B MOLDED RESISTORS**

Types MDB, MDC, and MDF. Molded, film-type carbon resistors for circuits requiring 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 (¼ watt); C (½ watt); F (1 watt). All units meet MIL 10509B specifications. Ratings are for 70° C. Specify values when ordering. Shpg. wts.; ¼ watt, 2 oz.; ½ watt. 3 oz.; 1 watt, 4 oz. Write for prices on larger quantities.

#### MIL-OHM VALUES

Ohms	Ohms	Ohms	Ohms	Ohms	Ohms	Ohms	Ohms
100	383	2870	7500	24,900	61,900	215K	499K
110	422	3010	9090	26.100	68,100	227K	511K
121	475	3480	10,000	26,700	75,000	237K	562 K
133	681	3830	11,000	30,100	82,500	249K	681 K
147	750	3920	12,100	31,600	90,900	287K	750K
162	825	4020	13,300	33,200	100K	301K	909K
178	1000	4220	14,700	34,800	110K	316K	1.0 meg
196	1100	4640	15,000	39,200	121K	332K	1.1 megs
200	1210	4750	16,200	40,200	130K	348K	1.33 megs
215	1500	4990	17,800	42,200	147K	383K	1.47 megs
237	2000	5110	19,600	46,400	150K	402K	1.5 megs
261	2210	5620	20,000	47,500	162K	422K	1.62 megs
287	2370	6190	21,500	49,900	196K	442K	1.96 megs
316	2670	6810	23,700	56,200	200K	464K	2.0 megs
210	I	1	l		ı	1	1

	340	1	1	· · · · · · · · · · · · · · · · · · ·	1	
_	Stock	I	MIL		NET	EACH
	No.	Type	Туре	Values	1-24	25-99
ĩ	MM 465	MDB	RN65B	100 ohms to 499K ohms	65¢	51¢
-	MM 466		RN65B	511K ohms to 1 meg	69¢	54¢
ļ	MM 455		RN70B	100 ohms to 2 megs	59¢ 88¢	47¢
- 1	MM 460	MDF	RN75B	100 ohms to 2 megs	88¢	114

#### **TEXAS INSTRUMENTS PRECISION RESISTORS** TYPE CD1/2MR-COATED

Coated, film-type carbon re-



Coated, film-type carbon resistors designed to provide dependable service in critical circuits. Ideal for use where high voltage ratings and low noise levels are required. All units listed below have a wattage rating of \( \frac{1}{2} \) watt. Meet MIL-R10509B specifications. Calibrated at 25° C. Have excellent moisture resistance and overload capacity. Nominal lead length, \( \frac{1}{2} \) "; number 20—0.032 diameter tinned copper. Specify values when ordering. Shpg. wt., 3 oz. Write for prices on larger quantities.

Ohms	Ohms	Ohms	Ohms	Ohms	Ohms	Megs	Megs
51	220	680	2700	10K	39K	.15	.51
56	240	750	3000	11K	43K	.16	.56
62	250	820	3300	12K	47 K	.18	.62
68	270	910	3600	13K	50K	.20	.68
75	300	1000	3900	15K	51 K	.22	.75
82	330	1100	4300	16K	56K	.24	.82
91	360	1200	4700	18K	62 K	.25	.91
100	390	1300	5000	20K	68K	.27	1.0
110	400	1500	5100	22K	75K	.30	1.1
120	430	1600	5600	24K	82K	.33	1.2
130	470	1800	6200	25K	91 K	.36	1.3
150	500	2000	6800	27K	.10 meg	.39	1.5
160	510	2200	7500	30K	.11 meg	.43	1.6
180	560	2400	8200	33K	.12 meg	.47	1.8
200	620	2500	9100	36K	.13 meg	.50	2.0

200   0	20   2300	9100   30K   .13	meg   .50	2.0
Stock	<b>+</b>	Values	NET EA	CH
No.	Туре	Values	1-24	25-99
I MM 430	CD½MR	51 ohms to 2.0 megs	39¢	31¢

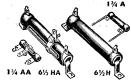
#### TYPE CDM-MOLDED

TYPE CDM—MOLDED

Precision-made, molded, film-type carbon resistors. Excellent for circuits where noise must be minimized 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 handling. Available in ¼ watt and ½ watt values. Type CDM¼ designates ¼ watt; Type CDM¼, ½ watt. Meet requirements of MIL-R 10109B specifications. Type CDM¼ and CDM½ are calibrated at 25° C. Nominal lead length, 1½°, number 20 –0.032 diameter timed copper. Type CDM¼ is MIL Type RNO5B; 0.85% long x 0.200° diameter. Type CDM¼ is MIL Type RNO5B; 0.50° diameter. Specify values when ordering. Shog. wts: ¼ watt, 2 oz.; ½ watt, 3 oz. Write to Allied's Industrial Division for prices on larger quantities.

Ohms	Ohms	Ohms	Ohms	Ohms	Ohms	Ohms	Ohms
100	383	2870	7500	24,900	61,900	215K	499K
110	422	3010	9090	26,100	68,100	221K	511K
121	475	3480	10,000	26,700	75,000	237K	562K
133	681	3830	11,000	30,100	82,500	249K	681 K
147	750	3920	12,100	31,600	90,900	287K	750K
162	825	4020	13,300	33,200	100K	301 K	909K
178	1000	4220	14,700	34,800	110K	316K	1.0 meg
196	1100	4640	15,000	39,200	121K	332K	1.1 megs
200	1210	4750	16,200	40,200	130K	348K	1.33 megs
215	1500	4990	17,800	42,200	147K	383K	1.47 megs
237	2000	5110	19,600	46,400	150K	402K	1.5 megs
261	2210	5620	20,000	47,500	162K	422K	1.62 megs
287	2370	6190	21,500	49,900	196K	442K	1.96 megs
316	2670	6810	23,700	56,200	200K	464K	2.0 megs
348	1	1		1	1	l	

Stock	-	37	NET	EACH .
No.	Туре	Values	1-24	25-99
I MM 435	CDM1/4 CDM1/4	100 ohms to 499K ohms 511K ohms to 1.0 meg	65¢ 69¢	51¢ 54¢
MM 440	CDM 1/2	100 ohms to 2 megs	59¢	47¢



#### WIRE-WOUND POWER RESISTORS

Large, non-porous ceramic cores, and thick cement coatings. All have lugs; Types 1½ A and 2 D, also have 1½" leads. Units of 25 watts and higher have mounting brackets. All ±10% tolerance except fixed types of 50 ohms and up, which are ±5%. NOTES ON ADJUSTABLE TYPES: Units of 25 watts and higher have silver contacts. Where range of values is given in individual listings, consult table for specific values available; e.g., 1 to 1000 means all values listed in table between and including 1 and 1000. Specify resistance value when ordering. Av. shpg. wt., 10-50 watts, 4 oz.; 100-200 watts, 1 lb.

#### STOCK RANGES—SPECIFY RESISTANCE VALUE

		VALUES	AVAILABLE	IN OHMS		
1†	25†	350*8	1250*	3500§	8500*§	30,000*
2†*§	50†	400		4000†	9000*§	40,000*
3+*	75†	500†	1500†	4500*§	10,000†	50,000*
5†	100†	600†*§	1750*§	5000†	12,000*§	100,000*
7.5*§ 10†	150†	750†	2000†	6000*	12,500*§	
10†	200†	800*	2250*8	7000*	15,000	
15§	250†	1000†	2500†	7500†§	20,000	
20†*§	300†	1200*	3000†	8000*	25,000	1

#### **FIXED POWER RESISTORS**

Stock No.	Ohms	EACH
MM  20   MM  21   MM  22   MM  23   M  24	1 to 1000 1200 to 5000 6,000 to 10,000 12,000 to 20,000 25,000	.47 .53 .59 .65

2 D (DG)—20 WATT All values to 50,000 ohms, except §. 2x%6".				
MM  40   MM  4    MM  42   MM  43   MM  44   M  45	1 to 1000 1200 to 5000 6000 to 10,000 15,000 and 20,000 25,000 to 40,000 50,000	.62 .65 .71 .76 .88 1.03		
	A D III	CTABLE B		

### 4½ E (EP)—50 WATT

Stock No.	Ohms	EACH
I MM 160	1 and 2	1.47
MM  6    MM  62	5, 10, 25, 50, 75, 100, 200, 250, 500, 1000 1500, 2000, 2500, 3000,	1.06
I MM 163	4000, 5000 6000 and 10,000	1.12
I M 168	100,000	2.06

6½ H (HA)—100 WAII In values indicated below only, 6½x1⅓″.				
I MM 300	5, 10, 25, 50, 75, 100, 150, 250, 500, 750, 1000	1.56		
1 MM 301	1250, 1500, 2000, 2500, 3000, 5000	1.65		
I M 302	7500	1.76		

#### ADJUSTABLE POWER RESISTORS 134 AA (ABA)—10 WATT

above table Cias 13/15/1	ed † ii
above table. Size, 13/4 x5/16".	
MM 200   1 to 1000	1 .94
MM 20   1500 to 5000	1.00
1 MM 202   7500 and 10,000	1.06
2½ DA (DHA)-25 WATT	
In all values above, except*. Size, 21/2	x9/16".
I MM 220   1 to 1000	11.21
MM 22  1500 to 5000	1.23
MM 222   7500 and 10,000	1:29
MM 223   15,000 and 20,000	1:35
I M 224   25,000	11.33
1 11 12-7   20,000	1 1.47

M 224	25,000	1.47		
4½ EA (EPA)—50 WATT In values indicated below only, 4½x¾″.				
I MM 240	10, 25, 50, 75, 100, 150, 200, 250, 500, 750, 1,000	1.53		
MM 24	1500, 2000, 2500, 3000 4000, 5000	1.59		
I M 242 I MM 243 I MM 244	10,000 15,000 and 20,000 25,000, 30,000, 40,000	1.71		
M 245	50,000 100,000	2.00 2.12 2.53		

	(HAA)100 WA		
Available only in	values indicated	below.	Size
616×116"			

U	72 X 1 78 .		
ī	MM 260	100, 200, 400, 500, 750	2.32
ı	MM 261	1500, 3000, 5000	2.38
!	M 262	10,000	2.50
1	M M 263 M 264	15,000 and 20,000 25,000	2.65
1	M 265	50,000	2.94
i	M 267	100,000	3.20

## 10½ HA (HOA)—200 WATT Available only in resistances indicated below. Size, 10½x1⅓".

I MM 340 I MM 341 I M 342 I M 345 I M 347	10, 25, 50, 100, 250, 500, 1000 1500, 2000, 2500, 5000 10,000 50,000 100,000	2.82 2.88 3.06 3.35 3.67
2 M 604. Fo	or 4½ EA. } EACH	. 3 oz. 18c

# WW2J

#### WIRE-WOUND PRECISION RESISTORS

6 ww.41 ww.101

WW5J Type WW2J. 1 Watt. Enameled windings on ceramic forms. Maximum volts, 2000. Lug terminals. Size, 7/8×215/6". Shpg. wt., 3 oz.

Type WW4J. ½ Watt. Special impregnant for complete humidity protection, as on others of series. Max. volts, 700, Size, %6x1". Wt. 3 oz. TYPE WW4J

Excellent selection of highly dependable precision resistors. Widely used in instruments, calibrated controls, etc. All except Type WW10J are wound with adjacent sections in opposite directions to minimize coupling effects. Tolerance is ±1%, All have lug terminals, except Type WW10J, which has wire terminals.

Type WW5J. ½ Watt. Similar to type WW4J, but rated at 1000 volts maximum. Tolerance is ± 1%. Size, ½xx1½'. Shgs. wt., 3 oz.

Type WW10J. 0.15 Watt. Extremely small wire-wound resistors. 2" wire leads. Maximum volts, 200. Size, ½xx1½". Shgg. wt., 2 oz.

					** ** 103	0   00   200   1200   10,000		
Stock No. 0	Ohms	EACH	Stock No.	Ohms	EACH	Stock No.   Ohms   EACH	Stock No.   Ohms   EACH	MM 190. 1-99, NET EACH35¢
2 M 541 2 M 549	0.1		2 M 515	10000	1.59	2 M 550 10	2 M 564 4000 2 M 565 5000 1.29	100-499, EACH25¢
2 M 542 2 M 500	0.5		2 M 5 l 6 2 M 5 l 7	12500 15000		2 M 551 25 1.32 2 M 552 50	2 M 565 5000 1.29 2 M 566 7500	FUSE-RESISTORS
2 M 546	5	1.29	2 M 518 2 M 544	20000 22500	2.06	2 M 553 100	2 M 567 10000   1.35	Type FR 7.5. A highly reliable plug-in type resistor with
2 M 501 2 M 502	10 25		2 M 519 2 M 520	25000 30000		2 M 554 200 2 M 555 250	2 M 568 12500 2 M 569 15000	characteristics of a slow-blow fuse. For series-string filament
2 M 503 2 M 504	50 100		2 M 521	40000		2 M 556 300 1.20 2 M 557 500	2 M 570 20000 2 M 571 25000 1.59	circuits in television sets and other equipment. Prevents severe tube losses—
-	200		2 M 522 2 M 523	50000 60000		2 M 558 1000	2 M 572 30000 2 M 573 40000	opens filament circuits if current is excessive.
	250 300	1.38	2 M 524	75000		2 M 559 1500 2 M 560 2000	2 M 574 50000	May be used to replace similar units in Ray- theon, RCA, Motorola, Sylvania. Zenith, etc.
2 M 507	500 000		2 M 525 2 M 526	100000	2.32	2 M 561 2500 2 M 562 3000 1.29	2 M 575 60000 2 M 576 75000 1.76	Has fully insulated ceramic body. Resistance, 7.5 ohms. Shpg. wt., 3 oz.
	500		2 M 527	150000		2 M 563 3500	2 M 577 0.1 Meg	2 M 771. 1 to 9, EACH
2 M 510 20	000		2 M 528 2 M 529	175000 200000	2.56	TYPE WW5J	I TYPE WW2J	Type FR 5. As above, but 5 ohms. 3 oz.
2 M 547 30	000		2 M 530	225000		Stock No.   Ohms   EACH		2 M 773. 1 to 9, NET EACH44c
2 M 512 4	500 000	1.50	2 M 53 I 2 M 352	250000 300000	2.82		2 M 538 1.5 Meg   12.49	10 or More, EACH
	000		2 M 533		3.32	2 M 581 0.75 Meg 7.3 2 M 582 0.9 Meg 7.5	2 M 540 2.5 Meg   15.67	Type F R 5.6. As above, but 5.6-ohm. 3 oz. 2 M 772. 1 to 9, EACH
2 M 514 7	500	1.59	2 M 534	500000	3.79	2 M 583   Meg   7.8		10 or More, EACH



#### 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 (\*± 10%). Each resistance value is in a separate compartment. Prices are for resistors only—no charge for cabinets. 53/x515/kgx107/g\*.

#### **METAL RESIST-O-CABINETS**

MEIAL RESIST-O-CABINETS

ASSOrtment No. 3A. 120 2-wat resistors as follows: 7 each: 8200, 10K, 22K, 47K; 5 each: 1K, 6800, 15K, 0.1 meg; 4 each: 100, 330, 470, 1500, 2200, 3300, 4700, 27K, 1.0 meg; 3 each: 47, 82, 150, 220, 270, 3900, 0.22 meg, 0-47 meg; 2 each: 47, 10, 22, 68; 1 each: 15, 27, 33, 39. Complete with metal Resist-O-Cabinet. Shpg. wt. 4½ lbs. 2 M 776. NET.....

Assortment No. 5A. 125 IRC 1-watt resistors. 7 each: 1K, 10K, 27K, 47K, 0.1 meg. 0.27 meg. 0.47 meg. 1.0 meg; 5 each: 2200, 4700, 22K; 4 each: 33K, 39K, 68K; 3 each: 47, 100, 150, 220, 270, 470, 1500, 2700, 3300, 15K, 0.15 meg. 0.22 meg, 2.2 meg, 4.7 meg. With metal Resist-O-Cabinet. Shpg. wt., 43/4 lbs. 2 M 778, NET.....

## 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 ceramic case. Particularly recommended for circuits where a stable resistor is required with an actual wattage dissipation of 10 watts or less. Has axial leads 11/2" long. Tolerance ±10% ize less leads, 11/2\*x/2\*x/1½". Sppg. wt., 20. Specify values when ordering—see listing below.

#### VALUES AVAILABLE (OHMS)

1	10	75	300	1500		20,000
3	15	100	500	2000		25,000
3	20	150	750	2500	8200	
4	25	200	1000	3000	10,000 15,000	
_ 5	50	250	1250	4000	15,000	

10 or More, EACH	35¢
Type FR 5. As above, but 5 ohms.	3 oz.
2 M 773, 1 to 9, NET EACH 10 or More, EACH	440
Type F R 5.6. As above, but 5.6-ohm.	

#### FAMOUS "BROWN DEVIL" WIRE-WOUND RESISTORS

For voltage drop-ping, bias units, bleeders, etc. Thick vitreous enamel coating—for excel-lent heat conduction and insulation:



tion and insulation; also protects against effects of humidity. Welded high-strength alloy terminals. Accuracy, ± 5%. Size: 5-watt units, 1½%; 10-watt units, 1½½%; 20-watt units, 2½%. 1½″ tinned leafs. Av. shpg. wt., 3 oz.

#### SPECIFY VALUES DESIRED

Ohms	Ohms	Ohms	Ohms	Ohms
1	100	1000	7500	35,000
1.5†*	125*	1100*	8000	40,000
2*	150	1200	8500*\$	45,000
3*	200	1250	9000	50,000
4* 5	225*	1500	10,000	55,000
5	250	1750	11.000*	60,000
7.5*	300	2000	12.000*	65,000
10	350	2250	12,500	70,000
12*	400	2500	13.500*	75,000
15*	450*	2750†§	15,000	80,000
20*	500	3000	16.000*	85,000
25	600*	3500	17.500*	90,000
30*	650†§	4000	18.000*	95,000
35*	700	4500	20,000	100,000
40*	750	5000	22,500*	,
50	800	6000	25,000	
75	900*	7000	30,000	

#### 5-WATT SIZE

Available in all values to 10,000 except those marked § in table at left.

No.	Ohms	EACH
I MM 730 I MM 731	1 to 1000 1100 to 5000 6000 to 10,000	.44 .47

#### 10-WATT SIZE

Available in all values to 50,000 except those marked † in table at left.

I MM 700	1 to 1000	.47
I MM 701	1100 to 5000	.53
I MM 702	6000 to 10000	.59
I MM 703	11000 to 20000	.65
I MM 704	22500 to 25000	.71
I MM 705	30000 to 50000	.79

#### 20-WATT SIZE

Available in all values except those marked \* in table at left.

I MM 720 I	5 to 1000	.62
I MM 721	1200 to 5000	.65
I MM 722	6000 to 10000	• <u>7</u> !
I MM 723	12500 to 20000	.76
I MM 724	25000 to 40000	.88
I MM 725	45000 to 60000	1.03
I MM 726	65000 to 80000 85000 to 100000	1.18

#### "DIVIDOHM" WIRE-WOUND ADJUSTABLE RESISTORS



Used for voltage-dividing networks in power supplies, adjustable dropping resistors, etc. Wire-wound on ceramic core with vitreous enameled coat. Accuracy ±10%. With slider and mounting brackets. Av. shpg. wt., ½ lb.

#### 10 WATTS-13/4x5/6"

No.	Туре	Ohms	Ma.	EACH
74 M 950 74 M 951 74 M 952	1001 1002 1003	1 2 3 5	3160 2240 1830	.94
74 M 953	1004	5	1410	
75 M 861 75 M 862 75 M 863	1006 1009 1010	10 25 50	1000 630 450	
75 M 864 75 M 865	1011 1012	75 100	370 320	~4
75 M 866 75 M 867	1013 1015	150 250	260 200	.94
75 M 868 75 M 869 75 M 870	1019 1021 1023	500 750 1000	140 120 100	
75 M 871 75 M 871 75 M 872	1025 1028	1500 2500	81 63	1.00
75 M 873	1033	5000	45	1.00
75 M 874 75 M 875	1036 1040	7500 10,000	36 32	1.06
75 M 883	EXTR	A SLID	ER	18¢

25 WAIIS-2x3/16					
No.	Туре	Ohms	Ma.	EACH	
74 M 954 74 M 955 74 M 956 74 M 957	0361 0362	1 3 5 10	5000 2880 2240 1580	1.21	
74 M 958 74 M 959 74 M 960 74 M 961	0365 0366	15 25 50 75	1290 1000 710 580	1.21	
75 M 780 75 M 781 75 M 782 75 M 783 75 M 784	0371 0372 0373	100 250 500 750 1000	500 320 220 180 160	1.21	
75 M 785 75 M 786 75 M 787 75 M 788 75 M 789	0377 0378 0379	1500 2000 2500 3000 5000	130 120 100 91 70	1.24	
75 M 790 75 M 791	0384 0385	7500 10000	57 50	1.29	
75 M 792 75 M 793 75 M 794	0387	12000 15000 20000	42 36 31	1.35	
75 M 795		25000	28	1.47	
75 M 880	EXTR	A SLIDE	R	18¢	

#### 50 WATTS-4-9/-"

No.	Type	Ohms	Ma.	EACH			
74 M 962			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			

#### 50 WATTS-4x%6" (Cont.)

No.	Туре	Ohms	Ma.	EACH
74 M 966	0561	10	2230	1.53
74 M 967	0562	25	1410	
74 M 968	0563	50	1000	
74 M 969	0564	75	820	1.53
74 M 970	0565	100	710	
74 M 971	0566	150	580	
74 M 972	0567	200	500	
75 M 800	0568	250	450	1.53
75 M 801	0569	500	320	
75 M 802	0570	750	260	
75 M 803	0572	1000	220	
75 M 804	0573	1500	180	1.59
75 M 805	0374	2000	160	
75 M 806	0575	2500	140	
75 M 807	0578	5000	100	
75 M 808	0581	10000	71	1.71
75 M 809	0583	15000	57	1.82
75 M 810	0584	20000	50	1.82
75 M 811	0585	25000	45	2.00
75 M 812	0586	30000	36	
75 M 813	0587	40000	29	
75 M 814 75 M 815 75 M 880	0588 0591 EXTR	50000 100000 A SLIDE	26 18	2.12 2.53

	100 WATTS61/2x3/4"								
5	M	880	EXT	RA SLIDE	R				
5	M	813	0591	50000 100000	18	2.5			
5	M	814	0588	50000	26	2.1			
				40000					

Type | Ohms | Ma. | EACH

No.

74 M 973	0956A	1	10000	2.94
74 M 974	0956B	2	7070	
74 M 975	0956C	3	5770	
74 M 976	0956D	4	5000	2.32
74 M 977	0956	5	4470	
74 M 978	0957	10	3160	
74 M 979	0958	25	2000	
74 M 980	0959	50	1410	2.32
74 M 981	0960	100	1000	
74 M 982	0960B	250	630	
74 M 983	0961	500	450	
75 M 830	0962	1000	320	
75 M 831	0964	5000	140	2.38
75 M 832	0965	10000	100	2.50
75 M 833	0966	15000	81	2.65
75 M 834	0967	20000	71	2.65
75 M 835	0968	25000	63	2.82
75 M 837	0970	40000	50	2.82
75 M 838	0971	50000	45	2.94
75 M 840	0973	100000	28	3.20

75 M 88 | EXTRA SLIDER......26¢

200 WATTS—10½×1¼"								
No.	Туре	Ohms	Ma.	EACH				
74 M 984 74 M 985	1356A 1356B	1 2 3	14100 10000					
74 M 986 74 M 987	1356C 1356D 1356	3 4 5	8160 7070 6320	3.67				
74 M 988 74 M 989 74 M 990	1357 1358	10 25	4470	0.00				
74 M 991	1359	50	2830 2000	2.82				
74 M 992 74 M 993	1360 1360B	100 250	1410 890	2.82				
74 M 994 75 M 850	1361 1362	500 1000	630 450					
75 M 851 75 M 852	1364 1365	5000 10000	200 140	2.88 3.06				
75 M 858 75 M 860	1371 1373	50000 100000	63 45	3.35 3.67				
75 M 882 EXTRA SLIDER26¢								



#### "LITTLE DEVIL" RESISTORS

Molded, insulated composition resistors. Meet MIL-R-11A specifications, including salt water immersion and high humidity tests. Dissipate heat rapidly and can be used at their full wattage ratings at 158° F. Tinned copper leads. Breakdown ratings: 'Jio W., 200 v.; ½ W., 350 v.; 1 W., 500 v.; 2 W., 750 v. Shpg. wt., 2 oz.

#### SPECIFY VALUES DESIRED 10% TOLERANCE RESISTORS

Ohms	Ohms	Ohms	Megs	Megs
10	220	4,700	0.1	2.2
12	270	5,600	0.12	2.7
15	330	6,800	0.15	3.3
18	390	8,200	0.18	3.9
22	470	10,000	0.22	4.7
27	560	12,000	0.27	5.6
33	680	15,000	0.33	6.8
39	820 '	18,000	0.39	8.2
47	1,000	22,000	0.47	10.0
56	1.200	27,000	0.56	12.0
68	1,500	33.000	0.68	15.0
82	1,800	39,000	0.82	18.0
100	2,200	47,000	1.0	22.0
120	2,700	56,000	1.2	
150	3,300	68,000	1.5	}
180	3.900	82,000	1.8	1

Stock	1.00	NET EACH				
No.	Watts	1-99	100-249†	250-499†		
2 MM 050 2 MM 040	1/10* 1/2	24¢ 12¢	:141	.118		
2 M M 060 2 M M 080	1 2	18¢ 24¢	106	.071		

†Applies to resistors of one value only. \*Available only in values from 100 ohms to 1.0 megohm.

#### **5% TOLERANCE RESISTORS**

Ohms	Ohms	Ohms	Megs	Megs
10	220	4,700	0.1	2.2
11 12 13	240	5,100	0.11	2.4
12	270	5.600	0.12	2.7
13	300	6.200	0.13	3.0
15	330	6,800	0.15	3.3
16	360	7.500	0.16	3.6
18	390	8,200	0.18	3.9
20	430	9.100	0.20	4.3
22	470	10,000	0.22	4.7
24	510	11,000	0.24	5.1
27	560	12,000	0.27	5.6
30	620	13,000	0.30	6.2
24 27 30 33	680	15.000	0.33	6.8
36	750	16,000	0.36	7.5
39	820	18.000	0.39	8.2
43	910	20,000	0.43	9.1
47	1,000	22,000	0.47	10.0
51	1.100	24.000	0.51	11.0
56	1,200	27,000	0.56	12.0
62	1,300	30,000	0.62	13.0
68	1,500	33,000	0.68	15.0
75	1,600	36,000	0.75	16.0
82	1.800	39,000	0.82	18.0
91	2,000	43,000	0.91	20.0
100	2.200	47,000	1.0	22.0
110	2.400	51,000	1.1	
120	2,700	56,000	1.2	1
130	3.000	62,000	1.3	
150	3,300	68,000	1.5	
160	3,600	75,000	1.6	
180	3.900	82,000	1.8	
200	4,300	91,000	2.0	

Stock Water		NET EACH			
No.	Watts	1-99	100-249†	250-499†	
2 MM 045	1/2	24¢	.141	.094	
2 MM 065	1	35¢	.212	.159	
2 MM 085	2	47¢	.282	.235	

†Applies to resistors of one value only.

#### "LITTLE DEVIL" ASSORTMENTS

NO CHARGE Plastic Cabinet



Selected supply of 150 ½-watt or 125 1- or 2-watt resistors in most-often-needed values. Complete with handsome plastic cabinet, 4½x 9x5½", at no extra charge. Cabinet has 5 drawers and 40 compartments. Has dovetail top and bottom. Shpg. wt., 7 lbs.

	Type		EACH
2 M 761	CAB-10	150 ½-watt resistors 125 1-watt resistors 125 2-watt resistors	17.64
2 M 754	CAB-2	125 1-watt resistors	22.05
2 IVI 762	CAB-3	1125 2-watt resistors	29.40

## **Quality Resistors**

#### 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: ±5% for values over 50 ohms; ±10% for values less than 50 ohms. Wattage ratings based on temperature rise to 300° C. 1½" 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	l
5.0	35	225	700	1500	4500	12.500	l
7.5	40	250	750	1750	5000	15,000	
100	50	1 300	800	2000	6000	17 500	1

#### 3 WATTS--%x1/4"

No.	Ohms	EACH	No.	Ohms	EACH
2 MM 090 2 MM 095	1-1000 1100-5000	50¢ 53¢	2 MM 110	6000-10,000	56¢

#### 5 WATTS-11/4-11/60

No.	Ohms	EACH	No.	Ohms	EACH			
2 MM 115 2 MM 130 2 MM 135	1-1000 1100-5000 6000-10,000	56¢	2 MM 145 2 MM 146	12,500-20,000 22,500-25,000	71¢ 73¢			

#### SPRAGUE "KOOLOHM" WIRE-WOUND RESISTORS



Feature high-voltage insulated resistance wire windings; will withstand 10,000 volts from surface of jacket to resistance element. KT types are inductively wound; NT types have non-inductive

winding. Ceramic jackets and special end-seals provide complete protec-tion against high humidity and heat—ceramic coating insulation with stands temperatures to 100° C. Accuracy within 5%. Av. shgs. 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-S WATT-176-156-7

No.	Ohms	EACH	No.	Ohms	EACH
I MM 640	1250 to 5000	38¢	I M 645	20,000	56¢
I MM 641		41¢	I M 646	25,000	65¢
I MM 642		47¢	I M 647	30,000	71¢
I M 643		53¢	I M 649	35,000	82¢
I M 644		56¢	I M 648	40,000	88¢

#### TYPE 10KT-10 WATT-127/2x15/2"

MM 660   5 to 1000   MM 661   1250 to 5000   MM 662   6000 to 10,000   MM 663   12,000 to 17,500   M 664   20,000	44¢ 47¢ 53¢ 59¢ 65¢	I M 666   30,000 I M 658   35,000 I M 667   40,000 I M 668   50,000 I M 669   60,000	.76 .88 .97 1.06
IM 665 25,000	71¢	M 659 70,000	1:29

TIPE SNIT—3 WATT NON-INDUCTIVE—1/22"X1-/32"								
No.	Ohms	EACH			EACH			
IMM 670	5 to 1000 1250 to 2000	59¢	I MM 672	2500 to 4000 5000	73¢			
IMM 671	1250 to 2000	68¢	I M 673	5000	76¢			

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Ī	M M 681	5 to 1000 1250 to 2000 2500 to 4000	59¢ 68¢ 73¢	I MM 683 I MM 684 I M 685	5000 to 6000 7500 to 9000 10,000	.76 .85 1.12



#### OHMITE TYPE FR FUSE RESISTOR

A highly dependable 7½-ohm fuse resistor. May be used to replace many fuse resistors used in television circuits. 1½° 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, 1½° 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 resistance can be determined. Also has parallel resistance calculator. Size, 9x3". Shpg. wt., 3 oz.

ize, 9x3". Shpg. wt., 3 oz. M 780. NET..... 

## OALLIED RADIO CORR O COLOR CODE EVIDE

#### ALLIED'S COLOR-CODE GUIDE

#### **DAVEN QUALITY RESISTORS ENCAPSULATED WIRE-WOUND RESISTORS**





Type 1250

Encapsulated wire-wound precision resist-ors, ±1%. All have non-inductive windings

Type 1174

Types 1250 and 1174 meet MIL-R-9444 specs. Type 1250 has axial leads of No. 20 wire, 2" long; Type 1174 has gold-plated solder lugs. Size and wattage ratings: Type 1250, ½x½/" long, ½ watt. Type 1174, ½x½/" long, ½ watt. Wattage at 25°-125° C, 400 v. max. Wt., 2 oz.

	Type 1250 Type 1174 NET EACH					
Ohms	Stock No.	Stock No.	1-9	10-24	25-U p	
1 10 20 40 50	31 M 400 31 M 401 31 M 402 31 M 403 31 M 404	31 M 475 31 M 476 31 M 477 31 M 478 31 M 479	1.31 1.31 1.31 1.31	1.00 1.00 1.00	.85 .85 .85 .85	
100 150 200 300 400	31 M 405 31 M 406 31 M 407 31 M 408 31 M 409	3  M 480 3  M 481 3  M 482 3  M 483 3  M 484	1.31	1.00 1.00 1.00 1.00	.85 .85 .85 .85	
500 600 1000 1500 2000	31 M 410 31 M 411 31 M 413 31 M 412 31 M 414	31 M 485 31 M 486 31 M 488 31 M 487 31 M 489	1.31 1.31 1.31 1.31	1.00 1.00 1.00 1.00	.85 .85 .85 .85	
3000 4000 5000 6000 8000	31 M 415 31 M 416 31 M 417 31 M 418 31 M 419	31 M 490 31 M 491 31 M 492 31 M 493 31 M 494	1.31 1.31 1.35 1.35	1.00 1.00 1.00 1.03 1.03	.85 .85 .87 .87	
10,000 15,000 18,000 20,000 22,000	31 M 420 31 M 421 31 M 422 31 M 423 31 M 424	31 M 495 31 M 496 31 M 497 31 M 498 31 M 499	1.35 1.45 1.45 1.45 1.45	1.03 1.12 1.12 1.12	.87 .94 .94 .94	
25,000 30,000 40,000 43,000 47,000	31 M 425 31 M 426 31 M 427 31 M 428 31 M 429	31 M 500 31 M 501 31 M 502 31 M 503 31 M 504	1.45 1.54 1.54 1.54	1.12 1.19 1.19 1.19	.94 1.00 1.00 1.00	
50,000 56,000 60,000 70,000 75,000	31 M 430 31 M 431 31 M 432 31 M 433 31 M 434	31 M 505 31 M 506 31 M 507 31 M 508 31 M 509	1.54 1.61 1.61 1.61	1.19 1.24 1.24 1.24 1.24	1.00 1.05 1.05 1.05	
80,000 82,000 100,000 120,000 150,000	31 M 435 31 M 436 31 M 437 31 M 438 31 M 439	31 M 510 31 M 511 31 M 512 31 M 513 31 M 514	1.68 1.68 1.68 1.74 1.90	1.31 1.31 1.31 1.37 1.51	1.10 1.10 1.10 1.15 1.27	
160,000 180,000 200,000 220,000 250,000	31 M 440 31 M 441 31 M 442 31 M 443 31 M 444	31 M 515 31 M 516 31 M 517 31 M 518 31 M 519	1.99 2.06 2.06 2.18 2.18	1.58 1.63 1.63 1.76 1.76	1.32 1.37 1.37 1.47 1.47	
300,000 400,000 500,000 750,000 1 Megohm	3  M 445 3  M 446 3  M 447	31 M 520 31 M 521 31 M 522 31 M 523 31 M 524	2.47 2.83 3.10 4.18 4.79	1.96 2.24 2.45 3.29 3.76	1.63 1.86 2.04 2.73 3.12	

Type 1195. Same design as Type 1250, but  $\frac{1}{4}x\frac{3}{4}$  long and rated at  $\frac{1}{2}$  watt. Meets MIL-R-93B proposed requirements. Shpg. wt., 2 oz.

3| M 448. 750K. 25-Up, EA. 2.73 10-24, EA. 3.29 1-9, EA. 4.18 3| M 449. 1 meg. 25-Up, EA. 3.12 10-24, EA. 3.76 1-9, EA. 4.79

#### TYPE 850 1/2-WATT METAL-FILM PRECISION RESISTORS



Hermetically sealed, precision ½-watt resistors. Designed for accuracy, small size and low cost. Exceed MIL-R-load, effect to soldering, moisture resistance, voltage coefficient, load life, temp. coefficient (PPM/°C). Tolerance is =1%. Voltage: 350 v., max. Size (less leads): %e″ diameter, %e″ 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	1	[		

Stock Values Available		NET EACH			
No.		1-9	10-24	25-U P	
31 MM 365	1, 2, 3, 5, and 8-ohm only All values in above table except* 500K, 600K, 700K, 800K-ohm only	1.15 1.04 1.15	1.00 .90 1.00	.85 .75 .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 of most-often-used values, all in color coded ½-watt and 1 watt sizes. All resistors are brand new and have tinned copper leads. Non-insulated types only. copper leads. I Shpg. wt., 12 oz.

58 M 086. NET......95c

## Special-Purpose Resistors, Controls

#### **DAVEN STEP-TYPE ATTENUATORS**



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 positive contact under all types of conditions. All have 20 steps at 2 db per step, except \*30 steps at 1½ db per step. SP-2627 exactly replaces Gates A-9703 with cue, RCA 147875-2; SP-4633—Gates 9703, RCA 147273-4; LA-350-G—RCA 147875-9, G.E. M2R32Pf, Collius 378-20369-000; LA-350-AH is used in Magnecord tape recorders. †Indicates cueing switch. Prefixes indicate: T—pridged "T" networks; LA—unulanancel ladder networks; TA—multiplier networks for VU meters (ranges: §MW +4 to +40 and off; ‡ +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., 1½ lbs. Allied can supply the complete Daven line at OEM prices—write for literature.

Stock	Mfr's	Terminal	NET	EACH
No.	Туре	Impedance	1 to 4	5 or More
3   M 456	†SP-4627	150/300	15.58	14.25
3   M 457	SP-4633	150/300	13.58	12.45
3   M 458	LA-350-EF	250/500	13.58	12.45
3   M 459	LA-350-G	600/600	13.58	12.45
3   M 460	LA-350-AH	30/60	13.58	12.45
3   M 461	#CP-350-Y	500,000	13.58	12.45
3   M 462	CP-354-T	100,000	13.58	12.45
3   M 463	CP-354-X	250,000	13.58	12.45
3   M 464	#CP-350-T	100,000	13.58	12.45
3   M 465	†LAQ-350-EF	250/500	15.58	14.25
3   M 466	\$TA-1000-1	7100/3900	38.92	35.25
3   M 467	‡TA-1000-4	7100/3900	38.92	35.25
31 M 468	*T-330-G	600/600	32.25	29.25
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% /°C. positive temperature coefficient of resistance. Tol., ±10%. TM ¼ has molded case with axial leads; TC ¼ has hermetically-sealed, round welded case. Av. shops. wt., 2 oz. Specify values when ordering.



-		TITM
TM	1/4	

0hms 100 120	0hms 150 180	220 270	330 390	470 500	Ohms 560 680	-	820 1000
Stock No.	Mfr		tts Ci	Loading		NET 1-49	EACH  50-499

Stock No.	Mfr's Type	Watts	Loading Characteristics		EACH 50-499
3   MM 56	TM 1/4	1/4	Full load to 100° C.	4.00	3.50
3   MM 562	TC 1/8	1/8	Full load to 125° C.	5.00	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 line. For use with 110-120 v., AC-DC. Av. shgg. wt., 7 oz.





Stock No.	Туре	Watts	NET						
80 G 144	5301	100-275	.97						
81 G 036	5302	250-400	1.15						

#### G-C GLO-BAR THERMISTORS

Popular thermistors used in series-string filament circu of RCA, Crosley, Philco, and other TV sets. A necess service replacement item. \*Matched pair; replaces fi ment resistors of G.E., M'rola, Sears, etc. Av. wt., 1

uits		
ary ila- oz.		ı
oz.	-	

	l _	Hot   Cold		i	NET EACH	
Stock No.	Type			Replaces	1-9	10-Up
2 M 066	9214	20	250	GE RRW051	.79	.72
2 M 067	9215	75	950	GE RRW041	.79	.72
2 M 068	9216	31	260	GE RRW097	.83	.74
2 M 069	9217	35	460	GE RRW054	.83	.74
2 M 053	9265	11	250	M'rola 6A735941	.79	.72
2 M 054	9266	50	1050	Philco 33-1343-3	.71	.64
2 M 055	9267	10500	at 125V.	G.E. RRW052	.88	.79
2 M 070	9268	43	125	Crosley	1.00	.90
2 M 071	9269	9	200	RCA 100118		.98
2 M 072	9135	40	375	*(see above)		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. shop, wt., 1 oz.



Stock No.	Туре	Ohms	List	1-9, EACH	10 or More, EAC
2 M 073	9276	5.6	.65	38¢	34¢
2 M 074	9207	7.5	.65	38¢	34¢
2 M 075	9277 9278	9.0	.65	38¢	34¢
2 M 076	92/8	22.0	.65	38¢	34¢

Type 9279 Fuse-Sistor Kit. Contains one each of above. 2 M 077. List, \$2.50. NET.....

#### . 1.47

#### **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 and mobile applications. Highly resistant to vibration, shock and violent acceleration; all units are specially sealed to be splash, sand and dust-proof. Self-locking adjustment holds any setting under extreme conditions. Interchangeable mounting for easy substitution in experimental circuits. All except Models 120-15, 215L are wire-wound; all except Models 222W have 25-turn screwdriver adjustment. Model 200S has solder lug connectors; all others have wire leads. Units mount easily in stacked assemblies—twenty Model 200L "Trimpots" fit into a 1¼-inch cubel All metal parts are fully corrosion-resistant; contacts and collector strips are platinum alloy. Wiper assembly of all units ides at ends of elements—prevents possible damage from forced adjustments. Units are 100%, inspected; Total Resistance Tolerance: ±10%, except Models 120-15, 215L, ±20%. Features of various models are briefly explained below. Av. shpg. wt., 2 oz. Write for prices on larger quantities and complete specifications.

Model	Size HxWxL	Max. Oper. Temp. °C.	Diss. Watts	Features
200L	5/6x1/4x11/4"	105	0.25	Standard "Trimpot."
120-15	5/16x 1/4 x 1 1/4" 5/16x 1/4 x 1 1/4"	95	0.20	Carbon element for infinite reso- lution and high resistance.
200S	5/6x1/4x11/4"	105	0.25	Solder lug connectors.
215L	5/6x1/4x11/4" 5/6x1/4x11/4"	125	0.25	Carbon element; infinite resolu- tion; humidity-proof.
201L	5/16×1/4×11/4"	105	0.25	"TrimR" variable resistor; two leads.
260L	5/16×1/4×11/4"	175 135	1.0	High temperature model.
236L	2364x1964x111/32*	1	0.8	Humidity-proof; exceeds MIL- STD-202A, method 106.
222W	5/16×1 1/64×1"	175	1.0	Micro-miniature, "Trimpot, Jr."; high temperature humidity- proof; 15-turn adjustment.

#### RESISTANCES AVAILABLE-SPECIFY WHEN \*Available in Model 201L Only.

		-			
Ohms	Ohms	Ohms	Ohms	Megohms	Megohms
10	200	5,000	30,000	.1†	.4
20	500	10,000	40,000	.15	.3†
50	1000	20,000+	50,000+	.2†	.75
100	2000	25,000*	75,000	.3	1.0†

When Ordering-Specify Stock No., Model No., and resistance.

Stock No.	Model	Resistances Available (See Table Above)	1-9, EACH	10-24, EACH	25-49, EACH
3 MM 382 3 MM 383	200L 120-15	10 to 10,000 20,000 only 20,000 to 1.0 meg 10 to 10,000 20,000 only	4.86 6.48 4.86 4.86 6.48	4.50 6.00 4.50 4.50 6.00	4.05 5.40 4.05 4.05 5.40
31 M 386 31 M 387 31 MM 388	201L 201L 201L 260L 260L	20,000 only 25,000 only 50,000 only 10 to 10,000 20,000	5.94 5.94 7.56 5.94 7.56	5.50 5.50 7.00 5.50 7.00	4.95 4.95 6.30 4.95 6.30
3 i MM 395	236L 222W 222W	10 to 10,000 20,000 100 to 10,000 20,000 only Values indicated by †	7.02 8.64 8.64 10.26 5.94	6.50 8.00 8.00 9.50 5.50	5.85 7.20 7.20 8.55 4.95

#### **BOURNS TRIMIT SUBMINIATURE POTENTIOMETERS**

Low-cost subminiature potentiometers. Occupy remarkably little space—body is only ½x½x1½. 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° to 185° C. Av. shops, wt., 2 oz. When ordering—specify Stock No., Model No., and resistance value wanted.

#### WIRE-WOUND TRIMIT POTENTIOMETERS

Stock		Ter-	Resistances Available (See Table Above)	NET EACH			
No.	141000	minals	(See Table Above)	1-9	10-24	25-49	
31 MM 397 31 MM 398 31 MM 399	273	Leads Lugs Pins	100 to 10,000	1.94	1.80	1.62	

#### CARBON TRIMIT POTENTIOMETERS

Stock No.	Model	Ter- minals	Resistances Available (See Table Above)	1-9	T EA	
31 MM 377 31 MM 378 31 MM 379	274	Leads Lugs Pins	Values indicated by † only	1.94	1.80	1.62

#### **BOURNS MOUNTING ACCESSORIES FOR ABOVE**

Stock No.	Accessory	1-24, EACH	25-99, EACH
31 M 391	End Mounting Brackets	20¢	15¢
31 M 392	Side Mounting Brackets	20¢	15¢
31 M 393	2-56x1½" Machine Screws	2¢	1½¢

#### WIREWOUND INDUSTRIAL RHEOSTATS

Quality vitreous-enameled wirewound rheostats. Provide extremely smooth, highly dependable control of industrial and other electronic devices. Resistance wire is wound on a solid ceramic core and each turn is permanently bonded in place by vitreous enamel. The core and base are also bonded by vitreous enamel. A pivoted universal-action-mounted contact brush rides over a smooth, flat surface to assure perfect contact at all settings. Copper-graphite contact brush, except \*silver-

graphite contact brush. Ratings indicated are at full setting. U.L. Approved. Types H. J. K. and L. mount on panels up to ½" thick; Type N on panels up to 1½" thick. Specifications: Type H, dla. 1½%' depth behind panel 1½"; Type J. dia. 2½%', depth behind panel 1½"; Type J. dia. 4", depth behind panel 1½"; Type K. dla. 4", depth behind panel 2"; Type N. dia. 6", depth behind panel 2"; Type N. dia. 6", depth behind panel 2". Complete with fluted, plastic knob. Av. shpg. wt., 10 oz.



#### 25 WATT-TYPE H

No.	Туре	Ohms	EACH	No.	Type	Ohms	EACH
74 M 320	0140*	1	4.53	74 M 341	0152	125	
74 M 321	0141	2 3		74 M 328 74 M 329	0153 0154	175 250	
74 M 337 74 M 322	0142 0143	6		74 M 342	0155	350	4.03
74 M 338	0144	8		74 M 330 74 M 331	0156 0157	500 750	
74 M 323 74 M 324	0145 0146	10 15	4.03	74 M 332		1000	4.50
74 M 324 74 M 325	0147	25		74 M 333 74 M 334	0159 0160	1500 2500	4.53
74 M 339	0148	35		74 M 334		3500	
74 M 326 74 M 340	0149 0150	50 75		74 M 336		5000	4.76
74 M 327	0151	100					

#### 50 WATT-TYPE J

	No.	Туре	Ohms	EACH	No.	Type	Ohms	EACH
74 74 74		0308* 0309* 0310*	1	5.06	74 M 359 74 M 360 74 M 361	0321 0322 0323	150 225 300	4.53
74 74 74 74 74	M.355	0311 0312 0313 0314 0315	4 6 8 12 16		74 M 362 74 M 371 74 M 363 74 M 372 74 M 364	0325 0326 0327	500 800 1000 1600 2500	4.76
74 74 74 74 74	M 356 M 369 M 357 M 358		22 35 50 80 125	4.53	74 M 373 74 M 365 74 M 374 74 M 366	0329 0330 0331	3500 5000 8000 10,000	5.06

#### 100 WATT-TYPE K

No.	Туре	Ohms	EACH	No.	Туре	Ohms	EACH
74 M 380 74 M 393 74 M 38 74 M 382 74 M 394	0441* 0442* 0443*	1 2 3	<b>7.</b> 59	74 M 399 74 M 400 74 M 401 74 M 387 74 M 402	0452 0453 0454 0455 0456	200 300 400 500 750	7.09
74 M 395 74 M 385 74 M 397 74 M 384	0446	7.5 10 16 25	7.09	74 M 388 74 M 403 74 M 404 74 M 389	0457 0458 0459 0460	1000 1500 2000 2500	7.59
74 M 38: 74 M 39: 74 M 38:	0450	50 75 100		74 M 390 74 M 391 74 M 392	0461 0462 0463	5000 7500 <b>1</b> 0,000	8.06 8.58 9.06

#### 150 WATT-TYPE L

	No.	Туре	Ohms	EACH	No.	Type	Ohms	EACH
74 74 74 74 74	M 451 M 452 M 453 M 454	0524* 0525* 0526* 0527* 0528* 0529*	1 2 3 5	9.58	74 M 463 74 M 464 74 M 465 74 M 466 74 M 467	0537 0538 0539 0540 0541	150 200 250 350 500	9.06
74 74 74 74	M 456 M 457 M 458	0530 0531 0532	10 15 25 35	9.06	74 M 468 74 M 469 74 M 470 74 M 471	0543	750 1250 1800 2250	9.58 9.58 10.11
74 74 74 74	M 460 M 461	0533 0534 0535 0536	50 75 100	7.00	74 M 472 74 M 473 74 M 474 74 M 475	0547 0548	3000 4500 7500 10,000	10.11 10.58 11.11 12.11

NOTE: Allied can supply all Ohmite industrial controls. Write for free copy of complete Ohmite catalog, our Stock No. 37 M 047.

#### 300 WATT-TYPE N

	No.		Ohms	EACH	No.	Туре	Ohms	EACH
74 74 74 74		0650* 0651* 0652* 0653*	1 2 3 4		74 M 487 74 M 488 74 M 489 74 M 490	0661 0662 0663 0664	100 150 200 300	
74 74 74 74	M 480 M 481 M 482 M 483	0654* 0655* 0656* 0657*	7.5 10	13.64	74 M 491 74 M 492 74 M 493 74 M 494	0665 0666 0667 0668	400 700 900 1200	13.64
74 74 74	M 484 M 485 M 486	0658 0659 0660	25 50 75		74 M 495 74 M 496 74 M 497		1500 1750 2500	

Type 5000 Dial Plate. For Type H, J, K and L. 2\%6" diameter. Handsomely finished with bright figures and lines on etched black back-

ground. 0-100 scale. Shpg. wt., 2 oz. 74 M 405. NET	.18c
Type 5001 Dial Plate. For Type N. 5½" 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. Large frame (No. 6533) is designed for Models K and the rear position. Maximum panel thickness when long and 1½" wide. Small frame (No. 6532) is designed for Models H and J, and will accommodate Model H or L in the rear position. Maximum panel thickness, ½". Frame is 2½" long and 1½" wide.

No 6532 Tandem Counting Kit, Shog wt 4 oz

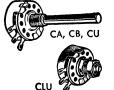
74 M	408.	NET.				- · · · · · · · · · · · · · · · · · · ·	
No. 6	533 Ta	nd <b>em</b>	Coupling	Kit. Sh	pg. wt.,	5 oz.	0.00
74 M	409.	NET					<b>2.</b> 23

## MODEL E 121/2-WATT MINIATURE RHEOSTATS Extremely compact, 12½-watt power rheostats for limited space applications. Rugged, all ceramic and metal construction. Built to operate at maximum hot spot temperature rise of 300° C at ambient 40° C. Ideally suited for military and industrial applications at high ambient temperatures. Resistance tolerance is = 10%. Only ½° in diameter. Require ½° behind panel. Have ½° by 32 threaded bushing ½° long. ½° diameter shaft is ½° long. With knob. Av. shpg. wt., 2 oz.

Type | Ohms | EACH No. No. Type | Ohms | EACH No.
74 M 932
74 M 934
74 M 935
74 M 935
74 M 937
74 M 937
74 M 937
74 M 939
74 M 941
74 M 941 74 M 920 74 M 921 74 M 922 74 M 923 74 M 923 74 M 925 74 M 927 74 M 927 74 M 927 74 M 930 74 M 930 0013 0114 0115 0116 0117 0118 0119 0120 125 175 250 4.53 4.03 4.03 4.03 4.03 4.03 4.03 4.03 4.033 4.033 4.033 4.033 4.533 4.533 4.76 1 3 6 8 10 15 25 35 75 0103 0104 0105 0106 0107 0108 0109 0110 0111 0112 350 500 750 1000 1500 2500 0121 0122 0123 3500 5000



#### **OHMITE "AB" TWO-WATT POTENTIOMETERS**



Туре

CU5001 CU1011 CU2511 CU5011

CU1021 CU2521 CU5021 CU1031

Two-watt potentiometers featuring molded resistor element construction for exceptionally high safety factor. Resistor element is sealed in a metal enclosure to make each unit dust-proof and splash-proof. Carbon sliding contact and terminals assures areach and splash-proof. Carbon sliding contact and terminals assure smooth, noise-free operation.

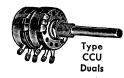
Size of single units, 1½″ dia. x 5%″. Size of double units, 1½″ dia. x 11½″. Mount in ¾″ hole on panels up to ¼″

TYPES CA, CB, CU Ohms Ohms | EACH EACH No. Type 28 M 512 28 M 513 28 M 514 28 M 515 CB5031 CU1041 CA1041 CU2541 50,000 100,000 100,000 250,000 2.20 1.91 2.20 1.91 50 100 250 500 1.91 CA2541 CU5041 CA5041 CU1052 1000 28 M 516 28 M 517 28 M 518 28 M 519 250,000 500,000 500,000 1 Meg\* 2.20 1.91 2.20 1.91 2500 5000 10,000 1 Meg\* 2.5 Meg\* 2.5 Meg\* 28 M 520 28 M 521 28 M 522 28 M 523 CA1052 CU2552 CA2552 CA2552 CU5052 2.20 1.91 2.20 1.91 10,000 25,000 2.20 1.91 2.20 1.91

Type CS-1 SPST Switch. For AB potentiometers. Wt., 3 oz. ...65c 28 M 524, NET.....

25,000 50,000

thick. Types CU, CCU, CA and CB have 2° standard ¼° round shafts; Type CLU has locking nut and slotted shaft for screwdriver adjustment. Type number prefix indicates taper of potentiometer. CU, CCU and CLU types have linear taper; CA types, clockwise logarithmic taper; CB types, counterclockwise logarithmic taper, CA all ±10% tolerance, except \*±20%. Av. shpg. wt., 5 oz.



#### TYPE CLU-WITH LOCKING SHAFT

No.	Type	Ohms	EACH	No.	Type	Ohms	EACH
28 M 525	CLU5001	50			CLU2531	25,000	
28 M 526	CLU1011	100		28 M 534	CLU5031	50,000	
28 M 527	CLU2511	250		28 M 535	CLU1041	.1 Meg	
28 M 528	CLU5011	500	2.50	28 M 536	CLU2541	.25 Meg	2.50
28 M 529	CLU1021		2.50		CLU5041	.5 Meg	
28 M 530	CLU2521	2500	1	28 M 538		1.0 Meg*	
28 M 53 I	CLU5021	5000		28 M 539		2.5 Meg*	
28 M 532	CLU1031	10,000		28 M 540	CLU5052	5.0 Meg*	

	TYPE CCI	DUALS	
28 M 541 CCU1031 28 M 542 CCU2531 28 M 543 CCU5031 28 M 544 CCU1041	10,000 25,000 50,000 100,000 5,000	28 M 545 CCU2541 28 M 546 CCU5041 28 M 547 CCU1052	250,000 500,000 1 Meg* 5.73

28 M 500 28 M 501 28 M 502 28 M 503

28 M 504 28 M 505 28 M 506 28 M 507

28 M 508 CB1031 28 M 509 CU2531 28 M 510 CB2531 28 M 511 CU5031 CB1031 CU2531

## 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

Stock	Mfr's.	Ohms	NET
No.	Type		EACH
28 M 580	3601	100	5.00
28 M 581	3602	250	
28 M 582	3603	500	
28 M 583	3604	1K	
28 M 584	3605	2.5K	
28 M 585	3606	5K	5.00
28 M 586	3607	10K	
28 M 587	3608	25K	
28 M 588	3609	50K	
28 M 589	3610	.1 meg	
28 M 590	3611	.25 meg	5.00
28 M 591	3612	.50 meg	
28 M 592	3613	1.0 meg	
28 M 593	3614	2.5 meg	
28 M 594	3615	5.0 meg	

#### IRC CONTROLS



#### TYPE LC-1 LOUDNESS CONTROL

#### TV SIGNAL ATTENUATOR



#### IRC Q CONTROLS WITH UNIVERSAL SHAFTS

Handle over 90% of all radio TV applications. Knurled, flatted and slotted. 3' universal shaft can be cut to desired length. 1\( \frac{1}{2}\text{w} \) body dia. Bushing is \( \frac{1}{2}\text{w} \) long. Use with "M" multi-sections (page 138) for ganged controls. \*Includes 270-ohm, \( \frac{1}{2}\text{-watt bias resistor. Less switches (below). See taper explanation below. Av. shpg. wt., 4 oz.



No.	Туре	Ohms	Taper	l No.	Туре	Ohms	Täper
30 M 395	Q11-201	250	A	30 M 318	Q13-128	100K	C
30 M 300	Q11-103	500	A	30 M 388	Q11-228	125K	A
30 M 377	Q11-105	750	A	30 M 875	Q11-328	150K	A
30 M 441	Q17-105	750	P	30 M 444	Q13-328	150K	C
30 M 301	Q11-108	1000	A	30 M 374	Q11-129	200K	A
30 M 379 30 M 874 30 M 442 30 M 380 30 M 302	Q17-108 Q17-110 Q11-109 Q17-109 Q11-110	1000 2000 1500 1500 2000	Q A Q A	30 M 319 30 M 320 30 M 445 30 M 876 30 M 321	Q11-130 Q13-130 Q11-131 Q11-132 Q13-132	250K 250K 300K 350K 350K	A C A A C
30 M 373	Q13-111	2500	C	30 M 322	Q11-133	500K	A
30 M 381	Q17-111	2500	Q	30 M 323	Q13-133	500K	C
30 M 303	Q11-112	3000	A	30 M 324	Q14-133	500K	D
30 M 382	Q17-112	3000	Q	30 M 397	Q17-133	500K	Q
30 M 304	Q11-114	5000	A	30 M 398	Q11-134	600K	A
30 M 383	Q13-114	5000	C	30 M 390	Q11-136	750K	A
30 M 384	Q17-114	5000	Q	30 M 325	Q11-137	1 meg	A
30 M 305	Q11-115	7500	A	30 M 326	Q13-137	1 meg	C
30 M 306	Q11-116	10K	A	30 M 327	Q14-137	1 meg	D
30 M 307	Q13-116	10K	C	30 M 877	Q17-137	1 meg	Q
30 M 308 30 M 385 30 M 309 30 M 310 30 M 311	Q14-116* Q17-116 Q11-119 Q16-119* Q11-120	10K 10K 20K 20K 25K	D Q A Spec. A	30 M 328 30 M 329 30 M 330 30 M 399 30 M 331	Q11-138 Q11-139 Q13-139 Q17-139 Q11-239	1.5 meg 2 meg 2 meg 2 meg 2.5 meg	A C Q A
30 M 343	Q13-120	25 K	C	30 M 332	Q11-140	3 meg	A
30 M 312	Q14-120*	25 K	D	30 M 333	Q13-140	3 meg	C
30 M 313	Q11-121	30 K	A	30 M 446	Q17-140	3 meg	Q
30 M 396	Q11-122	35 K	A	30 M 334	Q11-141	5 meg	A
30 M 314	Q11-123	50 K	A	30 M 287	Q12-141	5 meg	Spec.
30 M 315	Q13-123	50K	C	30 M 392	Q13-141	5 meg	C
30 M 316	Q14-123*	50K	D	30 M 393	Q17-141	5 meg	Q
30 M 387	Q11-125	75K	A	30 M 394	Q11-142	7.5 meg	A
30 M 317	Q11-128	100K	A	30 M 335	Q11-143	10 meg	A

NET

#### IRC TAPPED Q CONTROLS WITH UNIVERSAL SHAFTS

†Ohms.									
No.	Type	Megs	Taps, Ohms	Taper	No.	Туре	Megs	Taps, Ohms	Taper
30 M 378 30 M 878 30 M 879 30 M 386 30 M 288	Q17-105 X Q17-110 X X Q13-118 X Q13-118 X X Q17-118 X	750† 2K† 15K† 15K† 15K†	250 250/500 10K 5K/10K 5K	Spec. Spec. Spec. Spec. Spec.	30 M 347 30 M 346 30 M 348 30 M 349 30 M 350	Q17-137X Q13-137X Q17-137XX Q18-137X Q18-137XX	1.0 1.0 1.0 1.0 1.0	35 K 25 0 K 50 K / 100 K 100 K 250 K / .5 Meg.	Spec. H Spec. Spec. Spec.
30 M 447 30 M 389 30 M 337 30 M 336 30 M 338 30 M 339 30 M 340	Q17-118XX Q17-328XX Q18-130X Q13-130X Q18-130XX Q17-132X Q18-132X	.15 K† .25 .25 .25 .25 .35	5K-10K 19K/38K 60K 125K 60K/120K 35K 75K	Spec. H Spec. Spec. Spec. H	30 M 351 30 M 352 30 M 351 30 M 358 30 M 355 30 M 357	Q19-137X QVC-539X Q13-138X Q19-139X Q17-139X Q18-139XX 013-139XX	1.0 1.5 2.0 2.0 2.0 2.0	.5 Meg. .5 meg .25 meg 50 K 150 K 250 K/.5 Meg .5 Meg/1 Meg	Spec. Spec. Spec. Spec. Spec.
30 M 342 30 M 343 30 M 341 30 M 344 30 M 345	Q17-133X Q18-133X Q13-133X Q19-133X Q18-133XX	.5	25K 50K 125K 250K 100K/200K	Spec. Spec. H Spec. Spec.	30 M 353 30 M 356 30 M 448 30 M 449	Q13-139X Q18-139X Q18-139X Q13-140X Q18-140X	2.0 2.0 3.0 3.0	.5 Meg 1 Meg 900K 1.5 Meg	Spec. Spec. Spec. Spec.

EACH.....

#### TYPE 76 ATTACHABLE SWITCHES FOR Q CONTROLS

Blue bakelite enclosure. Easily and quickly attached. U.L. Approved. Shpg. wt., 2 oz. 30 M 359. Type 76-1. SPST. NET 30 M 591. Type 76-2. DPST. EACH...4lc

#### **EXPLANATION OF TAPERS**

Taper A. Linear.

Taper C. Logarithmic curve for audio circuit control or antenna shunt control.

Taper D. Tapered at both ends to provide control of grid bias and antenna circuit. Used where control of grid bias is of prime importance in controlling gain.

Taper H. Tapped logarithmic curve. Audio level control for automatic bass compensation. **Taper P.** Semi-logarithmic curve with reverse taper. For use in contrast and picture control circuits in television.

**Taper Q.** Same applications as **Taper P** above, but has slightly steeper curve.

#### CENTRALAB COMPENTROL CONTROLS

#### TYPE C-1 COMPENTROLS

Combination vol-



Combination volume control and tone compensator. The electronic circuit network is designed to improve the apparent bass and treble response of amplifiers, radio and TV sets, hi-fi equipment, phorographs, etc. when volume is at low level. Easily installed in place of existing volume controls. Switch is SPST. Shaft length, 3". 1\( \frac{1}{2}\) fody dia. Shpg. wt., 5 oz.

Stock	Mfr's	N	NET EACH		
No.	Type	Description	1-4	5-49	
30 M 421 30 M 422 30 M 423 30 M 424	C1-60-S C1-70	½ meg, plain ½ meg, with switch 1 meg, plain 1 meg, with switch	2.69	2.4	

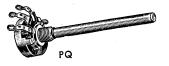
#### TYPE C2-100 COMPENTROL "SENIOR"

Combination vol-ume control and tone compensator. Automatically com-

pensates for re-duced response of human ear at low volume levels. Ad-

volume feves. Advises a mount of compensation desired. A worthwhile addition to hi-fi, radios, TV, etc. Complete with two brown plastic knobs and installation instructions. Shaft length, ½". Spg. wt. 6 oz. 4.41

#### INDUSTRIAL CONTROLS







These versatile industrial-type controls have a smooth carbon base element and "two-finger" 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 3½" threaded bushing. Body diameter less terminals is 1½" maximum; body diameter including terminals is 1½" maximum; depth behind panel, 3½". Each Type M multisection adds 1½" to depth. Type PQ. RQ. RQL and M sections feature 300 degree are of rotation—with or without switch. Power rating is ½ watt, 500 volts maximum.

PQ types have shaft 3" long, \(\frac{1}{2}\) (diameter. RQ and RQL types have a short shaft with a screwdriver slot for use where adjustment is semi-permanent; shaft extends \(\frac{1}{2}\)'' 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 \(\frac{1}{2}\) 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 Tapers below.

Mfr's Type	Ohms	Taper*	Stock No. PQ	Stock No. RQ	Stock No. RQL	Stock No. M
11-103 11-108 11-110 11-112	500 1000 2000 3000	A A A A	30 M 510 30 M 511 30 M 512 30 M 513	30 M 542 30 M 543 30 M 544 30 M 545	29 M 271 29 M 272 29 M 273 29 M 274	30 M 592 30 M 574 30 M 593 30 M 598
11-114 11-115 11-116 13-116	5000 7500 10K 10K	A A A C	30 M 514 30 M 515 30 M 516 30 M 517	30 M 546 30 M 547 30 M 548 30 M 549	29 M 275 29 M 276	30 M 575 30 M 576
14-116 17-116 11-119 11-120	10K 10K 20K 25K	D Q A A	30 M 518 30 M 519 30 M 520	30 M 550 30 M 551 30 M 552	29 M 277 29 M 278	30 M 599
14-120 11-121 11-123 13-123	25 K 30 K 50 K 50 K	D A A C	30 M 521 30 M 522 30 M 523 30 M 524	30 M 553 30 M 554 30 M 555 30 M 556	29 M 279 29 M 280 29 M 281	30 M 596 30 M 578
14-123 11-128 13-128 11-129	50K 100K 100K 200K	D A C A	30 M 525 30 M 526 30 M 527 30 M 375	30 M 557 30 M 558 30 M 559 30 M 376	29 M 282 29 M 283	30 M 579 30 M 580
11-130 13-130 11-133 13-133	250K 250K 500K 500K	A C A C	30 M 528 30 M 529 30 M 530 30 M 531	30 M 560 30 M 561 30 M 562 30 M 563	29 M 284 29 M 285 29 M 286 29 M 287	30 M 581 30 M 582 30 M 583 30 M 584
11-137 13-137 11-138 13-138	1.0 meg 1.0 meg 1.5 meg 1.5 meg	A C A C	30 M 532 30 M 533 30 M 534	30 M 564 30 M 565 30 M 566	29 M 288 29 M 289 29 M 290	30 M 585 30 M 586 30 M 499
11-139 13-139 11-239 11-140	2.0 meg 2.0 meg 2.5 meg 3.0 meg	A C A A	30 M 535 30 M 536 30 M 537 30 M 538	30 M 567 30 M 568 30 M 569 30 M 570	29 M 291 29 M 292 29 M 293 29 M 294	30 M 587 30 M 588
13-140 17-140 11-141 11-143	3.0 meg 3.0 meg 5.0 meg 10.0 meg	C Q A A	30 M 539 30 M 540 30 M 541	30 M 571 30 M 572 30 M 573	29 M 295 29 M 296	30 M 594 30 M 597 30 M 589 30 M 590

PQ, RQ and M Controls. NET EACH. 1.32
RQL Controls. NET EACH 1.53

#### \*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 591. Type 76-2. DPST. EACH.

#### L AND T PAD SPEAKER CONTROLS





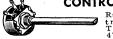
An excellent selection of L and T-type constant-impedance attenuator pads for controlling volume level of individual speakers in sound systems. Used in multi-speaker systems to permit raising or lowering volume at one speaker without affecting volume of other speakers. Widely used on music distribution 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 provide both constant input and output impedances. Diameter 11½"; depth behind panel, 1½", CL Pad) and 12½", Cl Pad). ½" bushing for mounting on panels up to ½", thick. With knob. Av. shpg. wt., 6 oz.

R L PADS

A T PADS

					٠		
Stock No.	Mfr's Type	Impedance (ohms)	NET EACH	Stock No.	Mfr's Type	Impedance (ohms)	NET EACH
30 M 880 30 M 881 30 M 882 30 M 883	LP4 LP8 LP15 LP500	4 8 15 500	2.73	30 M 884 30 M 885 30 M 886 30 M 887	TP4 TP8 TP15 TP500	4 8 15 500	3.09

#### UNIVERSAL WIRE-WOUND CONTROLS



Rugged 4-watt controls. Replace Types W, WK, Have linear taper, except \*left-hand logarithmic taper for TV focus and \*right-hand logarithmic taper for picture contrast. Rotation, 300°. Size: 11/4 'dia. '2½z' deep; threaded bushing is ½' dia. and ¾' long. Nickel-plated brass shafts, ¼' dia. Type WP has round shaft, 3' long. Type WFK has 3' long "Knob Master" shaft—fix a wide variety of knobs. Type WPS has ½' long shaft, knurled at end and slotted. Type WM multisections can be attached to all controls. Shpg. wt., 4 oz.

#### WPK CONTROLS

Туре	Ohms	Туре	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†					
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†	WPK-7500	7500					
WPK-1000	1000	WPK-7500L	7500*					
WPK-1350	1350	WPK-10000	10,000					

l ype	Ohms	lype	Ohms
WPK-12500	12,500	WPK-20000	20,000
WPK-15000	15,000	WPK-25000	25,000
Specify Typ	e No. a	nd Ohms.	10
30 MM 199	. NET E	ACH	I,33

#### **WPS CONTROLS**

Туре	Ohms	Туре	Ohms
WPS-25	25	WPS-2000	2000
WPS-40	40	WPS-2250	2250
WPS-60	60	WPS-2250L	2250*
WPS-250	250	WPS-2500	2500
WPS-500	500	WPS-3000	3000
WPS-500L	500*	WPS-4000	4000
WPS-1000	1000	WPS-4000L	4000*
WPS-1500	1500	WPS-5000	5000

Specify Type No. and Ohms. 30 MM 217, NET EACH..... 

#### WP CONTROLS

Туре	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

# 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 TV focus. Rotation, 300°. Multisection adds %" to depth. Shpg. wt., 2 oz.

Type	Ohms	lype	Onms
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		l

Specify Type No. and Ohms.

#### 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 219, Type 76-12. DPST. EACH... 4 lc

## General-Purpose and TV Controls

#### IRC EXACT-DUPLICATE TV CONTROLS TYPE QJ

A wide selection of exact-duplicate controls for TV receivers. All duplicate the originals in every detail—there's never any installation problem when you use these carefully engineered replacement units. No time is wasted in cutting down shafts or enlarging mounting holes and

no modifications in wiring are 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 to highest standards to assure smooth, highly dependable operation—quality is always equal or superior to the originals.

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.

replace	ment	in the adjoining o	oiui	un. Av.	snpg.	wt., 3 oz.	
Stock No.	IRC No.	Mfr and Mfr's Part No.	NET	Stock No.	IRC No.	Mfr and Mfr's Part No.	NET
30 M 922	QJ-106		2.20	30 M 916		PATHE: A24109	2.62
30 M 901	QJ-12	75B11-13, -15	2.62	30 M 940	QJ-49 QJ-231 QJ-21	A24124	2.62
30 M 902	QJ-13	1 /5B11-1618	2.62	30 M 907	QJ-21	TVC-528-D	2.62
30 M 972 30 M 978	QJ-397 QJ-425	75B11-21 75B17-1	2.02	30 M 947	QJ-277	PHILCO:	١
30 M 917	QJ-51	75B11-14	2.62 2.62 2.62 2.41 2.62	30 M 919	QJ-82	33-5563-22 33-5563-22	2.41
30 M 977	QJ-418		3.03	30 M 948	QJ-279	33-5563-39	2.20
30 M 929	01-162	C-8.217-3	2.20	30 111 340	Q3 273	33-5563-27	2.41
30 M 913	QJ-40	ARVIN: 22464-1	3.03	30 M 954	QJ-309	33-5563-36	3.03
30 M 913	QJ-40	BELL: 970111-7	3.03	130 M 9/1	QJ-391 QJ-340 QJ-357	33-5563-42	2.62
30 M 913	01-161	970111-8	2.20	30 M 960 30 M 965	QJ-340	33-5563-44 33-5563-51	3.03
30 M 903	QJ-15	BENDIX: 262036-1	2.20	30 M 974	QJ-402	33-5563-53	2.41
		BRUNSWICK: 390034	2.62	20 14 000	QJ-501	33-5563-63	2.41 2.41 2.20
30 M 915 30 M 929	QJ-48	390036	2.20	130 M 913	QJ-40	RCA: 970111-7	3.03
30 M 928	QJ-162 QJ-161	970111-8	2.20		QJ-161 QJ-131	970111-8	3.03 2.20 2.20
30 M 979	QJ-446			30 M 925 30 M 914	QJ-131 QJ-41	970111-18	2.20
	25	453337A-1	2.62	30 W 914	-	970111-30 970913-9	3.03
30 M 913	QJ-40	CBS (AIR KING):		30 M 930	QJ-168 QJ-81 QJ-222	970913-26	3.03 2.20 2.20
		970111-7	3.03	30 M 918	QJ-81	970913-27	2.20
30 M 977	QJ-418	CORONADO: 78X12	3.03	30 M 938 30 M 980	QJ-222 QJ-447	970913-30 971666-6	3.03
30 M 959 30 M 907	QJ-332 QJ-21	PD-10-A TVC-528-D	3.03 2.62	30 M 980	QJ-44/	971666-11	l
	QJ-21				1	971666-13	3.03
30 M 913	QJ-40	CROSLEY: 139170	3.03	30 M 984	QJ-496	971666-9	3.03
30 M 928 30 M 931	QJ-161	139173 146856	2.20 2.62 2.62	30 M 986	QJ-504	971666-15	3.03
30 M 932	QJ-176 QJ-181	148098A	2.62	30 M 928	QJ-161	REGAL: 20-2A,	1
30 M 932 30 M 933 30 M 967	QJ-183	149220	13.03			970111-8	2.20
30 M 967	QJ-370		2.62	30 M 913	QJ-40	070111-7	3.03
30 M 924	QJ-119	DUMONT: 01027020	2.20	30 M 950	QJ-292	CM4994, T-20-2 970111-7 T-20-9	3.56
30 M 920	QJ-84	01028210	3.03	30 M 944	OJ-261	SCOTT:	_
30 M 915	QJ-48	EMERSON: 390034	2.62			18A791705 70W5027	3.03
30 M 929	QJ-162	390036 390074- <b>6</b>	2.20 2.62	30 M 942	QJ-246	70W5027	
30 M 910 30 M 911	QJ-30 QJ-32	390144	2.62	i		VC12127, -B VCA12127D	3.03
30 M 904	01-17	390167	1262	20 14 016	01.40	SILVERTONE:	3.03
30 M 956	QJ-313 QJ-237 QJ-410	390184, 390201	2.62 3.03	30 M 916	QJ-49	SILVERIUNE:	2.62
30 M 941	QJ-237	390187 390207	3.03 2.62	30 M 940	QJ-231	A24109 A24124	2.62 2.62 2.62 2.62
30 M 975	QJ-410	530207		30 M 966	QJ-363 QJ-22	A24142	2.62
30 M 913 30 M 946	QJ-40 QJ-270	FADA: 52.22 52.64	3.03 3.15	30 M 908	QJ-22	M25B888 M25B889	2.62
30 M 977		FIDECTONE, 70VID D		30 M 952	QJ-305 QJ-231	M25B889	2.41
30 M 940	QJ-418 QJ-231	FIRESTONE: 78X12,-B A424124, PA24124	2.62	30 M 940 30 M 907 30 M 942	01-21	TVC-528-D	2.62
30 M 940	QJ-231		2.62	30 M 942	QJ-246	PB24124A TVC-528-D VCA12127B, -C	3.03
30 M 926	01 1/2	C F - K68186-1	2.20	30 M 906	QJ-20	STROMBERG-	
30 M 923	QJ-110 QJ-200 QJ-201	K68J881-2	2.62 3.03			CARLSON: 145164	2.62
30 M 934	QJ-200	K71J70-1	3.03	30 M 937	QJ-205	SYLVANIA:	
30 M 935	QJ-201	K71J70-2	3.03 3.03 2.62 2.62	30 M 976	QJ-417	37-73153-1, - <b>2</b> 37-73876-3	3.03
30 M 962 30 M 936	QJ-350 QJ-203	K71J70-3 K71J71-2	2 62	30 M 983	QJ-472 QJ-513	37-77377-1	3.03 2.82
30 M 964	111-354	K71J71-3	2.62	30 M 983 30 M 988	QJ-513	37-79047-1	2.62
30 M 951	QJ-301	K82J163-1 K83J475-1	3.03 2.62	30 M 937	QJ-205	R73153	3.03
30 M 958	QJ-328	K83J475-1 K83J870-2	2.62	30 M 913	QJ-40	TECHMASTER: 11-7	3.03
30 M 973 30 M 990	QJ-398 QJ-547	K83J941-1	2.82 3.23	30 M 928	QJ-161	11-8	2.20
30 M 987	QJ-506 QJ-352	K119J66-1	2.82 3.23	30 M 959	QJ-332	TELE-KING: PD-10-A	2.02
30 M 963		M77J466-1	3.23	20 14 007			3.03
30 M 908	QJ-22	HALLICRAFTERS:		30 M 907	QJ-21	TELE-TONE; TVC-528-D	2.62
20 44 000	01 205	25B888 25B889	2.62 2.41	30 M 905	01.10	TELE-VOGUE:	2.02
30 M 952 30 M 953 30 M 909	QJ-305 QJ-306	25B889 25B895	2.41	20 III 303	QJ-19	VC-0033C	2.62
30 M S09	QJ-306 QJ-24	25B898	2.62	30 M 906	QJ-20	VC-0033, -C VC-0040	ı
30 M 961	QJ-345	25B997	2.62	20 14 007	1 1	VC-0040-A VC-0040-1	2.62
30 M 968	QJ-371	HOFFMAN: 4833, -2	اء ما	30 M 981	QJ-454		2.62
30 M 913	01-40	4863 T4801	2.62	30 M 913 30 M 928	QJ-40 OJ-161	TRIAD: 970111-7 970111-8	3.03
30 M 913	QJ-40 QJ-161	T4801	3.03 2.20	30 M 928			2.20
30 M 929		MAJESTIC:			QJ-291	TRAVLER: TV-VC-36	2.82
	23-102	C-8.217-3	2.20	30 M 977	QJ-418	TRUETONE: 78X12, -A, -B	3.03
30 M 900	QJ-9	C-8.217-3 C-8.230-1	2.62	30 M 929	QJ-162	C-8.217-3	2.20
30 M 900	QJ-9	METEOR: C-8.230-1	2.62	30 M 928	QJ-161	VIDEO CORP:	
30 M 942	QJ-246	MIRRORTONE:		30 III 320	Q1-101	970111-8	2.20
	-	VC12127, B, D	3.03	30 M 928	QJ-161	VIDEO PROD:	
30 M 957	QJ-322	MOTOROLA:				EP-105	2.20
		18K702864	3.50	30 M 913	QJ-40	EP-107, -A	3.03
<b>30</b> M 969	Q1-380	18B720263 18B722190	3.50	30 M 942	QJ-246	VISION MASTER: VC12127B	
30 M 943	QJ-260	18A790166	3.44				3.03
30 M 944	QJ-261	18A791705	3.44 3.03	30 M 921	QJ-91	WESTINGHOUSE:	
30 M 945	QJ-262	18A792009	3.03	30 M 927.	QJ-149	V-9235-2	2.20
30 M 900	QJ-9	MUNTZ: C-8.230-1	2.62	30 M 970	01-382	V-9877-456	3.03
30 M 905 30 M 906	QJ-19 QJ-20	VC-0033, -B,-C, -D	2.62 2.62 2.62	30 M 970 30 M 989	QJ-382 QJ-519	V-9877, -1 V-9877-4, -5, -6 V-9877-7, -8 V-10854-1	3.03
30 M 906 30 M 981	QJ-20 QJ-454	VC-0033, -B,-C, -D VC-0040, -A, -B VC-0040-1	2.62	30 M 955 30 M 982	01-310	V-10854-1	3.03
30 M 925		OLYMPIC: PT-1478	2.20		QJ-464	V-11695-1	3.44
30 M 928	01-161	PT-1479 PT-2267	2.20 2.62	30 M 939	QJ-229	ZENITH: 63-1667	200
		DT 2267	וכם כו			00-1001	2.62
30 M 912	QJ-34	F1-2207	2.02				

#### CLAROSTAT CONTROLS MINIATURE CONTROLS



High quality miniaturized potentiometers designed for transistor circuits or equipment where extremely compact controls are required. Available with composition or wirewound elements. All have resistance tolerance of ±10%; linear taper; mechanical and electrical rotation of 300°. Types 48M and 49M have ¼\* dia. bushings, ¼\* long; shafts are ¼\* dia., ½\* long beyond bushings. Types 48M-9 and 49M-9 are identical except for ½\* long locking bushings and ½\* long screw driver 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:  $1\frac{1}{2}$ x $^{5}$ % dia.

#### RESISTANCES AVAILABLE—SPECIFY WHEN ORDERING Ohms | Ohms | Ohms | Ohms | Ohms | Ohms

1000 1500	2500 5000	7500 10,000	25K 50K	100K 250K	500 1	K meg.	2.5 meg.
Stock No.	Mfrs. Type		nces Ava		N I 1-9	10-24	CH 25-49
31 MM 24 31 MM 24	0 48M 3 48M-	1000 ohr 9 1000 ohr	ns to 2.5 ns to 2.5	meg.	1.28 1.60	3.21	2.78

#### 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:  $1\frac{1}{2}x^25\frac{1}{2}x^2$  dia.

#### RESISTANCES AVAILABLE—SPECIFY WHEN ORDERING

Ohms	Ohms	Ohms	Ohms	Ohms	Ohms
5 10 20	25 50 100	200 250 500	1000 1500 2000	2500 5000 7500	10K 20K

Stock	Mfrs. Resistances Available		NET EACH			
No.	Туре	(See Table Above)	1-9	10-24	25-49	
3   M 298 3   M M 245 3   M 297 3   M 299 3   M M 235 3   M 233	49M 49M 49M-9 49M-9 49M-9	5 10 to 10K 20K 5 10 to 10K 20K	8.29 6.63 8.29 8.61 6.95 8.61	6.21 4.98 6.21 6.43 5.22 6.43	5.32 4.28 5.32 5.44 4.40 5.44	

#### 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 tolerance of ±10%. Insulation tested to 1000 v. A.C. Control size: 23½ x12½ dia. Shaft size: 2x½ x1½ dia. Molded phenolic body. Av. shpg. wt., 4 oz.

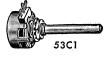


#### RESISTANCES AVAILABLE-SPECIFY WHEN ORDERING

Ohms	Ohms	Ohms	Ohms	Ohms	Ohms	Ohms
1	15	50	300	1500	7500	25K
2	20	60	400	2000	10K	30K
4	25	75	500	2500	15K	40K
6	30	100	750	3000	20K	50K
10	40	200	1000	5000		

Stock No.	Mfrs. Type	Resistances Available (See Table Above)	NET EACH
31 MM 120	58	1 ohm to 10K	.91
31 MM 121	58	15K; 20K; 25K	1.18
31 MM 122	58	30K; 40K; 50K	1.59

#### TYPES 53C1 AND 53C2 MOLDED COMPOSITION POTS



High-quality molded, composition-element controls. Completely sealed against moisture for extreme stability under any climatic conditions. Excellent for use in critical applications such as test 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 53C2 has 1/4 dia. shaft, 1/5 long and 1/6 dia. bushing 1/6 long. Type 53C2 has 1/4 shaft. 1/6 long with screwdriver slot and a 1/6 locking bushing 1/6 long. Tolerance of ±10%. Linear taper. Control size is 1/8 x1/8 dia. Wt., 4 oz.

#### RESISTANCES AVAILABLE-SPECIFY WHEN ORDERING

Ohms	Ohms	Ohms	Ohms	Ohms
50	2000	20K	200K	2 meg
100	2500	25K	250K	2.5 meg
250	5000	50K	500K	3 meg
500	7500	75K	750K	4 meg
750	10K	100K	1 meg	5 meg
1000	15K	150K	1.5 meg	10 meg
1500				

Stock	Mfrs.	Resistances Available	NET EACH
No.	Type	(See Table Above)	
31 MM 110	53C1	50 ohms to 10 meg	1.91
31 MM 115	53C2	50 ohms to 10 meg	2.50

## **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° rotation. Knurled ½, shaft is ½, long; has screwdriver slot. "M" shaft is hollow to accept DS-36 and DS-37 shafts (see below, right). MT types center-tapped TV units. 15½, dia. x ½, Mount in ½, hole. Linear taper. Shpg. wt., 4 oz.

#### **POTENTIOMETERS**

No.	Туре	Ohms	EA.	No.	Туре	Ohms	EA.
29 M 425	M1PK M3PK	1 3	1.32	29 M 4 1 2	M500PK M600PK	500 600	1.32
THE REAL PROPERTY AND ADDRESS OF THE PARTY AND	M10PK	10		29 M 431	M1MPK M1.5MPK	1000 1500	
29 M 400	MT10PK M15PK M20PK	10 15 20	1.32	29 M 432	M2MPK M2.5MPK M3MPK	$\frac{2000}{2500}$	1.32
29 M 429 29 M 402	MT20PK M25PK	20	1.29	29 M 4 1 6 29 M 4 1 7	M4MPK M5MPK	4000 5000	1.52
29 M 430	M30PK MT30PK M40PK	30 30 40	1.32		M10MPK M15MPK	15000	
29 M 405	M50PK M60PK	50			M20MPK M25MPK	20000 25000	1.44
29 M 407	M75PK M100PK	75	1.32	29 M 422 29 M 423	M50MPK M70MPK	50000 70000	1.71
29 M 409 29 M 410	M200PK	200		29 M 433 29 M 434	M75MPK M100MPK	75000 100000	2.41

#### RHEOSTATS

Have open or "off" position counter-clockwise.

No.	Туре	Onms	Amps	No.	Туре	Ohms	Amps
29 M 451		1/2	2.80	29 M 459	M20RK	20	.45
29 M 452		1	2.00	29 M 460	M25RK	25	.40
29 M 453	M2RK	2	1.40	29 M 461	M30RK	30	.37
29 M 454	M3RK	3	1.15	29 M 462		40	.32
29 M 455		4	1.00	29 M 463	M50RK	50	.28
29 M 456		6	.82	29 M 464	M60RK	60	.26
29 M 457	M10RK	10	.63	29 M 465	M75RK	75	.23
29 M 458	M15RK	15	.52	29 M 466		100	.20

NET EACH.....

29 M 651. Type 395 Dial Plate. For "M" Controls. 2 oz. NET.. 15¢



#### "C" WIREWOUND CONTROLS

Ideal for limited-space applications. Conservatively rated to dissipate 2 watts. Contact arm grounded to shaft. 266° effective electrical rotation. 1½° dia. x ½° deep. ½° shaft, slotted ¾° x ½° feep. ½° shaft, slotted ¾° trunished. Use dial plate 34 B 622, listed below. Linear taper. Av. shpg. wt., 4 oz.

#### **POTENTIOMETERS**

	No	. 1	٦	ур	9	10	) h m	8	Amı	ps	1	N	٠.	Ī	T	ype	1	Ohn	ns	Amps
29		720		26P		1	6	-1	.5		29		72			0P	٦.	4		. 22
29		721		2101		1	10	1	. 4.		29		72			$0P_{-}$	- 1	. 5		.2
29		722		151		1	. 15		. 3		29		72			00P		10		.14
29		723		2201		1	20		. 3		29		72			00P		20		.1
29	M	724	(	2301	۲_	1	30	Ţ	2	0_	129	M	72	91	C4	00P	_ [	40	U	.07
N E		١												٠.						.1.06
29	M	730	C	1M	P	1	1000	ī	.0	45	129	M	73	II	C3	MP	1	3000	,	.025
N E	CH	1																		1.18
29 29		732 733		5M 6M		T	5000 6000		.02		29 29	M	734 735			ME		100 150		.014
N E	T	1																		.1.44

#### RHEOSTATS

	C6R C10R C15R C20R	1 :	6 10 15 20	.45 29 M 705 C40R 4	0   .26 0   .22 0   .2 00   .14
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NET EACH.... 34 B 622. Type 393 Dial Plate. For "C" controls. 2 oz. NET.....21¢



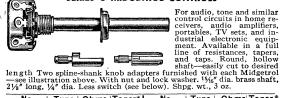
#### "E" WIREWOUND POTENTIOMETERS

Ruggedly constructed, heavy-duty, wire-wound potentiometers. Conservatively rated to dissipate 7 watts. For industrial, laboratory production control and research applications. Contact arm grounded to shaft. 295° effective electrical rotation. 29%f 'dia. x 53½f' deep. //4" shaft slotted 3½f' x 1½f' deep, extends ½f' from bushing. Mount in ½f' hole. Hexagon nut furnished. Use dial plate 29 M 650, listed below. Linear taper. 6 oz.

No.	Type	Ohms	Amperes	NET
29 M 480	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	E25MP	25,000	.019	3.03
29 M 484	E50MP	50,000	.0135	3.09
29 M 485	E75MP	75,000	.011	3.18
29 M 486	E100MP	100,000	.0095	3.23
29 M 487	E125MP	125,000	.0085	3.23
29 M 488	E150MP	150,000	.0078	3.29

29 M 650. Type 399 Dial Plate. For "E" Controls. 2 oz. NET... 2 C

#### SERIES U MIDGETROL CONTROLS



No.	Type	Ohms	Taper*	No.	Туре	Ohms	Taper*
29 M 714	U-1	100	4	29 M 764	U-36	75K	1
29 M 715	U-52R	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	U-751R	750	2 4 2 2	29 M 767	U-41	100K	2 4 4
29 M 796		1K	2	29 M 795	U-415	125K	4
29 M 785		1K	4	29 M 768	U-42	150K	1
29 M 797		1500	2 4 2	29 M 769	U-43	200K	4 1 2 4
29 M 786		2K	4	29 M 770		250K	1
29 M 798	U-7	2500	2	29 M 771	U-45	250K	2
29 M 787	U-8	3K	4,	29 M 772	U-46	250K	4
29 M 717		3K	2	29 M 773	U-48	500K	1
29 M 751	Ü-12	5K	1	29 M 774	U-50	500K	4
29 M 752	Ŭ-14	5K	4	29 M 775	U-51	750K	1
29 M 753		10K	4	29 M 713	U-52	1 Meg	2
29 M 754	U-19	10K	2	29 M 776	U-53	1 Meg	1
29 M 755		10K	2 4 1 2	29 M 777	U-54	1 Meg	4
29 M 756		15K	1	29 M 790		1.5Meg	
29 M 757		15K	2	29 M 778		2 Meg	1
29 M 758		20K	1	29 M 781	U-56	2 Meg	4
29 M 783		20K	1	29 M 784	U-255	2.5Meg	4
29 M 759		25 K	4 2	29 M 779	U-57	3 Meg	1
29 M 712			ī	29 M 782	U-59	3 Meg	Ā
29 M 760		25 K	4	29 M 780	U-65	5 Meg	4
29 M 761		50K	i	29 M 788	U-67	5 Meg	1 4
29 M 762		50K	2	29 M 789	Ŭ-82	10 Meg	4 4
29 M 763		50K	4	27 709	0.02	** Wies	1 -
27.01703	1 0 00	OIL			<u>'                                    </u>	<u>'</u>	

### NET EACH......9Ic **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. 4: Linear. For voltage control.

#### TYPE UT SINGLE-TAPPED MIDGETROLS

#### Same as U-types above, but tapped for tone compensation.

No.	Туре	Ohms				Туре		Тар
29 M 718	UT-153	15K				UT-438		300K
29 M 802	UT-420	250K				UT-443		450K
29 M 803	UT-425	350K				UT-450		125K
29 M 816	UT-429	500K				UT-448		250K
29 M 804	UT-427	500K	100K	29	M 809	UT-454	2 Meg	400K
29 M 860	IIT-430	500K	150K	29	M 863	UT-449	2 Meg	600K
29 M 805						UT-451		900K
29 M 86			200K	29	M 817	UT-457	3 Meg	900K

#### TYPE UDT DOUBLE-TAPPED MIDGETROLS

No.	Mfr's Type	Ohms	Taps	EACH
29 M 988	UDT-283	500K	100K/200K	
29 M 989	UDT-289	1 Meg	250K/500K	
29 M 990	UDT-291	1.5 Meg	225K/500K	100
29 M 991	UDT-295	2.25 Meg	250K/500K	1.32
29 M 992	UDT-296	2.25 Meg	500K/1 Meg	
29 M 719	UDT-303	3.3 Meg	300K/1.5 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 ¼" dia., fixed knurled and slotted phenolic shaft protruding ¼" 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.	Mfr's Type	Ohms
29 M 646 29 M 647 29 M 832 29 M 826	SU-6 SU-8 SU-14 SU-20	1.5K 3K 5K 10K	29 M 828 29 M 814 29 M 829 29 M 830	SU-54 SU-56	250K 500K 1 Meg 2 Meg
29 M 812 29 M 827 29 M 813	SU-29 SU-35 SU-41	25K 50K 100K	29 M 833 29 M 831 29 M 815	SU-565 SU-59 SU-67	2.5 Meg 3 Meg 5 Meg

#### Pach......91c SWITCHES AND ACCESSORIES FOR MIDGETROLS

"Push-on, stay-on" switches for Midgetrols. Shpg. wt., 2 oz.
29 M 620. US-26 SPST Switch. NET
29 M 621. US-26T SPST Switch. With dummy terminal. NET. 53¢
29 M 622, US-27 DPST Switch, NET
29 M 985. DS-36 Special 3" 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¢
29 M 882. DS-37 3/6" Diameter Shaft. For use with round-shaft Mid-
getrols to accommodate knobs requiring 3/16" shaft. Wt., 2 oz. NET32¢
29 M 987. EB-214 Special Bushing. Dimensions: 1/2"-28 thread, 23/6"
long with .403" milled flat. Shpg. wt., 2 oz. NET53¢

## **Industrial and Special Controls**

#### MALLORY CONTROLS

#### SPEAKER CONTROLS

Constant-load attenuator pads. Widely used to control the level of low-impedance audio circuits in sound systems. Rated at 4 watts, continuous DC; 15 w. peak audio. Have 2" shafts. Bushing size: ½x½, diameter. Supplied with bar knob, 0-10 dial plate and wiring instructions. Av. shpg. wt., 7 oz.



T Pad Attenuators. Present constant source impedance as well as constant load at all control settings. Size: 15% dia., 111/6 deep. L Pad Attenuators. Present a constant load impedance at all control settings. Size: 15/8" dia., 11/4" deep.

Ohms	Stock No.	Туре	Stock No.	Туре
2	29 M 868	T2	29 M 883	L2
4	29 M 869	T4	29 M 884	L4
6	29 M 870	T6	29 M 885	L6
. 8	29 M 871	T8	29 M 892	L8
15	29 M 872	T15	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 89T	L2000
3000	29 M 878	T3000	29 M 923	L3000
4000		1	29 M 708	L4000

"T" Pads. NET EACH...3.03 | "L" Pads. NET EACH...2.68

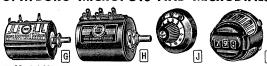
\*Couples 1/4" shafts to 1/4", or 1/4" to 3/6" shafts. Bush-



ingfor panel mount-ing. †Extends body of control 5/8" away from mounting surface. Av. shpg. wts.: Brackets, 3 oz.; shafts, couplers and bushings, 1¼ oz.

No.	Туре	Fig.	Description	EACH
29 M 676	RB249	A	Mtg. bracket. Mtg. Ctrs. 21/2"	24⊄
29 M 675	RB248	A	Mtg. bracket. Mtg. Ctrs. 13/4"	216
29 M 661	EB247†	l C	Extender	410
29 M 665	178	C E	Wrench for 1/2"-9/16" v.c. hex nuts	50¢
29 M 655	RS242	F	Ext. shaft, 4x 1/4x 1/2" flat.	
29 M 656	RS243	F	Ext. shaft, 4x 1/4 x 3/2" flat.	56c
29 M 657	RS244	F	Ext. shaft, $4x\frac{3}{16}x\frac{1}{16}$ flat.	
29 M 658	RS245	F	Ext. shaft, 2x1/4" with 3/2" slot.	79¢
29 M 672	EC240*	В	Coupling	596
60 H 390	UB241 §	D	Bushing	96

#### G. W. BORG 'MICROPOTS' AND 'MICRODIALS'



Model 205 "Micropots." High-precision, ten-turn linear pots. Widely used in electronic instruments, industrial and military controls, electronic computers, etc. Resistance is directly proportional to the shaft rotation. Linearity, 0.1%. Smooth action and low uniform torque. Anti-backlash spring in contact guide. Mechanical and electrical rotation, 3600°. Power dissipation, 5 watts @ 40° C. Average life more than 1 million revolutions. Control size: 2½x1¾ dia. Shaft, ½ los. Av. shpg. wt., 1½ lbs.

Stock No.	Ohms	Stock No.	Ohms	Stock No.	Ohms
29 M 680 29 M 681 29 M 682	100 500 1000	29 M 683 29 M 684 29 M 685		29 M 686 29 M 687	

Model 1111B Micropots. High quality precision ten-turn potentiometers. Similar to above but designed chiefly for commercial applications. Rated at 3 watts @ 40° C. Linearity accuracy is 0.5%. Have average life of more than 500,000 revolutions. Control size: 2½x1¹⅓e″ diameter. Shaft, ⅓″ long. Av. shpg. wt., 1½ lbs.

Stock No.	Ohms	Stock No.	Ohms	Stock No.	Ohms
3   M 99   3   M 992 3   M 993	100 500 1000	31 M 994 31 M 995 31 M 996	5K 10K 20K	31 M 997 31 M 998	50K 100K
NET FACH					10.00

Ten-Turn "Microdials." For above. Have 2 concentrically mounted dials—one for counting increments of each turn and the other for counting turns. Built-in fingertip brake. May be locked in any position. For panels to \( \frac{3}{2}\text{m}'\) thick. Type 1320 has bright chrome cover and chrome dial. Type 1327 has dul black cover and dull black dial. Overall diameter, 13/4". Overall depth, 13/4". Shpg. wt., 4 oz.

29 M 695. Model 1320. NET.

5.85

Model 1307 Direct Reading Microdial. For use with Micropots above. Three digit readings give close indexing accuracy. For operation at speeds up to 100 rpm. Rotation is continuous in either direction. Built-in, finger-tip brake—may be locked in any position. Size: 13%x2" dia 4.0; 

#### 2-WATT TV AND INDUSTRIAL CONTROLS

Two-watt wirewound potentiometers designed especially 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 resistance element and chassis. 297° rotation. Taper 4. 1254, " in diameter. Knurled stub shaft has screwdriver slot. \*Center-tapped. 3%" bushing. Shpg. wt., 4 oz.



_	No.		Type   Ohms		NET No.		Туре	Ohms	NET	
29			R20L R20CT*	20 20	.91	29 29	M 842 M 843	R1000L R1500L	1000 1500	.91
29	M 8	37	R25L	25	.91	29	M 844	R2500L	2500	•91
			R30L R30CT*	30 30			M 846 M 845		3000 5000	
29			R50L	50	.91				7500 10.000	1.06
29	M 8	41	R100L R250L	100 250	.91	29		R15ML	15,000	1.06
			R500L	500	.31				20,000	

#### 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. 1\/\epsilon'e\ dia. cases. Shafts are \( \frac{1}{2} \) long; \*steel (knurled), †brass. Shpg. wt., 4 oz.



No.			Mfr's Type	Description	EACH
	М	847 848 849	*TSA-10 *TSA-35 †TSA-6	L-pad Potentiometer Shunt-type Attenuator	1.44 1.06 1.06

#### **IRC "CIRCUIT INSTRUMENTS" CONTROLS**













HD-150 H-100T H-750T SM-500

MINIATURE PRECISION POTENTIOMETERS

An excellent selection of ten-turn and one-turn precision linear potentiometers. All have highly desirable characteristics of low temperature coefficient (20 ppm), fine resolution, long rotational life, and high corrosion resistance. Insulated copper cores are wound with precision metalalloy 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, % dia. and % long; HD-150 has % dia. bushing. Types HD-150, H-100T and H-750T have black, phenolic cases and shafts of mickel-plated brass. Types SM-500, 151, and 751 have nickel-plated brass cases with stainless steel shafts. All shafts are ½ x ¼ dia. Av., 3 oz.

 Model
 HD-150.
 5-watt,
 10-turn
 potentiometers.
 Tolerance,
 ±5%;

 linearity,
 ±0.5%,
 2" long,
 1½" dia.
 Available in 1K,
 5K,
 10K,
 20K,
 50K

 and
 10K olms
 -specify value when-ordering.
 31 MM 530.
 1-9,
 NET EACH
 10.00
 10-24,
 EACH
 9.50

 25-99,
 EACH
 9.00
 100-Up,
 EACH
 8.50

Model 151.3-watt, one-turn potentiometers. Tolerance, ±5%; linearity ±0.5%. ½" long, 1½" dia. Available in 100, 500, 1K, 2.5K, 5K and 10K ohms—specify value when ordering.

31 MM 550, 1-9, NET EACH... 8.75 10-24, EACH.... 7.87 25-99, EACH.... 7.00 100-Up, EACH.... 6.55

#### DIRECT READING REVODEX DIALS

High quality turn-indicating knob for above precision pots or any with \(\frac{1}{2}\) w shafts. Gives 3-digit readings accurate within one lundredth of a turn for any device with ten turns or less. Has locking-screw for holding dial at desired readings. Choice of black or clear anodized aluminum body. Size: 1\(\frac{1}{2}\) ka1\(\frac{1}{2}\) dia. Wt., S oz.

3 \( M \) 551. Black Anodized Aluminum. NET

3 \( M \) 552. Clear Anodized Aluminum. EACH. 5.75

10-24, EA....5,46

25-99, EA...5,17

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 warmpregnated cardboard outer sleeves. Single-section Type BR has solid, tinned-copper leads with negative terminal grounded to can Type BR is a miniature version of Type BR, for limited-space applications. Type BRHV is similar to Type BR, but is designed

for filter applications in higher-voltage power supplies. Surge voltage of Type BRHY is 150 volts above working voltage. Types BBRD, BBRT, and BBRQ have 77 flexible vinyl covered leads with color coded positive and common negative. All "Blue Beavers" are rated for operation up to 85°C., except 500-volt types, which are for up to 65°C. Av. shpg. wt., 4 oz. See Page 159 for mtg. hdwe.

#### TYPE BR SINGLE SECTION

Radio and TV replacement units. Ideal for

bypass, fil		Hermet		nits. Idea sealed.	ıl for
Stock No.	Туре	Mfd	W.V.		NET
19 L 285 19 L 286	500-6	500	6	13/16×17/8	.91
19 L 286 19 L 287 19 L 272 19 L 273	1000-6 2000-6	1000 2000	6	15/16×23/16 11/16×211/16	1.12
19 L 287 19 L 272 19 L 273	2501	250	15	13/6×17/8	1:37
19 L 273	5001	500	15	15/16×23/16	1.03
19 L 274	10001	1000	15 15	11/16x23/16	1.35
19 L 284	20001 2502	2000 250	15 25	11/16x33/16	1.88
19 L 271	5002	500	2.5	15/16x17/8 11/16x23/16	1.35
19 L 147	1005	100	50	13/16XZ3/16	1.35 .82
19 L 148 19 L 149 19 L 269 19 L 145	1505 2505	150	50	15/16×23/16	.91
19 L 149 19 L 269	5005	250 500	50 50	11/6×23/16	1.03
19 L 145	5005 2515	25 30	50 150	11/16x33/16 13/16x15/8	1.41 .73
14 L 045	3015		150	13/16×15/8	.76
14 L 046	4015 5015	40 50	150 150	13/16×17/8	.79
19 L 146	6015	60	150	15/16×17/8 15/16×23/16	.82
14 L 039	8015	80	150	15/16×23/16	.94
14 L 056	10015	100	150	11/16x211/16	1.03
14 L 057	15015 1625	150 16	150	11/16x33/16 13/16x17/8	1.12
14 L 034	2025 3025	20 30	250 250	13/16×17/8	.76 .79
19 L 142	3025	30	250	15/16×17/8	.85
14 L 035	4025	40	250	15/16×23/16	.91
19 L 143 19 L 144	5025 6025	50 60	250 250	11/16×23/16 11/16×211/16	1.00
14 L 020	435 835	4	350	11/16X21/16 11/16X15/8 11/16X17/8	.62
14 L 021	835 1235	8 12	350 350	11/16×17/8	.71
14 L 022	1635	$\frac{12}{16}$	350	13/16×17/8	.76
14 5 018	2035	20	350	15/16×17/8 15/16×17/8	.82 .85 .97
14 L 019	2035 3035	30	350	11/16x23/16 11/16x211/16	.97
14 L 026 19 L 141	4035 5035	40 50	350 350	11/16x211/16 11/16x211/16	1.03
14 L 008	145	1	450		1.09
14 L 009	245	2	450	11/6x11/4	.65 .65
14 L 010	445	4	450	11/16X15/8	.68
14 L 011	845 1045	8 10	450 450	13/16×15/8 13/16×17/8	.73 .76
14 L 013	1245	12	450	13/16×17/8	.79
14 L 014	1645	16	450	15/6x23/6	.82
14 L 015	2045 3045	20 30	450 450	15/16×23/16	.91
14 L 016	4045	40	450	11/16x211/16 11/16x211/16	1.00
14 L 004	6045	60	450	17/6×213/6	1.38
14 L 005	8045	80	450	17/6x35/16	1.65
19 L 215	450 850	4 8	500 500	13/16×17/8 13/16×17/8	٠٢١
14 L 000 19 L 140	1250	12	500	15/16×23/16	.76 .82
14 L 001	1650	16	500	11/4x23/4c	88
14 L 002	2050 3050	20 30	500	11/16x23/16 11/16x211/16	.94
14 L 003			500		1.03
TYI	PE RRD	SING	E CE	CTION	

#### TYPE BBR SINGLE SECTION

Miniaturized units for hearing aids, transistor radios, low-voltage circuits, etc. Hermetically sealed. Grounded negative lead.

StockNo. Type   Mfd   W.V.   Size   NET									
19 L 200	25-3								
13 1 200	50-3	25 50	3 6 6 6	7/16×1 1/4 7/16×1 1/4	.50 .56				
19 L 201 19 L 202 19 L 203	5-6	5	š	%6x1 14	:47				
19 E 203	25-6	25	ŏ	%6x1 1/4	:36				
19 L 201 19 L 202 19 L 203 19 L 204	50-6	25 50		7/16×1 1/4	.50 .56				
19 L 205	100-6	100	6 6 15 25	%6x11/4	.71 .79 .73				
19 L 206 19 L 207 19 L 216 19 L 217	250-6	250	6	9/16×1 5/8 9/16×1 1/4 7/16×1 1/4 7/16×1 1/4	.79				
19 L 207	100-15	100	15	%16x1 1/4	.73				
19 L 216	10-25	10	25	/16X1 /4	.59 .59				
	20-25	20	25		.59				
19 L 218	25-25	25	25 25	7/16×1 1/4	.59 .65 .79 .53				
19 - 219	50-25	50 100	25	%6x1 1/4	.65				
13 5 208	100-25 1-50	100	25 50	9/16×15/8	•23				
19 L 219 19 L 208 19 L 209 19 L 210	2-50	1 2	50	7/6×1 1/4 7/6×1 1/4	.53				
	4-50				-53				
19 L 211 19 L 222 19 L 223	5-50	4 5 10	50 50	7/16×1 1/4 7/16×1 1/4	•53				
19 6 223	10-50	10	50	7/6×1 /4	.53				
i 9 L 224	25-50	25	50	9/6 71 /4	.53				
19 L 211 19 L 222 19 L 223 19 L 224 19 L 212	10-90	10	9ŏ	9/16×1 1/4 9/16×1 1/4	.59 .59 .62 .65				
	16-90	16	90	9/16×15/8	.65 .59 .62 .62				
19 L 214	4-150	4	150 150	7/16×1 1/4	.59				
19 L 249	8-150	8	150	%16×1 1/4	.62				
19 L 226	10-150	10	150	%6x1 1/4	.62				
	12-150	12	150	%6x1 1/4	.65				
19 L 248 19 L 225 19 L 227	16-150	16	150	9/16x15/8	.68				
19 L 225	20-150	20	150	%16x15/8	.71				
19 L 227	4-250	4 8	250	%6x1 1/4	.59				
19 L 225 19 L 227 19 L 228 19 L 229	8-250 12-250	12	250 250	%6x15/8 %6x15/8	.59 .68 .73				
17 - 229	1. 12-230	1 14	230	716A1 7/8	./3				

#### TYPE BBRD DUAL SECTION

Sealed in aluminum tube; wax-impregnated

cardboard outer sleeve. Common negative lead.									
StockNo.	Туре	Mfd	W.V.	Size	NET				
19 L 220	2202	20-20	25	13/16X11/4	.82				
19 L 250	115	10-10	50	13/16X11/4	82				
19 L 251	2115	20-10	150	13/16X15/8 13/16X17/8	.91				
19 L 252	2215	20-20	150	13/16X1 /8	.97				
19 L 253	3215	30-20	150	15/16X1%	1.00				
19 L 254	3315	30-30	150	15/16X1 1/8	1.06				
19 L 255	4215	40-20	150	15/16X1/8	1.03				
19 L 256	4315	40-30	150	15/16X23/16	1.06				
19 L 257	4415	40-40	150	15/16X23/16	1.09				
19 L 258	5315	50-30	150	15/16X23/16	1.15				
19 L 259	5515	50-50	150	11/16X23/16	1.23				
19 L 260	8415	80-40	150	11/16X23/8	1.32				
18 L 609	0183.7	100-50	150	1 x3	1.76				
19 L 288	101015	100-100	150	11/16X33/16	1.88				
18 L 610	0196	200-5	150	1 x39/16	1.56				
19 L 289	8D25	8-8	250	13/16X15/8	.94				
19 L 261	16825	16-8	250	13/16X23/16	1.00				
19 L 262	16D25	16-16	250	15/16X23/16	1.06				
19 L 263	2225	20-20	250	11/16X1 1/8	1.09				
19 L 296	3325	30-30	250	11/16x23/8	1.32				
19 L 264	7V225	75-20	250	11/16X33/16	1.53				
18 L 612	0242	80-10	250	1 x3	1.50				
18 L 614	0286	150-100		1%x3%6	3.09				
19 L 265	8D45	8-8	450	15/16X1 1/2	1.00				
19 L 266	16845	16-8	450	11/16x23/8	1.18				
19 L 267	16D45	16-16	450	11/16X211/16	1.32				
19 L 268	2245	20-20	450	1 1/16X3 3/16 1 3/16X3 3/4	1.47				
19 L 297	3345	30-30	450	13/16X33/4	1.76				
19 L 221	4445	40-40	450	11/16X41/4	2.00				
18 L 616	0646	20, 100		1 x2½	1.29				
18 L 617	0652	40.50	l 450, 50	1 x39/4	1.76				
18 L 618	0722	80, 100	450, 50	1%x39/16	2.20				
18 L 619	0707	30, 50	450, 200	11/8 x 21/2	1.68				

#### TYPE BBRT TRIPLE SECTION

19 L 230	22215	1 20-20-20	1 150	15/16X11/8	1.29
19 L 231	32V215	30-25-20	150	15/16×23/16	1.32
19 L 232	33315	30-30-30	150	11/16X23/16	1.38
19 L 233	42215	40-20-20	150	11/16x1/8	1.32
19 L 234	43215	40-30-20	150	1 1/16X23/16	1.38
19 L 235	44215	40-40-20	150	11/16x23/16	1.38
19 L 236	44415	40-40-40	150	1 1/16x23/8	1.44
19 L 298	84215	80-40-20	150	11/16x33/16	1.62
18 L 620	0126.5	150-150-150		13% x 43/16	2.79
19 L 237	2215C	20-20,20	150,25	15/16×11/8	1.21
19 L 238	3315C	30-30,20	150,25	15/16X23/16	1.29
19 L 239	4215C	40-20,20	150,25	1 1/16x1 1/8 1 1/16x1 1/8	1.26
19 L 240	4315C	40-30,20	150,25	11/16x11/8	1.29
19 L 241	4415C	40-40,20	150,25	11/16x11/8	1.32
19 L 242	4415X25	40-40,250	150,10	11/16X23/8	1.53
19 L 243	5315C	50-30,20	150,25	11/16X1/8	1.38
19 L 244	5515C	50-50,20	150,25	1 1/16 x 2 3/8	1.47
19 L 299	5315C25	50-30,250	150,25	1 1/16x33/16	1.82
19 L 245	8415C	80-40,20	150,25	11/16X211/16	1.56
19 L 246	3215C10	30-20,100	150,25	11/16x23/16	1.38
19 L 275	#5315X20	50-30,200	150,10	11/16X23/8	1.50
19 L 276	5315C10	50-30,100	150,25	11/16x23/8	1.44
19 L 277	8215C10	80-20,100	150,25	11/16x211/16	1.62
19 L 278	2225C	20-20,20	250,25	1 1/16X23/16	1.32
19 L 279	4225C	40-20,20	250,25	11/16x23/8	1.50
19 L 280	4425C	40-40,20	250,25	11/16x21/8	1.71
	7V4125	75-40-10	250	13/16X33/16	2.03
18 L 621	0185	40-40-40	300	11/8 x 3	2.70
18 L 625	0878	140-5,200	350,200	1½ x43/16	3.94
19 L 282	16T45	16-16-16	450	13/16X33/16	1.82
19 L 283	2245C	20-20,20	450,25	1 1/16x33/16	1.71
18 L 626	1411		450,150,25		2.18
18 L 627	1238	5, 80-40	450,400	1%x39/16	2.68

#### TYPE RRPO CHARPINE SECTION

			-	טט	17.04	40	~.	DROI		JL.	٠.		•
9	L	292	532	15C	150-30	-20,15	012	20,25		1/161	x21		1.79
9	L	293	443	15C	40-40	-30.15	0 2	20.25	- 1	11/16	x21	1/16	1.76
9	Ĺ	294	555	15C	60-50	-50,15	0 2	20,25		11/16			2.03
9	L	290	332	15C	30-30	-20,20	)   ]	150,25		11/16			1.71
8	L	628	078	9.4	140-5	,200-3	10 3	300,150	- 1	11/2 X	13/1	6	3.03
8	τ	630	078	9.5	80-60	.40.20	3	50,300,	150	13/8 X	3 /	6	3.47
8	L	631	092	5	140.5	.200-3		50,300.					4.50
8	L	633	012	5	20-20	-20-10	) 4	50	1	1%x3	31/1	6	2.50
		634			40-20	-20-10	0 4	50	1	1%x3	39/4	6	2.76
8	L	635	017	4	40-40	-20-20	0 4	50	- (:	1%x4	13/1	6	3.20
9	L	295	222	45C	20-20	-20.20	14	50.25	-	13/161	(31/		2.38
8	Ĺ	636	092	6.5		.40-40		50,300.	250	13/8 X	19/4		2.91
8	Ĺ	637	095	4				50,300,		-,,	•	•	
	-				1		1	250.50		1%x3	39/	. 1	2.82
8	L	639	1069	5.3	10,20	-20-10	) 4	50,350	· 1	11/8 x3	3 ' '	٠,	2.06

#### TYPE BRHV HIGH-VOLTAGE

Stock No.	Type	Mfd	W.V.	Size	NET
14 L 538	708	8	700	15/16×33/16"	1.29
14 L 539	710	10	700	11/6x33/6	1.38
14 L 540	712	12	700	1 1/6×31 1/6"	1.44
14 L 541	716	16	700	1 1/16x45/16"	1.56
14 L 534	608	8	600	13/16×33/16"	1.23
14 L 535	610	10	600	15/16×33/16"	1.29
14 L 536	612	12	600	11/16x33/16"	1.41
14 L 537	616	16	600	11/16x33/16"	11.50

#### BC "PLUG-IN" TUBULARS



High-quality, phenolic-cased paper "plug-in" capacitors. Leads plug directly into printed circuits for dip soldering. Perfect for production runs or general replacement use. Withstand high soldering temperatures. Tolerance: #20 except \*=10%, \$400 v. DC. Operating temperature range: 200 and 400 WVDC units, -40° C to +90° C; 600 WVDC units, -55° C to +100° C. Av. shpg. wt., 4 oz.

#### 200 VOLTS DC WORKING

Stock No.	Туре	Mfd	Size	NET
19 L 126		.01	3/8×1"	18¢
19 L 107		.047	1 ½x1¼″	21¢
19 L 108		.10	1/2 x 1 1/2"	24¢
19 L 138		.22	5/8×17/8"	29¢
19 L 139	BC2P33J	.33	5/8×17/8"	32¢

#### 600 VOLTS DC WORKING

Stock No.	Туре	Mfd	Size	NET
19 L 163	BC6D1J	.001	3/8×1"	18¢
19 L 165	BC6D22J	.0022	3/8×1"	18¢
19 L 167	BC6D47J	.0047	3/8×1"	18¢
19 L 169	BC6S1J	.01	3/8×11/4"	21¢
19 L 194	BC6S22J	.022	7/6×11/4"	24¢
19 L 196	BC6S471*	.047	1/2×11/2"	26¢
19 L 117	BC6P22J	.22	1/8×21/2"	38¢
19 L 198	BC4P47J8	.47	1/8×21/2"	41¢

#### TYPE NL "ELECTROMITES"



#### SUBMINIATURE ELECTROLYTICS

"Electronites" meet modern equipment design trends toward compactness, lightweight, and portability. These units offer "big capacitor" performance and reliability in smallest aluminum-foll capacitor construction. Have very low DC leakage of approximately 0.1 microamp per microfarad per volt—excellent in coupling applications. Surge voltages exceed working voltages by 20%. Operating temp., —20° C to +85° C. Grounded negative lead. Plastic insulating sleeve. Shpg. wt., 2 oz.

	I lastic including becover supply well a con-					
1.71 2.03	Stock No.	Туре	Mfd	w.v	Size	NET
2.70	18 L 640	25-3	25	3	1/4 x 5/8"	.73
3.94	18 L 641	200-3	200	3	3/8×1"	.88
1.82	18 L 642	1-6	1	6	3/16×1/2"	.73
1.71	18 L 643 18 L 644	2-6 5-6	2 5	6	3/16×1/2" 3/16×5/8"	.88 .73 .73
2.18						
2.68	18 L 645	10-6 20-6	10 20	6	1/4 x 5/8"	.79
	18 L 646 18 L 647	25-6	25	6	1/4 x 5/8" 1/4 x 5/8"	.79 .79
N	18 L 648	50-6	50	6	3/8×5/8"	.82
	18 L 649	60-6	60	6	3/8×3/4"	.82
1.79	18 L 650	100-6	100	6	3/8×7/8"	88
1.76 2.03	18 L 651	10-10	10	10	1/4×5/8"	.79 .79
1.71	18 L 652	25-10	25 50	10 10	%x%,	.79
3.03	18 L 653 18 L 654	50-10 100-10	100	10	3/8×5/8" 3/8×3/4" 3/8×1"	.85 .94
3.47						
4.50	18 L 655	5-15 10-15	10	15 15	1/4 x 5/8" 1/4 x 5/8"	.82
2.50	18 L 656 18 L 657	20-15	20	15	3/8×5/8"	.82 .85
2.76	1 8 L 658	30-15	30	15	3/8×3/4"	.88
3.20		15-25	15	25	3/8×5/8"	.85
2.38	18 L 660	20-25	20	25	3/8×5/8"	1,88
2.91	18 L 662	5-50	ľš	5ŏ	1/4 x 3/4"	.88
2 82	118 L 663	10-50	10	50	3/8×5/8"	.88
2.82	18 L 664	20-50	20	50	3/8×7/8"	.88
					And in case of the last	CONTRACTOR AND ADDRESS.

## 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

temperature range to +85°C; 500-volt types have range to +65°C. All are UP types, except \*UPE types which are designed for selenium rectifier circuits. Solder lugs. Av. shpg. wt., 5 oz.



### SINGLE SECTION

StockNo.	New Type	Old Type	Mfd/WVDC	Size	NET
14 L 426 14 L 427 18 L 670 14 L 511 14 L 428	A0560	A052 A053 XA013 A055 A056	10/500V 20/500V 30/500V 40/500V 80/500V	1x2" 1x2½" 1x3" 1x35%" 13%x35%"	.94 1.09 1.18 1.47 1.88
19 L 384 19 L 387 14 L 322 14 L 408 19 L 388	A0430 A0460 A0470 A0480 A0490	A043 A046 A047 A048 A049	10/450V 20/450V 30/450V 40/450V 50/450V	1x2" 1x2" 1x2½" 1x3" 1x35/8"	.91 1.06 1.15 1.21 1.38
14 L 323 18 L 665 18 L 666 18 L 667 18 L 668	A0510 A0512 A0514 XA0401* XA0411*	XA011 XA012	80/450V 100/450V 125/450V 80/350V 125/350V	13/8 x3" 13/8 x3" 13/8 x41/8" 13/8 x21/2" 13/8 x3"	1.79 2.03 2.21 1.64 2.15
18 L 669 19 L 460 18 L 679 18 L 680 18 L 681	XA0331* A0340 XA0355* XA0291* XA0315*	XA010 A034 XA008	80/300V 100/300V 150/300V 40/250V 150/250V	1x3" 13/8x3" 13/8x3" 1x2" 13/8x21/2"	1.50 1.71 2.06 1.06 1.82
18 L 682 14 L 400 18 L 677 18 L 678 19 L 383	XA0265.3* A0200 XA0231* XA0241* A0250	A020 XA002 XA003 A025	120/200V 50/150V 80/150V 100/150V 120/150V	13/8×2" 1×2" 1×2" 1×21/2" 13/8×2"	1.65 .97 1.09 1.18 1.21
18 L 674 18 L 675 18 L 676 19 L 381 19 L 382	XA0261* XA0262* XA0263* A0140 A0160	XA004 XA005 A014 A016	150/150V 200/150V 300/150V 100/50V 500/50V	1x3" 1 <sup>3</sup> / <sub>8</sub> x2 <sup>1</sup> / <sub>2</sub> " 1 <sup>3</sup> / <sub>8</sub> x3" <sup>3</sup> / <sub>4</sub> x2" 1 <sup>3</sup> / <sub>8</sub> x2"	1.26 1.44 1.65 .97 1.56
14 L 320 18 L 673 19 L 380 19 L 377 19 L 378	A0170 A0174 A0130 A0060 A0070	A017 A013 A006 A007	1000/50V 1500/50V 1000/25V 1000/15V 2000/15V	13/8 x35/8" 13/8 x41/8" 13/8 x2" 1x21/2" 13/8 x21/2"	2.20 2.26 2.09 1.50 2.03
18 L 671 18 L 672	A0080 A0040	A008 A004	3000/15V 2000/6V	13/8×3″ 13/8×2″	2.06 1.50

DUAL SECTION						
19 L 359 14 L 486 14 L 449 19 L 360 19 L 422	B0490 B0500 B0530 B0540 B0630	B049 B050 B053 B054 B063	10-10/500V 20-20/500V 40-40/500V 60-40/500V 10/450V; 20/25V	1x2½" 1¾8x2½" 1¾8x35%" 1¾8x35%" 1x2"	1.15 1.68 2.53 2.70 1.00	
14 L 420 19 L 396 14 L 448 14 L 421 14 L 326	B0370 B0380 B0390 B0400 B0410	B037 B038 B039 B040 B041	10-10/450V 15-15/450V 20-10/450V 20-20/450V 30-10/450V	1x2" 1x2½" 1x2½" 1x3" 1x3"	1.12 1.32 1.32 1.50 1.47	
14 L 447 14 L 514 14 L 422 19 L 357 18 L 683	B0430 B0440 B0450 B0470 B0473	B043 B044 B045 B047	30-30/450V 40-20/450V 40-40/450V 80-10/450V 80-20/450V	13/8 x 2 1/2" 13/8 x 2 1/2" 13/8 x 3" 13/8 x 3" 13/8 x 3" 13/8 x 35/8"	1.79 1.76 2.03 2.12 2.29	
19 L 358 18 L 684 19 L 421 19 L 394 18 L 685	B0480 B0483 B0290 B0310 B0326	B048 B029 B031	80-40/450V 100-40/450V 15-15/350V 30-30/350V 80-40/350V	13/8 x35/8" 13/8 x41/8" 1x2" 1x3" 13/8 x3"	2.56 2.85 1.32 1.71 2.32	
19 L 395 18 L 686 19 L 392 18 L 687 14 L 418	B0330 B0332 B0270 B0608 B0210	B033 B027 B021	80-80/350V 100-100/350V 80-80/300V 150/300V;100/150V 20-20/250V	13/8 x 35/8" 13/8 x 41/8" 13/8 x 3" 13/8 x 35/8" 1 x 2"	2.76 3.62 2.38 2.65 1.12	
18 L 688 19 L 391 18 L 689 18 L 690 18 L 691	XB0241* B0250 XB0252* XB0196* XB0091*	XB011 B025  XB001	40-40/250V 150-150/250V 200-200/250V 200-5/200V 20-20/150V	1x3" 1 <sup>3</sup> / <sub>8</sub> x4 <sup>1</sup> / <sub>8</sub> " 1 <sup>3</sup> / <sub>8</sub> x4 <sup>1</sup> / <sub>8</sub> " 1 <sup>3</sup> / <sub>8</sub> x2 <sup>1</sup> / <sub>2</sub> " 1x2"	1.47 3.03 3.59 1.59 1.00	

### **DUAL SECTION (Cont'd)**

Stock No.	New Type	Old Type	Mfd.	Size	NET
19 L 390		B0110 B012	30-30/150V 40-20/150V	1x2" 1x2"	1.09
18 L 692		XB002	40-40/150V	1 x 2"	1.12
14 L 425 18 L 693 18 L 694	XB0161*	B015 XB003 XB004	50-30/150V 50-50/150V 80-40/150V	1 x2" 1 x2 ½" 1 x2 ½"	1.18 1.26 1.35
8 L 697  8 L 698  9 L 4 6		XB008 XB009 B0040	200-150/150V 200-200/150V 1000-1000/15V	1 3/8 x 3 5/8" 1 3/8 x 3 5/8" 1 3/8 x 2 1/2"	2.20 2.35 2.59

#### TRIPLE SECTION

14 L 334	C0380	C038	10-10-10/500V	1 x 3"	1.59
19 L 455	C0390	C039	30-20-20/500V	13/8 x 3"	2.47
19 L 373	C0410	C041	40-40-10/500V	13/8x35/8"	2.97
19 L 339	C1180	C118	40-40/500V; 100/200V	13/8x41/8"	3.44
19 L 454	C0374	C156	40-30-30/475V	13/8x35/8"	3.03
14 L 432	C0240	C024	10-10-10/450V	1x2½" 1x3"	1.53
19 L 365	C0260	C026	20-10-10/450V	1x3"	1.73
14 L 487	C0270	C027	20-20-20/450V	13/8 x21/2" 1 x3"	2.12
14 L 458	C0990	C099	20-20/450V; 20/25V		1.79
19 L 366	C0280	C028	30-20-20/450V	13/8x3"	2.26
19 L 367	C0300	C030	30-30-30/450V	13/8x3"	2.56
19 L 370	C0330	C033	40-30-20/450V	13/8×3"	2.53
19 L 428	C1070	C107	40-40/450V; 20/25V	13/8×3"	2.32
19 L 371	C0340	C034	40-40-10/450V	13/8×3"	2.47
14 L 329	C0350	C035	40-40-40/450V	13/8x33/8"	2.88
19 L 338	C1090	C109	40-40/450V; 100/50V	13/8x35/8"	2.53
19 L 372	C0360	C036	60-20-20/450V	13/8×35/8"	2.70
14 L 513	C0370	C037	80-40-20/450V	13/8×41/8"	3.18
i 9 L 376	C0800	C080	20-20/350V; 20/25V	1x2½"	1.65
19 L 426	C0840	C084	30-30/350V; 20/25V	13/8×2"	2.00
18 L 701	XC1209*	XC010	100/300V; 60/20/250V	13/8×41/8"	4.32
18 L 702	XC1212*	XC011	200/300V; 60/20/250V	13/8×5"	3.41
18 L 703	XC0071*	XC002	40-20-20/150V	1x2"	1.41
19 L 361	C0080	C008	40-30-20/150V	1×2"	1.47
18 L 704	XC0551*	XC008	40-40/150V; 20/25V	1x2"	1.41
14 L 434	C0090	C009	40-40-40/150V	1 x 2 1/2"	1.53
18 L 705	XC0105*	XC003	50-50-50/150V	1x3"	1.76
19 L 362	C0110	C011	60-40-20/150V	1x2½"	1.62
18 L 706	C0113		70-15-15/150V	1 x 2 1/2"	1.59
14 L 5 1 2		C012	80-40-20/150V	1 x 3"	1.71

#### OHADDIDLE SECTION

	QUADRUPLE SECTION							
14 L 450 14 L 445	D0090 D0480	D009 D048	10-10-10-10/450V 10-10-10/450V; 20/25V	13/8×2" 13/8×2"	1.97			
19 L 435	D0810 D0120	D081	10-10/450V-60/200V 100/50V 20-10-10-10/450V	13/8×3" 13/8×21/2"	2.26			
14 L 451 19 L 432	D0130 D0520	D013 D052	20-20-20-20/450V 20-20-20/450V; 20/25V	13/8 x3" 13/8 x21/2"	2.76			
9 L 342 19 L 433	D0170 D0640	D017 D064	40-20-10-10/450V 40-30-10/450V; 20/25V	13/8×3" 13/8×3"	2.62 2.65			
19 L 438 19 L 439	D0174 D0176	D121 D122 D092	40-40-20-20/450V 40-40-30-30/450V 40-40/450V; 30-30/350V	13/8×41/8" 13/8×41/8"	3.26 3.56			
19 L 436 19 L 429	D0920 D0020	D002	40-40-20-10/300V	13/8×41/8" 13/8×21/2"	3.47 2.68			
19 L 437 19 L 431 19 L 343	D0866 D0230 D0300	D109 D023 D030	100-10/300V,200-30/150V 40-40-20/150V; 200/10V 60-40-20/150V: 200/10V	13/8×5" 13/8×2" 13/8×2"	3.47 1.91 2.06			
19 1344	D0330	D033	80-40-40/150V; 100/25V	13/8×21/2"	2.20			

### 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" long. Av. shpg. wt., 6 oz.

Stock No.	Type	Mfd	WVDC	Size	NET
14 L 161	608C	8	600	1 3/8 x 4 3/8"	1.85
14 L 162	616C	16	600	1 3/8 x 4 3/8"	2.20

### 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, amplifiers, test instruments, industrial electronic equipment, etc. Carefully engineered, 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° C to 85° C and are rated at 1000 WVDC, except \*600 WVDC. All have a guaranteed minimum capacity tolerance, except † ±20%, ‡ ±0.5 mmi. Av. shpg. wt., 3 oz.

TYPES BYA & BYB						
No.	Туре	Mmf	Size	EA.		
19 L 577 19 L 578 18 L 707 19 L 579 19 L 580	BYA10T5 BYA10T82 BYA-6D1* BYA10D1M† BYA10D15	500 820 1000 1000 1500	9/32×5/32" 9/32×5/32" 9/32×5/32" 9/32×5/32" 3/8×5/32"	I2c		
19 L 581 19 L 582 19 L 583 18 L 708 19 L 584	BYA10D2 BYA10D3 BYA10D4 BYA-10D47M† BYA10D5	2000 3000 4000 4700 5000	3/8 x5/32" 19/32 x5/32" 19/32 x5/32" 19/32 x5/32" 5/8 x5/32"	12c		
18 L 709 18 L 710 19 L 585 19 L 586		6800 10000 10000 20000		12¢ 12¢ 12¢ 18¢		
-						

		TYPE	L	
9 9	L 556 L 557 L 558	L10V5‡ L10Q1 L10Q22	10 10 22	\frac{\%_{32}\x^{\frac{5}{32}''}}{\%_{32}\x^{\frac{5}{32}''}}  12c

TYPE L (Cont'd)						
No.	Туре	Mmf	Size	EACH		
19 L 559	L10047 L1005	47 50	9/32X5/32" 9/32X5/32"			
19 L 561	L10Q56	56	9/32×5/32"	l2c		
19 L 562 19 L 563	L10T1 L10T12	100 120	9/32×5/32" 9/32×5/32"			
19 L 564 19 L 565	L10T15 L10T18	150 180	9/32×5/32" 9/32×5/32"			
19 L 566	L10T2 L10T22	200 220	9/32X5/32" 9/32X5/32"	I2c		
19 L 567	L10T25	250	9/32×5/32"			
19 L 568	L10T27 L10T33	270 330	9/ <sub>32</sub> x5/ <sub>32</sub> " 9/ <sub>32</sub> x5/ <sub>32</sub> "			
19 L 570	L10T39	390	%32X5/32"	I2c		
19 L 571 19 L 572	L10T47 L10T5	470 500	3/8 x 5/32" 3/8 x 5/32"			
19 L 573	L10T68	680	3/8 x5/32"			
19 L 574	L10T82 L10D1	820 1000	19/32×5/32" 19/32×5/32"	12c		
19 L 576	L10D15	1500	19/32X5/32"			

### QC PLUG-IN ELECTROLYTICS

QC PLUG-IN ELECTROLYTICS

Quality electrolytics featuring 4-pin, octal bases to
permit speedy installation
in standard octal tube socket. Ideal where quick capacitor changes are required.
For experimental work, juke
boxes, government communications receivers, etc.
Capacitors are hermetically
sealed in aluminum containers. Ground lugs
supplied with all multiple-section units. Temperature range to +85°C., except 500 v. units
to +65°C. Av. shpg. wt., 6 oz.

SINGIES

#### SINGLES

Stock No.	Mfrs. Type	Mfd	D.C. W.V.	Size	NET	
19 L 328			500 450	13/8 x2 1/2" 15/32 x2 1/2"	2.94	
19 L 324 19 L 326	QC 4045	40	450	13/8 x 2 1/2"	2.68	
19 L 327 QC 8045 80 450 13 x3 1/2" 3.26						

19 L 333   QC 2250   19 L 329   QC 1145   19 L 330   QC 2245   19 L 332   QC 4445	20-20 10-10 20-20 40-40	500 450 450 450 450	13/8x21 15/32x21 13/8x21 13/8x31	3223.	12 59 97 50

### TRIPLES 450 15/32x21/2 450 13/8x3"

# Cornell-Dubilier Capacitors



### "CUB" PLASTIC TUBULAR CAPACITORS

For general replacement service; extremely durable and very compact. Have high insulation resistance, low power factor and exceptional capacitance stability. Molded in extra hard, non-inflammable bakelite; resistant to moisture, high temperature and shock. Excellent dielectric strength. Dry assembled and sealed after impregnation 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, and to +90° C.; 600 volt units and up, -55 to +100° C. \*ST types in ceramic case. Av. shops. wt., 4 oz.

#### 200 VOLTS DC WORKING

Stock No.	Type	Mfd	Size	NET
19 L 000	252	.02	3/8 x 1"	! 5¢
19 L 001	2 S 4 7 2 S 5	.047	716X1 1/4"	5¢   5¢
19 L 003	2P1	.10	7/16×1 1/4"	21¢
19 L 004	2P15	.15	%16x11/2"	21¢
19 L 005	2P22 2P25	.22	11/16x17/8"	24¢ 24¢
19 6 007	2P47	.47	11/6x17/8"	35¢
19 F 008	2P5	.50 1.0	11/16×17/8"	35¢
19 L 009	2W1	}1.U	74XZ74"	2.5€

#### **400 VOLTS DC WORKING**

Stock No.	Туре	Mfd	Size	NET
19 L 010		.01	3/8×1"	5¢
19 L 011		.02	7/6×1 1/4"	5¢
19 L 012		.022	7/6×1 1/4"	5¢
19 L 013		.047	7/6×1 1/4"	8¢
19 L 014	4P1	.05	7/6×1 1/4"	18¢
19 L 015		.068	9/6×1 1/2"	21¢
19 L 016		.10	9/6×1 1/2"	21¢
19 L 017		.15	1 1/6×1 7/8"	21¢
19 L 018	4P22	.22	11/16x17/8"	24¢
19 L 019	4P25	.25	11/16x17/8"	24¢
19 L 049	4P47	.47	3/4x21/4"	35¢
19 L 020	4P5	.50	3/4x21/4"	35¢
19 L 021	4W1*	1.0	1x27/8"	53¢

600 VOLTS DC WORKING					
Stock No.	Type	Mfd	Size	EACH	
19 L 022 19 L 023 19 L 024 19 L 025 19 L 026	6T1 6T25 6T4 6T5 6D1	.0001 .00025 .0004 .0005 .001	3/8×1"		
19 L 027 19 L 028 19 L 029 19 L 030 19 L 086	6D15 6D2 6D22 6D3 6D33	.0015 .002 .0022 .003 .0033	3/8×1*	l5c	
19 L 031 19 L 032 19 L 033 19 L 034	6D4 6D47 6D5 6D6	.004 .0047 .005 .006	3/8 x 1" 3/8 x 1" 3/8 x 1" 3/8 x 1" 7/6 x 1 1/4"		
19 L 035 19 L 036 19 L 037 19 L 038 19 L 039	6D 68 6S1 6S15 6S2 6S22	.0068 .01 .015 .02 .022	7⁄ <sub>6</sub> ×1 ½″	l8c	
19 L 040 19 L 087 19 L 041	6S3 6S33 6S4	.03 .033 .04	7/16×1 1/4" 9/16×1 1/2" 9/16×1 1/2"	2lc	
19 L 042 19 L 043 19 L 044 19 L 099	6S47 6S5 6S6 6S68	.047 .05 .06 .068	9/16X1 1/2" 9/16X1 1/2" 1 1/16X1 7/8" 1 1/16X1 7/8"	240	
19 L 045 19 L 104 19 L 105 19 L 046 19 L 047	6P1 6P2 6P22 6P25 6P5*	.10 .20 .22 .25 .50	11/16x17/8" 3/4x21/4" 3/4x21/4" 3/4x21/4" 1x27/8"	26¢ 32¢ 32¢ 32¢ 47¢	

#### 1000 VOLTS DC WORKING

Stock No.	Type	Mfd	Size	EACH
19 L 072 19 L 073 19 L 074 19 L 078 19 L 079	10T5 10D1 10D15 10D2 10D22	.0005 .001 .0015 .002	3/8 x1" 3/8 x1" 3/8 x1" 3/8 x1" 3/8 x1"	29c
19 L 081 19 L 082 19 L 083 19 L 084 19 L 088	10D3 10D4 10D47 10D5 10D68	.003 .004 .0047 .005 .0068	3/8 x1" 7/16 x1 1/4" 7/16 x1 1/4" 7/16 x1 1/4" 7/16 x1 1/4"	29c
19 L 089 19 L 090 19 L 091 19 L 092 19 L 093	10S1 10S15 10S2 10S22 10S3	.01 .015 .02 .022 .03	7/6×1 1/4" 9/6×1 1/2" 9/6×1 1/2" 9/6×1 1/2" 9/6×1 1/2"	29c
19 L 094 19 L 095 19 L 096 19 L 097 19 L 098	10S35 10S47 10S5 10S68 10P1	.035 .047 .05 .068 .10	11/16x17/8" 11/16x17/8" 11/16x17/8" 11/16x17/8" 11/16x17/8" 3/4x21/4"	29¢ 35¢ 35¢ 38¢ 44¢

#### 1600 VOLTS DC WORKING

19 L 050 19 L 051 19 L 052 19 L 053 19 L 054	16D1 16D15 16D2	.0005 .001 .0015 .002 .0022	⅓6×1 ¼″	
19 L 055 19 L 056 19 L 057 19 L 058 19 L 059	16D33 16D4 16D47	.003 .0033 .004 .0047 .005	<b>⅓6</b> x1 ⅓″	38c
19 L 060 19 L 061 19 L 062 19 L 063 19 L 064	16D68 16D7 16D75	.006 .0068 .007 .0075 .008	%6x1 ½*	
19 L 065 19 L 066		.01 .015	%6×1 ½″	
19 L 067 19 L 068 19 L 069 19 L 070 19 L 071	16S22 16S3 16S4	.02 .022 .03 .04 .05	11/6x17/8" 11/6x17/6" 11/6x17/8" 11/6x17/8" 3/4x21/4" 3/4x21/4"	4lc

### 6000 VOLTS DC WORKING

9 L 075   60T5   .0005   19 L 076   60D1   .001   .005   .005   .005	9/16×1 1/2" 790
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#### 10.000 VOLTS DC WORKING

Stock No.	Туре	Mfd	Size	NET
19 L 080	100T5	.0005	11/16x17/8"	88¢

#### 12,500 VOLTS DC WORKING Stock No. Mfd Size Туре 11/6x17/8" I.00 19 L 085 125T25 .00025

#### PM MOLDED MYLAR TUBULARS

A wide selection of high-quality, molded tubular capacitors designed to withstand severe operating conditions and high temperature applications. Feature mylar poly-ester film dielectric material. Temperature range is -55° C to +85° C—derate 90% of rated voltage at 100° C and derate 50% at 130° C.

### 200 VOLTS DC WORKING

Stock No.	Туре	Mfd.	Size	NET
14 L 273	PM2S2	.02	3/8×11/4"	15¢
14 L 274	PM2S5	.05	3/8 x 1 1/4"	15¢
14 L 275	PM2P1	101.	7/16×1 1/4"	21¢
14 L 276	PM2P22	.22	1/2 x1 1/2"	24¢
14 L 277	PM2P25	.25	%6x1%6"	26¢
14 L 278	PM2P47	.47	5/8x17/8"	35¢
14 L 279	PM2P5	.50	5/8×17/8"	35¢
14 L 286	PM2W1	1.00	3/4×21/4"	56¢

### 400 VOLTS DC WORKING

400 VOLIS DE WORKING							
14 L 293	PM4S1	.01	5/16×1"	15¢			
14 L 294	PM4S2	.02	3/8×11/4"	15¢			
14 L 295	PM4S5	.05	7/16×11/4"	18¢			
14 L 296	PM4P1	.10	1/2 x 1 1/2"	21¢			
14 L 297	PM4P22	.22	5/8×17/8"	29¢			
14 L 298	PM4P25	.25	5/8x17/8"	32¢			
14 L 299	PM4P47	.47	3/4×21/4"	47¢			
14 L 243	PM4P5	.50	3/4×21/4"	50¢			
14 L 244	PM4W1	1.00	1 x 21/6"	85#			

Non-inductive construction insures low resistance connections and low RF impedance. Rugance connections and low Kr impedance. Rugged thermoset assembly firmly secures leads and sections making it possible to withstand extremes of handling, shock, vibration and soldering temperatures. Moisture resistance exceeds JAN-C-91 or MIL-C-25A requirements. Av. shpg. wt., 3 oz.

### **600 VOLTS DC WORKING**

Stock No.	Туре	Mfd	Size	NET
14 L 158	PM6T5	.0005	5/16×1"	15¢
14 L 159	PM6D1	.0010	5/16×1"	15¢
14 L 167	PM6D22	.0022	5/16×1"	15¢
14 L 169	PM6D47	.0047	3/8×11/4"	
14 L 178	PM6S1	.010	3/8 x 1 1/4"	18¢
14 L 179	PM6S15	.015	3/8 x 1 1/4"	18¢
14 L 180	PM6S22	.022	7/6 x 1 1/4"	18¢
14 L 182	PM6S47	.047	1/2 x 1 1/2"	24¢
14 L 183	PM6S68	.068	9/16×19/16"	24¢
14 L 184	PM6P1	.10	5/8×17/8"	26¢
14 L 197	PM6P22	.22	3/4×21/4"	38¢
14 L 198	PM6P33	.33	1 ×21/8"	53¢
14 L 199	PM6P47	.47	1 ×21/8"	68¢

PM Capacitor Kit. In handy plastic case with 10 each .001, .005, .02, .047, .10; 12 each .01, .05; and 6—.002. All are rated at 600 WVDC. Shpg. wt., 3 lbs.

### INDUSTRIAL CAPACITORS

### TYPE TAN "SUB-MINIATURE" TANTALUM FOIL ELECTROLYTIC **CAPACITORS**



Remarkably small subminiature size Tantalum electrolytic capacitors. Especially well suited for applications in transistor circuits size %6" long; 3/6" diameter. From - 55° C. to +85° C. Standard capacitance tolerance is ±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 mfd per volt at room temperature. Terminals are solid, tinned-wire leads 1½' long. Av. shpg. wt., 2 oz.

1 /2 long. Av. snpg. wt., 2 oz.						
NET EACH	Volts DC	Mfd	Mfr's Type	Stock No.		
1.62	3 3 4 6	1.0 2.0 8.0 4.0 1.0	TAN 76 TAN 68 *TAN 77 TAN 65 TAN 60A	19 L 300 19 L 301 19 L 302 19 L 303 19 L 304		
1.62	10 10 10 10	4.0 0.5 1.0 2.0 3.0	*TAN 78 TAN 69 TAN 56A TAN 58A *TAN 79	19 L 305 19 L 306 19 L 307 19 L 308 19 L 309		
1.62	15 20 25 30	2.0 0.25 1.75 1.5	*TAN 59A TAN 70 *TAN 80 *TAN 81	19 L 310 19 L 311 19 L 312 19 L 313		
1.62	40 40 50	0.1 1.0 0.8	TAN 71 *TAN 82 *TAN 83 *TAN 84	19 L 3 14 19 L 3 15 19 L 3 16		



### FB HIGH-CAPACITY **LOW-VOLTAGE TYPES**

Highly dependable capacitors hermetically ringily dependance capacitors in elementary 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 conections. Av. shpg. wt., 6 oz.

Stock No.	Mfr's Type	Mfd	Volts DC	Size	NET EACH
	FB 5005	500	50	13/8x31/8"	2.29
19 L 321	FB 5010	1000	50	13/8×41/8"	4.12
	FB 5020	2000	50	13/4 x 4 1/8"	5.35
19 L 323	FB 5040	4000	50	21/2x41/8"	7.35
19 L 355	FB 2510	1000	25	13/8x31/8"	2.82
	FB 2520			13/8x41/8"	3.38
	FB 2540	4000	25	2x4 1/8"	5.59
	FB 2550	5000	25	21/2x41/8"	6.47
19 L 353	FB 1520	2000	15	13/8x31/8"	2.76
19 L 354	FB 1560	6000	15	2x41/8"	5.88



### TYPE MP "PUP" METAL END-CAP **CARDBOARD TUBULARS**

CARDBOARD IUBULARS

Self-healing, metallized cardboard tubulars.
Lightweight, compact, and made to last. Waximpregnated and dip-sealed against humidity.
Bare wire leads firmly anchored in metal endcaps. Temperature range: -40° to +60°.

Extended foil construction; non-inductively
wound. High insulation resistance, low power
factor and low capacity change. Tolerance,

±20%. Av. shgs. wt., 2 oz.

200 VOITS DC WORKING

200 VOLIS DE WORKING						
Stock No.	Mfr's Type	Mfd	Size	1-24, EACH		
14 L 928 14 L 929 14 L 930	2S5 2P1 2P25	.05 .10 .25	3/8 x 5/8" 3/8 x 5/8" 15/16 x 5/8"	.43 .46 .67		
14 L 931 14 L 932 14 L 924	2P5 2W1 2W2	.5 1.0 2.0	15/32X1 1/8" 9/16X1 1/8" 5/8 X1 5/8"	.78 1.05 1.42		
600 VOLTS DC WORKING						

Mfr's Type Mfd Size 3/8 x 5/8" 15/32 x 1 1/8" 5/8 x 1 1/8" 23/32 x 1 5/8" .44 .57 .90 .01 .25

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.

# 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. Inadividually tested for accuracy. Tinned bras wire leads. Values are ±20%. Rated at 500 WVDC, 1000 v. DC test, except \*300 WVDC, 600 v. DC test. Shpg. wt., 2 oz.

#### TYPE 5W

Size, 51/64x15/32x7/32". With 11/4" tinned leads.

No.	Туре	Mfd	EACH		
4 L	5W5V5	.000005	15c		
4 L      2	5W5Q1	.00001			
4 L    3	5W5Q2	.00002			
4 L    00	5W5Q25	.000025			
4 L    01	5W5Q3	.00003			
4 L  02	5W5Q4	.00004	I2c		
4 L  03	5W5Q5	.00005			
4 L  14	5W5Q7	.00007			
4 L  04	5W5T1	.0001			
4 L  05	5W5T15	.00015			
4 L  06	5W5T2	.0002			
14 L 107	5W5T25	.00025	15c		
14 L 110	5W5T3	.0003			
14 L 108	5W5T4	.0004			
14 L 109	5W5T5	.0005			

#### TYPE 1W

Size 13/c" square v 1/" With 11/" tinned loads

Dize, /16 bqt	141CA 74 . 1	WILLII 174 C.	inned leads,
14 L 131	1W5T6	.0006	I5c
14 L 132	1W5T7	.0007	
14 L 120	1W5T8	.0008	
14 L 136	1W5T82	.00082	
4 L  33	1W5T9	.0009	5¢
4 L  21	1W5D1	.001	8¢
4 L  22	1W5D15	.0015	8¢
4 L  23	1W5D2	.002	24¢
14 L 124	1W5D25	.0025	26¢
14 L 125	1W5D3	.003	29¢
14 L 126	1W5D4	.004	32¢
14 L 127	1W5D5	.005	35¢

#### TYPE 1D

Size, 13/6" square x 5/6". With 11/4" tinned leads.

14 L 128	1D5D6	.006	44¢
14 L 129	1D3D8*	.008	59€
14 L 139	1D3D82*	.0082	59¢
14 L 130	1D3S1*	.01	71¢

### "SUPER MICADON" **ENCAPSULATED** MOLDED **MIDGET MICAS**



Latest design "Super Micadon," midget mica capacitors. Hermetically sealed construction. Highly stable over temperature range from 55° to +130° C. Ideal for printed circuits. Tolerance: ±5%. All are rated 500 WVDC.

### TYPES 1A AND 1AD

Size: Type 1A, 5%4'' square x %2''; Type 1AD, 5%4'' square x 1%2''. Tolerance  $\pm 5\%$ . Shpg. wt., 2 oz.

No.	Туре	Mfd	NET
14 L 998	1A5D39	.0039	1.27
14 L 979	1A5D51	.0051	1.32
14 L 980	1A5D68	.0068	1.47
14 L 981	1A5D82	.0082	1.47
14 L 982	1A5S1	.01	1.47
14 L 983	1A5S15	.015	1.79
14 L 984	1AD5S2	.02	2.09

#### TYPE 5A

Size,  $1\frac{5}{2}$  x  $5\frac{1}{6}$  x  $\frac{7}{32}$ ". Tolerance  $\pm 5\%$  or 1 mmf whichever is greater. Shpg. wt., 2 oz.

	_		
No.	Туре	Mfd	NET
14 L 995	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 quan-tities 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,
ALLIED RADIO CORPORATION
100 N. Western Avenue Chicago 80, Illinois

### 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 10 or more.

#### **600 VOLTS DC WORKING**

COO TOLIS DE MORRINO				
No.	Туре	Mfd	Size	NET
73 L 604	6005	.5	21/8×113/6×11/6"	2.51
73 L 600	6010	1	21/8×113/6×11/6"	2.68
73 L 601	6020	2	27/8×113/6×11/6"	3.20
73 L 602	6040	4	33/8×21/2×13/6"	4.32
73 L 664	6050	5	4 <sup>3</sup> / <sub>4</sub> ×1 <sup>1</sup> / <sub>16</sub> ×1 <sup>1</sup> / <sub>16</sub> "	4.69
73 L 687	6060	6	4 <sup>5</sup> / <sub>8</sub> ×2 <sup>1</sup> / <sub>2</sub> ×1 <sup>3</sup> / <sub>16</sub> "	5.05
73 L 603	6080	8	3 <sup>1</sup> / <sub>3</sub> / <sub>16</sub> ×3 <sup>3</sup> / <sub>4</sub> ×1 <sup>1</sup> / <sub>4</sub> "	6.18
73 L 650	6100	10	4 <sup>5</sup> / <sub>8</sub> ×3 <sup>3</sup> / <sub>4</sub> ×1 <sup>1</sup> / <sub>4</sub> "	6.64

#### 1000 VOLTS DC WORKING

73 L 609	10001	.1	2x113/16x11/16"	1 2.25
73 L 613	100025	.25	21/8x113/16x11/16"	2.60
73 L 614	10005	.5	21/8x113/6x11/16"	2.67
73 L 605	10010	1	2 1/8 x 1 13/16 x 1 1/16"	2.88
73 L 606	10020	2	4x113/6x11/16"	3.61
73 L 607	10040	4	45/8×21/2×13/16"	4.84
73 L 608	10080	8	37/8x33/4x13/4"	6.92
73 L 651	10100	10	45/8x33/4x13/4"	7.93
73 L 665	10150	15	$4\frac{3}{4}$ x $3\frac{3}{4}$ x $2\frac{1}{2}$ "	10.82

#### 1500 DC VOLTS WORKING

73 1 610: 15010 : 1 14-113/ -11/ #

73 L 6 1 1 73 L 6 1 2 73 L 6 5 2	15040	4	4½x2½x1½ 4½x2½x1½″ 4½x3¾x1¼″ 4¾x3¾x3¾	4.68 6.34 11.47	
				-	

#### 2000 VOLTS DC WORKING

No.	Туре	Mfd	Size	NET
73 L 618	20001	.1	2½8x1½6x1½6"	3.71
73 L 619	20005	.5	2½8x1⅓6x1½6"	4.14
73 L 615	20010	1	3¾8x2½x1¾6"	4.64
73 L 616	20020	2	4x3¾x1¼"	5.73
73 L 617	20040		3 <sup>1</sup> 3/ <sub>16</sub> x3 <sup>3</sup> / <sub>4</sub> x2 <sup>1</sup> / <sub>4</sub> "	8.00
73 L 689	20050		4 <sup>3</sup> / <sub>4</sub> x3 <sup>3</sup> / <sub>4</sub> x3 <sup>3</sup> / <sub>16</sub> "	9.07
73 L 690	20080*		4 <sup>3</sup> / <sub>4</sub> x3 <sup>3</sup> / <sub>4</sub> x3 <sup>3</sup> / <sub>16</sub> "	12.09

### 2500 VOLTS DC WORKING

73	L	620	2500 2501 2504	10	1 4	31 4x	/2x33 /4x33 :33/4x	4×1 4%16	4"	1	6.	47 59 03
		3	3000	VO	LTS	DC	WO	RKIN	1G			

73 L 666	30001	.1	2x2½x1¾6"	6.96
73 L 667		.25	2 ½ x2 ½ x1 3/16"	7.40
73 L 668	30005	.5	37/8x21/2x13/16"	8.08
73 L 625	30010	1	313/16x33/4x21/4"	9.62
73 L 626	30020*	2	4 1/8 x 3 3/4 x 3 3/16" 4 3/4 x 3 3/4 x 4 9/16"	12.75
73 L 656	30040*	4	4 <sup>3</sup> / <sub>4</sub> x3 <sup>3</sup> / <sub>4</sub> x4 <sup>9</sup> / <sub>16</sub> "	17.83

#### ACCO VOLTE DE WORKING

4000 AOF!	3 DC WORKING	
73 L 693 40005	.5  4x3 <sup>3</sup> / <sub>4</sub> x2 <sup>1</sup> / <sub>4</sub> "	9.01
73 L 657 40010	1  5x3 <sup>3</sup> / <sub>4</sub> x2 <sup>1</sup> / <sub>4</sub> "	11.37
73 L 659 40040A*	4  8x3 <sup>3</sup> / <sub>4</sub> x4 <sup>9</sup> / <sub>16</sub> "	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 under severe heat and humidity conditions. Meet "F" characteristics of JAN-C-5. Ideal for aircraft, submarine, marine and tropical applications. Metal shell. Tol., # 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 650-99.



No.	Type	Mfd	Size	NET
14 L 620	6005	.05	113/16x1x3/4"	1.69
14 L 621	6010	.1	113/16X1X3/4"	li .73
14 L 622		.25	113/16x1x3/4"	18.1
14 L 623		.5	113/16x1x7/8"	1.93
14 L 624	6100	1.0	$2x1\frac{3}{4}x\frac{7}{8}$ "	2.20
14 L 625	6200	2.0	2x2x11/8"	2.94
14 L 626		.0505	113/16x1x3/4"	2.15
14 L 627		.11	113/16x1x3/4"	2.18
14 L 628		.2525	113/16x1x7/8"	2.20
14 L 629	6055	.55	$2x1\frac{3}{4}x\frac{7}{8}$ "	2.53

I	No.	Туре	Mfd	Size	NET
	14 L 630 14 L 631 14 L 633 14 L 613	6111 6555	1.0-1.0 .111 .555	2x2x1½" 11¾6x1x¾" 2x2x1½" 11¾6x1x¾"	3.12 2.47 3.38 1.75
	14 L 614	10010*	.1	113/16x1x3/4"	1.85
	14 L 615 14 L 616 14 L 618 14 L 619	10050* 10011*	.5 .11	113/6x1x3/4" 2x13/4x13/6" 113/6x1x3/4" 2x13/4x13/6"	1.89 2.02 2.35 2.47

### TLA & TNAD TRANSMITTING CAPACITORS

Designed to provide high safety factor and exceptionally long life. Inverted mtg. in ½" hole. \*Have two 10-32 screw terminals and two solder lug terminals insulated from case; others have one screw terminal and one solder-type ground lug. Meet MIL-C25A test. 2½x1½" diameter except ±4½x1½" diameter. With hardware. Av. shpg. wt., 2 lbs.



No.	Туре	Mfd	Volts	NET	No.	Type	Mfd	Volts	NET
73 L 630 73 L 632	TLA6020 TLA6040 †	2 4	600 600	2.70 3.70		TNAD6040 *† TNAD10020*†		600 1000	4.17 3.70

### "SILVER MIKE" MICA CAPACITORS

Silvered mica midget

survered 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 maintained. Tolerance, ±5%, 500 volts DC working, 1000 volts DC test. Has tinned leads. Av. shpg. wt., 2 oz.







### TYPE 22R

Highly stable micas. For use in circuits where accuracy and stability of capacity are of prime importance. Tolerance, ± 5%. All rated 500 WVDC; tested at 1000 VDC. Size: ½x1%x2 3%x1 Vi. '' timed leade Av show, xvt.''

3/16". 11/2" tinned leads. Av. shpg. wt., 2 oz.							
No.	Туре	Mfd	EACH				
14 L 850	22R5Q1	.00001	24c				
14 L 851	22R5Q15	.000015					
14 L 852	22R5Q2	.00002					
14 L 853	22R5Q22	.000022					
14 L 854	22R5Q22	.000024					
14 L 855	22R5Q27	.000027	24c				
14 L 856	22R5Q3	.00003					
14 L 857	22R5Q33	.000033					
14 L 859	22R5Q39	.000039					
14 L 861	22R5Q47	.000047					
14 L 862	22R5Q5	.00005	24c				
14 L 863	22R5Q51	.000051					
14 L 864	22R5Q56	.000056					
14 L 865	22R5Q62	.000062					
14 L 866	22R5Q68	.000068	24c				
14 L 867	22R5Q75	.000075					
14 L 868	22R5Q82	.000082					
14 L 870	22R5T1	.0001					
14 L 872	22R5T12	.00012	26c				
14 L 873	22R5T13	.00013					
14 L 874	22R5T15	.00015					
14 L 889	22R5T16	.00016					
14 L 890	22R5T16	.00018					
14 L 875	22R5T2	.0002					

# TYPE 5R

Size,  $51/64x^{15}/32x^{7}/32^{7}$ . With  $11/4^{7}$  tinned leads.

No.	Туре	Mfd	NET
14 L 386	5R5T33	.00033	.32
14 L 387 14 L 388	5R5T39 5R5T47	.00039	.38
14 L 389	5R5T51	.00051	:41
14 L 394	5R5T3	.0003	-32
14 L 395 14 L 396	5R5T4 5R5T5	.0004 .0005	.38 .41

### TYPES IR AND IDR

Size: Type 1R, 13/16" square x 1/4"; Type 1DR,

13/16" square x	5/16". *300 volt	s working	
14 L 341 14 L 342 14 L 343 14 L 380	1R5T75 1R5T82 1R5D1 1R5D15	.00075 .00082 .001 .0015	.56 .56 .65
14 L 381	1R5D2	.002	.79
14 L 382	1R5D25	.0025	1.06
14 L 383	1R5D3	.003	1.21
14 L 384	1R5D4	.004	1.26
14 L 385	1DR5D5	.005	1.32
14 L 344	1DR3D68*	.0068	1.47
14 L 345	1DR3D75*	.0075	1.47
14 L 346	1DR3D82*	.0082	1.47
14 L 347	1DR3S1*	.01	1.47

# 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 effort write 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 with glass-to-metal, solder-seal terminals. 96P-S2 units are inserted-tab type construction; 196P-S2 are extended-foil type; use where losses at resonance are a factor. Tol., ±10%. Av. shpg. wt., 4 oz.

#### SERIES 96P-S2

No.	Type	Mfd	WVDC	Size	NET
15 L 911	10391	.01	100	3/16X3/4"	1.94
15 L 926	10491	.1	100	5/16X7/8"	2.13
15 L 925	47491	.47	100	9/16X11/8"	2.48
15 L 044	10591	1.0	100	9/16X11/8"	2.80
15 L 912	10392	.01	200	15/64X3/4"	2.04
15 L 913 15 L 914 15 L 915 15 L 924 15 L 923	22392 47392 22492 10492 47492	.022 .047 .22 .1 .47	200 200 200 200 200 200	15/64X <sup>3</sup> /4" 5/16X <sup>3</sup> /8" 13/32X1 <sup>3</sup> /8" 13/32X <sup>3</sup> /8" 9/16X1 <sup>3</sup> /8"	2.04 2.15 2.36 2.21 2.68
15 L 916	10592	1.0	200	43/64X1/8"	3.09
15 L 045	47393	.047	300	5/16X /8"	2.18
15 L 046	10493	.1	300	13/32X1 1/8"	2.24
15 L 047	47493	.47	300	9/16X1 /8"	2.78
15 L 048	10593	1.0	300	34 X2 1/8"	3.33
15 L 917	10394	.01	400	15/64X3/4"	2.11
15 L 918	22394	.022	400	5/16X7/8"	2.18
15 L 919	47394	.047	400	13/32X1/8"	2.26
15 L 922	10494	.1	400	13/32X13/8"	2.39
15 L 920	22494	.22	400	9/16X13/8"	2.68
15 L 921	47494	.47	400	11/ <sub>16</sub> x1/ <sub>8</sub> "	3.09
15 L 049	10594	1.0	400	1x1/ <sub>8</sub> "	3.71
15 L 927	22296	.0022	600	15/ <sub>64</sub> x <sup>3</sup> / <sub>4</sub> "	2.07
15 L 902	47296	.0047	600	15/ <sub>64</sub> x <sup>3</sup> / <sub>4</sub> "	2.11
15 L 903	68296	.0068	600	15/ <sub>64</sub> x <sup>3</sup> / <sub>4</sub> "	2.11
15 L 904 15 L 905 15 L 906 15 L 907 15 L 908 15 L 910	10396 22396 47396 68396 10496 47496	.01 .022 .047 .068 .1	600 600 600 600 600	5/16X 1/8" 5/16X 1/8" 1 3/32 X 1 1/8" 1 3/32 X 1 3/8" 9/16 X 1 1/8" 3/4 X 2 1/8"	2.17 2.22 2.32 2.42 2.57 3.35

#### SERIES 196P-S2

No.	Type	Mfd	WVDC	Size	NET
15 L 444 15 L 445	10291 33291	.001	100 100	11/64X 1/8" 11/64X 1/8"	1.98
15 L 446 15 L 447 15 L 448	47291 47391 10492	.0047 .047 .1	100 100 200	1 1/64X3/4 " 5/16X3/8" 1 3/32X11/8"	2.00 2.18 2.30
15 L 449 15 L 454	47293 47393	.0047	300 300	15/64X <sup>3</sup> / <sub>4</sub> " 13/ <sub>32</sub> X <sup>7</sup> / <sub>8</sub> "	2.11
15 L 455 15 L 456 15 L 457	33294 47394 10494	.0033 .047	400 400 400	15/64X3/4" 13/32X11/8" 9/16X15/8"	2.15 2.38 2.58
15 L 458 15 L 459 15 L 546	10296 22296 10396	.001 .022 .01	600 600 600	15/64X3/4" 15/64X3/4" 5/16X7/8"	2.15 2.15 2.28
15 L 547 15 L 548	47396 10496	.047 .1	600 600	13/32x13/8" 9/16x15/8"	2.49 2.73

#### **CP-53 CAPACITORS**

Non-inductive oil-filled bathtub o capacitors; hermetically sealed. JAN C-25. Suffix K has tol. of ±10%; suffix V, +20%, -10%. For use up to 85° C. 600 WVDC except \*1000 WVDC. 5 oz.

No.	JAN No.	Mfd	Size	NET			
15 L 727	B1EF503K	.05	113/16x1x3/4"	1.77			
15 L 736	B1EF104K	.1	113/16X1X3/4"	1.83			
15 L 737	B1EF254K	.25	113/16x1x3/4"	1.89			
15 L 738	B1EF504K	.5	113/16x1x1"	2.05			
15 L 739	B1EF105K	1.0	2x1¾ x1"	2.39			
15 L 740	B1EF205K	2.0	2x2x11/8"	3.19			
15 L 741	B4EF104V	.11	113/16x1x3/4"	2.48			
15 L 742		.2525	113/16x1x1"	2.56			
15 L 743		.55	2x1¾ x1"	2.92			
15 L 744	B5EF104V	.111	2x1¾ x¾"	2.85			
15 L 745		.25	113/16x1x1/8"	2.00			
15 L 735		.1	113/16x1x3/4"	1.94			
15 L 746	B4EG254V*	.2525	2x1¾ x%"	2.80			
15 L 747	B1EG504K*	.5	2x1¾ x%"	2.14			
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-up, write or phone our Industrial Division.

### TYPE CP70 PAPER CAPACITORS





Type B

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.

#### TYPE B

No.	JAN No.	Mfd	WV	Size	NET
15 L 262 15 L 263 15 L 264 15 L 265	B1EF405K B1EF605K	4.0 6.0	600 600	113/6x11/6x31/4" 21/2x3/6x31/8" 33/4x11/4x31/8" 33/4x13/4x4"	3.92 5.47 6.48 8.69
	B1EG205K	2.0	1000	113/16x11/16x2/8" 113/16x11/16x43/4" 33/4 x11/4 x3/8"	3.64 4.68 6.32

#### TYPE F

15 L 563 EI		.5		113/16x11/16x21/4"	2.88
15 L 564 E1	LEG104 K	.1	1000	113/16x11/16x15%"	2.68
15 L 565E1	LEG254 K	.25	1000	113/16X11/16X21/4"	3.03
15 L 566 EI	LEG105 K			113/16x11/16x2%"	4.10
15 L 567 EI	EG205 K	2.0	1000	113/16x11/16x43/4"	5.36
15 L 568 E1	LEG405 K	4.0	1000	3% x1% x3%"	6.77
15 L 569 EI	FG605 K	6.0	1000	3% x1% x4"	8.38
15 L 590 EI				3% x1% x4% *	8.97
15 L 591 E1		15.0	1000	3¾ x3¾6x4¾"	13.02
15 L 592 E1	LEH205K	2.0	1500	21/2 x1 3/16x43/4"	6.47
15 L 593 E1	IEH405K	4.0	1500	3¾ x1¾ x4¼ "	8.68
15 L 594 E				2½ x13/16x2½"	4.09
15 L 595 EI	E1254K	.25	2000	2½x13/16x2½"	4.43
15 L 596 E1				21/2 x1 3/16x43/4"	5.61
15 L 527 E1				3% x1% x4%"	6.64
15 L 528 E				3% x2% x5%"	
13 F 25810	IEJ4UDK I	4.0	2000	1374 XZ74 X378"	9.36

For OEM prices on CP70 capacitors (in lots of 10 and up), write to Allied's Industrial Division.

### TYPE 118P-S2 METALLIZED SUBMINIATURES



Improved, highly reliable metallized-paper capacitors. Hermetically sealed. Will operate at rated voltage up to 125°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.

#### 200 VOLTS DC WORKING

No.	Туре	Mfd	Size	NET
15 L 256	10402	.1	5/16X13/16"	1.61
15 L 257 15 L 258	15402 22402	.15	5/16×11/16" 13/32×13/16"	1.65
15 L 275	33402	.33	13/32×11/16"	1.80
15 L 276	47402 68402	.47	1/2 x 1 1/16"	1.90
15 L 277 15 L 278	10502	1.0	1/2 x1 1/16" 9/16 x 1 1/16"	1.98
15 L 279	20502	2.0	43/64×113/16"	3.85
15 L 282		3.0	43/64×113/16"	4.21
15 L 283 15 L 284	40502 50502	4.0 5.0	3/4 x1 13/16" 1 x1 13/16"	5.04
i5 L 287	60502	6.0	1x113/16"	5.96

#### 400 VOLTS DC WORKING

15 L 293   10404   .1   1	1.71
15 L 294   22404   .22   9	%x15%6" 1.88
15 L 295   33404   .33   9	%x19%6" 2.08
15 L 223   10504   1.0   1	34x113%6" 2.91
15 L 224   20504   2.0   1	1x113%6" 4.80

#### 600 VOLTS DC WORKING

		-		
15 L 2281	10306	.01	5/16X13/16#	1.59
15 L 235	10406	.1	1/2 x1 1/16"	1.77
15 L 237	47406	.47	43%4×19/16"	2.64
15 L 238	68406	.68	43/64×113/16"	2.90
15 L 239	10506	1.0	1x113/16"	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° C. to +85° C. Useful for applications requiring up to 150 working volts DC in military or industrial equipment, including control equipment, computers, airborne radar and communication equipment. Can be used in low temperature conditions where aluminum-foil capacitors are inoperative. Have extremely low leakage current. Valuable for use where small physical size, stable electrical characteristics, and long service life are important. Silver-plated metal case. Polarized; shell should be insulated from chassis unless chassis is negative potential. Av. shpg. wt., 2 oz.

Stock No.	Mfr's Type	Mfd	DC WV	Size	NET EACH
15 L 332	102D107	35	6	9/32X 1/8"	7.64
15 L 333	102D108	100	6	3/8 x 1 7/16"	12.47
15 L 334	102D112	25	10	9/32X 1/8"	7.64
15 L 335	102D116	4.5	15	3/16X 1 1/16"	4.99
I 5 L 336	102D121	3	25	3/16X 1 1/16"	4.99
15 L 337	102D122	12	25	9/32×1/8"	7.64
I 5 L 338	102D123	35	25	3/8 x 1 7/16"	12.47
I 5 L 339		70	25	3/8 x 2 1/8 "	17.00
15 L 343		2.5	30	3/16X 1 1/16"	4.99
15 L 344	102D127	10	30	9/32X 1/8"	7.64
15 L 345	102D131	1.5	50	3/16X 1 1/16"	4.99
15 L 346	102D132	6	50	9/32×1/8"	7.64
15 L 347	102D133	20	50	3/8 x 2 1/8"	12.47
15 L 348		40	50	3/8 x 2 1/8"	17.00
I 5 L 349	102D137	5	60	9/ <sub>32</sub> x 1/8"	7.64
15 L 393	102D141	1	75	3/16X 1 1/16"	4.49
15 L 394		.5	150	3/16X 1 1/16"	4.49
I 5 L 395		. 2	150	9/32X1/8"	7.64
15 L 396		.7	150	3/8 x 1 7/16"	12.47
15 L 397	102D154	14	150	3/8 x 2 1/8 "	17.00



Tiny, extremely stable tantalum capacitors. Ideal for transistorized circuitry in the most critical military and commercial applications. Provide highly reliable operation throughout temperature range of  $-80^{\circ}$  to  $+85^{\circ}$  C. Hermetically-sealed metal cases. Meet MIL-C-3965 requirements. Tolerance,  $\pm 20\%$ . Av. wt., 2 oz.

Stock	Mfrs	Mfd	DC	ا م- ا	NET .
No.	Type	IVII	w٧	Size	EACH
74 L 670	150D158	6.8	6	1/8 x 1/4 "	3.64
74 L 671	150D164	60.0	6	1 1/64X 7/16"	3.81
74 L 672	150D172		10	1/8 x 1/4"	3.64
74 L 673	150D177	33.0	10	1 1/64×7/16"	3.81
74 L 674	150D178	40.0	10	1 1/64X 7/16"	3.81 3.64 3.81 3.81
74 L 675	150D185	3.3	15	1/8 X 1/4 "	3 64
74 L 676	150D190	22.0	15	1 1/64×7/16"	3.81
74 L 677	150D195	1.5	20	1/8 x 1/4 "	3.64
74 L 678	150D196	2.2	20	1/8 x 1/4 "	3.64
74 L 679	150D199	6.8	20	1 1/64X 7/16"	3.81 3.64 3.64 3.81
74 L 680	150D200	10.0	20	1 1/64X 7/16"	3 81
74 L 681	150D259	15.0	20	1 1/64x 7/16"	3.81
74 L 682	150D242	.0047	35	1/8 X 1/4 "	3.29
74 L 683	150D244	.0068	35	1/8 x 1/4 "	3.29
74 L 684	150D246	.01	35	1/8 x 1/4 "	3.81 3.29 3.29 3.29
74 L 685	150D248	.015	35	1/8 x 1/4 "	3.29 3.29 3.29 3.29 3.29
74 L 686	150D250	.022	35	1/8 x 1/4 "	3.29
74 L 687	150D252	.033	35	1/8 x 1/4 "	3.29
74 L 688	150D254	.047	35	1/8 x 1/4 "	3.29
74 L 689	150D256	.068	35	1/8 x 1/4 "	3.29
74 L 690	150D258	1	35	1/8 x 1/4"	3.29
74 L 691	150D264	.22	35	1/8 x 1/4 "	3.64
74 L 692	150D265	.33	35	1/8 x 1/4 "	3,64
74 L 693	150D266	.47	35	1/8 x 1/4 "	3.64
74 L 694	150D267	.68	35	1/8 x 1/4 "	3.29 3.64 3.64 3.64 3.64
74 L 695	150D268	1.0	35	1/8 x 1/4"	3.64 3.81 3.81
74 L 696	150D269	1.5	35	1 1/64x 7/16"	3.81
74 L 697	150D270	2.2	35	1 1/64X 7/16"	3.81
74 L 698	150D271	3.3	35	11/64x7/16"	3.81 3.81 3.81
74 L 699	150D272	4.7	35	1 1/64 x 7/16"	3.81

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.

# Sprague Capacitors



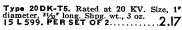
#### TYPE 68P PAPER MIDGETS

Midget-size capacitors, manufactured to extremely high standards. Ideal for replacement use or new design. May be used in portable and auto radios—wherever space is at a premium. Provide dependable service, even under adverse operating conditions. Provide reliable operation at ambient temperatures as high as 85 degrees Centigrade. Have high resistance to effects of humidity. Sizes given are diameter and length. Av. shpg. wt., 2 oz.

No.	Type	Mfd	W.V.	Size	EA.
15 L 820 15 L 821 15 L 822 15 L 823	68P26 68P27 68P28 68P29	.001 .002 .003 .004	600 600 600	1/4 x 1 1/16" 1/4 x 1 1/16" 9/32 x 1 1/16" 9/32 x 1 3/16"	2 ¢ 2 ¢ 2 ¢
15 L 824 15 L 825 15 L 826 15 L 827	68P30 68P31 68P32 68P33	.005 .006 .008 .01	600 600 600 600	9/32×13/16" 5/16×13/16" 5/16×1"	24¢ 24¢ 24¢ 26¢
15 L 828 15 L 829 15 L 830 15 L 832	68P34 68P35 68P36 68P40	.02 .05 .1	600 600 600 600	11/32×1" 15/32×11/8" 5/8×11/8" 5/8×11/6"	29¢ 32¢ 41¢ 47¢
15 L 831 15 L 800 15 L 802 15 L 803	68P37 68P1 68P3 68P4	.25 .001 .003 .004	600 400 400 400	5/8 x2" 1/4 x 1 1/16" 1/4 x 1 1/16" 1/4 x 1 1/16"	47¢ 21¢ 21¢ 21¢
15 L 804 15 L 805 15 L 806 15 L 807	68P5 68P6 68P8 68P9	.005 .006 .01 .02	400 400 400 400	1/4 x 1 3/6" 1/4 x 1 3/16" 5/16 x 1 3/16" 5/16 x 1 "	21¢ 21¢ 24¢ 26¢
15 L 808 15 L 843 15 L 844 15 L 845	68P10 68P21 68P38 68P22	.05 .1 .2 .25	400 400 400 400	13/32x1" 15/32x11/8" 5/8x11/8" 5/8x13/8"	29¢ 38¢ 41¢ 44¢
15 L 846 15 L 809 15 L 810 15 L 811	68P23 68P11 68P12 68P14	.5 .005 .006 .01	400 200 200 200	5/8 x25/16" 1/4 x1 1/16" 1/4 x1 1/16" 9/32 x1 1/16"	50¢ 21¢ 21¢ 24¢
15 L 812 15 L 813 15 L 814 15 L 836	68P15 68P16 68P17 68P18	.02 .05 .1	200 200 200 200 200	9/32×13/16" 5/16×1" 13/32×1" 15/32×11/8"	26¢ 29¢ 35¢ 38¢
15 L 837 15 L 838 15 L 815 15 L 816	68P24 68P25 68P19 68P20	.25 .5 .25 .5	200 200 100 100	1 1/32 x 1 1/8" 5 /8 x 1 3/8" 1 5/32 x 1 1/8" 5 /8 x 1 1/8"	41¢ 47¢ 41¢ 47¢

### **DOORKNOB CAPACITORS**

High-voltage, 500-mmf plastic capacitors for replacement use in all types of TV sets. Molsture-resistant, thermosetting molded plastic. Molded guard rings increase surface leakage path. Capacitor body has threaded ends and can take a wide variety of screw-in terminals. The 20DK-T5's are supplied with 14 terminals (2 of each type illustrated). Type 30DK-T5 is supplied with 2 terminals, \*see illustration.



Type 30 DK-T5. Rated at 30 KV. Size, 15% diameter, 114" long. Shpg. wt., 4 oz. 1.76

### **HYPASS 3-TERMINAL NETWORK CAPACITORS**

Feed-through type VHF bypass capacitors. Perform efficiently up to 150 mc. Reduce vibrator hash and harmonic radiation. Type 48P18 is for reduction of voltage regulator noise in mobile applications; leads rated at 40 amps. Type 80P3 leads rated at 20 amps. 48P18 and 80P3 have screw terminals. Wt., 2 oz.



No.	Туре	Mfd	WVDC	Size	NET
15 L 688 15 L 683 15 L 685 15 L 689	46P12 48P8 80P3	.002 .1 .1	600	1x1 <sup>13</sup> / <sub>6</sub> " 1/4x1 <sup>5</sup> / <sub>8</sub> " 1/ <sub>6</sub> x1 <sup>13</sup> / <sub>6</sub> " 11/ <sub>6</sub> x1 <sup>13</sup> / <sub>6</sub> " 1x1 <sup>9</sup> / <sub>6</sub> "	1.26

### **CAPACITOR INDICATOR**



### "BLACK BEAUTY" TELECAPS

Hi-temp molded tubulars. Highly resistant to heat and moisture; rugged; completely insulated. Special molded construction. 200 to 1000 v. types operate to 105° C; 1600 v. and up, operate to 85° C. 600-6000 v. types are oil impregnated. Av. shpg. wt., 3 oz.

# 200 VOLTS DC WORKING

No.	Туре	Mfd	Size	EA.
15 L 120	2TM-S2	.02	3/8×11/4"	15¢
	2TM-S47	.047	3/8×1 //4"	15¢
	2TM-S5	.05	3/8×1 /4"	15¢
	2TM-P1	1.1_	16×1 1/4"	2!¢
15 L 145	2TM-P15	.15	1/2×1 1/2"	21¢
15 L 146	2TM-P22	.22	5/8×17/8"	24¢
	2TM-P25	.25	5/8×17/8"	24¢
15 L 148	2TM-P47	.47	5/8 x 1 7/8"	35¢
	2TM-P5	.5	5/8 x 1 7/8"	35¢
15 L 124	2TM-M1	1.0	3/4×21/4"	53¢

#### 400 VOLTS DC WORKING

15 L 125 4T		.01	5/16×1" 3/4×11/4"	15¢
15 L 013 4T	M-S22	.022	3/8×1 1/4"	i8¢
15 L 014 4T		.047	7/6×1 1/4"	18¢
15 L 127 4T		.05	7/16×1 1/4"	18¢
15 L 015 4T		.068	1/2×1 1/2"	21¢
15 L 128 4T		.1_	1/2×1 1/2"	21¢
15 L 011 4T	M-P15	.15	5/8 x 1 7/8"	24¢
15 L 521 4T1		.2	5/8×17/8"	24¢
15 L 012 4T	M-P22	.22	5/8×17/8"	24¢
15 L 129 4T1	M-P25	.25	5/8×17/8"	24¢
15 L 010 4T1	M-P5	.5	3/4×21/4"	35¢

### 600 VOLTS DC WORKING

16 L 250	6TM-T1	.0001		1
16 L 251	6TM-T25	.00025		1.5
16 L 252 16 L 253	6TM-T4	.0004	5/16×1"	I5c
16 L 253	6TM-T5	.0005	7.10	
15 L 070	6TM-D1	.001		ŀ
15 L 084	6TM-D15	.0015		
15 L 071	6TM-D2	.002		
15 L 092	6TM-D22	.0022	5/16×1"	I5c
15 L 072	6TM-D3	.003		1
15 L 084 15 L 071 15 L 092 15 L 072 15 L 522	6TM-D33	.0033		l
15 L 073	6TM-D4	.004		
15 L 093	6TM-D47	.0047	3/8×11/4"	15c
15 L 093 15 L 074	6TM-D5	.005	78 A 1 74	100
15 L 075	6TM-D6	.006		
16 L 254	6TM-D68	.0068	3/8×11/4"	
15 L 523	6TM-D8	.008	3/8×11/4"	l
15 L 076	6TM-S1	.01	3/8×11/4"	18c
15 L 094	6TM-S15	.015	7/6×1 1/4"	100
15 L 077	6TM-S2	.02	7/6×1 1/4"	1
16 L 255	6TM-S22	.022	1/2×1 1/2"	
15 L 078	6TM-S3	.03	1/2×1 1/2"	21¢ 21¢
15 L 078 15 L 526 15 L 079 15 L 098 15 L 080	6TM-S33	.033	1/2 x1 1/2"	21¢
15 L 079	6TM-S4	.04_	1/2×11/2"	21¢
15 L 098	6TM-S47	.047	1/2 x1 1/2"	24¢
15 L 080	6TM-S5	.05	1/2×1 1/2"	24¢
15 L 081	6TM-S6	.06	5/8 x 1 7/8"	24¢
15 L 082 15 L 524 15 L 525 15 L 083	6TM-P1	.1_	5/8 x 1 7/8"	26¢ 29¢ 32¢ 32¢
15 L 524 15 L 525	6TM-P15	.15	3/4×21/4"	29¢
15 L 525	6TM-P2	.2_	3/4×21/4"	32¢
15 L 083	6TM-P25	.25	3/4×21/4"	32¢
16 L 260	6TM-P5	.5	1x23/8"	4/¢
16 L 261	TC-10	1.0	11/8x25/8"	73¢

### 1000 VOLTS DC WORKING

SPRAGUE

No.	Туре	Mfd	Size	EA.
15 L 929 15 L 930 15 L 931	10TM-T5 10TM-D1 10TM-D15 10TM-D2 10TM-D22	.0005 .001 .0015 .002	5/6x1" 5/6x1" 5/6x1" 3/8x1 1/4" 3/8x1 1/4"	290
15 L 936 15 L 937	10TM-D3 10TM-D5 10TM-D68 10TM-S1	.003 .005 .0068 .01	3/8×11/4"	290
15 L 940 15 L 941 15 L 942	10TM-S15 10TM-S2 10TM-S22 10TM-S3 10TM-S35	.015 .02 .022 .03 .035	1/2 x 1 1/2" 1/2 x 1 1/2" 1/2 x 1 1/2" 5/8 x 1 1/8" 5/8 x 1 1/8"	290
15 L 945 15 L 946	10TM-S47 10TM-S5 10TM-S68 10TM-P1	.047 .05 .068 .1	5/8 x1 7/8" 5/8 x1 7/8" 5/8 x1 7/8" 5/8 x1 7/8" 3/4 x2 1/4"	35¢ 35¢ 41¢ 44¢
	COO MOITE	DC WC	NEVILIA	

#### 1600 VOLTS DC WORKING

16 L 270:	MB-T5	1 .0005 t	3/8 x 1 1/4"	1
16 L 271	MB-D15	.0015	3/8 x 1 1/4"	00
15 L 158	MB-D2	.002	3/8 x 1 1/4"	138c
16 L 272	MB-D22	.0022	3/8 x1 1/4"	1
15 L 159	MB-D3	.003	1/6×1 1/4"	
16 L 273	MB-D33	.0033	7/16×1 1/4"	
15 L 160	MB-D4	.004	7/16×1 1/4"	۱
16 L 274	MB-D47	.0047	7/16×1 1/4"	38c
15 L [6]	MB-D5	.005	716×1 1/4"	
15 L 162	MB-D6	.006	½x1 ½"	İ
16 L 275	MB-D68	.0068		
15 L 163	MB-D7	.007	½x1½"	20-
15 L 164	MB-D75	.0075	72 X 1 72	300
15 L 165	MB-D8	.008		
15 L 166	MB-S1	.01	1/2 x1 1/2"	
15 L 167	M B-S15	.015	5/8 x 1 7/8"	4lc
15 L 168	M B-S2	.02	5/8 x1 7/8"	410
16 L 277	MB-S3	.03	5/8×17/8*	
16 L 278	MB-S4	.04	5/8 x 1 7/3"	4lc
16 L 280	TR-15	.05	3/4 x2 1/8"	710
16 L 281	TR-215	2x .015	3/4×2"	47¢

## 6000 VOLTS DC WORKING 15 L 853 is rated at 10,000 DC wk

	o racea ac	<b>20,</b> 000	DC WAS.	VUILS.
No.	Туре	Mfd	Size	EA.
15 L 851	TVM-356 TVM-216 TVM-256 TVM-351	.0005 .001 .005 .0005	1/2x11/2" 1/2x11/2" 5/8x11/8" 5/8x17/8"	79¢ 79¢ 79¢ 88¢

TK-1 KIT. A selection of 72 "Black Beauty" capacitors in plastic case. All are 600 volt—11 most-often used values. Compartmented case contains: 5—001, 5—002, 2—0047, 8—005, 8—02, 2—03, 15—01, 5—047, 12—05, 8—1, and 2—25. 11x6/yx2". Wt., 2½ lbs. 58 L 5 | 5. NET.

### CAN-TYPE DRY ELECTROLYTICS

Can-type electrolytic capacitors for replacement and original equipment use. Inverted screw-can mounting. Will replace old-style or standard-size units. With mtg. hardware.

# PLS "TINY MIKE"

525 Volts Surge—450 Volts Wkg.

An assortment of electrolytic capacitors with sections having separate positive leads and common negative leads. Feature etched-foil construction. Av. shpg. wt., 6 oz.

No.	Type	Mfd	Size	NET
15 L 700		4	13/8×27/6"	1.18
15 L 701		8	13/8×27/6"	1.29
15 L 702		12	13/8×27/16"	1.41
15 L 703		16	13/8×27/6"	1.44
15 L 709	PLS-20	20	13/8 x 2 1/16"	1.59
15 L 710		25	13/8×37/16"	1.71
15 L 711	PLS-30	30	13/8×37/6"	1.76
15 L 712	PLS-40	40	13/8×315/16"	1.85
15 L 704	PLS-48	4-8	13/8×215/16"	1.73
15 L 705	PLS-88	8-8	1 1/2 x 215/16"	1.76
			1 1/2 x 215/16"	2.94
			1 1/2 x 21 5/16"	1.94
15 L 708	PLS-216	16-16	1 1/2 x 31 5/16"	2.09

#### LS INVERTED SCREW CAN

B Negative can. Av. shpg. wt., 6 oz.

15 L 020	LS-8	8	13/8×215/16"	1.29
15 L 0211	LS-12	12	13/8×215/16"	1.41
15 L 022	LS-16	16	13/8×215/16"	1.44
15 L 025	LS-20	20	13/8×215/16"	1.59
15 L 026	LS-25	25	13/8×37/16"	1.71
15 L 027	LS-30	30	13/8×37/6"	1.76
15 L 028	LS-40	40	13/8×315/16"	1.85
15 L 023	LS-88	8–8	13/8×21/4"	1.76

#### SC INVERTED SCREW CAN 600 Volts Surge-475 Volts Wkg.

A

B Threaded bushing mount. Negative can. Insulating washer. Av. shpg. wt., 6 oz.

No.	Type	Mfd	Size	NET
15 L 320	SC-4	4	1x37/16"	1.50
15 L 321	SC-8	8	13/8×47/6"	1.62
15 L 323		12	13/8×47/16"	1.73
15 L 324	SC-16	16	1 1/2×4 1/16"	1.85
15 L 325	SC-88	8–8	13/8×41/4"	2.41

#### **CL INVERTED SCREW CAN** 600 Volts Surge-475 Volts Wkg.

A Like "SC" but can insulated from filter section. Pos. and neg. leads. Wt., 8 oz.

#### WR REPLACEMENTS FOR WET ELECTROLYTICS 600 Volts Surge-500 Volts Wkg.

B High-voltage dry electrolytics. Designed to replace wet types. Will withstand high peak voltages. Lug terminals; can is negative. With insulating washers. Inverted screw can mountings. Av. shpg. wt., 8 oz.

	No.	Туре	Mfd	Size	NET
	15 L 040	WR-8	8	13/8×315/16"	1.68
	15 L 041	WR-16	16	13/8×47/6"	1.94
	15 L 042	I WR-25	25	11/2x57/6"	2.20

# **Sprague Capacitors**



### TVA AND TU ATOMS—MIDGET ELECTROLYTICS

Very compact, metal-cased dry electrolytics. Engineered especially for replacements in tough TV applications—such as power supplies, decoupling circuits, cathode bypass circuits, etc. Will withstand the high surge voltages and high ripple currents common in TV circuits. Operate efficiently at temperatures as high as 85°C. \*Separate negative lead. Av. shpg. wt., 6 oz.

1.7		
IAI	SINGLE-SECTION	ATOMS

Stock No.	Mfr's Type	Mfd	wv	Size	NET EA.
16 L 249 16 L 256 16 L 257 16 L 258 15 L 175	TVA-1962 TVA-1963 TVA-1965 TVA-1966 TVA-1902	8 10 16 20 8	600 600 600 600 500	15/16x25/8" 1x31/16" 1/8x45/2" 1x41/8" 1/8x111/16"	1.23 1.29 1.50 1.59
5 L   76  5 L   77  6 L 6   3  6 L 6   4  6 L 6   5	TVA-1905 TVA-1906 TVA-1802 TVA-1804 TVA-1701	16 20 10 20 2	500 500 475 475 450	15/16X23/16" 1X23/16" 34 X115/16" 38 X27/16" 7/16X15/8"	.88 .94 .79 .94 .65
5 L   70   5 L   71   5 L   225   5 L   72   5 L   73	TVA-1702 TVA-1704 TVA-1705 TVA-1706 TVA-1708	8 10 12 16	450 450 450 450 450	9/6×111/6* 11/6×111/6* 11/6×111/6* 34×111/6* 34×23/6*	.68 .73 .76 .79 .82
5 L  74  5 L  69  5 L  78  5 L 99    6 L 248	TVA-1709 TVA-1711 TVA-1712 TVA-1713 TVA-1714	20 30 40 50 60	450 450 450 450 450	34 x23/16" 1/8 x23/16" 1/8 x21 1/16" 1/8 x33/16" 1 x31 1/16"	.91 1.00 1.06 1.23 1.38
15 L 985 16 L 616 15 L 181 15 L 184 15 L 983	TVA-1716 TVA-1601 TVA-1603 TVA-1608 TVA-1611	80 4 8 20 40	450 350 350 350 350	1x3 <sup>11</sup> / <sub>16</sub> " ½x15%" 58x1 <sup>11</sup> / <sub>16</sub> " 13/ <sub>16</sub> x1 <sup>11</sup> / <sub>16</sub> " %x2 <sup>7</sup> / <sub>16</sub> "	1.65 .62 .71 .85 1.03
15 L 984 16 L 247 15 L 185 15 L 186 16 L 617	TVA-1613 TVA-1575 TVA-1501 TVA-1503 TVA-1504	60 140 4 8 10	350 300 250 250 250	1x27/16" 13%x33%" 7/16x15%" 1/2x15%" 9/16x111/16"	1.15 1.85 .59 .68 .71
15 L 187 15 L 188 15 L 189 16 L 618 15 L 190	TVA-1505 TVA-1507 TVA-1508 TVA-1510 TVA-1511	12 16 <b>20</b> 30 40	250 250 250 250 250 250	9/16X1 1 1/16" 5% X1 1 1/16" 1 1/16X1 1 1/16" 1 1/16X2 3/16" 34 X2 3/16"	.73 .76 .79 .85
6 L 246  5 L  92  5 L  93  5 L 226  5 L  94	TVA-1480 TVA-1402 TVA-1405 TVA-1406 TVA-1407	200 4 8 10 12	200 150 150 150 150	1%x3%" %x1¼" %x1¾" %x1¾" %x1¾"	.59 .62 .62 .65
15 L 195 16 L 241 15 L 196 16 L 242 15 L 197	TVA-1409 TVA-1403 TVA-1410 TVA-1411 TVA-1412	16 5 20 25 30	150 150 150 150 150 150	9/16X1 1 1/16" 3/8 X1 1/4" 9/16X1 1 1/16" 5/8 X1 1 1/16" 5/8 X1 1 1/16"	.68 .59 .71 .73 .76
15 L 198 15 L 199 16 L 243 15 L 878 16 L 619	TVA-1413 TVA-1414 TVA-1415 TVA-1418 TVA-1420	40 50 60 80 100	150 150 150 150 150	% X1 1/16" 34 X1 11/16" 13/16X1 11/16" % X1 11/16" % X1 15/16" % X2 3/16"	.79 .82 .88 .94 1.03
16 L 240 16 L 244 16 L 245 15 L 870 15 L 871	TVA-1422 TVA-1423 TVA-1425 TVA-1300 TVA-1301	150 200 300 1 2	150 150 150 50 50	1x23/16" 111/16x315/16" 11/8x3/8" 11/8x3/8" 11/4" 11/4"	1.12 1.29 1.50 .53 .53
15 L 200 15 L 201 15 L 202 15 L 203 15 L 876	TVA-1303 TVA-1304 TVA-1306 TVA-1308 TVA-1310	5 10 25 50 100	50 50 50 50 50	3/8 x 1 1/4" 3/8 x 1 1/4" 7/16 x 1 7/16" 9/16 x 1 1 1/16" 5/8 x 1 1 1/16"	.59 .59 .62 .71
15 L 858 15 L 859 16 L 620 15 L 207	TVA-1311 TVA-1312 TVA-1201 TVA-1203	150 250 2 5	50 50 25 25	34 xl 1 1/16" 15/16xl 1 1/16" 3% xl 1/4" 3% xl 1/4"	.91 1.03 .53 .59

## A SINGLE-SECTION ATOMS (cont.)

Stock No.	Mfr's Type	Mfd	wv	Size	EA.
15 L 205	TVA-1204	10	25	3/8 x 1 1/4 "	.59
15 L 206	TVA-1205	25	25	%x1¼*	.59
15 L 208	TVA-1206	50	25	9/16X13/16	.65
15L867	TVA-1207	100	25	9/16X111/16	.79
15 L 868	TVA-1208	250	25	34 x1 1 1/16"	1.00
15 L 869	TVA-1209	500	25	1/8 x23/16"	1.35
16 L 236	TVA-1160	100	15	%x13/16"	.73
16 L 237	TVA-1161	250	15	%x111/16"	.91
16 L 238	TVA-1162	500	15	1 1/16x23/16"	1.03
16 L 239	TVA-1163	1000	15	1/8 x2 3/16 °	1.35
16 L 234	TVA-1130	100	12	9/16×13/16"	.71
15 L 862	TVA-1131	250	12	%x111/16"	.85
15 L 863	TVA-1132	500	12	14 x111/16"	1.00
16 L 235	TVA-1133	1000	12	13/16×23/16	1.32
15 L 981	TVA-1100	50	- 6	3/8 x1 1/4"	.56
16 L 230	TVA-1101	100	6	½x1½*	.71
16 L 23 I	TVA-1102	250	6	%x17/16	.79
16 L 232	TVA-1103	500	6	% x23/16"	.91
15 L 860	TVA-1104	1000	6	11/16X23/16"	1.12
16 L 233	TVA-1105	1500	6	13/16X211/16"	1.23
15 L 861	TVA-1106	2000	6	13/16X215/16"	1.35

### B DUAL-SECTION ATOMS

15 L 220	TVA-2720	8-8	450	1 1/8 x 1 1 1/16"	1.00	
15 L 221	TU-88	*8-8	450	11/16x3%	1.26	
15 L 222	TVA-2725	16-8	450	1/8 x23/16"	1.18	
15 L 884	TVA-2722	10-10	450	%x115/16"	1.09	
15 L 215	TU-1616	*16-16	450	13/8 x31/8"	1.65	
15 L 227	TVA-2730	20-20	450	3/8 x2 15/16"	1.47	
15 L 986	TVA-2735	30-30	450	1x33/16"	1.76	
15 L 987	TVA-2740	40-40	450	1x315/16"	2.00	
16 L 266	TVA-2711	80	450			
		100	50	1%x4%*	2.18	
16 L 264	TVA-2535	120-80	250	1%x3%*	2.35	
15 L 245	TVA-2415	8-8	150	%x17/16"	.88	
15 L 254	TVA-2420	16-16	150	%x17/16"	1.06	
15 L 247	TVA-2428	20-20	150	%x17/16"	.97	
15 L 248	TU-220	*20-20	150	1x2%	1.21	
15 L 253	TVA-2421	30-20	150	1/8 x1 1 1/16"	1.00	
15 L 252	TVA-2438	40-20	150	%x111/16"	1.03	
15 L 251	TVA-2434	30-30	150	%x111/16"	1.06	
15 L 249	TU-420	*40-20	150	11/16x25/8"	1.29	
15 L 250	TVA-2442	40-30	150	%x115/16"	1.06	
15 L 243	TVA-2445	40-40	150	%x115/16"	1.09	
15 L 244	TVA-2450	50-30	150	%x115/16"	1.15	
15 L 305	TVA-2453	50-50	150	1/8 x27/16	1.23	
15 L 306	TVA-2460	80-30	150	⅓x2 <sup>7</sup> ∕16"	1.29	
16 L 259	TVA-2462	80-50	150	1x3¼*	1.38	
16 L 262	TVA-2464	100-	1	1		
		100	150	1%x3%*	11.88	
16 L 263		200-5		1x3%"	1.56	
15 L 255	TVA-2315	10-10	50	1/8 x 1 7/16"	.82	

### C TRIPLE-SECTION ATOMS

	TVA-3440			78x111/16"	1.29
	TVA-3444			7/8 x 2 3/16"	11.38
15 L 308	TVA-3448	40-30-20	150	%x23/16"	1.38
	TVA-3451			1x27/16"	1.44
15 L 327	TVA-3455	80-40-20	150	1x215/16"	1.62
15 L 989	TVA-3419	30-30	150		
		100	12	1/8 x 1 15/16"	1.35

### C TRIPLE-SECTION ATOMS (cont.)

Stock No.	Mfr's Type	Mfd	wv	Size	EA.
15 L 988	TVA-3415	20-20	150		
		20	25	1/8 x 1 7/16"	1.21
15L312	TVA-3423	40-30	150		
		20	25	%x115/16"	11.29
15 L 328	TVA-3427		150		
		100	25	1/8 x27/16"	11.44
15 L 3 I 3	TVA-3430	50-30	150		
		20	25	3/8 x 2 3/16"	1.38
15 L 329	TVA-3433		150		
		200	25	1x23/16"	11.62
15L314	TVA-3436		150		l
		20	25	15/16x23/16"	11.47
16 L 283	TVA-3712		450		l
		80-40	400	1%x4%"	2.68
15 L 990	TVA-3716	12-12	450		i
		20	25	1x2%*	11.35

#### QUADRUPLE-SECTION ATOMS

•	GOADKOI EE-SECIJOIT A COM						
No.	Туре	Mfd.	WV	Size	EACH		
16 L 284	TVA-4576	140-5	300				
		200-30	150	11/5 x 4 1/8"	3.56		
16 L 285	TVA-4584	120-40-40	300	_,_,			
		10	250	1%x4%*	3.65		
16 L 286	TVA-4607	140	350				
		5	300		i		
	1	200-30	200	1½x5½°	4.50		
16 L 287	TVA-4618	80-60	350				
		40	300				
	1	20	150	11/5 x45%*	3.47		
16 L 288	TVA-4659	80-10	400				
		40	300	l	1		
	i	100	50	1%x4%"	3.20		
16 L 289	TVA-4705	10	450				
	ł	80	300	ł	1		
	l	40	250	l	1		
		100	50	1%x4%°	2.82		
15 L 854	TVA-4742	20-20-					
		20-10	450	1%x3%"	2.50		
15 L 855	TVA-4748	40-20-			1		
		20-10	450	1%x4%"	2.76		
15 L 856	TVA-4750	40-40-					
	1	20-20	450	1½x4¼°	3.20		

### ATOM CAPACITOR KITS

58 L 516, Net St.

### **MOTOR-STARTING CAPACITORS** TYPE AM



No.	Type	*Mfd	Size	NET
5 L 579  5 L 580  5 L 581  5 L 582  5 L 583	1106 1107 1108 1109 1110	47-56 53-64 64-77 72-88 88-108	1x2½, 1x2½, 1x2½, 1x2½, 1x25, 1x25,	1.23 1.26 1.32 1.35 1.53
15 L 584 15 L 585 15 L 586 15 L 587 15 L 588	1113 1116 1119 1122 1125		13/8×25/8" 13/8×25/8"	1.68 1.73 1.73 1.88 1.91
15 L 570 15 L 571 15 L 572 15 L 573 15 L 574	1128 1130 1131 1134 1137	189-227 200-240 216-259 233-280 243-292	13/8×31/8"	2.21 2.29 2.38 2.65 2.76
15 L 575 15 L 576 15 L 577 15 L 589 15 L 578	1140 1142 1143 1146 1149		13/8x41/8" 13/8x41/8" 13/8x41/8" 13/8x41/8" 13/4x41/8"	2.79 3.18 3.26 3.53 3.56

### SPRAGUE "LITTL-LYTIC" SUBMINIATURE CAPACITORS

Ultra-small 30D series electrolytics for transistor circuits in hearing aids, radios, etc. Hermetically sealed aluminum foil. Withstand temperatures to 85°C. Size is dia. x length. Av. shpg. wt., 1 oz. 3 MFD [] 🕽 | Mfd | WVDC| Size | FA. I Mfd I WVDCI Siza 1 FA

givo.	1 ype	mila	11100	3126	EA.	110.	1 ype	miu	****	3126	LA.
16L027 16L028 16L029 16L030 16L031	TE-1010 TE-1055 TE-1060 TE-1080 TE-1081	5 25 110 1 2	1 3 6 6	1/4 X1 1/16" 1/4 X1 1/16" 3/8 X1 1/16" 1/4 X1 1/16" 1/4 X1 1/16"	.73 .73 .82 .73	16 L 629 16 L 630 16 L 631 16 L 632 16 L 633	TE-1158 TE-1159 TE-1160 TE-1161 TE-1162	30 35 50 75 100	15 15 15 15 15	5/16X1 1/16" 3/8 X 1 1/16" 3/8 X 1 1/16" 3/8 X 1 3/16" 3/8 X 1 5/16"	.88 .91 .94 1.00
16L032 16L033 16L034 16L035	TE-1082 TE-1083	3 4 5 8	6 6 6	1/4 X 1 1/16" 1/4 X 1 1/16"	.73 .73 .73 .79	16 L 634 16 L 635 16 L 046 16 L 047 16 L 048	TE-1163 TE-1164 TE-1202 TE-1203 TE-1204	150 200 5 6	15 15 25 25 25 25	3/8 x 1 1/4" 3/8 x 1 1/4" 1/4 x 1 1/16" 1/4 x 1 1/16" 1/4 x 1 1/16"	1.15 1.23 .82 .82
 16L 037 16L 038 16L 039 16L 040 16L 041	TE-1089 TE-1091	15 25 30 40 50	6 6 6 6	1/4 X 1 1/16" 1/4 X 1 1/16" 1/4 X 1 1/16" 1/4 X 1 1/16" 1/4 X 1 1/16" 5/16 X 1 1/16"	.79 .79 .82 .82	16 L 636 16 L 637 16 L 638 16 L 639	TE-1205 TE-1206 TE-1207 TE-1208 TE-1209	15 20 25 35 50	25 25 25 25 25 25	5/16X11/16" 3/8X11/16" 3/8X11/16" 3/8X13/16" 3/8X13/16"	.85 .88 .91 .97
16L026 16L042 16L043 16L621 16L622	TE-1101 TE-1116 TE-1118 TE-1119 TE-1119.3	60 15 25 50 100	6 10 10 10	5/16X1 1/16" 1/4 X1 1/16" 1/4 X1 1/16" 3/8 X1 1/16" 3/8 X1 3/16"	.82 .79 .79 .88	16 L 640 16 L 641 16 L 642 16 L 643 16 L 644	TE-1210 TE-1211 TE-1301 TE-1302.1 TE-1305	75 100 2 4 20	25 25 50 50 50	3/8 x 1 1/4" 3/8 x 1 1/2" 1/4 x 1 1/16" 1/4 x 1 1/16" 3/8 x 1 3/16"	1.15 1.23 .79 .79
16 L 623 16 L 044 16 L 045 16 L 624	TE-1119.6 TE-1127 TE-1128 TE-1152 TE-1155	200 5 10 5	10 12 12 15	3/8 x 1/4" 1/4 x 1 1/16" 1/4 x 1 1/16" 1/4 x 1 1/16" 1/4 x 1 1/16"	79 .79 .82	16L645 16L646 16L647 16L648	TE-1307 TE-1404 TE-1407 TE-1408	50 5 10 15 20	50 100 100 100 100	3/8 x1 ½" 3/8 x1 5/16" 3/8 x1 5/16" 3/8 x1 ½"	1.03 .88 .91 .91
16 L 626 16 L 627	TE-1156 TE-1157	15 20 25	15 15 15	1/4 X 1 1/16" 1/4 X 1 1/16" 5/16 X 1 1/16"	.85 .85	16L650 16L651	TE-1502 TE-1504	3 5 10	150 150 150	38 x 1 5/16" 38 x 1 5/16" 38 x 1 5/16"	.85

# **Sprague Capacitors**

### 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

washer for above-chassis mounting. Terminals are welded to capacitor cathode and tinned for easy soldering. Supplied with bakelite insulating washer and metal washer rosecure mounting. Capacity and voltage clearly printed on tubular casing to eliminate replacement error. Can serves as common negative. Av. shpg. wt., 6 oz.



#### SINGLE SECTION

SINGLE SECTION							
Stock No.	Mfr's Type	Mfd	DC Wkg. V.	Size	NET EACH		
16 L 510	TVL-1940	10	500	1x2"	.94		
16 L 435	TVL-1943	20	500	1x2½" 1x3"	1.09		
16 L 184	TVL-1947 TVL-1950	30 40	500 500	1x3" 1x3½"	1.18		
16 L 435 16 L 184 16 L 436 16 L 600	TVL-1958	80	500	13/8×3"	1.47		
	TVL-1960	90	500	13/8×31/2"	2.05		
16 L 185 15 L 757 15 L 470 15 L 886 15 L 887	TVL-1820	40	475	1 3/2 x 2"	1.47		
15 L 470	TVL-1705	10	450	1 x 2"	1.47		
15 L 886 15 L 887	TVL-1714	20	450	1x2"	1.06		
	TVL-1720	30	450	1x2½"	1.15		
15 L 473 16 L 434	TVL-1725	40 60	450 450	1x3"	1.21 1.53 1.79		
16 L 434	TVL-1730 TVL-1735	80	450 450	13/8×21/2" 13/8×21/2"	1.53		
16 L 217 15 L 755	TVL-1760	125	450	13/8×4"	2.26		
16 L 509	TVL-1621	40	350	1x2"	1.18		
15 L 754 15 L 799 16 L 601 16 L 204	TVL-1630	80	350	13/8×3"	1.68 2.32 2.32 1.50 1.71		
15 L 799	TVL-1638	125	350	13/8×31/2"	2.32		
16 L 601 16 L 204	TVL-1642	150	350	13/8×4"	2.32		
16 L 204	TVL-1573 TVL-1578	80 100	300 300	1x3½" 1x4"	1.50		
			300		1./1		
16 L 603 16 L 205 16 L 602 15 L 797 16 L 503	TVL-1580 TVL-1584	125 150	300	13/8 x 3 1/2" 13/8 x 3 1/2"	2.06		
16 L 602	TVL-1590	250	300	13/8×4"	3.26		
16 L 602 15 L 797	TVL-1509	20	250	1x2"	.94		
16 L 503	TVL-1519	40	250	1x2"	1.06		
16 L 506 15 L 798	TVL-1535	100	250	1x3"	1.59 1.82 2.15 .97		
15 L 798	TVL-1540	150	250	13/8 x2 1/2"	1.82		
16 L 604	TVL-1547 TVL-1415	200 50	250	13/8×31/2"	2.15		
16 L 506 15 L 798 16 L 604 15 L 794 15 L 750	TVL-1413	80	150 150	1x2" 1x2½"	1:09		
16 L 605	TVL-1423	100	150	1=216"	1.18		
16 L 606	TVL-1425	120	150	1x2½″ 1x3½″	1.26		
16 L 190	TVL-1426	120	150	13/8x21/2"	1.26		
16 L 218	TVL-1428	140	150	1x3"	1.26		
16 L 607	TVL-1429	150	150	1x3"			
15 L 795	TVL-1430	150	150	13/8×3"	1.26		
16 L 219	TVL-1431	200 300	150	13/8×4"	1.44		
12 1 (36)	TVL-1434 TVL-1320	150	150 50	13/8 x 3 1/2"	1.65		
15 L 795 16 L 219 15 L 796 16 L 500 15 L 793	TVL-1330	500	50	3/4 x2 1/2" 13/8 x2 1/2"	1.56		
15 L 792 16 L 220 15 L 791 16 L 200	TVL-1220	500	25	1x2"	1.50		
16 L 220	TVL-1230	1000	25	13/sx2"	2.09		
15 L 791	TVL-1168	2000	15	13/8×2"	2.03		
16 L 200	TVL-1115	2000	6	13/8 x 2"	1.50		

### **DUAL SECTION**

16 L 442	TVL-2940	40-40	500	13/8x3"	2.53		
15 L 480	TVL-2750	10-10	450	1x2"	1.12		
16 L 192	TVL-2753	15-15	450	1x2½"	1.32		
16 L 440	TVL-2754	20-10	450	1x21/2"	1.35		
16 L 440 15 L 481	TVL-2755	20-20	450	1x3"	1.32		
16 L 191	TVL-2757	30-10	450	1x3"	1.41		
15 L 897	TVL-2759	30-30	450	13/8×21/2" 13/8×21/2"	1.79		
16 L 199	TVL-2762	40-20	450	13/8x21/5"	1.91		
15 L 477	TVL-2764	40-40	450	13/8x3"	2.03		
16 L 199 15 L 477 16 L 441	TVL-2768	60-20	450	13/8×3"	2.09		
16 L 209	TVL-2770	60-40	450	13/8×31/2" 13/8×3" 13/8×4" 13/8×21/2"	2.32		
15 L 898	TVL-2776	80-10	450	13/8x3"	2.12		
16 L 197	TVL-2777	80-30	450	13/8×4"	2.47		
16 L 524	TVL-2735	40-10	450-350	13/8x21/2"	1.53		
15 L 898 16 L 197 16 L 524 16 L 439	TVL-2677	80-60	400	13/8×4"	1.53 2.76		
16 L 438	TVL-2656	80-80	400-200	13/8x31/2"	2.32		
16 L 193	TVL-2628	30-30	350	1x3"	1.71		
16 L 195	TVL-2639	100-60	350	13/8x31/2"	2.82		
16 L 195 15 L 762	TVL-2585	80-80	300	13/8x31/2"	2.82 2.38		
16 L 193 16 L 195 15 L 762 16 L 207	TVL-2515	20-20	250	1x2"	1.12		
15 L 894	TVL-2520	40-40	250	1x3½" 13/8x4"	1.47		
16 L 225	TVL-2535	150-150	250	13/8x4"	3.03		
16 L 608	TVL-2442.1	80-50	150	1x21/2"	1.41		
15 L 483	TVL-2415	20-20	150	1x2*	1.00		
16 L 225 16 L 608 15 L 483 15 L 890	TVL-2422	30-30	150	1x2"	1.09		
15 L 468 15 L 891 15 L 469 15 L 484 15 L 892	TVL-2425	40-20	150	1x2"	1.09		
15 L 891	TVL-2428	40-40	150	1x2½"	1.12		
15 L 469	TVL-2432	50-30	150	1x21/2"	1.18		
15 L 484	TVL-2435	50-50	150	1x21/2"	1.26		
15 L 892	TVL-2438	60-60	150	1x3½"	1.38		
15 1 903	TVL-2442	80-40	150	13/8x21/2" 13/8x3"	1.35		
16 L 221 16 L 512	TVL-2444	200-5	150	13/8x3"	1.59		
16 L 5 1 2	TVL-2445	200-125	150	13/2X31/2"	2.20		
16 L 511	TVL-2320	50-50	50	1x2"	1.00		
16 L 221 16 L 512 16 L 511 15 L 761	TVL-2160	1000-1000	15	1x31/2"	2.59		

### TRIPLE SECTION

	1x3"	1.59
16 L 228   TVL-3965   40-40-10   500   13	8x31/2"	2.97
15 L 969   TVL-3840   30-30-20   475   13/	%x3"	2.62
16 L 559   TVL-3843   40-30-30   475   13	8x4"	3.03
16 L 226   TVL-3822   20-20-60   475-475-450   13/	8x4"	2.85
	1x3"	1.53
16 L 476   TVL-3779   20-10-10   450	1x3"	1.71
15 L 965   TVL-3780   20-20-20   450   13/	8x21/2"	2.12
15 L 966 TVL-3782 30-30-30 450 13	8x31/2"	2.56
16 L 477 TVL-3784 40-30-20 450 13	8x3"	2.53
15 L 778 TVL-3785 40-40-10 450 13	8x31/2"	2.44
16 L 229   TVL-3786   40-40-20   450   13/	%x3"	2.62
	8x31/2"	2.88

### TRIPLE SECTION (cont'd)

Stock No.	Mfr's Type	Mfd	DC Wkg. V.	Size	NET EACH	
16 L 554 16 L 555 16 L 136 16 L 137 15 L 773	TVL-3789 TVL-3790 TVL-3791 TVL-3793 TVL-3761	60-20-20 60-30-10 60-40-20 80-40-20 40-10-80	450 450 450 450 450 450-450-200	13/8×3" 13/8×3" 13/8×31/2" 13/8×4" 13/8×3"	2.70 2.65 2.94 3.18 2.29	
15 L 963	TVL-3764	40-40-100	450-450-200	13/8×4"	2.91	
15 L 962	TVL-3758	40-40-40	450-450-150	13/8×31/2"	2.44	
16 L 146	TVL-3757	80-20-100	450-450-50	13/8×4"	2.82	
15 L 490	TVL-3731	10-10-20	450-450-25	1×21/2"	1.41	
16 L 213	TVL-3735	20-10-20	450-450-25	1×3"	1.59	
15 L 485	TVL-3739	20-20-20	450-450-25	1x3"	1.79	
15 L 961	TVL-3741	30-30-20	450-450-25	13/8x21/2"	2.09	
16 L 475	TVL-3744	40-40-20	450-450-25	13/8x3"	2.29	
16 L 145	TVL-3724.4	20-40-10	450-350-350	13/8x21/2"	2.06	
16 L 544	TVL-3723	30-40-50	450-350-25	1x4"	2.18	
16 L 223	TVL-3712	10-80-80	450-250-250	13/8×4"	2.44	
16 L 222	TVL-3706	40-40-130	450-150-50	13/8×3"	2.18	
16 L 474	TVL-3689.3	100-10-80	400-400-350	13/8×4"	3.59	
15 L 426	TVL-3678	20-20-20	400-400-25	1×3"	1.68	
16 L 538	TVL-3640	60-40-20	350	13/8×4"	2.50	
15 L 957	TVL-3630	15-10-20	350-350-25	1x2½"	1.47	
16 L 449	TVL-3639.2	100-60-20	350-350-200	13/8x4"	3.23	
16 L 609	TVL-3635	20-20-20	350-350-25	1x2½"	1.71	
15 L 958	TVL-3634	20-10-20	350-350-25	1x2½"	1.50	
16 L 448	TVL-3636.8	200-10-50	350-350-25	13/8x4"	3.09	
16 L 211	TVL-3620	30-30-20	350-300-25	1x3"	1.85	
16 L 533	TVL-3580	10-10-10	300	1x2"	1.41	
16 L 534	TVL-3585	120-50-40	300	13/8x4"	3.44	
15 L 955	TVL-3540	40-20-20	250	1x31/2"	1.71	
16 L 529	TVL-3513	30-30-20	250-250-25	1x3"	1.65	
16 L 446	TVL-3471	80-10-20	200-200-50	1x3"	1.65	
16 L 138	TVL-3461.4	60-200-140	200-150-150	13/8x4"	2.82	
16 L 139	TVL-3448	120-80-40	150	13/8x31/2"	2.23	
15 L 493	TVL-3433	20-20-20	150	1x21/2"	1.35	
15 L 952	TVL-3437	40-20-20	150	1x21/2"	1.41	
15 L 421 15 L 953 16 L 445 16 L 224 16 L 210	TVL-3440 TVL-3442 TVL-3444 TVL-3450 TVL-3422	40-40-40 50-50-50 80-40-20 200-100-60 40-20-20	150 150 150 150 150 150-150-25	1x3½″ 1x3″ 1x3″ 13⁄8x3½″ 1x2½″	1.53 1.76 1.71 2.68 1.35	
16 L 444	TVL-3426	40-40-20	150-150-25	1x2½"	1.41	
15 L 420	TVL-3427	50-30-100	150-150-25	1x3"	1.59	
15 L 951	TVL-3430	50-50-20	150-150-25	1x3"	1.56	
16 L 525	TVL-3210	20-20-20	25	1x2"	1.15	

### QUADRUPLE SECTION

QUADRUPLE SECTION						
16 L 125 16 L 599 15 L 788 16 L 587	TVL-4917 TVL-4840 TVL-4827	40-20-10-10 50-30-10-20	500 500-450-50-50 475 475-475-475-300	13/8×2" 13/8×21/2" 13/8×3" 13/8×31/2"	2.06 2.47 3.00 3.29	
16 L 585	TVL-4815	10-10-10-10	475-475-300-50	1 3/8 x 3"	2.82	
16 L 584	TVL-4811		475-450-400-50	1 3/8 x 4"	3.26	
16 L 583	TVL-4800		475-300-50-25	1 3/8 x 3"	2.62	
15 L 488	TVL-4760		450	1 3/8 x 2"	1.97	
15 L 979	TVL-4763	20-20-20-20	450	13/8×3"	2.76	
16 L 598	TVL-4773	40-40-20-20	450	13/8×4"	3.26	
16 L 147	TVL-4774	40-40-30-30	450	13/8×4"	3.56	
16 L 612	TVL-4775	40-40-40-40	450	13/8×4"	3.79	
16 L 148 16 L 581 16 L 579 16 L 580	TVL-4783 TVL-4747 TVL-4742 TVL-4745	80-10-10-10 40-40-10-100 30-30-15-30 40-40-10-25	450-450-450-50 450-450-450-50	13/8×4" 13/8×31/2" 13/8×3" 13/8×31/2"	2.97 3.26 2.67 2.76	
15 L 495	TVL-4723	10-10-10-20	450-450-450-25	13/8×2"	1.85	
16 L 126	TVL-4724.2	20-20-20-20	450-450-450-25	13/8×21/2"	2.44	
15 L 978	TVL-4734	40-30-10-20	450-450-450-25	13/8×31/2"	2.65	
16 L 578	TVL-4736	40-40-10-20	450-450-450-25	13/8×31/2"	2.76	
16 L 216		40-40-40	450-450-450-25	13/8×4"	3.23	
15 L 889		40-20-20-40	450-450-450-25	13/8×3"	2.73	
16 L 611		40-40-30-30	450-450-350-350	13/8×4"	3.47	
16 L 127		80-10-40-30	450-400-300-300	13/8×4"	3.41	
16 L 597	TVL-4669	80-40-10-20	400-400-400-25	13/8×4"	3.12	
16 L 128	TVL-4670	80-40-30-40	400-400-400-25	13/8×4"	3.50	
16 L 596	TVL-4663.5	100-10-30-20	400-400-50-50	13/8×31/2"	3.00	
16 L 499	TVL-4635.7	80-60-40-20	350	13/8×4"	3.76	
16 L 594 16 L 569 16 L 568 16 L 129	TVL-4628 TVL-4620	90-40-30-30 40-40-40-150 20-10-5-10 40-40-20-20	350 350-350-350-50 350-350-350-25 350-350-350-25	13/8×4" 13/8×4" 13/8×2" 13/8×3"	4.00 3.32 1.82 2.73	
16 L 154	TVL-4609	60-40-60-20	350-350-200-150	13/8×31/2"	2.97	
16 L 155	TVL-4590	200-20-20-20	300	13/8×4"	3.67	
16 L 565	TVL-4575	40-40-40-20	300-300-300-150	13/8×3"	2.88	
16 L 158	TVL-4561	100-10-200-30	300-300-150-150	13/4×4"	3.47	
16 L 159	TVL-4559	100-60-10-20	300-200-150-50	13/8 x 3 1/2"	2.85	
16 L 610		10-200-140-30	300-150-150-150	13/8 x 3 1/2"	3.00	
16 L 563		100-40-10-100	250-250-250-50	13/8 x 3 1/2"	3.02	
16 L 561		30-30-30-40	150-150-150-25	13/8 x 2"	1.82	
15 L 975		40-40-30-20	150-150-150-25	13/8 x 2"	1.82	
15 L 976 16 L 496 16 L 495 16 L 156 16 L 157	TVL-4425 TVL-4431 TVL-4414 TVL-4409 TVL-4410.7	20-20-160-40	150-150-150-25 150-150-150-25 150-150-150-10 150-150-25-25 150-150-25-25	1 3/8 x 2" 1 3/8 x 2" 1 3/8 x 2" 1 3/8 x 2" 1 3/8 x 2"	2.09 2.03 1.88 2.09	
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Industrial Users—all Sprague JAN-type capacitors are available from Allied. Write to our Industrial Division for quantity prices.

# Sprague & Condenser Products Capacitors



## SPRAGUE "CERA-MITE" DISC CERAMIC CAPACITORS

Ultra-compact ceramic disc capacitors. In EIA (RETMA) and other popular values. High by-pass efficiency in critical circuits. Moisture-proof coating. Tolerances: 100 WVDC types  $\pm 20\%$ . 3000 WVDC types 1.5 mmf,  $\pm 25$  mmf;  $\pm .7$  mmf,  $\pm .5$  mmf;  $\pm 10\%$ ; thru 500 mmf,  $\pm 20\%$ . All capacitors are "tagged" for easy identification. Shg. wt., 2 oz.

#### SERIES 5GA 1000 WVDC

No.	Туре	Mmf	No.	Туре	Mmf
16 L 300	V5	5	16 L 330	T25	250
16 L 301	V6	6	16 L 331	T27	270
16 L 302	V75	7.5	16 L 332	T3	300
16 L 303	V8	8	16 L 333	T33	330
16 L 304	Q1	10	16 L 334	T35	350
16 L 305	Q12	12	16 L 335	T36	360
16 L 306	Q15	15	16 L 336	T39	390
16 L 307	Q18	18	16 L 337	T4	400
16 L 308	Q2	20	16 L 338	T47	470
16 L 309	Q22	22	16 L 339	T5	500
16 L 310 16 L 311 16 L 312 16 L 313 16 L 314	O25 O27 O3 O33 Q39	25 27 30 33 39	16 L 340 16 L 341 16 L 342 16 L 343 16 L 344	T68 T75	560 600 680 750 800
16 L 315 16 L 316 16 L 317 16 L 318 16 L 319	Q47 Q5 Q56 Q68 Q75	47 50 56 68 75	16 L 345 15 L 670 16 L 347 16 L 348 15 L 671	T82 D1 D12 D13 D15	820 .001 * .0012 * .0013 *
16 L 320	Q82	82	16 L 350	D16	.0016*
16 L 321	Q91	91	16 L 351	D18	.0018*
16 L 322	T1	100	16 L 352	D2	.0020*
16 L 323	T12	120	16 L 353	D22	.0022*
16 L 324	T13	130	16 L 354	D25	.0025*
16 L 325	T15	150	16 L 355	D27	.0027*
16 L 326	T18	180	16 L 356	D3	.0030*
16 L 327	T2	200	16 L 357	D33	.0033*
16 L 328	T22	220	16 L 358	D39	.0039*
16 L 329	T24	240	16 L 359	D4	.0040*

No.	Туре	Mfd.	EACH
16 L 360 16 L 361 16 L 362 16 L 363	D43 D47 D5 S1	.0043 .0047 .005	l8c
16 L 364	S2	.02	

#### SERIES 30GA 3000 WVDC

No.	Туре	Mmf	EACH
16 L 387	V15	1.5	24c
16 L 370	V47	4.7	
16 L 371	Q1	10	
16 L 388	Q12	12	
16 L 372	Q15	15	
16 L 373	Q25	25	24c
16 L 374	Q3	30	
16 L 389	Q39	39	
16 L 375	Q5	50	
16 L 390	Q6	60	
16 L 376	Q68	68	24c
16 L 377	T1	100	
16 L 378	T12	120	
16 L 379	T15	150	
16 L 380	T18	180	
16 L 381	T2	200	
16 L 382	T22	220	24c
16 L 383	T25	250	
16 L 384	T27	270	
16 L 385	T3	300	
16 L 386	T5	500	

### SINGLE AND DUAL HIGH-K TYPES SERIES 5HK 1000 WVDC

15 L 672	D2	.002 mfd	15¢
15 L 673	D5	.005 mfd	15¢
15 L 674	S1	.010 mfd	18¢
15 L 675	2D1	2x.001 mfd	24¢
15 L 676	2D15	2x.0015 mfd	24¢
15 L 677	2D2	2x.002 mfd	24¢
15 L 678	2D4	2x.004 mfd	26¢

### MINIATURIZED DISC CERAMICS **Excellent for Transistorized Circuits**



SPRAGUE
Type TG. Designed for circuits requiring extremely small components, Ideal for printed circuits, transistor-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% to -20% except \*+80% to -30%.

No.	Туре			Wt.	EA.
15 L 995	D50	.005 .01	5/16"	2 oz.	26¢
	S10	.01	3/8"	3 oz.	
15 L 997	S25*	.025	19/32"	3 oz.	
15 L 998	S50	.05	19/32"	3 oz.	41¢
15 L 999	P10	1.1	3/4"	4 oz.	53¢

### TYPE NPO CERAMICS

Zero temperature-coefficient capacitors. 500 WVDC. Discs, except \*rectangular. Wt., 2 oz.

No.	Туре	Mmf	EACH
16 L 450	5TCCB-V1*	1.0	
16 L 451	5TCCB-V15*	1.5	
16 L 452	5TCCB-V22*	2.2	
16 L 453	5TCCB-V33*	3.3	
16 L 454	5TCCB-V47*	4.7	29c
16 L 455	5TCCB-V68*	6.8	
16 L 456	5TCC-Q1	10.0	
16 L 457	5TCC-Q15	15.0	
16 L 458	5TCC-Q2	20.0	
16 L 459	5TCC-Q22	22.0	
16 L 460	5TCC-Q25	25.0	
16 L 461	5TCC-Q33	33.0	
16 L 462	5TCC-Q39	39.0	32c
16 L 463	5TCC-Q47	47.0	
16 L 464	5TCC-Q5	50.0	
16 L 465	5TCC-Q68	68.0	
16 L 466	5TCC-Q75	75.0	
16 L 467	5TCC-T1	100.0	
16 L 468	5TCC-T12	120.0	35c
16 L 469	5TCC-T15	150.0	
16 L 470	5TCC-T175	175.0	
16 L 471	5TCC-T22	220.0	41¢
16 L 472	5TCC-T27	270.0	47¢

#### **TYPE N750 CERAMICS**

A negative temperature coefficient capacitor with a negative change of 750 parts per million per degree Centigrade. 500 WVDC. Discs, except \*rectangular. Shpg. wt. 2 oz.

No.	Туре	Mmf	EACH
!6 L 480	5TCUB-V5*	5	29c
6 L 481	5TCU-Q1	10	
6 L 482	5TCU-Q15	15	
6 L 483	5TCU-Q2	20	
6 L 484	5TCU-Q22	22	
16 L 485	5TCU-Q25	25	29c
16 L 486	5TCU-Q33	33	
16 L 487	5TCU-Q47	47	
16 L 488	5TCU-Q68	68	
16 L 489	5TCU-Q75	75	
16 L 490	5TCU-T1	100	29c
16 L 491	5TCU-T15	150	
16 L 492	5TCU-T2	200	
16 L 493	5TCU-T22	220	
16 L 494	5TCU-T33	330	

### TYPE BL DISC CERAMICS

New 2000 WVDC disc ceramic capacitors for buffer applications. Tiny, rugged construction. Moisture-proof coating assures high dependability. Fit into tight spaces. Tol., ±20%. Av. shg. wt., 2 oz.

No.	Type	Mfd	EACH
16 L 290 16 L 291 16 L 292 16 L 293 16 L 294	BL-D10 BL-D20 BL-D30 BL-D40 BL-D50	.001 .002 .003 .004 .005	2lc
16 L 295 16 L 296 16 L 297 16 L 298 16 L 299	BL-D60 BL-D70 BL-D75 BL-D80 BL-S10	.006 .007 .0075 .008	2lc

### UNIVERSAL CERAMIC CAPACITORS



Highly versatile, 4-lead ceramic type capacitors. Provide maximum coverage with minimum stock. Ideal for use by servicemen, experimenters, etc. Offer a large variety of odd and popular ratings—simply wire leads in various combinations. With complete instructions on how to select the desired capacitance. \*Guaranteed minimum value; UGA-1 and UGA-2 have tolerance of ±20%. Rated at 500 WVDC. Av. shpg. wt., 3 oz.

Stock	Mfr's	Capacity	Size	NET
No.	Type	Range, Mfd		EACH
5L2 6  5L2 7  5L2 8  5L2 9	*UHK-2 UGA-1	.001004 .0025015 .00040013 .00060027	25/32X 5/8 X 5/32" 1 1/8 X 5/8 X 5/32" 25/32 X 5/8 X 5/32" 1 1/8 X 5/8 X 5/32"	29¢ 35¢ 29¢ 35¢

#### UNIVERSAL CERAMIC CAPACITOR KIT

Kit CK-4. New, universal multi-purpose capacitor kit. Handles 90% of all common caramic, molded tubular, and mica replacements in bypass and coupling circuits. Includes 3 each: UHK-1, UHK-2, UGA-1 and UGA-2. Supplied with detailed instructions. 3½x8½". 



### CONDENSER PRODUCTS CO. SILICONE-FILLED GLASSMIKES

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, electrometer, 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 ferrules soldered to silver end bands are fused to each end of heavy walled glass tubes. Vacuum tight and fungus proof. Ample flash-over spacing is provided between silver bands for sea level operations. Tolerance, ±10%. Temperature range, to 85°C. All have 8-32 serew terminals. \*Tinned copper leads, 2½\* long, No. 18 gauge. 150% test voltage rated for 1 minute. Peak ripple voltage plus the DC voltage should not exceed rated voltage. Av. shpg. wt., 6 oz.

#### 1000 WORKING VOLTS

Stock	Mfr's	1164	Mfd. Size	NET EACH			
No.	Type			1-9	10-49	50-249	
10 L 900 10 L 902 10 L 903 10 L 904 10 L 905	203* 503 104		13/16x19/32" 13/16x19/32" 13/4x3/4" 21/4x3/4" 21/4x29/32"	1.71 1.71 1.85 1.85 1.85	1.43 1.43 1.54 1.54 1.54	1.28 1.28 1.39 1.39 1.39	

#### 2000 WORKING VOLTS

Stock	Mfr's	Mfd.	Size	NET EACH		
No.	Type	mia.	Size	1-9	10-49	50-249
10 L 906 10 L 907	202* 502*	.002 .005	13/16X19/32" 13/16X19/32"	171	1.43	120
10 L 908 10 L 909			13/16X19/32" 19/16X19/32"	1.71	1.43	1.20
10 L 910 10 L 911 10 L 912	104	.05 .1 .25	1¼ x¾ ° 2¼ x¾ ° 2¼ x <sup>29</sup> / <sub>32</sub> °	1.85 1.91 2.13	1.54 1.59 1.78	1.39 1.43 1.60

#### 3000 WORKING VOLTS

Stock	Mfr's	Mfd.	ا مبد ا	NET EACH		
No.	Type	mia.	Size	1-9	10-49	50-249
10 L 913 10 L 914 10 L 915 10 L 916	202* 502*	.001 .002 .005	13/16X19/32" 13/16X19/32" 13/16X19/32" 19/16X19/32"	2.45 2.45 2.45 2.55	2.04 2.04 2.04 2.13	1.84 1.84 1.84 1.91
10 L 917 10 L 918 10 L 919	203 503	.02 .05 .1	1½ x¾ * 2½ x <sup>2</sup> 9⁄32* 2½ x <sup>2</sup> 9⁄32*	2.97 3.27 3.60	2.48 2.73 3.00	2.23 2.45 2.70

#### 5000 WORKING VOLTS

10 L 920 102* 10 L 921 103 10 L 922 203	.01	13/16X19/32" 13/4 X3/4" 21/4 X3/4"	4.08	3.15 3.40 3.60	2.83 3.06 3.24
10 L 923 503 10 L 924 104	.05	2½x <sup>29</sup> / <sub>32</sub> " 2½x1¾"	4.56	3.80 4.25	3.42 3.83

### 8000 WORKING VOLTS

10 L 925 10 L 926 10 L 927 10 L 928	202* 502		19/16X19/32" 19/16X19/32" 13/4 X/4" 21/4 X/4"	3.90 4.08 4.20 4.50	3.25 3.40 3.50 3.75	2.93 3.06 3.15 3.38
10 L 929 10 L 930 10 L 931 10 L 932	203 503 104	.02 .05 .1	2¾ x <sup>2</sup> 9⁄ <sub>32</sub> " 2¾ x1¾" 3½ x1½" 7x1¾"	5.16 4.20 7.50 8.64	4.30 3.50 6.25 7.20	3.87 3.15 5.63 6.48

### 10,000 WORKING VOLTS

10 L 933 501*	.001	1% x 19/32"	4.20	3.50	3.15
10 L 934 102*		1% x 19/32"	4.32	3.60	3.24
10 L 935 202*		1% x 19/32"	4.44	3.70	3.33
10 L 936 502		1% x 13/16"	5.10	4.25	3.83
10 L 937 103	.01	3½ x <sup>2</sup> 9/ <sub>2</sub> "	5.52	4.60	4.14
10 L 938 203	.02	2¾ x1½"	6.84	5.70	5.13
10 L 939 303	.03	2¾ x1¾"	8.76	7.30	6.57
10 L 960 603	.06	4¼ x1¾"	10.50	8.75	7.88

#### 20,000 WORKING VOLTS

10 L 940	501*	.0005	2½ x <sup>19</sup> / <sub>32</sub> " 3½ x¾" 3½ x <sup>13</sup> / <sub>16</sub> "	10.80	9.00	8.10
10 L 941	102	.001	3½ x¾*	11.40	9.50	8.55
10 L 942	202	.002	31/2 x 1 3/16"	12.60	10.50	9.45
10 L 943	502	.005	3½ x1½*	13.50	11.25	10.13

### SPRAGUE "TC" CALCULATOR

Handy slide-rule. Determines values of NPO and N750 ceramics to be connected in parallel to equal a capacitor of desired intermediate temperature coefficient and required capacity. Shps. wt. 4 oz.

37 K 103, NET.

Industrial Users Attention! Allied can readily supply from stock a wide vari-ety 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.

# TYPE AEP PLUG-IN ELECTROLYTIC CAPACITORS

Plug-in type 1, 2 and 3-section electrolytic capacitors. Designed for continuous service applications; quickly changed by simply plugging in a new unit. Insulated, tube-type bases fit all standard octal sockets. Keyed guide pins insure correct installation and polarity. Vented for safety; etched aluminum foil construction. Common neg. Av. wt., 5 oz.



### SINGLE SECTION

No.	Type	Mfd.	W. V.	Size	NET
13 L 035 13 L 037 13 L 038	4J	10 20 30	450 450 450	15/32×21/2" 15/32×21/2" 15/32×21/2"	2.53
13 L 039 13 L 040 13 L 041		40 80 10	450 450 600	15/32x21/2" 13/8x31/2" 13/8x41/4"	3.26

#### **DUAL SECTION**

3 L 044   22J   10-10   450   13/2 x2 1/2"   2.59   13 L 045   44J   20-20   450   13/2 x2 1/2"   2.99   13 L 046   88J   40-40   450   13/2 x3"   3.52
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#### TRIPLE SECTION

3 L 047 222J  3 L 048 444J	110-10-10	450	115/2721/4/13	00
15 7 6 76 777	100 00 00	100	12/3/20/2	.go
13 L U4814441	120-20-201	450	113/0 x.5"   3	59

# SRE BANTAM ELECTROLYTICS METAL CASED TUBULARS

Extremely small dry electrolytic capacitors for portable and miniature equipment. Sealed-



equipment. Sealedin tubular aluminum cases are protected by external wax-impregnated cardboard insulating tubes. Shpg. wt., 2 oz.

No.	Mfd	Volts	Size	NET
13 L 830 13 L 831 13 L 832 13 L 819 13 L 833	5 10 15 20 25	150 150 150 150 150	3/8 x1" 3/8 x15/8" 1/2 x1 1/8" 1/2 x1 5/8" 1/2 x1 5/8"	.59 .62 .68 .71
13 L 847 13 L 848 13 L 849 13 L 827 13 L 828	1 2 5 10 15	50 50 50 50 50	3/8 x 1 " 3/8 x 1 " 3/8 x 1 " 3/8 x 1 " 3/8 x 1 1/8"	.53 .59 .59
13 L 829 13 L 844 13 L 845 13 L 846 13 L 824	25 5 10 20 25	50 25 25 25 25 25	1/2 x1" 3/8 x1" 3/8 x1" 3/8 x1" 3/8 x1"	.62 .59 .59
13 L 825 13 L 826 13 L 821 13 L 822 13 L 823	50 100 50 100 200	25 25 12 12 12	1/2 x1" 1/2 x1 5/8" 3/8 x1 1/8" 1/2 x1" 1/2 x1 5/8"	.65 .79 .59 .71
13 L 841 13 L 842 13 L 838 13 L 820 13 L 843	5 25 50 100 250	6 6 6 6	3/8 x1" 3/8 x1" 3/8 x1" 1/2 x1 1/8" 1/2 x1 5/8"	.47 .50 .56 .71
13 L 839 13 L 840 13 L 834 13 L 835 13 L 836 13 L 837	25 50 100 200 300 500	3 3 3 3 3	3/8 x 1 " 3/8 x 1 " 3/8 x 1 " 3/8 x 1 5/8 " 1/2 x 1 1/8 " 1/2 x 1 5/8 "	.50 .56 .65 .68 .76

# XPP MINIATURIZED METAL-CASED ELECTROLYTICS

Miniature, hermetically sealed metal-cased tubular aluminum elec-



alumnum electrolytic capacitors. Ideal for all transistorized assemblies where space limitations are present. Feature extended life, and provide for relatively high capacitance values at low voltage. Tolerance: -10%, +250%. Operating temperature range: -20 to +65° C. Av. shpg. wt., 2 oz.

Stock No.	MAN	WINDS	Size	NET EACH
	WIT G.	WVDC	Size	NEI EACH
18 L 829	6	3	3/16X1/2"	73¢
18 L 830	25	3	1/4×5/8"	737
18 L 831	25 50	3	1/4 x 3/4"	73¢ 73¢
18 L 832	100	3 3 3	3/8×3/4"	82¢
	100			
18 L 833	1	6	3/16×1/2"	73¢
18 L 834	3	6 6	3/16×1/2"	73¢
18 L 835	3	6	3/16×1/2"	73¢
18 L 836	4	lš	3/16X5/8"	73¢
***************************************			-	
18 F 838	. 8	6	3/16X5/8"	79¢
18 L 839	10	6	1/4 x 5/8"	79¢
18 L 840	15	6	1/4 x 5/8"	79¢
18 L 848	5	12	3/16×5/8"	79¢
18 L 849	10	12	1/4 x 5/6"	79¢
18 L 850	5	25	1/4 +5/6"	82¢
18 L 851	ő	25	17. 75%"	82¢
18 1 852	10	25 25 25	32 -52 "	824
10 5 825	10	42	78×78	85¢
18 L 853	15	25	3/8×3/4"	85¢

### 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 premium, and dependable service is required. Negative leads are connected to aluminum cans. Dual and triple-section types have common negative leads. Single-section capacitors have bare, tinned copper leads, 37 long. Dual and triple-section types have flexible stranded-copper leads, 57 long, with insulating sleeves. All are conservatively rated for temperatures to 85°C, Av. shpg. wt., 4 oz.

### A-SINGLE SECTION

Stock No.	Mfd	Volts	Size	NET EACH
13 L 639 13 L 640 12 L 623 13 L 642 13 L 632	8 10 12 16 8	700 700 700 700 700 600	15/16x31/16" 11/16x31/16" 11/16x39/16" 11/16x39/16"	1.29 1.38 1.44 1.56 1.23
13 L 633 13 L 634 13 L 635 12 L 617 12 L 618	10 12 16 1 2	600 600 600 450 450	15/6×31/6" 11/6×31/6" 11/6×39/6" 9/6×11/4" 9/6×11/4"	1.29 1.41 1.50 .64 .64
13 L 385 13 L 386 13 L 394 13 L 387 13 L 388	4 8 10 12 16	450 450 450 450 450	1 1/16×1 1/2" 13/16×1 1/2" 13/16×1 3/4" 15/16×1 1/2" 15/16×1 3/4"	.68 .73 .76 .79 .82
13 L 389 13 L 395 13 L 396 12 L 619 12 L 620	20 30 40 50 60	450 450 450 450 450	11/16x13/4" 11/16x21/4" 11/16x21/2" 11/16x31/4" 11/16x31/4"	1.00 1.06 1.23
12 L 621 12 L 622 12 L 612 13 L 403 13 L 404	80 100 10 16 24	450 450 350 350 350	11/16x33/4" 11/16x33/4" 13/16x13/4" 13/16x13/4" 15/16x13/4"	1.65 1.88 .73 .82
13 L 403 13 L 404 12 L 613 12 L 614 12 L 615 12 L 616 13 L 410	30 40 50 60 4	350 350 350 350 250	13/6x21/4" 15/6x21/4" 11/6x21/4" 11/6x21/2" 11/6x11/4"	.97 1.03 1.09 1.15
13 L 411 13 L 412 13 L 413 13 L 414 12 L 608	8 12 16 20 30	250 250 250 250 250 250	11/16x11/2" 11/16x13/4" 13/16x11/2" 13/16x11/2" 13/16x21/4"	.68 .73 .76 .79
12 L 609 12 L 610 12 L 611 13 L 430 13 L 431	40 50 60 4 8	250 250 250 150 150	13/6x21/4" 15/6x21/4" 15/6x21/4" 9/6x11/4" 11/6x11/4"	1.00 1.06 .59
13 L 425 13 L 432 13 L 433 13 L 443 13 L 434	10 12 16 20 24	150 150 150 150 150	11/6x11/4" 11/6x11/4" 11/6x11/2" 11/6x13/4" 11/6x13/4"	.62 .65 .68 .71
13 L 435 13 L 436 13 L 441 12 L 607 13 L 426	30 40 50 60 80	150 150 150 150 150	13/6x1 1/2" 13/6x1 3/4" 15/6x1 3/4" 15/6x1 3/4" 15/6x2 1/4"	.76 .79 .82 .88 .94
13 L 427 13 L 428 13 L 450 13 L 856 13 L 451	100 150 10 20 25	150 150 50 50 50	15/6x21/4" 11/6x3" 9/6x11/4" 11/6x11/4" 11/6x11/4"	1.03 1.12 .59 .59
13 L 452 13 L 453 12 L 605 12 L 606 13 L 460	50 100 150 250 10	50 50 50 50 25	11/6×13/4" 13/6×13/4" 15/6×13/4" 15/6×13/4" 9/6×11/4"	.71 .82 .91 1.03
13 L 858 13 L 461 13 L 462 13 L 463 12 L 604	16 25 50 100 250	25 25 25 25 25 25	9/6x1 1/4" 9/6x1 1/4" 11/6x1 1/2" 13/6x1 1/2" 15/6x2 1/4"	.59 .59 .65 .79

# A-SINGLE SECTION (Cont'd)

Sincer Section (com a)						
Stock No.	Mfd	Voits	Size	NET EACH		
13 L 857	500	25	1 1/16x2 1/2"	1.35		
13 L 861	100	12	1 1/16x1 1/2"	.71		
13 L 860	250	12	1 3/16x1 3/4"	.85		
13 L 859	500	12	1 5/16x2 1/4"	1.00		
12 L 603	1000	12	1 1/16x3 1/4"	1.32		
12 L 600	100	6	11/16x1 1/4"	.71		
13 L 864	500	6	13/16x1 3/4"	.91		
13 L 863	1000	6	15/16x2 1/4"	1.12		
13 L 862	2000	6	11/16x2 3/4"	1.35		

#### B -- DOUBLE SECTION 13 L 391 13 L 392 13 L 397 12 L 638 12 L 639 13/6x21/4" 15/ex21/4" 15/6x21/4" 11/6x21/4" 15/6x31/6" 8-16 10-10 16-16 20-20 450 450 450 450 450 11/6x31/4" 11/6x31/4" 11/6x4" 11/6x4" 12 L 640 12 L 641 13 L 851 12 L 642 450 450 450 450 30-30 1.76 1.73 1.97 2.00 40-20 40-40 50-30 10-10 16-16 20-20 30-30 8-8 250 250 250 250 250 200 12 L 635 12 L 636 13 L 852 12 L 637 12 L 631 13/16×13/4" 13/16×21/4" 15/16×21/4" 15/16×21/4" 11/16×13/4" .09 .32 .88 30-30 8-8 20-20 20-30 200 150 150 150 15/6x21/4" 11/16x13/4" 13/16x13/4" 13/16x21/4" 12 L 633 13 L 437 13 L 439 12 L 625 15/6x13/4" 15/6x13/4" 15/6x21/4" 15/6x21/4" 12 L 626 12 L 627 12 L 628 13 L 442 20-40 30-30 40-30 40-40 150 150 150 150 1.03 1.06 1.06 1.06 40-80 50-30 50-50 150 150 150

12 L 630	100-100	150   11/4	6x31/4"	1.88
	C-TRIP	LE SECT	ION	
12 L 650 12 L 665 13 L 855 13 L 870 12 L 643	20-20, 20 20-20-20	450 450, 25 150 150 150	11/16x21/4" 11/16x23/4" 15/16x13/4" 15/16x13/4" 11/16x13/4"	.44   .7    .29   .26
12 L 644 13 L 871 12 L 645 12 L 649 13 L 872	40-40-20	150 150 150 150 150	15/16X21/4" 15/16X21/4" 15/16X21/4" 11/16X21/4" 11/16X21/4"	1.38 1.38 1.38 1.44
12 L 646 12 L 647 12 L 648 12 L 658		150 150 150 150, 25	15/6x21/4" 11/6x21/2" 11/6x23/4" 15/6x13/4"	1.38 1.44 1.62 1.29
12 L 651 12 L 659 12 L 652 12 L 660	30-20, 100 40-20, 20 40-30, 20 40-40, 20	150, 25 150, 25 150, 25 150, 25	15/6×21/4" 15/6×13/4" 15/6×21/4" 11/6×13/4"	1.29 1.29 1.32
12 L 661 12 L 656 12 L 662 12 L 653		150, 25 150, 10 150, 25 150, 25	1½6x2¼″ 1½6x2¼″ 1½6x1¾″ 1½6x2¼″	1.44 1.53 1.38 1.50
12 L 654 12 L 655 12 L 663 12 L 664	50-50, 20 80-20, 100	150, 25 150, 25	11/6x23/4" 11/6x21/4" 11/6x21/4" 11/6x21/4"	1.82 1.47 1.62 1.56

### TYPE MSRP MOTOR-START CAPACITORS

An assortment of motor-start capacitors. Housed in molded plastic containers to provide maximum resistance to effects of o



plastic containers to provide maximum resistance to effects of oil, dirt, grease and moisture. Units listed come furnished with 2 screwtype terminals for easy installation. For 110 volt capacitor-start AC motors; \*125 volt AC. 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 on-motor mtg. Types PCT-1 and PCT-2 are end caps for off-motor mtg. Types CTB-1 and CTB-2 are snap-in mounting brackets. End caps are plastic; brackets are metal. Av. shpg. wt., 4 oz.

Stock No.	Туре	Size	NET
13 L 300	PCB-1	17/16" dia.	12¢
13 L 301	PCB-2	113/16" dia.	15¢
13 L 302	PCT-1	17/16" dia.	I2¢
13 L 303	PCT-2	113/16" dia.	15¢
13 L 304	CTB-1	$3\frac{3}{8}$ " long	18⊄
13 L 305	CTB-2	43/6" long	21#

Stock No.	Type	Mfd	Size	NET
13 L 306	-811	20-24	1½6x3¾	1.21
13 L 307	-813	32-36		1.23
13 L 308	-815	43-53		1.23
13 L 309	-817	64-77		1.32
13 L 358	-818	70-84		1.35
13 L 359	-819	75-90	1%6x33/8"	1.50
13 L 360	-800	88-108		1.53
13 L 361	-801	108-130		1.68
13 L 362	-802	124-149		1.73
13 L 363	-822	130-157		1.73
13 L 364	-823	145-175	17/6x33/8"	1.88
13 L 365	-803	161-193		1.91
13 L 366	-824	189-227		2.20
13 L 367	-804	200-220		2.29
13 L 368	-805	216-259		2.38
13 L 369	-807	270-324	113/16x33/8"	2.79
13 L 321	-825	340-412		3.26
13 L 322	-809	400-450		3.56
13 L 323	-810	485-540		4.47
13 L 324	-881*	108-130	17/6x33/8"	1.85
13 L 325	-882*	145-175		2.15
13 L 326	-883*	161-193		2.26
13 L 327	-884*	189-227		2.53



### STANDARD INDUSTRIAL CAPACITORS



### TYPE P92ZN METALLIZED-PAPER 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. Will withstand high temperatures. Operating range is -30 degrees C to +100 degrees C. Tolerance of ±20% in all capacities and voltages. Sizes given are diameter and length. Av. shpg. wt., 2 oz.

No.	Mfd	Volts	Size	1-24, EA.
12 L 700 12 L 701 12 L 702 12 L 703	.01 .02 .03 .05	200 200 200 200 200	3/16×9/16" 1/4 ×23/32" 1/4 ×23/32" 1/4 ×27/32"	.42 .42 .44
12 L 704 12 L 705 12 L 706 12 L 707 12 L 708	.1 .25 .5 1.0 2.0	200 200 200 200 200 200	9/32×27/32" 3/8×27/32" 13/32×15/32" 9/16×15/32" 5/8×11/2"	.46 .67 .78 1.05 1.42
2 L 709  2 L 7 0  2 L 7    2 L 7  2	.01 .02 .03 .05	400 400 400 400	1/4 x <sup>23</sup> / <sub>32</sub> " 5/ <sub>16</sub> x <sup>23</sup> / <sub>32</sub> " 3/ <sub>8</sub> x <sup>23</sup> / <sub>32</sub> " 3/ <sub>8</sub> x <sup>27</sup> / <sub>32</sub> "	.42 .44 .44 .46
12 L 713 12 L 714 12 L 715 12 L 716 12 L 717	.1 .25 .5 1.0 2.0	400 400 400 400 400	3/8 x15/32" 9/6 x15/32" 5/8 x13/8" 3/4 x17/8" 13/16 x23/8"	.49 .73 .93 1.29 1.82
12 L 718 12 L 719 12 L 720 12 L 721	.01 .02 .03 .05	600 600 600 600	9/32 x <sup>2</sup> 3/32" 3/8 x <sup>2</sup> 3/32" 13/32 x <sup>2</sup> 3/32" 13/32 x <sup>2</sup> 7/32"	.44 .46 .49 .52
12 L 722 12 L 723 12 L 724 12 L 725 12 L 726	.1 .25 .5 1.0 2.0	600 600 600 600	13/32x15/32" 5/8x15/32" 11/6x11/2" 13/6x17/6" 15/6x23/8"	.57 .90 1.13 1.40 1.99

For OEM prices in quantity lots of 25-49 and 50-up, 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 ceramic or glass terminal seals offer high insulation. Operating temperature range from -55 degrees C to +100 degrees C at full rating. Can be operated at +125 degrees C at 75 per cent of voltage rating. Standard tolerance of ±20%. \*, -55° C to +70° C. Av. wt., 4 oz.

01 - 20 /0.	,		+10 C.AV.	W.C., 1 02.
No.			Size (LWH)	
12 L 750 12 L 751 12 L 987 12 L 752	3.0 4.0 4.0* 5.0	150 150 150 150	13/4 x1 x3/4" 13/4 x1 x3/4" 13/4 x1 x7/8" 13/4 x1 x3/4"	3.21 3.87 3.58 4.29
12 L 753 12 L 754 12 L 988 12 L 755	6.0 8.0 8.0* 10.0	150 150 150 150	13/4x11/4x7/8" 2x13/4x3/4" 2x2x1" 2x13/4x3/4"	4.48 5.17 4.88 5.96
12 L 989 12 L 756 12 L 990 12 L 757	10.0* 12.0 12.0* 15.0	150 150 150 150	2x2x1½" 2x2x½" 2x2x1½" 2x2x1½"	5.66 6.68 6.39 8.08
12 L 761 12 L 991 12 L 762 12 L 992	1.0 1.0* 2.0 2.0*	200	13/4×1×3/4"	2.80 2.51 3.46 3.17
12 L 763 12 L 766 12 L 993 12 L 767 12 L 994	1.0 1.0* 2.0 2.0*	400	13/4×1×3/4" 13/4×1×7/8" 13/4×1×7/8" 2×13/4×13/6" 2×13/4×7/8"	2.25 2.90 2.61 3.66 3.36
12 L 768 12 L 769 12 L 995 12 L 770	3.0 4.0 4.0* 5.0	400 400 400 400	2x13/4x15/16" 2x2x1" 2x2x11/6" 2x2x11/4"	4.13 4.87 4.58 5.87
12 L 771 12 L 772 12 L 774 12 L 997	.1 .25 1.0 1.0*	600	13/4x1x3/4" 13/4x1x3/4" 13/4x11/4x7/8" 13/4x11/4x7/8"	2.32 2.41 3.18 2.89
12 L 775 12 L 996 12 L 776 12 L 777	2.0 2.0* 3.0 4.0	600 600 600	2x2x <sup>7</sup> /8" 2x2x1" 2x2x1 1/8" 2x2x1 1/4"	3.77 3.48 5.34 6.40

For OEM prices in quantity lots of 25-49 and 50-up, write our Industrial Division.

### TYPE P82Z AEROLITE METALLIZED-PAPER TUBULARS

Lightweight, metallized-paper tubular capacitors, Hyvol K impregnated units in moisture-resistant, wax-impregnated cardboard cases, Have "self-healing" characteristics for protection against surge voltages, Low power factor, less than 1%. Operate from -40° C to 70° C. Av. shpg. wt., 2 oz.

No.	Mfd	Volts	Size	1-24, EA.
13 L 670 13 L 671 13 L 672 13 L 673 13 L 674	.01 .02 .03 .05	200 200 200 200 200 200	3/8 x 5/6 3/8 x 5/6 3/8 x 5/6 3/8 x 5/6 3/8 x 5/6 3/8 x 5/6	.42 .42 .44 .44
13 L 675 13 L 676 13 L 677 13 L 678 13 L 679	.25 .5 1.0 2.0 .01	200 200 200 200 200 400	15/2×5/8" 15/32×11/8" 9/6×11/8" 5/8×15/8" 3/8×5/8"	.67 .78 1.05 1.42 .43
13 L 680 13 L 681 13 L 682 13 L 683 13 L 684	.02 .03 .05 .1 .25	400 400 400 400 400	3/8 x 5/8" 3/8 x 5/8" 15/12 x 5/8" 15/12 x 1 1/8" 9/16 x 1 1/8"	.44 .44 .46 .49
13 L 685 13 L 686 13 L 687 13 L 688 13 L 689	.5 1.0 .01 .02 .03	400 400 600 600 600	5/8 x 1 5/8" 13/12 x 2 1/8" 3/8 x 5/8" 3/8 x 5/8" 15/12 x 5/8"	1.29 1.44 .46 .49
13 L 690 13 L 691 13 L 692 13 L 693 13 L 694	.05 .1 .25 .5	600 600 600 600	15/2x5/8" 15/2x11/6" 5/8x11/6" 13/2x15/6" 13/2x25/8"	.52 .57 .90 I.13 I.40

For OEM prices in quantity lots of 25-49 and 50-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 radio, TV and electronic equipment. Hyvol K impregnated, in 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 13 L 886 13 L 887 13 L 888	.005 .01 .002 .003	200 200 400 400	3/16×3/16"	.21 .21 .21 .26
13 L 889	.01	400	1/4 x 9/16"	.26
13 L 890 13 L 891	.0005 .001	600 600	3/6×3/6"	.21
13 L 892 13 L 894 13 L 895 13 L 896	.002 .0047 .005 .0068	600 600 600	1/4 x 1/16"	.26 .26 .26

For OEM prices in quantity lots of 25-49 and 50-up, write our Industrial Division.

### TYPE JP30M HYVOL CAPACITORS



Hermetically sealed, immersion-proof bathtub style caractors. With oil-impregnated, oil-filled, drawned case. Rugedly constructed for usuaditions. MIL type CP53, CP54, CP55, 600 WVDC. \*Single; †dual section. Av. wt., 8 oz.

No.	Mfd	Size	1-9, EA.
13 L 950*	.05	13/4x1x3/4"	1.70
13 L 951*	.1	13/4x1x3/4"	1.74
13 L 952*	.25	13/4x1x13/6"	1.81
13 L 953*	.5	13/4x1x1"	1.93
13 L 954*	1.0	2x13/4x1"	2.25
13 L 955*	2.0	2x2x13/6"	3.00
13 L 956†	.0505	13/4x1x3/4"	2.32
13 L 957†	.11	13/4x1x3/4"	2.39
13 L 958†	.2525	1¾x1x1"	2.46
13 L 959†	.55	2x1¾x7/8"	2.76
13 L 960†	1.0-1.0	2x2x1¾6"	3.37

For OEM prices in quantity lots of 10-24 and 25-up, write our Industrial Division.

### TYPE P123ZG ULTRA-COMPACT METALLIZED-PAPER CAPACITORS

METALLIZED-PAPER CAPACITORS

Ultra-compact P123ZG capacitors. Extremely small size makes them ideal for military and aircraft applications where minimum size and weight with maximum durability is required. Units are also well suited for replacement and original use in radio, television and electronic equipment. In hermetically sealed metal cans to withstand temperature extremes, moisture and heat. Temperature range: -55° C. to +70° C., at full voltage rating; to +100° C. at lower voltages. Tolerance: ±20% in all capacities and voltages. Av. shpg. wt., 2 oz.

No.	Mfd	Volts	Size	1-24, EA
13 L 900 13 L 901 13 L 902 13 L 903 13 L 904	.001	200 200	11/64×7/16"	.95
13 F 201	.002	200	1 1/64×7/16"	.95
13 L 902	.003		1 1/64×7/16"	.96
13 L 203	.005	200	1 1/64×7/16"	1.96
	01	200	11/64×7/16"	1.09
13 L 905 13 L 906 13 L 907 13 L 908 13 L 909	.047	200	15/64×23/32"	1.05
13 L 906	.050	200	15/64×23/32"	1.05
13 L 907	.068	200	5/16X23/2"	1.08
13 L 908	.10 .22	200	5/16×23/32"	1.11
		200	5/16×11/32"	1.13
13 L 910 13 L 911 13 L 912 13 L 913	.25	200	5/16 × 1 1/32"	1.24
13 L 911	.47	200	13/2×11/2"	1.33
13 L 912 13 L 913 13 L 914	.68	200	%6x11/32"	1.40
13 L 913	1.0	200	1%16×17/32"	1.54
	2.0	200	%6x1732" %6x123/32"	1.54 2.33
13 L 915 13 L 916 13 L 917 13 L 919 13 L 920	.0005	400	11/64×7/16"	.99
13 L 916	.001	400	11/64×7/16"	.99
13 L 917	.002	400	1 1/64×7/16"	.99
13 L 919	.02	400	11/64×23/32	1.05
13 L 920	.022	400	5/16X23/32"	1.06
13 L 921 13 L 922 13 L 923 13 L 924 13 L 926	.033	400	5/16 X2 3/32"	1.06
13 L 922 13 L 923 13 L 924	.040	400	5/16×23/32	1.06
13 L 923	.047	400	13/32 X23/32	1.06
13 L 924	.050	400	13/32×23/32	1.06
13 L 926	.10	400	13/32×11/32"	1.18
13 L 927 13 L 928 13 L 929 13 L 931 13 L 933	.15	400	1/2 x 1 1/32"	1.25
13 L 928	.22	400	9/16×11/22"	1.25
13 L 929	.25	400	%6x1 /32"	1.42
13 L 931	.47	400	%6x123/32"	1.55
13 L 933	1.0	400	9/16×123/32" 43/64×27/32"	1.42 1.55 1.92
13 L 934	.01	600	5/16X23/32"	1.08
13 L 936	.10 .25	600	1/2×11/2/	1.23
13 L 937	.25	600	9/c×111/22	1.53
13 L 938	.50 1.0	600	4364×123/32"	1.84
13 L 939	1.0	600	3/4×27/32"	2.10
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For OEM prices in quantity lots of 25-up, write our Industrial Division.

### **TYPE P89ZXY SEALED METAL TUBULARS**



Tubular Aerolites in hermetically sealed metal cases. Hyvol K or M impregnated. Have "self-healing" characteristic which assures full protection against voltage surges. Double-rubber bakelite terminal seals. For hard use under extreme conditions. Tolerance: ±20%. Negative lead not connected to metal case. Av. shpg. wt., 2 oz.

No.	Mfd	Volts	Size	1-24,EA.
12 L 730	.25	200	1/2 x1"	1.37
12 L 732	1.0	200	5/6 x1 1/2"	1.77
12 L 733	2.0	200	5/8 x2"	2.19
12 L 735	.05	400	7/6 x1"	1.24
12 L 736	.1	400	7/6×15/6"	1.32
12 L 737	.25	400	5/8×15/6"	1.54
12 L 738	.5	400	5/8×2"	1.71
12 L 739	1.0	400	3/4×21/2"	2.17
12 L 740	2.0	400	1x2½" 3/8x1" 3/8x1" 1/2x1"	3.12
12 L 741	.01	600		1.27
12 L 742	.02	600		1.27
12 L 744	.05	600		1.32
12 L 745 12 L 746 12 L 747 12 L 748 12 L 749	.1 .25 .5 1.0 2.0	600 600 600 600	1/2 x1 1/2" 5/8 x1 5/8" 3/4 x2" 13/16 x2 1/2" 1 1/4 x2 1/2"	1.37 1.70 1.90 2.49 3.60

For OEM prices in quantity lots of 25-49 and 50-up, write our Industrial Division.

### **ROTATOR CAPACITORS**

AC motor capacitors. 70 mfd., 50 v. AC. 7/4x3". \*Solder lugs; †5" leads. 5 oz. 12 L 670. †Type XA4098A. NET 12 L 669. \*Type XA4283. EACH....73c

### **INDUSTRIAL BUYERS:**

Allied can make immediate shipment on all Aerovox, Cornell-Dubilier, Sprague, and Mallory capacitors in industrial quantities and at OEM prices. Contact our Industrial Division for price quotations.

# **Aerovox Capacitors**









### **MICA CAPACITORS**

Extremely stable capacitors. Types 1468LS, 1467LS, 1469, 1464; Made to MIL C-5A specs; 500 WVDC, except \*300 WVDC; have \*20% tolerance, except 1464 and 1469 which are \$-5%. Types 1650L, 1651L, 1652L, 1445, 1446 and 1447: \*10% tolerance. Types 1445,

A TYPE 1468LS

Stock No.	Mmf	MIL No.	Size	NET EACH
12 L 468 12 L 469 12 L 470 12 L 471	5 10 20 24	CM-20B-050 CM-20B-100 CM-20B-200 CM-20B-240	<sup>45</sup> /64X <sup>2</sup> %4X <sup>3</sup> /16"	18c
12 L 472 12 L 473 12 L 474 12 L 475	30 50 82 100	CM-20B-300 CM-20B-500 CM-20B-820 CM-20B-101	45/64X <sup>2</sup> 9/64X <sup>3</sup> /16"	18¢ 12¢ 12¢ 12¢
12 L 476 12 L 477 12 L 478 12 L 479	150 200 250 270	CM-20B-151 CM-20B-201 CM-20B-251 CM-20B-271	<sup>45</sup> /64X <sup>29</sup> /64X <sup>3</sup> /16*	15¢ 15¢ 18¢
12 L 480 12 L 481 12 L 482 12 L 483	300 390 430 500	CM-20B-301 CM-20B-391 CM-20B-431 CM-20B-501	<sup>45</sup> /64X <sup>29</sup> /64X <sup>3</sup> /16"	18c

B TYPE 1467LS

12 L 778 12 L 779 12 L 780 12 L 781 12 L 782		CM-30B-561 CM-30B-681 CM-30B-911 CM-30B-102 CM-30B-152	53/64X53/64X9/32"	18¢ 18¢ 18¢ 21¢ 24¢
12 L 783 12 L 784 12 L 785 12 L 786	2000 2200 2500 2700	CM-30B-202 CM-30B-222 CM-30B-252 CM-30B-272	53/64X53/64X9/32"	26¢ 26¢ 29¢ 29¢
12 L 787 12 L 788 12 L 789 12 L 790	3000 3300 4700 5000	CM-30B-302 CM-30B-332 CM-30B-472 CM-30B-502	53 <sub>64</sub> X53 <sub>64</sub> X9/32"	35¢ 35¢ 4-¢
12 L 79 I 12 L 792 12 L 793 12 L 794 12 L 795	5600 6200 7500 8200 10000	CM-30B-562 CM-30B-622 CM-30B-752 CM-30B-822 CM-30B-103	53/64X53/64X9/32"	41¢ 53¢ 59¢ 71¢

A TYPE 1469-SILVERED MICA

Stock No.	Mmf	MIL No.	Size	EACH
12 L 300 12 L 301 12 L 302 12 L 303 12 L 304	5 10 12 15 18	CM-20C-050 CM-20C-100 CM-20C-120 CM-20C-150 CM-20C-180	45/64X <sup>29</sup> /64X <sup>3</sup> /16"	24c
12 L 305 12 L 306 12 L 307 12 L 308	20 24 27 30	CM-20C-200 CM-20C-240 CM-20C-270 CM-20C-300	<sup>45</sup> / <sub>64</sub> x <sup>29</sup> / <sub>64</sub> x <sup>3</sup> / <sub>16</sub> "	24c
12 L 309 12 L 310 12 L 311 12 L 312	33 36 39 43	CM-20C-330 CM-20C-360 CM-20C-390 CM-20C-430	<sup>45</sup> ⁄64X <sup>29</sup> ⁄64X <sup>3</sup> ⁄16"	24c
12 L 3 1 3 12 L 3 1 4 12 L 3 1 5 12 L 3 1 6 12 L 3 1 7	47 50 51 56 62	CM-20C-470 CM-20C-500 CM-20C-510 CM-20C-560 CM-20C-620	<sup>45</sup> /64X <sup>29</sup> /64X <sup>3</sup> /16"	24c
12 L 318 12 L 319 12 L 320 12 L 321	68 75 82 91	CM-20C-680 CM-20C-750 CM-20C-820 CM-20C-910	<sup>45</sup> / <sub>64</sub> x <sup>29</sup> / <sub>64</sub> x <sup>3</sup> / <sub>16</sub> "	24c
12 L 322 12 L 323 12 L 324 12 L 325		CM-20C-101 CM-20C-151 CM-20C-181 CM-20D-201	45/64X <sup>29</sup> /64X <sup>3</sup> /16"	24¢ 26¢ 26¢ 26¢
12 L 326 12 L 327 12 L 328 12 L 329 12 L 330	220 240 270 300 360	CM-20D-221 CM-20D-241 CM-20D-271 CM-20D-301 CM-20D-361	<sup>45</sup> ⁄64X <sup>29</sup> ⁄64X <sup>3</sup> ⁄16 <b>"</b>	26¢ 32¢ 32¢ 32¢ 32¢

В	TYPE	1464—SIL	VERED MICA	
12 L 331	470	CM-30D-471	53/64X53/64X9/32*	.41
12 L 332	510	CM-30D-511		.41
12 L 333	560	CM-30D-561		.44
12 L 334	620	CM-30D-621		.44
12 L 335 12 L 336 12 L 337 12 L 338	680 750 820 910	CM-30D-681 CM-30D-751 CM-30D-821 CM-30D-911	53/64X53/64X9/32"	.47 .47 .50
12 L 339	1000	CM-30D-102	53/64X53/64X9/32*	.59
12 L 340	2000	CM-30D-202		.79
12 L 341	3000	CM-30D-302		1.12
12 L 342	3900	CM-30D-392		1.18
12 L 343	5000	CM-30D-502	53/64X53/64X9/32"	1.26
12 L 344	6200	CM-30D-622	53/64X53/64X9/32"	1.41
12 L 345	7500	CM-30D-752	53/64X53/64X9/32"	1.47
12 L 346	10000*	CM-35D-103	53/64X53/64X21/64"	2.06

1446 and 1447 are  $1\frac{1}{2}x1\frac{1}{2}x1\frac{1}{2}x^2$ ; lug terminals and  $1\frac{1}{2}\frac{1}{6}x^2$  centers; case styles are equivalent to CM45 and CM50 of MIL-C5A. Types 1650L, 1651L and 1652L are  $1\frac{1}{2}x1\frac{1}{6}x\frac{1}{6}x\frac{1}{6}x^2$ , have 6-32 screw terminals;  $1\frac{1}{4}x^2$  centers. Av. shge, wt.: 1467LS, 1468LS, 1469 and 1464, 20z.; others, 4 oz.

600 WVDC

(C	TYPE 165	0 L	(D) TYPE	1445
Mfd	Stock No.	EACH	Stock No.	EACH
.00005 .0001 .00025 .0005	12 L 347 12 L 348 12 L 349 12 L 350	85c	12 L 359 12 L 360 12 L 361 12 L 362	7lc
.001 .002 .003 .005	12 L 351 12 L 352 12 L 353 12 L 354	.85 .97 1.09 1.23	12 L 363 12 L 364 12 L 365 12 L 366	.71 .76 .85
.01 .015 .02 .03	12 L 355 12 L 356 12 L 357 12 L 358	1.65 1.79 2.09 2.68	12 L 367 12 L 368 12 L 369 12 L 370	1.26 1.56 1.79 2.62
	12	00 WVI	C	

	12	OU WY	,,,	
(C)	<b>TYPE 165</b>	1L	(D) TYPE	1446
.00005 .0001 .00025 .0005	12 L 371 12 L 372 12 L 373 12 L 374	94c	12 L 382 12 L 383 12 L 384 12 L 385	94c
.001 .002 .003	12 L 375 12 L 376 12 L 377	1.12	12 L 386 12 L 387 12 L 388	1.06 1.41 1.79
.005 .01 .02	12 L 378 12 L 379 12 L 380	1.94 2.76 4.15	12 L 389 12 L 390	1.94 3.00

2500	WVI	C		
TVPF 16521		(D)	TYP	E 1447

(0)	1 TPE 1002	-	(D) 11FE	
.00005 .0001 .0002 .00025 .0003	12 L 484 12 L 485 12 L 486 12 L 487 12 L 488	1.12 1.23 1.26 1.29	12 L 967 12 L 968 12 L 969 12 L 970 12 L 971	1.12 1.12 1.29 1.32
.0004 .0005 .001 .0015	12 L 489 12 L 490 12 L 491 12 L 492	1.47 1.50 1.71 2.29	12 L 972 12 L 973 12 L 974 12 L 975	1.35 1.41 1.65 2.09
.002 .003 .004 .005	12 L 493 12 L 494 12 L 495 12 L 496 12 L 497	2.50 3.00 3.32 3.65 4.29	12 L 976 12 L 977 12 L 978 12 L 979	2.44 2.88 3.32 3.76

### PLASTIC-COATED, DIPPED-MICA **CAPACITORS**

Compact, plastic-coated, dip-ped-mica capacitors designed for long life and high stability for long life and high stability over wide ranges of temperature and humidity. Employ radial-lead design—ideal for printed-circuit use and automatic insertion. Operate from 55° to +123° C. Tolerance is ±10%. Rated 500 DCWV, except \*300 DCWV, Max. size: ADM-15, 1½2x½(x½²; ADM-15, 1½x½(x½²; AV. shpg. wt., 2 oz.



Stock No.	Mfr's Type	Mmf	EACH
13 L 541	ADM-15-050	.5	1
13 L 542 13 L 543 13 L 544	ADM-15-100	10	15c
13 L 543	ADM-15-150	15	136
13 L 544	ADM-15-200	20	
13 L 545	ADM-15-300	30	1
13 L 545 13 L 546 13 L 547 13 L 548	ADM-15-330	33	15-
13 L 547	ADM-15-360	36	I5c
13 L 548	ADM-15-390	39	
13 L 549	ADM-15-470	47	
13 L 549 13 L 572 13 L 573 13 L 574	ADM-15-500	50	1.5
13 L 573	ADM-15-560	56	I5c
13 L 574	ADM-15-680	68	1
13 L 575	ADM-15-820	82	15¢
13 L 575 13 L 576 13 L 577 13 L 578	ADM-15-101	100	15¢
13 L 577	ADM-15-151	150	18¢
13 L 578	ADM-15-181	180	21¢
13 L 873	ADM-15-201	200	21¢
13 L 873 13 L 874 13 L 875 13 L 876	ADM-15-221	220	24¢
13 L 875	ADM-15-271	270	26¢
13 L 876	ADM-15-301	300	_26¢
13 L 877	ADM-15-361	360	29¢
13 L 878 13 L 879 13 L 880	*ADM-15-471	470	35¢
13 L 879	*ADM-15-511	510	35¢ 35¢
13 L 880	ADM-19-681	680	35¢
13 L 881	ADM-19-821	820	35¢
13 L 881 13 L 882 13 L 883 13 L 884	ADM-19-102	1000	41¢
13 L 883	ADM-19-202	2000	65¢
13 L 884	*ADM-19-302	3000	. 88¢



### **P84CM DURAMIC CERAMIC CASED TUBULARS**

Ceramic-cased paper tubular capacitors—for use in electronic equipment where outstanding performance and top dependability are required. Have high stability and dielectric strength. Thermosetting type end-seals provide exceptional humidity protection. Pigtail leads are firmly imbedded; will not work loose or pul out. Operating temperature range: ~55°C to +85°C. ±20% tolerance. Av. shpg. wt., 4 oz.

,					
Stock No.	Mfd	WVDC	Size	NET EACH	
12 L 400 12 L 401 12 L 402 12 L 403 12 L 404	.01 .015 .02 .022 .03	200 200 200 200 200 200	5/6×1" 3/8×11/4" 3/8×11/4" 3/8×11/4" 3/8×11/4"	l5c	
12 L 405 12 L 406 12 L 407 12 L 408 12 L 409	.033 .047 .05 .068	200 200 200 200 200 200	3/8 x 1 1/4" 7/16 x 1 1/4" 7/16 x 1 1/4" 17/32 x 1 9/16" 17/32 x 1 9/16"	15¢ 15¢ 15¢ 18¢ 21¢	
12 L 410 12 L 411 12 L 413 12 L 414 12 L 415	.15 .2 .25 .33 .47	200 200 200 200 200	17/32×13/4" 5/8×17/8" 5/8×17/8" 3/4×2" 13/16×21/4"	21¢ 21¢ 24¢ 29¢ 35¢	
12 L 416 12 L 418 12 L 419 12 L 420 12 L 421	.5 1.0 .0068 .01 .015	200 200 400 400 400	13/16X2 1/4" 1x2 1/4" 5/16X1" 5/16X1" 3/8X1 1/4"	35¢ 53¢ 15¢ 15¢	
12 L 422 12 L 423 12 L 424 12 L 426 12 L 427	.02 .022 .03 .047 .05	400 400 400 400 400	3/8 x 1 1/4" 3/8 x 1 1/4" 7/6 x 1 1/4" 7/6 x 1 1/2" 7/6 x 1 1/2"	5¢   5¢   8¢   8¢	
12 L 429 12 L 431 12 L 433 12 L 434 12 L 435	.1 .2 .25 .33 .47	400 400 400 400 400	17/32×19/16" 5/8×17/8" 3/4×2" 3/4×2" 13/16×21/4"	21¢ 21¢ 29¢ 32¢ 32¢	
12 L 436 12 L 438 12 L 439 12 L 440 12 L 441	.5 1.0 .0005 .001 .0015	400 400 600 600 600	13/16×21/4" 1×27/8" 5/16×1" 5/16×1"	35¢ 53¢ 15¢ 15¢	
12 L 442 12 L 443 12 L 444 12 L 445 12 L 446	.002 .0022 .003 .0033 .004	600 600 600 600	5/16×1" 5/16×1" 5/16×1" 5/16×1"	l5c	
12 L 447 12 L 448 12 L 449 12 L 450 12 L 451	.0047 .005 .006 .0068 .01	600 600 600 600	5/16×1" 5/16×1" 5/16×1" 3/8×1 1/4"	15¢ 15¢ 15¢ 18¢	
12 L 452 12 L 453 12 L 454 12 L 455 12 L 456	.015 .02 .022 .03 .033	600 600 600 600	3/8 x 1 1/4" /16 x 1 1/4" /16 x 1 1/4" 17/32 x 1 9/6" 17/32 x 1 9/6"	18¢ 18¢ 18¢ 21¢ 21¢	
12 L 457 12 L 458 12 L 459 12 L 460 12 L 461	.047 .05 .068 .1 .15	600 600 600 600	17/32×19/6" 17/32×19/6" 9/6×17/8" 5/8×17/8" 3/4×2"	24¢ 24¢ 24¢ 26¢ 26¢	
12 L 462 12 L 463 12 L 464 12 L 466 12 L 467	.2 .22 .25 .47 .5	600 600 600 600 600	13/6x21/4" 13/6x21/4" 1x21/4" 1x27/8" 1x27/8"	26¢ 29¢ 32¢ 41¢ 47¢	

#### **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 in a cubic inch of space! "Cerafil" miniature capacitors now permit designs of a compactness heretofore impossible. These rugged ceramic units operate from -55 to +85°C, at 100 v. All values of Cerafil capacitors are tested in accordance with MIL-C-11015A, and meet the requirements of this specification. Capacity tolerance, \$20%. Av. shpg. wt., 2 oz.

Stock No.	Mfr's Type	Mfd.	WVDC	Diam.	Length	NET
18 L 854 18 L 855	C-80V102AM C-80V502AM C-80V103AM	.001	100 100	.090 .120	.320 i .500	.56

For OEM prices on Aerovox Cerafil capacitors (in lots of 25-49, 50-99 and 100-499), write or phone our industrial Division.

# **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 voltages and high temperatures. Units are encased in compact, rubber-sealed aluminum cases. FP types have the exclusive Mallory Fabricated Plates—anodes specially constructed of metalized cotton 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 terminals and are for use in printed circuits. Special internal design lowers RF impedance and permits a minimum of coupling between plates. Up to 150 WVDC, capacity tolerance is -10% to +100%. Above 150 WVDC, tolerance is -00% to +50%. Can is negative except \*. Insulating washer supplied. For mounting hardware, see page 159. Av. shpg. wt., 6 oz.



### SINGLE SECTION

•	Stock	Mfr's	Mfd	DC	Size	NET
	No.	Туре		Wkg. Volts		EAC H
	18 L 471	FP171	10	500	1x2"	.94
	18 L472	FP173	20	500	1x2"	1.09
	8 L472 8 L473	FP175	30	500	1x21/2"	1.09
	18 L474	FP177	40	500	l 1x3"	1.47
	18 L471 18 L472 18 L473 18 L474 18 L475 17 L360	FP187	90	500	13/8×3"	2.06
	7 L 360 17 L 364 17 L 361	FP142	10 15 20	450	3/4 x 2"	.91
	7 L 364 7 L 361	FP143	15	450 450	1x2"	1.00
	IZ L 361	FP144	20	450	1x2" 1x2½"	1.06
	1 / - 30/	FF145	30	450	1 x 2 ½"	1.15
2	17 L 362	FP146	40	450	1x2½"	1.00 1.06 1.15 1.21
	8 L 469 7 L 368 8 L 470 7 L 370 8 L 468	FP148	60	450	13/8 x2 1/2" 13/8 x2 1/2"	1.65
	1 L 368	FP149	80	450	13/8×21/2"	1.79
-	B - 4/0	FP150	100 50	450	1 1 3/0 X.5"	2.03
	8 L 470 7 L 370 8 L 468	FP137	50	350	1x2½" 1x3"	1.23
	18 L 468	FP137.2	60	350		2.03 1.23 1.29 2.32
	7 L 371 8 L 465	FP140	125	350	13/8×3"	2.32
	18 L 465	FP128	80 100	300	1 1x3"	1:50
-	18 L 466	FP129.1	100	300	1x3"	1.71
	18 L 467	FP131	150	300	13/8×3"	2.06
Į	8 L 713	FP121	120	200	13/8 x3" 13/8 x2"	2.06 1.38
1	18 L 23 I	PFP122	160	200	13/8 x 2 1/2"	1.68
-	7 L 372 7 L 373	FP115	50	150	1x2"	.97
	I 7 L 373	FP116	100 120	150	1x2½"	1.18
	18 L 463	FP116.5	120	150	1x3"	1.21
_]	18 L 465 18 L 466 18 L 467 18 L 231 17 L 373 18 L 232 18 L 232	PFP116.8	140	150 150	1x2½"	.97 1.18 1.21 1.23
	7 L 799	FP117	150	150	1x3"	1.26
	18 L 464	FP118	200	150	13/8 x2 1/2"	1.44
	17 L 836	FP119	300	150	13/6×3"	1.65
- 1	7 L 350	WP065	500	50	13/8×2"	1.56
_	8 L 464 7 L 836 7 L 350 7 L 258	WP068	1500	50	13/8 x2" 13/8 x4"	1.56 2.26
	17 L 257	WP052	40	25	3/4×2"	.79
- 1	8 L 350 7 L 352	WP057	500	25	1x2½"	1.50
- 1	17 L 352	WP059	1000	25	13/8×2"	2.09
ı	7 L 353	WP039	1000	15	1 x21/5"	1.50
- 1	7 L 354	WP041	2000	15	13/8×21/2"	1 2.03
1	7 L 354 7 L 256	WP042	3000	25 25 25 15 15	13/8 x2 1/2" 13/8 x3"	2.06

### **DUAL SECTION**

18 L 458	FP284	30-30	500	13/8 x2 /2" 13/8 x2 /2"	1.91
18 L 233 17 L 286 17 L 842 18 L 455	PFP284	30-30	500	136 x2 16"	i.śi
17 L 286	FP288	40-40	500	13/8×3/2	3.23
17 L 842	FP258	15-15	475	17843	1.22
18 L455	FP259			1x21/2"	2.53 1.38 1.53
10 6422		30-10	475		1.53
17 L 843 18 L 352 18 L 456 18 L 457 17 L 283	FP262	40-40	475	13/8×3"	2.53 2.32 2.68 2.97
18 L 352	FP255	20-100	475-300	13/8×3"	2.32
18 E 456	FP263	60-40	475 475	13/8×4"	2.68
18 L 457	FP264.5	80-40	475	13/8×4"	2.97
18 L 457 17 L 283	FP266	80-50	475	13/8×4"	3.06
17 L 375	FP231	10-10	450	1x2"	
16 5 343	FP231.3				1.12
18 L 477 17 L 376 17 L 765	FP231.3	20-10	450	1x21/2"	1.29
14 5 2/2	FP234	20-20	450	1x3"	1.50
17 L 765 17 L 430	FP237	30-30	450	11/8×21/2"	1.79
17 L 430	FP238	40-40	450	13/8×3"	2.03
17 L 383 17 L 766 18 L 478 18 L 454 17 L 838	FP239	50-40	450	13/8×3" 13/8×3" 13/8×4"	2.15 2.26 2.65 2.29
17 L 766	FP240*	50-50	450	13/0×3"	2.26
18 L 479	FP242.5	60-60	450	13% x4"	2.65
18 L 454	FP245.2	80-20	450	13%x3"	2.20
18 L 454 17 L 838	FP230	20-50	450-250	1x3"	ĩ.65
18 L 356	FP244	80-50			1.03
18 L 356 18 L 453 17 L 432 17 L 630 17 L 265	FP229.5		450-50	13/8×3"	2.06 3.09 1.32
18 L 453 17 L 432	FF229.5	120-40	400	13/8×4"	3.09
17 6 636	FP225	15-15	350	1x2"	1.32
17 L 630 17 L 265	FP227	20-20	350	1x2½" 1x3"	1.35
17 L 265	FP227.3	30-30	350	1x3"	1.71
18 L 482	FP227.7	100-100	350	13/8×4"	3.62 2.35 1.73 2.23 1.15
18 L 354	FP218	120-20	300	13/8 x3" 13/8 x2"	2.35
18 L 480	FP217.87	40-40	300	13/ex2"	1.73
18 L 355	FP217.9	75-75	300	13/8×3"	2.23
18 L 234	PFP217.86	10-10	300	13/8×2"	7.75
18 L 482 18 L 354 18 L 355 18 L 234 17 L 377 17 L 377 17 L 373 18 L 353 18 L 479 17 L 760	FP217	20-20	250	1x2"	1.12
17 [ 637	EP221	40-40	250	1x3"	1.12
17 L 837 18 L 353 18 L 479 17 L 760	FP221 FP217.7	150-150	250	13/-4	3.03
18 7 778	FP217.74	200-200	250	13/8×4" 13/8×4"	3.53
19 5 360	FP208	20-200	1 230	17874	3.53
17 2 700			150	1x2"	1.00
	FP211	30-30	150	1x2"	1.09
17 L 761	FP210	40-20	150	1x2" 1x2½"	1.06
17 L 762	FP212	40-40	150	1x2½"	1.12
17 L 763	FP213	50-30	150 150	1x2"	1.18
17 L 761 17 L 762 17 L 763 18 L 235	PFP213.1	50-30	150	1x2"	1.18
17 L 380 18 L 236 17 L 764 17 L 395 17 L 995	FP214	50-50	150	1x2½"	1.26
18 E 236	PFP214.3	70-30	150	1x2"2	1.29
17 1 764	FP216	80-40	150	1x3"	1.29 1.35 2.00
17 7 303	FP215	125-100	150	13/8×21/2"	7.52
18 L 236 17 L 764 17 L 395 17 L 995	FP216.1	200-5	150	13/ -21/#	7.50
17 L 263				13/8 x2 1/2"	1.59
	FP216.4	200-200	150	13/8×4"	2.35 2.35 1.00
18 L 237	PFP216.4	200-200	150 50	13/8×3"	2.35
18 L 451	WP202.1	50-50	[ 50	1 x 2"	1.00
18 L 452	WP202.5	100-100	50	1 x 2"	1.23
18 L 450	WP201.1	40-40	25	1x2"	`.9ī
18 L 238 17 L 433	PWP200.6	500-100	20	1x2"	1.73
17 L 433	WP200	1000-1000	15	13/ex21/4"	2.59
17 L 356	WP204	250-1000	10-6	13/8 x21/2" 13/8 x2"	2.59 1.68
		1 -30 1000	1 10-0	1 - 7844	

Industrial users: Allied can promptly supply industrial capacitors in any quantity at OEM prices. Write to Industrial Division for information and prices. One order to Allied will cover all your needs.

TRIPLE SECTION						
Stock No.	Mfr's Type	Mfd	DC Wkg. Volts	Size	NET EACH	
17 L 713 17 L 864 17 L 865	FP398 FP394	10-40-40 10-10-10	500-450-450 475	13/8×3" 1×3"	1.59	
17 L 865	FP396 FP396.2	30-30-20 40-10-10	475 475	13/8×3" 13/8×21/2"	2.62 2.26 2.88	
17 L 857	FP377	40-40-40	450	13/8×4"	2.88	
17 L 858 17 L 665	FP378 FP375.8	80-40-20 10-10-10	450 450	13/8 x4" 1 x 2 1/2"	1:53	
17 L 666	FP376.1 FP376.3	15-15-10 20-10-10	450 450	1x3"	1.53	
17 L 668	FP376.5	20-20-20	450	1% x2 1/2"	2.12	
17 L 669 17 L 855 17 L 853	FP376.8 FP375	40-40-10 40-40-100	450 450-450-200	13/8 x3" 13/8 x4"	2.91	
17 L 853	FP366 FP345.2	20-10-50 10-10-20	450-450-50 450-450-25	1 x 3" 1 x 2"	1.68	
17 L 598	FP345.5	15-15-40	450-450-25	1x2½"	1.62	
17 L 599	FP345.8 FP346	20-20-20 40-40-20	450-450-25 450-450-25	1x3" 13/8x3"	1.79	
17 L 444 18 L 360 18 L 717	FP341	40-90-50	450-150-150	13/8×3" 13/8×4"	2.32 2.35 3.59 2.91	
18 L 239	FP333.85 PFP333.15	100-10-80 40-30-20	400-400-350 400-350-300	13/8 x 2 1/2"	2.91	
18 L 485 17 L 428	FP332.4 FP330.5	100-100-10	350 350	13/8 x 4" 1 x 2"	4.00	
17 L 429	FP330.7	30-20-10	350	1 x3"	1.91	
18 L 484	FP330.3 FP329.5	20-10-5 20-20-20	350-350-250 350-350-25	1x2" 1x2"	1.65	
17 L 386 17 L 346	FP328 FP331	15-10-20 30-30-20	350-350-25 350-300-25	1x2" 1x3"	1.47	
17 L 346 18 L 241	PFP326.76	150-100-30	300	13/8x4"	3.00	
17 L 346 18 L 241 18 L 242 17 L 846	PFP326.4 FP335	60-10-25 100-60-20	300-300-25 300-250-250	13/8 x 2" 13/8 x 3"	2.20	
101 403	FP326.3	100-200-60	300-150-150	13/8×4"	3.20	
18 L 240 17 L 425	PFP326.15 FP320	40-20-20	300-150-150 250	1x2" 13/8x2"	1.71	
18 L 240 17 L 425 17 L 358 17 L 289	FP319 FP311.2	80-40-50 20-20-20	250-150-50 150	13/8 x2 1/2" 1 x2"	1.94	
17 L 337	FP311.4	40-20-20	150	1x2½"	1.41	
17 L 338 17 L 339 17 L 340	FP311.5 FP311.7	40-40-40 80-40-20	150 150	1x3" 13/8x2"	1.53 1.71 2.38	
17 L 340 18 L 243	FP311.9 PFP311.63	120-120-40 50-40-30	150 150	13/8 x3" 1 x21/2"	1.88	
18 L 244	PFP311.12	70-30-20	150-150-25	1x21/2"	2.35	
17 L 387	FP306 FP307	40-20-20 40-20-100	150-150-25 150-150-25	1x2" 1x2½"	1.35	
17 L 767 17 L 768 17 L 438	FP310 FP309	40-40-20 50-30-100	150-150-25 150-150-25	1x21/2" 1x21/2"	1.41	
17 L 344	FP311	50-50-20	150-150-25	1x3"	1.56	
17 L 844 18 L 245	FP314 PFP302.75	40-40-200 90-40-400	150-150-25 150-150-10	1x3" 1x3"	2.06 2.00	
18 L 723	FP302.5	80-60-250 70-30-100	150-150-10 150-150-10	1x2½" 1x2½"	1.65	
18 L 246 17 L 357	WP520	40-40-40	25	1x2"	1:26	

### **QUADRUPLE SECTION**

		MOUDING! FI	. SECTION		
18 L 462	FP495	40-40-8-8	500	13/8×4"	3.35
18 L 459	FP474.5	20-20-10-10	475	13/8×21/2"	2.56
18 L 460	FP475	20-20-20-20	475	13/8×3"	3.06
18 L 461	FP475.5	40-10-10-10	475	13/8×3"	2.73
17 L 880	FP474	10-10-10-10	475	13/8 x2"	2.06
17 L 994 18 L 369 18 L 725 17 L 422	FP476	40-20-10-10	475	13/8×3"	3.00
16 7 360	FP456	25-20-40-100	475-450-300-50	13/8×3"	3.67
18 L 369 18 L 725	FP451.3	10-4-140-100	475-300-300-50	13/8×4"	\$16
17 L 422	FP434	10-10-10-10	450	13/8×2"	2.91 3.12 1.97
i7 L 423	FP444	20-20-20-20	450	13/8×3"	2.76
17 L 893	WP433.6	5-5-5-5	450	13/8×2"	1.76
17 L 894	FP434.5	20-10-10-10	450	13/8XZ"	2.18
17 L 894 17 L 896	FP444.8	30-30-20-20	450	13/8 x2" 13/8 x3"	2.18 3.06 2.70
17 L 898	FP445	35-35-10-5	450	13/8×3"	3.50
17 E 899	FP447	40-40-20-20	450	13/8×4"	3.26
17 L 887	FP430.2	40-20-25	450-450-450-25	13/8×3"	2.70
i7 E 872	FP436	40-20-20-40	450-450-450-25	13/8×3″	2.73
17 L 449	FP429	40-30-10-20	450-450-450-25	13/8×3"	2.65
17 L 888	FP430.6	40-40-40-40	450-450-450-25	13/8×4"	3.23
17 L 886	FP428.4	40-40-30-30	450-450-350-350	13%x4"	3.23
17 L 885	FP427.5	10-10-60-100	450-450-200-50	13/8×21/2"	2.26
17 L 448	FP426	20-15-20-20	450-450-25-25	13/8×2"	2.03
17 L 834	FP413X	40-40-40-20	450-300-300-150	13/8×3"	2.88
18 L 247	PFP420.52	40-30-20-20	400-350-350-350	13/8×3"	2.91
18 L 726	FP420.7	100-10-30-20	400-400-50-50	13/8 x 3"	3.00
18 L 494	FP420.45	40-80-100-25	400-350-200-50	13/8×4"	3.56
18 L 248	FP419.9	15-15-15-50	350-350-350-50	13/8×2"	2.20 2.50 2.73
18 L 492	FP419.87	40-20-20-50	350-350-350-25	13/8x21/5"	2.50
18 L 365	FP419.3	40-40-20-20	350-350-350-25	13/8×3"	2.73
18 L 728	FP419.67	60-100-60-40	350-350-200-75	13/8×4"	3.85
18 L 491	FP419.65	160-60-10-4	350-300-300-300	13/8x4"	3.76 3.79
18 L 490 18 L 489	FP419.54	200-20-20-20	300	13/8×4"	3.79
18 L 489		150-30-30-150	300-300-300-50	13/8×4"	3.59
17 L 868	FP419	200-20-100-20	300-250-50-25	13/8x4"	3.41
17 L 730	FP412	100-80-60-40	150	13/8×3"	2.73
18 L 730		200-200-100-10	150-150-150-75	13/8×4"	3.50
17 L 447	FP409	40-40-30-20	150-150-150-25	13/8 x 2"	1.82
17 L 716	FP409.4	50-20-20-200	150-150-150-25	13/8×2"	2.06 2.09 2.18
18 L 362 17 L 717	FP410	50-50-50-20	150-150-150-25	13/8×21/2"	2.09
		80-40-30-100	150-150-150-25	13/8 x 2 1/2"	2.18
17 L 718	FP411.3	80-40-40-20	150-150-150-25	13/8×21/2"	2.06
17 L 715	FP408	60-40-20-200	150-150-150-10	13/8×2"	2.03
17 L 714	FP405	20-20-160-40	150-150-25-25	13/8 x2"	1.88

### "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. All capacitors have an operating range of  $-20^{\circ}$  C. to  $+65^{\circ}$  C. Tolerance is -10% to +250%. Leads are 22 gauge, tinned copper wire. Av. shpg. wt., 2 oz.

Stock No.	Туре		WVDC	Size	NET
18 L 764	TT3X40	5 10 25 40 2	3 3 6	3/16X 1/2" 3/16X 5/8" 1/4 X 5/8" 1/4 X 5/8" 3/16X 1/2"	73¢ 73¢ 73¢ 73¢ 73¢
18 L 769 18 L 770 18 L 771 18 L 772 18 L 773	TT6X5 TT6X8 TT6X10 TT6X15 TT6X25	5 8 10 15 25	6 6 6 6	3/16×1/2" 3/16×9/16" 3/16×5/8" 1/4×5/8" 1/4×5/8"	73¢ 79¢ 79¢ 79¢
18 L 775 18 L 776 18 L 777 18 L 778 18 L 779	TT6X40 TT6X50 TT6X60 TT6X100 TT10X15	40 50 60 100 15	6 6 6 10	3/8 x 5/8" 3/8 x 3/4" 3/8 x 3/4" 3/8 x 3/4" 1/4 x 5/8"	82¢ 82¢ 82¢ 88¢ 79¢
18 L 780 18 L 781 18 L 782 18 L 783 18 L 784	TT10X25 TT10X60 TT12X1 TT12X2 TT12X5	25 60 1 2 5	10 10 12 12 12	3/8 x 5/8" 3/8 x 5/8" 3/16 x 1/2" 3/16 x 1/2" 3/16 x 9/16"	79¢ 85¢ 79¢ 79¢
18 L 785 18 L 786 18 L 787 18 L 788 18 L 789	TT12X10 TT15X10 TT15X20 TT15X30 TT25X5	20 30 5	12 15 15 15 25	1/4 x 5/8" 1/4 x 5/8" 3/8 x 5/8" 3/8 x 3/4" 1/4 x 5/8"	79¢ 82¢ 85¢ 88¢ 82¢
18 L 790 18 L 791 18 L 792 18 L 793 18 L 794 18 L 795	TT25X8 TT25X15 TT25X20 TT50X5 TT50X10 TT50X20	8 15 20 5 10 20	25 25 25 50 50 50	3/8 x 5/8" 3/8 x 5/8" 3/8 x 3/4" 1/4 x 3/4" 3/8 x 5/8" 3/8 x 3/4"	82¢ 85¢ 88¢ 85¢ 88¢

### AC MOTOR-STARTING CAPACITORS



Non-polarized dry electrolytic capacitors for intermittent duty in AC motor-starting circuits. All are Type Ps, with molded plastic containers except †Type EP, aluminum case with cardboard sleeve. Equipped with two sorrew-type terminals, and two solder lugs for optional use. Capacitors are rated at minimum capacity values, with a tolerance of +20%. Use mounting hardware listed below. All for 110-volt AC motors, except \*for 330 v. AC, \*for 150 v. AC, \*\*for 220 v. AC. Av. shpg. wt., 10 oz.

10 02.							
Stock No.	Туре	Mfd	Size	NET			
18 L 403	2730*	27	113/16x33/8"	3.82			
17 L 550	5310	53	17/16x33/8"	1.26			
17 L 551	6410	64	17/6x33/8"	1.32			
17 L 552	7010	70	17/16x33/8"	1.41			
17 L 553	7510	75	17/16x33/8"	1.50			
18 L 404†	8130*	81	2%6x43/8"	6.76			
17 L 554	8610	86	17/16x33/8"	1.56			
17 L 555	9710	97	17/16x33/8"	1.65			
17 L 556	10810	108	17/6x33/8"	1.68			
18 L 405t	10830*	108	2%6x43/8"	8.06			
17 L 557	12410	124	17/16x33/8"	1.73			
17 L 558	13010	130	17/16x33/8"	1.73			
18 L 745	14120**		1½16x43/8"	5.50			
17 L 559	14510	145	17/16x33/8"	1.88			
18 L 400	15810	158	113/16×33/8"	1.91			
17 L 561	16110	161	17/16x33/8"	1.91			
17 L 563	19410	194	17/16x33/8"	2.29			
17 L 565	21610	216	113/16x33/8"	2.38			
17 L 566	24310	243 243	113/16x33/8"	2.76			
18 L 402	24365§		21/16x43/8"	5.06			
17 L 567	27010	270	113/16x43/8"	2.79			
18 L 40 I	28210	282	113/16x43/8"	2.85			
17 L 568	32410	324	113/16x43/8"	3.18			
17 L 569	34010	340	113/16x43/8"	3.26			
17 - 579	37810	378	21/16×43/8"	3.53			
17 L 571	40010	400	21/16x43/8"	3.56			

### PL & HB MOUNTING HARDWARE

Plastic end caps and mounting brackets for all capacitors (except EP types) listed above and high-capacity electrolytics at right. P.E.C. indicates plastic end cap. Av. shpg. wt., 3 oz.

No.	Туре	Description	Size	NET
18 L 390		P.E.C., on motor	17/16"	12¢
18 L 391	PL-6	P.E.C., on motor	113/16"	15¢
18 L 392	PL-8	P.E.C., on motor	21/16	18¢
18 L 393	PL-3A	P.E.C., off motor	1 7/16"	12¢
18 L 396	HB-4	Horiz, bracket	33/8"	18¢
18 L 397	HB-8	Horiz, bracket	43/6"	214









### METAL-CASED ELECTROLYTICS

Metal-cased electrolytics. All units have external insulating sleeves. Type TC has 3" tinned copper leads; TCD and TCT have 8" insulated wire leads. TCS, soldering lugs. \*Non-polarized types. Shgs. wt., 4 oz.

### TYPE TC SINGLE CAPACITORS

TYPE IC SINGLE CAPACITORS					
No.	Туре		W.V.	Size	EA.
17 L 450 17 L 245 17 L 246 17 L 247 17 L 452	92 81 83 84	10 10 20 30	500 500 500 500	11/16x215/16" 15/16x13/4" 11/16x13/4" 11/16x21/4"	1.73 .79 .94 1.03
17 L 452	70	5	450	11/16×13/4"	.71
17 L 619 17 L 620 17 L 638 17 L 622 17 L 453	71 72 73 74 75	8 10 12 16 20	450 450 450 450 450	13/16×13/4" 13/16×13/4" 15/16×13/4" 15/16×13/4" 11/16×13/4"	.73 .76 .79 .82
17 L 454 17 L 508 18 L 800 17 L 204 17 L 634 17 L 635	77 78 795 80 60 61	30 40 60 80 5	450 450 450 450 350 350	1½6x2¼* 1½6x2¼* 1½6x2¼* 1½6x2½* 1½6x4* 1½6x1¾*	1.00 1.06 1.35 1.65 .62
17 L 455 18 L 341 17 L 637 17 L 456 17 L 244 18 L 801	62 63 64 65	10 12 16 20 60 100	350 350 350 350 350 350 350	13/6×13/4" 13/6×13/4" 15/6×13/4" 15/6×13/4" 11/6×21/4" 11/6×4"	.73 .76 .82 .85 1.15
17 L 626 17 L 627 17 L 457 17 L 629	50X 51 52 54	5 8 10 16	250 250 250 250	11/16X1 1/4" 11/16X1 3/4" 11/16X1 3/4" 13/16X1 3/4"	.62 .68 .71 .76
17 L 505 17 L 633 17 L 243 17 L 249	55 58 59 1265	20 40 50 100	250 250 250 250	13/6×13/4" 11/6×13/4" 11/6×13/4" 1×3"	.79 .91 1.00 1.44
17 L 458 17 L 624 17 L 459 17 L 625 17 L 608	40 41 42 43 44	5 8 10 12 16	150 150 150 150 150	7/6×15/6" 7/6×113/6" 7/6×113/6" 7/6×113/6" 11/6×11/2"	.59 .62 .62 .65
17 L 502 17 L 610 17 L 611 17 L 504 17 L 640 18 L 802	45 47 48 49 492 493	20 30 40 50 80 100	150 150 150 150 150 150	13/6x1 1/2" 13/6x1 1/2" 15/6x1 3/4" 15/6x1 3/4" 15/6x2 3/4" 11/6x2 1/4"	.71 .76 .79 .82 .94
17 L 242 17 L 639 17 L 623 17 L 603	495 302 30 32	150 2 5 10	150 50 50 50	1½6x2½" ½6x <sup>15</sup> /16" ½6x <sup>15</sup> /16" ½6x15/16"	1.12 .53 .59
17 L 604 17 L 605 17 L 641 18 L 342	36 39 3501 50025	25 50 100 250	50 50 50 50	11/16x1 1/4" 13/16x1 1/4" 11/16x1 3/4" 15/16x1 3/4"	.62 .71 .82
17 L 600 17 L 601 17 L 602 17 L 500 17 L 207	22 26 29 2501 *425	10 25 50 100 100	25 25 25 25 25 25	7/16x15/16" 7/16x15/16" 11/16x11/2" 11/16x13/4" 1x15/8"	.59 .59 .65 .79

### TYPE TC SINGLE CAPACITORS

No.	Туре	Mfd	w.v.	Size	EA.
18 L 804	304	2	3	11/16X11/4"	.53
17 L 466	2505	500	25	11/16x21/4"	1.35
17 L 642		200	15	13/16×11/2"	.82
17 L 460	1505	500	15	15/16 x 2"	1.03
17 L 209	1501	1000	15	11/16x21/4"	1.35
17 L 206		1000	15	11/16x21/4"	1.35
17 L 205	*412	500	10	11/16x21/4"	.94
17 L 461	605	500	6	13/16 x 1 3/4"	.91
17 L 462		1000	6 3	15/16×2"	1.12
18 L 805	305	500	3	11/16x11/2"	.82
17 L 463	310	1000	3	15/16×13/4"	1.00

#### TCD COMMON-NEGATIVE DUALS

No.	Type	Mfd	w.v.	Size	EA.
17 L 470	71	8-8		15/16×2"	1.00
17 L 507		10-10		11/16×2"	1.09
17 L 471		15-15		11/16x31/8"	1.29
17 L 472		20-20		11/16x31/8"	1.47
17 L 468	78	40-40	450	11/16x4"	2.00
17 L 473		10-10	350	15/16×2"	1.00
17 L 474	65	20–20	350	11/16×31/8"	1.32
17 L 475	52	10-10	250	15/16x2"	.97
17 L 476	55	20-20	250	1½6x2"	1.09
17 L 503	45	20-20	150	13/16×13/4"	.97
17 L 477	47	30-30	150	15/16x13/4"	1.06
17 L 480	485	40-20	150	15/16×13/4"	1.03
17 L 478	48	40-40		11/16x2"	1.09
17 L 482	497	50-30	150	15/16x2"	1.15
17 L 481	49	50-50	150	11/16x21/4"	1.23
18 L 344		80-50	150	11/16x21/4"	1.38
17 L 479	26	25-25	25	13/16×11/4"	.82

#### TCS SEPARATE-SECTION DUALS

No.	Type	Mfd	W.V.	Size	EA.
17 L 485 17 L 487 17 L 490 17 L 493 17 L 495	75 52 45	8-8 20-20 10-10 20-20 40-40	450 250 150	1½6x2¾8″ 1½6x3½″ 1½6x2¾″ 1½6x2¾″ 1½6x2¾8″ 1½6x2¾″	1.26 1.85 1.23 1.23 1.38

### TCT TRIPLE COMMON NEGATIVE

No.	Туре	Mfd	W.V.	Size	EA.
18 L 372	3112	20-20	150		
		20		11/16x13/4"	1.26
18 L 373	3113	30-30	150		l
		30		11/16x21/4"	1.38
18 L 374	3114	40-20	150		
	1	20	150	11/16x21/4"	1.32
18 L 375	3115	40-40	150		
.0 - 5.5	1	40		11/16x27/8"	1.44
18 L 376	3116	40-40	150		
		20	150	11/16x21/4"	1.38
18 L 371	3107	50-30	150		1
		20	25	11/16x21/4"	1.38
18 L 377	3094	50-30	150		1
		200	25	11/16x27/8"	11.62

### ALUMINUM CAN THREADED-NECK DRY ELECTROLYTICS

Threaded-neck units for replacement of wet or dry electrolytics. Upright mounting types. With ing types. With hardware to facil-itate replacement. For sub-chassis



For sub-chassis mounting, see Universal clips (page 159). Necks are ½-16 for 17 dia. units, ¾-16 for 13/8" dia. All 1" dia. units have special washer for 13/8" clamp mounting. RS, HS and RM types have 8" leads and are internally insulated from case. \*Has common positive and separate negative terminals (one connected to case). Type SR638 is lug-type dual. Av. shpg. wt., 7 oz.

is tug-type duar. Av. slipg. wt., 1 oz.									
No.	Type	Mfd	W.V.	Size	NET				
17 L 058	HS693	8	600	13/8×4"	1.85				
17 L 064	HS696	20	600	13/8×41/4"	2.26				
17 L 220	RS213	8	450	1x23/4"	1.29				
17 L 801	RS212	8	450	13/8×3"	1.29				
17 L 059	HD684	10	450	1x3"	1.35				
17 L 221	RS215	12	450	1x23/4"	1.41				
17 L 802	RS214	12	450	13/8×3	1.41				
17 L 803		16	450	13/8×3"	1.44				
17 L 222		16	450	1x31/2"	1.44				
17 L 23 I	RS219	20	450	13/8×3"	1.59				
17 L 232	RS223	30	450	13/8×3"	1.76				
17 L 233	RS224	40	450	13/8×3"	1.85				
i 7 L 327	SR638	8-8	450	13/8×23/4"	1.76				
17 L 334	SR645	*8-8	450	13/8×23/4"	1.76				
7 L 236	RM 262	8-8	450	13/8×3"	1.76				

### HIGH-CAPACITY ELECTROLYTICS

HIGH-CAPACITY ELECTROLYTICS
Plastic-cased electrolytics with
screw terminals. †Aluminum case,
lug terminals—for fence control.
\*NP non-polarized types—intermittent AC use only. Others are
polarized (all Type HC; except
\*\*For photoflash. See hardware, at left. Av.
wt 10 02.

wt., 10 oz.										
No.	Туре	Mfd	W.V.	Size	NET					
17 L 810	4505*	50	450	113/16x33/8"	4.41					
17 L 811	4510*	100	450	21/16x43/8"	6.82					
17 L 820	45003**		450	2½6x43/8"	6.17					
18 L 426	45052**		450	21/16x43/8"	13.23					
18 L 428	3003*	15	300	17/16x33/8"	2.20					
17 L 808	3014*	100	300	113/16x43/8"	3.97					
17 L 588	3025*	200	300	21/16x43/8"	5.58					
17 L 592	20005	500	200	21/16x43/8"	5.76					
17 L 591	15010	1000	150	21/16x43/8"	6.17					
18 L 427	1235*	300	125	21/16x43/8"	3.38					
17 L 805	1255*	500	125	21/16x43/8"	4.41					
17 L 585	5005	500	50	17/6x33/9"	2.29					
17 L 586	5010	1000	50	113/16x33/8"	3.76					
17 L 590	5020	2000	50	113/16x43/8"	5.14					
18 L 431	4040	4000	40	21/16x43/8"	5.59					
17 L 582	2510	1000	25	17/16x33/8"	2.85					
17 L 583	2520	2000	25	113/16x33/8"	3.38					
17 L 584	2540	4000	25	113/16x43/8"	3.97					
18 L 430	2060	6000	20	21/16x43/8"	5.09					
17 L 580	1520	2000	15	17/6x33/8"	2.75					
17 L 581	1540	4000	15	113/16x33/8"	3.23					
17 L 589	1560	6000	15	113/16x43/8"	3.71					
17 L 576	1020	2000	10	17/16x33/8"	2.32					
17 L 577	1040	4000	10	113/16X33/8"	2.80					

## INDUSTRIAL & SUBMINIATURE TANTALUM CAPACITORS



#### TYPE XT TANTALUM CAPACITORS

Extremely rugged tantalum electrolytic capacitors, designed for use wherever severe conditions exist. Operate over a very wide temperature range: -55° C to +200° C. Hermetically sealed in steel. Ends have glass-to-metal seal. Dia., ½". Wrap-around terminals except for \*screw terminal and nut. †Cathode tab. Av. wt., 4 oz.

Stock	T	Mfd	DC '	Volts	Ht.	NET	EACH
No.	Туре	IVITA	175° C	85° C	nt.	1-24	25-49
18 L 501 18 L 502 18 L 503 18 L 504 18 L 505	XTL120 XTH240 XTL75 XTH150 XTL40	120 240 75 150 30	12 12 20 20 38	18 18 30 30 60	1/2" 11/16" 1/2" 11/16" 1/2"	8.55 9.80 8.55 9.85 8.55	8.05 9.10 8.05 9.10 8.05
18 L 435 18 L 436 18 L 506 18 L 507 18 L 508 18 LC 509	XTL40A† XTLS40*† XTH80 XTL25 XTH50 XTL12	30 30 80 25 50 12	38 38 38 60 60 120	60 60 60 100 100 180	1/2" 1/2" 11/16" 1/2" 11/16" 27/32"	8.60 8.90 9.80 8.55 9.80 13.50	8.10 8.40 9.10 8.05 9.10 12.60
18 LC 510 18 LC 511 18 LC 434 18 LC 512 18 LC 513	XTH25 XTL8 XTL8A† XTH16 XTL6	25 8 8 16 6	120 180 180 180 240	180 270 270 270 270 360	1 1/4" 13/16" 13/16" 1 13/16" 1 1 7/32"	15.60 19.00 19.05 22.10 23.85	14.55 17.90 17.95 20.60 22.25
18 LC 433 18 LC 515 18 LC 516 18 LC 517 18 LC 518 18 LC 432	XTH12A† XTL5 XTH10 XTL4 XTH8 XTH8A†	12 5 10 4 8 8	240 300 300 360 360 360	360 450 450 540 540 540	23/8" 129/32" 215/16" 21/4" 31/2" 31/2"	28.75 29.65 35.70 36.30 42.60 42.65	33.30 34.20 39.70

### SUBMINIATURE ELECTROLYTIC CAPACITORS

B For transistor applications. Silver case; tantalum anode. Operate from -55° to +85° C. Tol. -15% to +75%.1½" leads. ½x¾".5 oz.

Cont. No.	-	Mfd	WVDC	P	IET EACH	1
Stock No.	Туре	IVITA	WVDC	1-24	25-49	50-99
18 L 796 18 L 441 18 L 442 18 L 443 18 L 444	TAP90-2 TAP75-3M TAP60-4 TAP50-5 TAP40-6	3.5 4 5 6	90 75 60 50 40	2.50	2.00	1.75
18 L 445 18 L 446 18 L 447 18 L 449	TAP30-8 TAP25-10 TAP20-12 TAP10-20	8 10 12 20 30	30 25 20 10	2.50	2.00	1.75

### NEW TYPE TAS SOLID ELECTROLYTICS

Subminiature solid-electrolyte tantalum capacitors. Ideal for use in 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 destroyed. Withstand extreme conditions. Operating temperature range:

-80° C to +85° C. Tol. ±20%. 3/6″ long. Av. shpg. wt., 4 oz.

Stock	Mfr's	l	Working	Surge	N	ET EAC	Н
No.	Type	Mfd	Voltage DC	VDC	1-24	25-49	50-99
18 L 981	TAS10-6	10	6	8			
18 L 982	TAS15-6	15 22 33 47	6 6 6 6	888888			
18 L 983	TAS22-6	22	6	8	2 50	2.00	1.50
18 L 984	TAS33-6	33	6	8	3.50	2.00	1.50
18 L 985	TAS47-6	47	6	8			
18 L 986	TAS60-6	60	6	8			
18 L 987	TAS6.8-10	6.8	10	13			
	TAS10-10	10 15	10	13 13 13 13 13	0 50	000	
	TAS15-10	15	10	13	3.50	2.00	1.50
18 L 990	TAS22-10	22	10	13			
18 L 991	TAS33-10	22 33	10	13			
18 L 992	TAS40-10	40	10	13 18 18 18	-		
	TAS4.7-15		15	18	0 50	000	1.50
	TAS6.8-15	6.8	15	18	3.50	2.00	1.50
18 L 995	TAS10-15	10	15	18			l
18 L 996	TAS15-15	15	15 15 15 15	18		1	1
18 L 997	TAS22-15	22	15	18			
	TAS3.3-20		20	18 23 23 23 23 23		1	1
	TAS4.7-20		20	23			
	TAS6.8-20		20	23	3.50	2.00	1.50
	TAS10-20	10	20	23		1	1
18 L 949	TAS15-20	15	20	23		1	1

## TYPES THE & STHE SUBMINIATURE CAPACITORS

ITPES INI & SINI SUBMINIATURE CAPACITORS

| Subminiature polarized tantalum electrolytic capacitors. Withstand rugged environmental conditions found in aircraft control and communications equipment. For use in hearth also strongly small radios and printed package assemblies. Type TNT will stand the vibration conditions of MIL-STD-202, Method 201.1. Temperature range: -55° C to +85° C. Capacity tolerance, -15 to +75%. Tinned leads. Size: TNT, %4x%, STNT, %4x%, Av. shpg. wt. 2 oz.

Stock No.	Туре	Mfd	WVDC	1-24, EA.	25-49, EA.	50-99, EA.
18 L 957 18 L 958	TNT 8-50 TNT 15-30 TNT 25-15 TNT 50-6 TNT 80-3	15	50 30 15 6 3	2.00	1.60	1.40
18 L 963 18 L 964		2 4 6 12 25 40	50 50 35 15 6	1.97	1.58	1.38

Industrial Buyers: Allied has complete stocks of tantalum capacitors at OEM prices. Any reductions in price become effective just as soon as announced by manufacturers.



### GEM MOLDED TUBULAR PAPER CAPACITORS

Size

Mfd

001

NET EACH

#### 600 VOLTS DC WORKING

Stock NO

Molded tubular paper capacitors, manufac-
tured 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.
Cases are molded by a non-pressure process to
assure high durability. May be lead-mounted;
leads are double-tinned copperweld wire. Types
up to 1/2" dia, have No. 20 leads; types over
1/2" dia. have heavy-duty No. 18 leads. All
GEM capacitors are designed to operate effi-
ciently at temperatures up to 85°C. All have
capacity tolerance of 20%, except* 10%. Out-
side foil is clearly indicated by a line on the
bakelite case. Av. shpg. wt., 5 oz.
Darente case. Av. sups. Wt., J Oz.

### 400 VOLTS DC WORKING

400 FOLIS DE HORKING									
Stock No.	Mfrs Type	Mfd	Size	NET EACH					
18 L 586 18 L 587 18 L 588 18 L 589 18 L 590	GEM-421 GEM-425 GEM-411 GEM-4115 GEM-412	.001 .005 .01 .015 .02	5/16X1" 5/16X1" 5/16X1" 3%X1 <sup>1</sup> /4"	15c					
18 L 591 18 L 592 18 L 593 18 L 594 18 L 595	GEM-4122 GEM-4125 GEM-413 GEM-4133 GEM-414	.022 .025 .03 .033 .04	%x1¼" %x1¼" %x1¼" 7/16x1¼" 7/16x1¼"	18c					
18 L 596 18 L 597 18 L 598 18 L 599 18 L 600	GEM-4147 GEM-415 GEM-416 GEM-4168 GEM-401	.047 .05 .06 .068	7/16X1¼" 7/16X1¼" ½x1½" ½x1½" ½x1½"	18¢ 18¢ 21¢ 21¢ 21¢					
18 L 601 18 L 602 18 L 603 18 L 604	GEM-4015* GEM-402* GEM-4022* GEM-4025*	.15 .2 .22 .25	% x1 % " % x2 ¼ " % x2 ¼ " % x2 ¼ "	24¢ 26¢ 26¢ 26¢					
18 L 605 18 L 606 18 L 607	GEM-405*	.33 .47 .5 1.0	34 x214" 1x23/8" 1x23/8" 1x23/8"	29¢ 35¢ 35¢ 73¢					

#### 18 L 546 18 L 547 18 L 548 18 L 549 18 L 550 5/16X1" 5/16X1" 5/16X1" 5/16X1" 5/16X1" GEM-621 GEM-6215 GEM-622 GEM-6222 .001 .0015 .002 .0022 15c GEM-6225 18 L 551 18 L 552 18 L 553 18 L 554 18 L 555 GEM-623 GEM-6233 GEM-624 GEM-6247 .003 .0033 .004 .0047 5/16x1" 5/16x1" 5/16x1" 5/16x1" 3/8x11/4" 15c **GEM-625** .005 3/8 x 1 1/4" 3/6 x 1 1/4" 3/6 x 1 1/4" 3/8 x 1 1/4" 3/8 x 1 1/4" 18 L 556 18 L 557 18 L 558 18 L 559 18 L 560 GEM-626 GEM-6268 GEM-627 GEM-628 .006 .0068 .007 .008 | 8¢ | 8¢ | 8¢ | 8¢ GEM-6282 .0082 3/8 x 1 1/4" 3/8 x 1 1/4" 3/8 x 1 1/4" 7/16 x 1 1/4" 7/16 x 1 1/4" 18 L 561 18 L 562 18 L 563 18 L 564 18 L 565 GEM-611 GEM-6112 GEM-6115 GEM-612 .01 .012 .015 18c .02 GEM-6122 .022 7/6x1¼" 7/6x1¼" ½x1½" ½x1½" ½x1½" GEM-6125 GEM-613 GEM-6133 8 L 566 8 L 567 8 L 568 8 L 569 8 L 570 .025 .03 .033 2|¢ 2|¢ 2|¢ 2|¢ 2|¢ GEM-614 GEM-6147 18 L nα .047 GEM-615 GEM-6156 GEM-616 GEM-6168 ½x1½° %x1½° %x1½° %x1½° %x1½° %x1½° 24¢ 24¢ 24¢ 26¢ 26¢ .05 .056 .06

#### 1600 VOLTS DC WORKING

No.	Туре	Mfd	Size	NET				
18 L 746	GEM-16225	.0025	7/16X11/4"	38¢				
18 L 747	GEM-1623	.003	7/16X11/4"	32¢				
18 L 748	GEM-16233	.0033	7/16X11/4"	32¢				
18 L 749	GEM-1624*	.004	7/16X11/4"	32¢				
18 L 750	GEM-16247*	.0047	½x1½"	32¢				
18 L 751	GEM-1625*	.005	½x1½*	32¢				
18 L 753	GEM-1626*	.006	½x1½"	32¢				
18 L 754	GEM-16268*		½x1½*	38¢				
18 L 755	GEM-1627*	.007	½x1½"	32¢				
18 L 757	GEM-1628*	.008	½x1½*	35¢				
18 L 758	GEM-16282*	.0082	½x1½*	38¢				
18 L 759	GEM-1611*	.01	½x1½"	35¢				
18 L 761	GEM-1612*	.02	%x1%"	41¢				
18 L 385	GEM-1613*	.03	%x1%"	41¢				
18 L 386	GEM-1614*	.04	3/4 x21/4"	41¢				
18 L 762	GEM-1615*	.05	3/8 x 2 1/4"	41¢				
18 L 387	GEM-1621*	.001	3%x1¼"	410				
18 L 388	GEM-1622*	.002	3/8 x 1 1/4"	41¢				
	3000 VOLT	S DC W	ORKING					
18 L 966	GEM-3031	.0001	7/16X11/4"	91€				
18 L 967	GEM-3035	.0005	7/16X11/4"	65¢				
101 060		001	7/11/4	650				

3	HOOD VOLE	S DC M	OKKING	
18 L 966	GEM-3031	.0001	7/16X11/4"	91¢
18 L 967		.0005	7/16x11/4"	65¢
18 L 968		.001	7/16x11/4"	65¢
18 L 969	GEM-3023	.003	½x1½"	68¢
18 L 970	GEM-3025	.005	5/8 x 1 1/8"	68⊄
18 L 971	GEM-3011	.01	%x1%"	82¢
18 L 972		.03	1x2%"	82¢
18 L 973	GEM-3015	.05	1x2%"	94¢
	OOO VOLT	S DC W	ORKING	

	OOO VOLIS	DC W	OKKING	
18 L 974		.0005	1 ½ x1½"	79¢
18 L 975	GEM-6x21	.001	%x1%"	79¢
18 L 976	GEM-6x22	.002	%x1%"	85¢
18 L 977	GEM-6x23	.003	3/4 x21/4"	1.03
18 L 978		.005	34 x214"	1.09
18 L 979		.0075	1x2%"	1,23
18 L 980	GEM-6×11	.01	1x2¾"	1.23

18 L 980 GEM-6x11 10,000 & 15,000 \$10,000 volts. †15,000 volts. 18 L 950 GEM-10032\$ 18 L 951 GEM-10021\$ 18 L 952 GEM-15031† 18 L 953 GEM-150325† 18 L 954 GEM-15035† V. DC WORKING .001 .0001

.068

.2 .22

.33

.5 .68

%x1%\* %x2¼\* %x2¼\*

1x23/8" 1x23/8" 1x23/8" 1x25/8"

29¢ 41¢ 41¢ 32¢ 41¢

41¢ 47¢ 47¢ 47¢ 73¢

GEM-601

GEM-6015\* GEM-602\* GEM-6022\*

GEM-6025\*

GEM-6027\*

IS L 581 GEM-6037\*
IS L 582 GEM-603\*
IS L 583 GEM-605\*
IS L 584 GEM-6068\*
IS L 585 GEM-61\*

# **Centralab Ceramic Capacitors**

### **850S 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 extremely low power factor. "Double cup" construction provides high mechanical strength and long leakage paths. Silver electrodes fired to ceramic. \( \lambda'' \)-long hex stud terminals with 6-32 tapped holes. Ynegative temperature coefficient of 750 parts/million/°C. \( \frac{2}{2} \text{cor} \) temperature coefficient. \( \pi 10\) % tolerance. Series 858S are same size and style; Hi-K dielectric; \( \lambda x'\)\( \lambda''\) dia. \( \pi 20\)% tolerance. \( \lambda''\) Based on 30°C. temp. rise. Av. shpg. wt., 2 oz.

Stock	Stock Mfr's			§RF Load,	NET EACH								
No.	Type	Mmf.	WVDC	30 Mc	1-4	5-9	10-24	25-149	150-499				
L   0       L   0 2	850S-25Z* 850S-50Z* 850S-50N† 850S-75N†	25 50 50 75	7500 7500 7500 7500	7 amps 10 amps 8.8 amps 10 amps	2.65	2.38	2.20	1.99	1.86 1.86 1.67 1.67				
L   04     L   07     L   08	858S-500	100 500 1000	5000 5000 5000	9.8 amps	2.65	2.38	2.20	1.99	1.67 1.84 1.84				

### FEED-THRU HI-KAPS

Tiny ceramics designed for single-hole mounting. Permit 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 ½" dia. flange, mounts in ½" dia. hole and is attached by soldering to chassis (has No. 16 leads). Tolerance: \*±20%; † -20 to +50%; § ±10%; †guaranteed minimum value. Av. shpg. wt., 2 oz.



	TYPE FI												
Stock	Mfr's	1	NET EACH										
No.	Туре	Mmf	1-24	25-99	100-249								
L 390     L 391     L 392     L 393     L 394	FT- 500 FT-1000 FT-1500 FT-1800 FT-2300	* 500 *1000 †1500 †1800 †2300	59c	47c	39c								

	TYPE	MFT MI	NIATURE	5					
Stock	Mfr's	1	NET EACH						
No.	Туре	Mmf	1-24	25-99	100-249				
L 488     L 489     L 490     L 491	MFT-50 MFT-100 MFT-500 MFT-1000	\$ 50 \$ 100 * 500 ‡1000	.29	.23	.196				

### DF FLAT PLATE HI-KAPS

Unusually thin, compact ceramics with capacities up to 1 mfd. Excellent for use in bypass and filter applications. Offer exceptionally high stability. Rated at 600 working volts DC. Tolerance: all guaranteed minimum value, except \*+80% to -20%, No. 20 tinned leads firmly anchored in capacitor body. Capacity and working voltage are stamped on all capacitors. Size of DF-104 and DF-753 is 1½x\*1½x\*1 vigor Type DF-503, Type DF-403 and Type DF-303 is 1½6\*1½x\*2 vigor Type DF-503, Type DF-403 and Type DF-303 is 1½6\*1½x\*1 vigor Ty



Stock	Mfr's	1	NET EACH								
No.	Туре	Mfd	1-24	25-99	100-249						
11 L 245	DF-104*	.1	47¢	37¢ 37¢ 32¢ 32¢	35¢ 35¢						
11 L 246	DF-753	.075	47¢	37¢	35¢						
11 L 247	DF-503	.05	41¢	32¢	31¢						
11 L 248	DF-403	.04	41¢	32¢	31¢						
111 249	DF-303	0.3	410	32¢	310						

### 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 in capacitance values from 0.22 to 2.2 mid. Insulated with double coating of "Durez" and impregnated with high-vacuum wax to withstand extreme temperatures, humidity and vibration. Provide capacitance values from 0.22 to 2.2 mfd. in diameters from only ¼ to ¾". Rated 3 working volts DC. All units stamped with capacity and voltage ratings. Tolerance; guaranteed minimum value. ½2" thick. No. 22 tinned copper leads. Av. shpg. wt., 2 oz.



Stock	Mfr's	1	1	NET EACH									
No.	Туре	Mfd	Dia.	1-24	25-99	100-249							
11 L 293	UK-224	.22	1/4"	.32	.25	.216							
11 L 294	UK-474	.47	3/8"	.32	.25	.216							
11 L 295	UK-105	1.0	9/16" 3/4"	.44	.35	.29							
11 L 296	UK-225	2.2	3/4"	.53	.42	.35							

### HI-VO-KAP UNIVERSAL CAPACITORS



#### CERAMIC-DIELECTRIC TRIMMERS











Compact, highly stable trimmer capacitors with ceramic dielectric. Full capacity range with 180° rotation. Balanced rotor and heavy spring pressure for excellent stability under vibration. Silver is fired 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: ±0.75% or ±0.5 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	Mfr's			Base	N	ET EAC	Н
No.	Type	Fig.	Mmf	Size	1-24	25-99	100-249
L 38       L 382     L 383     L 384	820-D 820-A 820-B 820-C	A	1-3.5 2.5-6 5-20 7-35	5/8 x <sup>2</sup> 7/ <sub>32</sub> "	.71	.56	.47
L 650     L 651     L 125     L 124     L 123	822-DN 822-EN 822-CN 822-BN 822-AN	В	2-6 4-30 4.5-25 7-45 8-50	<sup>2</sup> 7/ <sub>32</sub> x <sup>2</sup> 1/ <sub>32</sub> "	.88	.70	.59
L 652     L 653     L 129     L 128     L 654     L 127	822-DZ 822-EZ 822-CZ 822-BZ 822-FZ 822-AZ	В	1.5-3 1.5-7 2-7.5 2.5-13 3-12 4.5-25	<sup>2</sup> 7/ <sub>32</sub> x <sup>2</sup> 1/ <sub>32</sub> "	.88	.70	.59
L 5   2     L 5   1     L 5   0     L 5   5     L 5   4     L 5   3	823-DN 823-BN 823-AN 823-DZ 823-BZ 823-AZ	С	8-50 10-100 20-125 6-25 10-50 12-60	15/16×19/32"	2.06	1.62	1.62
L 5   6     L 5   7     L 5   8     L 5   9	827-A 827-B 827-C 827-D	D	2.5-7 3.5-12 6-30 7-35	17/ <sub>32</sub> x <sup>3</sup> / <sub>4</sub> "	.73	.58	.49
L 400     L 401     L 402     L 403     L 404	829-3 829-4 829-6 829-7 829-10	Е	.5-3 1-4 1-6 1-7.5 1.5-10	*1/2" *1/2" *5/8" *3/4" *3/4"	.29 .29 .29 .35	.23 .23 .23 .28 .28	.196 .196 .196 .235







DDA 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: ½x½x½x½" thick, tolerance -20% to +100%, 30 WVDC. Type DDA: ½x½x½x½x½thick, tolerance -20% to +80%, 75 WVDC. Type DM: ½x½x½x¾x²thick, tolerance \*-20% to +50% and †-20% to +80%, 150 WVDC. Av. shpg. wt., 2 oz.

TYPE DA													
Stock	Mfr's	1	NET EACH										
No.	Type	Mfd	1-24	25-99	100-249								
L 627     L 628	203 503	.02	.23 .38 .56	.18	.156								
11 L 629	104	.03	:56	.44	.25 .37								
TYPE DDA													
11 L 630	503	.05	.29	.23	.196								
11 L 631	104	1 .1	.53	.42	.36								
		TYPE DA	Λ										
II L 632	101* 201*	.0001	.20	.16	.137								
11 L 635	501*	.0005	.20	.16	.137								
11 L 636	102*	.001	.26	.20	.176								
11 L 637	202* 302†	.002	.26	.20	.176								
II L 638 II L 639	502† 502†	.005	.26 .38	.20 .30	.176								
11 L 640	103†	.01	.38 .53	.30	.25								
11 L 641	2-502†	2x.005	.53	.42	1 .36								

### ATTENTION INDUSTRIAL BUYERS!

Allied now offers OEM prices on the Centralab capacitors on this page (except 850S 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 schedules.

# 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 ½ to ½ dia. Tolerance ±20% except † ±0.5 mmf, \*±10%, §guaranteed minimum value and \*\* -20% to 80%. Capackors are specially made to withstand extreme temperature, humidity and vibration. Av. shpg. wt., 2 oz.

### DD 1000 VOLTS (except \$600 v.)

No.	Type	Mmf	No.	Type	Mmf
L 406	3R3†	3.3	L 429	331	330
L 407	050†	5	L 534	361	360
L 520	060†	6	L 430	391	390
L 408	6R8†	6.8	L 535	401	400
L 522	080†	8	L 43	471	470
L 409	100*	10	L 432	501	500
L 523	120*	12	L 433	561	560
L 4 0	150*	15	L 536	601	600
L 4	200*	20	L 434	681	680
L 525	220*	22	L 435	751	750
L 4   2	250*	25	L 436	801	800
L 527	270*	27	L 537	821	820
L 4   3	330*	33	L 437	102	1000
L 4   4	390*	39	L 538	122	1200
L 4   5	470*	47	L 539	132	1300
L 4 6	500*	50	L 438	152	1500
L 4 7	560*	56	L 541	182	1800
L 4 8	680*	68	L 439	202	2000
L 4 9	750*	75	L 542	222	2200
L 529	820*	82	L 543	252	2500
L 420	101*	100	L 544	272	2700
L 42	121*	120	L 440	302	3000
L 53	131*	130	L 600	332	3300
L 422	151*	150	L 601	392	3900
L 423	181*	180	L 602	402	4000
L 424	201*	200	L 44	472	4700
L 425	221	220	L 037	502§	5000
L 426	251	250	L 604	562§	5600
L 427	271	270	L 605	682§	6800
L 428	301	300	L 455	103§	10,000

1-24,	NET	EAC	Н			 						15c	
20-99.	. EMU	п		 				 		 	 	. 120	
100-2	49, E	<b>₹CH</b>		 ٠.				 				. 10¢	

Type Mfd No. Type Mfd

IIL 106 IIL 442	1032 5022	.01 .005	11L042	203‡§	.02
1-24, NE	CH.	н			.18c
400 040				• • • • •	

### **DD16 1600-VOLT BUFFER CAPACITORS**

	1 _		112	I LAUII		
No.	Type	Mfd	1-24	25-99	100-249	
L 456     L 370     L 371     L 372	302 § 402 § 502 § 602 §	.003 .004 .005 .006	01-	1./-	1.4	
L 457     L 373     L 374     L 375	702 § 752 § 802 § 103 §	.007 .0075 .008 .01	21c	I OC	14c	
111 376	153**	015	350	28#	24#	

#### **DD30 3000 VOLTS**

No.	Туре	Mmf	No.	Туре	Mmf
11 L 607	250 470	25 47	11 L 617	221 251	220 250
11 610	500	50	L 6   9	271	270
	560	56	L 620	471	470
L 6 2	680	68	L 62	501	500
	820	82	L 622	102	1000
L 6   4	101	100	L 624	202	2000
L 6   6	181	180	L 626	502	5000

1-24, NET EACH	.24c
25-99, EACH	. 19#
100-249, EACH	I6¢

#### **DD60 6000 VOLTS**

No.	Type	Mmf	No.	Type	Mmf
IIL 680	100	10	11 L 475	151	150
11 L 681	150	15	11 L 476	181	180
11 L 462	250	25	11 L 478	221	220
11 L 466	390	39	11 L 479	251	250
11 L 467	470	47	11 L 480	271	270
II L 468	500	50	11 L 682	391	390
11 L 469	560	56	11 L 485	471	470
11 L 470	680	68	11 L 486	501	500
11 L 472	820	82	11 L 683	751	750
11 L 473	101	100			

25-99. EA	TEACH CH EACH		23#
No.	Type Mmf	No.	Type   Mmf
11 L 445	102 1000	11 1 440	202 2000

1 6 447 152 1500	202  2000
1-24, NET EACH	50c
25-99, EACH	39¢

### DISC CERAMIC CAPACITOR KITS

DDK-200 Ceramic Capacitor Kit. 200 Type  

#### BC TUBULAR CERAMIC "HI-KAPS"-TYPE D6 DE CARACITOR SIZES

For bypass and coupling or filter applications. 600 WVDC.  $\pm 10\%$  tolerance, except  $\$ \pm 20\%$ . \*GMV (guaranteed minimum value). 2 oz.

DO CAPACITOR SIZES					
Cap. Mmf	Size	Cap. Mmf	Size		
3 to 330	1/4×1/2"	1200 to 3000 3300 to 5000 5600 to 10,000	1/4 x 1 3/16"		
390 to 680	1/4×13/16"	3300 to 5000	5/16X29/32"		
750 to 1000	1/4 x 1/2"	5600 to 10,000	5/16×13/16"		

Type Mmf

No.	Type	Mmf	No.	Type	Mmf
L 545   L 546   L 547   L 548   L 549	030 050 100 120 150	3 5 10 12 15	L 57    L 572   L 573   L 574   L 575	271 301 331 391 401	280 300 330 390 400
L 550   L 551   L 552   L 553   L 554	250	18 20 22 25 27	II L 576 II L 577 II L 578 II L 579 II L 580	471 501 561 601 681	470 500 560 600 680
11 L 555 11 L 556 11 L 557 11 L 558 11 L 559	470 500	33 39 47 50 56	II L 581 II L 582 II L 583 II L 584 II L 585	751 821 102 122 152	750§ 820§ 1000§ 1200§ 1500§
L 560     L 561     L 562     L 563     L 564	750 820 910	68 75 82 91 100	II L 586 II L 587 II L 588 II L 589 II L 590	182 202 222 252 272	1800§ 2000§ 2200§ 2500* 2700*
II L 565 II L 566 II L 567 II L 568 II L 569 II L 570	151 181 201 221	120 150 180 200 220 250	L 59      L 592     L 593     L 594     L 595	402	3000* 3300* 4000* 4700* 5000*

1-24, NET EACH	I5c
25-99, EACH	 12¢

CAPACITOR KITS
D6K-200. 200 Type D6 BC tubular ceramic capacitors (described at left) in a 1-drawer steel cabinet—values from 5 to 10,000 mmf. 5 of each included, except 10 or 15 each of the most poular values. Size of cabinet, 4¼x6/x11½°. Shpg. wt., 6 lbs. 18 L 914. NET. 29.89

Type

Write to Allied's Industrial Division for OEM prices on DD, DD16, DD30, DD60, D6, TCZ and TCN ceramic capacitors in lots of 250-499 and 500-999.

#### SERIES TC TEMPERATURE-COMPENSATING CAPACITORS



Comply with JAN-C-20A specs. TCZ is NPO: capacity remains constant from -20 to +85° C. TCN has negative coefficient: N750, or 750 parts/million/°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 25 to 56 62 to 100 110 to 150 160 to 300	1/5 x 2/5" 1/5 x 1 1/16" 15/64x 1/8" 9/32 x 1 1 1/64" 9/32 x 15/8"	3.3 to 62 68 to 160 180 to 270 300 to 430 470 to 750	1/5 x 2/5" 1/5 x 1 1/16" 1564 x 1/8" 9/32 x 1 1 1/64" 9/32 x 15%"

No.	Mmf	Tol.*	No.	Mmf	Tol.*
II L 200 II L 201 II L 202 II L 203 II L 203 II L 205 II L 206 II L 207 II L 208 II L 209 II L 210 II L 212 II L 213 II L 213	1.5 2.2 3.3 4.7 6.8 10 12 15 18 20 22 24	±.25 mmf ±.5 mmf ± 2%	L 2 5     L 2 6   L 2 7   L 2 9     L 220     L 493     L 223     L 223     L 225     L 226     L 227     L 228     L 229	39 43 47 50 51 56 62 68 75 82 91	±2%

1-24, NET EACH 25-99, EACH 100-249, EACH		29c
No.   Mmf   Tol*	No.	Mmf   Tol.*

1-24. NET EACH44	c
1-24, NET EACH	¢

No.	Mmf	Tol.*	No.	Mmf	101.*
L 235   L 236   L 237	180 200 220	±5%	L 238    L 239    L 240	240 270 300	±5%

1-24, NET EACH		590
25-99, EACH		479
100-249, EACH	• • • • • •	399

### TYPE TCN-NEGATIVE (N750)

No.	IVI mt	101.	140.		
L 24     L 250	5 10	±.5 mmf	L 265	56 62	
L 25       L 25 2     L 25 3     L 25 4	12 15 18 20		L 267     L 268     L 269     L 27	68 75 82 100	≠2%
II L 255 II L 494 II L 257 II L 258 II L 259	22 25 27 30 33	±2%	L 272     L 273     L 275     L 276     L 277	120 150	±5%
L 26       L 26 3     L 49 5     L 26 4	39 47 50		L 278     L 279     L 280     L 281	200 220 240 270	,,,

1-24. NE	TEAC	н			.29c
25-99, EA	CH				23¢
			No.		
11 1 292	300	101.	11 L 284	360	101.

%
4c
50

			No.		
II L 287 II L 288 II L 289	470 510 560	±5%	L 290    L 291    L 292	620 680 750	±5%

1-24, NET	EACH	 	 	 59
100-249, E	ACH	 	 	 39

# Industrial Capacitors—Capacitor Hardware

Proof

### VITRAMON SERIES A PORCELAIN CAPACITORS

- Miniature Size
- Humidity Proof
- Ruggedly Built



and nave exceptional mechanical strength.

Their vitreous dielectric is unaffected by humidity and maintains its insulation resistance after total immersion. Meet shock requirements of MIL-STD-202 and MIL-T-5422C and exceed vibration requirements of MIL-C-54 and MIL-C-13272A; 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. Tolerance: = 5% or 0.25 mmf, whichever is greater. (Types with 1% or 2% tolerance awaitable on special order—write for prices.) 1/8 leads are tin-clad copper, soft solder coated. Sizes range from ½x1½x x/x6" thick to 2/2x1½x8/x3/x6" 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 CY22C; 2400 to 6200 mmf are Type CY20C; 2400 to 6200 mmf are T

rype	CYSZC	•						•
Mmf	Mmf	Mmf	Mmf	Mmf	Mmf	Mmf	Mmf	Mmf
1.0	5.1	12	24	47	100	270	680	3000
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	*5100
4.3	10	22	39	82	220	560	2400	*6200

Stock	Values	NET EACH				
No.	(See Table, Above)	1-49	50-99	100-249	250-499	
74 LL 660 74 LL 661 74 LL 662 74 LL 664	1.0 to 10 mmf 12 to 82 mmf 100 to 390 mmf 470 mmf	1.00 .80 1.00 1.30	.95 .76 .95	.80 .64 .80 1.04	.75 .60 .75	
74 LL 665 74 LL 666 74 LL 667 74 LL 668 74 LL 669	560 to 820 mmf 1000 & 2000 mmf 2400 & 3000 mmf 3600 & 4300 mmf 5100 & 6200 mmf	1.90 2.16 4.00 5.40 7.70	1.81 2.05 3.80 5.13 7.32	1.52 1.73 3.20 4.32 6.16	1.43 1.62 3.00 4.05 5.78	

### TEXAS INSTRUMENT "TAN-TI-CAP" SOLID TANTALUM ELECTROLYTIC CAPACITORS

Extremely

Small

Size

- Small Size, Rugged Capacitors
- Long Operating and Storage Life • Ideal for Transistorized Circuits

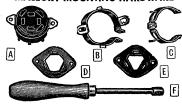
Small-sized solid tantalum electrolytic capacitors. Ideal for use in transistorized circuits, resistor-capacitor timing circuits, power supply circuits, etc. Excellent for control, computer and communication equipment for both military and commercial purposes. Useful in any application requiring small size, stable electrical characteristics, long life and high efficiency, repliability under severe operating conditions.

The hermetically sealed case can be mounted 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° C to +85° 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 204; shock test requirements of MIL Standard 202A, Method 202A, Have tinned brass case. 1½" leads can be safely bent at angle to case. Leads withstand 3-lb. pull. Tol. ±20%. Av. shpg. wt., 2 oz.

Stock	Mfr's	Mfd	Volts	Size	NET	EACH
No.	Туре	wiiu	VOITS	Size	1-24	25-Up
73 L 781	T050	22	6	11/64X <sup>23</sup> /64"	3.75	2.25
73 L 782	T051	33	6	11/64X <sup>7</sup> /16"	3.95	2.37
73 L 783	T052	47	6	3/16X <sup>7</sup> /16"	4.22	2.54
73 L 784	T053	60	6	3/16X <sup>7</sup> /16"	4.50	2.70
73 L 785	T054	200	6	1764×45/64"	9.16	5.50
73 L 786	T200	10	15	11/64×32/64"	3.88	2.32
73 L 787	T201	15	15	11/64×7/16"	3.98	2.38
73 L 788	T202	22	15	11/64×7/16"	4.40	2.64
73 L 789	T203	33	15	3/16X7/16"	4.77	2.86
73 L 790	T204	100	15	17/64X45/64"	9.85	5.91
73 L 791	T300	5	25	11/64X23/64"	3.65	2.19
73 L 792	T301	10	25	11/64X7/16"	4.02	2.42
73 L 793 73 L 794 73 L 795 73 L 796 73 L 797	T302 T303A T304 T400 T401	15 35 55 4 8	25 25 25 25 35 35	3/16×7/16" 17/64×45/64" 17/64×45/64" 11/64×23/64" 3/16×7/16"	4.70 7.87 9.38 3.80 4.05	2.82 4.72 5.63 2.28 2.43

### MALLORY MOUNTING HARDWARE



A complete assortment 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 use VR brackets for vertical mounting, or TH spring clips for horizontal mounting. \*Metal. †Phenolic. Av. shpg. wt., 3 oz.

No.	Туре	Fig.	Size	NET
17 L 531	PS-4	A	1"	.41
17 L 532		A	13/8"	.53
17 L 402		В	1 to 11/16"	.09
17 L 413	VR-3	В	13/8 to 17/16"	.09
17 L 414		В	11/2 to 19/16"	.12
17 L 415	VR-6	В	13/4 to 113/16"	.15
17 L 416		В	2 to 21/16"	.18
17 L 412		C	13/8 to 17/6"	.06
17 L 417	MW-100	F	Mtg. Wrench	1.03

No.	Mfrs. Type	Fig.	Size	Per Pkg of 3
18 L 414 18 L 415	MP-2 MP-4	D* D*	1"	
18 L 416 18 L 417 18 L 418		D* E† E†	1 3/8" 1"	9c
18 L 419 18 L 420	TH-13	Et Et C	13/8"	
18 L 421 18 L 422 18 L 423 18 L 424	TH-19	CCCC	1/2 to %6" 5/8 to 11/6" 3/4 to 13/6" 1/8 to 15/6"	9с

INSULATING SLEEVES Fiber sleeves for FP type capacitors. Wt., 2 oz.					
No.	Туре	Size	EACH		
17 L 510 17 L 511 17 L 512 17 L 513 17 L 514	CE-1 CE-3 CE-4 CE-5 CE-6	3/4 x2" 1 x2" 1 x3" 1 3/6 x2" 1 3/6 x3"	бc		

#### SANGAMO MICA CAPACITORS

#### TYPE E "HAM" MICAS



No.	lype	Wifd	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		.004	10,000	11.20
74 L 599	E-1025	.005	10,000	11.79
74 L 596		.0005	12,500	6.47
74 L 126		.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

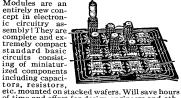
Extr Sizes tinuc wt.,

Folera ous du	1/4''; F3, ance, $\pm 5\%$ ity rating.	%. *Con-		
½ lb.	Type	I Med II	PeakWV*	EAC

No.	Туре	Mfd	PeakWV*	EACH
74 L 632 74 L 631	F2-0501 F2-1515	.05	500 1500	11.29
74 L 620	F1-335	.0005	3000	7.41
74 L 629	F2-325	.005	3000	10.17
74 L 623	F2-532	.0002	5000	
74 L 624	F2-533	.0003	5000	
74 L 625	F2-535	.0005	5000	
74 L 626	F2-521	.001	5000	10.17
74 L 627	F2-522	.002	5000	
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 modules are an entirely new concept in electronic circuitry assembly! They are complete and extremely compact standard basic circuits consist



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 experimental 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 Type	Description	EACH
ı	2 L 677	P1002	Low-Level Cathode Follower	7.74
1	2 L 678	P1003	Dual Cathode Follower	8.08
1	2 L 679	P1004	Cascade Intermediate Video Amplifier	10.39
	2 L 680	P1005	Triode Video Driver Amplifier	12.89
1 !	2 L 681	G1001	PRF Multivibrator	5.00
4	2 L 682 0 H 404 0 H 405 2 L 683	R1001 MBB-12 MBB-1 A1001	DC Regulator ± 300 v. 12-Pos. Breadboard Phenolic Socket Low-Level Lin. Amp.	20.68 19.60 1.47 5.14
l	2 L 684 2 L 685	A1002 A1003	Inter. Lin. Amp. Phase Inverter-Driver Linear Amplifier	5.14 4.16
	2 L 688	R1002	DC Regulator ± 150v.	10.49

### 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.

No.	Fig.	Description	of 2
19 L 478	G	Mtg. Ring; 11/4" dia. cans	.23
19 L 479	G	Mtg. Ring; 13/8" dia. cans	.23
19 L 480	G	Mtg. Ring; 11/2" dia. cans	.35
19 L 481	H	Mtg. Clip; 3/4" dia. cans	.35
19 L 482	н	Mtg. Clip; 1" dia. cans	.35
19 L 483	H	Mtg. Clip; 13/8" dia. cans	.35
19 L 484	J	"C" Clamp; 5/8-3/4" cans	.35
19 L 485		"C" Clamp; /8-1" cans	.35
19 L 489	K	Mtg. Strap; I.D. 5/8"	.17
19 L 491	K	Mtg. Strap; I.D. 3/4"	.17
19 L 492	K	Mtg. Strap; I.D. 7/8"	1.17



-	Stock No.	Fig.	Description	Pkg. of 2
	19 L 493 19 L 494 19 L 495	L L L	For 3/8-1/16" dia. cans For 1/2-9/16" dia. cans For 5/8-11/16" dia. cans	.35 .35
	19 L 496 19 L 497 19 L 498	L L L	For 3/4-13/6" dia. cans For 7/8-15/6" dia. cans For 1-11/6" dia. cans For 13/4-17/4" dia. cans	.35 .35

# Packaged Circuits and Printed Circuit Kits

### SPRAGUE BULPLATE PRINTED CIRCUITS



Each unit consists of a self-contained "package"—ca-pacitors, resistors and, in certain units, inductance. There is no need to waste time on excessive wiring and

time on excessive wiring and unwiring operations—simply 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 v. test, while the maximum voltage to be applied across the resistors is 250 v. DC; except D-1 where all elements are rated 100 v. DC. 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 sets produced by leading radio and television manufacturers. NO CHARGE when requested with your next order.

No.	Туре	Description	NET
18 L 862 18 L 863 18 L 864	D-3 DP-1	Diode Filter Diode Filter Diode Filter Detector Pentode Coup. Audio Output	.35 .35 .73 .59
18 L 869	DT-5 DT-6 F-1	Audio Output Audio Output Audio Output Decoupling Filter Pentode Coupling	.68 .68 .50
18 L 874 18 L 875 18 L 882 18 L 883 18 L 885	P-3 T-1 T-2	Pentode Coupling Pentode Coupling Triode Coupling Triode Coupling Triode Coupling	.53 .59 .44 .44
18 L 886 18 L 887 18 L 888 18 L 890 18 L 891	V1/V3 V-2 V-4	Triode Coupling Vertical Integrator Vertical Integrator Vertical Integrator Vertical Integrator	.44 .65 .73 .65

### 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 WVDC, 1000 VDC test. Av. shpg. wt., 2 oz.

5				
No.	Type	Mfd	Size	NET
15 L 626	34C3	.002, .00022, .00022, .005	11/8×5/8×5/32**	.44
15 L 627	34C4	.002, .00015, .005, .0001, .005	11/8 x 5/8 x 5/32 °	.53
15 L 628	34C5	.002, .005, .0001, .005	11/8×1/8×5/32"	.44
15 L 629	34C6	3X.004	11/8 x5/8 x 5/32"	.38

### CENTRALAB PACKAGED **ELECTRONIC CIRCUITS (PEC)**



Complete, printed electronic circuits—with resistors, capacitors, and in some cases, inductance. Ideal for the replacement of entire circuit sections in radio and Truit sections in radio and It wiring and all components are bound to a ceramic base and sealed against moisture, the reperature change and sealed against moisture, and the reperature change and sealed against moisture, and sealed

18 L 893. PC-5 Packaged Electronic Circuit Guide. Contains complete data—NO CHARGE when requested with your next order.

No.	Туре	Description	NET
ii Ē i48	PC-50 PC-51 PC-70 PC-71 PC-80	Diode Load Filter Diode Load Filter Triode Couplate Triode Couplate Triode Couplate	35¢ 35¢ 41¢ 44¢
L   65	PC-81 PC-84 PC-90 PC-91 PC-92	Triode Couplate Triode Couplate Pentode Couplate Pentode Couplate Pentode Couplate	44¢ 44¢ 53¢ 53¢ 59¢
L   57   L   356   L   357	PC-101 PC-104 PC-105	Vertical Integrator Vertical Integrator Vertical Integrator Vertical Integrator Vertical Integrator	65¢ 73¢ 65¢ 65¢ 59¢
11 L 170	PC-151 PC-154 PC-157	Audio/Det Couplate Audio/Det Couplate Audio/Det Couplate Audio/Det Couplate Audio/Det Couplate	59¢ 68¢ 59¢ 59¢ 68¢
L   7       L   72     L   368	PC-160 PC-165 PC-260	Audio/Det Couplate Pentode/Det Couplate Pentode/Det Couplate Sync Takeoff Couplate Sync Takeoff Couplate	79¢ 73¢
18 L 901	PC-314	Sync Takeoff Couplate Retrace Suppression Pentode/Det Couplate	59¢

### **NEW CENTRALAB PACKAGED ELECTRONIC CIRCUIT KIT**

Type PCK-40, 40 assorted packaged electronic circuit units in one-drawer steel Equipto cabinet. Contains packaged circuits most frequently used in popular electronic equipment. All units are individually packed in transparent plastic package with part numbers clearly shown for easy identification.

Kit consists of: 2—PC-81 Triode Couplates; 2—PC-91 Pentode Couplates; 10—PC-100, 5—PC-101, 2—PC-104, 2—PC-105, 2—PC-106 Vertical Integrators; 5—PC-150, 2—PC-151, 2—PC-158, 2—PC-150, 2—PC-150, 2—PC-150, 2—PC-165 Pentode-Detector Couplates; 2—PC-160, 2—PC-165 Pentode-Detector Couplates plates; 2—PC-16 tector Couplates.

Sturdily constructed Equipto cabinet measures 111/ax6%ax41/4". Shpg. wt., 6 lbs.

#### CENTRALAB COMPONENTS



### TRANSISTOR AMPLIFIER

Ultra-miniature ampli-

Ultra-miniature amplifers—stamp or pencilera-stamp or pencileraser size! Circuit includes transistors, capacitors, resistors, etc. For computers, pocket-size radios or recorders, hearing aids, and other ultra-miniature applications. Specially designed high-gain low-noise transistors hermetically sealed in steatite base. Output will drive headphones.

Type TA-11. 4-stage. Response: 250-40,000 cps ± 5 db. Gain: 73 db at 1 kc. Input Impedance: 1000 ohms. Supply Voltage: 1.3-1.5 v.; 4 ma drain. Output: 1 milliwatt. Size, 13/ex 1/6x 1/4. 



#### **AMPEC AUDIO AMPLIFIER**

AMPEC AUDIO AMPLIFIER

3 stage. Operates on 22½ v.
"B" battery and 1.5 v. A"
battery. Response, 200-8000
cps. Gain of 4500 at 1 kc. PC-201 complete with tubes: One
CK548DX; two CK512-AX.
Wt., 8 oz. PC-200 same but
less tubes. Wt., 4 oz. B16-228
volume control and switch for
use with either Ampec unit.
½" dia. ½" deep with knob.
Instructions. Wt., 3 oz.

BC-201 NET 14 70



# **AEROVOX RIGHT-ANGLE**

TUBE SOCKETS

Space-saving sockets permit horizontal placement of tubes. For use with printed circuits. Allow extremely compact chassis layout. Socket prongs insert easily into punched circuit board holes. Silver plated contacts. Molded Alkyd 430 body. Meets MIL specs. 31/2x31/2x5/6°, 6° oz. 40 H 406. Type RA9A. 9-Pin. NET....97C 40 H 403. Type RA7A. 7-Pin. NET....81¢

## HIGH-QUALITY PRINTED CIRCUIT KITS











G.C. Model 683. Save time and minimize replacement of printed circuit components with this handy repair kit. Permits quick repair jobs on resistors, capacitors, coils, wiring, sockets, lugs, copper foil, etc.—a valuable service aid. Kit includes: foil, solder washers; solder; "solder ease" tool for tightening contacts, etc.; fiberglass brush for removing excess solder; 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. 7x12/x3 3/x². Shgs. wt., 1 lb.
46 N 465. List, \$13.25. NET.

A G.C. Type 682 Standard Kit. Complete printed circuit repair kit for quickly and easily making repair jobs on soldered components in printed circuits. Valuable service aid—simplifies replacement of soldered components in printed circuits and permits repairing of sockets, lugs, copper foil, etc. Complete kit 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. 

E Kepro Professional Kit. Etched circuit kit. A negative of the layout can be produced photographically, or manually with the negative 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 ½° copper-clad phenolic 6x3°; 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., 2½ lbs. 5.29

C Kepro Standard Kit. This low-cost etching kit is supplied complete with all the materials needed for manually producing etched copper circuits. Simple to use—just draw the 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 1/6" copper-clad phenolic 6x3"; 1 bottle etch-resistant solution; 1 etching tray; 1 bottle etch-resistant solution; 1 etching tray; 1 bottle etching solution; 1 cleaning pad; 1 brush; and instructions. Complete with convenient plastic case. Shpg. wt., 1½ bs.

43 N 069. NET. 3.38

# Interference Filters — Auto Suppressors

### PLUG-IN TYPE FILTERS FOR RADIO, TV AND APPLIANCES



### **AEROVOX INTERFERENCE FILTERS**

\* A 1430 X.

Type IN-27. A simple and inexpensive plug-in unit for use where interference is slight; electric shavers, etc. Diameter, 13%, 1½.	:
long. Shpg. wt., 5 oz. 70 B 096 List, \$1.50. NET	

B Type IN-28. For use where ground is at a considerable distance. Provides most efficient filtering action when mounted on appliance. Supplied with convenient mounting bracket. Diameter, 13%; 2" long. 

Type 1 N-30. Highly effective plug-in unit for local noise sources of 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, to Diameter, 13/e; '3' long. Shpg. wt., 7 oz. 1.47

#### SPRAGUE "FILTEROL" TYPE F-400

## CORNELL-DUBILIER "QUIETONE" FILTERS

Type IF-18. Highly effective all-wave capacitive-inductive type of filter for suppression of severe interference. Used where ventilating or air conditioning units, washing machines, or machine tools interfere with reception on radio or TV. Bakelite case, 6x3½x2½, with line cord and plug attached. Binding post for attachment of ground wire, if used. Rated at 115 volts, AC-DC, 5 amps. Shpg. wt., 4 lbs. 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 location. Terminal for ground connection. Rated 115 volts AC-DC, 5 amps. Bakelite case, 4x2/4x2/x². Shpg. wt., 1/2 lbs.

4.53

Type IF-4. Plug-in, cylindrical filter for suppression of medium-intensity 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. 1½ diameter and 2″ long. Shpg. wt., 5 oz. 73 C B 125. List \$1.25. NET.

Type 1F-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. Connects between power line and appliance, or between power line and receiver. Rated at 115 volts, AC-DC, 5 amps. Size, 1¾ diameter, 2 long. Shgs. wt., 6 oz.

70 B 126. List, \$1.95. NET.

### WIRED-IN TYPE FILTERS AND AUTO SUPPRESSORS

#### CORNELL-DUBILIER "QUIETONE" FILTERS NEW FEDERAL ELECTRONICS TVI FILTER

- For Use With Any TV Receiver Greatly Reduces Interference
- Quick and Easy Installation



Type 1F-54. General-purpose capacitive-inductive filter for use 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, AĈ or DC. Shpg. wt., 8 oz. 70 B | 14. List, \$2.50. NET.

# **MALLORY AUTO NOISE SUPPRESSORS**

AG RF ΑM FM441

Prevent interference caused by generators, vibrators, switches and other spark-producing devices in auto, 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 sealed—provide low RF impedance, recommended for extreme climate conditions. Both AG and AS types are for noise suppression use on generators, ammeters, and other electrical equipment where there is contact spark or noise radiation. AG442 also used in midget aircraft motors. AG453 has shielded lead. FM441 and FM421 for Ford generators. AM454 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. shog. wt., 30z.

No. Type Mfd. WVDC Size EACH

N	٥.	Туре	Mfd.	WVDC	Size	EACH
17 L 17 L 17 L 17 L	728 677	RF481 CA275X FM441 RF480	0.5 4.0 0.5 0.5	50 50 100 100	3/4×13/8" 2×2×1" 11/ <sub>16</sub> ×17/8" 13/ <sub>16</sub> ×15/ <sub>16</sub> "	.53 1.76 .50 .47
17 L 17 L 17 L 17 L	720 670	AS125 AG442 AG443 AS145	0.01 0.05 0.05 0.1	100 100 100 100	11/6x15/6" 3/8x11/4" 7/6x13/6" 11/6x13/8"	.71 .47 .59 .82
17 L 17 L 17 L 17 L	724 678	AS165 AS185 FM442 AM454	0.2 <b>5</b> 0.5 0.5 0.5	100 100 160 200	3/4×1 1/2" 1×15/8" 11/16×17/8" 11/16×2"	.88 1.03 .38 .38
	674 671	AG453 AG452 AG444 AG451	0.5 1.0 0.25 0.5	200 200 200 200 200	3/4×2" 1×23/16" 5/8×13/4" 3/4×2"	.88 .53 .35

#### SPRAGUE INTERFERENCE FILTERS

Type IF. Compact multi-section interference filters for suppressing man-made radio and TV interference. Small and completely self-contained. For use on motors, thermostats, arcing devices, etc., up to 220 volts, AC or DC. Easily installed. Av. shpg. wt., 8 oz.

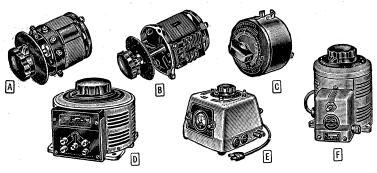
Stock No.	Mfr's Type	Fig.	Size	Sections	List	NET
70 B 100	IF-15	M	1x23/6"	Triple	\$2.60	1.53
70 B 105	IF-21	P	1x23/6"	Dual	1.75	1.03
70 B 113	IF-S1	N	3/4x2//6"	Single	1.15	.68
70 B 112	IF-37	P	1x27/6"	Triple	2.25	1.32

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 functions as one of the terminals. The filter selected should have a higher rating than the continuous current rating of the device with which it is to be used. Type 4 utilizes "Hypass" capacitor, providing exceptionally strong attenuation at frequencies above 5 megacycles. All have convenient single-hole mounting; Types 2 and 3 are drilled for mounting at either side. Av. shop, wt., 1 lb.



шо	nounting at either side. Av. snpg. wt., 1 lb.										
Sto	ocl	kNo.	Туре	Fig.	Amps	V.AC-DC	Size	List	NET		
		092			10 35	115		\$14.80	8.70		
		093			35	115	17/8×27/8×31/8"	27.40	16.11		
70	В	094	4	R	20	115	1" dia.x1'3/6" long	3.05	1.79		

# **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 distortion. Rated for 50° C. temperature rise under full load. \*For 110-120 v. AC inputs. For 240 volt inputs. For 50-60 cycles, except \$60 cycles only. 2PF-136 has standard 2-blade plug and receptacle. 3PF-136 has 3-blade plug and receptacle; third wire is connected to Powerstat frame. Gang assemblies: 1156C-2P and 1256C-2P 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. 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 panel and diameter; U types, overall height and diameter. Types 2PF10, 116 and 216 have on-off switch, line cord and plug, fuse and output receptacle. 1Also 105-135 v. and 225-255 v. output for line-voltage correction.

Sto	ock	Mfr's		0	UTPUT	1	Mtg. Size		Wt	NET
N	o	Type	Fig.	Volts	Amps	KVA	Mtg.	SIZO	Lbs.	EACH
62 G	536	10*5	C	0-132	1.25	0.165	P	21/16x213/16"	21/2	8.50
62 G	575	2PF10*§		0-132	1.0	0.132	U	3½x3½"	31/2	16.50
62 G	531	20*5	A	0-140	3.0	0.42	P	311/16×311/16"	6 -	12.50
62 G 62 G	525	116*	F	0-140	7.5	1.0	U	6½x45/8"	12	24.00
62 G	524	116U*	В	0-140	7.5	1.0	P	47/8×45/8"	11	18.00
62 GU	543	136*	D	0-140	20.0	2.8	U	61/16x73/4"	25	50.00
62 GU	576	LW136*†‡	D	0-30	25.0	0.75	Ü	611/16x73/4"	25	80.00
62 GU		2PF-136*		0-140	20.0	2.8	U	61/16x73/4"	26	65.00
62 GU		3PF-136*	1	0-140	20.0	2.8	Ü	61/16x73/4"	26	65.00
62 GU		1156C*		0-140	45.0	6.3	U	81/2x147/8"	80	118.00
62 G	527	216†	F	0-280	3.0	0.84	U	61/2×45/8"	12	26.00
62 G	573	216U†	В	0-280	3.0	0.84	$\mathbf{P}_{\sim}$	47/8×45/8"	11	20.00
62 GU	544	236†	D	0-280	9.0	2.5	บั	6½6x7¾"	25	50.00
62 GZ		1256C†		0-280	28.0	7.8	U	81/2×147/8"	80	118.00
62 GZ		1156C-2P*	1	0-140	90.0	12.6	U	175/6x147/8"	170	269.00
62 GZ		1156C-3P*	1	0-140	135.0	18.9	Ū	253/6x147/8"	295	418.00
.62 GZ		1256C-2P†	1	0-280	56.0	15.7	U	175/16x147/8"	170	269.00
62 GZ		1256C-3P†		0-280	84.0	23.5	Ū	253/6x147/8"	295	418.00
62 GZ	541	1156C-3Y†§	1	0-280	45.0	21.8	U	253/6x147/8"	280	394.00

### MODEL UCIM VOLTBOX

For industrial and electrical, chemical and physics laboratory installations and radio-TV 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. Input 120 v. 50-60 cycles. Output 0-140 volts. 3x8x6°. Shog. wt., 17 lbs. 65.00

### OTHER "SUPERIOR" EQUIPMENT

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, explosion-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 drivel, etc. Important note—write to Allied for free Bulletin (No.
37 G 102).



## RAYTHEON VOLTAGE REGULATORS

Stabilize Varying Line Voltages to Within  $\pm \frac{1}{2}\%$ 

Fully automatic magnetic-type AC line voltage stabilizers. For applications requiring accurate voltage stabilization. Maintain absolutely constant output of 115 volts, within ½% 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 parallel for greater power-handling capacity where load is greater than rated capacity of single unit. Require no adjustment. \*Case has flat top instead of style illustrated. †In 2 sections, mounted as single unit. For 95-130 v., 60 cycle AC. Available in ratings to 2000 watts on special order.

No.	Туре	Watts	Size	Mtg. Ctrs.	Wt.	NET
62 G 6	75 VR-6110* 76 VR-6111	15 30	53/4x211/6x31/2" 71/2x33/8x41/8"	51/16" 67/8×21/4"	6 lbs. 7 lbs.	16.00
62 G 6	77 VR-6112	60	7½x33/8x47/6"	61/8 x 2 1/4"	10 lbs.	25.00
	78 VR-6113	120	7½x33/8x515/6"	61/8 x 2 1/4"	17 lbs.	33.00
62 GU 6	80 VR-6115	250	123/8×5×75/8"	11%6x3½"	29 lbs.	52.00
62 GZ 6		500	123/8×5×91/4"	11%6x3½"	52 lbs.	81.00
62 GZ 6		1000	141/6×133/6×95/8"	12%x11%6"	128 lbs.	135.00

### CONNECTING ASSEMBLIES FOR VOLTAGE REGULATORS

Type 51-590 G1. Cord, plug, socket and mounting plate assembly for VR-6111, VR-6112, VR-613. Shpg. wt., 2 lbs. 2.25

Type 51-590G2. Cord, plug, socket and mounting plate assembly for VR-6114 and VR-6115. Shpg. wt., 2 lbs. 3.00





TO-300

TO-330

### ACROSOUND 300 SERIES HI-FI OUTPUT TRANSFORMERS

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 watts undistorted power from 20 to 30,000 cps; 40 watts undistorted from 30 to 20,000 cps. Recommended for type KT66, 807, 1614, 616 or 5881 tubes. Primary impedance: 6600 ohms. Secondary impedance: 4, 8, 16 ohms. Frequency response, ±1 db. 10-100,000 cps. Permissible feedback, 30 db. Maximum DC per primary, 75 ma. Primary shunt inductance, 150 hearies minimum. 10 color-coded leads. Seamless steel case. Gray finish. Size, 4¼x35½x3½, Shgw. tr. 7lbs. 24,7563 G993. NET.

Model TO-310. High-fidelity output trans-former. Excellent for converting push-pull 6V6's or EL84's to Ultra-Linear operation. All-though recommended for 12-watt circuits, will deliver 10 watts undistorted power from 20 to 30,000 cps. Primary impedance, 8000 ohms. Primary shunt inductance, 85 henries minimum. All other specifications same as TO-300, above. Size, 4¼x35¾x3¼\*. Shgg. wt. 6 lbs. 18.75 63 G 994. NET

Model TO-305. Ideal for amplifiers where high-output impedances are required for multiple speakers, telephone lines, broadcast equipment, etc. Same specifications as TO-300 above, but has 4, 8, 16, 125 and 500-ohm output impedances. Size, 4¼x3½x3¼". Shpg. wt 8 libe wt., 8 lbs. 63 G 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 renote amplifier to feed long line or where high-output impedances are needed. Has 4, 8, 16, 125 and 500 ohm output impedances. Other specifications are same as TO-310 above. Size, 4¼x35/x3½", Shgp. wt., 7 bs. 24.75

63 G 996. NET ... 24./3 Model TO-320. For Ultra-Linear operation in Williamson-type circuits. For push-pull 6550's, EL-34's, 6CA's, 80's, etc. in fixed-bias operation. Provides 50 watts undistorted power from 20 to 30,000 cps; 100 watts undistorted power from 30 to 20,000 cps. Primary impedance, 3800 ohms. Secondary impedance, 4, 8, 16 ohms. Response, ±1 db., 10-100,000 cps. Permissible feed back, 30 db. Max. DC in primary, 150 ma. Fully potted. Gray finish. Holes for bottom mounting. 10" leads. Size, 5½x4x4½" Sipg. wt., 14 lbs. 39.75
Model TO-320. Recommended for Ultra-Line-

Model 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 from 30 to 20,000 cps. Primary impedance: 5000 ohms plate-to-plate. Secondary impedance: 4, 8 and 16 ohms. Frequency response: ±1 db., 10 to 100,000 cps. Maximum DC per primary, 150 ma. Case has provision for either top or bottom mounting. Gray finish. Has 10' color coded leads through case bottom. Size, 4x4%x5%, Shpg. wt., 14 lbs. 39.75

### **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 requirements. Plate winding delivers 285-0-285. at 175 ma. Filament windings deliver 5 v. at 2 amps and 6.3 v. at 5 amps. Gray hammertone; endbell construction with upright mounting. 4x 3½x3½', 10' wire leads. For 110-120 v., 50-60 cycle AC. Shpg. wt., 6 lbs. 9.75

# Special-Purpose Transformers and Supplies

### STANDARD ELECTRIC "ADJUST-A-VOLT" VARIABLE AUTOTRANSFORMERS













Type T502U. Similar to above. Output is variable from 0-270 volts. Max. output: 32.5 amps. Max. load rating: 7.5 KVA. 131/4x121/2x51/2". For 230 v., 50-60-cycle AC. Shpg. wt., 57 lbs. 120.00

D Type 100BU. Similar to above. Output is variable from 0-132 volts. Mounts on panels up to 1/4" thick, Max. output current: 1.25 amps. Max. load rating: 165 VA. 23/2x13/2" dia. For operation from 120 v., 50-60 cycle AC. Shpg. wt. 2 lbs. 8.33

Type 500 B, 500 BU and 520 B. For laboratory and industrial applications. Internal construction similar to that of above. Types 500 B and 520 B are cased, 6½x4½" dia. Supplied with line cord, plug, receptacle, pilot light, on-off switch and fuse. Constructed of die-cast aluminum with gray wrinkle finish. Type 500 BU is uncased (not illustrated). Designed for back-of-panel mounting—supplies pilot-light voltage, adjustable shaft length. Size, 5x4½" dia. For 50-60 cycle operation. Avshor wr. 10 lbs.

Stock	Mfr's	Input		Output					
No.	Type	Volts	Volts	Amperes	KVA	EACH			
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 1500B. (Not illustrated.) For heavy-duty applications such as theatrical lighting control. Maximum current output is 15 amps. Voltage output range is 0-135 v. Maximum load rating is 2.0 KVA. With dust cover. Size, 8½x8x51½°. For operation from 115 v., 50-60 cycle AC. 62.611500 NET. 

### SOLA CONSTANT-VOLTAGE TRANSFORMERS

#### POWER TRANSFORMERS

 $\fbox{G}$  Replace ordinary power transformers. Stabilize plate and filament voltages within  $\pm 3\%$  with line variations from 100-130 volts. With Pyranol oil-filled input filter condenser and mounting bracket. For 100-130 volts, 60 cycles AC only.

Type 7107. As above, but 380 v DC to filter @ 250 ma. Fil., 6.3 v @ 4A; 6.3 v @ 8A (unreg.); 5 v @ 3A. 7x5x4½". Wt., 19 lbs. 62 G 671, 10-UP, EACH.....27.65 1-9, NET EACH.....27.00

### 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 ±3% stabilized voltage. No wiring necessary. Turns on and off with set. 9\\\( x4\\ x1\\\ x'\\ For 95-130\\ v.\), 60 cycle AC. Shpg. wt., 26 lbs. 37.50 Type 7201. For 110 to 175-watt sets. Shpg. wt., 19 lbs. 34.50

#### STANDARD-TYPE TRANSFORMERS

STANDARD-IIFE IRANGIOMEES

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 transformer and load equipment from excessive current. Use new low strayfield design—suitable for use as internal components. All have 95-130 v. inputs, except the -04-group which has 95-130/190-260 v. inputs. All types have chlorinated di-thernol capacitor. Input voltages at 60 cycle AC. 25 and 50 cycle units available on special order. Write for quotation, giving full details about vour requirements. 50 cycle units available on spec details about your requirements.

No.	Type	Fig.	Output V.	VA	Size	Lbs.	EACH
61 G 976	20-01-015	Н	6.0	15	3½ x25/8 x51 1/16"	6	15.00
61 G 977	20-02-015	н	6.3	15	3½ x2% x51 1/16"	6	15.00
61 G 978	20-10-015	Н	115	15	31/2 x21/8 x51 1/16"	6	15.00
63 G 193	20-04-030	G	6.3	30	413/16x31/8x31/8"	6	16.00
63 G 194	20-04-065	G	6.3	60	413/16x31/8x31/4"	7	20.00
63 G 195	20-04-095	G	6.3	120	413/16x31/8x411/16"	11	24.00
63 GU 196	20-04-113	G	6.3	150	7x4½x5½°	20	31.00
63 GU 197	20-04-116	G	6.3	250	7x4½ x51½6"	23	35.00
62 G 657	20-13-030	1	118	30	6x4x53/16"	61/2	18.00
62 G 658	20-13-060	1	118	60	63/16x4x53/16"	91/2	25.00
62 G 659	20-13-112	j	118	120	71/8 x 4 x 5 3/16"	13	33.00
62 GU 618	20-13-115	j	118	150	81/8 x 53/8 x 77/16"	22	40.00
62 GU 660	20-13-125	J	118	250	111/8 x 615/16 x 67/16"	30	52.00
62 GU 661	20-13-150	j	118	500	121/2 x615/16x67/16"	40	81.00
62 GZ 662	20-13-210	J	118	1000	151/8 x615/16x67/16"	115	135.00
63 GZ 198	20-25-220	J	118	2000	21½ x8% x9½6	168	245.00







### **HARMONIC-FREE TRANSFORMERS**

Designed for use with equipment that requires a stabilized source of 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	Mfr's	Pri.	Sec.	Cap.	Wt.	NET EACH	
No.	Туре	V.	٧.	VÁ	Lbs.	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

CONSTANI-VOLIAGE 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 computers, telemetering devices, variable-speed industrial motors. Employ a constant-voltage transformer, semi-conductor rectifier and high-capacitance filter. Output is held within ±1% with line changes of ±10%. Ripple is less than 1% (rms), except \*½%. Easily withstand high, short-time overloads. Units can be series-wired for higher voltages. Input and output connections made at terminal strip. All circuits are insulated from ground, permitting operation at either polarity. Supplies are assembled on 5½x19° rack panels. Depth, 9¼°. Chassis have vent holes. For operation from 100-130 v., 60 cycles AC.



Stock	Mfr's	Ou	tput Ratin	gs	Efficiency	Wt.,	NET
No.	Туре	Watts	Volts	Amps	% (approx.)	Lbs.	EACH
62 GZ 636	28156	144	24	6.0	72	45	145.00
62 GZ 637	28120	192	48	4.0	77	45	135.00
62 GZ 638	28152	250	125	2.0	82	55	145.00
62 GZ 639	28106	300	150	2.0	80	50	145.00
62 GZ 640	*28193	200	200	1.0	76	45	140.00
62 GZ 641	*28192	250	250	1.0	81	55	150.00

### "DC SOLAVOLT" ADJUSTABLE CONSTANT-VOLTAGE DC POWER SUPPLIES

Compact DC supplies with manually adjustable output and automatic voltage regulation. Use semi-conductor rectifier, high-capacity filter, ehoke, variable autotransformer and constant-voltage transformer. Hold output voltage within #1% despite line voltage changes of #15%. Will safely handle "pulse" loads up to 200% of rated output. Have no tubes. Circuits insulated from ground, permitting operation at either polarity. All units assembled on 7x19x12½\* rack panel. For 100-130 volts, 60 cycle AC.



Stock No.	Mfr's Type	Output Range	Rated Lo	ad—Amps Max. v.	% Ripple Full Load		NET EACH
61 GZ 979	28510	5-35v.	7.0	7.0	0.10	80	325.00
62 GZ 614	28520	25-60v.	6.0	4.0	0.05	84	325.00
62 GZ 615	28530	30-90v.	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. Shog. wt., 5 lbs. 6.75

# Stancor TV Transformers



### **EXACT-REPLACEMENT TV HORIZONTAL OUTPUT TRANSFORMERS**

A complete line of top-quality replacement flyback transformers for all standard television receivers. Every transformer faithfully duplicates all of the electrical and physical characteristics of the original manufacturer's unit. Manufacturer's own specifications are used.

No alterations are required in the existing circuit or chassis for installation of the Stancor transformers. High-quality construction. \*For 7711 except where 6CD6 horizontal output tube is used. Write to Allied for quantity prices. Av. shog. wt., 1 lb.



ADMIRAL			
No.	Type	Orig. Mfr's Part No.	NET
64 G 210 64 G 211 64 G 551	A-8133	79C23-3, 79C28-1 79C30-1/-3 79C-30-2/-4,	6.53 6.86
64 G 213 64 G 214	A-8254	79C38-1, 79D38-1 79C60-1 79C60-2/-3	6.86 4.47 5.29
63 G 460 64 G 572 64 G 212 63 G 459	A-8135 A-8253	79C70-1 79D41-1/-2 79D48-1 79D65-1	4.73 7.02 6.37 5.10
CAPEHART			
64 G 221 63 G 461	A-8131 A-8285	750163A-1 850285E-1	4.24 7.06
CBS-COLUMBIA			

CD3-COLOMBIA			
64 G 331	1	10104/07/18/10/26 /35	6.86
64 G 332 63 G 462 63 G 463 63 G 464 63 G 465	HO-258 A-8283 A-8284	10136B/37/38/59 12000751 12000841 12001051 PC10161	6.86 5.15 6.37 5.68 5.88
	C	ROSLEY	
64 G 222 64 G 223	A-8241	157820 154069/-1, 154990/	5.29
U- U 223	11 0240	2/3	8.00

64 G 208	A-8263	158481-1/-2/-5	6.04
	ΕN	MERSON	
64 G 221 64 G 268 64 G 333	A-8138	738047/48/53 738079/84 738067/68/69/73/	4.24 6.53
64 G 369	1 (	74/75/82	6.86 6.20

GENERAL ELECTRIC			
64 G 546 A-81308 64 G 276 A-8259 64 G 277 A-8262	77J1 RTO-129/30 RTO-131/141/-	6.53 5.88	
63 G 466 A-8288 63 G 467 A-8289	163-3 RTO-149/1 RTO-151/3	6.37 5.48 5.48	
63 G 471 A-8290 63 G 468 HO-252 63 G 469 HO-253 63 G 470 HO-254	3) RTO-175	5.48 5.88 5.88 5.88	

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		HOFFMAN	
No.		Orig. Mfr's Part No.	
63 G 97 63 G 97	5 HO-286 6 HO-287	5165 5144/45/46/48/49/55	8.65 7.18
	MA	AGNAVOX	
63 G 47	2 A-8293	360593-2, 360552-1/  -2/-2A, 360577/-1	6.37
63 G 47 63 G 47	3 A-8294	360606/-1 360614-1, 360623/-1	5.10

63 G 970 HO-279		5.68	
63 G 970 HO-279	300032-1	6.53	
M	OTOROLA		
64 G 325 A-8224	24C711265/A,		
64 G 279 A-8239	24C721290 24K792753	8.55	
64 G 326 A-8225	24K701099 24K712193	6.53 8.55	
64 G 327 A-8226	27K21301/C.	8.55	
63 G 971 HO-280	24K721517C 24K739284	8.55	
63 G 972 HO-281	24K730902/03	7.35 7.64	
63 G 973 HO-282	24C726487, 24K738699	7.64	
MUNTZ			
MUNIZ			

64 G 281 A-8129 TO-0024

64 G 559 A-8132   TO-0031	6.86		
64 G 283 A-8240   TO-0036	6.53		
63 G 436 A-8291   TO-0039	6.52		
64 G 278 A-8261   C9.253/-1/-2/-E	6.04		
PHILCO			
53 G 438   HO-277   32-8465-2, 32-8509/-2	8.65		
54 G 323 A-8222   32-8533/34	6.99		
64 G 322 A-8221   32-8555	7.35		
54 G 32   A-8220   32-8565	6.96		
64 G 324 A-8223 32-8572	6.30		
63 G 437 HO-276 32-8624/-1	6.59		
63 G 439 HO-278 32-8695-1	6.53		
63 G 440 HO-264 32-8709-1	5.88		
PHILHARMONIC			

1 6.53

6.53

54	G	783	A-8119	211T5	1 6.53
				211T1/T3	6.30
			HO-252		5.88
53	G	441	HO-256	235T1	6.86
4	G	789	A-8235	75519, 75585, 76381	4.47

RCA

64 G 573|A-8136 |80-263/-265/-2

### RCA (Cont'd)

No.		Orig. Mfr's Part No.	NET
64 G 787 64 G 788 64 G 221	A-8234	76430, 76795 76501 76951	6.76 4.12 4.24
64 G 785 64 G 786 63 G 442	A-8244	77833 78201, 78810 972914-1 103092	4.12 6.53 5.39
	SII	VERTONE	

0121 -1(1 -112	
64 G 331   A-8230   10104/07/08/10/26/35 64 G 332   A-8231   10136B/37/38/59 63 G 969   A-8252   N24989	6.86 6.86 5.88
SPARTON	

63 G 974 HO-284 PC-70	00-10/6,-12/F   6.53
SYLVAN	AIA
	0003 0005/-0006   4.70 5.03

63 G 443 HO-259	241-0011 INGHOUSE	1 4.80
64 G 330 A-8229	241-0007	5.29
64 G 329 A-8228	241-0005/-0006	5.03
64 G 328 A-8227	241-0003	4.70

				IINGHOUSE	
64	G	285	A-8237	V-9904-1,V-10213-1 V-10214-1, V-9904-2, V-10204-1 V-11548-1/-2/-3/-4	6.37
04	G	200	A-0230	V-10214-1, V-9904-2, V-10204-1	6.37
64	G	284	A-8236	V-11548-1/-2/-3/-4	7.35
				TENITU	

		ZENITH	
		S-15911/12, -1556-6, S-17130/40, 17233, S-17245/265/435, S-17646/767/811, S-17927, -20908	6.11
64 G 288	A-8268	S-15015/202/709, S-15710, -16006, S-16191/204, S-17244/699/X, S-20866	6.11
64 G 289		S-18487/537/802	5.88
64 G 290 64 G 291	1.	S-18567/990, S-19728 S-19032	5.88 5.88
64 G 368 63 G 444	A-8272 HO-267	S-20993 S-20099	5.88 5.03
63 G 445 63 G 446 63 G 447 63 G 448	HO-269 HO-270	S-22720	5.03 5.39 5.88 5.39



#### 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 shorting band to reduce external magnetic field. †Pri. for 117/107 v. For 117 volts, 60 cycles.

Stock	Mfr's	Prate	l Ke	ct.	1 1	L.	Overall	Wt.,	NET
No.	Type	VIM	V	A	V	A	Size	Lbs.	
	P-5059†	675 200			6.3 CT		43/8 x 43/4 x 4"	93/4	
	P-6315	740 27			6.3 CT	7.0	41/4 x 33/4 x 41/2 "		12.73
	P-8154	750 20			5/6.3	2/5.6	41/4 x 43/4 x 41/2"		12.74
64 G 576	P-8159*	720 29			5/6.3/6.3	2/8/.6	55/16x313/16x43/4"	101/2	16.26
64 G 577	P-8160	716 18			6.45	12	41/4 x33/4 x41/2"	10	14.00
	P-8164*	600 22			6.3	9.0	41/8 x 37/16 x 41/2"		13.12
	P-8166*	680 33			6.3/6.3/6.3	2.5/5.0/5.0	6x313/16x43/4"	13	19.30
63 G 458	P-8167	560 400	5	6	6.3/6.3	4.8/8.5	6x3 <sup>13</sup> / <sub>16</sub> x4¾"	13	19.73
	P-8169*	760 220		3	6.3/6.3/6.3	1.2/5/7	45/8 x33/4 x41/2"	101/2	15.44
	P-8170*	760 220		3	6.3/6.3/6.3		4¾ x4x4¾ "	101/2	15.02
		750 22		3		2.0/9,0	5x3¾ x4½"		15.41
63 G 449	P-8172	540 200		3	6.3	8.5	4%x3%x3¾*	7	13.85
64 G 413		620 240		3	6.3/6.3	6.4/3	41/2 x33/4 x41/2"	9	12.97
	P-8333*	590 22			6.3/6.3		4% x3¾ x4½"	10	13.48
		550 30			6.3/6.3	8.5/1.2	51/8 x31/4 x41/2"	13	15.64
64 G 417	P-8335*	600 32	5	6	6.3/6.3	8.8/1.5	51/2 x31/4 x41/2"	13	15.64
64 G 419	P-8337	630 22			6.3	8.25	4½ x3¾ x4½"	81/2	13.88
	P-8339	650 25			12.6 CT	5.25	4% x3% x5"		11.59
	P-8340*	710 270			6.3/6.3/6.3		5½ x3¾ x4½"	12	14.69
	P-8342*	730 260				8.85/1.2	5% x3% x4½"	13	14.20
63 G 428	P-8352*	580 240	5	3	12.6 CT	5.25	4 % x 3 ¾ x 4 ¾ "	81/2	12.96

## VERTICAL BLOCKING OSCILLATOR TRANSFORMERS

No.	Туре	Ratio (Pri. to Sec.)	Size	Lbs.	NET
64 G 501	A-8111	1:4.2	1 ½ x2 ½ x1 ½"	1/2	1.76
64 G 504	A-8121	1:4.2	1 ¾ x25/6 x1 ½"	1/2	2.42
64 G 543	A-8122	1:4.2	1 ½ 6x1 ¾6x1 ¾6"	1/2	2.74
64 G 549	A-8124	Sec. #1, 1:0.48; #2, 1:1	1 5/8 x2 7/8 x1 5/8"	1/2	2.71
64 G 558	A-8125	1:4.2	23/6 x1 1/4 x13/6"	1/2	1.76
64 G 471	A-8126	1:1.5	13/4 x1 1/2 x2"		1.79
63 G 432	VBO-200	1:1.5	1 1/2 x1 1/2 x2 1/2"		1.89

HORIZON	TAL BLOCKII	NG OSCILLATOR	TRANSFO	ORMERS
No.	Type	Size	Lbs.	NET
64 G 500 64 G 503	A-8110 A-8120	1½x2½x1½″ 1¾x25/cx1½″	1/2	1.99

37 G 037 Stancor TV Replacement Guide. Free with order.



### DEFLECTION YOKES

For 70° deflection picture tubes; §for 50°. All have ferrite cores and cosine windings. Molded coil forms provide minimum "crosstalk." Av. shpg. wt., 1½ lbs.

No.	Туре	Horizontal	Vertical	NET
64 G 538 64 G 595 64 G 539 64 G 590 64 G 589	DY-1A§ DY-2A DY-8A DY-9A DY-10A	8.3 mh, 13.5 ohms 10.3 mh, 14.5 ohms 8.5 mh, 14.5 ohms 13.5 mh, 17.5 ohms 30.0 mh, 45 ohms	50 mh, 66 ohms 50 mh, 66 ohms 50 mh, 52.5 ohms 50 mh, 53.5 ohms 3.5 mh, 3.5 ohms	5.15 6.53 6.53 6.53
64 G 596	DY-11A	20 mh, 31 ohms	50 mh, 50 ohms	6.53
64 G 597	DY-12A	30 mh, 41 ohms	50 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 mh, 45 ohms	3.5 mh, 3.5 ohms	6.69
64 G 371	DY-15A	25 mh, 35 ohms	50 mh, 50 ohms	6.53
63 G 482	DY-16A	20 mh, 26 ohms	44 mh, 45 ohms	7.18
63 G 483	DY-17A	12 mh, 20 ohms	42 mh, 43 ohms	8.65
63 G 484	DY-18A	14.5 mh, 18 ohms	41.5 mh, 50 ohms	7.18
63 G 485	DY-19A	20 mh, 28 ohms	41.5 mh, 50 ohms	7.18
63 G 486	DY-20A	20 mh, 28 ohms	41.5 mh, 50 ohms	7.18
63 G 487	DY-21A	14.5 mh, 10 ohms	3.1 mh, 3.5 ohms	6.53
63 G 488	DY-22A	20 mh, 25 ohms	46 mh, 45 ohms	6.11
63 G 489	DY-23A	20 mh, 27 ohms	45 mh, 43 ohms	8.15
63 G 495	DY-24A	18.5 mh, 34 ohms	11 mh, 11.5 ohms	
63 G 496	DY-25A	24 mh, 46 ohms	11 mh, 11 ohms	
63 G 497	DY-26A	19 mh, 34 ohms	11.5 mh, 16.5 ohms	
63 G 498	DY-27A	17.5 mh, 35.5 ohms	12.3 mh, 13.5 ohms	

### VERTICAL DEFLECTION OUTPUT TRANSFORMERS

†Indicates autoformer type. \*Copper shield. Pri. & sec. in ohms.

•						
No.	Type	Pri.	Sec.	Size	Lbs.	NET
64 G 522	A-8112	1300	10	2x31/4x13/4"	1	2.84
64 G 523	A-8113	700	12	2x31/4x13/4"	1	2.91
64 G 502	A-8115	600	7	$3\frac{1}{16}$ x2 $\frac{1}{2}$ x2 $\frac{1}{2}$ "	21/2	4.31
64 G 547	A-8123†	1200	11	2x31/4x13/4"	21/2	2.65
64 G 554	A-8140	400	0.3	21/2x21/2x31/32"	2½ 1½	4.47
64 G 557	A-8141†	1650	4.5	21/4×33/4×21/8"	11/2	3.82
64 G 461	A-8143	625	14	21/4x21/4x35/8"	2	2.84
64 G 462	A-8144	540	15	21/4x13/4x35/8"	11/2	2.52
64 G 472	A-8147†	300	9	2x13/4x31/4"	1	2.28
64 G 473	A-8148†	375	6.5	2x17/8x31/4"	11/2	2.77
63 G 433	A-8150	450	11.3	2x33/4x23/16"	11/2	2.81
63 G 434	A-8151	580	6.7	21/4x33/4x21/2"	11/2	3.01
63 G 977	VO-103*	530	5.5	2x11/2x31/4"	11/2	2.62
63 G 978	VO-106	1400	3.8	15/8x11/2x27/8"	1	2.28
63 G 979	VO-107	1220	3.0	$1\frac{5}{8} \times 1\frac{1}{2} \times 2\frac{7}{8}$ "	1	2.28

# Stancor Transformers













BV





### **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.

All are Fig. M, except Type PC is Fig. C and Type PS is Fig. A. §Has extra winding: 6.3 v. @ 3A. not C.T. Pri., 117 volts, 60 cycle AC.

Stock	Mfr's	Pla	te	5V	6.3V	Overall	Wt.,	l	NET	EACH	
No.	Туре	VCT	Ma	@	@	Size	Lbs.	1-9	10-24	25-49	50-99
64 G 162 64 G 078 64 G 216 64 G 077 64 G 154	PA-8421* PS-8416*	125 125 250 460 470	15 50 25 50 40	2A	.6A 2.0A 1.0A 2.5A 2.0A	23/8×13/8×2" 21/4×33/4×21/8" 25/6×27/8×13/4" 33/6×25/8×27/8" 21/2×3×25/6"	3/4 1 1/2 1 2 3/4 2 1/4	2.06 3.43 2.58 4.27 4.41	1.85 3.09 2.32 3.85 3.97	1.67 2.78 2.09 3.47 3.58	1.55 2.58 1.94 3.21 3.31
64 G 176 64 G 170 64 G 177 64 G 175 64 G 215	PM-8402 PC-8402 PM-8419* PC-8419*	470 480 480 480 480	40 55 55 70 70	2A 2A 2A	2.0A 2.0A 2.0A 3.0A 3.0A	3 <sup>3</sup> / <sub>16</sub> ×2 <sup>5</sup> / <sub>8</sub> ×2 <sup>5</sup> / <sub>8</sub> " 2 <sup>3</sup> / <sub>4</sub> ×2 <sup>1</sup> / <sub>2</sub> ×3" 3 <sup>1</sup> / <sub>16</sub> ×2 <sup>5</sup> / <sub>8</sub> ×2 <sup>3</sup> / <sub>4</sub> " 2 <sup>7</sup> / <sub>8</sub> ×2 <sup>1</sup> / <sub>2</sub> ×3" 3 <sup>3</sup> / <sub>16</sub> ×2 <sup>5</sup> / <sub>8</sub> ×2 <sup>7</sup> / <sub>8</sub> "	21/4 21/2 21/2 21/2 23/4 21/4	4.41 4.90 4.90 4.90 4.90	3.97 4.41 4.41 4.41 4.41	3.58 3.97 3.97 3.97 3.97	3.31 3.67 3.67 3.67 3.67
64 G 167 64 G 168 64 G 171 64 G 178 64 G 179		520 520 500 500 520	90 90 70 70 90	2A 2A 2A 2A	4.0A 4.0A 2.5A 2.5A 3.0A	3½x3x3½" 3½x2½x3%x3¾" 3½x2½x3" 3½x2½x3" 3¾6x2½x3" 35%x3x3½"	3½ 3½ 3½ 3¼ 3¼ 4	5.45 5.45 5.49 5.49 6.17	4.91 4.91 4.94 4.94 5.56	4.42 4.45 4.45 5.00	4.10 4.10 4.12 4.12 4.64
64 G 160 64 G 172 64 G 183 64 G 155 64 G 157	PM-8404 PM-8405 PC-8405 PM-8407 PM-8406	520 540 540 650 650	90 120 120 55 40	2A 3A 3A 2A 2A	3.0A 3.5A 3.5A 2.0A 2.0A	27/8 x33/8 x35/8" 31/2 x31/8 x33/4" 4x31/4 x31/2" 21/2 x3x31/8" 21/2 x3x23/4"	4 4½ 4½ 3¼ 2½	6.17 6.82 6.82 4.96 4.51	5.56 6.14 6.14 4.47 4.06	5.00 5.53 5.53 4.02 3.66	4.64 4.87 4.87 3.72 3.38
64 G 164 64 G 156 64 G 158		650 650 680 680 700	40 55 70 70 90	2A 2A 2A 2A 2A	2.0A 2.0A 2.5A 2.5A 3.0A	3 <sup>3</sup> / <sub>6</sub> x2 <sup>5</sup> / <sub>8</sub> x2 <sup>3</sup> / <sub>4</sub> " 3 <sup>3</sup> / <sub>6</sub> x2 <sup>5</sup> / <sub>8</sub> x3 <sup>1</sup> / <sub>8</sub> " 3 <sup>3</sup> / <sub>8</sub> x3 <sup>5</sup> / <sub>8</sub> x3" 2 <sup>7</sup> / <sub>8</sub> x3 <sup>3</sup> / <sub>8</sub> x3 <sup>1</sup> / <sub>2</sub> " 2 <sup>7</sup> / <sub>8</sub> x3 <sup>3</sup> / <sub>8</sub> x3 <sup>3</sup> / <sub>4</sub> "	21/4 31/2 4 4 41/2	4.51 4.96 5.62 5.62 6.27	4.06 4.47 5.06 5.06 5.64	3.66 4.02 4.55 4.55 5.08	3.38 3.72 4.21 4.21 4.70
64 G 186 64 G 173	PM-8411	700 720 720 750	90 120 120 150	2A 3A 3A 3A	3.0A 3.5A 3.5A 4.5A	35/8 x3x35/8" 31/8 x33/4 x33/4" 4x31/4 x33/4" 37/8 x31/2 x41/8"	41/4 51/2 51/2 51/2	6.27 6.92 6.92 8.29	5.64 6.23 6.23 7.47	5.08 5.61 5.61 6.72	4.70 5.19 5.19 6.22
64 G 163	PC-8411 PM-8412 PC-8412 PC-8414§	750 800 800 1200	150 200 200 200 200	3A 3A 3A 3A	4.5A 5.0A 5.0A 3.0A	45/6x35/8x41/8" 33/4x41/2x37/8" 4x4x43/4" 41/4x43/4x4"	51/2 81/4 81/4 81/2	8.29 9.16 9.16 11.78	7.47 8.41 8.41 10.61	6.72 7.57 7.57 9.55	7.01 7.01 8.85

#### **FILTER CHOKES**

All ratings are with maximum DC in winding. All are Fig. A mounting type, except \*Fig. L, †Fig. TD, \$Fig. C, ‡Fig. NV. All are rated 1500 v. rms. except \*\*2000, ††3000.

Stock	Mfr's	Hys.	Ma.	Ohms	Size	Wt		NET	EACH	
No.	Туре				Size	Lbs.	1-9	10-24	25-49	50-99
64 G 057	C1001††	10.5	110	225	25/8×4×21/4"	2½ 1¼ 1½	2.91	2.62	2.35	2.19
64 G 056 64 G 055	C1002 C1003	15.0 16.0	75 50	400 580	21/4 x33/4 x21/4"	11/4	2.13	1.21	1.72	1.60
64 G 065	C1003	3.5	50	200	2x3¼x1¾" 15/8x27/8x1½"	3/4	1.40	1.56	1.40	1.30
64 G 075	C1279	8.5	5ŏ	400	15/8x27/8x11/2"	3/4	1.44	1.29	1:17	1.08
64 G 067	C1355*	8.0	75	290	21/16x25/16x13/4"	11/2 21/2	1.99	1.79	1.62	1.50
64 G 063	C14108††	4.0 4.5	175 200	100	33/16x25/8x25/8"	21/2	4.12	3.70	3.33	3.09
64 G 466 64 G 455	C14118†† C14128††	4.0	250	80 60	35/8 x3x3 1/8" 35/8 x3x3 1/2"	31/2	4.66 6.82	4.20 6.14	3.78 5.53	3.51 5.13
64 G 068	C14208	16.0	80	360	3 <sup>3</sup> / <sub>16</sub> x2 <sup>5</sup> / <sub>8</sub> x2 <sup>5</sup> / <sub>8</sub> "	21/2	3.53	3.18	2.86	2.65
64 G 465	C1421§††	7.0	140	165	33/16x25/8x25/8"	21/2	4.02	3.62	3.25	2.99
64 G 058	C1515	20.0	15	900	15/8×27/8×11/2"	1	1.44	1.29	1.17	1.08
64 G 050	C1706	4.5	50 50	300	13/8x23/8x13/8"	3/4 3/4	1.21	1.09	.99	.91
64 G 051 64 G 052	C1707 C1708	7.0 13.0	65	550 500	13/8 x23/8 x13/8" 2x31/4 x13/4"	1 3/4	1.27	1.15	1.03	.96 1.50
64 G 053	C1709	8.0	85	250	2x31/4x2"	13/	2,22	2.00	1.80	1.67
64 G 054	C1710	7.0	150	200	25/8x4x21/4"	13/4 21/4	3.23	2.91	2.62	2.43
64 G 069	C1721ࠠ	8.5	200	120	37/8 x 3 1/8 x 3"	41/2	5.64	5.09	4.58	4.24
64 G 456	C1722111	8.0	300 130	80	45/8 x33/4 x31/2"	71/2	9.37	8.44	7.59	7.04
64 G 059	C2303**	2.5		100	2x31/4x13/4"		2.03	1.82	1.64	1.52
64 G 060	C2304	2.3	150 100	60 300	2x31/4x13/4"	11/2	2.09	1.88	1.70	1.57
64 G 061	C2305† C2308§††	5.0 8.0	300	80	2 <sup>1</sup> ½6x2¾x2¾6″ 4¾x4x3 <sup>7</sup> /8″	73/4	3.07 9.47	2.76 8.53	2.49 7.67	2.30 7.10
64 G 457	C2309**	3.0	150	90	21/4 x33/4 x21/4"	13/4	2.52	2.26	2.04	1.89
64 G 505	C2325	2.0	200	60	33/4 x2 1/4 x2 1/4"	2'4	2.52	2.26	2.04	i.89
64 G 520	C2326	1.0	300	43	33/4×21/4×21/4"	13/4	2.84	2.55	2.30	2.14
64 G 073	C2327	1.5	200	85	15/8x27/8x11/2"	11/2 21/2	1.60	1.44	1.29	1.21
64 G 458 64 G 459	C2328	.8	375 300	25 60	2½x3¾x2″	1 1/2	3.30	2.97	2.68	2.48
64 G 459	C2334	2.8	1 300	1 00	25/8×21/4×4"	1 4 1/2	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	Mfr's	Range of	Max. DC O	utput Load	Size	Wt		NET	EACH	
No.	Type	AC Vo ts	Resistive	Capacitive		Lbs.	1-9	10-24	25-49	50-99
64 G 372			11.2v. @ 2.0A	13.8v. @ 2.0A	31/8 x21/2 x33/8"	21/2	4.73	4.26	3.84	3.56
64 G 373	RT-202	12.0 to 29.8	23.0v. @ 1.25A 11.1v. @ 4.0A 24.3v. @ 2.0A	30.0v. @ 1.25A 14.7v. @ 4.0A 33.0v. @ 2.0A	3%x27/8x31/2*	4	6.27	5.64	5.08	4.70
64 G 374			12.0v. @ 8.0A		4x31/4 x41/8"	61/4	7.90	7.11	6.40	5.93
64 G 375		12.0 to 29.7	24.0v. @ 4.0A 11.5v. @ 12.0A 24.0v. @ 6.0A		4¼ x37⁄16x51/8"	91/4	10.52	9.47	8.52	7.89
64 G 376	RT-208		11.4v. @ 15.0A		4¾ x3¾ x5¼"	121/2	12.44	11.20	10.08	9.34
64GU378	RT-2012	21.1 to 29.0	23.7v. @ 8.0A 11.4v. @ 22.5A 23.5v. @ 12.0A	14.3v. @ 22.5A	5%x4%x6%"	21	19.30	17.38	15.64	14.48

# POLY-PEDANCE MODULATION TRANSFORMERS

Highly dependable modulation transformers for matching Class "B" modulators to Class "C" load impedances in amateur and commercial transmitters. Multi-tapped primary and secondary windings will each match load impedances from 2000 to 20,000 ohms. Range covers all common impedances and assures 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. Overall
size: 4x3¼x¼″. Shpg. wt., 7 lbs. 64 G 478. 1 to 9, NET EACH
10 to 24, EACH 11.62 25 to 49, EACH 10.46 50 to 99, EACH 9.60
Type A-3894. Rated 125 watts. Max. DC, primary and secondary 225 ma. each. Size, 4½ x4x
45%". Shpg. wt., 10 lbs. 64 G 488. 1 to 9, NET EACH
10 to 24, EACH
50 to 99, EACH

#### TUBE CHECKER TRANSFORMER

Type P-1834-3. Multiple-secondary transformer. Pri.: 125/115/105 v. 60 cycles. Secondary output volts: 1.1/1.4/1.5/2.0/2.5/3.0/6.3/7.0/7.5/12/25/30/35/50/70/85 110/117. Size, 2½%442/2". A" style mounting. With data sheet. Shng. wt., 2½ lbs. 9.27 10 to 24, EACH ... 8.35 25 to 49, EACH ... 7.52 50 to 99, EACH ... 6.96

#### **AUDIO INPUT TRANSFORMERS**

A For single plate to push-pull grids except single plate to single grid; for 7000-20,000 ohm plate impedances. All others have 7000-15,000 ohm plate impedance. Maximum primary DC, 10 ma.

	1 1/2".
Shpg. wt., 3/4 lbs.	70
64 G 079, 1 to 9, NET EACH	./ 7
10 to 24, EACH	1.62
25 to 49, EACH	1.46
50 to 99, EACH	1.35
·	
Type A53*. 1:3 ratio. Size, 13/8x23/8x	1 1/2 .
Shpg. wt., 3/4 lbs.	73
64 G 090. 1 to 9, NET EACH	رير:
10 to 24, EACH	1.20
25 to 49, EACH	
50 to 99, EACH	1.30
Type A-53-C. 1:3 ratio. Size, 13/8x23/8x	13/8".
Character 4 1h	
64 G 081. 1 to 9, NET EACH	./0
10 to 24, EACH	1.59
25 to 49, EACH	
	1.43
50 to 99. EACH	1.32
50 to 99, EACH	1.32
50 to 99, EACH	1.32
50 to 99, EACH	1.32 1½″.
50 to 99, EACH  Type A-63-C. 1:3 ratio. Size, 1%x2%x Shpg. wt., 34 lbs. 64 G 082. 1 to 9, NET EACH	1.32 1½″. 1.99
50 to 99, EACH.  Type A-63-C. 1:3 ratio. Size, 15/2x27/2x Shpg. wt., 3/4 lbs. 64 G 082. 1 to 9, NET EACH	1.32 1½″. 1.99 1.79
50 to 99, EACH.  Type A-63-C. 1:3 ratio. Size, 15%x27%x Shpg. wt. 3/, lbs. 64 G 082. 1 to 9, NET EACH	1.32 1½″. 1.99 1.79 1.62
50 to 99, EACH.  Type A-63-C. 1:3 ratio. Size, 15/2x27/2x Shpg. wt., 3/4 lbs. 64 G 082. 1 to 9, NET EACH	1.32 1½″. 1.99 1.79 1.62

### 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, $1\frac{5}{8}$ x $2\frac{7}{8}$ x $1\frac{1}{8}$ .
Shpg. wt., 1 lb. 64 G 076. 1 to 9, NET EACH
64 G 076. 1 to 9, NET EACH
10 to 24, EACH
25 to 49, EACH
50 to 99, EACH
Type A-4723. 3:1 primary to 1/2 secondary ra-
tio; 30 ma. max. in primary. Over-all size, 1%x
27/8x11/2". Shpg. wt., 1 lb. 64 G 038, 1 to 9, NET EACH
21/8 x1 1/2". Shpg. wt., 1 lb. 64 G 038, 1 to 9, NET EACH
27/8x11/2". Shpg. wt., 1 lb. 64 G 038, 1 to 9, NET EACH
21/8 x1 1/2". Shpg. wt., 1 lb. 64 G 038, 1 to 9, NET EACH

			4752 : 40																	
3/4°	, is	hp	g. w 9. 1	t., 1	9.	1	bs	Ť	F	Δ.	c	н				•••	,	2	8	7
10	to	24,	, EA	١СН	٠.						٠.								2.	58
25 50	to	49, 99.	EA	CH	::	• •	: :	•	• •	•	• •	•	•	•	•	٠	• •	•	3.	33

# Stancor Transformers

















#### UNIVERSAL OUTPUT TRANSFORMERS

For single or push-pull plates to voice coil. All are Fig. Q except \*Fig. J. Secondary: †500 ohms; \$500, 333, 200, 125, 50 ohms; others match any voice coil. Av. shpg. wt., 1½ lbs.

Stock	Mfr's	Primary	Watts	Size		NET I	EACH	
No.	Туре	riillary	Walls	Size	1-9	10-24	25-49	50-99
64 G 294 64 G 005 64 G 026 64 G 242	A3824	5K; 10, 20K CT 7-10K 4-14K CT 6-10K	(15ma) 4 8 8	2x3½x1¾″ 1¾x2¾x1¾″ 1½x2½x1½″ 2x3½x2″	3.23 1.79 2.28 3.23	2.91 1.62 2.06 2.91	2.62 1.46 1.85 2.62	2.43 1.35 1.71 2.43
64 G 002 64 G 028 64 G 293 64 G 023 64 G 024	A3825 A3830* A3841*† A3849 A3850*	1.5-4.5K 3-10K CT 2.5, 4.5, 6, 7 1.5-10K 4-14K CT	20 10 10 8	2x3½x15½" 21½6x35½x2½" 21½6x35½x2¼" 15½x2½x1½" 2x2¾x1½"	2.58 3.53 4.90 2.19 2.58	2.32 3.18 4.41 1.97 2.32	2.09 2.86 3.97 1.77 2.09	1.94 2.65 3.67 1.65 1.94
64 G 027 64 G 025 64 G 029 64 G 292	A3852* A3856 A3870 A3880	4-14K CT 4-14K CT 4-14K CT 4-14K CT	18 4 18 15	25/6×27/8×2" 13/8×23/8×13/8" 2×31/4×2" 21/4×33/4×21/4"	2.84 2.12 3.23 3.89	2.56 1.91 2.91 3.50	2.30 1.72 2.62 3.15	2.14 1.60 2.43 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	Mfr's	Primary	Sec.	Watts	Mtg.	Wt.		NET E	EACH	
No.	Туре	1 IIIIai y	500.	watts	Ctrs.	Lbs.	1-9	10-24	25-49	50-99
64 G 013 64 G 245 64 G 033 64 G 297	A2313 A3304* A3311*	14,000 CT 7,000 7,10K CT 10K CT	4 8 500/15/8/4 500/15/8/4	10 10 25 25 5	2 <sup>3</sup> / <sub>8</sub> " 2 <sup>13</sup> / <sub>16</sub> " 2x1 <sup>1</sup> / <sub>16</sub> " 2 <sup>1</sup> / <sub>4</sub> x2"	1 1 2 <sup>3</sup> / <sub>4</sub> 3 <sup>1</sup> / <sub>2</sub>	2.28 2.22 6.30 5.94	2.06 2.00 5.67 5.35	1.85 1.80 5.11 4.81	1.71 1.67 4.73 4.46
64 G 296	A3327	25K	4	5	2″	1/2	1.60	1.44	1.29	1.21
64 G 244 64 G 246 64 G 299 64 G 243 64 G 295	A3329 A3330 A3332	4,000 8,000 2K 2,000 5K	3.5 3.5 3.5 3.2 6-8	3 3 5 3 10	13/4" 13/4" 2" 13/4" 23/8"	1/2 1/2 1/2 1/2 1/2	1.34 1.24 1.79 1.05 1.99	1.21 1.12 1.62 .94 1.79	1.09 1.01 1.46 .84 1.62	1.01 .93 1.35 .78 1.50
64 G 020	į į	5,000 CT 6,600 CT	500/250/15/ 8/4 500/250/15/	30	21/4×2"	4	6.04	5.44	4.90	4.54
64 G 298 64 G 015 64 G 001	A3857	10K CT 25K CT 2,000	8/4 8/4/2 4 4	35 5 5 5	2½ x2¾6″ 2¾8″ 2″ 2″	43/4 3/4 1/2 1/2	7.25 2.35 1.67 1.24	6.53 2.12 1.50 1.12	5.87 1.90 1.35 1.01	5.44 1.76 1.25 .93
64 G 004 64 G 006 64 G 010 64 G 138 64 G 519	A3878 A3879 A8094	5,000 7,000 10,000 4,000 7,600	4 4 4 32/16/8 3.2	5 5 71/2 5	2" 2" 2" 3½16"	1/2 1/2 1/2 1/2 1/2	1.30 1.27 1.24 2.94 1.73	1.18 1.15 1.12 2.65 1.56	1.06 1.03 1.01 2.38 1.40	.98 .96 .93 2.20 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 v., 60 cycle.

Stock	Mfr's	Fig.	Volts	A	Insul.	Mtg.	Wt		NET	EACH	
No.	Туре	rıg.	VOITS	Amps		Ctrs.	Lbs.	1-9	10-24	25-49	50-99
64 G 141 64 G 301 64 G 262	P6133 P3060 P6467	BV	2.5 2.5 5.0	5.0 10.0 3.0	7500 10KV 2500	2 <sup>13</sup> / <sub>16</sub> " 2 <sup>1</sup> / <sub>4</sub> x1 <sup>7</sup> / <sub>8</sub> " 2 <sup>13</sup> / <sub>16</sub> "	21/2	3.72 4.66 3.14	3.35 4.20 2.82	3.02 3.78	2.79 3.51
64 G 255 64 G 887	P3062 P6465	BV A	5.0 6.3	6.0 .6	2500 2500 1500	2x2" 2½"	2½ 1½ 2¼ 1	4.15 1.73	3.73 1.56	2.54 3.36 1.40	2.35 3.12 1.30
64 G 888 64 G 308 64 G 584 64 G 585	P6492 P6134 P8190 P8191*	D A A A	5.0 6.3 6.3 6.3	30.0 1.2 1.2 1.2	2500 3000 5000 5000	3x2 <sup>3</sup> / <sub>4</sub> " 2 <sup>3</sup> / <sub>8</sub> " 2 <sup>1</sup> / <sub>3</sub> / <sub>16</sub> "	7½ 1 1	10.61 1.89 2.48 2.68	9.55 1.71 2.23 2.41	8.60 1.54 2.01 2.17	7.97 1.42 1.86 2.01
64 G 263 64 G 309 64 G 256 64 G 264 64 G 312	P6466 P5014 P4019 P4089 P3064	A BV C C BV	6.3 6.3 6.3 6.3 6.3	3.0 3.0 4.0 6.0 6.0	2500 2500 2500 2500 2500 2500	213/16" 2x13/4" 2x111/16" 21/4x2" 2x2"	1½ 2 2½ 3½ 2½	3.04 3.56 4.70 5.39 4.09	2.73 3.20 4.23 4.85 3.67	2.46 2.88 3.81 4.37 3.31	2.28 2.68 3.53 4.05 3.07
64 G 313 64 G 265 64 G 314 64 G 257	P6308 P6309 P5015 P5016	BV BV	6.3 6.3 7.5 10.0	10.0 20.0 4.0 4.0	2500	2½x2¾6" 3x2¾8" 2x2½" 2½x2½"	3½ 6¾ 3 3¼	4.90 9.27 4.15 5.00	4.41 8.35 3.73 4.50	3.97 7.52 3.36 4.05	3.67 6.96 3.12 3.75
64 G 318 64 G 258 64 G 142 64 G 143	P6139 P4097 P8130 P6469	C A A	10.0 10.0 12.6 25.2	8.0 8.0 2.0 1.0	2500 2500 1500 1500	2½x2¾8″ 2½x2¼6″ 2⅓6″ 21¾6″	5 5 1½ 1½	6.08 6.60 3.36 3.20	5.47 5.94 3.03 2.88	4.92 5.34 2.72 2.60	4.56 4.95 2.53 2.40

### **HIGH-FIDELITY OUTPUT TRANSFORMERS**

Frequency response of 20-20,000 cycles at 25 watts, ±1 db. Maximum rating: 50 watts. Have inter-leaved "trifilar" windings and are well balanced. Types A8054 and A8072 may be used with Williamson amplifiers. Sizes: 4%cx3%cx4\%". Shpg. wt., 7 lbs.

Stock	Mfr's	Pri. Imp.	Sec.	Max. Pri. DC		NET	EACH	
No.	Туре	(P-P)	Imp.	Per Half	1-9	10-24	25-49	50-99
64 G 563 64 G 570 64 G 564 64 G 574	A-8053 A-8056 A-8054 A-8072	5000 6600 9000 7600	8, 16 8, 16 8, 16 4, 8, 16	150 ma 125 ma 100 ma 100 ma	13.36 13.36 13.36 16.27	12.02 12.02 12.02 14.70	10.82 10.82 10.82 13.23	10.03 10.03 10.03 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	are center-tapped.												
Stock	Mfr's	's Pri. Ohms		Sec. Ohms	Mtg.	Lbs.	NET EACH						
No.	Type	Pri.	Onms	Sec. Onms	Ctrs.	LDS.	1-9	10-24	25-49	50-99			
64 G 094	A4350	500/333	/200/125/50	Same as Pri.	213/16"	1	4.24	3.82	3.44	3.18			
			/200/125/50	89,000	23/8 x1 1/2"	11/2	4.54	4.09	3.67	3.41			
			/200/125/50		213/16"	1	3.95	3.56	3.20	2.97			
64 G 096	A4705	200/70		80,000	2"	1/2	2.09	1.88	1.70	1.57			

#### **VIBRATOR TRANSFORMERS**

For New Automotive Equipment. \*6-volt 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. 31/8×21/2×25/8". Shpg. wt., 21/2 lbs. 

Type P4061. Secondary, 580 volts, CT; 50 ma. 3½x2½x25%". Shpg. wt., 2½ lbs. 31/8×21/2×25%". Shpg. wt., 21/2 lbs. 4.24

Type P6166\*. Secondary, 700 volts, CT; 135 ma. Also has 6.3 volt filament @ 2.25 amperes. 43/4x4x35/". Shpg. wt., 71/2 lbs. III.Ol

**Exact Replacements.** A selection of exact vibrator transformer replacements for original equipment. Av. shpg. wt., 2 lbs.

#### **DELCO**

Stock No.	Mfr's Type	Fig.	Original Part No.	NET
	P6471	TC	725581	4.96
	P6482	TC	6060	5.71
	P6489	R	6067	3.26

### MOTOROLA

Stock	Mfr s	Fig.	Original	NET
No.	Type		Part No.	EACH
64 G 757	P6471	TA	25B472533	4.96
64 G 758	P6472	TA	C217020, C71014,	
64 G 761	P6476	TA	25B70950 C70267, D70267	4.96 5.10
64 G 763	P6478	R	25C501644	3.30
64 G 894	P6493		25C535794	3.04

### **PHILCO**

Stock No.	Mfr's Type	Fig.		NET EACH
64 G 765	P6480	::::	65-0347	3.50
64 G 766	P6481		32-831 3-1	3.72

### INTERCOM AND TRANSCEIVER **TRANSFORMERS**

| Type A-3833. For transceiver applications. 200 and 5K-ohm pri. for carbon mike; sec., 60K. 15/x2/x11/z". Wt., 1 lb. 2.81 10 to 24, EACH 2.53 25 to 49, EACH 2.27 50 to 99, EACH 2.11

Type A-4749. For telephone patch circuit use. 10 K-ohm pri.; sec., 500 ohms. 11½(s2½x1½g². Shpg. wt. 1 lb. 64 G 148. 1 to 9, NET EACH. 4.24 10 to 24, EACH. 3.82 25 to 49, EACH. 3.84 50 to 99, EACH. 3.18

Type A-4744. For intercom use; voice coil
A to grid input. 4-ohm pri., sec., 25K. 13/x
23/x11/y. Shgg, wt., 3/ 1b.
4 G 030. 1 to 9, NET BACH 1.83
10 to 24, EACH 6.65
25 to 49, EACH 1.48
50 to 99, EACH 1.37

Type A-8090. Matches line to voice coil. Has 45-50 ohm pri., sec., 3-4, 6-8. Maximum watts, 3. Size, 13/x23/x11/2". (Not illustrated.) Shpg. wt., 3/4 lb. wt. ½ lb.
64 C 489, 1 to 9, NET EACH. 1.50
10 to 24, EACH. 1.50
25 to 49, EACH. 1.25
0 to 99, EACH. 1.25

#### WM-8 CHASSIS SET

Two completely punched and finished chassis Two completely punched and finished chassis for the ultra-linear Stancor-Williamson Amplifier (use A-8072 high-fidelity output transformer, listed at left) and power supply. Complete with schematic diagram and comprehensive parts lists. Shpg. wt. 3½ lbs. 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 weight, very important for miniaturized or por table equipment. Ideally suited for general replacement applications and installation in new equipment. Allied will stock new transistor components as they become available. \*Maximum primary DC

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, 1½ lbs.; TA-14, 6½ lbs.; Type TA-17, 3 lbs.; Type TP-1, 2½ lbs.

### INPUT TRANSFORMERS

Stock	Mfr's	Pri.	Sec.		Pri.	Sec.			l	1.	NET	EACH	
No.	Type	Imp.	Imp.	Ma*	Res.	Res.	Watts	Size	Fig.	1-9	10-24	25-49	50-99
63 G 952	TA-1	600 CT	10	20	42	.8	.05	13/16X19/16X15/16"	A	1.89	1.71	1.54	1.42
63 G 857	TA-15	50-100	10	50			5mw	13/16x19/16x15/16"	A1	1.47	1.32	1.20	1.11
63 G 860 63 G 889	TA-18	30 CT	50K 200K CT		14.7 123	4060 1815	.150 .300		A1 A	3.26	1.32 2.94 2.94	2.65	2.45
03 6 669	1 A-4/	INCI	1200K G I	1				7,10,0,4	I A	3.20	2.94	2.65	2.45
					OUTP	UT TRA	ANSF	ORMERS					
63 G 959		9800	15	2	640	2		13/8 x 2 7/16 x 13/8"	A	4.24	3.82	3.44	3.18
63 G 960 63 G 961			4/8/16 4/8/16	10	180 250	3.5 4	.2	% x1 %6x¾ " % x1 %6x¾ "	Á	4.86	4.38 4.79	3.94	3.66
63 G 962	TA-11	48 CT	8/16	275	250	1.5		2x35/16x13/4	A	2.74	2.47	2.22	2.06
63 G 963	TA-12	20 CT	8	500	.55	.35	10	1%x17/16x11/2"	Ä	1.89	1.71	1.54	1.42
63 G 965	TA-14§	24 CT	16/4CT	200			10	41/4 x43/8 x39/16"	TD	9.41	8.47	7.62	7.06
63 G 862	TA-20	350 CT	4/12		38	1.45	.150	21/32X13/16X5/8"	Al	3.26	2.94 2.94	2.65	2.45
63 G 863	TA-21	500 CT	4/8/16		75.3	3.55	.150		A1	3.26	2.94	2.65	2.45
63 G 865		600 CT			732	3.2	.150		Al		2.94		
63 G 867		825 CT	50K		74	2.7	.150	21/32X13/16X5/8"	A1	3.26	2.94	2.65	2.45
63 G 868 63 G 87 I	TA 20	1250 2500	4/12 4/16		132.5 370	1.4 2.3	.150 .150		A1 A1	3.26	2.94 2.94	2.65	2.45
63 G 875	TA-33		4/8/16		1174	2.6	.150		Ai	3.56	2.94	2.65	2.45
63 G 879		400 CT	11		71.5	1.5	.150	21/32X13/16X5/8"	A1	3 26	2.94	2 65	2 45
63 G 88 Í	TA-39	100 CT			10.9	1.45	.300	13/16X15% X34"	A	3.26	2.94	2.65	2.45
62 G 882	TA-40	160	4/8/16		18.7	1.4	.300	13/16x15%x3/4"	Α	3.26	2.94	2.65	2.45
63 G 883			4/8/16		34	1.5	.300	13/16x15%x34"	Α		2.94		
63 G 884	TA-42	500 CT	4/8/16		47	.85	.300	13/16X1%x3/4"	Α	3.26	2.94	2.65	2.45
63 G 885		700 CT			77	1.15	.300		Į A	3.26	2.94	2.65	2.45
63 G 886 63 G 887	TA 45	2500 3000	4/8/16 4/8/16		172 192	1.15 1.2	.300 .300		A	3.26	2.94	2.65	2.42
03 6 887	[1A-45	13000	4/0/10		·			710 -70-74	[ A	13.26	2.74	2.65	2.45
						AGE T		FORMERS					
63 G 953	TA-2	100 CT	10 CT	100	4.3	.8		11/16x21/8x13/8"	A	1.89	1.7!	1.54	1.42
63 G 954 63 G 955	1A-3	100 500 CT	1K CT	100 12	5.8	4.5 250	.25	13/8 x 2 7/16 x 13/8	A	11.89	1.71	1.54	1.42
63 G 861	TA-19	100 CT	5K CT 10 CT		37 19	1.27	.03 .150	13/8 x27/16x13/8" 21/32x13/16x5/8"	Al	5.40	2.23	2.01	2.45
63 G 864		500 CT	50		59.7	7.9	.150	21/32X13/16X5/8"	Al	3.20	2.04	2.65	2.45
63 G 866	TA-24	500 CT	50K			5135	.150	21/32X 1/16X /8	Ai	13.56	2.94 2.94	5.65	2.45
63 6 060	TA 27	1200	20K CT		1/0.0	1000	150		1 71	12.25	2.24	2.55	5.75

						DRIVE	R TRA	NSFC	RMERS					
63 6	3 877 3 878 3 880 3 888	TA-36 TA-38	10K 500 CT	3K CT 150 CT 1500 CT		1200 1200 62 3250	385 21.2 143	.150 .150 .150 .300	21/32X13/6X5/8" 21/32X13/6X5/8" 21/32X13/6X5/8" 13/6X15/8X3/4"	A1 A1	3.26 3.26 3.26 3.26	2.94 2.94	2.65 2.65	2.45 2.45
236	3 877	TA 25	10K	2K CT		1200	257	.150	21/ -12/ -5/#	Al	3 36	2 04	2 65	2 45
	3 876		10K	200 CT		573 1200	33.4	.150	21/32X13/16X5/8" 21/32X13/16X5/8"	A1 A1	3.26			
	3 8 7 4 3 8 7 4		5K CT	80K CT	1		5740	.150			3.26			
	3 872 3 873	TA-30	5K CT	7500 CT 10K CT	1	650 635	790 1100	.150 .150	21/ <sub>32</sub> x13/ <sub>16</sub> x5/ <sub>8</sub> " 21/ <sub>32</sub> x13/ <sub>16</sub> x5/ <sub>8</sub> "	A1 A1	3.26	2.94	2.65	2.45
_														
	3 87Ó		1500	500 CT	1	104	46.5	.150	21/32×13/16×3/8"		3.26	2 64	2 65	2 45
63 (	3869	TA-27	1200	20K CT	1	142	1860	.150	21/32X13/16X5/8"	A1	3.26	2.94	2.65	2.45
	3 866		500 CT	50K		76.8	5135	.150	21/32X13/16X5%	A1	3.26			
	3 864		500 CT			59.7	7.9	.150	21/32X13/16X5/8"		3.26	2.94	2.65	2.45
		TA-19	100 CT		1	19	1.27	.150	21/32X13/16X5/8"	A1	3.26			
63 (	3 955	I A-4	500 CT	5K CT		37	250	.03	1% x27/16x1%	Α			2.01	
	3 954		100	1K CT		5.8	4.5	.25	1%x27/16x1%	A			1.54	
	3 723		100 61			4.3	8.		1 1/16XZ/8X1/8	I A			1.24	

63 G 956 TA-5	1000		10   400	115	%x1¼x½*	14.70 4.23 3.81 3.53
63 G 957 TA-6 63 G 958 TA-7	2000	200 CT 1	5 720	115	%x1¼x½* 15%x113%ex13%*	5.32 4.79 4.31 4.00
63 G 964 TA-13					3x211/16x25/32"	4.02 3.62 3.25 2.99
63 G 858 TA-16	20	36 CT 4	00		13/16x21/16x11/8"	11.62 1.46 1.31 1.22

### POWER TRANSFORMERS 63 G 966|TP-1† |.....|....|....|....|...|...|.3x3x2½

MODULATION	IKANSTUKMEKS	
63 G 859 TA-17   8CT   7500/5K@120 Ma DC	35  31/8x3x21/2"	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 one or more speakers in parallel. Type volt types. †Power steps in watts.											
Stock	Mfr's	1		l	Mtg.	Wt			NET EACH			
No.	Type	Primary Imp.	Secondary Imp.	Watts	Ctrs.	Lbs	Fig.	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 1500/2000	.06 to 8, .12 to 16									
	1	2500 /3000	.30 to 4036 to 48	15	23/8"	13/4	J	3.60	3.23	2.91	2.69	
64 G 098		500	15/8/6/4	25	23/8"	11/4	J.	3.07	2.76	2.49	2.30	
64 G 085	A7947	2000/1500/ 1000/500	6-8/3.2	8	2%"	3/4	0	2.09	1.88	1.70	1.57	
64 G 086	A7949	2000/1500/					<u> </u>					
		1000/500	6-8/3.2	12	2%"	11/4	J	2.77	2.50			
64 G 089		500	3.2/6-8	5	2" 2"	1/2 3/4	Q	1.54	1.38		1.15	
64 G 091 64 G 092	A8102 A8103	8/4/2/1/.5† 16/8/4/2/	4/8/16	8	2-	9/4	,	2.94	2.65	2.38	2.20	
04 6 092	V0102	1/.5†	4/8/16	16	213/16"	11/2	ı	4.12	3.70	3.33	3.09	
64 G 099	A8104	3000/2000/										
		1500/1000/500	16/8/4	10	2%*	11/2		3.99	3.59	3.22	2.99	
64 G 889	A8105	5/2.5/1.25/	4 /0	5	2"	1,	_	2 12		1 70	1.60	
64 G 890	A8106	.62/.31†   8/4/2/1†	4/8 4/8/16	8	2"	1/2 3/4	Q	2.13	1.91	1.72	2.20	
64 G 891	A8107	16/8/4/2/1†	4/8/16	16	213/16"	1¾	ĺ	4.12	3.70	3.33	3.09	
64 G 892	A8108	5/2.5/1.25/		ا ۔ ا		١.,	_					
	1	62+	4/8	5	2"	1/6	10	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 internally to core. \*117 v. pri. to 117 v. sec.

Type P-6410. 50 watts. Size, 3%cx21%cx 3/k". Shpg. wt., 4 lbs. 64 G 449, 1-9, EA... 6.72 10-24, EA... 6.06 25-49, EACH... 5.45 50-99, EACH... 5.05

KA Shpg. wt., 7 lbs. KA Shpg. wt., 7 lbs. 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\*. 5%x4%x5½". Shpg. wt., 9 lbs. 64 G 475. 1-9, EA.18.95 10-24, EA.17.06 25-49, EACH...14.22

Type P-6415. 350 watts. Size, 53/xx41/2x 53/x. Shpg. wt., 17 lbs. 64 G 444.1-9, EA 20.86 10-24, EA 18.79 25-49, EACH...15.66

KA 75% Shpg. wt., 28 lbs. 64 GU 448.1-9, EA.38.69 10-24, EA.34.84 25-49, EACH...31.36 50-99, EACH...29.04

#### STANCOR AIR CONDITIONER **AUTOTRANSFORMERS**

Type PSU-2000.



Type PSU-3000, Similar to PSU-2000, but de-

### 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, 115, 120, 125 volts, at 50-60 cycles. Type T10306 is for 65, 75, 90, 100, 115, 130 and 145 volts. Features simple, "plug-in" installation funit-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.

Type T10306. Rated, 150 watts. 45%x37% x53/4". Shpg. wt., 7 lbs. 14.33

1.....|4.86|4.38|3.94|3.66

# **UTC Transformers**







G-5
G-7
G-8
G-9
G-10
G-11
G-12

	CASE DIMENSIONS								
Case	Height	Width	Depth	Shpg. Wt.					
G-2	25/16"	33/8"	115/16"	1½ lbs.					
G-3	21/2"	33/4"	25/32"	2 lbs.					
G-4	215/16"	41/8"	25/16"	3 lbs.					
G-5	33/4"	31/8"	41/2"	4½ lbs.					
G-7	45/8"	45/8"	51/2"	8 lbs.					
G-8	45/8"	53/8"	53/8"	12 lbs.					
G-9	57/8"	53/8"	63/4"	21 lbs.					
G-10	57/8"	61/8"	65/8"	24 lbs.					
G-11	57/8"	61/2"	73/8"	31 lbs.					
G-12	101/4"	73/8"	91/4"	52 lbs.					

#### POWER TRANSFORMERS-115 V., 50-60 CYCLES All Eil

All Fil. 2 windings are center tapped.									
Stock No.		Sec. VCT	Rec. Fil.	Fil. 1	Fil. 2	Case	1-24, EA.	25-99, EA.	
62 G 739	S-39	980/800 @ 175 ma	5V 3A	2.5 VCT, 6A	6 3V 4A	G.7	16.17	13.75	
62 G 740	S-40	1050/850		· ·		l			
62 G 741	S-41	1200@	5V, 3A	6.3 VCT, 3A 7.5V tapped	6.3V, 3A	G-7	17.64	14.99	
62 G 742	l	200 ma	5 <b>V</b> , 3A	7.5V tapped 6.3V, 3A 7.5V tapped	6.3V, 2A	G-7	17.64	14.99	
02 0 742	U-42	@ 300 ma						16.25	

### LINE-TO-SPEAKER TRANSFORMERS

			Primary			1-24, EA.	25-99, EA.
62 G 769 62 G 770	S-12 S-13	15 30	500, 2000 4000	} 2, 4, 8, 15	G-2 G-4	5.29 7.64	4.50 6.50

### **OUNCER AUDIO UNITS**

Weigh only 1 ounce—for all compact applications. Response characteristics are: ±1 db 30-20,000 cps, except 0-14, 0-15, and units carrying DC, which are for voice from 150 to 4,000 cps. Maximum operating level, 0 db. Sealed in aluminum housings. ½, dia., 1½, figh. Mount by two 2-56 screws on 1½6 centers opposite terminals, Shpg. wt., 4 oz.

Stock No.	Type	Primary Impedance	Sec. Imp.	1-24, EA.	25-99, EA.
62 G 780	0-1	50, 200-250, 500-600	50,000	7.64	6.50
62 G 781	0-2	50, 200-250, 500-600	50,000 CT	7.64	6.50
62 G 782	0-3	7.5-30	50,000	7.35	6.25
62 G 783	0-4	15,000	60,000	6.47	5.50
62 G 784	0-5	15,000 DC in Pri.	60,000	6.47	5.50
62 G 785	0-6	15,000	95,000 CT	7.35	6.25
62 G 786	0-7	15,000 DC in Pri.	95,000 CT	7.35	6.25
62 G 787 62 G 788 62 G 789 62 G 790	0-8 0-9 0-10 0-12	15,000 15,000 DC in Pri. 30,000 plate to plate 50, 200-250	(50, {200-250, [500-600	7.64 7.64 8.23 7.64	6.50 6.50 7.00 6.50
62 G 793 62 G 791 62 G 792 62 G 794	0-13 0-14 0-15 0-16	Audio choke: 300 hys. at 3 ma DC, 6000 ohm 200 15,000 250 CT	at O DC; 50 hys. s. ½ megohm 1 megohm 50,000	6.17 7.35 7.35 10.00	5.25 6.25 6.25 8.50
62 G 493	0-18	10,000/2500	2000/500	8.23	7.00
62 G 494	0-19	10,000/2500	4000/1000	8.23	7.00
62 G 495	0-20	1500 CT	500/125	8.23	7.00
62 G 496	0-21	2000 CT; 4000 CT	8; 16	7.64	6.50
62 G 492	0-17	Mumetal Shield; fits an	y Ouncer unit	1.47	1.25



### SUB AND SUB-SUBOUNCER TRANSFORMERS

"Tiny" transformers for miniature equipment. Frequency response, ±3 db from 200 to 5000 cps. Sub-ouncers size ½x½x½½". Weight, ½ oz. 5000 cps. Sub-subouncers size ½xx½x½". Weight, ½ oz. †Fixed imp. ratio; 1250:1 for SO-1 and SSO-1; 1:50 for SO-3 and SSO-3. \*SO-5. 2675 ohms DC resistance; SSO-5, 4400 ohms. Wt., 2 oz.

### SUB-OUNCER TRANSFORMERS

Stock No.	1 ype	036	rn. mp.	PH. DC	Sec. Imp.	1-24, EA.	25-99,EA.
62 G 210	†SO-1	Input	200, 50	0	250K,		
62 G 211 62 G 212 62 G 213	\$0-2 †\$0-3 \$0-4	Audio 1:3 PI to line Output	10,000 10K, 25K 30,000	0-2.5 ma 3, 1.5 ma 1 ma	62.5K 90K 200, 500 50	2.94 2.94 2.94 2.94	2.50 2.50 2.50 2.50
62 G 214 62 G 215	\$0-5 \$0-6	Reactor Output	50 hys @ 100,000	1 ma DC* .5 ma	60	2.94 3.82	2.50 3.25
62 G 216	S0-7	Transistor Interstage	20K, 30K	.5 ma	800, 1200	2.94	2.50
62 G 217	S0-8	Transistor to PP sec.	10K	1 ma	2000 CT	3.53	3.00
62 G 218 62 G 497	SO-9 SO-10	PP Trans- istor to VC Transistor	500 CT 2K CT	0	3.2	3.53	3.00
02 9 497	30-10	to VC	4K CT	4 2	16	3.53	3.00

	200-2000	JUNCER	IKAN	rokmek3
1-022+	1 Innut	1 200 50	1 0	1 250

70000	1000						
62 G 236	†\$\$0-1	Input	200, 50	0	250K 62.5K	4.41	3.75
62 G 237	SSO-2	Interstage1:3	10.000	025 ma	90K	4.70	4.00
62 G 238	<b>†SSO-3</b>	Pl. to line	10K. 25K		200, 200	3.82	3.25
62 G 239	SSO-4	Output	30,000	1 ma	50	3.82	3.25
62 G 240	SSO-5	Reactor	50 hys@	1 ma DC*		3.82	3.25
62 G 241	SSO-6	Output	100.000	.5 ma	60	3.82	3.25
62 G 235	SSO-7	Transistor	20K. 30K	.5 ma	800. 1200	2.94	2.50
62 G 229	SSO-8	Transistor			1,		
		to PP sec.	10K	1	2000 CT	3.82	3.25
62 G 234	SSO-9	Transistor	10K.	2	16	2.94	2.50
62 G 246	SSO-10	(to VC	10K	2	3.2	2.94	2.50
62 G 247	SS0-11	Transistor	500	3.5	50		
		Output	600	3.5	60	2.94	2.50
62 G 248	SSO-12	Transistor	1000		50		
		Output	1200	3	60	2.94	2.50
62 G 249	SSO-13	Crystal to					
		Transistor	200K	0	1000	4.41	3.75
62 G 498	SSO-14	Transistor	10K CT	2 2	200 CT		
		Interstage	25K CT	2	500 CT	4.70	4.00
62 G 499	SSO-15	,	20K CT	1	800 CT		
			30K CT	1	1200 CT	4.70	4.00

#### UNIVERSAL DRIVERS

Stock No.	Mfr's Type	Application	Case	1-24, EA.	25-99, EACH
62 G 761 62 G 762 62 G 763	S-9	Single driver plate to PP grids PP pl. to grids of class B tubes 12AU7 or similar tubes to 5881	G-4	6.47 8.23	
02 G / 03	3-10	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.	Туре	Primary Ohms	Watts	Case	1-24, EA.	25-99, EACH
62 G 764	S-14	2500, 4000, 7000, 10,000	10	G-2	6.47	5.50
62 G 765	S-15	PP tubes: 4000, 5000, 10,000	12	G-2	7.06	6.00
62 G 766	S-16	PP 3000, 6000, 9000-10,000	30	G-4	8.23	7.00

### FILTER, SWINGING AND AUDIO CHOKES

Stock No.	Mfr's Type	Henrys	Ma	Ohms	Insul.	Case	EACH	25-99, EACH
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 V.	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	6	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 G 75 I	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	8	400	60	5000 V.	G-8	11.76	10.00
62 G 736		4/20	400	60	5000 V.	G-8	11.76	10.00
62 G 737	S-37	8	550	60	6000 V.	G-8	14.70	12.49
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.	Туре	Sec. VCT	DC Ma	Case	1-24, EA.	25-99, EA.
62 GU 744 62 G 745 62 GU 746 62 GU 748	S-45 S-46	1150/1050 1800/1500 2000/1500 3000/2500/2000	500 200 300 300	G-9 G-8 G-9 G-10	23.52 20.58 23.52 32.34	19.99 17.49 19.99 27.49
62 GU 749 62 GU 750 62 GU 700	S-49	3000/2500/2000 4200/3600/3000 6000/5000	500 300 300	G-11 G-11 G-12	38.22 35.28 58.80	32.49 29.99 49.98

### UNIVERSAL MODULATION TRANSFORMERS

Stock No.	Туре	Audio Power	Case	EA.	EACH	
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 773	S-20	55 watts	G-5	14.70	12.49	
62 GU775	S-22	250 watts	G-9	32.34	27.49	

### SINGLE-SECONDARY FILAMENT TRANSFORMERS

All primaries tapped at 105, 115 Volts, 50-60 cycles. \*Tapped sec Stock No. |Type|Secondary (CT)|Ins. V. |Case|1-24, EA. | 25-99, EA. 62 G 703 62 G 704 62 G 705 62 G 707 62 G 708 S-53 S-54 S-54 S-55 6.3V @ 3A S-57 S-58 2.5V @ 10A 2.5V @ 20A 5.00 4.75 4.50 7.50 8.00 1500 2500 1500 10000 5.88 5.59 5.29 8.82 9.41 10000 62 G 709 62 G 710 62 G 711 62 G 712 62 G 713 S-59 | 5V @ 13A | 5V @ 22A | S-61 \* 7.5, 6.3V @ 10A | S-62 | 10V @ 10A | S-63 \* 14,12,11V @ 10A 8.82 12.94 10.00 9.11 12.94 5000 10000 3000 3000 7.50 11.00 8.50 7.75

## **MULTIPLE-SECONDARY FILAMENT TRANSFORMERS**

rimary tapped 105, 115 volts, 50-60 cycles. Insulation, 3000 v., except -71. 10,000 v. and S-72, 5000 v. All in G-5 case except \*G-7 case. Primar

Stock No.	Mfr's Type	Fil. 1 CT	Fil. 2 CT	Fil. 3 CT	1-24, EA.	25-99, EACH
62 G 717 62 G 720		5 V @ 6 A 6.3 V @ 5 A	6.3 V @ 5 A 6.3 V @ 5 A		9.70	8.24 8.50
62 G 721 62 G 722	S-71* S-72	2.5 V @ 6 A 5 V @ 3 A	2.5 V @ 6 A 5 V @ 6 A		14.70	12.49 9.00



### **400 CYCLE FILAMENT TRANSFORMERS**

Designed to provide maximum reliability with small size and weight. Primary for 105-115 v., 380-1000 cycles AC. All have 6.3 v. CT secondaries. Ideally suited to high reliability industrial and military needs. Hermetically sealed to MILT-7278 specs. Av. shgg. wt., 1 lb.

Stock No.	Mfr's Type	Sec.	Ins. V.	Size	1-24, EACH	25-99, EACH
63 G 138	H-101	3	2500	1¾ x15% x2"	13.82	11.75
63 G 139	H-102	5.5	2500	1¾ x2x2¼"	14.70	12.50
63 G 140	H-103	10	2500	25/16x2½ x2½"	17.05	14.49
63 G 141	H-104	20	2500	213/16x2½ x3"	19.11	16.24

#### CASE DIMENSIONS

Case	Height	Width	Length	Mounting	Shpg. Wt.
H-1	31/8"	1 15/16" 1 1/2" 2 5/8"	23/8"	13/8×113/6"	2½ lbs.
, A		1 1/2"	23/8" 11/2" 31/8"	15/32×15/32	1 lb.
LS-1 LS-2	31/4"	25/8	31/8"	115/16x27/16"	3½ lbs.
LS-3	43/16" 41 1/16"	31/2*	47/16" 513/16"	211/16x311/16" 43/16x51/32"	8 lbs. 16 lbs.

#### 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. ± 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				25-99, EACH
62 G 869	HA-133	Plate to mult. line Plate to mult. line PP plates to line	15 K 15 K 30 K	+21 +22 +23	17.64 20.58 20.58	14.99 17.49 17.49

#### LOW-IMPEDANCE-TO-GRID AND MIXING TRANSFORMERS

Primary: 50, 125-150, 200, 250, 333, 500-600 ohms. ±1 db from 30-20,000 cps, except HA-108X, ±1 db from 20-50,000 cps, Max. level (dbm): HA-100, HA-108X, +18; HA-100X, +16. In H-1 case.

			1-24, EA.	25-99, EACH
62 G 805 HA-100 62 G 806 HA-100X 62 G 810 HA-108X	As above	60,000	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. Has split secondary. Primary impedance, 15,000 ohms. Secondary impedance, 135,000 ohms. Turns ratio, 31 overall. Response: from 30-20,000 cycles, ± 1 db. Max. level, ±20 dbm. In H-1 case.

62 G 813. 25-99, EACH....... 15.75, 1to 24, NET EACH...... 18.52

#### **ULTRA-COMPACT HIGH-FIDELITY AUDIOS**

Max. level, +15 dbm, except  $\dagger +30$  dbm. \*Multiple alloy shield. Responses A-10, A-12,  $\pm 2$  db, 20-20,000 cps; A-11,  $\pm 2$  db, 50-20,000 cps, A-16, A-18, A-19, A-25,  $\pm 2$ db, 40-20,000 cps; A-20,  $\pm 2$  db, 10-50,000 cps; A-24, A-26,  $\pm 2$  db, 20-40,000 cps; A-21,  $\pm 2$  db, 30-30,000 cps; A-15, A-22, A-23, 2 db, 40-10,000 cps. In A case. Av. shpg. wt., 11½ lbs.

Stock No.	Mfr's Type	Pri. Imp., Ohms	Sec. Imp. Ohms	1-24, EA.	25-99, EACH
62 G 820 62 G 821 62 G 822 62 G 864	A-11* A-12		50K 50K P.P. 80K 2 sect. 500-2K	12.94 11.76 11.76 9.70	11.00 10.00 10.00 8.25
62 G 824 62 G 825 62 G 826 62 G 827 62 G 828	A-18 A-19 A-20	15K (Split) 15K—8 ma DC	60K 2:1 80K P.P. 2.3:1 80K P.P. 2.3:1 80K P.P. 2.3:1 Same as Pri. Same as Pri.	9.70 11.76 11.76 14.11	8.25 10.00 10.00 12.00
62 G 868 62 G 873 62 G 777 62 G 778 62 G 779 62 G 874	A-23† A-24 A-25 A-26	500 15K 15K—8 ma DC	125-500, split 4-16, split As A-10 pri. As A-10 pri. As A-10 pri.	9.70 9.70 12.64 11.76 12.94	8.25 8.25 10.75 10.00 11.00

### "DO-TS" TRANSISTOR TRANSFORMERS

Deci-Ouncer-Transformers (DO-TS). Miniature transistor transformers weighing only 1/10 of an ounce. Low distortion, high efficiency and excellent response. Moisture-proof case has firmly anchored leads, with plastic insulation. Especially suitable for printed circuits. \( \frac{3}{2} \) dia., \( \frac{3}{2} \) long. Shpg. wt., \( 1 \) oz.



Stock No.	Mfr's Type	Application	Onms	Secondary Ohms	1-24, EA.	25-99, EACH
62 G 688 62 G 689	DO-T2 DO-T3	Interstage Output Output Output Output Output	20K-30K 500-600 1K-1.2K 600 1.2K	800-1200 50-60 50-60 3.2 3.2	5.88 5.29 5.29 5.29 5.29	5.00 4.50 4.50 4.50 4.50
62 G 692	DO-T8 DO-T9	Output Input Reactor Out. Driv. Driver	3.5 hys. @ 10K-12.5K	3.2 1 K 2 ma DC 500-600 1.2K-1.5K	5.88 6.47 4.70 6.47 6.47	5.00 5.50 4.00 5.50 5.50
62 G 698 62 G 699	DO-T12 DO-T13 DO-T14	Driver S/PP Output S/PP Output S/PP Output S/PP Output	300-400 600-800	2K-2.5K 12-16 12-16 12-16 12-16 12-16	6.47 5.59 5.59 5.88 5.88	5.50 4.75 4.75 5.00 5.00
	DO-T17 DO-T18 DO-T19	S/PP Output S/PP Output S/PP Output Output Output	1.5K-2K	12-16 12-16 12-16 600 600	5.88 5.88 6.17 5.88 5.88	5.00 5.00 5.25 5.00 5.00
63 G 093	DO-T22 DO-T23 DO-T24	Output Interstage Input		600 800-1.2 <b>K</b> 1 K	5.88 5.88 6.76 7.35 7.06	5.00 5.00 5.75 6.25 6.00
63 G 095 63 G 096 63 G 097	DO-T27	Reactor 6 hy Reactor 1.25 Shield, for an	hys @ 2 ma		5.59 4.70 .88	4.75 4.00 .75







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 distributed capacitance. Minimum hum pickup is achieved by the use of a high-conductivity outer case and hum-balancing coil structure.

#### INTERSTAGE AUDIO TRANSFORMERS

Designed for coupling single plates to PP grids. LS-19: ±1 db, 20-20,000 cps; relative hum, -50 db. LS-21: ±1 db, 10-20,000 cps; relative hum, -74 db. Maximum level: +20 dbm. Primary impedance, 15,000 ohms; for coupling single plate to PP grids. LS-1 case.

		Sec. Imp., Ohms		25-99, EACH
62 G 835	LS-19	95,000. Ratio, 11/4:1	17.64	14.99
62 G 837	LS-21	135,000. Ratio, 3:1	17.64	

#### **OUTPUT TRANSFORMERS**

±1 db, 7-50,000 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 \*in LS-3 case.

Stock	Mfr's	Pri. Imp.,	Sec. Imp.,	Watts	1-24,	25-99,
No.	Type	Ohms	Ohms		EACH	EACH
62 G 845	LS-52	8000	(1.2, 2.5, 5, 7.5, 10, 15, 10, 30, 50, 125, 200, 333, 500.	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		20	23.52	19.99
62 G 851	LS-6L1*	9000		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; LS-30X, .3 ma. Primary and secondary have 6 taps: 50, 125-150, 200, 250, 333, 500-600 ohms. In LS-1 case.

### HIGH-LEVEL MATCHING TRANSFORMER

### LOW-IMPEDANCE-TO-GRID TRANSFORMERS

LS-10, LS-10X to single grid; others to PP grids. Relative hum-pickup reduction compared to uncased type, -72 db; †except, -92 db. Primary impedance 50, 125-150, 200, 250, 333, 500-600 ohms. \*Total impedance, both sections. In LS-1 case. ± 1 db, 20-20,000 cps.

Stock No.	Туре	*Sec. Ohms	Max.Level	1-24, EA.	25-99, EACH
62 G 830†	LS-12	50,000 120,000	+19 dbm +17 dbm +19 dbm +17 dbm	20.58 20.58 24.70 23.52	17.49 17.49 20.99 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. ± 1 db, 10-40,000 cps.

Stock No. Type	Pri. Ohms	Max. Level	1-24, EA.	25-99, EACH
62 G 843 LS-50	15,000	+23 dbm		17.49
62 G 844 LS-51	30,000	+24 dbm		22.49

### TYPE DI-T TRANSFORMERS

Extremely compact transformers for transistor applications. Weigh 0.06 oz. and measure only \% about dia. by \%' 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	Mfr's	Application	Primary	Secondary	1-24,	25-99,
No.	Type		Ohms	Ohms	EA.	EACH
63 G 106	DI-T2	Output	500-600	50-60	6.17	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. @ 2 m	a 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
33 G           63 G       2   63 G       3   63 G     37	DI-T11 DI-T19 DI-T20 DI-T22 DI-T23	Output Output	10K-12K 300 500 1.5K 20K-30K	2K-2.5K 600 600 600	7.35 6.76 6.76 6.76	6.25 5.75 5.75 5.75

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6666

# **UTC Transformers and Inductors**

### TRANSFORMERS, TOROIDS, FILTERS, VOLTAGE CONTROLS, INDUCTORS





CG, CVP, CVM







ВМІ

### FIXED-IMPEDANCE & VARIMATCH **AUDIO OUTPUT TRANSFORMERS**

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 withstand extremes of climate. Response of all units ±1½ db from 40 to 10,000 cps. P-P pri. imp. of CG-15 8000 ohms; CG-16 3000 and 500 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, 7000, 8000, 10,000, 14,000 ohms. Sec. imp.: 1.5, 3, 5, 8, 16, 50, 200, 500 ohms. All units require 2½ mounting hole, except \*3" hole. Shpg. wt. and size: 3½x3x3x", 3½ lbs; except \*4½x3¾x33x", 6½ lbs.

Stock No.	Mfr's Type	Watts	Typical Tubes	1-24, EACH	25-99, EACH
62 G 922	CG-15	20	6AQ5, 6V6, 6F6 triode	111.76	10.00
62 G 923	CG-16	20	2A3, 6AS7G, 6L6,	11.76	10.00
63 G 067	1	12	2A3, 6AQ5, 6V6, 25L6	12.94	11.00
63 G 068	*CVP-2	30	2A3 616. 807.	14.11	11.98

### 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, secondary imp., from 500 to 20,000 ohms. Maximum audio ratings, CVM-0 12 w., CVM-1 30 w., CVM-2 60 w. \*Maximum watts. Shpg. wt.: CVM-0 3½ lbs.; CVM-1, 6½ lbs.; CVM-2, 11 lbs.

Steck No.	Mfr's Type	Class C Input*	Size	1-24, EACH	25-99, EACH
63 G 069 63 G 070	CVM-1		3¾ x4½"	10.29 13.52	11.49
63 G 071	CVM-2	125	4½ x5½"	17.64	14.99

### HI-FI OUTPUT TRANSFORMERS

Hi-fi units. Sec. imp.: 4, 8, 16 ohms, 70 volt. Pri. imp.: CG-20 5000CT, 43% screen taps. CG-21 3300CT, 40% screen taps. Size and wt.: CG-20 334x41/2", 61/2 lb.; CG-21 41/2x51/2". Shpg. wt., 11 lbs.

Stock No.	Mfr's. Type	Watts		1-24, EACH	
62 G 102 62 G 103		25 50	EL-34's in AB 6550's in AB <sub>1</sub>		

### INPUT, INTERSTAGE, MIXING AND LOW-LEVEL OUTPUT TRANSFORMERS

A new line of transformers designed for a wide variety of applications. Shpg. wts.: CG-132, 1 lb.; CG-133, 1½ lbs.; CG-134, ½ lb.; CG-141, ½ lb.; CG-141, ½ lb.;

Stock No.	Mfr's. Type	Application	1-24, EACH	25-99, EACH
62 G 104 62 G 105 62 G 106 62 G 219 62 G 108	CG-134 CG-140	1 plate to 2 grids 2 plates to 2 grids Line to 1 grid Triode plate to line PP plates to line	9.70 10.29 8.82 7.64 8.82	8.25 8.75 7.50 6.50 7.50

#### **FILTER CHOKES**

Inductance shown is at rated DC ma. Shpg. wts.: CG-40, 5 lbs.; CG-48C, 2½ lbs.; CG-102, 11 lbs.; CG-104, 15½ lbs.; CG-108, 22 lbs.

Stock	Mfr's.	Hys.	DC	DC	1-24,	25-99,
No.	Type		Ma.	Ohms	EACH	EACH
62 G 109	CG-40	10	200	110	7.94	6.75
62 G 111	CG-48C	75	50	2200	7.35	6.25
62 G 112	CG-102	12	250	100	12.94	11.00
62 G 226	CG-104	10	350	90	14.70	12.49
62 G 113	CG-108	10	500	52	26.46	22.49

### SWINGING INPUT CHOKE

#### 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 Q values: MQE-7 max. Q, 130 @ 8 kc; MQA-10, 150 @ 5 kc; MQB-5, 250 @ 3 kc and 50 @ 250 cycles. Lab. adjusted to 1% tol. DC currents shown will drop coil inductance 5%. Shpg. wts., MQE 2 oz.; MQA, 4 oz.; MQB 14 oz.

### TYPE MQE-11/6x17/32x1/2"

Stock	Mfr's.	Induc-	Max.	1-24,	25-99,
No.	Type	tance	Ma.	EACH	EACH
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	.6 hy	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	10.00

### TYPE MQA-1%2x123/32x11/6" 62 G 985 | MQA-1 | 7 mhy | 250 | 7.35 | 6.25

02 G 380	WQA-Z	12 mmy	200	7.04	0.00
62 G 987	MQA-3	20 mhy	150	7.94	6.75
62 G 988	MOA-4	30 mhv	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	MOA-8	.2 hv	50	9.41	8.00
62 G 993	MOA-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	.7 hy	25	10.29	8.75
62 G 996	MOA-12	1 hy	20	10.58	9.00
62 G 997	MOA-13	1.5 hy	17	10.88	9.25
62 G 998	MOA-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	MOA-18	15 hy	- 5	14.70	12.49
62 G 970	MQA-19	22 hy	4	17.64	14.99

### TYPE MQB-2%6x213/6x15/6"

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	MOB-5	.5 hy	60	13.82	11.75
62 G 958	MOB-6	1 hy	40	14.11	11.98
62 G 959	MQB-7	2 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	18 hy	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. Q of 4\$ at 100 cycles. Exceptional temperature stability. Inductance values laboratory adjusted to 2% tolerance at 1 volt, 60 cycles. Very low hum pickup assured by heavy Hipermalloy shielding and laminated structure. Two identical windings brought out to 4 terminals permit series, parallel, center-tapped, or transformer type connections. Requires 1½ dia. cutout. 11½ dia. x 2½. Shg. wt., 1 lb. Shock | Mir's | Saries | Parallel | 1.24 | 25.98

Stock	Mfr's.	Series	Parallel	EACH	25-99,
No.	Type	Hy.	Hy.		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

### TYPE HVC VARIABLE INDUCTORS

TYPE HVC VARIABLE INDUCTORS
Wide-range, high-Q variable inductors offering
exceptional voltage and temperature stability.
Ideal for filter, oscillator, equalizer, tuned am
plifier, and other similar applications. Hermetically sealed to MIL-T-27A specifications. All
are MIL type TF4RX20VY. \*Adjustment
screw on top of case permits changing inductance +200% to -70% of mean value. Range
is covered in 900° rotation. Mount by two 4x40
studs. Size, 1½x\* high, 1½x\* wide and ½x\* deep.
Av. shpg. vt., 3 oz.
Stock | Mfr's. | Mean | Max. | 1-24, | 25-99.

Stock No.	Mfr's. Type	Mean Hys.*	Max. Ma.	1-24, EACH	25-99, EACH
62 G 114 62 G 115 62 G 116 62 G 117	HVC-1 HVC-2 HVC-3 HVC-4	.006 .015 .040	100 60 40 30	8.82 8.82 8.82 8.82	7.50 7.50 7.50 7.50
62 G 118 62 G 119 62 G 121 62 G 122	HVC-5 HVC-6 HVC-7 HVC-8	.25 .6 1.5 4.0	20 15 10 7	8.82 8.82 9.41 9.41	7.50 7.50 8.00 8.00
62 G 123 62 G 124 62 G 126 62 G 127	HVC-9 HVC-10 HVC-11 HVC-12	10 25 60 150	5 3.5 2 1.5	9.41 9.70 10.58 11.76	8.00 8.24 9.00

#### TYPE VIC VARIABLE INDUCTORS

TYPE VIC VARIABLE INDUCIORS
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° rotation of screw
varies inductance from +85% to -45% of
mean value. Adjustment tool included. Housed
for four 4-40 screws. Mtg. ctrs., 13/6x23/2". Shpg.
wt., 6 oz.

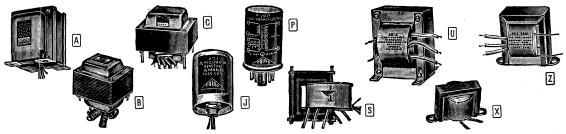
Stock No.	Mfr's. Type	Mean Hys.*	Max. Ma.	1-24, EACH	25-99, EACH
62 G 900	VIC-1	.0085	75	6.47	5.50
62 G 901	VIC-2	.013	60	6.47	5.50
62 G 902	VIC-3	.021	50	6.47	5.50
62 G 903	VIC-4	.034	40	6.47	5.50
62 G 904 62 G 905	VIC-5 VIC-6	.053 .084	35 30	6.47 6.47	5.50 5.50
62 G 906	VIC-7	.13	25	6.47	5.50
62 G 907	VIC-8	.21	21	6.76	5.75
62 G 908 62 G 909	VIC-9	.34	18 15	6.76	5.75 5.75
	VIC-10	.54		6.76	
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 5 4	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 2	7.64	6.50
62 G 919	VIC-20	52.		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

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;
H—high-pass; L—low-pass. Last letter: I—
Interstage (10,000 ohms); L—line (500/600
ohms). Shielded; reduce hum pickup to 150
nv. per gauss at 60 cps. Hermetically sealed in
case. Require ½" dia. cutout. 4 hole mounting
with 6-32 screws; mtg. centers ½x1½". Size,
1½x11½x1½", except \*1½x11½x2½". Av.
shpg. wt., 9 oz.

Stock No.	Mfr's. Type	Cycles	1-24, EACH	25-99, EACH
62 G 950 63 G 004 63 G 005 62 G 951	BMI-60 BMI-100 BMI-120 BMI-400	60 100 120 400	26.46	22.49
63 G 006 63 G 007 62 G 952 63 G 009 62 G 960	BMI-500 BMI-750 BMI-1000 BMI-3000 BML-400	500 750 1000 3000 400	26.46	22.49
63 G 016 63 G 017 63 G 018 63 G 019	*HMI-200 *HMI-500 *HMI-1000 *HMI-3000	200 500 1000 3000	29.40	25.00
62 G 966 63 G 053	*HML-200 *HML-1000	200 1000	32.34	26.51
62 G 971 63 G 020 63 G 021 63 G 022 63 G 023	LMI-200 LMI-500 LMI-1000 LMI-2000 LMI-2500	200 500 1000 2000 2500	29.40	25.00
62 G 972 63 G 051 63 G 054 63 G 055	LMI-3000 LMI-10,000 *LML-1000 *LML-2000	3000 10,000 1000 2000	29.40	25.00
63 G 056 63 G 057 63 G 063	*LML-2500 *LML-4000 *LML-12,000	2500 4000 12,000	29.40	25.00

# **Triad Transformers**



#### TRANSISTOR POWER TRANSFORMERS

TRANSISTOR POWER TRANSFORMERS

Type TY-68S. Highly efficient transistor power supply transformer. May be used in conjunction with transistor oscillator and silicon rectifiers to step up DC voltage from 12 to 250 volts. Rated at a maximum of 5 manuunting centers are 1½". Size (HWD), 1½x 1½x1½x1. Shpg. wt., 8 oz. 1½x1½x1. Shpg. wt., 8 oz. 1½x1½x1. Shpg. wt., 8 oz. 12 shpg. Shpg. Shpg. wt., 8 oz. 12 shpg. Sh

3 Type TY-695. Same as above but 300 VDC, 100 ma max. rating. 1½x2½x1½\*.
61 G 945. 5-24, EA. 9.50 1-4, EA. ...... 10.56 25-49, EA. ...... 8.55 50-99, EA. ..... 7.92

S Type TY-705. As above but 325 VDC, 150 for G. G. 946. 5-24, EA. 10.26 1-4, EA. .... 11.40 25-49, EA. ..... 9.23 50-99, EA. ..... 8.55 50-99, EA. ...... 9.23 50-99, EA. .... 9.23 50-99, EA. .... 9.23 50-99, EA. ..... 9.23 50-99, EA. .... 9.23 50-99, EA. .... 9.23 50-99, EA. ..... 9.23 50-99, EA. .... 9.

A Type TY-67A. Has power level up to 40 watts. Pri. im. 6 ohms (CT); secondary taped for 16/8/4 ohm output im. 3/x3%x3/x7. Shps. wt., 4½ lbs. 61 G 950. 5-24, EA. 8.24 1-4, EA. . 9.15 25-49, EA. . . 7.42 50-99, EA. . 6.86

Type M-3X. 20 audio watt modulation transformer with 10,000 ohm primary center tapped for modulator tubes. Sec. impedance, 3000,5000/8000. Rated at 100 ma. Size: 2½x31¾cx2½°. Wt. 1½ lbs. 64 G 939, 5-24, EA. 4.02 1-4, EA. 4.47 25-49, EA. 3.62 50-99, EA. 3.35

Type M-4Z. 10 audio watt modulation autoformer with 5000 ohm primary. Tapped secondary with 6750/4 ohm im. Rated at 100 ma (total). 11½6x2½x1½. ½/4 lb. 61 G 952. 5-24, EA. 2.70 1-4 EA. 3.00 25-49, EA. 2.43 50-99, EA. 2.25

Type M-52. 20 audio watt modulation autoformer with 5000 ohm primary. Has tapped secondary with 6750/4 ohms impedance. Rated at 165 ma (total). Size: 21½κ33½κ 2½″. Wt., 1½ lbs. 61 G 953. 5-24, EA. 3.59 1-4, EA. 3.99 25-49, EA. 3.23 50-99, EA. 2.99

### **PLUG-IN TRANSFORMERS**

PLUG-IN IKANDTOKMERS

Type A-200P. High-quality input transformer for coupling low impedance line or mike to amplifer. Has 70 db magnetic shielding. Equipped with nine prong plug for quick easy insertion. Primary is center tapped to match 200/So ohm source to 36,000 ohm load impedance. Prequency response: 59-15,000 cps. 2½° high; 1½° dia. Shpg. wt., ½ lb. 4.40

Type A-202P. Same as above in applica-

P Type A-202P. Same as above in application and impedance characteristics. Has 90 db magnetic shielding and 30-15000 cps response 2½" high, 1¾" dia. ½ lb. 19.02

#### POWER TRANSFORMERS

Last letter in Mfr's Type No. indicates case style. *CT.													
Stock	Mfr's	Pla	te	1	Filar	nents		OI (IIWD)	Wt.	Wt.			
No.	Туре	Volts	Ma	Volts	Amps	Volts	Amps	Size (HWD)	Lbs.	1-4	5-24	25-49	50-99
61 G 901 64 G 936 64 G 976 64 G 977	R-3A R-4A	135 500* 500* 600*	15 20 40 65			6.3 6.3* 6.3* 6.3*	2 2	1%x1%x19/16" 2%x2%x2½" 2%x2%x2%" 3%x2%x2%"	1 1¼ 1¼ 2¼	3.84 4.95 4.95 5.73	3.46 4.46 4.46 5.16	3.11 4.01 4.01 4.64	2.88 3.71 3.71 4.30
61 G 900 64 G 978 61 G 902 64 G 979	R-7A R-8A	480* 600* 500* 600*	50 50 75 75	5 5 5 5	2 2 2 2	6.3* 6.3* 6.3* 6.3*		3½x2½x2½° 3¾6x2½x2½° 3½x2½x3½° 39/6x3x3¾°	2¾ 2¾ 2 3 3 3 2	5.73 6.15 6.60 7.14	5.16 5.54 5.94 6.43	4.64 4.98 5.35 5.78	5.36
61 G 903 64 G 986 61 G 904 64 G 987	R-11A R-12A	525* 700* 550* 700*	90 90 110 125	5 5 5	2 3 2 3	6.3* 6.3* 6.3* 6.3*	5	3½ x3x3%" 3%6x3x3%" 3% x3¼ x3½" 4x3¼ x3¹5/16"	4½ 4¼ 4½ 6	7.92 8.07 7.95 9.27	7.13 7.26 7.16 8.34		5.96 6.95
61 G 905 61 G 906 61 G 907 61 G 908	R-18A R-20A	700* 750* 700* 800*	160 175 200 200	5 5 5	3 3 3	6.3* 6.3* 6.3* 6.3*		3% x3¼ x4¼ " 4¼ x3% x4% " 4¼ x3% x4% " 4¼ x3% x4% "	8½ 8½ 8½ 9¼	10.62 12.30 12.24 13.35	9.56 11.07 11.02 12.02	8.60 9.96 9.91 10.81	7.97 9.23 9.18 10.01
61 G 909 61 G 910 61 G 911 61 G 912	R-30X R-54X	230* 135 115 900*	40 50 15 250	5*	4	6.3 6.3 6.3 6.3*/6.3	.6	2¾ x2¾ x2¾° 25/6x3¾ x2¼° 111/6x213/6x1¾° 4% x4x5°	1¾ 1½ 1 1 12	4.95 4.02 3.48 16.50	4.46 3.62 3.13 14.85	4.01 3.26 2.82 13.37	3.71 3.02 2.61 12.38
61 G 913 61 G 914 61 G 915 61 G 916	R-73B R-56A	800* 135 130 800*	140 200 20 30	5 0/15 5	.6/.6 2	6.3 6.3* 22.5/30 6.3/6.3	.6/.6	4¼ x319/ <sub>32</sub> x4%* 2x3% x21 <sup>3</sup> / <sub>16</sub> * 2¼ x2% x2¾* 3½ x2½ x3½*	5¾ 2¾ 2 3	7.50 6.06 8.31	10.13 6.75 5.45 <b>7.</b> 48	9.11 6.08 4.91 6.73	8.44 5.63 4.55 6.23
61 G 917		880* 1250	125 5		3 1.75/1.75			3¼ x4½ x3½*	71/2	16.62	14.96	13.46	12.47
61 G 918	R-43C	1600	3	5/5 2.5/2.5	1/3 1/3	6.3/6.3	1/3	236 x3x21/2"	31/2	9.87	8.88	8.00	7.40
61 G 919	R-45C	800* 800	30 5	5/5	2/2	6.3/6.3 6.3*	1/.6 3	2%x3%x3%*	41/2			10.50	

DRIVER, INTERSTAGE, AND INPUT TRANSFORMERS
Response, 300-3000 cps except \*30-15,000; †70-7000; \$50-10,000. ‡Spade-lug mtg. Last letter in Type No. is case style

Stock No.	Mfr's Type	Test Voits	Primary Ohms/MA	Turns Ratio	Size	Wt., Lbs.	1-4	NET EACH 5-24  25-49 5	50-99
64 G 989 61 G 925 61 G 926 61 G 927 61 G 928	A-3X A-4X A-5X	SB mike-p.p. grlds		84-1	13/6x21/x11/4° 13/6x21/x11/4° 13/6x21/x11/4° 111/6x213/6x11/4° 13/6x21/x11/4°	1/4	2.16 2.25 2.97	1.78   .60     .94   .75     2.03   .82     2.67   2.4   2   1.94   .75	1.62 1.69 2.23
61 G 929 61 G 930 64 G 934 64 G 991 61 G 920	A-9J* A-21X A-31X	speaker v.c. to grid	3.2 600/250/50 100 & 10,000 10,000	124:1 12:1 1:3	1x1½x1½° 1¼x1½x1½° 1¾6x2½x1¼° 1¾6x2½x1¼° 1½6x3½x1%°	1/8 1/4 1/4 1/4 1	5.01 9.30 2.31 2.16 2.97	4.51 4.06 3 8.37 7.53 6 2.08 1.87 1 1.94 1.75 1 2.67 2.41 2	3.76 6.98 1.73 1.62 2.23
61 G 922 61 G 923	A-83X† A-85X§ A-89A§	driver (6F6, 42, 45) driver (6F6, 42, 45) p.p. plates to grids	40 ma. in Pri.	1.33:1,½ sec. 2.66:1,½ sec. 3.1/1.8:1,½sc.		1/2 1 21/4	2.58 2.94 6.60	1.86   .68   2.32   2.09   2.65   2.38   5.94   5.35   8.10   7.29	1.94 2.21 4.95

### FILAMENT TRANSFORMERS

Last letter in Type No. is case style.

Stock	Mfr's	Seco	ndary	Test	Ol (INVD)	Wt		NET	EACH	
No.	Type	Volts	Amperes		Size (HWD)	Lbs.	1-4	5-24	25-49	50-99
61 G 931	F-1X	2.5CT	3	1500	111/16x213/16x11/8"	3/4	2.16	1.94	1.75	1.62
61 G 932	F-3X	2.5CT	10	3000	21/4 x313/16x21/4"	13/4	3.30	2.97	2.67	2.48
61 G 933	F-5U	2.5CT	10	7500	3x2½x2¾	2	4.80	4.32	3.89	3.60
61 G 934	F-6X	2.5CT	6	2500	1¹5⁄16x3¼x2*	1¼	3.06	2.75	2.48	2.30
61 G 935	F-7X	5CT	3	1500	115/16x31/4x2"	11/4	3.42	3.08	2.77	2.57
61 G 936	F-8X	5CT	6	1500	21/4x313/16x21/4"	13/4	3.96	3.56	3.21	2.97
64 G 953	F-13X	6.3	.6	1500	13/4x23/8x13/8"	1/2	2.04	1.84	1.65	1.53
64 G 954	F-14X	6.3CT	1.2	1500	111/16x213/16x15/8"	3/4	2.22	2.00	1.80	1.67
64 G 955	F-16X	6.3CT	3	1500	115/16x31/4x2"	1½	3.18	2.86	2.58	2.39
64 G 956	F-18A	6.3CT	6	1500	33/16x25/8x25/8"	2½	5.64	5.08	4.57	4.23
64 G 957	F-21A	6.3CT	10	1500	39/16x3x31/4"	3½	6.96	6.26	5.64	5.22
64 G 958	*F-22A	6.3CT	20	2000	4x31/4x43/16"	7	9.90	8.91	8.02	7.43
64 G 959	F-25X	12.6CT		1500	115/16x3 <sup>1</sup> / <sub>4</sub> x2"	1¼	3.51	3.16	2.84	2.63
61 G 937	F-26X	12.6CT		1500	29/ <sub>32</sub> x3 <sup>1</sup> 1/ <sub>16</sub> x2 <sup>3</sup> / <sub>8</sub> "	2¼	3.96	3.56	3.21	2.97
64 G 974	F-40X	24CT		1500	115/ <sub>16</sub> x3 <sup>1</sup> / <sub>4</sub> x2"	1¼	3.39	3.05	2.75	2.54
61 G 938	F-41X	25.2CT		1500	25/ <sub>8</sub> x4 <sup>1</sup> / <sub>16</sub> x2 <sup>1</sup> / <sub>2</sub> "	2¼	4.80	4.32	3.89	3.60
64 G 935	F-23U	10CT		1500	3 <sup>3</sup> / <sub>8</sub> x2 <sup>1</sup> / <sub>3</sub> / <sub>16</sub> x3 <sup>3</sup> / <sub>8</sub> "	4	6.87	6.18	5.57	5.15

### HIGH-LEVEL OUTPUT TRANSFORMERS

A ±3 db, 20-20,000 cps. Secondaries 4, 8, 16 ohms \*except 8, 16, 32. Type S-34X is X.

No.	Туре	Pri. Imp.	Watts	Size	Lbs.	1-4, EA.	5-24, EA.	25-49, EA.	50-99, EA.
61 G 939 64 G 833 61 G 940 64 G 834	S-34X* S-31A S-142A S-35A	4000CT 8000CT 8000CT 5000CT	7.5 15 15 20	29/32x311/16x23/8" 31/8x25/8x33/8" 31/8x25/8x33/8" 31/8x25/8x35/8"	1½ 3½ 3½ 3½ 4	4.95 8.58 12.84 9.30	4.46 7.72 11.56 8.37	4.01 6.95 10.40 7.53	3.71 6.44 9.63 6.98
61 G 941 61 G 942 61 G 943	S-38A S-146A S-152A	9000CT 6600CT 4000CT	25 25 65	3½ x3x4¼ " 3½ x3x4¼ " 4¼ x3% x4% "	5¾ 5¾ 9	12.00 18.36 26.76	10.80 16.52 24.08	9.72 14.87 21.68	9.00 13.77 20.07

# Chicago Transformers





Height





Height



Depth

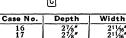


Height

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Case No.

Pepth	Width	
21/4"	21/8"	
21/4"	21/8"	



D E

Case No.

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	3
F	*

Width

TRANSFORME	RS AND	CHOKES
INMISTORME	INS AIND	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 one-piece, 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 compound-sealed units with fiberboard base covers and 10° color-coded leads. \*Have extra filament winding; 6.3 v. at 1 amp. Has extra filament winding; 5.5 v. at 2 amps. All units have 117 volt, 50-60 cycle primaries.

### POWER TRANSFORMERS FOR CAPACITOR INPUT FILTERS

Stock	Mfr's	Case	1-9	10-24	25-49	Stock	Mfr's	Case	1-9	10-24	25-49	Plate		Re	ct.	F	il.	Wt.,
No.	Type	No.	EA.	EA.	EA.	No.	Type	No.	EA.	EA.	EA.	VCT	Ma	٧	Α	VCT	Α	Lbs.
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 64 G 708	PCC-55 PCC-60	16 18	5.38 6.17	5.12 5.87	4.84 5.56	64 G 607 64 G 709	PSC-55 PSC-60	17 19	9.11	8.66 9.22	8.20 8.73	540 600	55 60	5	2	6.3	2	3½ 4½
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 64 G 619	PCC-120 *PCC-150	22	9.32	8.85	8.39 9.61	64 G 611	PSC-120 *PSC-150	22	12.23	11.62	11.01	750 740	120 150	5	3	6.3	4	91/2
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	†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 64 G 638 64 G 640	PCR-55   16 PCR-70   18 PCR-105   20	6.32	5.31 6.01 7.46	5.03 5.69 7.07	64 G 629 64 G 630 64 G 632	PSR-55 PSR-70 PSR-105	17 19 21	9.26 10.14 11.76	8.80 9.63 11.17	8.34 9.13 10.58	700 850 900	755 70 105	5 5 5	2 2 2	6.3 6.3 6.3	2 3 3.5	3½ 4½ 6½
64 G 641 64 G 643 64 G 644	PCR-120 22 *PCR-200 22 *PCR-300 24	11.47	8.35 10.90 17.04	7.91 10.32 16.14	64 G 633 64 G 635 64 G 636	*PSR-200	22 22 24	12.49 18.52 26.17	11.87 17.60 24.86	11.25 16.67 23.55	1000 1040 1100/740/150	120 200 300	5 5 5	3 3 6	6.3 6.3 6.3	4 4.5 5	9½ 12¼ 17½

### **FILTER CHOKES**

Stock No.	Mfr's Type	Case No.	1-9 EA.	10-24 EA.	25-49 EA.	Stock No.	Mfr's Type	Case   No.	1-9 EA.	10-24 EA.	25-49 EA.	Hys.	Ma.	Ohms	Test Volts	Wt., Lbs.
64 G 669	RC-1540	12	2.50	2.37	2.25	64 G 657	RS-1540	12	3.53	3.35	3.17	15	40	475	2500	1½
64 G 670	RC-1055	12	2.91	2.76	2.62	64 G 658	RS-1055	13	3.91	3.72	3.52	10	55	230	2500	1¾
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	2
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	2½
64 G 673	RC-1585	14	3.70	3.52	3.33	64 G 661	RS-1585	15	4.97	4.72	4.47	15	85	285	2500	2¾
64 G 674	RC-8105	16	4.11	3.91	3.70	64 G 662	RS-8105	17	5.59	5.31	5.03	8	105	100	2500	3¾
64 G 675	RC-12105	16	4.32	4.10	3.89	64 G 663	RS-12105	17	5.59	5.31	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	5¼
64 G 677	RC-12150	18	5.73	5.45	5.16	64 G 665	RS-12150	19	6.67	6.34	6.01	12	150	150	2500	5½
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	7
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	12½

### **FILAMENT TRANSFORMERS**

A Hermetically sealed filament transformers. Built to rigid specifications. Meet all MIL-T-27 requirements. All have 115-230 v., 50-60 cycle primaries. 2500 v. insulation.

Stock	Mfr's	Sec.	Amps	Case	Wt.,	1-9	10-24
No.	Type	V.CT		No.	Lbs.	EA.	EA.
64 G 721	FH-615	6.3	1.5	12	1	7.94	7.55
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

R Semi-sealed, 115-230 v., 50-60 cycle primaries. 2500 v. insulation.

Stock	Mfr's	Sec.	Amps	Case	Wt.,	1-9	10-24
No.	Type	V.CT		No.	Lbs.	EA.	EA.
64 G 686 64 G 688 64 G 692 64 G 723	F-54 F-58 F-530 F-615	5 5 5 6.3	10 30 1.5	15 17 22 12	21/4 31/2 101/2	6.38 10.88 16.61 5.14	6.06 10.33 15.78 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**

For faster, safer, easier servicing of AC-DC equipment. Chassis ground is isolated from line ground, eliminating shock hazard. Primary slide switch selects high, medium and low secondary voltages. 8' line cord, female output receptacle. Primary volts, 105/115/125; secondary volts, 125/115/105. For 50-60 cycle AC operation.

Stock	Mfr's	Watts	Case	Wt.,	1-9	10-24
No.	Type	Cont.	No.	Lbs.	EA.	EA.
64 G 726	IS-50	50	21	5	8.08	7.68
64 G 727	IS-100	100	22	8½	11.61	11.03
64 G 728	IS-150	150	24	12½	13.82	13.13
64 G 729	IS-250	250	24	18¼	16.32	15.50

### **OUTPUT TRANSFORMERS**

Full-frequency-range outputs. Typical response, ±0.5 db, 30-20,000 gb-13 have split, balanced secondary with CT.

Stock No.	Mfr's Type	Pri. Ohms	Sec. Ohms	Watts	Case No.	Wt., Lbs.	1-9 EA.	10-24 EA.
62 G 522	BO-1	15K	600/150		14	21/4	9.97	9.47
64 G 734		20K	600/150		16	3	13.23	12.57
64 G 738	BO-9*	5K/3K	600/16/8	15	20	6	16.90	16.06
64 G 747	BO-12	10K	600/16/8	10	22	9	17.49	16.62
64 G 748	BO-13	10K	16/8/4	20	21	7	17.49	16.62

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: 8x5½x6". Shpg. wt. 21 lbs. 64 GU 775. 1 to 9, NET EACH. 38.95 10 to 24, NET EACH. 37.00

### PA OUTPUT TRANSFORMERS

#### TRANSISTOR TRANSFORMERS

Ultra-miniature audio transformers for transistor applications below 1 mw level. Wound on nylon bobbins with nickel-steel laminations. Actual wt., 1/10 oz. 3/4x3/4x3/4"; except \*1/4x3/4x3/4". 2 oz.

Stock	Mfr's	Appli-	Impe	dance	DCResi	stance	1-9	10-24
No.	Туре	cation	Pri.	Sec.	Pri.	Sec.	EA.	EA.
64 G 237	*UM-110	Interstage	20K	1K	1675	285	5.59	5.31
64 G 238	UM-111	Output/	1K	50/60	120	9	3.82	3.63
64 G 239	UM-112	Matching Mic. input	200K	1K	4K	195	6.17	5.87
64 G 240	UM-113	Interstage	20K	1 K	1350	205	4.26	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

For coupling plate of output tube to the speaker voice coil. Designed for class A amplifiers. Secondary impedance, 3.2 ohms. Shpg. wt., 3/4 lb.

Stock	Prim	ary	Audlo	i		NET	EACH	ł
No.	Imp.	Ma.	Watts		1-9	10-24	25-49	50-99
62 G 064 62 G 063 62 G 093 62 G 065	2,500 8,000	40 50 20 50	3 3 3 5	13/16x17/16x7/8" 13/16x17/16x7/8" 13/8x17/8x1" 15/16x23/8x11/16"	.93 .93 .93	.85 .85 .85	.77 .77 .77 .83	.71 .71 .71 .76

#### **UNIVERSAL OUTPUTS**

CT primary. 6 taps on secondary. Match single or push-pull tubes to speaker voice coil.

Stock		l	Mtg.	Wt	I	NET	EACH	
No.	Impedances	Watts	Ctrs.	Lbs.	1-9		25-49	
62 G 023	Pri. , 4000-	4	2"	1	1.30	1.20	1.08	1.00 1.15 1.64
62 G 021	14,000 ohms.	.8	23/8" 23/8"	1	1.50	1.38	1.24	1.15
62 G 022	Sec., VC	18	23/8	11/4	12.14	1.96	1.77	1.64

#### FILTER CHOKES

Excellent for receivers, low power transmitters, etc.

Stock	l		١	Mtg.	١ ا		NET	EACH	
No.	Hys.	Ma.	Ohms	Ctrs.	Lbs.	1-9	10-24	25-49	50-99
62 G 135 62 G 136 62 G 137 62 G 138 62 G 139	5.5 8.5 16 15 10.5	50 50 50 75 110	330 400 550 400 220	2" 23/8" 213/16" 31/8" 39/16"	1 1/2 1 1/2 2 1/2 2 1/2	1.03 1.11 1.44 1.94 2.47	.94 1.02 1.32 1.78 2.26	.85 .92 1.18 1.61 2.03	

#### REPLACEMENT POWER TRANSFORMERS

AC 62 G 008 is Fig. C; all others Fig. A. Recommended for radio set replacement, kit building, etc. Fully shielded; heavy duty 5" flexible coded leads. All plate and Fil. 1 windings center-tapped. All have 110-120 volt, 50-60 cycle primaries.

Stock	Pia	ite	Re	ct.	Fi	1. 1	Mtg.	Wt.	l	NET EACH
No.	٧	Ma	٧	A	٧	Α	Centers	Lbs.	1-9	10-24 25-49 50-99
62 G 008	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	2x2½*	3		3.15 2.84 2.62
62 G 04 I	650	40	5	2	6.3	2	2x2½*	3		3.52 3.18 2.94
62 G 042	650	_ 70	5	3	6.3	3.5	2x2½*	5	4.65	4.27 3.85 3.56
62 G 043	700	90	5	3	6.3	3.5	21/4 x 2 1/8"	53/4		4.39 3.96 3.66
62 G 044	700	120		3	6.3	4.7	2½x3½"	7		5.07 4.57 4.22
62 G 045	750	150	5	3	6.3	5	2½ x3½*	71/4		5.82 5.24 4.85
62 G 033	800	200	5	5	6.3	5	3x3¾*	10	7.65	7.03 6.34 5.86

### **AUDIO TRANSFORMERS**

C \*Single or double-button. Shpg. wt., 1 lb.

Stock		Mta.	NET EACH			
No.	Description	Ctrs.	1-9	10-24	25-49	50-99
	*Carbon mike to grid	23/8"	1.58	1.45	1.31	1.21
62 G 062	1:3 Single plate to single grid	1.2."	11.25	11.15	11.04	96

### FILAMENT TRANSFORMERS

C Primaries, 105-125 volts, 50-60 cycle AC.

Stock		_		Wt	ł		EACH	
No.	V	Amps	Size	Lbs.	1-9	10-24	25-49	50-99
62 G 028	5	6	21/4x311/16x17/8"	21/4	2.41	2.22	2.00	1.85
62 G 030	6.3	1	15/8 x 213/16 x 11/2"	11/4	1.45	1.33	1.20	1.11
62 G 031	6.3	3	2 x31/4 x17/8"	13/4	11.99	1.83	1.65	1.52

operation. Recommended for replacement applications and installation in new equipment. A fine low-cost line of transformers for use by radio-TV servicemen, Amateurs, experimenters, students and industrials.

### HIGH-FIDELITY OUTPUT TRANSFORMERS

Designed for ultra-linear Williamson-type amplifiers. All flat from 6-90,000 cps \*except 10-100,000 cps. Rated watts from 20-30,000 cps. All have 4, 8 and 16 ohm outputs. †Max. allowable DC current in each half of primary. \$End bell construction for upright mounting (similar to \$\frac{\pi\_1}{2} \in \frac{\pi\_2}{2} \in \frac{\pi\_3}{2} \in \frac{\pi\_4}{2} \in \frac{

Stock	Ela	Watts	P-P	†Ma.	Size	Wŧ.,	l	NET	EACH	
No.	ı ıg.	watts	Imp.	i wa.	3120	Lbs.	1-9	10-24	25-49	50-99
62G 082		12	8000		2%x3%x3%*	5	7.60	6.99	6.29	5.82
62G018		18	8000		3x3¼x3%*	31/2	7.94	7.29	6.56	
62 G 083		24	6600	75	3¼ x3¼ x3%"	61/2	12.40	11.38	10.26	9.49
62G 019	F	30*	6600	100	41/4 x31/8 x47/16"	81/2	13.26	12.18	10.97	10.15
62G 024		12	8000	60	25/8 x 25/8 x 31/8"	31/2	5.85	5.37	4.84	4.47
62G 058		18	8000	65	23/8 x 3 1/16 x 29/16"	21/4	4.00	3.67	3.31	3.06
62 G 054		24	6600		31/4 x 31/2 x 41/4"	6	10.47	9.61	8.66	8.01
62G 059	1 5	30*	6600	100	41/8 x 31/8 x 41/4 "	71/4	111.33	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	Watt	Watts Mtg.		Wt.,	J	NET	IET EACH 10-24 25-99 50-99 1.38 1.24 1.15		
No.	Taps	Watts	Ctrs.	Lbs.	1-9	10-24	25-99	50-99	
	5, 2.5, 1.25, .62, .31	*5 Max.	2"	3/4	1.50	1.38	1.24	1.15	
	10, 5, 2.5, 1.25,	10 Max	1	1			1.38		
	18, 9, 4.5, 2.25, 1.12, .56	18 Max.	23/8"	11/4	1.98	1.81	1.63	1.51	
62 G 0/9	1.12, .56 24, 12, 6, 3, 1.5, .75	24 Max.	31/8"	13/4	3.01	2.76	2.49	2.30	

### 230-TO-115 VOLT AUTOTRANSFORMERS

Well-built step-down transformers for reducing 220-250 volts, 50-60 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			I	1	NET	EACH	
No.	Watts	Size	Lbs.	1-9	10-24	25-49	50-99
62 G 510		3½x215/16x3"	4	4.95	4.54	4.09	3.79
62 G 511	150	37/8×33/16×35/8"	6	6.81	6.25	5.64	5.21
62 G 512		45/8×313/16×4"	91/4	8.94	8.20	7.39	6.84
62 G 513	500	45/8x313/6x43/8"	11	111.42	10.48	9.45	8.73

### VARIABLE VOLTAGE AND ISOLATION TRANSFORMERS

VARIABLE VOLIAGE AND ISOLATION TRANSFORMERS

| Variable Voltage and Isolation Transformer, Rated 150 watts. Delivers 115 v. from 90-250 v., 50-60 cycle AC input. With 6-ft. cord and plug. Mtg. centers, 3x3½\*. Sing. wt., 9 lbs. 62 G080. 1-9, EACH. 12.40
| 10-24, NET EACH. 11.38
| 25-49, EACH. 10.26 | 50-99, NET EACH. 11.38
| Variable Voltage Transformer. 150 watts. Tests for possible failure 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., 2½x3¾\*. Wt., 6½ lbs. 62 G085. 1-9, EACH. 10.73 | 10-24, NET EACH. 9.85
| 25-49, EACH. 8.88 | 50-99, NET EACH. 8.21 | Solidation Transformer. Reduces shock hazard by isolating test

E isolation Transformer. Reduces shock hazard by isolating test units, or equipment under test, from line. For 115 volts, 50-60 cycle AC. With 6-ft. cord, plug and output receptacle.

Stock	Watts	Size	Wt			EACH	
No.	watts	H.W.D.	Lbs.	1-9	10-24	25-49	50-99
62 G 086	100	41/4 x 39/16 x 33/4"	7	10.47	9.61	8.66	8.01
62 G 087	250	45/8x313/16x47/8"	121/2	16.84	15.46	13.93	12.89

## **CHICAGO TRANSFORMERS**

### **MULTIPLE FILAMENT TRANSFORMERS**

Primaries tapped for 105, 115 or 125v., 50-60 cycle AC. Insulation, 2500 v. except F8, 5000 v. All secondaries have CT except \*.

Stock	Mfr's				Case	Wt.,	1	NET	EACH	
No.	Type	Fil. 1	Fil. 2	Fil. 3		Lbs.	1-9	10-24	25-49	50-99
63 G 154		*5V@2A	6.3V@2.5A		15	23/4	9.70			8.08
63 G 155	F2		12.6V@1.25A		15	23/4	9.70			8.08
63 G 156	F3	*5V@3A	6.3V@5A		17	31/2	10.14	9.63	9.13	8.46
63 G 157	F4	*5V@3A	6.3V@3A	6.3V@3A	18	43/4	11.61	11.03	10.46	9.68
63 G 158			6.3V@1A	6.3V@5A	18	43/4	11.76			9.80
63 G 159	F6	6.3V@3A	6.3V@3A		17	31/2	10.14	9.63	9.13	8.46
63 G 160	F7	6.3V@6A	6.3V@6A		21	61/2	12.05	11.46	10.85	10.04
63 G 161	F8	5V@3A	5V@3A	5V@3A	21	7	12.64	12.01	11.38	10.53

### **PLATE TRANSFORMERS**

[] Primaries for 115-230 v., 50-60 cycle AC.

( )									
Stock	L	l	Ī			Ī	NET	EACH	
No.	Type	VCT	Ma	Size	Lbs.	1-9	10-24	25-49	50-99
63 G 162	P45	1350/1150	250	55/16x41/8x49/16"	12	14.99	14.25	13.49	12.49
63G 163	P67	1800/1470	250	55/16X41/8X49/16"	131/2	16.46	15.64	14.82	13.72







## **AUDIO TRANSFORMERS**

K Size of each transformer, 2x11/2x11/2". Shpg. wt., 10 oz.

Stock	Mfr's			EACH		
No.	Туре	Description	1-9	10-24	25-49	50-99
63G 187	WF20	Pri.:50,125/150,200,250,333,500/600	11.47	10.90	10.30	9.55
63 G 189	WF22	Sec.:80,000 overall in two sections.	11.47			
63 G 190	WF28	Pri.:15,000. Sec.Imp.:80,000 overal.	10.70	10.15	9.63	8.92
63G 192	WF30	Pri.:50,125/150,200,250,333,500/600 Sec.:50,125/150,200,250,333,500/600	11.47	10.90	10.30	9.55

# Thordarson Transformers



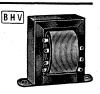
G 700 G 701 G 702 G 703











#### UNIVERSAL-MOUNT POWER TRANSFORMERS

AGF tran	th qual nsforme ets per	cycle prin	ing, EIA colo naries. All tra er-tapped Fil			
Stock No.	Mfr's Type	VCT   Ma	Rect.	Fil. 1	Mtg. Ctrs.	Wt., 1-9

5 5 5

	UNT	PO	WER TRA	NSF	ORMER:	Š						
	power tal mounting. EIA color-coded. 117 volt, 50-60 dijust-cycle primaries. All transformers listed below have center-tapped Fil. 1 windings.											
	Fi	Fil. 1 Mtg. Wt., NET EACH										
	V	A	Ctrs.	Lbs.	1-9	10-24	25-49	50-Up				
	6.3	2.0	2x2½*	21/2	4.88	4.39	3.95	3.74				
	6.3	2.5 3.0	2x2½" 2x2½"	31/4	5.88 7.03	5.29 6.32	4.76 5.68	4.50 5.38				
	6.3	3.5	21/4 x21 3/16"	3¾	6.85	6.16	5.55	5.24				
į	6.3	5.0	2½ x3½*	51/2	7.50	6.74	6.07	5.74				
	6.3 6.3	5.0 6.0	2½ x3½ " 3x3¾ "	6¾ 8½	8.76	7.89	7.10 9.26	6.70 8.75				
	0.0	0.0	0,0/4	0/2	11,77		7.2.0	0.75				

### **UPRIGHT-MOUNT POWER TRANSFORMERS**

GGV	Have	117 v.,	50-60	center-t	imari	es. Fila-
uuv	ment	1 wir	idings	center-t	appe	d. EIA
color-	coded	leads;	ends	stripped	and	tinned.

150

22R00 500 40 5 5 5 5 222

22R01 550 50

22R02 22R04 600 600 90

22R05 600

22R06 22R07 650 700

\*Additional 6.3 volt, 3-amp center-tapped winding, †Fig. BGV; §Not center-tapped.

Stock	Mfr's	PI	ate	Re	ct.	Fi	. 1	Mtg.	Wt.,		NET E	<b>ICH</b>	
No.	Type	VCT	Ma	٧	A	v	A	Ctrs.	Lbs.	1-9	10-24	25-49	50-Up
63G711 63G712 63G713 63G714	22R30 22R31 22R32* 22R33	550 720 700 750	50 80 110 160	5 5 5 5	2 2 2 3	6.3 6.3 6.3 6.3	2.5 2.5 3.0 5.0	2x2¼" 2x2¾" 2½x2¹¹¼6" 2¾x3"	2¼ 4 6¼ 7	6.12 8.67 10.76 11.44	5.51 7.80 9.68 10.29	4.95 7.02 8.71 9.26	4.68 6.64 8.23 8.75
63 G 7 I 5 63 G 7 I 6 63 G 7 I 9 63 G 73 7	22R34 22R35 22R36 26R60†	770 800 1200 150§	225 340 200 25	5 5 5	3 6 3	6.3 6.3 6.3 6.3	5.0 7.0 5.0 5.5	3x3 <sup>9</sup> /16" 3x4" 3x3 <sup>5</sup> /16" 2"	11¾ 13 9½ ¾	13.05 15.99 11.76 2.62	11.75 14.40 10.58 2.35	10.57 12.96 9.53 2.12	

#### "ECONOMY SERIES" POWER TRANSFORMERS

zontal mtg. (Fig. AGF). Have 110-120 volt, 50-60 cycle primaries. Fil. 1 windings are center-tapped. EIA color-coded. For general replacement. Types ending with U are for upright mounting (Fig. GGV). Others have brackets to permit flush, vertical or hori-

Stock	Mfr's	Pi	ate	Re	ct.	Fil	. 1	Mtg.	Wt		NET EA	CH	
No.	Type	VCT	Ma	٧	A	V	Α	Ctrs.	Lbs.	1-9	10-24	25-49	50-Up
63 G 319 63 G 320 63 G 321 63 G 322	24R00 24R00-U 24R01 24R01-U	480 480 650 650	40 40 40 40	5 5 5 5	2 2 2 2	6.3 6.3 6.3 6.3	2.0 2.0 2.0 2.0	2x2½" 2x1½" 2x2½" 2x1½"	2 2 2¾ 2¾ 2¾	4.41 4.41 4.50 4.50	3.97 3.97 4.05 4.05	3.57 3.57 3.65 3.65	3.38 3.38 3.44 3.44
63 G 323 63 G 324 63 G 325 63 G 326	24R02 24R04 24R04-U 24R05	700 700 700 700 700	70 90 90 120	5 5 5 5	2 3 3 3	6.3 6.3 6.3	2.5 3.5 3.5 4.7	2½ x213/16" 2½ x213/16" 2½ x25%" 2½ x3½"	4 4¼ 4¼ 5¾	5.62 6.53 6.53 6.91	5.06 5.87 5.87 6.21	4.55 5.28 5.28 5.60	4.30 5.00 5.00 5.29
63 G 327 63 G 328 63 G 329 63 G 330 63 G 331	24R05-U 24R06 24R06-U 24R07 24R07-U	750 750 800	120 150 150 200 200	5 5 5 5	3 3 3 3	6.3 6.3 6.3 6.3 6.3	4.7 4.7 4.7 5.0 5.0	2½ x2¹½6" 2¾ x3½" 2¾ x2½" 3x3¾" 3x3¾"	5¾ 6½ 6½ 9½ 9½ 9½	6.91 8.17 8.17 9.32 9.32	6.21 7.35 7.35 8.39 8.39	5.60 6.62 6.62 7.55 7.55	5.29 6.25 6.25 7.13 7.13

### MODULATION TRANSFORMERS

Stock	Mfr's	ri~	Watts	Prl.	Secondary	Mtg.	1 Wt 1		ITE	EAUII	
No.	Type	Fig.	watts	CT	Ohms	Ctrs.	Lbs.	1-9	10-24	25-49	50-Up
63 G 801	21M52	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	21/8"	11/2	3.91	3.52	3.16	3.00
63 G 613	21M68	BAV	10	10K	4K, 5K, 7.5K.				ı	1	
	1	l	i	l	10K, 12K	23/8"	11/2	3.59	3.22	2.90	2.74
63 G 612	21M67	GGV	25	10K	3K, 5K, 6.5K, 8K	2x11/8"	23/4	5.41	4.87	4.38	4.14
63 G 802	21M54	GGV	25	6.6K	4K	2x2"	31/4	6.53	5.87	5.28	5.00
								-			

GGV Mu	ilti-Mat	ch Type. Have taps to per-	modu	modulator output tubes and RF amplifier load					
	proper	impedance match between	Split	Split secondary.					
Stock	Mfr's	Watts Prim. Ma. Sec. Ma.	Mtg.	Wt.,	NET EACH				

Stock	Mfr's	Watts	Prim. Ma.	3ec.	wa.	Mtg.	Wt		NEI CA	υn	
No.	Type	watts	Each Side	Ser.	Par.	Ctrs.	Lbs.	1-9	10-24	25-49	50-Up
63 G 812 63 G 813	21M61A 21M62A	60 125	125 210	125 160	125 320	2¾ x2½* 3¼ x3½*	6½ 15	14.38	12.94	11.65	11.00
										<del></del>	

### **FILTERING AND COUPLING CHOKES**

20C58 is speech-frequency tuned audio choke for impedance coupling. 20C50 is plate impedance coupling choke. Others for both input and smoothing use. \*Inductance at rated ma.

Stock	Mfr's	Fig.	*Hys.	Rated	Resis.	Test	Mtg.	Wt.,		NET I	EACH	
No.	Type	1 16.	-11ys.	Ma	Ohms	Volts	Ctrs.	Lbs.	1-9	10-24	25-49	50-Up
63 G 725	20C50	BAH	350	5	5500	2500	21/8"	1½	3.50	3.14	2.83	2.68
63 G 726	20C51	BAH	35	15	1850	2500	2"	3/4	1.38	1.24	1.12	1.06
63 G 727	20C52	BAH	8	40	450	2500	2"	3/4	1.23	1.11	.99	.94
63 G 728	20C53	BAH	12	80	375	2500	21/8"	1½	2.06	1.85	1.67	1.58
63 G 729	20C54	GGV	8	150	145	2700	1¾ x2"	3	4.08	3.67	3.30	3.13
63 G 730	20055	GGV	6	200	75	2700	2x2½"	3¾	5.09	4.58	4.11	3.89
63 G 731	20056	GGV	8	250	60	3500	3x2½"	63/4	8.26	7.44	6.69	6.33
63 G 733	20058	BAH	3/4	10	30	1100	23/8"	3/4	2.35	2.12	1.90	1.80
63 G 738	26C40	BAH	1.5	10	95	2500	1%"	1/2	1.29	T.17	1.05	1 i .ŏŏ

### **CONTROL TRANSFORMERS**

Fig. BHV, \*except not illustrated. Two-section secondary windings permit series or parallel either 115 volts or 230 volts. 50-60 cycle AC.

Stock	Mfr's	Secon	dary	Size	Mtg.	Wt		NET EA	VCH.	
No.	Type	Parallel	Series	3126	Ctr.	Lbs.	1-9	10-24	25-49	50-Up
63 G 179	23V50	6V.@2A	12V.@1A	23/8 x21/8 x2"	23/8"	3/4	3.53	3.18	2.86	2.70
63 G 180		6V.@4A	12V.@2A	3% x3% x2¼*	2 1/8"	11/2	5.29	4.76	4.29	4.05
63 G   8 I	23V52	12V.@4A	24V.@2A	31/8 x31/8 x21/8"	31/8"	2	7.05	6.35	5.55	5.40
63 G 182	23V53*		24V.@4A	3% x2% x3"	2% x21/4"	31/2	9.41	8.46	7.62	7.20
63 G 183	23V54*	12V.@16A	24V.@8A	41/8 x31/2 x31/2"	2% x2¾*	8	12.94	11.64	10.48	9.90

### UNIVERSAL TV POWER TRANSFORMER

UNIVERSAL TV POWER TRANSFORMER

A GF
Type 26 R00. Extremely versatile, highquality replacement unit for power
transformers in over 2000 popular television
sets. Ideal stock-item for TV service-shops—
helps keep down inventory. Multi-tapped 295ma secondary. Primary: 117 volts, 50-60 eyes
AC. Tapped high-voltage secondary: 840 volts
center-tapped, 720 volts center-tapped, 840 volts
center-tapped, 720 volts center-tapped, 700
volts center-tapped. Filament windings: One
5 v. @ 3 amps, one 5 v. @ 6 amps and four
6.3-volt @ 3 amps es v. @ 6 the shielding. 33/x41/x44/x 180 shield10 to 24, EACH
10 to 24, EACH
15 to 49, EACH
13.75

### **PLATE TRANSFORMERS**

GGV Primaries for 115 volts, 50-60 cycles. Excellent for use in transmitter, RF amplifier and modulator power supplies. All 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, 835-656-0-656-835 volts @ 220 ma. Mounting centers, 33/x3². Overall size: 45/x33/x41/2². Shps. wt., 10 lbs.

63 G 657. 1 to 9, NET EACH	2.73
10 to 24. EACH	11 45
25 to 49, EACH	10.31
Type 21P89. Secondary, 550-0-550 volts	@ 175

114. Mounting centers, 3x21/2". Size, 3	1/8×31/4×
41/4". Shpg. wt., 61/2 lbs. 63 G 658. 1 to 9, NET EACH	982
10 to 24, EACH	8.84
25 to 49. EACH	7 95
60-Up, ÉACH	7.51
Type 21 P93. For two full-wave recti	fier sys-

### **DUAL TONE CONTROL COMPONENTS**

Type 20C74. Reactor. For tone compensating Type 20C74. Reactor. For tone compensating systems to boost or attenuate bass or treble independently. Not illustrated. Use with R1068X listed below. Hum-bucking. Inductance, 22 hys. DC resistance, 220 ohms. 221% dia. Shpg. wt., 12 oz. 63 G 734.1 to 9, NET EACH. 7.14 10 to 24, EACH. 6.43 50-Up, EACH. 6.43

Type R1068X. Dual Control. Use with reactor above. Size, 11/16" dia x 13/1" overall length. Shaft, 3/8" long. With hardware and diagram. Two required for complete bass-treble system.

Shpg. wt., 8 oz. 63 G 165. 1 to 9, NET EACH	4.12
25 to 49. EACH	3.70
50-Up, ÉACH	3.15

### **TUBE-TO-LINE TRANSFORMERS**

Low-level tube-to-line transformers for a wide variety of applications. Both units listed below are rated at 8 watts. Primary may be used with single or push-pull plates. Frequency response, 60-15,000 cps.

FGV Type 22S90. Tube-to-line audio output transformer. Primary, 20,000 ohms center-tapped @ 25 ma. Secondary, 125, 200, 500, 600 ohms. Mounting center, 2½\*. Overall size, 2½\*. Shgs. wt. 1 lb. 63 G 740.1 to 9, NET EACH 3.39 10 to 24, EACH 3.39 25 to 49, EACH 3.05 50-Up, EACH 2.88

BAH Type 22S91. Tube-to-line audio output transformer. Primary, 20,000 ohms center-tapped @ 25 ma. Secondary, 125, 200, 500, 000 ohms. Mounting center, 27%\*. Overall size, 2x3 ½x2\*. Slpg. wt., 1 lb. 63 G 61 l., 1 to 9, NET EACH ... 2.91 10 to 24, EACH ... 2.95 to 49, EACH ... 2.62 50-Up, EACH ... 2.48

# Thordarson Transformers













### TRANSISTOR TRANSFORMERS

IRANSTOK IKANSTOKMERS

BAH High-quality transistor transformers designed for input, bridging, interstage and output applications. These transformers need not necessarily be used at their stated impedance—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 mw, 1½ mounting centers; all other types, 150 mw (not illus.), have mtg. tabs on ½ centers. Applications: A—input; B—bridging; D—driver; IS—interstage; O—output. 2 oz.

Stock	Mfr's	Turns	Imped	ance	Appli-
No.	Type	Ratio	Winding 1	Winding 2	cation
63 G 228	*TR-1	1.00:1	500 CT	500 CT	
63 G 229		1.23:1	5000 CT		
63 G 230	TR-3	1.41:1			
63 G 232	TR-5	1.81:1	490 CT		
63 G 234	TR-7	2.24:1		2000 CT	
63 G 235		2.45:1			0
63 G 237	TR-10	3.00:1	5000 CT	45000	A, IS
63 G 239	TR-12	3.16:1			
63 G 240	TR-13	4.00:1			
63 G 241	TR-14	4.08:1	20000	1200	A, IS
1-9, EA	3 /	26 10	-24, EA		2 94
25-49, EA	i2.€		-Up, EA		
25-49, EA	2.6	4 50	-Up, EA	·	2.50
25-49, EA	TR-17	5.00:1	20000	800 CT	
25-49, EA 63 G 244 63 G 246 63 G 248	TR-17 TR-19 *TR-21	5.00:1 6.04:1 6.33:1	20000 400 CT 160 CT	800 CT 11 8 or 4	2.50 A,D,IS,S 0 0
25-49, EA 63 G 244 63 G 246	TR-17 TR-19 *TR-21	5.00:1 6.04:1 6.33:1	20000 400 CT 160 CT	800 CT 11 8 or 4	2.50 A,D,IS,S 0 0 0
25-49, EA 63 G 244 63 G 246 63 G 248 63 G 249 63 G 257	TR-17 TR-19 *TR-21 *TR-22 TR-23	5.00:1 6.04:1 6.33:1 7.07:1 7.07:1	20000 400 CT 160 CT 400 CT 10000	800 CT 11 8 or 4 8 or 4 200 CT	A,D,IS,S 0 0 0 0 D, 0
25-49, EA 63 G 244 63 G 246 63 G 248 63 G 249	TR-17 TR-19 *TR-21 *TR-22 TR-23	5.00:1 6.04:1 6.33:1 7.07:1 7.07:1 8.17:1	20000 400 CT 160 CT 400 CT 10000 100000	800 CT 11 8 or 4 8 or 4 200 CT 1500 CT	A,D,IS,S 0 0 0 0 D, 0 A, IS
25-49, EA 63 G 244 63 G 246 63 G 248 63 G 249 63 G 257	TR-17 TR-19 *TR-21 *TR-22 TR-23 *TR-24	5.00:1 6.04:1 6.33:1 7.07:1 7.07:1 8.17:1 8.66:1	20000 400 CT 160 CT 400 CT 10000 100000 15000	800 CT 11 8 or 4 8 or 4 200 CT 1500 CT 200 CT	D, 0 A, IS, IS, IS, IS, IS, IS, IS, IS
25-49, EA 63 G 244 63 G 248 63 G 249 63 G 257 63 G 258	TR-17 TR-19 *TR-21 *TR-22 TR-23 *TR-24 TR-25	5.00:1 6.04:1 6.33:1 7.07:1 7.07:1 8.17:1 8.66:1	20000 400 CT 160 CT 400 CT 10000 100000	800 CT 11 8 or 4 8 or 4 200 CT 1500 CT	D, 0 A, IS, IS, IS, IS, IS, IS, IS, IS
25-49, EA 63 G 244 63 G 248 63 G 249 63 G 257 63 G 258 63 G 260 63 G 261	TR-17 TR-19 *TR-21 *TR-22 TR-23 *TR-24 TR-25 TR-26 TR-27	5.00:1 6.04:1 6.33:1 7.07:1 7.07:1 8.17:1 8.66:1 10.0:1	20000 400 CT 160 CT 400 CT 10000 100000 15000 50000	800 CT 11 8 or 4 8 or 4 200 CT 1500 CT 200 CT 500 CT 3.2	D, 0 A, IS, IS, IS, IS, IS, IS, IS, IS
25-49, EA 63 G 2446 63 G 2486 63 G 257 63 G 259 63 G 260 63 G 262	TR-17 TR-19 *TR-21 *TR-22 TR-23 *TR-24 TR-25 TR-26 TR-27 *TR-28	5.4 50 5.00:1 6.04:1 6.33:1 7.07:1 7.07:1 8.17:1 8.66:1 10.0:1 12.5:1 14.1:1	20000 400 CT 160 CT 400 CT 10000 100000 15000 500 CT 200000	800 CT 11 8 or 4 8 or 4 200 CT 1500 CT 200 CT 500 CT 3.2 1000	2.50 A,D,IS,S 0 0 D, 0 A, IS IS, 0 A, D, 0 A
25-49, EA 63 G 244 63 G 248 63 G 249 63 G 257 63 G 258 63 G 260 63 G 261	TR-17 TR-19 *TR-21 *TR-22 TR-23 *TR-24 TR-25 TR-26 TR-27 *TR-28	5.4 50 5.00:1 6.04:1 6.33:1 7.07:1 7.07:1 8.17:1 8.66:1 10.0:1 12.5:1 14.1:1	20000 400 CT 160 CT 400 CT 10000 100000 15000 50000	800 CT 11 8 or 4 8 or 4 200 CT 1500 CT 200 CT 500 CT 3.2	2.50 A,D,IS,S 0 0 D, 0 A, IS IS, 0 A, D, 0 A

1-9, EA. 2.64 50-Up, EA. 2.94 25-49, EA. 2.65 50-Up, EA. 2.50 Miniature Transistor Transformers. (Not illus). For circuitry with limited space. Weigh 1/10 oz. ½\*7%/\*\*/x%\* Shgx. wt. 2 oz.

1/10 02. /2 A/16 A/16 : Caps. Will 2 02.										
Stock	Mfr's	Turns			Appli-					
No.	Type	Ratio	Winding 1	Winding 2						
63 G 350		1:1								
63 G 351	TR-39	1.24:1		2600 CT	D, IS					
63 G 352		2.23:1		2000 CT	D, IS					
63 G 353	TR-41	3.16:1		50	D, 0					
63 G 354	TR-42	3.16:1	20000	2000 CT	A, IS					
63 G 355	TR-43	3.53:1		10	0					
63 G 356		4.07:1		1200	A, IS					
63 G 357	TR-45	4.46:1	1000	50	D, 0					
63 G 358	TR-46	4.47:1		10	0					
63 G 359		5.46:1			0					
63 G 360		5.75:1		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		0					
63 G 363	TR-51	9:65:1			0 .					
63 G 364		11.8:1	7000	50	D, 0					
63 G 372	TR-53	12.5:1	500 CT	3.2	0					
1-9, EA.				EA						
25-49, EA	<b>1.</b>	3.31	50-Up,	EA	3.13					

### TRANSISTOR POWER OUTPUTS

For auto radios, audio amplifiers, etc. \*For parallel 3.2 and 8 ohm voice coils. Wt., 1 lb.

Stock	Mfr's		l imp	edance	
No.	Type	Fig.	Pri.	Sec.	Size
63 G 373	TR-57*	BAH	32 CT	1.6/4	2x35/16x17/8"
63 G 374	TR-58	BAH	32 CT	3.2/8/16	2x35/16x11/8"
63 G 375					25/16x21/8x2"
63 G 376	TR-63	BAV	100 CT	3.2/8/16	25/16x21/8x2"
1-9, EA		3.26	10-2	4, EA	2.94
25-49, E/	١	2.64	50-U	p, EA	2.50

### **DRIVER TRANSISTOR TRANSFORMER**

For driving power transistors—Sylvania: 2N68, 2N95, 2N141; CBS: 2N255, 2N256. \*Power output. Shpg. wt., ½ lb.

63 G 8   4   *TR-61	BAV   48 C	T  3.2 /8 /16	1¾ x2x1¼″ 1¼ x2½x1″
63 G 377 TR-64	BAH 100	100 CT	11/4 x 21/8 x 1"
63 G 378 TR-65	BAH  100	200 CT	11/4 x21/8 x1"
63 G 379 TR-66	BAH  500 CT	[ 200 CT	1¼x2½x1"
1-9, EA	.1.88 10	-24, EA.	1.69
25-40 FA	1 52 50	LII É EA	1 44

### HI-FI TRANSISTOR TRANSFORMER

HI-FI TRANSISIOR IRANS-ORMEK Model T R-67. (Not illus). Encased, wide-range output transformer. Response: ./½ db from 20-20,000 cps. Imp. (ohms): Pri., 125CT; Sec., 8. Pri. MADC 50. Power: 1-5 watts. Mig. ctrs., 1½6". 1½6x1½6x1½6". Shpg. wt., 1 lb. 63 G 380. 1-9, EA. 4.91 10-24, EA. ...4.42 25-49, EA. ....3.98 50-Up,EA. ...3.76

#### OUTPUT TRANSFORMERS

A wide selection of high-quality audio output transformers for replacement purposes as well as new equipment use. Listing includes types for

single-ended outputs and for push-pull amplifiers in a variety of impedances and wattage ratings. Av. shpg. wt., 2½ lbs.

as new equi	pment	use. Li	sting includes type	sioi lauli	igs. A	v. supg.	WL., 47	2 108.		
Stock No.	Туре	Fig.	Primary	Secondary	Watts	Ctrs.	1-9, EACH	10-24, EACH	25-49, EACH	50-Up, EACH
63 G 775 63 G 776 63 G 777 63 G 778 63 G 779	22S45 22S46 22S47 22S48 22S56	BAH BAH BAH BAH BAH	1500-3000 2000-3000 6000-7000 CT 12,000-16,000 CT 8000/10,000 CT	3.2-4 3.2-4 3.2-4 3.2-4 3.2-4, 6-8	5 5 5 10	2" 2" 2" 2" 2 %"	2.44 2.76 2.62 1.94 3.26	2.20 2.49 2.35 1.74 2.94	1.98 2.24 2.20 1.57 2.64	1.87 2.11 2.00 1.49 2.50
63 G 780 63 G 781 63 G 782 63 G 783	22S58 22S60 22S62 22S64	BAH BAH BHH GGV	5,000/7,000 CT 2500/4000 CT Univ. Plate 10,000 CT	3.2-4, 6-8 3.2-4, 6-8 0.1-30 3.2-4, 6-8, 15, 250, 500	8 10 8 25	2 % " 2 % "	2.20 3.09 3.20 5.88	1.98 2.77 2.88 5.29	1.79 2.50 2.60 4.76	1.69 2.36 2.45 4.50
63 G 784 63 G 785	22S66 22S68	GGV	8000 CT 6500 CT	3.2-4, 6-8 15, 250, 500 3.2-4, 6-8	25	1¾ x2*	6.14	5.53	4.98	4.70
63 <b>G</b> 786	22\$70	GGV	5000 CT	15, 250, 500 3.2-4, 6-8 15, 250, 500	25 25	1¾ x2° 1¾ x2°	6.47 5.23	5.82 4.71	5.23 4.24	4.95 4.00
63 G 790 63 G 788 63 G 796 63 G 797	22S78 22S74 22S86 22S87	GGV BHH BAH BAH	3300 CT Universal CT Universal CT Universal CT	3.2-4, 6-8 15, 250, 500 1 to 30 3.2-4 6-8 3.2-4, 6-8	60 25 3 6	2½x2½* 35%* 2* 2%*	9.82 5.44 2.26 2.94	8.84 4.89 2.04 2.65	7.80 4.32 1.99 2.38	7.51 4.16 1.73 2.25
63 G 798 63 G 759 63 G 774	22S88 22S93 22S95	BAH GGV GGV	Universal CT 9500 CT 5.000 CT	3.2-4, 6-8 3.2-4, 6-8 15-16 3.2-4, 6-8.	8 10	2 1 % " 1 3 4 x 2 "	2.94 7.03	2.65 6.32	2.38 5.69	2.25 5.38
63 <b>G</b> 799	22\$97	GGV	3,000 CT 6,000 CT	15-16 3.2-4, 6-8	15	1¾ x2"	7.70	6.93	6.24	5.89
63 G 772	24\$60	внн	4000/7000/8000/ 10,000/14,000 CT	15, 250, 500 0.1-30	25 4	1¾ x2" 2"	7.32 1.88	6.59 1.70	5.93 1.52	5.60 1.44
63 G 773	24\$61	внн	4000/7000/8000/ 10,000/14,000 CT	0.1-30	8	23/8"	2.20	1.98	1.78	1.68

### **FILAMENT TRANSFORMERS**

Primaries for 117 volt 50-60 cycle AC, except 26F65 6.3 volt, 21F26 115-230 volt. All have 2500 volt insulation, except 21F02 and 21F05

10,000 volt, 21F26 8500 volt, 21F27 3000 volt, 26F65 5000 volt. \*Single secondary with taps. †Tapped primary.

Stock No.	Туре	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	21F01	BAV	2.5 CT	10	2¾"	11/2	4.12	3.70	3.33	3.15
63 G 667	21F02	CAV	2.5 CT	10	2x1¾	23/4	4.62	4.16	3.74	3.53
63 G 668	21F03	BAV	5 CT	3	23/8"	11/2	3.26	2.94	2.64	2.50
63 G 669	21F04	CAV	5 CT	8	2x1¾"	3	5.56	5.00	4.50	4.25
63 G 681	21F05	CAV	5 CT	3	2x1¾"	21/2	5.70	5.14	4.62	4.36
63 G 670	21F06	CAV	5 CT	13	2x2"	31/4	4.82	4.34	3.91	3.69
63 G 67 I	21F07	CAV	5 CT	21	21/4 x 21/2"	53/4	9.14	8.23	7.41	7.00
63 G 672	21F08	BAV	6.3 CT	1	2"	1	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	21F10	BAH	6.3 CT	3	23/4"	1	3.03	2.73	2.45	2.32
63 G 674	21F11	CAV	6.3 CT	6	1¾ x2"	23/4	4.06	3.66	3.29	3.10
63 G 675	21F12	CAV	6.3 CT	10	2x2"	31/4	5.56	5.00	4.50	4.25
63 G 676	21F14	BAH	*6.3/5/2.5	2.5	21/8"	13/4	3.59	3.22	2.90	2.75
63 G 677	21F15	BAV	7.5 CT	4	21/8"	2	4.09	3.67	3.31	3.13
63 G 678	21F16	CAV	7.5 CT	8	2x2"	31/4	5.88	5.29	4.76	4.50
63 G 682	21F17	CAV	7.5 CT	12	21/4 x 21/4"	5	7.50	6.74	6.07	5.74
63 G 679	21F18	CAV	10 CT	5	1¾ x2"	23/4	5.88	5.29	4.76	4.50
63 G 680	21F19	CAV	†10 or 11 CT	12 or 11	21/4 x 21/2"	6	9.61	8.65	7.79	7.36
63 G 605	21F26		7.5 CT	51	3%x41/16"	15	25.96	23.36	21.03	19.87
63 G 606	21F27	BAH	26.5 CT	.6	21/8"	11/2	3.26	2.94	2.64	2.50
63 G 746	26F60	BAH	6.3 CT	1.2	21/8"	11/4	2.44	2.20	1.98	1.87
63 G 607	26F65	BAH	6.3 CT	1.2	2%"	11/2	2.68	2.41	2.17	2.05
63 G 608	26F66	LAV	5 CT	15	2x2½"	31/2	6.85	6.16	5.55	5.24

### **AUDIO INPUT TRANSFORMERS**

All are electrostatically shielded except 20A10, 20A01 and 20A04. Types 20A00 and 20A04 have a frequency response of 250-3500 cps; Type 20A01 has a frequency response of 60-7500 cps and highly effective hum-bucking construction. Av. shpg. wt., 1 lb.

Stock No.	Mfr's Type	Fig.	Turns Ratio	Application	Mtg. Ctrs.	1-9, EACH	10-24, EACH	25-49, EACH	50-Up, EACH
63 G 760 63 G 761 63 G 764 63 G 616 63 G 610	20A00 20A01 20A04 20A10 20A11	BAH FGV BAH BAH BAH	1:10 1:20 1:80 1:20 1:20	Line or mic to sgl. or PP grids. Line or mic to sgl. grid. Voice coil or mic to grid. Line or mic to sgl. grid. Line or mic to sgl. or PP grids.	2%" 2" 2%"	3.26 4.26 1.82 2.94 3.09	2.94 3.83 1.64 2.65 2.77	2.64 3.45 1.48 2.38 2.50	2.50 3.26 1.40 2.25 2.36

### **AUDIO INTERSTAGE TRANSFORMERS**

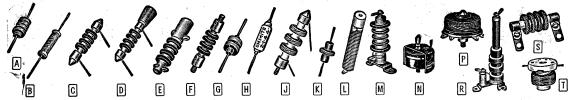
Primary current, 8 ma. Type 20A25 has humbucking construction. Types 20A24 and 20A25 have split secondary winding. Type 20A29 is

also applicable for high impedance output mixing and can be connected as a driver with 2:1 ratio. Av. shpg. wt.,  $1\frac{1}{4}$  lbs.

	Stock No.	Mfr's Type	Fig.	Ratio	Application	Mtg. Ctrs.	1-9, EACH	10-24, EACH	25-49, EACH	50-Up, EACH
	63 G 750 63 G 751	20A16 20A17	BAH	1:2 1:2	Sgl. plate to sgl. or PP grids. Sgl. plate to sgl. or PP grids.	2" 13%"	1.76 5.23	1.59 4.71	1.43	1.35
	63 <b>G</b> 752 63 <b>G</b> 753	20A19 20A22	BAH	1:3 1:3	Plates to grids, sgl. or PP. Sgl. plate to sgl. or PP grids.	2 1/8" 2 1/8"	1.94 2.47	1.74 2.22	1.57 2.00	1.48
	63 G 754 63 G 755 63 G 756	20A23 20A24 20A25	FGV FGV RTV	1:3 1:3 1:1.41	Sgl. plate to sgl. or PP grids. Plates to grids, sgl. or PP. Plates to grids, sgl. or PP.	23/8" 23/8" 13/8"	4.90 4.00 8.03	4.41 3.60 7.22	3.98 3.23 6.50	3.76 3.06 6.14
ļ	63 G 748	20A29	BAV	1:1:1:1	Univ. car radio interstage.	2"	2.35	2.12	1.91	1.80

175

# RF Chokes—Transformers and Coils



### POPULAR RF CHOKES FOR EVERY PURPOSE

Chokes below may be used in 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-

movable standoff insulator at one end. National chokes wound on isolantite forms; Meissner, on specially treated dowels, except \*iron-core type. †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. ‡Millihenries. \*\*Microhenries. Av. shpg. wt., 2 oz.

Stock No.	Mfr.	Туре	Fig.	‡Mh	Ma	Ohms	NET
60 H 795 71 H 150 71 H 188 71 H 189 71 H 152	J. W. Miller National National National National	4532 R-100 R-100 R-100 R-300	C C T	1.5 2.5 5 10 1	200 125 75 75 300	21 50 50 50 10	.53 .40 .40 .40
71 H 1518 71 H 1868 71 H 1878 71 H 1538 71 H 1618	National National National National National	R-100U R-100U R-100U R-300U R-100S	D D D E	2.5 5 10 1 2.5	125 75 75 300 125	50 50 50 10 50	.48 .48 .48 .48
71 H 1788 71 H 1798 71 H 1628 71 H 164 71 H 159	National National National National National	R-100S R-100S R-300S R-300ST R-33	E E F G	5 10 1 2.5 10**	75 75 300 300 100	50 50 10 10 1.0	.48 .48 .46 .40
71 H 158 71 H 163 71 H 148 71 H 149 71 H 198	National National National National National	R-33 R-33 R-33 R-33 R-50	6 6 6 6	50** 100** 1** 750** 2.5	100 100 100 100 100	4.0 5.5 .06 17 41.5	.40 .40 .40 .40
71 H 250 71 H 251 71 H 252 71 H 253 71 H 156	National National National National National	R-50 R-50 R-50-I R-60 R-154U	A A B M	.5 10 2** 1	100 100 100 1700 600	16.2 22 30 6	.40 .61 .40 1.61
71 H 160 60 H 027† 60 H 030† 60 H 031† 60 H 032†	National Meissner Meissner Meissner Meissner	R-175A 19-5588 19-5592 19-5594 19-5596	R N N N	.225 `8.0 30.0 60.0 80.0	800 30 20 16 16	77 165 318 342	3.56 .76 .88 1.18
60 H 010 60 H 011 60 H 014 60 H 015 60 H 016	Meissner Meissner Meissner Meissner Meissner	19-1994 19-4551 19-1995 19-2330 19-3247	P P P P	2.5 5.5 16.0 30.0 60.0	20 20 20 20 20 20	40 57.5 108 159 258	.53 .53 .76 .82
60 H 017 60 H 040* 60 H 042* 60 H 045* 72 H 040 72 H 073	Meissner Meissner Meissner Meissner Millen Millen	19-2709 19-6834 19-6842 19-6848 34100 34101	P P P D J	80.0 2.5 30.0 125.0 2.5 2.5	16 20 20 75 250 250	372 22.5 114 330 52.5 51.5	.82 .68 1.00 1.62 .48 .42

Stock No.	Mfr.	Туре	Fig.	‡Mh	Ma	Ohms	NET
72 H 067	Millen	34103	С	2.5	250	52.5	.42
72 H 076 72 H 134 72 H 135	Millen	34106	J K	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   88 72 H   89	Millen	34300-500	K G G	500**	250	19.8	.42
72 H 190	Millen	34300-1000	G	1000**	250	19	.42
72 H 188 72 H 189 72 H 190 72 H 192	Millen	34225		25	75	159	.84
72 H 193	Millen	34280		80	75	336	.96
72 H 194	Millen	J300-100	В	100**	50	4.0	.42
72 H   95	Millen	J300-250	B	250**	50	6.2	.42
72 H 196	Millen	J300-500	В	500**	50	12.8	.42
72 H 194 72 H 195 72 H 196 72 H 197	Millen	J300-1000	В	1000**	50	20.3	.42
72 H 198	Millen	1300-2500	B L S S	2500**	50	37.2	.42
60 H 417	P & 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 T T	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 H 413	Bud	CH-1227	T	16	200	59	.60
60 H 414	Bud	CH-1228	T	30	190	88	.68 .75
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.	Туре	Fig.	**uh	Ma	Mc	NET
74 M 410 74 M 411 74 M 412 74 M 413	Ohmite Ohmite Ohmite Ohmite	Z-460 Z-235 Z-144 Z-50	H H H H	0.2 0.84 1.8 7.0	1000 1000 1000 1000	320-520 160-350 80-200 35-110	.29 .29 .29
74 M 414 74 M 415 74 M 416	Ohmite Ohmite Ohmite	Z-28 Z-14 Z-7		21 44 84	600 600 1000	20-60 7-35 3-20	.47 .53 1.21
71 H 296 71 H 297 71 H 298 71 H 299	National National National National	B20407-1 B20407-2 B20407-3 B20407-4		.1 .18 .27 .36	2000 2000 2000 2000	30 30 30 30 30	.30 .38 .48 .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 load under actual operating conditions. Operating reliability is safe-guarded by the latest precision engineering and control methods for maximum dependability.



TAV



GGV

UNIVERSAL LINE-TO-VOICE COIL

24S21, 24S21, 24S22 and 24S23 are fig. TAV; others BHH. Secondary taps marked with impedance values. \*Also marked for 70 v. operation. †For 25 v. operation. §Auttoformer. ‡Also has 39 ohm pri. tap.

Stock Mfr's	Pri.	Sec.	Watts	C+	Wt.,		NEI	LACH	
No. Type	Imp.	Imp.	watts	ous.	Lbs.	1-9	10-24	25-49	50-UP
63 G 791 22S80	500, 600		8	31/8"	11/2	3.91	3.52	3.17	2.99
63 G 792 22S82	,		25	35%"	21/2	3.53	3.18	2.86	2.70
63 G 793 22S83	2000/1500/	3.2,	15	31/8"	21/2		3.52		2.99
63 G 794 22S84	1000/500	8, 16	5	2 1/8"	1 1		3.09		
63 G 795 22885	J		3	2%"	3/4	3.76	3.39	3.05	2.88
63 G 744 24S66	2000, 1500,	3.2,	1	1	1				
	1000, 500	8	10	2"	1	2.73	2.46	2.21	2.09
63 G 745 24S62*	3000, 2500,	۱	1	l	1	1	į l		
	2000, 1500,	.06,		3"	01/	4 00			
63 G 166 24821†	1000, 500 178, 156	48	10	3"	21/2	4.23	3.81	3.43	3.24
03 G 100 243211	312, 625	4, 8	8	2"	3/4	2 95	2.56	231	2 12
63 G 167 24S22†1	1250	16		213/16	1%	4.09	3.68	5.2!	2.12
63 G 168 24\$23†				- /10	1-/-	4.07	3.00	2.2.	22
63 G 168 24523TS	62, 125 250, 500	4, 8	10	23/8"	1	3 26	2.94	264	2 50
	1125, 250	ľ	1 10	278	1 *	3.20	2.74	2.04	2.50
63 G 169 24S24†	500, 1000.	4,	5	2"	1/2	2.12	1.91	1.72	1.62
	2000	8	"		۱ "				

### OSCILLOSCOPE TRANSFORMER

GGV Type 22 R40. For use in oscilloscopes, CRT applications and test equipment. Primary, 117 volts, 60 cycles. Plate, 1800 volts AC at 2 ma. Rectifier filament, 2.5 volts at 1.8 amps. Filament 1, 6.3 volts at 0.6 amps; tapped at 2.5 volts, 2.1 amps. Overall size: 3\(\frac{1}{2}\)x23\(\frac{1}{2}\)x3\(\frac{1}{2

### CLASS "B" AND "AB" DRIVERS

LIADS "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 plate to PP grids. Others can be used as single or PP plates to PP grids. §Illustrated on page 174. NET FACIL

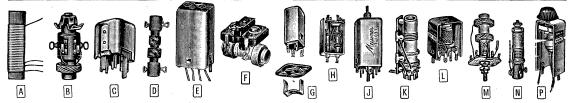
Stock	Mtr's	Fig.	Max.	Pri. to	Mtg.	Wt		INE	EACH	
No.	Type		Ma DC	½ Sec	Ctrs.	Lbs.	1-9	10-24	25-49	50-UP
63 G 690 63 G 691 63 G 692 63 G 693	20D76* 20D77* 20D78	BAH FGV§ GGV	40	2.4:1 5.2:1 2.5:1 4.0:1	2" 2" 23/8" 13/4 x2"	1 1 1 3	2.76 2.76 4.23 5.97	2.49 2.49 3.81 5.37	2.24 2.24 3.43 4.83	2.12 2.12 3.24 4.57
63 G 694 63 G 609		FGV§ BAH	30 30	5.2:1 5.2:1	2¾″ 2½″	2 1¾	5.03 4.91	4.26 4.42	4.07 3.98	3.85 3.76

### "ECONOMY SERIES" OUTPUT TRANSFORMERS

BAH wide selection of single-ended output transformers designed for economical replacement purposes in radio and TV sets as well 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., 1½ lb.

Stock	Mfr's	Primary	Pri.	Watts	Mtg.		NET E		
No.	Type	Impedance	Ma	watts	Ctrs.	1-9	10-24	25-49	50-UP
63 G 742		4,000-5,000	10	5	13/4"	1.29	1.16	1.05	.99
63 G 743	24549	7,000-8,000	10	5	13/4"	1.24	1.08	.98	.92
63 G 768	24\$50	2,000	55	5	2"	1.21	1.08	.98	.92
63 G 769	24\$51	5,000	40	5	2"	1.29	1.16	1.05	.99
63 G 770	24\$52	7,000-10,000	30	5	2"	1.26	1.14	1.02	.97
63 G 771	24S54	15,000-25,000	10	5	2"	1.38	1.24	1.12	1.06

# Meissner IF's and Coils



#### MINIATURE COILS AND IF's 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 Type	Fig.	Use	Req.	Size	EACH
60 H 950	14-9001	Α	Ant.	98	5/32x3/4 x25/8"	1.47
60 H 951	14-9003		Ant.	365	½ x7″	1.47
60 H 952	14-9004	В	Osc.	365	1 1/16X 1/8"	1.18
60 H 953	14-9005	Α	Ant.	123	5/32 x 3/4 x 3 1/8"	1.18
60 H 954	14-9006	C	Osc.	78	1/2 x 1/2 x 5/8"	2.94
60 H 955	14-9009		Ant.	165	3/8 x 7"	1.76
60 H 956	14-9010	В	Osc.	82	9/16x11/8"	1.18
60 H 957	14-9011		Ant.	73	3/8 x 5"	1.76
60 H 958	14-9012		Osc.	59	½ x¾"	1.47
60 H 959	14-9013		Ant.	123	3/8 x 5"	1.44
60 H 960	14-9014	В	Osc.	98	1 1/16X 1/8"	1.18
60 H 961	14-9015	В	Ant.	100-365	3/8 x 2"	1.03

Transistor IF Transformers, Engangers ity units for input—A; interstage—IS; and output—O. Ideal for printed circuits. 455 KC except 16-9001 (262 KC). ½" sq. 3 oz. Transistor IF Transformers. High-qual-

Stock No.	Туре	Pri. Imp.	Sec.Imp.	Use	NET
60 H 962	16-9001	20000	600	AII	2.94
60 H 963	16-9002	25000	600	AII	1.65
60 H 964	16-9003	10000	500	A, IS	2.94
60 H 965	16-9004	10000	1500	O	2.94
60 H 966	16-9007	80000	25	A	2.94
60 H 967	16-9008	30000	25	IS	2.94
60 H 968	16-9009	30000	1000	O	2.94
60 H 969	16-9012	25000	250	A	2.94
60 H 970	16-9013	20000	150	IS	2.94
60 H 971	16-9014	20000	1000	O	1.65

### MINIATURE VARIABLE PEAKING COILS

D For exact adjustment of frequency response in video amplifiers. Slug-tuned. Wt., 4 oz.

No.	Type	Range	Size	EACH
60 H 034	19-1920	65-115 μh	1x1½″	59¢
60 H 035	19-1921	115-195 μh		59¢
60 H 036	19-1922	195-325 μh		59¢
60 H 037	19-1923	325-500 μh		73¢



### IRC INSULATED HF CHOKES

Insulated wire-wound chokes for use in high Insulated wire-wound chokes for use in high frequency 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 ±10% tolerance. Type CLA units have resistance tolerance of ±20%, except 0.47, 0.56, 0.68 and 1.0 microhenry units which are ±30%. CL-1 units are ±20%, except 0.47, 0.82 and 1.0 microhenry units which are ±30%, "Q" rises with frequency. CLA,2½x"x ¼x" dia.; CL-1, 1¼x"¼x" dia. Wt., 2 oz.

,,,	, -,-	/		
Stock No.	Mfr's Type	Micro- henries	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
				01

### MINIATURE IRON-CORE COILS

Permeability-tuned broadcast coils. For AC sets \*except battery. Shpg. wt., 3 oz.

	No	.	Туре	Use	Size	EACH
60	H	168	14-1071 14-1072 14-1073 14-1074*	Ant. RF Osc. Osc.	1 ½ x <sup>3</sup> / <sub>8</sub> " 1 ½ x½" 1 x <sup>3</sup> / <sub>8</sub> " 1 x <sup>3</sup> / <sub>8</sub> "	1.03

### IF TRANSFORMERS **LOW-COST PLASTICS**

Stock No.	Mfr's Type	Use	Freq.	NET EA.
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	1.41
60 H 196	16-6658	Input	456	1.41
60 H 197	16-6659	Interstage	456	
60 H 198	16-6660	Output	456	
60 H 070	16-6666§	Input	456	
60 H 071	16-6667§	Output	456	1.47
60 H 139	16-6662†	Input	456	
60 H 144	16-6663†	Output	456	

### STANDARD GENERAL REPLACEMENTS

E Suitable for most receivers. Double-tuned mica trimmers. Size,  $3x1\frac{3}{6}x1\frac{3}{6}$ ". Av., 4 oz.

Stock	Mfr's	Use	Freq.	NET
No.	Type		Kc	EA.
60 H 077	16-5700	Input	175	1.62
60 H 080	16-5712	Input	456	1.47
60 H 081	16-6133	Interstage	456	1.62
60 H 082	16-5714	Output	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. †1½x1½x3½'; §½x½x2". ‡For battery radios. Wt., 5 oz.

Stock	Mfr's	Use	NET
No.	Type		EACH
60 H 181	16-5740† 16-5742†	Input Output	2.06
60 H 199	16-6668§	Input‡	1.76
60 H 143	16-6669§	Output‡	1.76
60 H 104	16-6678§	Input/Output	1.76

### "CARTWHEEL" IF TRANSFORMER

### 34" PERMEABILITY TUNED IF's

G Tuned at top and bottom by variable iron cores. Silvered mica condensers. Size,  $2x^3/4x$ .". With mtg. plates. †With diode filters. 4 oz.

Stock	Mfr's	Use	Freq.	NET
No.	Type		Kc	EACH
60 H 152	16-6758	Input/Output	456	1.29
60 H 153	16-6770†	Output	456	1.35
60 H 157	16-6754†	Output	262	1.53
60 H 154	16-6752	Input	262	1.47

### TWEET FILTER OUTPUT IF TRANSFORMER

#### AM-FM IRON CORE IF

Type 16-6675. Has a 455 kc AM and 10.7 mc FM transformer. Each circuit tunes by powdered iron cores. 2½x1¾x1½". 7 oz. 2.94

### 10.7 MC FM IF TRANSFORMERS

High quality—permeability tuned. Input or interstage type. Stable shunt capacities. Excellent for replacement use or as part of original equipment. Av. shpg. wt., 5 oz.

No.	Туре	Fig.	Mounting	Size	EACH
60 H 097	16-6665	1	11/2"	%x%x1¾"	1.62
60 H I 58	16-3487	G	Var. 34 x11/2"	34 x34 x2"	1.62

### **BROADCAST, TV AND PHONO COILS** REPLACEMENT COILS

Wide selection of air-core types. High-impedance primary. Litz wire secondary. Tune 545-1620 kc, with 360 mmf tuning condenser. \*Shielded. †456 kc IF frequency; 350 mmf padder required. Shgs. wt., 5 oz.

No.	Type	Fig.	Use	Size	EACH
60 H 000		K	Ant	11/4 x21/2"	
60 H 001	14-1011	K	RF	11/4 x21/2"	110
60 H 005	14-1004*	L	Ant	134 x134 x21/2"	1.18
60 H 006	14-1005*	L	RF	1¾ x1¾ x2½ "	
60 H 075		L		13/8 x 13/8 x 2"	
60 H 076	14-2437*	L	RF	1%x1%x2"	110
60 H   6	14-4034†	M	Osc	lxlxl½"	1.18
60 H 166	14-4243*†	L	0sc	1½ x1½ x1¾ "	
60 H 150	14-1022	K	Ant	1/8 x 2 1/8 "	1.03
60 H 151	14-1023	K	RF	11/8×21/8"	1.03

#### PENTAGRID OSCILLATOR **BROADCAST COILS**

N 128A7, etc. 456 kc. Single ¼" hole mtg. ¾" dia.1" long. Use 420 mmf padder. 4 oz. 1.03

Type 14-1053. Oscillator coil. (Not illustrated.) 455 kc. Same as above, but requires cut section padder. 162 mmf. Single ¼" hole mounting, ¾" dia. Wt., 4 oz. 1.03

# UNIVERSAL ADJUSTABLE INDUCTANCE COILS

†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 x 1 1/8"	
60 H 125	14-1060†	N	Osc.	34 x134 "	1 17
60 H 135		M	Ant.	11/8 sq. x 13/4"	1.4/
60 H 136	14-1027	M	RF	11/8 sq. x 13/4 "	
60 H 137	14-1028*	M	Osc.	11/8 sq. x 13/4"	
60 H 171		N	Ant.		1 17
60 H 172	14-1057	N	RF	34 x1%"	1.47
60 H 173	14-1058*	N	Osc.	34 x1 1/8"	

Type 15-2866. Adjustable Wave Trap. Not illustrated. 456 kc. Shpg. wt., 4 oz. 1.18

### PHONO-OSCILLATOR COIL

Type 17-9373. For use in building either wireless or direct connected phono-osc. units. Permits record reproduction through any radio receiver. Knob adjustment allows selection to obtain clear frequency. Size: 3½x1½x1½%. Shgs. wt., 4 oz.

60 H 096. NET. 2.20

### SHORTWAVE AND **MULTIPLE-BAND COILS** BFO COIL

P Type 17-6753. Beat frequency oscillator coil. For receivers having 1F's between 290 and 650 kes. Supplies 'beat' note necessary to receive CW. 3x1/4x1/4". Wt., 6 oz.

2.94

### **ADJUSTABLE INDUCTANCE** SHORTWAVE COILS

Adjustable Hi-Q iron cores. Tune with 292 mmf condenser. Universal replacements. Freq. range: 1.7-5.3 mc. 34x134". Shpg. wt., 4 oz.

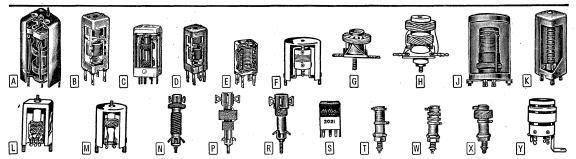
No.	Type	Coil type	EACH
60 H 146	14-1061	Antenna	1.76
60 H 147	14-1062	R.F.	
60 H 148	14-1063	Osc. (for 6SA7)	

### MULTIPLE-BAND COILS

Engineered for custom set builders, experimenters, etc. For use with 456 kc IF. Range: 530-1660 kc, 5.8-19 mc. Shpg. wt., 5 oz.

		Coiltype		EACH
60 H 149	14-2860	Antenna	1x1½x3¼″	2.94
60 H 124	14-2862	Osc.	1x1½x2¼″	

# J. W. Miller Coils and IF Transformers



### COILS AND IF TRANSFORMERS

### 455-KC IF TRANSFORMERS

Double-tuned air-core, universal input, in-terstage or output transformers. Universal wound primary and secondary tuned by mica insulated compression-type trimmers. RETMA (EIA) leads. Size, 13/2x13/2x23/2". Wt., 4 oz.

Stock	Mfr's.	Application	NET
No.	Type		EA.
60 H 739 60 H 740 60 H 741 60 H 512	512-C2 512-C3	Input IF Interstage IF Full-wave output IF Half-wave output IF	1.53

#### MINIATURE IF TRANSFORMERS

B Shell core IF transformers with built-in capacitors. Tunable powdered iron cores. \*Built-in diode filter capacitors. 34" sq. x 2". With mtg. hardware. Wt., 4 oz.

	No.	Туре	Freq.	Use	Net
60	H 727 H 728 H 787 H 716 H 717	12-C2 12-C6 12-C7	455 kc 455 kc	IF Input IF Output IF Output* Input (Batt.) Output (Batt.)	1.35 1.35 1.44 1.35
60	H 718 H 719 H 729 H 731 H 788	12-C10 12-H1 12-H2	455 kc 262 kc 262 kc	Input(AC-DC) Outpt.(AC-DC) IF Input IF Output IF Output	1.35 1.53 1.53 1.62
6ŏ	H 732 H 733 H 734	1464	10.7 mc		1.68 2.00 2.00
60	H 789 H 790 H 791	6203 6204 6205	4.5 mc	Input or Inter. Discriminator Ratio Detect.	2.00

### **MIDGET IF TRANSFORMERS**

Air-core mica trimmer tuned IF's. Excellent gain and selectivity. 6-32 spade-bolt mtg. 11/2x11/2x2". \*With filter. Wt., 4 oz.

No.	Туре	Freq'cy	Use	EA.
60 H 735	112-C1	455 kc		
60 H 736	112-C2	455 kc	Interstage	1 4-7
60 H 737	112-C3	455 kc	Interstage CT Output	1.4/
60 H 738	112-C4	455 kc	Output	
60 H 855	112-H1	262 kc		
60 H 856	112-H2	262 kc	Interstage	
60 H 857	112-H3	262 kc	Interstage CT Output	1.53
60 H 858	112-H4	262 kc	Output	
60 H 859	112-H6	262 kc	Output*	1.65

#### SUBMINIATURE 455KC IF TRANSFORMERS

D extremely small IF transformers with excellent gain and bandwidth characteristics. Ferrite-shell cores provide high efficiency. Pri. and sec. mica-trimmer tuned. Only ½" square by 1½" high. 3 oz. 60 H 860. Type 10-C1. Input. NET 60 H 861. Type 10-C2. Output.EA....1.53 Extremely small IF transformers with ex-

### TRANSISTOR IF TRANSFORMERS

Subminiature. A tiny 455-kc IF transperson former with cup-core construction for top performance. Only ½" square by ½" high. Primary impedance, 25,000 ohms; secondary impedance, \*600 ohms, †1000 ohms. Will match CK760 and CK761 transistors. Primary is tuned and tapped. Shpg. wt., 3 oz. 60 H 802. Type 9-C1\*. Input. NET 60 H 803. Type 9-C2†. Output. EA. 2.20

Miniature. High-quality 455-kc IF transformer for compact transistor receivers. Primary impedance, 25,000 ohms; secondary impedance, \$000 ohms, 11000 ohms. Will match CK670 and CK671 transistors. Primary is tuned and tapped. Shpg. wt., 3 oz. 60 H 896. Type 2041\*, Input. NET 60 H 973, Type 2042†, Output. EA....1.76

### BANDPASS COUPLING COIL

Negative mutual coupling coil for hi-fi TRF receivers 11/4x2". Shpg. wt., 4 oz. 79c

### MIDGET OSCILLATOR COILS

MINOR: OSCILLATOR COILS

[G] H Over 540-1600 with a 365 mmf capacitor. 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 return; for use with 6BE6 and similar mixers, and with separate oscillator and mixer. Size, 1x1". Shpg. wt., 4 oz.

	Type			
60 H 742	5480-K	175 kc	.001 mfd	
60 H 884	5480-H	262 kc	.0006 mfd	
60 H 743	5480-C	455 kc	.0004 mfd	720
60 H 885	5481-H	262 kc	.0006 mfd	
60 H 981	5481-K	175 kc	.001 mfd	!

#### **DELUXE BANK-WOUND COILS**

Shielded antenna RF and bandpass coils.

Cover 540-1740 kc with 365 mmf capacitor.
Two-bank Litz secondaries. High impedance primaries. 17/x5°. Shpg. wt., 4 oz.
60 H 783. Type 242-A. Ant. NeT.
60 H 784. Type 242-RF. RF. EACH 1.18
60 H 797. Type 242-BP. Bandpass. NET1.03

### MINIATURE RF COILS

Shielded iron-core coils for compact receivers. For 365 mmf tuning capacitors. Antenna and osc. coils have tapped sec. 3/4" sq. x 2". \*Requires series pad. Shpg. wt., 4 oz.

No.	Туре	Use	KC Range	EACH
60 H 798 60 H 785 60 H 786	X-121-A X-121-RF X-121-C	Antenna RF Osc.	140-425 140-425 *120 mmf	1.29
60 H 706 60 H 707 60 H 708	A-121-A A-121-RF A-121-C A-121-H	Antenna RF Osc. 455 kc	540-1700 540-1700 *400 mmf *600 mmf	1.09

### UNIVERSAL ADJUSTABLE **BROADCAST BAND COILS**

Compact, variable-inductance iron-core coils for replacement use. Shielded type. Use with 250-450 mmf variable capacitors. Oscillator coils have tapped secondary. 1½x 1½x2½². Av. shpg. wit., 5 oz. \*IF frequency.

No.	Type		KC Range	
60 H 748	73-A	Antenna	500-1800	1.68
60 H 749	73-RF	RF	500-1800	
60 H 752	73-OSC	Oscillator	*100-550	

### ANTENNA AND RF COILS

M Untuned. Broadly self-resonant from 540 to 1700 kc. No tuning capacitor needed. Can, 2½x1½, Shg. wt., 4 oz. Ant. NET . 1.32 60 H 758. Type 472-UR. RF. NET . . 1.62

### HIGH "Q" BROADCAST RF COILS

High-efficiency, unshielded, iron-core coils. For replacement purposes or for new receiver design. Adjustable core for tracking desired frequency range. Range indicated obtained using 365 mmf variable capacitor. Coils mount in ½" hole. \*Padder values shown are for 455 kc IF. Size: 3/x2". Shpg. wt., 4 oz.

No.	Type	Use	KC Range	EACH
60 H 862 60 H 863 60 H 864 60 H 865	A-5495-RF A-5495-C	RF Std. Osc.	550-1700 550-1700 *400 mmf *400 mmf	1.23

#### MINIATURE ADJUSTABLE RF COILS

Variable-inductance RF coils. Use with tuning capacitors of 250 to 450 max. capacity. Type 70-0SC coil has tapped secondary. 70 series installed self-supported. 71-OSC has 2-tap primary. Both track 100 to 550 kc IF. Max. size: ½x1½ high. Av. shpg. wt., 4 oz.

No.	Туре	Use	KC Range	NET
0 H 866	70-A	Antenna	540-1600	.88
0 H 867	70-RF	RF	540-1600	.88
OH868	70-0SC	Osc.	540-1600	.88
0 H 869	71-0SC	Osc.	500-1800	1.18

### TRANSISTOR OSCILLATOR COILS

R Type 2020. For use in a converter oscillator circuit using only one transistor. For 365 mmf tuning capacitor, 455 KC IF. 36x11/8. Shgs. wt., 30z. 1.32

#### SUBMINIATURE TRANSISTOR OSC. COIL

Type 2021. Shielded. For use in converter Sircuits using one transistor for oscillator, mixer. Use with 100 mmf variable capacitor. Size, \( \frac{8}{7} \), high x \( \frac{3}{7} \), sq. Shpg. wt., 2 oz. 1.62

### ADJUSTABLE CERAMIC RF INDUCTORS

Finductors

¶ W X Adjustable coils for the most exacting requirements. Wound on silicone-impregnated ceramic forms. Tuned by powdered-iron 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 ½" mtg. hole. Form size: ¾x1½6". Av. shpg. wt., 3 oz.

No.	Туре	Fig.	Microhenries	NET
60 H 982	4400 4403	····	Form only 0.9-1.6	.98
60 H 984	4404	Ť	1.5-3.2	1.29
60 H 985	4405	T	3.1-6.8	1.35
60 H 986	4406	T	6.7-15	1.41
60 H 987	4407	X	14.8-31	1.47
60 H 988	4408	X	30-69	1.50
60 H 989	4409		68-130	1.56
60 H 990	4410	X	126-250	1.56
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.  $\frac{3}{6}$  mtg. hole. Form size:  $\frac{1}{4}$ x $\frac{7}{8}$ . Av. shpg. wt., 3 oz.

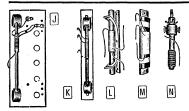
60 H 870 60 H 871 60 H 872 60 H 873	4500 4502 4503 4504	T T T	Form only 1.0-1.6 1.6-2.8 2.8-5	.88 1.18 1.23
60 H 874 60 H 875 60 H 876 60 H 877	4505 4506 4507 4508	T T W W	5-9 9-16 16-24 24-35	1.35 1.41 1.47
60 H 878 60 H 879 60 H 880 60 H 881	4509 4511 4512 4513 4514	W X X X	35-60 60-120 110-200 190-330 320-500	1.47 1.47 1.53 1.53

Subminiature. For ultra-compact equipment. 11/64" mtg. hole. Form: 3/16x5/8". 3 oz.

No. Type Microhenries NET Fig. 60 H 995 60 H 996 60 H 997 60 H 998 4300 4301 4302 Form only 0.17-0.27 0.27-0.41 0.40-0.65 .88 1.18 1.18 1.23 T T T 4303 60 H 999 60 H 927 60 H 928 60 H 929 4304 4305 4306 4307 0.64-0.95 0.94-1.55 1.5-2.57 2.5-4.40 1.29 1.32 1.35 1.41 TTTT 4.3-7.15 7.1-12.5 12.4-20.3 20.1-32.8 4308 4309 4310 4311 60 H 930 60 H 931 60 H 932 60 H 933 1.41 1.47 1.47 1.47 TXXX 4312 4313 4314 4315 32,5-51.5 51-102 101-180 178-300 60 H 934 60 H 941 60 H 942 60 H 943 1.47 1.53 1.53 1.53

### TYPE 20 ECONOMY TRF COILS

# J. W. Miller Components



## LOOP ANTENNAS FERRITE ROD ANTENNA

Type 705A. For universal replacement use. Uses a highly efficient design for outstanding performance. Improves reception of distant stations. Extremely easy to adjust. Simply slide the coil along the ferrite rod to peak the antenna. Non-directional. Replaces any loop artenna. 3½x9½". Shpg. wt., 5 oz. 1.62

TRANSISTOR LOOP ANTENNA
Type 2000. Has fixed inductance loop;
picks up adequate signal to the first stage.
Inductor is tapped to match the 600 ohm input
impedance of the transistor. Frequency range
is 540-1650 kc when used with a 365 mm variable capacitor. 1/4x9/2". Shpg. wt., 3 oz.
60 H 894. NET.

#### TRANSISTOR ANTENNA RODS

Type 2001. Matches 600 ohm input imped-
Type 2001. Matches 600 ohm input impedance. Inductance, 240 $\mu$ h. Tunes with 365
ance. Inductance, 210 pm. 1 times with
mmf. 3/4 x 3 3/4". Shpg. wt., 4 oz.
60 H 976. NET

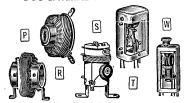
# STRIP TRANSISTOR ANTENNA RODS M Type 2004. Matches 600 ohm input impedance. Inductance, 240 μh. Tunes with 365 mmf. ¼x¾x¾x¾". Shpg. wt., 4 oz. 1.47 60 H 978. NET. 1.47

Type 2005. As above, but 700 microhenries. Use with 125 mmf capacitor. 60 H 979. NET......1.47

# SUB-MINIATURE ANTENNA ROD

N Cool tunes with 500 mmf. Mounts in ½% hole, or bracket supplied. Matches 600 ohm input. Size. ½x2½°. Shpg. wt., 3 oz. 88c 60 H 980. NET. 88c

#### **DUO-LATERAL FILTER CHOKES**



Effective line filters. Duo-lateral wound for 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. 827 is 17%x 13/4" wound on bakelite form. 7826 and 7827 are 1/2x4", wound on ceramic forms.

	No.	Type	Amps	Ohms	Oz.	Mh	NET
70	H 185	7825	2	.7	5	.600	1.18
60	H 886	7826	- 5	.28	10	.570	2.85
60	H 887	7827	10	.15	16	.370	3.20

CENTER TAPPED CHOKE

R Duo-lateral wound, single-section RF chokes. Ceramic dowels. 20 mh. 100 ohms, 125 ma. 1½x5½" high. Shpg. wt., 4 oz. 7lc

### CAPACITY-OPERATED RELAY COIL

For alarm systems, window displays, etc. With diagram.  $\frac{7}{8}x^2\frac{1}{4}$  high. Wt.,  $\frac{4}{9}$  oz. 1.71

# BEAT FREQUENCY OSCILLATOR COIL

# 100 KC HI-Q IF TRANSFORMER

W Type 1890-P1. For input or interstage. 31/4x13/4x17/4". Shpg. wt., 4 oz. 60 H 822. NET.,,,,5,00















# TV COILS, INDUCTORS & TRANSFORMERS

A complete selection of highest-quality components specifically designed to meet the rigid requirements of television sets, scopes, and related electronic equipment.

Ideal for both original equipment and re-placement use. All units are manufactured from the finest materials—your absolute assurance of dependable service.

# SOUND IF TRANSFORMERS

Permeability tuned sound IF transformers Type 6190 and Type 6191 for 21.25 mc in television receiver sets with separate picture and sound IF channels. Type 1466 is for 4.5 mc in sets with inter-carrier system. Provide high gain and adequate 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 ½x½x½/x² high. Type 1466 and Type 1470 have an over-all size of ½x1½x2½/x² high. Shpg. wt., 5 oz.

Stock	Mfr's	Description	NET
No.	Type		EACH
60 H 762 60 H 763 60 H 764 60 H 705	6191 1466	1st IF sound 2nd IF sound Input or Interstage Sound Trap, 4.5mc	1.41

#### SOUND DETECTOR AND OSCILLATOR **TRANSFORMERS**

RANSFORMERS

Quality TV components. Types 6192 and 6184 for TV receivers with separate 21.25 mc sound IF channel. Types 1467 and 1468 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/sx11/sx21/s\*, Type 1467 and Type 1468, 11/sx11/sx21/s\*, Type 6182 and Type 6183, 11/sx11/sx21/s\*. Shps. wt., 5 oz.

Stock	Mfr's	Description	NET
No.	Type		EACH
60 H 765	6192	Discriminator	1.76
60 H 766	6184	Ratio detector	1.94
60 H 724	6182	Hor. Osc.	1.32
60 H 799	6183	Hor. Osc.	1.62
60 H 767	1467	Discriminator	1.76
60 H 768	1468	Ratio detector	1.94

### SYNC STABILIZER (RINGING) COIL

 $\fbox{C}$  Type 6210. Has bakelite form with %'' mounting clip. 16-42 mh range. Size, 34x 21/2'' . Shps. wt., 2 oz.

#### HORIZONTAL LINEARITY AND WIDTH CONTROL

D Iron-core variable inductance coils for horizontal sweep circuits. \*Have AGC winding, Mounting clip fits 3/6,\* hole. 6300 series are 1/x21/4.\* long on phenolic forms. 6100 series are 4/x21/4.\* long on bakelite forms. Sh

Stock	Mfr's	Millihenries	NET
No.	Type		EA.
60 H 770	6195	.185- 1.000	.73
60 H 771	6196	.054- 0.245	.65
60 H 897	6196-A	.05450 tapped	
60 H 772	6197	.550- 2.300 tapped	
60 H 773	6198	.170- 0.610	
60 H 774	6199-A	1.300- 4.100 tapped	
60 H 775	6199-B 6313 6314	.500- 1.700 .5 - 5 2.0 -18	.73
60 H 827 60 H 828	6315	4.0 -30	1.03
60 H 829 60 H 830	6316*	4.0 -30 3.2 - 9	1.32
60 H 831	6318	.2 - 3	.88
60 H 832	6319	15.0 -60	1.32
60 H 833	6320	.2 - 3 tapped	.88
60 H 834	6321	1.0 - 5 tapped	.88
60 H 835	6322	1.5 -10	
60 H 836	6323	.5 - 5 tapped	1.32
60 H 898	6324	60 -130 tapped	

#### HIGH VOLTAGE RF POWER SUPPLY TRANSFORMERS

Type 4525. RF power supply transformer for TV receivers, scopes. Up to 5,000 v. DC. Size, 334114". Wt., 4 oz. 4.85

Type 4526. Up to 10,000 v. DC. (30,000 in rectifier-tripler circuit). Size, 6x21/4" diameter. Shpg. wt., 4 oz. 8.08

#### 20 MC RANGE PICTURE IF **TRANSFORMERS**

Popular shielded and unshielded permeability tuned TV IF transformers, single and brillar wound. Type 6247 has single tuned circuit and cathode trap. Type 6248 employs single vinding. Types 6251 and 6252 are shielded. Unshielded coils have mounting clip for 36. hole. Maximum dimensions of units listed: 34. O.D. by 21½ long. Type 6245, Type 6246, Type 6247 and Type 6249 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.	Mfr's Type	IF Mc	Trap Mc	NET EA.
60 H 840 60 H 841 60 H 842 60 H 843 60 H 844	6245 6246 6247 6248 6249	25.5 22.0 21.25 24.5 21-25	27.25 21.20 	1.47 1.47 1.47 .88 .88
60 H 845 60 H 846 60 H 847 60 H 848 60 H 849	6250 6251 6252 6253 6254	25-29 21-25 25-29 21-30 22-32	20-23 24-29	.88 1.32 1.32 1.62 1.62

# HORIZONTAL OSCILLATOR AFC DISCRIMINATOR TRANSFORMER

Type 6194. For horizontal oscillator circuits using "synchro-lock" automatic frequency control system. Two coupled permeability tuned windings; one, tapped for use in horizontal blocking oscillator tank circuit; the second, center-tapped for phase discrimination. Housed in aluminum shield with adjustment for horizontal frequency at top, and adjustment for horizontal phase at bottom. 6-32 spade bolt mounting. Over-all size: 1\(\frac{1}{2}\text{ex1}\)/\(\fra

#### **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, 74x9½r diameter; all other types, ¾x¾e″ diameter. Av. shpg. wt., 2 oz.

Stock No.	Mfr's Type	μhys.	Shunt	NET EACH
60 H 792	6172	73	None	35c
60 H 889	6153	120	None	
60 H 793	6173	250	22 K	
60 H 794	6174	500	None	
60 H 776	6175	0.8	None	29c
60 H 888	6152	20	None	
60 H 777	6176	36	None	
60 H 778	6177	93	None	35c
60 H 779	6178	120	22 K	
60 H 780	6179	180	39 K	
60 H 781	6180	180	None	
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 ex-tensively with high-gain RF and audio ampli-fier tubes to minimize microphonics, and pre-

vent oscillation, hum pickup, etc. Also used to shield oscillator and converter tubes to avoid radiation. Tube caps provide positive, dependable contact. Av. shpg. wt., per pkg., 3 oz.

Stock No.	Fig.	Description and Application	Quantity Per Pkg.	NET Per Pkg.
42H5I0 42H5II	A	Goat G1332-3 tube shield for GT tubes, 25/16" high, 1/8" hole. Goat G1332-5A. Same as 42 H 510, but with closed top.	4	25¢ 25¢
42H5I3 42H5I2	C	H. H. Smith 537 metal tube grid shield. Slot for grid lead. Goat G1700 tube shield for miniature T5½ with G1710-B base865"x1%".	2 3	24¢ 14¢
42H514 42H515 42H507 42H509	E E F	National Type 24. For standard tubes, %" dia. grid caps. National Type 8. For octal tubes, %" diameter grid caps. Coat G1222K-5 tube shield for GT types. 1½" dia., 22542" high. Goat G1222L-4 tube shield for loktal type tubes. 13%" dia., 22%;" high.	5 5 4	20¢ 20¢ 14¢ 13¢
42 H 508		(Not illustrated). Goat G1004-2 ground clip for grounding shields on octal tubes.	10	ll¢
42 H 506		(Not illustrated). Goat G1307-2 double clip for octal base tubes (fits on tube socket).	5	<b>7</b> ¢

#### TRANSMITTING TUBE CAPS

An excellent selection of plate and grid caps for transmitting tubes. Listing includes heat-dissipating types; fins provide large metal sur-face area for rapid radiation of heat; have machine screw for secure connection. Millen

36011 cap is for mobile or industrial use where a tighter-than-normal grip is required; self-locking, with snap-button release. \*For wire leads. All others are cap type. Av. shpg. wt.,

Stock No.	Fig.	Description and Application	Quantity Per Pkg.	NET Per Pkg.
42H 093*	G	Eimac HR-3 heat dissipating cap for 35T, 250TH, etc070" hole.	1	.60
42 H 096	G	Eimac HR-6 heat dissipating cap for 4-250A, 304TH, etc359" hole.	1	l .ĕŏ
73 H 007	G	Bud TC-487 heat dissipating cap for UH50, HK24, 304B, 829B, 832A, 834.	,	.67
73 H 000*	G	Bud TC-488 heat dissipating cap for HK24, 3C24, 24G, 25T, etc052" hole.	1 1	.67
73 H 001*	Ğ	Bud TC-489 heat dissipating cap for 35T, HK54, etc072" hole.	î	.67
73 H 002	G	Bud TC-1920 heat dissipating cap for 100T, 807, 4-125A, 2-150D, 250TH,		
73 H 003	G	4-250A, 6146, 1625, 4D32, 807W, 1B3GT, etc375" hole.		.67
73 H 003	٩	Bud TC-1921 heat dissipating cap for 866, T125, HF100, 450TH, 750TH, 809, 811, 812, 813, 828, 866, etc570" hole.	1 .	.78
73 H 004	G	Bud TC-1924 heat dissipating cap for HK57, 152TH, etc125" hole.	1	.71
73 H 005	Ğ	Bud TC-1925 heat dissipating cap for 304TH, 304TL, etc125" hole.	î	.73
73 H 006	Ğ	Bud TC-1926 heat dissipating cap for WL468, WL463, WL460, HF200,	- 1	., ,
	_	HF201, HF300810" hole.	1	1.03
72 H 082	H	Millen 36011 industrial snap-action plate cap. %6".	1	.69
71 H 246	ĵ	National SPP-9 ceramic-insulated grid and plate cap. %16".	1	.24
42H518	Ē	National Type 12 grid and plate cap. 9/16".	3	.2 i
72 H 069	K	Millen Type 36002 steatite tube cap, 3/8".	1	.24
72 H 140	K	Millen Type 36004 steatite tube cap, ¼".	1	.24
72H 068	K	Millen 36001 steatite plate cap for 866, etc. %6".	1	.24

# JFD PISTON-TYPE VARIABLE TRIMMER CAPACITORS











Selection of precision-made glass and quartz trimmer capacitors with spring-loaded piston. Screwdriver adjustment for precision setting. 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 155° C.; quartz dielectric for temperatures up to 150° C. §Mounts in .257° round or "D" hole, 1,192° "D" hole. ‡Requires 2 hole mount. \*Requires 4 hole mount. With mounting hardware. Shpg. wt., 5 oz.

Standard Panel-Mount Series. Rugged-constructed. Low-loss, linear tuning. Con-tain a stainless steel spring and nut that provide compensation for backlash and thread wear.

-	Stock No.	Type§	Mmf	1-24, EA.	25-99, EA.
-	16 H 005 16 H 000 16 H 001 16 H 006	VC2 VC5 VC11 VC11A VC12	0.7-4.5 0.5-5 1-10 1-10 10-20	3.30 3.90 4.50 4.50 6.00	2.97 3.51 4.05 4.05 5.40
	16H 008 16H 009 16H 010 16H 011	VC1G VC3G VC4G VC5G VC6GA	0.5-8 0.7-8 1-18 1-18 1-18	1.95 1.65 1.95 2.25 1.80	1.75 1.48 1.75 2.02 1.62
-	16H013 16H014 16H002 16H015 16H016	VC6GC VC7G VC11G VC11GRA VC11GRB	1-18 2-30 0.7-12 0.7-10 0.7-10	1.95 2.25 2.25 2.10 1.80	1.75 2.02 2.02 1.89 1.62
_	16 H 017 16 H 018 16 H 004 16 H 019 16 H 020	VC11GRC VC13GA VC30G VC3GI VC6GI	0.7-10 1-10 1-30 0.7-9 0.8-17	2.10 1.20 2.40 1.80 1.95	1.89 1.08 2.16 1.62 1.75

Panel-Mount Series Miniature Panel-Would Series. Scoping tuning assembly saves length. Has

Stock No.	Type‡	Mmf	1-24, EA.	25-99, EA
16H 021	VC20G	0.8-8.5	2.70	2.43
16H 022	VC21G	0.8-4.5	2.70	2.43
16H 023	VC22G	0.7-12	3.30	2.97
16H 024	VC23G	0.8-18	3.45	3.10
16H 025	VC24G	1-30	3.90	3.51

push-pull RF circuits, and similar networks.								
Stock No.	Type§	Mmf Max.	Min.	1-24, EA.	25-99,EA			
16 H 064 16 H 065 16 H 066	17G	8.5-8.5	0.5-0.5 0.6-0.6 0.7-0.7	2.70	2.16 2.43 2.70			
16 H 067 16 H 068 16 H 079 16 H 080	81 82	3.2-3.2 5.5-5.5	0.3-0.3 0.4-0.4 0.5-0.5 4.8-4.8	4.50	3.51 4.05 4.59 6.75			
- MI T								

Miniature Trimmer Series. For automatic insertion and dip soldering techniques.

Stock No. | Type# | Mmf | 1-24, EA. | 25-99, EA.

16H081	VC9G	0.8-8.5	2.40	2.16
16H082	VC10G	0.8-4.5	2.40	2.16
16H083	VC31G	0.8-12	3.00	2.90
16H 084	VC32G	0.8-18	3.15	2.83
16H 090	VC42G	1-21	3.30	2,97
16H 091	VC43G	0.8-30	3.60	3.24

R Miniature Printed Circuit Board Series.
Four wire leads for more shock resistant

Type*	Mmf	1-24, EA.	25-99, EA
VC9GW	0.8-8.5	2.40	2.16
	0.8-4.5	2.40	2.16
		3.00	2.70
			2.83
			2.97
		VC9GW 0.8-8.5 VC10GW 0.8-4.5 VC31GW 0.8-12 VC32GW 0.8-18 VC42GW 1-21	VC9GW 0.8-8.5 2.40 VC10GW 0.8-4.5 2.40 VC31GW 0.8-12 3.00 VC32GW 0.8-18 3.15 VC42GW 1-21 3.30

Write for quantity prices on 100 or more JFD capacitors

#### J. W. MILLER PRINTED CIRCUIT **RF CHOKES**



RF CHOKES
High-quality, air-core RF chokes
for use on printed circuit boards.
Available in a wide range of
inductances for transmitters,
receivers, test equipment, etc. inductances for transmitters, receivers, test equipment, etc. Printed-circuit type mounting lugs for quick, easy soldering into circuit. Coil forms are ½" long. Av. shpg. wt., 2 oz.

Stock No. | Type: Mh | Ohms | Ma | EACH 60 H 610 60 H 611 60 H 612 60 H 613 60 H 614 970 971 972 973 974 17.2 19.8 38¢ 38¢ 38¢ 41¢ 44¢ 21.8 24.7 27.4 125 125 125 60 H 615 60 H 616 60 H 617 60 H 618 60 H 619 125 125 44¢ 44¢ 44¢ 44¢ 44¢ 975 976 31.2 34.8 34.8 38.9 43.2 48 7/8" 29/32" 979 5.6 125 60 H 628 60 H 629 60 H 630 60 H 631 60 H 632 47¢ 47¢ 50¢ 50¢ 53¢ 980 6.8 8.2 53.6 60.8 125 100 100 100 100 68 77 87.7 29/32" 15/16" 12 15 984 60 H 633 60 H 634 60 H 635 60 H 636 60 H 637 100 985 18 97 9 22 27 33 39 75 75 75 75 988 989 209 231 i1/16" 60 H 638 60 H 639 60 H 641 60 H 642 263 292 326 29/32" 15/16" 1" 68¢ 71¢ 76¢ 82¢ 88¢ 990 47 50 50 50 50 993 82 100 368 60 H 643 994 394

#### AMPHENOL COIL FORMS



Low-loss, miniature transparent polystyrene coil forms. Excellent for reviewer, low-power transmitters, VHF equipment, etc. Plug-in type. The rigidly anchored prongs are spaced to fit Amphenol Series 785 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.	Mfr's Type	Description	Size
71 H 723 71 H 711 71 H 713 71 H 714 71 H 724	24-4 P 24-5 P	5-Prong Min. 6-Prong Min. 4-Prong Std. 5-Prong Std. 6-Prong Std.	19/16×13/4" 19/16×13/4" 21/4×11/4" 21/4×11/4" 21/4×11/4"

1-99, NET EACH. 24¢ 100-249, EACH. 20¢ 250-up, EACH. 18¢

### CTC SLUG-TUNED COILS

For broadband RF amplifiers, TV traps, HF circuits, etc. Bodies of LS3, LSM and LS4 are HF paper base phenolic; PLS5 and PLS6 are ceramic. LS3 has larger slug, greater bandpass. LS4 for larger inductance and Q. Tunable from either end; locking nut. LSM, 2½x½" dia.; LS4, 2x½" dia.; LS3, 1½xx½" dia.; PLS5, 1½xx½" dia.; PLS6, 2½x½"  dia.; PLS6, 2½x½½; dia.; PLS6, 2½x½½; dia.; PLS6, 2½x½½; dia.; PLS6, 2½x½½; dia.; PLS6, 2½x½½; dia.; PLS6, 2½x½½; dia.; PLS6, 2½x½½; dia.; PLS6, 2½x½½; dia.; PLS6, 2½x½½; dia.; PLS6, 2½x½½; dia.; PLS6, 2½x½½; dia.; PLS6, 2½x½½; dia.; PLS6, 2½x½½; dia.; PLS6, 2½x½½; dia.; PLS6, 2½x½½; dia.; PLS6, 2½x½; dia.; PLS6, prices on larger quantities.

Stock	Mfr's	D	NET	EACH
No.	Type	Description	1-49	50-249
72H 294 72H 295 72H 296 72H 297 72H 298	LS3 LS3 LS3 LS3 LS3	Coil Form 1 Mc Coil 5 Mc Coil 10 Mc Coil 30 Mc Coil	52¢ 78¢ 74¢ 71¢ 70¢	44¢ 75¢ 71¢ 69¢ 68¢
72 H 299 72 H 282 72 H 283 72 H 284 72 H 293	LS3 LSM LSM LSM LSM	60 Mc Coil Coil Form 1 Mc Coil 5 Mc Coil 10 Mc Coil	70¢ 52¢ 78¢ 74¢ 71¢	68¢ 44¢ 75¢ 71¢ 69¢
72 H 286 72 H 287 72 H 288 72 H 289 72 H 292	LSM LSM LS4 PLS5 PLS6	30 Mc Coil 60 Mc Coil Coil Form Coil Form Coil Form	70¢ 70¢ 68¢ 61¢ 56¢	68¢ 68¢ 58¢ 49¢

### **AMPEREX VACUUM CAPACITORS**



For industrial RF applica-tions. Provide extremely high stability in critical by-

pass, coupling and neutralizing dictuits. Can be used as plate tank capacitor. Break-down voltage of all capacitors rated at 32 KV maximum. Size, 2½x6½°. 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

# Millen Components

#### MINIATURIZED COUPLINGS

For limited space use. M003 is brass. M006 (illustrated) is universal joint style made of nickel plated brass with steatite insulation and spring fingers. M008 is an insulated coupling with brass inserts. 39003 is solid brass for ¼" shafts; all others are for ½" shafts. Av. shpg. wt., 2 oz.



Stock No.	Type	Description	NET
72 H 172 72 H 170 72 H 171 72 H 090	M 003 M 006 M 008 39003		75¢ 51¢

#### FLEXIBLE COUPLINGS

Popular 39000 series of flexible couplings. Designed to provide higher flexibility, no backlash, high break-down voltages, smaller diameter and accurate alignment. 39006 for "out-of-line" shaft operation. 39016 has insulating barrier diaphragm.
For 1/4" shafts; \*\*/\*\*, shaft. Av. wt., 2 oz.



Stock No.			EA.
72 H 176 72 H 054 72 H 094	39002 39005 39006	Insulated universal joint Insulated Universal joint Insulated slide action Insulated barrier *Miniature of 39016	48c

#### 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 for smooth operation and minimum backlash. \( \lambda'' \) left and right-hand shafts. Size, \( 3x^2x^2\) \( 2x^2 \) Shoz. wt. 6 oz. Type A012 Right-Angle Drive. Compact single-hole bushing mount type drive mechanism. Has 1-to-1 ratio. 1/2 let and right-hand drives can be used together. 11/4x11/4x3/6". Shpg. wt. 4 oz. 72 H 174. NET. 3.90

MOLDED COIL FORMS Type 45004. Molded-mica, phenolic base type coil forms. Four-prong type. For shortwave receivers and low-power transmitters. Size: 1' diameter; 13'32' winding length; 2'86' overall. Shps. wt., 2 oz. 5lc 

### **INSTRUMENT DIALS**

P Type 10007. Handsome dial with 0-10 clockwise scale spread over 180°. Lends professional apearance to test





R Type 10008. Has a clockwise dial scale with 0-100 calibration, spread over 180°. For instruments, transmitters, etc. Black knob. Fits ¼" shaft. 3½" dia. Shgs. wt., 4 oz. 2.40

#### MINIATURE KNOBS



S



T





Black plastic knobs with brass inserts for ½", dia. shafts. Overall ht.: A006 and A007, ½"; A018 and A019, 5%", Shog, wt., 4 oz.

No.	Type	Fig.	Size	NET
72 H 271 72 H 272 72 H 273 72 H 274	A007 A018	TW	3/4" dial dia. 5/8" dial dia. 3/8" dial dia. 1/4" dial dia.	42¢ 42¢ 39¢ 36¢



# "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 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 and plugs provide a limited 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.

Stock No.	Mfr's Type	Fig.	Description	Wt., Oz.	NET EACH
72 H 085	10012	H	Right Angle Drive	5	5.00
72 H 087	10050	K	Dial Lock. Shaft Lock, for 3/8" Bushing; 1/4" shafts Shaft Lock, for 1/4" Bushing; 1/8" shafts Shoft Lock with Knurled Nut.	4	.54
72 H 099 72 H 668	10061	F	Shaft Lock, for 3/8" Bushing; 1/4" shafts	4	.45
72 H 668	A061	F	Shaft Lock, for 1/4" Bushing; 1/8" shafts	4	.39
72 H 088	10062	G	Shart Bock with Khuned Nut	4	.54
72 H 036	37001	J	High Voltage Terminal and Thru-Bushing, Black	3	.45
72 H 037	37001	J.	High Voltage Terminal and Thru-Bushing, Red	3 3 3	.48
72 H 260	40305 41305	*	5-Prong Steatite Coil Plug	3	.69
72 H 261 72 H 057	37202	*	5-Prong Steatite Jack Bar for above Bakelite Plates (2) for 37222 below, Black	2	.84
72 H 138	37212	*	Double Banana Plug, Black	3	.78
72 H 059	37222 37302	D *	Binding Post, for 37212 above		30
72 H 163	37304	*	Steatite Terminal Strip, 2 Terminals	3 4	1 :96
72 H 165 72 H 166	37305	*	Steatite Terminal Strip, 2 Terminals Steatite Terminal Strip, 4 Terminals Steatite Terminal Strip, 5 Terminals	3	1.14
	37306	*		5	1.23
72 H 167 72 H 130	69041	Ĉ	Steatite Terminal Strip, 6 Terminals		1.23
/2 m 130	09041		Slug	3	.96
72 H 131	69043	A	Slug. Ceramic Slug-tuned Coil Form, 1/4 x 3/8", Iron Slug	3	.84
72 H 084	69045	B	Ceramic Slug-tuned Coil Form, 1/2x11/16", Copper	•	1
		_	Slug	3	1.05
72 H 132	69046	В	Slug		
			Slug	3	1.05
72 H 133	69048	*	Ceramic Slug-tuned Coil Form, 1/4 x 3/8", Iron Slug	3	1.05
72 H 669	69051	E	Ceramic Slug-tuned Coil Form, 3/8x3/8", Copper	_	
		_	Slug	3	.87
72 H 670	69052	E	Ceramic Slug-tuned Coil Form, 3/8x3/8", Iron Slug	3	.87
72 H 671	69055	E	Ceramic Slug-tuned Coil Form, ½x1½", Copper	2	1.05
72 H 672	69056	E	Slug Ceramic Slug-tuned Coil Form, ½×1½", Iron Slug	3	1.05
	69057	E			1.03
72 H 673	09057	L E	Ceramic Slug-tuned Coil Form, 1/4 x 5/8", Copper	2	.87
72 H 674	69058	E	Slug Ceramic Slug-tuned Coil Form, 1/4x5/8", Iron Slug	3	:87
72 H 674 72 H 675	69061	Ē	Ceramic Slug-tuned Coil Form, 3/8x3/4". Copper		
0/3	1 5,001	1	Slug	3	.90
72 H 676	69062	E	Ceramic Slug-tuned Coil Form, 3/8x3/4", Iron Slug	3	.90
72 H 150	80042	L	Nicoloi Shield for 2AP1 and 2BP1 2" CR Tubes	10	6.63
72 H 151	80043	L	Nicoloi Shield for use with either 3AP1 or 3BP1		
		_	3" CR Tubes	10	7.62
72 H 177 72 H 153	80055	*	Nicoloi Shield for 5CP1	12	13.41
72 H 153	80072	*	Bezel, Cushion and Filter for 2" CR Tube	4	1.80
72 H 154 72 H 155	80073	*	Bezel, Cushion and Filter for 3" CR Tube	5	4.35
/2 H  55	80075	, •	Bezel, Cushion and Filter for 5" CR Tube	7	8.40

#### VARIABLE CAPACITORS

Series 20000 Utra-Midgets.
Top-quality, steatite-insulated variables. All are single-bearing type with .015° air gap (rated 600 volts peak), except \*double-bearing type with .045° air gap (rated 1400 volts peak). All have ½" round shafts, 1" long. ¾" -32 thread mounting bushing. Au - bear with 500 per 100 per



ing.	v. sh	pg. wt.,	5 oz.			-
	ock lo.	Mfr's Type	Max. Mmf	Min. Mmf	Overall Length	NET EACH
72 H 72 H 72 H	030 044 032 033 045	20015 20025 20050 20100 21935*	20 28.5 56 111 39.5	2.8 3.0 3.5 5.2 6.7	12 1/32" 21/32" 25/32" 22 1/32" 39/32"	1.77 1.86 2.04 2.43 4.08

#### 33087 TUBE BASE CLAMPS

Sturdily made, polished spring steel tube base clamps. Hold tubes in sockets and protect against damage from sudden jarring and shock. Excellent for use in oabile suite.



cellent for use in mobile equipment and for reducing vibration of oscillator tubes. 2 oz. Stock No. Туре Diameter EACH 72 H | 78 72 H | 79 72 H | 80 33087A 33087B 33087C 1.125° 1.165° 1.250° 1.275" 1.375" 1.156" 1.000" 36c 72 H 181 72 H 182 72 H 183 72 H 184 33087D 33087E 33087F 33087I





N

**MULTI-SCALE DIALS** 

N Type 10039 Midget Panel Dial. Economy model. Excellent for small transmitters, receivers and measurement equipment. Drive ratio is 8 to 1. Totally self-contained mechanism eliminates back-of-panel interference; quick, easy installation. Compact design. Comfortable, finger-grip knob. Has 5 blank scales for calibration and one 0-100 logging scale. Attractive black finish. Size, 4x3/4". Shpg. wt., 13 oz. 72 H 050. NET. 3.24

# CALIBRATED AND UNCALIBRATED DIALS







ACN

#### VERNIER DIALS FOR INDIVIDUAL CALIBRATION

Popular blank dials featuring famous "Velvet Vernier" with 5:1 drive ratio. Pointers have centered hairlines and pinholes for accurate calibration of each scale. Black-wrinkle clear-view plastic windows. With instructions, extra scales, hardware, and hub for 1/4" shafts.

Type ACN. The famous original of this type with smart styling. Large-size vernier dial for easy direct calibration and high legibility. Knob has bright chrome insert. 5' high, 7',4'' wide. Shpg. wt., 1',4 lbs. 7.04

Type MCN. Small size vernier dial. Similar to above but not illuminated. Only  $23_4''$  high,  $37_4''$  wide. Perfect for mobile gear and other small units. Mechanism extends  $1_4''$  below frame. Shpg. wt., 10 oz. 3.99

#### CALIBRATED DIALS

Famous National dials for smooth performance and dependability. Recommended 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 Type	Fig.	Ratio	Scale	Dia.	Wt. Oz.	NET EACH
71 H 072 71 H 073 71 H 076 71 H 077 71 H 078	AM-2 AM-3 AM-4 AM-5 AM-6		5:1 5:1 5:1 5:1 5:1	0-100; 180° 100-0; 180° 150-0; 270° 200-0; 360° 0-150; 270°	3" 3" 3" 3"	10 10 10 10 10	3.93 3.93 3.93 3.93
71 H 067 71 H 068 71 H 069 71 H 063 71 H 091 71 H 058	BM-1 BM-2 BM-5 N-5 K HRS-3§	A A .:. D	Fixed Fixed Fixed 5:1	0-100-0; 160° 0-100; 180° 200-0; 360° 200-0; 360° 0-100; 180° 0-10; 300°	3" 3" 4" 31/2" 17/16"	10 10 10 12 12 12	4.88 4.64 4.64 7.50 1.73 .58
71 H 059 71 H 218 71 H 219 71 H 082 71 H 070	HRS-3† HRS-4§ HRS-4† O R	D D B E	Fixed Fixed Fixed Fixed	0-10; 300° 1-line; 300° 1-line; 300° 0-100; 180° 0-10; 180°	1½6" 1½6" 1½6" 3½" 15%"	2 2 2 4 2	.58 .58 .58 2.85 .69

Type ODD Pinch Drive Mechanism. For Type O dial above. Same as used on "K" dial (Fig. C). With knob. 1 1/6 x 3/6". Shpg. wt., 2 oz. 48c



#### **EQUIPMENT DESIGN COMPONENTS**

Stock No.	Mfr's Type	Fig.	Description	1-24, <b>EA</b> CH	25 or More, EACH
71 H 167 71 H 166 71 H 173 71 H 176 71 H 157	FWA FWC FWH FWJ FWT	K	Binding Post. Takes wire, lugs, etc., Insulator for FWA. Mica-Bakelite. (Pr.) Terminal Strip—Binding Post Terminal Strip—As FWH, for jacks only Plug for FWH and FWJ terminal strips	.42 .60 I.10 .87 I.56	.37 .54 .99 .78 1.40
71 H 208 71 H 209 71 H 204 71 H 086 71 H 071	HR HR HRB HRK HRP-P	F H 	Knob, Black, HRS Type; white dot. Knob, Gray; same as above. Lever Knob; bright zinc alloy. Knob, Black. 23% dia. Set screw; for 1/4". Bar knob with pointer. 1/4x1/4".	.35 .35 .52 .66 .28	.31 .31 .47 .59 .24
71 H 056 71 H 057 71 H 242 71 H 199 71 H 116	HRT HRT CFA OSR TPB	G J 	Knob, Black; chrome trim. 2½" dia. Knob, Gray; chrome trim. As above. Chart frame; ½6" steel; 2½x3½". 100 kc. Osc. Coil. For superregens. Threaded Polystyrene Bushing.	.86 .86 .40 2.07	.77 .77 .36 I.86
7   H 228 7   H 229 7   H 24   7   H 239 7   H 122	XR-50 XR-60 XR-62 XR-91 XS-6	M N N N	Coil Form, iron-slug tuned. Mica-bakelite Coil Form, iron-slug tuned. Ceramic. Coil Form, iron-slug tuned. Ceramic. Coil Form, iron-slug tuned. Ceramic. Steatite Bushing.	1.04 1.32 1.32 .87 .14	.93 1.19 1.19 .78 .13

### TRANSMITTING CAPACITORS







#### TYPE TMS-SINGLE STATOR\*

	tock No.	Mfr's Type	Max. Mmf		NET
7	H 001 H 002	TM S-100 TM S-150 TM S-250 TM S-300	100 150 250 300	9.5 11 13.5 15	5.48 6.02 7.01 6.81

## TYPE TMS-DOUBLE STATOR\*

# 0|5|TMC-50 0|6|TMC-100 0|7|TMC-150 0|8|TMC-250

TYPE TMC-DOUBLE STAT	OR§
71 H 020 TMC-50D   50-50   9	-9   5.64
71 H 021 TMC-100D 100-100 11 71 H 022 TMC-200D 200-200 18.5	-11     1.6   -18.5   8.66

Compact, rigid construction. Steatite insulation. Provisions for panel, chassis or standoff insulator mounting. Air Gap and Peak Voltage: TMS types, 026', 1000 volts; TMC types, 0.77", 3000 volts; ST types, 0.26', 1000 volts except, 018", 600 volts. Lengths: \*3°; †3" to 6"; §45%" to 9\%". 180° rotation. Wt., 1 lb. TYPE ST-SINGLE BEARING\*

Stock	Mfr's	Max.	Min.	NET
No.	Type	Mmf	Mmf	EACH
71 H 031	STHS-15; STHS-25; STHS-50;		3 3.25 3.5	3.09 3.20 3.24

#### TYPE ST-DOUBLE BEARING\*

71 H 033 ST-35	35	6	4.65			
71 H 034 ST-50	.50	7	4.83			
71 H 035 ST-75	75	8	5.34			
71 H 036 ST-100	100	9	4.88			
71 H 037 ST-140	140	10	6.51			
71 H 038 ST-150	150	10.5	7.28			
71 H 039 STH-2001	200	12	5.79			
71 H 040 STH-250	250	13.5	5.99			
71 H 041 STH-300‡	300	15	7.62			
71 H 042 STH-335	335	17	7.01			

# ST-SPLIT STATOR DOUBLE BEARING\*

71 H 043	STD-50 STHD-100‡	50-50	5-5	7.50
71 H 044	STHD-100‡	100-100	5.5-5.5	6.21

# FRONT PANEL RIGHT-ANGLE DRIVE

Type RAD. Front panel control for variable capacitors, po-

capacitors, potentic tention eters, etc., at right angles to panel. Saves space by permitting greater freedom in parts layout. May be used to drive two units. Die-cast zinc housing and gears. ½x1½x2";2½x¼" shaft. 6oz. 4.31

Type PRAD. As above but deluxe precision model with brass gears. Backlash less than 11/2%. 1/4" shaft is 21/2" long. Wt., 3 oz. 71 H 247 NET ... II.31

#### MULTI-BAND TANK ASSEMBLIES





MB-40DL

Type MB-150. Tunes all frequencies from 80

Type MB-150. Tunes all frequencies from 80 through 10 meters with no coil change. Constant L/C ratio maintained on all bands. Rated at 150 watts; handles 1500 v. peaks. Consists of 3 coils, 4-gang tank condenser, RF choke. For balanced or single-ended amplifiers. Size, 81/4x 329'. Shg. wt., 4 lbs.
71 H 046. NET.

Type MB-40 DL. Low-power version of MB-150 tank above. Excellent for final tank in low-power transmitters or for grid circuit in transmitter using MB-150 in final. Has same frequency coverage. Shielded swinging link minimizes harmonics. Handles up to 40 watts with output link loaded; 20 watts no load. Size, 55/6×21/4x61/4". Shpg. wt., 13/4 lbs.
71 H 045. NET.

# **UM MINIATURE CAPACITORS**



ATURE CAPACITORS.

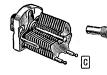
180° rotation. Straight-line-capacity plates. 017" air gap, 600 v. peak. 1/4" dia. shafts; protrude for ganging. Low minimum capacity. Ceramic base for 4-hole mounting or single 3/4" hole. 1x21/4x25/6". Wt., 5 oz.

Stock	Mfr's	Max.	Min.	NET
No.	Type	Mmf	Mmf	EACH
71 H 275	UM-15	15	1.5	1.17
71 H 276	UM-35	35	2.5	1.32
71 H 277	UM-50	50	3	1.43
71 H 278	UM-75	75	3.5	1.67
71 H 279	UM-100	100	4.5	1.84

# HAMMARLUND CAPACITORS FOR AMATEUR, INDUSTRIAL AND MILITARY USE















#### TYPE MC

Siliconized steatite base, nickel-plated brass plates. Panel or chassis mounting, \*Straight-line capacity characteristic; others have mid-line capacity characteristic. Air gap: M and S types, .0245°; MX and SX types, .0715°. 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	Mfr's	Max.	Min.	NET
No.	Type	Mmf	Mmf	EACH
72 H 425	*MC-20-S	20	5.5	2.64
72 H 426	*MC-35-S	35	6.0	2.79
72 H 427	*MC-50-S	50	6.5	2.88
72 H 428	MC-50-M	50	6.3	2.88
72 H 429	*MC-75-S	80	8.0	3.06
72 H 430	MC-75-M	80	7.3	3.06
72 H 431	*MC-100-S	100	8.3	3.15
72 H 432	MC-100-M	100	7.7	3.15
72 H 433	MC-140-M	140	9.0	3.39
72 H 434	*MC-140-S	140	10.0	3.39
72 H 435	MC-200-M	200	10.3	3.63
72 H 436	MC-250-M	250	12.0	3.87
72 H 437	MC-325-M	320	13.5	4.23

#### DOUBLE-SPACED MC's

72 H 451	*MC-20-SX	20	6.8	2.82
	*MC-35-SX	32		2.97
72 H 453	MC-35-MX	32	7.8	2.97
	*MC-50-SX	53	11.5	3.15
72 H 455	MC-50-MX	53	10.5	3.15
72 H 456	*MC-100-SX	100	16.5	3.93

#### TYPE MCD DUALS

Panel-mount type. Steatite base; nickel-plated brass plates. Tested at 1000 v. \*Straightline capacity characteristic; others mid-linecapacitycharacteristic, Shpg. wt.,11 oz.

Stock No.	Mfr's Type	Max. Mmf		NET EACH
72 H 466	MCD-50-M MCD-100-M *MCD-100-S		5.5 6.3 7.0	4.44 4.89 4.89
72 H 468	MCD-140-M	140	7.8	5.28

### **DOUBLE-SPACED DUALS**

72 H 469	MCD-35-MX *MCD-35-SX	31 31	6.8	4.62
14 11 4/1	) [*MCD-33-3A]	31	1 0.0	14.02

#### TYPE MAPC

Midget padding, trimming and general-purposecapacitors. Similar to APC, but smaller. Idea for small space applications. Gap. 0.135". Rotors and stators are nickel-plated brass. Nickel-plated beryllium copper wiper contact. Tapped (4-40 thread) brass studies in steatite base permit mounting without grounding rotor. Tested at 600 volts rms, 60 cps. Overall size: 2½" wide, 1½" high. All units listed below have slotted shafts for screwdriver or hex wrench. Shpg. wt., 4 oz.

Stock No.	Mfr's Type	Max. Mmf	Min. Mmf	NET EACH
72 H 209	MAPC-15 MAPC-25 MAPC-35	15 25 35	2.3 2.6 2.9	1.17
72 H 212	MAPC-50 MAPC-75 MAPC-100	50 75 100	3.2 3.9 4.5	1.32

#### TYPE HFA

D Sturdy capacitors, similar to HF, but larger plates and wider air gaps. For general-purpose and transmitting applications. Single-hole panel mounting. Also bracket for base mounting. End letter Ain type no. denotes 02" air gap, B—03", E—07"; 800, 1200 and 1750 test volts respectively. Shgs. wt., 1 lb.

Stock	Mfr's	Max.	Min.	NET
No.	Type	Mmf	Mmf	EACH
72 H 224	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-25B	25	3.0	2.07
72 H 227	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 H 223	HFA-140A	145	6.0	2.79

#### TYPE MAC

(Not illustrated.) Extremely small variable capacitors. Excellent for use as VHF trimmers. Steatite base; only '4x'54''. Screwdriver adjustment. Have threaded sleeve for convenient panel mounting. Shg. wt., 4 oz.

Stock	Mfr's	Max.	Min.	NET
No.	Type	Mmf	Mmf	EACH
72 H 255	MAC-5	5.0	1.4	1.14
72 H 256	MAC-10	8.7	1.7	1.17
72 H 257	MAC-15	14.2	2.2	1.23
72 H 258	MAC-20	19.6	2.7	1.32

**BUD VARIABLE CAPACITORS** 

#### TYPE HF

Ideal for tuning or trimming critical high-frequency circuits. Isolantite insulation \*Double-spaced units. Shpg. wt., 6 oz.

Stock No.	Mfr's Type	Max. Mmf	Min. Mmf	NET EACH
72 H 215 72 H 216 72 H 217 72 H 218	HF-35 HF-50	17.5 36 52 102	2.8 3.2 3.7 5.3	1.26 1.29 1.32 1.53
72 H 219 72 H 220 72 H 221	*HF-15-X	142 15 30	6.3 3.6 5.2	1.80

#### HED COUT STATOD

IIID SI MIT-SIATOR			
72 H 230 HFD-50	52	3.6	3.63
72 H 231 HFD-100	102	5.0	4.17
72 H 232 HFD-140	142	6.0	4.62
72 H 233 *HFD-15-X	16	3.8	3.57
72 H 234 *HFD-30-X	28.5	5.0	3.96

#### TYPE APC

Compact high-quality variables. Isolantite base. Screwdriver or hex-wrench adjustment. Shpg. wt., 4 oz.

Stock	Mfr's	Max.	Min.	NET
No.	Type	Mmf	Mmf	
72 H 250 72 H 251 72 H 252 72 H 253 72 H 253 72 H 254	APC-25 APC-50 APC-75 APC-100 APC-140	25 50 75 100 140	3.0 3.9 4.6 5.5 6.7	1.17 1.23 1.32 1.44 1.71

#### BFC BUTTERFLY TYPES]

G Straight-line capacity type; 90° minimum to maximum. Spacing 03°. Tested at 1200 v. rms., 60 cycles between rotor and each stator. Tapped (6-32 thread) studs in steatite base permit mounting capacitor without grounding the rotor. Silver contact. Shpg. wt., 1 lb.

Stock No.	Type	Max.	Min.	NET
72 H 262 72 H 263 72 H 264	BFC-12 BFC-25 BFC-38	14.5 27.3 40.1	3.4 4.8 6.2	1.65 1.86 2.19

# **NEUTRALIZING CAPACITOR**

### E. F. JOHNSON CAPACITORS



Stock No.

75 H 053 75 H 054 75 H 055 75 H 056 75 H 057



For VHF and UHF use. Low-loss steatite insulation. Mount in ¼" panel hole; ½x½'s" panel mtg. space. Slotted shaft takes ¾'s knob. 1250 volts approximate peak break-down.

SINGLE

5.0 8.7

BUTTERFLY

TYPE "R" VARIABLES For transmitting and receiving. Have .024" airgap; .023" plates. Av. shpg. wt., 1 lb. Stock Mfr's Max. Min. No. of NET No. Type Mmf Mmf Plates EA.

6 6.5

Mfr's Max. Min. No. of NET Type Mmf Mmf Plates EACH

1.5 1.8 2.3 2.7

1250 volts approximate peak b Nickel-plated. Av. shpg. wt., 2 oz.

Type

K

20R12 35R12 50R12 75R12



1.00 1.05 1.20 1.35

2.25 2.35 2.45 2.60 2.75 2.95

### "MC" MIDGETS

Sturdy, highly efficient midget variables. Single and double-bearing types; 'double. Fit '%' dia mounting hole. '%' Cadmium-plated brass rotor and stator plates. Steatie insulation. 024' airgap. Shpg. wt., 7oz.



Stock No.	Mfr's Type		Min. Mmf		NET EACH
61 H 144	1850*	15	3	3	1.78
	1852*	33	4	5	1.84
	1853*	50	5	7	2.43
	1855*	100	7	14	2.65
61 H 148	1856*	140	7	19	2.72
	1858*	190	9	27	2.94
	1859*	235	10	33	3.38
	1860*	300	12	43	3.67
61 H 151 61 H 152 61 H 154	1870 1872 1873 1875 1876	15 33 50 100 140	3 4 5 7 8	3 5 7 14 19	1.76 1.84 1.91 2.06 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.



# CARDWELL CAPACITORS





# VHF BUTTERFLY CAPACITORS

90° capacitors with butterfly rotor plates. M 90° capacitors with butterny room placton.
Electrical symmetry; low inductance; no moving contacts. Isolantite insulation. Removable plates. Air gap, .030°. Shpg. wt., 10 oz.

Stock	Mfr's	Max.	Min.	NET
No.	Type	Mmf	Mmf	EACH
75 H 001	PL-6078	5	1.5	1.73
75 H 002		7	2.0	1.81
75 H 003		13	3.0	2.64
75 H 004		13	10.4	2.06

# TRIM-AIR MIDGETS

Universal mounting. Isolantite insulation, Shaft has rear extension for ganging; except\*. †Air gap, .02"; others .03". Shpg. wt., 7 oz.

L Stock	Mfr's	Max.	Min.	NET
No.	Type	Mmf	Mmf	EACH
75 H 010	PL-6000	10	1.2	1.20
75 H 011	PL-6001	15	1.5	1.58
75 H 012	PL-6002	25	2.0	1.80
75 H 013	PL-6003	35	2.5	2.03
75 H 014	PL-6004	50	2.8	2.18
75 H 015	PL-6016†	75	2.7	1.89
75 H 016	PL-6017†	100	3.0	2.48
75 H 017	PL-6018†*	140	<b>5.0</b>	3.45

183

# 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 to 467.8 mmf, each section increases capacity. With trimmers for each section. End plates slotted to permit easy tracking adjustments. Spring brass wipers. Requires series padder for oscillator use. Has 3/6 diameter shaft. Use with shaft extender Stock No. 60 H 366 (at center, below) for conversion to 1/4" 



2- and 3-Gang Capacitors. Compact TRF variables are solved for tracking adjustment. Tapped to tracking adjustment. Tapped to secure mounting. Range: 12 to 367 mmf. Shaft diameter 3/4". Size of 2-gang: 23/6x111/6x15/4". Av. shpg. wt., 6 oz. 60 H 725. 2-gang. 1 to 9, EACH.... 1.04 10-49, EACH.... 1,44 50-99, EACH... 1,66 10-49, EACH.... 1,44 50-99, EACH... 1,33

#### SUPERHET CAPACITOR AND MATCHING COILS



AND MATCHING COILS

Two-Section Superhet
Variable. 19-plate oscillator section with 172.6
max.—10.6 min. mmf.;
has one 2-17 mmf. trimmer. 27-plate RF section
with 434 max.-14.5 min.
mmf.; has one 2-17 mmf.
trimmer. Provides 455 kc
combination with oscillator coil and loop antenna, below. Capacity increases in counterclockwise direction. 1½x11½cx2½/c. Shaft, ¼'
diameter. ¾' long. Shpg. wt., 10 oz.
61 H 065.1 to 9, EACH. 10 oz.
61 H 065.7 NET. 366
Oscillator Coil for Above. Shpg. wt., 4 oz.
55 H 507. NET. 366
Loop Antenna for Above. Shpg. wt., 8 oz.
51 C 040. NET. 53¢

#### MIDGET SUPERHET AND TRF TYPES



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. 145. to 308 mmf,
plates; osc. section, 11.6 to 136.6 mmf, 15
plates; Capacity increases with counter-clockwise rotation. For use with 455 kc 1F. With
trimmers. Size, 111/4x11/x13/4c. '', ''' diameter
shaft extends 1" beyond frame. Ball-bearing
mounted shaft. Shpg. wt., 6 0z.



Midget TRF. 33-plate, single-gang capacitor. Variable from 15 to 409 mmf. Capacity increases clockwise. Size: 13/6" deep, 13/6" wide, 15/6" high. 13/4" diameter shaft extends 3/4" beyond frame. Shpg.

#### TRANSISTOR VARIABLE CAPACITOR



Midget, variable, two-section capacitor designed for use with broadcast band transistor receivers. Ideal for small table models and portables. Counter-clockwise rotation for capacity increase. Each section includes a trimmer for precise adjustment. Oscillator section designed for 455-kc IF. Oscillator capacity: 7.2 to 66 mmf. Antenna section capacity: 7.5 to 81 mmf. Shaft diameter ¼". Size: 1½x1½x1½x1½x". Shpg. wt., 4 oz.

., 4 012. 1 to 9, EACH..................96c -49, EACH... 86¢ 50-99, EACH...80¢

Write for quantity prices on 100 or more capacitors

#### TRIMMERS AND PADDERS



from 3 turns open Av. shpg. wt., 2 oz.

Stock	Mmf		ILL LAUI	
No.	MILIT	1-9	10-49	50-99
60 H 347 60 H 340 60 H 341 60 H 342 60 H 343	1.5-15 2-30 4-80 9-180 25-280	12¢ 12¢ 12¢ 14¢ 15¢	¢     ¢     ¢   3¢	10¢ 10¢ 10¢ 12¢ 12¢
60 H 344 60 H 345 60 H 346 60 H 348 60 H 349	45-380 70-480 100-580 140-680 170-780	17¢ 19¢ 23¢ 24¢ 27¢	15¢ 17¢ 20¢ 21¢ 24¢	13¢ 15¢ 18¢ 19¢ 22¢

Write for Prices on Larger Quantities

### PANEL BEARING ASSEMBLY



For use with rigid or flexible couplings for mount-ing volume controls, etc.,

away from the panel.
Made of brass. Take panels up to 1/6" thick. For standard 1/4" shafts.
Supplied with 2 fiber insulating washers. Shpg.

wt., 3 oz.				00
60 H 385.	Overall length 3".	NET.	٠.	320
	Overall length 6".			
60 H 390.	Bearing only.	NET.		9

#### E. F. JOHNSON FLEXIBLE SHAFTS

Non-rusting phosphor-bronze flexible shafts with ¼' hubs. Ideal for 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". NET....50¢
73 H 291, 115-254. Length 6". NET....75¢



SHAFT FITTINGS L

Extender

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 nonsame diameter. Available in insulated and non-insulated types. Insulated types are made of black phenolic. Extenders for decreasing or increasing shaft diameter and for extending shaft length. 60 H 366 has ½" opening, ½" shaft. Shaft length on all extenders, 5%"; overall length, 1½". Av. shpg. wt., 4 oz.

Brass	Insulated	Kind	Size
60 H 360	60 H 350	Coupling Coupling	1/4 to 1/4"
60 H 361	317.17.27.23	Coupling	3% to 3%
60 H 362	60 H 352	Coupling	14 to 18
60 H 365 60 H 366	60 H 355	Ext.	% to 4
1 to 9, EAC	н		16
10 to 49, E	ACH		14
Write	for prices on I	arger quant	ities.

# HAMMARLUND COUPLINGS



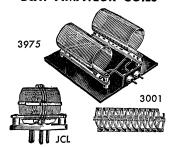
Type FC-46S. Insulated couplype FC-46S. Insulated colling. Excellent for providing flexible linkage between angularly misaligned shafts. Maximum torque is limited only by holding power of the set screws. For ¼\*-dia. shafts. Shaft clearsh voltage, 6000 v. Size, 1½x

anec, 732 . I lash voitage, 0000 v.	CIEC, I/4A
13/16". Shpg. wt., 3 oz.	105
72 H 496. NET	I <b>.</b> ∠⊃
Type FNC-46S. As above, but no	
type. Has durable, plated-metal co	nstruction.
11/4D.x <sup>23</sup> / <sub>32</sub> ". Shpg. wt., 3 oz.	

#### INSULATED COUPLING



# **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 low-power final amplifiers, exciters, buffer and oscillator stages, etc. Low-loss steatite bases fit standard 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-enter (ICL) or variable-center (IVL) link types. All fit standard 5-prong tube sockets. 3/kx11/k². Shpg. wt., 5 oz.

Band	JEL	JCL	JVL	EACH
160 80 40	75 H 32 I	75 H 330 75 H 331 75 H 332	75 H 341	
20 15 10 6	75 H 349 75 H 324	75 H 333 75 H 354 75 H 334 75 H 445	75 H 355 75 H 344	ļ.

#### 25 WATT "BABY" PLUG-IN COILS

Very compact coils for exciters and low-power transmitters. Only  $1/4 \times 1/2^{r}$ . MC—center tap, no link. MEL—end link. MCL—center link. Tune with 50 mmf (except 100 mmf for 160M). Fit standard 5-prong sockets. Wt., 3 oz.

Band	MC	MEL		EACH
160 80	75 H 380	75 H 300 75 H 301	75 H 310	
40	75 H 370	75 H 302	75 H 3 l 2	1.47
20 15	75 H 358	75 H 303 75 H 357	l 75 H 356	
10	75 H 372	75 H 304	75 H 3 I 4	

### MINIDUCTOR COIL STOCK

Easily-cut, polystyrene-supported, air-wound coils. High Q values. Ideal for high frequency circuits in compact mobile and portable rigs. Standard lengths can be cut to specific needs. Use for tank coils. If transformers, loading coils, etc. 17 dia. coils are 3″ long, all others, 2″. Av. shg. wt., 5 oz.

4 7	Turns Per	Inch	8 Turns	Per I	nch
Dia.	No.	Type	No.	Туре	NET
1/2" 5/8" 3/4" 1"	75 H 305 75 H 309 75 H 319 75 H 328	3001 3005 3009 3013	75 H 306 75 H 316 75 H 325 75 H 329		45¢ 54¢ 63¢ 69¢
16	Turns Per	Inch	32 Turns	Per I	nch
1/2" 5/8" 3/4" 1"	75 H 307 75 H 317 75 H 326 75 H 335	3007 3011	75 H 308 75 H 318 75 H 327 75 H 336	3008	45¢ 54¢ 63¢ 69¢

### 2" & 21/2"-DIA. COIL STOCK

Ideal for making buffer and final tank coils, antenna loading coils, line noise filter coils, etc. Easily cut to size. 2" dia. types perform as links when fitted inside any 2½" dia. type. \*Turns per inch. All 10" long.

. Stock No.	Туре	Dia.	Wire	*TPI	Wt., Oz.	NET EACH
75 H 406 75 H 407 75 H 408 75 H 409	3905-1 3906-1	2" 21/2" 21/2" 21/2"	#14 #12 #14 #16	8 6 8 10	9 13 12 8	1.86 1.95 1.86 1.86

#### **TYPE 3975 BALUN ANTENNA COILS**

#### MORRIS COIL WINDER



#### **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 6E5 or 6U5. Type 58-MEA-8 takes octal-type indicator tubes such as the 6AD6G, 6AF6G, 6AL7GT. Easily installed in any superhet receiver having automatic volume control circuit. Complete with hood escutcheon; less tube. Shpg. wt., 6 oz.

ILLUMITRONIC COIL STOCK

mental, and laboratory applications, Excellent for use in tuned circuits of transmitters, receivers, VFO's, converters, and other types of RF equipment. Each coil comes in a convenient 10' 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 casy soldering and efficient performance. Polystyrene supporting strips provide strength and rigidity—excellent physical stability for frequency determining circuits. \*Turns per inch.

Type Dia. \*TPI Wire Wt., NET Size Oz. EACH

10 6 8 14 16

10

16 12 14

9 13 13 1.95 1.95 2.25 2.25

13 17 17 17 16 12 14 14

Max. NET μh EACH

EACH

1 1/2"

21/2 21/2 8

21/2 10 6 8 10

E. F. JOHNSON ROTARY INDUCTORS

High-quality air-wound coil stock for a wide variety of amateur, experi-mental, and labora-

Stock

72 H 3 | 2 1006T 114" 72 H 3 | 3 1008T 114" 72 H 3 | 4 1010T 114" 72 H 3 | 5 1206T 112" 72 H 3 | 6 1208T 112"

72 H 317 1210T 72 H 318 1406T 72 H 319 1408T 72 H 326 1410T 72 H 327 1606T

72 H 328 1608T 72 H 329 1610T 72 H 330 2006T 72 H 331 2008T

72 H 332 2010T 72 H 333 2406T 72 H 334 2408T 72 H 337 2410T

Stock Mfr's No. Type

No.



Stock	Mfr's	NET EACH				
No.	Туре	1-99   100-249   250-U				
45 H 855	58-MEA-6	1.12	.93	.84		
45 H 856	58-MEA-8	1.53	1.27	1.15		

1.65 1.65 1.65 1.80 1.80

1.80 1.90 1.90 1.90 1.95

2.25 3.40 3.40 3.40

# WALSCO DIAL CORD SPOOLS

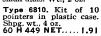
An excellent selection of dial cord covering 80% of the replacement demand. All types have either a fiber-glass or a linen core. Pre-stretched; maintains proper tension. Nylon-braided sleeves. Av. shpg. wt 4 or wt., 4 oz.



No.	Туре	Dia.	Strgth.	Lgth.	EA.
60 N 491 60 N 492	652-Med. 656-Thin 654-Std.	.025"	15 lbs. 20 lbs.	25 ft. 25 ft.	.88
43 N 197 43 N 195 43 N 196	652-Med. 656-Thin 654-Std.	.040" .025" .032"	35 lbs. 15 lbs. 20 lbs.	100 ft. 100 ft. 100 ft.	2.91

#### **G-C DIAL POINTERS**

Will fit most radio sets. Can be cut shorter for small dials. Wt., 2 oz.





Α	6802. 5" rotary for 1/4" shaft. Has gold and red finish.
60	H 446. NET EACH24
	6801 3" rotary for 1/4" shaft Gold

# **G-C AUTO-RADIO SPEAKER CONTROLS**

Type 8891. Switch assembly for selecting operation of either front or rear-seat speaker, or both at the same time. Quickly mounts under the dash. Includes switch, dial plate, knob, instructions, hardware. Shgs. wt. 3 oz. 83 D 053. NET.

# 60 H372 229-201 43/8 x2 1/2 x2 3 1/3 2 60 H373 229-202 5<sup>29</sup>/<sub>32</sub> x2 1/2 x2 3 1/3 2 60 H374 229-203 75/3 x2 1/2 x2 3 1/3 2

Provides weatherproof cable connection to half-wave doublet antenna; also serves as center in-sulator. Antenna elements sulator. 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.

Smooth-operating rotary inductors—ideal for tank circuits in multi-band transmit-ters. Variable-pitch windings for improved efficiency at high frequencies. All are rated at 3 amps. Av. shpg. wt., 1½ lbs.



B&W "CC-50" COAXIAL CONNECTOR

Siza

... 5.85

NATIONAL VARIABLE CAPACITORS Type VHF-2S. Precision-Type VHF-2S. Precision-made, chassis-mounting dual split-stator variable capacitor. Shaft extension at rear, ball bearings front and back and brack-ets for mounting 2.5 Fach split-stator section 1.5 Fach split-stator split-split split 


FRONT REAR BOTH

#### 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 with shafts up to ½" 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 kc, FM covers 88-108 mc, shortwave covers 6-18 mc. Series CR-1: 9:1 tuning ratio, 3½" pointer travel. Series CR-2: 18:1 tuning ratio, 7½" pointer travel. Series CR-3: 18:1 tuning ratio, 7½" pointer travel. \*Has 0-100 logging scale. logging scale.

Stock No.	Mfr's Type	Application	Cutout	Lbs.	NET EACH
55 H 317 55 H 318 55 H 319 55 H 356	CR-1 CR-1A CR-1B CR-1C	*AM-Shortwave AM-FM AM FM	} 113/16x45/16"	}1	7.35 7.35 7.35 7.35
55 H 322 55 H 323 55 H 324 55 H 357	CR-2 CR-2A CR-2B CR-2C	*AM-Shortwave AM-FM AM FM	} 113/16×79/16"	}11/4	8.17 8.17 8.17 8.17
55 H 325 55 H 326 55 H 327	CR-3 CR-3A CR-3B	*AM-Shortwave AM-FM AM	2x8½"	11/2	10.58 10.58 10.58

# **CRONAME DIAL & SWITCH PLATES**





## **SQUARE DIAL PLATES**

E Attractive anodized aluminum dial plates with black scales. Available in a large variety of designations. Excellent for installers, hobbyists and experimenters. Use with 1¼\* bar knob. Size, 2½6×2½\*, with ½\* center hole. knob. Size, 23/1 Shpg. wt., 2 oz.

| Mfe's |

No.	Туре	Description
55 H 160 55 H 161 55 H 137 55 H 164 55 H 165 55 H 126	448 447 429 428 416 417 415	Treble, 0-10 Bass, 0-10 Treble, 5-0-5 Bass, 5-0-5 Microphone, 1, 0-10 Microphone, 2, 0-10 Microphone, 0-10
55 H 170 55 H 124 55 H 127 55 H 123 55 H 134	413 412 422 411 426	Master Gain, 0-10 Gain, 0-10 Gain, 5-0-5 Tone, 0-10 Volume, 0-10
55 H  25 55 H  35 55 H  38 55 H  39 55 H  31	414 427 430 446 423 410	Record, 0-10 Fader, 5-0-5 Expansion, 0-10 Phono, 0-10 Increase, with arrow No title, 0-10

1-24, NET EACH	 5lc
25-99, EACH 100-Up, EACH	

#### ROUND DIAL PLATES

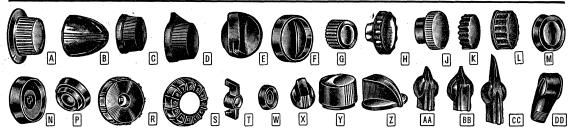
E Basy-to-read etched aluminum scale with black background. 1½," diameter. Type 25 has clockwise arrow labeled "Volume." Type 569, 0-100 over 180° clockwise. Type 905, 0-100 over 270° clockwise. Use with 1½," bar knobs. 1½," ctr. hole. Shpg. wt., 2 oz.

Stock	Mfr's	NET EACH			
No.	Туре	1-24	25-99	100-Up	
55 H 141 55 H 140	25 569	37¢ 37¢	33¢ 33¢	30¢ 30¢	
55 H 108	905	27¢	24¢	22¢	

#### "OFF-ON" SWITCH PLATE

Economy-priced "Off-On" switch plates. Etched aluminum with black background. Has polished aluminum etc-ters and border. Size, 11/6x111/6; Shgg. wt., 2 oz. 60 H 338, 1-24, NET EACH 156 100-Up, EACH 146

# Molded Knobs—Speaker Repair Service



# 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 knuled shafts only; other types are equipped with

Stock			١		NET	EACH	
No.	Fig.	Dia.	Color	1-9	10-49	50-99	100-Up
55 H 031 55 H 032 55 H 080 55 H 022	A A A B	1 ½" 1½" 29/32" 7/8"	Black Red Black Black	.12 .08 .08	.108 .108 .072 .072	.099 .099 .066	.09 .09 .06
55 H 025 55 H 027 55 H 028* 55 H 029	B B B B	3/4" 3/4" 3/4" 3/4"	Black Walnut Walnut Ivory	.08 .10 .04 .08	.072 .090 .036 .072	.066 .083 .033	.06 .07 .03 .06
55 H 043* 55 H 035 55 H 036 55 H 023	cccc	11/16" 11/16" 11/16" 11/16"	Black Black Walnut Black	.04 .06 .06	.036 .054 .054 .090	.033 .049 .049 .083	.03 .04 .04 .07
55 H 040 55 H 042* 55 H 081 55 H 018	D E	11/16" 11/16" 1" 11/8"	Black Black Black Black	.06 .04 .12	.054 .036 .108 .090	.049 .033 .099 .083	.04 .03 .09 .07
55 H 019 54 H 960* 54 H 964* 54 H 965*	E F G G	1 ½" 1 5½" 15½" 15½"	Red Walnut Walnut Ivory	.10 .24 .16	.090 .216 .154 .154	.083 .199 .132 .132	.07 .18 .12 .12

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 ¼ shafts. Simple to install. Av. wt., 3 oz.

Stock		I	1	1	NET	EACH	
No.	Fig.	Dia.	Color	1-9	10-49	50-99	100-Up
55 H 024 55 H 050 55 H 082 54 H 982	H H J K	13/4" 13/4" 1"	Black Black Black Walnut	.10 .14 .04 .10	.090 .126 .036 .090	.083 .116 .033 .083	.07 .10 .03
54 H 983 54 H 980 54 H 981 54 H 962*	K L L M	11/8" 11/8" 11/8" 11/2"	Ivory Walnut Ivory Walnut	.10 .10 .10	.090 .090 .090	.083 .083 .083	.07 .07 .07
55 H 067 55 H 083 55 H 084 55 H 072	X Y Z AA	11/16" 3/4" 13/16" 11/4"	Black Black Black Black	.35 .08 .08	.315 .072 .072 .054	.290 .066 .066	.26 .06 .06
55 H 073 55 H 078* 55 H 074 55 H 070	AA AA BB CC	11/4" 11/4" 11/4" 2"	Red Black Black Black	.08 .12 .08 .14	.072 .108 .072 .126	.066 .099 .066	.06 .09 .06
55 H 071 55 H 079* 55 H 006 55 H 089	CC CC DD DD	2" 2" 15/8" 21/2"	Red Black Black Black	.16 .16 .16	.154 .154 .154 .154	.132 .132 .132	.12 .12 .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 Randix Westinghouse Admiral at

Stock		l		NET EACH			
No.	Fig.	Dia.	Use	1-9	10-49	50-99	100-Up
54 H 966* 54 H 967† 54 H 968\$ 54 H 969‡ 54 H 970†	M M M N P	15/16" 15/16" 15/16" 15/16" 15/8"	Front dual Front dual Front dual Rear dual Comb. dual	.26 .29 .29 .16	.234 .261 .261 .154	.215 .240 .240 .132 .365	.19 .21 .21 .12

Made of molded plastic; have walnut pattern with attractive gold-finish inlay on face. \*For 1/4" knurled shaft. 1/4" flatted shaft. 3/4" flatted shaft. 1.265" keyway shaft. \*\*3/4" flatted shaft. 1.265" keyway shaft. \*\*3/4" flatted shaft. 1.265" keyway shaft.

Stock	I			NET EACH			
No.	Fig.	Dia.	Use	1-9	10-49	50-99	100-Up
54 H 974** 54 H 973† 54 H 971† 54 H 972**	S T	25/8" 21/4" 2" 15/32"	Rear dual Front dual Front dual Rear dual	.26 .73 .53	.234 .657 .477 .154	.215 .605 .439 .132	.19 .54 .39

# FLUTED BAKELITE KNOBS





An excellent selection of high-quality fluted knobs. Made of durable high-gloss bakelite. All types have metal inserts for added strength. Set screw mounting for use on either '\'\sigma' round or flatted shafts. \*Types with pointer. Av. shpg. wt., 4 oz.

Stock		1	NET EACH				
No.	Fig.	Dia.	1-9	10-49	50-99	100-Up	
55 H 085* 55 H 088* 55 H 086* 55 H 087* 55 H 095	EE EE EE EE	1 1/8" 1 3/8" 1 5/8" 2 3/8" 1 1/8"	.32 .32 .46 .20	.288 .288 .288 .414 .180	.265 .265 .265 .381	.24 .24 .24 .30	
55 H 094 55 H 096 55 H 097 55 H 092 55 H 090	EE EE FF FF	1 3/8" 1 5/8" 2 3/8" 1 1/2" 2 1/16"	.20 .24 .36 .38	.180 .216 .324 .342 .432	.166 .199 .298 .315	.15 .18 .27 .28	



#### 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 ment for knows on most automobile ratalos, as extended use on amateur mobile transmitting and receiving equipment. Small diameter prevents crowding of controls where panel space is limited; %" diameter, 11/6" long. Fits ¼" round or flatted shafts. Shpg. wt., 4 oz.

.... 32c l





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 by repeated tube insertions. Does away with time consuming socket replacements. Prevents tube tester sockets from developing loose, worn contacts which cause inaccurate test readings. No wiring or soldering is 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. shog, wt., 3 oz. Av. shpg. wt., 3 oz.

No.	Type	Description	EACH
40 H 668	SS-7	For 7-pin min.	1.91
40 H 669	SS-8	For 8-pin octal	1.91
40 H 678	SS-9	For 9-pin min.	1.91

#### POMONA 110° CONVERSION ADAPTER





### ALLIED OFFERS COMPLETE SPEAKER REPAIR SERVICE HI-FI SPEAKER REPAIR SERVICE

Your valuable hi-fi speakers can be completely rebuilt by 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 high-fidelity 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 order. 30 days delivery. Service includes replacing cone, gasket, voice coil, spider and dust cover. 7.50

•		sheaver.	nepair service	
12"	Hi-Fi	Speaker.	Repair Service	25
15"	HI-FI	Speaker.	Repair Service 15 (	nη

# STANDARD SPEAKER REPAIR SERVICE

Skilled technicians will completely rebuild your old speakers for the small charges listed below. Service covers general-purpose 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' to 9'; \$2.25 for 10' to 12'. Field coils welded into speaker frames cannot be replaced.

Size	Repair Service	Size	Repair Service
4" to 6"	1.55	14" to 15"	3.85
61/2" to 9"	2.55	4"x6" oval	2.00
10"	2.85	5"x7" oval	2.55
11" to 12"	3.05	6"x9" oval	2.55

#### WAFER-TYPE SOCKETS

Sturdily constructed, laminated-bakelite tube sockets. All have 1½" mtg. centers except \* which has 1" centers. Av. shpg. wt., 2 oz.



Stock	Prongs	N	CH	
No.	ongo	1-9	10-49	50-99
40 H 224 40 H 225 40 H 226 40 H 227 58 H 004* 40 H 228	4 5 6 7 (small) 7 (min.) Octal	7¢ 8¢ 9¢ 10¢ 6¢ 7¢	6¢ 7¢ 8¢ 8¢ 5¢ 6¢	5¢ 6¢ 7¢ 7¢ 4¢ 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". Shpg. wt., 2 oz.

Stock	Mfr's	Prongs	1-9,	10-49,
No.	Type		EACH	EACH
40 H 254 40 H 255 40 H 256 40 H 261 40 H 258	12-5 12-6 12-7-N-O	4 5 6 7L & 7S Octal	30¢ 32¢ 35¢ 35¢	27¢ 29¢ 31¢ 32¢ 35¢

TV Tube Socket Type 49-13 DD. All-molded bakelite, duo-decal TV tube socket for magnetic or electrostatic focusing tubes. Complete with 12' leads. Shap, wt., 4 oz. 40 H 291, 10-49, EA....42¢1-9, EA....47¢

#### CRT TEST SOCKET ADAPTER

TV picture tube socket adapter, TV picture tupe socket anapte, easy to install or remove. External lugs permit checking all CRT pin voltages while set is in operation. No wiring or soldering required. Wt., 3 oz. 40 H 273, 1-9, EACH... 94c 10-49, EACH... 84¢



## JAMES MILLEN TUBE SOCKETS

commended for UHF use. Higher steatite body gives longer leakage path between contacts. Mounting centers, 13/4". Shpg. wt., 4 oz.



		<del></del>	
Stock No.	Туре	Prongs	EACH
72 H 060	33004	4	
72 H 061	33005	5	1
72 H 062	33006	6	1 45c
72 H 064	33008	1 8	1

#### **RAY-PAR ANTI-CORONA SOCKETS**

Octal socket for 1B3 high-



#### **VECTOR SOCKETS** PLUG-IN UNITS

Consist of standard tube socket, tubular terminal post, octal plug and shield can. Can sizes: B10M and B10N, 1.37" square, 2.5" long; C10M and C10N, 2" square, 2.5" long. Av. wt., 5 oz.



		Description	
40 H 237	B10M	7-pin Miniature	1.79
40 H 238	B10N	9-pin Noval	1.82
40 H 241	C10M	7-pin Miniature	2.18
40 H 239	C10N	9-pin Noval	2.20

#### 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, 1—9-pin miniature, and 1 octal adapter in plastic carrying case.



# E. F. JOHNSON TUBE SOCKETS











#### SPECIAL SOCKET TYPES

Type 122-244, 4-pin steatite for "super jumbo" tubes. Takes 8008, BR6, SC22, SC22, GL146, GL152, GL159, GL169, ROS85, RH507, SRS0, SRS3, SK60, FG105. Wt., ½ lb. 73 H 997. NET.

B Type 124-109. 8-pin socket of Kel-F plastic for UHF high power tubes. 8—.128" holes on 1½" circle. Shpg. wt., ½ lb. 40 H 299. NET. 5.00 Type 122-101. 7-pin steatife with base shield and retainer springs. For use with 4-65A, 826, 829, 832, etc. Shpg. wt., ½ lb. 73 H 245. NET. . . . 2.35

Type 120-277. As above, but metal mtg. frame and shield base. Shpg. wt., 3 oz. 73 H 186. NET......59¢ F Type 133-278-6 Shield. For use with Type 130-277 socket. Height 1¾". oz. 15¢
F Type 133-278-8 Shield. As above but 2¼" high. Shpg. wt., 3 oz. 73 H 187. NET. 18¢

# STANDARD WAFERS

Steatite wafer sockets for receiving and low-power transmitting tubes. Cadmium-plated contacts. Size, 2½ "x1½". 1¾" Mtg. centers. Shpg. wt., 4 oz.

Stock No.	Mfr's Type	Prongs	NET
73 H 238 73 H 239 73 H 240 73 H 241 73 H 243	122-224 122-225 122-226 122-227 122-228	4 5 6 7 Octal	69¢ 76¢ 94¢ 90¢

#### **JUMBO WAFERS**

Type 122-237. Steatite wafer for 813, 8001, 3D22, 4E27, HK257. 25%" square. 4 mounting holes, 17%" 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. Shgs. wt., ½ lb.

1.45

# **BAYONET SOCKETS**

NET FACH

# **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 Al specifications. Bayonet-type locking shields and sockets. Highest quality materials and workmanship used in the construction of each precision part. Shg. wt., 3 oz.



Stock	JAN. No.		NET EXOT				
No.	% S-28 A1	Description	1-24	25-99	100-249	250-UP	
	TS 102C01 TS 102P01 TS 103C01 TS 103P01	7-Pin Shield Base, Ceramic 7-Pin Shield Base, Mica-filled 9-Pin Shield Base, Ceramic 9-Pin Shield Base, Mica-filled	32¢ 24¢ 35¢ 26¢	28¢ 20¢ 30¢ 22¢	25¢ 17¢ 28¢ 20¢	5¢   ¢  7¢  2¢	
40 H 268 40 H 269	TS 102U01 TS 102U02 TS 102U03 TS 103U01	7-Pin Tube Shield, 13/8" 7-Pin Tube Shield, 13/4" 7-Pin Tube Shield, 21/4" 9-Pin Tube Shield, 11/2"	5¢   6¢   9¢   8¢	3¢   4¢   6¢   6¢	¢     2¢   4¢   4¢	7½¢ 8¢ 9¢ 9¢	
40 H 272 40 H 286	TS 103U02 TS 103U03 TS 101C01 TS 101P01	9-Pin Tube Shield, 115/6" 9-Pin Tube Shield, 23/8" Octal, Saddle, Ceramic Octal, Saddle, Mica-filled	18¢ 22¢ 74¢ 31¢	16¢ 19¢ 64¢ 27¢	14¢ 16¢ 54¢ 23¢	9¢ 11¢ 26¢ 15¢	

#### **CORRUGATED JAN SHIELD INSERTS**

Corrugated JAN-type shield inserts effectively reduce over-heating of miniature tubes—prolong tube life. Material: 0.003" cadmium-plated beryllium copper. Black, non-corrosive finish. Shpg. wt., 2 oz.

Stock	Mfr's	D	escription	1-24	25-99	100-249	250-UP
No.	Туре	Ht.	For JAN-Shield		EACH	EACH	EACH
41 H 232	929	13/8"	TS102U01	18¢	16¢	15¢	9¢
41 H 233	930	13/4"	TS102U02	21¢	18¢	17¢	10¢
41 H 234	931	21/4"	TS102U03	26¢	23¢	22¢	13¢
41 H 235	932	11/2"	TS103U01	22¢	19¢	18¢	l I¢
41 H 236	933	115/16"	TS103U02	27¢	24¢	23¢	13¢
41 H 237	934	23/8"	TS103U03	32¢	28¢	27¢	15¢

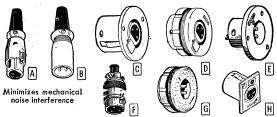
#### **SERIES 3300 TRANSISTOR SOCKETS**

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° diam. circle of any configuration. Conform to MIL-P-14. Gold-flashed beryllium copper contacts. Av. shpg. wt., 2 oz.

Stock No. | Type | Fig. | Description | 1-24, EA. | 25-99.

SLOCK NO.	: ype	į rig.	Description	1-24, EA.	20-99, EA.	100-249, EA.	250-UP
41 H 092 41 H 238 41 H 093 41 H 094	3301 3303 3304 3305	K K K K	Saddle Mounting Printed-Circuit Type Mounting Ring Type Printed-Circuit Type	35¢ 27¢ 26¢ 30¢	30¢ 24¢ 22¢ 26¢	25¢ 21¢ 18¢ 22¢	17¢ 13½¢ 13¢ 15¢
41 H 239 41 H 243 41 H 244 41 H 245	3306 3307 3308 3309	L L M	Saddle Mounting Mounting Ring Type Printed-Circuit Type Saddle Mounting	35¢ 26¢ 30¢ 35¢	30¢ 22¢ 26¢ 30¢	25¢ 18¢ 22¢ 25¢	17¢ 13¢ 15¢ 17¢
4  H 246 4  H 247 4  H 248 4  H 249 4  H 095	3310 3311 3312 3313 757	M M N N	Mounting Ring Type Printed-Circuit Type Saddle Mounting Mounting Ring Type Ring Only for 3304, 3307 3310 3313	26¢ 30¢ 38¢ 29¢	22¢ 26¢ 33¢ 25¢	18¢ 22¢ 28¢ 21¢	13¢ 15¢ 19¢ 14½¢
				3# 1		24	

# 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 streamline design, satin nickel finish, integral cable clamp, neoprene 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.		Fig.			25-99, EA.
41 H 212 40 H 791	XLR-4-11C XLR-3-12C	AB	Female (socket insert) Female (socket insert) Male (pin insert) Male (pin insert)	.91 1.26 .88 1.18	.78 1.08 .75 1.00

#### WALL AND PANEL RECEPTACLES

41 41 41	H	215	XLR-3-13* XLR-4-13* XLR-3-13N† XLR-4-13N†	C	Female (socket insert) Female (socket insert) Female (socket insert) Female (socket insert)	.91 1.26 .91 1.26	.78 1.08 .78 1.08
4   4   4   4	H	219	XLR-3-14* XLR-4-14* XLR-3-14N† XLR-4-14N†	G	Male (pin insert) Male (pin insert) Male (pin insert) Male (pin insert) Male (pin insert)	.71 1.00 .85 1.15	.60 .85 .73 .98
41	Н	225 793	XLR-3-31* XLR-4-31* XLR-3-32* XLR-4-32*	H 	Female (socket insert) Female (socket insert) Male (pin insert) Male (pin insert)	.91 1.26 .71 1.00	.78 1.08 .60 .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	P3-13	Pane	l mount, female		
	P3-CG-11S P3-CG-12S	F Cable	eket) mount, male(pin) plug, female(skt) plug, male (pin) receptacle, female	3.70 3.03	2.95 1.79 3.33 2.72
40 707	1 0-00		40 H 701	5.11	4.69

Manufacturers and industrials-write for special prices on Cannon Plugs and Receptacles in quantities of 100 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 16F shield, (below). Shpg. wt., 2 oz.

100 or More, EACH ..... 18¢

Type 11PB 11-Contact Plug. Same as above, but with 11 contacts. Molded black bakelite. Fits 11-contact socket, Type 11RB listed below. Use with type 16F snap-on shield. Shpg. wt., 2 oz. 40 H 847. 25-99, EA. 21 1/2¢ 100 or More, EA. 20¢ 1-24, EA... 24c

# TYPE 16F STEEL SNAP-ON SHIELD

Cadmium-plated, durable steel shield. Designed to snap on 8PB and 11PB sockets. For use with extension cables. Rubber grommet with \$45\\(\phi\) protects cable. Shpg. wt., 2 oz. 40 H 848. 25-99, EA. 25¢ 100 or More, EA. 24¢ 1-24, EA. . . 28c

# TYPE 11RB 11-CONTACT SOCKET



For use with 11PB 11-contact plug (above). Molded from high-dielectric, black bakelite. Hot solder-dipped tinning on brass contact terminals for quick, positive solder connections. Can be mounted on \( \frac{\psi}{6} \) thick chassis using retaining ring. Can also be used with 16F snap-on shield (above) on extension cables. Shpg. wt., 202.

40 H 849. 25-99, EA. 25¢ 100 or More, EA. 24¢ 1-24, EA.... 28c

# H. H. SMITH TV COAX CABLE CONNECTORS





Low-cost solderless coaxial cable connectors for use with RG-59/U and other  $V_a^{\mu}$  diameter cable. Low-loss insulation, Silver-plated for high conductivity. Av. shpg. wt., 2 oz.

Male Connector. For below. 40 H 300. 10-49, EA....42¢ 50-Up, EA. 38¢ 1-9, EA....47c Female Receptacle. 3/6" threaded stem. Chassis type. 40 H 301. 10-49, EA....42¢ 50-Up, EA. 38¢ 1-9, EA.....47c

Cable Junction. Feed-through. Both ends fit 40 H 300. 40 H 302, 10-49, EA....53¢ 50-Up, EA. 48¢ 1-9, EA....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. Fig. P mounts from top of chassis with spring retainer ring. Contacts are cadmium-plated brass. Av. shpg. wt., 4 oz. per pkg. 3 sockets per pkg.

Stock No.	Fig.	Mtg. Centers	Mtg. Hole Req.		5-9 Pkgs. PER PKG.	10 or More Pkgs. PER PKG.
41 H 524 41 H 525	M	1½" 15/16"	19/32" 11/8"	23¢ 22¢	20¢ 20¢	18¢  8¢
41 H 526	P	15/16	11/4"	62¢	56¢	49¢



#### 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 ½" mounting hole; mounting centers are ½" apart. 9-pin types require ½" mounting hole; mounting centers are 1½" 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 41 H 529	7	S	Phenolic Mica-Filled Phenolic		20¢ 25¢	18¢ 22¢
4   H 530	9	T	Phenolic Mica-Filled Phenolic	29¢	26¢ 31¢	23¢ 27¢

Top Mounting Type. Miniature type sockets for top-of-chassis mounting. 7-pin types require  $^{55}k''$  mtg. hole; mtg. centers are  $^{7}k''$  apart. 9-pin types require  $^{63}k'''$  mtg. hole; mtg. centers are  $^{1}k''$  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.
4  H 532 4  H 533 4  H 534 4  H 535	7 7 9 9	S S T T	Phenolic Mica-Filled Phenolic Phenolic Mica-Filled Phenolic	29¢	23¢ 28¢ 26¢ 31¢	20¢ 25¢ 23¢ 27¢

# **ELCO SOCKETS FOR PRINTED CIRCUITS**



Dependable 7 and 9 miniature, and Dependable 7 and 9 miniature, and octal type sockets designed for use in printed circuits. Types 647, 657 and 659 are for general-purpose use; others have low-loss mica insulation. \*Bottom solder; top solder; \$bield base; ground contact; #shield contact. Av. shog. wt., 3 oz.

Stock No.	Mfr's Type	Fig.	Pins	1-24, EACH	25-99, EACH	100-249, EACH	EACH
41 H 550	645*	W	7	12¢	10¢	8¢	6¢
41 H 551	612PH*	W	Octal	36¢	31¢	28¢	19¢
41 H 552	653*	W	9	16¢	14¢	12¢	8¢
42 H 410	646*‡	W	7	13¢	II¢ '	9¢	6¢
42 H 411	647*#	W	7	13¢	11¢	9¢	6¢
42 H 412	648*#	W	7	14¢	12¢	10¢	6¢ 8¢
42 H 413	657†‡	W	.9	17¢	14¢	12¢	8¢
42 H 414	658†‡	_w_	9	18¢	15¢	13¢	9¢
42 H 415	659†#	w	9	17¢	15¢	13¢	8¢ 9¢
42 H 416	660†#	W	9	18¢	15¢	13¢	9¢
42 H 417	623BC§	X	9	91¢	78⊄	76¢	70¢
42 H 418	622PHSP§	l X	7	78¢	67¢	65¢	60¢

#### VECTOR SOCKET-TURRETS

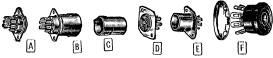


Highly dependable terminal structures for use in single or riiginy dependance terminal structures for use in single or multi-stage sub-assemblies—ideal for limited space appli-cations. Simplifies construction of electronic equipment. Components mount on mica-filled phenolic form. Turrets are ½" diam. Octal units mount in 1" hole; miniatures, ½" hole. Av. shpg. wt., 3 oz.

21/2" Turre	ets. Has 9	terminals in			
Stock No.	Type	Socket	1-19, EA.	20-49, EA.	50-199,EA
40 H 211	10-0-9T	Octal	62¢	57¢	52¢
2" Turrets	. 9 termin	als in two ring	gs, spaced 1"	apart.	
40 H 212 40 H 217 40 H 233	8-M-9T	Octal 7-Pin Min. 9-Pin Noval	59¢ 68¢ 68¢	54¢ 62¢ 62¢	49¢ 57¢ 57¢
11/2" Turr	ets. Have	6 terminals in	one ring on	ıly.	
40 H 213 40 H 218 40 H 234	6-M-6T	Octal 7-Pin Min. 9-Pin Noval	53¢ 62¢ 62¢	49¢ 57¢ 57¢	44¢ 52¢ 52¢

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 1-19, EA. |20-49, EA. |50-199,EA. Description For 7-pin sockets For 9-pin sockets 40 H 235 40 H 236 S9

# Amphenol Sockets



# MINIATURE SOCKETS AND SHIELDS

#### **BAKELITE AND STEATITE SOCKETS**

High-grade miniature sockets and shields. 147 series mount in ½° chassis hole; ½° mtg. ctrs., with ½° screw holes. 59 series mount in ½° chassis hole and have 1½° mtg. ctrs. with .095° rivet holes, (except 40 H 103, .125°). \*Steatite. ‡Black bakelite. †Mica-filled bakelite. Av. wt., 5 oz.

# A WITHOUT TUBE SHIELD BASE

Stock	Mfr's	Prongs	1-99,	100-249,	250-Up,
No.	Type		EACH	EACH	EACH
40 H 191 40 H 192 40 H 199 40 H 193 40 H 167	‡147-500 *147-501 †147-505 ‡59-409 †59-410	7 7 7 9 9	.15 .24 .15 .20	.125 .205 .125 .17	.113 .185 .113 .153

#### B WITH TUBE SHIELD BASE

40 H 194	<b>‡147-905</b>	7	.21	.18	.162
	*147-925	7	.26	.225	.203
	†147-913	7	.22	.188	.169
40 H 103	†59-403	9	.29	.24	.225
40 H 176	†59-407	9	.27	.24	.216
40 H 196	‡59-406	9	.24	.21	.189

#### C TUBE SHIELDS FOR 7-PRONG SOCKETS

Stock No.	Туре	Height	1-99, EA.	100-249,EA.	250-Up, EA.	
40 H 197 40 H 198	5-401 5-402	1 3/8" 1 3/4"	.08	.074 .078	.066	
FOR A PROMIC SOCVETS						

		O			
					-
Stack No	Type	Length	1-99 FA	100-249,EA.	ď
SCOCK NO.	, Jp0	Length	1-00, EA.	100-240,270	•

Stock No.	Type	Length	1-99, EA.	100-249, LA.	250-Up, LA
40 H 188	5-405	1 1/2"	.09	.075	.068
40 H 189	5-408 5-409	15/16" 23/8"	:10	.09	.081

# 7- AND 9-PIN "ETHYLON-A" SOCKETS

Molded of low-loss "Ethylon-A" high "Q" insulating material. For use where temperature is below 125°F. Sockets without shield base are "Zip-In" type; require special keyed hole. 7-pin sockets with shield base require 2\(\frac{7}{30}\)" holes; 9-pin, 1\(\frac{1}{36}\)" holes. Av. shpg. wt., 5 oz.

#### D WITHOUT TUBE SHIELD BASE

	٠ ا				
Stock No.	Туре	Prongs	1-99, EA.	100-249,EA.	250-Up, EA.
40 H 184 40 H 185	59-357 59-359	7 9	.15 .20	.125 .17	.113
	E	WITH TU	BE SHIELD	BASE	
40 H 186   40 H 187	59-367 59-369	7 9	.21	.18 .31	.162 .27

# **RETAINER RING SOCKETS**

Mount in %" round or "D" shaped hole with retainer ring provided.
May be used with 91-MPM plugs (page 192). Av. shpg. wt., 5 oz.

#### BLACK BAKELITE 166-16 1 100-249 | 250-IIn

No.	Туре	Prongs	EACH	EACH	EACH
40 H 131	78-S3S	3	.07	.063	.056
40 H 115	78-S4S 78-S5S	5	.07	.063 -09	.056 .081
40 H (30	78-S6S	6	.11	.095	.086
40 H 120	78-7P	7	.14	.12	.108

#### MICA-FILLED

40 H | 24 | 78-7PT .128 .115



#### SPECIAL OCTAL, AND MAGNAL SOCKETS

[6] Type [1-MIPSFK Floating Octal. Live-rubber grommets in en-
G larged mounting holes of sturdy steel plate. Mounts in 13/6" hole with
two 1/4" holes on 11/2" centers. With grommets, mtg. screws, nuts and
washers. Shpg. wt., 5 oz.
WASHING SIDE. WIT FACU
40 H 043. 1-99, NET EACH

wasners. Snpg. wt. 3 oz.
40 H O43. 1-99, NET EACH. 18 250-Up, EACH 16-249, EACH. 18 250-Up, EACH 16-249, EACH. 18 250-Up, EACH 16-249, EACH 18 250-Up, EACH 16-249, EACH 18 250-Up, EACH 19-249, EACH 19-250-Up, EACH 15-350-Up, EACH 19-250-Up, EACH 16-350-Up, EACH 19-250-Up, EACH 16-350-Up, EACH 19-250-Up, EACH 19-



# POPULAR STANDARD SOCKETS

Type MIP. Bakelite body with molded-in steel plate. \*Require 11/8" hole; mounting centers, 11/6". All others have 11/2" mounting centers, 17/6". All others have 11/2" mounting centers, 18/11/2" hole; \$11/12" hole. †Mica-filled bakelite. Av. shpg. wt., 4 oz.

Stock	Mfr's	Prongs	1-99,	100-249,	250-Up,
No.	Type		EACH	EACH	EACH
40 H 024 40 H 025 40 H 026 40 H 027	77MIP4§ 77MIP5§ 77MIP6§ 77MIP7S§	4 5 6 7 Small	.09 .10 .11 .12	.078 .086 .099	.070 .077 .087 .096
40 H 029	77MIP7L†	7 Large	.12	.106	.095
40 H 028	77MIP8§	Octal	.10	.085	.077
40 H 126	88-8*	Octal	.11	.095	.086
40 H 030 40 H 034 40 H 032 40 H 033	88-8X* 77MIP8T§‡ 77MIP9§ 77MIP11§	Loctal Octal 9 11	.14 .12 .12	.118 .102 .10	.106 .092 .09

Type RS. Have removable mounting plate. 40 H 009 mounts in 1944, hole, others in 1944, hole. Slotted mounting holes to fit centers from 1/2 to 1/4. Av. shop, wt., 4 oz.

40 H 004 40 H 005 40 H 006	78RS4 78RS5 78RS6	4 5 6	.11 .12	.098 .105	.088 .095
40 H 007	78RS7S	7 Small	.14	:iiii	:106
40 H 009 40 H 008 40 H 010 40 H 012	78RS7L 78RS8 78RS8L 78RS9	7 Large Octal Loctal 9	.18 .13 .17 .13	.155 .11 .148 .115	.14 .099 .133 .104

Type RSS. Ultra-low-loss steatite sockets. Excellent for use in high-Type RSS. Ultra-low-loss steatite sockets. Excellent for use in high frequency transmitting equipment, etc. All are universal type; have removable mounting plate with slotted holes 1½ to 1½". Mounting hole, 1½" except 40 H 079, which requires 12½4". Av. shpg. wt., 5 oz.

40 H 074	49RSS4	4	.28	.245	.22
40 H 075	49RSS5	5	.29	.255	.23
40 H 076	49RSS6	6	.31	.27	.243
40 H 077	49RSS7S	7 Small	.35	.30	.27
40 H 079	49RSS7L	7 Large	.34	.295	.266
40 H 078	49RSS8	Octal	.30	.255	.23

Type S. High-dielectric molded bakelite body. Units are the same as type RS, but without mounting plate; mount with retainer ring, supplied. All sockets require 111/64" hole, except 40 H 059, which requires 121/64" hole. Av. shop, wt. 4 oz.

40 H 054 40 H 055 40 H 056 40 H 057	78S4   78S5   78S6   78S7S	5 6 7 Small	.08 .09 .10	.07 .078 .085 .09	.063 .07 .077 .081
40 H 059 40 H 058 40 H 062 40 H 060	78S7L 78S8 78S9 78S8L	7 Large Octal 9 Loctal	.14 .10 .11	.123 .085 .098	.11 .077 .088 .106







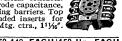


Type "S" Miniature Sockets. Have high-dielectric, molded bakelite insulating material. Mount in standard 111/6," chassis hole with retainer ring supplied. Av. shpg. wt., 5 oz.

Stock No. Type Pins 1-99, EA. 100-249, EA. 250-Up, EA. 40 H I I 3 78-A7P 7 .22 185 .22

Barrier-Type Industrial Octal Sockets. Max. EIA working voltage, 2,000 DC. Bronze cloverleaf contacts. Rated 8 amps each contact. Inter-electrode capacitance, 2.6 mmf. Eight screw terminals. Insulating barriers. Top mounting. \*Includes 4 molded-in threaded inserts for use as tie points. Size: 634x113/ex25/\*. Mtg. ctrs., 111/e\*. (Shpg. wt., 8 oz.

Туре Stock No. 1-49, EACH 50-149, EACH 150-Up, EACH



# Amphenol AN Connectors



Stock No.

39H 701 39H 702 39H 703

Stock No. 39 H 704 39 H 705 39 H 706

Stock No.

39H 708 39H 709 39H 710 39H 711

Stock No.

39H717 39H718 39H719 39H720 39H721

39H 722 39H 723 39H 724 39H 725

39 H 725 39 H 726

Stock No.

Stock No.

39 H 750 39 H 751 39 H 752 39 H 753 39 H 754

39 H 755 39 H 756 39 H 757



Con-tacts

Con-tacts

NET

NFT

.44 .44 .64

NET

.69 .86 .73 333

.75 .47 1.30 1.03 2 2 2

NET

.44 .75 1.27 .71 .47 22222

.78 1.30 1.05

Con-tacts NET

tacts

44

444

2.40

NET

.62 .93 .66 .96 33333

1.10

.62 .93 1.25 1.49

.93 .96 .71 1.01

1.05

1.00 .76 1.08 1.40 1.64

1.21 5 6 6

Con-tacts

Size 8S

"AN" Type

Size 10S

"AN" Type

3102A-10S-2P 3102A-10S-2S 3106A-10S-2S

Size 10SL

"AN" Type

3106A-10SL-4S 3100A-10SL-3P 3101A-10SL-3P

3102A-10SL-3P

Size 12S

"AN" Type

3102A-12S-3P 3106A-12S-3P 3108A-12S-3P 3100A-12S-3S

3100A-12S-3S 3102A-12S-3S

3106A-12S-3S 3108A-12S-3S 3108B-12S-3S 3102A-12S-4P 3106A-12S-4S

Size 125L

"AN" Type

Size 14S "AN" Type

3102A-14S-1P 3106A-14S-1P 3102A-14S-1S 3106A-14S-1S 3108A-14S-1S

3108B-14S-1S 3102A-14S-2P 3106A-14S-2P 3106B-14S-2P 3108A-14S-2P

3100A-14S-25

3101A-14S-2S 3101A-14S-2S 3102A-14S-2S 3106A-14S-2S 3106B-14S-2S

3108A-14S-2S 3108B-14S-2S

3101A-14S-5P 3102A-14S-5P

3106A-14S-5P

3100A-14S-5S

3102A-14S-5S 3106A-14S-5S 3106B-14S-5S 3108A-14S-5S

3108B-14S-5S

3106A-14S-6S

39 H 7 I 6 3106A-12SL-844S

39H712 3106A-10SL-3S 39H713 3102A-10SL-4P 39H714 3108A-10SL-4S 39H715 3108B-10SL-4S

3106A-8S-1P 3108A-8S-1P 3102A-8S-1S











AN 3108A AN 3102A AN 3106A AN 3106B

AN OR MS MARKING-MEET ARMY-NAVY SPECIFICATIONS

#### **ALLIED STOCKS ALL AMPHENOL AN CONNECTORS**

Allied can sup

,,	~ L.L	~~~	HEIGOL	~''			OKS
pl	у (	any .	Amphen	ol T	уре	ΑN	(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	145	(cont'd)	,

Stock No.	"AN" Type	Con- tacts	NET
39 H 758 39 H 759 39 H 760 39 H 761	3108B-14S-6S 3102A-14S-7P 3106A-14S-7P 3101A-14S-7S	6 3 3	1.27 .62 .93
39 H 762 39 H 763 39 H 766 39 H 767	3102A-14S-7S 3106A-14S-7S 3101A-14S-9P 3102A-14S-9P	3 3 2 2	.66 .96 .83 .57
39 H 768 39 H 769 39 H 770 39 H 771	3106A-14S-9P 3102A-14S-9S 3106A-14S-9S 3108B-14S-9S	2 2 2 2	.88 .61 .91

Size 16			
Stock No.	"AN" Type	Con- tacts	NET
39 H 772 39 H 774 39 H 775	3106A-16-10P 3102A-16-11P 3106A-16-11S	3 2 2	1.18 .62 1.22

Size 16S

	1	Con-	, 1
Stock No.	"AN" Type	tacts	NET
39 H 777	3101A-16S-1P	7	1.10
39 H 778	3102A-16S-1P	7	.78
39 H 779	3106A-16S-1P	7	1.15
39 H 780	3108B-16S-1P	7	1.45
39 H 781	3100A-16S-1S	7	1.01
39 H 782	3102A-16S-1S	7	.76
39 H 783	3106A-16S-1S	7	1.13
39 H 784	3106B-16S-1S	7	1.52
39 H 785	3108B-16S-1S	7	1.44
39 H 786	3102A-16S-5P	3	.59
39 H 788	3106A-16S-6P	3	1.01
39 H 789	3102A-16S-8P	5	.71
39 H 790	3102A-16S-8S	5	.75
39 H 791	3106A-16S-8S	5	1.11

	0.000			
39 H 782 39 H 783 39 H 784 39 H 785 39 H 786	3102A-16S-1S 3106A-16S-1S 3106B-16S-1S 3108B-16S-1S 3102A-16S-5P	7 7 7 7 3	.76 1.13 1.52 1.44 .59	
39 H 788 39 H 789 39 H 790 39 H 791	3106A-16S-6P 3102A-16S-8P 3102A-16S-8S 3106A-16S-8S	3 5 5 5	1.01 .71 .75	
	Size 18			
Stock No.	"AN" Type	Con- tacts	NET	
39 H 792 39 H 793 39 H 794	3102A-18-1P 3106A-18-1P 3108B-18-1P	10 10 10	1.10 1.54 1.96	

Stock Ito.	All Type	tacts	112.
39 H 792 39 H 793 39 H 794 39 H 795 39 H 796	3102A-18-1P 3106A-18-1P 3108B-18-1P 3100A-18-1S	10 10 10 10	1.10 1.54 1.96 1.40
39 H 796	3102A-18-1S	10	1.18
39 H 797 39 H 798 39 H 799 39 H 800 39 H 801	3106A-18-1S 3106B-18-1S	10 10	1.62 2.14 2.62
39 H 799 39 H 800	3108A-18-1S 3108B-18-1S	10 10	2.62
39 H 801	3102A-18-3P	2	.73
39 H 802 39 H 803	3106A-18-3S 3102A-18-4P	2	1.35 .78
39 H 804 39 H 805 39 H 806	3106A-18-4P 3102A-18-4S	4	.88
	3106A-18-4S 3102A-18-8P	4 8	1.32
39 H 807 39 H 808	3106A-18-8P	8	1.47
39 H 808 39 H 809 39 H 810	3102A-18-8S 3106A-18-8S	8 8 7	1.20
39 H 8 I 2	3106A-18-9P 3100A-18-9S	7	1.44
39 H 8 I 4	3106A-18-9S	7	1.59
39 H 815 39 H 816	3102A-18-11P 3106A-18-11P	5	1.03
39 H 817 39 H 818	3106A-18-12P 3102A-18-12S	6	1.34
39 H 819 39 H 820	3106A-18-12S 3102A-18-15S	6	1.47
27020	1 010271-10-100		12.00

	Size 20		
Stock No.	"AN" Type	Con- tacts	NET
39 H 822 39 H 823	3102A-20-4P 3106A-20-4S	4	.98 1.78

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 16th's of an inch; (2\%6", or 1\%4"). 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.

Size 20 (cont'd)			
Stock No.	"AN" Type	Con- tacts	NET
39 H 824 39 H 825 39 H 826 39 H 827 39 H 828	3102A-20-7P 3106A-20-7P 3101A-20-7S 3102A-20-7S 3106A-20-7S	8 8 8 8	1.08 1.64 1.60 1.20 1.74
39 H 829	3102A-20-9P	8	1.18
39 H 830	3106A-20-11P	13	1.86
39 H 831	3102A-20-11S	13	2.33
39 H 832	3102A-20-15P	7	1.22
39 H 833	3106A-20-15P	7	1.78
39 H 834 39 H 835 39 H 836 39 H 837 39 H 838	3102A-20-15S 3102A-20-16P 3106A-20-16P 3102A-20-18P 3102A-20-18S	7 9 9 9	1.78 1.06 1.62 1.21 1.40
39 H 839	3102A-20-27P	14	1.40
39 H 840	3106A-20-27P	14	1.96
39 H 841	3106B-20-27P	14	2.33
39 H 842	3108B-20-27P	14	2.42
39 H 843	3100A-20-27S	14	1.70
39 H 844	3102A-20-27S	14	1.45
39 H 845	3106A-20-27S	14	2.01
39 H 846	3106B-20-27S	14	2.38
39 H 847	3108A-20-27S	14	3.18
39 H 848	3108B-20-27S	14	2.47
39 H 849	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. 39 H 853 39 H 854 39 H 855 39 H 856 39 H 857 39 H 860 39 H 861 39 H 862	"AN" Type 3102A-22-5P 3106A-22-14P 3102A-22-14P 3106A-22-14P 3108B-22-14P 3108B-22-14S 3106A-22-14S 3106B-22-14S	Contacts  6 6 19 19 19 19 19 19 19 19 19	NET 1.08 2.22 2.01 1.69 2.35 2.76 1.89 2.57 3.74
39 H 865 39 H 866 39 H 867 39 H 868 39 H 869 39 H 871	3106A-22-18P 3102A-22-18S 3102A-22-19P 3102A-22-19S 3106A-22-19S 3106A-22-23P 3102A-22-23S	8 8 14 14 14 14 8 8	1.94 1.30 1.50 1.57 2.23 1.98 1.83
	Simo 24		

3128 24			
Stock No.	"AN" Type	Con- tacts	NET
9 H 872	3106A-24-5P	16	2.32
9 H 873	3102A-24-5S	16	1.88
9 H 874	3106A-24-5S	16	2.62
9 H 875	3108B-24-5S	16	2.97
9 H 876	3106A-24-7P	16	2.32
89 H 877	3100A-24-7S	16	2.18
89 H 879	3108B-24-7S	16	2.94
89 H 880	3106A-24-9P	2	2.42
89 H 881	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 H 886	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 H 890	3106A-24-28S	24	2.96
39 H 891	3106B-24-28S	24	3.30
Size 28			

"AN" Type | tacts

39 H 892 3102A-28-11P 22

NET

Size 28 (cont'd)				
Stock No.	"AN" Type	Con- tacts	NET	
39 H 893 39 H 894 39 H 895 39 H 896	3106A-28-11P 3102A-28-11S 3106A-28-11S 3106B-28-11S	22 22 22 22 22	3.07 2.50 3.35 3.66	
39 H 897 39 H 898 39 H 900 39 H 901	3102A-28-12P 3106A-28-12P 3102A-28-12S 3106A-28-12S	26 26 26 26 26	2.04 2.89 2.58 3.43	
39 H 903 39 H 904 39 H 905 39 H 906	3102A-28-15P 3106A-28-15P 3102A-28-15S 3106A-28-15S	35 35 35 35 35	2.84 3.69 3.02 3.87	
39 H 907 39 H 908 39 H 910 39 H 911	3102A-28-16P 3106A-28-16S 3106A-28-20S 3102A-28-21P	20 20 14 37	1.91 3.02 3.20 2.94	
39 H 912 39 H 913 39 H 914	3106A-28-21P 3102A-28-21S 3106A-28-21S	37 37 37	3.79 3.12 3.97	

Size 32					
Stock No. 39 H 917 39 H 918 39 H 920	"AN" Type 3102A-32-7S 3106A-32-7S 3102A-32-13S	Contacts 35 35 35 23	NET 3.67 5.03 3.09		

# **DUST CAPS**

Provide protection against live circuits and from dirt and dust when con-nector is not being used. With inter-nal threads for use on all receptacles listed. Have soft rubber gasket to form a highly dependable, waterproof seal. Shpg. wt., 2 oz.

Stock No.	Mfr's Type	Fits Shell	NET
39 H 924	9760-10	10S, 10SL	.42
39 H 925	9760-12	12, 128	.47
39 H 926	9760-14	12SL, 14, 14S	.53
39 H 927	9760-16	16, 16S	.59
39 H 928	9760-18	18	.67
39 H 929	9760-20	20	.71
39 H 930	9760-22	22	.75
39 H 931	9760-24	24	.83
39 H 94 I	9760-28	28	1.02
39 H 942	9760-32	32	1.20

### CABLE CLAMPS

Sturdy cable Sturdy cable clamps to support wire or cable at the plug or receptacle and prevent twisting or pulling. Die-cast alumin um for strength and light weight. So

Screws and washers

are plated to prevent corrosion. Shpg. wt., 2 oz.

Stock No.	"AN" Type	Fits Shell	NET
39 H 932 39 H 933 39 H 934 39 H 935 39 H 936	3057- 3 3057- 4 3057- 6 3057- 8 3057-10	8S, 10S 10SL,12, 12S 14, 14S 16, 16S 18	.44 .44 .44 .53
39 H 937 39 H 938 39 H 939 39 H 940	3057-12 3057-16 3057-20 3057-24	20, 22 24, 28 32 36	.53 .59 .62

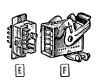
Stock No.

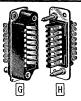
# Amphenol Connectors



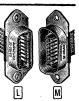












#### **BLUE RIBBON CONNECTORS**

Amphenol Type 26 Blue Ribbon connectors for heavy-duty opera-tion. Provide an excellent solution to multi-circuit connection, switching and re-routing problems. Self-cleaning spring contacts maintain continuity even under conditions of severe vibration. Do not require visual alignment. Positive polarization prevents mismating of connectors. Feature low insertion and withdrawal force, but provide firm, positive contact. Exclusive spring-tension contacts are heavily silver base plated and gold finished; will not tarnish or corrode. Plug contacts are supported their full length on the dielectric. Dielectric

configuration makes it impossible to overstress or fatigue contacts and individual protective barrier between each spring member insures proper spacing. Bodies are diallyl phthalate blue dielectric and meet government specifications. Have high insulation resistance and stability. Mounting plates are made of corrosion-resistant stainless steel and are molded into the body. 4301 Series has end cable outlet; 4501 Series has side cable outlet. S in Type No. indicates socket contacts; P indicates plug contacts. For wire size up to No. 16. Rated 5 amperes at 600 v., DC. Av. shpg. wt., 5 oz.

#### TYPE 26 BARRIER POLARIZATION TYPES

(B) MALE					(/	A) FEMALE		
Con-	Stock	Mfr's	NET	EACH	Stock	Mfr's	NET	EACH
tacts	No.	Туре	1-9	10-49	No.	Туре	1-9	10-49
8	40 H 542		1.02		40 H 543		1.64	1.22
· 16	40 H 660 40 H 661		1.78		40 H 664 40 H 665		1.57	1.18
24	40 H 662	4100-24P	2.14		40 H 666		2.72	2.04
32	40 H 663	4100-32P	2.51		40 H 667		3.20	2.40

#### TYPE 26 BARRIER POLARIZED **CONNECTORS WITH KEYED SHELLS**

(D) MALE					(	C) FEMALE		
Con-	Stock	Mfr's	NET	EACH	Stock	Mfr's	NET	EACH
tacts	No.	Type	1-9	10-49	No.	Туре	1-9	10-49
8	40 H 650		1.88		40 H 671	4201-8S	2.16	1.62
	40 H 651		2.82		40 H 672		2.94	2.20
24	40 H 652		3.26		40 H 673		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					TING RECE	TACLES	
Con-	Stock	Mfr's	NET EACH		Stock	Mfr's	NET EACH	
tacts	No.	Туре	1 to 9	10 to 49	No.	Туре	1 to 9	10 to 49
8	40 H 610		5.45	4.09	40 H 618	4401-8P	2.92	
8	40 H 614	4501-8P 4301-16S	4.83	3.63	40 H 619 40 H 620	4401-8S 4401-16P	3.53 3.86	2.65
16 16	40 H 615	4501-165 4501-16P	6.06		40 H 621	4401-16S	4.33	3.25
24	40 H 612		7.38	5.54	40 H 622	4401-24P	4.31	3.23
24 32 32	40 H 616 40 H 613		6.79 8.26	5.10	40 H 623 40 H 630	4401-24S 4401-32P	4.90	3.67
32	40 H 617		7.56		140 H 631	4401-32S	5.49	

#### **TYPE 26 PIN POLARIZATION TYPES**

(H) MALE				((	) FEMALE			
Con-	Stock	Mfr's	NET	EACH	Stock	Mfr's	NET	EACH
tacts	No.	Type	1-9	10-49	No.	Туре	1-9	10-49
16	40 H 544		1.94		40 H 545		2.42	1.81
24 32	40 H 546		2.33		40 H 547		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

Extremely compact, high-quality connectors for use in cable-to-chromate treatment plus the Blue Ribbon features described above. Rated 5 amps, 700 v. DC. Av. shpg. wt., 1 oz.

Stock No.		Description	1-9, EA.	10-49, EA.
41 H 075	57-30140	14-Contact Plug	2.76	2.08
41 H 079	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	36-Contact Plug	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

Miniature connectors for chassis-to-chassis connections. Have gold-iridite finished brass shell and gold-plated contacts. For wire up to No. 22. Rated 5 amps, 700 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. High-quality 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 after repeated insertions. Blue dielectric; gold-plated contacts. All units accept. 061° to .071° printed circuit boards. Av. shpg. wt., 2 oz. 5



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 plus, 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.	Туре	Contacts	1-9, EA.	10-49, EA.					
H 090	143-006-01	6	1.43	1.08	Stock No.	Туре	Contacts	1-9, EA.	10-49, EA.
10 H 503	143-010-01	.10	1.16	.86	41 H 085	133-010-21	10	1.80	1.35
10 H 500	143-015-01	15	1.55	1.16	4! H 086	133-015-21	15	2.11 2.35	1.59
10 H 501	143-018-01	18	1.68	1.25	41 H 087	133-018-21	18	2.35	1.76
10 H 502	143-022-01	22	2.01	1.50	41 H 088	133-022-21	22	2.57	1.93

# **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 large size with 11, 14 or 24 contacts. All connectors 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 13/6" hole and are secured through 4, 125" equally spaced holes on the flange. Flange is only 11/16"

SMALL SHELL-5 No. 20 AWG								
Stock	Type	Contacts and	Description	NET				
No.	No.	Ampere Rating		EACH				
40 H 595	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				
	SN	ALL SHELL-9 No.	20 AWG					
40 H 579	165-13	9 @ 7.5	Male Plug	3.26				
40 H 580	165-14	9 @ 7.5	Female Plug	4.00				
40 H 581	165-15	9 @ 7.5	Male Receptacle	2.56				
40 H 582	165-16	9 @ 7.5	Female Receptacle	3.18				
	SM	ALL SHELL-12 No.	20 AWG					
40 H 575	165-9	12 @ 7.5	Male Plug	3.40				
40 H 576	165-10	12 @ 7.5	Female Plug	4.39				
40 H 577	165-11	12 @ 7.5	Male Receptacle	2.71				
40 H 578	165-12	12 @ 7.5	Female Receptacle	4.65				

square. Large receptacles mount in 11/6" hole and are secured through 4, .125" equally spaced holes on a 14/6" square flange. Plugs are approximately 21/6" long. Small sized plug is 5'46" diameter and large sized plug is 14/4" 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 No.	Contacts and Ampere Rating	Description	EACH
40 H 583	165-17	4 @ 17; 7 @ 7.5	Male Plug	4.48
40 H 584	165-18	4 @ 17; 7 @ 7.5	Female Plug	5.36
40 H 585	165-19	4 @ 17; 7 @ 7.5	Male Receptacle	2.96
40 H 586	165-20	4 @ 17; 7 @ 7.5	Female Receptacle	3.77
	LAI	RGE 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
	LAI	RGE SHELL-24 No	. 20 AWG	
40 H 587	165-25	24 @ 7.5	Male Plug	5.34
40 H 588	165-26	24 @ 7.5	Female Plug	6.85
40 H 589	165-27	24 @ 7.5	Male Receptacle	3.77
40 11 500	4 6 7 00	04 6 77	12 1 . 12 1	

Female Receptacle

40 H 590

# **Amphenol Connectors and Plugs**









MINIATURE RACK PANEL & CABLE CONNECTORS

Miniature type connectors designed especially for interconnection of miniature electronic equipment. Modded 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 3% decided and mounting hole. This type also available with a locking clip (Fig. C) for mating with the hood and cable clamp type where a locking dip (Fig. C) for mating with the hood and cable clamp type. Vovrall diameter, hex nut type only %; cable clamp type, ¼. Voverall length, cable clamp type. They. Av. shps. wt., 5 oz. Write for quantity prices on 50 or more of any one type.

MAIF CONNECTORS

#### MALE CONNECTORS

Stock	Mfr's	Con-	Ī		NET E	ACH
No.	Type	tacts	Fig.	Description	1-9	10-49
40 H 632 40 H 634 40 H 636	126-010 126-191 126-012	5 7 9	B B	Hex nut type, for panel mtg. Hex nut type, for panel mtg. Hex nut type, for panel mtg.	.76 1.14 .98	.58 .85 .73
40 H 644 40 H 646 40 H 648	126-217 126-195 126-220	5 7 9	D D D	Hood and cable clamp type Hood and cable clamp type Hood and cable clamp type	1.38 1.52 1.59	1.04 1.15 1.20
40 H 638 40 H 640 40 H 642	126-216 126-197 126-219	5 7 9	::	Hex nut type, with locking clip Hex nut type, with locking clip Hex nut type, with locking clip	.82 .98 1.04	.62 .73 .78

		FE	WAL	CONNECTORS		
40 H 633 40 H 635 40 H 637	126-011 126-192 126-013	5 7 9	A A A	Hex nut type, for panel mtg. Hex nut type, for panel mtg. Hex nut type, for panel mtg.	1.20	.90 1.28 1.55
40 H 645 40 H 647 40 H 649	126-223 126-196 126-222	5 7 9	::	Hood and cable clamp type Hood and cable clamp type Hood and cable clamp type	1.79 2.29 2.65	1.34
40 H 639 40 H 641 40 H 643	126-218 126-198 126-221	5 7 9	CCC	Hex nut type, with locking clip Hex nut type, with locking clip Hex nut type, with locking clip	1.26	.95 1.30 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 mount-

May be combined for "pull-out" rack mount-ing, inter-connecting several units, and extending conductors. Mica-filled phenolic plastic has high impact strength, low loss and low shrinkage. Non-rotating contacts are silver-plated with .0002" hard gold shell. Plating gives improved appearance, makes soldering easier and faster—no pre-tinning of solder cups is required. All have eyelets inserted in mounting holes for added strength, and interlocking barriers to prevent accidental shorting. Rated at 900 v., 60 cycles, AC. Finsert 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.

Contacts

Stock	Mir's	lotal		tuoto	Description	I WELL EVOIL
No.	Type	Contacts	No. 16	No. 20	Description	1-9   10-49
40 H 530	126-804*	11	2	9	Chassis plug	1.04 .78
40 H 53 I	126-805*	11	2	9 1	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		15	3	12	Cable socket	1.52 1.15
40 H 538	126-806*	20	4	16	Chassis plug	1.79 1.34
40 H 539	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 54 I	126-810	20	4	16	Cable socket	2.23 1.68
40 H 569	126-813*	20	20	l l	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 \( \frac{1}{6}\)'' O.D. Male types can be plugged into chassis-mounted tube sockets. Size, \( 1\)''<sub>6</sub>\( x1\)''<sub>2</sub>\( x^2\). Av. shpg. wt., \( 3\) oz.

#### [FEMALE

Stock	Mfr's.	Con-	Con- NET EACH					
No.	Туре	tacts	1-99	100-249	250-Up			
40 H 524 40 H 525 40 H 526 40 H 527	78-PF4 78-PF5 78-PF6 78-PF7S	4 5 6 7S	17¢ 18¢ 19¢ 20¢	14½¢ 15¢ 16¢ 16½¢	13¢ 14¢ 14¢ 15¢			
40 H 528 40 H 516 40 H 517	78-PF8 78-PF9 78-PF11	8 octal 9 11	19¢ 21¢ 22¢	6¢   7¢   8½¢	4¢   5½¢   6½¢			

#### MALE

Stock	Mfr's.	Con-	Con- NET EACH				
No.	Туре	tacts	1-99	100-249	250-Up		
40 H 504	86-PM4	4	21¢	171/2¢	16¢		
40 H 505 40 H 506	86-PM5 86-PM6	6	21¢ 22¢ 23¢	18½¢	16¢		
40 H 507	86-PM7S	7S	23¢	19¢	17¢		
40 H 508 40 H 512	86-PM8 86-PM9	8	22¢	18¢	! 6¢		
40 H 513	86-PM11		22¢ 22¢ 23¢	18½¢	17½¢		

Amphenol Cable Clamp. Type 79-CC4. For use with above connectors. Relieves strain on soldered connections. Shpg. wt., 5 oz. 40 H 670. 1-49. NET EACH. 5c to 149, EACH. 4¢ 150 or More, EACH. 3½¢



#### SUBMINAX SUBMINIATURE RF CONNECTORS

Subminiature RF connectors for use with Amphenol subminiature co-axial cable. Feature high efficiency, plus space-saving design. Use screw-on types with each other; push-on connectors only with push-on types; 75-ohm and 50-ohm types cannot be inter-mixed. Plugs fit jacks, bulk-head jacks or receptacles. For cables use plugs and jacks. Use bulkhead jacks for chassis or panel mounting if internal wiring is coax; use re-ceptacles if internal wiring is non-coax. Feed-through types are for per-manent feed-through connection. All connectors have gold-plated bodies and contacts. Shgg. wt. 3 oz. Write for quantity prices on 50 or more of any one type. any one type.

50 OHM PUS	SH-ON	ł
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Stock	Mfr's	D	For Amphenoi Cables	NET	EACH
No.	Type	Description	For Amphenol Cables	1-9	10-49
40 H 470	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 47 I	27-2	Jack	21-598 (RG-174/U)	.91	.69
40 H 472	27-3	Receptacle		.94	.71
40 H 473	27-4	Jack, Bulhkead	21-598 (RG-174/U)	1.09	.81
40 H 474	27-5	Feed-Through	1	1.47	1.11
40 H 045	27-801	Terminator 521-596	21-598 (RG-174/U)	.62	.46

#### 50 OHM SCREW-ON

Stock Mfr's		Description	For Amphenol Cables	NET	ET EACH	
No.	Type	Description	Of Ampliend Capies	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	27-10	Jack, Bulkhead	21-598 (RG-174/U)	1.00	.75	
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	1-9	10-49
40 H 48 I 40 H 497 40 H 458	27-13 27-18 27-15	Plug Right-Angle Plug Receptacle	21-597 21-597	1.12 3.00 1.12	.84 2.25 .84

#### 75 OHM SCREW-ON

Stock	Mfr's	D	For Amphenol Cables	NET EACH		
No.	Туре	Description	For Amphenol Cables	1-9	10-49	
40H461	27-19	Plug	21-597	1.03	.77	
40 H 498	27-25	Right-Angle Plug	21-597	2.59	1.94	
40 H 462	27-20	Jack	21-597	1.00	.75	
40 H 463	27-21	Receptacle		1.09	.81	
40H464	27-22	Jack, Bulkhead	21-597	1.32	.99	

#### CRIMPING TOOLS FOR SUBMINAX CONNECTORS

Stock No.	Mfr's Type	Description	For Amphenol Cables	Wt. Oz.	NET EACH
40 H 467	27-900	Crimp Tool	21-598 (RG-174/U)	12	14.00
40 H 468	27-901	Crimp Tool	21-597	12	14.00

#### MINIATURE CABLE CONNECTORS





Last letter in Type No. indicates long (13/6"), or short (13/6"). Last fig, in Type No. denotes contacts. PCG—chassis type. Figs. E and G are female types; Fig. F, male. Shpg. wt., 2 oz.

No.	Туре	Fig.	1-49, EA.	50-149, EA.	150-Up, EA.
40 H 320	91-MPF3L	E	27¢	24¢	21¢
	91-MPF3S	E	27¢	24¢	21¢
	91-MPF4L 91-MPF4S	E	29¢ 27¢	24¢	23¢
				24¢	21¢
40 H 325	91-MPM3L	F	24¢	21¢	19¢
	91-MPM3S	F	23¢	20¢	18¢
40 H 326	91-MPM4L	F	24¢	21¢	19¢
40 H 574	91-MPM4S	F	23¢	20¢	18¢
	91-MPM5L	F	26¢	23¢	20¢
40 H 328	91-MPM6L	F	27¢	24¢	21¢
40 H 330	78-PCG3	G	16¢	13½¢	12¢
40 H 331	78-PCG4	G	16¢	13½¢	12¢
40 H 332	178-PCG5	G	18½¢	15½¢	4¢
40 H 333	78-PCG6	Ğ	19¢	16¢	14¢



#### TYPE CP PLUGS

Standard bakelite plugs for use as chassis connectors. Use adapter plate below for replacement mounting. With mounting ring for 11½″ holes except \*12½″ keyed hole. †Have guide post and aligning key. Av. wt., 2 oz.

No.	Mfr's Type	Prongs	1-99, EA.	100-249, EA.	250-Up, EA.
40 H 015	86-CP4	4	¢  2¢	91/2€	8½¢
40 H 016	86-CP5	5	12¢	10¢	9¢
40 H 017	86-CP6	. 6	13¢ 15¢	[¢	10¢
40 H 018	86-CP7L*	7-Large		12½¢	11¢
40 H 019	86-CP7S	7-Small	14¢ 12½¢	11½¢	10¢
40 H 020	86-CP8†	Octai	12½¢	10½¢	91/2⊄
40 H 021 40 H 022	86-CP9† 86-CP11†	9 1	13¢	114	0¢
40 N UZZ	00-UPIIT	1 11 1	14¢	1 12⊄	110

Adapter Plate. Nickel plated steel. For use with all Type CP plugs above except 86-CP7L. 1½" to 1½" centers. Shpg. wt., 2 oz. 2c

# Amphenol Connectors, Sockets and Plugs

# RF CABLE CONNECTORS



### **TYPE 83 COAXIAL CONNECTORS**

Meet government specs. \*Polystyrene insulation. †Mica-filled insert. ‡For twin coax RG-22/U and RG-22A/U cable. 3 oz.

UHF Small Single Contact. Popular connectors for any RF application.								
Stock	Military No.	Mfr's	Jr:-	Dan-windi	NET	EACH		
No.		Type	Fig.	Description	1-9	10-49		
40 H 357	UG-106/U, M-360	83-1H	D	For RG/U 8, 9, 10				
42 H 450	HG-111/H	83-750	A	11, 12, 13, 63 Plug for RG/U 59.	.26	.22		
4211430	00-111/0	63-730	^	62. 71	.98	.81		
40 H 360	UG-175/U	83-185	ļ	Reducing Adapter for				
40 H 359	UG-176 /II	83-168		RG/U 29, 55 Reducing Adapter for	.20	.17		
40 H 339	04-1/0/0	83-108	l	RG/U59. 62	.20	.17		
40 H 351	UG-177 /U	83-765	D	For RG/U 29, 55, 58A	.29	.25		
40 H 373	UG-203/U, 49482	83-776	l A	For RG/U 29, 55, 58A.	.29	.25		
40.11.254	UO 202 /U DI 274	00.154	1	59, 62, 63, 71	1.11	.92		
	UG-363/U, PL-274 UG-646/U, M-359	83-1F* 83-1AP*	F	Feed-ThroughConnector Right Angle Plug Adapter	1.94	1.62		
42 H 451		83-1HP	D	Hood for RG/U 8. 9. 10.	1.00	1.36		
	'	03-1111	"	11, 12, 13, 63, 65	.32	.27		
	M-358, 49199	83-1T*		"T" Adapter	2.59	2.16		
	M-359A, 49192 PL-258, 49191	83-58 83-1J*	C	Right Angle Adapter Straight Adapter	2.11	1.75		
	PL-259, 49190	83-1SP†			1.13	94		
40 H 350	FL-235, 45150	89-1911	A	For RG/U 8, 9, 10, 11, 12, 13	.72	.60		
	PL-259A, 49195	83-756	A	As above, but Teflon	1.35	1.16		
40 H 372	PL-259A, 49195	83-1SPN	Α	For RG/U8, 9, 10, 11,		٠		
40 H 352	SO-239, 49194	83-1R†	В	12, 13, 63, 65 Receptacle Chassis Type	.98 .73	.81 .62		
42 H 453		83-798	B	Receptacle	1.78	1.49		
40 H 358	l	83-1AC		Cap and Chain	.55	':45		
	SO-239, 49194	83-1RTY*	В	Receptacle	.55 .73	.62		
42 H 456		83-59		Rtang plug for RG/U5 8,9,10,11,12,13,63,6	2.55	2.12		
42 H 457	PL-259, 49190	83-822	A	Plug-Teflon	1.24	1:03		
HUE Constitute Contact Property is a second state of the second st								

UHF Small Twin Cont	ect. For us	e with 2-conductor coax	rables.
40 H 36 I UG-102/U, PL-284	83-22SP‡	A Straight plug B Chassis receptacle Right-angle adapter C Straight Adapter Straight Bulkhead Adapter Reduc'g Adptr250 ID	1.20 1.00
40 H 362 UG-103/U, S0-264	83-22R‡		.98 .81
40 H 374 UG-104/U, PL-293	83-22AP‡		2.44 2.03
40 H 5 I I UG-105/U, PL-285	83-22J		1.80 1.51
40 H 5 I 8 PL-275	83-22F		2.85 2.37

Solderless Type UHF Plug Connectors.									
40 H 510	83-850 83-851	E	Plug for RG/U 11 Plug for RG/U 8, 9, 10, 11, 12, 13, 63, 65	1.35	1.13				

#### **SOCKETS AND PLUGS**

Single-contact sockets and plugs. Molded bakelite bodies. Sockets mount in ½ hole. Supplied with Amphenol 2-11 retainer ring. Contacts recessed ½ to prevent shorts and possibility of shock from exposed metal. Shpg. wt., 1 oz.



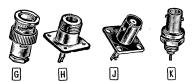
				_	-
Stock	Mfr's			NET EACH	
No.	Type	Description	1-99	100-249	250-Up
41 H 153 41 H 154 41 H 156		Plug. Red. For 5/32" socket. Plug. Black. Same as above. Plug. Red. For 1/8" socket.	.03	.025	.023
41 H 157 41 H 158 41 H 159	71-1M 71-1S 71-1S	Plug. Black. Same as above. Plug. Red. For 3/12" socket. Plug. Black. Same as above.	.03	.025	.023
41 H 160 41 H 161 41 H 162 41 H 163		Socket. Red. For 5/32" plug. Socket. Black. Same as above. Socket. Red. For 1/8" plug. Socket. Black. Same as above.	.05	.043	.039
41 H 164 41 H 165 41 H 166 41 H 167	78-1P 78-1S	Socket. Red. Std. 080" phone tip. Socket. Black. Same as above. Socket. Red. For 3/32" plug. Socket. Black. Same as above.	.05	.043	.039

#### **TYPE 71 PLUGS**

TYPE 71 PLUGS

Compact, efficient, high-dielectric plugs. Ideal for all plug-in connections where space is limited. Excellent for transmitters, receivers, intercoms, etc. Body is made of high quality bake-lite. Molded ring allows firm, non-slip finger grip. Securely anchored, 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.

Stock	Mfr's	_		NET EACH	
No.	Mfr's Prongs 1-99		100-249	250-Up	
40 H 177	71-3S	3	.065	.055	.05
40 H 169	71-4S	4	.08	.07	.063
41 H 149	71-5S	5	.09	.075	.068
40 H 179	71-65	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.	Mfr's Type	Fig.	Description	NET 1	10-49
42 H 459 42 H 460 40 H 313 42 H 461 40 H 314	UG-18B/U UG-18C/U UG-21B/U UG-21D/U UG-22B/U	82-86 82-203 82-61 82-202 82-62	L	Plug Plug Plug for RG/U 8, 9, 10 Plug Panel Jack for RG/U 8, 9, 10	2.11 2.64 1.87 2.53	1.75
40 H 315 40 H 520 42 H 462 42 H 463 42 H 464	UG-23B/U UG-27A/U UG-27B/U UG-27C/U UG-28A/U	82-63 82-64 82-98 82-213 82-99	M	Jack for RG/U 8, 9, 10 Right-Angle Adapter Right-Angle Adapter Right-Angle Adapter T Adapter	1.71 3.39 3.53 4.33 3.81	1 43
40 H 521 40 H 522 40 H 529 40 H 312 40 H 316	UG-58/U UG-94A/U	82-65 82-66 82-97 82-24* 82-84*	H	Straight Adapter Bulkhead Adapter Receptacle Receptacle Plug for RG/U 11, 12, 13	2.05 3.00 1.18 1.20 2.20	1.71 2.50 .98 1.00 1.83
40 H 523 40 H 519 40 H 558 42 H 465 42 H 466	UG-680/U MX-913/U	82-90* 82-36 82-102 82-811 82-106		Panel Jack for RG/U11, 12 T Adapter T Adapter Bulkhead Receptacle Cap and Chain	5.44 4.19 2.61 .61	3.50 2.18 .51
	UG-1186/U UG-1187/U			Plug for RG/U 17, 18 Plug\RG/U 8, 9, 10, 87A, Jack / 115, 115A Panel Jack Right Angle Plug	4.96	2.05 1.75 1.87 4.14
			ge. 5	0 ohms. Av. shpg. v	t., 3 o	z.
40 H 375 40 H 317 42 H 468 40 H 318	UG-59B/U UG-496/U	82-38 82-804 82-92 82-805		Piug for RG/U 8, 9, 10 Piug for RG/U 8, 9, 10 Receptacle Receptacle	3.11 3.37 2.28 3.18	2.81
40 H 563 40 H 5!4 40 H 5!5 42 H 469	UG-1213/U	82-320 82-321 82-324 82-48 82-833		Plug For RG/U 8, Jack 9, 10, 87A, Panel Jack 115, 115A Armor Clamp Right Angle Plug	4.35 4.90 5.12 .82	3.63
	nd LC Conne				7.04	2.00
40 H 488 42 H 47 I	UG-154/U	82-59	1		10.92	9.10

40 H 488   UG-154/U	82-59	Plug for RG/U 17, 18 Receptacle Plug for RG/U 8, 9, 10 Cap and Chain	10.92 9.10
42 H 47   UG-568/U	82-504		1.91 1.60
40 H 489   UG-573A/U	82-530		3.20 2.67
42 H 472   MX-1142/U	82-512		1.02 .85
Push-On Connectors.			
42 H 473	82-831	Plug	.50 .42
42 H 474		Bulkhead Receptacle	.89 .74
42 H 475		Plug	.52 .43

BNC Type Connectors. Small lightweight, weatherproofed connectors. Low voltage, single contact types for use with 50 ohm RG-55/U and RG-58/U cables except \*for use with 70 ohm RG-59/U, RG-62/U and RG-71/U. †Pressurized. Av. shpg. wt., 3 oz.

Stock No.	Military No.	Mfr's Type	Fig.	Description	NET 1-9	EACH 10-49
40 H 391 42 H 476 42 H 477 40 H 393 42 H 480	UG-88/U UG-88B/U UG-88C/U UG-89/U UG-201/U	31-002 31-018 31-202 31-005 31-830	G	Plug Plug Plug Jack Adapter N to BNC	1.09 1.16 1.52 1.18 2.61	.91 .96 1.27 .98 2.18
42 H 48 I 40 H 396 42 H 478 42 H 479 40 H 397	UG-260A/U	31-016† 31-012* 31-021* 31-212 31-015*	G	Bulkhead Receptacle Plug Plug Plug Plug Jack	3.09 1.16 1.11 1.46 1.22	2.58 .96 .92 1.22 1.02
40 H 395 40 H 493 40 H 492 42 H 482 40 H 392	UG-273/U	31-011* 31-028 31-008 31-208 31-003		Panel Jack BNC to UHF Adapter T Adapter T Adapter Receptacle	1.26 1.89 2.76 3.46 1.00	1.05 1.58 2.30 2.89 .83
42 H 483 40 H 399 40 H 394 42 H 484 42 H 485	UG-306/U	31-203 31-001 31-009 31-217 31-817	J	Receptacle Panel Jack Right Angle Adapter Adapter N to BNC Receptacle	1.13 1.24 2.57 2.74 1.09	1.03 2.14 2.28 .91
42 H 486 40 H 494 40 H 398 42 H 487 42 H 488	UG-491A/U UG-492A/U UG-657/U UG-909/U UG-910/U	31-218 31-220 31-102 31-206 31-207	K	Double Plug Adapter Adapter Receptacle Panel Jack Panel Jack	2.55 3.05 1.61 1.96	2.12 2.54 1.34 1.64 1.47
42 H 489 42 H 490 42 H 491 42 H 492 40 H 490	UG-913/U UG-914/U UG-1094/U UG-1098/U CW-123/U	31-204 31-219 31-221 31-222 31-006		Angle Plug Double Jack Adapter Bulkhead Jack Angle Bulkhead Jack Cap and Chain	3.70 1.83 1.16 2.73 .50	3.09 1.52 .96 2.26 .42
42 H 493 40 H 491 42 H 494 42 H 495 42 H 496	CW-123A/U CW-155/U CW-155A/U	31-026 31-007 31-027 31-304 31-759		Cap and Chain Cap Cap Plug Shielded Grd. Lug	.52 .35 .41 1.64	.43 .29 .34 1.36 .08

# Cinch—Jones Terminals & Fanning Strips

#### **FANNING STRIPS**



For neat, highly dependable terminal wiring. Insure correct, positive firm connections. Ideal for cable or near many correct, positive firm connections. Ideal for cable or near many connections can be made before putting strip into assembler. Facilitate disconnecting sub-assemblies for servicing. Last letter in Type No. indicates right or left mounting hole position. Laminated bakelite. Terminals made of .032" thick brass. Av. shpg. wt., 3 oz.

Series 160 L. Fit Series 140 barrier terminals at right. Terminals are mounted on ½2" bakelite, ½2" wide and on ½2" centers.

Stock	Mfr's		1	NET EAC	Н
No.	Туре	Term.	1-24	25-99	100-499
41 H 808	2-160L	2	8¢	7¢	6½¢
41 H 809	3-160L	3	12¢	11¢	10¢
41 H 812	4-160L	4	15¢	13¢	12½¢
41 H 813	5-160L	5	19¢	17¢	16¢
41 H 814	6-160L	6	23¢	21¢	20¢
41 H 817	8-160L	8	30¢	28¢	26¢
41 H 818	10-160L	10	37¢	34¢	32¢
41 H 819	12-160L	12	45¢	40¢	38¢

Series 160 R. Fit Series 140 barrier terminals at right. Terminals are mounted on \( \frac{3}{2}'' \) bakelite, \( \frac{1}{2}'' \) wide and on \( \frac{3}{3}'' \) centers.									
40 H 956	2-160R	2	8¢	7¢	6½¢				
40 H 957	3-160R	3	12¢	¢	10¢				
40 H 958	4-160R	4	15¢	3¢	12½¢				
40 H 959	5-160R	5	19¢	7¢	16¢				
40 H 960	6-160R	6	23¢	21¢	20¢				
40 H 961	8-160R	8	30¢	28¢	26¢				
40 H 962	10-160R	10	37¢	34¢	32¢				
40 H 963	12-160R	12	45¢	40¢	38¢				

Series 161L. Fit Series 141 barrier terminals at right. are mounted on 3/2" bakelite, 5%" wide and on 1/6" centers. Terminals

41 H 822	2-161L	2	8¢	71/2¢	7¢
4 i H 823	3-161L	3	13¢	¢	10 ½¢
41 H 824	4-161L	4	16¢	14¢	13¢
41 H 827	5-161L	5	20¢	18¢	161/2¢
41 H 828	6-161L	6	24¢ 30¢	22¢	20¢
41 H 829	8-161L	8	30¢	27¢	26¢
41 H 832	10-161L	10	38€	34¢ 1	321/5⊄
41 H 833	12-161L	1 12	450	400	381/4

Series 161 R. Fit Series 141 barrier terminals at right. Terminals are mounted on 3/12" bakelite, 5/8" wide and on 1/16" mounting centers.

			,		
40 H 964	2-161R	2	8¢	71/24	7¢
40 H 965 40 H 966	3-161R 4-161R	3 4	13¢	¢  4¢	10½¢
40 H 967	5-161R	5	20¢	18¢	16½¢
40 H 968 40 H 969	6-161R 8-161R	6	24¢ 30¢	22¢ 27¢ 34¢	20¢ 26¢
40 H 970	10-161R	10	1 38¢	34¢	32½¢
40 H 971	12-161R	12	45¢	40¢	381⁄2¢

**Series 162L.** Fit Series 142 barrier terminals at right. Terminals are mounted on  $\frac{3}{2}$  bakelite,  $\frac{5}{8}$  wide and on  $\frac{9}{6}$  centers.

41 H 834	2-162L	2	10¢	9¢	8 ½¢
41 H 843	3-162L	3	14¢	13¢	11 ½¢
41 H 844	4-162L	4	17¢	15¢	14 ½¢
41 H 845	5-162L	5	21¢	19¢	17 ½¢
41 H 846	6-162L	6	25¢	23¢	21 ½¢
41 H 847	8-162L	8	32¢	29¢	27 ½¢
41 H 848	10-162L	10	40¢	36¢	34¢
41 H 849	12-162L	12	47¢	42¢	40¢

Series 162 R. Fit Series 142 barrier terminals at right. Terminals are mounted on 3/2" bakelite. 5/4" wide and on 3/2" centers

mounted on /32	Building, 78	Wide this	4 014 /16	ccircus.	
40 H 972 40 H 973 40 H 974 40 H 975	2-162R 3-162R 4-162R 5-162R	2 3 4	10¢ 14¢ 17¢	9¢ 13¢ 15¢	8 ½¢     ½¢   4 ½¢
40 H 976 40 H 977 40 H 978	6-162R 8-162R 10-162R 12-162R	6 8 10 12	21¢ 25¢ 32¢ 40¢ 47¢	23¢ 29¢ 36¢ 42¢	17 ½¢ 21 ½¢ 27 ½¢ 34¢ 40¢



#### CABLE CLAMPS

Cable clamps for fanning strips above. Made of nickel-plated brass, with 6-32 round head screws. Serve as strain relief and anchor cable securely. Sizes shown are 1.D. Shpg. wt., 2 oz.

Stock	Mfr's		NET EACH		
No.	Туре	Size	1-24	25-99	100-499
41 H 852 41 H 853 41 H 854	CC-161-4 CC-161-6 CC-161-8	1/4" 3/8" 1/2"	8¢	7½¢	7¢
41 H 857 41 H 858 41 H 859	CC-161-10 CC-161-12 CC-161-14	5/8" 3/4" 7/8"	8¢	7½¢	7¢



#### **SERIES 2000 TERMINAL STRIPS**

Terminals are made of .019" brass, tin-plated, and spaced on %6" centers. Modded bakelite insulation. Mounting brackets are made of cadmium-plated steel. Mounting holes at each end of bracket. Av. shpg. wt., 2 oz.

Stock   Mfr's			Mtg.	NET EACH			
No.	Туре	Term	Ctrs.	1-24	25-99	100-499	
41 H 687 41 H 688 41 H 689	2002 2003 2004	3	1" 15/16"	6¢ 7¢	5½¢ 6½¢	5¢ 6¢	
41 H 690	2005	4 5	15/8" 115/16"	8¢ 9¢	7¢ 8¢	6 ½¢ 7 ½¢	
41 H 691 41 H 693 41 H 695	2006 2008 2010	6 8 10	2½" 2½" 3½"	10¢ 11¢ 13¢	9¢ 10¢ 12¢	8¢ 9½¢	
41 H 697	2012	12	41/8"	l i5č	146	121/s¢	

#### **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 shorts caused by frayed wires at the terminals. Base is moided bakelite, with mounting holes at ends. Eyelets and binder screws of nickel-plated brass; terminals of hot tin-finish brass. Barrier-type terminals and fanning strips, when used together, insure positive contact and screws, ¼" metal-to-metal spacing. No. 141 terminal strips have 5-40x¾" binder head screws, ½" metal-to-metal spacing. No. 142 terminal strips have 8-32x¾" binder head screws, ½" metal-to-metal spacing. Av. shpg. wt., 5 oz. Series 140. Metal-to-metal spacing over bakelite ¼". Base ½" wide x¾z" high. ¾" centers. Use with Series 160 fanning strips. Barriers between each terminal provide increased insula-

Stock	Mfr's	_		NET	EACH
No.	Туре	Term.	1-24	25-99	100-499
41 H 580 41 H 800 41 H 801 41 H 803 41 H 807	1-140 2-140 3-140 4-140 5-140	1 2 3 4 5	.09 .14 .20 .24 .30	.08 .13 .18 .23	.075 .12 .165 .21 .25
4! H 802 4! H 58! 4! H 804 4! H 582 4! H 805 4! H 583	6-140 7-140 8-140 9-140 10-140 11-140	6 7 8 9 10 11	.34 .40 .45 .51 .56	.31 .36 .41 .45 .50	.30 .34 .39 .43 .48
41 H 806 41 H 584 41 H 585 41 H 586 41 H 587	12-140 13-140 14-140 15-140 16-140	12 13 14 15 16	.66 .72 .77 .82 .87	.60 .64 .69 .74 .78	.56 .61 .66 .70 .75
41 H 588 41 H 589 41 H 590 41 H 591 41 H 592	17-140 18-140 19-140 20-140 21-140	17 18 19 20 21	.92 .98 1.03 1.08 1.14	.83 .88 .93 .97	.79 .83 .88 .92 .97

Series 141. Metal-to-metal spacing over bakelite  $\frac{3}{6}$ ". Base  $\frac{1}{6}$ " wide x  $\frac{1}{6}$ " high.  $\frac{3}{6}$ " centers. Use with Series 161 fanning strips.

/2 /10	CCIICCID!				
41 H 835 41 H 836 41 H 837 41 H 842 41 H 838 41 H 839	2-141 3-141 4-141 5-141 6-141 8-141	2 3 4 5 6 8	.19 .24 .31 .38 .44	.17 .22 .28 .35 .40	.16 .21 .27 .33 .38 .50
41 H 840 41 H 841 41 H 876 41 H 877 41 H 878 41 H 879	10-141 12-141 14-141 16-141 18-141 20-141	10 12 14 16 18 20	.72 .84 .98 1.12 1.24	.65 .76 .88 1.01 1.12 1.24	.61 .72 .84 .95 1.07

Series 142. Metal-to-metal spacing over bakelite %6''. Base  $1\frac{5}{16}''$  wide x 5%'' high. %6'' centers. Use with Series 162 fanning strips.

/6 2-18 /10					
41 H 670	2-142	2	.22	.20	.18
41 H 671	3-142	3	.30	.28	.26
41 H 672	4-142	4	.38	.34	.33
41 H 673	5-142	5	.46	.42	.39
41 H 674	6-142	6	.54	.49	.46
41 H 676	8-142	8	.71	.64	.60
41 H 678	10-142	10	.87	.78	.75
41 H 680	12-142	12	1.04	.94	.88
4  H 88	13-142	13	1.12	1.01	.95
4  H 882	14-142	14	1.20	1.08	1.02
4  H 883	15-142	15	1.28	1.16	1.11
4  H 884	16-142	16	1.36	1.22	1.16
4  H 886	17-142	17	1.44	1.29	1.23



#### **ADAPTER SOLDER TERMINALS**

Adapt barrier strips (listed above) to permit top-side or underside solder connections. Type ½W permits top-side soldering to barrier terminals; Type Y is for underside solder connections. Made of brass; hot-tin finish. Assure positive solder connections. Fasten securely under binder 3/4W head screws. Av. shpg. wt., per 10, 3 oz.

TYPE 3/4 W

Stock No.	Mfr's Type	For Series	Pkg. of 10	Stock No.	Mfr's Type	For Series	Pkg. of 10
41 H 887 41 H 888 41 H 889	3/4 W-141	141	29¢ 34¢ 42¢	41 H 891 41 H 892 41 H 893	Y-140 Y-141 Y-142	140 141 142	29¢ 34¢ 42¢



#### SERIES 170 TERMINAL STRIPS

Terminal strips with extra-heavy solder terminals. Ideal for industrial users, experimental labs, etc. Black molded bakelite insulation, ½6, wide, ½6, thick. Terminals are mounted on ¾6 centers. Mounting holes are ¾6 from center of end terminals. 032° brass, tin plated. Double-notched solder terminals with or west-around connections. Connect the duminals.

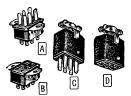
Terminals are -032° brass, tin plated. Double-notched solder terminals for rapid soldering or wrap-around connections. Compact, sturdy units. Av. shpg. wt., 5 oz.

Stock No.	Type	Term.	1-24, EA.	25-99, EA.	100-499, EA.
40 H 990	1-170	1	14¢	13¢	121/2¢
40 H 991	2-170	2	19¢	17¢	15½¢
40 H 992	3-170	3	22¢	20¢	18¢
40 H 993	4-170	4	25¢	23¢	22¢
40 H 994	5-170	5	25¢ 29¢	26¢	25¢
40 H 995	6-170	6	33¢	30¢	28¢
40 H 996	7-170	7	36¢	33¢	3īè
40 H 997	8-170	8	39¢	35¢	346
40 H 998	9-170	9	43¢	39¢	37¢
40 H 999	10-170	10	460	42#	400

# 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 contacts are ½² wide by ¾¼′ thick. \*Round shell; others rectangular. Av. shpg. wt., 3 oz.



# TYPE AB FOR CHASSIS MOUNTING

A PLUC	GS				
Contacts	Stock No.	Type	1-24, EA.	25-99, EA.	100-499, EA.
2 3	40 H 870* 40 H 871	P-302-AB P-303-AB	.19	.17	.16 .20
6 8	40 H 872 40 H 873 40 H 874	P-304-AB P-306-AB P-308-AB	.25 .31 .37	.23 .28 .34	.20 .22 .27 .32
10 12 15 18	40 H 875 40 H 876 40 H 816 40 H 817	P-310-AB P-312-AB P-315-AB P-318-AB	.42 .48 .63	.38 .43 .57	.365 .405 .535 .665
21	40 H 818	P-321-AB	.98	.88	.835
24 27 30 33	40 H 819 40 H 820 40 H 821 40 H 822	P-324-AB P-327-AB P-330-AB P-333-AB	1.19 1.40 1.61 1.80	1.07 1.26 1.45	1.01 1.19 1.36 1.53

#### B SOCKETS

Contacts	Stock No.	Туре	1-24, EA.	25-99, EA.	100-499, EA.
2	40 H 880*	S-302-AB	.21 .24 .27 .34	.19	.175
3	40 H 881	S-303-AB	.24	.23	.21
4	40 H 882	S-304-AB	.27	.24	.23
6 8	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 .59 .71	.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

# TYPE CCT WITH CABLE CLAMP

Contacts	Sto	ck No.	Туре	1-24, EA.	25-99, EA.	100-499, EA.
2	40 F			.43	.39	.37
- 3	40 F		P-303-CCT	.46	.42	.395
4	40 F		P-304-CCT	.51	.45	.43
6	40 F		P-306-CCT	.56	.50	.475
8	40 F	808	P-308-CCT	.62	.56	.525
10	40 F	1810	P-310-CCT	.69	.62	.585
12	40 F		P-312-CCT	.75	.68	.64
15	40 F		P-315-CCT	.98	.88	.835
18	40 H		P-318-CCT	1.19	1.07	1.01
21	40 F	1 809	P-321-CCT	1.40	1.25	1.19
24	40 F		P-324-CCT	1.66	1.49	1.40
27	40 F		P-327-CCT	1.87	1.69	1.59
30	40 F		P-330-CCT	2.18	1.96	1.85
33	140 F	1815	P-333-CCT	2.33	2.10	1.98

### D SOCKETS

Contacts	Sto	ck No.	Туре	1-24, EA.	25-99, EA.	100-499, EA.
2 3	40 F			.44	.40	.375
3	40 F		S-303-CCT	.48	.43	.405
4	40 F		S-304-CCT	.51	.46	.435
6 8	40 H		S-306-CCT	.59	.53	.50
8	40 F	858	S-308-CCT	.69	.62	.58
10	40 I		S-310-CCT	.76	.69	.65
12	40 H		S-312-CCT	.87	.78	.745
15	40 F		S-315-CCT	1.09	.98	.925
18	40 F		S-318-CCT	1.29	1.17	1.10
21	40 F	855	S-321-CCT	1.50	1.35	1.25
24	40 F		S-324-CCT	1.77	1.60	1.50
27	40 F		S-327-CCT	1.98	1.78	1.65
30	40 F		S-330-CCT	2.28	2.06	1.94
33	40 F	1863	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 equipment employing subminiature tubes. Molded from mica-filled low-loss bakelite. Silver-plated beryllium copper contacts. 4-prong tubes and G.E. transistors Gil and Gil Aft 2HS socket. All ½′ deep. Shpg. wt., 2 oz.



2H5





111 /32 GCCp.	onpg. wt.	, 2 02.			
Stock No.	Туре	Contacts	1-9, EA.	10-49, EA.	50-99, EA.
40 H 294 40 H 245 40 H 247 40 H 242	2H3 2H5 2H7 8SM	3 5 7 8	.20 .27 .30 .52	.18 .24 .27 .47	.165 .23 .24 .43

Transistor Types. 5-contact sockets designed for use with transistor circuits. Use type 5PC for printed circuits and 5WC for conventional wired circuits. Average shpg. wt., 2 oz.

Stock No.	Type	Size	1-9, EA.	10-49, EA.	50-99, EA
40 H 249	5WC	3/8 x 7/32 x 1 7/64"	.39	.35	.32
40 H 252	SPC	13/2×17/4×1/4"	36	ו פיב	1 30

#### 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, series 2400 rated at 1700 rms volts, 15 amps. All have polarizing pins. Plug contact prongs are ½" wide by ½", thick. Bodies bakelite. Phosphor-bronze socket contacts engage both sides of flat plug contact prongs to minimize contact resistance. Series 2400 improved 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	Stoc	k No.	Туре	1-24, EA.	25-99, EA	. 100-499, EA
2			P-402-CCT	.73	.66	.62
4 .	40 F	1911	P-404-CCT	.89	.80	.755
6 8			P-406-CCT	1.04	.94	.885
8			P-408-CCT	1.19	1.07	1.01
10			P-410-CCT	1.34	1.21	1.14
12	40 F	1915	P-412-CCT	1.49	1.34	1.27
2			P-2402-CCT	.90	.81	.765
4	40 F	834	P-2404-CCT	1.01	.91	.86
6 8			P-2406-CCT	1.14	1.02	.975
8			P-2408-CCT		1.13	1.07
10			P-2410-CCT		1.24	1.18
12	40 F	I 839	P-2412-CCT	1.52	1.34	1.30

# F SOCKETS

$\Box$				
2 4 6 8 10 12	40 H 920   S-402-CCT 40 H 921   S-404-CCT 40 H 922   S-406-CCT 40 H 923   S-408-CCT 40 H 924   S-410-CCT 40 H 925   S-412-CCT	.78 .99 1.20 1.40 1.62	.71 .89 1.08 1.26 1.45	.67 .84 1.03 1.20 1.38
2 4 6 8 10 12	40 H 840 S-2402-SB* 40 H 841 S-2404-SB* 40 H 842 S-2406-SB* 40 H 843 S-2408-SB* 40 H 844 S-2410-SB* 40 H 845 S-2412-SB*	.70 .82 .95 1.08 1.22 1.35	.63 .74 .85 .97 1.10	.595 .70 .81 .925 1.09
_				

#### G PLUGS TYPE AB FOR CHASSIS MOUNTING

2 4 6 8 10	40 H 890 P-402-AB 40 H 891 P-404-AB 40 H 892 P-406-AB 40 H 893 P-408-AB 40 H 894 P-410-AB	.46 .57 .69 .78	.41 .51 .62 .71	.395 .485 .58 .665 .755
12	40 H 895 P-412-AB	.98	.88	.835

# J SOCKETS

2	40 H 900 S-402-AB	.52	.47	.445
4	40 H 90 I S-404-AB	.69	.62	.58
6	40 H 902 S-406-AB	.83	.74	.715
8	40 H 903 S-408-AB	.98	.88	.835
10	40 H 904 S-410-AB	1.15	1.03	.975
12	40 H 905 S-412-AB	1.28	1.17	1.10

### H PLUGS TYPE DB RECESSED FOR CHASSIS MOUNTING †

Contacts	Stock No.	Туре	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
6	40 H 951	P-406-DB	.89	.80	.755
8	40 H 952	P-408-DB	1.04	.93	.885
10	40 H 953	P-410-DB	1.20	1.08	1.025
12	40 H 954	P-412-DB	1.35	1.22	1.15

#### SERIES 101 PLUG AND SOCKET

Low-loss plug and socket for high-irequency RF use. For coax or shielded 1cond. Cadmium-plated brass; prong, contacts, silver-plated. Shpg. wt., 4 oz.



Stock No. Type Descrip	tion 1-24,EA.	25-99,EA.	100-499,EA
40 H 825 P-101 1/2" Plug. Ler 40 H 835 S-101 Socket. Dia.,	ngth 11/4" .63 .7/8" .41	.57 .37	.54 .35

#### SERIES 202 PLUGS AND SOCKETS

Cadmium plated brass plugs and sockets. Type P-202-CCT is polarized. Knurled nut. Type S-202-B socket mtg. holes, No. 30 drill on 1" centers. All units have 34"-27 thread; shpg. wt. of 3 oz. Type P-202-CCT and S-202-CCT-THR wit





P-202-CC1 and S-202-CC1-1HR with capie clamp.								
Stock N	o.   Type	Fig.	Description	1-24, EA.	25-99, EA.	100-499, EA		
40 H 9	BO P-202-CCT	K	Plug, 2 contact	.58	.52	.495		
40 H 9	82 S-202-B	1 L	Socket, base mounting		.62	.58_		
40 H 9:	R I IS-202-CCT-THI	N IS	Socket extension	.78	.71	.665		

#### 2R2 CHASSIS TYPE AC SOCKET



# Switchcraft Plugs and Jacks



"LITTEL-PLUGS" PHONE PLUGS

Small-size phone plugs; fit standard ¼" phone jacks, except \*Type S-250, .206° sleeve for S-11 "Little Jax" and †Type R280 which has short sleeve for Rever recorders. Plugs with solder terminals feature built-in cable clamp; others do not include cable clamp. Metal (shielded) handles are nickel-plated brass; plastic handles are d'urable "Tenite." Handles are 1¹½6″ long; ½" dia. Av. shpg. wt., 4 oz.

Stock Mfr's		Fig. Cond.	Handle	Ter.	NET EACH			
No.	Type	g.	Jona.	Color		1-49	50-99	100-Up
41 H 553	240	A	2	Black	Screw	44¢	37¢	34¢
41 H 554		A	2	Red	Screw	44¢	37¢	34¢
41 H 611	250	A	2	Black	Solder	410	34¢	31¢
41 H 614	S250*	A	2	Black	Solder	446	37¢	34¢
41 H 612	255	A	2	Red	Solder	41¢	34¢	31¢
41 H 555		A	3	Black	Screw	71¢	59¢	54¢ 48¢
41 H 616	267	A	3	Black	Solder	62¢	52¢	48¢
41 H 613	1280	В	2	Metal	Solder	59¢	49¢	45¢
41 H 556	R280†	В	2	Metal	Solder	73¢	62¢	57¢
41 H 617	297	В	3	Metal	Solder	76¢	64¢	58¢

#### STANDARD PHONE PLUGS

Standard-size ¼" phone plugs. Metal (shielded) or black bakelite handles; 2½%' long, ½%' dia., except \*1′ long. Type 170 is similar to 70, but has 2-piece handle with cable clamp for ¼' cable. No. 190A is similar to 90, but has same handle as 170. Av. shpg. wt., 5 oz.

Stock	Mfr's	F:	Cond.	Handle		NET EACH			
No.	Type	Fig.	Cona.	Color	Ter.	1-49	50-99	100-Up	
41 H 55	7 40	A	2	Black	Screw	.44	.37	.34	
41 H 55		A	3	Black	Solder	.62	.52	.48	
41 H 55	9 70	В	2	Metal	Screw	.71	.59	.54	
41 H 56		E	3	Metal	Solder	.76	.64	.58	
41 H 56		E	2	Metal	Screw	.53	.44	.40	
41 H 56		C	2	Metal	Screw	.97	.81	.75	
41 H 56	3 190A	C	3	Metal	Solder	1.15	.96	.88	

# "LUG-PLUG" PHONE PLUGS

Low-cost, two-conductor, 1/4" phone plugs, similar to "Littel-Plugs," above. Have solder terminals. Exterior parts bright nickel plated. Red or black "Tenite" handles are 15/4" long, 1/2" dia., except \*Type 380 which has metal (shielded) handle 1" long. Av. shpg. wt., 4 oz.

Stock	Mfr's	l I	Handle	NET EACH			
No.	Type	Fig.	Color	1-49	50-99	100-Up	
41 H 564	350	A	Black	32¢	27¢	25¢	
41 H 565	355	A	Red	32¢	27¢	25¢	
41 H 566	380*	D	Metal	41¢	34¢	1 31¢	

#### **FLAT PHONE PLUGS**

14" phone plugs featuring flat, space-saving handles. Ideal for applications where conventional plugs would protrude too far and interfere with operation of equipment, prevent installation in tight quarters, etc. Easily removable plastic handle. Screw terminals on Types 220 and 225 will accept standard phone tips. Terminals and body are mechanically interlocked. Shpg. wt., 4 oz.

Stock No.	Mfr's Type	Fig.	Cond.	Handle Color	Ter.			100-Up
41 H 621 41 H 567 41 H 568 41 H 569	230	F F F	2 2 3 3		Screw Screw Screw Screw	53¢ 53¢ 76¢ 76¢	44¢ 44¢ 64¢ 64¢	40¢ 40¢ 58¢ 58¢

#### MILITARY-TYPE "LITTEL-PLUGS" AND EXTENSION JACK



Meet exacting industrial and military requirement. Plugs are made in accordance with MILP-642A specs. Type 820 extension jack is designed to meet MII. J-641A specs. Highest quality materials and advanced molding technique provide firm internal interlock; parts will not shift in position. Black plastic handle. Extension jack; fits Type 430 "Littel-Plug." All have screw termingls. Av., shop. wt. 5 oz. screw terminals. Av. shpg. wt., 5 oz.

Stock	Mfr's	F:	Cond.	JAN	JAN Old		NET EACH			
No.	Type	Fig.	Cona.		S.C. No.	1-49	50-99	100-Up		
41 H 570	430	G	2	PJ-054B	PL-54	.82	.69	.63		
41 H 618	440	G	2	PJ-055B	PL-55	.82	.69	.63		
41 H 602	480	H	3	PJ-068	PL-68	2.12	1 76	1.62		
4 î H 619	820	J	1 2	l I I-026	IK-26	1.18	.98	.90		



Stock	Mfr's			<b>a</b> :	JAN	N	ET EA	
No.	Type	Diag.	Cond.	Circuit	Type	1-49	50-99	100-Up
41 H 603	MT-331	I	2	OC	JJ-086		.73	.67
41 H 604			2	SCC	JJ-024			. <u>7</u> 6
41 H 606	MT-332B	III	3	oc	JJ-022	1.00	.83	.76

	JACK SCHEMA	ATIC DIAGRAM	AS .
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"LITTEL-JAX" PHONE JACKS

Take standard ¼" phone plugs, except \*S-11 which takes S-250 Littel-Plug" and †C-12B which takes 480 Military-type "Littel-Plug" Jacks are ¼" dia., 1½" overall, and have a ½" dia. threaded shank, ½" long. SCC indicates single closed circuit; OC indicates open circuit. Av. shpg. wt., 3 oz.

Stock	Mfr's	Diag.	Cand	Circuit	JAN	N	ET E	ACH
No.	Type	Diag.	Conu.	Circuit	Туре	1-49	50-99	100-Up
41 H 622	11	I	2	OC		24¢	20¢	18¢
41 H 623		I	2	oc	JJ-034	35€	29₫	27¢
41 H 607	S-11*	I	2	loc		26¢	23¢	21¢
41 H 624	12A	II	2	SCC		26¢	23¢	2i¢
41 H 631		II	2	SCC	JJ-089	44¢	37¢	34¢
41 H 632	12B	III	3	oc		32¢	276	25¢
41 H 633	C-12B†	III	3		JJ-033	416	34¢	316
41 H 634	13B	IV	3	SCC		440	37€	34¢

# "TINI-JAX" SUB-MINIATURE PHONE JACKS

Extra-small 2-conductor jacks for "Tini-Plugs". 2/32" long; fit 1/4" hole. OC, open circuit; CC, closed circuit. Av. shpg. wt., 2 oz. 41 H 516 41 41 H 517 42A II 2 |.....| 24¢ | 20¢ |.....| 26¢ | 23¢

# "TINI-PLUGS" SUB-MINIATURE PHONE PLUGS

For use with "Tini-Jax". 1\%" overall length. 2-conductor. Handles are "Tenite" plastic or nickeled brass. Shpg. wt., 2 oz.

Stock	Mfr's	Fig.	Ter.	Handle	NET EACH			
No.	Туре	rig.	ier. Hangie		1-49	50-99	100-Up	
41 H 518	740	M	Screw	Black	44¢	37¢	34¢	
41 H 519	745	M	Screw	Red	44¢	37¢	34¢	
41 H 520	750	M	Solder	Black	41¢	34¢	31¢	
41 H 521		M	Solder	Red	41¢	34¢	31¢	
41 H 522		N	Screw	Shielded	62¢	51¢	48¢	
41 H 523		N	Solder	Shielded	59¢	49¢	45¢	

# "EXTENSION JAX" CABLE EXTENSION JACKS

Extension cable jacks; fit standard ¼" plugs. 1½" O.D.; 2½" long. Black handles are durable plastic Tenite; shielded handles are nickeled brass. All are open circuit type. Av. shpg. wt., 3 oz.

		Mfr's	Fig	Cond.	Ter.	Handle	N	ET EAC	H
	No.	Туре	rig.	Conu.	Ter.	nandle	1-49	50-99	100-Up
41	H 571	80	P	2	Screw	Black	.68	.57	.52
4!	H 718	88 120	R	2	Solder Screw	Black Shielded	.59	.49	.45
<u>41</u>	H 717		R			Shielded		.76 .96	.70 .88
		T	N				<u> </u>	A	nd.



### **AUDIO ADAPTER/CONNECTORS**

For quick adaptation of plug to fit other type of jack on recorders,

am					tal nandle. Av. snpg. Wt., 0 oz.	
	Νo	•	Type	Fig.	Description	EA.
41		636	332	X	Phone jack input to female micro- phone connector output	1.03
41		637	334	Y	Phono jack connector input to female mike connector output	.85
41	Н	712	335	т	2 cond.—input has conn. Switch- craft2501MP(Amphenol75PC1M) and output conn. Cannon XL-3-11	1.73
41		638	336	$\overline{z}$	Phone jack input to phono plug con-	1.73
		639	338	AA	nector output  Male mike connector input to phono	.85
41					plug connector output	.85
41	н	713	339	W	As Type 335, but output conn. Switchcraft 2501F (Amphenol	
					75-MC1F) to input conn. Cannon XL-3-12	1.73
41		609	342	• • • •	Dual-purpose binding post/banana jack input to phone plug output	1.53
41	Н	460	343	СС	Phono jack input; phone plug output. Built-in limiting resistor for cord	1.15
41	Н	645	344	DD	Phono jack connector input to phone plug output	.85
41	Н	649	346	EE	Tip jack input to phone plug output	1.26
41		608 382		BB S	Phono jack input to phone jack output Phone plug output with phono jack	.82
40	н	383	347	CC FF	input Phonojackinputtophoneplugoutput	.73 .91
41	п	657	44	P.F	Adapts Amphenol Type 75-MC1F or 75-MC1F-A connectors for use with standard 1/2" 2-conductor	
				<b></b>	phone jacks	.29

# Plugs, Jacks and Jack Panels



75N 75A 100 100A 100N

# MALLORY PLUGS AND JACKS

#### STANDARD PHONE PLUGS

Standard ¼\*, 2 and 3-conductor, phone plugs for use with headphones, handsets, microphones, and for numerous other audio applications. Fit standard ¼\* 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 76A (not illustrated) similar to 75 and 75A. Av. shpg. wt., 3 oz.

Stock   Mfr's		l		Han	NET	
No.	Type	Cond.	Terminals	Туре	Length	EACH
41 H 641 41 H 640 41 H 937 41 H 941 41 H 942	75A *76	2 2 2 3 3	Screw Screw Screw Solder Solder	Phenolic Shielded Shielded Phenolic Shielded	1 ½" 1 5/8" 1 1 3/16" 1 9/16" 1 1 3/16"	.44 .65 1.03 .65

#### STANDARD EXTENSION JACKS

Type 100. 2-conductor, fiber handle extension jack for standard ¼" phone plugs. Length, 3¼". Screw terminals. Shpg. wt., 4 oz. 82c

Type 100N. 2-conductor extension jack with shielded, nickel-plated brass handle. For standard ¼" phone plugs. Screw terminals. Length, 3%". Shps. 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 ½" phone plugs. Length, 3½". Shpg. wt., 5 oz. 1.47



#### LONG-FRAME STANDARD PHONE JACKS

Industrial-type, long-frame jacks offering a variety of switch combinations. All take standard ¼" phone plugs. Types Nos. 1, 2, 2A, and 5 (Fig. A) are 3½x1½x3½s" wide. Mount in panels up to ¼" thick by means of ¾s" diameter threaded shank. XP types (Fig. B) are 3½x2½xx ½s\* ½s" wide. Have ½s" diameter smooth shank ½s" long and mount with 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.

STOCK NO.	Type	*Cond.	Circuit	† Diagram	NET
34 H 440	1	2	Open	T	44¢
34 H 441	2	2	Shorting	VII	56€
34 H 442	2A	2	Closed	II	56¢
41 H 055	5	2	Closed & Transfer	IX	88¢
34 H 445	XP1	2	Open	ī	62¢
41 H 644	XP2B	2	Closed	ĨI	736
34 H 446	XP3B	2	Transfer	VIII	88¢

# G





# MALLORY STANDARD PHONE JACKS

JUNIOR PHONE JACKS

[C] Compact "Junior" jacks for standard ¼" phone plugs. Require only 1½%" behind panel. Cadmium-plated frames with nickel-plated brass shank, springs, and mounting hardware. ¾" diameter threaded shank for mounting in panels up to ¼" thick. Silver contacts. \*Column head "Cond." indicates number of conductors in mating plug. Av. shops wit 3 oz. Av. shpg. wt., 3 oz.

Stock No.	Type	*Cond.	Circuit	Diagram	NET
41 H 054	701	2	Open	I	44¢
41 H 058	702B	3	Ореп	III	56¢
41 H 052	703	2	Open	V	59¢
41 H 059	703B	3	Closed-Transfer 1	IV	59¢
41 H 060	704B	3	Closed-Transfer 2	l VI	68¢

#### MIDGET AND INFANT PHONE JACKS

Extremely small "Midget" and "Infant" type jacks for limited-space applications. All take ¼" phone plugs. "Midget" type jacks require only ½" mounting space behind panel; "Infant" type requires only ½" behind panel. Cadmium-plated steel frames with nickel-plated brass shank, springs, and mounting hardware ¾" threaded shank for mounting in panels up to ¼" thick. \*Column headed "Cond." indicates number of conductors in mating plug. All are "Midget" type except A-1 "Infant" type jack. (†Not illustrated). Av. shpg. wt., 2 oz.

Stock No.	Туре	*Cond.	Circuit	Diagram	NET
41 H 050	†A-1	2	Open	I	38¢
41 H 051	A-2	2	Shorting	VII	47¢
41 H 053	A-2A	2	Closed	11	56¢
41 H 056	A-3A	2	Closed-Transfer 1	VIII	65¢

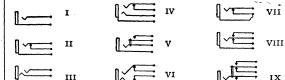
#### MILITARY-TYPE SC JACKS

miliary-Type SC JACKS

Type SC phone jacks are commercial equivalents of military types complying with JAN-J-641 specification. Both require %" mounting space behind panel. Type SC-1A has ½" diameter threaded shank, ½" long. Type SCA-2B has 5%" diameter threaded shank, ½%" long. Av. shpg. wt., 2 oz.

Type SCA-2B. Equivalent to military jack No. IJ-033. Open circuit, 3-conductor jack, see Diagram III. Takes all 3-conductor plugs with .206" diameter sleeves, including Western Electric 109; Military Nos. PL-68, PL-108, PJ-068, PJ-168, and PJ-309.

# JACK SCHEMATIC DIAGRAMS



# H. H. SMITH PLUGS AND JACK

Standard ½" 2-conductor phone plugs and jack. Plugs have screw-type terminals and are available with red or black bakelite handle. Overall length, 2-½": Open-circuit jack has ½" dia. threaded shank ½" long. Require 1" behind panel. Av. shpg. wt., 3 oz.



-	Stock	Mfr's			NET		EACH		
_	No.	Type	Fig.	Description	1-9	10-49	50-99	100-up	
41	H 017	222B	D	Phone Plug (black)	38¢	34¢	31¢	29¢	
41	H 018			Phone Plug (red)	38¢	34¢	31¢	29¢	
41	H 019	275	C	Standard Phone Jack	26¢	24¢	22¢	20¢	
								~	

### MINIATURE PLUG-JACK



# **BATTERY BINDING POST**

41 H 242, NET.....

Universal storage battery binding post. Shpg. wt., 5 oz. 41 H 785. NET EACH.... 56c

# GENERAL RADIO DOUBLE PLUG

Type 274-MB. Dual plug for standard banana jacks. Molded as a unit on  $\frac{1}{4}$ " centers. Recessed top forms double jack, allowing units to be used in tandem. Banana plug prongs. Holes in body accept phone tips or wires up to No. 12; terminal screws clamp conductors securely. 15 amp. rating. 11%, W., 11%, L. Shpg. wt., 3 oz.





#### PHONO PIN PLUG & JACK-TEST CLIPS

Shielded Phone Pin-Plug and Jack. For auto radios, record players, etc. Pin plug fits standard phone jack on radio. Pin dia., I/m, length, 1/m, Single prong jack on 1/m, bakelite disc. 1/m, mtg. centers. Av. wt., 1 oz. 3 per package. 46 H 2 | 2, Pin Plug. 10 or More Pkgs., Per Pkg. 13¢. Per Pkg. 14C 46 H 2 | 3. Pin Jack. 10 or More Pkgs., Per Pkg. 18¢. Per Pkg. 20¢

N Grayhill Type 2-1 Test Clip. As above, but with banana plug for mounting in standard banana jacks. 1% long. Shpg. wt., 20z. 34c

P. H. H. Smith No. 1200 Motorola Type Plug. Antenna lead in plug designed for connecting coaxial lead in antenna wire to auto radio. Split brass shell has serrated edge to provide secure ground connection. Pin dia. 1/4°. Shig. wt., 202. 41H 152.10 or More, EACH.......7¢. 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 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. Mounting brackets slotted to fit standard 19" relay rack. Panel includes plastic-covered designation strips. \*With military-type MT-332A jacks listed on page 196 (recommended for military and low-level audio applications). Have telephone-type T-332A jacks (non-military version of MT-332A).

Stock No.	Type	Rows	Jacks	H. W. D.	Shpg. Wt.	NET
41 H 452 41 H 453 41 H 454	1332A	Single	12 pair*	13/4×19×11/4" 13/4×19×11/4" 21/8×19×11/4"	4 lbs. 4 lbs. 5 lbs.	26.46 32.34 44.10
41 H 457 41 H 458 41 H 459	2632A	Double	52†	21/8x19x11/4" 13/4x19x5/8" 13/4x19x5/8"	5 lbs. 6 lbs. 6 lbs.	55.86 49.98 64.68



#### TELEX SUBMINIATURE JACKS AND PLUG

Type 9245. Jack. hole. Shpg. wt., 2 oz	Closed-circuit jack for plug above. Mounts in	1/4"
59 J 242. NET		
Type 12102. Jack. Mounts in 1/4" hole.	Open-circuit jack for Type 9231 plug listed abo Shpg. wt., 2 oz.	ve.

# H. H. SMITH ALLIGATOR CLIPS

		117	phone tip or banana			
Stock No.	Туре	Color	Description	1-9, EA.	10-49, EA.	50-Up, EA.
41 H 300 41 H 305	304 304	Red Black	With tip jack adapter. With tip jack adapter.	32¢ 32¢	29¢ 29¢	26¢ 26¢
41 H 168 41 H 169	305 305	Red	With comb. tip & banana jack. With comb. tip & banana jack.	38¢	34¢ 34¢	31¢



# **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-B Black. NET 45 H 181. Type 16-R Red. EACH.....83c



#### NU-WAY SNAPS. STUDS AND LUGS

Make and break contacts for tempo-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	1-9 Pkgs. PER PKG.	10 Pkgs. or More, PER PKG.
44 H 452	В	Stud for panel or chassis mtg.	7/16"D x 1/8"L 6-32x1/2" 1/32×5/16×3/4"	4.30	5.00 3.00 3.00

#### AUDIO DEVELOPMENT JACK PANELS & CORDS

# 

#### **BROADCAST-TYPE JACK PANELS**

Professional-quality jack panels for use in broadcast stations, paging systems, theaters, and in any other installation requiring efficient distribution and switching of audio signals. With card strips. Bakelite panels fit standard 19" relay rack.

Type PJ340. Double row jack panel complete with 52 (26 pairs) closed circuit jacks. Width, 13/". Shpg. wt., 5 lbs.

49.50

Type PJ341. Double row jack panel complete with 48 (24 pairs) closed circuit jacks. Width, 21%. Shpg. wt., 5 lbs. 42.75 86 HX 802. NET. 42.75

Type PJ343. Single row jack panel complete with 24 (12 pairs) closed circuit jacks. Width, 1½". Shpg. wt., 3½ lbs.

25.14



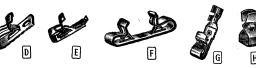
#### PATCH CORD SETS

One patch cord and two double plugs. Tinned-copper, 2-conductor, insulated wire. Heavy braid overall. Bakelite and brass plugs. Have polarizing identifications. Wt., 9 oz.

41 H 661. Type PJ12. Patch Cord Set. 2-ft. long. NET	.59
--	-----

Replacement Cords. Same fine quality 2-conductor cords as used on patch cord sets above. Insulated tinned copper. Heavy protective braid. Fit all makes of standard plugs. Av. shgg. wt., 6 oz.

41 H 667. Type PJ22. Replacement Cord. 2-ft. long. NET. 1.65 41 H 668. Type PJ23. Replacement Cord. 3-ft. long. NET. 1.74 41 H 669. Type PJ24. Replacement Cord. 4-ft. long. NET. 1.80 41 H 659. Type PJ25. Replacement Cord. 5-ft. long. NET. 1.89
41 H 659. Type PJ25. Replacement Cord. 5-ft. long. NET1.89



#### **FAHNESTOCK SPRING CONTACT CLIPS**

Positive contact clips. \*Made of bronze. All others brass. Av. shpg. wt., per pkg., 3 oz. 10 clips per pkg. NET DED DVC

Stock	Mir's	Fig.	Length	Width	Max.	Mtg.	114	u.	
No.	Туре		Longin		Wire	Hole	1-9	10-99	100- Up
41H 700	2	D	1'	3/8"	#10	#8	.12	-11	.10
41 H 702	3	D	11/16"	3%"	#10	#8	.17	.15	.14
41 H 705	10	D	3/4"	5/16"	#14	#6	.10	.09	.08
41 H 703	5	Ē	11/16	3/8"	#10	#8	.19	.17	.16
41 H 707*	15	E	1/2"	7/32"	#16	#4	.10	.09	.08
41 H 704	9	F	21/16"	3/8"	#10	#8	.51	.46	.42
41 H 710	9C	F	13/4 "	3/8"	#10	#8	.51 1.50	1.35	1.24
41 H 715	18	F	11/2"	5/16"	#14	#6	.50	.45	.41
41 H 708*	36	G	15/8"	5/16" 3/8" 3/8"	#10	lug	.55	.50	.46
41 H 709	45	H	3/4 "	<b>3%</b> "	#12	<b>#</b> 6	.17	.15	.14

# TIE POINTS AND TERMINAL STRIPS





#### STANDARD BAKELITE TIE-POINTS

Terminals riveted to 1/16" thick bakelite on 1/16" centers. \*Have one mounting lug; others have two. Mounting centers, 4-terminal, 1/16"; 6-terminal, 1/16", 4.v. shpg. wt., per pkg., 1/2 lb. 10 per pkg.

Stock No.	Term.	1-9 Pkgs, PER PKG.					10 Pkgs & Up, PER PKG.
41 H 500 41 H 501 41 H 502	3*	15¢ 17¢ 30¢	13½¢ 15½¢ 27¢	41 H 503 41 H 504	5* 6	26¢ 54¢	23½¢ 50¢

# SINGLE-LUG TIE-POINT

#### **TERMINAL STRIPS**

Excellent for cabled sub-assemblies, to simplify chassis removal. Have //s'-thick bakelite strips. Cadmium-plated screw terminals and tinned solder lugs. Av. shpg. wt., per pkg., //g lb. 6 per pkg.

Stock No. Term.	1-9 Pkgs., PER PKG.	10 Pkgs & Up, PER PKG.	Stock No.	Term.	1-9 Pkgs,, PER PKG.	10 Pkgs & Up, PER PKG.
41 H 505 2 41 H 506 3 41 H 507 4	42¢ 60¢ 77¢	38¢ 54¢ 69¢	41 H 508 41 H 509	5 6	95¢ 1.13	85¢ 1.01











# MINIATURE TIE-POINTS

Consist of .025" tinned brass terminals on 1/6"-thick laminated phenolic. Ground lug included. Av. shpg. wt., per pkg., 8 oz. 10 per pkg.

Stock No.	Term.	1-9 Pkgs., PER PKG.	10 Pkgs & Up, PER PKG.	Stock	No.	Term.	1-9 Pkgs., PER PKG.	10 Pkgs & Up' PER PKG
41 H 510 41 H 511 41 H 512	3	15¢ 21¢ 25¢	13½¢   19¢   22¢	41 H 41 H	513 514	5 6	31¢ 36¢	27¢ 32¢

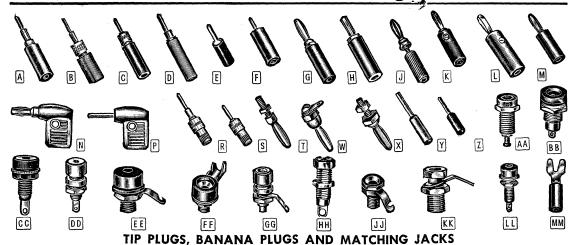
### **HEAVY-DUTY STRIPS**

Black 3/2" bakelite. Cadmium-plated screw terminals. Tinned lugs, for antenna-ground connection on receivers, etc. Av. wt., 4 oz. Stock No. |Terminals| 1-9, EA. |10-Up, EA.| Stock No. |Terminals| 1-9, EA. 10-Up,EA. 41 H 875 41 H 880 41 H 885 13¢ 15¢ 19¢ 22¢ 41 H 895 41 H 897 41 H 898 24¢ 28¢ 31¢ 14¢ 17¢ 21¢ 24¢

### **TERMINALS—CONNECTORS**

Av. shpg. wt., per pkg., 4 oz. 10 per pkg.

Stock No.	Fig.	Description	1-9 Pkgs., PERPKG.	10 or More PERPKG.
41 H 757	P	Single hole fuse mount. For '4" diameter fuses.	51/s¢	5¢
41 H 767 41 H 777	R	Terminal lugs. Black, insulated pin-plug.	5½¢ 53¢ 86¢	48¢ 77¢



#### INSULATED TIP PLUGS

INSULATED TIP PLUGS

Type 229 Heavy Duty Phone
Tip Plug. Molded bakelite
handle. One-piece, nickel-plated
brass construction for heavier-current use. 2½° long. Shpg. wt., 3 oz.
41 H 535. Red
41 H 537. Black
41 H 539. Yellow NET EACH
41 H 539. Green
41 H 539. Green
41 H 539. Blue
50-99, EA. 12¢ 10-49, EA. 13¢
Type 200 "Senior" Solderless

41 H 540. Blue
50-99, EA. 12¢ 10-49, EA. 13¢
B Type 200 "Senior" Solderless
B Phone Tip Plug. Knurled nut
tightens against wire, making soldering unnecessary. Plug is made
of nickel-plated brass; bakelite
handle. 2½" long. Shpg. wt., 3 oz.
41 H 250. Red
41 H 2515. Black
41 H 415. Yellow NET EACH
41 H 416. Green
15c
60-99, EA. 12¢ 10-49, EA. 13¢
C Type 201 "Junior" Solderless Phone Tip Plug. Has
same tightening assembly in body
of plug as Type 200, above. Baketick handle; nickel-plated brass. 2°
long. Shpg. Rt. 3 oz.
41 H 542. Black
41 H 544. Plow
41 H 544. Sleen
41 H 544. Sleen
41 H 544. Sleen
41 H 545. Green
41 H 546. Blue
60-99, EA. 12¢ 10-49, EA. 13¢
60-99, EA. 12¢ 10-49, EA. 13¢
60-99, EA. 12¢ 10-49, EA. 13¢
60-99, EA. 12¢ 10-49, EA. 13¢
60-99, EA. 12¢ 10-49, EA. 13¢
60-99, EA. 12¢ 10-49, EA. 13¢

D Type 270 Subminiature
Phone Tip. ¼" O.D. bone
fiber handle. Nickel-plated brass
tip. 12½" overall length. 2 oz.
4 | H 547. Red 1-9,
4 | H 548. Black NET EA. 13C
50-99, EA. 11¢ 10-49, EA. 12¢

E Type 237. For standard tip jacks. 13/2" long. 3 oz. 4! H 260. Red 1-9, 4! H 261. Black NET EA. lOc 50-99, EA...8¢ 10-49, EA...9¢

50-99, EA...8¢ 10-49, EA...9¢

Type 203 Short Phone Tip

Plug. Shoulderless tip permits insertion all the way up to insulated handle. Handle is molded bakelite. Nickel-plated brass tip. 11½ long. Shpg. wt., 3 oz. 41 H 575. Red 41 H 577. Yellow NET EACH 41 H 578. Green 41 H 578. Green 12C 50-99, EA.10¢ 10-49, EA...1¢

#### NON-INSULATED TIP PLUGS

Type 105 "Senior" Solder-less Phone Tip Plug. Has knurled nut for fastening wise. 115½" long. Shpg. vt., 2 oz. 41 H 240. 1-9, NET EACH. IO C 60-99, EA... 8¢ 10-49, EA... 9¢

Type 106 "Junior" Solder-less Phone Tip Plug. As above, but 136" long. 2 oz. 41 H 230. 1-9, NET EACH IOC 50-99, EA...8¢ 10-49, EA...9¢

Type 123 Heavy-Duty Cord Tip. Fits standard phone tip jacks. 1"long. Shpg. wt., 2 oz. 4! H 125.1-9, NET EACH. 3C 50-99, EA...2¢ 10-49, EA...2½¢

#### NON-INSULATED TIP PLUG

Type 108 Standard Cord Tip. For instruments, test panels, headphones, etc. Length, 17. Shpg. wt., 2 oz. 41 H 200.1-9, NET EA... 2/2C 50-99, EA... 1/2¢ 10-49, EA... 2¢

# **MOLDED METER PLUGS**

MOLDED MEIER PLUGS
Type 255 Banana-Type MeN ter Plug. Four-leaved phosphor bronze spring; nickel-plated. Tip is 1942 long. Wt., 2 oz. 41 H 467. Red 1-9, 41 H 468. Black NET EA. 35C 50-99, EA. 29¢ 10-49, EA. ..31¢

P Type 235 Meter Tip Plug.
Molded in two halves for easy assembly with screw and nut.
Nickel-plated tip is ½" long. 2 oz.
41 H 203. Red 1-9,
41 H 204. Black NET EA. 26C
60-99, EA. 22¢ 10-49, EA. ...24¢

### **BANANA PLUGS**

BANANA PLUGS
Type 212 Insulated, Spring
Tip. Molded Bakelite handle.
Wire can be soldered to brass stud
supplied, or directly into plug.
Length, 1%. Shpg. wt., 2 oz.
41 H 593. Red
41 H 594. Black
41 H 595. Yellow NET EACH
41 H 596. Green
41 H 597. Blue
50-99, EA. 17¢ 10-49, EA. ... 19¢

Type 253 Insulated, Split Tip. Nickel-plated, cross-slotted tip. Wire can be soldered to brass stud supplied or directly into plug. Length, 13/4". Shpg. wt.,

2 oz. 41 H 428. Red 41 H 427. Black 41 H 067. Yellow 41 H 068. Green 41 H 069. Blue 50-99, EA. 15¢ 10-49, EA. ... 16¢

50-99, EA. 15¢ 10-49, EA...16¢

Type 236 Insulated, Spring
Tip. Tenite handle. Silverplated tip. Fits all standard banana jacks. Four leaved spring
provides lasting contact. Has
curved contact area to assure
high current handling capacity.
Length, 17½6". Shps. wt., 2 oz.
41 H 407. Red 1-9,
41 H 408. Black NET EA. 29¢
60-99, EA. 24¢ 10-49, EA. . 26¢
Type 244 Insulated, Spring

50-99, EA. 24¢ 10-49, EA. 26¢ Yppe 204 Insulated, Spring Tip. Solderless; has set screw in bakelite handle. Nickel-plated tip. Length, 11½, Wt., 2 oz. 41 H 405. Red 41 H 410. Black NET EACH 41 H 403. Green 18C 50-99, EA. 15¢ 10-49, EA. 16¢ Tyne 213 Insulated, Split

Type 213 Insulated, Split Tip. Solderless; set screw in handle. Length, 1%6". Shpg. wt.,

nande. Length, 196°. Shpg. wt., 2 02. 4 | H 425. Red 4 | H 430. Black 4 | H 412. Yellow NETEACH 4 | H 413. Green 4 | H 413. Green 50-99, EA. 15¢ 10-49, EA. 16¢

### **BANANA PLUGS**

Type 211 Insulated, Spring
Tip. Nickel-plated brass tip.
Wire can be soldered to brass stud
supplied, or directly into plug.
Length, 1%. Shpg. wt., 2 oz.
41 H 462. Red 1-9.
41 H 464. Yellow NET EACH
41 H 465. Green 18C
50-99, EA. 15¢ 10-49, EA. 16¢

Type 103 All-Metal, Spring Tip. Has solder lug. Four-leaved spring. Body and tip are nickel-plated. 6-32x½" stud. Length, 1½". Shpg. wt., 20z. 41 H 400. 1-9, NET EACH.15 C 50-99, EA. 12¢ 10-49, EA. 13¢

W Type 100 All-Metal, Spring Tip. As above, but internal threads permit use on all size panels. Length, 11/2". Shpg. wt., 2 02.

41 H 488. 1-9, NET EACH 15C 50-99, EA. 12¢ 10-49, EA. 13¢

X Type 102 All-Metal, Spring Tip. Nickel plated, one-piece construction. 6-32x 3/s stud. Length, 17/2". Shpg. wt. 2 oz. 41 H 489. 1-9, NET EACH 15C 60-99, EA. 12¢ 10-49, EA. 13¢

#### TIP JACKS

AA Nylon Tip Jacks.

Type 1505 Miniature
Nylon Tip Jacks. Silverplated, beryllium copper contact.
Fits ¼\* hole; panels to ¼\* thick.
Overall size, ½½\*x¾\* dia.Wt., 2 oz.
41 H 495. Red
41 H 496. Black
41 H 497. Yellow
AI H 498. Green
41 H 498. Green
41 H 499. Blue
50-99, EA. 24¢ 10-49 EA. ...26¢

BB Type 240 Nylon Tip Jack.
Completely insulated; phosphor bronze contact. 1½"x"x"½" dia.
Shps. wt., 2 oz.
41 H 012. Red
41 H 013. Black
41 H 014. Yellow NET EACH
41 H 015. Green
41 H 016. Blue 18C
50-99, EA. 15¢ 10-49, EA. . 16¢

50-99, EA. 10¢ 10-49, EA. 10¢.

CC Type 202 Insulated Tip Jack, Body is nickel-plated brass. Mounts in ¾6 hole in panels up to ¾6 thick. Size, 1¼6 x%6 O.D. Shpg. wt., 2 oz.

41 H 110. Red
41 H 15. Black
41 H 433. Green
41 H 433. Green
50-99, EA. 11¢ 10-49, EA. 12¢

DD Jack. Molded nylon head and insulating washer. Nickel-plated brass body. Mounts in % hole. Shpg. wt., 2 oz. 41 H 024. Hed 1.9, 41 H 025. Black Al H 025. Yellow NET EACH 41 H 027. Green 18C 40-99, EA. 15¢ 10-49, EA. 16¢

TIP JACK

Type 107 Non-Insulated

Tip Jack, ½" mtg, hole;
3/#" max. panel thickness. Has phosphor-bronze spring contact, he look 19, NET EACH 10C 60-99, EA. 8¢ 10-49, EA...9¢

nana Jack. Molded nylon head and insulating washer. 3/6" mgr. hole; 3/6" max. Wt., 2 oz. 41 H 043. Black 1-9. 41 H 043. Black NET EACH 41 H 045. Green 18c

July 1 July 1

bo-99, EA... 9¢ 10-49, EA... 9¢

Type 109 Non-Insulated
Banana Jack. ¼" mtg.
hole; ¾" max thickness. 2 oz.
41 H 470. 1-9, NET EACH IOC
50-99, EA... 8¢ 10-49, EA... 9¢

# COMBINATION JACK

COMBINATION JACK

Type 206 Insulated Combination Jack. Will accommodate all standard phone tip or banana plugs. Nickel-plated brass body. Mounts in %16 hole; 11½7. Shpg. wt., 2 oz. 41 H i 30. Red 1-9, 41 H i 35. Black 1-9, 41 H i 38. Green 41 H i 38. Green 60 H i 196 Go-99, EA. 13¢ 10-49, EA. 14¢

### **INSULATED SPADE LUG**

MM Type 218 Banana Plug To Spade Lug Adapter. Has jack in rear of handle to allow injack in rear of handle to allow insertion of banana plug. ½" wide steel hot-tinned lug. 030" thick for extra durability. Size: 111/6" long, ¾" O.D. Shpg. wt., 2 oz. 4 | H 048. Red 1-9, 4 | H 049. Black NET EA... | C 50-99, EA... 9¢ 10-49, EA... 10¢

# Alligator Clips, Binding Posts



# MUELLER UNIVERSAL CLIPS AND FLEXIBLE INSULATORS

A wide variety of clips for positive, dependable electrical contacts. For batteries, high-frequency equipment, experimental setups, transmitting apparatus, electroplating, and countless other applications.

# MESH TEETH TEST CLIPS

A for general purpose applications. \*Solid Copper. ‡Solid bronze. \$\frac{1}{2}\text{ sadmium-plated steel. } tinsulation-piercing needle for quick wire contact. Av. shgs. wt., 3 oz.

Stock	Mfr's	١ ـ	1	NET EACH					
No.	Type	Amps Size	1-9	10-99	100-499	500-Up			
45 N 000 45 N 005 45 N 010 45 N 078 45 N 087	§45 *45C \$48B *48C ‡†50C	5 10 10 10 10	11/2" 11/2" 2" 2" 21/4"	.07 .13 .10 .14	.05 .09 .07 .098	.042 .078 .06 .084	.04 .072 .056 .08		

# **LEAD-PLATED BATTERY CLIPS**

A for moderately heavy current work, including battery charging, electroplating, and light welding. Lead-plated steel for complete protection and long life. Av. shopg. wt., 4 oz.

45 N 020   24A 45 N 030   21A	25 50	27/8"	.20	.14 .24	.12	.112
45 N 040   11A	100	6"	.98	.69	.59	.56

#### SOLID COPPER CLIPS

Heavy-duty, high-conductivity, solid copper clips, Shpg. wts.: 24C, 3 oz.; 21C, 5 oz.; 11C, 8 oz.; 33C, 1 lb.

45	N 025	24C		50	27/8"	.33	.24	.20	1.19
45	N 035	21C	ı	100	41/2"	.86	.61	.52	.49
45		11C	- 1	200	6"	1.67	1.17	1.00	1.95
45	N 050	33C		300	73/4"	3.18	2.23	1.91	1.82

#### 3-SIDED MESH TEETH CLIPS

В	§Cadmiteeth or	ium-plated a 3 sides of	steel; each j	*solid aw. Shp	copper.	Jaws o	pen 5/8".	Meshing
45 45	N 015 N 097	\$27 *27C	20 40	27/16"	.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.

1278 1 127 1 10 1 117	45 N   40   §63 45 N   41   *63C	10	21/8"	.27 .29	.20	.17 .18	:16 :17
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#### **70 SERIES ALLIGATOR CLIPS**

Streamlined, simplified design. No. 70 is cadmium-plated steel, with solder connection; No. 70S is cadmium-plated steel, with screw connection. No. 70CS is made of solid copper and has screw connection. Av. shgs. wt., 3 oz.

# 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 \( \frac{1}{6} \).

Av. shpg. wt., 2 oz.

Stock	Mfr's	Size	Description	1	NET EACH			
No.	Type	Size	Description	1-9	10-99	100-499	500-Up	
45 N 070 45 N 075 45 N 090 45 N 095	60HS 60HS *60CHS *60CHS	211/32" 211/32" 211/32" 211/32"	Red handle Black handle Red handle Black handle	.14 .14 .16	.095 .095 .11	.08 .08 .096	.076 .076 .092 .092	

#### **CROCODILE CLIPS**

\*Solid copper; \$cadmium-plated steel. ‡Phone tip on one jaw. Wt., 2 oz. 

45 N 060 \$85 | 2½° | Screw Connection | .08 | .058 | .048 | .044 | .45 N 062 | \*850 | 2½° | Screw Connection | .16 | .11 | .098 | .092 | .45 N 098 | ‡851 | 2½° | Tip-Clip | .21 | .15 | .126 | .12

#### **ALLIGATOR CLIPS**

Steel, except \*Solid copper. †Solder type; "S"—sc jaws for close work. Jaws open %6". Shpg. wt., 2 oz. 45 N 200 | †60 | 2" | Fit banana plugs | .07 | .05 | 45 N 065 | 608 | 2" | Fit banana plugs | .08 | .058 | 45 N 080 | \*60CS | 2" | Fit banana plugs | .08 | .084 | .084 | .084 | .084 | .084 | .084 | .084 | .084 | .084 | .084 | .084 | .084 | .084 | .084 | .084 | .084 | .084 | .084 | .084 | .084 | .084 | .084 | .084 | .084 | .084 | .084 | .084 | .084 | .084 | .084 | .084 | .084 | .084 | .084 | .084 | .084 | .084 | .084 | .084 | .084 | .084 | .084 | .084 | .084 | .084 | .084 | .084 | .084 | .084 | .084 | .084 | .084 | .084 | .084 | .084 | .084 | .084 | .084 | .084 | .084 | .084 | .084 | .084 | .084 | .084 | .084 | .084 | .084 | .084 | .084 | .084 | .084 | .084 | .084 | .084 | .084 | .084 | .084 | .084 | .084 | .084 | .084 | .084 | .084 | .084 | .084 | .084 | .084 | .084 | .084 | .084 | .084 | .084 | .084 | .084 | .084 | .084 | .084 | .084 | .084 | .084 | .084 | .084 | .084 | .084 | .084 | .084 | .084 | .084 | .084 | .084 | .084 | .084 | .084 | .084 | .084 | .084 | .084 | .084 | .084 | .084 | .084 | .084 | .084 | .084 | .084 | .084 | .084 | .084 | .084 | .084 | .084 | .084 | .084 | .084 | .084 | .084 | .084 | .084 | .084 | .084 | .084 | .084 | .084 | .084 | .084 | .084 | .084 | .084 | .084 | .084 | .084 | .084 | .084 | .084 | .084 | .084 | .084 | .084 | .084 | .084 | .084 | .084 | .084 | .084 | .084 | .084 | .084 | .084 | .084 | .084 | .084 | .084 | .084 | .084 | .084 | .084 | .084 | .084 | .084 | .084 | .084 | .084 | .084 | .084 | .084 | .084 | .084 | .084 | .084 | .084 | .084 | .084 | .084 | .084 | .084 | .084 | .084 | .084 | .084 | .084 | .084 | .084 | .084 | .084 | .084 | .084 | .084 | .084 | .084 | .084 | .084 | .084 | .084 | .084 | .084 | .084 | .084 | .084 | .084 | .084 | .084 | .084 | .084 | .084 | .084 | .084 | .084 | .084 | .084 | .084 | .084 | .084 | .084 | .084 | .084 | .084 | .084 | .084 | .084 | .084 | .084 | .084 | .084 | .084 | .084 | .084 | .084 | .084 | .084 | .084 | .084 | .084 | .084 | .084 | .0 -screw type. Slim Fit banana plugs | .07 Fit banana plugs | .08 Fit banana plugs | .12 .044 .048 .072 .05 .058 .084

#### **NON-FERROUS R.F. TEST CLIP**

Phosphor bronze clip with brass screw. Ideal for tapping small transmitter coils; also for work in crowded chassis. Shpg. wt., 2 oz. 45 N 055 | 88 | 111/6 | Ideal for coils | .22 | .15 | .13 | .124

# "MINI-GATOR" CLIPS

Miniaturized—¾6" jaw opening, 1¼4" O.D. tip. \$Cadmium-plated steel; \*solid copper. Shpg. wt., 2 oz.

Stock	Mfr's	Amps.	Size	NET EACH				
No.	Туре			1-9	10-99	100-499	500-Up	
45 N 142 45 N 143	\$30 *30C	5	11/16"	.07	.044	.038	.036	
45 N 143	*30C	10	11/16"	.08	000	.048	.044	

#### SLIP-ON INSULATORS FOR CLIPS

Tough, flexible plastic. High dielectric strength; resistant to oils and 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	Mfr's	For Use	NET PER PKG.						
No.	Type	With	1-4	5-49	50-249	250-Up			
45 N 167 45 N 164 45 N 163 45 N 166 45 N 144	13 23 26 29 32	Series 11 Series 21 Series 24 Series 27 Series 30	1.51 .94 .47 .31 .22	1.06 .67 .33 .22 .152	.90 .57 .278 .192 .126	.86 .53 .262 .18			
45 N 162 45 N 160 45 N 161 45 N 165 45 N 168 45 N 169	35 47 49 62 87 93	Series 33 Series 45 Series 48, 50 Series 60, 70 Series 85 Series 88	5.06 .14 .20 .14 .14	3.53 .096 .14 .096 .096	3.04 .08 .112 .08 .08	2.88 .076 .108 .076 .076			



# BINDING **POSTS**











#### H. H. SMITH BINDING POSTS

Type 208. 5-way metal binding post. Can accept banana plug. Mounts in .144" hole in 1/16" to 3/4" panels. Has wrap-around solder stud. 6-32 thread. Shpg. wt., 3 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 1/6" to 1/4". 257 has wrap-around solder stud; 220 is grounding type. \*Locking edge. Av. shpg. wt., 2 oz.

Stock	Mfr's	Fig.	Mtg.	Total Lgth.	Color	NET EACH		
No.	Type		Hole	(Closed)	00.01	1-9	10-49	50-Up
41 H 368 41 H 367 41 H 386 41 H 387	*257R *257B *267R *267B	R R S	1/2" 1/2" 1/2" 1/2"	123/32" 123/32" 119/32" 119/32"	Red Black Red Black	35¢	31¢	28¢
41 H 330 41 H 335 41 H 388 41 H 389	220R 220B *260R *260B	T T W	1 1/64" 1 1/64" 5/16" 5/16"	19/64" 19/64" 19/64" 19/64"	Red Black Red Black	18¢ 18¢ 24¢ 24¢	16¢ 16¢ 22¢ 22¢	15¢ 15¢ 20¢ 20¢

Type 110 Post. For heavy-duty use and low-resistance connections. Nickel-plated brass 13% long, 3% mtg. hole. Wt., 2 oz. 41 H 371. 50-Up, EA...12¢ 10-49, EA...13½¢ 1-9, NET EA....15c

### SUPERIOR BINDING POSTS

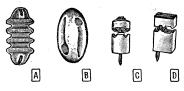
Take spade lugs, banana plugs (have jack in top), clip leads, and up to No. 12 wire. Rated 1000 volts, 30 amps. Insulated with nylon plas-Stock No.

Type | Color | 1-99, EACH | 100 or More. EACH

41	н	172	DF30YC	Vellow		 	-
41	н	173	DF30GNC	Green	40c	34c	
41	Н	174	DF30WTC	White	700	U-T-C	

tic; all metal components are recessed. For  $V_6$ - $V_4$ ° panels. Mount in  $V_2$ ° holes. Metal parts gold-plated. Choice of 6 colors. Shpg. wt., 4 oz. Stock No. Туре Color | 1-99, EACH | 100 or More, EACH 41 H 177 DF30BC 41 H 178 DF30RC 41 H 198 DF30BLC Black 34c Red Blue 40c

# Insulators, Plugs, Jacks and Adapters



#### ANTENNA INSULATORS 51 C 223. Glazed porcelain insulator, 21/2"

A long. Shpg. wt., 2 oz. 4 per pkg. 1 to 9 Pkgs., Per Pkg 10 or More Pkgs., Per Pkg	2lc
B 51 C 224. White porcelain strain inst 134x7/6" dia. Wt., 2 oz. 4 per pkg. 1 to 9 Pkgs., Per Pkg	.29c 26¢
6 51 C 225. Standard nail knob. 13/dia. Shpg. wt., 4 oz. 4 per pkg. 1 to 9 Pkgs., Per Pkg	x11/8" 17c 15¢

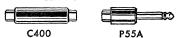
#### NATIONAL STAND-OFF **INSULATORS**

Molded steatite insulators for use in RF circuits. Glazed to prevent moisture absorption. Base and terminal assembly removable to form single-screw type pillar mount. Av. shpg. wt., 3 oz.



Stock	Mfr's	Body	Dia.	NET
No.	Type	Ht.		EACH
71 H 125	GS-1	13/8"	1/2"	27¢
71 H 126	GS-2	27/8"	1/2"	35¢
71 H 127	GS-3	27/8"	3/4"	69¢

#### LAB-TRONICS JACK ADAPTERS AND CONNECTORS











# FAMOUS E. F. JOHNSON QUALITY PRODUCTS **INSULATORS**



Thru-Panel Insulators. High is strength; long leakage paths. White celain, except †steatite. \*Have Tyjack, listed below. Shpg. wt., 12 oz. mechanical ite glazed por-Type 108-740

Stock No.	Mfr's Type	Fig.	Top Ht.	Panel Hole	Hard- ware	EA.
73 H 225	135-40†	E	11/4"		10-32	.35
73 H 226	135-40-2	F	11/4"	7/16"	*	.45
73 H 227	135-42†	E	7/8"	13/32"	10-32	.35
73 H 228	135-42-2	F	<i>7</i> 8″	13/32"	*	.45
73 H 229	135-44†	E	5/8*	5/16"	6-32	.27
73 H 230	135-45	G	13/8"	1/2"	10-32	.47
73 H 23 I	135-45-2	н	13/8"		*	.57
73 H 233	135-46	E	23/4"	1 1/16"	1/4-20	1.30
73 H 235	135-47	E	41/2"	3 1/32"	1/4-20	1.85
73 H 223	135-48	G	2"	1 1/16"	10-32	.70
	135-48-2	Н	2"	1 1/16"	*	.83



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.	Mfr's Type	Fig.	Top Ht.	Max. Dia.	Panel Hole	NET EA.
73 H   60 73 H   61 73 H   62	135-51	S	13/16" 13/16" 11/8"	3/4" 11/4" 13/4"	15/32" 27/32" 17/32"	33¢ 54¢ 78¢
73 H 163 73 H 164 73 H 165	135-54	N	13/4" 4" 1/4"	21/2" 31/2" 3/4"	127/32" 211/16" 15/32"	29¢ 79¢ 31¢

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.

No.	Type	Height	Width	EACH
73 H 150 73 H 151	135-500 135-501	1"	5/8" 3/4"	.23 .31
73 H 152 73 H 153	135-503	1 1/2"	1"	.51 .71
73 H 154	135-504	3"	11/2"	1.20



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 ribbed; others have drawn bases. †Have jacks as listed below. \*Like Fig. L but square base. Av. shpg. wt., 1 lb.

Stock No.	Mfr's Type	Fig.	Body Ht.	Hard- ware	NET
73 H 120 73 H 121 73 H 122 73 H 123 73 H 139	135-20§ 135-20-2 135-22§ 135-22-2 135-24§	J K J K J	19/16" 19/16" 1" 1" 5/8"	10-32 740† 8-32 740† 6-32	25¢ 30¢ 19¢ 23¢
73 H 125 73 H 126 73 H 127 73 H 128 73 H 129	135-60 135-62 135-65 135-65-2 135-66	* * L L	41/2" 23/4" 13/8" 13/8" 23/4"	1/4-20 1/4-20 10-32 740† 1/4-20	98¢ 60¢ 30¢ 39¢
73 H 130 73 H 131 73 H 136 73 H 137	135-66-2 135-67 135-68 135-68-2	M M *	23/4" 41/2" 2" 2"	760† 1/4-20 10-32 740†	98¢ 98¢ 46¢ 54¢



#### ANTENNA INSULATORS

Types 107 and 112 are wet-process porcelain; 800 lbs. breaking strength. Type 104 is dryprocess porcelain; 400 lbs. breaking strength.

Stock No.		Size	Wt.	NET
73 H 215	136-104	4"x5%" sq.	4 oz.	.26
73 H 216	136-107	7"x1" dia.	10 oz.	1.18
73 H 217	136-112	12"x1" dia.	11/4 lb.	1.25

#### FEEDER SPREADERS

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/ax/2". treated with "Slianeal," a silicone product—impervious to moisture. Av. shpg. wt., 3 oz.

Stock	Mfr's	Length	NET	
No.	Type		EACH	
73 H III	136-122	2"	17¢	
73 H     2	136-124	4"	24¢	
73 H     3	136-126	6"	32¢	

### **PLUGS AND JACKS**

# 753 750-2 760 750

### 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.	Туре	Fits	Lgth.	NET
73 H 200	108-740	750, 750-2, 753	5/8 "	12¢
73 H 201	108-750	740	1½"	13¢
73 H 202	108-750-2	740	1½"	14¢
73 H 203	108-753	740	15/16"	14¢
73 H 204	108-760	770, 771	1"	31¢
73 H 205	108-770	760	125/32"	30¢
73 H 206	108-771	760	11/8"	34¢

#### NYLON TIP JACKS

Low loss nylon insulated .081" tip jacks. Silver-plated beryllium copper contacts. Body threaded 1/2"-32; single nut mounting. D.C. breakdown volts, 11,000. Rated at 10 amps. Length 2%2". Diameter 3/8". Shpg. wt., 2 oz.



Red Black

Green

Blue Yellow



25c

# **NYLON BANANA JACKS AND PLUGS**

Compact, high voltage insulated, plugs and jacks. Molded of tough low-loss nylon. Retain low-loss 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 v. Jacks mount in <sup>2</sup>½4" hole. 2 oz.



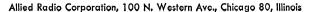
			Fig.	Color	Length	EACH
71 H 20	66	108-901	T	White	15/16"	
71 H 20	67	108-902	Ť	Red	15/16" 15/16"	l4c
		108-903 108-904	T	Black Green	15/16"	14C
		108-907		Yellow	15/16" 15/16"	
		108-301		White	13/8"	
		108-302	W	Red	13/8"	2lc
		108-303 108-304		Black Green	13/8"	210
		108-307	w	Yellow	1 3/8" 1 3/8" 1 3/8" 1 3/8" 1 3/8"	

#### **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, 3/6" long; 081" diameter. Body, 7/8" long; 481" diameter. Wt., 2 oz.

105-307





# 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 connection that cannot be accidentally pulled apart. Ideal for extension cables, portable electric tools, motors, and all types of electrical equipment subject to vibration. Conform to National Electrical Code Standard. Av. shpg. wt., 3 oz.

#### 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  $\frac{5}{6}$  to  $\frac{1}{2}$ " 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	Mfr's	<b>-</b>	D11	NET EACH		
No.	Type	Fig.	Description	1-9	10-49	50-Up
41 H 282 41 H 283 41 H 284 41 H 287	7428 7427 7466 7468	A B C D	Male Cap Female Conn. Male Base Female Base	.39 .73 .85 1.03	.31 .58 .69 .82	.28 .52 .62 .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" O.D. Polarization prevents incorrect connection. Rated 10 amps at 250 v., or 15 amps at 115 v.

41 H 288 I	7485	A	Male Cap	1.931	.74	.67
41 H 289	7484	В	Female Conn.	1.35	1.08	.97
41 H 290	7486	С	Male Base	1.20	.96	.86
4   H 29	7487	$\mathbf{D}$	Female Base	11.46	1.17	1.05

# AMPHENOL AC PLUGS AND RECEPTACLES









U. L. Approved. All plugs and receptacles are rated at 15 amps, 110 O. L. Approved. All plugs and receptacles are rated at 13 amps, 110 v., or 10 amps, 250 v. High-dielectric black bakelite. Fig. L mounts with retainer ring. Requires 1½" hole. Fig. M has mtg. plate. Requires 1½" hole, mtg. centers, slotted 1½" to 1½". Fig. N is recessed type. Requires 1¾" hole, mtg. centers, 1¾". Fig. P is shielded type with clamp. For standard or polarized plugs. All are 2 pole except † 3 pole. Av. shpg. wt., 3 oz.

#### RETAINER RING TYPE

Stock	Mfr's	l		NET EACH			
No.	Type	Fig.	Description	1-99	100-249	250-Up	
40 H 675	61-M	L	Male Standard	20¢ 20¢	17¢	5¢   5¢   9¢	
40 H 676	61-MP	L	Male Polarized	20¢	17¢	15¢	
40 H 081	60-M	L	Male Polarized†	25¢	21½¢	19¢	
40 H 677	61-F	L	Female Universal*	19¢ 22¢	16¢	14½¢	
40 H 082	60-F	L	Female Polarized†	22⊄	6¢   9¢	17¢	

#### WITH SEPARATE MOUNTING PLATE

#### WITH BELOW-SURFACE SHELL

Stock	Mfr's	<b>.</b>			NET EACH	
No.	Type	Fig.	Description	1-99	100-249	250-Up
40 H 685	61M10	N	Male Standard	29¢	25¢	22½¢
40 H 686	61MP10	N	Male Polarized	30¢	26¢	23¢
40 H 687	61F10	l N	Female Universal*	28¢	24½¢	22¢

#### SHIELDED CABLE TYPE

40 H 690   61M11	P	Male Standard	33¢	1 28¢ 1	25¢
40 H 691 61MP11	P	Male Polarized	33¢	28€	256
40 H 692   61F11	P	Female Universal*	316	274	24€
40 H 693   60M11	Ìр	Male Polarized†	386	32 1/2⊄	294

TYPE 61-MIP-61F. Female receptacle. Same as Fig. M above except has molded-in plate. Two mounting holes on  $1\frac{1}{2}$  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, EACH16¢	250 or More, EACH

TYPE 61-61. Shell only. Converts Fig. L male plugs and female receptacles to Fig. N, for recessed mtg. Shpg. wt., 2 oz. 40 H 086. 1 to 99, NET EACH....

# STANDARD SIZE CONNECTORS

3-WIRE POLARIZED TYPES

Type 7572 male cap, Type 7556 male base and Type 7557 female base have rust-resistant metal housings. Type 7555 female connector is bakelite. Clamps take cords from .296 to .562 O.D. All are rated 10 amps at 250 v., or 15 amps at 125 v. \*Armored.

Stock	Mfr's		B	1	NET EA	CH
No.	Туре	Fig.	Description	1-9	10-49	50-U p
41 H 292 41 H 293 41 H 294 41 H 295	7572 7555 7556 7557	E F G H	*Male Cap Female Conn. Male Base Female Base	1.11 1.75 1.46 1.62	.88  .41  .17  .29	.79 1.26 1.05 1.17

#### **HEAVY-DUTY 3-WIRE POLARIZED TYPES**

Type 7311 male cap, Type 7327 male base and Type 7328 female base have rust-resistant metal housings. Type 7313 female connector is bakelite. Clamps take cords from .437 to .750" O.D. Rated 20 amps at 250 v., or 10 amps at 575 v. \*Armored.

41 H 296	7311	E	*Male Cap	11.60	1.28	1.15
41 H 297	7313	F	Female Conn.	2.46	1.97	1.77
41 H 298	7327	J	Male Base	1.69	1.35	1.21
41 H 299	7328	K	Female Base	2.91	2.33	2.10

# HART & HEGEMAN MIDGET CONNECTORS



[T]

Bakelite 2-prong cord connectors and receptacles. Rated 10 amps. 250 volts, 1-inch hole required for all receptacles. 3/8" ing. Terminals are exposed; threaded cover. \*With plate for screws. †With plate and lock ring. \$Fits all receptacles. Prices below are OEM; write for prices on larger quantities. Av. shpg. wt., 3 oz.

Stock	Mfr's	<b></b>	D		
No.	Туре	Fig.	Description	1-99	100-999
52 N 721 52 N 722 52 N 723 52 N 724	80332	R S	Male cable connector. Female cable connector. Cord connector Terminal cover.	.70 .70 1.13 .38	.48 .48 .92 .19
52 N 725 52 N 726 52 N 727 52 N 728 52 N 729	80327† 80329†	W X Y	Female flush receptacle. Male flush receptacle. Female flush receptacle. Male flush receptacle. Female flush recept., recessed	.72 .84 1.09 1.13 1.13	.54 .63 .88 .92

# FRICTION TAPE

B R

S

# **DUTCH BRAND TAPE**

|X|

3/4" FRICTION TAPE. A very popular standard width tape. For radio, electrical, home and shop applications. Av. wt., 6 oz.

[W]

Stock		NET PER ROLL			
No.	Size	1-29	30-99	30-99   100-Up	
52 N 610 52 N 611 52 N 612	3/4"x13' 3/4"x32' 3/4"x68'	14¢ 22¢ 42¢	13¢ 21¢ 40¢	12¢ 20¢ 38¢	

PLASTIC TAPE. Strong, black vinyl plastic electrical tape. Stretches and conforms to irregular surfaces. Its high-dielectric strength and excellent adhesive qualities make it a favorite with radiomen and electricians. ¾" type is only .00". Rated 7000 volts. ½" type is .010". Rated 10,000 volts. Av. shpg. wt., 6 oz.

52 N 614. 3/4"×44". NET PER RO	DLL	1.00
50-Up, EACH80¢	15-49. EACH	90¢
52 N 623. 1/2"x108'. NET PER I		
48-Up, EACH1.50	6-47, EACH	1.66



#### SCOTCH NO. 33 PLASTIC BACKED TAPE

Plastic-backed electrical tape. .007" thick; 10,000 v. dielectric strength. Molds to irregular surfaces. Resistant to chemicals, abrasion, oil, salt water, weather. Av. wt., per roll, 6 oz.

Stock No.	Size	Per Roll	12-Up, Per Roll
52 N 613	3/4"x20'	.54	.49
52 N 616	3/4"x66'	1.47	1.32

# Electrical Accessories

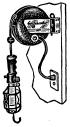
#### **RACINE CORD'N REEL**

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 outlet built into reel hub outlet but into reel nub to furnish current for ap-pliance or tool to be used. Excellent for use with shop tools, lawn mowers, floor sanders, vacuut, cleaners, etc. Heavy-duty, U.L. Approved, rubber-covered 2-conductor cords.

Stock	Mfr's	Length,	Wire	Amps	Wt.,	NET	
No.	Type	Feet	Size		Lbs.	EACH	
46 N 954	1850	25	18	7	2	3.40	
46 N 958		50	18	7	3	5.12	
46 N 959		50	16	10	4	7.38	

### CORDOMATIC **DROP-LIGHT REELS**

DROP-LIGHT REELS
Unique, self-winding drop
light. Provides light where
you want it. Cord is out of
the way when light no
longer needed. No. 18,
2-conductor cord, covered
with tough, neoprene insulation. Crack-proof handle
with built-in outlet and toggle switch. Chrome reflector
has swing-open bulb guard.
Steel housing is equipped
with universal mounting
pracket. Less bulb. U.L.
Approved.



Stock No.	Туре	Ft.	Lbs.	EACH
46 NX 976	700	20	7	14.65
46 NX 977	800	30	8	18.57
46 NX 978	900	40	9	22.47

#### **TAP-A-LINE OUTLET**

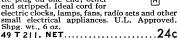
An extremely handy multiple outlet tap. Ideal for home, store or



### BELDEN GRIP-PRONG REPLACEMENT CORDS

#### LIGHT-DUTY CORDS

A LIGHT-DUTT CORDS
Type 17126M (Old 1755 B), SP-16-Foot Replacement
Cord, No. 18 wire. Brown, rubber-overed cod Extraflexible. Under the condition of the con



Type 17308M (Old 1754K). SJ 8-Foot Replacement Cord. No. 18 wire. Black rubber cord. U.L. Approved. ½ lb. 

Type 17206M (Old 1749K). SV 6-Ft. Replacement Cord. No. 18 wire. For use on small appliances. Gray rubber. Cord-holder plug. U.L. Approved. Wt. ½ lb. 

By Type 17408M (Old 1766B). SJ 8-Foot Appliance Grounding Cord. No. 18 wire. Used for electric power tools and appliances. 3 conductor cord with 3-prong plug. U.L. Approved. Shpg. wt., ½ lb. 



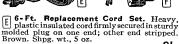


#### HEAVY-DUTY CORDS

Type 17270M (Old 1751K). SV 20-Foot Extension Cord. No. 18 gauge wire. Extra-flexible gray cord with plastic cord-holder plug and plastic connector. Specifically designed for use on vacuum cleaners and other small appliances and tools such as soldering irons, grinders, polishers, power saws, etc. In natural gray; will not mark or stain floors. 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., 11b. 96c







49 T 230. 10 or More, EA. 19¢. EA. . . 21c

F Cube Tap Extension. 3-way extension tap. Rated at 15 amps 125 volts; 10 amps 250 volts. With 6-foot cord and bakelite plug cap. Shpg. wt., 7 oz. 52 N 605. 10 or More, EA. . 33¢. EA. . . 37c



# REPLACEMENT CORD **VALUES**

Rubber Cube Tap Extension. An all-rubber, solderless, 3-way extension cord set. Consists of 9-ft. cord, unbreakable cube tap and plug. No. 18 wire. Spring-action contacts in cube receptacle provide positive connection with plugs. Shpg. wt., 8 oz.

**6-Ft. Extension.** Same as above, but with 6-ft. cord. Shpg. wt., 6 oz. 52 N 621. EACH......50¢





























# VALUES IN HANDY ELECTRICAL ACCESSORIES

Line Cord Receptacle. Rubber pull-handle receptacle. Dia., 11/4". 15 amps at 125 v. Shpg. wt., 3 oz. 

Bakelite Plug Cap. With convenient finger-grip. Cap size,  $1\frac{1}{8}x1\frac{1}{16}x\frac{4}{16}$  deep. Brown finish. Shpg. wt., 2 oz. 52 N 600, EACH .....

Flat Rubber Plug. Non-breakable molded rubber plug cap. Because of their narrow 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. 

Moutlet of one-piece, soft rubber. U. L. Approved. Shpg. wt., 4 oz. 23c

Continental Adapter. Male-female adapter. Permits using standard flat-prong American plugs in Continental Europe outlets designed for round prongs. Wt., 2 oz.

Fused Plug. Protects equipment. Small fuses for each side of line fit snugly in cylindrical receptacles—blown fuse easily removed for quick replacement. Interchangeable with any standard AC plug. Supplied less 3AG cartridge fuses. (See pages 214, 215 for fuses.) Shpg. wt., 3 oz. 52 N 648. EACH.......33c

S Academy 3-Way Outlet. No wire stripping—insert cord, close case. 15 amps/125 v. or 10 amps/250 v. Shpg. wt., 5 oz. 52 N 622. Mahogany plastic. 52 N 619. White plastic.

Parallel Ground Adapter. Adapts 3-

Plug Fuses. U.L. Approved. Clear view—easily seen when blown. Shpg. wt., 8 oz. 5 per box.

N Continental Adapter. Male-female adapter ter. Permits using standard flat-prong American plugs in Continental Europe outlets designed for round prongs. Wt., 2 oz.  49 N 536, NET	52 B 170. 10 Amps	PER BOX
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W

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 dependable. 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. No tools needed. Wires cannot be pulled out. Finest grade phenolic. U. L. Approved. Av Pkg. of 25, 5 oz.; Pkg. of 100, 11/4 lbs.



Wire	Stock	Pkg.		Pkg.		
Size	No.	of 25		of 100		
16-18	52 N 874	.46	52 N 870	.73		
14-18	52 N 875		52 N 871	1.06		
12-18	52 N 876		52 N 872	1.28		
10-18	52 N 877		52 N 873	2.41		

# **Belden Cable and Wire**



# SHIELDED MICROPHONE CABLE SINGLE CONDUCTOR-FOR HIGH-IMPEDANCE MIKES

No. 25, tinned, stranded conductor; 3x33 copper and 4x33 steel wire. Covered with cellulose acetate yarn braid, polyethylene insulation, tinned copper shield and chrome plastic jacket. Rubber insulation and black rubber jacket. Lengths under 100 ft. available only in spool sizes listed below.

Mfr's Type	0. D.	Wt., 100 ft.
8401	.200"	3 lbs.
8410*	.245"	4 lbs.
8411	.144"	21/4 lbs

Mfr's		15 ft. Spool			25 ft. Spool		50 ft. Spool			100 ft. Spool			ī	Over 100 ft.									
	Туре		N		NET		N		NE					NE					NET		No.		Per 100'
ē	8401 8410*	47	I	561	.81	47	I	562	Ţ.	ĮŞ	47	I	563	2.	30	47	I	560	4.2	1 47	W 56	4	4.21
	8410	47	÷	601	.64	47	÷	602	2.	99	47	÷	603	3.	82 71	47	÷	600	3.1	2147	W 44 W 60	4	7.20 3.14

#### TWO-CONDUCTOR-FOR LOW-IMPEDANCE MIKES

Shielded cable. 8422 is No. 22 stranded (16x34) tinned copper, polyethylene insulation, chrome plastic jacket. 8412 is No. 20 stranded (26x34) cotton wrap, rubber ins., black rubber jacket. 8428 is heavyduty studio cable, No. 18 stranded (41x34), cotton wrap, black rubber jacket. Lengths under 100 ft. available only in spool sizes listed below.

Mfr's Type	O. D.	Wt., 100 ft.
8428	.295"	7 lbs.
8412	.268"	5½ lbs.
8422	.231"	4 lbs.

Mfr's	Mfr's 15 ft. Spool			. Spool	50 ft. S	looc	100 ft. S	pool	Over 100 ft.		
Type		NET				NET				Per 100'	
8428	47 T 465	1.71	47 T 4	166 2.79	47 T 467	5.29	47 T 454	10.29	47 W 468	10.29	
8412	47 T 457	1.42	143 T 5	158 2.30	147 T 452	4.21	143 T 453	8.08	47 W 468 47 W 464 47 W 456	8.08	
0422	47 1 431	11.00	147 1 4	+52 1.07	147 1 422	1 3.09	147 1 450	2.29	147 W 436	1 2.39	

#### MULTIPLE-CONDUCTOR MIKE AND POWER CABLE

For microphone and interconnecting power cable requirements. No. 20 For microphone and interconnecting power cable requirements. No. 20 stranded (26x34), 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 rubber outer jacket. Types 8403, 8404, and 8405 have polyethylene 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.

	Type	O.D.	100 ft.
	8403	.247"	53/4 lbs.
	8404	.250"	7½ lbs.
ı	8423	.277"	53/4 lbs.
	8424	.295″	7½ lbs.
ı	8405	.275"	8 lbs.
	8425	.323"	8 lbs.
1	8426	.349"	101/4 lbs.
	8427	.360"	103/4 lbs.
	8418	.386"	10½ lbs.

Mfr's Type	Con-		Mmf.	15 ft. S	looq	50 ft. S	pool	100 ft. S	pool	Over 1	00 ft.
No.	tors	foot	No.	NET	No.	NET	No.	NET	No.	Per 100'	
8423	3	85	47 T 461	1.62		4.80	47 T 460	8.82	47 W 463	8.82	
8403	3	45	47 T 554	1.47	47 T 555	3.67	47 T 557	7.35	47 W 558	7.35	
8404	4	42	47 T 559	1.70	47 T 565	4.41	47 T 566	8.82	47 W 567	8.82	
8424	4	95	47 T 471	1.86	47 T 472	5.39		10.29		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	47 W 573	10.88	
8426	6	60 56	47 T 491	2.65	47 T 492	7.89	47 T 490	15.14		15.14	
8427	7	56	47 T 507	2.89	47 T 508	8.53	47 T 510	16.56		16.56	
8418	8	64	48 T 834	2.89	148 T 835	8.77	48 T 836	16.86	48 W 837	16.86	

# UNSHIELDED TWO-CONDUCTOR WEATHERPROOF CABLE

For intercoms, speaker extensions, etc. 8205 is No. 22 stranded (7x30), rubber insulation, black cotton braid; 8204 is No. 18 (16x30), rubber insulation, white cotton braid.

8205	.165"	2 lbs.
8204	.220"	3 lbs.

8205	47 T 861	.79 1.22	47 T	860  2.40 47 639  3.53 47	W 862 W 641	2.40 3.53

### 2-CONDUCTOR RUBBER SERVICE CORDS

2-CONDUCTOR RUBBER SERVICE CORDS

Two conductor stranded bare copper wire with cotton fillers. Rubber insulation is ½" on type SJ. and ¼" on SV. All are color coded for easy identification. 8452 and 8478 are No. 18 stranded (41x34). 8472, No. 16 stranded (65x34). \*Indicates type SV., findicates SJ. U.L. Approved. Lengths under 100 feet available only in spool sizes listed below.

Mfr's		25 ft. Spool		50 ft. S	pool	100 ft. S	Spool	Over 1	00 ft.	Lbs
Mfr's Type O. D.			NET	No.	NET		NET		Per 100'	
8452* .:	245"	47 T 411	1.42	47 T 412	2,40	47 T 410	4.26	47 W 413 47 W 404 47 W 408	4.26	5
8478† .:	299"	47 T 401	1.62	47 T 402	2.79	47 T 400	5.14	47 W 404	5.14	51/4
8472†	325"	47 T 406	1.91	147 T 407	3.38	147 T 403	6.32	147 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 flexible stranding; cotton wrap; rubber insulation color-coded conductors; black rubber jacket, Av. shgg. wt., per 100-ft. spool 5½ lbs. Lengths under 100 ft. available only in spool sizes listed below

s	Туре	O. D.
; !.	8453 8454 8455	.265" .265" .280"

Mfr's			15 ft. S	pool	50 ft. Spool		100 ft. S	pool	Over 100 ft.	
Type	Cond.		140.	NET	No.	NET	No.	NET	No.	Per 100'
8453 8454 8455	3 4	18 (41x34) 18 (41x34) 3-22(16x34)	47 T 42 I 47 T 43 I	1.17	47 T 422 47 T 432	2.94 3.53	47 T 420 47 T 430	5.39 6.57	47 W 423 47 W 433	5.39 6.5 <b>7</b>
8433		2-18(41x34)	47 T 441	1.37	47 T 442	3.92	47 T 440	7.30	47 W 443	7.30



#### SHIELDED PA AND SOUND SYSTEM CABLE

For long runs in speaker installations. 8208 and 8209 are 2-cond. 8206, 1-cond.; 8735, 3-cond.All have No. 18 stranded copper conductor(except 8735), cotton or paper wrap, rubber insulation (except 8735), and copper braid shield. 8735 is No. 22 stranded (7x30) and has plastic insulation 8209 in weatherproof cotton outer jacket; 8208, 8735 plastic; 8206 in copper braid. Lengths under 100 ft. available only in sizes below.

Mfr's O. D. 15 f		ft. S	pool		50 ft. S	pool	1	00 ft. S	pool		Over 1	00 ft.	L.bs	
Type	O. D.	N	ο.	NET		No.	NET		No.	NET		No.	Per 100'	100 ft.
8206	.155"	47 7	831	.71	47	T 832	1.91	47	T 830	3.38	47	W 833		2
8208	.260"		852	1.15	47	T 853		47	T 851	5.83	47	W 854		4
8209	.258"		847	1.08	47	T 848			T 850		47	W 849		31/2
87.35	.195"	48 7	872	.85	148	T 873	2.25	148	T 876	4.21	148	W 874	4.21	3

#### JUKE BOX CABLE



Mfr's Type	0. D.
8783	.240"
8782	.058"x.115"
8785	.195"x.300"
8786	.195"x.300"

High-quality speaker and control cable for all juke box applications. All have vinyl-plastic inner insulation; chrome vinyl plastic outer jacket. Type 8782 parallel is box. 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—No. 20 (10x30), 2—No. 16 (20x30). Type 8785 oval is 5-cond. color-coded. No. 22 stranded (7x30) tinned copper with copper braid shield over 3 conductors, twisted pair unshielded. 8786 oval is 6-cond. color-coded, 2—No. 22 (7x30), 4—No. 24 (7x32) tinned copper braid shield over 4 conductors; twisted pair unshielded.

Stock	Mfr's		NET	NET
No.	Type		Per ft.	Per 100 ft.
48 W 867 48 W 868 48 W 869 48 W 864	8783 8782 8785 8786	4 lbs. 10 oz. 3 lbs. 3 lbs.	1 ½¢ 6¢	4.26 .91 5.14 6.47

#### CATHODE-RAY TUBE CABLE

Type 8869. High voltage cable for CR tubes, power supplies and other applications. High dielectric strength, corona resistance and minimum surface leakage. No.20 single conductor stranded (7x28) tinned copper, with white flame retardant polyethylene insulation. 0.35° thick. 108° O.D. 10,000 volts. Shpg. wt., 100 ft., 134 lbs. Available only in lengths abown below.

Available	nly in lengths sho	wn below.
47 T 893.	nly in lengths sho 25 ft. Spool. NET	гС/С
47 T 895.	100 ft. Spool. N	ET1.71

Type 8868. As above but with .065" insulation, white with red stripe; rated at 20,000 volts. .168" O.D. Shpg. wt., 100 ft., 2½ lbs. 

# 47 T 896. 100 ft. Spool. NET......3.02 DUPLEX LIGHTING CABLE

# SHIELDED GRID WIRE

Type 8885. No. 20 single stranded (10x30) tinned copper, 0.15" rubber insulation. Cellulose acetate yard bridge in sulation. Cellulose acetate yard bridge in the coating, tinned copper braid shield. Used in circuits where shielded grid return is required and to shield a circuit conductor from stray fields. Break-down voltage, 4000 volts. O.D., 117". Shg. wt. 100 ft., 21bs. 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	96¢
47	T 790.	100 ft. Spool.	NET.	2.94
47	W 793.	Over 100 ft.,	PER 100	FT2.94

### PHONO PICKUP ARM CABLE



Type 8430. New, pho-no pickup arm cable of exceptional flexibility. Lightweight; has mini-

Lightweight; has minimum effect on tracking ressure. No. 32 stranding ed (7x40) copper conductor with .009" vinyl plastic insulation. Red and black twisted pair; O.D., .055".

47 T 614. 10-ft. Spool. Wt., 4 oz. NET 3.50 (47 T 616. 250-ft. Spool. Wt., 5 oz. NET .506 (47 T 616. 250-ft. Spool. Wt., 8 oz. NET .3.38

# **Belden Wire and Cable**

#### 3 & 4-CONDUCTOR INTERCOM CABLE

Type 8734. No. 22 tinned, stranded copper (7x30) with plastic insulation. 3



Mfr's Type	0. D.	Wt., 100 ft.		
*8443	.146"	2 lbs		
*8444	.164"	21/4 lbs		
*8445	.176"	21/2 lbs		
†8446	.218"	4 lbs		
1 8447	.236"	41/2 lbs		
†8448	.241"	41/2 lbs		
1+8440	251"	5 1he		

#### VINYL-COVERED PLASTIC-INSULATED CABLE

For permanent installation of speakers, control and For permanent installation of speakers, control and intercom circuits, and other applications requiring highly durable, lightweight cable. Conductors are tinned copper, flexible, stranded wire, with color-coded, plastic insulation; chrome vinyl plastic inschet overall. \*All conductors are No. 22 stranded (7x30). †Have two conductors of No. 18 stranded (16x30); the others are No. 22 stranded. Lengths under 100 ft. available only in spool sizes listed below.

Mfr's	l .	15 ft. 9	pool	25 ft. S	Spool   100 ft. S		pool   Over		100 ft.	
Туре	Cond.	No.	NET	No.	NET	No.	NET	No.	Per 100'	
*8443	3			47 T 361	.81	47 T 360	2.43	47 W 362	2.43	
*8444	4	1		47 T 371	.96	47 T 370	2.94	147 W 372	2.94	
*8445	5			47 T 381	1.14	47 T 380	3.63	47 W 382	3.63	
<b>†8446</b>	6	47 T 311	1.03			47 T 310	5.24	47 W 312	5.24	
†8 <b>44</b> 7	7	47 T 321	1.13	1	1	47 T 320	5.83	47 W 322	5.83	
†8448	8	47 T 331	1.18	<b>.</b>		47 T 330	6.12	47 W 332	6.12	
†8449	9	47 T 341	1.27			147 T 340	6.76	47 W 342	6.76	

#### SHIELDED P.A. AND SOUND SYSTEM CABLE

For public address and intercom use. All For public address and intercom use. All have inner insulation of vinyl plastic except 8432 and 8433 (rubber) and 8799 (cotton braid). Outer jackets of chrome vinyl plastic, except \*copper braid shield. 8432 and 8433 are No. 20 stranded (10x30); 8789, 8790 and 8791 are No. 18 stranded (17x50; 8799 is No. 18 solid (it cast use); 8779 and 8780 are No. 16 stranded (19x29).



solid (for PA and broad-

Stock No.	Mfr's Type	Cond.	O. D.	Lbs., 100 ft.	PER FOOT	100 Ft. For
48 W 884 48 W 866	8432* 8433*	2 3	.225"	3½ 5¼	7¢	5.98 7.45
48 W 814 48 W 815	8779* 8780	2 2	.225″ .256″	41/2	9¢ 8¢ 8¢	6.17
48 W 865 48 W 803	8789* 8790		.205"	3	5¢ 5½¢	4.41
18 W 804 48 W 885	8791 8799*	2 3 2	.230" .165"	51/4 3	7¢	5.73 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. All have outer jackets of chrome vinyl plastic except 8482, 8483, 8460 and 8470 which are twisted lead types. 8762 has aluminum foil shield over copper ground wire and twisted pair, stranded (7x28). \*Solid copper conductors. †Stranded (7x26), § stranded (19x29).

Stock No.	Mfr's Type	Cond.	Wire Size	O.D.	Lbs., 100 ft.	PER FOOT	100 Ft. For
48 W 878 48 W 879 48 W 805 48 W 806	8482* 8483* 8486* 8487*	3 2	19 19 19 19	.115" .132" .162" .176"	3½ 1¾ 3½ 2½	1½¢ 2¢ 2¢ 3¢	1.25 1.76 1.85 2.34
48 W 809 48 W 816 48 W 817 48 W 818 48 W 819	8461† 8470§	2 2	20 18 18 16 16	.166" .175" .195" .195" .246"	2 2½ 3 2¾ 4	4¢ 3¢ 5¢ 3½¢ 4½¢	3.23 2.35 3.97 2.79 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 braid; 8440, chrome vinyl plastic. Type 8438 and 8440 have waxed cotton braid over cotton wrap; 8436 and 8439, cellulose-acetate yarn braid over cellulose-acetate yarn wrap; 8437, waxed cotton braid over cellulose-acetate yarn wrap.



Stock No.	Mfr's Type	Gauge	O. D.	Lbs., 100 ft.	PER FOOT	100 Ft. For
48 W 859 48 W 886 48 W 887 48 W 888 48 W 889	8436 8437 8438 8439 8440	22 22 20 20 20 22	.180" .222" .140" .150" .185"	2 3½ 2¾ 2¾ 2¾ 3	5½¢ 6¢ 5¢ 5½¢	4.56 4.95 4.07 4.70 4.41

#### COPPER BRAID SHIELDING AND BONDING CABLE

Mfr's   Type	I.D.	Stranding
8660 8668	11/8"	96x34 120x34
8661 8669 8662	3/8" 1/2" 25/32"	192x34 336x34 576x34

Flexible, braided and



Mfr's	10 ft. S	loot	50 ft. S	ool	100 ft. or more		
Туре	Stock No.	NET	Stock No.	NET	Stock No.	Per 100'	
8660	49 T 351	.41	49 T 350	1.32	49 W 352	2.51	
8668 8661	49 T 356	.51	49 T 355	1.76	49 W 357	3.35	
8669	49 T 361 49 T 366	.56	49 T 360	2.16 5.14	49 W 362 49 W 367	9.41	
8662	49 T 381	1.40	49 T 380	6.47	49 W 382	12.94	

#### PAIRED VINYL-COVERED CABLE

For intercom and telephone wiring. No. 22 solid tinned copper; color-coded vinyl plastic insulation.

Conductors are cabled in twisted pairs; chrome vinyl plastic overall.



100' or more, PER 100' Con-ductors O. D. | Lbs., FOOT No. Туре 8740 8741 8742 8743 48 W 890 48 W 891 48 W 892 48 W 893 .140" .191" .226" .281" 2¢ 3½¢ 5¢ 7¢ 1.76 2.89 3.82 5.44 13/4 21/2 31/2 43/4 1Ž 48 W 894 48 W 898 48 W 895 48 W 896 8744 8753 8745 8746 .330" .370" .400" .520" 7.79 10.88 14.21 24.99 6½ 8 9¢ 13¢ 17¢ 30¢ 18 22 10 17 30 54

#### 2-CONDUCTOR SHIELDED INTERCOM CABLE

All have vinyl plastic insulation, jackets; except 8738, 8758 have copper braid jackets. Tinned conductors. \*Tinned copper spiral-wrapped shield. Black/red coding. 8737 is No. 22 stranded (7x30); 8758, 8759 are No. 20 stranded (7x28); 8738, 8739 are No. 22 solid.



Stock	Mfr's	O. D.	Lbs.,	PER	100' or more,
No.	Type		100 ft.	FOOT	PER 100'
48 W 877 48 W 882	8737* 8738	.166"	31/2	4¢ 3¢	3.53 2.50
48 W 801	8758	.165"	2½	4¢	3.09
48 W 802	8759*		2¾	5¢	3.82
10 W 903	8730*	156"	217	31/4	3.00

#### TV CAMERA CABLE

Type 8280. 28-conductor TV camera cable. All conductors, plastic-insulated color-coded. Highest performance with black-and-white color. Has 4 No. 18 conductors; 21 No. 22 conductors in groups of 7 each; 3 coaxial cables (Nom. Imped. 51 ohms); paper separator, tinned copper braid shield; chrome plastic jacket .750° O.D. Wt., 100 ft. 35 lbs.



47 W 575. NET PER FT.....70¢ 100' or More, PER 100'..58.80

# 75-OHM VIDEO CABLE



## RG HIGH-FREQUENCY CABLE



All cables have Iow-loss, flexible, polyethylene plastic inner jacket, covered with copper braid shield. All have black vinyl plastic outer jacket overall, except RG-9/U has gray plastic jacket and silver-coated copper shielding; RG-54A/U and RG-71/U have clear polyethylene outer jacket. Impervious to acids, alkalis, oils and gasoline. RG-8/U and RG-9/U are medium-sized video and communications cable. RG-11/U is medium-sized 75-ohn video and communications cable. RG-8/U is ideal for radio-frequency transmission, video, test equipment, etc. \*Solid copper; all others stranded. See page 193 for connectors.

Stock No.	RG No.	Mfrs Type		Mmf/ft	O. D.	Lbs., 100 ft.	Per Ft.	100 Ft. For
47 W 51 47 W 51 47 W 51 47 W 51	9/U 3   11/U 5   54A/U		52 51 75 58	29.5 30.0 20.5 26.5	.405" .420" .405" .250"	15 <sup>3</sup> / <sub>4</sub> 11 4 <sup>1</sup> / <sub>2</sub>	13½¢ 28½¢ 12¢ 8½¢	9.51 6.71
47 W 51 47 W 51 47 W 55 47 W 51 47 W 51	7 58A/U 59/U 62/U	8240* 8259 8241* 8254* 8257*	50 73 93	28.5 29 21 13.5 13.5	.195" .195" .242" .242" .250"	31/2 41/2 4 41/2	5½¢ 5½¢ 6¢ 6½¢	4.12 4.46 4.90 8.67

#### RUBBER-COVERED LEAD-IN

Type 8200. Flexible No. 18 tinned copper wire, stranded (1/x27), with .040° live rubber insulation. Overall diameter, .126°. Av. shpg. wt., .100-ft. spool, .1½ lbs. .47 T745, .100-ft. Spool. NET 1,47. .47 T746, 500-ft. Spool NET 5.83



#### TYPE MIL-W-76A SRIR THERMOPLASTIC HOOK-UP WIRE



A general-purpose, heavy-duty, thermoplastic-insulated hook-up wire for critical electronic applications. Insulation is rated at 1000 volts ms. Made to conform to stringent government specifications. Features extremely high dielectric strength, excellent stability at high temperatures and extremely low moisture absorption. Has high flame and fungi resistance, Vinyl thermoplastic insulation (.016" thick) is virtually impervious to damage from solvents. All lare tinned copper conductors. Available in: black, brown, red, orange, yellow, green, blue, violet, gray and white. Specify choice. shops. wt. 25-ft. spool, 6 oz.; 100-ft. spool, 1¼ lbs.; 1000-ft. spool, bs.

14 lbs.

#### 25-FOOT SPOOLS—SPECIFY COLOR

Stock No.	Mfr's Type	Size	Strands	O. D.	NET EACH
47 TT 214	8530	22	Solid	.059"	32¢
47 TT 215	8524 8529	22 20	7x30 Solid	.064"	37¢
47 TT 217	8523	20	10x30	.072"	35¢ 38¢

#### 100 AND 1000-FOOT SPOOLS-SPECIFY COLOR

Mfr's		C4	0 0	1	100′	SPC	OL	1	1000	SPC	OOL
Туре	Size	Strands	O. D.		No		EACH		No.		EACH
8530	22	Solid	.059"	47	TT	218		47		222	4.56
8524	22	7x30	.064"	47	II	219		47	II	223	
8529	20	Solid	.066″	47	II	220		47	II	224	5.73
8523	20	10x30	.072"	47	11	221	1.03	4/	_ ! !	225	7.06



### **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-ft. coil, 1 lb.

#### STRANDED BARE COPPER

Туре	8000-7×2	2	Type 8002—7×24				
Stock No.	Spool	NET	Stock No.	Spool	NET		
47 T 680 47 T 681 47 T 682 47 T 683	50 ft. 75 ft. 100 ft. 1,000 ft.	.81   1.11   1.40   13.23	47 T 654 47 T 655 47 T 656 47 T 657	50 ft. 75 ft. 100 ft. 1,000 ft.	.59 .73 .96 8.82		

#### \*SOLID NYLCLAD COPPER

Type 8008 No. 12	Type 8009 No. 14
47 T 670   100 ft.   2.30 47 T 735   200 ft.   4.26 47 T 736   500 ft.   9.55	47 T 740   100 ft.   1.62 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". Shpg. wts.: 25-ft. spool, 2 oz.; 500-ft. spool, 2 lbs.

47 T 930. 25-ft. spool. NET 29C. 47 T 933. 500-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 of all types of thinners; resists softening and brittleness at 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	100	.62	48 T 088	18	199	1.18			
48 T 039	20	157	.65	48 T 089	20	315	1.22			
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	1.49			
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 T 046	34	3930	1.11	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	9700	1.70	48 T 098	38	19400	3.50			
48 T 049	40	16050	2.62	48 T 099	40	32100	5.50			

#### **WIRE MARKERS**

#### HIGH-TEMPERATURE THERMOPLASTIC HOOK-UP WIRE



Type B Mil-W-16878-B. For general use in temperatures of up to 212 degrees F. and with voltages up to 600 volts rms. Vinyl thermoplastic insulation (.010") 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 striping. Available in 9 colors: wh/black, wh/brown, wh/red, wh/orange, wh/yellow, wh/green, wh/blue, wh/violet, wh/gray. Av. shpg. wt.: 100-ft. spool, ½ lb.; 1000-ft. spool, 4¾ lbs.

#### 100 AND 1000-FOOT SPOOLS-SPECIFY COLOR

Mfr's	<u>.</u>			100' Spool			1000' Spool				
Туре	Size	Strands	0. 0.		No.		EACH	l	No		EACH
8501	18	7x26	.068"	47	TT	260	1.38	47	TT	264	11.12
8502	20	7x28	.058"	47	TT	261		47	TT	265	
8503	22	7x30	.050″	47	TΤ	262		47	TT	266	
8504	24	7x32	.044"	47	TT	263	1.09	47	TT	267	7.89

#### 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 fungus and fiame resistant lacquer coating. 1000 v. AC breakdown voltage. DC insulation resistance is 200 megs/ft. Type 8943 is 10x30, type 8947 is 10x30, type 8942 is 26x30, type 8938 is 41x30. Type 8941 has .072"
O.D., Type 8943 has .070" O.D., Type 8942 has .080"
O.D., Type 8938 has .115" O.D. Av. shpg. wt. per 100 ft.: no. 20, ½ lb.; no. 18, ½ lb.; no. 16, 1 lb.; no. 14, 1½ lb.

#### TYPE 8941-20 SOLID

Coil	Red	Black			Yellow	
100 Ft.	47 T 920	47 T 921	47 T 922	47 T 923	48 T 334 47 T 924	1.47
1000 Ft.	48 T 351	48 T 350	48 T 352	48 T 353	48 T 354	11.40

Type 8818 Assorted Wire Kit. Contains eight spools of type 8941 cellulose acetate insulated hook-up and lead wire described above. Kit includes convenient work-bench dispenser rack. Has 25 ft. each of the following colors: black, blue, green, red, white, yellow, orange, and brown. Shpg. wt., 2 lbs.

47 T 228. NET. 3.68

#### TYPE 8943-20 STRANDED

Coil	Red	Black	Blue	Green	Yellow EACH
25 Ft.	48 T 361	48 T 360	48 T 362	48 T 363	48 T 364 .47
100 Ft.	47 T 940	47 T 941	47 T 942	47 T 943	47 T 944 1.47 48 T 384 12.20

Type 8820 Assorted Wire Kit. Contains eight 25-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, NEI	
TYPE 8945-18 SOLID	TYPE 8947-18 STRANDED
47 T 900. Red. 47 T 901. Black. 100-Ft. Spools	47 T 9 10. Red. 47 T 9 11. Black.

7 7903. Green. FACH 1.62 47 7913. Green. FACH 1.76 TYPE 8942-16 STRANDED TYPE 8938--14 STRANDED

T 916. Black T 917. Red T 918. Green 100-Ft. Spools NET EACH 2.06 47 T 935. Red 47 T 936. Black 100-Ft. Spools NET 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 is 65x36 stranded tinned copper with cotton wrapping. Type 8898 has 230° O.D. and .088° rubber insulation. 10,000 v. working voltage, 29,000 v. puncture voltage. Type 8899 has .140° O.D. and .043° rubber insulation. 5000 v. working voltage, 20,000 v. puncture voltage. Stype with per 100 ft.; 8898 4 lbs.; 8899, 2 lbs. Lengths under 100 ft. are available only in 10 and 25-ft. spools.

	ITPE	8898		11PE 8899				
Stock No.	Color	Length	Ea.	Stock No.	Color	Length	Ea.	
47 T 811 47 T 801 47 T 812		10 ft.spool 10 ft.spool 25 ft.spool	.56	48 T 911 48 T 901 48 T 912		10 ft.spool 10 ft.spool 25 ft.spool	.41	
47 T 802 47 T 810 47 T 800	Red	25 ft.spool 100 ft.spool 100 ft.spool	3.38	48 T 910	Red	25 ft.spool 100 ft. spool 100 ft. spool	2.25	
47 W 813 47 W 803	Red Black	Over 100', PER 100'	3.38	48 W 913 48 W 903	Red Black	Over 100', PER 100'	2.25	

#### LITZ WIRE

Type 8817. 5x44 stranded Celenamel with one nylon wrap. For rewinding antenna primaries, hand-winding RF coils, and similar applications. Outside diameter; .008". 100 ft. spool. Shpg. wt., 2 oz. 24c



#### CABLE LACING CORD

# Consolidated Wire

#### POSJ AND POT TYPE LAMP CORD

No. 18 stranded copper wire, POSJ has coded cotton wrap, heavy rubber jacket. POT has vinyl insulation. Sipg. wt., 3 lbs. per 100 ft. Lengths under 100 feet are available only in 25-ft. coil.



Mfr's	Color	25 ft. Coil		100 ft. (		Over 100 ft.		
Type	00.0.					Stk. No.		
POSJ	Brown	48 T 761	74¢	48 T 760	2.73	48 W 763	2.73	
POSJ	Black	48 T 771	74¢	48 T 770	2.73	48 W 773	2.73	
POT		48 T 765	63¢	48 T 764	2.33	48 W 766	2.33	
POT	White	48 T 768	63¢	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: Power supply cords, remote control circuits, 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:

Type, Size	2 Cond.	3 Cond.	Type, Size	2 Cond.	3 Cond.
SV #18 SJ #18 SJ #16 S #18	4 lbs. 5¼ lbs. 6¼ lbs. 8½ lbs.	6 <sup>3</sup> / <sub>4</sub> lbs. 8 lbs. 8 <sup>3</sup> / <sub>4</sub> lbs.	S #16 S #14 S #12 S #10	9½ lbs. 11¾ lbs. 21 lbs. 23 lbs.	11 <sup>3</sup> / <sub>4</sub> lbs. 19 lbs. 23 lbs. 29 lbs.

#### 2-CONDUCTOR

Type,	25 ft.	Coil	50 ft. Coil		100 ft.	Coil	Over 100 ft.	
Size	Stock No.	NET	Stock No.	NET	Stock No.	NET	Stock No.	PER 100'
SV #18	48 T 480	1.20	48 T 488	2.25	48 T 496	4.47	48 W 439	4.47
SJ #18	48 T 481	1.50	48 T 489	2.55	48 T 497	4.90	48 W 451	4.90
SJ #16	48 T 482	1.80	48 T 490	3.30	48 T 498	6.30	48 W 452	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	13.95
S #14	48 T 485	3.90	48 T 493	7.43	48 T 436	13.95	48 W 465	
S #12	48 T 486	6.23	48 T 494	12.00	48 T 437	23.04	48 W 466	
S #10	48 T 487	7.50	48 T 495	14.25	48 T 438	27.27	48 W 467	

#### 3-CONDUCTOR

SJ #18	48 T 468	2.18	48 T 416				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 I I .52
S #16	48 T 406	3.98	48 T 419	7.50	48 T 504	14.04	48 W 514 14.04
S #14	48 T 407	5.85	48 T 425	11.33	48 T 505	21.64	48 W 515 21.64
S #12	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 517 32.57

#### TELEPHONE WIRE

2-Conductor Interior. For interior use with telephones, intercoms, etc. No. 22 solid, tinned copper wire. ½2″ insulation and glazed cotton braid. Shpg. wt., 100 ft., 2½ 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 ft., 3 lbs.

48 W 826. PER FOOT .. 4¢. 100 ft. or More, PER 100 FT.. 3.38 3-Conductor Exterior. As above, but 3-cond. Wt., 100', 4 lbs. 48 W 825. PER FOOT. 51/4. 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 impedance match assures efficient signal transfer. Consists of two flexible No.
18, stranded-wire conductors with tough, long-life rubber insulation.
½" thick. Weather-proof; does not crumble or dry out during prolonged
usage. Shpg. wt., 100 ft., 3 lbs.

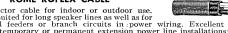
48 W 850, PER FOOT....3c 100 ft, or More, PER 100 FT. 2.56

# **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, 200x.350°. Shpg. wt. 100 ft., 7/4 lbs. non-metalic sheathed waterproof and

100 ft. 71/4 lbs. 47 W 594. PER FOOT... 9C 100 ft. or More, PER 100 FT.. 8.52

#### ROME ROFLEX CABLE



2 conductor cable for indoor or outdoor use. Ideally suited for long speaker lines as well as for electrical 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 covering entire cable. Flexible and easy to use. Current capacity is 15 amp. Rated at 600 volts. U.L. Approved. Sizes, .230x.410". Shpg. wt., 100 ft., 7 lbs.

47 W 549, PER FOOT. 7C 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° C. Suitable for high-voltage circuits where low loss and proper insulation is essential. Shg. wt., per 25 ft. spool, 4 oz.



20 SOLID	20 STRANDED			
T 455. Black. SPOOL SPOOL T 457. Blue. T 458. Green. 29C	48 T 460. Black. 48 T 461. Red. 48 T 462. Blue. 48 T 463. Green. 48 T 464. Vellow.	25 FOOT SPOOL 34c EACH		

#### 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. ut.,  $25\,\mathrm{ft.}$ ,  $5\,\mathrm{oz.}$ 

Coil	Black	Red	Blue	Geen	White	EACH
25 ft.	48 T 200	48 T 201	48 T 202	48 T 203	48 T 205	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 convenient wiring. Available in both solid and stranded type. Unusually flexible and durable. Double-cotton covered with paraffin-treated damp-proof braid. 5 different colors. Shpg. wts.: 25 ft., 4 oz.; 100 ft., 1 lb.



### STRANDED TYPE, 10×30

Spool				Blue		
25 ft.	48 T 442	48 T 440	48 T 444	48 T 441	48 T 443	.36
100 ft.	48 T 447	48 T 445	48 T 449	48 T 446	48 T 448	1.29

#### SOLID TYPE

Spool	Red	Black	Yellow	Blue	Green	EACH
25 ft. 100 ft	48 T 472	48 T 470	48 T 474	48 T 471 48 T 476	48 T 473	.34 1.26

# HIGH-GRADE MAGNET WIRE ON SPOOLS

Insulated, soft-drawn copper wire of highest quality. Specially manufactured for all types of coil winding applications—transformers, RF coils, chokes, etc. All sizes indicated below are standard B&S gauge. Shpg. wts.: ½-1b. spool, 14 d. oz.; 1-1b. spool, 1½ lbs.



# PLAIN ENAMELED 1/2 LB. SPOOLS

Stock No.	Size	Feet	NET	Stock No.	Size	Feet	NET
48 T 100	14	38	.60	48 T 111	26	640	.71
48 T 102	16	63	.60	48 T 112	28	1013	.75
48 T 104	18	101	.62	48 T 113	30	1602	.83
48 T 106	20	159	.62	48 T 114	32	2543	.84
48 T 108	22	253	.65	48 T 115	34	4042	.92
48 T 109	24	402	.65	48 T 116	36	6410	.92

#### SINGLE COTTON ENAMELED 1 IR SPOOLS

-							
48 T 020	14	78	1.44	1 48 T 028	22	490	1.91
48 T 022	16	124	1.50	48 T 029	24	772	1.95
48 T 023	17	156	1.56	48 T 030	25	936	2.07
48 T 024	18	198	1.62	48 T 031	26	1209	2.19
48 T 025	19	248	1.70	48 T 032	28	1876	2.63
48 T 026	20	312	1.79	48 T 033	30	2780	3.08

#### HEAVY FORMVAR MAGNET WIRE IN 1-POUND SPOOLS

IN 1-POUND SPOOLS

Copper magnet wire covered with Formvar; tough, sturdy, abrasion-resisting film. Stable dielectric is maintained under the cumulative drying and aging effects of heat; does not fail after two hours at 105° C. Impervious to the deteriorating effects of petroleum solvents; resists acid and alkali. Takes up less winding space. Infinite resistance to moisture. Ideal for servicemen, experimenters, amateurs, etc. Replaces enamel, paper, cotton, silk, and double cotton and double silk wire. Shpg. wt. per spool, 1½ 155.

Stock	No.	Size	Feet	NET	Stock No.	Size	Feet	NET
	180	14	78	1.13	48 T 187	28	1999	1.59
	137	15	99	1.13	48 T 144	29	2780	1.77
	181	16	124	1 13	48 T 188	30	3200	1.79
	138	17	156	1.14	48 T 145	31	4410	2.03
48 T I	82	18	198	1.14	48 T 189	32	4900	2.04
	139	19	246	1.19	48 T 146	33	6441	2.16
48 T (	83	20	313	1.20	48 T 190	34	7950	2.19
48 T I	140	21	397	1.26	48 T 147	35	9002	2.51
48 T i	84	22	501	1.26	48 T 191	36	12,800	2.54
48 T i	141	23	628	1.34	48 T  48	37	15,898	3.45
	185	24	798	1.34	48 T 192	38	20,000	3.51
48 T I	42	25	941	1.43	48 T 149	39	25.188	5.37
48 T I	86	26	1200	1.46	48 T 193	40	31,700	5.47
48 T i	43	27	1583	1.56				

#### TINNED SOLID COPPER WIRE

Fine quality, soft-drawn copper wire, tinned for easy soldering. Excellent for circuit wiring. Av. shgs. wt.: \*3 lbs., †5 lbs.

\*100-FT. COUS

	*100-FT. COILS										
Stock No.	Gauge	NET	Stock No.	Gauge	NET						
47 T 523 47 T 520	16 14	1.07	47 T 530 47 T 540	12 10	2.07 4.35						
	†1000-FT. SPOOLS										
47 T 525 47 T 527	24 22	2.55 3.98	47 T 533 47 T 535	20 18	6.00 9.00						

# Alpha Wire and Zipper Tubing

# MIL-W-76A PLASTIC WIRE

#### TYPE MW-UNCOVERED PLASTIC WIRE

SQLID COLORS. General-purpose, thermoplastic-insulated hook-up wire. Stranded, tinned-copper conductor. Has high resistance to flame, fungi, moisture and solvents. Insulation rated at 1000 v. rms. Conformed to stringent government specifications. Has .016' insulation. Features 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. Av. shpg. wt., 100', 1¼ lbs.; 1000', 7 lbs.

Mfr's	Type	ı	1	i	100-Ft. S	pool	1000-Ft. S	pool
Type	Designation	Size	Strand	0.D.	Stock No.	NET	Stock No.	NET
	MW-C 24(7)U		7/32	.059"	49 TT 750	.82	49 TT 755	6.76
	MW-C 22(7)U		7/30	.064"	49 TT 751	.93	49 TT 756	7.79
	MW-C 20(10)U		10/30		49 TT 752		49 TT 757	
1555	MW-C 18(16)U	18	16/30				49 TT 758	
1557	MW-C 16(26)U	16	26/30	.095*	49 TT 754	2.27	49 <b>TT 7</b> 59	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, white/brown, white/orange, white/gray, and white/violet.

1551 MW-C 22(7)U	22	7/30  .064"  49 TT 760   1.04  49 TT 763   8.90
1553  MW-C 20(10)U	20	10/30   .073"   49 TT 76     1.27   49 TT 764   11.25
1555 MW-C 18(16)U	18	16/30   .084"   49 TT 762   1.70   49 TT 765   15.44



33

#### 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". 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. shgs. wt., 100-ft. spool, 11/4 lbs. Av. shgs. wt., 100-ft. spool, 80.

Mfr's	Type		1	[	100-Ft. S	pool	1000-Ft. S	pool
Type	Designation	Size	Strand	0.D.	Stock No.	NET	Stock No.	NET
	MW-C 22(7)B		7/30	.080"	49 TT 766	1.71	49 TT 769	15.58
	MW-C 20(10)B		10/30		49 TT 767			
1592	MW-C 18(16)B	18	16/30	.100"	49 TT 768	2.55	49 TT 771	23.96



#### TYPE MW-NYLON JACKET

Tinned-copper, stranded hook-up wire with thermoplastic insulation and overall nylon jacket. Has .016" insulation thickness. 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-ft. spool, 11/4 lbs. Av. shpg. wt., 100-ft. spool, 7 lbs.

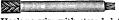
Mfr's	Type				100-Ft. S	pool	1000-Ft.	Spool
Type	Designation	Size	Strand	0.D.	Stock No.	NET	Stock No.	NET
	MW-C 22(7)J		8/30	.075"	49 TT 772	1.44	49 TT 775	12.20
	MW-C 20(10)J		10/30	.090"	49 TT 773	1.84	49 TT 776	16.10
1506	MW-C 18(16)J	18	16/30	.103"	49 TT 774	2.38	l 49 TT 777	21.61



#### TYPE MW-SHIELDED WIRE

Single-conductor, stranded, tinned-copper, hook-up wire—has .016" thermoplastic insulation and tinned-copper shield overall. Insulation rated at 1000 volts. Meets military specifications. Av. shpg. wt., 100-ft. spool, 1¼ lbs. Av. shpg. wt., 100-ft. spool, 8 lbs.

Mfr's	Type				100-Ft. S	loog	1000-Ft. S	pool
Type	Designation	Size	Strand	O.D.	Stock No.	NET	Stock No.	NET
1351	MW-C 22(7)S	22	7/30	.085"	49 T 778	3.02	49 T 781	27.93
1352	MW-C 20(10)S	20	10/30	.095″	49 T 779	3.31	49T 782	30.87
1353	MW-C 18(16)S	18	16/30	.105"	49 T 780	4.05	49 T 783	38.22



#### TYPE MW-SHIELDED NYLON

Hook-up wire with stranded tinned-copper conductor, white thermo-Hook-up wire with stranged tinned-copper conductor, white therpalestic insulation, braided tinned copper shield plus clear nylon jacke overall. Made to conform to stringent government specifications, sulation is rated at 1000 volts. Wall thickness, 016°. Nominal jacke thickness: Types 1371, 1372, and 1373—007°; Type 1374—008°, 8 hgs. wt., 100-ft. spool, 1¼ lbs. Av. shpg. wt., 100-ft. spool, 1½ lbs. Av. shpg. wt., 100-ft. spool, 1%

Mfr's	Type			l	100-Ft. S <sub>I</sub>	oool	1000-Ft. S	pool
Type	Designation	Size	Strand	O.D.	Stock No.	NET	Stock No.	NET
1372 1373	MW-C 22(7)SJ MW-C 20(10)SJ MW-C 18(16)SJ MW-C 16 <sub>2</sub> 26)SJ	20 18	7/30 10/30 16/30 26/30	.120"	49 T 785 49 T 786	4.19	49 T 788 49 T 789 49 T 790 49 T 791	38.22 47.04



#### TYPE HW-UNCOVERED PLASTIC Stranded, single-conductor, tinned-copper hook-

Insulation is rated at 600 volts. Wall thickness, .045°. Conforms to stringent military specifications. Available in choice of white, black, and red—specify color when ordering. Av. shpg. wt., 100-ft. spool, 1½ lbs. Av. shpg. wt., 100-ft. spool, 1½ lbs.

Mfr s Type	1	i	100-Ft. Spool 1000-Ft. Spool				
	Size	Strand	0.D.	Stock No.	NET	Stock No.	NET
1579 HW-C 14(41)U						49 TT 795	
1651 HW-C 12(65)U						49 TT 796	

#### 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 violet—specify color when ordering. In 100-ft. and 1000-ft. lengths on handy spools. Av. shpg. wt., 100-ft. spool, 1 lb. Av. shpg. wt., 100-ft. spool, 6 lbs.

Mfr's	Type	l	I	1	100-Ft. Sp	ool	1000-Ft. Sp	ool
Туре	Designation	Size	Strand	0.D.	Stock No.	NET	Stock No.	NET
	LW-C 30(7)U		7/38	.033"	49TT 938		49TT 942	
	LW-C 28(7)U LW-C 26(7)U		7/36 7/34		49TT 939 49TT 940		49 TT 943 49 TT 944	
	LW-C 24(7)U		7/32		49TT 941	1.66	49TT 945	7.06

#### 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, 1850, 1851, 1852, 1853, 1854, 1855 and 1856) withstands temperatures to 100°C.; all other types have nylonizacket over thermoplastic insulation and are for temperatures to 110°C. Type B has nominal insulation thickness of .010° and is rated at 600 v. rms. [Type C has .016° insulation and is rated at 1000 v. 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 and use. Available in 6 solid colors: white, black, red, green, yellow, and blue—specify choice when ordering. Av. shpg. wt., 100-ft. spool, ½ lb. Av. shpg. wt., 100-ft. spool, ½ lb. Av. shpg. wt., 1000-ft. spool, 4½ lbs.

#### TYPE B-UNCOVERED PLASTIC (Specify Color)

Mfr's	MIL	Ī	1	1	100-Ft. Sp	loo	1000-Ft. Spool		
Type	Type	Size	Strand	0.D.	Stock No.	NET	Stock No.	NET	
1850 1851 1852 1853	B-32 B-30 B-28 B-26	32 30 28 26	7/40 7/38 7/36 7/34	.028" .032" .035" .038"	49 TT 798 49 TT 799 49 TT 900 49 TT 901	.82 .81 .85	49 TT 905 49 TT 906 49 TT 907 49 TT 908	8.31 6.76 6.61 6.99	
1854 1855 1856	B-24 B-22 B-20	24 22 20	7/32 7/30 10/30	.043" .049" .060"	49 TT 902 49 TT 903 49 TT 904	.88 .99 1.22	49 TT 909 49 TT 910 49 TT 911	7.35 8.31 10.73	

#### TYPE B-NYLON (Specify Color)

1860 1861 1862 1863	B-32 B-30 B-28 B-26	32 30 28 26	7/40 7/38 7/36 7/34	.032" .036" .039" .042"	49 49 49	TT 9 TT 9 TT 9 TT 9	i 4   i .ŏ	3 49		20	9.11 8.82 9.19
1864 1865 1866	B-24 B-22 B-20	24 22 20	7/32 7/30 10/30	.047" .053" .065"	49 49 49	TT 9 TT 9 TT 9	7 1.2		TT	23 24 25	9.55 11.02 13.38

# TYPE C-UNCOVERED PLASTIC (Specify Color)

1831 1832 1833	C-22 C-20 C-18	22 20 18	7/30 10/30 16/30	.064" .072" .082"	49TT 926 49TT 927 49TT 928	1.68	4911 929 8.97 4911 930 11.54 4911 931 15.29	)

#### TYPE C-NYLON JACKET (Specify Color) 7/20 | 0727 | 40 TT 032 | | 30 | 40 TT 935 | 12 28

1841 1842 1843	C-22 C-20 C-18	20 18	10/30 16/30	.079"	49 TT 933 49 TT 934	2.08	49 TT 936 49 TT 937	15.22

# 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—elimoparations, Extremely strong, flexible and turable. 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 polywing chloride plastic to meet MIL-1-631C specifications. Wall thickness: 0.020° ± .001°. Lateral pull strength when zipped, 42.7. pounds per inch; 59.8 pounds when sealed. Order tubing ¼ larger than total 0.D. of wires to be covered. One slider supplied with each 25° of tubing. Available in clear and black, 100-ft. lengths only.

Black	Clear	Inside	Wt.,	i	100-Foot Coils	
Stock No.	Stock No.	Dia.	Lbs.	EACH	10-49, EACH	50-149, EACH
49 T 946	49 T 959	1/2"	4	31.00	29.00	28.00
49 T 947	49 T 960	5/8"	4½	31.50	29.50	28.50
49 T 948	49 T 96 I	3/4"	5	32.00	30.00	29.00
49 T 949	49 T 962	7/8"	5½	32.50	30.50	29.50
49 T 950	49 T 963	1"	6¼	33.00	31.00	30.00
49 T 951	49 T 964	1½"	6½	34.00	32.00	31.00
49 T 952	49 T 965	1¼"	6¾	34.50	32.50	31.50
49 T 953	49 T 966	1½"	7¼	36.00	34.00	33.00
49 T 954	49 T 967	1¾"	8	37.00	35.00	34.00
49 T 955	49 T 968	2"	8¾	38.00	36.00	35.00
49 T 956	49 T 969	2½"	11½	40.50	38.50	37.50
49 T 957	49 T 970	3"	12½	43.00	41.00	40.00
49 T 958	49 T 971	4"	16½	48.00	46.00	45.00

AB-295 METAL SLIDER. Extra sliders for above. Wt., 1 oz. 

#### 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 tubing. 4 oz. will seal approximately 1000 ft. of tubing.

	Stock No.	Size	Wt.	NEI	Stock No.	Size	Wt.	MEI
١	49 T 973	1 oz.	6 oz.	.35	49 T 976	1 at.	3 lbs.	5.00
	49 T 974		9 oz.	.60	49 T 977	l gal.	10 lbs.	13.50
	49 T 975	4 oz.	10 oz.	1.00		-		l
ľ								

# 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 with-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° C and given cold bend after 4 hours cooling at -65° C. Stranding: 18 ga., 19x30; 20 ga., 19x32; 22 ga., 19x34; 24 ga., 19x36. Shpg. wt., 100′, ½ lb.



Color	Stranded 18 Gauge	Stranded 20 Gauge	Stranded 22 Gauge	Stranded 24 Gauge
Black Brown	47 W 168	47 W 173	47 W 178 47 W 179	47 W 188
Red Orange Yellow	47 W 169	47 W 174	47 W 180 47 W 181 47 W 182	47 W 189
Green Blue	47 W 171	47 W 176	47 W 183 47 W 184	47 W 191
Violet Gray White	47 W 172	47 W 177	47 W 185 47 W 186 47 W 187	47 W 192
1-99 Ft., PER FT.	.127	.106	.086	.082
100-499 Ft., PER FT.	.115	.095	.077	.074
500-999 Ft., PER FT.	.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 7x .0063" and 21-597 has 7x.0056"). Shpg. wt., 100', 1½ lbs.

Stock	Mfr's	Imp.,	Mmf	0.D.	1-99 Ft.,	100-999 Ft.,
No.	Type	Ohms	Per Ft.		PER FT.	PER FT.
49 W 473	21-598	50	30	.105"	.051	.047
49 W 472	21-597	75	20	.150"	.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 No.	Mfr's Type	Imp., Ohms	Mmf Per Ft.	0.D.	Lbs., 100'	1-99 Ft., PER FT.	100-999 Ft., PER FT.
49 W 313 49 W 337	21-146 621-100	45	35 16.5	.155" .405"	2	.048	.044
49 W 33/	621-100	75 73	16.5	105"	8	.141	.129

#### CONSOLIDATED SHIELDED CABLE FOR SOUND SYSTEMS

Type 14-2. Flexible, 2-conductor P.A. cable, No. 14 wire (stranded 41x30) with ½2" plastic insulation, tinned-copper braided shield, and weatherproof cotton outer jacket. Shpg. wt., per 100 ft., 4 lbs.



#### VARNISHED SPAGHETTI TUBING

# ASSORTED 8" LENGTHS

Highly popular with experimenters and builders. 26 pieces of cambric spaghetti tubing in various colors and diameters. 3 oz.



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		Stoc	k No.		Per	5 or More Pkgs.,
Size	Black	Yellow	Red	Green	Pkg.	Per Pkg.
20	49 T 164	49 T 165	49 T 166	49 T 167	53¢	48¢
18	49 T 169	49 T 170	49 T 171	49 T 172	57¢	52¢ 53¢
16	49 <u>T</u> 174	49 T 175	49 T 176	49 <u>T</u> 177	58¢	53¢
14	49 T 179	49 T 180	49 T 181	49 <u>T</u> 182	64¢	58¢
12	49 T 184	49 T 185	49 T 186	49 T 187	68¢	62¢
10	49 T   189	49 T 190	49 T 191	I 49 T 192	75¢	68¢

#### NEW SPIRAP SPIRAL-CUT PLASTIC WRAPPING

Flexible, highly durable polyethylene plastic wrapping. Provides neat appearance and protection for wire harnesses from ¼" to 2" in diameter. Spiral-cut design permits instant location of individual wires. Easy to



wind or unwind. Shpg. wt., 100 ft., 11/4 lbs. 71W 543. 1-99 Ft., PER FOOT......8c 

#### RG COAXIAL CABLE

Low-loss coaxial cable for RF applications. All meet rigid military and commercial specifications. Impervious to the effects of weather, acids, alkalis, oil and gasoline.



POLYETHYLENE DIELECTRIC-VINYL JACKET

Stock	RG	Imp.,	Mmf	0.0.	Lbs.,	1-99 Ft.,	100-499 Ft.,	500-999 Ft.,
No.	No.	Ohms	Per Ft.		100'	PER FT.	PER FT.	PER FT.
49 W 303	5/U	52.5	28.5	.332"	9	.143	.131	.118
49 W 304	7/0	97	12.5	.370"	81/2	.134	.123	.111
49 W 460	8/U	52	29.5	.405" .405"	12 12	.132	.121	
49 W 315 49 W 469	8A/U 9/U	52 52	29.5 30	.420"	121/2	.314	.145	.258
				.420"	121/2	.383	.351	
49 W 314 49 W 322	9A/U 9B/U	51 51	30 30	.420"	121/2	.407	.372	.316 .335
49 W 470	11/0	75	20.5	.405"	12"	.726	1116	ردد. ا
49 W 317	IIA/U	75	20.5	.405"	12	.144	išĭ.	
49 W 305	14/Ú	52	29.5	.545"	21	.330	.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 49 W 485	55/U	53.5 53.5	28.5 28.5	.206" .195"	3½	.101	.092	
49 W 485	58/U 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	28.5	.242"	41/2	:060	.055	
49 W 316	59A/U	73	21	.242"	41/2	.071	.065	
49 W 488	62/Ú	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/U	93	13.5	.250"	41/2	.109	.099	12722
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	1 200
49 W 324	122/U	50	29.3	.160"	21/2	.062	.057	.051

#### TEFLON DIELECTRIC—FIBERGLASS SILICONE-IMPREGNATED JACKET

Stock	RG	Imp.,	Mmf	0.D.	Lbs.,	1-99 Ft.,	100-249 Ft.,
No.	No.	Ohms	Per Ft.		100'	PER FT.	PER FT.
49 W 326	87A/U	50	29.5	.425"	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"	6	1.96	1.76
49 W 328	141/U	50	29	.195"	4	1.62	1.45
49 W 329	142/U	50	29	.206"	5½	1.73	1.56
49 W 333	187/U	75	19.3	.110°	11/4	.47	.42
49 W 332	188/U	50	29	.110°	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° C to 105° 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" wall thickness; all others, .016". Available in nine popular colors: clear, black, red, yellow, green, blue, brown, white, and orange—specify color. Av. shpg. wt., 100-ft., 5 oz.

		25 Ft. 0	Coil	100 Ft. Coil				
Size	Nom.	Stock	NET	Stock	1-9,	10-49,	50-Up,	
1.0		No.	EACH	No.	EACH	EACH	EACH	
24 22 20 18	.022" .027" .034" .042"	71 TT 300 71 TT 301 71 TT 302 71 TT 303	.51 .53 .54	71 TT 307 71 TT 308 71 TT 309 71 TT 310	1.40 1.40 1.44 1.50	1.15 1.15 1.18 1.21	.96 .96 .98	
16 14 12	.053" .066" .085"	71 TT 304 71 TT 305 71 TT 306		7  TT 3   7  TT 3 2 7  TT 3 3	1.61 1.73 1.86	1.28 1.35 1.46	1.07 1.13 1.22	

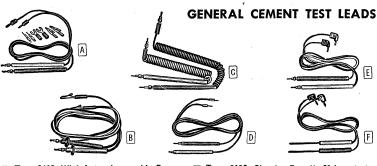
Tubing as above. Size 10, .016" wall thickness; all other sizes, .020". Available in choice of six popular colors: clear, black, red, yellow, green, and blue-specify color. Av. shpg. wt., 100-ft., 10 oz.

			•						
10	.106"		TT 314		171 TT		2.01	1.62	1.36
8	.133"		TT 315				2.88	2.27	1.75
6			TT 316				3.30	2.52	2.07
4	.208"		TT 317		71 TT	322	3.85	2.89	2.43
2	.263"	171	TT 318	1.26	7 I TT	323	4.43	3.41	2.89

Wall-thicknesses, size 0, .020"; \*.025"; †.030"; §.035"; ‡.040"; 11/2", .045". Choice of clear or black—specify. Av. wt., 100', 5 lbs.

0	.330"	71 TT 324	1.46	71 TT 335	5.18	1 4.03	3,44
5/16"* 3/8"*	.312"	71 TT 325	1.71	71 TT 336	6.25	4.83	4.11
3/8"*	.375"	71 TT 326	2.07	71 TT 337	7.30	5.62	4.86
1/2 "*	.500"	71 TT 327	2.63	71 TT 338	9.12	7.08	6.08
5/8" <del>†</del>	.625"	71 TT 328		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
%"§	.875"	71 TT 330	5.33	71 TT 341	20.64	16.12	13.55
1"§	1.000"	71 TT 331	6.15	71 TT 342	23.07	18.00	15,04
11/4"‡	1.250"	71 TT 332	8.33	71 TT 343	31.98	25.07	21.14
1%"‡	1.375"	71 TT 333	8.85	71 TT 344	34.18	26.57	22.42
11/2"	1.500"	71 TT 334	10.80	71 TT 345	41.45	32.26	27.53

# Test Leads, Prods and Patch Cords





Test Leads For Every Use

G

Type 8463. With Interchangeable Connectors. 50" leads have 6" 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 interchangeable with the banana plugs. 6000-volt insulation. Shpg. wt. 4 oz. 1.76

Type 8464. With Interchangeable 

Type 9102. HV Test Leads. 48" long, flexible, heavy-duty, rubber-covered leads, ¼" thick. One red, one black. Pointed phone tip prods; alligator clip ends. Special fingerguard prod handles. 5" long. 22,000-volt breakdown at 60 cycles. Shpg. wt., 4 oz. 3.52

Type 9301. Stretch Leads. No-kink-no-tangle test leads. 9' coil extends to 6 feet. 6" Tenite prod handles. Pointed phone tips both ends. Shpg. wt., 4 oz. both ends. Shpg. wt., 4 oz.
42 N 355. NET PER PAIR......2.91 D Type 9190. Slender Pencil. 5" long test prods made of durable Tenite with 50" kink-less leads. Have pointed phone tips on prod end; plain phone tips on connector end. Shpg. with 4 ng. wt., 4 oz. 42 n 356. net per pair..........73c

Type 8459. 6000v Insulation. 6" durable Tenite prods with pointed phone tips. Angle phone tips on connector ends. 50" leads. Shpg. wt., 4 oz. 

Type 8461. Needle-tipped, Insulation Piercing. Same as Type 5050 but prods have needle type chuck and needle points for piercing insulation. Shgs. wt., 4 oz.

1.15

**Type 8462.** Same as Type 8459 above but equipped with angle phone tips on connector ends instead of the pointed phone tips. Shpg. 

Type 8465. Long Needle. Same as Type 8462 but prod tips are 4" lengths of stiff, pointed No. 16 wire. Also prod handles are 4" long. Excellent for those hard-to-reach places. 50" leads—6000-volt breakdown, insulation. Shpg. wt., 4 oz. 

# KLIPZON TEST PRODS AND LEADS

G Prods equipped with clip-tip which holds on to wire, lug, etc.; leaving both hands free. 43/4" handles. 4' leads. Av. wt., 4 oz.

Stock No.			PR.
42 N 362	5608	Klipzon tips both ends Klipzon tips and plain	1.91
	l .	phone tip connectors	1.47
42 N 364	5610	Klipzon phone tip prods; banana plug connectors.	1.91

#### KLIPZON JUMPER LEADS

H 2 wire leads with Klipzon phone-tip miniprods at each end. Average shpg. wt., 4 oz.

Stock No.	Type	Color	Length	PER PAIR
42 N 369	5634	Red	12"	.59
42 N 370			12"	.59
42 N 371	5636	Red	24"	1.09
42 N 372	5637	Black	24"	1.09

## H. H. SMITH TEST PRODS



Type 302. Solderless Test Prod. Threaded prod with 5½" long plastic handle, ¾" diameter. Nickel plated phone tip. Wire fits through handle, wraps around screw portion. Shpg. wt., 4 oz. 42 N | | 0. Red. 42 N | | 1. Black. NET EACH PROD......50c

Type 318. Phono Needle Test Prod. Brass nickel-plated body with steel, nickel-plated, phono-type needle. Removable chuck for replacing broken needles. Red or black molded plastic handle. Overall length 65%". Shgs. wt., 3 oz. 42 N 373. Red. 42 N 374. Black. NET EACH PROD......55C

Type 329. Heavy-duty Test Prod. Threaded type. Extra sturdy brass, nickel-plated tip with red or black molded plastic handle. Overall length, 61\%". Shpg. wt., 3 oz. 42 N 375. Red. 42 N 376. Black. NET EACH PROD......55c

G-C KLIPZON MINIPRODS

Self-Gripping Tips. No. 5621. Clip to any terminal, lug, etc., and stay there! Needle points for piercing insulation. Solderless connection inside 1¼" plastic handle. Shpg. wt., 2 oz. 42 N 271. Red. 42 N 272. Black. NET EACH TIP.......32c

Mini-prod Adapter Tips. No. 5623. Fit over standard test points or phono-needle types. Convert them to self-gripping types with special insert supplied. Shpg. wt., 2 oz. 50 N 159. Red. 50 N 160. Black. NET EACH TIP.........35c



Type 7830. Molded-plastic, angle phone tip prods. Feature solderless "Trigger-Quik" clamps for sure connections. I—red and I—black. Shpg. wt., 2 oz. 70c



10 or More, EACH.....

**NEON GLOW TESTERS** GENERAL CEMENT NEO-O-LITE

SITIER LOW VOLTAGE TESTER

Type T202. Extremely useful low voltage tester. Indicates voltages from 5 v. to 50 v. AC/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.

42 N 406. NET EACH.

99c

**Type T203.** Similar to above but tests 2½ to 24 v. AC/DC. 42 N 407. NET EACH......

# 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. Requires only a twist of the fingers to convert test leads to any two of 50 different types. Equips the test bench to meet almost any testing need. Has four phone tips, two banana plugs, and two spade lugs. An exceptionally menter. Comes attractively packaged in transparent plastic wallet-style kit. Shg. wt., 5 oz.

#### 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 3½ spacing. Ground connection is clearly marked on one side. Types with single banana plugs have single-conductor, polyvinyl-insulated cord. Withstands pull test exceeding 50 lbs. Solder bonding of each terminal assures noise-free connections. Contact resistance less than 0.001 ohm per plug in standard jack. One-piece beryllium copper spring provides dependable 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 cable with single inner conductor polyethylene insulation, vinyl jacket. †18-gauge, vinyl insulated twisted pair. \$RG58-C/U coaxial cable with BNC connector on one end. Av. shg. wt., 5 oz.

# WITH DOUBLE PLUGS

Stock No.	Type	Length	NET EACH	
42 N 203 42 N 204 42 N 205 42 N 206	2BA-36†	36"	3.67 3.67 3.67 4.75	

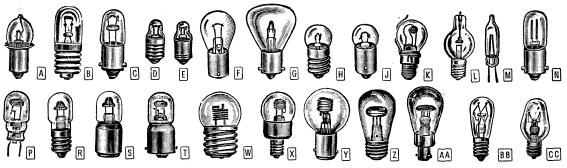
#### WITH SINGLE PLUGS 1 886-1- I

No.	Type	Length	EACH	
42 N 207	B-18	18"	1.47	
42 N 208	B-24	24"	1.47	
42 N 209	B-36	36"	1.47	

#### WITH DOUBLE PLUG AND TWO ALLIGATOR CLIPS

Stock	Mfr's	Length	NET
No.	Type		EACH
42 N 236	2BA-AL-24†	24"	2.47
42 N 237	2BA-AL-36†	36"	
42 N 238	2BB-AL-24*	24"	3.07
42 N 239	2BB-AL-36*	36"	

# General Electric Lamps—Sockets



# MINIATURE, NEON, AND ARGON LAMPS

#### GENERAL-PURPOSE MINIATURE LAMPS

All are miniature, except: \*Midget flanged type; †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, flanged; S. C., Bay.—single contact, bayonet; D. C., Bay.—double contact, bayonet. Under Bulb Style; G—globe; T—tubular; B—lemon shape; TL—Lens end, tubular (pre-focus type); FE—flat end; RP—reflector, pear shape; S—as in Fig. F; PAR—parabolic. Shpg. wts.: 1 lamp, 2 oz.; box of 10, 4 oz.

	.,		-,						
Stock No.	Mfr's Type	Fig.	Volts	Amps	Base	Bulb Style	NET EA.	10 or More, Ea.	100 or More, Ea
52 E 344 52 E 345 52 E 337 52 E 338 52 E 387	PR-2 PR-3 PR-4 PR-9 PR-12	A A A	2.4 3.6 2.3 2.7 5.95	0.50 0.50 0.27 0.15 0.50	S.C., F. S.C., F. S.C., F. S.C., F. S.C., F.	B-3½ B-3½ B-3½ B-3½ B-3½ B-3½	.20 .20 .20 .25	.14 .14 .14 .18	.13 .13 .16
52 E 304 52 E 300 52 E 301 52 E 303 52 E 302	PR-13 13 14 27 31	HHHH	4.75 3.7 2.5 4.9 6.2	0.50 0.30 0.30 0.30 0.30	S.C., F. Screw Screw Screw Screw	B-3½ G-3½ G-3½ G-4½ G-4½	.20 .17 .17 .17	.14	.13 .11 .11
52 E 305 52 E 306 52 E 307 52 E 308 52 E 309	40 41 42 43 44	<b>BBBCC</b>	6-8 2.5 3.2 2.5 6-8	0.15 0.50 0.35 0.50 0.25	Screw Screw Screw Bayonet Bayonet	T-3¼ T-3¼ T-3¼ T-3¼ T-3¼	.15 .20 .15	.10	.09 .09 .13 .09
52 E 3 I 0 52 E 3 I 2 52 E 3 I 3 52 E 3 I 4	45 46 47 48 49	свсвс	3.2 6-8 6-8 2.0 2.0	0.35 0.25 0.15 0.06 0.06	Bayonet Screw Bayonet Screw Bayonet	T-3¼ T-3¼ T-3¼ T-3¼ T-3¼	.15		.09 .09 .09
52 E 315 52 E 316 52 E 369 52 E 320 52 E 660	50 51 53 55 57	H 	6-8 6-8 14.4 6-8 12-16	1 c. p. 1 c. p. 0.12 2 c. p. 2 c. p.	Screw Bayonet Bayonet Bayonet Bayonet	G-3½ G-3½ G-3½ G-4½ G-4½	.15		.09 .09 .09
52 E 322 52 E 321 52 E 317 52 E 325 52 E 327	63 81 82 112 136	HOH	6-8 6-8 6-8 1.2 1.3	3 c. p. 6 c. p. 6 c. p. 0.22 0.60	S.C. Bay. S.C. Bay. D.C. Bay. Screw Screw	G-6 G-6 G-6 TL-3 G-4½	.20 .20 .25 .17	.14	.13 .13 .16 .11
52 E 330 52 E 331 52 E 333 52 E 334 52 E 339	222 223 224 233 248	HHH: O	2.2 2.2 2.15 2.2 2.5	0.25 0.25 0.22 0.27 0.80	Screw Screw Special Screw Screw	TL-3 FE-3¾ TL-2¾ G-3½ G-5½	.17 .17 .17	.12	.!!
52 E 319 52 E 323 52 E 377 52 E 378 52 E 658	313 327 328 425 428	C : :HH	28 28 6 5 12.5	0.17 0.04 0.20 0.50 0.25	Bayonet S.C. Mid.* S. C. Mid.* Screw Screw	T-31/4 T-13/4 T-13/4 G-41/2 G-41/2	.35 .90 .70 .17	.26 .66 .51 .12	.23 .59 .46 .11
52 E 332 52 E 652 52 E 342 52 E 664 52 E 650	432 433 605 1129 1133	HJIFG	18.0 18 6.1 6-8 6-8	0.25 0.25 0.50 21 c. p. 32 c. p.	Screw Bayonet Screw S.C. Bay. S.C. Bay	G-4½ G-4½ G-4½ S-8 RP-11	.17 .17 .35	.12 .12 .12 .26	.   .   .   .23
52 E 65 I 52 E 379 52 E 659 52 E 34 I 52 E 66 I	1188 1323 1446 1447 1449	G :###	6-8 6.2 12 18.0 14	50/32 c. p. 4.30 0.20 0.15 0.20	D.C. Bay. S.C. Pref.† Screw Screw Screw	RP-11 RP-11 G-3½ G-3½ G-3½	1.00 1.00 .17 .20	.72 .72 .12 .14	.65 .65 .11
52 E 662 52 E 653 52 E 654 52 E 655 52 E 340	1458 1477 1487 1488 1490	<b>ВВСС</b>	20 24 12-16 14 3.2	0.25 0.17 0.20 0.15 0.16	Bayonet Screw Screw Bayonet Bayonet	G-5 T-3 T-3¼ T-3¼ T-3¼	.17 .40 .20 .20	.12 .27 .14 .14	.11 .24 .13 .13
52 E 656 52 E 326 52 E 657	1493 1768 1815	F B C	6.5 6 12-16	2.75 0.20 0.20	D.C. Bay. Midget Screw Bayonet	S-8 T-1¾ T-3¼	1.00 .75 .20	.70 .52 .14	.63 .47 .13
52 E 324 52 E 343 52 E 384	1820 1829 4546	C C :	28 28.0 4.7	1.0 0.07 0.50	Bayonet Bayonet S.C. Term§	T-3¼ T-3¼ PAR-36	.40 .35	.29 .25 1.77	.26 .22 1.59

#### **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. shg. wt., 1½ lbs.

				•	•				
No.	Туре	Fig.	Amps	NET	No.	Туре	Fig.	Amps	NET
9 E 900	12X825		2	4.41	9 E 904		L	6	4.77
9 E 901	206501	K	2	4.41	9 E 905	*217283	L	15	9.19
9 E 906	20X672	1	5	5.52	9 E 907	16X897		2	12.13
9 F 9/13	122042		161	1 77	9 F 908	45 Y 674		16	11470

#### **NEON GLOW LAMPS**

For 105-600 volt operation except types marked ‡ which are for 210-600 v. Indicates DC only. S.C. stands for single contact; D.C., double contact; Sk., skirted. Screw types have series resistor in base—for 105-125 v. operation; others require external resistor. AC starting voltage shown. DC starting voltage is 40% higher. †Red sprayed. Av. shpg. wt. 1 lamp, 3 oz.; box of 10, 5 oz.

Stock No.	Mfr's Type	Fig.	Watts	AC Volts	Bulb Style	Base	NET EACH	10-Up EACH
52 E 370 52 E 396	NE-2 NE-2H	M	1/25	65	T-2 T-2	Wire Term. Wire Term.	.10	.08
52 E 374	NE-7	P	1/4 1/4	55	T-41/2	Wire Term.	.73	.56
52 E 826 52 E 827	§NE-16 NE-17	S	1/4 1/4	\$67 55	T-4½ T-4½	D.C. Bay. Cand. D.C. Bay. Cand.	.63 .90	.48
52 E 822	NE-21	T	1/4	55	T-41/2	S.C. Bay. Cand.	.95	.71
52 E 801 52 E 809	NE-30 NE-31	W X	1 1	60 60	G-10 G-10	Edison Sk. Cand. Screw	1.20	.93 2.62
52 E 814	NE-32	Y	l î	60	G-10	D.C. Bay. Cand.	1.20	.93
52 E 803	NE-34	Z	2_	60	S-14	Edison	1.85	1.43
52 E 805		Z	2	60	S-14	Edison	1.97	1.53
52 E 815 52 E 806	NE-36 NE-40	AA Z	2 3 3	60 60	S-14 S-14	Sk. D.C. Bay. Cand. Edison	2.40	1.89
52 E 816	NE-42	ÃΑ	3	60	S-14	Sk. D.C. Bay. Cand.	2.65	2.04
52 E 807	NE-45	R	1/4	65	T-41/2	Cand. Screw	.85	66
52 E 812	NE-48	S	1/4	65	T-4½	D.C. Bay. Cand.	.70	.54
52 E 373	NE-51	N	1/25	65	T-31/4	S.C. Bay. Min.	.21	.!7
52 E 395	NE-51H	N	1/4		T-31/4	S.C. Bay. Min.	23	.19
52 E 360 52 E 361	INE-56 NE-57	W R	,1	60 55	G-10 T-4½	Edison	1.25	.98 .76
52 E 362		R	1/4 1/2	65	T-41/2	Cand. Screw Cand. Screw	.95	:71

### **ARGON GLOW LAMPS**

							radiation. Clear g 1 lamp, 3 oz.; bo		
52 E 52 E 52 E	811 820 810	*AR-3 †AR-2 †AR-1	R AA Z	½ 2 2	65	S-14	Cand. Screw Sk. D.C. Bay. Cand. Edison	.85 2.20 1.90	.68 1.78 1.53

#### **AC-DC PILOT LAMPS**

Rated at 1500 hours, average use. Have clear glass envelopes except white glass. Ideal for use behind small panel openings, as indicator lamps, etc. \*Candelabra screw base. †Double contact candelabra bayonet base. †Herzog tubular lamp—all others, G.E. Av. wt., 4 oz.

Stock No.	Туре	Fig.	Volts	Watts	EACH	10-Up, EA.
52 E 349	*S6	BB	120	6	.22	.20
52 E\352	†6S6	BB	120	6	.30	.27
52 E 354	*3S6	BB	120	3	.30 .35 .52	.31
52 E 353	*10S6	BB	230	10	.52	.47
52 E 355	*C7	CC	115-125	7	.20 .20 .26	.18
52 E 356	*§C7	CC	115-125	7	.20	.18
52 E 351	†Č7	cc	115-125	10	.26	.23
52 E 350	‡*		120	4	,39	.35

# SOCKETS FOR NEON, ARGON AND PILOT LAMPS







\*Hard rubber insert in metal shell. Av. shpg. wt., 3 oz.

Stock No.	Fig.	Description	EACH	10-Up,EA.
52 E 850 52 E 858 52 E 852 52 E 855	DD DD EE DD	Edison Miniature screw Candelabra screw Candelabra screw	.13 .14 .45	.12 .13 .41
52 E 853* 52 E 856 52 E 857	FF GG GG	Double-contact, bay. candelabra Double-contact, bay. candelabra Single-contact, bay. candelabra	.29 .75	.26 .67 .53

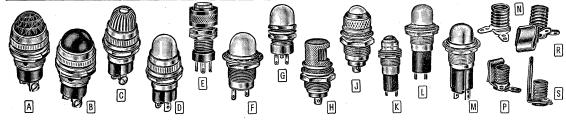
#### LAMP SOCKET REDUCERS

Receptacle opening receives base of bulb; other end fits into socket desired. Enables user to convert to most commonlyused types of bulb bases. Positive contact. Av. shpg. wt., 2 oz.



Stock No.	Fig.	Description	NET
52 E 606 52 E 639 52 E 634	HH JJ JJ	Edison-to-Candelabra Candelabra-to-Miniature Intermediate-to-Candelabra	16¢ 14¢ 7¢
52 E 638	KK	Edison-to-Intermediate	15¢

# Dialco Pilot Light Assemblies



#### **OIL-TIGHT SERIES**

Heavy-duty pilot light assemblies. Feature totally enclosed construction. Chrome finish. Glass lens gives 180° light spread. High-impact phenolic insulation. Rugged terminals. Caps unscrew from front for lamp replacement. With mtg. hardware; less lamp. Av. shpg. wt., 3 oz.

#### 1" MOUNTING HOLE TYPES

Series 103-3101. For use with S6 screw-base lamp. Size, 13/6×17/6". Screw-type terminals. \*Indicates frosted lens.

A Stock No. (Faceted)	Mfr's Type	B Stock No. (Dome)	Mfr's Type	Color
52 E 8886 52 E 8887 522 E 8889 522 E 8990 522 E 891	-1331 -1332 -1333 -1334 -1335 -1336 -1337	52 E 893 52 E 894 52 E 895 52 E 896 52 E 897	-1211* -1212* -1213* -1214* -1235 -1216* -1217*	Red Green Amber Blue White Yellow Clear

1 to 9, NET	EACH		
iv or wore,	EACH	· · · · · · · · · · · · · · · · ·	. 1.98

Series 103-3502. As above, but for 6S6 bayonet base lamp. \*Indicates frosted lens.

A Stock No. (Faceted)	Mfr's Type	B Stock No. (Dome)	Mfr's Type	Color
52 E 839	-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

# 

# 11/16" MOUNTING HOLE TYPES

Series 125-408. Pilot light assemblies for use with NE-51 neon lamps. Built-in resistor. All have solder terminals. Size, 15/6x2364".

C Stock No. (Fluted)	Mfr's Type	D Stock No. (Plain)	Mfr's Type	Color	
52 E 823 52 E 824 52 E 825	-1191 -1193 -1197	52 E 828 52 E 829 52 E 830		Red Amber Clear	
1 to 9, NET EACH					

#### "PRESS-TO-TEST" SERIES

Series VM-911M. "Press-to-test" indicator assemblies. Feature built-in circuit testing provision. Have 3 soldering terminals: 2 to rormal circuit and 1 for test circuit. Units are completely enclosed. Provide 180° daylight beam; "halo" light for night. Require 154° mtg. hole. 3/a/13″. For Nos. 327, 328, bulbs. 1 oz.

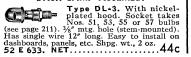
Dim	mer	Non-D	immer	Lens
		Stock No.		Color
52 E 415	MS25041-1 MS25041-2	52 E 456 52 E 457	MS25041-5 MS25041-6	Clear
52 E 417	MS25041-3 MS25041-4	52 E 458 52 E 459	MS25041-7 MS25041-8	Green Amber
1 to 9, NET EACH				.2.06

# SITTLER PANEL LAMP



Type 211007 Neon Indicating Lamp. Has started to the control of th

#### COLE-HERSEE DASH LAMP ASSEMBLY



# SUBMINIATURE SERIES

Extremely compact pilot light assemblies for use with tiny T-14 bulbs (voltages from 1.3 to 28). Caps unscrew from front of panel for easy lamp replacement. Permanent isolation from ground assured by military-grade phenolic material. All connections, lamp, and socket are completely insulated from the bushing and panel. Ruggedly constructed of brass and are finished in black nickel. Size, ½xI¼° Supplied with lockwasher and nut. Less lamp (see listing on page 211). Av. shpg. wt., 2 oz.

#### 2-TERMINAL PLASTIC DOME TYPES

Series 101-5030 Front Mount and 101-3830 Back Mount. Front mount pilot lights (Fig. F) require '½'' panel clearance; back mount (Fig. G) pilot lights require '½'' clearance hole. For Nos. 327, 328 bulbs.

F Stock No. (Front)	G Stock No. (Back)	Mfr's Type	Color
52 E 513	52 E 521	-951	Red
52 E 514	52 E 522	-952	Green
52 E 515	52 E 523	-973	Amber
52 E 516	52 E 524	-975	White

10-Up, EACH....[.|2 1-9, EACH....[.24

#### 1-TERMINAL LIGHT SHIELD TYPES

1-terminal units for use in grounded circuits. Meet M1L-L-7806-A specifications. Opening on side of assembly emits light on panel—ideal for dials, instruments control panels, etc. Movable contact is made solid brass; spring does not carry current. Require <sup>13</sup>/<sub>22</sub> dia, mtg. Fits Nos. 327, 328 bulbs.

Type 4-1930. With soldering terminal. 52 E 544. 10-Up, EA. 1.43 1-9, EA. 1.59 Type 4-1830. With binding screw terminal. 52 E 549, 10-Up, EA. 1.43 1-9, EA. 1.59

### 1-TERMINAL NON-DIMMING TYPES

Series 8-1830 With Binding Screw and Series 8-1930 With Soldering Terminal.

Meet MIL-1-7806-A specifications. All have frosted lenses except \*unfrosted. 15½" mtg. hole. For Nos. 327, 328 bulbs.

Stock No.	Stock No.	Mfr's	Color
(Screw)	(Solder)	Type	
52 E 423 52 E 424 52 E 425 52 E 426 52 E 427 52 E 428 52 E 429	52 E 433 52 E 434 52 E 435 52 E 437 52 E 438 52 E 439	-111 -112 -113 -114 -135* -116 -117	Red Green Amber Blue White Yellow Clear

#### LOW VOLTAGE ENCLOSED SIGNAL ASSEMBLIES

Series 812210. Aviation type signal assemblies with smooth-faced jewels in ½" white-nickel holder. Take T-3½ min. bayonet base tubular lamp, replaceable from front (see page 211), 2½" long. Require ½%" mtg. hole. For panels up to ¾" thick. Less lamp. Shpg. wt.,

Stock	Mfr's	Cap	EACH
No.	Type	Color	
2 E 589	111	Red	56c
2 E 590	112	Green	
2 E 591	113	Amber	
2 E 592	135	White	

# REPLACEMENT JEWEL CAPS ONLY FOR ABOVE

No.	Туре	Color	EACH	10-Up
52 E 535 52 E 536 52 E 537 52 E 538	81-112	Green	l6c	l4c

# PILOT BULB REMOVER



Lesigned to expedite installation or removal of miniature and candelabra 52 E 550, NET. Designed to expedite

#### **NEON INDICATOR LIGHTS**

Series 95408X and Series 95408XH. Enclosed neon indicator lights. Series 95408X have built-in 56,000-0hm, ½ watt resistor for NE-51 neon lamps in 105-125 v. AC-DC circuits. Series 95408XH (\*\*) have built-in resistor of 18,000 ohms for use with NE-51H "high brightness" neon glow lamp on 105-125 v. AC, or DC circuits over 160 v. 2½6" long, 1½6" hole. Meet MIL-L-3661, CSA and U.L. requirements. Less lamp (see page 211). 3 oz.

Stock	Mfr's	Stock	Mfr's	Cap
No.	Type	No.	Type	Color
52 E 504	931	53 E 142		Red
52 E 505	933	53 E 143		Amber
52 E 506	935	53 E 144		White
52 E 507	937	53 E 145		Clear
1-9, NET EACH				

# **NEON PANEL ASSEMBLIES**

Series 952208. Enclosed neon pilot light assemblies. Have built-in 56,000 ohm resistor for NE-51 in 105-125 v. AC-DC circuits except \* with 18,000 ohm resistor for NE-51H "high brightness' lamp for use with 105-125 v. AC or 160 v. DC. 21/6" long, 11/6" mtg. hole. Less lamp (see page 211). Wt., 3 oz.

Mfr's Stock Mfr's Cap Type Color Stock 53 E | 46 | 931H\* | Red 53 E | 47 | 933H\* | Ambe 53 E | 48 | 935H\* | White 53 E | 49 | 937H\* | Clear 52 E 581 52 E 582 52 E 583 52 E 584 931 933 935 937 931H\* Red 933H\* Amber 935H\* White

### REPLACEMENT PLASTIC CAPS FOR ABOVE

Stock	Mfr's	Color	1 to 9,	10 or More
No.	Type		EACH	EACH
52 E 565 52 E 566 52 E 567 52 E 568	95-933	Red Amber White Clear	I5c	l3c

#### PILOT LIGHT SOCKETS

Popular Dialco assemblies. Cadmium plating on all brackets. Terminal lugs of tinned brass to facilitate rapid soldering. Coil spring construction on all bayonet type sockets. Supplied with high-grade insulating washers. See page 211 for complete selection of miniature screw lamps (for Series 500), bayonet lamps (for Series 700), and candelabra lamps (for Series 600). Av. shpg. wt., per 5, 6 oz. 5 per pkg.

#### MINIATURE SCREW

Stock	Mfr's	Fig.	Per	5 Pkgs. or More,
No.	Type		Pkg.	Per Pkg.
52 E 400 52 E 401 52 E 402 52 E 410	507 504	P N R S	36¢ 28¢ 36¢ 34¢	32¢ 25¢ 32¢ 31¢

# MINIATURE BAYONET (Not illustrated.)

Stock	Mfr's		5 Pkgs. or More,
No.	Type		Per Pkg.
52 E 404	701	39¢	35¢
52 E 405	707	32¢	28¢
52 E 403	704	39¢	35¢
52 E 406	705	39¢	35¢

#### CANDELABRA SCREW-115 VOLTS

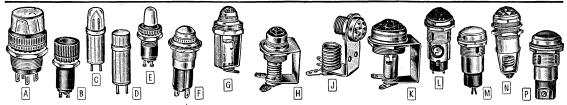
Stock	Mfr's	Fig.	Per	5 Pkgs.orMore
No.	Type		Pkg.	Per Pkg.
52 E 407 52 E 408 52 E 409	604	R	45c	4lc

#### PILOT LIGHT LENS CAPS

All-purpose ¾", ½", and ½" diameter smooth jewels in polished nickel-plated brass holders for up to ½" panels. Require ¼"6", ¾" and ½" holes, respectively, for mounting. 2 oz. Deduct 10% of price for 10 or more.

Size	_	to No Re		Stock No. Green		Stock No. Amber		NET EACH		
3/4" 1/2" 11/32"	52	Ε	490	52	Ε	491	52	Ε	446 492 449	13¢

# Dialco "Datalites" and Indicator Lights



#### **NEW "DATALITES" ULTRA-MINIATURE** INDICATOR LIGHTS

Ultra-miniature indicators. Ideal for data-processing equipment, computers and automa-tion applications. Fully insulated; comform to all applicable military specs. Two basic styles: twin or single assemblies with replaceable lamp cartridges; and permanent types with built-in, non-replaceable neon glow lamps.

#### TWIN LAMP ASSEMBLY

Type 248-6939-1437. Compact assembly

#### SINGLE LAMP ASSEMBLY

Type 7538. Ultra-compact holder for Dial-

#### REPLACEABLE LAMP CARTRIDGES

REPLACEABLE LAMP CARRINIDGES
Series 38 Neon Gjow Lamp Cartridges. NE2E 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 or 9v. DC
starting voltage; for use with 105-125 v., ½
watt external resistor is recommended (see
page 130). For bright light, use 56,000 ohms;
for longer life, use 100,000 ohms. Av. wt., 1 oz.

Stove	oi pe	Long Cylin	Lens	
Stock No.	Type	Stock No.	Туре	Color
54 E 102	931	54 E 107	1531	Red
54 E 103	933	54 E 108	1533	Amber
54 E 104	935	54 E 109	1535	White
54 E 105	936	54 E 110	1536	Yellow
54 E 106	937	54 E	1537	Clear
1 to 19, N 20 or Mor				

Series 39-6 Incandescent Lamp Cartridges. T-1½ 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 amps. Shop, wt., 10.2 Cartridges with other ratings available on special order.

Stover	orpe	Short Cylii	Lens	
Stock No.	Type	Stock No.	Туре	Color
54 E     2 54 E     3 54 E     4	971 972 973	54 E 118 54 E 119 54 E 120	1471 1472 1473	Red Green Amber
54 E   15 54 E   16 54 E   17	974 975 976	54 E 121 54 E 122 54 E 123	1474 1475 1476	Blue White Yellow
		H H		

#### PERMANENT "DATALITES"

Series 249-7840. Ultra-compact indicators with built-in, non-replaceable NE-2E neon glow lamps. Require only ½° 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 ohm or 100,000 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.
54 E 54 E 54 E 54 E 54 E	125 126 127	933 935 936	Red Amber White Yellow Clear	1.68	1.12
-	CVI	INIDDI	CAL (C:-	iles to Ei	- D)

CY	LIND	RIC	AL	(Si	mil	ar	to	Fig.	D)	ı

Stock	No.	Type	Lens	1-19, EA.	20-Up, EA.
		1431	Red		
		1433			1.10
		1435			1.18
		1436	Yellow		
54 E	133	1437	Clear		

#### HALF INCH ENCLOSED TYPE **INDICATOR LIGHTS**

F Series 81410X. Rugged, aviation-type socket shell with smooth jewel in ½" nickel-brass holder. Take 7-3½ min. bayonet base lamp, replaceable from front. 2½" long, 1½" mtg. hole. Fits panels up to ½" thick. Less lamp (see page 211). U.L. Approved. Shpg. wt., 3 oz.

No.	Type	Color	EACH	EACH
52 E 530 52 E 531 52 E 532 52 E 533	112 135	Red Green White Amber	1.19	1.07

#### Replacement Jewel Caps for Above

2 E 535 52 E 536 52 E 537 52 E 538	81-112 81-135	Green White	lóc	I4c

#### HALF-INCH OPEN TYPES

G Series 857B. Requires an ½6" mtg. hole. ½° lens. 2° long. Tinned solder terminals. For panels up to ½" thick. With mounting washer. Less lamp. Uses type 44, 47 or 51 listed on page 211. Shpg. wt., 4 oz.

Stock	Mfr's	Jewel		10 or more
No.	Type	Color		EACH
52 E 545 52 E 546 52 E 547 52 E 548	432 433	Red Green Amber Blue	44c	40c

#### MINIATURE TYPES

Ejewel. Require an '½6' mtg. hole. Use miniature bulbs. Series M takes T-3½ bulb, bayonet base. Yes takes T-3½ bulb, bayonet base. Less lamp; see page 211. Shpg. wt., 2 oz.

Stock	Mfr's	Jewel		10 or more,
No.	Type	Color		EACH
52 E 450 52 E 451 52 E 452 52 E 453 52 E 454	M-431 M-432 M-433 B-431* B-432* R-433*	Amber Red	32c	29c

Series 510, 610, and 710. Open-type visual indicators. Faceted jewels. Lug terminals. Require % mounting hole. Less lamp (see page 211). Type 510, 710 take T-3¼ bulb style, 610 takes S6. Shpg. wt., 2 oz.

#### Series 510 Miniature Screw Type

_	No.	Туре	Color	EACH	EACH
52	E 475 E 476 E 477	432	Red Green Amber	2lc	l9c
	Seri	ies 610 (	Candelabr	a Screw	Type
52	E 540	1 431	Red	1	1

# 52 E 541 432 | Green | 21c |

52 E 542	433	Amber	<u> </u>	
Serie	s 710 i	Miniature	Bayone	Type
52 E 480 52 E 481 52 E 482	431 432 433	Red Green Amber	2lc	19c

#### MINIATURE SOCKETS

K Series 910. Open type with chrome-plated brass jewel holders. 11/2" long. 1" mounting hole. Miniature types take T-31/4 bulb style; candelabra type takes S6 style. Less bulb. Shpg. wt., 3 oz.

#### MINIATURE BAYONET TYPE

Stock	Color	NET	10 or More,
No.		EACH	EACH
52 E 420 52 E 421 52 E 422	Green	6lc	55c

#### MINIATURE AND CANDELABRA SCREW

Color	Miniature	Candelabra	NET	10 or More
	Screw	Screw	EACH	EACH
Red Green Amber	52 E 430 52 E 431 52 E 432	52 E 440 52 E 441 52 E 442	58c	52c

#### **ONE-INCH ENCLOSED TYPES**

Series 313101. 115-volt, enclosed pilot lamp assembly. Black bakelite and brass. Has faceted jewel in chrome-plated holder. Candelabra screw socket. 1" mounting hole. \*Not recommended for neon; all others for neon or incandescent. For type S6 bulbs. U.L. Approved. Shpg. wt., 4 oz.

Stock	Mfr's	Jewel	NET	10 or More,
No.	Type	Color	EACH	EAC H
52 E 460 52 E 461 52 E 462 52 E 510 52 E 511 52 E 512	431 432 433 437 434 435	Red Green* Amber Clear Blue* White	1.03	93c

#### ASSEMBLIES WITH WIRE LEADS

M Series 312901. Enclosed assembly. With 6" wire leads. Solid brass. Has friction-fit, chrome-plated cap. 1" mig. hole. U.L. Approved. Less S6 candelabra screw-base lamp (see page 211). Shpg. wt., 4 oz.

Stock No.	Mfr's Type	Jewel Color	NET EACH	10 or More, EACH
52 E 485		Red		
52 E 486 52 E 487	112 113	Green Amber	1.13	1.02
52 E 488	117	Clear		

#### ONE-INCH OPEN TYPES

Series 75. 115-volt open-type pilot lamp assembly with faceted jewel in chromeplated brass holder. Candelabra screw socket. Solid brass construction. Friction-fit chromeplated cap. 1' mounting hole. Less S6 lamp (see page 211). Shpg. wt., 5 oz.

Stock No.	Mfr's Type			10or More, EACH
52 E 500 52 E 501 52 E 502	C-432	Red Green Amber	70c	63c

#### JEWEL CAP ASSEMBLIES

Series 31914. For NE-45, NE-57, etc. Candelabra screw base neon lamps. 115 v., 21/2" long. 1" mtg. hole. Neon lamp removable from front. Less lamp (see page 211). U.L. Approved. Shpg. wt., 4 oz.

Stock	Mfr's	Jewel	NET	10 or More,
No.	Type	Color	EACH	EACH
52 E 559 52 E 560 52 E 562	113	Red Amber Clear	1.03	93c

#### REPLACEMENT JEWEL CAPS For Series 312901 and 31914

Stock	Mfr's	Cap	NET	10 or More,
No.	Type	Color	EACH	EACH
52 E 575 52 E 596 52 E 576 52 E 578	31-112 31-113	Amber	3 <i>5</i> c	3lc

FOR SERIES			
52 E 525 31-431 52 E 526 31-432 52 E 527 31-433 52 E 588 31-437	Red Green Amber Clear	35c	3lc

# DRAKE NEON INDICATING LIGHTS





R Type 110 "Flushlite." Neon light in translucent plastic base. For 110-125 v. AC-DC. ½x1½x1½x1½. 10'. mtg. cntrs. Wt., 2 oz. 78 E 061. 10-Up, EA... 39¢ 1-9, EA... 43¢

Type 105 "Post-lite." Panel lights for 56-130 v. AC or 90-130 v. DC. 2½" long. Require ½" mtg. hole. With mtg. nut. 2 oz. 78 E 062. 10-Up, EA. . . . 52¢ 1-9, EA. . . . 58¢

Type R115 "Taperlite." Neon lamps with resistor for 110-125 v. AC-DC. 3/6" dia. mtg. hole. Wt., 1 oz. 53 E 192. NET.....87¢



Type 115. As above, less built-in resistor. 53 E 193. NET....

# Littelfuse Fuses and Mountings



# CARTRIDGE FUSES FOR RADIO, TV & INSTRUMENTS

#### TYPE 3AG 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.  $1/4 \times 1/4^2$ . Pkg. ship. w., 2 oz. 5 fuses per pkg.

Amps	Max. Voits	Stock No.	Per Pkg.	or more, Per Pkg.	Amps	Max. Volts	Stock No.	Per Pkg.	or more, Per Pkg.
1/16 1/8 15/100 .175 3/16	250 250 250 250 250 250	52 B 242 52 B 230 52 B 671 52 B 672 52 B 161	59c	49c	3/4 1 1½ 2 3	250 250 250 250 250 250	52 B 233 52 B 234 52 B 235 52 B 236 52 B 237	24¢	32¢ 20¢ 20¢ 20¢ 18¢
1/4 3/10 3/8 1/2	250 250 250 250 250	52 B 23 I 52 B 673 52 B 243 52 B 232	SOC	32c	4 5 6 8	250 250 250 250 125	52 B 238 52 B 239 52 B 240 52 B 248	29¢	24¢ 24¢ 24¢ 37¢

# TYPE 3AG 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 for circuits having heavy starting currents, such as motors and lamps. Units through 5 amps are U.L. Approved. Size: 1½" long and ½" diameter. Shpg. wt., per pkg. 2 oz. 5 fuses per pkg.

Amps	Max. Volts	Stock No.	Per Pkg.	20 Pkgs. or more, Per Pkg.		Max. Volts	Stock No.	Per Pkg.	20 Pkgs. or more, Per Pkg.
1/100 1/32 1/16 1/10 1/8	125 125 125 125 125	52 B 185 52 B 186 52 B 187 52 B 252 52 B 188	1.06 1.06 79¢ 79¢	88¢ 88¢ 67¢ 67¢	1 1¼ 1½ 1.6 2	125 125 125 125 125 125	52 B 220 52 B 253 52 B 198 52 B 254 52 B 179	79¢ 73¢ 73¢ 73¢ 73¢	67¢ 61¢ 61¢ 61¢ 61¢
15/100 .175 3/16 2/10 1/4	125	52 B 189 52 B 675 52 B 190 52 B 191 52 B 921			2½ 3 3.2 4 5	125 125 125 125 125 125	52 B 257 52 B 181 52 B 182 52 B 227 52 B 223		
3/10 3/8 4/10 1/2	125 125 125 125 125	52 B 192 52 B 193 52 B 194 52 B 923	70-	67c	6¼ 8 10 15	32 32 32 32 32	52 B   83 52 B   84 52 B 226 52 B 224	59c	49c
6/10 3/4 8/10	125 125 125	52 B   95 52 B   96 52 B   97	79c	67c	20 25 30	32 32 32	52 B 225 52 B 676 52 B 677	59c	49c

#### TYPE 3AB FUSES

Series 314000. Steatite enclosed, arc-quenching, powder-filled fuses. Shatter-proofed against quick shorts. Medium lag:  $1/4 \times 1/4$ . Types through 15 amps, U.L. Approved. Shpg. wt., per pkg. 2 oz. 5 fuses per pkg.

Amps	Max. Volts	Stock No.	Per Pkg.	20 Pkgs. or more, Per Pkg.	Amps	Max. Voits	Stock No.	Per Pkg.	20 Pkgs. or more, Per Pkg.
1	250	52 B 678			10	250	52 B 244	50¢	42¢
2		52 B 679		1	12	250	52 B 245	50¢	42¢
3	250	52 B 680	500	42c	15	250	52 B 246	50¢	42¢
5	250	52 B 681	200	420	20	250	52 B 247	50¢	42¢
8	250	52 B 24 I			30	125	52 B 682	59¢	49¢

# TYPE 8AG FAST ACTION INSTRUMENT FUSES

Series 361000. For protection of meter movements and delicate electronic equipment. High-speed action to prevent damage to instruments. Size, 1x/4°. Sipg. wt., 2 oz. per pkg. 5 fuses per package.

Ampere Rating	Blow Point In Ma	Max. Volts	Stock No.	Per Pkg.	20 Pkgs. or more, Per Pkg.
1/500 1/200 1/100 1/32 1/16	3 8 16 40 85	250 250 250 250 250 250	52 B 199 52 B 200 52 B 201 52 B 202 52 B 203	3.53 1.47 1.33 1.18 .79	2.94 1.22 1.11 .98 .67
1/8 1/4 3/8 1/2 3/4	155 270 380 520 800	250 250 250 250 250 250	52 B 205 52 B 206 52 B 207 52 B 208 52 B 209	.59 .38 .38 .38	.49 .32 .32 .32
1 1½ 2 3 5	1300 1950 2600 3600 6000	250 250 250 250 250 32	52 B 210 52 B 212 52 B 211 52 B 213 52 B 214	.29 .29 .29 .29	.24 .24 .24 .24 .24

TYPE 3AG PIGTAIL FUSES
\*Series 315000, †Series 318000. Wire lead fuses for TV and limited-space applications. 11/4x1/4". Shpg. wt., per pkg., 2 oz. 5 fuses per pkg.

Amps	Volts	Action	Stock No.	Per Pkg.	20 Pkgs. or more, Per Pkg.
15/100 2/10 1/4 1/2 2	125 125 125 125 125 125	Slo-Blo Slo-Blo Slo-Blo Slo-Blo Slo-Blo	52 B 280* 52 B 281* 52 B 216* 52 B 282* 52 B 217*	1.00 1.00 1.00 1.00	.83 .83 .83 .83
2½ 4 5 1/16 1/8	125 125 125 250 250	Slo-Blo Slo-Blo Slo-Blo Fast Fast	52 B 218* 52 B 219* 52 B 229* 52 B 927† 52 B 277†	.79 .79 .79 .73	.67 .67 .62 .62
1 <sup>1/4</sup> 3/8 1 <sup>1/2</sup>	250 250 250 250 250	Fast Fast Fast Fast	52 B 215† 52 B 278† 52 B 279† 52 B 928†	.59 .59 .59	.49 .49 .49

#### TYPE 4AG SLO-BLO FUSES

Series 413000. Will withstand severe vibration. Will open within 1 hour on 135% overload; within 60 seconds on 200%; immediately on short circuit. 11/4x3/2". Shpg. wt., 2 oz. 5 fuses per package.



Amps	Max. Volts	Stock No.	Per Pkg.	20 Pkgs. or more, Per Pkg.	Amps	Max. Volts	Stock No.	Per Pkg.	20 Pkgs. or more, Per Pkg.
1/10 15/100 2/10 1/4 3/10	250 250 250 250 250 250	52 B 992 52 B 993 52 B 994 52 B 985 52 B 995		.86c	2½ 3 3-2/10 4 5	250 250 250 250 32 32	52 B 946 52 B 989 52 B 947 52 B 948 52 B 990	79c	67c
4/10 1/2 6/10 3/4	250 250 250 250 250	52 B 996 52 B 986 52 B 997 52 B 683		86c	61/4 8 10 15 20	32 32 32 32 32 32	52 B 949 52 B 960 52 B 991 52 B 961 52 B 962	79c	
1 1¼ 1-6/10 2	250 250 250 250 250	52 B 987 52 B 999 52 B 945 52 B 988	1.03	86c	25 30	32 32	52B 963 52B 964	79c	67c

TYPE 4AG AND 5AG STRAIGHT-ELEMENT FUSES

THE TAG AND DAG SHANGHII-EEEMEN 100ED											
Series	Series 417000: 11/4 x 13/2"; *Series 517000: 11/2 x 13/2". Medium-lag, heavy-										
duty fu	duty fuses. Shpg. wt., per pkg., 2 oz. 5 fuses per package.										
1	250	52 B	112	38¢	32¢	* 1	250				1
2	250	52 B	113	38¢	32¢ 32¢	* 2	250	52 B	137	47c	39c
3	250	52 B	114	38¢	32¢	* 3	250	52 B	138	4/C	370
5	32	52 B	115	32¢	27¢	* 4	32	52 B	139		
10	32	52 B	134	32¢	27¢	* 5	32	52 B	140		
15	32		135	32¢	27€	*10	32	52 B	14 Ĭ	1	27.
20	32	52 B	116	32¢	27¢	*15	32	52 B	142	44c	37c
25	32	52 B	117	32¢	27¢	*20	32	52 B	143		
30	32	52 B	118	32¢	27¢	*25	32	52 B	144		
35	32		i i ğ	384	27¢ 32¢	*30	32	52 B	145	44c	37c
40		52 B			32¢ ∣					770	0, 0

#### LIMITED-CURRENT BAYONET FUSES

TV fuses for 346000 series bayonet-lock fuse holders only. Series 333000 are Slo-Blo; 332000 are regular. Shpg. wt., 2 oz. 5 fuses per pkg. are Slo-Blo; 332000 are ... 332000 Series

52 B 167 82¢ 52 B 162 82¢ 52 B 164 82¢ 52 B 166 76¢ | 250 | 52 B | 68 | 47¢ | 250 | 52 B | 69 | 47¢ | 250 | 52 B | 63 | 26¢ 69¢ 69¢ 69¢ 64¢ 125 125 125 125 125 39¢ 39¢ 23¢ .3 .75 2.5

#### **TYPE SFE 32-VOLT AUTO FUSES**

Series 307000. Medium-acting fuses. Made to sizes specified by S.A.E. U.L. Approved. Shpg. wt., per pkg., 2 oz. 5 fuses per pkg.

Amps	Max. Volts	Stock No.	Size	Per Pkg.	20 Pkgs. or more, Per Pkg.
4 6 7½ 9	32 32 32 32 32	52 B 250 52 B 255 52 B 274 52 B 260	1/4" dia. x 5/8" 1/4" dia. x 3/4" 1/4" dia. x 7/8" 1/4" dia. x 7/8"	16¢ 16¢ 16¢	13¢ 13¢ 13¢
14 20 30	32 32 32	52 B 265 52 B 270 52 B 275	1/4" dia. x 11/16" 1/4" dia. x 11/4" 1/4" dia. x 17/16"	4¢   4¢   8¢	¢    ¢    5¢

#### LITTELFUSE MOUNTINGS-EXTRACTOR POSTS



ruse holders for every application. With ruse. Av. shpg. wt., o ca.									
Stock No.	Type	Fig.	For Fuses:	Description	EACH				
41 B 720 41 B 721 41 B 729 41 B 727 41 B 728	341001 371001 442001 342001 372001	H H E E	3AG, 3AB 8AG 4AG 3AG, 3AB 8AG	Panel mount, screw slot Panel mount, screw slot Panel mount, thumb knob Panel mount, thumb knob Panel mount, thumb knob	29¢ 29¢ 73¢ 29¢				
52 B 292 52 B 285 52 B 294 40 B 450 52 B 296	357001 387001 356001 351011 387002	C C C A J	3AG, 3AB 8AG 3AG, 3AB 3AG, 3AB 2-8AG	Single fuse, lug term, Single fuse, lug term, Single fuse, screw term, Single fuse mounting Double fuse mounting	12¢ 12¢ 25¢ 16¢ 24¢				
52 B 297 52 B 295 52 B 291	357002 383002 353001	J F D	2-3AG or 3AB 8AG 3AG, 3AB	Double fuse mounting "Meter-back" mounting Panel type mounting	24¢ 21¢ 35¢				
41 B 788 41 B 798 41 B 789 41 B 795	155009 155014 155020 342012	G G B	*SFE, (9 a.) *SFE, (14 a.) *SFE, (20 a.) 3AG	Inline fuse retainer for autos Inline fuse retainer for autos Inline fuse retainer for autos Miniature fuse extractor post	29¢ 29¢ 29¢ 29¢				

PHOSPHOR BRONZE FUSE CLIPS

Burnished nickel plate with fuse stop ears. 10 Clips Per Pkg. Wt., 5 oz. For Fuse Types: Stock No. Per Pkg. 10 Pkgs., Per Pkg. 52 B 685 52 B 686 52 B 687 52 B 688 52 B 688 SFE, 3AG, 8AG, 3AB 4AG, 4AB 5AG High-voltage Midget NEC-30 Fuses .15 .29 .35 .47 1.29 Standard High-voltage 1.08



#### TYPE 350130 SNAP-ON FUSE HOLDER

Double-ended fuse holder for fast replacement of "pig-tail" fuses. One side of holder clips onto blown fuse. New fuse fits into other side. Shpg. wt., 2 oz. 41 B 733. 10 or More, EACH 15¢ 1-9, NET EA. 18C

# 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 x1/4". U.L. Approved. Shpg. wt., per pkg., 2 oz. 5 fuses per pkg.

### 250 VOLTS MAX

Amps	Stock No.	Per Pkg.	20 Pkgs. or more, Per Pkg.	Amps	Stock No.	Per Pkg.	20 Pkgs. or more, Per Pkg.
1/32 1/16 1/10	53 B 441 53 B 442 53 B 443 53 B 444 53 B 450 53 B 451	.78	.88 .88 .67 .67 .67	3/10 4/10 1/2 6/10 8/10	53 B 452 53 B 453 53 B 454 53 B 455 53 B 456 53 B 461	/ BC	67c

### 125 VOLTS MAX

$\begin{bmatrix} 1-1/4 & 53 & B & 462 \\ 1-6/10 & 53 & B & 463 \\ 2 & 53 & B & 464 \end{bmatrix}$ 73c   62c $\begin{bmatrix} 2 & 2 & 2 \\ 2 & 3 & 464 \end{bmatrix}$	2-1/2   53 B 465   2-8/10   53 B 466   59c   49c
--	--

# 22 VOLTS MAY

		32 VOL	13 MM				
4 53 B 468 5 53 B 469 6-1/4 53 B 470	59c	49c	8 10 15	53 53 53	B 471 B 472 B 473	59c	49c

### 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, ½ second. 1½x½". U.L. Approved. Shpg. wt. per pkg., 2 oz., per 100, 15 oz. 5 fuses per pkg.

Amps	Stock No.	Per	20 Pkgs. or More, Per Pkg.	Amana	Stock No.	Per	20 Pkgs. or More, Per Pkg.
4 5	53 B 503 53 B 504		.57 .57	61/4	53 B 505 53 B 506	.69	.57 .57

### TYPE N TIME DELAY FUSES

Slow-blowing glass tube fuses. Time-delay action; unaffected by harmless surges which might cause ordinary fuses to fail. 1/4 and 1/2 ampfuses, 1/4 x1 1/4"; others, 1/4 x1 1/6". 250 volts maximum. Av. shpg. wt. per bg.



250 VOIU	s maximui	n. Av.	supg. wt.	per pkg.,	2 02. 5 TU	ses pe	rpkg.
Amps	Stock No.	Per Pkg.	20 Pkgs. or More, Per Pkg.	Amps	Stock No.		20 Pkgs. or More, Per Pkg.
1/4 1/2 1-6/10	53 B 535 53 B 536 53 B 537	.83 .83 .78	.69 .69 .64	$\frac{2}{3-2/10}$	53 B 538 53 B 539 53 B 540	.78 .69 .69	.64 .59

# 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.	A	Stock No.		20 Pkgs. or more, Per Pkg.
3 5 6 8	53 B 560 53 B 561 53 B 562 53 B 563	30c	27c	20 25	53 B 564 53 B 565 53 B 566 53 B 567 53 B 568	26c	24c

# TYPE HKL AND HKR INDICATOR FUSEHOLDERS

For 11/4x1/4" 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; has incandescent indicator. U.L. Approved. 1 oz. 53 B 501. Type HKR. NET... 1.26 53 B 502. Type HKR. NET... 2.06

# 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 per box) of Type C and N limited-current fuses marked by \* in table below. Rated 250 v., except 7 amp, 125 v. Clear plastic case has 3 spare compartments. Size, 17% x3x414". Shgs. wt. 2 lbs. 8.32



Туре	Amps	Туре	Amps	Туре	Amps
C (Regular) C (Regular)	.3*	N (Slo-Blo) N (Slo-Blo)	.6*	3AG 3AG	.2†
C (Regular) C (Regular) C (Regular) C (Regular)	.75* 2* 2.5*†	N (Slo-Blo) N (Slo-Blo) N (Slo-Blo) N (Slo-Blo)	1*† 1.25*† 1.6*	3AG 3AG-S.B. 3AG-S.B.	.5† .25† .5†
C (Regular) N (Slo-Blo) N (Slo-Blo)	7* .25*† .3*	N (Slo-Blo) 3AG 3AG	2* .25† .5†	8AG-U.L. 8AG-U.L.	.25†
N (Slo-Blo)	.5*	3AG	1†		

# 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. 11/4x1/4". Wt., 100, 15 oz. 5 fuses per pkg.



### 250 VOLTS MAX

Amps	Mfr's Type	Stock No.	Per Pkg.	20 Pkgs. or more, Per Pkg.	Amps	Mfr's Type	Stock No.	Per Pkg.	20 Pkgs. or more, Per Pkg.
1/16 1/8 1/4 3/8	AGC* AGC AGC AGC	53 B 420 53 B 421 53 B 422 53 B 423	.78 .59 .39	.67 .49 .32	1½ 2 3 4	AGC AGC AGC MTH	53 B 427 53 B 428 53 B 429 53 B 430	.24 .24 .21	.20 .20 .18 .24
1/2 3/4 1	AGC AGC AGC	53 B 424 53 B 425 53 B 426	.39	.32 .32 .20	5 6 8	MTH MTH ABC	53 B 431 53 B 432 53 B 433	.29 .29 .49	.24 .24 .42

TYPE AGC 32-VOLT FUSES
For circuits operating at 32 volts or less. 1/4x/4". U.L. Approved. Shpg. wt., 1 oz. per pkg. 5 fuses per pkg.

Amps	Mfr's Type	Stock No.	Per Pkg.	20 Pkgs. or more, Per Pkg.	Amps	Mfr's Type	Stock No.	Per Pkg.	20 Pkgs. or more, Per Pkg.
5 6 7½ 10	AGC AGC AGC AGC	53 B 434 53 B 435 53 B 436 53 B 437	15¢ 15¢ 15¢	13¢ 13¢ 13¢	15 25 30	AGC AGC AGC	53 B 438 53 B 439 53 B 440	15¢ 18¢ 18¢	3¢   5¢   5¢

### 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. 1x14%. Shpg. wt., per 5, 3 oz. 5 fuses per pkg.

Amps	Max. Voits	Stock No.	Per. Pkg.	20 Pkgs. or more, Per Pkg.	Amps	Max. Voits	Stock No.	20 Pkgs. or more, Per Pkg.
1/8 1/4 3/8 1/2 1/500 1/200	250 250 250 250 250 250 250	53 B 513 53 B 514 53 B 515 53 B 516 53 B 507* 53 B 508*		.49 .32 .32 .32 2.94 1.22	3/4 1 1½ 2 1/100 1/32	125 125 125 125 125 250 250	53 B 517 53 B 518 53 B 519 53 B 520 53 B 509* 53 B 510*	.32 .20 .20 .20 1.11

# FUSETRON TYPE FNM LONG TIME LAG FUSES



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—provides 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. 13/2x11/2". 250 v. max. except
\*125 v. 10 fuses per pkg. Shpg. wt. per pkg. 5 oz.

Amp	Stock No.	Per Pkg.	or More, Per Pkg.	Amps	Stock No.	Per	10 Pkgs. or More, Per Pkg.
2	53 B 485 53 B 486 53 B 487 53 B 488 53 B 489 53 B 490	2.32	1.94	4 5 61/4 8 10 15*	53 B 491 53 B 492 53 B 493 53 B 494 53 B 495 53 B 496	2.32	1.94

# FUSETRON TYPE T DUAL-ELEMENT FUSES

PUSEIRUM ITTE I DUAL-ELEMENI 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 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 1 Approved. Shpg. wt. per pkg., 5 oz. 4 fuses per pkg. fuse is blown, U.L.

53 B 521, 15 amp. Per 53 B 522, 20 amp. Pkg.... 27c 53 B 524, 30 amp. Pkg... 27c

# **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. † screw terminals. Av. Shpg. wt., 1 oz.

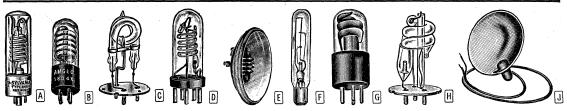
Stock No.	Туре	For Fuses	NET	Stock No.	Туре	For Fuses	NET
53 B 500 53 B 477 53 B 475 53 B 478	HPC HCM HKP HJM	13/ <sub>32</sub> x1½" 9/ <sub>32</sub> x1¼" ¼ x1¼" 1x¼"	.41	53 B 480 53 B 481 41 B735 41 B737	4408 1749	1¼ x¼" Double 4405 2½ x¾" 1½6x¼"	.12 .24 .14 .33

# TYPE 4121 TWIN CLIPS FOR 1/4" FUSES

For replacement of pigtail TV fuses with standard snap-on type. No cutting or soldering. Less fuse. Shgs. wt. per box, 10 oz. 10 per pkg. L13



# Photoflash and Stroboscope Components



# **ELECTRONIC FLASH TUBES AND REFLECTORS**

# **SYLVANIA R4330**

Flash tube for high-speed photo equipment. High-voltage discharge type. 100 wattseconds; 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. Flash durations from 1/500-1/10,000 sec. Specially engineered for long life. May be used for color work without filter. Color temperature, 6500° Kelvin. \*Relay type; all others are trigger type. Shpg. wt., 1 lb.

Stock	Mfr's	W-S	Operating	Cap.,	NET
No.	Type		Voltage	Mfd	EACH
78 E 655 78 E 652 78 E 653 78 E 658 78 E 662 78 E 663	54R4X* 56J2Z 5804X*	200 200 150 110 200	2000-2500 2250-2850 450-900 2250-2850 300-2000 400-600	15-80 15-80 300-1400 15-32 1500 1-4	14.70 14.70 12.74 13.72 8.82 5.88

# G.E. FLASH TUBES

G.E. FLASH TUBES
Used in amateur and professional photography, and solving research and industrial problems. Frovide flashes of exceedingly high intensity for a short duration, ranging from 1/1,000 to 1/1,000,000 second. Same tube can be flashed repeatedly—tens of thousands of times. Standard equipment in many units and popular for the home kit builder and experimenter. Tubes are helix-coiled, xenon-filled. \*60 watt incandescent modeling lamp fits inside Type FT-403. †Similar to Fig. D, but has 3-pin base. Av. shogs. wt., 1 lb. Av. shpg. wt., 1 lb.

Stock No.	Туре	Fig.	W-S	Volts	Mfd	NET
52 E 388	FT-218	C	200	1000	400	9.10
52 E 375	FT-118	С	125	500	1000	7.90
52 E 364	FT-214	D	200	2000	100	21.50
52 E 376	FT-220	E	200	2000	100	23,00
52 E 359	FT-403	+	480	2000	240	24.50
52 E 363	60T6½/1*	F		120	l	2.10
77 4 000	122.275	So	1 00			

# **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 synchro shutters or solenoid synchronization.

Synchro sautters 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 ws. Flashtubes are Kemlite; 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	٧.	NET
78 E 700 78 E 710			Flash Tube Flash Tube		450 500	9.95
78 E 703 78 E 704	FA-101	7	Reflector f	2.69 3.43		
78 E 702			Adapt. for			2.55









N













# BUILD YOUR OWN HIGH-SPEED PHOTOFLASH UNITS WITH THESE ESSENTIALS

# **CAPACITORS**

# SPRAGUE

K Type FF-1 525 Mfd. Capacitor. 450 volts DC working. Low-leakage electrolytic for dry battery photoflash service. Nominal rating 53 ws. Shpg. wt. 1½ ibs. 13.23

Type PQ Capacitors. Combine maximum dependability with very compact size. Rated, 2500 v., except Type 425 (4000 v.).

Stock No.	Type	Mfd	W-S	Lbs.	NET
15 L 730		10	31	13/4 41/4	10.00
15 L 732		25	78	41/4	15.58
15 L 733	2535	35	109	6	19.11
15 L 729	425	25	200	71/4	24.99

# CORNELL-DUBILIER

Type GKGT High-Voltage Oil-Filled. High dielectric photoflash capacitors. Impregnated and filled with Dynakol "G."

No.	Type	Mfd	W-S	DCWV	Lbs.	NET
14L 480		25	50	2000 2500	41/2	11.17
14L481			50			10.00
14L483	104	32	100	2500	6	21.76

N Low-Voltage Types. Type FB10063 has aluminum can with cardboard sleeve. Type FW10005 has bakelite case.

No.						NET
14 L 841 14 L 842	FB10063	200	450	20	11/4	4.03
14 L 842	FW10005	1 200	500	25	11/4	6.17

# MALLORY LOW-VOLTAGE TYPE

P Type HC 45003. An excellent low-voltage electrolytic for use in photofiash units. Capacity, 300 mfd at 450 volts working. Size, 2½ex43%. Shpg. wt., 1 lb. 17 L 820. NET . 6.17

# ILLINOIS UMC

R Highly efficient, dependable capacitors. All units have very low leakage current. Av. shpg. wt., 13/4 lbs.

Stock No.	Туре	Mfd	W-S	Volts	NET
10 L 579 10 L 581 10 L 578	60045	600	60	450	13.23 17.64 17.64

# TRANSFORMERS

# THORDARSON

S Type 22 R44. Ignition transformer. For high-pressure 3-electrode tubes. Pri., 200 volt DC discharge from 25 to 5 mfd. condenser. Sec., 15,000 v. peak. Size, 2½x1½x1½x1½x15hg. wt., 8 oz. 4.90

S Type 22 R41. Pri., 4 volts from vib. at 115 cyc. or higher. Sec., 450 volts DC or 900 volts DC at 15 ma. Mtg. ctrs., 2½". 2½\*2½x 2½x 2½x 2½\*3 NET. 3.26

# STANCOR

W Model P-6425. Power transformer for AC W Model P-6425. Power transformer for AC 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. 2½6x21½6x22". Mtg. centers, 2½6". Shgx, wtt. 1½ lbs. 3.43

Type P-6426. Trigger coil for P-6425 transformer. 34" long, 36" diameter. Replaces G. E. 86 G 41 trigger coil. Shpg. wt., 3 oz. 1.64

# UTC

Type PF-3. Trigger transformer for electronically fired circuit. 15 kv rating. Size: 3" long, 7%" diameter. Shpg. wt., 6 oz. 5.88

# COMPONENTS

# RECTIFIER, VIBRATORS, RELAY

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. 21\(^4\)\(\_6\)\(\_7

Type FA-103. Sprague Relay. Synchronization delay relay. Provides 5 to 25 millisecond delay. Designed for operation with 3 to 4½-volt battery flashgun. Shpg. wt., 8 oz. 3.43

# PHOTOFLASH HANDBOOKS

Illinois Electronic Flash Handbook. Handbook and construction manual. Covers 3 photoflash units: low-voltage battery-operated, low-voltage AC-battery and standard 450 v. AC-battery. Each construction article includes circuit diagram and parts list; latter two also have interior and exterior views of completed units. 8 pages. Size, 8½x11".

37 K 191. Postpaid in U.S.A.......50c

Thordarson Booklet "Universal Power Pack for High-Speed Electronic Photoflash Tubes". Shows 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. 789½". K 028. Postpaid in U.S.A...... 15c

# Potter and Brumfield Relays

# PR HEAVY-DUTY POWER RELAYS

For motor starting up to 1 HP, heater loads up to 20 amps, remote break-in control of transmitters, etc. Clean wiping contacts rated at 15 amps except \*rated at 20 amps. AC coils for 60 cycles. Operating power, 7 to 10 volt-amps. Sizes: PR3, PR5: 2½x2½x2½/s², PR7: 2½x2½x2½x2½x², PR1: 3½x2½x2½x², All AC types U.L. Approved. Av. shpg. wt., 12 oz.



Stock	Mfr's	Coil	Action	Norm.		NET	EACH			
No.	Туре	Volts		Pos.	1-24	25-50	51-74	75-99		
75 P 846 75 P 847 75 P 848		6 AC 6 AC 6 AC	SPDT	Open Open	3.95 4.15 4.65	3.94	3.73	3.32		
75 P 849 75 P 878 75 P 879		6 AC 12 AC 12 AC	SPDT	Open	6.15 4.15 4.65	3.94	3.73	4.92 3.32 3.72		
75 P 961 75 P 962 75 P 963		24 AC 24 AC 24 AC	SPDT	Open Open	3.95 4.15 4.65	3.94	3.55 3.73	3.32		
75 P 964 75 P 600 75 P 602		24 AC 115 AC 115 AC	SPST*		6.15 3.95 4.15	5.84 3.75	3.55	4.92 3.16 3.32		
75 P 603 75 P 663 75 P 652		115 AC 115 AC 230 AC	DPDT SPST*		4.65 6.15 4.30	5.84	5.53	4.92		
75 P 966 75 P 654 75 P 655		230 AC 230 AC 230 AC	DPST	Open	4.55 5.05 6.55		4.54			
76 P 508 76 P 509 76 P 510	PR11D PR3D PR5D	6 DC 12 DC 12 DC	SPDT	Open	6.15 3.95 4.15	5.84 3.75 3.94	3.55	4.92 3.16 3.32		
76 P 511 76 P 512 76 P 513 76 P 514	PR7D	12 DC 12 DC 24 DC 24 DC		Open	4.65 6.15 4.65 6.15	4.42 5.84 4.42 5.84	5.53 4.19	3.72 4.92 3.72 4.92		
75 P 968 75 P 969 75 P 970 75 P 971	PR3D PR5D PR7D PR11D	110 DC 110 DC 110 DC 110 DC	DPST	Open	4.55 4.75 5.25 6.75	4.32 4.51 4.98 6.41	4.09 4.27 4.72 6.07	3.64 3.80 4.20		

# MR MEDIUM-DUTY POWER RELAYS

Compact relays designed for general-purpose applications. Silver contacts rated at 8 amps except \* rated 10 amps. AC coils draw 4-5 VA, DC, 1.5 watts. Size: SP units, 1½x21½x2½"; DP units, 2x2½x2½"; 3P units, 1½x2½x2½x2½". Mtg.: two ½x" holes on 2½" centers for SP and 3P units, 2½" centers for DP units. Av. shpg. wt., 8 oz.



# 6 AND 24 VOLTS AC

Stock No.		Mfr's	Action	Norm.	1-24.	25-50.	51-74.	75-99.
6 V. AC	24 V. AC	Type	Action	Pos.	1-24, EACH	EACH	EACH	EACH
75 P 975	75 P 978	MR3A	SPST*	Open	3.30	3.13	2.97	2.64
75 P 610	75 P 979	MR5A	SPDT		3.00	2.85		2.40 3.36
	75 P 981 75 P 982	MR11A MR14A	3PDT			3.99 4.79		4.04
-		<u></u>	- 1/017					

# 115 VOLTS AC

Stock	Mifr's.	Action	Normal	1-24,	25-50,	51-74,	75-99,
No.	Type		Pos.	EACH	EACH	EACH	EACH
75 P 665 75 P 614 75 P 616 75 P 972	MR5A MR11A	SPST* SPDT DPDT 3PDT	Open	3.30 3.00 4.20 5.05	3.13 2.85 3.99 4.79	2.97 2.70 3.78 4.54	2.64 2.40 3.36 4.04

# 230 VOLTS AC

75 P 657 MR5A	SPDT	:::::::	3.40	3.23	3.06	2.72			
75 P 659 MR11A	DPDT		4.50	4.28	4.05	3.60			
75 P 974 MR14A	3PDT		5.45	5.17	4.90	4.36			
4 12 AND 24 VOLTS DC									

Stock No.		Mfr's		Norm.	1-24.	25-50.	51-74.	75-99, EAC H
6 V. DC   12 V. DC								
75 P 983 75 P 187 75 P 618 75 P 188 75 P 985 75 P 190 75 P 986 75 P 191	75 P 989	MR5D MR11D	SPDT		2.75	2.61	3.60	2.20

# 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  $\frac{1}{3}$ ° centers. Max. size,  $\frac{1}{2}$ x<sup>1</sup>/<sub>6</sub>x  $\frac{1}{3}$ z". Av. shpg. wt., 2 oz.





DP Type. Plastic-enclosed. For applications where plug-in units are required, such as 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, 2\%4x\frac{14\%4}{1\%6x\frac{14\%4}{1}}. Av. shpg. wt., 3 oz.

Stock No.	Mfr's Type	Coil Volts	Amps	Action	1-24, EACH	25-50, EACH	51-74, EACH	75-99, EACH
75 P 297	MG11D	6v. DC	2	DPDT	4.95	4.70	4.45	3.96
75 P 298	MG11D	12v. DC	2	DPDT	4.95	4.70	4.45	3.96
75 P 299	MG11D	24v. DC	2	DPDT	4.95	4.70	4.45	3.96
75 P 382	MG11D	110v. DC	2	DPDT	5.40	5.13	4.86	4.32
75 P383	MG17D	6v. DC	1	4PDT	6.60	6.27	5.94	5.28
75 P384		12v. DC	1	4PDT	6.60	6.27	5.94	5.28
75 P391		24v. DC	1	4PDT	6.60	6.27	5.94	5.28
75 P392		110v. DC	1	4PDT	7.05	6.69	6.34	5.64
75 P393 75 P394 75 P397 75 P398	MG17DP MG17DP MG17DP MG17DP	6v. DC 12v. DC 24v. DC 110v. DC	2 2 2 2	4PDT 4PDT 4PDT 4PDT	11.00 11.00 11.00	10.45 10.45 10.45 11.02	9.90 9.90 9.90 10.44	8.80 8.80 8.80 9.28

# AB APPLIANCE RELAYS

AB series relays are recommended for appliance applications where rugged construction, long life, and quiet operation are required. All units have DPDT silver contacts rated at 10 amps. Mounting: Two No. 8-32 tapped holes on 1½" centers. Overall size: 19½" high, 1½" wide, 3" long. \*U.L. Approved. Av. shpg. wt., 8 oz.



Stock No.	Mfr's Type	Coil Volts	1-24, EACH	25-50, EACH	51-74, EACH	75-99, EACH
75 P 399 75 P 418 75 P 419 75 P 448 75 P 449	AB11AY* AB11AY* AB11AY* AB11AY* AB11D	6v. AC 24v. AC 115v. AC 230v. AC 110v. DC	5.05 5.05 5.45 5.45	4.79 4.79 4.79 5.17 5.17	4.54 4.54 4.54 4.90 4.90	4.04 4.04 4.04 4.36 4.36

# ABC MEDIUM POWER RELAYS

ABC series medium duty power relays with dust covers. Typically used with small motors, industrial controls, and similar applications. All relays have DPDT silver contacts with 10 ampere current rating. Snap-on terminals. Size:  $1\frac{1}{16}$  x3x2 $\frac{1}{2}$  high above chassis. Mounting: One No. 8-32 stud  $\frac{1}{2}$  long.  $\frac{1}{2}$  U.L. Approved. Shpg. wt., 12 oz.



Stock	Mfr's	Coil	1-24,	25-50,	51-74,	75-99,
No.	Type	Volts	EACH	EACH	EACH	EACH
75 P 431 75 P 432 75 P 433 75 P 464 75 P 465	ABC11AY*	6v. AC 24v. AC 115v. AC 230v. AC 110v. DC	6.10 6.10 6.50 6.50	5.80 5.80 5.80 6.17 6.17	5.49 5.49 5.49 5.85 5.85	4.88 4.88 4.88 5.20 5.20

# CA LOW COST HIGH CAPACITY RELAYS

Compact power relays. Have double break, SPST, normally open contacts; 10 amp. rating. Solder terminals. Size:  $11/4 \times 25/8 \times 11/6$ ". Mounting: Two 3/6" dia. holes on 27/2" centers. Shpg. wt., 6 oz.



Stock	Mfr's	Coil	1-24,	25-50,	51-74,	75-99,
No.	Type	Volts	EACH	EACH	EACH	EACH
75 P 568	CA3A	6v. AC	2. <b>7</b> 5	2.61	2.47	2.20
75 P 569		24v. AC	2. <b>7</b> 5	2.61	2.47	2.20
75 P 570		115v. AC	2. <b>7</b> 5	2.61	2.47	2.20

# PS SERIES RELAYS

Extremely compact, long-life, medium-duty relays. Ideal for mobile communications, appliances, and similar applications requiring 10 amp, DPDT contacts. Solder-type terminals. Mounting: Four No. 6-32 tapped holes on ½x1\%6" centers. Shpg. wt., 8 oz.



Stock	Mfr's	Coil	1-24,	25-50,	51-74,	75-99,
No.	Type	Volts	EACH	EACH	EACH	EACH
75 P   15 75 P   16 75 P   17 75 P   18	PS11A PS11A PS11A PS11A	6v. AC 24v. AC 115v. AC 230v. AC	7.60 7.60 7.60 8.00	7.22 7.22 7.22 7.60	6.84 6.84 6.84 7.20	6.08 6.08 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	110v. DC	6.95	6.60	6.25	5.56

# SP11 SHOCK-RESISTANT RELAYS

Medium-duty relay for general industrial use, keying circuits, etc. High resistance to shock and vibration. Balanced armature permits mounting in any position. DPDT contacts rated 5 amps for 115 v. 60-cycle noninductive load. Maximum size, 123½x1½x2½%" Mounting: 2 tapped 6-32 holes on 13½" centers. Shpg. wt., 10 oz.



Stock	Mfr's	Coil	1-24,	25-50,	51-74,	75-99,
No.	Type	Volts	EACH	EACH	EACH	EACH
76 P 517	SP11A	24v. AC	6.20	5.89	5.58	4.96
75 P 926	SP11A	115v. AC	6.20	5.89	5.58	4.96
76 P 518	SP11D	6v. DC	5.95	5.65	5.35	4.76
76 P 519	SP11D	12v. DC	5.95	5.65	5.35	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, SPST, double break, normally open. Size, 1\%x^2\%x^1\%. Mounting: Four No. 3-48 holes on \%x\%' centers. Shpg. wt., 5 or

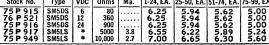


Stock	Mfr's	Coil	EACH	25-50,	51-74,	75-99,
No.	Type	Volts		EACH	EACH	EACH
75 P 059 75 P 065 75 P 066 75 P 067	MB3D MB3D	6v. DC 12v. DC 24v. DC 110v. DC	5.00 5.10 5.10 5.50	4.75 4.84 4.84 5.22	4.50 4.59 4.59 4.95	4.00 4.08 4.08 4.40

# SM SUPER-MIDGET RELAYS

Subminiature relays weighing less than 1 oz. SPDT silver-rhodium contacts rated ¼ amp, 24 v. DC for 50,000 operations or ¼ amp, 115 volts 60 cycles AC for 1,000,000 operations. Non-inductive load. Units are hermetically sealed in deep-drawn steel tubes. Have standard 7-pin miniature tube type bases. Size: ¾ dia., 11½ high above socket.\* Current-actuated types for use in plate-circuit applications. Av. shpg. wt., 3 oz.

Type | VDC | Ohms | Stock No. Ma. | 1-24, EA. |25-50, EA.|51-74, EA.|75-99, EA.



# Potter and Brumfield Relays

# GENERAL-PURPOSE, PLATE CIRCUIT AND SENSITIVE RELAYS



# KA GENERAL-PURPOSE RELAYS

Compact, low-cost general-purpose relays. Partic-ularly 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. approved. 6-32 mounting stud. 11/6x12/32x13/8". 6 oz.

	Stock No.		Type		1-24.	25-50	51-74.	75-99.
		115 v. AC	Ño.	Action	EÁCH	EACH	EACH	EACH
75 P 158	75 P 161	75 P 164	KA5AY	SPDT	3.05	2.89	2.74	2.44
75 P 159	75 P 162	75 P 165	KA11AY	DPDT			3.28	
75 P 160	75 P 163	75 P 166	KA14AY	3PDT	4.05	3.85	3.64	3.24
6 v. DC	12 v. DC	24 v. DC						
75 P 167	75 P 170	75 P 173	KA5D	SPDT	2.90	2.76	2.61	2.32
		75 P 174	KA11D	DPDT	3.25	3.09	2.92	2.60
75 P 169	75 P 172	75 P 185	KA14D	3PDT	3.65			

Stock No. 110 v, DC	Type No.	Action	1-24, EACH	25-50, EACH	51-74, EACH	75-99, EACH
76 P 522 76 P 523	KA11D KA14D	DPDT 3PDT	3.85	3.66	3.47	3.08



# 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 amps non-inductive load. 11½2x11½2x2″. Wt., 5 oz.

Stock No.	Туре	Actio		24,		51-74,	
6 v. AC [12 v. AC	No.	Activ	E.	CH	EACH	EACH	EACH
75 P 214 75 P 920 76 P 524 75 P 091 76 P 525			T 5	20 75	4.94 5.46 6.79	4.68 5.17 6.43	4.16 4.60 5.72
24 v. AC 115 v. AC							
75 P 215 75 P 213 75 P 216 75 P 921 75 P 092 75 P 093	KRP11A		OT 5	.20 .75	4.94 5.46 6.79	4.68 5.17 6.43	4.16 4.60 5.72
Stock No.	1	Type		1-2	1 25-5	0 51-74	75-00
6 v. DC  12 v. DC 2	4 v. DC	No.	Action			EACH	
75 P 217 75 P 244 7 75 P 922 75 P 246 7 75 P 094 75 P 095 7	5 P 247	KRP5D KRP11D KRP14D	SPDT DPDT 3PDT	5.1 5.7 7.1	0   5.4	2 5.13	4.56



# KCP ENCLOSED RELAYS

Sensitive plate circuit relays completely enclosed in high-impact, transparent dust-proof and weather-proof polystyrene case. Plugs into standard octal or-11-pin socket (see listing below). Silver contacts rated at 2 amps non-inductive load. Size: 11½x2 11½x2 high. Shpg. wt., 5 oz.

Stock No.	Туре	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	5.42	5.13	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 P 292	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, 111/16" Wt., 5 oz. 96c Vype 77MIP11 Socket. For KRP14, KCP14 types. Molded bakelite. Mounts in 15/2" hole. With retainer ring. Wt., 2 oz. 13c



# LM PLATE CIRCUIT RELAYS

Quality, medium-cost plate circuit relays. For photo-electric control, counting, and similar circuits. Armature spring tension adjustment and adjustable residual screw permits settings for specific voltages or currents. Has \( \frac{1}{6} \) fine silver contacts rated at 5 amperes. 115 volts. 60 cycles, non-inductive load, Sizes: LM5, 2\( \frac{1}{6} \) \( \frac{1}{6} \

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	3.15	2.80
		SPDT	5000	4.5	3.70	3.52	3.33	2.96
75 P 675	LM5	SPDT	10,000	3.2	4.00	3.80	3.60	3.20
75 P 682	LM11	DPDT	2500	9.0	5.05	4.80	4.54	4.04
	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 A, 28 v. DC. with non-inductive load. Size: 211/ex11/x13/v. Adjusted by bending tail-spring hook. For DC 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	9	2.35	2.23	2.11	1.88
75 P 626	SPDT	5000	6.3	2.55	2.42	2.29	2.04
75 P 774	SPDT	10,000	4.5	2.70	2.57	2.43	2.16



# GA MULTIPLE LEAF RELAYS

A rugged, multiple leaf relay for general circuit and power control applications. Designed to withstand nutriple lear 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-resistant coil prevents damage by high humidity. Contacts rated at 5 amps. AC coils are for 60 cycles. Size: 1x111/x212/x2 high. Has tapped core to permit mounting with single 8-32 screw. Shpg. wt., 10 oz.

Stock	Type	Coil	Action	1-24,	25-50,	51-74,	75-99,
No.	No.	Volts		EACH	EACH	EAC H	EAC H
75 P 192	GA11A	6 v. AC		3.15	2.99	2.83	2.52
75 P 193	GA17A	6 v. AC		4.50	4.28	4.05	3.60
76 P 526	GA17A	12 v. AC		4.50	4.28	4.05	3.60
75 P 194 75 P 195 75 P 196 75 P 197	GA11A GA17A GA11A GA17A	24 v. AC 24 v. AC 115 v. AC 115 v. AC	4PDT DPDT	3.15 4.50 3.15 4.50	2.99 4.28 2.99 4.28	2.83 4.05 2.83 4.05	2.52 3.60 2.52 3.60
75 P 198 75 P 199 75 P 105 75 P 106	GA11D GA17D GA11D GA17D	6 v. DC 6 v. DC 12 v. DC 12 v. DC	4PDT DPDT	3.15 4.50 3.15 4.50	2.99 4.28 2.99 4.28	2.83 4.05 2.83 4.05	2.52 3.60 2.52 3.60
75 P 107	GA11D	24 v. DC	4PDT	3.15	2.99	2.83	2.52
75 P 108	GA17D	24 v. DC		4.50	4.28	4.05	3.60
76 P 527	GA11D	110 v. DC		3.60	3.42	3.24	2.88



# 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 5 amperes at 115 volts, 60 cycle AC, non-inductive load. AC coils are for 60 cycles. 111/6x11/6x111/6x1. Av. shpg. wt., 4 oz.

Stock	Туре	Coil			NET	EACH	
No.	Νo.	Volts	Action	1-24	25-50	51-74	75-99
76 P 528 76 P 529 76 P 530	KL14A KL17A KL11A	6 v. AC 6 v. AC 12 v. AC	4PDT	5.00 5.90 4.45	4.75 5.61 4.23	4.50 5.31 4.00	4.00 4.72 3.56
76 P 531 75 P 219 76 P 532 76 P 533	KL17A KL17A KL11A KL14A	12 v. AC 24 v. AC 115 v. AC 115 v. AC	4PDT DPDT	5.90 5.90 4.45 5.00	5.61 5.61 4.23 4.75	5.31 5.31 4.00 4.50	4.72 4.72 3.56 4.00
75 P 218 76 P 534 76 P 535 76 P 536	KL17A KL14D KL14D KL11D	115 v. AC 6 v. DC 12 v. DC 24 v. DC	3PDT 3PDT	5.90 4.80 4.80 4.30	5.61 4.56 4.56 4.08	5.31 4.32 4.32 3.87	4.72 3.84 3.84 3.44
76 P 537 75 P 220 76 P 538	KL14D KL17D KL17D	24 v. DC 24 v. DC 110 v. DC	4PDT	4.80 5.60 6.20	4.56 5.32 5.89	4.32 5.04 5.58	3.84 4.48 4.96



# MP SNAP ACTION RELAYS

Snap action relays designed for starting split-phase capacitor-type motors of up to 1½-hp capacity. SPDT silver contacts are rated at 25 amps—large enough for many applications. AC coils are for 60 cycles. Mounts with 4—6-32 screws, 3½x½" ctrs. Size, 1½x2½x1½". Av. shpg. wt., 4 oz.

Stock No.	Type	Volts	1-24, EA.	25-50, EA.	51-74, EA.	75-99, EA.
75 P 005 75 P 006 75 P 007	MP5A MP5A MP5A	6VAC 24VAC 115VAC	5.70	5.42	5.13	4.56
75 P 008 75 P 009	MP5A MP5D	230VAC 110VDC	5.95 6.50	5.65	5.35 5.85	4.76 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 v. AC or 28 v. DC. Mount with 2—4.40 screws. Size: 1x15/2x25/2\*. Av. wt., 3 oz.

Stock No.	Volts	Ohms	Ma.	1-24, EA.	25-50, EA.	51-74, EA.	75-99, EA.
75 P 896 75 P 897 75 P 898 75 P 899	6	335 2500 5000 10,000	5.0 3.5 2.5	2.50 2.70 3.00 3.45	2.38 2.57 2.85 3.28	2.25 2.43 2.70 3.10	2.00 2.16 2.40 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" dia.; 111/6" high (above socket). \*Plate circuit type. Wt., 2 oz.

Stock No.	Type	Voits	Unms	ma.	I-24, EA.	25-50, EA.	51-/4, EA.	/5-99, EA.
75 P 018	PW5DS	6	202		10.25	9.74	9.23	8.20
75 P 019			810		10.25		9.23	8.20
75 P 027		24	3240		10.25	9.74	9.23	8.20
75 P 028		*	5000	2.8	10.60	10.07	9.54	8.48
75 P 029	PW5LS	*	10,000	2	111.00	10.45	9.90	8.80



# 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. DC non-inductive load. Precision-balanced armature 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 2½,2" centers. 11½,811½,811½,6". Wt., 8 oz.

# Potter and Brumfield Relays

### **GP "PIC & BUILD" SERIES**

Flexibility—keynote 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 arrangement in minutes. Perfect for prototypes, testing 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	Mfr's	Item		NET	EACH	
No.	Туре	Item	1-24	25-50	51-74	75-99
76 P 333 76 P 539 76 P 334 76 P 335 76 P 336	GPA GPA GPA GPA GPA	6v.AC Coil 12v. AC Coil 24v. AC Coil 115v.AC Coil 230v.AC Coil	1.55 1.55 1.55 1.55 2.00	1.47 1.47 1.47 1.47	1.39 1.39 1.39 1.39 1.80	1.24 1.24 1.24 1.24 1.60
76 P 337 76 P 338 76 P 339 76 P 340	GPD GPD GPD GPD	6v.DC Coil 12v.DC Coil 24v.DC Coil 110v.DC Coil	2.00 2.00 2.00 3.00	1.90 1.90 1.90 2.85	1.80 1.80 1.80 2.70	1.60 1.60 1.60 2.40
76 P 341 76 P 342 76 P 343 76 P 344	GPD GPD GP11 GP17	2500-ohm Coil 10,000-ohm Coil DPDT Switch 4PDT Switch	1.45 2.00 1.60 2.80	1.37 1.90 1.52 2.66	1.30 1.80 1.44 2.52	1.16 1.60 1.28 2.24

# TYPE PC IMPULSE RELAYS

Compact, pulse-operated relay. Armature and pusher assembly operate phenolic rocker switching from one contact pile to the other on alternate pulses. For on-off or reversing applications. Pulses may be as short as 30 milliseconds at 5 cps. Gold-flashed silver contacts, rated 10 amps at 115 volts AC, resistive load. Size: 13/4x231/3zx25%. AC is for 50-60 cycles. Shpg. wt., 10 oz.



Stock	Mfr's	Action	Coil		NET	EACH	
No.	Type	Accion	Volts	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	24AC	5.25	4.98	4.72	4.20
76 P 503	PC17A	4PDT	24AC	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	6.88	6.52	5.80
76 P 506	PC11D	DPDT	24DC	5.10	4.84	4.59	4.08
76 P 507	PC17D	4PDT	24DC	7.10	6.74	6.39	5.68

# TYPE KB LATCHING RELAYS

Ideal for memory work and overload applications. 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: 2½x1½x2½y² high. Mounts with 2—½² holes on 1½ coils coils and the coils are set as a maperes, except \*10 amps. †Indicates U.L. Approved. Shpg. wt., 10 oz.



Stock	Mfr's	l _	Coil	1	NET	EACH	
No.	Туре	Action	Volts	1-24	25-50	51-74	75-99
75 P 126 76 P 540 75 P 125 76 P 541	KB17AY KB17AY KB17AY KB17AG	4PDT† 4PDT† 4PDT† 4PDT*	6 AC 12 AC 24 AC 24 AC	10.00 10.00 10.00 10.10	9.50	9.00 9.00 9.09	8.00 8.00 8.00 8.08
76 P 542 75 P 124 76 P 543 76 P 544	KB23AY KB17AY KB17AG KB23AY	6PDT† 4PDT† 4PDT* 6PDT†	24 AC 115 AC 115 AC 115 AC	12.00 10.00 10.10 12.00		9.00 9.09 9.09	9.60 8.00 8.08 9.60
75 P 129 76 P 545 75 P 128 75 P 127	KB17D KB17D KB17D KB17D	4PDT 4PDT 4PDT 4PDT	6 DC 12 DC 24 DC 110 DC	9.00 9.00 9.00 10.20	8.55 8.55 8.55 9.69	8.10 8.10 8.10 9.18	7.20 7.20 7.20 8.16

# MH MINIATURE TELEPHONE RELAYS

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 built-in rectifier. Units are 4PDT, except \*PDPT, 4.5 ma current actuated; 10,000 ohm coil resistance. Contacts rated at 5 amps; break-beforemake. †Indicates hermetically sealed in metal housing. Sizes: Open type, 15½\*2½x1½\*; sealed type, 1½\*k21½x2½\*. Mounting: MH11L model has a No.½ stud 1½\* long, plus a locating boss. All other open models have four No. 3-48 holes on 3½x3½\* centers. Header in glass with solder terminals; minimum leakage resistance of 10,000 megohms at 50% humidity. Av. Shpg. wt., 6 oz.



Sealed

Stock	Mfr's	Coil		NET	EACH	
No.	Туре	Volts	1-24	25-50	51-74	75-99
75 P 937 75 P 936 75 P 293 75 P 935	MH17D MH17D MH11L* MH17DM†	6v. DC 24v. DC	5.75 5.75 5.75 11.60	5.46 5.46 5.46 11.02	5.18 5.18 5.18 10.44	4.60 4.60 4.60 9.28
75 P 941 75 P 939 75 P 942 75 P 294	MH17AMR† MH17DM† MH17AMR† MH11LM*†	24v. AC 24v. DC 115v. AC	25.00 11.60 19.00 9.70	23.75 11.02 18.05 9.21	22.50 10.44 17.10 8.73	20.00 9.28 15.20 7.76

# TYPE AF11A 400-CYCLE RELAY

Rugged armature-type relay. Coil operates on 400-cycle 115-v. power used in aircraft. Contacts rated 5 ampt 115 v. 60 cycle resistive. Has 2—6-32 holes on 1/6" n centers. 13/x11/6x2". Shpg. wt., 4 oz.





KE SERIES SUBMINIATURES

Sub-miniature latching relay with mechanical latch and electric release. Operates on momentary impulse to either coil. For intermittent use only. Mounting: 3 No. 6-32 studs. Pure silver contacts, 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 1½2x11½6x2½2". \*Sealed. Shpg. wt., 6 oz.

Stock No		Mfr's	Action		NET E	ACH	
6v. DC   12v. DC	24v. DC	Type	Action	1-24	25-50	51-74	75-99
76 P 345 76 P 346 76 P 349 76 P 350 76 P 353 76 P 354 76 P 357 76 P 358	76 P 351 76 P 355	KE17DM* KE23D	6PDT	19.50	8.55 18.52 10.92 23.75	17.55	15.60

### 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  $\frac{1}{16}$  oz. per relay. Contacts rated 2 amps. Solder lug terminals are all located at one end of relay. Size,  $1\frac{1}{6}$ x  $\frac{5}{44}x^2\frac{5}{44}x^2$ . Shpg. wt., 1 oz.



	Stock No.		Mfr's			NET E	.,	
6v. DC	12v. DC	24v. DC	Type	Action	1-24	25-50	51-74	75-99
76 P 361	76 P 362	76 P 363	KM5D	SPDT	3.20	3.04	2.88	
76 P 365	76 P 366	76 P 367	KMIID	DPDT	3.50	3.32	3.15	
76 P 369	76 P 370	76 P 37 I	KM14D	1 3PDT	4.05	3.84	3.64	3.24

### KT SERIES ANTENNA SWITCHING RELAYS

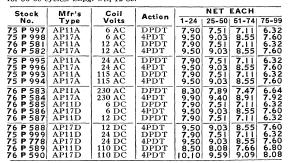
Precision antenna switching relay useful for switching antenna for use by both receiver and transmitter; specially designed for efficient use in RF applications; glassbase insulation for minimum RF loss. Used to switch 300-ohm line. Mounting: one No. 6-32 stud. Fine silver contacts, rated 5 amps. Size, 111/ex13/2x15/8". Shpg. wt., 2 oz.



Stock	Mfr's	Coil	Action N		NET	EACH		
No.	Туре	Voits	Action	1-24	25-50	51-74	75-99	
76 P 373 76 P 374 76 P 375 76 P 376	KT11A KT11A KT11D KT11D	6 AC 115 AC 6 DC 12 DC	DPDT DPDT DPDT DPDT	3.35	3.18	3.01	2.68	

# AP RATCHET IMPULSE RELAYS

An extremely fast acting relay for applications requiring on-off or reversing action on alternate 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% fine silver, rated 5 amps. Coils are wound on molded bobbins. Phenolic cams, hardened steel pawl and ratchet with pin hinged armature. Tinned solder terminals. Mounting: Three 5% diameter holes on 3% x y% triangular centers. Size: 23/ex21/4x33/4". Weight, 7 oz. AC are for 50-60 cycles. Shpg. wt., 12 oz.



# LATCHING AND NON-LATCHING RELAYS

LATCHING AND NON-LATCHING RELAYS

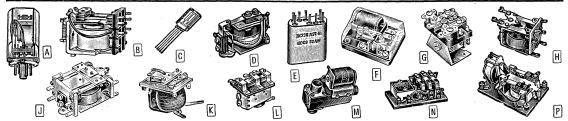
New exceptionally rugged, sub-miniature, 24 volt DC

relays. SC non-latching type, and SL latching type.

Both are hermetically sealed and designed to withstand
extreme shock and vibration (Shock, 100g., Vibration,
30g. 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° C. Size., 795x.359x.875°. Weight,
3/4 oz. Contact pressure: SC-16 grams min.; SL-20
grams min. Breakdown voltage, 1000 v. rms. min. between all elements and ground. Insulation resistance, 10,000 megohms,
min. Coil circuit on SC type polarized; positive terminals marked with a
red dot. Gold-flashed palladium contacts, rated 2 amps at 28 volts DC;
1 amp at 115 v. DC resistive. Available in choice of mountings: \*Plug-in
for printed circuit or receptacle; †Shoulder bracket with two 104x.136°
holes on 1.062x.281° centers. Shpg. wt., 2 oz.

Stock	Mfr's	Na	NET EACH				
No.	Type	Mounting	1-24	25-50	51-74	75-99	
76 P 591 76 P 592 76 P 593 76 P 594 76 P 595 76 P 596	SC11D SC11DA SC11DB SL11D SL11DA SL11DB	Plug-in* Bracket† Plate§ Plug-in* Bracket† Plate§	15.75 15.75 15.75 17.25 17.25	14.96 14.96 14.96 16.39 16.39	14.17 14.17 14.17 15.52 15.52 15.52	12.60 12.60 12.60 13.80 13.80 13.80	

# **Advance Quality Relays**



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 terminals (Fig. B). Type GHB rated 10 amps at 115v. AC with resistive load; GHP, GHE and GHA rated 5 amps a 115v. AC with resistive load. Type GHE is current actuated and can be used as plate circuit relays. All others are voltage actuated. Size: Types GHA and GHB 1½xx1½x"; others are 1½x" square by 2½x" 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 76 P 451 76 P 470 76 P 455 76 P 473	GHA/1C/6VA GHA/2C/6VA GHB/2C/6VA GHA/3C/6VA GHB/3C/6VA	6 v. AC 6 v. AC 6 v. AC 6 v. AC 6 v. AC	SPDT DPDT DPDT 3PDT 3PDT	3.05 3.55 4.05 4.05 4.60	2.90 3.37 3.85 3.85 4.37	2.75 3.20 3.65 3.65 4.14		
76 P 459 76 P 461 76 P 476 76 P 464 76 P 478	GHA/1C/6VD GHA/2C/6VD GHB/2C/6VD GHA/3C/6VD GHB/3C/6VD	6 v. DC 6 v. DC 6 v. DC 6 v. DC 6 v. DC 6 v. DC	SPDT DPDT DPDT 3PDT 3PDT	3.05 3.35 3.80 3.75 4.40	2.90 3.18 3.61 3.56 4.18	2.75 3.02 3.42 3.38 3.96		
76 P 462 76 P 465 76 P 448 76 P 471 76 P 463	GHA/2C/12VD GHA/3C/12VD GHA/1C/24VA GHB/2C/24VA GHA/2C/24VD	12 v. DC 12 v. DC 24 v. AC 24 v. AC 24 v. DC	DPDT 3PDT SPDT DPDT DPDT	3.35 3.75 3.05 4.05 3.35	3.18 3.56 2.90 3.85 3.18	3.02 3.38 2.75 3.65 3.02		
76 P 466 76 P 449 76 P 487 76 P 453 76 P 472	GHA/3C/24VD GHA/1C/115VA GHP/1C/115VA GHA/2C/115VA GHB/2C/115VA	24 v. DC 115 v. AC 115 v. AC 115 v. AC 115 v. AC	3PDT SPDT SPDT DPDT DPDT	3.75 3.05 5.10 3.55 4.05	3.56 2.90 4.85 3.37 3.85	3.38 2.75 4.59 3.20 3.65		
	GHP/2C/115VA GHA/3C/115 VA GHB/3C/115 VA GHP/3C/115 VA*		DPDT 3PDT 3PDT 3PDT	5.75 4.05 4.60 7.05	5.46 3.85 4.37 6.70	5.18 3.65 4.14 6.35		
Stock No.	Mfr's Type	Ohms Ma.	Action			50-99, EA.		
76 P 491 76 P 492 76 P 493	GHE/2C/2500D GHE/2C/5000D GHE/2C/10000D	2500   10.0 5000   7.2 10000   5.0	DPD	6.70	5.99 6.37 6.75	5.67 6.03 6.39		

Type NM Ultra-Miniature DC Relays. Hermetically sealed in transistor-type nitrogen-filled case. Ideal for computers, missiles, printed circuits, etc. Vibration resistance, 10G up to 500 cps; shock to 50G, SPDT contacts rated at ¼ amp. 28 v. DC. ½x¾x¾x½. Wt., 3 oz.

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	NM/1C/200	200	22		0000	01.40
76 P 197	NM/1C/500	500	14	24.00	22.80	21.60
76 P 198	NM/1C/1K	1000	. 10			
76 P 199	NM/1C/2K	2000	7		l	

Type PC Power-Control Relays. Contacts rated 15 amps, at 115 v. AC non-inductive. DC type draws 2½ watts, AC coils 4-7 VA. Mount by 2, 6-32 holes on 2" cntrs. SP units: 13%x15%x25%"; DP units: 15%x15%x211%"; 3P unit: 1132x23%x3". 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 v. AC	3.95	3.75	3.56
76 P 600	PC/2C/6VA	DPDT	6 v. AC	5.95	5.65	5.36
76 P 601	PC/3C/6VA	3PDT	6 v. AC	8.45	8.03	7.61
76 P 602	PC/1C/24VA	SPDT	24 v. AC	3.95	3.75	3.56
76 P 495	PC/2C/24VA	DPDT	24 v. AC	5.95	5.65	5.36
76 P 200	PC/1C/115VA	SPDT	115 v. AC	3.95	3.75	3.56
76 P 202	PC/2C/115VA	DPDT	115 v. AC	5.95	5.65	5.36
76 P 203	PC/3C/115VA	3PDT	115 v. AC	8.45	8.03	7.61
76 P 494	PC/4C/115VA	4PDT	115 v. AC	10.95	10.40	9.86
76 P 603	PC/1C/220VA	SPDT	120 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	PC/4C/220VA	4PDT	220 v. AC	12.45	11.83	11.21
76 P 216	PC/1C/6VD	SPDT	6 v. DC	3.95	3.75	3.56
76 P 605	PC/2C/6VD	DPDT	6 v. DC	5.95	5.65	5.36
76 P 606	PC/3C/6VD	3PDT	6 v. DC	8.45	8.03	7.61
76 P 607 76 P 608 76 P 609 76 P 610 76 P 496	PC/2C/12VD PC/1C/24VD PC/2C/24VD PC/3C/24VD PC/4C/24VD	DPDT SPDT DPDT 3PDT 4PDT	12 v. DC 24 v. DC 24 v. DC 24 v. DC 24 v. DC 24 v. DC	5.95 3.95 5.95 8.45 10.95	5.65 3.75 5.65 8.03 10.40	5.36 3.56 5.36 7.61 9.86

Type MV Rotary Action Relays. Precision-built for dependability. Plug-in type, in plain can. Has new spring lead design. Meets test conditions of MIL-R-5757B, MIL-R-6100A and MIL-R-2501B. Their high performance makes them ideal for meeting requirements of severe military and industrial applications. ½" high, 5½%" wick, 2¾%" deep. Contacts rated 2 amps resistive at 115 v., AC or 32 v., DC. Shpg. wt., 3 oz.

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	12,24
76 P 635	MV2C120D-24	120	44	13.60	12.92	12.24
76 P 636	MV2C600D-24	600	21	13.60	12.92	12.24
76 P 637	MV2C1000D-24	1000	16	13.85	13.16	12.47
76 P 638	MV2C2500D-24	2500	10	14.40	13.68	12.96
76 P 639	MV2C5000D-24	5000	7	14.95	14.20	13.46
76 P 640	MV2C10,000-24	10,000	5	16.35	15.53	14.72

Type SV Sensitive Relays. Highly sensitive relays for use in DC circuits. Actuating coils require only 0.005 watt excitation. Easily accessible, vernier screws permit changing relay sensitivity to meet specific requirements. Have transparent plastic dust covers. SPDT contacts are rated 1 amp at 115 VAC or 26.5 VDC resistive. Simple, 2-hole mounting. Size,  $1\frac{1}{2}x2x2\frac{9}{16}$ . Shpg. wt., 8 oz.

Stock No.	Mfr's Type	Ohms	Ma.	1-24, EA.	25-49, EA.	50-99, EA.
76 P 611 76 P 612	SV/1C/1000D SV/1C/1600D	1000 1600	2.25 1.80	8.25 8.40	7.84 7.98	7.43 7.56
76 P 613	SV/1C/2200D SV/1C/3500D	2200 3500	1.50	8.40 8.40	7.98 7.98	7.56 7.56
76 P 615	SV/1C/5500D	5500	0.95	8.75	8.31	7.88
76 P 616 76 P 617 76 P 618	SV/1C/8700D SV/1C/14000D SV/1C/20000D	8700 14,000 20,000	0.75 0.60 0.50	9.40 10.10 11.10	8.93 9.60 10.55	8.46 9.09 9.99
76 P 619 76 P 620	SV/1C/30000D SV/1C/40000D	30,000 40,000	0.40 0.35	11.85	11.26 12.64	10.67

Type PG General-Purpose Relays. DPDT relays offering high contact pressure to withstand severe vibration and shock. Contacts rated 15 amps at 115 VAC or 26.5 VDC resistive. Size, 11/8x11/2". Shpg. wt., 6 oz.

Stock No.	Mfr's Type	Voits	1-24, EA.	25-49, EA.	50-99, EA.
76 P 621	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 v. DC	6.90	6.56	6.21

Type AM Midget Antenna Relays. Compact "transmit-receive" antenna relays. For low-power RF use. DPDT contacts rated 2 amps at 115 VAC or 6.5 VDC resistive. Size, 1\%x\!\%x\!\%x\!\%\'. Shpg. wt., 6 oz.

Stock No.	Mtr's Type	Volts	1-24, EA.	25-49, EA.	50-99, EA.
76 P 624	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

Type AH Antenna Changeover Relay. Low-loss, steatite insulated antenna changeover relays. DPDT contacts carry RF loads up to ½ KW. \*Indicates auxiliary SPDT contacts. 11/6x11/6x21/4. Shpg. wt., 6 oz.

Stock No.	Mfr's Type	Volts	1-24, EA.	25-49, EA.	50-99, EA.
76 P 628	AH/2C/6VA	6 v. AC	13.00	12.35	11.70
	AH/2C/115VA	115 v. AC	13.00	12.35	11.70
	AH/2C1C/115VA*	115 v. AC	14.25	13.54	12.83

Type MK Miniature Relays. Contacts rated 1 amp, at 115 VAC or 6.5 VDC resistive. Size, 51/4x41/4x53/4". Shpg. wt., 2 oz.

Stock No.	Mfr's Type	Action	Volts	1-24, EA.	25-49, EA.	50-99, EA.
76 P 630	MK/1C/6VD	SPDT		4.95	4.70	4.46
76 P 631	MK/2C/24VD	DPDT		5.95	5.65	5.36
76 P 632	MK/2C/5000D	DPDT		6.95	6.60	6.26

Type SO Sensitive Relays. Extremely sensitive, adjustable, SPDT 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, 28 v. DC., 115 v. AC resistive. Size, 11/kgx11/s/x11/v. Av. shgs. wt., 3 oz.

Stock No.	Mfr's Type	Ohms	Ma.	1-24, EA.	25-49, EA.	50-99, EA.
	SO/1C/4000D	4000	1.6	5.85	5.56	5.27
	SO/1C/6500D	6500	1.25	6.35	6.03	5.72
	SO/1C/10,000D	10,000	1	6.70	6.37	6.03

Mouputs of up to 800 watts on lines 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. 3½x3½x3½\*. Shgg. wt., 11 oz.

Stock No.	Mfr's Type	Action	Volts	1-24, EA.	25-49, EA.	50-99, EA.
	CB/1C/6VD	SPDT	6 v. DC	12.00	11.40	10.80
	CB/1C/115VA		115 v, AC		11.54	10.92
	CB/1C2C/6VD		6 v. DC		12.35	11.70
76 P 254	CB/1C2C/115VA	SPDT*	115 v, AC	13.25	12.59	11.93

P Type LE Latching Relays. For industrial and power-control applications—eliminates undesired continuous current consumption by the duty coil. Positive locking. Has reset coil. 1½" contacts rated for 15 amps at 115 v. AC or 26.5 v. DC non-inductive. 2½x2½x3½". Wt., 1 lb.

76P498 LE/2C/24VD   DPDT   24 v. DC   11.65   11.08	76 P 497   LE/2C/115VA 76 P 498   LE/2C/24VD	

# Guardian, Dow-Key and Amperite Relays

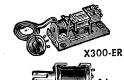
**GUARDIAN RELAYS** 

AND SOLENOIDS





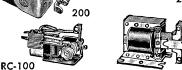
16-18











# **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. Overall size: With standard contact assembly  $2\%x1\frac{1}{2}x1\frac{1$ 

	AC Coil Types					DC Coil Types				
Stock No.	Volts	1 to 24, EACH	25to49, EACH	50to99, EACH	Stock No.	Voits	1 to 24, EACH	25to49, 5 EACH	0 to 99, EACH	
75 P 709 75 P 710 75 P 711 75 P 712 75 P 888	24 115	1.63 1.63 1.63 2.04 2.69	1.47 1.47 1.47 1.84 2.42		75 P 7   3 75 P 7   4 75 P 7   5 75 P 7   6 75 P 7   7	6 12 24 32 110	1.63 1.63 1.63 1.63 2.04	1.47 1.47 1.47 1.47	1.38 1.38 1.38 1.38	

# **SERIES 200 SWITCH CONTACT ASSEMBLIES**

Stock	Mfr's	Description	1 to 24,	25to 49,	50 to 99,
No.	Type		EACH	EACH	EACH
75 P 707	200-4	SPDT contact assembly. 8 amps.	1.33	1.20	1.13
75 P 708		DPDT contact assembly. 8 amps.	1.81	1.63	1.53
75 P 724		DPDT contact assembly. 12.5 amps.	2.10	1.89	1.78
75 P 889		4PDT contact assembly. 8 amps.	3.28	2.95	2.79
75 P 718 75 P 719 75 P 826	200-M2	SPDT midget contact assembly. 8 amps. DPDT midget contact assembly. 8 amps. 4PDT midget contact assembly. 8 amps.	1.24 1.63 2.70	1.12	1.05 1.38 2.29

# **RC-100 LOCKING RELAYS**

Locking relays for break-in control; phone to CW switching etc. Momentary coil energization locks contacts. Each impulse reverses contacts. \*\*X\*\* is view 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, 2½x2½x3½.\*\* Av. shpg. wt., 12 oz.

Stock No.	Туре	Contacts	Volts	1 to 24, EA.	25 to 49, EA.	50 to 99, EA.
75 P 727	RC-100-AR	4PST	115	5.96	5.36	5.06
	RC-100-BR RC-100-CR	SPDT & DPST	115 115	6.21 5.75	5.59 5.17	5.27 4.88
	RC-100-GR		115	5.83	5.25	4.95

# **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.

Stock No.	Туре	Ma.	Size	Lbs.	1 to 24,EA.	25 to 49,EA.	50 to 99,EA.
75 P 640 75 P 726		250-750* 500	4¾ x15/16x2" 1¾ x2½ x3¾ "	11/4	7.69 8.92	6.92 8.03	6.53 7.58

# **DOW-KEY COAXIAL ANTENNA RELAYS**



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.

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. .....**2.3**0

# 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 vs. coil drain, approx. 080 amps at 115 v., 60 cycles. 33/x21/x23/x6". Av. shpg. wt., relays, 12 oz.; coils, 6 oz.

Volts		Rela	ys		Replacement Coils				
AC	Stock		25-49,				25-49,		
	No.	EACH	EACH	EACH	No.	EACH	EACH	EACH	
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	75 P 085		5.40	5.10	75 P 089		1.84	1.74	
230	75 P 086	6.25	5.62	5.31	75 P 090	2.20	1.98	1.87	

CS-2200. Switch Parts. Switch assemblies for above relays. "Left" or "right" means as viewed at armature end, contacts up. Wt., 4 oz. 185 75 P 563. Left Assembly. NET. 1.85

# I-18 SERIES INDUSTRIAL SOLENOIDS

Stock No.	Type	Volts	Stroke	Lift Oz.	1 to 24, EA.	25 to 49, EA.	50 to 99, EA.
75 P 890 75 P 891	1A* 1A†	115AC 115AC	1/8-1/2" 1/8-1/2"	8	2.48 2.48	2.23	2.10
75 P 154	2*	115AC	1/8 - 1/8	27	2.90	2.61	2.46
75 P 155	2†	115AC	1/8 - 1/8	10	2.90	2.61	2.46
75 P 892	4*	115AC	1/8 - 11/8	24	3.13	2.82	2.66
75 P 893	4†	115AC	1/8-11/8"	6	3.13	2.82	2.66
75 P 828	12*	115AC	1/8-1"	32	3.88	3.49	3.29
75 P 829	12†	115AC	1/8-1"	22	3.88	3.49	3.29
75 P 595	11*	6DC	1/8-1"	39	3.08	2.77	2.61
76 P 318	11†	6DC	1/8-1"	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†	24DC	1/8-1	21	3.08	2.77	2.61
75 P 894	14*	115AC	1/8-1	110	5.61	5.05	4.76
75 P 895	14†	115AC	1/8-11/2	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†	115AC	1/8 - 5/8"	60	3.48	3.13	2.95
76 P 320	16†	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†	115AC	1/8 - 1"	145	4.88	4.39	4.14
76 P 321	18†	230AC	1/8 - 1"	145	5.10	4.59	4.33

# MER-115 MIDGET STEPPING RELAY

# AMPERITE THERMOSTATIC DELAY RELAYS

Hermetically sealed in glass envelope with octal base. Heater draws 2 watts and may be operated continuously. Contacts: SPST 3 amps at 115 v. AC. 1 amp at 220 v. AC. Voltage Breakdown: Contacts, 1900 v.; Heater-to-Contact, 1500 v., except\* 250 v. and 500 v. for delays of 10 sec. or less. Ambient temperatures from -55° to +70° C. Size, Dia., 1½2°; Height less prongs, 2½°. Av. shog, wt., 40z. Be sure to specify type number as well as stock number.

Type No. Normally Open 1 Type No. N.



Delay	lypa No. No	ormally Open	Type No. Normally Closed			
	6.3 v. AC-DC	115 v. AC-DC	6.3 v. AC-DC	115 v. AC-DC		
2*	6N02	115N02	6C2	115C2		
5*	6N05	115N05	6C5	115C5		
10*	6N010	115N010	6C10	115C10		
15	6N015	115N015	6C15	115C15		
20	6N020	115N020	6C20	115C20		
30	6N030	115N030	6C30	115C30		
45	6N045	115N045	6C45	115C45		
60	6N060	115N060	6C60	115C60		
75	6N075	115N075	6C75	115C75		
90	6N090	115N090	6C90	115C90		
120	6N0120	115N0120	6C120	115C120		
150	6N0150	115N0150	6C150	115C150		
180	6N0180	115N0180	6C180	115C180		

Miniature Relays. All types above also available in miniature size except 115C150, 115C180, 115NO150, 115NO180. 9-pin, 34x25/6. 3 oz. Specify type no., adding letter "T" following type number. Example: 6NO2T. 

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 В D

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 ratings based on 115 volts, 60 cycle resistive loads. All units have DPDT, single-break contacts; metal jumper supplied permits SPDT, double-break contact. Double-break contact ratings passed on 13 voltage properties of the provides when the provides were related to the provides two-step timing upon energized; (3) coil is deventised and de-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 in the provides two-step timing upon de-energizing cycle—auxiliary switch up to 15 seconds maximum; (6) as 1, but with auxiliary switch which transfers in the provides two-step timing upon de-energizing cycle—auxiliary switch up to 15 seconds maximum; (6) as 1, but with auxiliary switch which transfers in the provides two-step timing upon de-energizing cycle—auxiliary switch up to 15 seconds maximum; (6) as 1, but with auxiliary switch which transfers in the provides two-step timing upon de-energizing of coil; (7) as 2, but with auxiliary switch which transfers in the provides two-step timing upon de-energizing cycle—auxiliary switch up to 15 seconds maximum; (6) as 1, but with auxiliary switch which transfers in the provides two-step timing upon de-energizing cycle—auxiliary switch up to 15 seconds maximum; (7) provides two-step timing upon de-energizing cycle—auxiliary switch up to 15 seconds maximum; (8) as 1, but with auxiliary switch which transfers in the provides two-step timing upon de-energizing cycle—auxiliary switch up to 15 seconds maximum; (8) as 1, but with auxiliary switch up to 15 seconds maximum; (9) provides t

Stock	Mfr's	Fig.	Use	Coil	Size	NET	2-Up,
No.	Туре	· ·g.	036	Voits	HWD	EACH	EACH
76 P 650	FE-12QT	Α	1	115	41/8x25/8x211/16"	34.20	30.78
76 P 651	FE-12QT	A	1	230	41/8x25/8x211/16"	34.20	30.78
76 P 652	FE-12QT	Ą	1	440	41/8×25/8×211/16"		30.78
76 P 653	FE-22O1	À	2 2	115	41/8x25/8x211/16"		30.78
76 P 654		_A_		230	4½x25/8x21½6"	34.20	30.78
76 P 655	FE-22QT	A	2	440	41/8x25/8x211/16"		30.78
76 P 656		В	1	115	5x33/4x27/8"	42.25	38.03
76 P 657		B	1	230	5x3 <sup>3</sup> / <sub>4</sub> x2 <sup>7</sup> / <sub>8</sub> " 5x3 <sup>3</sup> / <sub>4</sub> x2 <sup>7</sup> / <sub>8</sub> "	42.25	38.03
76 P 658 76 P 659	EE 22D	В	2 2	115 230	5x33/4x21/8"		38.03
					5x3 <sup>3</sup> / <sub>4</sub> x2 <sup>7</sup> / <sub>8</sub> "	42.25	
	FED-12	C	3	115	61/4x37/16x4"	62.00	
76 P 661 76 P 662	FED-12 FET-12Q	Č	3	230	61/4×37/6×4"		55.80
76 F 663	FET-220	В	4 5	115 115	5½x25/8x21½6"		40.32
	FEL-12QT	E	6	115	5½x25/8x21½6" 4½x2½x33/8"	39.20	40.32 35.28
	FEH-22Q		7			-	-
	FM-12QT	F G	8	115	57/8×25/8×211/16"		34.92
76 P 667	FM-22QT	Ğ	9		213/6x31/2x211/6" 213/6x31/2x211/6"	22.20	19.98
76 P 668	DE-Y-12QT	H	ĺ	115	47/16x25/8x211/16"	36.20	
76 P 669	DE-Y-12QT	Ĥ	l î	230	47/16x25/8x211/16"	36.20	32.58
	DE-Y-22QT		2	115	47/16×25/8×211/16"	36.20	
76 P 671	DE-Y-22OT		2 2	230	47/16x25/8x211/16"		32.58
	DE-B-12QT		Ιĩ	115	47/16x25/8x211/16"	36.20	
76 P 673	DE-B-12QT		1	230	47/16x25/8x211/16"	36.20	32.58
76 P 674	DE-B-22QT	н	2	115	47/16x25/8x211/16"	36.20	32.58
76 P 675	DE-B-22QT	H	2	230	47/16x25/8x211/16"	36.20	
75 P 739	G Encl.		١	1	65/8 x221/32x35/32"	5.00	
75 P 248	GY Encl.	J	l	1	65/8x221/32x4"	6.00	
75 P 249	GZ Encl.	Ĵ		1	75/8 x35/32 x 325/32"	6.00	

# **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, code signal devices, time switches, program instruments, aircraft training devices etc. ing devices, etc.

Excellent shock and vibration resistance. Start instantly at full torque (40 inch-ounces at 1 rpm). Clockwise rotation. Overall size: 2½, diameter by 1½, deep. Shaft: ½, diameter by ½, long. Power drain: 7 watts. For operation from 110-115 volts, 60 cycle AC. Shpg. wt., 1 lb.

Stock	Mfr's	Output	NET EACH			
No.	Туре	Speed	1-17	18-35	36-71	
76 P 571 76 P 572 76 P 573 76 P 574 76 P 575 76 P 576 76 P 577	SM-1 SM-4 SM-6 SM-10 SM-16 SM-30 SM-60	1 rpm 4 rpm 6 rpm 10 rpm 16 rpm 30 rpm 60 rpm	6.75	6.40	6.07	

Write for prices on larger quantities.

# BARBER-COLMAN RELAYS AND MOTORS TYPE "O" ULTRA-SENSITIVE RELAYS



Ultra-sensitive, DC-polarized relays. Feature extemely 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 100 cps. Fine interest of the operated in excess of 100 cps. Fine closes. Sensitivity is 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° F. is ±25%; from -65° to +160° F., ±60%. All have octal plugin bases for chassis installation. 1%x3/kx1/k\*. Shpg. wt., 10 oz.

# Single Coil

Stock No.	Mfr's Type	Coil Ohms	Pull-in Volts	Pull-in Amps	Pull-in μ 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	.000076	45.9	22.00
76 P 419	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	AYLZ-4525S	13	.023	.00173	39.1	22.00
76 P 701	AYLZ-4526S	54	.047	.00087	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	.000093	48.7	22.00
76 P 706	AYLZ-4533S	5650	.604	.000076	45.9	22.00
76 P 707	AYLZ-5653S	900	198 أ	.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	23.00
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 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





BYLM PERMANENT MAGNET DC MOTORS

Ideal for fan and blower drives, rapid transfer switches, and programming devices, Permanent magnet field. Tapered air gap reduces armature reaction, for improved performance under varying load conditions. Multi-coat treatment protects usually exceeds 1000 hours. Motors perform well at high altitudes. Ambient temperature range is -65°F to +200°F. Meet AN-M-40 and MIL-M-809 (ASG) specs. 24° diam. spline shaft output. Can be used with gear trains listed below. Pround inches. Av. shpg., 2 lbs.

Stock No	Туре	DC V.	Duty Cycle	HP	RPM	*Torque	EACH
76 P 550	40F50	26	Continuous	.013	8200	.10	36.00
76 P 551	40050	26	3 min. on, 7 off	.020	10300	.12	36.00
76 P 552	75050	26	Continuous	.023	7200	.20	41.00
76 P 553	70250	26	1.5 min. on, 8.5 off	.054	12300	.28	41.00
76 P 554	90150	26	2 min. on, 8 off	.080	12600	.40	46.00
76 P 555	40A50	115	Continuous	.014	10700	.08	45.00
76 P 556	70750	115	Continuous	.027	7200	.23	45.00

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" dia. Lengths fom 1.07" (for 922) to 1.69" (for 919). Av. shpg. wt., 1 lb.

Stock No.	Туре	No. Steps	Gear Ratio	NET EACH
76 P 557	922	2	9.5 to 1	21.00
76 P 558	923	3	32.6 to 1	26.00
76 P 559	914H	4	113 to 1	19.00
76 P 560	915A	5	312 to 1	22.00
76 P 561	915B	5	390 to 1	22.00
76 P 562	916A	6	1093 to 1	25.00
76 P 563	917B	7	1767 to 1	28.00
76 P 564	917D	7	4648 to 1	28.00
76 P 565	918B	8	16053 to 1	31.00
76 P 566	919B	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., 50-60 cycle AC. Shpg. wt., 3 lbs. 75 P 243. NET. 16.50

# Relays, Counters and Contact Protectors







# SENSITIVE SIGMA RELAYS









Series 4F. Plate circuit relay for any 20 mw. sensitivity application. SPDT contacts rated 2 amps. 1½x15%x15½". 3 oz.

Stock	Mfr's		Ma.	NET	
No.	Type Ohn		DC		
76 P 378 76 P 379	4F-1000-S/SIL 4F-2500-S/SIL 4F-5000-S/SIL 4F-8000-S/SIL	1000 2500 5000 8000	4.5 3.0 2.0 1.6	5.50 5.50 5.75 6.00	

B Series 5F. Rugged SPDT DC relay withstands 100 G shock. 5 mw. sensitivity. Contacts rated 1 amp. 134x15/6x111/6". 5 oz.

© Series 11F. Small, low-cost DC relay. 50 mw. sensitivity; SPDT contacts rated 1 amp. 13/2213/621" high. Shpg. wt., 3 oz.

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75	Ρ	068	11F-1000-G/SIL 11F-2300-G/SIL 11F-6000-G/SIL 11F-9000-G/SIL	1000	17.01	1.50
75	Р	069	11F-2300-G/SIL	2300	4.6	i.50
75	P	074	11F-6000-G/SIL	6000	2.9	1.70
75	Р	075	11F-9000-G/SIL	9000	2.4	1.85

Series 11FZ. Small, low cost AC relay for positive on-off operation. SPDT contacts rated 1 amp at 120 V. AC. 1x15/2x15/2". 3 oz.

No.	Mfr's Type	Ohms	V. AC	NET	
76 P 547	11FZ-40-ACS/SIL	40	6	2.00	
	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	

D Series 22. Miniature hermetically-sealed relay. Silver contacts rated 2 amps for 28 V. DC or 115 V. AC resistive load. SPDT action at 20 mw sensitivity, except \*DPDT at 40 mw. 134x1x1\*. Stipg. wt., 4 oz.

No.	Type	Ohms	Ma. DC	NET
76 P 384		1000	4.5	13.00
76 P 385	22RJC-2500-G/S1L	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		5000	2.8	15.50
76 P 391		8000	2.3	16.00

Series 41. Exceptionally quiet, sensitive relay. SPDT contacts rated: \*2; †5 amps. Sensitivity, 40 mw, 21/4x11/4x15/6, 3 oz.

Densitivity, to mw. 2/4x1/4x1/16 . 5 oz.							
Stock No.	Mfr's Type	Voits (AC) Ohms (DC)	Ma. (DC)	NET			
76 P 392 75 P 077 76 P 393 75 P 078 76 P 394	41FZ-10-ACG/SIL 41FZ-35-ACS/SIL 41FZ-200-ACG/SIL 41FZ-500-ACG/SIL 41FZ-5000-ACG/SIL 41FZ-10000-ACS/SIL 41FZ-12000-ACG/SIL			3.50 3.50 3.50 3.50 3.65 3.85 4.15			
76 P 396 76 P 397 76 P 398 76 P 399	41F-5000-S/SIL	5 ohms 50 ohms 200 ohms 1K ohms 5K ohms 10K ohms	90 30 15 6.5 3.0 2.0	3.50 3.50 3.50 3.50 3.65 3.85			

Series 42. DPDT relay with octal plug-in base and dust cover. Provides extremely quiet operation. Operating power is under 0.25 watt on DC and under 0.5 volt-amp on AC. Silver contacts rated 5 amps at 28 V. DC or 115 V. AC for 100,000 operations. AC units are designed for 60 cycle operation. Pin connections are printed on relay cover. 21/6x11/6x11/6x1.

Stock No.	Mfr's Type	Volts (AC) Ohms (DC)		NET
76 P 402 76 P 403 76 P 404	42ROZ-8-ACG/SIL 42ROZ-50-ACG/SIL 42ROZ-200-ACG/SIL 42ROZ-4000-ACG/SIL 42ROZ-12000-ACG/SIL	6 v. 12 v. 24 v. 115 v. 220 v.		6.20 6.20 6.20 6.20 6.80
76 P 407 76 P 408 76 P 409 76 P 410	42RO-1000-G/SIL 42RO-5000-G/SIL	5 ohms 50 ohms 200 ohms 1K ohms 5K ohms 10K ohms	200 65 32 14 6.5 4.5	6.20 6.20 6.20 6.20 6.40 6.60

G 26F-8000-C DS/PAL Relay. Similar to 4F series 8000-ohm relay listed in left-hand column, but slightly lighter and with somewhat 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 ma. Shpg. wt., 7 oz. 850 

# EBERT MERCURY-PLUNGER RELAYS

Standard. Ideal for industrial applications where extreme dependability is required. Mercury contacts are hermetically sealed in tempered glass. (NO indicates normally open; NC indicates normally closed.) 60-cycle AC ratings (each pole of EM-4): 35 amps at 115 v., 25 amps at 230 v. HP ratings at 115 and 230 v., 60-cycle AC; EM-1 and EM-4 (total, both NO), 2 HP; EM-4 (total, both NC) and EM-2, 1 HP. Operate from 115-230 v., 50-60 cycle AC, or DC. U.L. Approved. Express only.



No.	Туре	Description	Size	Lbs.	NET
75 P 950 75 P 951	EM-1 EM-2	Single pole, NO Single pole, NC	43/4x25/8x21/2" 51/8x25/8x21/2"	11/4	12.65
75 P 952 76 P 578 76 P 579	EM-4 EM-4 EM-4	2-pole, both NO 2-pole, both NC 2-pole, 1 NO/1 NC	5 <sup>3</sup> / <sub>8</sub> x3 <sup>3</sup> / <sub>8</sub> x2 <sup>1</sup> / <sub>2</sub> " 5 <sup>3</sup> / <sub>8</sub> x3 <sup>3</sup> / <sub>8</sub> x2 <sup>1</sup> / <sub>2</sub> " 5 <sup>3</sup> / <sub>8</sub> x3 <sup>3</sup> / <sub>8</sub> x2 <sup>1</sup> / <sub>2</sub> "	2 2 2	20.90 24.20 22.55

Heavy-Duty. Similar to relays listed above. Types HD-1 and HD-2 are rated at 60 amps for 115 v. and 35 amps for 230 v., 60-cycle AC. Rated 2 HP total at 115 v. and 230 v., AC. Type HD-4-2-pole relay; each pole controls 60 amps at 115 v., and 35 amps at 230 v., 60-cycle AC; rated (both NO or NC, total, 2 HP at 115 v. and 3 HP at 230 v., 60-cycle AC; Type HD-7 3-pole relay; each of the 3 poles can control up to 60 amps at 115 v. and 35 amps at 230 v., 60-cycle AC; total HP rating is 3 HP (3-phase) and 2 HP (single-phase) at 115 v. and 230 v., AC. NO indicates normally open; NC, normally closed. Operate from 115/230 v., 50-60 cycle AC. All U.L. Approved. Shipped by express only.

No.	Type	Description	Size	Lbs.	NET
75 P 232	HD-1	Single pole, NO	23/8×51/4×33/4"	2	14.30
75 P 233	HD-2	Single pole, NC	23/8x51/4x33/4"	2	15.68
75 P 234	HD-4	2-pole, both NO	23/8×53/4×33/4"	2	26.40
75 P 235	HD-4	2-pole, both NC	23/8×53/4×33/4"	2	29.70
75 P 236	HD-4	2-pole, 1 NO/1 NC	23/8x53/4x33/4"	2	28.05
75 P 237	HD-7	3-pole, all NO	33/8×65/8×4"	3	35.20
75 P 238	HD-7	3-pole, all NC	33/8×65/8×4*	3	40.70

Minirelays. Compact relays designed for general power control applications. Handle loads nearly twice that of ordinary armature-type units of equal size. 60-cycle AC current rating: 20 amps at 115 v., 10 amps at 230 v., 5.2 amps at 440 v. HP rating (each tube of MR-14): 1.5 HP at 115 v., 230 v. and 440 v., AC. Hermetically-sealed, mercury-to-mercury contacts. NO indicates normally open; NC indicates normally closed. Actuating coils operate from 115/230 v. for MR-10 and MR-12, 115 v. for MR-14, 50-60 cycle AC. Shipped by express only.



No.	Туре	Description	Size	Oz.	NET
75 P 258	MR-10	Single pole, NO	37/8×17/8×11/2"	8	8.25
75 P 259	MR-12	Single pole, NC	4½x1½x1½" 4x3x1½"	8	9.08
76 P 580	MR-14	2-pole, both NO	4x3x17/8"	16	15.65

SPST Micrelays. Highly sensitive relays for handling heavy loads. Use 2D21 thyratrons to control built-in mercury-plunger relays. Actuated by control signals as low as 3 µa. For control circuits, 1 to 10 megolims impedance. Contacts: Standard Type—35 amps at 115 v., 25 amps at 230 v., and 12 amps at 440 v., 60-cycle AC. Heavy-Duty Type—60 amps at 115 v., 35 amps at 230 v., 18 amps at 440 v., 60-cycle AC. Normally open operation. 5x8½x4″. For 115/230 v., 60 cycles AC. 8½ lbs. Express only.

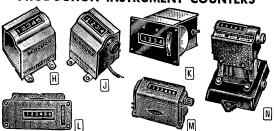


# FEDERAL CONTACT PROTECTORS

Effective protection for relay contacts controlling inductive circuits. Suppress arcing and RF transients. Consist of selenium rectifier cells back-to-back in small tubular unit. For inductive loads being operated up to 40 times per sec. Pigtail leads. P in Type No. indicates paper, H hermetically sealed. Wt. 6 oz.

Stock No.	Туре	Max.V.	Max.Ma	Min.V.	Size	NET
76 P 323 76 P 324 76 P 326 76 P 327 76 P 328	15A2PS2 8A5PS5 15A5PS5	52 AC 52 AC 130 AC 130 AC 44 DC	200 400 200 400 200	27 AC 27 AC 105 AC 105 AC 23 DC	25/64X <sup>3</sup> /4" 1/2X <sup>3</sup> /4" 25/64X <sup>15</sup> /16" 1/2X <sup>15</sup> /16" 25/64X <sup>3</sup> /4"	1.08 1.13 1.42 1.58
76 P 329 76 P 330 76 P 331 76 P 332 76 P 325	15A2PS1 15A2HS1 8A3PS2	44 DC 44 DC 44 DC 66 DC 66 DC	200 500 500 250 500	23 DC 23 DC 23 DC 23 DC 45 DC 45 DC	3364X11/32" 1/2 X3/4" 3764X1/32" 2564X3/4"	.92 2.32 .97 2.37 1.08

# PRODUCTION INSTRUMENT COUNTERS



High-quality electric counters for commercial and industrial applications. For 60-cycle operation.

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. Sipg. wt., 1 lb.

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 CPM, 200-million count life. Coil unharmed when current is left on. 6 digits. Shpg. wt., 3 lbs.

# RESET TYPES

No.	Туре	Fig.	V. AC	Size	Mount	Mtg. Ctrs.	NET
77 P 099	MDB-S4-24A	K	24	115/16x213/16x213/32"	Panel	19/16x27/16"	14.75
77 P 049	MDB-S4-115A	K	115	115/16x213/16x213/32"	Panel	19/16x27/16"	14.75
77 P 043	MDA-S4-115A	J	115	213/32x123/32x21/4"	Base	11/8 x 1 15/16"	14.00
77 P 236	624A	М	24	2½ x11/64x3½"	Base	315/64x123/64"	18.50
77 P 237		M		21/2 x 1 1/64x31/2"			18.50
77 P 238	P624A	L	24		Panel	41/16x11/2"	19.50
77 P 239	P6115A	L	115		Panel	41/16X11/2"	19.50
77 P 036	ECS-9	N		35/8 x115/16x51.5/32"		49/32×2"	38.50

# NON-RESET TYPES

77 P 033 MEA-N5-115A H | 115 |213/2x123/2x21/4" |Base |11/2x115/6" 14.40

# **Cutler-Hammer Switches**



# DEPENDABLE TOP-QUALITY SWITCHES

# STANDARD AC-DC TYPE

Phenolic case.  $1\frac{1}{2}\frac{n^2}{2}$  dial threaded stem. Stem length,  $1\frac{1}{2}\frac{n^2}{2}$ , excpet \*1 $\frac{1}{2}\frac{n^2}{2}$  and  $1\frac{1}{2}\frac{n^2}{2}$ , wire leads; facrow terminals; all others have solder lug terminals. U.L. Approved. Av. shpg. wt., 3 oz.

Stock No.	Mfr's Type No.	Action	Fig.	Amperes		1-9	10-99, EACH	100 or More,
140.	Type No.		_	125V	250V	EACH	EACH	EACH
34 B 500	8280-K16	SPST	A		3	.50	.42	34¢
34 B 527 34 B 508 34 B 501	8280-K14†	SPST	A		3 3	.50 .57	.42	34¢
34 B 508	8381-K8	SPST	Ą	6		.57	.48	38¢
34 B 501 34 B 528	8282-K14 8282-K12†	SPDT	A	6 3 3	1	.64	.54	43¢
						.64	.54	43¢
34 B 502	8360-K7	DPST	A		333333	.90	.77	61¢
34 B 529 34 B 530	8360-K6† 8363-K6†	DPST DPDT	A		3	.90 1.04	.77	61¢ 70¢
34 B 503	8363-K7	DPDT	Â		3	1.04	.88 .88	70€
34 B 529 34 B 530 34 B 503 34 B 749	8280-K15*	SPST	Ã	1:::::	3	.50	.42	34¢
	8290-K15*§		CC		3	.61	.52	41¢
34 B 783 34 B 784	8290-K16§	SPST	C		3	.61	.52	41¢
34 B 785 34 B 786	8295-K7*‡	SPST	В		3	.61	.52	41¢
34 B 786 34 B 787	8295-K8 ‡ 8381-K7*	SPST	B	1	3 3 3 3	.61	.52	41¢
				6		.57	48	38¢
34 B 788	8391-K7*	SPST	Č	6	3	.68 .68	.58	46¢
34 B 789 34 B 790	8391-K8 8396-K7*‡	SPST	ç	6	3	.68	.58 .58	46¢ 46¢
34 B 791	8396-K8 ±	SPST	B	6	3 3 3	.68	.58	46¢
34 B 792	8370-K7	DPST	A		-	.98	.83	66¢
34 B 793		DPST	B	6	33333	1.19	1:01	80¢
34 B 793 34 B 632 34 B 794 34 B 795	8373-K71	DPDT	Ā	6	3	i.iź	.95	77¢
34 B 794	8373-K8*	DPDT		6 6	3	1.12	.95	77¢
34 B 795	8375-K7	DPDT	l	6	3	1.44	1.22	98¢

# AIRCRAFT TYPE

Meet JAN-S-23 requirements. All have solder terminals and  $1\frac{1}{2}\frac{1}{2}$  long threaded stem. \*Have center-off position. †Have lever-seal to keep out sand and dust. Gov't ST-42 series are Fig. D. \$Momentary contact. ; Momentary contact one side. \*Momentary contact normally on. \*\*Momentary contact normally on. \*\*Momentary contact normally on. \*\*Momentary contact normally on. \*\*Momentary contact normally of. \*\*Momentary contact normally of. \*\*Momentary contact normally of. \*\*Momentary contact normally of. \*\*Av. shgp. wt. 3 oz.

Stock	Mfr's	Gov't		Am	peres	4.0	10.00	100 or
No.	Туре	No.	Action	28V DC	125 V AC	EA.	10-99, EA.	More, EA.
34 B 553 34 B 414 34 B 551 34 B 415	8803-K6	ST42E ST42E ST42A ST42A	SPDT SPDT SPST SPST	20 20 20 20 20	8 8 8 8	1.02 1.29 .85 1.09	.87 1.10 .72 .93	.57 .74
34 B 693 34 B 552 34 B 416 34 B 695	8816-K9†	ST42H ST42D ST42D ST42G	SPDT SPDT SPDT SPDT	20 20 20 20 20	7 8 8 7	1.12 1.02 1.29 1.12	1.10	.70 .87
34 B 696 34 B 417 34 B 554 34 B 418 34 B 555	8823-K5 8823-K6†	ST42B ST52P ST52K ST52K ST52N	SPST DPDT DPST DPST DPDT	20 30 30 30 30 30	7 20 20 20 20 20	.94 1.68 1.02 1.42	1.43 .87	.64 1.13 .70 .96 .78
34 B 419 34 B 697 34 B 699 34 B 712 34 B 713	8827-K5** 8831-K5\$ 8833-K3*‡	ST52N ST52M ST52R ST52T ST52S	DPDT DPST DPDT DPDT DPDT	30 20 20 20 20 20	20 12 12 12 12 12	1.42 1.16 1.34 1.34	.99 1.14 1.14	.91

# PUSH-BUTTON AC-DC TYPE

E Push-button type switches to control current by opening or closing door. Automatically turn lights on and off in refrigerators, telephone booths, closets, vaults, etc. Momentary contact type, §Stem length, ¼\*, others, ½\*, ²Red button; others are black. Solder lug terminals. \*Normally-open type is "on" with door closed; †normally-closed type is "on" with door open. U.L. Approved. Av. shpg. wt., 3 oz.

Stock No.	Mfr's Type	Action	Am;	eres 250 V	1-9, EACH	10-99, EACH	100 or More, EACH
34 B 548 34 B 63 I 34 B 547 34 B 549	8411-K4 8411-K6 8411-K8 8440-K2	SPST* SPST*§ SPST†‡ SPST*	.75 .75 .75 .75	.25 .25 .25	36¢ 36¢ 25¢ 73¢	31¢ 31¢ 21¢ 62¢	24¢ 24¢ 17¢ 50¢

AC-DC INDUSTRIAL TYPE

G Standard-duty switches. Bakelite case. 1½2" threaded stem, 1½2" long except \*, 1½2" long stem. Screw terminals. Underwriters' Laboratories Approved. Av. shgp. wt., 3 oz.

Stock No.	Mfr's	Action		eres	1-9 10-99, EACH EACH		100 or More,
110.	Туре		125 V	250 V	EACH	EACH	EACH
34 B 545	7320-K3	DPST	12	6	.96	.82	.65
34 B 408	7321-K2*	SPST	12	6	.96	.82	.65
34 B 520	7321-K3	SPST	12	. 6	.96	.82	.65
34 B 516	7360-K8	DPST	15	10	1.67	1.42	1.13
34 B 517	7402-K4	DPST	11/2 hp	20	2.34	1.99	1.58
34 B 714	7361-K5	SPST	15	10	1.67	1.42	1.13
34 B 715	8690-K2	DPDT	15	10	3.66	3.11	2.47
34 B 717	8680-K1*	DPDT	10	5	3.02	2.57	2.04
34 B 718	7360-K7*	DPST	- 15	10	1.67	1.42	1.13
34 B 719	7402-K3*	DPST	11/2 hp	20	2.34	1.99	1.58

# STANDARD AC TYPE

All rated at 6 amps at 125 v. and 3 amps at 250 v. Single-pole switches are Fig. K; double-pole are Fig. D. Solder lugs, except \*screw type terminals. †Center ''Offi'' positions. Threaded stem dia., <sup>15</sup>/<sub>32</sub>"; stem length, <sup>15</sup>/<sub>32</sub>". U.L. Approved. 3 oz.

Stock No.	Mfr's Type	Action	1-9 EACH	10-99, EACH	100 or More, EACH
34 B 640	7580-K4*	SPST	49¢	42¢	33¢
34 B 641	7580-K6	SPST	43¢	37¢	29¢
34 B 642	7581-K4*†	SPDT	56¢	48¢	38¢
34 B 643	7581-K6†	SPDT	47¢	40¢	38¢
34 B 644	7582-K4*	SPDT	56¢	48¢	32¢
34 B 645	7582-K6	SPDT	47¢	40¢	32¢
34 B 646	7590-K4*	DPST DPST DPDT DPDT DPDT DPDT	76¢	65¢	51¢
34 B 647	7590-K6		64¢	54¢	44¢
34 B 648	7591-K4*†		90¢	77¢	61¢
34 B 649	7591-K6†		72¢	61¢	49¢
34 B 689	7592-K4*		90¢	77¢	61¢
34 B 690	7592-K6		72¢	61¢	49¢

# **HEAVY-DUTY AC TYPE**

Slow-make, slow-break mechanism for long, dependable use. 1%2'' diameter threaded stem, 15%2'' long. \*Center off. †Screw terminals; others have solder lug terminals. All have nominal rating of 10 amps at 250 v. AC and 15 amps at 125 v. AC. U.L. Approved. Av. shpg. wt., 3 oz.

Stock No.	Mfr's Type	Action	Fig.	1-9, EACH	10-99, EACH	More, EACH
34 B 534 34 B 591 34 B 592 34 B 536	7501-K13 7500-K14† 7502-K13*† 7505-K4	SPST SPST SPDT SPDT	J J K K	.49 .57 .68	.42 .48 .58 .47	.33 .38 .46 .37
34 B 593 34 B 537 34 B 594 34 B 538 34 B 595	7504-K4† 7561-K4 7560-K5† 7565-K5 7564-K6†	SPDT DPST DPST DPDT DPDT	K D D D	.68 .74 .91 .84	.58 .63 .77 .71	.46 .50 .62 .57
34 B 539 34 B 596 34 B 543 34 B 597 34 B 523	7563-K4* 7562-K4*† 7611-K2 7610-K2† 7613-K2*	DPDT DPDT 3PST 3PST 3PDT	D D M M M	.84 1.10 1.58 1.83 1.94	.71 .94 1.34 1.56 1.65	.57 .74 1.07 1.24 1.31
34 B 598 34 B 796 34 B 798 34 B 799	7612-K2*† 7503-K13* 7615-K2 7614-K2†	3PDT SPDT 3PDT 3PDT	M K M M	2.33 .55 1.94 2.33	1.98 .47 1.65 1.98	1.58 .37 1.31 1.58

# SPST MIDGET TYPE

# **CENTER-OFF TYPE**

# **ON-OFF PLATE**

# Carling and Grayhill Switches

# CARLING SWITCHES

















# **AC-DC TOGGLE SWITCHES**

AC-DC toggle switches for medium duty applications. Type Nos. ending with 73 are bat handle with ½½″ stem length; those ending with 25 are ball handle with ½½″ stem length. All have solder lug connections except \*wire leads. All have ½½″-32 threaded stem. Av. shpg.

	ock o.	Mfr's Type	Action	Amperes		Amı		1-9, EACH	10-99,	100 or More,
	·.	ı y pe		125V	250V	EACH	EACH	EACH		
34 B		110-73	SPST	6	3	39¢	35¢	25¢		
		110-25	SPST	6	3	47¢	43¢	30¢		
34 B	177	112-73	SPDT	6	1	46¢	41¢	30¢		
34 B	093	112-25	SPDT	3	1	54¢	49¢	35¢		
		216-73	DPST	3	1	62¢	56¢	40¢		
34 B	094	216-25	DPST	3	1	71¢	64¢	46¢		
34 B	179	316-73	DPDT	3	1	714	64¢	46¢		
34 B	095	316-25	DPDT	3	1	78¢	71¢	5Ĭ¢		
34 B	096	2BB62-73	SPDT	6	3	54¢	49¢	35¢		
		2BK62-73	DPST	6	3	68¢	61¢	44¢		
		2BL62-73	DPDT	6	3	76¢	68⊄	49€		
34 B	180	111-16-73*	SPST	6	3	42¢	38¢	27¢		

# HEAVY-DUTY PLASTIC-TOGGLE AC SWITCHES

Extremely compact AC switches for limited space applications. Require only ½" behind panels. Ideal for instrumentation and development use. Rated 15 amps at 125 v. and 7½ amps at 250 v. Solder lug terminals. \*\*Center off: 1½"-32 threaded stem; ¼" stem length. U.L. Approved. Shpg. wt., 2 oz.

Stock No.	Mfr's Type	Color	Action	1-9, EACH	10-99, EACH	100 or More EA.
34 B 3 2 34 B 3 3 34 B 3 4 34 B 3 5 34 B 3 6 34 B 3 7	AA252-BL AA252-RD AB252-BL AB252-RD AC252-BL AC252-RD	Black Red Black	SPST SPST SPDT SPDT SPDT* SPDT*	48¢ 48¢ 54¢ 54¢ 54¢	43¢ 43¢ 49¢ 49¢ 49¢	32¢ 32¢ 35¢ 35¢

### MOMENTARY SPST AC-DC TOGGLE SWITCH

# **PUSH-BUTTON SWITCHES**

Heavy-duty, push-type momentary contact switches. Rated 10 amps, 125-250 v. AC. N.o., normally open; n.c., normally closed. Screw terminals. 15/2" dia. stem.; 16 long. Shpg. wt., 3 oz.

Stock	Mfr's	Action	1-9,	10-99,	100 or
No.	Type No.		EACH	EA.	More, EA.
34 B 398 34 B 397	172 170	SPST, n.o. SPST, n.c.	57c	5lc	37c

# HEAVY-DUTY AC AND AC-DC TOGGLE SWITCHES

E [ G Bat handle toggle switches, 11/6" long. ‡AC-DC types; all others are AC only. #Center off. Bakelite base with metal covering. Stem length, 15/2". Stem length, 25/2" -32 thread. \*Screw terminals with 6-32 binding-head screws. All others with solder lugs, fillustrated in Fig. F. Sillustrated in Fig. F. All others as in Fig. E. Shpg. wt., 3 oz.

							-
Stock No.				eres 250 V	1-9, E.A.	10-99, EA.	100 or More, EA.
34 B 380† 34 B 181† 34 B 379† 34 B 182†	2DA25-73‡ 2DK25-73‡ EA255-73‡ EK255-73‡	SPST DPST SPST DPST	12 12 15 15	6 6 10 10	.84 .84 1.32 1.32	.75 .75 1.19	.54 .54 .86 .86
34 B 183 34 B 385 34 B 386 34 B 184	2FA53-73 2FA54-73* 2FB54-73* 2FC53-73	SPST SPST SPDT SPDT#	15 15 15 15	10 10 10 10	.48 .54 .65	.43 .49 .58 .49	.32 .35 .42 .35
34 B 387 34 B 187 34 B 389 34 B 188	2FC54-73* 2GK53-73 2GK54-73* 2GL-53-73	SPDT# DPST DPST DPDT	15 15 15 15	10 10 10 10	.65 .70 .86	.58 .63 .78 .73	.42 .46 .56 .53
34 B 390 34 B 167 34 B 391 34 B 169§	2GL-54-73* 2GM53-73 2GM54-73* 600-C-73‡	DPDT DPDT# DPDT# SPST	15 15 15 20	10 10 10 10	1.03 .81 1.03 .62	.93 .73 .93 .56	.67 .53 .67 .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, 11/6" long. Stem length, 15/2". Stem dia., 15/2"-32 thread. \*Screw-type terminals with No. 6-32 bindinghead screws as in Fig. E. Others with solder lugs. ‡One side normally on; other side momentarily on; ocenter position. \$Both sides momentarily on; center off. \$One side momentarily on; center off. Shpg. wt., 3 oz.

Stock	Mfr's		Amp	eres	1-9	10-99	100 or
No.	Туре	Action	125 V 250 V		ĒĀ.	EA.	More, EA.
	6FA54-73*		15	10	.65	.58	.42
	6FA58-73*		15	10	.65	.58	.42
	6FB53-73*		15	10	.62	.56	.40
	6FB54-73*		15	10	.71	.64	.46
34 B 388	6FC54-73*	SPDT§	15	10	.71	.64	.46
	6FC58-73*		15	10	.71	.64	.46
34 B 062	6GK54-73*	DPST n.o.	15	10	1.00	.90	.65
	6GK58-73*		15	10	1.00	.90	.65
	6GL54-73*		15	10	1.16	1.05	.75
34 B 065	6GM54-73*	DPDT	15	10	1.16	1.05	.75
34 B 392	6GM58-73*	DPDT‡	15	10	1.16	11.05	.75

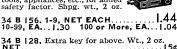
# TYPE 110-SP PUSH-BUTTON SPST AC-DC SWITCH

CH.....83¢ 100 or More, EACH.

# 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, 13½". Will fit panels to 3½" thick. Size, 13½ now to remove key. Use on power tools, appliances, etc., for added safety factor. Shpg. wt., 2 oz.





# 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.











# GRAYHILL MINIATURE **SWITCHES**





# MOMENTARY PUSH-BUTTON TYPES

Series 4000. SPST. 11½2"x5½4" dia. Solder terminals. ½ amp, 115 v. AC, resistive. 4 oz. 34 B 870. Normally open; red button. 50-99, EA.......53¢ 1-49, EA.......69c 34 B 871. Normally closed; black button. 50-99, EA......53¢ 1-49, EA.......69¢

Series 23-1. Tiny push-button switch. SPST. 13½" long; ½" dia. Solder terminals. ½ amp. 115 v. AC, resistive. Normally open. Wt., 2 oz. 34 B 890. 50-99, EA....64¢ 1-49, EA...83¢

Series 35. DPST. 11%4" long; 51,4" dia. Solder terminals. ½ amp, 115 v. AC, resistive. Normally open. Red button. Shpg. wt., 4 oz. 34 B 964, 50-99, EA....90¢ 1-49, EA.I.18

Series 34. Solderless wiring switch. SPST. Receptacles for A-MP #53 taper pins.  $3\frac{1}{2}$ "x1/2" dla. ½ amp, 115 v. AC, resistive. Normally open. Red button. Shpg. wt., 3 oz. 34 B 965. 50-99, EA... 1.01 1 6¾4, EA.1.32

Series 39. \*Ultra-miniature; SPST. 3%4" long; ¼" dia. Solder term. 1/10 amp. 115 v. AC. resistive. Normally open. Red button. 2 oz. 34 B 968. 50-99, EA. ... 75¢ 1-49, EA. .98¢

# **ROTARY TAP SWITCHES**

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., 17.
1-Deck Type. 11½" long. Wt., 1 oz., 24. B 707, 50-99, EA. 2.85, 1-49, EA. . 3.72
2-Deck Type. 11½" long. Wt., 1½ oz., 34. B 708, 50-99, EA. . 3.86 1-49, EA. . 5.05

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 pet deck. Non-shorting contacts. Solder terminals. Break 1 amp or carry 5 amps, 115 v. AC, resistive. Diameter, 1".

1-beck Type. 1½" long. Wt. 2 oz.

34 B 706, 50-99, EA.. 1,38 1-49, EA.. 1,81

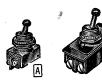
2-Deck Type. 1<sup>1</sup>3/6" long. Wt., 3 oz. 34 B 709. 50-99, EA. 3.07 1-49, EA. .4.02

3 to 10-Deck Series 12 and 24 available 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. 3c B 723. NET......3c 

# **Appliance and Miniature Switches**

















# ARROW-HART & HEGEMAN APPLIANCE SWITCHES

# BALL HANDLE TOGGLE SWITCHES

\*Indicates rating of 3 amps at 250 volts; †10 amps at 125 volts and 5 amps at 250 volts. All others are rated 3 amps at 125 volts and 1 amp at 250 volts. §Momentary type. ¹5½″ 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.	Mfr's Type	Action	Shank Length	1-9, EACH	10-99, EA.	100 or More, EA.
34 B 100 34 B 101 34 B 104 34 B 107 34 B 110	20994-BF 21518-B 80323-BU 80638 21350-B	SPST* SPST* SPST† DPDT† SPDT	13/32" 3/4" 1/2" 3/8" 13/32"	.50 .61 .84 3.42 .64	.42 .50 .68 2.77	.34 .39 .57 2.31 .44
34 B   27 34 B   20 34 B   30 34 B   31 34 B   32 34 B   34	21827-B 20902-AM 20905-Z 20905-BT 20905-C 20905-BX	SPDT§ DPST DPDT DPDT DPDT DPDT DPDT	13/32" 13/32" 13/32" 13/32" 3/4" 1" 15/32"	.93 .91 1.04 1.14 1.19	.76 .74 .85 .96 .965	.63 .61 .70 .77 .80 .70

# **POWER TYPE TOGGLE SWITCHES**

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 HP, 250 volts. U.L. Approved. Bakelite case. Screw terminals. Shank, 1942 dia. 1942 long. With mtg. nuts. Shpg. wt., 2 oz.; 20, 2 lbs.

Stock	Mfr's	Action	1-9,	10-99,	100 or
No.	Type		EACH	EACH	More, EACH
34 B 135 34 B 136 34 B 137	80607 80600 80618	SPST DPST SPDT	96c	78c	64c

### **ROTARY SWITCHES**

C Positive contact. U.L. Approved. All switches 125/250 volts. Threaded shank, 11/2" dia., 3/2" long. Shaft, 1/4" dia., 7/8" long. Wt., 2 oz.

Stock No.	Mfr's Type	Action	Amps	1-9, EACH	10-99, EACH	100 or More, EA.
34 B   41 34 B   43	81715-G 81724-G	SPST DPST	6/3 6/3	1.22	.99 1.32	.82 1.10
34 B 144	81727-G	DPDT	6/3	1.77	1.43	1.19

# **BAT HANDLE TOGGLE SWITCHES**

Ruggedly built A-H and H bat handle toggle switches. †in Action column refers to Fig. D above, \$Fig. E, fFig. 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, ½4" diameter, ½4" long, except \*½4" long. With mounting nuts. Shpg. wt., each switch 3 oz.; 20 switches, 3 lbs.

Stock No.	Mfr's Type	Action	Amps.	Volts	1-9, EACH	10-99, EA.	100 or More EA.
34 B 195 34 B 196 34 B 197 34 B 198	21350-BP 20902-DN	SPST† SPDT† DPST† DPDT†	3 3 3 3	125 125 125 125 125	.55 .70 .98 1.18	.45 .57 .79	.38 .47 .66 .79
34 B 109 34 B 109 34 B 103	80602-CA	SPST# DPST# DPDT§	12 15 6	125 125 125	.96 1.67 1.50	.78 1.35 1.22	.64 1.12 1.00

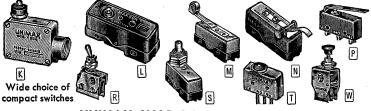
# **PUSH-BUTTON SWITCHES**

Momentary contact. findicates slow make and break type; ffast make and break type. 34 B 119 and 34 B 124 are normally closed, all others are normally open. Metal base, and ½ shank length, except 34 B 152, ½ \*\*Two-circuit type. § Same as 3392 but with black bakelite button. Shpg. wt., 3 oz.

34 B   18   3592# 34 B   19   3392*† 34 B   24   3392-AE\$ 34 B   52   80630	SPST SP2 SP2 DPST	3 1 1 12	250 125 125 125 125	.97 .70 .88	.78 .57 .71	.65 .47 .59 1.15

Type 86710-C. SPST push-button switch with snap-on bakelite button in red or black. Press button to close circuit; press to open. Rated at 3 amps, 250 volts; C. Approved. Threaded shank, 19/20% long. With mtg. nuts. Shpg. wt., each, 2 oz.; 20, 11/4 lbs. 34 B 161. Red. 34 B 162. Black. 100 or More, EA. . . 72¢ 10-99, EA. 87¢ EA. . . 1.07

34 B | 62. Black. 100 or More, EA... 72¢ 10-99, EA. 87¢ EA... I.U./
Type 86710. Same as type 86710-C push-button switch above, but less snap-on bakelite button. Shpg. wt., 2 oz. 34B | 60.100 or More, EA... 59¢ 10-99, EA.... 74¢ EA... 82c
Type 3391-GL. Momentary contact. SPST normally open. 1 amp. 125 v. AC. U.L. Approved. Threaded shank, 1½xx½/«". With mtg. nuts, lugs and bakelite button. Shpg. wt., each, 2 oz.; 20.11/4 lbs. 34 B | 59.100 or More, EA... 50¢ 10-99, EA... 59¢ EA... 73c



# **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 amp, 125 v DC and 20 amps, 125, 250, or 480 v., 60 cycle non-inductive AC. All switches SPDT. UL, CSA

Approval. Metal clad units allow direct wiring into standard electrical conduit systems. Up to No. 18 wire can be used in terminals. Sizes: (1) 11½6x²/ax¹/a²; (2) 21½xx1½x1½x²/4²; (3) 2²½xx 1/½x1½²; (3) 2²½xx1½x1½²; (3) 2²¾xx1½²; (3) 2³¾xx1½²; (3) 2³¾xx1¾x1½²; (3) 2³¾xx1¾x1½²; (3) 2³¾xx1¾x1¾x1½²; (3) 2³¾xx1¾x1¾x1¾x1½²; (3) 2³¾xx1¾x1¾x1¾x1¾x1¾x1¾x1¾x1

Stock	l Mfr's	Fig.	Actuator and	Micro	Overall	lr	NET EAC	н
No.	Type	rig.	Operating Force	Equiv.	Size	1-9	10-19	20-49
34 B 750	*2HB-1	L	Basic pin type; 9-13 oz.	BZ-2R	1	1.47	1.32	1.20
34 B 751	2HBL-1		Leaf spring type; 5 oz. max.	BZ-2RL	1	1.62	1.46	1.31
34 B 752	2HBW-1	M	Same with roller: 5 oz. max.	BZ-2RL2	2	2.11	1.90	1.71
34 B 755	*2HBT-1		Leaf spring, hinged; 1-2.5 oz.	BZ-2RW	1	1.86	1.68	1.51
34 B 759			Same with roller; 1-3.5 oz.	BZ-2RW2	3	2.35	2.12	1.90
34 B 764		N	Safety interlock; 10 oz. max.	None	4	2.70	2.43	2.19
34 B 753	2HBQ-1		Plunger, small; 9-13 oz.	BZ-2RS	5	1.81	1.63	1.47
34 B 754		S	Plunger, large; 9-13 oz.	BZ-2RQ1	2	3.38	3.05	2.74
34 B 721	KEB2HB-5	K	Boot pigr., metal clad; 9-24 oz.	BZE-2RN	6	5.93	5,34	4.80
34 B 781	KEJ2HB-5	l	Plunger, metal clad; 9-13 oz.	BZE-2RQ81	6	4.56	4.11	3.69

Subminiature Types. Snap action, fully enclosed SPDT switches. Rated 5-7 A, 125/250 v. non-inductive AC. Have UL, CSA Approval.

USM5 conforms to applicable military specs. Sizes: (1)  $^{2}$ /<sub>2</sub> $x_1$ /<sub>32</sub>x/<sub>4</sub>"; (2)  $^{2}$ /<sub>2</sub> $x_1$ /<sub>4</sub> $x^2$ /<sub>32</sub>"; (3)  $^{1}$ /<sub>32</sub>x/<sub>8</sub>x<sup>1</sup>/<sub>16</sub>". Wt., 2 oz.

# UNIMAX DESIGN KIT

# GENERAL-PURPOSE SWITCHES

Type 41047 Rotary Canopy Switch. SPST switch for lamps and small appliances. Rated 1 amp at 250 volts; 3 amps at 125 volts. Has ½6 stem; ½6 diameter. With 6 includes attached. Underwriters Laboratories Approved. Shpg. wt.: each, 2 oz.; 20, 1½ lbs. 48 C 10-99, EA... 44¢ 100 or More, EA... .40¢

# **EAGLE FLUSH MOUNT SWITCH**



Pushbutton Switch, For signalling bells, lights, etc. Pearl button. Screw terminals. For ½" hole. Shpg. wt., 2 oz. 55 B 196, 1-9, NET EACH. 29C 10-up, EACH. 26¢

# **INDICATING SWITCH PLATES**



X For toggle or rotary switches. 11/8" dia. polished aluminum plate. Has 1/2" hole. Etched on black background. Wt. 2 oz. 34 B | 5|. NET. 39¢ 20-99, EACH... 36¢

For Toggle Switches. Nickel-plated "On-Off" plate. 1/2" hole. Shpg. wt., 4 oz. 34 B 145, Package of 25......50c

# INDUSTRIAL STEP-ON AND FOOT SWITCHES

Conceals SPST Switch



### "SWITCHMAT" STEP-ON SWITCH

Stepping on the Switchmat closes circuit which

78 BX 356, 18x30", 10 lbs. NET..... 21.60

Control Box. Relay control unit for use with Switchtrol unit for use with Switchmat or other switch. Handles up to 1000 watts at 110-120 v., 60 cycle AC.
Provides 6 v. AC for switch circuit. Has two outlets, one for normally off operation of equipment. Special 2-prography is furnished for use with



of normally on operation of edulpment. Special 2-prong plug is furnished for use with Switchmat. Has 6-ft. AC cord. Size, 3x45.7 For operation from 11.0-120 volts, 60-cycle AC. Shgs. wt., 2½ lbs. 78 B 357. NET. 12.40

# **GENERAL CONTROL FOOT SWITCHES**

Model MA. Small, light-weight foot switch designed for applications where high operating speed and mini-mum fatigue are important. Ideal for office and light in-dustrial applications.



Ideal for office and light industrial applications. Switch is SPDT with spring return. Supplied with non-skid base; holes for floor mounting. Set for ½ 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. 1½x 4x½". Shpg. wt., 1½ lbs. 78 B 374, NET. 4.60



Model MI-25. Heavy-duty foot switch designed specifically for industrial applications. Overlapping treadle makes it ideal for operation with work-shoes. Switch has SPDT contact arrangement—first press transfers contacts, second press restores to original position. Rated 12 amps 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. 3.44x 6/4. Shgg. wt. 3/4 lbs.
78 B 370. NET.

Model MI-23. As above, but with spring re-

Model MI-23. As above, but with spring return. Has contacts and contact ratings of Model MA listed above. Shpg. wt., 3½ lbs. 9.80 78 B 371. NET..........9.80

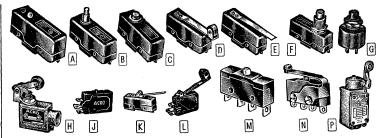
# LECTROMATIC FOOT SWITCH

Model 1010. Snap-action foot switch. Provides a fas-100t switch. Frovides a fas-ter, more efficient means of switching electric mo-tors and machines on and off. Ideal for controlling a wide variety of power tools, riveting and weld-ing units, photographic-equipment, etc.



Promotes greater safety because operator can instantly stop machine by releasing pressure on switch. Saves time and extra hand movement. Easy to install—just plug device to be controlled into the special socket and plug switch cord into AC wall socket. Normally-open SPST switch rated 10 amps, 115v. AC.

Housed in durable metal case, with anti-skid 



# 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 tavergreen mining, operating forcem funces, except \*grams. All switches are SPDT except †SPST normally open, §SPST normally closed. ‡SP4 and ##SP2. #With wire-leaf actuator; \*\*flat-leaf actuator; ††with mounting bracket. §§Mechanically and electrically equivalent. but not interchangeable. All have solder terminals except fis.erew. Av. shpg. wt., 4 oz. (except fig. P. 2½ lbs.)

Stock	Mfr's	Ī	Oper.	Pre-				NET	EACH	
No.	Туре	Fig.	Force	travel	Size	Amps	1-9	10-19	20-49	50-Up
35 B 016	TD-48L	K	12*	3/32	27/32X11/16X115/16"	10	2.02	1.82	1.62	1.41
35 B 009 35 B 018 35 B 019 35 B 020	1MD1-1A 2MD1-1A 2MD3-1A 1CMD1-2AXX	) ) )	3-6 6-10 6-10 20-27*	1/32 1/32 1/32 1/32 .040		10 10 10 3	1.45 1.45 1.45 1.45	1.31 1.31 1.31	1.16 1.16 1.16	1.02 1.02 1.02 1.02
35 B 021 35 B 024 35 B 030 35 B 008 35 B 038	2CMD1-2AXX 1CMD1-2AXX-A22 2CMD1-2AXX-A24 1MD1-1A-A18 1MD1-1A-A18M	J# j**	33-44* 2.5* 4* 1 ½ 2	.040 .750 .750 .750 1/32 .040	53/64X9/32X13/64"	3 3 3 10 10	1.45 1.75 1.75 1.85 2.05	1.31 1.58 1.58 1.67 1.85	1.16 1.40 1.40 1.48 1.64	1.02 1.23 1.23 1.30 1.44
35 B 028 35 B 029 35 B 031 35 B 130 35 B 131	3D05-5P 3DC5-5P ME-S1P0BD-R 260-0001-00 260-0008-00	G G M N	10-15 10-15 3-6 9 14-20	.0306 .188 .050	%x <sup>2</sup> 9/ <sub>32</sub> " dia. %x <sup>2</sup> 9/ <sub>32</sub> " dia. 5/ <sub>6</sub> x1 1/4 x9/ <sub>32</sub> " 1/2 x1/4 x3/4" 1/2 x1/4 x3/4"	†12 §12 10 ##10 ##10	1.75 1.75 .70 1.50 1.99	1.58 1.58 .63 1.35 1.79	1.40 1.40 .56 1.20 1.59	1.23 1.23 .49 1.05 1.39

### SWITCHES WITH MICRO EQUIVALENTS

Stock	Mfr's	Micro	l	Oper.	Pre-	Size	A		NEI	EACH	
No.	Туре	Equiv.	Fig.	Force	travel	3126	Amps	1-9	10-19	20-49	50-Up
	‡‡RD-5L	BZ-2RL		4-5	1/16	53/16×13/4×113/16"	10	1.58	1.42	1.26	1.11
35 B 014	‡‡RD-2M	BZ-2RL2		5	7/32		10	2.02	1.82	1.62	1.41
	††RD-1A-1S	BZ-2R-A2	A		.010025		15	1.56	1.40	1.25	1.09
	†† RD-2M-1S	BZ-2RL2-A2	D		5/32		15	2.11	1.90	1.69	1.48
	††RD-5L-1S	BZ-2RL-A2	E	4-5	1/16		15	1.72	1.55	1.38	1.20
35 B 288	††RD-1P-1S	BZ-2RQ-A2	F		.010025	1x11/16x115/16"	_15	3.34	3.01	2.67	2.34
		BZ-2RD-A2	C		.010025		15	1.88	1.69	1.50	1.32
	††RD-10-1S	BZ-2RS-A2	В		.015030		15	1.88	1.69	1.50	1.32
	††RD-LW28-1S	BZ-2RW82-A2		3.5	.15628		15	2.42	2.18	1.94	1.69
		BZ-2RW822-A2		6	.156		15	2.42	2.18	1.94	1.69
35 B 294	††RD-LW8-1 <b>S</b>	BZ-2RW80-A2		2.5	.128406		15	1.94	1.75	1.55	1.36
	++S-RD-7PN-1S	BZE-2RN		9-24			15	5.70	5.13	4.56	3.99
		BZE-2RQ2	H	10-18	9/64	1-11/-25/-	15	7.65	6.89	6.12	5.36
		BZE-2RQ9		9-13	.010025	1x1¾ x25/16°	15	7.65	6.89	6.12	5.36
	††S-RD-6PQ-1S	BZE-2RQ		9-13	.010025		15	4.40	3,96	3.52	
35 B 132	242-0003-03	IML1§§	P	48	.826	53/16x13/4x113/16"	‡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.



T-1003 meets MIL-S-6745 requirements for -65 to +160° F. temps. T-2104 is a miniature

i mintai	yancı	an tw	imstan	us 50 G	S SHOCK,	version, 13103 a subminiature version.					
Stock	Туре	Action		oeres	Terminals	Mtg.	Overall Depth	Body	N	ET EACH	
No.	lype	ACTION	28 VDC	115 VAC	Terminais	Hole	Behind Panel	Dia.	1-9	10-24	25-Up
33 B 800			20	10	Screw	15/32"	15/32" 43/64"	3/4 "	3.22	2.74	2.42
33 B 801	T2104	SP2_	10	5_	Lug	14"	43/64	15/32	3.63	3.09	2.72
33 B 802	13103	SPDI	5	2.5	Lug	14"	43/64"	11/32	4.06	3.45	3.05

# **PUSH-BUTTON TYPES**

Momentary action. Series W meet MIL-S-6743 (dwg. MS-25089-3) specs. for military aircraft. Others U.L. Approved. All without flange, except \*flat flange, †rounded flange.

No.	Type	Action		115 VAC	nals	Mtg. Hole	Behind Panel	Body Dia.	1-9 (10-24) 25-49 (50-Up
33 B 807 33 B 808		SP2 SP2 SPST (NO)	10 10 17	15	Screw Screw Screw	5/8 5/8 5/8	15/16" 15/16" 29/32" 29/32"	9/16" 9/16" 9/16"	5.43 4.62 4.07 3.81 5.43 4.62 4.07 3.81 3.76 3.20 2.82 2.64
33 B 809 33 B 810		SPST (NO)	10	15 15	Screw	5/8°		9/16"	3.01 2.56 2.26 2.11
33 B 811 33 B 812 33 B 813	B2001	SP2 SPST (NO) SPST (NC)	10	15 8 8	Screw Lug Lug	1/2"	19/32" 19/32" 47/64" 47/64"	9/16" 9/16" 9/16"	3.61 3.07 2.71 2.53 2.09 1.78 1.57 1.47 2.09 1.78 1.57 1.47

B5023. Silent, smooth-acting, non-snap, momentary switch for calculators, computors, etc. SP2, non-shorting. Rated 3 amps 33 B 8 4, 1-9, NET EACH.....3.78

@ 30 VDC. Min. life, 100,000 operations. Only  $\frac{1}{2}$  lb. operating force.  $\frac{1}{4}$  button travel.  $\frac{1}{2}$  mtg. hole,  $\frac{3}{4}$  behind panel,  $\frac{4}{6}$  body dia. 10-24, EACH.....3.21 25-Up, EACH.....2.84

# "SWITCHLITE" PUSH-BUTTON TYPES

W Switches with lamps in buttons. All push on-pull off, except \*momentary. Lamps independent, except toperates with switch on aux. contact. 28-v. lamps. Rated @ 28 VDC.

No.	Type	Action	Amps.	Terminals	Mtg. Hole	Behind Panel	Body Dia.	1-9	10-24	25-Up
33 B 803		SPST (NO)		Lug	5/8"	117/32"	17/32	7.52	6.39	
33 B 804		SPST (NO)		Screw	5/8°	1%	<b>%</b>		9.46	8.35
33 B 805	A3541	SPST (NO)	10	Screw	%'	1%*	74.	11.13	9.46	8.35

# Rotary and General Purpose Switches

# NEW knight PRINTED CIRCUIT SWITCHES



- Cut Labor & Wiring Costs
- Adaptable To Any Circuit
- Custom Types Available

Revolutionary development in rotary switches; increases production efficiency and reduces costs. Employ standard switch mechanism with printed circuit leads which terminate in prongs at the wafer edges.

Plug directly into printed circuit board . . . then dip solder, equits only a single bench single or double-faced wafers, with or without contact jumpers, in any shaft length, with any spacing between wafers.

Wafers: XXXP phenolic. Rotation: 360° in either direction. Mounting: 3/5" diameter threaded bushing, 3/5" long. Shaft: ¼" diameter, 17/6" long. Contact Rating: 2 amps at 15 voits DC; 150 ma at 110 voits AC. All types listed are single pole; non-shorting. Ganged switches have ½" spacing between wafers. Av. shpg. wt., 4 oz.

### 7 POSITION:

# 11 POSITION:

		Pts. Ea. Wafer				Pts. Ea. Wafer	
34 B 342	1	8	2.59	34 B 345	1	12	2.99
34 B 343	2	8	3.54	34 B 346	2	12	4.69
34 B 344	4	8	5.46	34 B 347	4	12	7.25

MANUFACTURERS: Allied can supply Knight printed-circuit 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° 43°. MS-20 has up to 19 circuits and 1 'off' position per deck. Letter B in Type Number indicates bonded construction, using cured laminations for ruggedization, shock-proofing and further enclosure. Non-shorting.

Stock No.	Mfr's Type	Gangs	Total Poles		Depth	NET EACH
34 B 950	MS-14-1	1	1	14	13/16"	1.96
33 B 950	MS-14B-1	1 1	1	14	13/16	2.30
34 B 951	M S-14-2	2	2 2	14	11/8"	2.50
33 B 951	MS-14B-2	2	2	14	11/8"	3.18
34 B 952	M S-14-3	3	3 4 4	14	17/16"	3.04
33 B 952	MS-14B-3	3	3	14	17/16"	4.07
34 B 953	MS-14-4	4	4	14	13/4"	3.97
33 B 953	MS-14B-4	4	4	14	13/4"	3.97 5.34
34 B 954	MS-14-6	6	6	14	23/8	5.78
33 B 954	MS-14B-6	6	6	14	23/8"	7.84
34 B 955	M S-20-1	1	1	20	23/8" 13/16"	2.50
33 B 955	M S-20B-1	1	1	20	13/16"	2.84
35 B 252	*MS-20-1-6DT	1	6	2 2 20	13/16"	3.18
33 B 956	*MS-20B-1-6DT	1	6	2	13/16"	3.53 3.18
34 B 956	MS-20-2	2 2	2	20	11/8"	3.18
33 B 957	MS-20B-2	2	2 2	20	11/8"	3.87
34 B 958	MS-20-4	4 4 6	4	20	13/4"	5.24
33 B 958		4	4	20	1 3/4"	6.61
34 B 959	MS-20-6	6	6	20	23/8"	7.40
33 B 959		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. Contrinuous rotation. Current ratings (not make or break): normal, 1 amp; momentary 5 amps. Supplied with knob.

Stock No.	Mfr's Type	Gangs	Total Poles	Pos. per Pole	Shorting or Non-Shorting	Depth	NET EACH
35 B 258 35 B 260	SS-14-1 SS-14-1S	1	1	14	N-S	13/16	1.86
35 B 262	SS-14-2	2	2	14	N-S	1 3/16" 1 1/8"	2.30
35 B 263 35 B 264	SS-14-2A SS-14-2S	2	2	14	N-S S	1½°	2.60 2.40
35 B 266 35 B 268	SS-14-3 SS-14-4	3	3	14	N-S N-S	17/16"	2.74
35 B 270	SS-20-1	i	i	20	N-S	13/16"	3.58 2.40
35 B 273	SS-20-2 SS-20-6	6	6	20 20	N-S N-S	11/8"	2.99

ETCHED DIAL PLATES. For the JBT rotary switches listed above. Raised bright metal numerals are easy to read against the duli black finish of the dials. Diameter, 2½". Shpg. wt., 1 oz.

Stock No.	Mfr's Type	Calibration	Angular Indexing	EACH
34 B 960	EP-13	Off thru 13	25° 43″	23c
34 B 961	EP-14	1 thru 14	25° 43″	
34 B 962	EP-19	Off thru 19	18°	
34 B 963	EP-20	1 thru 20	18°	

# DAVEN ADJUSTABLE-STOP SWITCHES



Stock No.	Mfr's Type	Poles	(Maximum)	EACH
35 B 374	*11-CM-24A	1	24	9.90
35 B 375 35 B 376	*21-CM-12A *31-CM-8A	2 3	12	10.20
35 B 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 3	9	10.20
35 B 380	31-CB-4A	3	4 3	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	3	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	1	16	9.90
35 B 387	22-CB-8A	2 3	8 5	10.20
35 B 388	32-CB-5A	3		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 amps, 150 volts, AC. Dia., 1½". The 212 is rated at 15 amps, 150 volts, AC. Dia., 1½". Model 312 is rated at 25 amps, 300 volts, AC. 150 v. between taps. Dia. 3½". \*Two-in-tandem types; rated same as single types. Shpg. wt., 111, 5 oz.; 212, 10 oz.; 312, 1 lb. All are U.L. Approved.

# MODEL 111

# MODEL 212

Stock No.	Taps	Rotation	NET EACH	Stock No.	Taps	Rotation	NET EACH
34 B 226 34 B 227 34 B 222*		30° 60°	2.65	34 B 238 34 B 323* 34 B 239	4	60° 60°	6.56 18.35 6.56
34 B 228 34 B 229 34 B 220* 34 B 230	5 5 6	90° 120° 120° 150°	2.65 2.70 10.50 2.70	34 B 240 34 B 241	5 6	90° 120° 150° 150°	6.82 6.82 18.87
34 B 231 34 B 232 34 B 233	- <del>7</del> -89	180° 210° 240°	2.82 2.82 2.94	34 B 242 34 B 243	- <del>7</del> 8 9	180° 210° 240°	7.09 7.09 7.32
34 B 234 34 B 235 34 B 293*	10 11	270° 300° 300°	2.94 3.03 11.61	34 B 245	10 12	270° 330°	7.32

# MODEL 312

34 B 279	3	60°	9.58 34 B 273	9	240°	110,35
34 B 278	4	90°	9.5834 B 272	10	270°	10.35
34 B 277	5	120°	9.8234 B 271	11	300°	10.58
34 B 276	10	150°	9.82 34 B 270	12	330°	110.58

See page 231 for 30° type switch plates.



FEDERAL ANTI-CAPACITY SWITCHES

Quick make-and-break type, positive-action switches. All normally open. Lever action is cam-roller type, with graphite-impregnated bearing turning on toolsteel axles. Provides smooth, easy action under all 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, 2½x5x¾". 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, <sup>35</sup>/<sub>4</sub>," wide x 11<sup>3</sup>/<sub>2</sub>," long. Mounting centers, 11/<sub>6</sub>," Type S-110-S is heavy duty; 6 amps at 125 volts; 3 amps at 250 volts. Type SS-6 has ½6," bevel trigger with prong guide, solder lug 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	EACH	25-49, EACH
34 B 491 34 B 492 34 B 148 34 B 421	Wirt Carling	SW724 SW725 S-110-S S-516	SPDT DPST SPST SP2 Cir.	0.75 0.5 6 3	22¢ 22¢ 43¢ 51¢	20¢ 20¢ 39¢ 46¢	18¢ 18¢ 28¢ 33¢
34 B 422 34 B 423 34 B 496		S60A S60B SS-6	SPST SPDT 3PDT	4 4 0.5	9¢ 10¢ 30¢	8¢ 9¢ 27¢	6¢ 7¢ 24¢

# LEV-R TYPE SWITCHES

Ultra-compact lever-action switches. Silver contacts, rated at 3 amps, 120 volts, non-inductive load. Length, 3½4; width 5½4, 8 no. means normally open; n.c., normally closed. \*3-position type. 17ppes 3034 and 3034L are operated to close either of two circuits keeping the other open. †7ppes 3035 and 3035L are operated to close either of two circuits keeping the other open. †7ppes 3035 and 3035L are operated to open one of two circuits keeping other closed. Require 1½2" mtg. hole. Shpg. wt., 3 oz.

Spring Return		Locking		Action§		NET EACH		
Stock No.	Type	Stock No.	Туре	Poles	Diag.	1-49	50-99	100-UP
34 B 465 34 B 454 34 B 466 34 B 467	3001 3002 3003 3004	34 B 471 34 B 455 34 B 472 34 B 473	3002L 3003L	SPST, n.o. SPST, n.c. SPDT DPST, n.o.	II III IV	1.15 1.15 1.32 1.47	.96 .96 1.11 1.22	.88 .88 1.01 1.13
34 B 456 34 B 468 34 B 485 34 B 469		34 B 457 34 B 474 34 B 484 34 B 475	3006L 3009L	DPST, n.c. DPDT 3PDT SPDT, n.o.	V VI VII	1.47 1.62 2.00 1.47	1.22 1.35 1.67 1.22	1.13 1.24 1.53 1.13
	*3036	34 B 459 34 B 477 34 B 479 34 B 476	*3035L *3036L	DP 2-Ckt ‡ DP 2-Ckt † DP 2-Ckt DPDT, n.o.	VIII IX X XI	1.53 1.53 1.71 1.73	1.27 1.27 1.42 1.45	1.17 1.17 1.31 1.33

# **NEW "BUTTON" SWITCHES**

NEW "BUTTON" SWITCHES
Unusually small, momentary-action push-button switches. Enclosed in metal housing; black or red plastic button. 903 and 913 are ½" long; fit ½" hole. 923 and 933 are ½" long; fit ½" hole. Mounting: \*903, 903D, 913, 913D are for behind-panel mounting; Types 923, 923D, 933, 933D mount from front of panel. †Rated at 250 ma, non-inductive load, AC (30 watts maximum). Shpg. wt., 2 oz.



Stock Type Stock		Туре	Actio	n l		NET EACH	1	
No.	(Red)	No.	(Black)	Poles	Diag.	1-49	50-99	100-UP
35 B 414 35 B 415 35 B 416 35 B 417	*903D †923	35 B 418 35 B 419 35 B 420 35 B 421	*913D †933	SPDT SPDT SPDT SPDT	III XII III XII	.88 .88 1.03 1.03	.73 .73 .86	.68 .68 .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 nickel-plated sleeve. A handsome, easy-to-operate switch for remote control of recorders, lights, counters, many other devices. Sleeve is 1½6" diameter and 2½6" long. Shpg. wt., 4 oz.

Stock	Type	Stock	Type	Act	ion	1 1	NET EACH	
No.	(Red)	No.	(Black)	Poles	Diag.	1-49	50-99	100-UP
35 B 422 35 B 423	E903 E903D	35 B 424 35 B 425		SPDT 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 constructed throughout. \( \lambda'' \) threaded shank; \( \lambda' \lambda' \) long. For low-level currents only. Require \( \lambda'' \) behind panel. \( \frac{\*}{n} \) no. means normally open; n.c., normally closed. Shpg. wt., 3 oz.



Stock	Type	Stock	Type	Action	*	NET EACH			
No.	(Red)	No.	(Black)	Poles	Diag.	1-49	50-99	100-UP	
34 B 83 I	951	34 B 834		SPST n.o.	1	53¢	44¢	41¢	
34 B 832 34 B 833	952 953	34 B 835 34 B 836		SPST n.c. SPDT	111	53¢ 59¢	44¢	41¢ 45¢	

# STACK SWITCH KIT

Model K-101. Kit of component parts for assembling or repairing stacking switches. Designed to speed the assembly of engineering samples in the 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 offierent sets of stack assembling pins, two roller assemblies, assorted contacts, etc.—everything needed for repair or assembly of switches is supplied in one package. Shpg. wt., 1½ lbs. 34 B 837 NET. Model K-101. Kit of component parts for assem-

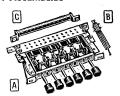


# SWITCHCRAFT SCHEMATIC DIAGRAMS

<b>₩</b>	<b>*</b>	<b>\$</b>			
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# **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 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 in one assembly. Fine silver contacts, rated 3 amperes or 300 watts maximum, non-inductive load. Use where circuit requirements call for circuit to be broken before next circuit is made.

### (A) Multiple Push-Button Frames

	,	(,					
Stock	Туре	Buttons	Ctrs.	Lbs.	1-49, EA.	50-99, EA.	100-Up, EA.
35 B 400	7200	2	21/4"	1/2	5.00	4.16	3.83
35 B 401	7400	4	31/2"	1/2	7.06	5.88	5,40
35 B 402	7600	6	43/4"	1	9.41	7.84	7.20
35 B 403	7800	8	6"	11/4	11.76	9.80	9.00
35 B 404	71200	12	81/2"	11/2	16.46	13.72	12.60

(B) Switches. Av. wt., 3 oz.					(C) Lockout Bars. Av. wt., 6 oz.						
Stock	Mfr's	Action	NET EACH			Stock	Mfr's	For	NET EACH		
	Type	Action	1-49	50-99	100-Up	No.	Type	roi	1-49   50-99	100-Up	
35 B 405	71	SPST n. o.	.29	.24		35 B 409			1.761.47		
35 B 406		SPST n. c.		.24		35 <b>B</b> 410			1.911.60		
35 <b>B</b> 407		SPDT	.35	.29		35 <b>B</b> 411			2.06 1.71		
35 <b>B</b> 408	73D	SPDT	.41	.34	.32	35 <b>B</b> 412	K0-8	7800	2.201.84	1.69	
	l	(shorting)	1	ŀ	1	<b> 35 B</b> 413	KO-12	71200	2.79 2.33	2.14	

# TELEVER TYPE SWITCHES



A rugged telephone-type lever switch. Nylon rollers actuate nickel-silver springs. Palladium contacts rated at 3 amps, 120 v. AC (non-inductive). Series 6000 tapped for 3-48 screws; standard telephone mtg. ctrs., \(^{1}\frac{1}{2}\xi^{1}\frac{1}{6}\''\), Series 16000 has \(^{1}\frac{1}{2}\xi^{2}\) 12 tread single hole mounting. \(^{3}\tau^{2}\) 32 thread single hole mounting. \(^{3}\tau^{2}\) 32 thread single hole mounting. \(^{3}\tau^{2}\) 30 sition type. \(^{1}\tau^{2}\) Two each side. Steel pivot pins; solder lug terminals. Available in locking or non-locking types Shop wt \(^{6}\tau^{2}\tau^{2}\) 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 729 60012 34 B 738 *6036 34 B 740 *60312 34 B 741 *60324	34 B 734 6006L 34 B 737 60012L 34 B 742 *6036L 34 B 744 *60312L 34 B 745 *60324L	DPDT VI 4PDT 4 sec. III 2-CktTr X 4PDT	2.94 2.45 2.25 4.00 3.33 3.06 2.94 2.45 2.25 4.00 3.33 3.06 5.88 4.90 4.50			

# E 16000 SERIES

34 B 855 34 B 859	16006D 34 160024 34	B 854 16006L B 856 16006DL B 860 160024L B 866 *160312L		2.94 2.45 2.25 3.29 2.74 2.52 5.88 4.90 4.50 4.00 3.33 3.06
34 B 867	*160316 34	4 B 868 *160316L	8PST   §8 sec. I	5.17 4.31 3.96 5.88 4.90 4.50

Type 530 Escutcheon. For Series 6000 Telever switches. 3 oz. 34 B 486. NET.

# 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. 3½" diameter threaded shank, 3½" long. With locknut and washer. \$n.o. means normally open. n.c. means normally closed. Shpg. wt., 3 oz.



Stock	Mfr's	Action§		NET EACH				
No.	Type	Poles	Diag.	1-49	50-99	100-Up		
34 B 994 34 B 995 34 B 996 34 B 997	1001 1002 1003 1004	SPST n.o. SPST n.c. SPDT DPST n.o.	- :: :: :: :: :: :: :: :: :: :: :: :: ::	.62 .62 .71 .76	.52 .52 .59 .64	.47 .47 .54		
34 B 998 34 B 999 34 B 969	1005 1006 1009	DPST n.c. DPDT 3PDT	V VI	.76 .91	.64 .76	.59 .70		

Littel Switches. For limited space applications. One-piece button and shaft. \*Black button; fred button. Nickel silver spring contacts. Spring sections are insulated. 3½" threaded shank, ¾" long. Recommended for low-level currents only. With mounting hardware. Shg., wt., 3 oz. 3

vith moun	ting in	ardware, Supg. w	t., 5 02.			4
4 B 944	101+	SPST n.o.		53¢	44¢	1 41¢
4 B 945	102+	SPST n.c.	- 11	53¢	44¢	416
4 B 946	103†	SPDT	111	59¢	49¢	45¢
4 B 947	201*	SPST n.o.	1	53¢	44¢	41¢
4 B 948	202*	SPST n.c.	111	53 €	44¢	410
4 B 949	203*	SPDT	1111	594	100	157

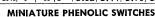
# Centralab Switches



# MINIATURE STEATITE SWITCHES

PA-2000 Series. Compact rotary switches. Precision constructed to provide excellent RF characteristics. Rated 2 amps @ 15 v. DC, 150 ma. @ 110 v. AC. \*1 off, up to 9 progressively shorting positions. Switch 11/8" long. Av. shpg. wt., 4 oz. per section.

			, ,	_				-			
Shorting		Non	-Short	ing	Sec-	Total	Pole	I.	NET E	ACH	
Stock No.	Type	Stock	No.	Type				1-9	10-24	25-49	50-99
35 B 095 34 B 900		34 B		2001	1	1	2-10 2-12	1.76	1.59	1.47	1.43
34 B 901 34 B 902 34 B 903		34 B 34 B 34 B	923	2003 2005 2007	1 2 1	2 2 3	2-6 2-12 2-5	1.94 2.76 1.94	2.49	1.62 2.30 1.62	2.23
34 B 904	2008	34 B	925	2009	3	3	2-12	3.53	3.18	2.94	2.85
34 B 905 34 B 906 34 B 907	2012	34 B 34 B 34 B	927	2011 2013 2015		4 4 5	2-6 2-12 2-3	2.76 4.23 1.94	2.49 3.81 1.74	3.53	2.23 3.42 1.57
34 B 908		34 B		2017	5	5	2-12	5.06	4.55	4.21	4.08
34 B 909 34 B 910 34 B 911	2020	34 B 34 B 34 B	931	2019 2021 2023	1 2 3	6 6	2 2-5 2-6	1.94 2.76 3.53	1.74 2.49 3.18	1.62 2.30 2.94	1.57 2.23 2.85
34 B 912 34 B 913	2024	34 B 34 B	933	2025 2027	6	6 8	2-12 2-6	5.88 4.23	5.29 3.81		4.75 3.42
34 B 914 34 B 915	2030	34 B 34 B	936	2029 2031	3	9 10	2-5 2-3	3.53	3.18	2.94	2.85
34 B 917 34 B 919 34 B 920	2038	34 B 34 B 34 B	940	2035 2039 2041	3	12 15 18	2 2-3 2	2.76 3.82 3.82	2.49 3.44 3.44	2.30 3.18 3.18	2.23 3.09 3.09
34 P 920	L ZU40	24 D	741	2041	,	10	4	ا ٥٠٠٤	44, د	ا0،۱۰	٥.05





PA-1000 Series. Miniature phenolic-insulated switches. Compact—ideal for limited space applications. 30° indexing, adjustable stop. 1½°x 1½°x 1½° dia. Shaft, 1½″ long. Rated 2 amps @ 15 v. DC, 150 ma. @ 110 v. AC. Shgw. wt., 5 oz.

Shortin	g	Non	-Short	ing	Sec-	Total	Pole	NET EACH			
Stock No.	Type	Stock	No.	Type				1-9	10-24	25-49	50-99
35 B 050	1000		065	1001	1	1	2-11	1.47	1.32	1.22	1.19
35 B 051	1002	35 B	066	1003		2	2-5	1.47	1.32	1.22	1.19
35 B 052		35 B		1005	2	2	2-11	2.12	1.90	1.76	1.71
35 B 053	1006	35 B	068	1007	1	3	2-3	1.47	1.32	1.22	1.19
35 B 054	1008	35 B	069	1009	3	3	2-11	2.65	2.38	2.20	2.14
35 B 055		35 B		1011	1	4	2	1.47	1.32	1.22	1.19
35 B 056	1012	35 B	071	1013	2	4	2-5	2.12	1.90	1.76	1.71
35 B 057	1014	35 B	072	1015	4	4	2-11	3.12	2.80	2.59	2.52
35 B 058	1016	35 B	073	1017	5	5	2-11	3.64	3.28	3.03	2.94
35 B 059	1018	35 B	074	1019	2	6	2-3	2.12	1.90	1.76	1.71
35 B 060		35 B		1021	3	6	2-5	2.65	2.38	2.20	2.14
35 B 062	1024	35 B	077	1025	2	8	2	2.12	1.90	1.76	1.71
35 B 063		35 B		1027	4	8	2-5	3.12	2.80	2.59	2.52
35 B 064	1028	35 B	079	1029	3	12	2	2.65	2.38	2.20	2.14

# 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. Shg. 2 oz.

Shorti	ng	Non-Shor	ting	Total	Pole		NET E	ET EACH		
Stock No.	Type	Stock No.	Type	Poles	Pos.	1-9	10-24	25-49	50- 99	
35 B 080	30	35 B 085	31	1	2-11				F.	
35 B 082	32 34	35 B 086 35 B 087	33 35	3	2-5 2-3	./1	.64	.59	.56	
35 B 083	36	35 B 088	37	4	2		1		l	
35 B 236	l 40	35 B 237	41	1 1	2-11		1	1	ı	

Type PA Steatite Sections Only. Custom and standard switches can be assembled by using these sections. Wt., 2 oz.

no emocration		dorres orrese	DCCCLOI		,				
Shorting Non-Sho			rting	Total	Pole		NET	EACH	
Stock No.	Type	Stock No.	Туре	Poles	Pos.	1-9	10-24	25-49	50-99
35 B 040	PA-0	35 B 045	PA-1	1	2-12				
35 B 041	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	1	1		
35 B 044	PA-8	35 B 049	PA-9	6	2	1	1		
35 B 238	PA-11	35 B 240	PA-18	1	2-11				
35 B 239	PA-12		l <i></i>	1	2-10	.97	.87	.81	.78
		35 B 241	PA-17	1	2-6				

PA-300 Series. Shaft and Index Assemblies. Hardware for miniature switches (spacers, tie-rods, etc.). 30° indexing. Wt., 3 oz.

Stock	Mfr's	Shaft	Sections		NET E	ACH	
No.	Type	Length	Sections	1-9	10-24	25-49	50 -99
35 B 092	300	2"	1-3	1.12	1.01	.93	.91
35 B 093	301	4"	4-6	1.47	1.32	1.22	1.19
35 B 094	302	6"	7-9	1.94	1.74	1.62	1.57

# 2500 SERIES—STEATITE INSULATION

Rotary switches. Excellent for RF use. Switch, 11/4x 11/4" diameter. 1/2" spacing between sections for 1 and 2 section switches; 1" spacing for switches over 2 sections. Bushing, 3/3" diax.3/4" long. Shaft, 17/4".

Positive 30° index; adjustable stop. Shpg. wt., per section, 4 oz.

Snortin	g	Non	-Short	ing	Sec-	Total	Pole		NET E	ACH	
Stock No.	Type	Stock	No.	Туре				1-9	10-24	25-49	50-99
35 B 214		35 B		2501	1	1	2-6				
35 B 215		35 B		2503	1	1	2-11	1.94	1.74	1.62	1.57
35 B 216		35 B		2505	1	1 1	2-5				
35 B 217	2506	35 B	228	2507	1	3	2-3				
35 B 218		35 B		2511	2	2	2-6				
35 B 219	2512	35 B	230	2513	2	2	2-11	2.76	2.49	2.30	2.23
35 B 220	2514	35 B	231	2515	2	4	2-5				
35 B 221	2516	35 B	232	2517	2	6	2-3				
35 B 223	2522	35 B	201	2523	3	3	2-11				
35 B 224	2524	35 B	202	2525	3	6	2-5	3.53	3.18	2.94	2.85



### **LEVER-ACTION SWITCHES**

Low capacity. Use singly or in groups. \*Shorting type; others non-shorting. Front plate and lever cadmium-plated. Index; †Positive; §Spring. Return; 1466, 1467 are Positive and Spring Return; †1475, tube tester replacement switch. 17\%x5\%x1\/2". Mtg. ctrs., 15\%". Knob and mtg. screws. Av. wt., 3 oz.

Stock No.	Туре	Stock No.	Туре	Poles	Pos.	1-9, EA.	10-24,EA.	25-49,EA.	50-99, EA.
34 B 021	1452*†	34 B 026	1454†	2	3	1.03	.93	.86	.84
34 B 022	1453*\$	34 B 027	1455§	12	3	1.03	.93	.86	.84
34 B 025	1456*§	34 B 030	1457§	4	2	1.18	1.06	.98	.95
34 B 024	1459*†	34 B 029	1458†	4	2	1,18	1.06	.98	.95
34 B 023	1466*	34 B 028		2	3	1.03	.93	.86	.83
		35 B 198	1475‡	11	3	1.03	.93	.86	.83



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 x 25/8"	.29	.26	.24	.23
34 B 051	P1756	2	1½x2%"	.29	.26	.24	.23
34 B 052	P1757	3	21/4 x 21/8"	.32	.29	.27	.26
34 B 053	P1758	4	3x25/8"	.41	.37	.34	.33
34 B 060	P221*	2	2¾ x4½"	.50	.45	.42	.40
34 B 06 I	P222*	1	2¾ x4½"	.41	.37	.34	.33



# 1400 SERIES-PHENOLIC INSULATION

Compact design. Switch,  $1\frac{1}{8}x1\frac{7}{8}$ " dia. Bushings,  $\frac{3}{8}$ "x $\frac{3}{9}$ ". Shafts,  $1\frac{7}{8}$ " from end of bushing. Positive  $30^\circ$  index. Mtg. nut, washer,  $1\frac{1}{4}$ " knob. Av. shpg. wt., 6 oz.

Shorting	3	Non	Short	ing	Sec-	Total	Pole				
Stock No.	Type	Stock	No.	Type	tions	Poles	Pos.	1-9	10-24	25-49	50-99
35 B 182		35 B		1401	1	1	2-6				
35 B 183				1403	1	1	2-11				
35 B 184		35 B		1405		2	2-5	1.71	1.54	1.42	1.38
35 B 185		35 B	166	1407		3	2-3				
35 B 186	1408	35 B	167	1409	1	4	2				
35 B 187	1410	35 B	168	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		35 B		1417	2	6	2-3				
35 B 191	1418	35 B	172	1419	2	8	2				
35 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° indexing. Shgg. 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"	1-3	1.12	1.01	.93	90
35 B 234	P-123	1 1	5-8	1.94	1./4	1.62	1.57



# UNIVERSAL AND INTERCOM SWITCHES

High-quality rotary switches. Bakelite constructed Metal is cadmium-plated. Shafts, 1%. \*1\* behind panel. †34\* behind panel. \$Positive in 2 pos., spring return in 3rd. All are non-shorting except‡. Wt., 8 oz.

Stock	Mfr's		NET EACH					
No.	Туре	Description	1-9	10-24	25-49	50-99		
34 B 088 34 B 085 34 B 087 34 B 071 34 B 072	1443*‡ 1450†, 1451† 1448* 1449*§	SP, 23 pos. 4PDT 4PDT, spring-return 6P, 3 pos., spring-return 6P, 3 pos.	1.62 .82 1.18 1.62 1.62	1.45 .74 1.06 1.45 1.45	1.34 .68 .98 1.34 1.34	1.31 .66 .95 1.31		

# INTERCOM AND RADIO SWITCHES

Step type. Rated 2 amps. at 15 v. Shaft,  $\frac{1}{4}$  dia.,  $\frac{2}{4}$  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	Mfr's		NET EACH					
No.	Туре	Description	1-9	10-24	25-49	50-99		
34 B 080 34 B 081 34 B 082	1460 1461 1462	SPDT phono-radio sw. SP-3-position selector DPDT bandswitch	.50 .88 .88	.45 .80 .80	.41 .73 .73	.40 .71 .71		
34 B 083 34 B 084 35 B 235	1463* 1464* 1472*	SPDT spring return DPDT spring return DP 3-position	.88 .88	.80 .80 .80	.73 .73 .73	.7  .7  .7		



# **AUTO RADIO SPEAKER SWITCH**

Type PK300 Switch Kit. Contains a complete assembly for switching between dual sneakers such as in your now switch nit. Contains a complete assembly for switching between dual speakers such as auto rear seat and front seat. Etched dial-mounting plate; dual speaker switch. Pointer knob is black, split knurl. With 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¢

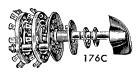
# **EAGLE KNIFE SWITCHES**

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	Action	Action Base			NET EACH		
No.	Action	Баѕе	Size	1-9	10-99	Over 100	
34 B 884 34 B 886 34 B 887 34 B 888 34 B 889	SPST SPDT DPST DPDT SPST	Bakelite Bakelite Bakelite Bakelite Porcelain	15/8×1" 25/8×1" 13/4×11/2" 25/8×15/8" 31/16×11/8"	20¢ 23¢ 33¢ 38¢ 25¢	18¢ 21¢ 29¢ 34¢ 22¢	16¢ 18¢ 25¢ 29¢	

# **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 ½" apart except spaced 1½", all others have 1" spacing between wafers. 30° indexing, except †90°; 1½" base dia.; use plates below, at right. With 2" grooved shaft, knob and hardware. \*Additional "Off" position. §Rated 1000 v. DC and 100 watts. Av. shpg. wt., 8 oz.

Stock No.	Mfr's Type	Gangs	Total Poles	Positions per Pole	NET EACH
34 B 327 34 B 328 34 B 329	172C 173C* 174C*	1 1 1	1 2 3	11 5 3	1.94
34 B 331 34 B 332 34 B 333	176C 177C* 178C*	2 2 2 2	2 4 6	11 5 3	2.76
34 B 335 34 B 336	180C 181C*	3 3	3 6	11 5	3.53
34 B 337 34 B 338 34 B 339 34 B 340 34 B 341	161C†§ 162C†§ 163C†§ 164C†§ 165C†§	2‡ 3 4	1 2 3 4 5	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..... .12c

### LEVER-ACTION SWITCHES

Desitive-indexing, lever action switches—with shorting or non-shorting contacts. Indexing in 2, 3 or 4 positions with 20° spacing between positions. Types 6142, 6143 and 6243 have mounting brackets with round holes spaced for 1½° centers. 5124 and 5224 have elongated mounting holes in the brackets, spaced 2½%° to 2½%° apart. Phenolic resin insulation. Maximum non-breaking current resistive load, 5 amps. With knob and hardware. Sing. wt. 4 oz.



knob and hardware. Shpg. wt., 4 oz.

SHORT	ING	SHORT		Poles	Positions Per Pole	NET EACH	
No.	Type	No.	Туре		1 61 1 016	EACH	
34 B 382	5124	34 B 383	5224	2	4	1.12	
34 B 365	6142 6143	34 8 368	6243	4	2 3	.97	

# "HAMSWITCH" TYPE 151L



# TYPE 13124L 24-POINT TAP SWITCH

Single circuit, 24 position, non-shorting switch. Continuous rotation. %" bushing, 2" grooved shaft. Useful in test equipment. 15° indexing between positions. With knob, dial plate and hardware. 6 oz. 2.26

# MINIATURE PUSH-BUTTON SWITCHES

Push-button switches for limited-space applica-tions. Eight circuit combinations. \*Locking type. tions. Eight circuit combinations. \*Locking type. All others are non-locking; contact is made only when button is depressed. Silver contacts. Frame is cadmium plated. Mount in single hole, 'Me' diameter, on panels up to 'M' thick. Mtg. radius is 'Me'' Mtg. depth is 'Me' min. (Type 1011) and 'M'' max. (Type 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*		.56
34 B 434	1013	SPDT	1 .65
34 B 435	1014	DPST—Make 2	
34 B 436	1015	DPST—Break 2	.71
34 B 437	1016	DPDT	.85
34 B 438	1017	DP-Make 2, Break 1	.85
34 B 439	1018	DPDT-Make before break	1 1.18

# PLX SERIES PLUNGER SWITCHES

Designed for appliance applications such as: heater, motor and lighting loads. Switch is  $11/2^{or}$  dia. Mounts by a spring grip washer pushed over the  $\frac{6}{36^{o}}$  bushing. Requires ntg, 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 lbs. depending on circuits. Plunger actuation is  $\frac{7}{36^{o}}$ —operates with a rotating cam, lever, door, sliding cam, etc. U.L. Approved. Shpg. wt., 3 oz.



Approved. S	-0-0		
Stock Mfr's No. Type		Action	NET EACH
34 B 684 34 B 685 34 B 686	PLX-1 PLX-2 PLX-3	DPST—2 Circuit progressive DPDT—Break before make SPST—Normally open	73¢ 73¢ 59¢

# TYPE 1200L & 1300L MULTI-GANG SWITCHES



Short	ing	Non-Sh	orting	l _	Total	Pos. per	NET
Stock No.	Type	Stock No.	Type	Gangs	Poles		EACH
34 B 203	1215L* 1213L* 1212L*		1311L 1315L* 1313L* 1312L*	1 1 1 1	1 2 3 4	11 5 3 2	1.71
34 B 206 34 B 207 34 B 208 34 B 209	1221L 1225L* 1223L* 1222L*		1321L 1325L* 1323L* 1322L*	2 2 2 2	2 4 6 8	11 5 3 2	2.12
	1231L 1235L* 1241L 1245L*	34 B 264	1331L 1335L* 1341L 1345L*	3 3 4 4	3 6 4 8	11 5 11 5	2.65 2.65 3.12 3.12
34 B 217 34 B 218	1251L 1256L 1261L 1266L	34 B 266 34 B 267 34 B 268 34 B 269	1351L 1356L 1361L 1366L	5 5 6 6	5 10 6 12	11 6 11 6	3.35 3.70 3.94 4.50

# 3100J & 3200J SINGLE GANG SWITCHES

Compact, enclosed, low-voltage switches. Have 2" notched shaft; %' threaded bushing, %' long. With bar knob and nut. All 1'\%' base dia. types have adjustable stops. For band switching, etc. Use plates listed below. Shpg. wt., 4 oz.



Short	ing	Non-Sho	rting		Posi-	Base	NET
Stock No.	Type	Stock No. Type		Poles	tions	Dia.	EACH
34 B 300	3115J	34 B 350	3215J	1	5	11/4"	
34 B 301	31112J	34 B 351	32112J	1	12	11/4"	
34 B 302	3122J	34 B 352	3222J	2	2	11/4"	82c
34 B 303	3123J	34 B 353	3223J	2	3	11/4"	
34 B 304	3126J	34 B 354	3226]	2	6	11/4"	
34 B 305	3134J	34 B 355	3234.1	3	4	11/4"	.85
34 B 306	3142J	34 B 356	32421	4	3	11/2"	.85 .85 .85
34 B 307	3143J	34 B 357	3243 T	4	3	11/4"	.85
	31117]	34 B 358	321171	1	17	111/16"	1.26
34 B 309	3129J	34 B 359	32291	2	9	111/16"	i.26
34 B 3 i 0 l	3136J	34 B 360	3236J	3	6	111/16"	i.35
34 B 3 i i	3163J	34 B 361	3263J	6	3	111/6"	i.35

# TYPE 3122 TV ANTENNA SWITCH

# TYPE 1400L CIRCUIT OPENING SWITCH

Opens any one of 12 "lines" for insertion of current reading meter while "through" circuit is maintained on other 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, ¼" dia.; length, 2". With bar knob, dial plate and hardware. Shpg. wt., 6 oz. 34 B 290. NET. 3.82

# **DIAL PLATES**

Types 372 to 390 for switches 1200L, 1300L and 1/4'' base 3100J and 3200J. Others for  $1^1/46''$  base 3100J and 3200J. Etched aluminum. Black background.  $1^1/46''$  dia. 7/46'' hole. Shpg. wt., 2 oz.



FC	30° SF OR 11⁄4″ BA			20° SPACING FOR 111/16" BASE SWITCHES				
Туре	Marking	Туре	Marking	Туре	Marking	Туре	Markin	g
372 373 374 375	1 to 2 1 to 3 1 to 4 1 to 5		Off 1 to 4 Off 1 to 5 Off 1 to 6 Off 1 to 7	453 454 455 456	1 to 3 1 to 4 1 to 5 1 to 6	474 475 476 477	Off 1 to 4 Off 1 to 5 Off 1 to 6 Off 1 to 7	5
376 377 378 379	1 to 6 1 to 7 1 to 8 1 to 9	388	Off 1 to 8 Off 1 to 9 Off 1 to 10	457 458	1 to 7 1 to 8 1 to 9 1 to 10	478 479 480 481	Off 1 to 8 Off 1 to 1 Off 1 to 1	3
380 381 382 383	1 to 10 1 to 11 1 to 12 Off 1 to 3			461 462 467 473	1 to 11 1 to 12 1 to 17 Off 1 to 3	482 483 484 486	Off 1 to 1 Off 1 to 1 Off 1 to 1 Off 1 to 1	12 13 14
34 BB 600, Specify Type.				34 BB 650, Specify Type.				

34 BB 600. Specify Type.

34 B 670. Type 369. 0-100 plate for volume control. 34 B 620. Type 391. Increase type plate for vol. control. 34 B 622. Type 393. 0-10 plate for rheostats and pots. 34 B 624. Type 396. 0-10 plate for wire-wound controls.	NET 15c
34 B 623, Type 394, 1-24 position, 15° opening. NET	12¢

# **RB254 UNIVERSAL MOUNTING BRACKET**

# Industrial Time Switches







# INDUSTRIAL TIMER CORPORATION







# 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

Motor driven timers specifically designed for repeating a definite electrical "Off-On" cycle continuously. A complete time unit consists of a Series CM chassis-mounted foundation unit, heavy-duty synchronous motor, cam activated 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., CM-4 will provide overall time cycles of from 40 seconds to 6 minutes, depending on which gear and rack assembly it is used with.

Cams have single screw adjustment for setting "On" or "Off" cycle up to 98% of complete time cycle. Synchronous motor assures precise

repetition of time cycle under continuous, in-dustrial 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 dust-proof. Contacts are rated 10 amperes at 115 volts, or 220 volts, 60 cycle AC. Overall size: 2½x2½sx3½°. 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. shogs. wt., complete, 4 lbs.

### **GEAR-AND-RACK ASSEMBLIES** \*S-Seconds M-Minutes H-Hours

Stock	Mfr's	l	*Overall Time Cycles Available					NET EACH					
No.	Type	CM-2	CM-4	CM-5	CM-6	CM-8	CM-10	CM-12	1-3	4-5	6-11	12-24	25-49
788 472 788 470 788 468 788 466	E-12 D-12 C-12 B-12	10S 12S 15S 20S	40S 48S 60S 80S	2M 2M24S 3M 4M	3M20S 4M 5M 6M40S	20M 24M 30M 40M	2H 2H24M 3H 4H	8H 9H36M 12H 16H	1.50	1.43	1.40	1.28	1.20
78 B 467 78 B 457 78 B 47 I 78 B 458	A-12 D-36	25S 30S 36S 40S	100S 2M 144S 160S	5M 6M 7M12S 8M	8M20S 10M 12M 13M20S	50M 60M 72M 80M	5H 6H 7H12M 8H	20H 24H 28H48M 32H	1,50	1.43	ι.40	1.28	1.20
78 B 459 78 B 460 78 B 461 78 B 465	A-20 A-24	45S 50S 60S 90S	3M 200S 4M 6M	9M 10M 12M 18M	15M 16M40S 20M 30H	90M 100M 2H 3H	9H 10H 12H 18H	36H 40H 48H 72H	1.50	1.43	1.40	1.28	1.20

### SERIES CM FOUNDATION UNITS

Stock	Mfr's	Stock	Mfr's	Stock	Mfr's	NET EACH				
No.	Type	No.	Type	No.	Туре	1-3	4-5	6-11	12-24	25-49
78 B 450		78 B 453	CM-6	78 B 455	CM-10		14.73	13.05	12.10	10.40
78 B 451 78 B 452	CM-5	78 B 454	CM-8	78 B 456	CIVI-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 Available for Time Cycles from 15 Seconds to 5 Minutes Duration

B C Dependable automatic reset timers. fixed or adjustable delay between the closing of one circuit and the closing or opening of another circuit.

SPDT switch has contacts rated 10 amperes at 115 volts AC with non-inductive load. Suitable for pre-heating transmitter tube filaments, also for vending machines and store displays, etc. Both Series H and Series SF are available in 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 mounting. Series SF (Fig. C. illustrated above) is for back of panel mounting. Both series are fastened by 4 screws. Constructed of highest-auxility nover for excellent services. quality parts for excellent service.

Overall sizes: H Series, 3½6x3½6x3½″; SF Series, 2¾x3½6x2½″. Underwriters' Laboratories Approved. For operation from 110-120 volts, 60 cycle AC. Shpg. wt., 1½ lbs.

NET FACH

STOCK	IVITES										
No.	Type	Time Cycle	1-3	4-5	6-11	12-24	25-49				
78 B 485 78 B 486 78 B 487 78 B 488	H-15S H-1M H-3M H-5M	15 seconds 1 minute 3 minutes 5 minutes	22.00	20.90	19.80	18.70	17.60				
78 B 481 78 B 482 78 B 483 78 B 484	SF-15S SF-1M SF-3M SF-5M	15 seconds 1 minute 3 minutes 5 minutes	19.00	18.05	17.10	16.15	15.20				

# INTERVAL TIMERS SERIES P AUTOMATIC RESET TIMERS

Portable, motor-driven timer with automatic reset. Operates by built-in pushbutton switch that actuates timer for each cycle. On completion of a cycle, lapsed time indicator automatically resets and unit is ready to start another cycle when pushbutton is pressed.

Receptacle for plugging in remote starting switch is provided. Has standard AC receptacle for plugging in load. Load switch contacts are rated 15 amperes at 115 volts, AC with non-inductive load. Built-in toggle switch is provided for closing load circuit continuously when timed operation is not required.

Completely portable, unit is supplied with AC cord and is housed in metal case with keyhole slots for wall mounting. Overall size, 5x5.3°. For operation from 110-120 volts, 60 cycle AC, Shg. wt., 3 lbs. For quantity prices in lots of 12 or more, write or phone Allied's Industrial Division.

Stock	Mfr's	Maximum	NE	TEA	СН
No.	Туре	TimeCycle	1-3	4-5	6-11
78 B 473 78 B 474	P-4R	1	٠,		
78 B 475	P-3M	3 min.	27.00	25.65	24.30
78 B 476	P-5M	5 min.	1	1	l

### SERIES S SIGNALING TIMER

E Motor-driven manual-set timer with 2 AC 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.

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, 5x5x3". 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, write or phone Altied's Industrial Division.

# SERIES PAB INSTANT RESET TIMERS

Extremely accurate automatic reset timers 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 spring resets arm in split second.

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 ½" knockouts for use with rigid or flexible conduit. 7x5x4". 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.

# 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, ½ hr.; max., 23 hours. Synchronous, self-starting motor. Snap-action silver-to-silver contacts; spring-temper, phosphor-bronze blades. DPST: Contacts rated 30 amps. at 120-240 v. Has ½' and ½' knockouts in bottom, sides and back. Indoor cabinet for wall mounting. Hammerloid enamel finish. Size: 4x7x4' deep. U.L. Approved. For 110-125 v., 60 cycle AC. Neutral tap for 3-wire, 230 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 by setting trippers for desired schedule. Provides 8 different combinations of 2-circuit control; may be set to operate both circuits simultaneously as a DPST switch. 13.72



# "BADGER" 50 AMP

"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 off periods of illuminated billboards, flood lights, air conditioning units, etc. Minimum 'ON' period, ½ hour; maximum, 23½ hours. Can be switched on or off manually if desired, at any time dwing cycle without interfering with automatic operation. Plunger action, copper-to-copper SPST contacts. Contacts rated at 50A at 120 to 240 v. Steel cabinet, 18 gauge. Cabinet finished in Hammerloid enamel. Has ¼ and 1½ knockouts in bottom, sides, and back. U.L. Approved. For 110-125 v., 60 cycle AC. Size: 5½x 78 B 392. List, \$22.00. NET.

# Industrial-Type Time Switches

# TORK SWITCHES—INTERVAL TIMERS

MODEL 1191 "LITTLE GIANT"

Automatically turns electrical equipment "on

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, 8½,x5x4½," U.L. Approved. For operation from 110-120 volts, 60 cycle AC. Shpg. wt., 5 lbs. 11.67

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. 8/4.x5x41/4", U.L. Approved. For 110-120 volts, 60 cycle AC. Shpg. wt. 5 lbs. 78 B 298. List, \$27.95. NET 18.17





# MODEL 4100 "HOURMASTER"

# MODEL 948 "TORKMASTER"

# MODEL 7D1191 "SEVEN DAY"





1191



8001

# MODEL 919 PORTABLE PLUG-IN

Extra Trippers. For above. Pair, 3 oz. 78 B 309, NET PER PAIR......

# MODEL 8001 PROGRAM TIMER

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 minutes each day. If an adjacent tab is tilted into,
the timer will be 'on' for 30 minutes. Thus,
the timer will be 'on' for 30 minutes. Thus,
the timer will be 'on' for 30 minutes. Thus,
the timer si '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. 8½x4x
4½\*'. U.L. Approved. For operation from 110120 volts, 60 cycle AC. Shpg. wt., 5 lbs.
77.52

# INTER-MATIC TIME SWITCHES



T171



T101



P101



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, 1¼ 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 amps, 125 v., AC. With 3
trippers (1 for each "on-off" cycle)7¼x5x3".
U.L. Approved. For 110-120 volts, 60 cycle AC.
Shgs. wt., 4 lbs.
78 B 313. List. \$17.95. NET.

# TYPE T965 TIME SWITCH

TYPE 1965 IIME 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 industrial 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 repeat timing cycles without resetting. Synchronous motor is low speed, high torque type.
7%xSx3". 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. NET.......25.03

# "SKIPPER" 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 dial. "On" and "of" trippers are set in the time dial. Special "cutout" tripper advances 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. 7½x5x3". U.L. Approved. For 110-120 volts, 60 cycle AC. Shpg. wt., 4 lbs.

Type T171. SPST.	
78 B 3   5. List \$17.95. NET	.11.67
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 SCF	
Type 107T19A. On-Cutout Tripper	's. Re-

placement for "Skipper" types only. 3 oz. 78 B 3 | 9. NET EACH.......................20c Type 107T8A. Set of "On and Off" Trippers. For all Inter-Matic switches (except T185). Shpg. wt., 2 oz. 78 B 324. NET PER SET......26¢

# TYPE TIO1 TIME SWITCH

Type T103. As above, but DPST. 78 B 321. List, \$13.95. NET..... 

# TYPE PIOI TIME SWITCH

# Clock Timers and Foot Switch



# GENERAL @ ELECTRIC

# TELECHRON CLOCK-TIMER

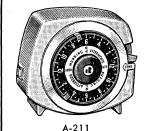
- Electric Clock and Automatic Time Switch
- Turns on Radio, TV, Etc. at Preset Time
   Complete with Knobs and Brass Bezel

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, single-throw switch rated 15 amperes at 125 volts AC. Two easy-to-operate switch controls are conveniently located on the outer edge of the clock dial. Switch can be used for

on the outer edge of the clock dial. Switch can be used for versatile control of an AC radio or any appliance such as a coffee-maker, hot plate, lamp, etc. One of the switch controlled device at a preselected time within a 12-hour period. Automatic turning on of the 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 "sleep switch."

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" long control on rear of clock. Rugged low speed motor is silent in operation. Outer brown 3" long control on rear of clock. Rugged low speed motor is silent in operation. Outer brass bezel is 3½ inches square. Four mounting studs built on for ease of installation. Requires four 1/6" holes 3% inches apart. U.L. approved. For 110-120 v., 60 cycle only. Wt., 2 lbs.

# INTERMATIC CLOCK TIMERS



• Simple to Operate

No Installation

# MODEL A-211 "TIME-ALL"

Time control switch for office, store or home. Excellent for control in 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.

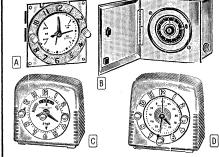
Min. "on" time, 15 min.; max., 23 hrs., 45 min. AC outlet for equipment to be controlled. Size, 5x4x2½". Handles 15 amps, 1650-watt load. With 6-ft. cord, plug, instructions. For 110-120 v., 60 cycle AC. Shpg, wt., 2 lbs.

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

Automatically turns on radios, television sets, toasters, and other electrical devices—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  $3\frac{1}{2} m^2$  diameter hole; overall size,  $3\frac{1}{2} m^2 \sqrt{2} m^2$  deep. Built-in single-pole switch handles appliances drawing up to 15 amps. 1650-watt load. Mounting centers,  $3\frac{1}{2} m^2$ . 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 Automatically turns on radios, television

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-mounting in walls or hi-fi cabinets. Provides a timed "on" and "off" cycle for controlling lights, heaters, hi-fi, or appliances automatically. Min. "on" time, 15 min.; max., 23½ hours. Can be switched "on" or "off" 23/4 nours. Can be switched "on" or "off" manually; timed cycle resumes automatically. SPST switch rated 15 amps, 1650 watts. 6/2x6/2x213/6". Beige finished door has concealed hinges; magnet holds door closed. Requires 5x5" cutout. For 110-120 

# MODEL A-401 "CLOCK-TIMER"

# MODEL A-301 "TIME-MINDER"

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 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 case. Clock and timing interval are both set from front panel. No installation is necessary—just plug the timer in and it's ready to go. U.L. Approved. Has 6-ft. cord and plug. Size. 4/2x4/3x2/4". For operation from 110-120 v., 60 cycle AC. 2 lbs. 

# MONTGOMERY PROGRAM CLOCK



Model M-24. Ideal for schools, industrial and service organizations. Provides dependable auto-matic control and opera-tion of buzzers, bells or horns, on a 24-hour sched-ule. Permits manual op-eration at any time for special program schedules, or sounding emergency

alarm, without affecting accuracy of preset schedule. Eliminates 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 signal at up to 5 minute intervals. Duration of signal is adjustable from 4 to 20 seconds. of signal is adjustable from \* to 20 seconus. Program mechanism is automatically set to correct time by turning the clock hands—assures perfect synchronization. Switch for silencing of signals during any days or nights of the week. Single-circuit timer consists and at 10 supple-circuit timer consists and at 10 supple-circuit timer consists. 

### **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-

trol of such appliances are 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. 4½x3½x3″, U.L. Approved. For 110-120 v., 60 cycle AC. Shpg. wt., 2 lbs.

Model 2925-12P. Max. setting, 12 hours 78 B 348. List, \$15.95. NET......10.36 Model 2925-24P. Max. setting, 24 hours 78 B 349. List, \$15.95. NET...... 10.36 Model 2925-1P. 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 \%'' 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—will not slip or slide even on polished 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 transformer which is included.

Complete with 18x30" commercial-type Complete with 18x30" commercial-type Switchmat, transformer with 6-ft. cord and plug, 25-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

# **Bud Metal Products**



# STANDARD CHASSIS BASES

High-quality, sturdily constructed chassis bases. Available in zinc-plated and black-wrinkle steel, and lightweight aluminum types. Carefully formed, one-piece 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; †No. 20; \*No. 18. Aluminum chassis gauges (aluminum gauge): ‡No. 18; \*\*No. 16; ††No. 14. Less bottom plates.



H.W.D.	Black	-Wrinkle St	teel	1-24	25-49	50-99	I н. w. p.	Zinc	- Plated Ste	el	1-24	25-49	50-99
Inches	Stock No.	Туре	Lbs.	EA.	EA.	EA.	Inches	Stock No.	Туре	Lbs.	EA.	EA.	EA.
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
2½x9½x5	80 P 457	CB-644*	1 <sup>3</sup> / <sub>4</sub>	1.34	1.21	1.08	2½x9½x5	86 P 905	CB-645*	11/2	1.64	1.47	1.31
1½x9½x5	80 P 458	CB-788*	1	1.18	1.06	.94	1½x9½x5	86 P 906	CB-776*	11/4	1.66	1.49	1.32
3x10x5	80 P 459	CB-604*	1 <sup>1</sup> / <sub>4</sub>	1.24	1.12	1.00	3x10x5	86 P 271	CB-605*	11/2	1.80	1.63	1.44
3x14x6	80 P 460	CB-755†	13/4	1.71	1.55	1.37	3x14x6	86 P 907	CB-756†	2	2.01	1.81	1.61
2x7x7	80 P 461	CB-789†	11/2	1.18	1.06	.94	2x7x7	86 P 272	CB-1191†	1 <sup>3</sup> / <sub>4</sub>	1.47	1.32	1.18
2x9x7	80 P 462	CB-790*	11/2	1.37	1.23	1.10	2x9x7	86 P 273	CB-1192*	1 <sup>3</sup> / <sub>4</sub>	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†	1 <sup>3</sup> / <sub>4</sub>	1.64	1.47	1.31
3x12x7	80 PX 464	CB-792†	1 <sup>3</sup> / <sub>4</sub>	1.54	1.38	1.23	3x12x7	86 P 275	CB-793†	2	2.01	1.81	1.61
2x13x7	80 PX 465	CB-646†	2	1.51	1.36	1.21	2x13x7	86 P 276	CB-1194†	2½	1.88	1.70	1.51
2½x13½x5	80 PX 466	CB-647†	1 <sup>3</sup> / <sub>4</sub>	1.73	1.56	1.39	2½x13½x5	86 P 908	CB-1198†	2	2.13	1.91	1.71
3x15x7	80 P 467	CB-649†	2	1.96	1.76	1.57	3x15x7	86 PX 909	CB-1189†	2½	2.35	2.12	1.88
3x15x8½	80 P 468	CB-665†	2½	2.20	1.98	1.75	3x15x8½	86 PX 910	CB-666†	2 <sup>3</sup> / <sub>4</sub>	2.66	2.39	2.13
3x17x4	80 P 469	CB-1068†	2¼	1.76	1.59	1.41	3x17x4	86 PX 911	CB-1066†	2 <sup>1</sup> / <sub>2</sub>	2.10	1.89	1.68
2½x17x7	80 PX 470	CB-648†	2½	1.95	1.75	1.56	2½x17x7	86 PX 912	CB-1199†	2 <sup>3</sup> / <sub>4</sub>	2.32	2.09	1.86
3x17x7	80 PX 471	CB-757†	1¾	2.11	1.90	1.69	3x17x7	86 PX 913	CB-758†	2	2.54	2.28	2.03
2½x10x8	80 PX 472	CB-701†	$\begin{array}{c} 2 \\ 2\frac{1}{2} \\ 1\frac{3}{4} \\ 2\frac{1}{2} \end{array}$	1.69	1.52	1.35	2½x10x8	86 P 914	CB-702†	2 1/4	1.98	1.78	1.59
2½x12x8	80 PX 473	CB-703†		1.71	1.55	1.37	2½x12x8	86 P 915	CB-704†	2 3/4	2.20	1.98	1.75
3x12x8	80 PX 474	CB-759†		1.81	1.64	1.45	3x12x8	86 P 916	CB-760†	2	2.29	2.07	1.83
2x17x8	80 PX 475	CB-650†		1.67	1.50	1.33	2x17x8	86 PX 917	CB-774†	2 3/4	2.29	2.07	1.83
3x17x8	80 PX 476	CB-651†	31/4	2.01	1.81	1.61	3x17x8	86 PX 918	CB-775†	31/2	2.57	2.31	2.06
3x12x10	80 P 477	CB-652†	3	1.85	1.67	1.48	3x12x10	86 P 919	CB-1195†	31/4	2.20	1.98	1.75
3x14x10	80 P 478	CB-653†	4	2.00	1.80	1.60	3x14x10	86 P 920	CB-779†	41/4	2.39	2.16	1.91
2x17x10	80 PX 479	CB-654†	31/4	1.96	1.76	1.57	2x17x10	86 PX 278	CB-769†	31/2	2.34	2.11	1.87
3x17x10	80 PX 480	CB-636†	4	1.96	1.76	1.57	3x17x10	86 PX 921	CB-1196§	5½	2.99	2.69	2.39
3x17x10	80 PX 481	CB-655§	5	2.49	2.24	1.99	3x17x10	80 PX 385	CB-637†	4	2.78	2.51	2.22
3x23x10	80 PX 482	CB-656§	5½	2.80	2.52	2.24	3x23x10	86 PX 922	CB-1197§	6	3.35	3.02	2.69
2x17x11	80 PX 483	CB-657§	4½	2.30	2.08	1.84	2x17x11	86 PX 923	CB-770§	4¾	2.75	2.48	2.20
3x17x11	80 PX 484	CB-658§	4½	2.71	2.44	2.18	3x17x11	86 PX 266	CB-771 §	43/4	3.42	3.08	2.73
2x17x12	80 PX 485	CB-663§	4½	2.39	2.16	1.91	2x17x12	86 PX 925	CB-661 §	43/4	3.03	2.72	2.42
3x17x12	80 PX 486	CB-664§	5¼	2.85	2.57	2.28	3x17x12	86 PX 268	CB-662 §	53/4	3.60	3.23	2.88
2x17x13	80 PX 487	CB-659§	5	2.85	2.57	2.28	2x17x13	86 PX 269	CB-772 §	51/2	3.65	3.28	2.92
3x17x13 4x17x10 4x17x13 5x17x10 5x17x13	80 PX 488 80 PX 489 80 PX 490 80 PX 491 80 PX 492	CB-660§ CB-640§ CB-642§ CB-623§ CB-625§	51/2 61/2 71/2 71/2 8	3.34 2.86 3.84 4.42 4.83	3.01 2.58 3.46 3.98 4.35	2.67 2.29 3.08 3.54 3.86	3x17x13 4x17x10 4x17x13 5x17x10 5x17x13	86 PX 270 86 PX 926 86 PX 927 86 PX 928 86 PX 929	CB-773 CB-641 CB-643 CB-624 CB-626 CB-626	6 7 8 8 8 8½	3.99 3.44 4.59 5.23 5.81	3.59 3.10 4.13 4.71 5.23	3.19 2.75 3.67 4.18 4.65
	Aluminum								Alumin	um			

	Aluminum						Aluminum						
Size	Stock	Mfrs.	Wt.	1-24	25-49	50-99	Size	Stock	Mfrs.	Wt.	1-24	25-49	50-99
Inches	No.	Type	Lbs.	EA.	EA.	EA.	Inches	No.	Type	Lbs.	E.A.	EA.	EA.
2x6x4	86 P 930	AC-431‡	3/4	1.08	.97	.86	3x17x7	86 PX 938	AC-423**	1 1/4	2.69	2.43	2.16
2x7x5	86 P 112	AC-402‡	3/4	1.15	1.03	.92	3x12x8	86 P 939	AC-424**	1 3/4	2.37	2.14	1.90
2x9½x5	86 P 113	AC-403‡	3/4	1.22	1.10	.97	2x17x8	86 PX 940	AC-425**	1 3/4	2.46	2.21	1.97
3x6x4	86 P 932	AC-430‡	3/4	1.31	1.19	1.05	3x17x8	86 PX 120	AC-412**	2	2.78	2.51	2.22
3x7x5	86 P 933	AC-429**	1	1.39	1.25	1.12	3x12x10	86 P 121	AC-413**	13/4	2.62	2.35	2.10
3x9½x5	86 P 114	AC-421‡	1	1.57	1.41	1.25	3x14x10	86 P 941	AC-414**	2	2.78	2.51	2.22
3x10x5	86 P 127	AC-404‡	1	1.60	1.44	1.27	2x17x10	86 PX 942	AC-415**	11/2	2.63	2.36	2.10
3x13x5	86 P 934	AC-422‡	1	1.80	1.63	1.44	3x17x10	86 PX 943	AC-416**	21/4	3.11	2.79	2.49
3x17x6 2x7x7 2x9x7 2x11x7	86 PX 935 86 P   15 86 P   16 86 P   17	AC-433** AC-405‡ AC-406‡ AC-407‡	1 ½ 3/4 3/4 1	2.62 1.32 1.43 1.55	2.35 1.20 1.28 1.39	2.10 1.06 1.15 1.23	2x17x11 3x17x11 3x17x12 2x17x13	86 PX 122 86 PX 123 86 PX 128 86 PX 944	AC-417†† AC-418††	2½ 3 3 2¾	3.35 3.89 4.00 3.44	3.02 3.50 3.60 3.10	2.69 3.12 3.19 2.75
3x12x7 2x13x7 3x15x7 3x17x4	86 P   18 86 P   19 86 PX 936 86 PX 937	AC-408‡ AC-409‡ AC-411** AC-432**	1 1/4 1 13/4 1 1/2	1.96 1.64 2.62 2.28	1.76 1.47 2.35 2.06	1.57 1.31 2.10 1.82	3x17x13 4x17x10 4x17x13	86 PX 124 86 PX 125 86 PX 126	AC-427††	3 3 <sup>3</sup> / <sub>4</sub>	4.17 4.42 5.15	3.75 3.98 4.64	3.34 3.54 4.13

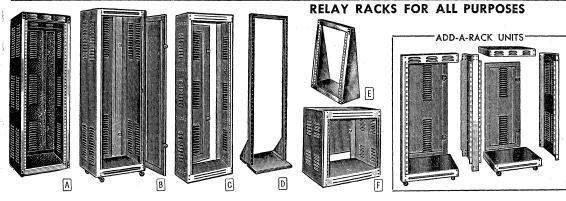
# BOTTOM PLATES FOR CHASSIS BASES

Bottom plates to fit the chassis bases listed above. In zinc-plated or black ripple 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.

	Black Wrinkle   1-49   50-99   100-1							self-tapping	inc Plated				
Size	Stock No.	Type No.	Lbs.	1-49 EA.	50-99 EA.	100-149 EA.	Size	Stock No.	Type No.	Lbs.	1-49 E.A.	50-99 EA.	100-149 EA.
5x7"	80 P 386	BP-705	1	.56	.50	.45	5x7"	80 P 406	BP-706	1	.68	.61	.54
5x9½"	80 P 387	BP-680	11/4	.61	:55	:49	5x91/2"	80 P 407	BP-667	11/4	:73	.66	.58
$5 \times 10^{7}$	80 P 388	BP-536	11/4	.66	.59	.49 .53 .73	5x10"	80 P 408	BP-538	11/4	.72	.65	.58 .57
7×7″	80 P 389	BP-681	11/2	.90	.81	· <u>7</u> 3	7x7"	80 P 409	BP-668	1 1/2	.95	-85	.76
7x9"	80 P 390	BP-682	11/2	.92	.83	.73	7x9"	80 P 410	BP-669	1 1/2	.97	.87	.77
7x11"	80 P 391	BP-683 BP-537	11/2	.93	.84	.74	7x11"	80 P 4!!	BP-670	11/2	1.05	.94	.84
7x12" 7x13"	80 P 392 80 P 393	BP-684	13/4 13/4	1.00	.87	.77 .80	7x12" 7x13"	80 P 412 80 P 413	BP-539 BP-671	13/4	1.10	1.06	.88
5x131/2	80 P 394	BP-685	11/2	1.82	.74	.66	5x131/2"	80 P 4 4	BP-672	1 3/4 1 1/2	.98	1.88	:78
4x17"	80 P 395	BP-1069	2'	.82	.74	.66	4x17"	80 P 415	BP-1067	2'2	1.05	.94	.84
7x17"	80 P 396	BP-686	2	.88	.79	.71	7x17"	80 P 416	BP-673	2	1.34	1.21	1.08
8x10"	80 P 400	BP-707	13/4	.90	.81	.73 .83	8x10"	80 P 417	BP-708	13/4	1.03	.92	.82
8x12" 8x17"	80 P 397	BP-709 BP-687	21/4	1.04	.93	.83	8x12" 8x17"	80 P 4 ! 8	BP-710 BP-674	21/4	1.3!	1.19	1.05
10x12"	80 P 398 80 P 399	BP-688	274	:93	.84 .84	.74	10x12"	80 P 419 80 P 420	BP-675	2 74	1.51	1.38	1.21
10x14"	80 P 401	BP-517	2	1.22	1.11	.98	10x14"	80 P 421	BP-514	2	1.30	1.18	1.04
10x17"	80 P 402	BP-689	21/4	1:18	1:06	.94	10x17"	80 P 422	BP-676	21/4	1.57	1.41	1.25
11x17''	80 P 403	BP-690	2	1.18	1.06	.94	11x17"	80 P 423	BP-677	2	1.57	1.41	1.25
12x17"	80 P 404	BP-691	21/2	1.24	1.12	1.00	12x17"	80 P 424	BP-678	21/2	1.83	1.65	1.47
13x17"	80 P 405	BP-692	23/4	1.44	1.29	1.16	13x17"	80 P 425	BP-679	23/4	2.20	1.98	1.75
		Alumin	um						Alumin	um			
5x7"	80 P 426	BPA-1589	1/2	.73	.66	.58 .58	7x11"	80 P 431	BPA-1594	3/4	.88	.79	.71
5x9½″	80 P 427	BPA-1590	1/2 3/4 3/4 3/4 3/4	.73	.66	.58	7×12″	80 P 432	BPA-1595	1	95	.85	.76
5x10" 7x7"	80 P 428 80 P 429	BPA-1591 BPA-1592	3/4	.73 .75	.66 .68	.58	7x13" 10x17"	80 P 433 80 P 434	BPA-1596 BPA-1597	11/4	1.12	1.01	.89 1.20
7x9"	80 P 430	BPA-1593	32	:78	:71	:63	13x17"	80 P 435	BPA-1598	11/4	2.03	1.82	1.63

# **Bud Relay Racks and Cabinets**



# **DELUXE ENCLOSED RACKS**

Ruggedly constructed racks. 16-gauge steel with 1/8" panel supports. Have sturdy bottom supports which permit fastening casters directly to base. All have chassis-type base. Accurately drilled and tapped for 19'' panels. Complete with hardware.

Overall	Panel	Mfr's	Gray Gray Black Hammertone Wrinkle Wrinkle			Wt.,					
Size	Height	Туре	Hammertone	Wrinkle	Wrinkle	Lbs.	1-9	10-14	15-19		
421/16x22x171/8"	36 <sup>3</sup> / <sub>4</sub> " 42"	CR-1774	88 PZ 503	98 PZ 808	86 PZ 819	90	44.27	39.84	35.42		
475/16×22×171/8"		CR-1771 CR-1772	88 PZ 500 88 PZ 501	98 PZ 843	86 PZ 816	95	50.08	45.07	40.06 50.15		
66%6x22x171/8" 825/6x22x171/8"	61 1/4" 77"	CR-1773	88 PZ 502	98 PZ 844 98 PZ 845	86 PZ 817 86 PZ 818	122 150	62.69 75.04	56.41 67.53	60.04		
421/16x22x22"	363/4"	CR-2074	88 PZ 505			120	61.84	55.65	49.47		
475/16×22×22"	42"	CR-2071	88 PZ 504			127	69.95	62.96	55.96		
66% x22x22"	611/4"	CR-2072	98 PZ 868		<b></b>	150	87.56	78.81	70.05		
825/16x22x22"	77"	CR-2073	98 PZ 869	<b> </b>		175	104.01	93.61	83.20		

# **ADD-A-RACK SERIES**

For addition of rack cabinets to deluxe, enclosed racks (Fig. A, above). Consist of four sections: Top, bottom, door and coupling panel. Replace either side panel of deluxe racks with coupling same sizes and construction as deluxe racks. With hardware.

Gray	] Gray	Black	Mfr's		Shpg. Wt.,	1	NET EACH	
Hammertone	Wrinkle	Wrinkle	Туре	Used With	Lbs.	1-9	10-14	15-19
88 PZ 506 88 PZ 507 88 PZ 508 88 PZ 509	98 PZ 817 98 PZ 818 98 PZ 819 98 PZ 816	86 PZ 806 86 PZ 807 86 PZ 808 86 PZ 805	AR-1775 AR-1776 AR-1777 AR-1778	CR-1771 CR-1772 CR-1773 CR-1774	77 100 127 75	48.03 59.70 73.30 43.45	43.23 53.76 66.06 39.11	38.43 47.79 58.72 34.76
88 PZ 510 88 PZ 511 88 PZ 512 88 PZ 513			AR-2276 AR-2277 AR-2278 AR-2275	CR-2072 CR-2073 CR-2074 CR-2071	130 150 107 113	83.47 101.67 58.94 66.68	75.12 91.51 53.05 60.02	66.78 81.34 47.15 53.34

# SUPER-DELUXE ENCLOSED CABINET RACKS

hind cabinet front, at 1" invervals. Front and rear doors.  $V_8$ " panel supports. Casters may be fitted directly to base. With hardware. B Similar to deluxe cabinet racks above, but with adjustable panel mounting supports; panel can be positioned from 1" to 6" be-

									* .
Overall	Panel	Mfr's	Gray	Gray	Black	Wt.,	1	NET EACH	
Size	Height	Туре	Hammertone	Wrinkle	Wrinkle	Lbs.	1-9	10-14	15-19
421/16x22x171/8"	363/4"	CR-2174	88 PZ 517	98 PZ 856	86 PZ 834	108	62.85	56.57	50.27
475/16x22x171/8"	42"	CR-2171	88 PZ 514	98 PZ 857	86 PZ 856	117	71.20	64.08	56.97
66%6x22x171/8"	611/4"	CR-2172	88 PZ 515	98 PZ 858	86 PZ 857	146	91.89	82.70	73.52
825/6x22x171/4"	77"	CR-2173	88 PZ 516	98 PZ 859	1 86 PZ 858	191	110.31	99.27	88.25

# SPACE SAVER RELAY RACKS AND ADD-A-RACKS

1" intervals. Removable rear door. Width 22"; inside depth 9". Take standard 19" panels. May be used with Add-A-Racks listed below. © Space Saver relay racks are only 10" deep. Sturdy 16-gauge steel. Panel mounting supports adjustable (front to rear) at

	SPACE SAVER RELAY RACKS							ADD-A-RACKS						
Overali	(17 T)   (17				Gray	Mfr's	Used	Wt.,		NET EACH				
Height	Height	Hammertone	Туре	Lbs.	1-9   10-14   15-19		Hammertone Type		With	Lbs.	1-9	10-14	15-19	
475/16"	42"	88 PZ 518	RR-1271	64	35.87			88 PZ 521	AR-1275	RR-1271	54	34.20	30.78	27.36
475/16" 669/16" 755/16"	61 1/4" 70"	88 PZ 519 88 PZ 520	RR-1272 RR-1273	93	44.93 52.67	40.43		88 PZ 522 88 PZ 523	AR-1276 AR-1277	RR-1272 RR-1273	69 76	42.87 50.22	38.58 45.20	34.30 40.18

# D OPEN-TYPE RELAY RACKS

Have chassis-type base, except \*has ¼" 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
353%4x20x22" 4055%4x20x22" 703%4x20x22"	31 ½" 36¾" 66½"	RR-1263 RR-1363 RR-1264	88 PZ 524 88 PZ 527 88 PZ 525	98 PZ 840 86 PZ 859 98 PZ 841	38 37 53	21.28 21.53 24.30	19.15 19.37 21.87	16.99 17.22 19.44
72½x20¾x13″ 7555⁄4x20x22″ 81¼4x20x22″	66½" 71¾" 77"	*RR-1265 RR-1364 RR-1366	88 PZ 528 88 PZ 529	98 PZ 809 86 PZ 877 86 PZ 878	100 46 48	53.68 24.63 29.38	48.31 22.17 26.44	42.94 19.70 23.50

# 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
24x203/8x12" 21"	RR-1248	86 PU 879	98 PU 848	15	8.91	8.03	7.13
31x201/8x12" 28"	RR-1249	86 PU 880	98 PU 849	17	10.97	9.87	8.77

HEAVY-DUTY CABINET RACKS AND ADD-A-CABS

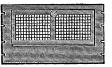
For use where increased depth 161/4". Top and bottom similar to those of racks in Fig. A, above. Has hinged removable rear door.

Louvered sides and 21/x171/4" 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.

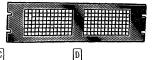
	HEAVI-DOTT CABINET RACKS								ADD-A-CABS					
Overall	Panel	Gray	Mfr's	Wt., NET EACH				Gray	Mfr's	Used	Wt.		NET EACH	
Height	Height	Hammertone	Туре	Lbs.	1-14   15-24   25-34			Hammertone	Type	With	Lbs.	1-14	15-24	25-34
241/2"	191/4"	88 PU 530	CR-1736	48	26.12	23.50	20.89	88 PU 533	ACR-1936	CR-1736	41.	24.89	22.40	19.91
31 1/2"	261/4"	88 PZ 531	CR-1737	55	28.17	25.35		88 PZ 534	ACR-1937	CR-1737	48	26.85	24.17	21.48
401/4"	35"	88 PZ 532	CR-1738	64	33.47	30.11	26.77	88 PZ 535	ACR-1938	CR-1738	55	31.90	28.70	25.52

# **Bud Rack Accessories and Miniboxes**











E



Α

В

# STANDARD RACK PANELS Heavy-duty rack panels of 1/8" thick aluminum or steel. All are

of all standard and telephone type relay racks. In the color columns

[A]	[1] 19" wide and have notched edges to fit mounting screw spacing of the tables below, *indicates wrinkle and †hammertone.													
Height		Steel			N	ET EA	СН	1	Aluminu	m		N	ET EAC	H
	*Black	*Gray	†Gray	Lbs.	1-49	50-99	100-149	*Black	*Gray	†Gray	Lbs.	1-49	50-99	100-149
1 <sup>3</sup> / <sub>4</sub> " 3 <sup>1</sup> / <sub>2</sub> "	98 PX 723	98 PX 738	88 PX 589	2	.82	.74	.66			88 PX 601	1	1.07	.96	.85
31/2"	98 PX 724	98 PX 739	88 PX 590	3	.98	.88	.78		98 PX 896		2	1.39	1.25	1.12
51/4"	98 PX 725	98 PX 740	88 PX 591	4	1.22	1.11	.98	98 PX 866			2	1.88	1.70	1.51
7"	98 PX 726	98 PX 741	88 PX 592	6	1.39	1.25	1.12			88 PX 604	2	2.37	2.14	1.90
83/4"	98 PX 727				1.71	1.55	1.37			88 PX 605	3	2.78	2.51	2.22
101/2"	98 PX 728	98 PX 743	88 PX 594	8	2.05	1.84	1.64	98 PX 888	98 PX 877	88 PX 606	_ 3	3.52	3.17	2.81
121/4"	98 PX 729	98 PX 744	88 PX 595	9	2.37	2.14	1.90			88 PX 607	4	4.01	3.61	3.20
14"	98 PX 733	98 PX 745	88 PX 596	10	2.78	2.51	2.22			88 PX 608	4	4.66	4.19	3.73
153/4"	98 PX 734	98 PX 746	88 PX 597	12	3.03	2.72	2.42			88 PX 609	5	5.23	4.71	4.18
171/2"	98 PX 735	98 PX 747	88 PX 598	13	3.44	3.10	2.75	98 PX 892	98 PX 862	88 PX 610 l	5	5.73	5.16	4.59
191/4"	98 PX 736	98 PX 748	88 PX 599	14	3.76	3.39	3.01	98 PX 893	98 PX 863	88 PX 611	6	6.30	5.67	5.04
21"	98 PX 737	98 PX 749	88 PX 600	15	4.17	3.75	3.34	98 PX 894	98 PX 803	88 PX 612	7	6.87	6.18	5.50

# STEEL DOOR RACK PANELS

Extremely useful when accessibility to component parts on the chassis is is important. Made of ½" sheet steel, panels are 19" wide. Newly designed, plunger-type lock makes certain door is easy to open and lock. Available in choice of either black or gray wrinkle finish or light gray hammered finish. Height: PS-814 and PS-615. 10½", PS-815 and PS-616, 12½", Offered in both ventilated as well as solid door styles. \*Ventilated door (square perforations). Av. shpg. wt., 9 lbs.

Grav	Black	Grav	Mfr's	NET EACH				
Wrinkle		Hammertone	Туре	1-49	50-99	100-149		
88 PX 614 88 PX 615	86 PX 175 88 PX 618	88 PX 621	PS-814*	7.37	5.36 6.63 6.63 7.29	4.76 5.90 5.90 6.49		

### SWIVEL TRUCK CASTERS

Type RC-7756. Heavy duty, ball-bearing casters for Bud deluxe relay racks. Support up to 400 lbs. distributed on four casters. Wheels are high grade, hard rubber. Shps. wt., 10 oz.

88 PX 624, 1-49, NET EACH
79¢ 100-149, EACH
71¢

### VENTILATED GRILL PANELS

Constructed of durable \( \frac{h''}{n} \) thick steel. The grill is die-stamped in 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 3½" space provided from bottom of panel to ventilated portion of the panel to allow for chassis mounting. Av. shpg. wt., 5 lbs.

	Grav	Black	Grav	Mfr's	N I	ET EAG	CH
Hgt.	Wrinkle	Wrinkle	Hammered	Туре	1-49	50-99 1	00-149
51/4"	88 PX 62	88 PX 630	88 PX 635	PS-808	3.19	2.87	2.55
7"	88 PX 62	88 PX 631	188 PX 636	PS-809	3.47	3.13	2.77
		188 PX 632				3.75	3.34
101/2"	88 PX 62	388 PX 633	88 PX 638	PS-811*	4.42	3.98	3.54
121/4"	88 PX 62	88 PX 634	188 PX 639	PS-812*	4.74	4.27	3.79

# **RELAY RACK SLIDE DRAWER**

RELAY RACK SLIDE DRAWER

Type SD-1717. Sliding drawer assembly for any standard rack or cabinet. 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 lbs. 16½x14x3°. Shps. wt., 5 lbs.

88 PX 640. 1-14, NET EACH. Il.20

15-24, EACH. 10.08 25-34, EACH. 8.96

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, 16½x14°. Wt., 1¾ lbs.

86 PX 257. 15-24, EA... 2.25 25-34, EA... 2.01 1-14, EA... 2.51

# **CHASSIS MOUNTING BRACKETS**

Heavy-gauge steel, cut away for chassis 3" high, except \*4" chassis. Stock Mfr's NET PER PAIR W+ Туре Ht. Depth 1-49 PR. 50-99 PR. 100-149 PR. 86 P 219 MB-458 86 P 220 MB-448 86 P 218 MB-459 61/2" 1.07 3 3 .96 1.20 1.32 .85 1.06 1.18 84 10" 11" 86 P 221 MB-449 6½ 86 P 224 MB-460 6½ 86 P 222 MB-450 \*8½ 86 P 223 MB-451 \*8½ 6½' 6½' \*8½' 12" 1.71 1.66 1.93 2.05 1.55 1.49 1.73 1.84 .37 .32 .55 3 3 4 13"

# TRIANGULAR PANEL BRACKETS

(Not illus.) Panel-mounted chassis support. Heavy steel. Black enamel.

Stock	Mfr's	Ht.	Depth	Wt.,		T PER PAIR		
No.	Type		- open	Lbs.	1-49 PR.	50-99 PR.	100-149 PR.	
86 P 226	MB-1266	5"	5"	1	.98	.88	.78	
86 P 227			7"	2	1.15	1.03	.92	
86 P 228	MB-1268	9″	9″	2	1.39	1.25	1.12	

# CHASSIS SUPPORTING ANGLES

(Not illus.	.) Kelay i	ack runners;	764" S	teel. For l	neavy cha	assis, shelves.
Stock	Mfr's		Wt.,		T PER	
No.	Туре	H.W.D.	Lbs.	1-24 PR.	25-49 P	R.   50-99 PR.
86 P 235	SA-1349	13/8x3x141/2" 13/8x3x12"	4	2.20	1.99	1.76
88 P 641	SA-1350	13/8x3x12"	3	2.13	1.91	1.71

# **UTILITY HANDLES**

Strong handles with comfortable grip. Made of tubular aluminum with etched finish. 2 oz.

	Mtg. ctr.	1-49, EA.	50-99, EA.	100-149, EA.
86 P 849 UH-70A	45/8"	35¢	31¢	28¢
86 P 899 UH-71A	31/4"	29¢	26¢	24¢

# HANDLE CATCH SET



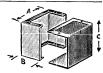
# **HEAVY-GAUGE STEEL RACK SHELVES**

- 1	Slide-in typ	e. Require	e chassis su	pport	angles belo	ow. Black er	amel finish.
1	No.				1-24, EA.	25-49, EA.	50-99, EA.
- 1	86 PX 231	CB-1976	1x19x15"	7	3.40	3.06	2.72
1	86 PX 232	CB-1977	1x19x12"	6	2.59	2.33	2.07

# **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 subassemblies—also excellent for complete, self-contained units 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 to circuitry for servicing or wiring modifications. Flanges assure extremely low RF leakage and also provide high rigidity. Self-tapping screws (supplied) hold sections firmly together. Made of high-quality aluminum; strong, easy to cut and drill. Excellent for any small construction project.



Size	Wt	Gray	Mfr's	N	ET EAC	H į	Natural	Mfr's	1	ET EAC	Н
AxCxB	Lbs.	Hammertone	Type	1-49	50-99	100-149	Aluminum	Type	1-49	50-99	100-149
2 <sup>3</sup> / <sub>4</sub> ×2 <sup>1</sup> / <sub>8</sub> ×1 <sup>5</sup> / <sub>8</sub> " 3 <sup>1</sup> / <sub>4</sub> ×2 <sup>1</sup> / <sub>8</sub> ×1 <sup>1</sup> / <sub>8</sub> " 3 <sup>1</sup> / <sub>4</sub> ×2 <sup>1</sup> / <sub>8</sub> ×1 <sup>5</sup> / <sub>8</sub> " 4×2×2 <sup>3</sup> / <sub>4</sub> " 4×2 <sup>1</sup> / <sub>6</sub> ×1 <sup>5</sup> / <sub>8</sub> "	1/2 1/2 1/2 1/2 1/2 1/2	80 P 342 80 P 359 80 P 343 80 P 357 80 P 344 80 P 345	CU-2100 CU-2117 CU-2101 CU-2115 CU-2102 CU-2103	.83 .82 .90 I.07 .90 .98	.75 .74 .81 .96 .81 .88	.67 .66 .73 .85 .73	80 P 360 80 P 377 80 P 361 80 P 375 80 P 362 80 P 363	CU-3000 CU-3017 CU-3001 CU-3015 CU-3002 CU-3003	.61 .61 .73 .61	.55 .55 .57 .57 .55	.49 .49 .49 .59 .49
4½x2½x1½" 5x2½x2¼" 5x4x3" 5¼x3x2½"	1/2 1/2 3/4 1/2	80 P 358 80 P 346 80 P 347 80 P 348	CU-2116 CU-2104 CU-2105 CU-2106	.98 1.07 1.22 1.07	.88 .96 I.II .96	.78 .85 .98 .85	80 P 376 80 P 364 80 P 365 80 P 366	CU-3016 CU-3004 CU-3005 CU-3006	.71 .76 .92 .80	.64 .69 .83 .73	.57 .61 .73 .65
6x5x4" 7x5x3" 8x6x3½" 10x2x15%"	1 1 1¼4 3¼4	80 P 349 80 P 350 80 P 351 80 P 355	CU-2107 CU-2108 CU-2109 CU-2113	1.86 1.78 2.19 1.35	1.68 1.61 1.97 1.22	1.49 1.43 1.74 1.08	80 P 367 80 P 368 80 P 369 80 P 373	CU-3007 CU-3008 CU-3009 CU-3013	1.44 1.37 1.69 1.13	1.29 1.23 1.52 1.02	1.16 1.10 1.35 .90
10x6x3½" 12x2½x2¼" 12x7x4" 17x5x4"	1 ½ 1 1½ 2½ 2½	80 P 352 80 P 356 80 P 353 80 P 354	CU-2110 CU-2114 CU-2111 CU-2112	2.54 1.67 3.20 3.44	2.28 1.50 2.88 3.10	2.03 1.33 2.57 2.75	80 P 370 80 P 374 80 P 371 80 P 372	CU-3010 CU-3014 CU-3011 CU-3012	1.98 1.34 2.66 2.86	1.78 1.21 2.39 2.58	1.59 1.08 2.13 2.29

# **Bud Metal Products**



# HEAVY-DUTY CHASSIS BASES

Ruggedly constructed chassis bases for Ruggedy Constructed chassis bases for heavy duty applications. Formed of one-piece heavy 1/6" steel. Electrically spot welded corners and sides folded over at bottom for added strength. Electro-zinc plated. Supplied complete bottom plates and mounting

### ELECTRO ZINC-PLATED

Stock	Mfr's.		Wt.	NET EACH			
No.	Туре	HWD	Lbs.	1-24	25-49	50-99	
86 PX 240 86 PX 242		3x17x 8" 3x17x11"	8 91/2	4.66 4.74	4.18 4.27	3.73 3.79	
86 PX 243 86 PX 244	CB-1768	2x17x13" 3x17x13"	101/2	5.23 5.32	4.71	4.18 4.25	
86 PX 946			111/2	5:73	5.16	4:59	

### **BLACK WRINKLE**

88 PX 536	CB-1758   3x17x 8"	1 8	4.17	3.75	3.34	
00 PY 537	CB-1760 3x17x11"	01/				
20 20 537	CB-1700 SX17X11	9/2	4.25	3.83	3.40	
	CB-1761 2x17x13"		4.74	4.27	3.79	
88 PX 539	CB-1762 3x17x13"	101/6	4.83	4.35	3.86	
88 PX 540	CB-1763 4x17x13"	111/2	5.15	4.64	4.13	



# MINIATURE ALUMINUM CHASSIS

Open-end aluminum chassis for limited space applications. Excellent for use with miniature tubes and for sub-assemblies. Have ¼" mounting flanges to allow fastening down of chassis or attachment of a bottom plate. Etched aluminum finish. Av. shpg. wt., ¾ lbs.

Stock	Mfr's.	H. W. D.	For	N	ET EAC	H	
No.	Туре		Cabinets	1-24	25-49	50-99	
80 P 446 80 P 452 80 P 448 80 P 453	CB-1624 CB-1617 CB-1626 CB-1618	1x3½x1¾″ 1x3½x4″ 1x4½x2¾″ 1x4½x4″	CU-883 C-1602 CU-728 C-1603	41¢ 40¢ 44¢ 49¢	37¢ 36¢ 39¢ 44¢	33¢ 32¢ 35¢ 39¢	
80 <b>P</b> 454 80 <b>P</b> 455 80 <b>P</b> 445	CB-1619 CB-1620 CB-1623	1x51/8x4" 1x61/8x4" 11/4x23/4x25/8"	C-1604 C-1605	52¢ 54¢ 37¢	47¢ 48¢ 33¢	41¢ 43¢ 29¢	
80 P 450 80 P 449 80 P 451 80 P 447	CB-1628 CB-1627 CB-1629 CB-1625	1½x6½x3" 1½x4½x3¾" 1½x4½x5¾" 2x4½x3¼"	CU-729 CU-1098 C-1788	52¢ 44¢ 56¢ 47¢	47¢ 39¢ 50¢ 42¢	41¢ 35¢ 45¢ 37¢	



# SLOPING PANEL UTILITY BOXES

Sloping panel utility boxes are carefully designed to provide streamlined appearance and maximum useable space. Will conveniently house a small amplifier, oscillator, test equipment, etc. Opening is located in rear of box; has 3/8" flange to permit simplified back cover mounting. Rigid construction assures proper support and protection for components. All units are 4" high, 41/4" deep. Finished in black wrinkle enamel.

Stock	Mfr's		For Chas.		N	ETEAC	н
No.	Type	Width	No.	Lbs.	1-49	50-99	100-149
80 P 657 80 P 672	C-1602 C-1603 C-1604		CB-1617 CB-1618 CB-1619	1/2	1.20	1.08	1.10
80 P 673 80 P 717	C-1605		CB-1620	i	1.44	1.29	1.21

### OPEN-END CHASSIS



An excellent selection of open-end, heavy-gauge aluminum chassis. Have U-shaped construction with ends folded over 3/4 to provide additional strength. Available in a wide variety of sizes to accommodate nearly every construction requirement. Will

ly every construction requirement. Will provide excellent fit when used with Bud cabinets listed on pages 239 & 240. Electro zinc-plated. Av. shpg. wt., 11/2 lbs.

Stock	Mfr's		For	N	ET EAG	CH
No.	Туре	H.W.D.	Cabinet	1-24	25-49	50-99
80 P 437 80 P 438 80 P 440 80 P 441 80 P 443	CB-996 CB-976	1½x7x5" 1½x7x7" 1½x9x5½" 1½x9x7½" 1½x9x7½"	C-973 C-993 C-999, C-1746 C-994, C-1747		.85 1.10 .96 1.23 1.15	.76 .97 .85 1.10 1.02
80 P 444 80 P 436 80 P 439 80 P 442	CB-38 CB-39	1½x13x7". 2x6x7" 2x8x7" 2x10x7"	C-995, C-1748 C-1584 C-1585 C-1586	1.56 .98 1.15 1.34	1.40 .88 1.03 1.21	1.24 .78 .92

# 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 of small, self-contained units. Removable front and rear panels fastened with self-tapping screws permit easy access to components and provide maximum layout flexibility. Built-in chassis is securely fastened in place. Panels fit snugly against dust. Black-wrinkle enamel finish.

dust. Black-wrinkle enamel finish.

Stock		Cabinet	Chassis	Wt.,	N	ET EA	CH
No.	Туре	H.W.D.	H.W.D.	Lbs.	1-49	50-99	100-149
80 P 326			1x3½x1½"	3/4	1.31	1.19	1.05
80 P 327 80 P 328	C-1794 C-1795	4x5x3" 5x4x3"	1x4½x2½" 1¼x3½x2½"	1	1.45	1.30	1.16
80 P 329	C-1796	6x5x4"	13/4×41/8×37/8"	13/4	1.67	1.50	1.33
80 P 330 80 P 331	C-1798	6x6x6"	1 1/4 x 5 1/8 x 3 7/8" 1 3/4 x 4 7/8 x 5 7/8"	23/4	2.13	1.91	1:71



# UNIVERSAL METER CASES

Sloping front meter case for use with either 2° or 3° meters. Unit is supplied with front panel cut for a 2° meter. An easily removable knockout ring enlarges the hole to accommodate a 3° meter. Ideal 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 self-tapping screws. Top has two 3/6° knockouts for terminal posts or feed-through insulators. Available in steel or aluminum; both have gray ham mertone finish. Size, 41/x4x4°.

Stock	Mfr's		Wt.,	N	ET EAC	Н
No.	Туре	Material	Lbs.	1-49	50-99	100-149
88 P 541	CM 1935	Steel	1	1.47	1.32	1.18
88 P 542	CMA 1936	Aluminum	3/4	1.71	1.54	1.37



# **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 of cabinet. Panels can also be used for mounting components prior to assembling cabinet. Panels attach to flanges on cabinet with self-tapping screws. For amateurs, experimenters, 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 cabinets in black wrinkle or gray hammertone finish; aluminum units in etched aluminum or gray hammertone finish;

Size,	Stock I	vo. (Steel)	Mtr's	Wt.,	NET EACH			
H.W.D.	Black	Gray	Туре	Lbs.	1-49	50-99	100-149	
4x4x2" 4x5x3"	86 P 200 86 P 201	80 P 332 80 P 333	CU883 CU728	11/4	1.07	.96	.85	
6x5x4"	86 P 202	80 P 334	CU729	21/2	1.35	1.08	.96 1.08	
6x6x6" 9x6x5"	80 P 203 86 P 204	80 P 335 80 P 336	CU1098 CU1099	3	2.05	1.84	1.64	
10x8x7"	86 P 205	80 P 337	CU879	5	3.27	2.95	2.62	
10x10x8" 12x7x6"	86 P 207 86 P 206	80 P 339 80 P 338	CU880 CU1124	8	4.00 3.22	3.54	3.15 2.58	
12x11x8"	86 P 208	80 P 340	CU881	9	4.25	3.83	3.40	
15x9x7*	86 P 209	80 P 341	CU882	1 3	4.42	3.98	3.54	

Size H.W.D.	Etched Aluminum	Mfr's Type	Wt., Lbs.	1-49, EA.	50-99, EA.	100-149, EA.
4x4x2"	88 P 543	AU-1083	1/4	1.26	1.14	1.01
4x5x3"	88 P 544	AU-1028	1/4	1.34	1.21	1.08
6x5x4"	88 P 545	AU-1029	1/2	1.47	1.32	1.18
6x6x6"	88 P 546	AU-1039	1/2 3/4	2.13	1.91	1.71
9x6x5"	88 P 547	AU-1040	1	2.46	2.21	1.97
Size, H.W,D.	Gray Hammertone	Mfr's Type	Wt., Lbs.	1-49, EA.	50-99, EA.	100-149, EA.
4x4x2"	88 P 548	AU-1083HT	1/4	1.47	1.32	1.18
4x5x3"	88 P 549	AU-1028HT	1/4	1.64	1.47	1.31
6x5x4"	88 P 550	AU-1029HT	1/4 1/2 3/4	1.80	1.63	1.44
6x6x6"	88 P 551	AU-1039HT	3/4	2.37	2.14	1.90
9v6v5"	88 P 552	AII-1040HT	1	2 78	251	2 22



# **DELUXE CABINET RACKS**

Attractive, ruggedly constructed 16-gauge steel cabinet racks. Have welded joints. Ideal for commercial broadcast stations, amateur transmitters, sound or test equipment, etc. Cabinets have rounded compers and smart, red inlaid chrome trim. All have recessed, hinged top doors, with snap locks. Ventilation is provided by means of louvered sides and a 2½" opening in the bottom of the back, extending the

entire width of the cabinet. Models CR-1727, CR-1728, CR-1743, CR-1744 and CR-1745 have back doors with snap locks. The remainder have welded back panels. All panel mountings are drilled for standard E1A notched panels. Supplied with panel mounting screws. Units are 1444" in depth and 22" wide. Finish is in black or gray wrinkle or gray hammertone.

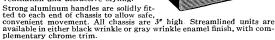
	Panel	1	Stock No.		Mfr's	Wt.,		NET EACH	
Ht.	Space	Gray Wrinkle	Black Wrinkle	Gray Hammertone	Туре	Lbs.	1-14	15-24	25-34
8 <sup>2</sup> 5/ <sub>32</sub> " 10%6" 125/6" 14 <sup>1</sup> / <sub>16</sub> " 15 <sup>13</sup> / <sub>16</sub> "	7" 83¼" 10½" 12¼"	88 PU 563 86 PU 729 86 PU 730	88 PU 564 98 PU 835 98 PU 804	88 PU 562 88 PU 557 88 PU 556	CR-1726 CR-1741 CR-1740	25 28 30	14.97 16.37 18.74	13.47 14.73 16.87	11.98 13.09 14.99
141/16" 1513/16"	14"	86 PU 73 I 86 PU 893	98 PU 836 86 PU 894	88 PU 558 88 PU 555	CR-1742 CR-1739	32 34	19.72 21.52	17.75 19.36	15.78 17.22
195/16" 335/16" 281/16" 2213/16" 3613/16"	17½" 31½" 26¼" 21" 35"	86 PU 732 86 PU 895 86 PU 733 86 PZ 897 86 PZ 734	98 PU 837 86 PU 896 98 PU 838 86 PZ 898 98 PZ 839	88 PU 559 88 PU 554 88 PU 560 88 PZ 553 88 PZ 561	CR-1743 CR-1728 CR-1744 CR-1727 CR-1745	38 39½ 48 52 60	25.70 31.34 29.54 27.50 32.98	23.13 28.20 26.59 24.74 29.68	20.56 25.07 23.63 22.00 26.38

# **Bud Foundation Cabinets**

### STREAMLINED FOUNDATIONS

Deluxe foundation units for use where an required. Ideal for all types of electronic equipment. Feature modern styling and rigid construction.

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.



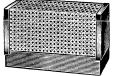
Size	Mfr's	Black	Gray	Wt	NET EACH		
H.W.D.	Туре	Wrinkle	Wrinkle	Lbs.	1-24	25-49	50-99
9x101/16x5" 9x121/16x7"	CA1751	80 PX 493 80 PX 494	80 PX 498	5	7.86	5.96 7.08	6.29
9x17½6x7″ 9x17½6x10″		80 PX 495 80 PX 496				7.52 8.17	

# STANDARD AMPLIFIER FOUNDATIONS

Standard amplifier foundations. Ideal units for most amplifier requirements. Foundations consist of regular chassis with ruggedly constructed metal covers.

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 2½" high chassis; Type CA-1128 has a 3" high chassis. All standard amplifier foundations are available in black wrinkle finish only.

Stock Mfr's		Size	Wt.	NET EACH			
No.	Type	H.W.D.	Lbs.	1-24	25-49	50-99	
80 PX 697 80 PX 698 80 PX 699 80 PX 656	CA-699 CA-1125 CA-1126 CA-1128	85/6x95/8x51/8" 85/6x135/8x51/8" 85/6x171/8x71/8" 813/6x121/8x101/8"	3 43/4 6 7	5.50 6.30 7.11 7.37	4.95 5.67 6.40 6.63	4.40 5.04 5.69 5.90	

# SLOPING CHASSIS AMPLIFIER FOUNDATIONS

These high-quality, sloping chassis amplifier foundations combine attractive 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" 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 reditations on folia paire and fourtees on sides allow directation of a for dissipation of heat. Top cover has gray wrinkle finish with chrome trim; chassis has contrasting black wrinkle finish. With handles for easy, convenient carrying. Overall height, 9½". Cover, 6" high. Base, 3½" high. Dimensions given below are: TWC—top depth by chassis width by chassis depth.

Stock	Mfr's	Size.	Wt.,	N	Н	
No.	Туре	TWĆ	Lbs.	1-24	25-49	50-99
88 P 585	CA-1980	5x10x8"	5	8.51	7.65	6.80
88 P 586	CA-1981	7x12x10"	6	9.16	8.25	7.33
88 P 587	CA-1982	7x17x10"	8	10.48	9.43	8.38
88 P 588	CA-1983	10x17x13"	10	10.97	9.87	8.77

# MINIATURE AMPLIFIER FOUNDATION

Type CA-1754. An extremely compact. sturdily built amplifier foundation. Designed expressly to meet the require-ments of builders employing miniature tubes. transistors. capacitors and other miniaturized com-

ments.



miniaturized components. Excellent for small, portable-type P. A. amplifiers, recording preamplifiers, etc. Chassis, which is an integral part of the unit, is only 2" high, 7" wide, and 5" deep. With foundation court forted in the contribution of cover fastened in place, entire unit stands only 6" 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

Stock cabinets of advanced design for housing highest quality instruments. Hinged cover Stock cabinets of advanced design for housing highest quality instruments. Hinged over swings back completely. Entire cover may be removed. Grommeted finger holes are provided 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 cooling air and provides easy removal of cabinet copening. For standard size relay rack panels. Built of 16-gauge steel. Has rubber feet. Finished in gray hammertone. Width: 21½6′; Depth, 14½6′. Clear inside depth, 13½6′. Rear opening, 18x3°. Cover opening, 21½6x 123½7′. Covers: \*solid; †perforated.



Stock	Mfr's	Height	Panel	Wt	N	ET EAC	H
No.	Туре	neignt	Space		1-14	15-24	25-34
86 PU 644 86 PU 645 86 PU 646 86 PU 647 86 PU 648 86 PU 649	C-1440* C-1441* C-1442* C-1550† C-1551† C-1552†	9½" 11¼" 13" 9½" 11¼"	7" 83/4" 101/2" 7" 83/4" 101/2"	21 23 25 20 22 24	27.66 29.46 32.16 29.95 32.08 34.86	24.89 26.51 28.95 26.95 28.87	22.13 23.57 25.73 23.96 25.66 27.90

# "PRESTIGE" SLOPING PANEL CABINETS

Distinctively styled sloping panel cabinets, expertly engineered to provide custom housings for top-quality apparatus. Deluxe features include: swept-back top panel construction 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" relay rack panels. Gray hammertone finish. Rear opening, 2½x18". Panel recess, 1½". Top depth, 9". Overall width, 22". All cabinets listed have 3½" vertical panel space. Height and depth shown are overall measurements. Distinctively styled sloping panel cabinets,



Stock	Mfr's HXD	HYD	Panel	Wt	NET EACH			
No.	Type		Space		1-14	15-24	25-34	
88 PU 573 88 PU 574 88 PU 575	C-1556	111/8x143/8" 131/4x151/8" 143/4x161/8"	83/4"	25	37.88	31.75 34.08 36.65	30.30	

# SLOPING PANEL CABINETS

SLOPING PANEL CABINETS

Very attractive, professionally styled, sloping panel steel cabinets. Feature smooth-action hinged top for easy access to tubes and other top-of-chassis components. Removable 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"; Type C-1585, 7x8x2"; Type 1586, 7x10x 2"; Type C-1587, 7x2"; Type C-1587, 7x72"; Type C-1588, 7x72"; Type C-1892, 8x12x12/x"; Type C-1893, 10x17x3"; Type C-1894, 7x 13x2"; Type C-1896, 7x17x3". Rigid construction assures proper support and protection for components. Available in choice of handsome black wrinkle enamel or gray hammertone finish.



Size	Mfr's	Stock No.	Stock No.	Wt	NEILACH
H. W. D.	Туре		Gray	Lbs.	1-24  25-49 50-99
61/2x71/16x75/16"	C-1584	86 P 900	88 P 576	3	3.23 2.81 2.59
6½x9½x75/6"			88 P 577	31/2	3.67 3.31 2.94
61/2x111/16x75/16"	C-1586	86 P 902	88 P 578	4	4.25 3.73 3.40
8x131/16x81/2"				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
		86 P 968	88 P 579	31/4	4.42 3.98 3.54
	C-1588	86 P 969	88 P 580	33/4	4.91 4.42 3.93
8x141/16x8"	C-1894	86 PX 970	88 PX 583	41/2	5.23 4.71 4.18
			88 PX 584	71/2	7.53 6.77 6.02

# **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 strength, or in aluminum for light weight. Steel units in choice of black wrinkle or gray hammertone finish; aluminum units in choice of etched or gray hammertone finish.



# PORTABLE STEEL CASES

Size	Mfr's	Lbs.	Stock No.	Stock No.	NET EACH			
H.W.D.	Type	LDS.	Black	Gray	1-24	25-49	50-99	
9x6x5"	CC-1095	31/4	80 P 798	80 P 8 1 3	2.95	2.66	2.36	
6x9x5"	CC-1091	31/4	80 P 799	80 P 8 1 4	2.95	2.66	2.36	
12x7x6"	CC-1096	4	80 PX 808	80 P X 8 1 6	4.10	3.68	3.27	
7x12x6"	CC-1092	4	80 PX 809	80 PX 817	4.10	3.68	3.27	
15x7 <sup>3</sup> / <sub>4</sub> x7"	CC-1097	5	80 PX 810	80 PX 818	4.59	4.13	3.67	
10x10x8"	CC-1100	5	80 PX 811	80 PX 819	4.74	4.27	3.79	
9x15x7"	CC-1093	5	80 PX 812	80 PX 848	5.73	5.16	4.59	

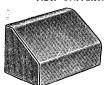
# ALUMINUM PORTABLE CASES

Size Mfr's Wt., Stock No.				NET EACH			Stock No.	NET EACH		
H.W.D.	Type	Lbs.		1-24	25-49	50-99	Gray	1-24	25-49	50-99
9x6x5"	ACC-2095		88 P 567	3.03	2.72	2.42	88 P 571	3,44	3.10	2.75
6x9x5"	ACC-2091		88 P 565	3.03	2.72	2.42	88 P 569	3.44	3.10	2.75
12x7x6"	ACC-2096		88 P 568	4.41	3.97	3.57	88 P 572	4.99	4.49	3.99
7x12x6"	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 all units is 4", depth 4\( 4''\). All cabinets have durable gray hammertone finish.

Stock	Stock Mfr's		Wt	NET EACH		
No.	Type	Width	Lbs.	1-49	50-99	100-149
88 P 642 88 P 643 88 P 644 88 P 645	C-1606 C-1607 C-1608 C-1609	4" 5" 6" 7"	3/4 3/4 11/8 11/8	1.42 1.52 1.62 1.86	1.27 1.36 1.45 1.68	1.14 1.22 1.29 1.49

# ALUMINUM

88 P 646	AC-1610	4"	1/2	1.65	1.48	1.31
88 P 647	AC-1611	5"	1/2	1.71	1.54	1.37
88 P 648	AC-1612	6"	3/4	1.86	1.54	1.49
88 P 649	AC-1613	7"	3/4	2.06	1.85	1.65

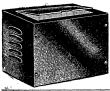
### SLOPING-PANEL UTILITY CABINETS



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 4¼", depth 4", All cabinets are finished in durable black wrinkle enamel.

Stock	Mfr's	Width	Wt	NET EACH		
No.	Type		Lbs.	1-49	50-99	100-149
80 P 718 80 P 719 80 P 796 80 P 797	C-1578 C-1579 C-1580 C-1581	4" 5" 6" 7"	3/4 3/4 1	1.20 1.86 1.44 1.51	1.08 1.23 1.29 1.36	.96 1.10 1.16 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 self-tapping screws. Panel extends full width of cabinet—provides maximum space for installation of controls. Louvers or each cited of exhibit resure annual year. on each side of cabinet assure ample ven-tilation of circuitry. Attractive black wrinkle enamel finish.

Stock	Mfr's	Size	Wt	NET EACH		
No.	Type	H.W.D.	Lbs.	1-24	25-49	50-99
80 P 378	C-973	7x8x8"	5	4.10	3.68	3.27
80 P 379	C-993	7x10x8"	5½	4.74	4.27	3.79
80 PX 380	C-994	7x12x8"	5¾	4.91	4.42	3.93
80 PX 381	C-995	7x14x8"	6	5.15	4.64	4.13
80 PX 382	C-1190	8x16x8"	7	7.45	6.70	5.96
80 PX 383	C-975	9x15x11"	8	9.01	8.10	7.20
80 PX 384	C-999	12x18x12"	15	9.72	8.75	7.78

# STREAMLINED CABINETS



Handsome, sturdily constructed cabinets with rounded corners. Recessed hinged top, plus 3½° opening in rear permit easy access to sockets, terminals, etc. Front panel fastens with self-tapping screws. Louvers provide ample ventilation. Excellent for amateur transmitters, test equipment, etc. Available in a choice of sizes to accommodate a variety of equipment. Durable black wrinkle enamel finish.

Stock	Mfr's	Size	Wt	l N	ET EAC	н
No.	Туре	H.W.D.	Lbs.	1-24	25-49	50-99
80 PX 314 80 PX 315 80 PX 316 80 PX 317 80 PX 318 80 PX 319	C-1789 C-1746 C-1747 C-1748 C-1790 C-1730	8x10½x8½″ 8x12½x8¼″ 8x14½x8¼″ 8x14½x8¼″ 8x16½x8¼″ 8x18½x8¼″ 12x205⁄ax12″	53/4 6 61/2 7 73/4	4.34 5.32 5.81 6.06 6.62 12.02	3.91 4.79 5.23 5.45 5.96 10.82	3.47 4.25 4.65 4.84 5.30 9.62

# **DELUXE STREAMLINED CABINETS**



Bud's deluxe equipment cabinets feature striking gray-wrinkle finish and chrome stripping. Include hinged door, convenient 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 equipment—excellent for amateur transmitters and receivers, laboratory equipment, and other units where appearance and rugged, functional design are of prime importance.

Stock	Mfr's	Size	Wt.,	NET EACH		
No.	Type	H.W.D.	Lbs.	1-24	25-49	50-99
80 PX 320 80 PX 321 80 PX 322 80 PX 323 80 PX 324 80 PX 325	C-1791 C-1781 C-1782 C-1783 C-1792 C-1731	8x10½x8¼″ 8x12½x8¼″ 8x14½x8¼″ 8x16½x8¼″ 8x16½x8¼″ 12x205%x12″	5 <sup>3</sup> / <sub>4</sub> 6 6 <sup>1</sup> / <sub>2</sub> 7 <sup>1</sup> / <sub>2</sub> 7 <sup>3</sup> / <sub>4</sub> 15	6.38 6.51 6.87 7.37 8.02 14.65	5.74 5.89 6.18 6.63 7.21 13.19	5.11 5.23 5.50 5.90 6.41 11.72



Open-side chassis for standard 19" mounting. 062" aluminum with reinforced corners. 1" flange on ends, with 4 elongated holes for mounting. Front flange has std. panel notching. All other edges have 5%" flanges. All models 17" wide, excluding flange, and 5%2" deep.

Stock	Mir's		Wt.,	N	ET EAC	Н
No.	Туре	Height	Lbs.	1-24	25-49	50-99
86 PX 185	CB-1370	13/4"	1	2.25	2.03	1.80
86 PX 186	CB-1371	31/2"	1½	2.54	2.28	2.03
86 PX 187	CB-1372	51/4"	1¾	2.78	2.51	2.22
86 PX 188	CB-1373	7"	2¼	3.19	2.87	2.56
86 PX 189	CB-1374	8 <sup>3</sup> / <sub>4</sub> "	2½	3.68	3.31	2.95
86 PX 190	CB-1375	10 <sup>1</sup> / <sub>2</sub> "	3	4.34	3.91	3.47
86 PX 191	CB-1376	12 <sup>1</sup> / <sub>4</sub> "	3¼	4.74	4.27	3.79
86 PX 192	CB-1377	14"	3½	5.23	4.71	4.18

# "SPECIFIC" C-100 CHASSIS



86 PX 680, NET......4.85

**MOUNTING PLATES.** Easily installed on or removed from Speed Chassis. Pre-punched for sockets, etc.  $4\frac{3}{6}$ " deep. Av. shpg. wt., 2 oz.

Stock No.	Description	Width	NET
86 P 692 86 P 693	Single 7-pin min. socket Double 7-pin min. socket Single 7-pin Vector socket Double 7-pin Vector socket Triple 7-pin Vector socket	1½" 1½" 1½" 1½" 15%" 15%"	20¢ 24¢ 34¢ 39¢ 44¢
86 P 684 86 P 695 86 P 696	Single 9-pin min. socket Double 9-pin min. socket Single 9-pin Vector socket Double 9-pin Vector socket. Triple 9-pin Vector socket	15%" 15%" 15%" 15%" 15%"	23¢ 27¢ 34¢ 39¢ 44¢
86 P 698 86 P 686 86 P 699	Single octal socket 1½ " ctrs Double octal socket 1½" ctrs Single octal socket 15/6" ctrs. Double octal socket 15/6" ctrs. Univ. transformer (2 required)	2½8" 2½8" 2½8" 2½8" 1½8"	25¢ 30¢ 25¢ 30¢ 54¢ pr.
86 P 689 86 P 690	Volume control (mounts 2) Blank	11/8" 11/8" 15/8" 21/8"	34¢ 15¢ 15¢ 15¢

# POPULAR BUILDERS' SUPPLIES

# **DUMONT CIRCUIT BREADBOARD**



Type K-100. Time saver for experimenters. Consists of  $3x4x12^{\circ}$  steel frame with ends punched for controls, 16 phenolic  $4x2^{\circ}$  such that  $3x4x12^{\circ}$  steel frame with ends punched for controls, 16 phenolic  $4x2^{\circ}$  such that  $3x4x12^{\circ}$  steel frame with ends punched for controls, and 20 double-ends strips, and 20 double-ends types for 7 or 9-pin miniature sockets, 4 single-hole types for octal sockets and 4 chassis with random holes. Shg. wt., 2 lbs.

# 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 corner bosses for flush mounting of panels. Case walls and panels are ½" thick. Av. shpg. wt., cases: 1½ lbs.; panels, 1 lb.

CASES

No.	Size	EACH	EACH			
86 P 286 86 P 287	61/4x33/4x2" 613/6x59/32x25/16"	.88 1.28	.77 1.13			
MATCHING DANIELS						

# "UNICHASSIS" EXPERIMENTAL CHASSIS



All-metal "breadboard-All-metal "breadboard-type" chassis for rapid assembly of circuits. Deluxe features make this perfect for research use. Consists of heavy-gauge, double-deck, aluminum chassis, 22 specially designed leads and 91 assorted terminations.

Chassis is pre-punched for potentiometers and tube sockets on the upper deck 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 of the tie points. Termination assortment includes test prods, banana plugs, alligator clips, grid caps, X-connectors and soldering stubs. The latter can be soldered to components to permit the insertion of test instruments without cutting the leads.

# 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.

# TIS 30 SATEFYING TO WHICH YOUR OVER KNIGHT-KIT



# 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!



# 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 cadmium-plated chassis with all holes prepunched-strong steel cases and top styling. All this and more, in Knight-Kits.



# 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 guesswork-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.



# 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 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 use!



# 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.

# NEW!

# **EXCITING knight-kits** YOU SHOULDN'T MISS

NEW **Page 244** 



Page 245



Page 243 Stereo Control



Page 246



12-Watt Hi-Fi Amplifier



25-Watt Basic Amplifier



4-Band Span Master

Page 256 **Printed Circuit Ranger** 

Page 257 Clock-Radio



NEW Page 256 Ranger III Radio



Page 257 Radio-Intercom



Page 262 12-in-1 Lab Kit

**Tube Checker** 



# here's why you get

# MORE FOR YOUR MONEY in **knight-kit**s

# 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 Knight-Kits 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-onthe-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 easyto-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 with a second seco

# YOU CAN SAVE UP TO HALF

Now you can build your own professionally styled high-fidelity equipment attremendous 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.



# NEW STERTO KITS

Knight-Kit stereo components combine outstanding quality with unsurpassed value to keynote a new era of breathtaking musical reproduction.

AND A CONTRACTOR SOCIETY AND CONTRACTOR AND ADDRESS OF THE SELECTION OF TH

YOU CAN ASSEMBLE YOUR OWN HI-FI SYSTEM—SAVE UP TO 50%. 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.

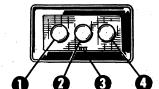
# knight-kits are FIRST with the LATEST—here's proof

Bandgy Port-Baid STEREO CONTROLKE

Full centralized stereo control for use with any two amplifiers individually rated up to 20 watts.



- Superb Styling
- Functions Remotely
- No Amplifier Rewiring Universal—Handles Any Two Amplifiers



1. Volume Control 3. Phase Reverse 2. Balance Control 4. Function Selector

Beautifully designed to take its place alongside the finest of stereo high-fidelity systems.



# NOW! complete STERED 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

NFT Introducing a versatile stereo control kit that provides 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

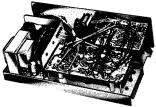
-no rewiring of amplifiers required. Functions: lets you balance speaker system volume; serves as master gain control for adjustment of overall volume; permits playing either stereo channel monaurally through one-half of speaker system or through entire system; provides channel reversal; also includes 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.  $4\frac{1}{2}x$  $7\frac{3}{4}$ x4". Shpg. wt.,  $3\frac{1}{2}$  lbs. 83 Y 778. NET......9.95



CUSTOM DESIGNED



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

\$6.25 Down

- 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 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,  $\pm \frac{1}{2}$  db, 7-120,000 cps; aux.,  $\pm \frac{1}{2}$  db, 7-75,000 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: Selector Equalizer (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.

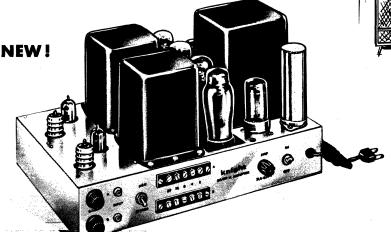
Beautifully styled metal cabinet finished in attractive French gray; front panel is aluminum with ebony trim. Ideal companion-piece for the Knight-Kit 60-watt stereo basic amplifier listed on next page. Supplied complete with all parts, cabinet, tubes, wire and solder and instructions.  $4\frac{1}{4}x13x8''$ . For 110-125 volts, 50-60 cycle AC. Shpg. wt.,  $17\frac{1}{2}$  lbs.

83 YX 776. NET........

# 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 TOP-VALUE BASIC STEREO HI-FI **AMPLIFIER ANYONE CAN BUILD** 

# TWO 30-WATT POWER AMPLIFIERS FOR STEREO;

**60 WATTS FOR MONAURAL** \$8.45 Down

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 chrome chassis of the stereo amplifier. Perforated to permit ample ventilation for top efficiency.

# knight-kit Basic 60-Watt Deluxe Stereo Amplifier Kit

Response Flat from 9 to 42,000 Cycles

• Phenomenal 0.08% Distortion at Full 60 Watts Special Circuitry Design for Exact Balance

• 60-Watt Monaural or Dual 30-Watt Stereo Unit

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.

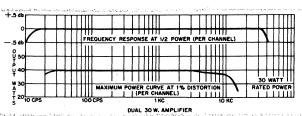
SUPERIOR SPECIFICATIONS. Frequency Response: (stereo)  $\pm 0.5$  db, 9-42,000 cps at half power; (monaural) ±0.5 db, 8-42,000 cps at half power. Harmonic Distortion: (stereo) 0.15% at 30 watts; (monaural) 0.08% at 60 watts. Intermodulation Distortion: (stereo) 0.15% at 30 watts; (monaural) 1.0% at 60 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; -ECC83/12AX7/7025 driver-inverters; 4-EL37 power outputs; 2-GZ34/5AR4 rectifiers.

Beautiful black and chrome styling. Size (HWD), 9x14x81/4". Supplied complete with tubes, all parts, wire and solder, hardware and easy-to-follow instructions. Less cover, listed below. For operation from 110-125 volts, 50-60 cycle AC. Shpg. wt., 36 lbs.

83 YU 777. NET..... 

# PROOF OF PERFORMANCE

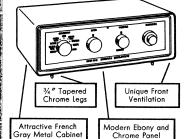
The frequency response and power curves, at right, illustrate the su-periority of the Knight-Kit 60-watt stereo amplifier—compare these with other units before you buy. You'll agree Knight-Kits are the finest values available anywhere.



# SAVE ON OUTSTANDING **knight-kits**



# SENSATIONAL LOW-COST STEREO AMPLIFIER ADVANCED DESIGN

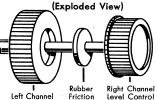


# SINGLE KNOB SELECTOR



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.

Clutch

Level Control

# NEW knight-kit 20-Watt Stereo Amplifier

- Quality Engineered—Economically Priced
- Only \$4.45 Down
- Simplified Point-to-Point Wiring Throughout • DC On Preamp Tube Filaments to Minimize Hum
- 13 db Negative Feedback for Minimum Distortion

Priced within reach of even the lowest hi-fi budget, this new Knight-Kit 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.

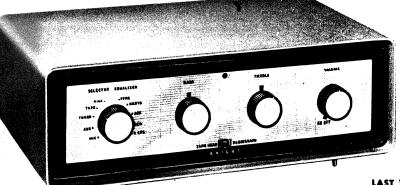
A unique type of selector switch demonstrates the exceptional convenience offered by this fine stereo amplifier kit. Both the input function and the desired type of operation are conveniently selected by a single control. The following positions are provided: Phono, Phono Reverse, Tuner, Tuner Reverse, 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:  $\pm 1\frac{1}{2}$  db, 20-20,000 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 Monaural—0.5 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 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:  $5x13\frac{1}{4}x9''$ . For operation from 105-125 volts, 60 cycle AC. Shpg. wt., 27 lbs. 83 YX 773. NET.....

# EASY-TO-BUILD HI-FI EVERYONE CAN AFFORD





LAST WORD IN PROFESSIONAL PERFORMANCE



# 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 construction—eliminates critical switch wiring, one of the major stumbling blocks encountered by the inexperienced kit builder.



# **knight-kit** Stereo Control

# 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 factory-assembled units.

# knight-kit 18-Watt Complete Amplifier Kit

\$3995 \$4.00 Down • RCA 6973 High-Fidelity Audio Tubes

Only 0.5% Distortion at Full 18 Watts Output
 Exclusive Knight-Kit Printed Circuit Switches

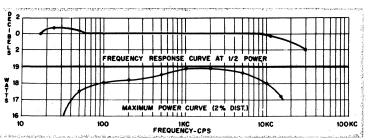
• Two Printed Circuit Boards

• Frequency Response,  $\pm 1$  db, 20 to 30,000 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: ±1 db, 20 to 30,000 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: Selector-Equalizer (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 preamplifier-equalizer 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—EZ81 rectifier.



# SAVE MOST ON SENSATIONAL KETTESTED TO THE SESSE



# Top-Value knight-kit I2-Watt Complete Amplifier Kit

\$1995 Less Cover

- 15 db Inverse Feedback For Distortion-Free Performance
- Boost and Attenuation on Both Bass and Treble
- Preamp Stage Equalized For Magnetic-Cartridge Input
- 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: ±1½ db, 30 to 15,000 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.

METAL COVER FOR ABOVE. Attractive French-gray perforated cover for

# 

FREQUENCY - CPS

# **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.

# MORE FOR YOUR HI-FI DOLLAR

A PLEASURE TO ASSEMBLE

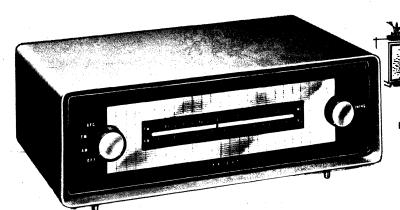
NEW!
LOWEST-COST
TRUE HI-FI
AMPLIFIER

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 specifications—you'll agree that you're getting the most for your money when you buy a Knight-Kit.



# **knight-kit** Stereo Control

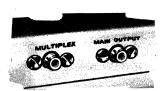
# LOW-COST HI-FI EVERYONE CAN AFFORD



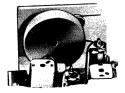


BUILD AND SAVE

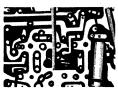
# ADVANCED DESIGN



**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

Only \$5.00 Down

- Modern Printed Circuit—Most of the Wiring Is Already Done
- Exceptional Sensitivity—2.5μν 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:  $\pm 0.5$  db, 20-20,000 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,  $4\frac{1}{4}\times13\frac{1}{4}\times8''$  (plus  $\frac{3}{4}''$  legs). For 110-125 v., 50-60 cycle AC. Shpg. wt., 12 lbs. 83 YX 787. NET.....

# SAVE ON COMPLETE SYSTEMS FEATURING knight-kits!

See pages 28 through 31 for Allied-selected music systems featuring easy-to-build Knight-Kits. 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** 

# **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.

# **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.

# knight-kit Basic FM Tuner Kit

- Has Stereo Multiplex Output Jack
- · AFC "Locks In" on FM Stations • Latest Time-Saving Printed Circuit

• 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 RF 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.

SPECIFICATIONS. Sensitivity: 4 µv for 20 db quieting. Output: 2 volts at 1000 µv input. IF Bandwidth: 200 kc. Audio Response: 20-20,000 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" high (plus 3/4" legs), 13 1/4" wide, 8" 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 assembly—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.....

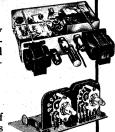


# 3 PRINTED CIRCUIT **BOARDS**

Wiring is greatly simplified. Assembly is quick and easy-perfect results too.

# PRINTED CIRCUIT **SWITCHES**

Make short work of the most tedious part of kit building.



# knight-kit 30-Watt Hi-Fi Amplifier Kit

\$7.70 Down

- A-AB-B Speaker Selector Switch
- Harmonic Distortion Never Exceeds 1% • Response, ±0.5 db, 15-100,000 cps
- 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:  $\pm 0.5$  db, 15 to 100,000 cps at 30 watts. Harmonic Distortion: never exceeds 1% from 20-40,000 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.  $4\frac{1}{4}$ x15 $\frac{1}{2}$ x15". With tubes, wire, solder, etc. For 105-125 v., 60 cycle AC. 32 lbs.

83 YU 762. NET.....



#### 2 PRINTED **CIRCUIT BOARDS**

Contain the wiring for all tubes -reduce assembly time to a minimum.

#### PRINTED CIRCUIT **SWITCHES**

Exclusive feature. Reduces complex switch wiring to a few easy steps.



## knight-kit Hi-Fi Preamplifier Kit

\$4.00 Down

- Deluxe Audio Control Center
- No Hum—DC On Tube Filaments
- 16 Combinations of Equalization
- Response: ±0.5 db, 10-40,000 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:  $\pm 0.5$  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 my); Pickering Phono (5 my); Ceramic (150 my); Mic. (24 my); Aux. (400 my); Tape Pre-amp (125 my); Tuner (125 my). 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.

- Brand New Design—Better Than Ever
- Hum and Noise 96 db Below 25 Watts
- 0.11% Harmonic Distortion; 0.17% IM
- New Narrow Chassis—Only 4¾" Deep
- Time-Saving Printed Circuit Board

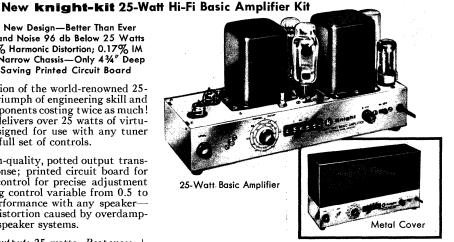
Introducing the new version of the world-renowned 25watt basic amplifier-a triumph of engineering skill and equal to high-fidelity components costing twice as much! Williamson-type circuit delivers over 25 watts of virtually flawless output. Designed for use with any tuner or preamplifier having a full set of controls.

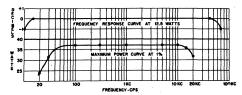
DELUXE FEATURES. Custom-quality, potted output transformer for superior response; printed circuit board for easy assembly; balance control for precise adjustment of output tubes; damping control variable from 0.5 to 50 to assure optimum performance with any speakerprevents low-frequency distortion caused by overdamping or underdamping in speaker systems.

SPECIFICATIONS. Rated Output: 25 watts. Response: ± 0.5 db, 9 to 70,000 cps at 12½ watts. Harmonic Distortion: 0.11% at 25 watts. IM: 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,  $4\frac{3}{4}x14\frac{1}{2}x7\frac{1}{8}$ ". Shpg. wt., 25 lbs. 

METAL COVER FOR ABOVE. Gold finish—contrasts beautifully with gleaming chrome chassis of amplifier. Shpg. 





HERE'S PROOF OF SUPERB HI-FI PERFORMANCE

## 



EASY TO ASSEMBLE. No experience is required to easily assemble Knight-Kit speaker systems. Illustrated, clearly written instructions make assembly a marvel of simplicity.

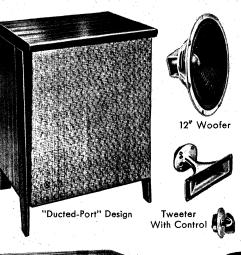
COMPLETE. You'll find everything you need in a Knight-Kit speaker systemhighest-quality speakers, pre-finished cabinetry, all hardware, acoustic insulation and instructions.

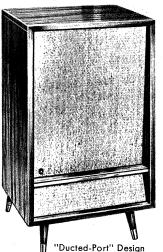
## knight-kit 2-Way Speaker System

- Pre-Finished in Mahogany, Blonde, or Walnut
- 12" Woofer, Compression-Type Tweeter Easy To Assemble—Only 7 Pieces
- \$5.00 Down • Hi-Fi Response: ± 5 db, 45-14,000 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 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" 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, 26x29x14". 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

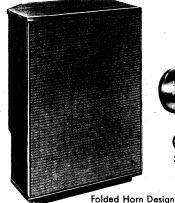








Knight KN-800 12" 3-Way Speaker





3-Way Speaker

## knight-kit "Ducted-Port" 3-Way System

- With Knight 12" 3-Way Speaker
- "Ducted Port" For Excellent Bass
- Choice of Mahogany, Blonde or Walnut

• Easy-To-Assemble, Pre-Finished Enclosure

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; vibration-free wood panels; hand-rubbed, fine furniture veneers. Enclosure has sloping front panel with brass divider and tapered legs. 32x17½x15". In mahogany, blonde or walnut finish-specify. Shpg. wt. 47 lbs. 

#### knight-kit Folded Horn 3-Way System

NET

- Folded Corner Horn Design • Famous Knight 12" 3-Way Speaker
- Dignifled Styling-Choice of 3 Finishes
- 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-800 12" 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. 33½x  $22\frac{3}{4}x15\frac{1}{4}$ ". In mahogany, blonde or walnut—specify when ordering. Shpg. wt. 55 lbs. 79 DZ 273-C2. Only \$8.85 Down. NET............ 88.45

Toronger Table Language 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.

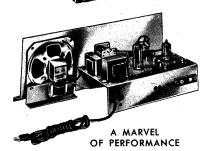




NEW! "SPAN MASTER"
4-BAND RADIO WITH
WORLD-WIDE RANGE



A WORLD OF RECEPTION AT YOUR FINGERTIPS!



## knight-kit "Span Master" 4-Band Receiver Kit

NET **\$ 7 1 9 5** 

\$2.50 Down

- Continuous Coverage From Broadcast To 30 Mc
- Instant Bandswitching Over All Four Bands
- Calibrated General Coverage and Bandspread Dials
- Efficient 4" 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-at-sea and aircraft, hear news-making police and fire-alarm 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 experience—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.

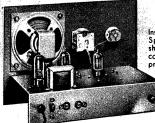


## LOW-COST knight-kit

HIGH-PERFORMANCE RADIO



Acclaimed by enthusiastic kit builders the world over as the most rewarding receiver ever designed—that's the heritage of the "Space Spanner" receiver.



Inside view of "Space Spanner" receiver, showing top-quality components mounted on pre-punched chassis.

# **knight-kit** "Space Spanner" Receiver Kit EXCITING WORLD-WIDE SHORT WAVE RECEPTION

\$18<sup>95</sup>

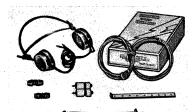
- Receives Broadcast Band and Short Wave
- Highly Sensitive Regenerative Circuit
- Convenient Bandswitching From Front Panel
- Built-In 4" Speaker—Beam Power Output

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" circuit—acclaimed 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 non-private listening. Built-in 4" PM speaker and 50C5 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.



ANTENNA KIT. For peak performance of your "Space Spanner" or "Ocean Hopper". Includes 50-ft. antenna wire, 25-ft. lead-in, insulators, etc. Shpg. wt., 1½ lbs.
83 Y 100. NET. . . . . . . . . 1.03



### 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

\$1**5**95

With Case

• Wide Frequency Coverage

Simple Highly-Sensitive Circuit

• Extremely Easy to Assemble

Convenient, Bandspread Tuning

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 fingertips—literally 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.

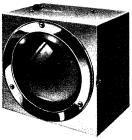
## knight-kit Photoelectronic Relay System . . . For Dozens of Uses!



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.

#### LIGHT SOURCE



\$<mark>6</mark>75

Long-life, sealed-beam light source with deep red filter—perfect companion for the photoelectronic relay unit

## NEW! 4 OUTSTANDING knight-kit "RANGER" MODELS .



#### 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



MINIATURE TUBES

• IDEAL FOR SCHOOL USE





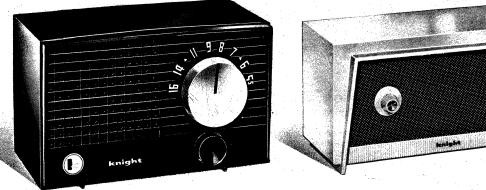
#### **LATEST PRINTED CIRCUIT SUPERHET**

Advanced-design printed circuitry simplifies assembly, assures peak performance and reduces wiring time to a minimum.

 PRINTED CIRCUIT BOARD FOR EASY, EFFORTLESS WIRING

• BEAUTIFULLY STYLED





# knight-kit "Ranger III" AC-DC Radio Kit TOP-PERFORMING BROADCAST BAND RECEIVER

NET \$1695

- Highly Efficient Superhet Circuit
- Rich, Full-Toned Sound
- Smart, Modern Plastic Cabinet
- 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.

## knight-kit "Ranger III-PC" AC-DC Radio Kit PRINTED CIRCUIT BROADCAST BAND SUPERHET

SIR9

- Up-To-The-Minute Printed Circuitry
- Exceptionally Easy to Assemble
- Beautifully Styled Plastic Cabinet
- Has Clear, Sensitive Reception

An easy-to-put-together, top-performing table radio in kit form—fun to use and beautiful to behold. Highest-quality 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 assembly—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: 51/4x 101/8x47/8". For operation from 110-125 volts, 50-60 cycle AC or DC. Shpg. wt., 4 lbs.

## TABLE RADIOS...CLOCK RADIO...RADIO-INTERCOM



#### **ADVANCED-DESIGN CLOCK-RADIO**

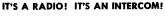
A rare combination of complete versatility and unsurpassed ease of assembly—brilliantly engineered with years-ahead features.

- MODERN PLUG IN MODULES
- PRINTED CIRCUIT **BOARD**
- EASIEST TO ASSEMBLE
- TELECHRON CLOCK









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" Clock-Radio Kit

WITH SLEEP-SWITCH AND APPLIANCE OUTLET

- Superb Broadcast Band Reception
- Top-Quality Clock-Timer Unit
- Unbeatable Ease of Assembly
- Ultra-Smart Cabinet Styling

NET

- Selective Superheterodyne Circuit
- Clear, Sensitive Intercom Response
- Time-Saving Printed Circuit

kniaht-kit "Ranger" Radio-Intercom Kit

**DUAL-PURPOSE—RECEIVER & 2-WAY INTERCOM** 

Attractively Styled Cabinets

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, 12AV6 and 50C5; rectifier is a 35W4. 6x95/8x53/8". 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

Smooth-operating, highly versatile two-station radio-intercom 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,  $5\frac{1}{4}$ x $10\frac{1}{8}$ x $4\frac{7}{8}$ ", Remote,  $4\frac{3}{4}$ x $6\frac{1}{2}$ x $4\frac{3}{8}$ ". 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' cable, all parts and instructions. For 110-125 volts, 50-60 cycle AC or DC. Shpg. wt., 8 lbs. 

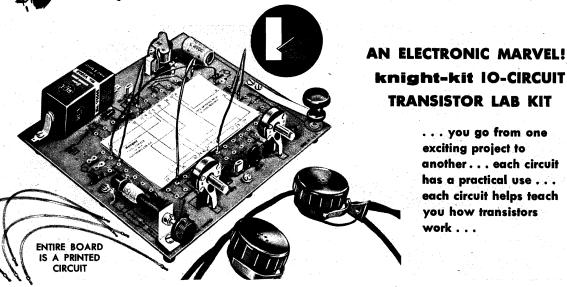
EXTRA REMOTE STATION KIT. Less cable. 3 lbs. 

EXTRA CABLE. Shpg. wt., 100 ft., 2½ lbs. 

## TRANSISTORIZED KITTEL TO THE TOTAL TO THE TRANSISTOR HOBBYISTS



Knight-Kit hobbyist kits are kept up-todate in every detail to assure you of the exceptional performance and value that latest developments in electronics make possible. The amazingly versatile 10-Circuit Lab Kit described below, the handsome, sensitive portable radio on the next page, as well as many other KnightKits, feature transistors—the latest electronic marvel. Because transistors last indefinitely and use remarkably little power, Knight-Kit transistorized kits offer maximum dependability plus extreme economy of operation. You can be sure of unsurpassed value and quality when you select Knight-Kits-an Allied product.



. . . you go from one exciting project to another...each circuit has a practical use . . . each circuit helps teach you how transistors work . . .

## 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 capacity-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

#### SO EASY TO ASSEMBLE

SOLDER THE BASIC PARTS IN PLACE . . CHANGE FROM ONE CIRCUIT TO ANOTHER BY PLUG-GING IN THE PROPER LEADS.

#### BUILD ANY ONE OF THESE **WONDERFUL PROJECTS:**

- 2-Stage AM Radio
- Photoelectronic Relay
- Wireless Broadcaster
- Code Practice Oscillator
- Electronic Switch
- 2-Stage Audio Amplifier
- Capacity-Operated Relay
- Electronic Timer
- Voice-Operated Relay
- Electronic Flasher

The KNIGHT-KIT 10-Circuit transistor lab kit is an ideal supplement to school electronic courses.

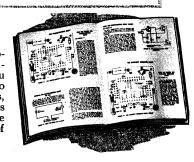


#### SPECIAL GUIDE CARDS FOR EACH EXPERIMENT

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 numbercoded-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

QUALITY 31/2" 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

\$2.60 Down

- Uses Texas Instrument Co. Transistors
- Printed Circuit for Easy Building
- Average Battery Playing Life, 200 Hours
- 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 3½" 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:  $3\frac{3}{4}$  high,  $7\frac{1}{2}$  wide,  $1\frac{3}{4}$  deep. With all parts, wire and solder. Less battery, earphone. 2 lbs.

BATTERY FOR ABOVE. 9-volt. Shpg. wt., 4 oz. 83 Y 772. NET......

**EARPHONE FOR ABOVE.** For private listening. 5.oz. 



## NEWEST TO THE PROPERTY OF THE

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!







#### knight-kit 2-Transistor Pocket Radio Kit

NET \$ | | 50

- Receives Local Stations Loud and Clear
- Employs Newest Printed Circuit Board
- Operates from Built-In Loop Antenna
- Plays for Months from Single Battery

You'll be delighted with the performance of this outstanding pocket radio! The miniature dynamic earphone, patterned after professional hearing-aid types, provides exceptionally 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.

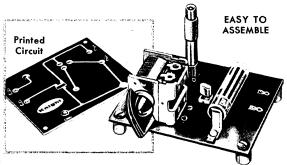
You'll enjoy building this extremely efficient, 2-transistor pocket radio—and your enjoyment will be doubled when you start listening to its crystal-clear, local broadcast reception wherever you go. Compact and portable, it fits easily into your pocket and button-down flap allows it to be suspended from your belt. Only 4" high, 3¾" wide, and 1¾" 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-bystep" instructions are marvelously clear and won't let you go wrong. Even with no previous building experience, the entire radio can be assembled in one evening.

Only two controls: On-Off-Volume and Tuning. Carrying weight is only 11 ounces! Handsome tan carrying case is plastic-impregnated and styled to resemble leather. Size, 4" high, 3¾" wide, 1¾" deep. Kit includes two transistors, carrying case, earphone with 3-ft. cord, wire, solder, all parts, and easy-to-follow instructions. Less battery. Shpg. wt. 1½ lbs.

## **FASCINATING LOW-COST TRANSISTOR KIT**



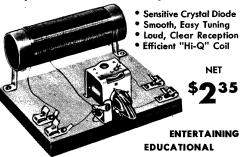
## knight-kit Printed-Circuit Radio Kit

NET

- Outstanding Kit Value
- Printed Circuit Mounting Board
- High-Efficiency Transistor
- Operates on Single Penlight Cell

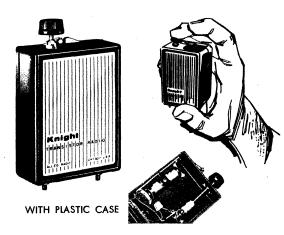
## Popular knight-kit Crystal Set Kit

ede carrie de allamación especial especial de Maria de Carrie de Carrie de Carrie de Carrie de Carrie de Carri



59 Y 112. 1000-Ohm Headphones.  $1\frac{1}{4}$  lbs. NET. 1.08 83 Y 100. Antenna Kit.  $1\frac{1}{2}$  lbs. NET. . . . . 1.03

#### FEATURE-PACKED TRANSISTOR RADIO KIT



### knight-kit "Trans-Midge" Radio Kit

NET

- Uses High-Efficiency Transistor
- **\$9**45
- Exceptionally Sensitive Reception
   Operates From Single Penlight Cell
- Has High-Impact Plastic Case

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 sensitivity— 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.



.....

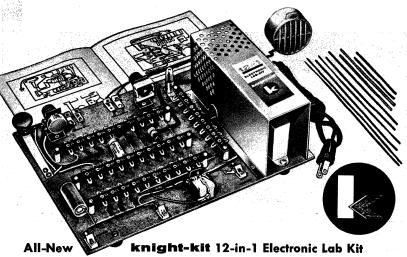
#### **HEADPHONES AND ANTENNA**

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-ft. lead-in, insulators, ground clamp.

#### **BUILD ANY ONE OF** THESE TWELVE **FASCINATING DEVICES**

- 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.



**NEW!** ELECTRONIC LAB KIT FOR EXPERIMENTERS

**Practical Projects Make it Fun to Learn Electronics!** 



NET

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 wires—no 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.,  $3\frac{1}{2}$  lbs. 83 Y 272. NET...........

SINGLE HEADPHONE. With 4½ ft. cord. 8 oz. 



Supply

## 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

\$2.95 Down

The feature-packed Knight-Kit electronic flash gun kit 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 1/700second 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-by-step 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. 

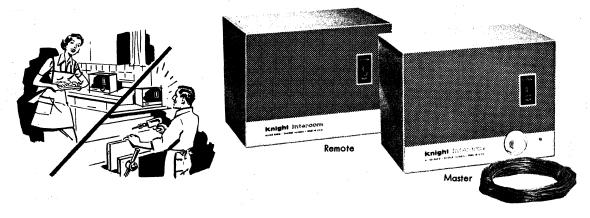
BATTERY. Burgess U-200. 300-volt battery. Shpg. wt., 1 lb. 

Knight-Kits Have Easy-to-Follow Instructions

## ③▲ンジ≒ ON THIS EASY-TO-BUILD INTERCOM SYSTEM

Low-Cost 2-Way Communication for Home, Store, Office or Factory

ANYONE CAN BUILD IT!
THOUSANDS OF USES
HANDSOME NEW STYLING



### High-Gain knight-kit 2-Way Intercom System Kit

NET 1 / 9 5

- 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

#### **Wireless Broadcaster-Amplifier Kit**

\$1105

- Broadcasts Clear Signal
- Use with Phono or Microphone
- High Gain Stage with Equalizer
- Use as Audio Amplifler

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.

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" PM speakers. The audio amplifier uses a 2-tube circuit plus a 35W4 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-ft. cable, solder and instructions—anyone can easily build this smooth-working intercom outfit. Each unit,  $4\frac{3}{4}$ x6 $\frac{1}{2}$ x4 $\frac{3}{6}$ %. For 110-125 v., 50-60 cycle AC, or DC. Shpg. wt., 8 lbs.

Use as an audioamplifier — attach to any PM speaker

(3,2 to 16 ohms).

NEW! AND A WORLD OF FUN!

Lets you make special "broadcasts" to any radio in your house — sing, speak, or play instruments.

263

Allied is Headquarters for Builders and Experimenters



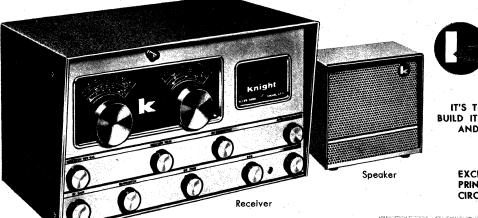
## QUALITY Renight-Kits FOR THE RADIO AMATEUR

## 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





IT'S THE BEST! BUILD IT YOURSELF AND SAVE!

> **EXCLUSIVE** PRINTED CIRCUITRY

### knight-kit Amateur Communications Receiver Kit

\$10.45 Down

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

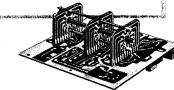
on all Ham bands from 80-10; slug-tuned hi-Q coils; continuous VR tuberegulated B+ applied to HF oscillator lets you switch from standby to receive with no drift; built-in Q-multiplier peaks desired signal or nulls interference (60-db notch really takes out interference); delayed AVC; built-in noise limiter; provision for "building in" crystal calibrator listed below. Exceptional sensitivity—1.5 µv for 10 db s/n ratio, even on 10 meters! 4 µv 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-kc IF. 10x103/4x16". 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.....

SPEAKER KIT FOR ABOVE. 4" 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.,  $3\frac{1}{2}$  lbs. 83 Y 728. NET......



#### Professional Features at Far Less Than Factory-Built Cost!

- Printed Circuit Bandswitch
- Printed Circuitry Throughout
- 300 cps to 4.5 kc Selectivity
- Constant-Running HFO
- Bandspread on 80-10 Meters
- Tunes 540 kc to 30 mc
- Built-in Q-Multiplier
- 1.5 µv Sensitivity on SW
- Vernier Dials—No Strings
- Deluxe Styling—Steel Chassis



Besides two printed circuit boards, the Knight-Kit Amateur Communications Receiver uses—for the first time in any communications receiver -the exclusive printed circuit bandswitch. Assures successful performance-reduces assembly time. CHINADAN TOTAL TOTAL AND AND THE STATE OF TH



## 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 1½x1½x3". Requires 6.3 v. at 0.15 amp and 150-300 v. DC at 3-6 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....





\$3.90 Down



### knight-kit VFO Kit

2950 Exceptional Stability
Built-In B+ Supply

\$2.95 Down Excellent Keying
TVI Suppression

## Save On This knight-kit 50-Watt CW Transmitter Kit

2095 • Ideal Transmitter for the Novice

Long-Life Transmitting Tubes—Effective TVI Suppression

Convenient Bandswitching—80 through 10 meters

• Efficient Pi-Network Antenna Coupler

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.

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 crystal-controlled 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. 5U4G 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 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.  $8\frac{1}{2}$ x $10\frac{1}{2}$ x $8\frac{1}{4}$ ". For 110-125 v., 50-60 cycle AC. Wt., 18 lbs.



## knight-kit Z-Bridge Kit

S For Measuring SWR Reads Antenna

Coax Input, Output

An invaluable aid for achieving peak antenna efficiency. Eliminates guesswork—accurately measures Standing Waye

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 ohm/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. 2½x3½x4". With SWR chart, wire and solder. Less meter. Wt., 1½ lbs.

83 Y 253. NET. . . . . . . . . . 5.85

#### knight-kit Transistor Code Practice Kit

NET
Transistorized Circuit
Extremely Compact
Operates for Months
On Penlight Cell

Advanced-design code practice oscillator at unusually low cost. Uses transistor circuit—powered by a single penlight

See page 389 for a complete selection of records specially prepared to teach beginners in Amateur radio to receive the code.



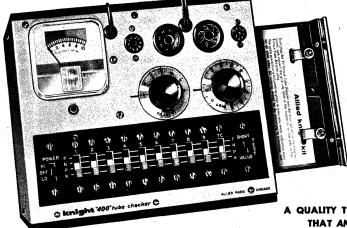
## BUILD YOUR OWN kmight-kill test equipment

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, pro-fessionally 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 Tubes

Covers 400 tubes, including latest high-fidelity tube types—quickly pays for itself!

A QUALITY TUBE CHECKER THAT ANYONE CAN AFFORD

\$2.00 Down

## NEW knight-kit "400" Tube Checker Kit—An Amazing Value!

- Lowest Cost Unit of Its Type
- Checks Most Receiving Tubes
- Weighs Only 51/4 Lbs.—Take It Anywhere!
- 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 "Replace-Good" scale, plus special scale for checking diodes. Quick-setting, universal-type selector slide switches, used in conjunction with handy "Flip-Cards", 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%" high, 9½" wide and 8" deep), it's perfect for carry-about use almost anywhere—the ultimate in servicing convenience! Carrying weight is only  $5\frac{1}{4}$  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.,  $6\frac{1}{2}$  lbs. 



## knight-kit Transistor and Diode Checker Kit

 Checks Transistor Gain Ratio \$850 • 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. 5x3x2". With battery. Shpg. wt., 2½ lbs. 

### knight-kit Printed-Circuit VTVM Kit

\$**25**<sup>75</sup>

Only \$2.58 Down

• 200-µa Movement, 41/2" Meter

Reads AC Peak-to-Peak

Balanced-Bridge, Push-Pull Circuit

• 1% Film-Type Resistors

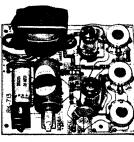
Here's a top buy in an extremely stable and highly accurate VTVM. Wiring and assembly are greatly simplified—the entire chassis is a printed circuit board. Performance is equal to factory-wired instruments costing much more. An outstanding choice for radio-TV service shop, lab, amateur use, etc. Uses 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. 4½" meter with sensitive 200-microamp movement.

SPECIFICATIONS: Input Resistance: 11 megs. DC and AC rms volts: 0-1.5-5-15-50-150-500-1500. AC Peak to Peak Volts: 0-4-14-40-140-400-1400-4000. Resistance: 0-1000-10K-100K 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, 7¾" high, 5¼" wide, 4¾6" deep. For operation from 110-125 v., 60 cycle AC. Shpg. wt., 6 lbs.

# YOU GET THE MOST FOR YOUR MONEY IN knight-kit TEST INSTRUMENTS





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.

# ) t

#### ACCESSORY PROBE KITS FOR knight-kit VTVM



Single range-function switch speeds assembly and simplifies operation.



knight-kit 20,000 Ohms/Volt VOM Kit

\$**29**<sup>50</sup>

Only \$2.95 Down

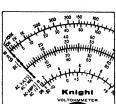
Versatile, 32-Range Instrument

• 1% Precision Resistors

Single Range-Function Switch
4½" 50-μα Meter—2% Accuracy

This Knight-Kit VOM offers outstanding quality and performance. Carefully engineered circuit employs 1% precision multipliers. Has  $4\frac{1}{2}$ " 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,  $6\frac{3}{4}\times5\frac{1}{4}\times3\frac{3}{4}$ ". With all parts, test leads, batteries, wire and solder. Shpg. wt., 5 lbs. 83 Y 140. NET. 29.50



Has 4½-inch meter with large, easy-to-read scales; 400-microamp sensitivity.



## knight-kit 1000 Ohms/Volt VOM Kit

\$16<sup>95</sup>

• 12-Pos. Range Switch; 38 Ranges

Employs 1% Precision Resistors
Versatile and Accurate Instrument
400-microamp, 4½" Meter

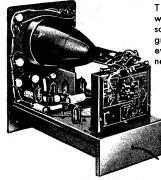
Another great value in an easy-to-build Knight-Kit instrument kit! This 38-range VOM kit provides exceptional accuracy. Separate scales for AC and DC voltage and current, decibels and resistance. 1% precision resistors. 3-position function switch and 12-position range switch.  $4\frac{1}{2}$ " 400-microamp 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 amp; Decibels, from -20 to +69 in six ranges. Black bakelite case, 634x54x334". With battery, test leads, wire and solder. Shpg. wt., 2½ lbs.

# LOW-COST Knight-kit SCOPES



Knight-Kit scopes feature printed circuit boards and laced wiring harnesses for quick, easy assembly.



The Knight-Kit wide-band oscilloscope is now a greater value than ever-offered at a new low price!

## knight-kit 5" Wide-Band Oscilloscope Kit

\$6.58 Down

- Printed Circuit Boards Speed Assembly
- 5-mc Bandwidth For Color TV Servicing High Vertical Sensitivity—25 mv/inch
- Sweep Range of 15 cps to 600 kc
- Push-Pull V and H Amplifiers

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 cathode-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:  $\pm 3$  db, 5 cps to 5 mc; only 1 db down at 3.58-mc color burst frequency. Vertical Sensitivity: 0.025 rms v/inch. Input Impedance: 2.9 megs and 20 mmf. Horizontal Amplifier: 0.6 rms v/inch; response down only 3 db at 600 kc, 4 db at 1 mc; 15-600,000 cps sweep range. Locks in as high as 9 mc.

Complete with all parts, 5UP1 CRT, punched chassis, case, wire and solder. 14½x9½x16". 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,  $7\frac{3}{4} \times 5\frac{1}{4} \times 4\frac{3}{6}$ . 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. 

#### knight-kit RF Demodulator Probe Kit

## knight-kit Low-Capacity Probe Kit



Use with Knight-Kit oscilloscopes to permit observation of modulation envelopes of RF and IF signals—extends scope range to 250 mc. With all parts, cable, solder, instructions. Wt., 2 lbs. 

NET

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





## knight-kit 5" General-Purpose Scope Kit

NFT \$4.20 Down

- Phantastron Linear Sweep Generator
- Time-Saving Printed Circuit Board
- Excellent V Sensitivity—25 mv/inch
- Retrace Blanking on all Ranges

Feature for feature the world's best oscilloscope kit value. This 5" general-purpose scope delivers performance equal to or better than factory-wired units several times its price—defies comparison with other scope kits at anywhere near its price. The ideal choice for radio-TV servicing, audio work and hundreds of other usesmeets at least 90% of all oscilloscope requirements.

Up-to-the-minute circuit design featuring a printed circuit wiring board and a laced wiring harness to reduce wiring to a minimum. Directly coupled positioning controls assure fast positioning of trace—free of overshoot.

Other important features include: blanking circuit to eliminate retrace lines on all ranges; frequency-compensated vertical input attenuator; internal and external, positive and negative synchronization; Phantastron linear sweep generator; and high 2nd-anode voltage for high-intensity trace. Vertical sensitivity is 3 times that of any other similarly priced scope kit available.

SPECIFICATIONS: Vertical Response: ±3 db, 3 cps to 1.5 mc; ±6 db to 2.5 mc. Vertical Sensitivity: .025 rms v/inch. Sweep: 15-150,000 cps in 4 ranges. Horizontal Sensitivity: .07 rms v/inch; response of horizontal sensitivity: .07 rms v/inch; response of horizontal constant sensitivity: .00 rms v/inch; response of horizontal constant sensitivity. amplifier is down only 3 db at 200 kc (1000 cycle reference). Vertical Input Impedance: 3.3 megs shunted by 45 mmf. Calibrating Voltage: 1-volt peak-to-peak, square wave (voltage regulated)-applied by springreturn slide switch.

Supplied complete with all parts, CRT, punched chassis, case, wire and solder. Includes step-by-step instructions and giant-size diagrams. 9½x13¾x17¾. For 110-125 v., 50-60 cycle AC. Shpg. wt., 40 lbs.

## **VERSATILE, TOP-VALUE TUBE TESTER**



## knight-kit Low-Cost Tube Checker Kit

Counter Model

\$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 4½" 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. 5x14x10". For 110-125 v., 50-60 cycle AC. Shpg. wt., 14 lbs.

PORTABLE MODEL TUBE CHECKER KIT. With covered plywood case;  $6\frac{1}{2}x14\frac{1}{2}x10\frac{1}{2}''$ . Shpg. wt., 15 lbs. 

83 YX 143. NET.....



TV PICTURE TUBE ADAPTER. Valuable service aid—ready to use. Permits testing TV picture tubes with Knight-Kit Tube Checker. Shpg. wt., 1 lb. 

## 





Widest-Range Flyback Checker Kit Available

Permits TV technicians to determine the condition of flyback transformers and deflection vokes.





Measurements are made by the laboratory-type balanced bridge method!

## Low-Cost knight-kit Flyback Checker Kit

**Q**50 \$2,00 Down

- Widest Range In Its Field
- Exceptional Accuracy Large 4½-Inch Meter
- Invaluable For TV Servicing

Race through TV deflection circuit repairs—for biggerthan-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! 4½-inch meter with 400 microamp movement provides clear readings and high accuracy. Circuit uses 6S4A 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, 734x556x5", has leather handle. Supplied complete with all parts, test leads, solder, wire, 6S4A tube, step-by-step instructions, etc. For operation from 110-125 v., 50-60 cycle AC. Shpg. wt., 6 lbs. 83 Y 118. NET........

### knight-kit Resistor-Capacitor Tester Kit

950 \$2.00 Down

- Shows Capacitance, Resistance
- Indicates Power Factor
  - Balanced-Bridge Circuit
  - Tests Capacitors at Rated Voltage

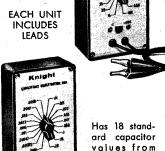
An extremely useful instrument—skillfully engineered for top-notch performance in the service shop and laboratory. Measures resistance and capacitance by the highly dependable bridge method; checks for opens and shorts in paper, mica and ceramic capacitors; and indicates the power factor of electrolytics. Its large, easyto-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 mfd, .001 to 0.5 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: ±10%. Power Factor Range: 0-50%. Uses 6E5 "magic eye"; also has 6X4 rectifier. In portable metal case with blue-wrinkle finish. Size, 7x10x5". With tubes, solder, pre-cut wire and instructions. For operation from 110-125 volts, 50-60 cycle AC.

knight-kit Resistance Substitution Box Kit

Rotary switch permits rapid setting to exact value needed.

**INCLUDES LEADS** 



.0001 mfd to .22

**NET \$**595

**NET** 

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 10K. High resistance range: 15K to 10 megohms. Slide switch selects either

range. Accuracy is within ±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, 5x3x2". With all parts, 18" leads, insulated alligator clips, solder, wire and instructions. Shpg. wt., 2 lbs. 83 Y 139. NET............

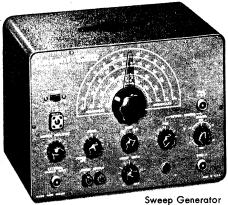
## knight-kit Capacitance Substitution Box Kit

Cuts time and effort in finding correct values for replacement 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, 5x3x2". Kit is supplied complete with all parts, 18" leads, insulated alligator clips, solder, wire and step-by-step instructions. Shpg. wt., 2 lbs. 

Allied Supplies Everything for the Experimenter and Builder

## EASY TO ASSEMBLE . . . TOP-QUALITY INSTRUMENTS







ity instrument at only one-third the cost of similar wired units!

A top-qual-

Signal Generator

## knight-kit TV-FM Linear Sweep Generator

\$**44**<sup>95</sup>

- Extreme Linearity
- Fundamentals to 250 mc
- 50 Down
- Output Flat Within 1 dbElectronic 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).  $8\frac{1}{2} \times 12 \times 7\frac{1}{2}$  For 110-125 v., 60 cycle AC. Shpg, wt., 16 lbs.

83 TX 123. NEI	44.73
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.	

## knight-kit RF Signal Generator Kit

\$1075

Precision-Wound CoilsNo Calibration Required

\$2.00 Down

- Modulated or Unmodulated Output
- 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. 7x10x5". For operation from 110-125 volts, 50-60 cycle. AC. Shpg. wt. 11 lbs. 

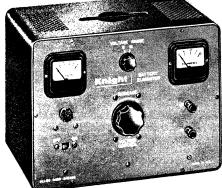
## knight-kit 6V-12V Battery Eliminator

\$**32**95

\$3.30 Down

- Most Power Per Dollar!
- Continuously Variable Output Voltage
- Delivers 15A at 6V-10A at 12V
- 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.



Make short work of auto radio servicing with this high-current unit! Powers any 6 or 12 v. radio. Also great for mobile gear!

Allied's Famous Knight-Kits Cost You Less-Serve You Better

YOU SAVE MOST ON EASIEST-TO-BUILD For extremely fast, convenient signal tracing by aural and visual methods—traces IF, RF, video and audio circuits. Exceptionally high amplification. Gain of 91,000 -highest in its price class.



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

50

\$2.65 Down

- Usable Gain of 91,000
- Built-in, Calibrated Wattmeter
- Measures Stage Gain
- Reveals "Dead" Stage

For speedier servicing and bigger profits, use the Knight-Kit 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 amplification—has 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" 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, 7x10x5". 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, 6V6GT power amplifier; 6E5 "magic eye"; 6X4 rectifier. For 110-125 volts, 50-60 cycle AC. Shpg. wt. 12 lbs. 83 Y 135, NET.......

## knight-kit Audio Generator Kit

\$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-to-date 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 v., ±1 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, 2-6CL6; 5Y3GT rectifier), pre-cut wire, solder and stepby-step instructions plus pictorial and schematic diagrams. Attractive blue metal case,  $8\frac{1}{2}$ x11x7½", 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" Capacitor Checker Kit

**NET** 

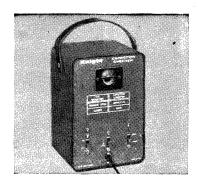
• "In-Circuit" Checking \$ 250 • "Magic-Eye" Indicator

20 mmf to 2000 mfd

An invaluable aid to speedy servicing—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-eve" 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. 73/4x5/4x5". Blue and gray finish. For 110-125 v., 50-60 cycle AC. Shpg. wt., 5 lbs. 



## See the Proof of knight-kit Superiority—Examine Our Instruction Manuals



#### CHECK THE DESIGN AND QUALITY FOR YOURSELF

ONLY 10c and 20c Here's the finest way to check the quality of Knight-Kits at the least expense to yourself. These complete and easy-to-follow instruction manuals are the very same that are provided with Knight-Kit electronic kits. No wiring experience or knowledge of schematics is necessary to follow these manuals,

and they offer you an inexpensive preview of any kit. Contain full construction details, construction notes, technical hints, operating data, parts lists and comprehensive schematic and pictorial diagrams. Read one—then judge for yourself!

38 K 166, RF Signal Generator.
38 K 183, VOM; 1,000 ohms-per-volt.
38 K 099, Scope Voltage Calibrator.
38 K 148, Capacitance Substitution Box,
38 K 147. Resistance Substitution Box.
38 K 199. Transistor Checker.
38 K 184. Resistance-Capacitance Tester.
38 K 188. In-Circuit Capacitor Checker.
38 K 928. Flyback Checker.
38 K 185. Vacuum-Tube Voltmeter.
38 K 197, 2-Station Intercom.
37 K 289. New "12-in-1" Lab.
38 K 295, 10-Circuit Transistor Lab.
38 K 050, Crystal Set.
38 K 936. 2-Transistor Pocket Radio.
38 K 943. "Trans-Midge" 1-Transistor Radio.
38 K 195. Printed Circuit 1-Transistor Radio.
38 K 934. Photoelectronic Relay.
38 K 935. Light Source.
38 K 198. Impedance and SWR Bridge.
38 K 296, 100-kc Crystal Calibrator.
38 K 146. Transistor Code Practice Oscillator.
38 K 161. "Ocean Hopper" Receiver.
38 K 297, New Wireless Broadcaster/Amplifier.
37 K 290. New "Ranger III" Table Radio.
37 K 294. New Economy "400" Tube Tester.
37 K 299. New "Ranger" Radio Intercom.
37 K 291. New Printed Circuit "Ranger III" AC-DC Radio.
ANY MANUAL ABOVE. Postpaid in U.S.A. EACH

38 K 187, 2-Band "Space Spanner" Receiver. 37 K 292, New 12-Watt Hi-Fi Amplifier. 38 K 871, New Stereo Control. ANY MANUAL ABOVE. Postpaid in U.S.A. EACH
37 K 293. New "Ranger" Clock Radio. 38 K 298. New 4-Band "Span-Master" Receiver. 38 K 096. Electronic Photoflash. 38 K 942. 5-Transistor Superhet Radio. 38 K 165. Deluxe Tube Tester. 38 K 165. Deluxe Tube Tester. 38 K 168. VOM; 20,000 ohms-per-volt. 38 K 169. Audio Generator. 38 K 169. Audio Generator. 38 K 166. TV-FM Sweep Generator. 38 K 170. Signal Tracer. 38 K 167. 5" Wide Band Oscilloscope. 38 K 167. 5" Wide Band Oscilloscope. 38 K 944. Amateur Communications Receiver. 38 K 180. Amateur Variable Frequency Oscillato. 38 K 937. Hi-Fi Monaural Preamplifier. 38 K 937. Hi-Fi Monaural Preamplifier. 37 K 298. New 25-Watt Basic Hi-Fi Amplifier. 38 K 299. 18-Watt Hi-Fi Amplifier. 38 K 941. Hi-Fi FM-AM Tuner. 38 K 126. Hi-Fi FM Tuner. 37 K 295. New Hi-Fi Stereo Preamplifier. 37 K 296. New 60-Watt Basic Stereo Hi-Fi Amplifier.
ANY MANUAL ABOVE. Postpaid in U.S.A. EACH20¢

Money-Saving Values in Essential Tools for Kit Builders

WEN MODEL 199 SOLDER GUN. Efficient, lightweight, 130-watt soldering gun. Long-life, steel-nose tip. Heats in 2½ sec. For 110-120 v., 60 cycle AC. Wt., 2¼ lbs. 46 N 358, NET...

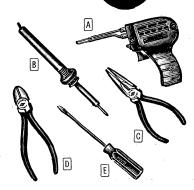
WALL MODEL 14T SOLDER IRON. Pencil-type; perfect for close work on printed circuit boards. Thermostatic action—heating range from 40 to 125 watts. For 110-120 v., AC or DC. Shpg. wt. 7 oz. 

KNIGHT 6" PLIERS. Long-nose, side-cutting pliers. 10 oz. 

KNIGHT 5" DIAGONAL CUTTERS. Excellent value. Economy-priced, ruggedly built diagonal cutters. Forged from high-quality carbon steel; tempered and tested. Has semi-polished heads and black handles. Shpg. wt., 10 oz. 

knight-kits ARE A PRODUCT OF ALLIED RADIO

XCELITE MODEL R-146 6" SCREW-DRIVER. Made of highly polished, chrome-vanadium steel. Shaft is permanently molded into rugged Xce-Lite plastic handle—fluted for nonslip grip. ½" diameter; overall length, 10". Shpg. wt., 6 oz. 



## **Quality Soldering Tools**





WELLER SOLDERING KITS, GUNS AND IRONS

> New Weller 'Magnastat' temperature-controlled soldering irons for constant, all-day use.





#### 8250AK HEAVY-DUTY KIT-250 WATTS

#### • Instant Heat-No Waiting

Versatile Array of Tips

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.......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., 2½ lbs.
50 N 049. List, \$5.95. NET. . . . . 4.46

3-11, EACH....4.16 12-Up, EACH.. 3.97

#### 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 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 the same wattage rating. For 110-120 v., 50-60 cycle AC. With plug-in cord.

Stock No.	Model No.	Watts	Shpg. Wt.	NET
50 N 211	TC-40	40	6 oz.	5.88
50 N 212	TC-60	60	7 oz.	6.62
50 N 213	TC-120	120	11 oz.	7.72

#### REPLACEMENT TIPS FOR ABOVE IRON

Stock No.	Model	For Iron	Tip Size	Oz.	NET
50 N 214 50 N 215	WT-60	TC-60	1/8° 3/16°	2	36¢
50 N 216	WT-120	TC-120	3/8"	4	88¢

#### **HEAVY-DUTY GUNS**

MODEL 8250A 250-WATT SOLDERING GUN. 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. Shop, wt., 4 lbs.

46 N 678. List, \$12.95. NET...... 8.47

#### 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...... 8.47

#### VERSATILE ACCESSORY TIPS

Shpg. wt., 3 oz.

Stock	Mfr's	Descrip-	Use With	NET
No.	Type	tion	Models	EACH
46 N 68 I	6110	Cutting	S-500, D-550	35¢
46 N 682	6120	Smoothing		35¢
46 N 683	6130	Cutting		35¢
46 N 684	6140	Smoothing		35¢

#### CHISEL-POINT TIPS

2 per Pkg. Av. shpg. wt. per pkg., 3 oz.

Stock No.	Mfr's Type	Use With Models	PER PKG.
46 N 573	7250	8100, S-400, D-440 8250A, S-500, D-550	25¢ 35¢
46 N 579	/300	S-107, D-207. Not inter- changeable with tips above.	25¢

#### SOLDER GUN REPLACEMENT PARTS

Shpg. wt., 3 oz.

Stock No.	Mfr's Type	Descrip- tion	Use With Models	NET EACH
46 N 625	7325	Tip nut.	WS-100, WD-135, S-400, D-440 and 8100	.15
46 N 630	7417	Tip nut.	WS-200, WD-250 S-500, D-550.	.15
46 N 626	7323	Switch.	All single-heat models.	1.22
46 N 627	7324	Switch.	All dual-heat models.	1.37

## DRAKE GENERAL PURPOSE & INDUSTRIAL IRONS

# High-Grade Nichrome Elements 400

#### MODEL 400 INDUSTRIAL-60 WATTS

Small, continuous-duty 60-watt iron. 9" long, 1/4" 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  $\frac{3}{6}$ ,  $\frac{1}{8}$  pyramid tips and stand. Cork insulator on handle; heat radiating baffles. 7½' long. For operation from 110-120 v., AC-DC. Shpg. wt., 8 oz. 46 N 532. List, \$5.50. NET......3.23

#### MODEL 325 STANDARD-100 WATTS

46 N 523. List, \$6.50. NET.......3.82

### **ECONOMY MODELS**

MODEL 5-40 WATTS. Low-cost, light-duty soldering iron. Length, 10". With 1/4" screw-on pencil tip and stand. For 110-120 v., AC-DC. Shpg. wt., 10 oz.

46 N 505. List, \$2.10. NET 1.23

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 3/4" pyramid tip and stand. Length, 11/2". For 110-120 v., AC-DC. Shpg. wt., 12 oz. 

#### REPLACEMENT TIPS

Copper replacement tips for Drake irons. Set of two tips.

Stock No.	Descrip- tion	Wt. Oz.	For Iron	EACH
46 N 537 46 N 535	1/4" straight pencil* 3/8" pyramid	3	5 225, 325,	44¢
46 N 514	%" pyramid	6	326, 625 315	44¢ 53¢
46 N 533 46 N 513	3/16" pyramid* 1/4" pyramid	2 2	360 400	18¢
46 N 547 46 N 548	1/8" straight pencil* 1/8" 45° pencil*	2 2	350 350	15¢   15¢

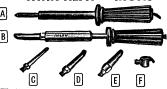


#### **TEMPERATURE CONTROLS**

Temperature controls for printed circuit and other delicate solder-ing, Variable from 300-600° F.

Stock No.	Model	For Iron	Oz.	List	NET
50 N 221 50 N 222	40 60	40-watt 60-watt	12	\$8.00 \$9.00	4.70

#### "KWIK-HEAT" **IRONS**



A MODEL 200 150-WAIT THERMOSTAT-CONTROLLED SOLDERING IRON. Industrial 150-wat iron for continuous use. Quick-heating—only 90 sec. to reach full operating temperature. Built-in thermostat maintains correct temperature deliveriate maintains correct temperature, delivering fast power when required or conserving heat during standby periods. Length, 1234. With chisel tip. For 100-125 v., 60 cycle AC.

3 or More, EACH..................6.62

B MODEL 300 225-WATT THERMOSTAT-CONTROLLED SOLDERING IRON. As above, but 225 watts for heavy duty use. 13" long. With 3%" chisel tip. 1 lb. 

3 or More, EACH......9.96

#### TIPS FOR MODEL 300 \*For Model 200 Av.

Stock No.	Fig.	Description	NET
46 N 561 46 N 562 46 N 565 46 N 566 46 N 633	D E F	Small taper point Gradual taper point Heavy, with chisel tip Melting pot; holds 1 oz. Chisel point*	1.39

## Soldering Guns and Irons



#### **WEN 199K SOLDERING GUN KIT**

- 3 Different Tips for Varied Jobs
- Lightweight—Only 1 ½ Lbs.
- Heavy-Gauge Metal Kit Box

Highly versatile, multi-purpose solder gun kit. Includes the Model 199 130-watt gun, one 5-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 2½ seconds after squeezing trigger. Tips are quickly interchanged to meet specific applications.

Well-balanced, pistol-grip handle assures fatigue-free operation. Single trigger automatically controls heat and built-in spotlight. Prefocused spotlight assures shadow-free working area. Gun is extremely light in weight; only 1½ lbs. Valuable for medium and light-duty soldering jobs in both radio and TV repair and home workshop. Handsome, cherry-red, heat and shock-resistant plastic housing.

and shock-resistant plastic nousing.

Tips include: Model 19-B-4 long-nosed standard tip for repair of household wiring, radio and TV, appliances, lamps, automobile wiring, hobycraft 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 tile, softening and removal of hardened putty, fusing and cutting of thermoplastic material, etc.

### FAMOUS WEN SOLDERING GUNS



#### MODEL 199-130 WATTS

- Heats in Just 2 ½ Seconds
- High Efficiency—Excellent Balance

Extremely popular, low-cost soldering gun. Heats in just 2½ seconds. Excellent balance for faster, easier soldering. Efficiency comparable to guns of much higher wattage ratings. Has steel nose long-life tip. Spotlight focuses on work. Rated at 130 watts. Lightweight; only 1½ lbs., for use over long periods of time without fatigue. Heat and shock resistant cherry-red plastic handle. Overall length less tip. 5′. 6′ cord. Underwriters' Laboratories Approved. For operation from 110-120 volts, 60 cycle AC. Shpg. wt., 2½ lbs.

REPLACEMENT TIPS

Stock	Mfr's	Description	NET
No.	Type		EACH
46 N 359	19-B-4	Standard Tip	34¢
46 N 328	19-C-1	Plastic Cutting Tip	41¢

#### MODEL 250-250 WATTS

Heavy-duty soldering gun at low cost. Rated at 250 watts. Heats in 3 seconds. Excellent for 

#### REPLACEMENT TIPS

Stock No.	Mfr's Type	Description	NET EACH
46 N 326	25-A-4	Standard Tip	17¢
46 N 327	25-X-20	Feraloy Tip	34¢
46 N 330	25-C-1	Plastic Cutting Tip	34¢

#### **MODEL 100-100 WATTS**

- Low-Cost, High-Quality Solder Gun
- For All Light-Duty Soldering Jobs

• For All Light-Duty Soldering Jobs

An exceptional value in a highly efficient 100watt soldering gun. Designed for light duty
work, it is ideal for general purpose soldering
jobs around the shop or home. Quick heating
—reaches operating temperature in 2½ seconds. Features include a built-in spotlight for
illuminating work area, easy-action trigger
switch, comfort-styled pistol grip for perfect
balance, and extra-long, steel-nosed tip for
easy access to hard-to-reach places. Heat and
shock-resistant black plastic housing. Length
with tip. 8'; less tip, 4½'. 5" high. Uses Type
19 replacement tips listed at left. For 110-120
volt, 50-60 cycle AC. Wt., 2½ lbs.
3 or More, EACH.

MODEL 288-200 WATTS

Economy-priced, heavy duty 200-watt soldering gun. Delivers large volume of heat for all types of heavy-duty



of heavy-duty
work. Special tip design also makes this
an excellent gun for a wide variety of delicate,
light-duty jobs. Long-reach tip for easy access
to hard-to-reach places. Built-in spotlight focuses directly on work; eliminates shadow.
Spotlight goes on and off with gun. Entire
housing made of high-impact, shatterproof
plastic. Ebony-black finish. Length with tip,
9½°; less tip, 4½°. U.L. Approved. For 110-120
v., 60 cycle AC. Shog. wt., 3½ lbs.
7.33
46 N 331. Extra Tip. Wt., 3 oz. NET. 41¢

### GREGG SOLDERING TOOLS



#### MODEL G250A 250-WATT GUN

Heavy-duty 250-watt solder gun

Heavy-duty 250-watt solder gun featuring unique, single-barrel design. Delivers large volume of instant heat. Slim, probetype 5" barrel easily reaches crowded chassis and miniaturized units. Built-in 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 jobs; and one chisel tip for heavier jobs. For 110-120 v., 60 cycle AC. Shpg. wt., 3 bs. 11.71

#### REPLACEMENT TIPS

High-quality replacement tips for Gregg Model G-250A solder gun, listed above. Shpg. wt., 6 oz. 2 per pkg.

		Description	
46 N 973	5211	Pencil Point Chisel Type	34¢
46 N 974	5212	Chisel Type	. 34¢

#### PRINTED CIRCUIT TIP KIT



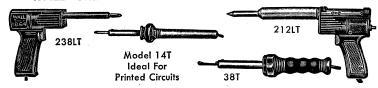
Screw-in tips for Gregg G-250A gun. Si-multaneously

multaneously heats all contacts on tube socket mounts, IF transformer lugs, terminal strips, etc. Allows easy removal of multiple contact components from printed circuit boards. \*1' dia. †Soldering tip 1½' long. §Tip 3' long. All 4 tips below. ½ lb. 50 N 140 NET. 3.18

Separate Tips. May be ordered singly.

				-6-5	
Stock No.					EACH
50 N 136 50 N 137 50 N 138 50 N 139	С	5208†	IF Transformers Min. Sockets \ Straight-line \ Connections	3	88c

#### 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 temperature—automatically providing correct wattage for soldering job, whether heavy or light. The lightweight, balanced guns permit continuous fatigue-proof operation. Narrow, 6½" barrel provides good reach into tight or crowded places.

All guns have interchangeable tip-element assemblies. Steel-clad tips assure long service life. 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 214LTN. Similar to above, but employs 1/2" tip. Wattage range, 150-400. Shpg. wt. 11/4 lbs. 9.77

Model 238LT. Designed for lighter soldering applications. Wattage range, 75-150. Employs & state to good the solder of the solde

#### **SOLDERING IRONS**

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. 14T is excellent for use with printed circuits and kit soldering jobs.

No.	lype	Watts	Tip	Lgth	Wt.	NET
46 N 851	18T*	25 to 85	1/8"	7"	7 oz.	4.51
46 N 851 46 N 852 46 N 854	38T	80 to 200	3/8"	121/2"	7 oz. 2 lbs.	6.53

#### REPLACEMENT TIPS

†Walloy-Red tips for production line use.

No.	Size	For	Wt.	NET
46 N 874 46 N 875 46 N 876 46 N 873 46 N 872 46 N 855	1/8" 1/4" 3/8" 1/8" 1/4" 3/8"	18T† 14T† 38T† 18T 14T 38T	2 oz. 2 oz. 3 oz. 2 oz. 2 oz. 3 oz.	.78 1.05 1.18 .23 .33

#### **TIP-ELEMENT ASSEMBLIES**

Replacement tip-elements for guns listed at left. Quickly and easily interchanged. \*Fits 212-LT and 212LTN; †fits, 238LT and 238T.

No.	Watts	Tip	Wt.	NET
46 N 870	*150-400	1/4"	12 oz.	3.25
46 N 849	*300-650	1/2"	1 lb.	5.21
46 N 897	† 75-150	1/4"	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 element-tiplet combinations. U.L. approved. For operation from 110-120 v., AC-DC.

with No. 536 pyramid element-tip. 6 oz. 2.16 46 N 580. 1-9, NET EACH
371/2-Watt Soldering Pencil. No. 776 handle

371/2-Watt Soldering Pencil. No. 776 handle
with No. 1236 pyramid element-tip. 8 oz. 46 N 591. 1-9, NET EACH2.35
10 or More, EACH

#### STANDARD ELEMENT-TIPS

For use with all Ungar handles and solder pistol (see below). Ceramic-insulated. \*23½-watt types; heat to 650-700° in 1 min. †37½-watt, silver-plated 800° units for use in production soldering. Av. shpg. wt., 3 oz.

Stock No.			Descrip.		
46 N 582 46 N 585			Pyramid Chisel		79c
46 N 592 46 N 593	C B	1236† 1239†	Pyramid Chisel	1.18	96c



880 Industrial Series. Industrial type soldering pencils. Feature special metal heat defector for lower handle temperature. Cork octagonal washer prevents rolling on table and keeps fingers from touching deflector. Consist of handle and element-tip unit. Handle can also be used with any other element-tip unit or element-tiplet combination. U.L. Approved. For 110-120 v., AC-DC.

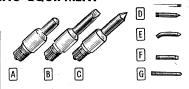
471/2-Watt Soldering Pencil. No	. 880 handle
with No. 4033 471/2-watt chisel	element-tip.
Shpg. wt., 11/4 lbs.	າດາ
50 N 102. 1-9, NET EACH	<b></b>
10 on More FACH	3 19

#### NEW TYPE 260 SOLDER PISTOL



Pistol-grip soldering iron for rugged, production line use and also for amateurs, experimenters and builders. Designed for comfortable working and 'on-target' soldering. Special knob permits quick rotation of element-tip to best position for application of heat. Consists of No. 660 handle and tellurium copper chisel element-tip (800° F.). Tough phenolic handle also takes any other element-tips and element-tiplet combinations, including 47½-watt "Super Hi-Heat" types. U.L. Approved. For 110-120 v., AC-DC. Spig. wt., 1 lb. 50 N 103. 6-Up., EA. 2.87 1-5, EA., 3.53 50 N 103. 6-Up, .. EA. 2.87 1-5, EA. .. 3.53

No. 660 Handle. Pistol-grip handle only; less tip and element. Shpg. wt., 1/2 lb. 50 N | 04.10-Up, EA.1.91 1-9, EA...2.35



#### STANDARD ELEMENTS & TIPLETS

Series 300 Tiplets. \( \lambda'' \) dia. \( 1^\* \) long. All tiplets are interchangeable; fit 535, 1235 or 4035 elements. PL types are iron-plated for long life. \( \text{New}, needle-point tiplet for very close work. \) Av. shpg. wt., 2 oz.

Stock No.	Fig.	Mfr's Type	Descrip.	1-9, EACH	10-Up, EACH
46 N 606 46 N 607 46 N 608	D E F	331 332 333	Pencil Offset Chisel	16¢	13¢
46 N 495 46 N 496 46 N 497 50 N 101	D E F G	PL331 PL332 PL333 PL338*	Pencil Offset Chisel Needle	47¢	38¢

Elements. Heating units for series 300 tiplets above. Fit any Ungar handles. Type 4035 delivers 850° F. temperature to tiplet; Type 1235, 750°; Type 535, 650°. Av. shpg.

Stock	Mfr's		NET	EACH
No.	Type	Element	1-9	10-Up
46 N 605	535	23½ Watts	.98	.79
46 N 609	1235	37 1/2 Watts 47 1/2 Watts	1.18	1.96

## "SUPER HI-HEAT" ELEMENT-TIPS

 $47/_2$ -watt, 1-piece element-tips for extra-heavy-duty service and production line soldering. Use with No. 880 handle or No. 660 pistol-grip handle. \*1/2° chisel. \$900° F.; ‡1000° F. Av. shop, wt., †2 oz.

			Descrip.		
46 N 647 46 N 648 46 N 649	E F E	4033*§ 4036‡ 4039†‡	Chisel Pyramid Chisel	2.35	1.91

#### **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. 50 N 105.10-Up, EA. 1.91 1-9, EA. 2.35 Series 800 Extra-Long Tiplets. 2" long; 3/16"

dia. Fit No. 4045 element only. Wt., 2 oz.						
Stock No.	Mfr's Type			10-Up, EACH		
50 N 106	PL833	Straight Chisel	78¢	64¢		



#### 507 HEAVY-DUTY SOLDERING KIT



Complete extra-duty soldering kit duty soldering kit and continuity test-er. Contains: 776 handle; heavy-duty element-tip (825° F.) for general-pur-pose use; precision heating element and tiplet (650° and tiplet (650° F.) for fine soldering such as printed

#### KESTER SOLDERS



#### ROSIN CORE SOLDER

Plastic rosin-filled thin solder. Flux filling flows easily for neater and quicker soldering. ½" solder is recommended for general-purpose radio and electrical work;  $\frac{1}{6}$  for fine, delicate work. 40% tin and 60% lead.

Stock No.	Size	Spool Wt.	Shpg. Wt.	NET
46 N 901		1 lb.	13/4 lbs.	1.05
46 N 902		5 lbs.	6 lbs.	5.05
46 N 930		1 lb.	13/4 lbs.	1.08
46 N 931		5 lbs.	6 lbs.	5.20

#### "RESIN FIVE" CORE SOLDER

Printed-Circuit Solder -60/40 Type. Compounded of 60% tin; 40% lead. For copperetched printed circuits. 1/6" dia. 46 N 926, 1-lb. Spool. 11% lbs. NET. 1.40

#### **ACID CORE SOLDER**

Acid core solder for all general soldering other than electrical connections. 1/8" dia. Acid flux saves time; makes a lasting job. 40% tin and 60% lead. and 00% lead. 46 N 905. Handy Coll. 3 oz. NET.....17c 46 N 906. 1-lb. Spool. 134 lbs. NET....05

#### **SOLDERING PASTE**

#### KESTER TINNING BLOCK

Cleans and tins soldering irons quickly. Replaces sal ammoniac. Will not crumble or cause any corrosion. Shpg. wt. 1½ lbs. 65c



## ERSIN MULTICORE SOLDER

5-core solder for high-speed, precision soldering. Melts rapidly 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., 1½ lbs.

#### **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	16 Ga.	1 lb.	1¾ lbs.	1.70
50 N 122		7 lbs.	8½ lbs.	11.62
50 N 123		1 lb.	1¾ lbs.	1.72
50 N 124		7 lbs.	8½ lbs.	11.76

#### **BLONDE TAPE SOLDER**



Tape of 40/60 tin lead

Tape of 40/60 tin lead solder with rosin flux. Just use a match, candle, cigarette lighter or torch for rapid soldering. Tape is wrapped around wires to be joined or metal to be bonded, and heat is applied. Flux is activated at 190° and dissipates at 210°—forms a bond that will not corrode. Has same protective qualities as bar or spool solder. 28′ long—enough for 100 connections. Shpg. wt., 2 oz. 



#### **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 47½-watt element; rectangular tiplet, 1½-x½/-for removing resistors, capacitors, etc.; circular tiplet, 1/ dia., for 9-pin tube socket removal; circular tiplet ¾// dia., for 7-pin sockets; circular tiplet, ½// dia., for 5-pin sockets, and slotted tiplet for straightening tabs. In sturdy metal case. For operation from 110-120 volts, AC-DC. Shgg. wt., 1½ lbs.

50 N 109. 6 or More, EACH...4.52 1-5, NET EACH....5.35

#### **ORYX MINIATURE** INDUSTRIAL IRONS



### 1/4-OUNCE SOLDERING IRONS

/4-OUNCE SOLDERING INONS

Perfect for the most delicate soldering—printed circuits, TV tuners, sub-miniature wiring, hearing aids, etc. Quick heating, low-voltage design. Operate from 6-v. AC or DC. Use with step-down transformer (below) or other 6-v. source. All are ¼ oz. and 6' long, \*except ¾ oz. and 7 ¼' long. All have replaceable tips, fexcept fixed tip. Tips are described in table (below). Poevelops 813° F for high-temperature applications. †Develops 1000° F. Av. wt., 2 oz.

Stock No.	Model	Tip Type	Watts	1-11, EACH	12 or More, EACH
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	§11	D	10	6.81	6.32
46 N 829	12-6	C	12	4.85	4.36
46 N 830	*18	F	18	7.35	6.91
46 N 909	‡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.

Sto	ck No.	Туре	For Model	Dia.	EACH
	N 831 N 843	A B	6A, 9-6 6A, 9-6	5/32" 3/32"	.49
	N 844 N 845	C D*	12-6 11	3/16" 5/32"	1.76
46	N 877 N 898 N 899	E* F G*	11 18 18	3/32" 3/16" 3/16"	1.76
	N 9 1 2	H	25	1/4"	2.30

Step-Down Transformer. For all irons above, except Model 25. Has holder for iron. Rated 18 watts. 4½-ft. AC cord. 2½x2½\*. For 110-120 v., 60 cycle AC. Wt., 2 lbs. 4.85 Transformer for Model 25. As above, but

## LENK SOLDERING IRONS



#### **ECONOMY PISTOL GRIP IRON**

REPLACEMENT TIP

#### PENCIL TYPE IRONS

Type 256. As above, but built for heavier work—rated 40 watts. Shpg. wt., 8 oz.
46 N 941. NET......4.41

REPLACEMENT TIPS

I of Mode	1 251 and 250 non.			
Stock No.	Description	Shpg. Wt.	NET	
46 N 942 46 N 946	1/8" dia. x 3" long 1/4" dia. x 13/4" long	3 oz. 3 oz.	33¢ 48¢	

## 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 kinking and twisting. Irons are rated to withstand an insulation breakdown test of 1100 volts.

#### MODEL 3128-60 WATTS

## REPLACEMENT TIPS AND ELEMENT

For Model 3128 iron. Type 9272 Replacement Element has mica insulation; includes handle-spring, tube and terminal assembly.

	No		Type	Description	Oz.	NET
46	N 8	820	3728 3728-IP 9272	Copper tip Iron-plated tip Element	3 3 6	.30 .57 2.30

#### MODEL 3138-100 WATTS

An excellent general purpose iron for home use. Also widely used in TV, radio, telephone and switchboard work and similar applications. % dia. copper tip. Polished chrome plated metal parts. Has cooling baffle. With stand. Length, 127%. For 110-120 volts, AC or DC. Shps. wt., 2½ lbs.
46 N 655. NET. 6.50
6 or more, EACH. 6.20

## REPLACEMENT TIPS AND ELEMENT

For Model 3138 iron.

No	٥.		Description		
46 N	656	3738	Copper tip	6	.42
46 N	821	3738-IP	Iron-plated tip	6	.69
46 N	666	9273	Element	16	2.70

#### **MODEL 3158-200 WATTS**

#### REPLACEMENT TIPS AND ELEMENTS

For Model 3158 iron. Tips are 5/8". Element is made of chrome-nickel wire on mica insulated steel rod. Shpg. wt., 1 lb.

No.	Туре	Description	Lbs.	NET
46 N 652 46 N 822 46 N 665	3758-IP	Copper tip Iron-plated tip Element		.98 1.35 3.60

#### MODEL 3178-300 WATTS

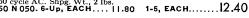
Excellent heavy-duty soldering iron. Ideal for service and production work. Standard equipment in factories and shops. Length 14½," tip dia. ½,"; net wt., 2½ lbs. With cord, stand and tip. For 110-120 volts, AC or DC. Shps. wt., 4 lbs. 46 N 671. NET. 10,40 6 or more, EACH.

#### REPLACEMENT TIPS AND ELEMENT

For Model 3178 iron. Shpg. wt., 1 lb.

No.	Type	Description	Lbs.	NET
46 N 672	3778	Copper tip	2	1.95
46 N 823	3778-IP	Iron-plated Tip	2	2.36
46 N 673	9277	Element	1½	4.95

#### MODEL T-30 SUPER HOT SOLDERING IRON



REPLACEMENT TIPS. For Model T-30 iron above. Wt., 2 oz.



 For Heavy-Duty Use Maintains Even Heat

Stock No.   Tip-Element	1-11,EA.	12-Up,EA.	Stock No.	Tip-Element	1-11,EA.	12-Up,EA.
50 N 052 1/8" Pencil 50 N 053 1/8" Chisel	2.15 2.15	1.70	50 N 054 50 N 055	¼" Pencil ¼" Chisel	2.15 2.15	1.70

## **REGULATING STAND AND SOLDER POTS**











#### 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 production 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., 2/2 lbs. 

#### **DRAKE SOLDER POTS**

Model 200—300 Watts. Heavy-duty production type solder pot. Excellent for dip soldering wires, plugs, coils and printed circuits. 2½" 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 or DC. Shpg. wt. 6 lbs. 7.06

#### LECTROHM SOLDER POTS

Solder pots for work requiring individual dipping pots. For tinning small wires, leads, etc. Sizes—SP-200: 2½" ht., 2½" dia., ½" cup depth; SP-250: 3½" ht., 2" dia., 1½" cup depth; SP-250: 3½" ht., 2" dia., 1½" cup depth. Complete with 6 foot detachable cord. For 110 volt operation, AC or DC.

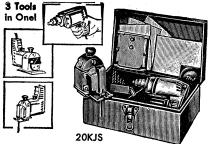
Stock No.	Type	Capac.	Watts	Wt.	NET
Stock No. 46 N 880 46 N 881	SP-200 SP-250	13/4 lbs. 2 lbs.	200 250	31/4 lbs. 31/2 lbs.	4.98 4.98

Replacement Nickel-Chrome Elements. Shpg. wt., 3 oz. 46 N 882. Type A. For SP-200. NET....42 46 N 883. Type B. For SP-250. NET....42

## Power Tool Kits-Quality Grinders

## THOR QUALITY POWER TOOL KITS





#### **HEAVY-DUTY WRENCH-DRILL KIT**

MODEL 60. Rugged, exceptionally handy kit for farm, shop and industrial use. Includes powerful impact-wrench with 7 most compowerful impact-wrench with 7 most commonly used nut-driver sockets; 3-jaw, geartype chuck with ½" capacity and steel carrying case (10½x11½x16½"). Used as impact-wrench it is perfect for production assembly work or auto, truck and machinery repair and maintenance. Couples directly 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 ½" drill. Can be used with attachments to do the work of a convertible of the control of the contro screwdriver, polisher-sander, tapper, hole saw, wire brush, etc. 3-conductor, 10' cord. For 110-120 v., AC or DC. 21 lbs.

50 NU 018. List, \$99.50. NET...... 68.11

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#### THREE-IN-ONE TOOL KIT

MODEL 20KJS. Three versatile tools in one a 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" electric drill. Has self-aligning ball-thrust bearings to assure 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 1—metal cutting saber-saw blade, 4 abrasive sheets and lambs wool polishing pad. Ruggedly constructed steel case holds entire kit. Size, 9x1234x9½". Drill Underwriters' Laboratories Approved; operates from 110-120 oratories Approved; operates from 110-120 volts, AC or DC. Shpg. wt., 11 lbs.

50 NX 016. List, \$37.50. NET.....24.95

## SKIL DELUXE 1/4" DRILL KIT

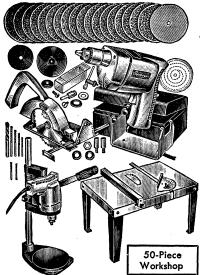


- Speeds Performance on Many Jobs
- Powerful Drill—32 Accessories

MODEL 515. Versatile, new 32-piece drill kit powered by Skil's famous No. 549 ½" drill with geared chuck. Rugged, 2.5 amp motor handles all accessories with ease. Drills, sands, polishes and grinds, stirs paint—practically 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" grinding wheel for sharpening tools; 5" rubber backing pad; 5 assorted grit sanding discs; ½" adapter with ½" shank; set of 13 twist drills, ½e" to ½" by 64ths; 3 wood auger bits, ¾6", ½", ¾2", %4"; countersink and paint stirring attachment. Cabinet-styled carrying case can be hung Cabinet-styled carrying case can be hung on workshop wall. 13x14x7". For 110-120 v., AC or DC. Shpg. wt., 14 lbs.

50 NX 226. List, \$42.95. NET. . . 32.20

## DORMEYER "MATCHED CRAFT" TOOL SET

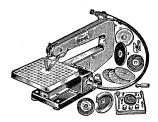


MODEL 5-3905. Complete, new 50-piece home workshop set. Drills, saws, polishes, grinds, sands, etc., and contains every-thing the home craftsman or serviceman ithing the home craftsman or serviceman could ask for—at an unusually low price! Workshop includes: The Model 5-2400 ½" drill; horizontal drill stand; stationary drill press; six 4" sanding discs (60 grit); six 4" sanding discs (120 grit); 4" sandpaper pattern; 3" buffing wheel; 4" rubber backing pad; 3" 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 4½" power saw; 4½" combination saw blade; sturdy, tilting saw table with miter gauge and rip fence—miters, levels, cross-cuts and rips; steel case. Model 5-2400 ½" drill included in the set, is an indispensable home and shop tool. Has geared chuck to securely grip drill

is an indispensable nome 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 atchments with ease No-load speed 220tachments 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 lbs.

46 NU 396. List, \$49.95. NET..... 36.11

### 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 "Rocker Action" saw has tilting table, tuli 15" 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 salishing compound stick. Kit also has a 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 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:  $6x^3/x^3/z^n$ . Powerful motor is  $\frac{1}{4}$ -hp induction-type. No-load speed, 3450 rpm. Self-aligning, oil-less bearings. On-Off switch. Overall length, 16". For 110-120 v., 60 cycle AC only. Wt., 24 lbs. 46 NÚ 468. List, \$32.50. NET.....



#### HIGH-QUALITY BENCH GRINDER

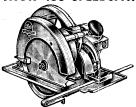
MODEL 117. Ideal power bench grinder for the small shop, garage, or home work bench. Widely used by model makers, hobbyists, schools, etc. Designed for medium or light work loads. Light in weight for easy portability.

Can be secured to bench or table-top if

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 4½x¾" with ¾" center hole. Dependable 1/15-1p motor. Speed: 3400 rpm nolod. Motor, shaft and bearings are completely housed by case which also provides integral wheel guards and tool rests. Has self-aligning, oil-less bronze bearings. On-Off switch. With 6-foot, heavy-duty 2-conductor cord. Height, 6"; width, 8"; depth, 6%". Rubber feet. For 110-120 volts, 60 cycle AC only. Shpg. wt., 8 lbs. 

## **Power Saws and Accessories**

## **THOR 450 SPEEDSAW**

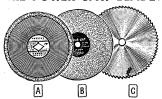


- Excellent for Home or Trade Use
- With Rugged 11/4-HP Motor

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 1½-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 porfor plunge cuts. Spring-loaded, ball-bearing mounted blade guard exposes only portion of blade required while cutting. Large 6½" blade cuts to 2½6" depth at 90°; 1½6" at 45°—cuts "2-by-4" at 45°. Minimum depth of cut, ½". Graduated angle adjustment easily adjusts to any angle between 90° and 45°. Comfortable, easy-grip handle with momentary-action trigger switch with guard. With combination (rip and cross-cut) blade, heavy-duty rubber-covered 10-ft. cord with ground wire, and adjustable rip guide. U.L. Approved. For 110-120 v., AC or DC. Shpg. wt., 15 lbs.
46 NX 788. List, \$49.95. NET... 34.25
EXTRA BLADE. Combination rip and cross-

EXTRA BLADE. Combination rip and cross-cut. 61/2" dia. Shpg. wt., 10 oz. 

## SKIL POWER SAW BLADES



#### PERMA-GRIT BLADES

CUTING 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 copper-bonded to metal blades. The grit will not roll off or wear out. Blades last for years—never need sharpening. Cut by abrasion 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 installation.

Stock No.				NET
45 N 212	19911	536	12 oz.	3.65
45 N 213	19909	553	11/4 lbs.	4.25

B SANDING BLADES. Can be used for same ing, cutting, shaping, notching and ploughing. SANDING BLADES. Can be used for sand-

Stock N	10.	Туре	Fits Saw	Wt.	NET
			536	3/4 lb.	4.98
45 N 2	15	20153	553	1 lb.	5.98

#### STEEL ALLOY BLADES

© Special nickel, chrome, molybdenum steel alloy. \*Fits 5/8" round arbor. †Fits diamond arbor. Shpg. wt., 3/4 lb.

Stock	Mfr's	Description	Fits	NET
No.	Type		Saw	EA.
45 N 218	17988* 356† 18552* 352†	Combination Combination Cross Cut Cross Cut Rip Rip		2.15 2.15 2.15 2.15 2.15 2.15

#### **POWER SAWS AND TABLES**



See Allied's low prices on quality-built power saws for both home and shop use.





## MODEL 553 71/4" SAW

- Powerful Home Workshop Power Saw
- Suitable for Heavy-Duty Construction Use

• Suitable for Heavy-Duty Construction Use Very rugged general purpose power handsaw—designed for heavy-duty construction use. Plenty of extra cutting capacity. Handles tough framing and rafter cuts. Easily cuts through "2x4's" even at 45° bevel. Has powerful 1½-hp motor. No-load speed, 6000 rpm. Variable torque clutch provides builtin protection against motor burn-out, excessive 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° to 45°. Makes accurate 90° cuts. Easy-to-reach depth-of-cut adjustment locks saw rigid at desired cutting depth. Permits cutting grooves accurately. Telescoping lower guard shields blade—

depth. Fermits cutting grooves accurately. Telescoping lower guard shields blade-automatically retracts as blade enters work. 71/4" blade cuts to 23/4" depth at 90°; 17/6" at 45°. 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. 12½x113½x12¾". 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 prois 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. 6½" blade cuts 23½" deep at 90°; 13½" at 45°. Cuts "2x½": at 45°. 5½" round arbor. Easy-toread calibrations allow accurate, adjustable bevel-cut setting from 0° to 45°. 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. 11x11x12½". Wt., 8½ 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%" table top. 14" high. By adjusting blade height, can be used for grooving, notching, and dadoing. Has adjustable miter and rip guides. Shpg. wt., 15½ lbs. 45 NX 226. List, \$19.95. NET.....14.95

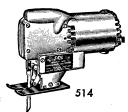
#### SKIL MODEL 514 JIG SAW

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 Can be used to cut intricate patterns and nne decorative curves—including inside curves and cutouts. Use it for starting a hole for pocket cuts—no need to drill hole in stock. Powerful ½" stroke cuts plastics and metal; will cut 2" 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......69c COARSE BLADE. Shpg. wt., 3 oz.

50 N 076. NET......36c



#### 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, ¾". Cuts wood, hardboard, plaster, leather, 2x4 lumber, etc. Makes its own starting-holes or inside cuts. Also makes straight, curved, circular or intricate cuts. Overall length of saw: 6¾". 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., 6½ lbs. 45 N 899. List, \$32.95. \$2.45 Down. NET... 24.50 Versatile power saw kit for shop and home. Can be



Hundreds of Uses

MODEL 505 PORTABLE POWER SABRE SAW ONLY. As above. With 3 blades—coarse, medium, fine. Shpg. wt., 4 lbs. 46 N 362. List, \$29.95. NET ..... MODEL 571 STEEL SAW TABLE ONLY. With protractor, jointer, circle cutter, rip fence, 5 blades. 15x15x7½". Shpg. wt., 12 lbs. 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...... 82c





Model 542

Large 2.5 Amp Motor

Ultra-Smooth Action

Rugged 3.5 Amp. Motor

MODEL 549 % DRIL

New, heavy-duty ¼' drill features large 2.5 amp motor for an extra margin in power. Gives top-performance on all drilling jobs or when used with ¼' 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 ¼'. Rugged aluminum housing with pistol-grip for easy handling. Momentary contact trigger has locking pin. No-load speed, 2500 rpm. Overall length, 8¼''. 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., ½' ibs.

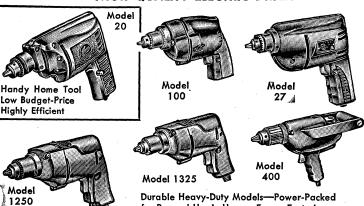
MODEL 549 1/4" DRILL

#### MODEL 542 1/2" DRILL

MODEL 542 ½" DRILL

New, power-packed ½' drill with rugged 3.5 amp motor. Handles the toughest jobs in heavy lumber, masonry and metals with ease. Advanced design with 3 separate handles for work in close quarters. Has highly polished, durable aluminum housing. Heavy-duty end-thrust bearings and self-aligning bronze bearings. Precision helical gears for smooth, efficient power take-off. Gear-type chuck takes up to ½' shanks. Drills holes in steel up to ½' in dia; 1' 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 12½'. U. L. Approved. For 110-120 v., AC or Dc. Shpg. wt., 11 lbs. 50. N. 194. List, \$56.50. \$4.22 Down. NET. 

#### THOR QUALITY ELECTRIC DRILLS



#### for Rugged Use in Homes, Farms, Factories MODEL 20 BUDGET DRILL

- Excellent Buy in a ¼" Drill
- A Thousand Uses in Shop or Home

MODEL 100 DRILL

#### MODEL 1325 3/8" DRILL

MODEL 27 DRILL

#### MODEL 1250 DRILL

Top-quality, heavy-duty 1/4" 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" diameter shanks. No-load speed, 2000 rpm, full-load, 1300 rpm. Length, 9", 10-ft., 3-conductor cord. U.L. Approved. For 110-120 volts, AC or DC, Shpg. wt., 5 lbs. 32.14

### MODEL 400 1/2" DRILL



#### HIGH-SPEED COPE-SAW BITS

A remarkably versatile, all-purpose bit for use with any ½" or ½" 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 holbybyist. Excellent for making cutouts in record changer boards, speaker enclosures and equipment panels. The three models listed below have cutting edges especially shaped for the recommended types of material to be cut. Av. shops, wt., 3 oz.
46 N 795. All-Purpose Bit.
46 N 795. Wood Bit.
46 N 797. Wood Bit.

#### MILLERS FALLS DRILL BITS



High-speed power bits for drilling large holes in hard and soft woods, plastics, dile, plywood, etc. Bits will cut through wire nails without damage. Designed for use with any 1/2 electric drill. Shanks are 1/2, milled for standard three-jawed chucks. Finely tempered high speed steel—holds edges ten times longer than orcutting on an angle. Bits are easily resharpened on a grinding wheel. Depth of cut, 5/2—ideal for boring through floors or partitions. Overall length of bits, 6/2/2.

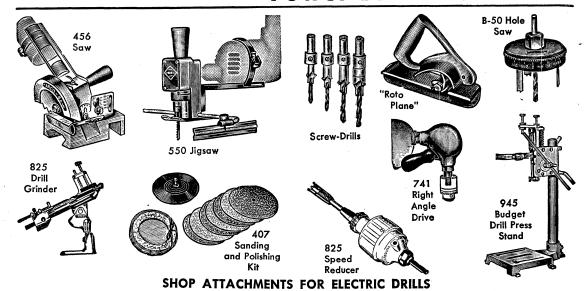
No. 8004 Power Bit Set. Set of 4 bits in convenient plastic roll. Sizes: ½", ¾", ¾" and 1". Shpg. wt., ¾ lb. 

No. 8006 Power Bit Set. Set of 6 bits in plastic roll. Sizes: 3/8", 1/2", 5/8", 3/4", 7/8" and 1". Shpg. wt., 1 lb. 46 N 367. List. \$7.80. NET..........5.12

### CENTURY MASONRY DRILL



Type L-56 18" Carbide Drill. Extra long for drilling ½" holes in brick, concrete, stone, etc. 4½" flute. Carbide tip provides clearance for expansion shields, plugs, etc. Shank dia., ¾". Shpg. wt., 1½ lbs. 50 N 199. NET. 5.25



Convert your portable power drill into a complete home workshop—and 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 sand; etc. These precision-made attachme and designed for years of dependable service.

#### ARCO 456 SAW

ARCO 456 SAW

Low-cost, high-quality saw attachment—designed to convert any ¼" electric drill into a multi-purpose power saw. Has features normally found in power saws costing many times more. Has "Dado-Arbor" that swivels saw blade to cut any groove up to ½" wide by 1" deep in one cut; arbor easily removed when saw is to be used for accurate straight or angle cutting. Simple to attach. Adjustable for straight-cutting to depth of 1½", rip gauge and beveltilt rip gauge from 0 to 45°. 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 landling. Includes safety voke. Can be used to the contained of the cont

"ARCO-SAW" REPLACEMENT BLADES High-quality 5" replacement blades for Arco 456. Tempered tool steel; \( \frac{1}{2} \)" bore. Wt., \( \frac{1}{2} \) lb.

Stock No.	Туре	Description	EACH
50 N 001	250T	Safecut blade	1.23
50 N 002	252T	Crosscut blade	
50 N 003	253T	Rip blade	
50 N 004	255T	Combination blade	

## ARCO 550 "JIG-SAW"

ARCO 550 "JIG-SAW"

Versatile jig-saw attachment—has adjustable circle-cutter and rip-gauge. Fits any 1/2" electric drill. Cuts perfect circles up to 20" in diameter; rips up to 10" wide. Does work of itg., keyhole, coping, rip, crosscut, band and hacksaw. Cuts plywood, plastic, etc.—even 2x4 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. Shps. wt. 2/2 lbs. 7.30
50 N 231. List, \$10.95. NET. ... 7.30
Extra Blades. For above iig-saw attachment.

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. NET. ... 1.30

## **ARCO SCREW-DRILLS**

Combination pilot hole drill and countersink. Drills proper size hole for woodscrews indicated; also drills counterbore. Adjusts to length of screw. Vanadium steel bit; ½" shank. \*Woodscrew size. Av. shpg. wt., 2 oz.

No. | Type| \*For | 1-5, EA. |6-Up,EA.

	. 3 pe		1-0, EA.	o-op, and	
50 N 010	1106	#6			
50 N 011	1108	#8			
50 N 0 1 2	1110	#10	<i>75</i> c	65c	
50 N 013	1112	#12			
50 N 0   4. Set of 4 drills above. 6 oz. 2.84					
6 or More	Sate	PFRSE	+	2 46	

#### ROTEX "ROTO-PLANE" ATTACHMENT

ROTEX "ROTO-PLANE" ATTACHMENT. High-quality precision planer attachment for use with '\u03b3' 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° to \u03b3'e). Guide edge provides automatic planing at a true 90 degrees—simplifies wood jointing. Diagonal shearing action eliminates deflections from knotholes, etc. Specially designed, 6-flute, spiral steel cutter is deep hardened and precision ground. Planing width 17\u03b3'. Entire unit is lightweight and perfectly balanced for fatigue-free handing. Has die-cast aluminum housing. With heavy-duty, permanently oil-impregnated bearings. Attractive baked hammerloid finish. With instructions. Shops. wt., 3 bs.

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 ½' electric drill or drill press. Valuable aid to the hobbyist, serviceman, home craftsman, etc. Easily cuts holes from 1½' to ½'' in ½' 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 cut to 1½' depth. Shpg. wt. 1½ lbs. 5.11

#### **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 grinder. Jig bolts to table or bench. Handles these drill sizes: Fractional—½\* to ¾\*\*, Number size—No. 30 to No. 1; Letter size—A to Z; Millimeter size—3.0 to 19.0. Positive indexed angle adjustment for almost any type of work: 88°—for hin sheets or hard materials; 68°—for high production use for drill ½\* or smaller; 59°—for general purpose drilling; 49°—soft materials (copper, etc.) and CSK angle for countersinks, wood, hard-rubber, fibre, etc. Attachment is fully adjustable and ruggedly built. Shgs. wt., 2 lbs. Model 825. Drill-holding jig. Holds drill in 

#### **BABCO SANDING AND POLISHING KIT**

Model 407. Complete sanding and polishing kil 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, high-quality lambswool bonnet. Kit permits completing sanding and buffing operations in a fraction of the normal time. Has a 5" rubber backing pad (fits into chuck of drill), o" lambswool bonnet and 7 assorted sandpaper discs. With instructions. Shop, wt., 10 oz. 46 N 364, List, \$1.95. NET. 1.43

#### BABCO 825 5-1 SPEED REDUCER

BABCO 825 5-1 SPEED REDUCER

A high-quality instantly reversing 5-to-1 speed reducer. Will fit any 1/2 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 1/2 tapping. Complete with 1/2 adapter,

## BABCO 741 RIGHT-ANGLE DRIVE

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
radio-TV servicemen. Amateurs, electricians,
plumbers, home owners, etc. Angle head fits
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 (¾".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 lb.

23.30

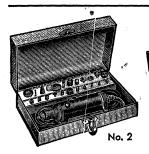
#### BABCO DRILL PRESS STAND

BABCO DRILL PRESS STAND

Model 945. Drill stand—converts any 1/4" 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. Spring-return 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. Handle provides up to 15-to-1 leverage. Leverage is set with thumbscrew 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 lbs.

50 N 233, List, \$13.95. NET 10.05

## Power Tool Kits—Drill Accessories



## VERSATILE POWER TOOL KITS



#### 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-rpm, rotary motor-operates 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, hobbysist, etc. Works well in wood, metal, plastics, leather, glass, etc. glass, etc.

#### **BURGESS V-760 TOOL KIT**

- Hundreds of Uses
- For Home and Industry

#### THOR G-A-K TOOL KIT

#### 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, 1/6" to 1/4" in 1/2" graduations. Shank sizes same as drill diameters. Supplied in handy, hinged, clear plastic container. All units are conveniently indexed so that desired drill bit can be located immediately. Shpg. wt., 6 oz.

5- Drill Set. Includes 5 drills, ¼" to ½" in ½¢ graduations. Have ¼" diameter shanks. With handy, indexed container of transparent plastic; drill bits are easily visible for quick selection. Shpg. wt., 1 lb.

13-Drill Set. Includes 13 drills, 1/6" to 1/4" in 1/4" graduations. Packed in Huot Index Drill Case. Opens like a book with every drill instantly accessible and identified. Case size, 4/4.x2x/4". Shpg. wt., 9 oz. 46 N 782. NET...... 5.19

15- Drill Set. 15 quality drills,  $V_{16}^*$  to  $V_{2}^*$  in 32nds. Sizes over  $V_{4}^*$  have  $V_{4}^*$  shank. Huot Case has space for 14 more drills in  $V_{44}^*$  graduations. Case, 7x4x15 $t_{4}^*$ . 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 Index Drill Case for protection and maximum accessibility. Case opens like book for quick selection of desired bit. Size of case, 4½x3½x 2½x Shgs. wt., 1½ lbs. 

#### SPECIAL-PURPOSE DRILL SETS

7-Piece Auger Bit Set. % to 1" in 8ths. Have % shanks to allow use in standard % electric drill. In convenient, space-saving plastic roll. Shpg. wt., 11 oz. 3.94

4-Piece Masonry Drill Set. 1/4", 1/6", 1/6" and 1/2". 1/4" shanks fit standard 1/4" electric drills. Carbide tips for drilling concrete, bricks and plaster. In plastic roll. Shpg. wt., 5 oz. 3.17

#### "MAGIC BLACK" INDIVIDUAL DRILLS

High-speed drill bits in sizes from 1/16" to 1/2". Feature "Magic Black" super-hard temper. Drills packaged in plastic. Sizes over 1/4" have 1/4" shank. Av. shpg. wt., 3 oz. Stank No I Size I NETI Stank No I Size I NET

STOCK NO.	SIZE	MEI	STOCK NO.	SIZE	14 5. 1
46 N 723	1/16"	.17	46 N 734	15/64"	.48
46 N 724	5/64"	.19	46 N 735	1/4"	.52
46 N 725	3/32"	.20	46 N 737	9/32"	.68
46 N 726		.20	46 N 739	9/32" 5/16"	.82
46 N 727	1/8"	.23	46 N 741	11/32"	1.00
46 N 728	9/64"	.24	46 N 743	3/8"	1.12
46 N 729	5/32"		46 N 745	13/32"	1.37
46 N 730	11/64"	.29	46 N 747	7/16"	1.55
46 N 731	3/16"	.39	46 N 749	15/32"	18.1
46 N 732	13/64"	.42	46 N 781	1/2"	11.99
46 N 733		.46			

#### **COASTAL WIRE WHEELS AND BRUSHES**







Wire wheels and brushes for home and industrial use. For any electric drill or grinder that will accept a ¼" shaft. Both wheel and cup type brushes are stocked in fine and coarse grades. 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.

Stock No.	Fig.	Туре	Dia.	Mtg.	Oz.	NET
50 N 023	*	91CF	2"	1/4" Shank	4	.59
50 N 024	*	91CC	2"	1/4" Shank	4	.54
50 N 026	, *	91EF	3″	1/4" Shank	6	.69
50 N 027	*	91EC	3"	1/4" Shank	- 6	.67
50 N 028	В	92C	2"	1/4" Shank	4	.89
50 N 029	В	92F	2"	1/4" Shank	4	.99
50 N 200	Α	P94F	4"	½" Bore	8	.89
50 N 20 I	Α	P94C	4"	1/2" Bore	8	.69
50 N 202	Α	P96F	6"	1½" Bore	12	1.25
50 N 203	Α	P96C	6*	1/2" Bore	12	1.03

Muslin Buff. High quality 6" muslin buffing wheel and bar of jewelers rouge in sealed plastic bag. Ideal for the craftsman or the hobbyist. For buffing and polishing silver, copper, brass, etc. Has ½" bore, can be used with arbor listed below. Shps. wt., 4 oz. 81c 50 N 204. List, \$1.10. NET .... 81c



725 Arbor. For holding wire and buffing wheels shown above. Has ¼' shank, ¾' body. Can be used with any ¼' capacity electric drill. Machined body and nickel plated body. Packed in clear plastic bag. Shpg. wt 8 cg. wt., 8 oz. 50 N 206. List, 60c. NET....44c

Bag of 5" Assorted Sanding Discs. 6 sanding discs in useful plastic bag. 8 oz. 23c

## KNEISLEY MINIATURE DRILL SET



Type Ks-1115 Cas-bon Drill Set. 20 drills—No. 61 through No. 80 (.039° to .0135°). An indispensable set for extremely fine drilling jobs. Hardened by unique method, assuring precision production. Finest grade carbon steel used. Set includes 4-jaw chuck with 1/6° shank for using drills in standard chucks. Molded lucite case. Shpg.

MILLERS FALLS COUNTERSINK

MILLERS FALLS COUNTERSINK
Model 710. Made of fine-grade highspeed steel. 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° angle for wood and machine
screws. Shank, ¼°. Fits any brace or
drill. Overall length of unit is 2½°. 

#### **GENERAL HARDWARE AUTOMATIC CENTER PUNCH**

**GENERAL HARDWARE** 

# SELF-CENTERING PUNCH

Model 806. For use with hardware having counter-sunk mounting holes—hinges, switch plates, etc. Tapered end of punch fits into hole and automatically or punch his into noise and automatically locates correct center. Just tap plunger pin and work is accurately marked. Made of cadmium-plated steel; plunger pin is tempered-steel. A handy, time-saving tool for the serviceman, repairman, builder, etc. Sips. wt., 2 oz. 386

## **Power Sanders and Accessories**

## WEN POWER SANDER KITS



#### MODEL 404 HEAVY-DUTY KIT

#### MODEL 303 MEDIUM-DUTY KIT

mODEL 303 MEDIUM-DUII AII
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 2½ lbs. Size, 3½/sx
5½/x2½′. With 12 sheets of assorted sandpage,
2 polishing cloths and metal carrying case. For 

## SKIL PERMA-GRIT TOOLS HAND SANDER KIT

Outlasts Hundreds of Sandpaper Sheets



New hand sander featuring remarkably efficient Perma-Grit sanding sheets. Tungsten-carbide grit cuts faster and easier than sandpaper. Grit resists clogging. With one fine and one medium-coarse sheet. 2½ x5½" sanding surface. Slog. wt. 1½ 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 50 N 151 50 N 152 50 N 153	18764 18973 18982 18763	Very fine Fine grit Medium Coarse	\$1.25	84c

#### 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 files are excellent for curved surfaces. ffine; \*coarse. Shpg. wt., 8 oz.

Stock No.	Туре	Description	List	NET
50 N 062 50 N 063	18730	Flat file	\$2.25	1.50
20 N 063	19039	coarse	1.95	1.31
50 N 064	19860	†Contour,fine	1.95	1.31

#### PERMA-GRIT SAND SHEETS

Long-life tungsten-carbide sand sheets for electric oscillating sanders. Standard size 33/x x sheets. Conveniently pre-formed for easy changing. Shpg. wt., 5 oz.

Stock No.	Туре	Description	List	EACH
50 N 154 50 N 155 50 N 156 50 N 157 50 N 158	18701 18702 18703	Medium Med. Coarse Coarse	<b>\$2</b> .95	1.98

## QUALITY POWER SANDERS



#### **MODEL 592 ORBITAL SANDER**

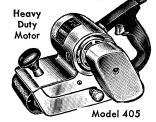
Highly versatile orbital sander. The ideal electric sander for the professional wood craftsman, or the do-it-your-self hobbyist. Can be used for coarse or fine-finish sanding; also for polishing and buffing with the polishing pad listed below. May be used for paint and varnish removal.

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 surfaces. Less sanding sheets. Uses standard 3½x29' sheets including Perma-Grit sheets, listed below left. Overall size: 6½x29¾x35½x1, For operation from 110-120 volts AC or DC. Shpg. wt., 7 lbs.

50 N 079. List. \$49.95. NET...... 35.50 50 N 079. List, \$49.95. NET.......35.50

Polishing Pad. For above. Wt., 3 lbs. 



#### MODEL 405 BELT SANDER

Professional-quality, 2-speed belt sander. Has plenty of power for any sanding job. An outstanding tool for hobbyists, carpenters and cabinetmakers. Speeds: 1100 and 800 f.p.m. The high speed is excellent for quick smoothing of large areas, or rapid sanding to size. The low speed will give satin-smooth finishes; also excellent 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' sanding belts. Flush design allows sanding right up to vertical edges. Simple locking device for quick, easy belt changing. Rugged lightweight, diagoest aluminum housing. lightweight, die-cast aluminum housing.

Overall size, 6½x6½x12½°. Equipped with 3-wire cord. Less sanding belts. For 110-120 v. 60 cycle AC, or DC. Shpg. wt., 16 lbs. 63.50 NX 077. List, \$89.50. NET......63.50

Box of 10 Assorted Belts. Wt., 1½ lbs. 4.98



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 lightweight and well balanced—ideal for vertical and overhead sanding. Easily does in minutes, sanding jobs that would require many hours of hard work when done by hand. Morital orbital action duplicates hand sanding motion Gives smooth surface required for French finishing. finishing.

Features rugged 6200-rpm series-wound motor-Has sealed and shielded factory lubricated ball bearings for smooth operation and long life. Ven-tilating slots in top and sides of housing; motor runs cool even after long sanding operations. 

Complete 24-Piece Outfit Model 1.5TK

## MODEL 15TK SANDER KIT

Versatile kit featuring the 15T sander. Makes

Model 15T Sander Only, 7 lbs. 

## **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 sizes. Less drills.

15-Drill Capacity. 1/6 to 1/2" in 1/2" steps. 4x 7x11/4". Wt., 2 lbs. 46 N 716. NET.. | .84

29- Drill Capacity. 1/6" to 1/2" by 64ths. U.S.S. and S.A.E. tap info. Shpg. wt., 3 lbs. 50 N 084. NET. 2.18



## **Selected Quality Tools**

#### NEW BURGESS DELUXE ELECTRIC SPRAYER KIT

- Complete, Ready to Use
- Precision-Ground Sapphire Nozzle
- Fast and Efficient, Easy to Use



Completely self-contained, requires no extra compressors or hoses, Operating mechanism sealed in a handsome brown, shock-proof, rust-proof housing rings or hoses, Operating mechanism sealed in a handsome brown, shock-proof, rust-proof housing. Trigger type switch for quick positive off-on action. 24-oz. graduated glass jar. 4-oz. glass container easily replaces large jar for touch-up and other small 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-ft. extension cord, 24-oz. graduated glass jar, 4-oz. auxiliary touch-up jar, variable direction norzle adapter, full set of spare parts including strainer attachment and special "fogging" norzle. Also includes hand sander and instruction book. All in an attractive steel carrying case with folding handle and safety clasp. For operation from 110-120 v. 50-60 cycle AC. Sprg. wt., 8 lbs.

19.97

Model VS-800 Spray Gun Only. Same high quality and workmanshin as spray gun in kit shows

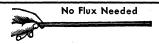


#### TURNER PROPANE-GAS "MULTI-TORCH" KIT

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 point burning or heating asphalt tile. Solid copper, chisel point solder tip screws into all brass socket for easy attachement to burner. Tip heats in seconds for quick soldering. Hot cutting tip also screws into socket attachment, is useful for cutting or scoring tile, removes putty like butter. Flame is safely encased, will not damage sash or frame. "Multi-Torch" kit supplied with tank of fuel, heavy-duty burner, soldering tip, flame spreader and cutting tip. In 3x10x6/x\* steel storage case. Shpg. wt., 6½ lbs.

50 N 081. List, \$9.95. NET

#### **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 soldering iron. Metals can be either soldered or welded, depending on application time of heat. Joints can be made stronger than the 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. 300° for thin-gauge metal, 800° for heavy work.

Stock No.	Unit	Temp.	Wt.	NET
50 N 083	2 bars	500°	31/2 oz.	.59
50 N 085	2 bars	800°	3½ oz.	.59
50 N 086	bulk	500°	1 lb.	1.49
50 N 087	bulk	500°	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 and bottom of flame tube permit quick filling and prevent leakage.

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, 3½x2x1. Shga. wt., 1 lb. 2.06

#### **DELTA HOMECRAFT WORKSHOP SAWS**



#### 34-600 9" CIRCULAR SAW

- Ripping, Cross-Cutting, Mitering
- Raising, Tilting Arbor
- Self-Aligning Rip Fence

• Self-Aligning Rip Fence

A professional-quality, 9' tilting arbor, circular saw for heavy-duty wood cutting applications. Ideal for the complete home workshop—rugged enough for commercial use in mill work and cabinet shops. Precision built to exacting specifications to insure smooth operation and lasting, dependable performance. The 9' combination blade makes smooth cuts up to 2½' deep with ease. Blade can be tilted up to 45' (table remains level). Precision-bearings. Height and angle of blade are easily read on calibrated ball blade are easily read on calibrated dials, Table top measures 22 by 15'. Unit is equipped with guide bars and self-aligning rip fence that features a micro-set dial for making fine adjustments. Also includes auto-set miter gauge with stop rods and clamp. The raising and tilting controls are easy to reach from the operating position. Overall dimensions, 17½' high, 37½' wide and 36' deep. Unit is supplied complete with table insert, arbor pulley and wrenches. Less ½-hp motor and table; see listings below. Sing. wt., 105 lbs. 76.95

Complete 9' Tilting Arbor Circular Saw. A complete table saw insufable to the stable saw in the stable saw in the stable saw in the stable say in the Model No. 3.4 600 of \$100 or \$10



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 con-struction. Double 3/8" shafts for added versa-tility. With 8-ft. cord, plug and switch. For operation from 110-120 v., 60 cycle AC only. 



#### MODEL 28-100 10" BAND SAW

- Precision, Ball-Bearing Construction
- Tilting Table for Making Bevel Cuts
- Cuts to Center of 20" Circle

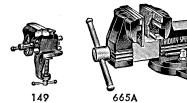
Complete 10" Band Saw. A complete band saw assembly consisting of the Model No. 28-100 10" tilting table band saw with accessories as described above plus the following Delta equipment: 50-328 table stand; 5275 motor pulley, 49-130 V belt and 1334 switch rod. Ruggedly constructed table is 20" high, 8" wide and 16" deep. Less ½-hp motor, see listing at left. Shpg. wt., 113 lbs. 50 NZ 246. Only \$6.50 Down. 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.

2.09

Allied can supply any Delta home workshop power tools not listed here, on special order. Write for literature and prices.

#### SHOP AND BENCH VISES









## BRINK & COTTON NO. 149 VISE

#### MILLERS FALLS NO. 217 VISE

For holding work on drillpress bed or work bench. work bench.
Radiomen find
it perfect for
holding parts
to be soldered,
sawed or drilled.
Sturdy steel jaw



sawed or drilled. Sturdy steel jaws are 23/6" wide. Have parallel faces extending to 31/6". Removable swivel jaw is provided for holding odd-shaped parts. Slidebar type handle and fine thread on screw gieve excellent leverage for solid, reliable grip on work. Slpg. wt., 5 lbs.

46 N 064. NET.

#### WILTON QUALITY VISES

Model 633½ 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 locking 360° swivel base. Jaws are 3½" wide; open to 4". Pipe jaws accept pipes from ½ to 1½" dia. Smooth action opening and closing—slide-bar spins with one hand. 4 built-in mtg. lugs. Shpg. wt., 20 lbs.
46 NU 866. NET. 9.33

Model 364. Vise and Positioner. Ruggedly-built utility vise mounted on famous PowRarm positioner. Excellent combination for work on small electronic assemblies or parts. Single-handed release of positioner level-bar permits rotating 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. Positioner is cadmium-plated steel. Capacity, 15 lbs. Vise jaws are smooth steel; 2½ vide; open to a maximum of 2½°. 5 lbs.

50 N 149 NET

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 2½". Jaw width, 2½". 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 instantly to any desired position. Heavy-duty thumbscrew locks it securely in place. Attractive, baked red enamel finish. 2 mtg. holes in base. Shpg. wt., 5½ lbs.

46 N 896, NET.

### VLCHEK QUALITY HAMMERS



H8816 Ball Peen Hammer. Top-quality mechanics hammer with handsome forged 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\*. Shpg. wt. 1½ lbs.

50 N 129. NET. 2.28

B HM16 Soft Face Hammer. Plastic-faced hammer for driving bushings and wrist pins, body bumping, straightening bent chassis, etc. Steel head has 1½° dia. faces of red vinyl and amber tenite. Will not mar aluminum or soft metals. Hickory handle. Length, 14°. Shpg. wt., 1 lb.

DHC813 Claw Hammer. A deluxe claw hammer featuring modern octagon neck 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". Shpg. wt. 1½ lbs. 

## HENRY HANSON ACE TOOLS









## TAP AND DIE SET

TAP AND DIE SET

Model 614V. Complete set of high-quality, 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 Srew Standard) 1/2-20, 1/4-18, 1/4-16, 1/6-14 and 1/2-13 NC (U.S. Standard), 1/2-28, 1/6-24, 3/6-24, 1/4-24 and 1/2-20 and 1/2-20, NF (S.A.E. Standard), 1/4' pipe. Includes die stock, tap and reamer wrench, "T" tap wrench, screwdriver and screw pitch gauge. Dies are V-notch adjustable. Green plastic case. Shpg. wt., 4 lbs.
46 N 245, NET. Only \$2.14 Down... 21.38

#### HIGH-SPEED DRILL BITS

Model 20. For clean, easy removal of broken screws, bolts, studs and pipes that resist regular methods. A hole is drilled into broken piece, using correct drill 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. Removes screws ½ to ½" in dia. Also, ½" and ½" pipe. Extractors are tough alloy steel. Shpg. wt., 1 lb. 46. N 264 NET INDIVIDUAL TAPS AND DIES

SCREW EXTRACTOR SET

High-quality taps and solid dies for all-purpose use. Tough carbon steel. Right-hand thread. Shpg. wt., 2 oz.

EACH
37¢
37¢ 37¢
78091

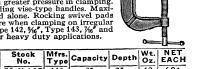
#### GREAT NECK CLAW HAMMER



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 puling small nails. Mirror-polished, hardened head cannot loosen. Has rubber cushioned handle for secure grip and excellent shock absorption. Highest quality forged tool steel construction. Overall length, 13". Shpg. wt., 1½ lbs. 3.19

#### **BRINK & COTTON CARRIAGE CLAMPS**

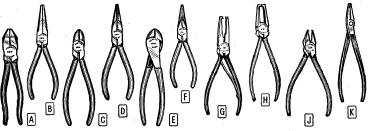
Sturdily-constructed "C" clamps of high-grade malleable iron. Extremely useful in shop or home for cabinet work, boat building, wood gluing, etc. Hold separate pieces of work securely in exact alignment for drilling, bending, soldering, or sawing. Have greater than usual throat depth and two heavy reinforcement 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 "A": Type 142, "M". Type 143, "M" and Type 242, "M". Type 242 is especially rugged for heavy duty applications.



Stock No.	Mfrs.	Capacity	Depth	Wt. Oz.	NET EACH	Stock No.	Mfrs. Type	Capacity	Depth	Wt. Oz.	NET EACH
50 N 163	141	1"	11/8"	3 4	21¢	50 N 165	143 242	3" 2"	17/16"	12	60¢ 45¢

## **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.

Stock No.	Fig.	Туре	Description	NET
46 N 400	A	1830	61½" Electrician's Side Cutting Pliers 8½" Linemen's Side Cutting Pliers 5" Needle Point Diagonal Cutters with Spring Handle 5" Narrow Head Diagonal "Oblique" Cutters 6" Narrow Head Diagonal "Oblique" Cutters	2.21
46 N 408	A	1801		3.38
50 N 110	J	4625		2.86
46 N 402	C	4501		2.06
46 N 403	C	4501		2.39
46 N 414 46 N 410 46 N 413 46 N 401 46 N 404	C E B D	2612 4610 1741 1661 1671	6/½" Wire-Stripping Notched Diagonal Cutters 7'* Heavy-Duty Diagonal Cutters 6" Long Flat-Nose Pliers (no cutter) 6" Long Chain Needle-Nose Pliers (with cutter) 6" Long Chain Needle-Nose Pliers (no cutter)	2.76 2.36 1.91 2.36 1.91
46 N 4 1 9	F	1663	6' Radio and Ignition Nose-Cutting Pliers 8' Long Reach Short-Jaw Nose-Cutting Pliers 6' Long Jaw Transverse End-Cutting Pliers 5½' Resistor Terminal End-Cutting Pliers	2.50
50 N 1 1 1	K	71		2.91
50 N 1 1 2	G	1650		2.76
50 N 1 1 3	H	5627		2.57

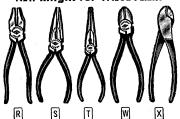
#### **KRAEUTER 10" JOINT PLIERS**



#### **KRAEUTER PATTERN SNIPS**

Type K-13. Combination pattern snips. Designed to cut either curved or straight lines in sheet metal, plastics, rubber, steel. Carefully heat-treated. Blades stay sharp and have uniform shearing action over their entire length. Pocket Jacel — only 7" long. 13/4" cut. Shpg. wt., 10 oz. 

**NEW knight TOP-VALUE PLIERS** 

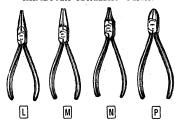


- Unsurpassed Tool Values
- One-Year Guarantee
- High-Grade Carbon Steel
- Made By Leading Manufacturer

Knight pliers offer exceptionally high quality at an economy price. Made by one of the nation's leading tool manufacturers. Drop-forged from high grade carbon steel, and carefully heat treated. Ideal tools for the engineer, electronic repairman and the hobbyist. These pliers have been precision machined, fitted and adjusted. Will give years of dependable service. All have semi-polished heads and black handles. Av. shpg. wt., 10 oz.

Stock No.	Fig.	Description	NET
50N 131 50N 132 50N 133 50N 134 50N 135	R S W	6½" Side-cutting pliers 6" Chain-nose with cutters 5" Diagonal cutting pliers 6" Diagonal cutting pliers 7" Chain-nose with cutters	1.59 1.54 1.34 1.59
50N 114		7" Heavy-duty diagonal cutters	

#### 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 from high-quality tool steel and polish finished. Av. shpg. wt., 5 oz.

Stock No.	Fig.	Туре	Description	NET
46 N 415 46 N 416 46 N 417 46 N 418	M	83 84 85 81	4½" Chain-Nose Pliers 4½" Flat-Nose Pliers 4½" Round-Nose Pliers 4½" Diag. Cutting Pliers	2.14

#### **KRAEUTER JEWELERS' PLIER SETS**



Type 89. Set consists of 3 jewelers' precision pliers for close, accurate work on miniature mechanical and electronic equipment. Most often used types for wiring and assembling. Set includes 1—Type 84 diagonal cutting pliers, 1—Type 84 diatnose pliers, 1—Type 84 diatnose pliers, 1—Type 84 diatnose pliers, 1—Type 84 diatnose pliers, 1—Type 85 diatnose chain-nose pliers. All are drop-forged from high-shock and abuse. Polished to a gleaming finish. Excellent for the well-equipped service shop. Each tool is 4½" long. Supplied in black zipper case, Shpg. wt., 1 lb.



Type 90. Complete set of 5 jewelers' precision pliers in durable black pilers in durable black zipper storing case Contains every popular type pilers. Used extensively for delicate, precision work by hobbyists, experimenters, watchmakers, etc. Set consists of 1—Type 81 diagonal cutters, 1—Type 84 flat-nose pilers, and 1—round-nose pilers. High-quality tool steel, heat treated and polished tool is 4½" long. Supplied with case. Shop, wt., 1½ lbs.

13.10

46 N 423. NET....

#### DIAMOND TOOLS



## **ADJUSTABLE WRENCHES**

Type DB-76. Double-ended wrench. Drop forged "Diamalloy" tool steel. Carefully machined to close tolerances for smooth dependable service. Finished in chrome nickel with highly polished heads and satin finished handle. Capacities are ½" and ½". ½" jaws are ½" at tip with ½" maximum head thickness; ½" jaws are ½" at tip with ½" maximum head thickness. Length, 6". Shop; wt., 6 oz. 2.6!

Type DB-78. Double-ended as above but with 3/4 to 15/6" capacity. Shpg. wt., 10 oz. 2.94

#### TYPE K SLIP-JOINT PLIERS

Slip-joint combination pliers with convenient wire cutting groove. Excellent for all general purpose work. Precision milied jaws provide a firm, non-slip grip on large or small objects of any shape. Knurled handles for secure grip.

Stock No.	Type		Wt.	
50N 116	K-15	5" Long, ¾" Jaw Capacity	10 oz.	.75
46N 460	K-16	6" Long, 1" Jaw Capacity	12 oz.	.80
50N 117	K-18	8" Long, 1¼" Jaw Capacity	14 oz.	1.03

## ADJUSTABLE WRENCHES



Type C-79. A handy adjustable wrench with sliding jaw. Will apply non-elipping pressure to large or small nuts and bolts. Excellent tool for any type of shop work where different sizes of nuts are encountered. Knurled adjusting nut quickly and precisely adjusts sliding jaw to any size up to 2½". Made of drop forged steel for rugged strength. Will provide many years of reliable service. Nickel-chromium plated for protection from rust. Overall length, 9". Shpg. wt., 14 oz.

## **VLCHEK TOOLS**



## **DOUBLE END WRENCH SETS**

Type X2664. 5-piece open-end wrench set. Made of tempered carbon steel. Ten openings, 1½ and ½, ½ b. 25.28 marked on wrenches. Rust resistant. Wt. ¾ lb. 1.38

46 N 265. NET ... 1.50 Yer and ½": ½" and ½": and ½": ½": and ½": ½": and ½": ½": and ½

#### STANDARD PUNCH & CHISEL SET



### **TYPE X860 CENTER PUNCH**



High-grade, carbon-steel center punch. Carefully heat treated and tempered for maximum toughness. 5° long. Shpg. wt., 2½ oz. 29c

### **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 ½\* thick. Just turn cap screw to cut hole—can be operated with ordinary wrench. No reaming or filling required. All punches require ½\* hole for lead screw, except ½½\* hole, and †½\* hole. Av. shpg. wt., 1½ lbs.

732

No.	Size	NET	No.	Size	NET
46 N 1698 46 N 1778	1/2.		46 N 002† 46 N 175	17/2	2.86
46 N 000 46 N 170	11/16	2.29		13/8"	
46 N 001	13/16	2.29	46 N 011†	15/8	3.97
46 N 171 46 N 172 46 N 178	1'/8 1'/6'	2.29 2.51 2.65	46 N I I I I †	17/8	4.50 5.60 6.04
46 N 173	11/8	2.65	46 N 181†	21/4"	6.57
46 N 179 46 N 174	13/16	2.65	46 N 209†	225/32"	11.02

Ball-Bearing Cap Screws. For use with Type 730 punches that have a ¾" cap screw. Reduce friction for easy operation. Shpg. wt., 1 lb.

50 N 168. Type AV249-BB. For 11/32". 15/8" and 13/4" chassis punches. NET2.07
50 N   69. Type AV304-BB. For $1\frac{7}{8}$ ", 2", $2\frac{9}{4}$ " and $2^{25}\frac{4}{8}$ " chassis punches. NET2,24

46 N 343. 34" screw for 136" to 225/2" punches.

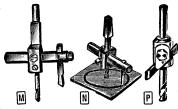
Series 731 Square Punches. Cut holes in metal up to ½" thick. Require ½" hole. Shpg. wt., 2 lbs.

46	N 269. N 276.	For 1/2"	hole.	NET	3.66
46 46	N 277. N 278.	For 1	hole.	NET NET NET	4.18 4.94

Series 732 Key Punches. Cut holes for keyed sockets. Require 1/2" hole except \$1/4" hole. Av. shpg. wt., 11/2 lbs.

No.	Size	NET	No.	Size   NET
46 N 2148	15/32"	4.31	46 N 189	11764 4.66
46 N 186	111/64"	4.41	46 N 193	11764° 4.66 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.

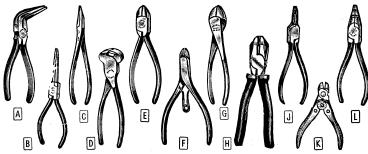
No.	Fig.	Shank	Hole Size	NET
45 N 600	M	Round 1/4" Square Round 5/6"	7/8" to 4"	1.69
45 N 602	N	Square	1" to 51/2"	2.10
45 N 603	M	Round 1/16"	1" to 51/2"	12.10

Replacement Cutter Blades. For above. Hardened tool steel. Shpg. wt., 4 oz. 44C

### CLARK HOLE CUTTER

P Type 100. Cuts holes 1/2 to 11/2 in dia., in metals up to 1/2 thick. 1/2 pilot drill with 1/4 round shank for electric drills. Fully adjustable. Shog. wt., 5 oz. 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, servicement, 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 cutting edges. Handles on all types are of proper size and shape for completely comfortable grip and balance. Av. shpg. wt., 10 oz.

No.	Fig.	Туре	Description	EACH
46 N 476	A	888	6" Curved Needle Nose Pliers 5½" Long Nose Pliers 6" Long Needle Nose Pliers 8" Assembly Pliers, Needle Nose	2.50
50 N 167	B	775		2.35
46 N 475	B	777		2.17
46 N 477	C	82		2.27
46 N 474	D	260	7" End Cutting Nippers 6" Aviation Diagonal Cutters 7" High Leverage Diagonal Pliers 6" Insulation Skinning Pliers	2.78
46 N 470	E	45		2.65
46 N 471	G	40		2.39
46 N 478	L	2291		2.47
46 N 425 46 N 426 46 N 489 46 N 466	F J H K	101 896 3950 470-5	4½" Midget, Scissors-Type Snips 6" Cutting and Stripping Pliers 6" Linemen's Side Cutters 5" Printed Circuit Cutting and Crimping Pliers	2.55 2.87 3.21 3.23

### UTICA STRAIGHT CUT TIN SNIPS



Type 270. High-quality tin snips for straight cutting, medium-duty applications. 77 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 0z. 1.66

### **CLAUSS INDUSTRIAL SCISSORS**



Type 925BS. Same as above, but one blade 

### 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. Indispensable when working on miniaturized units, in corners, etc. 10' long. Wt., 6 oz. 1.20

### **WALSCO PROTECTO-TUBE**

Type 18-K. Synthetic plastic highvoltage tubing for insulating the handles
of pliers, acrewdrivers, 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. Shog. wt., 12 oz. 1.06

### **UTICA ADJUSTABLE WRENCHES**



Type 91 Adjustable Wrench. Thin pattern design. Easily slip into tight places. Dropforged from tough alloy steel. Thumbscrew adjustment holds jaws firmly. Chrome finished head. \*Tip thickness.

Stock No.	*Thick-	Size	Jaw Open	Shpg. Wt.	NET EACH
46 N 481 46 N 482 46 N 483	3/16"	4" 6" 8"	1/2	2 oz. 4½ oz. 8 oz.	1.74 1.74 2.03
46 N 484 46 N 485	9/32"	10" 12"	1 1/8" 1 5/16"	1 lb. 1½ lbs.	2.61

### ADEL METAL "NIBBLING" TOOL

ADEL METAL

"Nibbles" holes,
slots or openings
in sheet metal. A
real time-saver;
leaves smooth, flat
edge on holes. Easily munches 18gauge steel, or
aluminum and
other soft metals i



aluminum and other soft metals up to 1/16" thick. Minimum hole size, 1/16" diameter. Durably constructed; easy to use. Shpg. wt., 8 oz. 43 N 863, 12-71, EA. 3.60 1-11, EA. 3.85

### 'TRU-CUT" LOCK WRENCH



Type 10-DC. Rugged, heavy-duty tool. Applies tremendous pressure with minimum effort—up to 1000 lbs.! Non-slip grip holds objects of any shape. Can be used as quick-clamp, pipe wrench, toggle press, or hand vise. Finger-tip release opens wrench instantly. Knurled-head adjustable bolt sets tool for sizes up to 1½°. Nickel-plated hardened steel. 10° long. Shpg. wt., 1½ lbs.

### HANDY STEEL TWEEZER

## XceLite Nutdrivers & Screwdrivers



## **HEX NUTDRIVER SETS**





### **MODEL 99PR NUT & SCREWDRIVER SET**

Model 99x10 8"-Extension. For above. 5 oz. 45 N 787. List, \$1.45. NET...........87¢

### **MODEL 127 NUTDRIVER SET**

Color-coded plastic handles indicate socket Color-coded plastic handles indicate socker sizes instantly. Sockets are deep enough to handle two nuts. Depth of shart hole, 11/2. Includes 7 wrenches, sizes 11/6 to 14/2. Includes 7 wrenches, sizes 11/6 to 14/2 to 15/6 to 15/6 to 16/6 t

### **MODEL 137 NUTDRIVER SET**

### **MODEL 17 NUTDRIVER SET**



Seven nutdrivers in

### XCELITE SERVICE MASTER KIT

Type 99SM Service Master Kit. An extremely versatile set of high-quality tools. Includes a complete assortment of wrenches, pliers, screwdrivers and reamers, plus handles and extension. 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" adjustable wrench; nine regular nutdrivers in sizes from 3½" through ½"; ¼" stubby nutdriver; ½", stubby nutdriver; ½", stubby nutdriver; ½", stubby nutdriver; ½", slotted screwdriver; ½", slott



High-quality, rugged screw-drivers in choice of blade sizes and lengths. Highly polished, chrome vanadium steel shafts imbedded in tough XceLite plastic handles—will not loosen, even under rigorous use. Han-dles fluted for sure grip.

A Round Shaft. Available in lengths from 41/4" to 12".

Stock	Stock Mfr's		ft Size	Overall	Shpg.	NET
No.	Туре	Dia.	Length	Length	Wt.	EACH
43 N 845	R-182	1/8"	2*	41/2"	3 oz.	.32 .36 .38
43 N 846	R-184	1/8"	6"	61/2"	3 oz.	.36
43 N 847 43 N 848	R-186 R-188	1/8" 1/8" 1/8" 1/8"	8"	101/2"	4 oz. 4 oz.	.38
45 N 795 45 N 796	R-144 R-146	14:	4" 6"	8″ 10″	6 oz.	.68
45 N 797	R-148	1 1/2"	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.

							-
	N 830		3/32"	3"	5"	2 oz.	.26
43	N 831	R-184SS	1/8"	4"	0"	2 oz.	.27

C Square Shaft. Available in lengths from 75%" to 18".

Stock	Mfr's	Shart Size		Overall Shpg.		NET
No.	Туре	Dia.	Length	Length	Wt.	EACH
43 N 829	S-3164	3/16" 1/4" 1/4"	4"	75/8"	4 oz.	.62
43 N 832 43 N 833	S-144 S-146	13.	6"	8″ 10″	6 oz. 6 oz.	.73
						.76
43 N 834	S-148	1/4" 3/8" 3/8"	8"	12"	7 oz.	.88
43 N 837 43 N 838	S-388 S-3812	3/8.	8″ 12″	123/8"	1 lb.	1.23
43 11 030	3-3612	3/8"	12"	18"	11/4 lb.	1./9

D Phillips Screwdrivers. Alloy steel. \*Stubby type.

Stock Mfr's		Sh	aft	Overall	Shpa.	NET	
No.	Туре	Tip	Length	Length	Wt.	EACH	
43 N 876	X-101	No. 1	3"	6 <sup>3</sup> / <sub>8</sub> "	5 oz.	.62	
43 N 877	X-108	No. 1	6"	10"	5 oz.	.69	
43 N 878	X-102	No. 2	4"	7 <sup>3</sup> / <sub>4</sub> "	6 oz.	.81	
43 N 879	X-1020	No. 2	10"	13 <sup>3</sup> / <sub>4</sub> "	8 oz.	1.08	
43 N 881	X-103	No. 3	6″	10"	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 metal assemblies, electronic gear, etc. Non-friction hold type.

50 N 144 50 N 145 50 N 146	G183 G5324 G3164	1/8" 5/32" 3/16"	4" 4" 4"	6½" 7½" 7½"	3 oz. 4 oz. 4 oz.	.72 .81 .81_

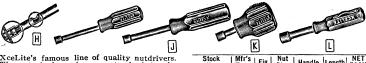
Stubby Screwdriver 1/4" square shaft, polished blade. Ideal for work in cramped space.

43 N 844 | S-141 | Regular | 11/4" | 31/4" | 5 oz. | .51

G Combination-Blade Screwdrivers.

No.	Type	Combination	Length	
45 N 746 45 N 747 45 N 748	CR1 CR2 CR3	3/6" Regular #1 Phillips 1/4" Regular #2 Phillips 5/6" Regular #3 Phillips	7" 7" 7"	5 oz. 10 oz. 1.26

### **XCELITE HEX NUTDRIVERS**



XceLite's famous line of quality nutdrivers. These tools have become standard in the electronics industry, and are offered in a wide range of sizes and styles for every application. 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. Socket wells are deep enough to handle two nuts simultaneously. nuts simultaneously.

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 style nutdriver with clip and hexagonal handle. A set of 3 sizes listed is extremely handy for the serviceman. Type HS-18 fits %e" volume contoil nuts. Shpg. wt., 6 oz., except S-8, S-10, S-12, which are 5 oz.

No.	Type	Fig.	Size	Handle	Length	EACH
45 N 779	HS-8	H	1/4"	Red	6"	.79
45 N 780	HS-10	H	5/16"	Amber	6"	.79
45 N 78 I	HS-11	H	11/32"	Green	6"	.79
45 N 782	HS-12	н	3/8"	Blue	6"	.79
45 N 783	HS-14	Н	7/16"	Brown	7"	.91
45 N 784	HS-16	H	1/2"	Red	7"	.94
45 N 785	HS-18	Н	9/16"	Orange	7"	.97
45 N 786	HS-20	Н	%*	Amber	7"	1.12
45 N 8 I 3	6	J	3/16"	Black	6"	.65
45 N 8 I 4	7	J	7/32"	Brown	6"	.65
45N815	8	1	1/4"	Red	6"	.65
45 N 8 I 6	9	J	9/32"	Orange	6"	.65
45 N 8 1 7	10	J	5/16	Amber	6"	.65
45 N 8 I 8	11	Ĵ	1 1/32"	Green	_ 6"	.65
45N819	12	J	3/8"	Blue	6"	.65
45 N 857	S-8	ĸ	1/4"	Red	31/4"	.54
45 N 858	S-10	K	5/16"	Amber	31/4"	.54
45 N 859	S-12	K	3/8"	Blue	31/4"	.54
50 N 141	P-8	L	1/4"	Red	33/8"	.45
50 N   42	P-10	L	5/16"	Amber	3%"	.45
50 N 143	P-12	L	3/8"	Blue	33/8"	.45

### OFFSET SCREWDRIVERS



Excellent for spots inaccessible to standard types. Heat-treated and tempered steel with screwdriver blade at each end.

### JEWELER'S SCREWDRIVER SET

### 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. Shockproof as well as hammerproof. Blades are 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.

Stock	Mfrs	Blade	Shpg.	NET
No.	Type		Wt.	EACH
43 N 738		4x 1/4"	8 oz.	.92
43 N 739		6x5/16"	10 oz.	1.10
43 N 740		8x 3/8"	10 oz.	1.39
43 N 741		6x <sup>3</sup> / <sub>16</sub> "	9 oz.	.77
43 N 742		4x <sup>1</sup> / <sub>4</sub> "	10 oz.	1.03
43 N 743		6x <sup>5</sup> / <sub>16</sub> "	12 oz.	1.32

### "HOLD-E-ZEE" SCREWDRIVERS AND SCREWDRIVER KITS





TK-5

RT-52

Type TK-5 Kit. Versatile, top-quality screw-driver kit. Especially recommended for the "do-it-yoursel" enthusiast, mechanic, and car owner. Kit includes 5 automatic-grip screw-drivers; one each—TR-4 with ½" hex blade, 4" long; PR-4, ½x4"; TS-4, ½x4"; PS-4, ½x4" and TH-6, ½x50". PR-4 and PS-4 are for Phillips head screws.

### **WALSCO HEX & SPLINE WRENCHES**

An extremely useful assortment of hex and spline wrenches. Contains 11 of the most commonly used sizes in electronic acquired





### ALLEN WRENCH SET

Excellent set of 6 L-shaped wrenches to fit 7 most popular-sized Allen-head screws. Nos. 4, 5, 6, 8 and 10 as well as ¼ and ½6 sizes. Made of extremely tough "Alenoy" steel. Keys are neatly packed in convenient, leatherette case which fits into pocket. Shgs. wt., 3 oz.



46 N 072, NET EACH 12 sets or more, EACH.....

### VACO TIME-SAVING SERVICE TOOL SETS







RT-14



INSULATED HEX NUT DRIVER SET

HANDY COMBINATION KIT

27-PIECE TV AND RADIO KIT



K-505

ZCH-65

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 1x35/m Ambervl handle with clutch. Blades: ¼x4m, ¾x4m, ¼x4m, Type K-7. Set includes 7 hex-nut drivers with color-keyed shafts. Permits immediate selection of correct hex driver for the job. Com-

### CLUTCH HEAD SCREWDRIVER KIT

Type ZCH-65. New, roll-up kit of precision-built 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—bold them for easy removal from tight places. Bits remove easily from screw recess after driving or clockwise turn. Kit includes: 4 blades, 3½" long for screw sizes, ½, ½2, ½6 and ½"; 1—4¾" blade for ½6" screw. Shipg. wt. 8 oz. 

### **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, slock-resistant Tenite. Has 31/2" all-hollow, heavy-duty steel shafts—easily fits long bolt extensions. Specially treated sockets assure long-wearing use. Durable plastic kit includes five popular nut-driver sizes: 1/4" 1/4", 1/

# REVERSIBLE PHILLIPS SCREWDRIVER



Type DUP-12. New Phillips model—two tools one. Reversible blade snaps easily in and out 

### HIGH TENSION TESTING SCREWDRIVER



### **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.

uie	nes. Blades of Chrome-variation secti.									
Sto	ck No.	Type	Length	Blade	Oz.	NET				
43 43	N 747 N 748 N 749 N 786	F-710 F-715	75/9"	3/16×3" 1/4×4" 5/16×6" 3/8×8"	2 3 5 9	.96 1.07 1.33 1.70				

### INSULATED BLADE SCREWDRIVER

Type VR-261. Useful screwdriver for work in crowded "live" circuitry. Prevents shorts. 6x½ 'blade fully insulated with break-resistant plastic. Amberyl handle. Wt., 3 oz. 7lc

### PHILLIPS SCREWDRIVER SET



Type P550. Set contains five of the most popular Phillips screwdrivers. A necessary timesaving aid for the radio-television serviceman, auto-mechanic, custom installer, etc. Designed to 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., 1½ lbs.

Гуре	Overall	Blade	ror Screws
P1	6½" 75/8" 10"	3/16×3" 1/4×4"	No. 4 and smaller
P2	75/8"	1/4 x 4"	No. 5 to No. 9
P3		5/16×6"	No. 10 to No. 16
P5	37/8" 3"	1/4 x13/4"	No. 5 to No. 9
P6_	3"	3/16×1 1/4"	No. 4 and smaller

43 N 880. List, \$5.72. NET......4.49

Type PO1 Screwdriver. For Nos. 0-1 Phillips type screws. Shock-proof Amberyl handle. Chrome vanadium blade, 2½x½". 1 oz. 55c

### BERYLLIUM-COPPER SCREWDRIVERS



For adjusting PM focus units on TV sets. Extra-long sizes permit back-of-the-set adjustments without removing the back cover. Quickly make close tolerance adjustments. Non-magnetic; do not affect picture. Nearly as hard as steel. Provide long service without buckling or shearing. Will not "give."

Stoc	k No.	Type	Lgth.	Blade		NET
43 1	V 896	VB26	83/4"	6x 1/8" 8x 1/4" 10x 1/8"	3	.99
43 1	1 897	VB48	115/8"	8x1/4"	4	2.37
43 ľ	4 898	VB210	123/4"	10x1/8"	4	1.08

# Quality Hand Tools



Model 170 Automatic Drill. Has conreleases with slight forward thumb pressure. Scrated, red plastic handle has 4 compartments—holds up to 12 drill bits. Complete with 4 drills: %4", %4" and 1%4". 10%" long. Shps. wt. 3/4 lb. 3.00. NET. 3.00

Model 1425 Hand Drill. High quality drill has double pinion gears for smooth action. Drive gear and pinions have precision-cut teeth. 3-jaw chuck takes drills up to 1/4" in dia. Nickel 3-jaw chuck takes drills up to ¼ in dia. Nickel plated frame and chuck. Hollow handle stores drills. Shpg. wt., 2 lbs.
50 N 174. List, \$4.75. NET. 3.56

### MODEL 1220 PLANE-R-FILE



Efficient tool with 2-way handle for use as file or plane. Shapes, de-burrs, finishes all woods and metals. Blade 1¼x10¼". Aluminum body

/4" long. With 1227 blade. 10 oz. 2.62 50 N 187.1226 Blade. Med. 2 oz.... NET. 73¢ 50 N 188. 1227 Blade. Coarse. 2 oz. NET. 73¢

### MODEL 29 SPIRAL RATCHET SCREWDRIVER

### MODEL 10 HANDY AWL

F Has nicely pointed alloy steel blade, 234" long. Nickel-plated ferrule. Hardwood handle. Overall length 41%". Wt., 1 oz. 26c

### HANSON ECONOMY HAND DRILL



### **ALL-PURPOSE HAND SAWS**



Coping Saw. Excellent, all purpose coping saw. Natural hardwood, lacquered handle. Special ratchet locks blade in position. Supplied with 6½" blade. Throat depth, 4¾".

Platol-Grip Hacksaw. Sturdily-constructed hacksaw, adjustable for 8 to 10° blades. Rugged frame is highly polished spring steel. Large thumbscrew for easy tightening of blades. Sure-grip green handle of high-impact, tough molded plastic. Supplied with 10° blade. Shpg. wt. 1½ lbs.

- Forsberg V-35 Four-Way Keyhole Hack-saw. Handy lightweight saw for all general purpose work. Cuts metal, wood, plaster, conduit, etc. Blade is 71/2 long, 24 teeth/inch—can be faced in 4 directions. Wt., 6 oz. 29c
- Extra Keyhole Saw Blades. Wt., 2 oz. 46 N 342. NET EACH.....

Millers Falis Model 525 Keyhole Hack-saw. Cuts metal, wood, plaster, etc. Has a replaceable 12° blade; 10 teeth per inch. Blade can be rotated and locked in any of 8 positions for easier odd-angle cuts. Handle fits blades below. Shgg. wt., 9 oz. 

	12" ACCESSORY BLADES									
	No.	Туре	Teeth Per Inch	Oz.	EACH					
46	N 103	24	24 (For metal) 7 (For wood)	3	45¢					
46	N 104	27	7 (For wood)	3	49¢					

### GREAT NECK "CORSAIR" PLANE



Model C-4. Excellent value in a top-quality smoothly operating plane. Parts are hardened and

sharp, 2-inch cutter. Lever cap is nickel-plated. Frog fully adjustable to entire width of mouth. Bottom and sides of plane are machined and 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 operation-flawless planing. A "must" for every tool chest. 9 inches long. Shpg. wit., 4 lbs. 45 N 849. NET.

### HAND-HELD REAMERS



Henry Hanson Type 120. For enlarging holes in chassis, panels and other materials. T-Handle provides firm grip for heavy work; removable for use in drill chuck. Precision machined from carbon steel. Point, W dia.; shank, W dia.; 5½ long. Wt., 9 oz. 94C

M Master Reamer. Tapered from 1/4" tip to 1/4". Made of finest tool steel. Plastic handle. A very handy tool for the radio and Ty repairman, experimenter, electrician, etc. Length, 8". Shpg. wt., 6 oz. 886

### G-C SPEEDEX WIRE STRIPPERS

Extremely efficient tools of advanced design. Strip insulation from all types

of wires pre-cisely and quickly. Stur-dy and easy to use—with





Jaws Will Not Crush Wire

narrow, plier grip handles that fit the Model 766 that fit the falm 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 tugging on wire ends. Removes insulation only—no crushing or nicking of wire. Strips wire ends or any spot along wire. A real time-saver for servicemen, electricians, production lines, etc. Model 766

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. Shgg. wt., 1¼ lbs.

46 N 225. Type 766. For 12 to 20 wire. 46 N 226. Type 766A. For 14 to 30 wire. 

Standard Models. Same design as above, but without "delayed return action." A smooth-operating, highly efficient tool at very moderate cost. Hardened blades. Shpg. wt., 11/4 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 766K Kit. A complete, versatile kit to fill most service and production line needs. Contains the Deluxe Wire Stripper described above and 7 different size hardened steel blades in special steel box. For wire sizes from No. 8 up to No. 30. Inside cover tide listing of blades to use

### G-C TYPE 757 5-IN-1 STRIPPER



Extremely compact wire stripper. This handy, multi-purpose tool belongs in every radio and TV serviceman's tool kit. It can be used as a wire stripper, cutter, scraper, winder, and as a screwdriver. Strips insulation easily without cutting wire. Shpg. wt., 3 oz. 29c

### MPC WIRE STRIPPER



An easy-to-use spring-steel, wire stripper and cutter. Has screw for adjusting cutting 5½°. Shog. wt., 5 oz.

660

### 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 required for any wire. Hardened steel blades. Ring lock holds blades closed when not in use. 5' long. Shpg. wt., 4 oz. 

### **WALSCO "TWISTO" WIRE STRIPPER**



592-03. Replacement Blades. Wt., 2 oz. 46 N 44|. List, \$1.00. NET PER SET..59¢

# **Quality Tools and Staplers**

### MILLERS FALLS UTILITY KNIFE



### CAMILLUS ELECTRICIAN'S KNIFE



Model 229. Rugged, versatile knife. Excellent for use by the electrician, serviceman or handyman. Two blades: Combination screwdriver-cutter-stripper-scraper; spear-shaped, %' knife blade. Brass locking bar positively prevents screwdriver blade from closing accidentally. Each blade is 2½' long; of carefully tempered, high-quality steel. Black plastic, full-grip handle. Shpg. wt., 5 oz. 1.56

### TUBE PULLERS & PIN STRAIGHTENER



G-C Type TL-201. Scissors-type tube puller with rubber tips. Unusually handy tool. Shpg.

wt., 12 oz. 46 N 092. NET......97¢ Walsoo Type 565 "Straight'N' Pull." 3 tools in one. Straightens 7 or 9 pin miniature tube pins; pulls tubes. Extremely helpful where pins have been bent by removal or insertion of tube. Shpg. wt., 3 oz. 97c

### **G-C PIN STRAIGHTENERS**

Type 5191. Precision-built steel die. For 7-pin minia-ture tubes. Shpg. wt., 6 oz. 46 N 227. NET..... 73¢ Type 8105. As above, for 9pin tubes. 46 N 228, NET.....73¢ Type 8655. Not illustrated. For both 7 and 9-pin minia-



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 dielectric material prevents shock from dangerous high voltages.

Model 5525. Midget size. For 1/4" to 1/2" fuses. 

### ECONOMY TOOL KITS



### COMBINATION DRIVER SET

A combination Driver Set

A complete nut and screwdriver set, in 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 screwchuck. Blades are made of hardened and tempered tool steel, nickel plated to prevent rusting. Nut driver blades are for hex sizes 3/6", 1/4", 3/6", 3/6", 3/6", 3/6" screwdriver blades and 1 brall standard screwdriver blade and 1 Phillips screwdriver blade. Each tool kept in place in its own transparent compartment. 

### 5-IN-1 SCREWDRIVER SET

B Screwdriver set containing five most-com-B Screwdriver set containing five most-combi monly-used screwdriver types. Interchangeable 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: \( \frac{1}{2}\text{x4}\frac{1}{2} \) cabinet blade; \( \frac{1}{2}\text{x4}\frac{1}{2} \) (abinet \text{ystone blade; plastic handle. Includes durable plastic roll-up holder with handy tie string. An economical, extremely versatile addition to the shop or home tool chest. Shpg. wt., 8 oz. \( \frac{4}{2}\text{c} \)

### MILLER FALLS CHISEL SET

Model 1434. Kit of 4 ex-Model 1434. Kit of 4 expertly designed wood chisels. Carefully balanced chisels feature thin, keenedged blades which permit deeper, more efficient cutting action. Long tangs make sharpening easier. Blades are high-carbon chisel steel, treated and tempered for extreme and tempered for extreme



### **10-PIECE RATCHET SOCKET SET**



### FLEXIBLE-DRIVE SOCKET SET





and out-of-the-way places. Extremely handy in 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 \*3½" overall length. Includes 6 hex sockets, sizes: ½", ½", ½", ½", ½". Complete with handy wood case. Shop. wt., 10 oz.

46 N 067. NET.

### ARROW STAPLE GUNS

### MODEL JT-21 JR ECONOMY STAPLER

 Combines Speed & Ease of Operation Precision Built for Dependable Service

Efficient easy-action

Efficient easy-action staple gun at an unusually low price. Ideal in the shop for tacking down twin-line, grille cloth, and acoustic padding. Excellent for many home uses such as screening, upholstery, shelfing, lining, etc. Drives staples firmly in place with minimum 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 service. Loading capacity of 100 staples. Size, 3/x 14.0 STAPLES EGDE MODEL IT-21.8

### STAPLES FOR MODEL IT 21 ID

SIMILES FOR MODEL 31-21 JR									
No.	Width	Length	Quantity	Wt.	NET				
45 N 654	13/32	5/16"		4 oz.	49¢				
45 N 655	13/32"	5/16"	1000	4 oz.	49¢				

### T-32 MEDIUM-DUTY STAPLER

An efficient, smooth-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-tion or plastic sheet-



### STAPLES FOR MODEL T-32

No.	Width	Length	Quantity	Wt.	NET
47 N 096 46 N 063	7/16° 7/16°	1/4 5/16	5000 5000		1.87

### T-50 GENERAL PURPOSE STAPLER

### STAPLES FOR MODEL T-50

No.	Width	Length	Quantity	Wt.	NET
45 N 792 45 N 793 45 N 789 46 N 294	3/8** 3/8** 3/8**	3/8" 1/4" 5/16"	5000 5000	1 lb. 1 lb.	2.29 2.08 2.20 2.92

### **MODEL T-25 CABLE STAPLER**

### STAPLES FOR MODEL T-25

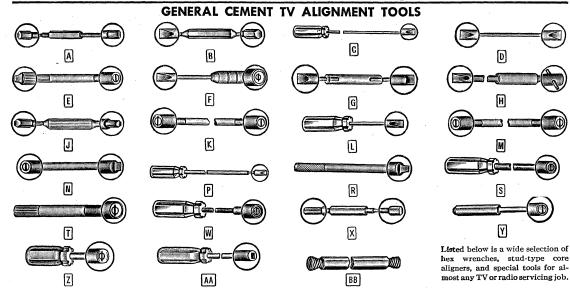
No.	Width	Length	Quantity	Wt.	NET
45 N 790	1/4 *	3/8"	5000	1 lb.	3.33
46 N 492	1/4 *	7/16"	5000	1 lb.	3.33
45 N 791	1/4 *	9/16"	5000	1 lb.	3.74

### **MODEL T-75 CABLE STAPLER**

### STAPLES FOR MODEL T-75

No.	Width	Length	Quantity	Wt.	NET
45 N 798 45 N 799 46 N 494		% %	1000	1¼ ibs. 1¼ ibs. 1¼ ibs.	1.88

# Alignment Tools and Servicing Aids



Stock No.	Туре	Fig.		Oz.	NET	Stock No.	Туре	Fig.		Oz.	NET
42 N 377	8606	A	Zenith-Admiral nylon hex wrench	3	.44	42 N 392	8721	M	9" duplex #4 & #6 stud aligner	3	.73
42 N 380	8282	В	Zenith wrench and aligner	3	.32	42 N 393	8722	M	7" duplex #4 & #6 stud aligner	3	.62
42 N 384	8988	C	12" blade plastic screwdriver	3	.88	42 N 395	8277	N	2½" duplex aligner	3	.47
42 N 385	8989	C	As above, but 16" blade	3	1.18	42 N 386	8607	P	121/4" nylon tip aligner	4	11.06
42 N 388	8728-A	D	7" long bone-fiber screwdriver	3	.35	42 N 387	8608-E		Replacement nylon tip for above	3	.18
42 N 389	8728	D	As above, but 12" long	3	.41	42 N 396	5000	R	Alignment screwdriver	3	.26
42 N 390	8729	D	As above, but 16" long	3	.53	42 N 397	8273	S	All-purpose TV aligner	3	.65
42 N 378	8276	E	Short duplex aligner	3	.47	42 N 398	8196	T	21/2" TV and FM tuning tool	3	.35
42 N 381	8275	F	Zenith universal aligner	3	.47	42 N 399	8272	l w l	IF and oscillator aligner	3	1.03
42 N 383	5097	G	K-tran and IF aligner	3	.56	42 N 346	9296	X	11" nylon hex (.075") wrench	4	.59
42 N 391	8274	H	9" nested core aligner	3	.71	42 N 347	9050-L	Y	Zenith nylon hex wrench	3	.44
42 N 379	9091	J	.125" hex nylon wrench	3	.44	42 N 348	9298		2" blade alignment tool	15	.38
42 N 382	8271	K	Stackpole stud-type core aligner	3	.53	42 N 349	6035	AA	RCA VHF channel selector wrench	3	1.03
42 N 394	8195	L	Channel tuning tool	3	.65	42 N 409	9147	BB	1/4" & 5/16" hex nut starter	3	1.47

### G-C TOP-QUALITY ALIGNMENT TOOL KITS



Type 9200 Panel Kit. A convenient, wall-Type 9200 Panel Kit. A convenient, wall-mounting type kit of the most-needed alignment tools. Contains 27 different tools for all popular makes of TV sets. Each tool has separate slot identified by shape and size number. Correct tool may be selected at a glance. All tools in this kit are selected to cover most alignent jobs on all popular radio and TV sets. The 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. as tool wears.

### **G-C CHASSIS CRADLE**



Model 5212. Easy-to-use, adjustable cradle holds chassis securely. A valuable accessory for the serviceman, builder and experimenter. Eliminates 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 angle. Ideal for working on power supplies, TV sets, transmitters, record changers, etc. Allsteel construction. Size, 24" long, 14" high, 12% wide. Shpg. wt., 7 lbs.

282



8283

Type 8283 Master Deluxe TV Tool Kit. A complete service alignment tool kit for television repair work. Contains 25 high-quality alignment tools not over 9' long. Flexible tool-case has heavily stitched edges and fold-over flap to prevent loss of tools. Kit is easily carried. Includes: TV K-Tran tool, TV Core Aligner, TV Long Reach Aligner, 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.... 12.26
Type 8280 Deluxe Television Alignment

### JFD "REPAIRACK"



Model 79-3. Sturdy, castiron rack for supporting chassis. Se-curely holds any chassis of up to 200 lbs. Full 360-degree rotation per-mits position-ing work to any convenient an-

convenient any chassis up to 32" in length. Greatly any chassis up to 32" in length. Greatly simplifies servicing jobs on large, heavy chassis. Allows faster, more efficient repair work. Separate chassis clamps on each side have thumbscrews that provide safe, positive holding action. 14½,x32x15". Wt., 18 lbs. 19.61

### WALSCO TEL-A-TURN ALIGNMENT TOOLS



CC No. 2587 Tel-A-Turn Screwdriver. Tunically counts turns. Standard tips on one end, wall 364° tip on other end. Shpg. wt., 302. 97C

DD No. 2586 Tel-A-Turn IF Aligner. Fibounts turns. One end fits 44 stud, the other fits 46 stud. Shpg. wt., 302.

ET No. 2588 Tel-A-Turn Hex Aligner. Valler uses the counts turns. One end fits 44 stud, the other fits 42 N 343. NET ... 97C

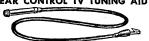
ET No. 2588 Tel-A-Turn Hex Aligner. Valler uses the counts turns. One end is .100° hex, the other end is .125° hex. Shpg. wt., 3 oz.

42 N 344. NET ... 97C

FF No. 2589 Concentric Color-TV Tool. New non-conductive tool for concentric type color-TV control shafts. Separate knobs for outer and inner controls. Shpg. wt., 3 oz. 1.17

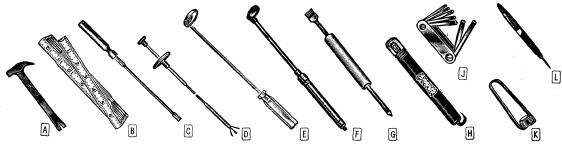
REAR CONTROL TV TUNING AID

### REAR CONTROL TV TUNING AID



Highly useful fingertip tuning aid for remote adjustment of television rear panel controls. A cool kit "must" item for the television serviceman or technician. No mirrors needed. Has sturdy alligator clip attached to one end of long-life cable; small knob at other end for tuning. Simply attach clip to any rear mounted control—bring cable around to front of television set and turn knob to make adjustment while observing results directly on televisin screen. Fermies making adjustment in minimum title. Plays for itself in time and trouble seved Flexible—rolls up to carry. Overall length, 5 ft. Slipg. wt., 8 oz. 2.98

# **Quality Tools and Slide Rules**



### ALL-PURPOSE SERVICING TOOLS

All-Steel Utility Hammer. Claw handle for pulling nails, dismantling cabinets, etc. Made of finest hardened and temperated steel—withstands roughest use. Excellent for use in workshop or home. Ideal size for carrying in tool box or belt. Overall length, 9½". Shps. wt., 1½ lbs. 43 N 900. NET. 83c

B Millers Falls Model 1460 6-ft. Rule. 6-ft. folding rule for the shop worker or handy-man. Has large easy-to-read black numerals on white enamel background. Graduated in 16ths. Made of selected hardwod, with concealed brass-plated joints that assure smooth easy action. Shpg. wt., 5 oz. 64c

C Hunter TV-12 Tuning Slug Retriever. Retrieves Standard Coil slugs without removing chassis from cabinet. Automatic holding mechanism. 11° L. Wt., 9 oz. 2.64 Type TV-16. As above but 15" long. 42 N 0 | 3. NET.

Type TV-20. As above but 20" long. 46 N 452. NET.....

E specting parts, connections, etc. in tightly wired radio and TV sets, auto radios, etc. thandy for reading parts numbers and inspect. Handy for reading parts numbers and inspecting solder and wire connections in out-of-sight places. 8" length allows user to get into crowded chassis with ease. Indispensable for radio and TV servicemen, Amateurs, experimenters, etc. Mirror dia, 1". Shpg. wt., 5 oz. 35c

G-C 8725 Illuminated Inspection Mirror. Permits inspection of parts otherwise hidden from sight. Consists of anodized aluminum flashlight with 6" lucite rod and 1" hingemounted mirror. Plastic housing prevents shocks. Locking switch allows one-hand operation. With bulb. Requires 2 penlight cells (below). 12½". Shpg. wt., 6 oz. 1.91

Burgess Type Z Cell. 1½-volt cell for use with 42 N 130, above. Shpg. wt., 3 oz. 53 J 031. NET EACH..................9c

G-C 9088 Soldering Aid Tool. A "must" for easier soldering. One end has a stiff wire brush for cleaning wire and terminals before 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" long. Shpg. wt., 4 oz. 97c

G-C 705 Handy Trouble Light. No radio-TV serviceman or technician should be without this handy light. Illuminates dark corners in chassis—excellent for visual inspec-tion of components in cabinets, etc. Casts light without glare; small size won't get in the way. With bulb and 5½-ft. cord. For 110-120 v., AC or DC. Shpg. wt., ½ lb.

Vichek Hex Key Wrench Set. Hardened in cikel-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 0.50° to 3%°. Nickel-plated steel frame. Handy, plastic carrying case. Shpg. wt., 4 oz. 950 N 128. NET. 95c

Knob-Puller. A very helpful tool kit item. Knob-puller easily removes all types of 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. 29 c

Pres-To-Oiler. Press on plunger to re-lease 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......95c

### MILLERS FALLS TORPEDO LEVEL



Model 590. Accurate, lightweight level with one 45° plumb, one 90° plumb and one level. Molded, high-strength, glossy, black baselite body. Top plate of heavy, polished "nickeloid"; sets flush with body to protect the level glass. Plumbs and level vial are of highly visible cat's-eye type. Impervious to moisture; unaffected by changes in temperature. Bottom has V-groove running its entire length. Size, 9311/x3/4". Shpg. wt. 7 oz. 1.87

### **EXACT "HANDYLEVEL"**



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, cabinet-makers, do-it-yourself' enthusiasts, etc. Provides highly accurate leveling in both horizontal and vertical positions. The easy-to-handle, 24'-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' long, 1½6' thick, 1½6' wide. Shpg. wt., 1½ bs.

46 NX 927. NET. 2.25

### STEVENS-WALDEN TOOL SETS "SPINTITE"

Marian &

9999999

SET 3800B15 Deluxe 15-piece ra-

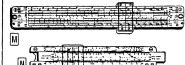


### "MIGIT" RADIO WRENCH SET

Model 3100C14. This compact, 14-piece socket set will cover almost all hex-head bolt and nut sizes encountered in radio-television servicing. A

television servicing. A publish 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\(\frac{1}{6}\)ft on \(\frac{1}{6}\)ft on \(\frac{1}{6}

### **ACU-MATH SLIDE RULES**

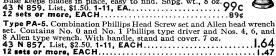


Model 1311 Professional 10' Slide Rule. Extremely accurate, high-quality 10' slide rule. Deluxe features include: white nitrate plastic sheet face, bonded to corrosion-resistant magnesium core; stainless steel brack-ets; crystal-clear lucite cursor; inlaid calibrations and numerals; Trig and Log Log numerals in red. Scales on one side: LLOI, L. K., A, B, T, ST, S, D and LL1. Other side: LLO2, LLO3, DF, CF, CTF, CI, C, D, LL3, and LL2. Supplied complete with sheath and instruction booklet. Shgs. wt., I lb.

### MOODY WRENCH AND SCREWDRIVER SETS

### SCREWDRIVER SETS

Type SC-5. Set of miniature screwdrivers contains 5 interchangeable hardened steel blades in sizes .001\*, .080\*, 070\*, .055\* and .040\*. 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. 99C 12 sets or more, EACH.



### 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: ¾, ½, ½, ¼, ¼, ¼ and ½, whenches are made of heat treated steel. Handle is nickelplated brass. In transparent plastic container with attractive colored base. Sipg. wt., 5 oz.

43 N 862. List, \$3.95. NET.

2.61

12 sets or more, EACH.........



..2.39

## Hardware and Measurement Tools

### JUFKIN TAPE RULES



- Plain Easy-to-Read Graduations
- Self-adjusting End Hooks
- Attractive Die Cast Cases

### WHITE CLAD MEZURALL TAPE RULES

White CLAD MEZURALL TAPE RULES

White clad ½/w wide Mezurall steel taperules. Practical, all purpose tape rules for construction and general home use. Easy-to-read jet black markings against a durable, snow white background on bonderized, tempered steel blade. Self-adjusing 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 16ths. W9266-Ft. Tape Rule. Shpg. wt. 4 oz. 78 C W9288-Ft. Tape Rule. Shpg. wt. 5 oz. W928 8-Ft. Tape Rule. Shpg. wt., 5 oz. 50 N 176. List, \$1.35. NET 

### **MEZURMATIC TAPE RULES**

### CHROME-CLAD MEZURMATIC TAPE RULES

### BANNER WHITE-CLAD TAPES



High-quality, ¾′ wide steel tages featuring durable construction and acturate, highly legible markings. The ideal general-purpose measuring tape for carpenters, liumbers, surveyors, and for general shop use. Have use and graduations on a conductive 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—enables on person to measure unassisted. Durable, vinyl covered, steel case. Folding flush handle is opened by push pin. Eas action crank mechanism rewinds tape rapidly. Shgs. wts., HW225 1 lb., Length List NET

Stock No.	Mfr's No.	Length	List	NET
50 N 184	HW223	50'	5.29	3.52
50 N 185	HW226	100'	7.29	4.86

### HANSON ECONOMY 1" MICROMETER



**Pre-Tested** and Adjusted

Precision-made micrometer. Has full-range accuracy of .0005\*. Excellent for the Amateur and experimenter. An aid for grinding 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 for improved accuracy. Frame, thimble and ratchet are fully chrome-plated to inhibit rust. Each micrometer pre-tested and factory adjusted. Shpg. wt., 7 oz. 46 N 249, NET . 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

angle brackets, seir-tapping screws, eyelets, and other 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. Shps. wt., 1½ bs. 97c

### G-C SCREW AND NUT ASSORTMENT



### **G-C HOME-SHOP ASSORTMENTS**



Handy assortments of most-often-needed hard-Hanuy assortments or most-orten-needed hard-ware. Provide many hard-to-get screws, springs, solder lugs, nuts, and bolts often needed by experimenters and servicemen. Packed in stur-dy lightweight plastic storage containers. Con-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. Shg. wt., 1½ lbs. 97C

No. 9118 Spring Assortment. Package of different type springs for use with dial cords, push-buttons, etc. Includes both extension and compression springs. Shpg. wt., 1½ lbs. 97c

No. 9193 Sheet Metal Screw Assortment. A selection of sheet metal screws for all applications. 700 screws in sizes  $4x/\xi'$  to 8xt'. In compartmented plastic box. Shog. wt., 2 lbs. 3.24

No. 9199 Machine Screw Assortment. A complete assortment of round head screws and nuts most often needed in electronics and radionus most often needed in electronics and radio-ty repairing. Machine screws from 4-40x/\* through 8-32x/\*. Hex nuts from 4-40x/\* through 8-32x/\*. 675 pieces total, in plastic box. Wt., 1½ lbs. 50 N 173. NET. 3.24

### CENTRAL 1" PRECISION MICROMETER



 Positive Lock • Easy to Read

Model 12RL. A high quality, moderately priced 0-1 micrometer 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, accurate readings. Has precision ground and highly polished spindle and anvil. Black steel frame and knurled, chromium plated thimble. Can be locked at any setting. Pre-adjusted with gauge blocks. Wt., 8 oz. 50 N 060. List, \$13.50. NET. 9.95

### LABELON "WRITE-ON-IT" TAPE





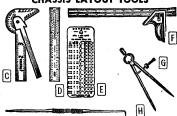
Plastic labeling tape with special carbon writing surface sandwiched between 2 layers of acctate. Writing stays legible; surface is protected by layer of plastic. Resists dirt, water, oil, etc. Sticks firmly to any surface without most surface without most surface without plastic. Av. wt., per 400-in. roll. 5 oz.

No.	Type	Width	EACH	12-23, EACH	More, EACH
52 N 751 52 N 753 52 N 754	335† 415* 425§	5/16 1/2 1/2 1/2	1.37 1.57 1.57	1.24	1.18 1.35 1.35
52 N 755 52 N 757 52 N 761	435† 515* 615*	1/2 5/8 3/4	1.57 1.76 1.91	1.42 1.59 1.72	1.35 1.51 1.63

TABLETS FOR TYPEWRITER USE Each has 45, 3-inch strips. Write black; colors

RIACH WIG I	given are borders. Av. wt., 5 02.					
Stock No.	Туре	Width	Color	NET EA.		
52 N 775 52 N 776	62T	3/4"	Blue			
52 N 776	63T	3/4"	Red	98c		
52 N 777	041	3/4"	Green			

### CHASSIS LAYOUT TOOLS



Drill and Steel-Wire Gauge. For gauging machine screw taps, sizes 1 to 60. Indicates decimal equivalents. Lists taps with tap-drill and body-drill sizes, 14-28 to 2-56. Made of heavy-gauge steel, specially hardened and tempered. Shpg. wt., 5 oz. 1.29

F Combination Steel Rule. 12" etched-steel combination square. Graduated on both sides in 32nds, 16ths, and 8ths. Head has thumbscrew for locking. 45 degree angle for bevel cuts. Shpg. wt., 134 lbs. 1.40

G Steel Dividers. Stiff tempered, bow spring and tapered fulcrum spoon to assure rigidity and accurate measuring. Needle points are replaceable. Split adjusting nut. Length, 6' Spng. wt., 6 oz. 2.45

9" Scriber. Two-point machinists' scriber with knurled finger-hold. Wt., 3 oz. 4lc

12" Stainless Steel Bench Rule. (Not illustrated.) Has two sides graduated in 8ths, 16ths, 32nds, and 64ths. 7% wide. Shpg. wt., 2 oz. 65C

### NEW VLCHEK TOOL KIT



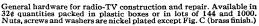
General purpose tool kit for small gasoline motors on power mowers, etc. Includes  $\frac{3}{\sqrt{8}}x_0^{\mu}e^{-3}$ ,  $\frac{3}{\sqrt{8}}x_0^{\mu}e^{-3}$ ,  $\frac{3}{\sqrt{8}}x_0^{\mu}e^{-3}$ ,  $\frac{3}{\sqrt{8}}x_0^{\mu}e^{-3}$ , open end wrenches; Phillips screwdriver; standard-type screwdriver; of pliers; pump pliers; park-plug wrench; key wrench set; and shear pin punch. With plastic pouch, Wt., 3 lbs. 4.99

# Hardware for Plant and Shop







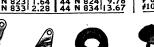


A for repair and construction jobs in radio, television and electronics. Plated steel. Shpg. wts.: 3 oz.; 14 oz.; and 5 lbs.

	32¢ cont	ainer	144 Lot	Pkg.	1000 Lot Pkg.		
Size	No. Quan.		No.	NET	No.	NET	
4-36x 1/4" 4-36x 1/2" 4-36x 3/4"	44 N 502 44 N 503 44 N 504	40 35 35	44 N 741 44 N 744 44 N 747	.64 .69 .79	44 N 742 44 N 745 44 N 748		
6-32x1/4" 6-32x1/2" 6-32x3/4" 6-32x1" 6-32x11/4"	44 N 505 44 N 506 44 N 507 44 N 508 44 N 509	30	44 N 703 44 N 711 44 N 716 44 N 721 44 N 726	.71 .81 .95 1.09	44 N 704 44 N 712 44 N 717 44 N 722 44 N 727	4.83 5.68	
8-32x <sup>1</sup> / <sub>4</sub> " 8-32x <sup>3</sup> / <sub>8</sub> " 8-32x <sup>1</sup> / <sub>2</sub> " 8-32x <sup>3</sup> / <sub>4</sub> " 8-32x1"	44 N 518 44 N 519 44 N 529 44 N 535 44 N 546	25	44 N 738 44 N 753 44 N 756 44 N 761 44 N 768	.98 1.06 1.22	44 N 739 44 N 754 44 N 757 44 N 762 44 N 769	5.43 5.86 6.35 7.27 8.32	
10-32x1/2" 10-32x3/4" 10-32x1"	44 N 548 44 N 549 44 N 553	20	44 N 777 44 N 780 44 N 783		44 N 778 44 N 781 44 N 784	7.48 8.75 9.84	

B Self-Tapping Screws. Flat-slotted type. Ideal for panel and rack mounting. No tapping of metal required. Plated steel. Hex head—with deep screwdriver slot. Slpg. wts.: 4 oz.; 12 oz.; and 4½ lbs.

Size	32¢ cont	ainer	144 Lot I	Pkg.	1000 Lot Pkg.		
0.20	No.	Quan.	an. No.   NET		No.	NET	
4x1/2" 6x1/4" 6x1/2" 8x1/2" 10x1/2"	44 N 564 44 N 565 44 N 566 44 N 567 44 N 569	35 30 25 20 15	44 N 803 44 N 808 44 N 813 44 N 823 44 N 833	1.26 1.40 1.64 2.28	44 N 804 44 N 809 44 N 814 44 N 824 44 N 834	7.57 7.57 8.38 9.78 13.67	



Solder Lugs. Sturdy, tinned solder lug units. Easily accommodate the screw numbers given below; No. 8 holes also take No. 6 screws. Shpg. wts.: 2 oz.; 4 oz.; 1 lb.

	32¢ container   144 Lot Pkg.		Pkg.	1000 Lot Pkg.							
Size		No	• .	Quan.		N	).	NET		No.	NET
8. Fig. H. 8. Fig. J. 10. Fig. K. 8. Fig. L. 8. Fig. M.	44 44 44	N	603 604 605 607 608	30 30 30	44 44 44	222	636 639 642 645 648	.65 1.94	44 44 44	N 64 N 64 N 64 N 64 N 64	9.37 8   11.60 8   11.65

Rubber Grommets. Soft, black stock. Size shown below is chassis mounting hole required. Shpg. wts.: 2 oz.; 8 oz.; 4 lbs.

16
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Rubber Tack Bumpers. Tacks molded-in. For wooden cabinets, etc. Shpg. wts.: 2 oz.; 8 oz.; 4 lbs. 44 N 774 10 | 44 N | 63 | 2.42 | 44 N | 64 | 14.49

HANDY PLASTIC BOXES OF MOST-OFTEN NEEDED SERVICING HARDWARE Most-often needed hardware used in radio, TV and electronics—pack-aged in convenient plastic boxes. No loss or spillage.

Stock No.	Description	Quan.*
43 N 332 43 N 302 43 N 300	Extra small size escutcheon and wood screws. Wood screws w/round and countersunk heads. ½-1" mach. screws w/round & flat heads:	25 25
43 N 301 43 N 367	Nos. 6, 8, 10. Nos. 2 & 4 screws & nuts. TV back-cover screws.	35 35 20
43 N 304 43 N 303	Nickel-plated rack screws & cup washers. Sheet metal screws, asst.—6, 8, 10. Round.	15
43 N 318 43 N 329 43 N 306	hex-slotted & unslotted. Phono needle set screws—2-56, 2-64, 1-72. Spade bolts, #6 hole size. Assorted set screws—6-32, 8-32, 10-32.	25 12 15 15
43 N 322 43 N 331 43 N 307 43 N 308	Self-locking speed nuts. Internal lockwashers, tempered. No. 2 to 3/6". Machine screw nuts—6-32, 8-32, 10-32. Hex & ring mounting nuts. Used on controls.	30 50 30
43 N 330	switches, etc. Insulating washers. Nos. 6 to 3/8".	15 35
43 N 3   2 43 N 3   3 43 N 3   6 43 N 3   7 43 N 3 4	Steel washers for #4, 6, 8, 10, ½ screws. Rings & C-washers for ½ ½ ½ shafts. Snap-hole plugs—½ to l'. Asst. ventilating hole plugs. TV cord rivets, ½ ½ diam., w/washers.	80 25 6 3 50
*Approxima	ate quantities. BOX	32c

Industrial Users: Allied can make immediate shipment from stock on all radio-TV hardware, below, in 144 and 1000 quantity lots. Orders can be placed by phone, wire or letter. Ornamental Head Screws. For use on panels, etc. Shpg. wts.:

C 4 oz.; 13	oz.; 6 lbs.	JUI 0 G.	101 400 0-			
	32¢ cont	ainer	144 Lot		1000 Lot	
Size	No.	Quan.	No.	NET		NET
6-32x 3/4" 8-32x11/4"	44 N 573 44 N 575	25 12	44 N 671 44 N 677	2.08	44 N 672 44 N 678	8.38 12.50

Screws. For general machine shop use. oz.; 2½ lbs. D Binding Head Machine Screws.
Plated. Shpg. wts.: 4 oz.; 7 oz.; 21/2 44 N 694 44 N 696 44 N 622 44 N 624 44 N 625 44 N 690 44 N 691 44 N 684 44 N 686 44 N 687 6-32x<sup>1</sup>/<sub>4</sub>" 6-32x<sup>3</sup>/<sub>8</sub>" 6-32x<sup>1</sup>/<sub>2</sub>" 8-32x<sup>3</sup>/<sub>8</sub>" 8-32x<sup>1</sup>/<sub>2</sub>" 44 N 576 44 N 577

Hex Nuts. Plated steel. Shpg. wts.: 4 oz.; 8 oz.; 3 lbs. 44 N 906 .87 44 N 910 .96 44 N 915 .96 44 N 918 1.25 44 N 44 N 44 N 44 N 44 N 584 44 N 579 30 30 4-36x1/4" 6-32x5/6" 8-32x5/6" 10-32x3/8" 44 N 585 30 44 N 953 5.40 44 N 954 5.73

F Split Lockwashers. Tempered steel. Wts.: 2 oz.; 4 oz.; 2 lbs. 44 N 662 screw

wts.: 2 oz.: 4 oz.: 11/4 lbs. Internal Star 110 screw



R Snap Hole Plugs. Fill hole size listed. 3 oz.; 11/4 lbs.; 10 lbs.

	32¢ con	tainer	144 Lot	Pkg.	1000 Lot Pkg.		
Size	No.	Quan.	No.	NET	No.	NET	
\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\	44 N 659 44 N 679 44 N 689 44 N 699 44 N 707	8 6 5 5	44 N 286 44 N 289 44 N 292 44 N 295 44 N 298	3.74 3.97 4.70	44 N 293 44 N 296 44 N 299	28.22	

S Screen-Vent Snap Hole Plug. Shpg. wts.: 3 oz.; 11/4 lbs.; 10 lbs. 1" | 44 N 396 | 1 | 44 N 394 | 27.93 | 44 N 395 | 167.50

T Cable Clamps. Fit cable sizes below. Wts.: 3 oz.; 12 oz.; 5 lbs.

44 N 708 44 N 713 44 N 732 44 N 733 44 N 333 44 N 336 44 N 339 44 N 344 Rubber Feet. Take screws, nails, etc. For wood or metal cabinets. Shpg. wts.: 3 oz.; 9 oz.; 41/4 lbs.

## All items are precision-made from high-quality materials to insure dependable service. All are assortments. Av. shpg. wt., 4 oz.

Stock No.	Description	Quan.*
43 N 319 43 N 342 43 N 343 43 N 321 43 N 320	Terminal & solder lugs. Tinned brass. \$6-10. Metal spacers. For \$6 & 8 screws. Insulated spacers for \$6 & 8 screws. Twin lead wiring nails. Cotter & hairpins.	30 12 12 35 50
43 N 323 43 N 310 43 N 311 43 N 327 43 N 337	Cable clamps w/mounting hole for ½ to ½ dia. cables. Large size expansion springs. Small size expansion springs. Rubber feet w/wood screws. Small-size dial drive springs.	20 10 10 8 10
43 N 338 43 N 325 43 N 339 43 N 344 43 N 315	Large & small dial drive springs. Cord strain relief for POSJ type wire. Radio knob springs. Allen wrench set. 4 hex: for #4 to 10 set screws, #2-6 cap screws. Rubber chassis mounts.	8 5 18 Set of 4
43 N 345 43 N 314 43 N 335 43 N 336	Spline wrenches for set acrews to ¼" & cap screws to No. 8. Rubber grommets. For cables & metals to ¼". Standard thin dial cord. Standard dial cord.	Set of 4 15 10 ft. 10 ft.
*Approxima	te quantities.	20-

# Quality Terminals—Installation Tools

### TERMINALS FOR EVERY USE



### THOMAS AND BETTS STA-KON TERMINALS

Have a barrel section into which a conductor is staked, and either a ring or spade tongue type terminal connection. Provide quick and easy, permanent installations without damaging the conductor or its insulation. 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. †Self-insulated, with insulation grip. \$Insulated connectors. ‡Disconnects. 100 per pkg.

Stock	Fig."	Mfr's	Туре	Wire	Stud	Shp	g. Wts.	NET PE	R PKG.
No.	Fig.	No.	rype	Size	Size	Per 100	Per 1000	1-9	10-Up
43 N 756 43 N 757 43 N 758	H	A18-6 A18-10 B14-6	Ring Ring Ring	22-18 22-18 20-14	6 10 6	5 oz. 5 oz. 6 oz.	2½ lbs. 2½ lbs. 3 lbs.		
43 N 759 43 N 760 43 N 761	H	B14-8 B14-10 B14-14	Ring Ring Ring	20-14 20-14 20-14	8 10 ½	7 oz. 5 oz. 12 oz.	3½ lbs. 2½ lbs. 6½ lbs.	3.75	3.00
43 N 762 43 N 763 43 N 764		C10-6 C10-10 C10-14		16-10 16-10 16-10	10	9 oz. 10 oz. 13 oz.	4½ lbs. 5½ lbs. 7½ lbs.	4.69	3.75
43 N 765 43 N 766 43 N 767	J	B14-6G* B14-10G* A18-6F	Ring Ring Spade	16-14 16-14 22-18	6_	6 oz. 6 oz. 5 oz.	3 lbs. 3 lbs. 2½ lbs.	3.75	3.00
43 N 768 43 N 769 43 N 770	D	B14-10F B14-6FG* B14-10FG*	Spade Spade Spade	16-14	6	7 oz. 7 oz. 8 oz.	3½ lbs. 3½ lbs. 4 lbs.		
43 N 77 I 43 N 772 43 N 773 43 N 774	Α	RA18-6† RA18-10† RB14-6† RB14-10†	Ring Ring Ring Ring	22-18 22-18 16-14 16-14	10 6	5 oz. 5 oz. 6 oz. 6 oz.	2½ lbs. 2½ lbs. 3 lbs. 3 lbs.	5.00	4.00
43 N 775 43 N 776 43 N 777 43 N 778 43 N 779	CCC	RA18-6F† RA18-10F† RB14-6F† RB14-8F† RB14-10F†	Spade Spade Spade Spade Spade	22-18 16-14 16-14	10 6 8	7 oz. 7 oz. 8 oz. 8 oz. 9 oz.	3½ lbs. 3½ lbs. 4 lbs. 4 lbs. 4½ lbs.	5.00	4.00
43 N 780 43 N 781 43 N 782 43 N 783	F	2RA18§ 2RB14§ B14-250F‡ B14-250T‡		22-18 16-14 20-14 20-14		7 oz. 7 oz. 6 oz. 6 oz.	3½ lbs. 3½ lbs. 3 lbs. 3 lbs.	6.25 6.25 3.75 3.75	5.00 5.00 3.00 3.00

### THOMAS AND BETTS WT111M 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. Shog. wt., 1lb. 

### TYPE WT152 HAND TOOL

### LYNN SOLDERLESS TERMINALS & TOOLS **QUALITY SOLDERLESS TERMINALS**

Use with Type 1902 crimping tool below, to make quick connections between terminal and wire. \*Included in 2195 kit shown below. †\u00e4' male tab. \$\u00e4\text{Female}\$ tab socket. \$\u00e4\u00dcdown' 1\u00e4'' and tab socket. \*\*\u00e4' male tab on one end; takes \$\u00e4z'' snap terminal on other end. \$\u00e4\u00e4\u00e4\u00e4\u00e4\u00e4\u00e4'' snap terminal on other end. Av. shpg. wt., per pkg. of 50, 4 oz. 50 per pkg.

Stock	Fig.	Mfr's	Type	Wire	Stud	NET	PER PKG	(50 PER	PKG)
No.	Fig.	No.	1 ypa	Size	Size	1	2-19	20-99	100-Up
43 N 752 43 N 753 43 N 754	H	2300* 2301* 2302*	Ring Ring Ring	22-16 22-16 22-16	4-6 4-6 8-10	1.18	1.09	.98	.88
43 N 755 43 N 789 43 N 790	H	2401*	Ring Ring Ring	16-14 16-14 16-14	4-6 4-6 8-10				
43 N 79 I 43 N 79 2 43 N 79 3 43 N 79 4 43 N 79 5	H		Ring Ring Ring Spade Spade	16-14 12-10 12-10 22-16 16-14	12-1/4 8-10 12-1/4 4-6 4-6	1.47 1.47 1.96 1.05	1.35 1.35 1.80 .97 1.09	1.22 1.22 1.63 .87 .98	1.11 1.11 1.47 .78 .88
43 N 796 43 N 729 43 N 797	M I	2602* 2700 3202	Spade Spade 5/32" Snap	16-14 22-16 18-14	8-10 4-6	1.18	1.09 .97 .84	.98 .87 .76	.88 .78 .69
43 N 798 43 N 799 43 N 717	K	2802 2902 3101	Flag Flag Butt	22-16 16-14 22-16	8-10 8-10	1.18	1.09 1.09 .84	.98 .98 .76	.88 .88
43 N 7 1 8 43 N 7 1 9 43 N 7 2 7 43 N 7 3 0 43 N 7 3 1	L M G F	3102 3103 3300* 3401 3402	Butt Butt Hook Tab† Tab§	16-14 12-10 22-16 18-14 18-14		.91 1.18 1.05 1.18	.84 1.09 .97 1.09 1.09	.76 .98 .87 .98	.69 .88 .78 .88
43 N 732 43 N 733 43 N 734	 N	3501 3502 3601	Tab‡ Tab# Adapter**	18-14 18-14		1.18	1.09 1.09 1.80	.98 .98 1.63	.88 .88 1.47
43 N 735 43 N 736 43 N 737	R	3602 3701 3702	Adapter†† Adapter** Adapter††			1.96 1.78 1.78	1.80 1.65 1.65	1.63 1.49 1.49	1.47 1.33 1.33

TYPE 2195 SERVICE KIT

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. \$3\fmix 6x1 \fmix.
44 N 479, NET. 8.77

### TYPE 1902 CRIMPING TOOL

### A-MP CRIMPING TOOLS AND SOLDERLESS TERMINALS TERMINAL KIT

### "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, ¼', ¾c' and ¾c'. Designed for heavy-duty use—made of hardened tool steel, has insulated yellow plastic handles for a secure and comfortable grip. Shps. wt., 1 lb. 4.95. 4.95. Type 4835. Same as showe but for crimping

taining an assort-ment of the 12 most popular terminal types for general wiring. 240 insulat-

Terminal kit con-

types for general wiring, 240 insulated, solderless terminals are supplied plus the heavy-duty of the

### **GENERAL WIRING TERMINALS**

Eliminate soldering. Simple crimping operation provides extremely strong, neat, vibration-proof connection. Inside of connector ribbed for firm grip on wire. \*Insulated terminals—plastic outer sleeves. Wire size, 14 to 16, except †16 to 22. Shpg. wt., 8 oz. 100 per pkg.

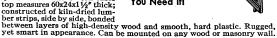
Stock No.	Fig.	Mfr's No.	Type	Stud Size	PER PKG.
45 N 301 45 N 302 45 N 303		34149*† 34142*† 34070*†	Ring Ring Butt	8-10 4-6	5.34 5.34 6.41
45 N 304 45 N 305	A	34158* 34161*	Ring Ring	4-6 8-10	5.34 5.34
45 N 306 45 N 307 45 N 308	C	34165* 34167* 34071*	Spade Spade Butt	4-6 8-10	5.34 5.34 6.41
45 N 323 45 N 310	L C H	34154*† 33214†	Spade Ring	5-6 8-10	5.34 3.73
45 N 311 45 N 312 45 N 313 45 N 314 45 N 315	H	34194† 31818† 34197 33217 33477	Ring Butt Ring Ring Spade	4-6 4-6 8-10 4-6	3.73 3.98 3.73 3.27 4.16
45 N 316 45 N 317 45 N 318 45 N 319	T T W	33219 31762† 31763 34846	Spade Knife Knife Shur- Plug	8-10	4.16 7.21 7.21 2.03
45 N 320	l	36840*	Recep.	<u> </u>	6.20

# Workshop Aids, Plastic Stock

### STURDI-BILT "DROPTOP" SET

Model DT 200T R. Here's an exceptionally valuable workshop aid—provides 1296 square inches of tool rack area plus 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 against wall when not in use! Tool rack panel can be easily removed from frame for cleaning or painting. ing or painting.

Accepts standard tool hooks 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 60×24×1½\* thick; constructed of kin-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 (48x27"), brackets and hardware. Can be easily set-up in a few minutes. Attractive tan finish. Shpg. wt. 67 lbs. 27.00

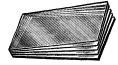
### JIFFY TOOL RACK



### G-C 8943 "TUX" TOOL HOLSTER



### **AMPHENOL POLYSTYRENE** SHEET STOCK & CEMENT





Extremely low-loss, 4x8" polystyrene sheets. Excellent for use in AC, DC and RF applications including VHF, UHF and SHF. Perfect where 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.

N	o.	Туре	Size	Wt.	NET
7   H	746 749	19-0938 19-1258	4x8x <sup>1</sup> / <sub>16</sub> " 4x8x <sup>3</sup> / <sub>32</sub> " 4x8x <sup>1</sup> / <sub>8</sub> " 4x8x <sup>3</sup> / <sub>16</sub> " 4x8x <sup>1</sup> / <sub>4</sub> "	3 oz. 4 oz. 5 oz. 6 oz. 8 oz.	20¢ 24¢ 37¢ 46¢ 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 negligible loss factor. With brush applicator. 2 oz. bottle. Shpg. wt., 3 oz. 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. Shgg. wt., 3 oz. 35c

### **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 as small household articles, fishing tackle, costume jewelry, etc. Type P250 has removable cover.



Type P250, 1—compartment. Size, 61/4x4x15/6". Wt., 6 oz. 44 N 362, NET
Type P221. 4—21/4x1 1/6" compartments. Size, 41/2x23/4x1". 4 oz. 44 N 363. NET
Type P212. 5—compartments. 4 are $11/2x23\%$ ° plus $11/2x33\%$ ° center compartment. Overall size, $71/2x33\%$ Shpg. wt., $11/2x33\%$ ° center 37c 44 N 356. NET
Type P215. $5-1\frac{3}{6}x^3\frac{1}{2}$ " compartments. Size, $7\frac{1}{6}x^3\frac{1}{4}x^1\frac{3}{6}$ ". $4$ oz
Type P203. 6—1½ x4½ "compartments. Size, $8\frac{3}{8}$ x4½ x1¾". ¾ 1b. 44 N 357, NET
Type P220. 6—1½x1¾" compartments. Size, $4\frac{1}{16}$ x3x1¾6". 4 oz. 44 N 365. NET23c
Type P210. 9—compartments. 8 are 11/4x11/2". Center compartment, 1x 31/6". Overall size, 71/5x34x13/6". Shpg. wt., 1/2 lb. 44 N 355, NET

Type P201. 12—compartments. Has 2x1¼" compartments; two 1½x4'six 1½x1¼". Overall size,8½x4½x1½". Shpg. wt., ¾ 1b. 44 N 358. NET
Type P612. 12—compartments. Has 6-111/6x2"; 6-111/6x41/4". Overal 11x6/4x11/4". Shpg. wt., 11/4 lbs. 44 N 354. NET
Type P200. 18—1¼" sq. compartments. Size, 8¾x4½x1¾". 8 oz. 44 N 366. NET
Type P618. 18—1 <sup>1</sup> / <sub>6</sub> x2" compartments. 11x6½x1½". 1½ lbs. 44 N 367. NET

### STORAGE CONTAINERS

A Glass Jar. Ideal storage for small parts. Metal screw cap protects contents from dust and moisture. Size, 2½° high; 2° in diameter. Wt., 7 oz. 44 N 500.12 or more, EA. 50. EACH... OC



### 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.



### POLYSTYRENE SHEETS

Stock	Size	Thick-	Shpg.	NET	EA.	Ī	Stock	Size	Thick-	Shpg.	NET	EA.
No.	3120	ness	Wt.		10-49	_	No.	Size	ness	Wt.	1-9	10-49
71 H 865 71 H 866 71 H 867 71 H 868 71 H 869	12x12" 12x12" 12x12"	3/32" 1/8" 3/16"	8 oz. 10 oz. 12 oz. 1 lb. 1½ lbs.	4.70 5.39 7.01	4.85	7   7   7	HX 870 HX 871 HX 872 HX 873 HX 874	12x24" 12x24" 12x24"	3/32" 1/8" 3/16"	1 lb. 11/4 lbs. 11/2 lbs. 2 lbs. 3 lbs.	7.64 8.97 10.39 12.89 15.34	8.07 9.35 11.60

### 12" POLYSTYPENE RODS

Stock	Dia.	Shpg.	NET	EACH	Stock	D:-	Shpg.	NET	EACH
No.	Dia.	Wt.	1-9	10-49	No.	Dia.	Wt.	1-9	10-49
71 H 875 71 H 876	1/8″† 3/16″	2 oz. 3 oz.	.03	.02	71 H 880 71 H 881	1/2" 5/8"†	6 oz. 8 oz.	.47 .71	.42 .64 .88
71 H 877 71 H 878 71 H 879	1/8"† 3/16" 1/4" 5/16" 3/8"	5 oz. 6 oz. 6 oz.	.12 .18 .25	.16	71 H 882 71 H 883 71 H 884	3/4" 1"	8 oz. 8 oz. 8 oz.	1.39 1.86	1.25

### 12" TUBING

Stock			Shpg.	NET	EA.	Stock	O. D.		Shpa.	NET	EA.
No.	O. D.	1. D.	Wt.	1-9	10-49		O. D.	I.D.	Wt.	1-9	10-49
71 H 885	1/4"†	1/8"	2 oz.	10¢	9¢	71 H 889		3/8"	4 oz.	31¢	28¢
71 H 886	5/16"* 3/8"	3/16" 1/4"	3 oz.	14¢	13¢	71 H 890		5/8"	4 oz.	39¢	35¢
71 H 887	3/8"	1/4"	3 oz.	18¢	16¢	71 H 891	1″	7/8"	6 oz.	55¢	49¢
71 H 888	1/2"	3/8"	3 oz.	25¢	22¢		1		1	1	. ,

## Tool Boxes—Parts Containers



# QUALITY STEEL UTILITY CHESTS





### HAMILTON UTILITY BOX

Model 1501. Sturdily constructed, drawn-metal tool and general-utility box. Extremely compact and easy to carry—fits anyplace. Indispensable for the radio and TV service-man, kit builder, experimenter, mechanic and home craftsman. Also excellent for gardening, fishing tackle, or general purpose use.

Easily accommodates a soldering iron, screv Easily accommodates a soldering iron, screw-driver, 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 compartments:  $1-2\sqrt{4}x6^{\alpha}$ ,  $1-1/\sqrt{4}x6^{\alpha}$ ,  $1-9/\sqrt{4}x6^{\alpha}$ . Compartments are extremely handy for the storage of hardware and miscellaneous small parts, such as resistors, capacitors, screws, etc.

### UNION "SUPER STEEL" TOOL CHESTS

Sturdy steel chest with removable tray. Has two heavy-duty drawbolts plus center padlock eye. Continuous hinge welded to cover and case. Heavy-duty steel handle. Blue, hard-baked enamel interior. Exterior has silver gray hammertone finish.

Type 6116. 16x7x7". Wt., 6½ lbs. 86 NX 018. NET	4.89
Type 6119. Same as above, but overal $19x7x7''$ . Wt., 7 lbs.	l size is
86 NX 017. NET	5.14

### UNION WATERTIGHT TOOL BOX

### 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 convenient "Lok-Tabs" that enable cabinets 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 removable partitions. Special safety-stop on drawers prevent accidental spilling of small parts. All drawers are 5½° long, 2½° wide, 1¼° deep. Cabinet frames are finished in handsome silver Dentone baked enamel.

Model U-24, 24-drawer cabinet. Size, 11x6x

Model U-24. 24-drawer	cabinet.	Size,	11x6x
12½". Shpg. wt., 9 lbs. 86 NX 783. NET			6.22
Model U-12, 12-drawer	cabinet.	Size. S	53/4×6×
12½". Shpg. wt., 6 lbs. 86 N 784. NET			.3.70

### "HAZ-BIN" SMALL PARTS STORAGE CABINETS

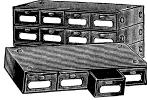


### Beautifully Styled—Clear Plastic Drawers

Space-conserving cabinets for small parts and hardware storage. Excellent for the radio-TV serviceshop, store, home workshop, etc. Clear plastic drawers, 11/6x23/x57/8", are separated into three sections by removable dividers. Contents are clearly visible to permit easy identification. Index cards are supplied to fit slots on heation. 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 cab-inets 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. Hammertone finish.

Stock	Mfr's	No.	H. W. D.	Wt.,	NET
No.	Type	Draw.		Lbs.	EACH
86 NX 047 86 NX 143 86 NX 144 86 NX 048 86 NU 039	J-16 J-20 J-24 J-32 J-64	24 32	81/8 x121/2 x6" 101/6 x121/2 x6" 12x121/2 x6" 151/4 x121/2 x6" 151/4 x251/8 x6"	8 9 10 13 25	6.95 7.95 9.95 12.95 24.95

## "QUA-DROR" ALL STEEL



## STORAGE CABINET



UNION 410 4-DRAWER STEEL CHEST

of contents.

### AKRO-MILS "E-Z FIND FULL-VUE" CABINETS



AKRO-MILS "E-Z FIND FULL-VUE" CABINETS
Extremely convenient cabinets for storing small parts.
Drawers are shock-absorbing, crystal-clear Styrene, 11/6x
21/8x55/8". Each drawer is divided into 4 compartments—
can be divided further with handy removable dividers supplied. Smooth-operating drawer pulls out with full-grip,
entered handle. Safety catch prevents drawer spillage,
Cabinet is of double-wall, heavy-gauge steel. Individual
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-TV service
slop, home workshop, hardware stores, etc. Attractive
baked-on gray enamel finish.

No. | Type | Drawers| | H.W.D. | Lbs. | NET

No.	Туре	Drawers	H.W.D.	Lbs.	NET
86 NX 759		12	6x121/2x6"	6	3.98
86 NX 767		24	101/2x121/2x6"	9	6.98
86 NX 773	V-32	32	14x121/2x6"	12	8.98

### DIXIE INTERLOCKING DRAWERS



ı	86 N 023. NET EACH42C
ı	10 or More, EACH38¢
ı	Dividers. For use with Dixie drawers, above.
	Shpg. wt., per pkg., 4 oz.
•	86 N 179, Pkg. of 310¢

## 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" interval of drawer length. Drawers have large convenient handles. Will not stick or jam. Instant-visibility label bolders on drawers and 



No. 8. 8-Drawer Cabinet. General-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-TV servicemen. Heavy-duty, welded steel frame holds 8 drawers on 2 levels. Each drawer has 2 cross dividers, adjustable on 1" centers, making a total of 24 compartments. Smooth-operating drawers are made of heavy steel—will not stick or jam topether. Have full-size handles and slot holders for label cards. Durable baked olive-green enamel finish. Drawer size, 31% high, 55% wide and 11" long. Cabinet size, 10" high, 25½ wide and 12" deep. May be placed on shelf or stacked. Shpg. wt., 33 lbs.

### "LITTLE GEM" AND COMBINATION CABINETS

"Little Gem" Cabinets. 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 1½" centers. Fit drawer bottom tightly—no creeping of parts under dividers. 12 compartments per drawer—up to 28 with extra dividers. ½x11" label holder on front of drawer. ½x11" label holder on each compartment. Olive green baked enamel finish. Size of each drawer: 11" long 11" wide, and 1½" high.

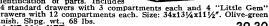


No. 1	. 2-Drawe	r Cabinet.	With div	iders provid	ing for 24	compart-
86 N	X 065. NET	Г	. <b>.</b>	bs. 		0.73

No. 2. 4-Drawer Cabinet. With dividers for 48 compartments. Size: 61/x11x11°. Sings. wt., 15 lbs. 13.90

No. 12. Combination Cabinet.
For small and medium-sized parts.
Cabinet combines the features of Equipto Standard Drawer Units with the safety and convenience for tiny parts storage of "Little Gem" Drawers at right. Label 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: 34x13½x11½". Olive-green finish. Shg. wt., 68 lbs.
86 NZ 096. NET.

39.30



### BENCH AND CABINET COMBINATION



### 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" diameter solid rubber-tired wheels. Wheels are stationary in front, swivel in rear. Designed for use in narrow aisles between rows of shelving or any general trucking use. Durable olive green baked enamel finish. Top tray may be inverted to make flat surface. Trays are 4" deep. Will safely shelf (86 N 093) listed in table below, fastens to push bar. to push bar.



				•
No.	Туре	Description	Wt., Lbs.	NET
NZ 090		36" high, 24" wide, 36" long	70	39.90
NZ 092		36" high, 16" wide, 30" long	60	29.90
N 093	146	Paper-carrying shelf; 81/2x11"	5	2.50

### **CHASSIS AND TEST UNIT STANDS**

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, 2½" diameter. Size, 18" wide, 24" in length. Height: With wheels, 34"; without wheels, 31".



No.	Type	Description	Wt., Lbs.	NET
86 NZ 087	710	With wheels	55	15.13
86 NZ 088	711	With wheels, wood top	57	

### 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 in or out of holder clips with one simple motion. Parts are always within easy reach. Masonite board is prepunched to permit hanging on any wall. Perfect for radio-TV service shops, machine shops or home workshops.



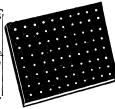
12-Jar Type. Size, 18x8¾". Shpg. wt., 4½ lbs. 86 NX 246. List, \$3.25. NET	<b>1.9</b> 1
24-Jar Type. Size, 18x18". Shpg. wt., 9 lbs. 86 NX 245. List \$6.00. NET	3.53
Replacement Jars. For above. Shpg. wt., 2 oz. 46 N 207. NET EACH	8¢
Holder Clips. Same as used in boards above. Wt. per pkg., 2 oz 46 N 204. Pkg. or 2, Per Pkg	20¢

## PIN-UP BOARD

 Keeps Tools or Parts Handy and in Sight

Model 102. Four separate squares of perforated hardboard, each 18x24". Provide 12 square feet of storage space. A convenient and attractive way to store tools and a great variety of other small accessories. Pin-up rack includes 62 specially designed fixtures for hang-





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

## General Cement Paints & Chemicals

### FAMOUS, HIGH-QUALITY CHEMICALS, PAINTS & KITS









No. 43 "Pli-O-Bond" Cement. Thermoplastic cement. Bonds all materials. 43 N 210, 2 ft. oz. Wt., 6 oz. NET
No. 31 Radio Service Solvent. Cement thinner for removing old speaker cement, etc. 43 N 451, 2 fl. oz. Wt., 5 oz. NET
No. 8460 "De-Ox-Id" Kit. Safely cleans and prevents oxidation on circuit contacts. With needle injector for easy application. 2 oz. bottle. Shps. wt. ½ lb. 43 N 453. NET
No. 19. "De-Ox-Id" Only. Less applicator.
43 N   27. 1 fl. oz. Wt., 4 oz. NET65 43 N   28. 2 fl. oz. Wt., 6 oz. NET94
No. 47 TV High Voltage Corona Dope. Prevents corona shorts. Air-drying. 43 N 145. 2 fl. oz. Wt., 6 oz. NET
No. 50 "Red-X" TV High Voltage Corona Dope. Red corona dope. 2 fl. oz. Wt., 6 oz.
Dope. Red corona dope. 2 fl. oz. Wt., 6 oz. 43 N 455. NET

No. 90	Red Gly	ptal Insul	ating \	/arnish.
Protectiv	ve anti-co	rona insulat z. Wt., 6 oz.	ion coat	ing. 🕝 🗸
43 N 46	50. 2 fl. o	z. Wt., 6 oz.	NET	<b>.</b> 50
		z. Wt., 11/4		
43 N 46	<b>52.</b> 1 gal.	Wt., 10 lbs.	NET	11.76

No. 35 Rubber-to-Metal & Phono Drive Cement. For cementing rubber phono and dial drives to shafts and pulleys; also rubber mount-

No. 57 Fungus Varnish. Prevents moisture absorption and fungus growth.
43 N 476.2 fl. oz. Wt., 5 oz. NET ... 4 4
43 N 477.8 fl. oz. Wt., 1/4 lbs. NET... 1.03
43 N 478.1 gal. Wt., 10 lbs. NET... 1.2.94

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. Spg. wt., 10 lbs. Shpg. wt., 10 lbs. 43 N 479.NET......6.94

### NO. 60 "RUF-KOAT" VARNISH

No. 32 Bakelite Cement. For bonding phenol-



Air-drying wrinkle varnish for amplifiers, test equipment, chassis, etc. Gives a professional-looking appearance—same type as used by original manufacturers. Can be air-dried or baked.

Black			Size	Lbs.	NET
43 N 480 43 N 483 43 N 486	43 N 481 43 N 484 43 N 487 43 N 489	43 N 482 43 N 485 43 N 488 43 N 490	4 fl. oz. 16 fl. oz. 32 fl. oz. 1 gal.	2½ 2¼ 6	.82 2.20 3.23 12.49

No. 60-X "Ruf-Koat" Undercoat. For use when applying "Ruf-Koat" to porous or pre-No. 50-A "Hur-Roat" to porous or previously-finished surfaces.
43 N 491, 16 ft. oz. Wt., 21/4 lbs. NET. 2.32
43 N 492. 1 gal. Wt., 10 lbs. NET. ... 12.88

### 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 without removal from the circuit. When

out removal from the circuit. When operating temperature goes up, defective component stops working, thus causing circuit to go out of operation. To find defective component component to former temperature, restoring it to operation. Thus, when circuit begins to operate again, last component sprayed is the component to former temperature, restoring it to operation. Thus, when circuit begins to operate again, last component sprayed is the component sprayed is the component sprayed in the component sprayed is the component sprayed in the component sprayed is the component sprayed in the comp 









### CABINET REPAIR KIT

CABINET REPAIR KIT

Type 901. Convenient, practical cabinet 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", alcohol lamp, alcohol, spatula, touch-up brushes, steel wool, sandpaper and wiping cloth. In convenient metal storage box. With complete, easy-to-follow instructions. Shpg. wt., 3 lbs.

43 N 115. List, \$8.50. NET. 5.00

### EIA (RETMA) COLOR-CODING KIT

### LUMINOUS "LITE-KOAT" KIT

### "DIAL-LITE" COLORING KIT

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.

43 N | | 0. List, \$1.40. NET..........82c

### SCRATCH STICKS

....44c

## "SPRA-KOAT" PAINTS



"SPKA-KUAI" PAINIS
Wrinkle Finish. Air drying
wrinkle varnish. For hobbyists,
servicemen, etc. Provides finish
comparable to professional oven
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., 1¼ lbs.
Tyme 60-12 Black

43 N 028. Type 60-12. Black. 43 N 029. Type 60-13. Gray. NET EACH.... 

### "SPRA-KLEEN" CONTACT CLEANER



Type 8666. Efficient cleaner for electrical contacts—eliminates noise due to dust, dirt and corrosion. No need to dismantle chassis—cleaner 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. Spng. wt., 10 oz. 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 printed circuits and to touch up circuits around eyelets, rivets, and other parts. Handy for servicemen, experimenters and engineers. Comes with handy brush-in-cap. Shpg. wt., 40z. 4.56

### SILICONE RESIN SPRAY



Type 14-6. Use this clear, silicone resin after repairing or replacing parts in printed circuits. Forms a protective coating which prevents shorts and arroing. Insulates, waterproofs and provides barrier against dust. Application is simple—pressing of button at top of can releases a spray. Used by manufacturers to assure dependable performance of printed circuits. Dries rapidly and requires no baking. Spray can. Contents 43 N 027. List, \$3.25. NET. 2.39

### **CONTROL GUN**



Type 9282. Control Gun Adapter. Use with Type 9280 Gun. For extra long shanks. 43 N 062. List, 75¢. NET.......44¢ Type 9281. Control Gun Adapter. Converts

gun to fit special size auto radio controls. 43 N 063 List, 75¢. NET......44¢

### 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-oz. bottle. Shpg. wt., 1½ lbs.
43 N 046, List, \$3.25. NET... 2.39

### **G-C SPRAY GUN TYPE** SPRAY CAN HANDLE

Inexpensive spray can han-dle attaches to any spray can —converts the 



### **G-C SPRAY CAN EXTENSION**





Extremely useful attachment for spray cansdirects spray exactly where you want it. Ideal for cleaning controls and tuners without removing them from chassis. Speeds up bench work. One end of 9° extension tubing fits over nozzle of can. Press release on can and spray squirts out nozzle at other end of tubing. All plastic—won't short. Fits all spray cans. Easily installed. Shpg. wt., 2 oz. 88c

### **G-C RECORDING HEAD CLEANER**

G-C RECORDING HEAD CLEAN
Specially prepared cleaning fluid for
use on recording head of tape and wire
recorders. The preparation dissolves
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. 1fl. oz. Wt., 4 oz. NET 5 óc.
45 N 204. 2 fl. oz. Wt., 5 oz. NET 94¢



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 v. per mil. Remove cap from container and dip handle of tool into liquid; may be dipped repeatedly if heavier coating is desired. Dries in 24 hours. Resists acids, alkalies or other corrosive compounds. Shpg. wt., 6 oz. can, 10 oz.; 32 oz. can 21/4 lbs.

Stock No.	Contents		24 or More, EACH	
42 N 400 42 N 401	6 oz.	.79	.71	
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 volts per mil. 12-oz. can. Shgs. wt., 1½ lbs.

Stock No.	Color	Contents	NET EACH	24 or more EACH
42 N 402 42 N 403 42 N 404	Clear Aluminum Black	12 oz. 12 oz. 12 oz.	1.19	1.07

### 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-inflammable and non-corrosive liquid; remains effective indefinitely. Also recommended for use on switches, pushbuttons, bearings, dial shafts, contacts, etc. An indispensable tool box item for the radio-TV serviceman. Shpg. wts: 2-oz. bottle, 7 oz.; 4-oz. bottle, 14 oz. \*With eye dropper.

43 N 103, 4-oz. bottle. NET.........2.49

### KRYLON PLASTIC AND ENAMEL SPRAYS

### CLEAR PLASTIC SPRAY

### **ENAMEL SPRAYS**

Highly attractive, non-fading, enamel sprays. Excellent for either interior or exterior use—provide 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., 1½ lbs.

No.	Color	No.	Color			
43 N 134 43 N 064 43 N 059 43 N 139 45 N 206 43 N 106 43 N 138 43 N 053 43 N 053 43 N 207	Flat White Glossy White Antique Ivory Flat Black Glossy Black Light Gray Machine Gray	43 N 109 43 N 107 45 N 208 43 N 054 45 N 209 43 N 055 43 N 056 43 N 044 43 N 043	Bright Gold Hunter Green Surf Green Chrome Yellow Pastel Yellow Regal Blue Cherry Red O. D. Khaki Int'l Orange			
NET EACH						

Saves time and money for radio-TV ser- & vicemen. Protects and preserves elec-KRYLON 4 (RYSTAL tronic equipment CLEAR UES IN MINU Use for home touch-up" or small area iobs

### ZINC CHROMATE PRIMERS

### WALSCO RADIO AND TV CHEMICALS

Carbon Tetrachloride. No. 111. Dissolves dirt and grease. Non-explosive and non-inflammable 4 oz. bottle. Shpg. wt., 12 oz. 53c

Scratch Removing Polish (Dark). No. 231, For walnut, mahogany, etc. Removes scratches as it polishes. 4 oz. bottle. Wt., 12 oz. 38c

Tunerlub. No. 26. Prevents noisy operation of TV tuning units, etc. Cleans and protects contacts from oxidation. 134 oz. tube. 53c

"Lubriplate." No. 23. For phonograph motors, record changers. Superior to ordinary greases. 2 oz. tube. Shpg. wt., 6 oz. 53c

No-Slip. No. 260. Greatly increases the friction of pulley cords and belts. Stops any slippage. 2 oz. bottle. Shpg. wt., 6 oz. 44 C









# 

Polystyrene Cament. No. 57. For bonding Polystyrene parts, coating coils. Brush-in-cap 4 oz. bottle. Shpg. wt., 12 oz. 7lc

Insulating Varnish. No. 190. Fast drying; for coils, transformers, solenoids, motors, etc. 2 oz. bottle. Shpg. wt., 6 oz. 50c

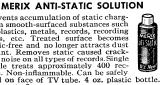
### "NO NOISE" SOLUTION

Remarkably effective chemical formula for cleaning, lubricating and protecting: TV front-ends, controls, switches, etc. In 6 oz. aerosol spray can. 2 oz. bottle is complete with dropper. Shgg. wts., 6-oz. can, 10-oz., 2-oz. bottle, 6 oz. 2.20 43 N 143. 2 oz. NET......98¢



Prevents accumulation of static charges on smooth-surfaced substances such as plastics, metals, records, recording discs, etc. Treated surface becomes static-free and no longer attracts dust or lint. Removes static caused crackling noise on all types of records. Single bottle treats approximately 400 records. Non-inflammable. Can be safely used on face of TV tube. 4 oz. plastic bottle. Shpg. wt., 8 oz.

43 N 144. NET. 69c



### RAPID "BRUSHPLATER"

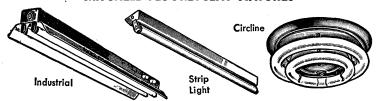
For quick, easy elec-tro-plating of small metal items such as hardware, trim, met-al knobs, etc. Plating process is exceedingly simple—just make a few electrical connec-tions and brush sur-face to be plated with face to be plated with

face to be plated with metal compound. Includes 1 oz. metal cleaner, 1 oz. metal polish, plating compound \( \frac{\gamma}{\gamma} \) brush wires and clips, and polishing stick. Requires 2 or 3 No. 6, 1\( \frac{1}{\gamma} \)- evolt cells (see page 424). Shpg. wt., 1 lb.

Mfr's Type Plating Compound 43 N 080 43 N 081 43 N 082 43 N 083 200 202 204 205 Nickel Cadmium 1.67 Copper Brass

## Fluorescent Fixtures—Lanterns

### MITCHELL FLUORESCENT FIXTURES



### 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 reflect. 481/x111/x5%". With reflector, starters and ballasts. Less lamps and chains. U.L. Approved. For 105-125 volts, 60 cycles AC. Shgs. wt., 17 15s. 29 1 RU 260. NET EACH. 9.43 3 or More, EACH......8.70

### INDUSTRIAL RAPID-START FIXTURE

3 or More, EACH......10.32

### CIRCLINE FLUORESCENT FIXTURES

Model 865C. Low-cost, single-lamp, chrome-plated fixture with "instant-start" feature. Provides clear, glareless illumination—equiv-alent in light produced to a 100-watt incandes-cent bulb. An excellent lighting fixture for use in average-size kitchens, basement work areas, small offices, dens, etc. Handsome chrome fin-ish complements any room. Lamp is held se-curely in place by tempered, spring-steel clips. With 12"-diameter, 32-watt Circline lamp, U.L. Approved. For 110-120 v., 60 cycle AC. Shgs, wt., 9 lbs.

91 RX 279. NET EACH...... 8.26 3 or More, EACH......7.51

### 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 303 for listings of fluorescent lamps.

### 1 LAMP-20 WATT 24"

Model 316. Normal power factor. Perfect for salesrooms, corridors. Shpg. wt., 4 lbs. 2.76 91 RX 195. NET 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 3 or More, EACH..................4.24

### 2 LAMP-40 WATT 48"

3 or More, EACH......8.23

Model 841C, Chrome-plated 2-lamp fluorescent fixture in attractive circular design. Improved light diffusion. With 12" dia. 32-watt and 8" dia. 22-watt rapid-start lamps, hardware and glass pendant. For 110-120 v., 60 cycle AC. U.L. Approved. 11 lbs. 91 RX 262. NET EACH. 13.35 3 or More, EACH. 12.14

### **RECESSED FLUORESCENT BOXES**



witchell recessed fluorescent boxes combine better lighting quality with modern, attractive styling. They allow more even light distribution and softer illumination throughout 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. 5½" deep with ½" flange. U.L. Approved. For 110-120 volts, 60 cycle AC. \*2 light, 20-watt. 24x5". †2 light, 40-watt. 48x5".

Stock No.   Ty										
91 RX 583 C22	OL* Louve	14	17.03	15.58	91 RX 585	C220G*	Ribbed Gl.	14	14.30	13.05
91 RU 584 C24		29	28.65	26,20	91 RU 586	C240G†	Ribbed Gl.	30	26,20	23.90

### **WALL BRACKET**

Model 704. Attractive fluorescent wall bracket Model 704. Attractive fluorescent wall bracket for general-purpose use in shop, store or home. Has handy flush-type electrical outlet on side panel. Triple-chrome finish. Rotary type on-off switch. 20x2½x2°. 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 3 or More, EACH. 4.24









High-quality starters and sockets for all types of fixtures. \*Circline. †Circlarc. Av. wt., 3 oz.

### A STARTERS

Stock No.		Mfr's Type	Watts	Each	Lots of 10, EA.
78 78	R 850 R 851 R 854	FS4 *FS12	14,15,20 30 or 40 32	20¢ 20¢ 28¢	18¢ 18¢ 25¢
78	R 855	FSZZ	14,15,18* 20-22†	28¢	25€

### **STARTERS & SOCKETS**

B LAMPHOLDER SOCKETS

Stock No. Lots of 10, EA. Watts Color Each 78 R 860 | 14,15,20 | Black | 78 R 861 | 30 or 40 | White

C STARTER SOCKETS Standard Dual-Loc remote starter socket.

### D STARTER SOCKET & LAMPHOLDERS

Stock No.				Lots of 10, EA.
78 R 865	{14,15,20	Black	42¢	38¢
78 R 866	30 or 40	White	44¢	40¢

### **BURGESS QUALITY** LANTERNS AND FLASHLIGHTS

### RADAR BEARCAT LANTERN



"RADAR-LAMP" LANTERN





Model TW7

Model TW34

Model TW7. Outstanding new portable lantern with super-intensity lamp. Completely leakproof and weatherproof. Simple to operate and convenient to carry. Battery can be replaced in seconds—two insulated knurled nuts hold battery firmly to head assembly. 91/x51/x224 (including battery). With TW16-v. battery. Wt. 41/2 lbs. 80 J 686. List, \$8.95. NET. 5.53

### "RADAR-LITE" LANTERN

Model TW3. Super power, all purpose lantern. Sealedbe e a m l a m n



### **FLASHLIGHTS**



E Model 255. New, two-cell flashlight. Ribbed metal case in gleaming chrome finish. Has 3-position switch, pre-focused lamp. Less two No. 2 cells. Shpg. wt., ¼ lbs. 1.26

Model 350. New two-cell fiashlight. Fiber barrel with rubber cushioned head, end cap. Pre-focused and weatherproof. Uses two No. 2 cells. With lamp. Less batteries. 1 lb. 128 Model 450. As above, but uses the No. 2 cells.

See Page 425 for Batteries

# Desk Lamps—Fluorescent Lamps—Lanterns

# LUXO ADJUSTABLE LAMPS Fingertip Adjustment Absolute Rigidity in any position

### MODEL L-1A ALL-ANGLE LAMP



### MODEL FL-1A FEATHER-TOUCH ALL-ANGLE FLUORESCENT LAMP

ALI-ANGIE FLUORESCENT LAMP

This 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
stay in desired position. Lamp housing is also
adjustable—may be turned up, down, or sideways—always remains at same angle regardless of arm positioning, Uses 15-watt tubes for
glare-free light. Shade is 19° long by 4½° wide
—has convenient push-button-type starter.
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°
lamps as listed below). Shpg. wt., 9 lbs., 20.96
91 RX 228, List, \$27.95. NET......20.96



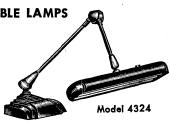
### MODEL 4303 ALL-PURPOSE LAMP

A well-designed all-purpose lamp. Head tilts vertically 180° and turns 300° on its axis. Upper elbow swings in 160° vertical arc; lower elbow swings in 110° vertical arc. Extends to 36°. Spring-controlled swivel joints. Push-button off-on switch. Easily installed—two bolts clamp base firmly to surfaces up to 3° thick. Bronze finish. Requires two 78, 15-watt lamps. For 105-125 v., 60 cycle AC. U.L. Approved. Less lamps (below). Shog. wt., 10 lbs.

3 or More, EACH......14.38



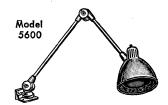
### MODEL 4444 "FLEXARM" TWIN-LIGHT



### MODEL 4324 PORTABLE DESK LAMP

POTABLE 4324 PORIABLE 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 position. Ideal for fine precision work, service
bench use, industrial assembly lines, etc. Gives
a light without glare or shadows. Attractive
streamline base design has pen and pencil
grooves. Double arm extends 32". U.L. Approved. For 105-125 volts, 60 cycle AC. Less
lamps (requires 2-T8 15-watt lamps as listed
below). Shpg wt., 23 lbs.
91 RU 226, List, \$28.95. NET. 21.28
3 or Morse. EACH 19.86

3 or More, EACH......19.86



### MODEL 5600 "COOL-SHADE" LAMP

### "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 4½" dia. x 9" focal length lens centers in 360° 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. 



### "LIFETIME" MODEL 501S ALL-PURPOSE LANTERN

Features powerful, sharp focus, sealed-beam lamp. May be hand-held, hung on wall or set on flat surface. Lamp fully adjustable through 180-degree swivel. Lamp and handle fold down for easy storage. 3-way switch for off-on-manual-flash operation. Ideal emergency or trouble light for servicemen, motorists, etc. Uses one 6-v. lantern battery (Burgess F4H listed below). In bright red baked enamel with chrome trim. Less battery. 5x3x2¾". Lamp 4" dia. Shpg. wt., 2 lbs.

78 J 222. NET.....



### 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 approximating natural daylight. Cool-white lamps are 4500° Kelvin. Lamp life is approximately 2000 hours. \*Circline lamps; size shown in table is the diameter of the lamp circle. All lamps below have medium-size bi-pin bases except Type T-5 (miniature bi-pin) and Circline lamps which have 4 pin bases. \$Rapid-start lamps.

Stock No.	Туре	Watts	Size	Tube Dia.	Color	Std. Pkg.	Wt. Lbs.	NET EACH	In Std. Pkg.,EA.
91 R 521 91 R 511 91 R 500 91 R 514 91 RX 502	T5 T12 T8 T12 T12	6 14 15 15 20	8¼" 15" 18" 18" 24"	5/8 1½ 1 1½ 1½ 1½	White Cool-white Daylight Cool-white Daylight	24 24 24 24 24	1 1 1 1 1½	1.35 1.00 1.05 1.00	1.08 .80 .84 .80
91 R 535 91 R 516 91 RX 538 91 RX 534 91 RX 506	T10* T10* T12§	22 32 40 40 40	8½" 12" 16" 48" 48"	11/4" 11/4" 11/4" 11/2"	Cool-white Cool-white Warm-white Cool-white Daylight	12 12 12 24 24	1½ 1½ 1¼ 2 2	3.50 3.50 4.70 1.30 1.25	2.80 2.80 3.76 1.04

### **ADVANCE FLUORESCENT BALLASTS**

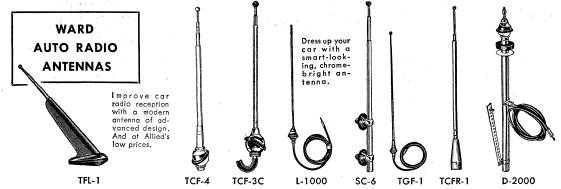


For all popular fixtures. Normal power factor types are 55-65% corrected. High power factor types are 90-100% corrected. L-132 is for standard Circline; LQ-132 is for quick-start Circline. U.L. Approved. For 105-125 volts, 60 cycle AC. \*Lamp watts.

1-LAMP BALLAST-NORMAL POWER FACTOR

	No.		Туре	Watts*	Size	Ctrs.	Lbs.	NET
78	R 8	89	L-115	15	41/4×2×17/6"	35/8" 35/8"	1	1.00
78	R 8	91	L-120	20	41/4×2×17/16"	35/8"	1	1.00
78	R 8	93	L-140	40	6½x115/6x13/8"	6"	3	1.70
78	R 8	94	L-132	32	61/2 x115/16 x13/8"	6"	23/4	1.70
78	R 8	85	LO-14-					
		- 1	20-C	14, 15, 20		23/4"	3/4	.68
78				32	61/2 x25/16x111/16"	6"	31/4	2.80
		2- L	AMP BAL	LASTN	ORMAL POWE	RFA	CTOR	
78	R 8	98	L-220	20	61/4×2×17/16"	55/8"	11/2	1.90
					HIGH POWER	FACT	OR	
78	R 8	87	SM-175-S	55	145/16×3764×125/32"	133/4"	10	9.45
		2	-LAMP BA	LLAST-	HIGH POWER	FACT	OR	
78	R 8	961	S-240	40	113/4×25/6×111/6"	117/16"	41/2	5.00
78	R 8	97	RSHM-240	40	91/2x23/8x111/6"	815/16	43/4	5.85
78	R 8	86	SEQM-			1	, ,	
			275-S	55, 74	145/6×37/4×125/32"	133/4"	91/3	9.45

## **Auto Antennas and Vibrators**



## **REAR-FIN ANTENNAS**

Model TFLT-1 Twin Antennas. As above, but with one antenna for each rear fender. Shpg. wt., 2½ lbs. 18.79 PER PR. .... 8.79

TOP-COWL AND FENDER TYPES
Model TCF-4. New, high-quality smartly
styled antenna for either top-cowl or fender
mounting. Ball mounting permitting adjusting
up to 35° The four telescoping sections extend
to 57°. Attractive chrome finish for lasting
beauty. Sleek and modern for today's care.
Easy to install. Supplied complete with 54°
lead cable. Shgg. wt. 1¼ lbs.
92 CX 576. List, \$6.95. NET. 3.67

Model TCF-3C. A top-notch antenna that offers deluxe appearance and fine performance. Has popular "Eight Ball" design for simplified installation on top cowl. Will fit any type of car perfectly. It adjusts to any desired angle. Has 3 sections—extends to 56°. Constructed of triple chrome-plated brass tubing; has 54° lead-in. With instructions and all hardware. Shgs. wt. 1 lb. 97 CX 2 l3. List, \$5.90. NET. 3.47

### NEW, LOK-MATIC UNIVERSAL TYPE

### SIDE-COWL TYPE

### NEW DISAPPEARING TYPE

### "DURA-RAMIC" AUTO ANTENNAS

Model TGF-1. Colorful auto antennas—constructed of opaque, corrosion-proof fiberglass. Extremely flexible. Made from millions of fibers of glass, woven together and resin-impregnated under pressure. The antenna elements are completely imbedded in the protective fiberglass. Excellent sensitivity in low-signal areas. Equal to metallic-type antennas. Features "Eight-Ball" top-cowl mounting. Adjusts to any desired angle. Fits any car. Has 54" vinylite covered, shielded lead-in. Length, 36". Available in 7 attractive opaque colors. Shpg. wt., 1 lb.

92 CX 002. Red.

### 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". Shgz. wt. ½ lb. 22 CX 595. List, \$2.43. NET. 1.43

### ANTENNA LEAD EXTENSIONS

Additional lead cable lengths for fender and rear mount installations.

`	Stock No.	Mfr's Type	Length	Shpg. Wt.	NET
	49 C 557		18"	6 oz.	.53
	49 C 558	C-12	24"	7 oz.	.71
	49 C 556		15-ft	1/2 lb.	1.91
	49 C 559	C-63	18-ft.	3/4 lb.	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 life and the trouble-free service required for all vibrator applications. These carefully designed, precision 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 105-strand 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.	Mfr's Type(Old)	Mfr's Type (New)	Volts	Size	List	EACH	Stock No.	Type
56 P 000 56 P 154	4-4 12-3 12-4	4-4 12-3 12-4	6 12 12	1½x2½" 1½x2½" 1½x2¾"	\$2.50 2.45 2.45	1.47	56 P 118 56 P 094 56 P 133	870
56 P 155 56 P 054	294	294	6	1½x3¼"	4.90	2.88	56 P 121	903
56 P 120 56 P 156 56 P 077 56 P 079	G567C 716	509P G1801/G567C 716 1801S/725C	6 12 6 6	1½x27/8" 1½x3¼" 1½x3½" 1½x3½"	4.15 9.95 7.70 8.55	2.44 5.85 4.53 5.03	56 P   59 56 P   60 56 P   27 56 P   28	175 T400
56 P 080 56 P 110 56 P 086 56 P 111		G1801S/G725C 1603S/826C F826S/F826C G1603S/G826C	12 6 32 12	1½x3¼" 1½x3¼" 1½x3¼" 1½x3¼"	9.95 6.35 7.70 7.70	5.85 3.73 4.53 4.53	56 P 135 56 P 140 56 P 144 56 P 145	M450 G454 G454
56 P 092 56 P 113 56 P 132	854 859 G859	854 1601/859 G1601/G859	6 6 12	1½x3¼″ 1½x2½″ 1½x2½″	4.90 4.70 4.70	2.88 2.76 2.76	56 P   3   56 P   38 56 P   39	454

Stock No.	Mfr's TypeOld	Mfr's Type (New)	Volts	Size	List	EACH
	W859	W1601/W859	4	1½x2½"	\$4.90	2.88
56 P 094	870	870	6	$1\frac{1}{2} \times 2\frac{7}{8}''$	4.90	2.88
56 P 133		G1602/G883	12	$3\frac{1}{4} \times 1\frac{1}{2}$ "	4.70	2.76
56 P 121	903M	903M	6	$1\frac{1}{2} \times 2\frac{7}{8}''$	3.60	2.12
56 P 159	1701	1701	6/12	1½x2½"	9.60	5.64
56 P 160	1751	1751	6	1½x2½"	9.80	5.76
56 P 127	T4002	T4002	2	1½x1½x2½"	10.70	6.29
56 P 128	T4003	T4003	2	15/16×21/8"	9.80	5.76
56 P 135	4501	1501/4501	6	1½x2½"	6.35	3.73
56 P 140	M4501	M1501/M4501	24	$1\frac{1}{2} \times 2\frac{7}{8}$ "	6.90	4.06
56 P 144	G4548	G1807/G4548	12	1½x3¼"	8.55	5.03
56 P 145	G4549	G1801/G4549	12	11/2x31/4"	8.55	5.03
56 P 131	G4501	G1501/G4501	12	1½x2½"	6.90	4.06
56 P 138	4548	1807/4548	6	11/2×31/4"	7.70	4.53
56 P 139	4549	1801/4549	6	$1\frac{1}{2}x3\frac{1}{4}''$	7.70	4.53

### **CORNELL-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., I lb.

Stock No.	Mfr's Type	Volts	Used in "Powercon" Models	NET EACH	Stock No.	Mfr's Type	Volts	Used in "Powercon" Models	N ET E ACH
82 P 753 82 P 789 82 P 775 82 P 777 82 P 782 82 P 783	6VB6H 6VD6H 2529 2563 12VB6H *12VD6H	6 6 6 12 12	GDCG, 6/110DH6, 6R5, 6S8, 6SW8   GSH15 6SW15   GSP2, 6LM3   6/12D5, 6L6, 12L8   12DC6, 12R8, 12S10, 12SW10   12DC12, 12H15, 12RU15 12SH20, 12SW15	7.94 13.82 2.44 6.09 7.94 13.82	82 P 779 82 P 780 82 P 787 82 P 788 82 P 784	2530 2532 110VB6H *110VC6H 2533	12 12 110 110 110	12SP2, 12LM4 12M6 110H25, 110S15, 110SW15, 220H25, 220S15 110H35, 110RT35, 110SH40, 110SW35, 220SH40 110LM5	2.44 4.53 7.94 13.82 2.44

in Public Address and Sound Distribution you get MORE with ALLIED'S auality 📉

Spinial 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 dependability—your assurance of supremacy in performance and value.

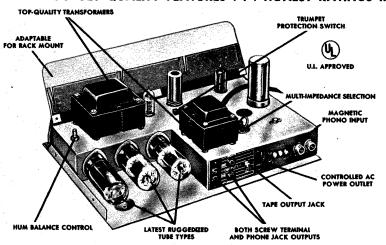


SAVE ON A COMPLETE SOUND SYSTEM. The cost of a complete Knight Sound System is always less than the total cost of individual components purchased separately. Additionally, only top-quality, nationally known parts and component products are used in the makeup of our P.A. systems. Whatever your plans—coverage of large open spaces or moderate sound distribution-Knight 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 be-cause 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 knight AMPLIFIER IS GUARANTEED FOR ONE FULL YEAR

### **FULL YEAR GUARANTEE**

All Knight amplifiers are guaranteed for one full year against defects in material and workmanship. Skillfully engineered and conservatively rated, they can be run 24 hours a day and still provide long, dependable service.

### **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.

THERE IS A MINISTRA AMPLIFIER FOR EVERY P.A. NEED



### knight 32-Watt P.A. Amplifier

ONLY \$5895

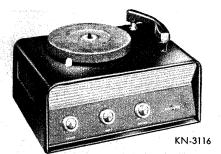
- 32 Watts, for 90% of P.A. Needs 2 Mike Inputs; 5 Tubes Plus Rectifler
- 1-Magnetic & 2-External Phono Inputs

Less Record Player

Tone, Phono Fader, & 2—Mike Controls

MODEL KN-3032. An outstanding P.A. value, the Knight 32-Watt Amplifier is a triumph of skillful engineering. Its highly attractive, ultra-compact styling features a tilted control panel for operator convenience; 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.

MODEL KN-3132 32-WATT AMPLIFIER WITH RECORD PLAYER INSTALLED. Shpg. wt., 28 lbs. 



### knight 16-Watt P.A. Amplifier

ONLY \$4650 Less Record Player

- Top Design—Dependable Performance One Mike, Two External Phono Inputs
- Phono Fader, Tone and Mike Controls
- Four Tubes Plus Rectifier

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: #2 db, 30-15,000 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-v. output—permits up to 16 speakers. Tubes: 6AV6, ECC83/12AX7, 2—6V6GT; 5V3GT rectifier. Size, 6½x15½x17. With all input plugs. Less record player. U.L. Approved. For 110-120 v., 60 cycle AC. Shpg. wt., 25 lbs.



### knight 60-Watt P.A. Amplifier

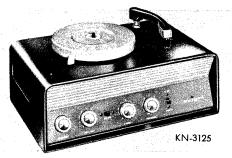
ONLY \$8400

- Tremendous Power-Minimum Distortion
- Bass, Treble, Phono & 2-Mike Controls
- 2 Mike Inputs; 5 Tubes & 2 Rectifiers Magnetic & 2-External Phono Inputs Less Record Player

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 with the aid of the 60-watt power booster described on page 307, its 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 Power Output: Full 60 watts of usable power. Hum is inaudible; 71 db below rated output. Frequency Response: ±2 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—6CA/TeL34; 5Y3GT, 5U4GB rectifiers. Output Impedances: 4, 8, 16, 250 and 500 ohms, plus 70.7-v. output. Size, 6/16x171/x11". 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.

MODEL KN-3160 60-WATT AMPLIFIER WITH RECORD PLAYER INSTALLED. Shpg. wt., 39 lbs.



## knight 25-Watt Mobile Amplifier

ONLY

- Use Indoors from 110-Volt AC Power
- Use Outdoors from 6 or 12-V. Battery
- \$10650 Phono Fader, Tone, and 2—Mike Controls
  - 2 Mike Inputs; 5 Tubes & 2 Rectifiers

Less Record Player

MODEL KN-3025. Remarkably versatile amplifier—operates anywhere—indoors or outdoors from either 6 or 12 v. DC, or 110 v. AC. Features: Tape output jack for simultaneous recording and P.A.; trumpet protector switch; battery "saver" switch.

Power Output: Full 25 watts. Frequency Response: ±2 db, 40-20,000 cps. Inaudible hum; 75 db below rated output. 5 Inputs: 2—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/Yone, Standby and Mic/Mag switch. 5 tubes, plus 2 rectifiers. Size. 6½s17½x11". Light brown hammerloid cabinet with aqua-and white 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.....

## GUARANTEED FOR ONE FULL YEAR

BIG VALUE! Combines.Low Cost with Dependable Operation KN-3008

### knight 8-Watt P.A. Amplifier

**\$**2000

\$3.25 Down

- Compact—Remarkably Versatile
   One Mike, Two Phono Inputs
- Microphone, Phono and Tone Controls
- Two Tubes Plus Rectifler

### **PUBLIC ADDRESS ACCESSORIES**

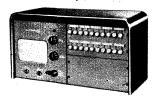


## knight 60-Watt **Power Booster**

ONLY \$500

\$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.



## knight Control **Unit for Paging** and Intercom

ONLY \$7730

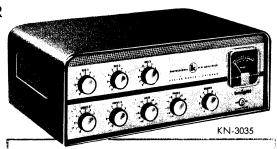
\$7.75 Down

Exceptionally versatile control unit with complete switching for up 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 intercom systems. Requires no power—connects to amplifier input and output. Size, 9x171/xx7". Shpg. wt., 111/2 lbs.

77 50 93 SX 056. NET.....

EXTRA 20-KEY PANEL. For control unit above. 13/4 lbs. 93 SX 057. NET.....

.. 29.50



### SUPERIOR QUALITY

### knight 35-Watt Professional Amplifier

\$10.98 Down

- Our Most Versatile Amplifler
  3 Mike, 2 Phono Controls
- 2 Tone; Master Volume Controls
- 5 Ruggedized Tubes & Rectifler

MODEL KN-3035. Expertly engineered and carefully assembled, 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; vol tion. reactures include: Cannon series AL connectors; Volume unit meter with range switch; provision for plug-in low-impedance 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 material 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: ±2 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-v. output. Tubes: 3—ECC83, 12AU7, 2—EL34 and 5U4GB rectifier. Rugged, all-metal black case with brushed chrome front panel. Size, 67/6x17/4x11". U.L. Approved. For 110-120 v., 50-60 cycle AC. Shpg. wt., 28½ lbs.

PLUG-IN LOW IMPEDANCE MIKE TRANSFORMER. Matches mikes with impedances from 50-600 ohms. Wt., 1 lb. 

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-ft. cable. Size, 5x2½x1″. Shpg. wt., 1½ lbs. .....12.75 93 S 070. NET....

### Rack Panel Kits for knight P.A. Units

Give your P.A. equipment professional appearance and centralization by mounting Knight P.A. components in mounting Knight P.A. components in standard relay racks; everything you need is in these new panel kits! Handsomely 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 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
93 SX 058	For KN-3035 Amplifier	7"	63/4	14.95
93 SX 059	For KN-3032 Amplifier	7"	71/2	14.38
93 SX 060	For KN-3060 Amplifler	7"	71/2	14.55
93 SX 061	For KN-3061 Booster	8¾″	71/2	14.10
93 SX 062	For KN-110 Deluxe Tuner	7"	61/2	11.60
93 SX 063	Phono Drawer on Slides	101/2"	14	19.65
3 SX 064	Blank Panel	31/2"	3	5.40
3 SX 065		51/4"	31/2	5.85
3 SX 066		7"	41/4	6.50
93 SX 067		8¾"	43/4	6.90

## SAVE ON COMPLETELY PORTABLE FOR THE PUBLIC ADDRESS SYSTEMS



## knight Deluxe 32-Watt All-Portable Sound System

Less Record Player

You Save \$23.33

Powerful Amplifler Delivers Top Performance

"Balanced Load"—For Fast, Easy Portability

Heavy-Duty 12" Speakers Provide Clean Response

Excellent Mike with Dynamic Cardioid Pattern

TRAVELING DANCE BANDS

THEATER GROUPS



SCHOOL GATHERINGS

Combining power with versatility, this de-luxe 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 believed correins over individual components in 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 top-mounted 4-speed record player.

SYSTEM INCLUDES: Knight KN-3032 32-Watt Amplifier, with or without Top-Mounted 4-Speed Record Player; Electro-Voice Model 664 Dynamic Microphone, Microphone Cable; Atlas CS-33 Microphone Floor Stand; and Two Heavy-Duty 12" Speakers, each rated at 25 watts, installed in a Carrying Case that comes apart to form two seaports bofflee for 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 love descendable services. structed for long, dependable service.

Wood cases have durable plastic brown-tweed finish—handsomely contrasted green grille. Each speaker has a 30-foot cord with plug attached. Speaker case is 19½x16x17"; amplifier case is 11½x17x12". Record player operates at 16½, 33½, 45, and 78 rpm; has ceramic cartridge with dual sapphire styli. System less record player is for operation 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 IN-STALLED. Greatly increases versatility of P.A. system; permits playing of any record-ing at any speed. Ceramic cartridge used provides excellent, wide-range reproduction—unaffected by heat and humidity. Ideal for outdoor dances, carrivals and fairs, in-stitutional use, churches, or general P.A. work indoors or out. Shpg. wt., 100 lbs. 51 PA 608 Von Sorg. \$23.63 NFT 178.95 51 PA 608, You Save \$23.63, NET. 178.95

## knight Standard 32-Watt Portable System

Less Record Player

A complete, one case 32-watt portable P.A. system, packed with exclusive Knight fea-tures—at savings of \$14.80 over the price of individual components if purchased sepa-

You Save \$14.80

To no 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° P.A. Loudspeakers.

Carrying case separates into two separate baffles when opened. Speaker-amplifier case has attractive blue-green and ivory leather-ette covering with matching plastic grille. HWD: 245/ax18x11". System less player is for 110-120 v., 50-60 cycle AC; system with player is for 110-120 v., 60 cycle only.

For Free P.A. Consultation, Write To Allied's Audio Division



### RECOMMENDED BY TO FIT YOUR NEEDS AND BUDGET



### knight 16-Watt DeLuxe Portable P. A. System

- Less Record Player Compact—Easily Fits Into One Case
  - Powerful, Advanced-Design Amplifler
  - Two Heavy-Duty 12" Quam Speakers

Only \$10.00 Down

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

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; Honor Stand; Astatic M332 Microphone; Knight Combination Speaker-Amplifier Case.

phone; 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: 24½x18x11". 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.

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.

COVERS UP TO 500 PERSONS

## knight 8-Watt "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" 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 Amplifler; Knight Speaker-Amplifler 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. 54.95 51 PA 511. NET.....

LOW-COST ACCESSORIES FOR USE WITH YOUR P.A. SYSTEM



### Argos PC-2 Changer Case

Lightweight, portable record changer case, pre-cut for Collaro TSC-740 record changer. Durable ¼" plywood construction with brass-finished reinforcements. Wear-resistant Tyroxylin covering is beautifully finished in contrasting brown and light tan. Height above

	mounting	board,	0-78	Size,
HWD: 101/2x17x151/4". Shpg. wt.,	16 lbs.			
93 SX 554. NET			K	3.23
93 SU 639. Changer Case with Blo	ink Mounting	Board. 1	NET1	3.23
89 RU 521. Collaro TSC-740 Recor				
64 SC 398, E-V 26MDST Cartridge	in Collaro H	lead.30	z. NET 2	2.05

### 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 mesoperator to control now of measages by pressing starter button. Plays from 1 to 55 minutes in duration. Speed: 334 ips. Complete with case. 734x6x65%. For 110-120 volts, 60 cycle AC. Shpg. wt., 8 lbs.

...87.95 91 R 736. Only \$8.80 Down. NET... MODEL SM-1 LOADED TAPE MAGAZINE. Standard magazine loaded with 200' 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



## ALLIED-RECOMMENDED KINIG THE PAGING & MUSIC SYSTEMS



### OPTIONAL PLUG-IN RECORD CHANGER

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.





### knight 60-Watt Super-Power Paging Systems

NET

• Use as Many as 48 Speakers

**Q**95

- For Private Offices or Classrooms
- Pre-Wired for Quick, Easy Assembly
   Grip-to-Talk, Slide-to-Lock Mike Stand

Only \$20.00 Down

When you need a "big voice" for indoor paging—in a large office, industrial plant, stadium, auditorium or any other large area—you'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.







PLANTS

**SCHOOLS** 

OFFICES

### knight 32-Watt Power Paging Systems

NET 50

- May Be Used with up to 24 Speakers
- Pre-Wired for Quick, Easy Assembly
- Grip-to-Talk, Slide-to-Lock Mike Stand

Only \$12.45 Down • 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.

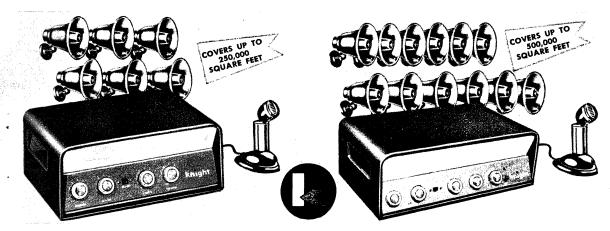
### ADD AS MANY SPEAKERS AS YOU NEED



### 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 on variations of these systems, or to recommend one specially tailored to your needs. If you are in doubt about 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.

### IDEAL FOR PLANTS, OFFICES, STORES, SCHOOLS, AND HOSPITALS



### knight 32-Watt Industrial Paging System

- May Be Used with as Many as 24 Speakers
- Ideal for Both Indoor or Outdoor Use
- Can Be Quickly and Easily Installed

NET

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 anywhere—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—instant readiness of operation.

This system can easily be expanded—you can add more trumpets or I his 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-Woth Amplifler, U.L. Approved for operator safety; Shure Model 520SL Microphone with grip-to-talk stand; six University Model Mll 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..

### 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



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, railroad 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-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.....

UNIVERSITY MIL TRUMPET. Efficient 5-watt trumpet for addition to above systems. 5-watt reflex-type driver. Range, 400-13,000 cps. Impedance, 8 ohms. Shpg. wt., 31/4 lbs. 

KNIGHT 70.7-VOLT LINE-MATCHING TRANSFORMER. Shpg. wt., 3/4 lb. 62 G 081. NET.....

Budget-Priced knight Indoor-Outdoor 8-Watt Paging System

- Provides Efficient Coverage up to 10,000 Square Feet
- Highly Dependable Service at Exceptionally Low Cost
- Easy to Install—No Special Technical Skill Required

NET

KNIGHT 8-WATT INDUSTRIAL PAGING SYSTEM WITH MIL TRUMPETS. This high-quality system provides dependable paging operation at a low price. It's perfect for shipping and receiving docks—you can give instructions to trucks outside—even during inclement weather. Stores and offices can also utilize it to call for desired merchandise from basement or rear storerooms. These are only two of the many applications possible with this versatile indoor or outdoor system. No special or expensive engineering is required for installation—your own plant maintenance men can quickly and easily route and connect your speaker cables; system is ready for use in a minimum of time

in a minimum of time.

System includes: Knight 8-Watt Amplifler; two University MIL Trumpets; Shure Model 215 "Starlite" Microphone with built-in wire stand. For operation from 110-120 volts, 50-60 cycle AC. Shpg. wt., 22 lbs. 

KNIGHT 8-WATT INDUSTRIAL PAGING SYSTEM WITH SPEAKER-BAFFLE UNITS. As above

but with attractive speaker-baffles for indoor use. Have better tonal quality for good music reproduction—suitable for use in classrooms, etc. Wt., 39 lbs. 51 PA 500. Only \$5.88 Down. NET..... 58.75



MIL TRUMPETS FOR OUTDOOR-INDOOR USE



SPEAKER-BAFFLES FOR INDOOR USE





## The INDOOR SYSTEMS FOR PERMANENT INSTALLATIONS

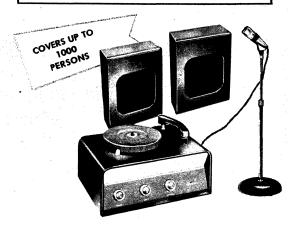
### Outstanding Sound Systems for Auditoriums, Churches, Clubs, etc.

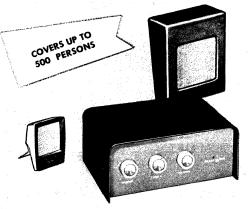


### OPTIONAL RECORD CHANGER

COLLARO TSC-740. 4-speed changer. Has E-V ceramic turnover cartridge with .0007" diamond and .003" sapphire styli. Worth \$69.45 if purchased separately.







### knight 32-Watt Deluxe Sound Systems

Less Phono

Designed for medium-power applicationsperfect for average-sized auditoriums, schools, churches and meeting halls. System price offers substantial savings over the Only \$13.00 Down

Only \$13.00 Down

Consider the control of the co

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" speakers. The Shure 5SS microphone is excellent for both voice and music. Has directional pick-up pattern. System includes 30-ft. speaker cables and plugs. Systems without phono or record changer are for 110-120 v., 50-60 cycle AC in those with either phono or record changer are for 60 cycle AC only. LESS PHONO OR RECORD CHANGER. Sans \$26.44. Wt. 72 lbs. 51 PA 515. Only \$13.00 Down. NET.

WITH COLLARO TSC-740 CHANGER. Save \$43.38. Quality 4-speed automatic record changer. Features fully automatic intermixing of 7". 10", and 12" records. Pick-up arm complete with E-V MDS26 hi-fi cartridge with diamond needle. Mahogany, blonde or walnut base—specify choice. Shpg. wt., 74 lbs.

### knight 16-Watt Permanent System

Less Phono



You'll find exceptional value in this Knight 16-watt sound system for permanent instal-lation. Although moderately priced, it offers

Action. Although moderately priced, it offers outstanding performance, exceptional operating convenience and rugged dependability. Covers audiences of up to 1000 persons and areas of up to 1000 persons and areas of up to 10,000 square feet. May be used with up to 15 speakers. You cost of components purchased separately! System includes: Knight KN-3016 16-Watt Amplifler; Two Argos Wall Baffles; Two 12" Quum 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 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 513. Only \$9.00 Down. NET.....

WITH 4-SPEED PHONO. Save \$14.98. Shpg. wt., 63 lbs. 

WITH COLLARO TSC-740 CHANGER. Save \$33.98. Mounted on Ma-

### knight 8-Watt System With Wall Speaker



Ideal for smaller permanent sound installations, the Knight "Little Giant" wall-mounted P.A. system is excellent for clubs and loung-

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, dependable 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-Wait Amplifier; Shure Model 215 "Starlite" Crystal Microphone; Quam 8" Heavy-Duty P.A. Speaker; and 8" Speaker Baffle. 8" Speaker Baffle.

## Republication 25-WATT MOBILE SYSTEM

PROVIDES UNIVERSAL P.A. COVERAGE WORKS FROM 6-VOLT, 12-VOLT OR 110-VOLT POWER



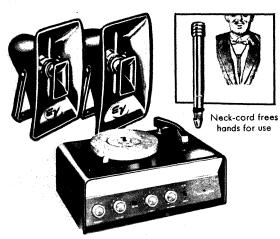




For Cars, Trucks, etc.

**Advertising** 

110-Volt AC Use



## knight Deluxe Mobile Sound System



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 all occasions. And it's priced to bring you giant savings over the cost of the individual components if purchased separately.

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.

tion now renting public address equipment.

P.A. System includes: Knight 25-Waft Mobile Amplifler, 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-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 12-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

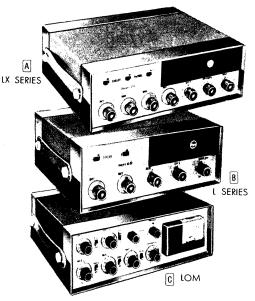
## Car-Top Speaker Platform

Exceptionally sturdy, weather-resistant Exceptionally sturdy, weather-resistant and heavily varnished wood platform. Easily supports even the largest speakers. Attaches by four non-slip vacuum cups. Flis roof contour of any car. Secured with straps and anchored by rubber-insulated clips to raingutter over car doors. Easily installed or removed. 7½x46°. Slpg. wt., 9 lbs. 93 DX 220. NET 645 93 DX 220. NET. ..... 6.45



Easy to Install

## **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: ±1.5 db, 20-20,000 cps. Distortion: Less than 2%. Hum: 60 db below rated output. Controls: 4—Gain; Mike-Phono switch; 2—Speech Filters: Off-On/Treble; Bass: Anti-Feedback. Output Imp: 4, 8, 16 ohms, balanced 25-v. line, 70-v. line. 5\%x16\%x13\%. For 110-120 v., 50-60 cycle AC.

LX60 60-WATT AMPLIFIER. Shpg. wt., 37 lbs. 

### "SUPERB" 30 AND 60-WATT FLEX-PAK AMPLIFIERS

B Ideal amplifiers for high-quality P.A. work. Has 3 independently controlled microphone channels (one convertible to phono). Phono input is equalized for all cartridges. Black and gray case with leather handle.

Response: ±2 db, 20-20,000 cps. Distortion: Less than 2%. Hum: 60 db below rate doutput. Controls: 3—Gain; Mike-Phono switch: Speech Filter; Off-On/Treble; Bass. Output Impedances: 4, 8, 16 ohms, balanced 25-v. line, 70-v. line, 60-watt, 5½x16½x13″, 30-watt, 5½x14½x13″. For 110-120 v., 50-60 cycle AC.

L60 60-WATT AMPLIFIER. Shpg. wt., 37 lbs. L330 30-WATT AMPLIFIER, Shpg. wt., 29 lbs. 

### "FLEX-PAK" ACCESSORIES

Stock No.	Type	Description	Use With	Lbs.	NET
91 SX 715 91 SX 717	LPA-4	Phono Top	L330	6	41.40
		-	LX60, LX30 L60 or LOM L330	6	41.40
		Locking Plates Locking Plates	LX60, LX30		4.65
99 S 184		Plug-in Mike Trans-	L60 or LOM	2	4.80
,,,,,,,,,		former. 200 ohms		1	10.50

### TYPE LOM PREAMP-CONTROL UNIT

T 165 OUTPUT TRANSFORMER. 500-ohm. Wt., 1 lb.

## **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 penciltype 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**

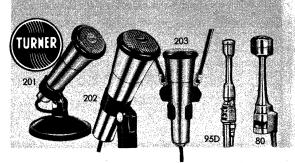
All of the microphone stands listed on page 323 have 5%"-27 threaded fittings. This is a standard thread that will fit any threaded mike or adapter. The microphone can be attached to either a desk stand or a floor stand, as required. All mikes are supplied less the



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.

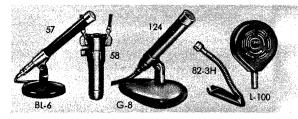
DYNAMIC MODELS. Response. 60-13,000 cps. Level, -53 db.

Stock No. Model	Accessory Supplied	Shpg. Wt.	List	EACH
93 \$ 390 201D 93 \$ 391 202D 93 \$ 392 203D	Desk Stand Floor Stand Adapter Lavalier Assembly	1 lb. 1 lb. 1 lb.	\$43,00	25.28

CRYSTAL MODELS. Response, 60-10,000 cps. Level. -51 db. 93 \$ 393 | 201 X | Desk Stand 93 \$ 394 | 202 X | Floor Stand Adapter 93 \$ 395 | 203 X | Lavalier Assembly 1 lb. \$28.00 16.46 1 lb. 1 lb.

MODEL 95D DYNAMIC. Attractively styled, all-directional high impedance microphone. Response, 100-10,000 cps. Level, -58 db. 73/4x11/8". With 20-ft. cable. Shpg. wt., 13/4 lbs. 

MODEL 80 CRYSTAL, Small, compact high impedance mike. Response, 80-7000 cps. Level, -54 db. Size, 41/4x1/8". Supplied with 7 foot shielded cable. Shpg. wt., 9 oz. .....9.38 99 \$ 525. List, \$15.95. NET ......



MODEL 58 DYNAMIC. All-directional lavalier type. Response, 60-

MODEL 124 DYNAMIC. Lightweight, all-directional; response, 50-13,000 cps. Level, -58 db. High impedance. Size,  $6\frac{1}{2}x1\frac{1}{3}6^{\prime\prime}$ . Shpg. wt.,  $1\frac{1}{4}$  lbs. 

MODEL 82-3H CRYSTAL. Model 80 (listed above) mike on special "hands free" chest holder. Fully adjustable flexible gooseneck. With

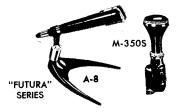
20-foot shielded cable. Shpg. wt., 11/2 lbs. 99 \$ 529. List, \$22.75. NET.....

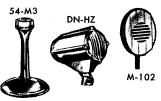
MODEL 98 DYNAMIC. Response, 65-11,000 cps. Cardioid pattern minimizes feedback. High impedance. Front-to-back ratio, 20 db. Level, -52 db. 6½x1½x1". Shpg. wt., 2 lbs.

POPULAR MIKE STANDS. All desk-type, except \*"3rd Hand" holder, as supplied with Model 82-3H mike.

frs. Type	For Use With	Wt., Lbs.	List	NET
BL-6	Model 57	1	\$7.50	4.41
G-8	Model 124	1	8.00	4.70
G-7	Model 98	1	8.00	4.70
3-H*	Model 80	1	5.00	2.94
	BL-6 G-8 G-7	BL-6 Model 57 G-8 Model 124 G-7 Model 98	BL-6 Model 57 1 G-8 Model 124 1 G-7 Model 98 1	BL-6 Model 57 1 \$7.50 G-8 Model 124 1 8.00 G-7 Model 98 1 8.00

### FAMOUS ASTATIC MICROPHONES





"FUTURA" SERIES DYNAMICS. Beautifully de-"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 3/4".27 swivel thread adapter for desk or floor stand mounting; lavalier assembly complete with belt clip and 20-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<sub>6</sub>x: 13/6". Shpg. wt., 12 oz.

99 \$ 413. List, \$79.50. NET..... 46.74

MODEL 888 "TEMPO". Response, 50-15,000 cps. Impedance and level: 50 ohms, -57 db; 200 ohms, -58 db; high impedance, -56 db. Size, 91/8x11/4". 11/2 lbs.

99 S 414. List, \$110.00. NET..... 64.68

MODEL 988 "VOGUE". Exceptionally uniform response, 40-20,000 cps. Impedance and level: 50 ohms. -57 db: 150 and 250 ohms, -58 db. 91½2x1½2". 1½ lbs. 90 20 99 \$ 416. List, \$150.00. NET..... 88.20

A-8 DESK STAND. For above. 5%"-27. 1½ lbs. 94 \$ 031. List, \$8.25. NET.......4.85

T-3



MODEL T-3 "PIONEER" CRYSTAL. Attractive all-directional high impedance microphone. Has metal seal crystal for protection against ras metal seal crystal for protection against moisture and humidity. Frequency response, 30-10,000 cps. Level, -51 db. Handy swivel hinge for tilting head. Standard 15-ft. cable included. Shps. wt., 2 lbs. 

MODEL G STAND. For use with T-3, DN-HZ, D-104, and other mikes. 5%"-27 thread. Has convenient grip-to-talk, slide-to-lock switch. Supplied with 6-foot shielded cable. Shpg. wt., 2½ lbs. 

MODEL JT-30 "SPOKESMAN" CRYSTAL. Bud-

MODEL M-350S "DYNAMIKE" DYNAMIC. MODEL M-3303 "DYNAMIKE" DYNAMICS STANDAM COMPAGENCE mike. Has 360°, all-directional pickup. Wide range response, 50-10,000 cps. Output level, -56 db. Complete with Off-On switch; interchangeable plug-socket connector. 5/8"-27 mounting. 18' cable. Shpg. wit 11b. nector. 3/8"-27 mounting. 18' cable. Shpg. wt., 1 lb. 99 S 419. List, \$46.50. NET...... 27.34

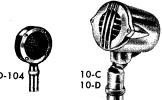
MODEL M-350 "DYNAMIKE" DYNAMIC. Same as above, less switch. Wt., 1 lb. 99 S 418. List, \$41.50. NET...... 24.40

MODEL 54-M3 "UNIVERSAL" CRYSTAL. All-directional mike. Response: 30-10,000 cps. Level. -51 db. With base. Wt., 2 lbs. 

MODEL DN-HZ "COMMENTATOR" DYNAMIC. Rugged all-directional high impedance mike. Level, -55 db. Response, 50-7000 cps. Standard ½"-27 thread mounting 10 ft. cable. Shpg. wt., 2½ 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 cps. Output level. -46 db. With 5-ft. shielded cable. Wt., 1½ lbs.

.5.70 99 \$ 442. List, \$9.70. NET



MODEL D-104 "PREMIER" CRYSTAL. High im-MODEL D-104 PREMIER CRISIAL HIGH IN-pedance mike. Popular among amateurs. Frequency response, 30-7,500 cps. Output level, -45 db. Produces the maximum amount of speech in the voice range. Metal sealed to protect crystal from moisture. Standard \( \frac{\pi}{2} - 27 \) mounting thread. Supplied complete with 5-ft. shielded cable. Shop, wt., 134 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, semi-directional ceramic element will withstand temperature range of -40°F to +300°F, and is immune to extremes of humidity. Output level, -54 db. Includes F-11 socket and cable connector with \%"-27 thread. 5' cable. Shpg. wt., 1½ lbs. microphone for amateur use, as 

response" mike as above, but with high-impedance dynamic element. Response: 300-3000 cps; level, -54 db. Complete with F-11 adapter and 5-ft. shielded cable. Shpg. wt., 1½ lbs. MODEL 10-D DYNAMIC. Same "tailored response" mike as above, but with high-

93 \$ 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.



### New Model 77 Cardioid Mike

- Positive, Anti-Feedback
- Uniform From 30-15,000 cps

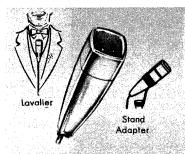
• Uniform From 30-15,000 cps

High fidelity uni-directional dynamic cardioid microphone. Features extremely high front-to-back cancellation of 18 db. for highest resistance to pickup from the rear—prevents feedback. Essentially flat frequency response, 30 to 15,000 cps. Operates efficiently and dependably under all ordinary conditions in hot or cold climates—may be used outdoors as well as indoors. "Pop" and "blast-proof" Mylar diaphragm is impervious to moisture, humidity, solvents and oils. Has output level of —52 db. Incorporates Off-On switch with "lock-on" feature. Multi-switch impedance selector: "L", 30 to 50 ohms; "M", 150 to 250 ohms; and "H", high impedance.

Equipped with standard 5½"-27 thread.

Equipped with standard 5/2".27 thread. Smooth non-reflecting satin chrome finish with black grille liner cloth. Size, 8x2/yx25/2". With 20-foot 2-conductor shielded cable. Shpg. wt., 3 lbs.

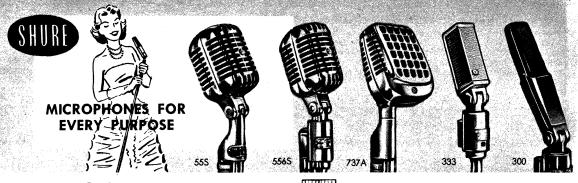
93 \$ 269. List, \$82.50. NET..... 48.51



### **Slim Crystal Microphones**

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, pressureast housing and contrasting black satingrille. 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\%"-27 mounting thread. Complete with 8-ft. shielded cable. Overall size, 4\frac{1}{2}\times 1\frac{1}{2}\times 
MODEL M-332-S. Same high quality crystal microphone as above with same specifications, but with built-in Off-On switch. Complete with lavalier cord assembly \%"-27 stand adapter and 8 feet of shielded cable. Shpg. wt., 1 lb. 





### **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 

MODEL 556S. 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 cps. Live rubber isolation unit in stand connector deadens vibrations from floor. With Cannon XL-3. Shpg. wt., 4½ lbs. 99 \$ 396. List, \$135.00. NET....

### "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 27.05 99 5 380. List, \$46.00. NET...



### **Uni-Directional Ribbon Mikes**

MODEL 333. An ultra-cardioid microphone made to

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: ± 2.5 db from 30 to 15,000 cps.

Minimizes pickup of moving props, scuffing feet, and other background 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. %%-27 thread. Non-reflecting bronze finish. 3%(x1)/%x1/%. Detachable. 20-ft. shielded cable with Cannon XL-3. Wt., 4 lbs. 99 \$ 456. List, \$250.00. NET.

MODEL 330. "Unitron" mike, similar to above. Less Voice-Music switch; satin-chrome finish. Shpg. wt., 4 lbs. 

### **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

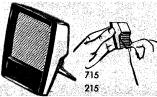
MODEL 300. Deluxe Bi-directional microphone. Shock mount; Voice-Music switch. Response, ±2.5 db from 40 to 15,000 cps. 30-50 ohms, 150-250 ohms and high impedance. Output is -57 db at high impedance Bronze finish, 5%-27 thread. Detachable, 18-ft. shielded cable with Cannon XL-3. 6x11/6x11/3z". Wt., 31/4 lbs. 

MODEL 315. As above, but less rubber shock mount and Voice-Music switch. Frequency response, 50-12,000 cps. Output, -57 db. Satin-chrome finish. Shpg. wt., 31/4 lbs.

99 \$ 398. List, \$89.50. NET....













### 51 "SONODYNE" DYNAMIC

Mike for recorder and P.A. use. Immune to effects of temperature and humidity. Frequency response, 60-10,000 cps. Multimpedance; 35-50 ohms, 150-250 ohm, and 

### **707A CRYSTAL MICROPHONE**

Popular, low-cost, semi-directional micro-Popular, Iow-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, ½".27 thread. Size, 2¾" dia., 3¼" long. 7-ft. cable. Shpg. wt., 2 lbs.

### 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. \\\%"-27 \text{ thread. Size, 2\\%" \text{ diameter, 3\\\%" long. 7' cable. Wt., 1\\\% lbs. 

### "STARLITE" MICROPHONES

MODEL 715. Extremely popular, high-output crystal microphone featuring smart, ultra-modern design. Has a semi-directional pick-up pattern and smooth response. Ideal for Amateur communications, home recording 

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, 60-10.000 cps. Black front, gray back. Polystyrene case. 35/x23/xc19/x²/y²/z²/5 single-cond. shielded cable. 1/2 lbs.

94 \$ 088. List, \$8.00. NET...... 4.70

### "COMMANDO" MICROPHONES

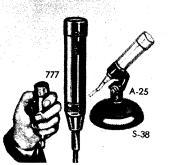
MODEL 415. Slim-grip, controlled-magnetic, high-impedance mike. Has all-directional pick-up pattern. Response, 60-10,000 cps. Output level is -55 db. Rugged, die-cast 

MODEL 420. All-directional, controlledmagnetic lavalier mike. Frequency response from 60 to 10,000 cps. Output is -55 db. Dual impedance; 150-to-250 ohms and high impedance. Gray finish polystyrene case. 20-ft., 2-cond., shielded cable, and lavalier cord with clip. 311/6x11/8". ½ lb.

MODEL 430. All-directional, controlled-MODEL 430. All-directional, controlled-magnetic mike with press-to-talk switch. Response, 60-10,000 cps. Output. —55 db. Dual impedance; 150-to-250 ohms and high impedance. Satin-chrome, die-cast metal case. Detachable, 15-ft. 2-cond. shielded cable. 611/6" long; dia. of head. 11/4"; dia. of handle, 11/6". With cover plate (may be attached for "On" operation), 5/6"-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°) 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**

MODEL 525 SIUDIO MICKOTTONE
All-directional, professional dynamic microphone. Dynamic range of 125 db. Response, ±2.5 db from 40 to 15,000 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%"-27 thread stands, and detachable 20-ft. shielded cable with Cannon XL-3. 8½" long and 1½" diam. Wt., 3¼ lbs. 99 \$ 454. List. \$200.00. NET. .... | 17.60

99 S 454. List, \$200.00. NET..... 117.60

### **MODEL 535 SLENDYNE MICROPHONE**

Moderately-priced, all-directional dynamic Moderately-priced, all-directional dynamic microphone. Especially suitable for public address applications. 60-13,500 cps. Builtin switch for selecting output impedances of 50-250 ohms, and high impedance. Output. —61 db. With swivel adapter. ½"-27 thread. Detachable, 18-ft., 2-conductor shielded cable with Cannon XL-3. 1½" diameter and 71½" long. Shop wt., 3 lbs. 99 \$ 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 on thoor 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 cps. Output, -62 db. High impedance. Satin-chrome finish. Detachable, 7-ft. cable. With neck-strap and holder for ½".27 thread stands. Size, 4½x1". Shog, wt., 1 lb.

99 \$ 616. List, \$25.00. NET. .... 14.70

-38 BASE. For above. Wt., 11/2 lbs. 94 S 038. List, \$4.50. NET...... 2.65

MODEL A-25 SWIVEL ADAPTER. Fits S-38 stand above. 5/8"-27 thread. Swings 90° 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 520SL, above right. Shpg. wt., 11/4 lbs. 94 S 035. List, \$6.50. NET.....

## **Communications Microphones**

MODEL 520SL "DISPATCHER." Ruggedly built. controlled-magnetic microphone. Designed to handle the most severe field requirements of paging and dispatching systems. Supplied or 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., 2-conductor shielded cable. 9½" high; 5" base. Shpg. wt., 5 lbs.

99 S 388. List, \$45.00. NET. .... 26.46

MODEL 505C. Similar to 505B, but high impedance. Output, -50.5 db. With 5-ft. 3-cond. (one cond. shielded) cable.

99 S 389. List, \$32.00. NET. ...... 18.81

MODEL A86A TRANSFORMER. For running lines from low-imp. mikes to high-imp. in-puts. Matches 35-50 or 150-250 ohms. ±1 db. 20-20,000 cps. 27%x15/8". 2 lbs.

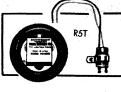
41 S 917. List, \$17.50. NET......10.29













### REPLACEMENT PARTS AND CONVERSION KITS

MODEL R5 MICROPHONE CARTRIDGE, High-

MODEL R7 MICROPHONE CARTRIDGE, High-MODEL R' MICROPHONE CARRIDGE. High-impedance crystal type. High output and very smooth response. Response, 50-10,000 cps. Output,—50 db. Used in Shure 707 A. 708 A and most other Shure crystal mikes. Depth, ¾"; dia. with rubber ring, 2¾"; dia. less ring, 13½". 5 oz.

41 S 945. List \$8.25. NET..... 4.85

MODEL C15C RETRACTING MICROPHONE CORD. Heavy, rubber-covered 4-conductor (not shielded) cable for use in mobile trans-C15C RETRACTING MICROPHONE mitters, etc. Extends to length of 5-ft.; only 1-ft. long when retracted. Color-coded wires with tinned ends. Replaces cables in the following Shure mikes: CB10, CB10B, CB10B, CB12C, CB12, CB12A, CB12C, CB15, CB15B, CB15C, CB15D, and all "100" series. Shpg. wt.. ½ lb. 41 \$ 932. List, \$6.25. NET ..... 3.67

NEW MODEL RST MICROPHONE CON-VERSION KIT. Converts any Shure hand-held communications mike—or any micro-phone having similar dimensions—into a rugged, high-intelligibility, controlled-mag-netic mike. Kit consists of a controlledmagnetic cartridge and a transistor 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.

MODEL CIOC RETRACTING MICROPHONE CORD. Tinsel-coiled microphone cord. Ideal for use with any dynamic or magnetic microphone where a shielded cable will premicropnone where a snielded cable will prevent 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., ½ lb. 

MODEL 710S "REX". Low-cost, semi-directional crystal microphone for home tape retional crystal microphone for home tape recorders, Amateur radio, etc. Response, 60-9000 cps. Output is -50 db, high impedance. Off-On switch. 7-ft. cable. Handsome burgundy-red metallic finish. Size, 3½x2½/½x1½%. 5½~27 thread adapter. Shpg. wt., 1½ lbs.

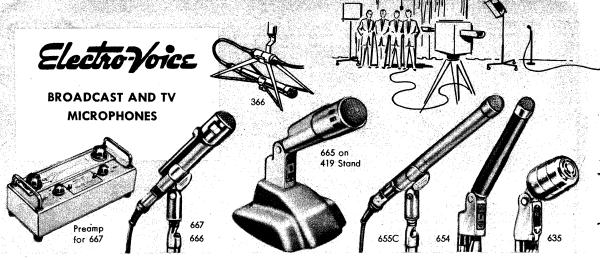
99 S 387. List, \$14.00. NET. . . . . . . . . . . . . 8.23

**LOW-COST MICROPHONES** 

MODEL 710A "REX". Same as Model 710S microphone described above, but without Off-On control switch. 

MODEL 510S "HERCULES". Semi-directional 

MODEL 510C "HERCULES". As above, but without Off-On control switch.



## Variable "D" Cardioid Dynamic Mikes

MODEI 657. 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 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 13/4x7½"; preamp, 9x3½x3¹½²". Supplied with 50-ft. and 20-ft. broadcast-type cables and connectors, ½° pipe thread with ¾°-27 adapter. Shpg. wt., 4 lbs. 

MODEL 366. BOOM SHOCK MOUNT. For 666 or 667. Wt., 12 oz. MODEL 524 WIND SCREEN. For 666 or 667, Minimizes wind effect during boom movement or when mike is used outdoors. Wt., 2 or 

MODEL 665. Similar in design and function to Model 666 mike, but for less exacting applications. Response, 40 to 15,000 cps. Output, -55 db. Recessed switch permits quick selection of 50 or 250 ohms. Dia., 17%; 77%; long. 18-ft., 3-conductor shielded cable and adapter for ½" and 5%".27 stands. Shpg. wt., 2 lbs. 99 \$ 530. List, \$150.00 NET.....



MODEL 646. All-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 cps. Recessed screw high-frequency adjustment. Output level, -57 db. Lathe-turned aluminum case in non-reflecting gray. Dia., 17; 64/2 long. With 30-ft. cable, carrying bag, neck cord, belt clip. Shpg. wt., 1 lb.
99 \$ 584. 50-Ohm Impedance. List
99 \$ 584. 50-Ohm Impedance Each \$147.50 FACH 86.73

99 \$ 537. 250-Ohm Impedance. Each, \$147.50. EACH... 86.73

NEW MODEL 649A. An ultra-small lavalier mike—only ¾" in diameter and 37%" long. Weighs only 3 ounces. Response, 60 to 12,000 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 \$ 476. List, \$105.00. NET.....

## Famous "Slim Trim" Dynamic Studio Mikes

MODEL 655C. "Slim-Trim" dynamic mike for highest quality professional recording and broadcasting. Wide frequency response, all-directional 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 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., 11/4", 103/" long. With clamp-on adapter for 1/2" and 3/"-27 stands; detachable, 20-ft., 3-conductor, shielded cable. Shpg. wt., 11/4 lbs. 117.60 99 \$ 579. List, \$200.00. NET.....

MODEI 654. Moderately priced mike, similar to 655C, but for less critical applications. All-directional. Response, 50 to 15,000 cps. Output, -55 db, Switch selects 50 or 250-ohm impedances. Diameter, 1½," 10½, "long, ½," 27 thread. With detachable, 18-ft., 3-conductor shielded cable, Shpg, wt., 1½ lbs.

99 \$ 583. List, \$100.00. NET.....

### 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 MODEL 633. Sturdily built and low in price, the Model 635 has a reputation as a studio "workhorse." Response is uniform, 40 to 15,000 cps. Level. -55 db. Recessed switch selects 50 or 250-ohm impedances. Cast zinc, chrome-plated case. \%'-27 thread. Dia., 2"; 6\%'' long. With detachable, 18-ft., 3-cond. shielded cable. 

### **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.



### Variable "D" Dynamic Microphone For Finer Public Address,

Tape Recording & Communications Use

y 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 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 



### 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° swivel. Response, substantially flat from 60 to 15,000 cps. 150-ohm or high impedance (connected for high-impedance output when shipped). Output level, —55 db. Chrome-plated steel case. 1½" dia., 10½" long. ½"-27 thread. On-off switch. With detachable, 18-ft. 2-conductor shielded cable. Shpg. wt., 2 lbs.

99 \$ 581. List. \$72.50. NET.

99 \$ 581. List, \$72.50. NET.....

MODEL 636G. As above, but finished in gold. 

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 cps. Output level, -56 db. Choice of 150-ohm or high-impedance output (connected for high-impedance when shipped). On-off switch. Chrome-plated. Dia., 15/6"; 71/2" long. 5/6"-27 thread. With detachable, 18', 2-cond. shielded cable. Wt., 2 lbs.

MODEL 630 HIGH-OUTPUT DYNAMIC. All-directional mike designed MODEL 430 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 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"; 61/4" long. 5%"-27 thread. Shpg. wt., 2 lbs.

99 \$ 347, 250-Ohm Impedance, List NET 99 S 336. High-Impedance. EACH.....30.87 Each, \$52.50

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. High-impedance output. Chrome-plated case, 23/x33/x63/4" long. 5%"-27 thread. With 18-ft, detachable cable. Shpg. wt., 21/2 lbs. 99 S 554. List, \$32.50. NET.....

### **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 cps. Output level, -55 db. Handsome satin-chrome finish, die-cast zinc case. Size, 1½x53½". With 18 ft., shielded, single-conductor cable. Shpg. wt., 1½ lbs. 29.II 

### 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 cps. Output level, -57 db. 150-ohm or high impedance. Black aluminum with chromium trim. Dia., 1"; 5" long. Supplied complete with neck cord, belt clip. 2 wrenches and detachable, 18-ft. 2-conductor cable. Shpg. wt., 11% lbs.

99 \$ 538. 150-Ohm Impedance. List, NET RECH 48. 51

99 S 585. High-Impedance. EACH..... 48.51 Each, \$82.50

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. 1½″ dia., 3½″ long. With neck cord, clip, 18-ft. cable. 12 oz. 

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.....

MODEL 502 MATCHING TRANSFORMER. Allows connecting long-line, low-impedance mikes to amplifiers with high-impedance input. Supplied complete with connector and 2-ft. single cond. cable. Shpg. wt., 1 lb. 

### Mobile Communication and Intercom Microphones

MODEL 648 DYNAMIC. Extremely versatile, MODEI 648 DYNAMIC. Extremely versatile, all-directional microphone. For broadcast, TV, intercom, paging or P.A. use. Built-in connector and mating 3½°-27 threaded adapter allow mounting on rigid or flexible booms, desk or floor stand. Response is uniform from 50 to 10,000 cps. Output, -58 db. Impedance, 250 ohms. Aluminum case; non-reflecting gray. Dia., 12°,6½″ long. With adapter and 2 wrenches. Less cable. Shpg. wt. ½ lb.
99 S 539. List, \$56.00. NET..... 32.93

MODEL 448 SWIVEL BOOM MOUNT. For use MODEL 448 SWIVEL BOOM MOUNT. For use only with Model 648 mike. Holds mike 111/6" off mounting surface. Male connector matches connector on mike. 62° elbow bend. Extends 4" below mtg. surface. 2½" dia. mtg. base. Chrome-plated. 1½ lbs.

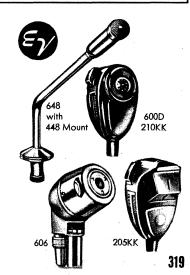
99 SX 540. List, \$24.00. NET . . . MODEL 606 DIFFERENTIAL DYNAMIC. For in-MODEL 606 DIFFERENTIAL DYNAMIC. For intercom use. Close-talking, noise-cancelling. Head is fixed at 22° angle. Response, flat from 100 to 5000 cps. Output level at ½."

-55 db. High impedance. Chrome-plated case, 2x3½x2½". ¾" -27 thread. With detachable 18-ft. cable. Wt., 2 lbs.

99 \$ 564. List, \$52.50. NET.....30.87

MODEL 600D DYNAMIC, Extra-rugged, handmobile soud by Manic. Extra-rugged, nand-held 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, 21/4x2x4". 5-ft. cable. Wt., 10 oz.

99 \$ 589. List, \$35.00. NET MODEL 205KK DIFFERENTIAL CARBON. Close-MODEL 205KK DIFFERENTIAL CARBON, Close-talking, 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 ½", -50 db, Press-to-talk switch. Black phenolic case, 2½x2½x4". With mounting bracket, 5-ft. coiled 3-cond. cable. Shpg. wt., 11b. 99 \$ 590. List, \$45.00. NET..... 26.46





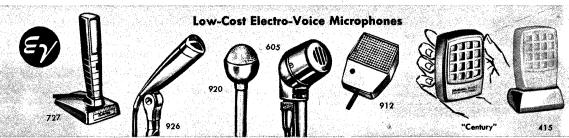
### LATEST MICROPHONES AND

### 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-ft, cable, screw-type connector and phone plug adapter. It can be readily connected to 90% of all tape recorders—standard-thread base (%"-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.



NEW MODEL 727 CERAMIC, Response, 60-

MODEL 920 "SPHEREX" CRYSTAL, 60-7000 cps; all-directional. Minimum breath "pop". Output, -50 db. Size, 2½" diameter. 18-ft. cable. Shpg. wt., 1 lb. 

MODEL 912 CRYSTAL. Plastic-cased; safe for use with AC-DC units. Response, 70-7000 cps. 5-ft. cable. Wt., 1 lb. 99 \$ 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. 3/8"-27 stand adapter; 5-ft. cable. 1 lb.

MODEL 715 "CENTURY" CERAMIC. Humidity-

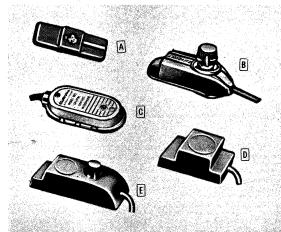
MODEL 715-S "CENTURY" CERAMIC WITH "ON-OFF" SWITCH. Incorporates the same fine construction as the Model 715 at left, but is equipped with slide-to-talk. On-Off switch. Ideal for conference use. home tape recording, paging systems, etc. Heat-and-humidity proof ceramic element. Same specs as the Model 715.

93 \$ 227. List, \$15.00. NET...... 8.82

MODEL 615 "CENTURY". Dynamic type. For rugged use; response. 80-8000 cps. High impedance; output, -55 db. 

MODEL 415 DESK STAND. For "Century" microphones. Holds mike at 15° tilt for desk use. Shpg. wt., 6 oz.

### Contact-Type Microphones for Musical Instrument Amplification



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. AMPERITE MODEL SKH. Hi-Z magnetic; response, 40-9000 cps. Output, -40 db. 34x3x1". 12-ft. cable. Shpg. wt., 10 oz. 

MPERITE MODEL KKH. As above, but has volume control 

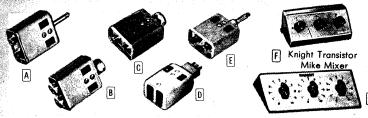
E-V MODEL 805, 100-5000 cps. Hi Z. 15-ft. cable. 10 oz. 

[D] KNIGHT CONTACT MICROPHONE. An unusual value. Response, 50-10,000 cps. High-impedance magnetic type. With 12-ft. cable and screw-type connector. Shpg. wt., 1 lb. 

As above, but with built-in volume control. 

MODEL 75-MC-1P PHONE PLUG ADAPTER FOR KNIGHT MICRO-PHONES. (Not illustrated). Shpg.wt., 2 oz. 41 H 962. NET.....

## ACCESSORIES FOR ALL APPLICATIONS





Pentron CA-14 Electronic Mixer

Knight Compact Mike Mixer

### Switchcraft "Mini-Mix" Audio Mixers

Accommodate 2 high-impedance inputs. Allow mixing 2 mikes, contact mike and record player, etc. 21/16x113/16x11/16". Wt., 4 oz.

Stock No.	Fig.	Type	Description	NET
41 H 953	Α	310	Has phone jack inputs with phone plug output. Fits std. jacks.	4.67
41 H 699		8266	For 310 above. Adapter for recessed jacks. Mixer. Has microphone connector inputs, and	2.20
41 H 954	В	320	outputs with std. mike connectors.	4.67
41 H 658	С	315	Phono jack inputs with mike connector output. Fits std. connector or No. 44 Adapter.	4.67
41 H 686	D	325	Mixer. For recorders and amplifiers using Jones- type connectors. Fits recessed connectors on	
			early Webcor tape recorders, etc.	5.85
41 H 988	Α	311	Similar to 310, but longer 2-cond. plug output.	5.26
41 H 989	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 (40,000 ohms) impedance by removing namelate and changing linkage but to impedance do the property of the control of the plate and changing linkage bar to impedance desired.

Response, 40 to 13,000 cps. Output, —55 db. Employs micrometal alloy diaphragm. unaffected by temperature extremes. Duraluminum case; gold and black anodized finish. XL-3-11 latch-lock plug. 54".27 threaded swivel. Complete mike, with swivel and slide-lock, weighs 8 oz. 1x814". Shpg. wt., 12 lbs.

MODEL ND-1-M DESK STAND. Cut-away design permits use of mike in vertical position. Satin black finish. 3" high. Shpg. wt., 1 lb. 

### 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 low-frequency response. Mylar plastic diaphragm is unaffected by temperature or humidity extremes. With clip-on stand and 6-ft. shielded cable. Less plue. Polished chrome cases, 1½6x4½." cable. Less plug. Polished chrome cases, 15/6x47/8".

MODEL D204 DYNAMIC. Low impedance. Response, 80 to 8500 cps. Output, — 57 db. Shpg. wt., 9 oz. 91 \$ 593. List, \$17.00. NET
MODEL D204TD DYNAMIC. High impedance55 db output. 9 oz. 91 \$ 594. List, \$23.00. NET
MODEL 8204 CERAMIC. High impedance. Response, 80 to 7500 cps. Output, — 60 db. Shpg. wt., 6 oz. 91 \$ 595. List. \$16.00. NET
MODEL X204-M CRYSTAL. High impedance. Response, 80 to 9500 cps. Output, -58 db. Shpg. wt 6 oz.

### Quality Microphone Mixers

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. 1x3x8". Shpg. wt., 1 lb. 93 \$ 283. NET.....

KNIGHT COMPACT MICROPHONE MIXER. Adds new versatility to any P.A. system at modest cost; permits mixing of three high-impedance 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 1½x3½x7¾". Shpg. wt.. 1 lb. 93 \$ 282, NET...

PENTRON CA-14 ELECTRONIC MIXER. Professional-type mixer for 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 cps. Size, 8x6x5". For operation from 105-125 volts, 60 cycle AC. Shpg. wt., 5 lbs. PENTRON CA-14 ELECTRONIC MIXER. Professional-type mixer for





### **New Hamilton TR-2 Transistorized** Mike-to-Grid Matching Network

- Permits Use of Balanced-Line Mikes
- Cable Lengths May Be Up to 1000 Feet

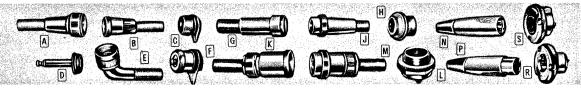
New transistorized matching network for line-to-grid applications. New transistorized matching network for line-to-grid applications. Matches low-impedance dynamic, ribbon or magnetic microphones to high-impedance inputs on home or semi-professional tape recorders, hi-fi amplifiers, P.A. amplifiers, 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 feet 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/N ratio: 50 db. Hum is zero. Distortion is less than 0.7%. Response, ±¾ db.20 to 20,000 cps. Accept Amphenol 91MC3M connector; phono pin plug output jack. 2¾43½x1½". With batteries. Shpg. wt., 1 lb. 93 S 278, NET.....

### **Switchcraft Miniature Mike Connectors**

New "Mini-Con" connectors designed for use with single-conductor New "Mini-Con" connectors designed for use with single-conductor and a shield). Ideal for lapel mikes, musical instruments, etc. Half the size of standard mike connectors. Av. net wt., ¼ oz. Nickel-plated brass body. 5501F has removable coupling ring for quick change of female to male type. 5501MP mounts in ¾6" dia. hole. Av. shpg. wt., 2 oz.

- 5501F. STRAIGHT CONNECTOR. Female type coupling ring. 41 H 947, NET..... 5501M. STRAIGHT MALE CONNECTOR. 41 H 948, NET...
- 5501MP. PANEL CONNECTOR. Male type.
  41 H 949. NET.....

## Microphone Connectors and Accessories



### **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. \( \frac{5}{6}''. \) 27 threads; \( \frac{8}{3}'' \) mounting holes. Av. shpg. wt., \( 3 \) oz.

Stock No.	Туре	Fig.	Description	NET
41 H 962 41 H 959	75-MC1F 75-MC1M *75-PC1M 75-MC1P 75-MC1FA *75-CL-PC1M	A B C D E F	Combination cable plug & jack Cable plug Chassis receptacle, non-shorting Phone plug adapter 90° angle cable jack Chassis receptacle, closed circuit	21¢ 22¢ 30¢ 63¢

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. shgs. wt., 3 oz.

Stock No.	Type	Fig.	Description	NET
42 H 080	*80-F	G	Female cable jack	40¢
42 H 084	*80-C	н	Female chassis receptacle	37¢
42 H 081	*80-M	J	Male cable plug	47¢
42 H 082	†80-MC2F	G	Female cable jack	43¢
42 H 085	†80-PC2F	H	Female chassis receptacle	40¢
42 H 083	†80-MC2M	J	Male cable plug	47¢

TYPE 75-CCC1 CAP AND CHAIN. (Not illustrated.) For dust-sealing of chassis-mounted. Series 75 and 80 receptacles. Shpg. wt., 3 oz. 24c 40 H 381. NET

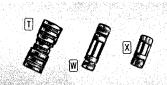
NOTE: Amphenol Type 75-MC1F (Fig. A) fits all Knight public address amplifiers. When splicing two cords, use two 75-MC1F connectors—they can be used as plugs or jacks.

SERIES 91. 3- AND 4-CONTACT TYPES. Microphone connectors for portable equipment. Polarized. Clamps eliminate stress on soldered connections. \*3-contact type. 44-contact type. Shgx. wt., 3 oz.

Stock No.	Туре	Fig.	Description	NET
41 H 970	*91-MC3F	K	Female cable jack	64¢
41 H 972	*91-PC3F	L	Female chassis receptacle	51¢
4 H 971	*91-MC3M	M	Male cable plug	64¢
41 H 977	†91-MC4F	K	Female cable jack	67¢
41 H 978	†91-PC4F	L	Female chassis receptacle	52¢
41 H 976	†91-MC4M	M	Male cable plug	66¢

"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.

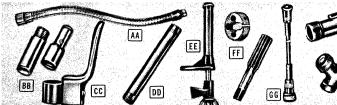
Stock No.	Туре	Fig.	Description	NET
42 H 065 42 H 066 42 H 067 42 H 068	*91-853 *91-854 *91-855 *91-856	N P R S	Male cable plug Female cable plug Male chassis receptacle Female chassis receptacle	1.06 1.24 .67
42 H 069 42 H 070 42 H 071 42 H 072	†91-857 †91-858 †91-859 †91-860	N P R S	Male cable plug Female cable plug Male ghassis receptacle Female chassis receptacle	1.00



### SWITCHCRAFT SOLDERLESS MICROPHONE CABLE CONNECTORS

TYPE 2501FT. Double-female connector 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. TYPE 2501FT. Double-female connector

X TYPE 2501FS. Same as 2501FL, but less cable clamp. Shpg. wt., 5 oz.





### M: ----ccessories

Micropho	ne	Α
ATLAS GN-13 FLEXIBLE GOOSE NECK. For any mike stand or fiture. Provides complete flexibility of mike positioning. %"-male and female threads. 13" long. Wt., 1 lb. 94 S 027. List, \$2.75. NET	21	-[
MODEL GN-19 FLEXIBLE GOOSE NECK. 19". 1½ lbs. 94 \$ 075. List, \$3.75. NET		[
BB ATLAS SO-1 SNAP-ON MIKE ATTACHMENT. Shpg. wt., 1 lb. 94 S 017. List, \$2.75. NET	2	[
diameter, Durable chromium finish. Shpg. wt., ½ lb. 94 \$ 076. List, \$2.50. NET.	7	(
DD ATLAS AD7 EXTENSION ROD. Rigid, lightweight tubing 3" lor Each end has \( \frac{5}{4}\)".27 male thread. Shpg. wt., 3 oz.  41 S 913. List, 60c. NET		[
DD ATLAS AD8 EXTENSION ROD. 6" long. Shpg. wt., 4 oz. 41 S 907. List, 70c. NET	lc	4
ATLAS BC-1 BRACKET CLAMP. 6" stem. Shpg. wt., 1 lb. 94 S 028. List, \$3.50. NET	6	-
ATLAS SW-1 GYROMATIC SWIVEL. (Not illustrated.) Locks mice phone at any desired angle. 4½" long. Shpg. wt., 1½ lbs. 94 S 067. List, \$4.50. NET		
FF MIKE STAND THREADING TOOLS. For tapping stands, tubin fittings, connectors, etc., with 5/8"-27 thread. 5 oz.		-

EXTENSION CORD. 25-ft. cable with 75MC1F, 75MC1M connectors. Shpg. wt., 2 lbs. 41 \$ 911. NET.....

HH AMPHENOL 75-MC1S SWITCH. Push-to-talk switch with lock. Require no soldering; standard threads. Wt., 6 oz. 41 H 950. NET..... .....1.08

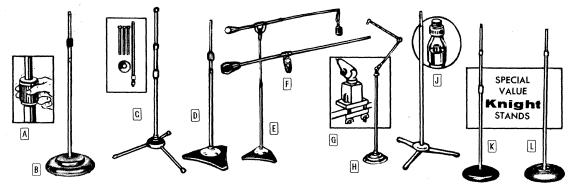
"TYPE MIKE CONNECTOR, 2 males, 1 female, 2 oz. 

"SAVE-UR-MIKE" COVER. Plastic-coated celanese. 2 oz. 

SWITCHCRAFT MODEL 329 MIKE VOLUME CONTROL. For high-impedance microphones having single-conductor detachable cable. Screws in between mike and cable. Wt., 6 oz. 41 H 946. NET.....

ATLAS MIKE STAND ADAPTERS. Wt., 2 oz. except \*, 6 oz.

Stock No.	Туре	Fig.	Description	NET
41 5 928	AD1	MM	For adapting RCA mikes. ½" male to ½"-27 female.	50¢
94 S 060	AD2	NN	1/8" pipe female to 5/8"-27 male.	35€
94 5 061	AD3	PP	1/8" pipe female to 5/8"-27 female.	35¢
94 5 062	AD4	NN	3/4" long. 5/8"-27 male thread.	18¢
94 S 063	AD5	PP	5/8"-27 to 5/8"-27 female coupling.	35¢
94 S 066	AD10		Adapts W.E. mikes. 5/8"-24 female	1
		1	to 5/4"-27 female.	71¢
41 5 906	AD11*	SS	Mike base flange. Female. 5/8"-27.	41¢
41 5 905	AD12*	RR	Mike base flange. Male. 5/8"-27.	416



## Quality Microphone Floor Stands and Booms

AB ATLAS MS-11C PLOOKSIAND. Dow-cost microphone stand with high-quality features. Equipped with "Full Grip" clutch ATLAS MS-11C FLOOR STAND. Low-cost mechanism—allows stand to be quickly and quietly adjusted to any height from 35" to 65". Excellent for use in school auditoriums, 

G ATIAS 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" to 64". Collapsed size, 22½". Self-leveling legs tipped with rubber—prevent skidding. Attractive chrome-plated finish. ½"-27 thread. Shpg. wt., 4 lbs.

24.5 X 016.2 List \$12.50 MET.

94 SX 016-2. List, \$12.50. NET.... 7.35

D ATLAS MS-25 "AIR-LOCK" FLOOR STAND. Features "air-lock" cushioning of telescoping section. Controlled escape of air scoping section. Controlled escape of air allows only slow, quiet collapse into lower section. Microphone stand extends from 37" to 66". Heavy base is 17" dia.; provides firm support for boom arm attachment. Will not tip even with a heavy microphone. Chrome-plated stem. Gray-finished base. 5%-27 thread. Shpg. wt. 20 lbs. 94 SU 029-2. List, \$25.00. NET.... 14.70

E ATLAS BS-36 PROFESSIONAL BOOM STAND. Similar to Model MS-25 (left), but with removable 62" 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" to 72". Slpg. 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%"-27 thread to a boom-type stand. Permits a quick, fixed positioning of micro-phone anywhere within a 5-ft. circle. Heav-ily chrome-plated boom attachment is 32" 

FLEXO MODEL 3 MIKESTER. Has a sturdy 40" floor stand and two 18" easy-action swinging arms. Arms can be adjusted to 

G FLEXO MODEL 1 MIKESTER. Similar to above, but less 40" floor stand. Has two bolts; unit may be clamped or screw-mounted to any surface up to three inches thick. Shpg. wt. 434 lbs. 94 SX 044. List, \$14.00. NET ..... 8.23

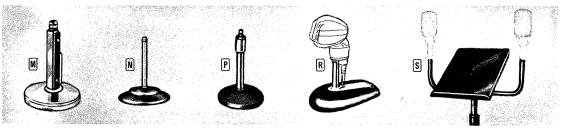
E-V 425 FLOOR STAND. Features singlebutton is released, shaft locks automatically. Shaft can be rotated without any adjustment. Adjustable from 37" to 66". Legs fold back for storing and carrying. Satin chrome finish. Die-cast base has 17" spread. 5%"-27 thread. Shpg.wt., 9 lbs.

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
- | THREE-SECTION MODEL. An outstanding value in a highly popular, compact morophone stand—carrying height only 25°. 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° to 61°. Stem is heavily chrome-plated for long wear. Sturdy, detachable, cast-iron base has 10° diameter. Gray, wrinkle finish. Standard ¾"-27 thread. Shpg. wt., 10 lbs. THREE-SECTION MODEL. An outstanding

ECONOMY MODEL. As above, but two-section type. Adjustable from 35" to 64". Shpg. wt., 10½ lbs. 94 SX 004-2. NET.... 5.85



## Microphone Desk and Banquet Stands

M E-V 428 TOUCH-TO-TALK STAND. Deluxe versatile microphone M E-V 428 TOUCH-TO-TAIK STAND. Deluxe, versatile microphone desk stand with touch-to-talk feature. Has 6½" touch-to-talk 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., 5½". 5½". 5½"-27 thread. Shpg. wt., 2 lbs.
94 \$ 053. List, \$17.50. NET...... 10.29

N ATLAS DS-5 DESK STAND. Low-cost desk stand. Chrome-plated stem. 4" high.  P ATLAS DS-7 ADJUSTABLE DESK STAND. Height adjustable from 8" to 13". Uses full-sized clutch mechanism for quick, smooth change of stand height. 2-section stem uses 5%" and 7%" tube combination. All tubular sections finished in chrome. Gray crackle base, 6" diameter. Rubber base pads prevent scratches. Standard 5%"-27 thread. Shpg. wt., 3 lbs.
94 \$ 014. List. \$5.00 NFT

94 \$ 014. List, \$5.00. NET....... 2.94

R ATLAS DS-10 DESK STAND. Modern, functional 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. %2-27 thread. Shpg. wt., 1½ lbs. ATLAS DS-10 DESK STAND. Modern, func-94 \$ 073. List, \$5.00. NET..... 2.94

S ATLAS TB-1 DUPLEX MIKE MOUNT. For 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. 9x11" desk of molded composition; black finish. 3/6"-27 thread. Shpg. wt., 21/2 lbs.

94 \$ 072. List, \$10.00. NET..... 5.88

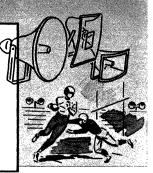
ATLAS TS-7 BANQUET STAND. For use with TB-1 duplex mount, above. Ideal for speakers' table. Chrome-plated. Height: Extended, 17½", closed, 10½". All chrome. Base dia., 10". Wt., 11 lbs.

94 \$ 074, List, \$10.00. NET..... 5.88



## How to Select a **Public Address Speaker**

It's easy to select and install P.A. speakers. Study the time and labor-saving suggestions below. If you need further information; write to Allied's Audio Division. Our audio experts will aid you by recommending specific components—specially suited to meet your individual needs.



- QUIET INDOOR AREAS such as offices, classrooms, reception R 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" and 12". The 8" speakers provide excellent reproduction of voice and music; however, in applications where extended low frequency response is necessary, 12" speakers are recommended. The wattage ratings given for speakers indicate the maximum power (volume level) they will handle without distortion. Average size rooms, offices atc. parendly require no more than. 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 trumpet-R NOISY INDOOR AREAS AND OUTDOOR USE select a trumpet-type 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 pene-trating power increase. Unless otherwise specified, trumpet-type speakers require drivers. There is no advantage in selecting a driver with better low frequency response them the horn it is 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. W MANY SPEARRS 10 OSE 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 extremely 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" projector 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°, 41" air column. Response, 150-10,000 cps. Mouth diameter, 2034"; length, 1476", All-metal construction. Handsome beige finish. Less driver 147/6". All-metal construction. Had (listed below). Shpg. wt., 123/4 lbs.

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° corner with mouth outlines in a continuous arc. Covers 80° sound angle, 41" air column. Response, 140-10,000 cps. 26x13½" mouth; 165%" long. Fiberglas-reinforced plastic construction; virtually indestructible. Handsome tan finish. Supplied with steel "U" bracket. Less driver (listed below). Shpg. wt., 15 lbs.

#### 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.	NET EACH
93 D 526 93 D 527	D-30 DD-100	30 100		75-7000 75-10000	41/16" 55/16"	41/2" 81/2"	3½ 8	16.17 56.74

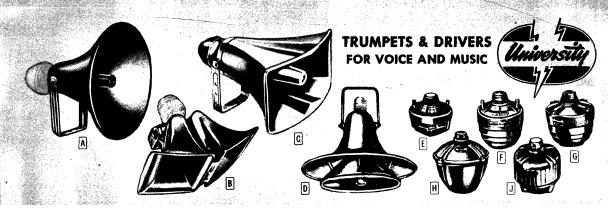
#### PROJECTORS—COMPLETE WITH DRIVERS

MODEL VH-91. Compact projector with excellent speech reproduction qualities. Ideal for placement near areas of extreme noise. Maximum angle coverage, 100°. Frequency response, 300-7000 cps. Power rating, 15 watts. Impedance, 8 ohms. Mouth diameter, 87%. Length, 75%. Corrosion-resistant metal shell has attractive tan found with universal-type mounting brackets. Built-in driver com-Length, 75%. Corrosion-resistant metal shell has attractive tan finish. With universal-type mounting brackets. Built-in driver completely protected from effects of weather. Shpg. wt., 3% lbs. 95 D 035. List, \$35.80. NET.....

MODEL HF-100. Extremely versatile high-fidelity projector for indoor or outdoor use. Reproduces voice and music with exceptional clarity. Frequency response, 60-15,000 cps. Power rating, 30 watts. Dispersion, 120°. Mouth diameter. 24½". Length, 11½" 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.....

"SPEECH MASTER" SPEAKERS
MODEL AP-10. Highly efficient 5" PM desk type speaker in attractive metal enclosure. Widely used for fixed and mobile radio communication, intercom systems, and control centers for commercial infinitiation, intercoin 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. 6\frac{3}{4}'' high. Heavy cast base has felt pad for table-top protection. In handsome gray finish with contrasting chrome trim ring. With 36'' cord. Shpg. wt., 6 lbs.

MODEL RK-61. 2-direction 6" speaker in metal case. 8 watts. Imp., 4 ohms. 8x31/4". With 24" cable. Tan. Wt., 31/2 lbs.



## University Weather-Proof Reflex Trumpets & Heavy-Duty Drivers

A Model GH has 85-cps cutoff for music. Models LH and PH have higher cutoff for general use. Model SMH for voice only. With "U" mtg. bracket, less driver.

Stock No. Typ		Type	Dia.	Length	Low Cutoff	Lbs.	List	EACH	
95 95	DZ DZ	158 155 156 157	GH LH PH SMH	307/8" 255/8" 201/4" 161/2"	27 <sup>7</sup> / <sub>8</sub> " 19" 15 <sup>3</sup> / <sub>4</sub> " 12"	85 cps 120 cps 150 cps 200 cps	22 16½ 11¾ 8	\$65.00 44.50 31.00 26.00	38.22 26.17 18.21 15.29

B COBREFLEX-2 WIDE-ANGLE REFLEX TRUMPET. Provides 120° horizontal sound pattern. 200-cps cutoff. For voice only. With swivel-joint bracket. 91/4x181/2x101/4". Less driver. 101/4 bs. 22.54 95 DX 184. List, \$38.35. NET.....

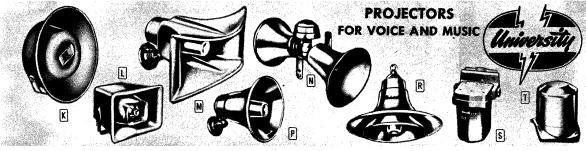
D MODEL RPH TRUMPET. For ceiling use; 360° coverage. 140 cps cutoff. 4-ft. air column. 253/6" dia. Less driver. 19 lbs. 

MODEL RLH. As above, with 5-ft. air column. 25 lbs.  PMA ADAPTER. Attachable to "U" bracket for mounting trumpets on ½" pipe fittings. Shpg. wt., ¾ 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"-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-v. line power taps; PA-50—16, 100, 165, 250, 500, 1000, 2000 ohms, 50, 30, 20, 10, 5 and 2.5 watt 70-v. line power taps.

Stock No.	Type	Fig.	Range, CPS	Watts	Ohms	Lbs.	List	EACH
81 D 573	MA-25		85-6500	25			\$27.50	
81 D 571	SA-HF		80-10,000	30	16	41/2	36.00	21.17
81 D 079	PA-HF		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. 



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. 70-15,000 cps. 2000-cycle crossover. Dispersion, 120° 25 watts. Imp., 8 ohms. 221/2x9". Shpg. wt., 21 lbs. 

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 cps. Dispersion, 120°. Capacity, 15 watts. Imp., 8 ohms. 123/4x9//ex105/6°. Shpg. wt., 10 lbs. 

CIB WIDE-ANGLE SPEAKER. Perfect for paging, announcing, etc. Has reinforced fiberglass bell. Capacity, 15 watts. 300 to 13,000 cps. Horizontal dispersion, 120°; vertical, 60°. Imp., 8 ohms. 73/x14x12". With mtg. bracket. Shpg. wt., 5½ lbs. 

2WP 2-WAY SPEAKER. Dual horns, 180° 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° each horn. Power and impedance ratings depend on type of driver used. With adjustable bracket. 20½x8° dia. Shpg. wt., 4 lbs.

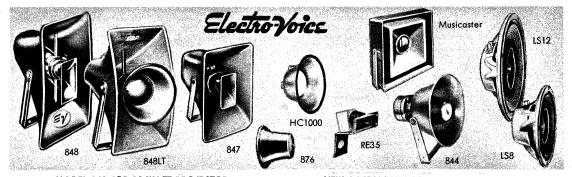
MODEL IBB GENERAL-PURPOSE SPEAKER. Reflex-type with built-in 15-watt driver unit. Compact and highly efficient, it offers maximum speech intelligibility in high-noise areas. 90° dispersion angle. Range, 300-13,000 cps. Input impedance, 8 ohms. 8½" bell dia. x 9° long. With mtg. bracket. Shpg wt., 4 lbs.

MODEL IBR RADIAL SPEAKER. 15 watts. 360° coverage. 300-10,000 cps. 8 ohms. 101/4x13" dia. With ceiling ring. 51/4 lbs. 

MODEL CTR TRANSFORMER HOUSING. Weatherproof, die-cast aluminum housing. For transformers 23/8x27/8x27/8" max., and mtg. ctrs. 1/2 to 23/4". Shpg. wt., 2 lbs. 93 D 379. List, \$8.00. NET.....

MODEL PB-1 TRANSFORMER HOUSING. The weatherproof transformer 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" mounting centers and not exceeding 115/6x15/x15/x". Size, 31/6" high, 25/6" dia. Shpg. wt., 1 lb. 

## P. A. ACCESSORIES—PORTABLE P. A. SYSTEMS



#### **MODEL 848 CDP 30-WATT PROJECTOR**

Unique coaxial projector with single driver. Virtually indestructible Unique coaxia projector with single ariver. Virtually indestructions spun fiberglas construction; greater coverage; wide response for full range sound. Two horns are employed; large horn for low frequencies –150-1000 cps. ± 5db; 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°. Capacity, 30 watts. Impedance, 16 ohms. Weatherproof. Finished in gray. 20½x10½" mouth; 20" deep. Wt. 17 lbs.

81 DU 490. List, \$75.00. NET.

#### 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°. Impedance, 16 ohms. Capacity, 30 watts. HWD: 20½x10½x21″. Shpg. wt., 17½ lbs.

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.....

#### **MODEL 847 CDP 25-WATT PROJECTOR**

#### 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-v. line. Imp. taps of 45, 200, 500, 1000, and 2000 ohms. 31/2x51/4". dia Shpg. wt., 3 lbs. 

MODEL 877. As above, but with thermal bimetallic relay for overload protection.  $3\frac{1}{2}x5\frac{1}{4}^{n}$  dia. Shpg. wt., 3 lbs.

81 D 493. List. \$17.50. NET......

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 ohms. 2½x2½x3". Shpg. wt., 2 lbs. 

#### 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, 9½; 5½; deep. Shpg. wt., 6½ 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., 4½ lbs. 82 D 924. List, \$40.00. NET...

#### **NEW "MUSICASTER" P.A. SPEAKER SYSTEM**

#### **NEW MODEL 844 COMPLETE PAGING UNIT**

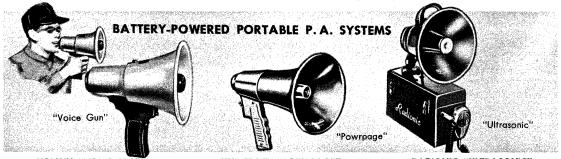
General-purpose speaker system at an economical price. The durably built Model 844 consists of a die-cast re-entrant horn, detachable 30-watt driver and universal mounting bracket. High capacity, rugged construction and excellent reproduction make it ideal for car-top mounting on police and fire vehicles, etc., as well as for use in paging systems. Tropicalized and weather-proofed. Response, 250 to 13.000 cps. Capacity, 30 watts. Impedance, 8 ohms. Dispersion, 90°. Diameter, 97%; 83% deep. Shpg. wt., 7½ lbs. 

#### **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 3½" deep). Include moisture-resistant cones and spiders that are completely fungi-proof.

MODEL LS-12 12" SPEAKER. Response, 30 to 13,000 cps. Capacity. 20 watts. Impedance, 8 ohms. Resonance, 40 cps. Shpg. wt., 5 / 1bs. 

MODEL LS-8 8" SPEAKER. Response, 50 to 13,000 cps. Capacity, 20 watts. Impedance, 8 ohms. Resonance, 55 cps. Shpg. wt., 4½ lbs. 82 D 851. List. \$30.00. NET.... .....18.00



## HOLMIN "VOICE GUN"

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° F to 120° F. Batteries fit into clip inside handle. Entire unit, with batteries, weighs only 31/4 lbs.! Spun aluminum horn and housing; red plastic handle. Includes batteries. Shpg. wt., 51/4 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 system. Has range of up to 1/4 mile. Weights only 3% 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" in diameter. Shpg.

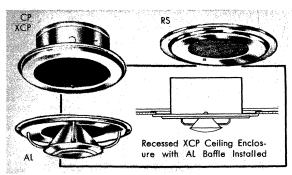
PENLIGHT BATTERY. 6 required. Each, 2 oz. 53 J 031. NET EACH ..... 9c

## **RADIONIC "ULTRASONIC"**

MODEL 2400. Heavy-duty, self-contained portable P.A. system. Easily transmits ¼ 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 heavymerlyid fixigh. Case size, 1014xy41/4/ hammerloid finish. Case size. 101/2x6x41/4". Shpg. wt., 15 lbs.

93 SX 886. List. \$99.50. NET..... 66.33

## SURFACE AND RECESSED WALL AND CEILING BAFFLES



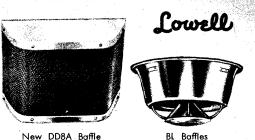
CP & XCP SERIES FLUSH-MOUNTING BAFFLE ENCLOSURES. For mounting AL and RS baffles, below. CP types for new construction; have steel can and plaster ring. All have sound deadening material. Shpg. wt.: CP6 and XCP6, 3½ lbs. each; CP8 and XCP8, 4¼ lbs. each; CP1012 and XCP1012, 7½ lbs. each.

Stock No.	Type	Description	NET
95 DX 235		For AL6A, RS6A. 7" I.D x4"x111/4" O.D.	4.28
95 DX 236		For AL8A, RS8A. 8½" I.D.x4½"x13" O.D.	5.29
95 DX 237		For AL12A, RS12A. 121/2" I.D.x7"x171/8" O.D.	
95 DX 232		For AL6A, RS6A, 7" dia.x4" deep.	3.77
		For ALSA, RSSA. 8½" dia.x4¼" deep.	4.73
95 DX 234	ACPIUIZ	For AL12A, RS12A. 12½" dia.x7" deep.	6.39

RS & AL WALL AND CEILING BAFFLES. Aluminum with ½" 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" speakers. 1034 x7/16"	1	2.94
95 DX 238	RS8-A	For 8" speakers, 12%x½".	1	3.26
95 DX 239	RS12-A	For 12" speakers. 161/2 x 1/2".	13/4	4.47
95 DX 226	AL6-A	For 6" speakers. 10½" dia.	1½	4.41
95 DX 227	AL8-A	For 8" speakers. 12%" dia.	13/4	7.14
95 DX 228	AL12-A	For 12" speakers. 16¾" dia.	31/4	9.00

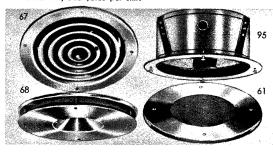
AL. RS and DD baffles are available in smart new, anodized AL, KS and Dubarries are available in smart new, anodized decorator colors—Gold, Copper, Pink, Blue and Black. When ordering, use the word "Special" in place of Stock No. and specify choice of color. For RS baffles, add \$1.50 per unit; for AL and DD, add \$2.25 per unit.



**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 

BL SERIES-NORMAL CEILING HEIGHT BAFFLES. BL baffles are designed be series—Normal Chilno Hilohi Baffles, BL dames 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° 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" jute to eliminate resonance.

Stock No.	Туре	Description	Lbs.	NET	
95 DX 223	BL8-A	For 6" speakers. 7¼ x12¼" dia.	3¾	7.64	
95 DX 224		For 8" speakers. 8½ x14¾" dia.	4	12.94	
95 DZ 225		For 12" speakers. 9¼ x18¾" dia.	6¾	15.88	



### **NEW RECESSED CEILING OR WALL MOUNT BAFFLES**

MODEL 67-8 LOUVERED BAFFLE. Similar to air diffusers in appearance. 

SERIES 61 TRIM RING BAFFIES. 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, 8½", 61-12, 12½".

Stock No. | Model | Speaker | Enclosure | O.D. |Lbs.|1-4, EA.|5-19, EA. 89 DX 973 61-8 89 DX 974 61-12 95-8 95-12 8" 12¾″ 17″ 1 3.11 2.80

#### **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.

	P		,	-	-coo opeamer.	
					1-4, EA. 5-19, EA.	
89 DX 975	95-8	61-8, 67-8, 68-8	9 1/8" 41/4"	7	5.12 4.61	
89 DX 976	95-12	61-12	145%" 7"	8	7.38 6.64	



#### SUSPENSION AND SURFACE-MOUNT BAFFLES

310 SERIES—SUSPENSION CEILING BAFFLES. Employ baffle similar to 210 series, but include husk and hardware. Less suspension hanger, below. \*From top of husk to bottom of baffle. Less speaker.

Stock No.	Model	Speaker	0.D.	Depth	Lbs.	1-4, EA. 5-19, EA	
93 DX 273						17.64 15.88	
93 DX 274	310-12	12"	1874"	*1174"	1 7/4	21.76 19.58	

210 SERIES-WIDE ANGLE SURFACE BAFFLE. Feature acoustic horn, bass inverter action for clean, rich sound. Undercoated and jute lined to prevent metallic resonance. Baffles can be mounted by 4 toggle bolts or to 4" outlet box. Satin aluminum. Less speaker.

Stock No.	Model	Speaker	0.D.	Depth	Lbs.	1-4, EA.	5-19, EA.
93 DX 271	210-8	8"	141/8"	,41/4"	4	12.94	11.65
93 DX 272	210-12	12"	18¼"	6½″	7	15.88	14.29

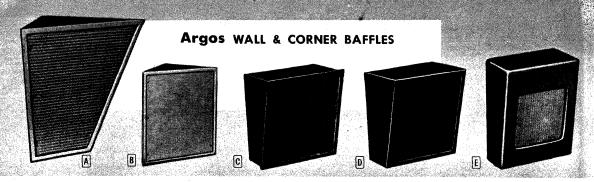
335 SERIES SUSPENSION HANGERS. Feature canopy with hang-straight swivel. ½" steel tubing. Mount on standard 4" outlet box. MODEL 335-2. Two feet long. Shpg. wt., ¾ lb.

93 DX 275. 5 to 19, EACH.....1.62 

MODEL 335-3. Three feet long. Shpg. wt., 11/4 lbs. 93 DX 276. 5 to 19, EACH.....1.89 1 to 4, 1 to 4, EACH . . . . . 2.10

## INDUSTRIAL USERS-SAVE ON LARGE ORDERS

You pocket big savings when you buy in quantities from 5 to 19—and you can get in on even greater savings if your requirements exceed this number. Write to Allied for special quotations on quantities of 20 or more.



ARGOS BASS REFLEX CORNER BAFFLES. Handsomely styled, extremely versatile bass reflex enclosures. In models for 8" or 12" speakers. versatile bass reflex enclosures. In models for 8" or 12" 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 installation—speaker 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.

A 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" speaker. Volume, 680 cu. in. Size, HWD: 15x21x10". Shpg. wt., 5 lbs.

95 DX 580. Mahogany. NET 

MODEL SCB-12. For use with 12" speaker. Volume, 1240 cu. in. Size, HWD: 211/4x21x101/2". Shpg. wt., 9 lbs.

95 DU 582. Mahogany. NET 95 DU 583. Blonde. EACH......10.73

 $\fbox{B}$  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" speaker. Volume, 525 cu. in. Size, HWD: 14x121/xx6". Shpg. wt., 41/2 lbs. 91 DX 546. Mahagany. NET

MODEL CB-12C. For use with 12" speaker. Volume, 1520 cu. in. Size, HWD: 201/4x18x9". Shpg. wt., 9 lbs. 91 DU 548. Mahogany. NET

91 DU 549, Blonde. EACH......10.29

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" speaker. 101/2x93/8x61/2". Shpg. wt., 3 lbs. 95 DX 400. Walnut. NET 95 DX 401. Limed Oak.

EACH ..... 5.88 MODEL DWB-12. For 12" speaker. 14x131/4x9". Shpg. wt., 5 lbs. 95 DX 402. Walnut. NET

95 DX 403. Limed Oak. EACH ..... 8.23

D 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 Size.		Speaker	W+	NET
Mahog.	Blonde		No.	HWD	Size	Lbs.	EA.
95 D 435 95 D 437 95 D 439 95 DX 441 95 DX 443	95 95		WB-4/5A WB-6A WB-8A WB-10A WB-12A	6x6x4" 8½x7½x5" 10½x9¾x6½" 12¼x10½x7¾" 14¼x13¼x9"	4-5" 6" 8" 10" 12"	1½ 2 3 4 5	2.74 3.33 3.97 4.70 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 all mounting hardware.

8" SPEAKER BAFFLE. Size, 11x93/4x6". Shpg. wt., 4 lbs. 12" SPEAKER BAFFLE. Size, 163/4x131/2x81/4". Shpg. wt., 6 lbs.

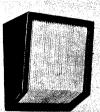
93 D 520. NET .....

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, ½"-thick plywood sides eliminate baffle vibration during loud passages. Speaker mounting board base bardly are already intelled and statistical headware invalided. has hardware already installed, and additional hardware is provided for quickly and easily completing installation of speaker. With acous-tically tested, matching grille cloth.

Stock No.	Model No.	Finish	Size, HWD		Wt. NET Lbs. EA.
93 DX 750			11x99/16x61/8"		31/26.15
93 DX 776			11x99/16x61/8"		31/2 6.60
93 DX 751			161/4x131/2x9"		51/2 8.40
93 DX 777	FWB-12B	Blonde	161/4x131/2x9"	12"	51/2 9.30

LEATHERETTE-COVERED WALL BAFFLES. Feature same excellent, lock-corner construction as baffles listed above. Covered with heavily embossed, scuff-resistant pyroxylin-coated leatherette fabric. Rigid 1/2" plywood sides prevent speaker vibration or rattle. Speaker mounting bolts installed; includes speaker installation hardware.

	Stock Mode No. No.		Model No.	Finish	Size, HWD	Speaker Size		NET EA.
					11x99/16x61/8"			4.08
					11x99/16x61/8"			4.08
					161/4x131/2x9"			5.61
93	DΧ	753	LCWB-12B	Blonde	161/4x131/2x9"	12"	51/2	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.	
91 DX 802	FWCB-8M FWCB-8B	Blonde	18x16x11"	8" 8" 12"	7	11.70
	FWCB-12M FWCB-12B		22x22 <sup>3</sup> / <sub>8</sub> x16"			16.95 18.60

LEATHERETTE-COVERED BASS REFLEX CORNER BAFFLES. Employ the 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.

	Stock No.	Model No.	Finish	Size, HWD	Speaker Size	Wt. Lbs.	
			Mahogany Blonde		8" 8"	4	7.50 7.50
91	DU 805	LCCB-12M LCCB-12B		22x223/8x16" 22x223/8x16"		9	10.50







## TRANSCRIPTION PLAYER



#### Quam Heavy-Duty P.A. Speakers **Bogen VP-17X Transcription Player**

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

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.

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" 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 accuracy interestances selection of conventional speeds tions for accurate, instantaneous selection of conventional speeds (78, 45,  $33\frac{1}{3}$  and  $16\frac{2}{3}$  rpm).

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-

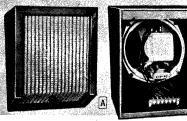
Incorporates heavy-duty 4-pole motor, weighted (3½ lbs.) and balanced turntable: reduces wow, hum and rumble to negligible values—wow to under 0.5% lbi-cast pick-up arm has ball-bearing mount and "Feather-Drop" action to protect record and stylus; equipped with G.E. variable reluctance cartridge with dual sapphire styli. With built-in compensated preamplifier for cartridge.

12" 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 carrying case is constructed of ½" plywood, and is adequately shockmounted. Expanded metal speaker grille; covered in two-tone lurgage-type fabric. luggage-type fabric.

Output: 10 watts with less than 3% harmonic distortion. Response: Mike,  $\pm 1/2$  db, 50-10,000 cps; Phono and Radio,  $\pm 1/2$  db, 40-12,000 cps. Hum: 60 db below 10 watts. Tone Control:  $\pm 15$  db at 100 cps; -23 db at 10,000 cps. Controls: Mike gain, phono gain, treble, bass, off-on. Size: 123/6x17x161/4". For 110-120 v., 50-60 cycle AC. Shpg. wt., 40 lbs.

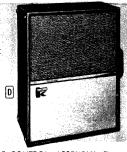
Mfr's Stock Max. Magnet Wt., Oz. NFT Size Туре Watts EACH No. Lbs. 81 D 061 81 D 062 81 D 335 8A21PA 8A31PA 2.15 3.16 4.82 5.41 8" 8" 8" 10 6.00 4.64 31/4 81 D 336 8A6PA 12 6.8 23/4 31/4 31/2 31/2 10A31PA 10" D 063 12 3.16 6.32 10" 81 D 394 81 D 395 10A4PA 10A6PA 4.64 6.8 6.88 14 10″ 10A10PA 10" 20 10.0 D 064 10.58 81 DX 065 81 DX 337 81 DX 338 81 DX 340 33/4 12A31PA 12" 6.82 7.44 12 3.16 15 25 12A6PA 8.53 10,0 12A10PA

## knight speakers & BAFFLES









8-OHM SPEAKER-BAFFLE COMBINATION. Ready-to-use, speaker-A 8-OHM SPEAKER-BAFFLE COMBINATION. Ready-to-use, speaker-baffle combination for extending sound coverage of existing sound systems. For all indoor installations including P.A. systems in 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 '\( \frac{1}{2} \) and '\( \frac{1}{2} ''\) energy energy with 4.64 oz. Alnico V magnet. Impedance, 8 olums. Capacity, 10 watts. Hanging the baffle is as easy as hanging a picture—has slots at rear for screws or nails. Size, 11x9\( \frac{1}{2} \) 6x6\( \frac{1}{2} \) (% To A \( \frac{1}{2} \) (Fig. 1) (9.3 \( \frac{1}{2} \) (7.4 \( \frac{1}{2} \) (Fig. 1) (9.3 \( \frac{1}{2} \) (7.4 \( \frac{1}{2} \) (Fig. 1) (9.3 \( \frac{1}{2} \) (7.4 \( \frac{1}{2} \) (7.5 

AS ABOVE, WITH 12" SPEAKER. Size, 161/4x131/2x9". Shpg. wt., 11 lbs 

A 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" speaker; pre-wired volume control for individual conditions and translating of the speaker load. 8" speaker; pre-wired volume control for individual conditions. trol 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. 

PRE-WIRED 8" SPEAKER & VOLUME CONTROL ASSEMBLY. Same components as used in 93 D 704 (at left), but for installation in baffle of your choice. Includes heavy-duty 8" speaker for efficient reproduction of voice and music; pre-wired volume control on 18" cable for controlling sound level at speaker. No soldering—just attach speaker line to screw terminals. Shpg. wt., 3 lbs.

92 D 398. NET.

B PRE-WIRED 70.7-VOLT 8" SPEAKER & VOLUME CONTROL ASSEMBLY. Same components as used in 93 D 703 (at left), but for installation in baffle of your choice. Includes 8" speaker with built-in transformer for use with 70.7-volt speaker distribution systems; pre-wired volume control on 18" cable for individual sound level adjustment. No soldering—just attach speaker line to screw terminals (marked for 10, 5, 2.5, 1.25 and 0.62-watt output). Wt., 4 lbs. 92 D 399. NET.....

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" speaker. Brown with light green grille. Molded plastic handle. HWD: 10x12x51/4". Shpg. wt., 9 lbs. 93 DX 768, NET.....

D LARGE CASE. For system using Knight 16 or 32-watt amplifier and two 12" speakers. Clips for mike stand. Aqua and ivory. Leather handle. HWD: 241/4x181/4x111/4". Shpg. wt., 20 lbs. 17.96 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 remuire connection to electrical outlets. Sub-stations can be wired answer all Masters, but no ther 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 "non-private" 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, 7x12x9". U.L. Approved. For 110-120 v., 50-60 cycle AC or DC.

Stock No.	Mfr's Type	Capacity	Shpg. Wt.	List	NET EACH
95 RX 885	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.

20-STATION REDI-POWER MASTER. Type C-RP-5920. 17 lbs. 

REDI-POWER MASTER WITH SINGLE-BUTTON PAGING. Type C-RP-

## "Chief" Sub Stations

"Chief" Sub stations are for use with any "Chief" Master 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 the Talk-Listen switch. Subs are not connected to 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: 61/4x8x71/2", except push-button Model C-46 which is 7x12x91/4". †Number of Masters, Sub-stations can call.

Stock No.	Type	Masters†	Cabinet	Wt.	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-41M	one	metal	3 lbs.	22.95	13.50
95 RX 890	C-42	two	bakelite	5 lbs.	29.95	17.50
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 RX 891	C-46	six	bakelite	9 lbs.	73.00	43.00

## **High-Power Subs and Origination Switches**

HIGH-POWER SUB-STATIONS. Can answer Master. Originate calls when used with switches, below.

HP-3. INDOOR TYPE. 8" speaker in brown, wrinkle-finish metal baffle. 5 watts. Size, 12x12x8". Shpg. wt., 9 lbs. 

C-20. TRUMPET TYPE. 9", weather-proof re-entrant horn for "Chief" and Master-Selective systems. 15 watts. 5 lbs. 95 RX 878. List, \$44.95. NET.....

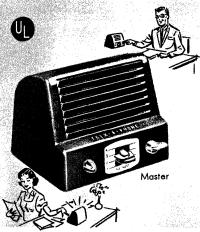
## CABLE REQUIREMENTS AND CABLE FOR "CHIEF" SYSTEMS

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 6-station or 12-station Masters; double lengths of cable between 20-station Masters; triple lengths of cable between 30-station Masters. station Masters.

Use single length of Type 6204 cable for connecting C-41, C-42, C-46, HP-3 and C-20 Sub-stations where origination of call is desired. Measure from Sub to each Masis desired. Measure from Sub to each Mass-ter 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 Sub-stations to Master station. Note: All 4 types of cables: 6212, 6224, 6204 and 6902, are suitable for indoor or outdoor applications, and are specially designed for use with Talls. A. Plong equipment Talk-A-Phone equipment.

TALK-A-PHONE INTERCOM CABLE. Designed for minimum noise pickup. Conductors: Type 6212, 12 conductors (6 twisted pairs) 6224, 24 conductors (12 twisted pairs); 6204, 4 conductors (2 twisted pairs); 6902, 2 conductors (1 twisted pair)

Stock	Mfr's	Lbs.,	PER
No.	Type	100 Ft.	FOOT
49 W 606	6212	5	14¢
49 W 608	6224	9	28¢
49 W 607	6204	21/2	6¢
49 W 613	6902	2	2¢



## 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 Standard Masters provide adequate volume for systems in average locations. For noisy locations, select High-Output Masters and Subs. Walnut bakelite cabinets, 84/x6/4x71/2", except LR-3M and AR-3M Subs in brown metal cabinets, 7x53/x31/2". Shpg. wts.: Masters, 7 lbs.; bakelite Subs, 5 lbs.; metal Subs, 3 lbs.

STANDARD-OUTPUT SYSTEMS. For 110-120 volt, AC or DC. MODEL LM-5. Master for up to 5 Sub-

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, 95 R 839. List, \$17.95. NET...... 10.50

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 bakelite-case Subs, except CL-5, CL-10 and radio-intercom 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.



## TALK-A-PHONE SYSTEMS FOR SPECIFIC INTERCOM NEEDS



Super-Selective System EVERY STATION CAN CALL EVERY OTHER STATION IN THE SYSTEM





- Consists Entirely of Masters Each 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 taneously without crosstalk. System 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 bakelite cabinets, 81/4x61/4x71/2". For 110-120 v., AC or DC. Shog, 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

TAIK-A-PHONE CABLE

For Master Selective systems, use
Type 5303 and measure from Master
to each Sub, then total. For Super
Selective systems, use Type 5506
for LS-5 Masters and Type 9911 for
LS-10 Masters. Measure from 1st
Master to 2nd only, 2nd to 3rd only,
etc. For Combination systems, use
Type 6212 for CL-5 Masters and
Type 6224 for CL-10 Masters Measure
from 1st Master to 2nd only, 2nd
to 3rd only, etc. For Subs, use Type
6902 and measure from each Sub to
nearest Master only.

Stock	Mfr's	Lbs.,	PER
No.	Type	100 Ft.	FOOT
49 W 604	5303	3	3¢
49 W 606	6212	6	14¢
49 W 608	6224	12	28¢
49 W 613	6902	3/4	2¢
49 W 605	5506	4	7½¢
49 W 603	9911	12	14¢



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 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 switch. Use a Master to originate calls to any Master or Sub in the system. In walnut bakelite cabinets, 81/4x61/4x71/2". U.L. Approved. Shpg. wts.: Type CL-5, 7 lbs.; Type CL-10, 81/2 lbs. either 5-station or 10-station models. Mas-

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, 81/4x61/4-x71/2"; LR-2M, 7x53/4x31/2".

MODEL LR-2 SUB. Shpg. wt., 5 lbs. 95 RX 844. List, \$15.95. NET......9.35 MODEL LR-2M SUB. Shpg. wt., 3 lbs.

95 R 847. List, \$15.95. NET......9.35

## OPTIONAL FEATURES FOR TALK-A-PHONE SYSTEMS

EXECUTIVE GRAY FINISH. All bakelite Talk-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.









"I'll be right there."

20



## TALK-A-PHONE TRANSISTORIZED HOME INTERCOM & MUSIC SYSTEM







### **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 4F6H 9-volt battery or one H1-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 (H1-9R listed below).

All Master and Staff stations have 151/4x51/4" 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 H1-SM housing assembly.

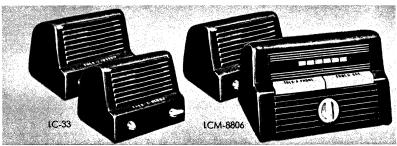
## **Sub-Stations and System Accessories**

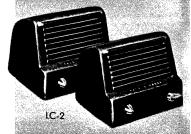
Indoor and Outdoor Sub-Stations can receive calls from and reply to any Master or Staff, but cannot originate calls. Indoor Subs can switch to "private" or "non-private." Outdoor Subs are "non-private" only; have push-button for connection to home chimes or buzzer, plus illuminated name-plate. Both types of Subs require  $2^{\prime\prime}$  square x  $2^{\prime\prime}$  deep opening for in-wall mounting. Attractively finished in polished gold and satin silver.

No.	Туре	Description	Size	Wt.	List	NET
93 R 247 93 R 248 93 R 249	HI-2 HI-SM HI-JB HI-PS	Indoor Sub Housing Assembly Junction Box	5% x3%" 6x15½ x4" 1¾ x8¾ x8¾ " 3x5x2"	1½ lbs. 1½ lbs. 2½ lbs. 1 lb. 5 lbs. 9 lbs.	27.50	15.95

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; Type 6202 for Outdoor Subs to nearest Master or Staff. Cable for Bothery 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',	12 lbs	. PER	FT	.28c
49W 621.	Type	6202	Cable.	Wt.,	per	100',	4 lbs.	PER 1	FT	.31/2c
49W 622.	Type	6206	Cable.	Wt.,	per	100',	3 lbs.	PER	FT	81/2c





## **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 stations—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 station—every station hears all messages. Feature "Sonic Gate" circuit to silence random noises and "Uni-Trans" switch-lock to permit continuous transmission. Bakelite cabinets. 7½x8½x6½".

TWO STAT	ION SYSTI	EMS. Sh	pg. wt.,	14 lbs.	
Stock No.	Type	Color	List	PER PAIR	
95 RX 821 95 RX 822	LC-33 LC-33G	Walnut Gray	\$120.00 126.00	69.95 73.55	
ADDITIONAL STATIONS. Shpg. wt., 7 lbs.					

ADDITIONAL STATIONS. Shpg. wt., 7 lbs.							
Stock No.	Type	Color		NET EA.			
95 RX 823 95 RX 824	LC-17 LC-17G	Walnut Gray	\$60.00 63.00	35.00 36.80			

SELECTIVE SYSTEMS. For up to 6 channels or 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. 7x12x9". 121/2 lbs.

Stock No.	Туре	Color	List	EACH
95 RX 826			\$122.50	72.00
95 RX 827	LCM-8806	Gray	127.00	74.70

SINGLE-CHANNEL AUXILIARIES. Bakelite cabinets, 71/2x81/2x61/4". Shpg. wt., 7 lbs.

Stock No.	Туре	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	Walnut	5
95 RX 834	LCS-806	Walnut	6

List, \$66.00. NET PER STATION.....38.80

93 RX 410	LCS-801G	Gray	1
93 RX 411	LCS-802G	Gray	2
93 RX 412	LCS-803G	Grav	3
93 RX 413	LCS-804G	Grav	4
93 RX 414	LCS-805G	Grav	5
93 RX 415	LCS-806G	Grav	6

List, \$69.00. NET PER STATION......40.60

## TALK-A-PHONE 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 teet 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 station 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, 8½x0½x7½". Approved. Size of cabinets, 8½x0½x7½". 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...... 33.55 TYPE 5303. Extra 3-conductor cable. 49W 604. Wt., 100', 4 lbs. Per Ft...... 3 c

### "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 built-in installation. Provides radio reception for up to six rooms and doubles as an extremely 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" inter-com 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 func-MASTER STATION. Offers choice of 4 functions: Radio, distributes program to all desired Subs; Radio-Lislen, 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 stalk 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 Radio-Volume, Intercom Volume, Function Selector. Has six station-selector switches. Has a heavy-duty 3½" PM speaker for natural sound reproduction. Frequency range of radio, 530-1650 kc. Tubes include: 12BE6, 12BA6, 12AV6, 12AU6, 50C5; 35W4 rectifier. Overall size, 4½x15½x3¾". For operation from 110-120 volts. 60 cycle AC. Shpg. wt., 8½ lbs. 95 RX 955. List, \$79.95. NET.... 59.95

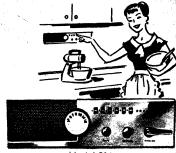
MODEL F2 INDOOR SUB. With Function Selector (Monitor, Normal, Call) and Privacy Switch. 3½" heavy-duty speaker delivers clear sound. 4½x0½x2½" deep. Needs no power. Shpg. wt., 2½ lbs. 95 R 956. List, \$11.95. NET...... 8.95

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', 31/2 1bs. Per 100 ff... 2.6y
48 W 890. 2-conductor. Wt., per 100'. 3 lbs. Per 100 ft.....

## Bogen INTERCOMMUNICATION

## AND MUSIC SYSTEMS



Model R16

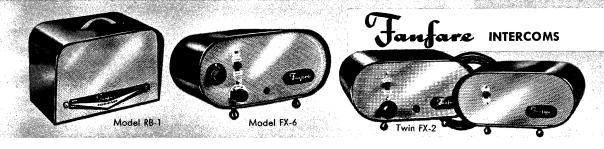


Model F2



Model F3A

TANKS OF BUILDING



## 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 dis-tances 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 

## 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. 4x8x4". U.L. Approved.

MASTER STATION. 1 required for each system. Can call any Master or Remote in privacy. Controls: Volume with AC On-Off; Talk-Listen; Master or Master-to-Remote Selec-tor. For 110-120 v., 50-60 cycle AC or DC. Shpg. wt., 33/4 lbs.

REMOTE STATION. Has Call-Listen switch for originating calls to its Master only.

MODEL FX-6 "EXEC" MASTER. For use with 1 Master and up to 5 Remotes. Can talk to any Master or Remote individually or in

MODEL FX-12 "MANAGER" MASTER. Use up to 12—FX-12's or 1—FX-12 and 11 FC's. 93 R 426. NET......22.50

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.

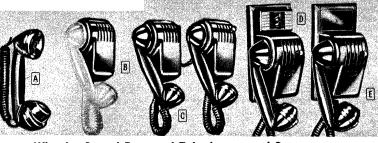
#### Fanon 2-Station System

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. 

MODEL FS EXTRA SUB. Use 3-cond. cable to Master. Shpg. wt., 2 lbs. 

## INTERCOM CABLE

Stock No.	Cond.	Wt., 100'	PER 100'
47 W 362	3	2 lbs.	2,43
47 W 322	7	41/2 lbs.	5.83
48 W 894	18	61/2 lbs.	7.79





## 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 telephone handset. Voice generates needed power—requires no batteries or supply line voltage. Up to 12 units may be connected in parallel. Supplied with 3½-ft. cable and clips, less wire. Uses 2-conductor, twisted-pair wire. Shpg. wt., 1½ lbs. 59 R 350. List, \$13.75. NET EACH... 9.62

MODEL SPT-123 HI-LEVEL HANDSET. Same as above, but extra sensitive. For use where background noise is high.

59 R 361. List, \$16.00. NET....... 11.20

B MODEL F-5308 HANDSET HOLDER. Wall

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.. 1½ lbs.

59 R 356. List, \$19.48. NET EACH...11.69

## TELEPHONES FOR 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-205-MI 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 3rd, etc). Master-Sub System: 3 common wires, and 1 wire from each sub to the master. Wt., 5 lbs., each station.

Stock No.			List	
59 R 353	SPS-205-MI (Master) SPS-205-SI (Sub)	D	61.60	36.96
59 R 354	SPS-205-SI (Sub)	E	52.25	31.35

#### 2 & 3-PHONE SYSTEMS

© SERIES SPS. Each has lever for common bell ringing. 205-H similar to 205, but delivers higher voice level. Use 2-conductor wire for 205 and 205-3; 3-cond. for 205-H. Measure from phone 1 to 2 and 2 to 3.

Stock No.	Mfr's Type	Phones	Wt., Lbs.	List	Per System
59R 351		2	7	73.15	43.89
59RX352		3	10	101.70	65.83
59R 362		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 common-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. 9½x3½x3½x. Less cable and power supply. Cable Requirements: 3-conductors plus an additional conductor for each station used.

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'	Per Ft.	Per 100'
48W 826	2	3	4é	3.38
48W 825	3	4	51/2¢	5.08
48W 892	6	31/2	5é	3.82
48W 893	12	6	7é	5.44
48W 894	18	63/4	9¢	7.79

### **New Feiler Wireless Intercom Systems**

#### UNITS JUST PLUG IN...NO INSTALLATION OR WIRES REQUIRED

ALL-MASTER SELECTIVE SYSTEM: Wireless intercom 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: 55/6x141/4x51/2"; 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 persons at Staff stations do not have to communicate with other Staff stations, but must talk with a central Master location. For 110-120 v., 50-60 cycle AC or DC. Size and shpg. wt., each Staff: 5½x14½x5½"; 8 lbs.

Stock No.	Mfr's Type	Station	List	NET EACH	Stock No.	Mfr's Type	Station	List	NET EACH
91 RX 570 91 RX 571 91 RX 572 91 RX 573	WS-700-1 WS-700-2	Master Channel 1 Staff Channel 2 Staff Channel 3 Staff	66.70	39.95		WS-700-5 WS-700-6	Channel 4 Staff Channel 5 Staff Channel 6 Staff Channel 7 Staff	66.70	39.95 39.95 39.95 39.95

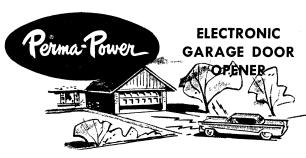
## LOW-COST 2-STATION WIRELESS SYSTEM

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, 55/8x141/4x51/2". 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 expanding above system. Shpg. wt., 8 lbs. 91 RX 581. List. \$66.25. NET.... 39.75





## **Automatically Opens Garage Door From Car**

Simple Push-Button Operation

- Handy Time-Delay Light Shutoff
- Fully Automatic Safety Devices

• Installed Without Special Tools

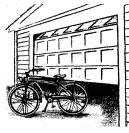
\$13.99 Down Just touch a pushbutton on your car's dashboard—the garage door rolls up and the light goes on! Press pushbutton again to close and lock the door securely—or use the wall-mounted pushbutton at the garage exit. A tremendous convenience in bad weather—and it also offers protection for members of family coming home late at night. 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.

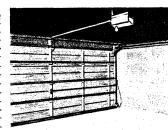
Features added convenience of a time-delay light shutoff switch. This handy, built-in unit keeps the light in the garage burning for a few minutes after the door has been shut—gives you plenty of time to enter the house without stumbling through darkness.

Transmitter operates from either 6 or 12-volt car battery. Crystal-controlled operation on FCC-authorized frequency of 27,255 mc. controlled operation on FCC-authorized frequency of 27.255 mc. Receiver has only three tubes for low power drain and uses low-voltage 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". 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. volts, 50-60 cycle AC.

System includes door mechanism, ¼-hp motor, transmitter, receiver, antennas, manual pushbutton, overhead light, all hardware, tubes, wire, and instructions. Shpg. wt., 95 lbs. 







Power shuts off automatically if path of door travel is blocked— prevents accidental damage to obstruction or mechanism.

Built-in overhead light minates garage when door is opened—light stays on several minutes after door is locked.

EXTRA TRANSMITTER. For 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 radio-controlled 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 opera-

Perma-Power Radio Control System for Industrial Use



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. 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 

MODEL 63300C STREET LIGHT CON-TROL. Similar to above, but turns on light at 1.0-5.0 foot-candles and has SPDT double-break contactor. nas SPDI double-break contactor. Rated 2000 watts normally closed. Turnoff point 1.0 foot-candle above turn-on. Shpg. wt., 9½ lbs.

FISHER-PIERCE **BEACON LIGHT** 

> ly 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: oper-ating any door or hatch in any type of plant; turning on area-way, 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.

• Efficient and Safe—Hundreds of Uses For Remote or Portable Control Applications

Time-Saving, Labor-Saving System

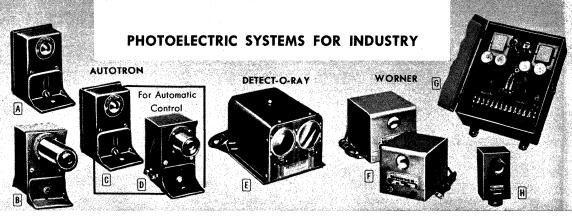
Transmitter meets all FCC requirements. Employs an extremely stable, crystal-controlled, tone-modulated circuit. Operates from any 6 or 12-volt system. Receiver operates from 110-120 volts, 50-60 cycle AC and includes a built-in relay rated 3 amps at 115 volts. Built-in filter and delay network prevents accidental operation from other signals or electrical disturbances. Constructed of top-quality components. Each unit,  $4\frac{1}{2}x5\frac{6}{8}x$   $4\frac{3}{6}$ "; with antenna and all mounting hardware.

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

MODEL LIA STRAIGHT FIXED BEAM LIGHT SOURCE. Has 3/4" 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, 5x3/4x3", with adjustable mounting bracket. Tapped for 1/2" conduit. For operation from 115 or 230 v., 50-60 cycle AC. Shpg. wt., 3 lbs. 77 P 234. NET.

L3A ADJUSTABLE FOCUS SAFETY LIGHT SOURCE. For detecting small objects and movements not large enough to interrupt fixed beams. Focuses down to a spot \( \frac{5}{6} \times \frac{1}{4} \times \text{ and 4} \frac{1}{4} \times \text{ away. Opens up to a straight light beam of 1\frac{1}{2} \text{ dia., which may be placed up to 13 feet away from either Model S1A or T1A (below). 5\frac{1}{4} \times \frac{1}{4} \times \frac{1}{2} \t 77 P 246. NET.....

C MODEL S1A DARK-ENERGIZED PHOTOELECTRIC CONTROL. For 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 amps, 115 volts AC, non-inductive load. Size. 5x3¾x5″. For 115 or 230 v., 50-60 MODEL SIA DARK-ENERGIZED PHOTOELECTRIC CONTROL. For cycle AC. Shpg. wt., 3 lbs. **77 P 247. NET**.....

D MODEL TIA DARK-ENERGIZED PHOTOELECTRIC TIMING CONTROL 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 amps. 115 v. AC non-inductive load. Size, 5\(^4\xx31\)\%x7\%6\(^7\)\%. For 115 or 230 v., 50-60 cycle AC. Shpg. wt., 3 lbs. .....57.50 77 P 248. NET....

#### **DETECT-O-RAY EQUIPMENT**

MODEL 1-162C 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 exercibled and an adjustable mirror (included) is installed on the 

MODEL L-205C POWER RELAY. Use with above when operating equipment up to 1,000 watts. SPDT. 110 v., 50-60 cycle AC contacts with outlets for normally on or normally off functions.  $4\frac{1}{4}x^{2}\frac{1}{2}x^{2}\frac{1}{2}$ ". For 110-120 v., 50-60 cycle AC. Shpg. wt.,  $1\frac{1}{4}$  lbs. 77 P 061, NET.....

#### WORNER PHOTOELECTRIC SYSTEMS

F MODEL 4000 "WATCHMAN." An economical indoor alarm sys E MODEL 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 davlight range; variable sensitivity control. Range; 35 feet 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, 5x5x5½". For 110-120 v., 50-60 cycle AC. Shpg. wt., 14 lbs. 77 PU 232. NET.

MODEL 62 R & L TWO-UNIT SET (not illust.). 62-R receiver and 62-L light source. Useful for many simple operations—detects objects over 2" square with a directional beam covering distances from a few over z 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 amps, 110 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, 6½x7x 4½"; receiver, 7x6½x4½". For 110-120 v., 50-60 cycle AC. Shpg. wt., 13 lbs.

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" 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 [6] MUDIE 49 ELECTRUNICALLY OPERATED DPDT RELAY. Responds to current from photocell. Contacts rated at 5 amps, non-inductive; 2 amps inductive at 110 v., 50-60 cycle AC. Operates up to 600 times per minute on complete or partial change of light intensity. Steel case, 9/4x11/2x5". For operation from 110-120 v., 50-60 cycle AC. Shpg. wt., 22 lbs. 77 PU 085. NET...

MODEL 33 EXCITER LAMP. Light source. Projects beam 10 feet. Gray cast-iron case. Size,  $4\frac{1}{4}x2\frac{3}{4}x2\frac{3}{4}$ ". For 6 v. operation. Takes power from Model 63 relay. Shpg. wt., 3 lbs.

77 P 087. NET.....

MODEL 23 PHOTO-CELL RECEIVER. Housed in same type of case as Model 33. Shpg. wt., 3 lbs. 77 P 090. NET......19.55





## Photoelectric Equipment Designed for Home Use

#### FISHER-PIERCE LIGHT CONTROL

Unusually economical, smooth-operating Unusually economical, smooth-operating photo-electric switch. Turns electric lights on or off, depending on amount of daylight striking photocell. Simple installation—just plug into outlet and plug lights into control unit. Perfect for store windows, cach lights outdoor igns at a Turns lights. 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 automatic—no need to set or reset. Light control is housed in attractive sturdy brown bake-lite 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: 3½x4½x3½?. For operation from 110-120 v., 60 cycle AC. Shpg. wt., 3 lbs.

77 P 235. List. \$15.95. NET. ... 10.94 porch lights, outdoor signs, etc. Turns lights

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, 8/4x6//x23/4". For 110-120 volts, 50-60 cycle AC. Wt., 8 lbs.

REPLACEMENT BULB. 32-candlepower, 2000-hour 6-volt bulb. For Models 33 and 61 (above). Shpg. wt., 5 oz.

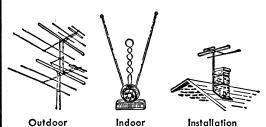
REPLACEMENT CHIME. For Model 61. May also be used with any other 6-volt AC power supply. Excellent warning device for

home or store. Shpg. wt., 2 lbs. 

## 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 pages 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.

## How to Select Your TV Antenna



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.

Antennas

★ Metropolitan-Suburban (up to 35 miles).

Accessories

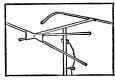
\* Semi-Fringe (up to 50 miles).

★★★ Fringe (up to 75 miles).

★★★ 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-and-white 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.

perend 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 include 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.

## ★★★★ Kit Featuring All-Channel's "Riviera" VHF Antenna

\$3132

Antennas

- Provides Excellent Deep-Fringe Reception
- 9-Position "Electronic Rotation" Switch
- Includes All Installation Accessories

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° (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.

"RIVIERA" ANTENNA AND SWITCH. As above, but less installation accessories. Shpg wt., 10 lbs.

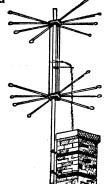
47 W 599. Over 100 ft., PER 100 FT......8.90







9-Position Switch—allows selection of antenna elements to obtain clearest picture from any direction



#### \*\* "SUBURBAN" ANTENNA

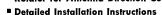
Excellent semi-fringe antenna. 9-position selector switch for peak signal pickup from any direction. Switch-to-set coupler; 2—mast and 2—screw-insulators; 70-ft. 4-cond. wire. Less mast. 5 lbs.

## Allied's Fringe-Area Antenna Kits

## Complete with Mast and All Installation Accessories For Color and Black-and-White TV Reception

## Completely Packaged—Ready for Quick and Easy Installation

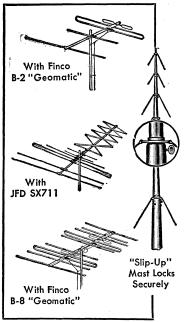
- Available with 20, 30 or 40-ft. Mast
- Choice of 3 Famous-Make Antennas
- Rotator for Antenna Direction Control
- Complete with All Hardware
- Top Quality Throughout



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 distance 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-ft. antenna kits). Kits with rotator also include 10-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.



Complete with Installation Accessories

## ★ ★ SEMI-FRINGE ANTENNA KITS

KIT A-20. Includes two-section, 20foot 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. 

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. 

KIT A-30-L. As above, less rotator. Shpg. wt., 41 lbs. 

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.....21.24

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; heavy-duty 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 C-20 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 B-20. Includes two-section, 20foot telescoping mast; extremely effective JFD Model SX711 TV antenna for channels 2 to 13; heavy-duty, fully automatic CDR Model AR-22 rotator; and all installation accessories. Shpg. wt., 50 lbs. 

★ ★ ★ FRINGE ANTENNA KITS

KIT B-20-L. As above, less rotator. Shpg. wt., 26 lbs. 

KIT B-30. Same as Kit B-20, but with

30-foot mast. Shpg. wt., 66 lbs. 92 CZ 179. NET...........65.33

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

## ★★★ DEEP-FRINGE ANTENNA KITS

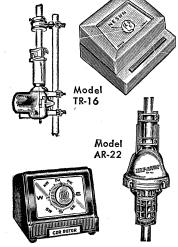
KIT C-30. Same as Kit C-20, but with 30-foot mast. Shpg. wt., 71 lbs. 

KIT C-30-L. As above, less rotator. Shpg. wt., 47 lbs.

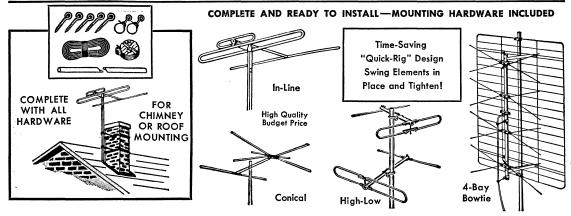
92 CZ 163. NET......33.05

KIT C-40. Same as Kit C-20, but with 40-foot mast. Shpg. wt., 82 lbs. 

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**

\*\*NET \*\*SIB\*\*

\*\*WITH CHIMNEY MOUNT. A complete VHF antenna kit with chimney mount and accessories—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-ohm twin line; U.L. Approved lightning arrester; five 3½" woodscrew standoff insulators; two clamp-type mast standoff insulators; and rugged chimney mount.

Antenna elements are high-quality ½" seamless aluminum tubing. Shpg. wt., 10 lbs.
92 CX 045. 6 or More, EACH....7.36 1-5, EACH...8.18

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

## **★**HIGH-LOW ANTENNA KITS

1-5, EACH . . **7.** 78

NET 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-ft. of 300-ohm twin line; U.L. Approved lightning arrester; and antenna. Antenna elements are ½" aluminum tubing. Shpg. wt., 10 lbs.

WITH ROOF MOUNT. As above, but with roof mount. 92 CX 047. 6 or More, EACH....6.38 1-5, EACH....7.09

92 CX 048. 6 or More, EACH....7.00

HIGH-LOW ANTENNA ONLY. Less accessories. 5 lbs. 92 CX 016. 6 or More, EACH....4.30 1-5, EACH....4.78

#### ★ NEW UHF 4-BAY BOWTIE ANTENNA KIT

NET WITH CHIMNEY MOUNT. Easily-installed 4-bay bowtie antenna kit. Includes: 2—3-ft. masts; 3 woodscrew standoff insulators; 2 mast standoff insulators; 50-ft. of 300-ohm twin line; lightning arrester; and antenna. Elements are ½" aluminum tubing. 12½ 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., 5½ lbs. 91 CU 835. 6 or More, EACH....4.33 1-5, EACH....4.81

#### **CONICAL ANTENNA KITS**

\*\*SINGLE-BAY WITH CHIMNEY MOUNT. Value-packed antenna kit for excellent reception on all VHF TV channels. Kit includes: Conical antenna; sturdy 5-ft. mast; 50-ft. of twin line; 2 mast standoff insulators; 4 wall standoff insulators; lightning arrester; chimney mount. Everything needed to make a complete, first-class 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

★★ 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-ft. mast. Shpg. wt., 10 lbs.

92 CX 173. 6 or More, EACH....8.95 1-5, EACH...9.95

★★ 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

★ 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.

## **ALL-DIRECTION FM ANTENNA KIT**

NET

\$**784** • Superb Reception Ideal for Hi-Fi

Top-quality FM antenna kit. Complete kit includes: rugged, 5-ft. mast; 50-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. 7 ¼ lbs.

92 CX 583. 6-Up, EACH......7.06 1-5, EACH... 7.84

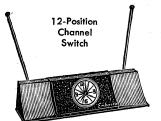
339

High

Gain

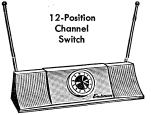
## Indoor TV Antennas

## ALL-CHANNEL ANTENNAS



FOR VHF RECEPTION

Fits Into Any Room Decor



#### **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-ft. AC cord. Size, 14x4x31/2". 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 13.92

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, 14x4x31/2". 21/2 lbs.

92 CX 066. Mahogany finish.

92 CX 574. Maple Walnut finish.

92 CX 067. Ebony finish.

92 CX 068. Ivory finish.

List Each, \$19.95. NET EACH., 9.95

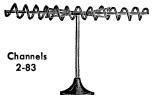
### REMBRANDT UHF-VHF SERIES



Deluxe indoor antenna featuring "radar loop" design plus all-angle telescoping dipoles. Delivers clear allchannel 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., 3½ 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.

## **HI-LO ANTENNAS**



#### **UHF-VHF "SPIRAL-TENNA"**

Model 202. Here's a popular, wellengineered indoor antenna. Gives excellent gain over the entire UHF-VHF bands (channels 2-83). Minimizes "ghosts" and interference. Requires no adjustment. Gold finish. Sturdy tip-proof base. Height 14"; width (span), 32". 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......5.02



Channels

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, 4x6x 11/2". Wt., 2 lbs. 92 CX 596. NET......4.77 **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" high; each arm extends to 15". Supplied complete with 6 feet of twin line. Shpg. wt., 21/2 lbs.

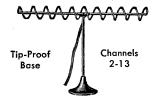
92 C 013. 1-5, NET EACH......5.85 



#### UHF-VHF ANTENNA KIT

For the do-it-yourself fan—here is an economical, high gain, Delta-Beam 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" 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, %" thick, hard-rubber base has felt flocked pad on bottom to prevent marring finish of TV set. Complete with 6 feet of twinline. Shpg. wt., 21/2 lbs. 

## 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"; width (span), 32". Easy to assemble. Complete with 6-ft. length of 300ohm twin-line, tipped with spade lugs, for quick, easy installation. Shpg. wt., 2 lbs. 

### TELCO "HIDE-A-WAY" VHF ANTENNA

Compact, plasticcased "Hide-A-Way" antenna. Provides excellent all-channel metropolitan-area reception. Telescoping elements are made of durable, nickel-plated brass tubing. Elements are mounted on ball-joint swivels; rotate 360° for excellent signal pick-



up from any direction. Case is completely concealed behind TV setall you see are the elements, which may be conveniently retracted. Elements are 37". Supplied complete with spade-lug-tipped 300-ohm twin line. Shpg. wt., 1 lb. 

#### knight VHF ANTENNA

Here's a popular indoor television antenna at unusually low cost. Features efficient, time-proven "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 interfer-



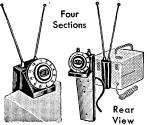
ence. Also excellent for FM reception. Uses sturdy, 3-section, brassplated telescoping elements for convenient adjustment to desired length. Bakelite base is weighted to prevent tipping. Felt padding on base protects TV set. With 3 ft. of 300-ohm twin-line. Shpg. wt., 2 lbs.

## QUALITY JFD ANTENNAS

#### "MERLIN" UHF-VHF ANTENNA

- Convenient Back-of-Set Mounting
- 12-Position Rotary Selector Switch • Elements Have Ball-Swivel Bases

Highly-efficient, fully-adjustable indoor antenna-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 position-



on TV Set

ing for angle of optimum reception. 38" 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	4.95
92	C 573	Model IIO	Blonde NFI	T FACH	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 MG850. Mahogany. 92 C 228. Model MG650. Blonde. 92 C 229. Model MG750. Ebony. NET EACH......8.95

#### MODEL TA-147 UHF-VHF ANTENNA

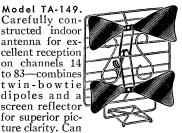
Famous indoor antenna featuring smart styling and outstanding per-formance. Has high signal gain; minimizes interference and ghosts. Employs 6-position impedance matching switch; permits adjustment for maximum efficiency on



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.

## "SONATA" UHF INDOOR ANTENNA

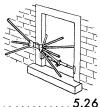
Model TA-149. Carefully constructed indoor antenna for excellent reception on channels 14 to 83—combines twin-bowtie dipoles and a screen reflector for superior pic-



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 300ohm twin lead, tipped with spade lugs for quick connection to TV set. Overall HWD is 12x12x6". Shpg. wt., 2 lbs.

#### 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" to 42" 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.....



### EASY-TO-INSTALL TV ANTENNAS CONSTRUCTED OF ALCOA ALUMINUM

## ★★★★ MODEL VX1111 "SATELLITE HELIX"

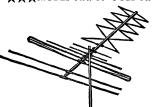


- For up to 150 Miles!
- New 28-Element Design

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 high winds, storms and heavy

high winds, storms and heavy icing. Super-sensitive 28-element array employs a special helical highband section, plus, 'balanced sleeve dipole' design. Gain is essentially flat, averaging 10 db on high bands and 6 db on low bands. Sharp directivity 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 aluminum dowels. Heavy-duty tandem U-bolt assembly locks boom to mast—boom has two 1" tubular braces for extreme rigidity. Antenna is completely pre-assembled—just flip elements into heavy locking brackets. Less mast and 300-olm twin line. Shpg. wt., 15 lbs. 

## ★★★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" 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.

★★Model AX7115. Same as AX711 above, except two bays for higher gain. Requires 10-ft. mast. Shpg. wt., 16 lbs.

Model SX711. Same as AX711, but without gold anodizing. **92 CZ 113.** List, \$25.50. NET..... Model SX711S. Same as AX711S, but without gold anodizing. 92 CZ 112. List, \$52.50. NET...... 30.87 ★★★MODEL JET213S "SUPER JET"

- Dowel-Reinforced Elements 1"-Square Heavy-Wall Boom
- High-performance stacked array for excellent fringe-area VHF reception—may also be used for local UHF reception. Provides exceptionally high gain on TV channels 2 to 13. Dual reflectors provide 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 performance. Entirely pre-assembled—just flip elements into place. Heavy-gauge brackets tightly grip elements. Long elements are reinforced with heat-treated, aluminated and the state of the stat

and icing. Extremely rugged aluminum booms are of one-inch-square heavy-wall aluminum. Supplied complete with quarter-wave stacking bars. Less mast and 300-ohm twin line. Requires 10-ft. mast. 

★★Model JET213. Similar to JET213S above, but single-bay. Shpg. wt., 7 lbs.

## ★★★★MODEL AX811 GOLD-ANODIZED "WONDER HELIX"

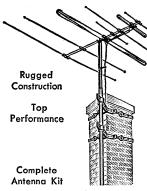
## Sharp Polar Gain Pattern Rugged, Streamlined Design

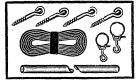
Model AX811S. Same as AX-811 above, except two bays for higher gain. Requires 10-ft. mast. Shpg. wt., 17 lbs. 

Model WX811. Same as AX811, but without gold anodizing. Model WX811S. Same as AX811S, but without gold anodizing.

92 CZ 282. List, \$82.50. NET.......48.51

## SERIES 500 "FIREBALL" GOLD ANODIZED ANTENNAS AND ANTENNA KITS





#### ★★MODEL AB500 ANTENNA

 Extremely Rigid Construction Minimum Ghost and Noise Pickup

Expertly engineered broadband array for superior semi-fringe VHF and local UHF coverage. Offers extremely high gain on both low and high VHF TV bands. Separate folded dipoles for low and high bands with individual reflectors and directors give high directivity and excellent front-to-back ratio. Tough gold-anodized surface provides high tarnish and corrosion resistance. Lightweight construction simplifies installation on high towers. Aluminum phasing harness prevents weather breakdown. Has 15" aluminum dowels in the center of every element over 30" long to minimize the effects of icing and high winds. Completely pre-assembled along a rugged 1"-square boomjust flip elements into place. Large brackets grip elements securely. Less mast and 300-ohm twin line. Shpg. wt., 5½ lbs.

\*\*\*Model AB5005. Same as AB500 above, except two bays for higher gain. Requires 10-ft. mast. Shpg. wt., 11 lbs.

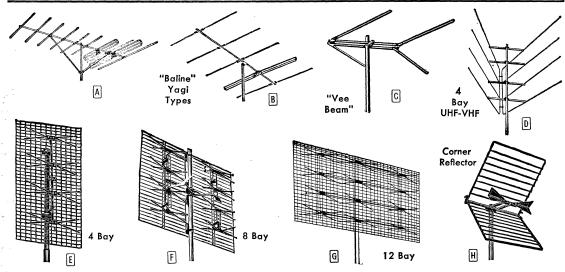
91 CU 829. List, \$47.00. NET.......27.64 Model FB500. Same as AB500, but less anodizing. 

## ★★★MODEL AB500CH ANTENNA KIT

- A Complete Kit—Nothing Else To Buy
- Quick, Easy Installation

91 CU 830. List, \$34.95. NET...... 20.55

## JFD VHF-UHF TV Antennas



#### "BALINE" YAGI ANTENNAS

Vagi 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 rust-proof, 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 \*\*\* 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. shpg. wt., 9 lbs.

No.	Туре	Chan.	List	EACH
98 CU 231	10Y2	2	\$27.80	16.35
98 CU 232	10Y3	3	26.35	15.50
98 CU 233	10Y4	4	24.30	14.29
98 CU 234	10Y5	5	24.30	14.29
98 CU 235	10Y6	6	21.55	12.67
98 CZ 236	10Y7	7		
98 CZ 237	10Y8	8		l
98 CZ 238	10Y9	9		
98 CZ 239	10Y10	10	11.95	7.03
98 CZ 240	10Y11	11		
98 CZ 241	10Y12	12		
98 CZ 242	10Y13	13		

B \*\*\* SINGLE CHANNEL 5-ELEMENT TYPES. Wide-spaced, single-driven-element yagis. Consists of 3 directors, 1 reflector and 1 folded dipole. Av. shog. wt. 5 lbs.

tor and I forded dipole. Av. slipg. wt., 5 lbs.					
No.	Model	Chan.	List	EACH	
98 CZ 322	5Y2	2	\$13.75	8.08	
98 CZ 323	5Y3	3	13.05	7.67	
98 CZ 324	5Y4	4	12.35	7.26	
98 CZ 326	5Y5	4 5	11.40	6.70	
98 CZ 327	5Y6	6	10,70	6.29	
98 CZ 328	5Y7	7			
98 CZ 329	5Y8	8			
98 CZ 331	5Y9	9			
98 CZ 332	5Y10	10	6.50	3.82	
98 CU 333	5Y11	11	1 0.00	0.02	
98 CZ 334	5Y12	12			
98 CZ 335	5Y13	13			
98 CZ 329 98 CZ 331 98 CZ 332 98 CU 333 98 CZ 334	5Y8 5Y9 5Y10 5Y11 5Y12	9 10 11 12	6.50	3.82	

CASCODE MULTI-CHANNEL TWIN-DRIVEN TYPES. Offer high-gain coverage of all low-band or all high-band channels with a single antenna. Uni-directional response.

A ★★★MODEL10Y26.10-element "Baline" for channels 2-6. Wt. 9 lbs. 98 CZ 455. List, \$37.50. NET.... 22.25

A \*\*\*MODEL107713.10-element"Baline" for channels 7-13. Wt., 9 lbs.

98 CZ 459. List, \$15.95. NET......9.38

B \*\* MODEL 6Y26, 6-element wide-spaced "Baline" for channels 2-6. Excellent per-

formance in areas of medium signal strength. Shpg. wt., 7 lbs. 98 CZ 450. List. \$21.15. NET..... 12.44

#### 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; †for 10Y713. Av. shgg. wt., ½ 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	†J178	7-13	.88

## QUALITY VHF ANTENNAS

★ 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 ½" boom. Includes built-in lightning arrestor. Less mast and 300-ohm twin line. Shpg. wt., 3½ lbs.

98 CU 166. List, \$6.25. NET.....  $\bigstar$  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 twin-line. Shpg. wt., 7 lbs.

#### **UHF AND VHF-UHF ANTENNAS**

D ★★ UN105. UHF-VHF antenna for 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., 5½ lbs.

92 CU 107. List, \$10.95. NET......6.44

MODEL UHF202. 4 bay, UHF bow-E \* MODEL UHF202. 4 pay, OHF bow tie antenna for suburban areas Reflector for high gain on all channels and reduction of snow and troublesome reflections. Features "Custom-Channel" flections. Features "Custom-Channel" calibrator—permits peaking individual channels for optimum response. Precision spaced elements and phasing harness for maximum gain. Galvanized grid wire screen with ½" 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

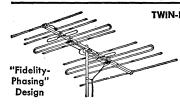
F \* MODEL UHF208. 8-bay, UHF bowtie antenna for semi-fringe area reception. Utilizes wire mesh reflector and matched elements to provide optimum gain on all channels. Rigidly constructed; solid aluminum rods and galvanized screen. Preassembled for simplified, rapid installation. Less mast and 300-ohm twin line. Shpg. 

G ★★★ 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 in-terference. Pre-assembled for quick, easy installation. Less mast and 300-ohm twin line. Shpg. wt., 10 lbs. 92 CU 551. List, \$34.50. NET..... 20. 29

★ MODEL UHF410. UHF corner reflector —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 in-creased intensity. Features extremely sharp directivity. The bowtie dipole provides op-timum beam width for maximum gain. Rig-idly constructed of solid, lightweight, rust and corrosion resistant aluminum.

## Finney Fringe Area TV Antennas



## TWIN-DRIVEN "GEOMATIC" VHF ANTENNAS

- High Front-to-Back Ratio From 2-13
- Preassembled for Easy Installation
- High Gain—Sharp Directivity

"Fidelity-Phasing"
Design

Design

The 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"; self-locking 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. Shipp. wt., 10 lbs. Shipped by express or truck only.

2702

92 CZ 594. List, \$45.95. NET....

\*\*\* \* \*Model B-7. Has same features as Model B-8 above, except with 1 reflector. Shpg. wt., 6½ lbs. Shipped by extress or truck and. 2 lbs. Shipped by express or truck only. 92 CZ 093. List, \$24.90. NET.....

\*\* \* Model B-6. Has same features as Model B-8 above, except has 1 reflector and 1 director. Shop, wt., 5½ lbs. Shipped by express or truck only. 92 CU 094. List, \$18.90. NET .....

## 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.

\*\*\* Model B-5. Highly efficient super fringe antenna. Shpg. wt., 9½ lbs. 92 CZ 074. List, \$32.00. NET......18.82

\*\* Model B-4. Ideal for fringe areas. High gain; sharp directivity. 6 lbs. 

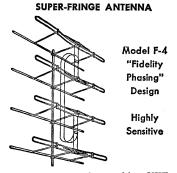
\*\* A Model B-3. For suburban-fringe areas. A top performer. Wt., 5 lbs. 92 CU 078. List, \$13.50. NET......7.94

★★ Model B-2. Metropolitan, suburban or semi-fringe areas. Shpg. wt., 3½ lbs. 92 CU 082. List, \$7.35. NET......4.32

#### STACKING KITS

Model A. For stacking all Series B antennas 

#### "GEOMATIC" TWIN-DRIVEN 2-BAY VHF ANTENNAS



★★★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. 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

length on low-band signals and as electrically different length on high-band signals—provides peak performance on both bands. "Fidelity phasing" efficiently combines the low-band folded dipole operation and high-band 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.

23 40 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 10 lbs. Express or truck. 92 CU 569. List, \$40.80. NET.... 23.99

\*\*\*\*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 signals.

## Gain Preassembled

CO-LATERAL UHF-VHF ANTENNAS

One

Antenna

For All Channels

High

#### MODEL 400-A ANTENNA

★★★★This highly efficient deep-fringe double-co-lateral antenna provides out-standing reception on all UHF and VHF channels. It features 32 driven elements channels. It features 32 driven elements which achieve remarkably high gain, extremely sharp directivity, and superior signal-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 alumibent, 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-ft. (minmum) 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-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



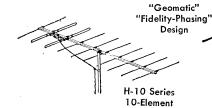
## MODEL 400-SA ANTENNA

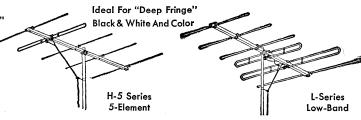
\*\*\*\*This antenna is the same as Model 400-A described above, but supplied with "Fro-Bac" full dimensional screen reflector. This special screen results in maximum signal gain plus extremely high front-to-back ratio. Eliminates unwanted rearignal interference and ghosting in fringe areas. Antenna 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. 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

\*\*\* Customized 10-element yagi. "Geo-matic" VHF TV antennas. Provide maximatic" VHF TV antennas. Provide maximum 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. Pre-assembled; "box girder" brackets; heavy, square aluminum boom; solid aluminum elements, and saddle brackets. Less mast and 300-ohm line. Av. shpg. wt., 4 1/4 lbs.

Stock No.	Model	For
92 CU 552	H-10-7	Channel 7
92 CU 553	H-10-8	Channel 8
92 CU 554	H-10-9	Channel 9
92 CU 555	H-10-10	Channel 10
92 CU 556	H-10-11	Channel 11
92 CU 557	H-10-12	Channel 12
92 CU 558	H-10-13	Channel 13

x ★ ★ ★ Model H-10-713. New, twin-driven 10-element yagi. Similar to above, but covers channels 7-13. 43% lbs. 92 CU 559. List, \$12.95. NET....... 7.61

## H-5 SINGLE-CHANNEL ANTENNAS

★★★Popular, 5-element, high-band VHF antennas. Have famous "Geomatic" design for high gain and clean directivity. Same superior construction as Series H-10; feature new solid-rod aluminum elements. Av. shpg. wt., 21/2 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

★ ★ ★ Model H-6-713. New, twin-driven 6element yagi. Similar to above, but covers channels 7-13. 23/4 lbs.

92 CX 567. List, \$8.75. NET...... 5.14

Model A Stacking Kit. For all Finney Series H 

TACO BROAD-BAND VHF ANTENNAS

### "GEOMATIC" LOW-BAND ANTENNAS

\*\*\*\* "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. "Customized" Series L "Geo-

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 gain—see Model C Stacking Kit. Less mast and 300-ohm twin line. Av. shpg. wt., 81/2 lbs.

Stock No.	Type	Channels
92 CZ 283	L-26	2-6
92 CZ 284	L-25	2-5
92 CZ 285	L-24	2-4
92 CZ 286	L-36	3-6
92 CZ 287	L-35	3-5
92 CZ 288	L-46	4-6
92 CZ 289	L-45	4 and 5

Model C Stacking Kit. For all Finney Series antennas above. Shpg. wt., 1 lb. 

## ₹ | B Has 1 Five Driven Elements 1890

#### MODEL 1890 "SUPER-TRAPPER"

\*\*\* Unique, multi-driven antenna for outstanding performance in deep-fringe 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 1½" diameter crossarm for long life. Low-loss fiberglas insulators. Easy to install—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.

		Description		
92 CX 031	1892	hi-band gain lo-band gain	1/4 lb.	.88
92 CX 032	1893	lo-band gain	7 oz.	2.20

## **Anodized Surface** G2560 G2570 • Ideal for Color TV

## **GOLDEN TOPLINER ANTENNAS**

★★★ 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 ments 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

## STACKING HARNESSES FOR "TOPLINER" ANTENNAS

**92 CX 297.** For stacking two G2570, G2560, 2570, or 2560 antennas for extra gain on channels 7-13. Wt., 1/2 lb. NET......88c ★★★ 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 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.

92 CX 298. For stacking two G2570, G2560, 2570 or 2560 antennas for extra gain on channels 2-6. Wt., 1/2 lb. NET..1.76

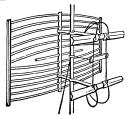
## ANTENNA INSTALLATION KIT

3-Mast Kit. Provides needed installation acconsorted for several for several for several for the several for the several for the several for the several for any antenna—perfect for service crews, etc. Contains: 3—3' mast sections; 100' of 300-0hm, flat twin-line; 1—lightning arrester; 2—mast standoffs; 5—screw-type standoffs; and 10' ground wire. Shpg. wt., 734 lbs. 

DAVIS UHF-VHF ANTENNA

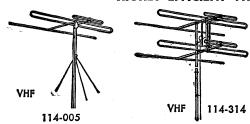
\*\*\*Model SV-ZR-1 "Zig-Rig." For superior fringe area
VHF reception; excellent UHF reception in primary signal
areas. Delivers 12 db or more average gain on high channels.
Features electronic dipole separators. With 2 sets of matching harness—permits peaking antenna on weakest channel and still maintain excellent all-channel coverage. Partially preassembled. Less mast and 300-ohm line. Shpg. wt., 12 lbs. By express or truck.

Model SK-1 Stacking Kit. For horizontal or vertical stacking of SV-ZR-1. 1½ lbs. 

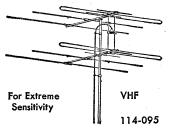


## Amphenol and Walsco TV Antennas

## HIGHLY EFFICIENT VHF & UHF AMPHENOL ANTENNAS







#### **★INLINE VHF ANTENNA**

Model 114-005. Covers all 12 VHF channels, Ideal for metropolitan and suburban use. Unusually broad frequency response. Uni-directional pattern and excellent impedance match on high and low-bands reduces stray reflections and "ghosts." Antenna elements constructed of sturdy aluminum tubing. Mast is heavy-gauge steel. Unique design permits large folded dipole 

Model 114-009. Same antenna as 114-005 above but less 300-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 insulators. Shpg. wt., 5 lbs. Express or truck. 97 CU 492. List, \$13.95. NET.....8.20

#### **★★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-

## ANTENNA COUPLERS



Antenna coupling networks. Eliminate antenna switching and separate lead-in lines.

separate lead-in lines, Permit using a single 300-ohm line to separate high and low-band VHF and UHF antennas and VHF and UHF antennas. Each coupler listed below consists of an efficient isolation of the for effectively isolations. filter for effectively isolating one antenna from the other; preserves the gain to assure good picture quality. Easily installed on antenna mast. With mounting hardware and installation instructions. Shpg. wt., 11/2 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 coupling network. Permits using a single 300-ohm twin line to separate VHF and UHF

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-ohm transmission line.

51 C 277. List, \$4.75. NET.........2.79

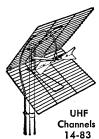
#### **★"PIGGY-BACK" VHF ANTENNA**

Model 114-026. Amphenol's extremely popular "Piggy-Back" VHF antenna—a particularly 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 adjustments for peak performance and minimum "ghosts" on channels 2-6 (low band) and 7-13 (high band).

Each antenna section employs its own folded dipole element plus a reflector element to assure excellent signal gain and a very favorable front-to-back ratio. Provides clear, sharp reception in metropolitan as well as suburban areas.

Antenna is supplied with the following installation accessories: 5-ft. steel mast, clamps, guy ring, isolating transmission harness, mounting support, stand-off insulators, 75 feet of 300-ohn twin line and 

#### **★UHF CORNER REFLECTOR**



Model 114-058, Engineered for high gain over channels 14 to 83. UHF cor-ner reflector design has proven most efficient antenna for both strong and weak signal areas. Excellent horizontal and vertical characteristics reduce "ghosts" as well as interference due to Channels simultaneous telecasting on the same channel or adjacent channels. Spacing

and dimensions of the elements and reflectors assure maximum broadband reception 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 1½" O.D. With complete mounting hardware. Less mast and 300-ohm twin line. Shpg. wt., 8 lbs. Express or truck.

97.CIL 263 List \$12.50. NET.

7.35

97 CU 263. List, \$12.50. NET......7.35

#### MATCHING TRANSFORMER



Matching transformer for connecting 72 and 300-ohm impedances. 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. 

#### ★★★"POWERAY" FRINGE-AREA VHF ANTENNA

Model 114-095. Designed for extreme sensitivity, the "Poweray" 2 bay fringe area VHF TV antenna produces outstanding reception even at distances to 75 miles from the transmitter. Features "Sleeve Dipole" design for proper balance of gain and directivity, the an extremely close impedance. design for proper balance of gain and directivity, 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 interference, and reduces ground reflections causing "ghosts." Easily installed—elements swing out and lock with positive spring-lock design. Heavy-duty, all-aluminum construction withstands severe weather conditions. Requires 10-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 stacking two 114-095 antennas. Wt., 1/2 lb. 92 CX 097......1.32

## WALSCO "IMPERIAL" VHF TV ANTENNAS





Disc Insulator

★ ★ Model 4062-F. Extremely popular "Imperial" 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 directivity and sensitivity.

The "Imperial" can be used in sea coast or heavy industrial areas. Features a barrier disc type insulator with 2" of air space between the terminals. Salt, moisture, soot, corrosion, etc., will not affect the gain or picture quality. Contact surfaces and terminals will never rust or oxidize. Stainless steel front and bardware presents eigen 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

★ 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	Model	Description	NET	
No.	No.		EACH	
98 CX 406		For 2-bay	.88	
98 CX 407		For 4-bay	3.29	

## **TELREX UHF-VHF** TV ANTENNA

DUO-BAND **UHF-VHF** CONICAL V-BEAM ANTENNA

\*\* MODEL 440. Universal 2-bay UHF-VHF 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 frequence. sion line for both bands. Higher frequency signals are further strengthened by the addition of 2 supplementary "V" splines. All aluminum construction. Less mast and 300-ohm line. Shgs. wt., 9 lbs.

92 CZ 204. List, \$26.40. NET ..... 15.52 ★ 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 ANTENNA** 

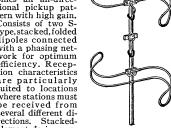
Single-bay, 6-element yagi antenna for top FM performance in weak signal areas. Uni-directional design. High F/B ratio. 6 to 9 db gain. Completely assembled. Elements 

## **MODEL 610 10-ELEMENT FM ANTENNA**

MODEL 646 STACKING KIT. Phasing line, insulators, hardware. Permits stacking two 644B or 610 antennas. Wt., 1 lb. 

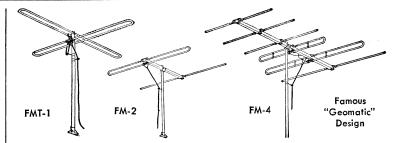
#### MODEL 624STL FM ANTENNA

An excellent value in a unique, stacked FM antenna—combines an all-directional pickup pattern with high gain.
Consists of two South type, stacked, folded dipoles connected with a phasing network for optimum efficiency. Recep-tion characteristics are particularly suited to locations where stations must be received from several different di-rections. Stackedelement design pro-



vides unusually good gain across the entire FM band. Sturdy, all-aluminum construction. Antenna is supplied with heavy-duty, 10-ft. aluminum mast. Less 300-ohm twin line. Shpg. wt., 7½ lbs.

92 CU 039. List, \$14.95. NET..... 8.79



#### FINNEY FM ANTENNAS

#### MODEL FMT-1 ANTENNA KIT

All-direction FM antenna kit. Provides un usually 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° coverage without rotation. Dipoles are 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-ft. 300-ohm transmission line; heavy-duty 5-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 ant construction throughout. All-aluminum boom and elements are completely pre-assembled with "snap-out," self-aligning aluminum brackets—designed for quick, simplified installation. Universal base will mount on any surface. Kit is supplied with 5-ft, antenna mast, heavy-duty mounting base, 50-ft, 300-ohm twin line, 2 mast-type standoff insulators and 3 screwere stand. stand-off insulators, and 3 screw-eye stand-off insulators. Shpg. wt., 6½ 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. All-aluminum construction with square boom. Special "Lock-Tite-No-Tilt" saddle bracket for permanent horizontal alignment. Uses folded dipole driven element for closer imet 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 antenna—provides 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 "T-Match" system. Twin drive allows maximum gain to be realized over the full 88 to 108 me hand 3 extra wide spaced parasitic 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 to the gain and broad-band reatures. 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-Titl" saddle mounting. Less mast, twin lead. Shpg. wt., 6½ 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. 



**FM ANTENNAS** MODEL 114-008

**AMPHENOL** 

An efficient, sturdily constructed FM antenna. Easily installed unit employs folded dipole as driven 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. extremely good gain and directional characteristics across the entire 88 to 108 mc acteristics across the entire 8s to 10s 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" 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 as-sembly and installation instructions. Acces-sories consist of: 5 ft. x <sup>3</sup>/<sub>4</sub>" O.D. steel mast, 

#### MODEL 114-010 ANTENNA KIT

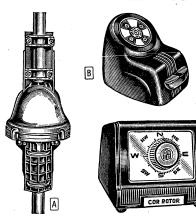


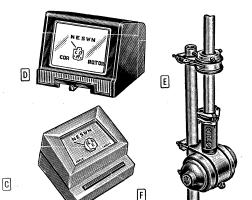
are received from many different directions. Elements are of 3/8" O.D. aluminum tubing—antenna is ruggedly constructed to with-—antenna is ruggetily constructed to Willi-stand high winds and icing. Employs 2 fold-ed dipoles mounted at right angles to achieve an essentially circular pickup pattern. Quarter wave phasing stub precisely match-es both elements to 300-ohm twin line.

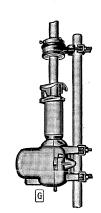
Supplied complete with full set of accessupplied complete with full set of accessories for easy, time-saving installation. Includes convenient, hinged base plate for simplified mounting of antenna on either a flat or sloping roof, 75 feet of quality 300-ohm twin line, all hardware, and sturdy 5-ft.x<sup>3</sup>/<sub>4</sub>" O.D. mast. Shpg. wt., 7 lbs. 97 CU 434 Tief e16.25 MET 0 55 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

Popular, fully automatic rotor for TV antennas up to 150 lbs. For 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 6½° roces. 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 ½° to 2° O.D. Rotor unit has 3 husky guy wire lugs built-in for convenience in installation.

#### MODEL TR-4 ROTATOR WITH METER-TYPE CONTROL UNIT

Heavy-duty antenna rotor; same as above except with meter-type control unit. Dial calibrated N, E, S, W, and N. Lever at front of control box permits forward or reverse movement of antenna. Dial pointer begins to turn as soon as starter lever is actuated, and can be stopped at any desired direction. Sturdy plastic cabinet with attractive mahogany finish. For 110-120 v., 50-60 cycle AC. Uses cable below. Shpg. wt., 16 lbs.

#### **MODEL TR-2 ROTATOR** WITH ILLUMINATED-COMPASS CONTROL UNIT

47 W 593. Over 100', PER 100'.....4.73

## 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 demonstrations—any multiple TV installation. Features high gain and wide response. 35 db isolation between outputs prevents interaction of TV sets, Gain control for adjusting signal level, national capital prevents interaction of TV sets, Gain control for adjusting signal level, and the control of the co

### **MODEL AR-2 ROTATOR** WITH AUTOMATIC-TYPE CONTROL UNIT

Automatic antenna rotator for precise antenna orientation with dial is calibrated in compass points: N, NE, E, SE, S, SW, W, NW. To change antenna direction, simply set control unit hob 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° in diameter; thrust bearing and antenna-mast collet accept masts up to 1½° in diameter. Antenna can be rotated 360° in 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., 13½ lbs.

29.37

#### **MODEL TR-16 ROTATOR** WITH METER-TYPE CONTROL UNIT

WITH METER-TYPE CONTROL UNIT

[G] F 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. Has same husky thrust bearing; instant locking—non-drift features. Mechanical brake—releases magnetically. Instantly reversible. Makes complete revolution in 45 seconds. Rugged, precision made gears. New, modern design control unit featuring meter-type dial and "piano key" 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 1½" 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 bs.

25.84 

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 bearings are silicone-lubricated. Advanced in-line design for greater load handling capacity (up to 200 lbs.) less wind resistance. Heavy-try 3-jaw chuck-type clamps on permit pinpoint accuracy. Moror is reached the properties of the

## TV Rotators, Boosters, Converters

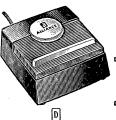
## **ALLIANCE TELEVISION ANTENNA ROTATORS**

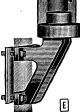
Choice of Three Handsome Control Units











#### MODEL U-98 ROTATOR FEATURING AUTOMATIC-TYPE CONTROL UNIT

- Smooth, Efficient, Weather-Proofed Rotor Unit
- Automatic Control Unit for Maximum Target Signal

#### **MODEL K-22 ROTATOR**

#### **MODEL T-12 ROTATOR** FEATURING METER-TYPE CONTROL UNIT

- Clean Straight-lined Styling of Control Unit
- Fingertip Direction of Antenna by Touch-bar

Heavy-duty antenna rotator, same as at left, but with meter-type control box. Control panel has clean straight modern styling with 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 4½" high, 6½" wide, and 2½" deep. Complete with rotor, control unit and instructions. Less 4-wire cable (listed below). For operation from 110-120 v., 50-60 cycle AC. Shgg. wt., 12 lbs.

92 TX 339, List, \$34.25. NET.

#### MODEL TBB2 THRUST BEARING BRACKET

Minimizes strain on rotators by relieving them of entire antenna weight. An ideal accessory when using large multi-element and multi-bay antennas. Increases rotator's weight-load capacity and assures reliable reception in windy weather. Shpg. wt., 3 lbs.

2.91

4-Wire Cable. For use with all Alliance rotators listed. Four—No. 20 gauge conductors. Shpg. wt., 100 ft., 3 lbs. 2.70 T 365, 100-ft. coil. NET. 2.70 47 W 576. Over 100', PER 100'......2.70

## POPULAR TELEVISION BOOSTERS

## **REGENCY MODEL DB-550 VHF BOOSTER**



## **BLONDER-TONGUE UHF TV CONVERTERS**

- **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 multiple images and troublesome interference. Input circuit is tracked with oscillator to reject spurious signals and
suppress oscillator radiation. Oscillator is thermally compensated to assure minimum drift. Precise input impedance match assures maximum
signal conversion; no line ghosts or picture smear. In "Off" position, VHF
signals are passed directly to TV set to permit regular VHF reception.
Uses 6AF4A oscillator, crystal dode mixer and selenium rectifier. Exact
300 ohm input and output impedance match assures maximum signal
power. Simple to install and operate. Meets new FCC radiation specs.
Housed in mahogany-finished plastic cabinet. U.L. Approved. Size,
61/4x41/4x43/4". For 110-120 volts, 60 cycle AC. Shgs. wt., 4 lbs.

15.95

98 T 586. List, \$22.95. NET.....

#### **BOGEN MODEL BB1-A VHF BOOSTER**

Advanced circuit, broadband, fringarea 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-mc bandwidth. Housed in brown plastic cabinet. Size, 8x4½x4¾. For operation from 110-120v, 60 cycle AC. U.L. Approved. With 4 feet of 300-ohm twin line. Shpg. wt., 4½ lbs. 98 T 360. List, \$32.50. NET..... 19.11



#### **REGENCY MODEL RC-103 FM TELEVERTER**

Regency converter for quality FM reception through your TV set. Full FM coverage at a fraction of the cost of an FM radio! Install in 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 flip 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 microamps. Handsome modern case, 4½x0x4½". Less batteries (below). Shpg. wt., 1½ lbs. 92 T 349. List, \$19.95. ONLY



53 J 031. Battery. 3 required. 3 oz. EACH......9¢



#### MODEL BTU-2R CONVERTER

- Deluxe Hi-Gain Conversion
- Clean Steady Reception Sharp All Channel Tuning





## Blonder-Tongue TV Equipment









Use Allied's free consulting service for friendly, individualized aid in solving your TV and booster problems at home, office or plant.







## TV BOOSTERS AND DISTRIBUTION SYSTEMS

#### VHF ANTENSIFIER

A 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 outwith 75 and 300-ohm lines input and output. Dual-triodes employed for extremely high signal-to-noise ratio—excellent fidelity. Sturdy-ventilated metal cabinet. Size, 8x4½x5". With 2—616's and 2—6BQ'A'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 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. lines are used.

Offers maximum fidelity for color TV as well oners maximum nuenty of color 1 v as wen as black-and-white sets. Gain is adjustable on high and low bands. Response flat within ±.5 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, 9x6x5" deep. In perforated gray metal cabinet. For operation from 110-120 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 attach to antenna terminals. Extremely compact chassis; may be installed out-of-sight at rear of one of sets, or may be placed in any other convenient location. Input and output impedance, 300 ohms. Size, 33/4x 61/4x21/2". For operation from 110-120 volts, 60 cycle AC. Shpg. wt., 11/2 lbs. 

#### VHF DISTRIBUTION SYSTEM

Model DA8-B. Combination booster and isolation-distribution system for use with to 8 TV sets. Features exclusive lowup to 8 noise all-triode circuitry. Requires no tunnoise all-triode circuitry. Requires no tun-ing, 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 sig-ruls. System overload is prevented through nals. 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, terminative successive southern and the supplier of sets. Unit includes power supply, terminating resistors and grounding clamp. Screw terminals permit fast installation. Designed for long life, continuous duty operation. Overall size, 53/4x9x5/½". For 105-125 v., 60 cycle AC. Shpg. wt., 7 lbs. 98 T 220. List, \$94.50. NET...... 58,50

## MODEL AB VHF BOOSTER

Antenna mounted TV booster. Efficient broadband circuit provides more than 25 db gain on all VHF channels. Features exclusive push-pull, cross-neutralized circuitry assuring maximum sized to mice 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: 7x734x514". Power supply: 5x3x4". With bracket and strap. For 110-120 y., 50-60 cycle AC. Shpg. wt., 10 lbs. 92 T 092. List, \$99.50. NET..... 62.00

### CONNECTORS, COUPLER & TAPOFFS

E Model P-59S Male Connector. For use 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 113. 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

G 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 ½ db line loss. Wt., 6 oz.

51 C 118. List, \$7.75. NET EACH... 4.65

#### MODEL MA4-1 MIXER-AMPLIFIER

[H] TV signal mixer, for up to five antennas. 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 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 a presemblification. Remaining A requiring no preamplification. Remaining 4 single-channel inputs use separate plug-in 

## STRIPS & CONVERTERS FOR ABOVE

Model CS-1 VHF Channel Strips. Plug-in strips. For use with Model MA4-1 mixerstrips. For use with Model MA4-1 mixer-amplifier 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 binder-head screw terminals for antenna conlite terminal strip at other end with binder-head screw terminals for antenna con-nections. 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—6CB6. Shpg. wt., 1 lb.

Stock	For	Stock	For
No.	Channel	No.	Channel
98 T 306	.2	98 T 312	8
98 T 307	3	98 T 313	9
98 T 308	4	987314	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

Model UC-1 UHF Converter Units. Three-tube,

## Jerrold TV-FM Accessories

#### "ULTRACON" UHF CONVERTERS



- Continuous Coaxial Tuning
- Low Noise, High Stability

Model TCU. Here's an economical, advanced-design 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 trimmer-tuning slug combination that holds alignment even under shock and vibration.



- 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 stability, low-noise crystal mixer, trimmer-tuning slug alignment and built-in UHF antenna for local reception.

Drift is only 0.25 mc with 95-120 volt line change. 12 db gain at 500 mc, 5 db gain at 800 mc. Low VSWR (3:1) assures absence of smear Straight-through switch for VHF. 6AF4A oscillator, 6CB6 IF, 1N72 mixer diode. 300-ohm input and output. 7½x5x5½. U.L. Approved. For 105-117 v., 60 cycle AC. 4 lbs. 93 T 085. Mahogany.\List. NET 93 T 086. Blonde. \\$39.95EACH27.50

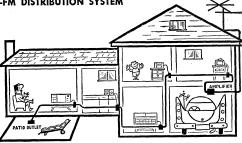
#### NEW LOW-COST TV-FM DISTRIBUTION SYSTEM

Quality TV-FM

Reception In Every Room Simple Screwdriver

Installation

Here's a complete, low-cost TV-FM signal distribution system for the home. Provides high-quality TV and FM sighigh-quality TV and FM sig-nals at convenient outlets in each room. Electrical isola-tion eliminates interference between sets. Installation is quick and easy—all you need is a screwdriver. Employs a minimum of wiring—stand-ard twin lead is used throughout. System is carefully matched for clear, sharp pictures.



TV-FM Signal Outlets Throughout House

#### **MODEL HSA-46 HOME AMPLIFIER**



### DISTRIBUTION SYSTEM TAPS AND ACCESSORIES

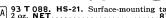
JERROLD

. . .

TV-FM

A

Taps and accessories for installation along twin-line. Surface-mounting basic tap (HS-21) provides 10 db receiver-line isolation, vides 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.



- © 93 T 090. HS-23. Ivory cover plate in standard outlet size. 3 oz. NET.....30¢
- EBSOLD! TEVENI C E B D
  - 93 T 091. HS-24. Twin-line plug. Attaches without stripping. 1 oz. NET.....30¢
  - E 93 T 092. HS-140. Flush-mounting outlet (described above, left). 2 oz. NET.... 65
  - 93 T 093, HS-36. Strap insulator for installing twin lead indoors. 1 oz. Pkg. of 24.....08

#### MODEL HSK-300 TV-FM DISTRIBUTION SYSTEM KIT

Contains all items necessary for a complete, economy-priced signal distribution system installation. Consists of the highly efficient HSA-46 Home Amplifier, five HS-140 flush-mounting

outlets, twelve HS-36 strap insulators and 100-foot coil of 300-ohm twin-lead transmission line. Shpg. wt., 6 lbs. 93 TX 094, List, \$67.75. NET.....43,98

### ANTENNA-MOUNTED TV BOOSTERS

Model DSA-62. As above, but for channels 2-6 only. Shpg. wt., 81/4 lbs. 92 TX 533. List, \$90.00. \$5.40 Down. NET.......................54.00



## 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.		Fig.	Description	NET
71 C 833	*F-59	F	Male conn. For RG-59/U, cable.	
71 C 834	F-61	G	Mates with F-81, F-61 & A-61 Female chassis fitting. Mates with	.48
71 C 835	F-81	н	F-59, AF-101, TR-72F. 3/6" mtg. hole. Female feed thru. Mates with F-59.	.55
			AF-101, TR-72F. 3/8" mtg. hole.	.75
71 C 836	A-61	J	Adapter. Allows F-59, AF-101 or TR-72F to mate with C-61 female.	.05
71 C 837	*F-101-59	к	Adapter. RG-11/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	М	72-ohm terminating resistor. Mates with F-61, F-81, A-61, F-101-59.	.90

## "TRAP-EASE" ANTENNA TRAPS

Tuneable interference trap for elimination of adjacent-channel television interference. Provides up to 50 db attenuation of the interfering signal. Removes the "beat" or "herringbone" pattern frequently caused by nearby sound or video carriers—permits reception of weak, distant stations that are usually blocked out by adjacent-channel stations having greater signal strength. Works with any TV receiver and antenna that would normally bring in pictures from the distant stations if the interfering 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, 7\(\frac{1}{2}\times \frac{3}{2}\frac{1}{2}\times \frac{1}{2}\times \frac{1}{ 2 lbs.

wt., 2 lbs. 98 T 828. Model HQ-91. For channels 2-6. List. NET 98 T 829. Model HQ-92. For channels 7-13. \$19.95 EACH. II.97

#### **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 mc 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 1.261. Unit is supplied complete with mounting strap and F-59 coaxial cable councetor (described in table at left). Size 21/2/1/4/1/ cable connector (described in table at left). Size,  $2\frac{1}{4}x2\frac{1}{4}x1^{2}$ . Shpg. wt., 8 oz. 6.00



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. 21/4x21/4x1". 



#### 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**

Expertly engineered high-strength antenna towers featuring special "culvert base" for quick, one-man installation without concrete. Self-supporting—require no additional guying or support of any kind! Ideal towers for fringe-are reception locations or areas where added height of antenna is necessary for stronger signal.

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 certification.

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-ft. tower sections—all necessary parts and clearly written, easy-to-follow instructions. All sections are factory assembled.

Stock	Mfr's	Antenna	Sections	Wt.,	NET
No.	Type	Height		lbs.	EACH
92 CZ 294	X28CB	23'	2	89	29.95
92 CZ 295	X36CB	31'	3	120	46.95
92 CZ 058	X44CB	39'	4	155	59.95
92 CZ 059	X52CB	47'	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' to 48' heights at remark-able savings. Each pack has one or more 8' tower sections, a ground plate, and an 8' mast. Tower sections are rugged zinc-plated steel with com-

W Salad

B

pletely riveted construction for maximum strength. Can be bracketed to building if ground plate is used. Require guying every 16' for roof-mounting. House bracket and roof mounting base, below, are extras.

Stock No.	Type	Ht.	Sections	Lbs.	NET	Stock No.	Туре	Ht.	Sections	Lbs.	NET
92 CZ 534 92 CZ 535 92 CZ 540 92 CZ 541	EP-5 EP-4 EP-3 EP-2	40' 32' 24' 16'	5 4 3 2	88 72 56 41	32.79	92 CX 543	EP-1 EP-R1 EP-H1	8' Roof House	1 Base Bracket	25 2 5	13.29 2.88 3.67

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.

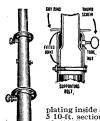
#### KTV ANTENNA TOWERS

Complete "free-standing" tower assemblies in 20 to 50-foot heights. May be ground mounted without guy wires or added support—safe in gales up to 80 mph. Designed for easy installation on roof or ground. Have "controlled sway" lateral loading bearing joints. Sections secured by bolts in welded-on, load-bearing 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 tubing. Top section takes masts up to 1½" O.D. 4' of bottom section mounts in concrete. 720-K. 20' tower. 10' top; 1-10' section. 58 lbs. 37.00

730-K. 30' tower. 10' top; 2—10' sections. 92 lbs. 91 CZ 369. NET.....55.50 740-K. 40' tower. 10' top; 3—10' sections. 126 lbs.
91 CZ 370. NET....74.00 750-K. 50' tower. 10' top; 4—10' sections. 164 lbs.
9| CZ 37|. NET.....92.50 863-H. Roof mount for above. Adjustable, flat-45°. 8 lbs. 91 CX 372. NET.....9.00 862-H. Tower base.  $3\frac{1}{2}$  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.

## TELESCOPING TV MASTS



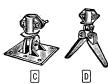
Heavy-duty telescoping mast of high-carbon steel. Ideal for any television array. Devision arr

40-Ft. Mast. Consists of 4 rugged sections (see sizes listed above): Nos. 1, 2, 3, and 4. Height, 40 feet. Shpg. wt., 29 lbs.
92 CZ 102. NET.......8.87

30-Ft. Mast. Consists of 3 rugged sections: Nos. 1, 2, and 3. Maximum height, 30 feet. Shpg. wt., 21 lbs. 

20-Ft. Mast. Consists of 2 sections: Nos. 1 and 2 described above. Height, 20 feet. Shpg. wt., 14 lbs.

#### PENN TV MAST MOUNTS



TV mast mounts TV mast mounts for flat and slop-ing roofs and side walls. Permit one-man instal-lation of tall, fringe area an-tennas. Lock in any position. Made of aluminum alloy.

#### PENN FLOATING GUY RINGS



GRA-140. Cast aluminum, GRA-140. Cast aluminum, floating guy ring and collar. Fastens to mast with steel set screw. Formits rotating antenna after guy wires are installed. Lubricated to assure smooth rotation. For 3-guy or 4-guy installations. For masts to 11½". Shpg. wt. 8 oz. 1.12



A wide selection of turnbuckles. Provide convenient adjustment of guy-wire tension. Made of galvanized malleable iron. Fig. Chas closed loops at each end for use where quick removal is not required. Other types can be easily disconnected. Av. wt., 8 oz. wt., 8 oz.

Stock No.	Fig.	Closed	Open	NET EA.	10 up, EACH
44 C 790 44 C 791 44 C 792 44 C 793	E	5½" 6¾" 7½" 5½"	75/8" 91/4" 101/2" 75/8"	12¢ 20¢ 30¢ 12¢	11¢ 18¢ 27¢
44 C 794 44 C 795 44 C 796 44 C 797 44 C 798	F G	63/4" 71/2" 51/2" 63/4"	91/4" 101/2" 75/8" 91/4"	20¢ 30¢ 12¢ 20¢ 30¢	18¢ 27¢ 11¢ 18¢ 27¢

#### **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'x3/8". Shpg. wt., 11/2 lbs.

92 CX 537. NET4/ C
Size, 6'x3%". Shpg. wt., 21/4 lbs. 92 CU 538. NET59¢
Size, 8'x½". Shpg. wt., 5 lbs. 92 CZ 539. NET

#### **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-ft.	11/2	.87
49 T 650 49 TU 652	100-ft. 1000-ft.	26	13.10

7| TU 5|3. 1000-Ft. Roll. NET......5.74

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-galvanized finish. \*Seamless type; others are seamed. All are 11/4" O.D.

Stock No.	Ht.	Wall	Shpg. Wt.	NET EACH
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 CZ 367*	10 ft.	.051"	7 lbs.	2.04

## TV Mounts and Accessories

#### TV POWER CORDS AND CONNECTORS



TV Power Cord and Connector. Identical to original equipment on most TV sets. No. 18 conductor; rubber-covered; 6 feet long. U.L. Approved. Shps. wt., 8 02. 26c

9-Ft. Cord. As above, but 9' long. 12 oz. 49 T 234, NET......33¢

TV Power Cord and Connector. (Not illustrated.) Identical to original equipment on Zenith television sets. No. 18 conductor; rubber-covered cord. 6 feet leng. Rubber plug. U.L. Approved. Shpg. wt., 10 oz. 36c

B Male Connector. Flush mounting; used on most TV sets. Shpg. wt., 2 oz.
49 T 238. NET......9c

#### SENCO TV JUMPER CORD

Model JC2. Universal jumper cord which extends power from back of TV set provides serviceman with AC for soldering iron, in-AC for soldering iron, in-struments, etc. Eliminates furniture moving and bulky extensions to get AC for service equipment. Has switch for controlling TV set power from rear. Wt. 1/2 lb.



#### ALL-PURPOSE SERVICE CORD

Female Type. One cord to service most TV sets. Plug one end in wall outlet; other end has AC outlets for serv ice equipment, plus connectors for TV chassis. Shpg. wt., 1 lb. 52 T 665. NET.....



## **TELCO LEAD-IN TUBES**



Type 8641. Combination plastic lead-in tube and lightning arrester. Fits walls to 16" 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" mounting hole. Shpg. wt., 1 lb. 2.09

#### TACO SELECTIVE ATTENUATOR

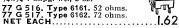
Model 835. 300-ohm variable attenuator switch for TV and FM receivers. Cuts down strong incoming signals. Reduces sound and picture distortion caused by overdriving receivers. Positions: 0 db for on attenuation (normal no attenuation (normal reception); 15 db for

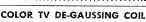


reception); 15 db for minimum. 30 db for maximum. Size, 41/2x21/4". 

#### MILLER ANTENNA TRANSFORMERS

Permits use of low-loss 52 or 72-ohm coaxial cable on 300-ohm receiver inputs. 2 required: one at antenna, and one at receiver. Excellent where long 300-ohm line gives poor picture. May be used outdoors. Size, 1\%x \frac{3}{4}x\frac{3}{4}''. Shpg. wt., 2 oz.

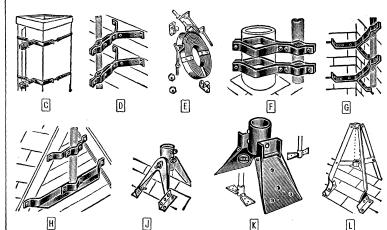




A valuable aid for every TV serviceman. Extremely effective de-gaussing coil designed especially for color TV alignment. Electro-magnetic field neutralizer eliminates stray magnetic fields to allow accurate purity adjustments. With 9-ft. cord. For 110-120 volts, 50-60 cycles AC. Shop, wt., 5/2 lbs.
71 CX 666. List, \$19.95. NET.



## TELCO TV ANTENNA MOUNTS



#### LOW-COST CHIMNEY MOUNT

#### SNAP-IN WALL MOUNT

Type 8308. Same as above, but holds mast 8" from wall. Shpg. wt., 4 lbs. 98 C 482. List, \$3.90. NET......2.28

### **DELUXE SNAP-IN MOUNT**

Type 8318. Same as above, but provides 18" wall clearance. Shpg. wt., 7 lbs. 98 CX 484. List, \$5.40. NET........3.18

Type 8324. Same as Model 8312, but provides 24" wall clearance. Shpg. wt., 10 lbs. 98 CX 485. List, \$7.30. NET.....4.29

#### CHIMNEY MOUNT REPAIR KIT

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. Shgg. wt., 2 lbs. 71 C 558. List, \$3.55. NET...........2.09

#### VENT PIPE MOUNT

Type 8803. Handy vent pipe mount that will clamp on any pipe or vent from 4" to 6" in diameter. Perfect for autenna 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 14," in diameter. Securely supports antenna mast. Zinc-plated and dichromate-dipped for double protection against rusting; provides exceptionally long life. Shop, wt. 3 lbs.

98 C 480. List, \$2.70. NET.

#### **SNAP-IN CHIMNEY MOUNT**

Type 8930. With Stainless Steel Strapping. Excellent mount for quick, dependable installation. Extra-heavy construction. Simply snap mast into bracket and tighten bolts. Fits masts up to 1½" diameter. Brackets of heavy-gauge steel, zinc-plated and dichromate-dipped for protection against rusting. With two 12-ft. lengths of stainless steel strapping. Shpg. wt. 4 [bs. wt. 4]. The proceeding of the process of t

#### **EAVE MOUNT**

Type 8933. For mounting antenna mast on eaves of buildings. Lower bracket is 48° long to straddle side of building; angle-iron construction provides high strength. Upper bracket mounts close to peak of rof. Weatherproof—zinc plated and dichromate dipped. For masts to 1½″ dia. Shpg. wt., 7 lbs. 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 1½ dia. Shgs. wt., 5 lbs., 98 C 493. List, \$4.75. NET. 2.79

#### HINGED-TYPE RIDGE MOUNT

#### **ANTENNA BASE**

Type 9143. Same as Model 9144 but 5 feet high. Shpg. wt., 15 lbs. 92 CU 044. List, \$15.90. NET......9.35

## LOW COST ANTENNA MOUNT

Type 8800-U. Low cost antenna st mount designed to provide 



## TV Accessories & Antennas



## BELDEN, FEDERAL, AMPHENOL AND knight TWIN LINE

	TWIN	

A Type 8225. Flat 300-ohm twin line. Finest quality 7-28 stranded copper conductors.
quality 7-28 stranded copper conductors.
High-quality polyethylene jacket has 58 mil
web thickness. Shpg. wt., 100 ft., 134 lbs. 1.06 49 T 385. 50' Coil. NET
49 T 385. 50' Coil. NET
49 T 386, 75' Coil. NET
49 T 389, 100' Coil. NET
49 W 384, Over 100', Per 100',
• • • • • • • • • • • • • • • • • • • •

A 70-mil web thickness. Conductor of 7-28
stranded copper-coated steel wire. Copper coat-
ing provides high conductivity; steel core for
high strength, Wt., 100 ft., 2 lbs. 49 T 387, 50' Coil. NET
10 7 70 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7
49 I 387. 50' Coil. NEI
49 T 388, 75' Coil. NET
49 T 394, 100' Coil, NET
49 W 383. Over 100'. Per 100'
Type 8275, 300-ohm UHF-VHF celluline.

Has cellular plastic core, inert	gas-filled.
Brown polyethylene-plastic jacket.	
per-coated steel conductors. Shpg.	wt., per
100 ft., 3 lbs. 49 T 396, 50' Coil, NET	2 20
49 T 397. 75' Coil. NET	
49 T 395. 100' Coil. NET	
49 W 398, Over 100', Per 100'	

Type 8235. 300-ohm, oval twin-line. Very low loss; for UHF-VHF use. Copper-
coated, 7-28 steel wire conductors. Extremely tough 185-mil web thickness. Flexible and
strong. 100-ft. minimum. Shpg. wt., per 100 ft., 5 lbs.
49 T 393, 100' Spool, NET4.12

49 W 399. Over 100', Per 100'4.12
Type 8222. 72-Ohm Twin Line. High-quality brown polyethylene jacket075x.128" diam.
100-ft. minimum. Shpg. wt., per 100 ft.,
49 T 392. 100' Spool. NET

#### FEDERAL TWIN LINE

Shielded 300-Ohm Line. For high-interference areas. Wt., 100 ft., 8½ lbs. 13c
ference areas. Wt., 100 ft., 8½ lbs.
49 W 498. Per Foot
100 ft. or more. Per 100 ft

#### AMPHENOL TWIN LINE

E Air-core spacing for extremely	twin line.
Air-core spacing for extremely	high effi-
ciency-ideal for UHF or VHF ins	stallations.
7-28 copper conductors, 100-ft, minin	um. Shog.
my === 100 f+ 2 11-	
49 T 444. 100' Coil. NET	3.41
49 W 447 Over 100' Per 100'	3 41

,
,

E Type 214-076. Heavy-duty, extable 300-ohm tubular twin line	tremely dur- e. May also
be used by amateurs-rated at 1 k	
loss air-core spacing for high eff	
extra durability. 7-26 bare copper	
of high quality. 100-ft. minimum le	ength. Shpg.
wt., 100 ft., 31/2 lbs.	6.23
40 T 414 1007 Coll NET	0.23

49 W 409.	Over 100', Per 100'	6.23
F Type 21	4-056. Flat 300-ohn	polyethylene
twin line	e for FM and TV and	tennas. 56-mil
web thickne	ess. 7-28 stranded co	nductors. Wt.

per 49	100 ft., 2 lbs. T 434, 25' Coil. NET	80c
49	T 437, 50' Coil. NET	.1.26
49	T 439, 75' Coil. NET	. 1.73
	T 441, 100' Coil. NET	
49	W 436. Over 100', Per 100'	.2.12
$\overline{}$	Tune 214-100 Flot 200 ohm polyoti	ariono.

twin line. 100-mil web thickness. 7-28
stranded copper conductors. Shpg. wt., per
100 ft. 2½ lbs.
49 T 417. 50' Coll. NET
49 T 418, 75' Coil. NET2.03
49 T 4 3. 100' Coil. NET
49 W 419, Over 100', Per 100',2.65

F Type 214-185. Flat, heavy-duty, 300-ohm twin line. Thick jacket provides extra
strength for long life, 185-mil web thickness
Brown polyethylene dielectric. 7-26 stranded
copper conductors, 100-ft. minimum. Shpg.
49 T 414. 100' Coil. NET
49 1 414. 100 Coll. NE1
49 W 426. Over 100', Per 100'4.88

#### **AMPHENOL TWIN LINE**

Type 214-318. Flat, 300-ohm twin line for indoor installation only. 60-mil web clear polyethylene dielectric. Shpg. wt. per 100 ft.,

49 T 481. 50-ft. Coll.	NET
49   482, 75-ft, Coll.	NET
49 T 483, 100-ft, Coil	
49 W 484. Over 100',	Per 100'2.32

Type 214-559. "Steelcore" high strength twin line for a durable, long-lasting installation. Particularly useful wherever long runs, adverse weather and high winds are encountered. 7-28 copperweld conductors, heavy 72-mil virgin polyethylene. Shpg. wt. per 100 ft. 2 lbs.

49	Ť 456.	50-ft.	Coil.	NET.		
49	1 457.	fo-it.	COII.	NEI		1 . 7 9
49	T 458.	100-ft	. Coil.	NET.	<b></b> .	2.28
49	W 459.	Over,	100',	Per 100	۲	2.28

## AMPHENOL SILICONE COMPOUND

#### KNIGHT TWIN LINE

H UHF-VHF Ope 0.5 db per 100	n Line. 300-ohm. ft. at 200 mc. In	Loss
lengths below. Wt., 1 47 T 578. 100' Coil 47 TX 579. 250' Co	100 ft., 21/4 lbs.	2.17

300-ohm VHF-TV Twin Line. High-quality twin line. 72-mil web thickness. Low-loss polyethylene jacket. No. 20 stranded
conductors. 100-ft. minimum length. Shpg. wt.,
49 T 448, 100' Coil. NET

E cable. 100-ft. minimum length,	e, 300-ohm Shpg. wt.,
100 ft., 2 lbs. 49 T 429, 100' Coll. NET	2.58
49 W 428, Over 100', Per 100'	2.58

## 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 series or parallel-wired tube filaments. Shpg. 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 parallel-wired filaments. Can be installed on any black-and-white picture tube—8° or larger. 7.8 v. booster tap. Gold-anodized aluminum housing. Does not relieve cathode-filament shorts. Shpg. wt 8 or or relieve cathode-filament shorts. 

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" or larger. Does not relieve cathode-filament shorts. For use in television receivers having parallel-wired filaments only. Shpg. wt 8 or 100 per 100

80 G 183. List, \$1.49. NET.......87c  Model C-211 110° Autoformer Type.
Wersatile dual-purpose tube brightener for use with 110° picture tubes. Boosts output to 7.8 volts. Has switch for adapting to parallel or series-wired filaments. With button base (RCA 

Model C-221 110° Autoformer Type. Same as above, but with shell base. (Sylvania-Dumont type). Shpg. wt., 8 oz. 80 G 169, List, \$3.75. NET. 2.20

Model K-101 TV Tube Restorer. Highly versatile TV picture tube restorer. Corrects 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 .......3.90

### LINE VOLTAGE REGULATOR

Model D101. Restores correct height and width to TV in locations where low line voltage causes picture shrinkage. Regulator plugs into AC outlet; TV set plugs into regulator. 3-position selector switch for boosting or lowering voltage. 300-watt rating. 43/4x43/4x-21/4". Wt., 21/4 lbs. 80 G 186. List, \$6.95. NET. 4.09

#### STANCOR TV TUBE BOOSTER



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 with counts of tube brilliance. Connector plug of booster attached to picture tube. Size, wt., 8 oz.

2. List. S.44 NET 3.20 Model P8192. Self-contained

80 G 182. List, \$5.44. NET.......3.20

### **EBY CRT EXTENSION HARNESS KIT**



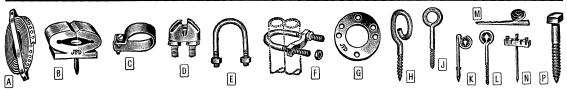
Model K302. Consists of Model K302. Consists of 3-ft. anode extension harness; 4-ft. CRT socket harness for both electrostatic and magnetic tubes; 3-ft. yoke extension harness for sets using octal plug; and socket. In rugged, heavy-duty plastic

## **EBY COLOR & 110° CRT ADAPTER**



Model AD-67. Universal CRT adapter. Adapts any commercial CRT checker or rejuvenator for 110° or color TV picture tubes. Individually checks each gun of color tube. 3-position selector switch selects correct color gun. Wt., 1 lb. 41 H 346. NET....779

## TV Antenna Accessories



Ring Clamp. Supports guy wire ring, etc. Corrosion-resistant steel. Fits mast diameters (0.D.) shown below. Shpg. wt., per pkg., 3 oz. 5 per pkg. 3 oz. 5 per pkg. 37¢ 7 | C 609, 3½-1½". Per Pkg. 37¢ 7 | C 610. 1²-1½". Per Pkg. 37¢

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 \( \frac{1}{6}\epsilon \) dia. Solid steel U-bolt has \( \frac{1}{6}\epsilon \) 424 thread. Hex nuts for easy tightening. Galvanized collar has tapered slots—increases cable grip with each turn of wrench. Size, \( \frac{1}{6}\epsilon \) 1746. "Shr. wt. 4.02". 

1 Store

[G] Universal Guy Rings. Rest unanchored on ring clamp. Fit mast. O.D. below. Shpg. wt., per pkg., 10 oz. 5 per pkg. 33¢ 7 | C 6 | 5. 1 ½". Per Pkg. 33¢ 7 | C 6 | 6. 1 ½". Per Pkg. 46¢ 7 | C 6 | 6. 1 ½". Per Pkg. 46¢ 7 | C 6 | 6. 1 ½". Per Pkg. 46¢ 7 | C 6 | 6. 1 ½". Per Pkg. 46¢ 7 | C 6 | 6. 1 ½". Per Pkg. 46¢ 7 | C 6 | 6. 2 ". Per Pkg. 48¢

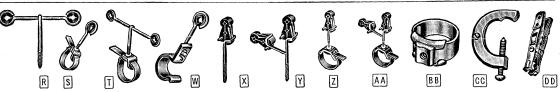
Hook Eye. Anchors guy wires. 5" long. Shpg. wt., per pkg., 10 oz. 5 per pkg.
7| C 62|. Per Pkg......2¢

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. shgp. wt., per pkg. 10 oz. 5 per pkg. 13¢ 7 | C 622. 3½" Per Pkg. 13¢ 7 | C 624. 5½". Per Pkg. 17¢ 7 | C 624. 7½". Per Pkg. 22¢

Universal Hot Nail Stand-Off Insulators. For flat, oval, tubular, and coaxial TV lead-in line. Holds securely when driven into wood, mortar, or brick. Length, 3½°. Shpz. wt., per pkg., 4 oz. 5 per pkg.

71 C 627. Per Pkg.

P Heavy-Duty Lag Bolts. For rigidly securing mast mounts, tower bases, etc., to wood, brick, masonry or other surfaces. Mad of heavy cadmium-plated steel. Have ¼" diameter shank. Tighten with wrench or pliers. Av. shpg. wt., per pkg. 5 oz. 10 per pkg. 7 I C 605. 1½" Per Pkg. 38¢ 7 I C 606. 2" Per Pkg. 42¢ 7 I C 607. 3". Per Pkg. 50¢



Double Stand-Off Insulators. Wood screw type. For flat, oval, tubular and coaxial lines. Av. shpg. wt., per pkg., 10 oz. 5 per pkg.

Strap-Type Single Stand-Offs. For flat, oval, tubular and coaxial lines. Mount on any mast. Shpg. wt., per pkg., 6 oz. 3 per pkg.

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. 

Snap-on Stand-Off Insulators. For flat, oval, tubular and coaxial lines. 3½" long Fit mass (O.D.) below. Av. shpg. wt., per pkg.,

7 | C 636.1". Per Pkg. | 9¢ 7 | C 637.11/6". Per Pkg. | 9¢ 7 | C 638.11/4". Per Pkg. | 9¢

Single Screw-Type Stand-Off Insulators. For any lead-in. Insulator swings out for insertion of lead-in. Snaps shut with finger pressure. Design assures isolation of lead-in from metal holder. Av. wt., per pkg., 9 oz.

Double Screw-Type Stand-Off Insula-tors. As above, but with two insulators for securely supporting two transmission lines. Polyethylene insulation. Keeps lines well sep-

Dual Strap-Type Stand-Off Insulators. With two polyethylene pivot-action lock insulators. Electro-galvanized steel strap. Will hold two lead-in lines or lead-in plus rotator cable. Length, 7½". Shpg. wt., per pkg., 13 oz. 3 per pkg. 48¢

BB Mast Insulator Clamps. Consist of metal strap and nut block for 10-32 machinescrew type stand-off insulators. No need to drill hole in mast. Wt., per pkg., 5 oz. 3 per pkg. 7 | C 822, For 1 masts.
7 | C 823, For 1 / 4 masts. 

### 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. Shg. wt., 8 oz.

Stock No	Туре	Description	NET
71 C 661	AC40	2 TV sets to 1 antenna	2.06
71 C 662	AC60	3 TV sets to 1 antenna	2.35
71 C 663	AC70	4 TV sets to 1 antenna	2.85

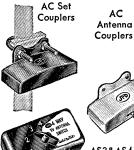
Model AC Antenna Couplers. Designed for connecting 2 separate TV antennas to single twin-line. Eliminate need for running separate twin lines through the house. Supplied with hardware. Shgp. wt., ¼ lbs.

Model AC10. Couples 2 antennas; high-band and low-band VHF. 51 C 269. List, \$3.50. NET......2.06

Model AC30. Couples 3 antennas: Low-band and high-band VHF, and UHF. 5 | C 267. List, \$4.85. NET......2.85

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-work-

AS4 Antenna Switch. Same as Type AS3 listed above but for use with up to 4 antennas. 71 C 541. List, \$5.95. NET......3.50



A\$3&A\$4 Antenna Switch

AS1

Antenna

Switch

## TV Antenna Accessories

## JFD LIGHTNING ARRESTERS, COUPLERS, WAVE TRAPS















B AT102 Regular Flat-Line Lightning 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. wt., 15 oz. 

B AT103 Lightning Arrester. Like Type AT102, described above, but for oval-jumbo and tubular twin lead-in line. U. L. Approved. Shpg. wt., 15 oz.

D AT104 Lightning Arrester. For antenna 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 oz. 71 C 519, List, \$1.50. NET. 88C

E 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 groundlug. U. L. Approved. Shpg. wt., 15 oz. 71 C 531. List, \$1.50. NET............ 88C

AT1105. Similar to the Type AT110 described above, but supplied with a stainless steel hanger strap. Shpg. wt., 15 oz. 1.03

"Tele-Plex" TV Set Couplers. For operation of 2 to 4 TV receivers from a single antenna. Simply plug 300-ohm antenna lead-in into coupler input and plug in 300-ohm lead from each set. Bakelite case with built-in lightning arrester. \*With arrester. Size, 0x3x3". With mounting screws and complete instructions. Shpg. wt., 1 lb.

Stock	Mfrs.	Used for	NET
No.	Type		EACH,
98 C 140	TC2L*	2 sets	7.03
71 C 658	SC2	2 sets	6.44
98 C 141	TC4L*	up to 4 sets	7.61
71 C 659	SC4	up to 4 sets	7.03

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. Sings. wt., 1 lb. 98 C 143. List, \$3.75. NET.

Model HP50 Interference Eliminator. Filters 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 capacitors and air-core coils. A compact, highly efficient unit. Easily installed. Size, 5x3x2°, Shpg. wt. ½ lb.
71 C 671. List, \$4.50. NET. 2.65

## POPULAR LIGHTNING ARRESTERS AND COUPLERS



RCA ARRESTERS & COUPLER

KCA ARRESTERS & COUPLER
Type 235A1 Arrester. Expertly designed 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 with conductors. Underwriters' Laboratories Approved. Strap type for mounting on mast or water pipe. Shop. wt., 802. %t., 8 oz. 51 C 229. NET......82c

Type 240A1 Coupler. Set Coupler. For operating two or more TV sets from one antenna having a 300-01m transmission line. Save cost of additional antenna for that second set. Utilizes resistance elements only—does not affect impedance characteristics of transmission line. Designed to provide necessary isolation between TV receivers to reduce interference caused by interaction of their oscillators. Easily installed. Shpg. wt., 6 oz. 1.15

#### TELCO LIGHTNING ARRESTER

Type 8642. Extremely versatile, low-cost lightning arrester. For use with round, oval, flat, or open lines. Requires no stripping, cutting, or splicing of insulation. Toothed circular contacts make firm contact. Underwriters' Laboratories Approved. Mounts on walls. Shor wt 60% 

#### PORCELAIN ARRESTER



A low-cost, general purpose lightning arrestor. Designed for series insertion in single-wire lead-in lines of radio 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. Wt., 6 oz. 

## AMPHENOL ARRESTERS & COUPLERS

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 with either color TV sets or black and white Excellent also for matching FM radios to a single antenna. Have attractive appearance as well as weather-proofing and durability—suitable for either indoor or outdoor installation. Have built-in strain relief (flanged mount) for antenna lead-in. 2-screw mounting. Wt. ½ lb.

Type 114-097. 2 sets to 1 antenna. 9   C 841. NET	1.73
Type 114-098. 3 sets to 1 antenna 9   C 842, NET	
Type 114-099. 4 sets to 1 antenna. 91 C 843. NET	1

#### JERROLD TV COUPLERS



Isolating Couplers, High quality, exceptionally low-loss couplers. Models for use in either fringe or metropolitan areas. Permit the operation of 2, 3, or 4 receivers on the same 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 4½" long, 1½" wide, and 1½" deep. Stock | Mfrs.|

	Type	Description	NET EACH
71 C 841	M-2	For 2-sets. Blue-Gray.	2.10
71 C 842	MF-2	For 2-sets. Ivory.	2.70
71 C 843	MF-4	For 3 or 4-sets. Ivory.	3.45

## BLONDER-TONGUE LINE SPLITTER

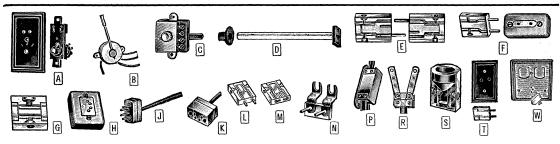




#### **BLONDER-TONGUE THERMO RELAY**

Model TR-3A. Replacement relay used in boosters and converters which automatically turn on and off with TV set. Silver contacts adjustable for time delay of .1 to 4 seconds; will handle up to .5 amp @ 117 v. or ¼ amp @ 220 v., AC. Uniform operation over current range of .13 amps. 214x1x¾". Wt. 2 oz. 1.30

## Television Accessories



## MOSLEY TWIN LINE ACCESSORIES

	M
Type F-10 3-Way Switch and Leadin Socket. Switch and single twin-line socket in one flush-mounted unit. With faceplate. Shpg. wt., 12 oz.	
40 C 336. With brown plate. 40 C 335. With ivory plate. NET EACH	
B Type F-20 3-Way Antenna Switch. Sein all positions. Mounts on back of TV set. Shpg. wt., 12 oz. 40 C 338. Brown plastic case. NET 40 C 423. Ivory plastic case. EACH. 2.31	
Type F-40 2-Way Antenna Switch. Same as Type F-20 above, but for 2 antennas. 40 C 425. Brown plastic case. 40 C 426. Ivory plastic case. NET EACH	
Type 625 Wall-Thru Insulator. For	

Type 625PK. Same as Type 625 above, but with universal TV lead-in socket for inside wall plate. Ivory. Shpg. wt., 1 lb.

Type 321 Polarized Connector. Efficient twin-line connector consisting of 2 polystyrene plugs, each with one male and one female. Assures proper polarization. 1% long. Shog. wt., 2 oz. 72 C 711. PER PAIR......37c

Type 343-PK Transmission Line Sockets with Plug. Can be mounted on inside 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..... .....66c

## CINCH-JONES WALL PLATE

For terminating TV lead-in and rotator cables in standard wall outlet. Wall plates are chrome-plated. S-302 for antenna lead-in. S-302-4 for lead-in plus 4 rotator wires; S-302-8, for lead-in and 8 rotator wires. Shops. wt., 7 oz.



					van riates
41	С	646.	S-302.		NET
41	С	647.	S-302-4	٤.	NET
41	C	648.	S-302-8	В.	NET

## CCT Style Plugs for Above

40 H 802, P-302, Antenna plug, NET...43¢ 40 H 804, P-304 4-wire rotor plug NET...51¢ 40 H 808. P-308 8-wire rotor plug NET .. 62¢

#### "CLEAR-PIX" TELEVISION **INTERFERENCE FILTERS**

Minimize or elimnate common IV interference. Effective against



•⊜•

21 mc amateur transmitters, diathermy machines, strong FM stations, ignition, and other high frequency sources. 300 ohms. Screwdriver adjustment. Shpg. wt., 5 oz.

Stock	Mfr's	Interference	NET
No.	Type	Used For	EACH
5   C 043 5   C 044 5   C 046 5   C 045	CPD CPF	21 mc amateur Diathermy machine Strong FM station Ignition or similar	1.17

G Type 27-S Flat-Line Po Splicer, Strip wires, insert, and	lystyrene
Splicer. Strip wires, insert, and	tighten set
screws for positive electrical cor	
3/4 x 3/4 x 1/4". Shog. wt., 2 oz. 72 C 706. NET EACH	llc
10 for99¢ 100 for	

Solderless Base Sockets. Precision molded polarized multi-wire connectors for 4 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	.84
40 C 439	358	For 8-wire cable	1.08

J Line Plugs. Solderless; for 2, 4 and 8 wire; take flat or round cable. Shpg. wt., 2 oz.

Stock No.	Type	Description	NET
40 C 429 40 C 431 40 C 433	303 374 378	For 2-wire cable For 4-wire cable For 8-wire cable	19¢ 46¢ 62¢
		m.1. 1. 1.	D 1

Line Sockets. Take plugs, above. Polystyrene; for connecting or terminating multi-wire cable. Shpg. wt., 2 oz.

Stock No.	Type	Description	NET
40 C 434 40 C 436		For 4-wire cable For 8-wire cable	60¢ 77¢
C T	04 DI	T.1 .1.C	·· · · · · · ·

Type 301 Plug. Ideal for connecting TV antenna lead-in to set or booster. Made of polystyrene. ½" pin spacing (fits socket below). Shgs. wt. 2 oz. 19c

Type 311 Socket. For use with twin-line plug above. Standard ½" spacing. Poly-styrene insulation. Shpg. wt., 2 oz. 72 C 709. NET. 19c Type 304 Mosley Antenna Connector. For connection of lead-in to TV antenna terminal. Fits Type 311 socket, above. Shpg.

R type	s of tran s. Solderl	smission ess. screw	lines to	o TV an	tenna max.
	M+ 6 00				

Type 29-S Tubular To Flat-Line Splicer. For joining tubular or oval 300-ohm lines to standard flat lines. Clear polystyrene. 

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. 2.17

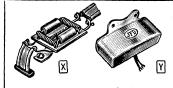
Type F-114PK Combination Flush Socket and Wall Plate. As above, but for 2 twin-lines and 4-wire rotator cable. With plug. 8 oz. 40 C 448. Brown plastic. NET 40 C 449. Ivory plastic. EACH.......2.17

W AC-TV WALL PLATE SOCKETS. Shpg. wt., 6 oz.

AC-1PK. For 2 AC sockets and 300-ohm 

AC-14PK. As above, plus 4-wire rotor. 2.05 AC-18PK. Same as Type AC-1PK, plus 8-

wire rotor. 40 C 409. NET......2.28









## TV INTERFERENCE FILTERS

#### **REGENCY HIGH-PASS FILTER**

Model HP-46. Attenuates signal frequencies 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 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. 1½x½. Shgs. wt., 2 oz. 

#### JFD INTERFERENCE FILTERS

Model WT713. As above, but for channels 7-13. 77 C 681. List \$4.50. NET...........2.65

### **AMPHENOL HIGH-PASS FILTER**

#### R. L. DRAKE TVI FILTER

#### J. W. MILLER HIGH-PASS FILTER

## TV Components and Accessories

#### "COMFORT LINE" TV TABLES









All "Comfort Line" TV tables employ a tubular steel frame and offset legs for extra rigidity. Shipped unassembled—set up in a jiffy.

Model 87. As above, but bronze-plated top. 99 CX 132. NET . 7.96
Model 531 Portable TV Table. For all portable TV sets. Includes storage shelf. Arms extend from 13" to 21". 24" high; 2" lucite casters. Satin black. Shpg. wt., 9 lbs. 9. CX 204. NET. . 5.30

Model 567. As above, but brass-plated. 99 CX 439. NET.....



Model 517. As above, but all brass-plated except for black table top.
99 CX 449. NET......9.30

#### TV TUBE DELUXE PLASTIC MASKS



Solid, optically clear, 1/8"-thick plasticsafety masks for rectangular pic-ture tubes. Pre-vents tube breakvents tube break-age and guards against "implosion" and shattering. Gold metal luster finish border. Easy to install. Shpg. wt., 13/4 lbs.

Stock No.			NET
97 CX 923	17" Rect.	131/4×163/4"	5.35
97 CX 913	21" Rect.	153/4×211/2"	8.00

## WALDOM TV MASK ASSEMBLIES



Ideal for use with cylindrical-face, rectangular tubes in custom TV installations—also for converting small screen TV receivers to a larger picture tube. Has metallic gold-finished escutcheon green-sprayed aluminum mask, and heavy protective glass. Sembly has 3½° tilt to eliminate glare and light reflections. With mounting hardware and instructions. Av. shpg. wt., 7 lbs.

Stock	For	Size	NET
No.	Tube		EACH
97 CX 917	17" Rect.	135/8×171/8"	12.70
97 CX 914	21" Rect.	171/2×211/2"	

## TELEVISION FILTERS



Scientifically tinted (gray) to protect eyes. Effectively minimize glare and improve picture contrast. Us-able with any type of picture tube. All have square corners and may easily be cut as required. Av. shpg. wt., 1 lb.

Stock No.	Used With	Size	NET		
71 CX 814 71 CX 820	16-17" sets 19-21" sets	13x17" 16x21"	2.19		

## G-C "WUERTH" TUBE-SAVER



Model 5303. A high-

Model 5304. For color TV sets; 250 to 400 watts. Shpg. wt., 12 oz. 80 G 149. List, \$5.95. NET. 3.50

# VIDAIRE "KINE TEST"

Tester for checking electro-magnetic picture tubes by substitution method. No need to remove picture tube or chassis from cabinet. Just plug tester into picture tube socket. Electron-ray tube dynamically checks filament, bias, and 1st anode voltages, video signal, etc. Compact—easily fits in tool chest. With instructions. Size, 4½x1½". Shpg. wt., 6,02.

84 C 017. List, \$4.90. NET..........2.88

### PERMA-POWER HORIZONTAL **BAR GENERATOR**



Type B101. Provides series of horizontal lines for accurate checking of picture linearity. Also used for setting of defection yoke and focus coil or magnet. Plugs into all duo-decalype picture tube sockets. With instructions. Size 1½x1½°.

Shng Wt. 5 oz. 170 Shpg. wt., 5 oz.

51 C 212, NET

### CRT HI-VOLTAGE CONNECTOR



Second-anode connector. Silver plated, snap-button plug; makes perfect contact with picture tube. Well insulated by 1½" diameter rubber cap. Supplied with 18" heavily insulated wire lead.

Shpg. wt., 4 oz. 41 H 347. NET 29c

#### "NU-LIFE" CATHODE-RAY TUBE RESTORER



Remarkably versatile unit. Corrects many kinds of shorts and opens in magnetic-focus and electro-static-focus picture tubes.

anu electro-staticfocus picture tubes.

Permanently eliminates such defects
as; open cathode,
shorted cathode to
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 inexpensive method of restoring picture tube
brightness. Built-in potentiometer allows adjustment to correct for low filament emission
and slow heating. Shpg. wt., 12 oz.

4.95

RCA TV PECCURO

#### 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., 1½ lbs., except \*15 lbs., †6 oz., §3 lbs.

Stock No.	Mfr's Type	Component	NET EACH
77 G 146 77 G 188 77 G 263 77 G 266	74588 74950 74952§ 75221†	Power Transformer Horiz. Output & HV Transf. Vert. Deflection Output Transf. Deflection Yoke Selenium Rectifier	25.23 14.70 4.59 6.34 1.73
77 G 193 77 G 268 77 G 197 77 G 255	75519 76168 76501 766538	Power Transformers Horiz. Output & HV Transf. Focus Magnet Horiz. Output & HV Transf. Deflection Yoke Deflection Yoke	14.11 4.41 7.71 4.23 6.53 6.85

## RCA COLOR TV SERVICING AIDS

A 'must' for service kits. Types 222X1 and 223X1 are for RCA color TV 1956 sets. Types 220X1 and 221X1 are for 1956 and 1957 sets. Types 224X1, 225X1 and 226X1 are for 1957 color television receivers.

Stock No.	Mfr's Type		Wt., 0 z.	NET EACH
77 G 311	221X1	CRT Socket Ext. Cable Reflecting Yoke Ext. Cable Converging-Magnet	9	7.25 3.43
77 G 313	223X1	Assembly Ext. Cable Hi-Volt Ext. Cable	6	3.33
77 G 315	224X1	Hi-Volt Interlock Plug Converging-Magnet Ext. Cable	2 2	2.62
77 G 316 77 G 317	225X1 226X1	Hi-Volt Ext. Cable	6 9	1.32 4.70

#### QUAM FOCALIZER UNIT



Type QF-4. For quick, accurate focusing and centering of raster. Fits all picture tubes regardless of size or anode voltage. Size, 1½x3½x5½°. Shpg. wt., 1 lb. 41 H 133, NET. . . . 2.50



#### BARKHAUSEN ELIMINATOR

Very effective in eliminating Barkvery enective in eliminating Bark-hausen 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. 73c

#### MILLER ADJUSTABLE ION TRAP



Model 6295. Universal single-Model 6295. Universal single-magnetion 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. Extension spring permits easy installation. Shpg. wt., 6 oz. 73c



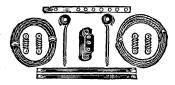
#### **CLAROSTAT REGULATORS**

Type TVA. Protects TV sets from line voltage surges. Reduces surge of 140 v., down to 110 v. Plug-in type. For sets using 200-300 watts. Shpg. wt. 5 oz. 2.06

Type TVB. For sets having a power consumption of 300 to 375 watts. Diameter, 113/6"; length, 33/4". Shpg. wt., 5 oz. 

# 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 long-wave and broadcast bands. Contains all wire and parts for any one of the following antennas: balanced doublet; double doublet; or inverted-L. Includes: 100 ft. of bare antenna wire; 50 ft. of insulated transmission line; 4 insulator; 2 bakelite screw eyes; doublet lightning arrestor; lead-in strip; and ground clamp. With instructions. Shpg. wt., 3½ lbs.

#### **MODEL 635 DOUBLET ANTENNA**



#### 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 T 133	12	100	2	2.69
49 T 134	12	250	5	6.30
49 T 140	14	100	11/2	2.37
49 T 141	14	250	3 - 2	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 Replace-ment Tuner. Re-places TAA-050, 21-mc pentode and TCA-050, 21-mc cascode tuners. Features neu-tralized-triode circuit



trailized-triode circuit to provide substantial improvements in gain, signal-to-noise ratio, and general performance. Delivers excellent pictures even in fringe areas. Uses 6BN4 RF amplifier and 6CQ8 converter. Printed circuit board. Has improved filter circuits and shielding; greatly 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 v. D.C. plus heater voltage. With full instructions. Shgg. wt., 3 lbs.

#### 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 32 60 GG 32 60 GG 32 60 GG 32	H	60 GG 326 60 GG 327 60 GG 328	Q/R U

NET EACH...... 2.19

#### 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 ke with 365 or 410 mmf tuning ca-

VLT-240 Transistor Vari-Loopstick. Has impedance tap; convenient micrometer adjustment. Easily adjusted for peak efficiency. Simplified, one-hole snap-in mounting. For use with 365 mmf or 410 mmf variable tuning capacitor. Size, ½«x2.2". Shpg. wt., 4 oz. 73c

Ferri-Loopstick. Excellent, low-cost, replacement antenna for AM broadcast receivers. Needs no orientation. Has "Q" of 240-275 for clear, powerful reception. Supplied with clamp for convenient single-hole snap-in mounting. Size "\( \kappa \) \( \kappa 

C Vari-Tenna. For use with older radio sets equipped with built-in antenna. Features high sensitivity and excellent signal-to-noise ratio. Boosts gain up to 25 times. Single-hole mounting. ½x2½". Wt., 4 oz. 73c

# **C** В D E E

Discrete Perri-Loopstick. This 5" high grain brings in weak, distant stations. Adjustable coil with self-locking vinyl collar permits peaking antenna for optimum results. Convenient single-hole mounting. Size: 3\%x5". Shgs. Wt., 6 oz. 88c

7" Loopstick. Same as "energized" loopstick described above, but 7" long for even greater sensitivity. Has "Q" of up to 425. Shpg. wt., 602. 

High "Q" Transistor Loopsticks. Ideal universal replacement for most transistor sets. Feature extremely high "Q" core. Have movable turns and multiple impedance taps; provide complete adjustability for maximum gain. Flat design provides excellent pick-up. All tune 540 to 1600 kc with standard 365 or 410 mmf tuning capacitor. Complete with installation instructions.

Stock No.	Mfr's Type	μH	Size	Shpg. Wt.	NET EACH
51 C 025	5FT-240	200-265	2¾*	4 oz.	1.62
51 C 026		200-265	35%*	4 oz.	1.62
51 C 027		175-260	5¼*	4 oz.	1.62
51 C 028		170-265	7*	4 oz.	1.76

#### 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 6x8½". Shgs. wt., 8 oz.

10 or more, EACH......48¢

#### MINIATURE ANTENNA LOOP

#### WINDOW LEAD-IN

Made of soft drawn flexible copper, covered with heavy black cotton braid. Thoroughly weatherproofed with multiple coats of Duco lacquer. For use with broadcast band and short wave antennas having single-wire lead-in. Fits under window. Has Fahnestock clip on each end. 12" long by ½" wide. 2 oz. 96 1 C 050. NET.

#### CENTRALAB TV H-PADS

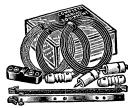




For use in strong signal areas where TV signal requires attenuation to obtain optimum performance. H-pad has 4 terminals. Installed in series with 300-ohm antenna lead-in. Size: 11/4x13/6x3/6". Shpg. wt., 1 oz.

No.	Туре	Attenuation	EACH
L   90	PCH-10	10 db	88c
L   91	PCH-20	20 db	
L   92	PCH-30	30 db	
L   93	PCH-40	40 db	

#### **DELUXE BC-SW ANTENNA KIT**



Handy antenna kit for broadcast and short wave reception. Increases "pulling power" of any set. Includes 100 ft., 7x26 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 arrester; 2 porcelain nail knobs; 1 ground clamp and full instructions. Shpg. wt., 2½ lbs. 2.04 83 C 101. NET.

#### SERVICE INSTRUMENTS CO. "UP-DOWN" VOLTAGE REGULATORS

"UP-DOWN" VOLTAGE REGULATORS
Type LB2. An extremely handy, multi-purpose voltage regulator for the servicing bench. Designed to increase low line voltage or decrease high line voltage. Raises or lowers line voltage. Raises or lowers line voltage at voltage 10 volts by simple flick of a switch. Can be used with any television receiver or appliance which has a 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: 2½x3½x3½x². Rated, 300 watts. Shpg wt., 3 lbs.

Type LB2 (N). Same as Type LB2 described



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 light goes on when output voltage of regulator reaches 126 volts.

7.03

## Quality Replacement Speakers





#### **FAMOUS QUAM** ADJUST-A-CONE **SPEAKERS**

Rugged construction, trouble-free operation and excellent sound reproduction.





Pincushion

#### 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 3½" to 6½" speakers, except 4A06, 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.	NET EACH
81 D 066 81 D 346 81 D 309	25A07 3A07 4A06	Square Square* Square*	2½″ 3½″ 4″	2.0 2.5 2.5	.65 oz .68 oz. .58 oz.	1/2 1/2 1/2 1/2 1/2 1/2 3/4	2.35 2.35 1.73
81 D 320	4A07	Square*	4"	3.0	.68 oz.	1/2	2.35
81 D 321	4A1	Square	4"	3.0	1.0 oz.	3/4	2.50
8   D 322	4A15	Square	4"	3.0	1.47 oz.	3/4	2.76
8   D 347	46A07	Oval*	4x6"	3.5	.68 oz.	3/4	2.62
8   D 37	46A1	Oval	4x6"	3.5	1.0 oz.	1	2.79
8   D 372	46A15	Oval	4x6"	3.5	1.47 oz.	1	3.03
8   D 323	5A07	Pincushion*	5"	3.5	.68 oz.	3/4	2.47
81 D 324	5A1	Pincushion	5"	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	52A1	Pincushion	5¼"	4.0	1.0 oz.	1	2.73
81 D 317	52A21	Pincushion	5¼"	4.0	2.15 oz.	11/4	3.35
81 D 348	57A1	Oval	5x7"	5.0	1.0 oz.	1	3.17
81 D 334	57A15	Oval	5x7"	5.0	1.47 oz.	1	3.41
81 D 339	57A21	Oval	5x7"	5.0	2.15 oz	1¼	3.79
81 D 326	6A1	Pincushion	6½"	5.0	1.0 oz.	1	2.82
81 D 327	6A15	Pincushion	6½"	5.0	1.47 oz.	1	3.06
81 D 328	6A21	Pincushion	6½"	5.0	2.15 oz.	1¼	3.44
81 D 332 81 D 373 81 D 374 81 D 331 81 D 387	6A31 69A2 69A3 7A21 7A31	Pincushion Oval* Oval Pincushion* Pincushion	6½" 6x9" 6x9" 7"	6.0 8.0 10.0 6.0 9.0	3.16 oz. 1.4 oz. 3.2 oz. 1.4 oz. 3.16 oz.	1½ 1½ 1½ 1¾ 1	3.97 4.41 5.26 4.26 5.00
81 D 329 81 D 330 81 D 388 81 D 804	8A21 8A31 10A31 10A4A	Pincushion Pincushion Round Round	8" 8" 10" 10"	7.0 9.0 9.0 10.0	2.15 oz. 3.16 oz. 3.16 oz. 4.46 oz.	1½ 2¼ 2¾ 3¼ 3¼	4.23 5.00 6.17 6.88
81 D 805	12A4A	Round	10"	12.0	6.8 oz.	3½	8.00
81 DX 333		Round	12"	10.0	3.16 oz.	3¾	6.67
81 DX 806		Round	12"	12.0	4.64 oz.	4	7.44
81 DX 807		Round	12"	14.0	6.8 oz.	4½	8.53

#### "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.	Mfr's Type	Size	Shape	Max. Watts	Magnet	Wt., Lbs.	EACH
81 D 308	3A070T	3½"	Square	2.5	.68 oz.	1/2	2.35
81 D 393	4A10T	4"	Square	3	1.0 oz.	1	2.50
81 D 306	5A150T	5"	Pincushion	3.5	1.47 oz.	1	2.85
82 D 260	6A150T	6"	Pincushion	5	1.47 oz.	1/4	3.06

#### **ELECTRO-DYNAMIC SPEAKERS**

Field coils made from carefully tested materials. 3.2-ohm impedance. Wattage ratings are conservative. 4", 5", 6½" and 4x6" speakers have universal mounting brackets. †Equipped with humbucking coils.

Stock No.	Mfr's Type	Size	Shape	Field Ohms	Max. Watts	Wt., Lbs.	NET EACH
81 D 350	4E45	4"	Square	450†	3.0	1	3.09
81 D 375	46E45	4x6"	Oval	450†	3.5	1¼	3.67
81 D 352	5E45	5"	Pincushion	450†	3.5	1	3.23
81 D 353	5E10	5"	Pincushion	1000	3.5	1	3.23
81 D 356	6EV6	6½"	Pincushion	6-V.	5.0	1½	3.82
81 D 357	6E10	6½"	Pincushion	1000	5.0	1½	3.82
81 D 378	69EV6	6x9"	Oval	6-V.	8.0	2	4.41
81 D 368	7EV6	7"	Pincushion	6-V.	7.0	2	4.41
81 D 361	8E10	8"	Pincushion	1000	7.0	1½	4.41
81 DX 364	12E10	12"	Round	1000†	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.	Туре	Size	Shape	Magnet	Shpg. Wt.	NET
81 D 808 81 D 809 81 D 810	3A07Z45 4A1Z45 5A1Z45	3½″ 4″ 5″	Square Square Pincushion	.68 oz. 1.0 oz. 1.0 oz.	½ lb. ¾ lb. 1 lb.	2.50 2.65 2.76
See page 329 fo	r istings of C	uam PA s	peakers.			

#### **QUAM REAR-DECK KITS**



Model AS-3. Complete rear-deck speaker kit featuring a 5x7" "Adjust-A-Cone" speaker specially designed for automobile use. Speaker provides excellent tonal quality and is ruggedly built to withstand severe road shock. Has 34" precision-centered voice coil and efficient 1.47-oz. Alnico V magnet. Fader control for exact adjustment of balance between radio-mounted speaker and rearblalance 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 installation.

structions. Shpg. wt., 21/4 lbs. 81 D 140. NET.....

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-oz. Alnico V magnet and 1" voice coil. Includes fader control, 18 feet of cable, flocked screen grille, baffle 

#### 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 applica-tion. 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.

Stock No.	Mfr's Type	Size	Shape	Magnet Weight	Watts	Wt., Lbs.	EACH
82 D 171 82 D 271 82 D 272 82 D 176 82 D 273	P275-Y P4-W P5-W P5-V P6-W	2¾* 4* 5* 5* 6*	Round Square Square Square Square	0.65 oz. 1.0 oz. 1.0 oz. 1.47 oz. 1.0 oz.	.15 2.0 2.5 3.5 3.0	1½ 1½ 1¾ 1¾	3.67 2.47 2.68 2.85 2.85
82 D 179 82 D 181 82 D 195 82 D 183 82 D 184	P6-V P6-T P69-V P8-U P8-T	6" 6" 6x9" 8"	Square Square Oval Square Square	1.47 oz. 3.16 oz. 1.47 oz. 1.73 oz. 2.5 oz	4.0 6.0 5.0 6.0 7.0	2 2 2½ 2½ 2½ 2¾	3.12 4.59 4.41 4.50 5.23
82 D 185 82 D 187 82 DX 190 82 DX 270		8' 10' 12' 14x3'	Square Round Round Oval	4.64 oz. 2.5 oz. 2.5 oz. 3.16 oz.	8 0 8.0 9.0 7.5	3¼ 5 5 2	6.67 6.32 6.94 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.

and on-on dian,	oups. we., o o	··		
Stock No.	Type No.	Ohms	Watts	NET
33 M 942	ST-760	3-4	5	1.97
33 M 940	ST-276	l 6-8 l	5	1.76
33 M 94 i	ST-411	6-8	15	2.76
33 M 938	ST-837	15-16	15	2.76
33 M 939	ST-761	500-600	15	3.65

#### TOP-VALUE DANISH 12" SPEAKER



Wide Frequency Range

Rich Tonal Quality

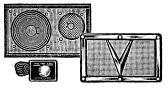
An outstanding value in an imported 12" twin-cone speaker. Designed by Denmark's finest craftsmen—featured by Allied at exception-ally low cost. Ideal for use in limited-budget music systems, and for improving the tone of music systems, and for improving the tone of TV sets, radios, and phonos. Has two 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 t Alnico V magnet. Voice coil impedance, 5 lbs

frequencies. Efficient Alni 6 ohms, Shpg. wt., 5 lbs. 81 DX 068. ONLY......

360

# **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.

tures 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" speaker and a 6" speaker, mounted side-by-side on a baffle board. 4" speaker serves as an efficient tweeter for reproducing treble notes. 6" speaker is used as a woofer for bass response. A highly efficient built-in high response. sponse. 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, 7x11½". Supplied complete with switch, wire, all hardware and easy-to-follow instructions—everything needed for a quick, simple installation.

Shog. wt., 3 lbs.
81 D 130. Chrome Grille.
81 D 131. Gray Grille.

NET EACH.....II.34

#### EXTENDED-RANGE SPEAKER KIT

As Low As \$539

High-quality extended-range speaker kit for rear deck mounting. Has duo-type speaker with specially designed, high-frequency cone mounted at

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. any car interior.

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			2	5.39
81 D 133			2	5.55
81 D 135			21/2	5.71
81 D 134	6x9"	Chrome	21/2	5.88

#### STANDARD REAR-DECK SPEAKER KITS

As Low As \$375

A value-packed luxury item at remarkably low cost.

t remarkably low cost.
These economically priced, 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. greatly improved sound distribution.

Dash-mounted, 3-way control switch permits operation of front speaker only, or both speakers together. Speakers are top-quality, Alnico V PM type with handsome, protective grille. Kits are uniloble in two southers are conwith handsome, protective grille. Alts 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 instructions—nothing else to buy.

Stock No.	Size	Grille	Lbs.	EACH
81 D 558 81 D 559 81 D 501 81 D 502	5x7" 5x7" 6x9" 6x9"	Gray Chrome Gray Chrome	2 2 2½ 2½ 2½	3.75 3.92 4.49 4.65

#### 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 6x9" Alnico V oval speaker enclosed in gold finished, metal-mesh basket. Has modern contoured appearance to match in-

#### knight SPEAKER GRILLES ONLY



chrome finish speaker grilles 

FOR 5x7" SPEAKER. 1.08

#### TOP BUYS IN COAXIAL SPEAKERS

628

AS LOW AS A Outstanding values for economy-minded music lovers. Dependable, high-quality, 8", 12" and 15" coaxial speakers. Ideal for use in economy hi-fi sys-

tems, 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. Builting crossover networks in crossover networks.

8" COAXIAL SPEAKER. 8" cone; has 2.15 oz. magnet. 23/4" tweeter with .68 oz. magnet. Rated at 8 watts. Range: 70-12,000 cycles. Crossover: 3000 cycles. Shpg. wt., 3 lbs. 

12" COAXIAL SPEAKER. 12" cone; has 6.8 oz. magnet. 5" 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" COAXIAI SPEAKER, 15" cone; has 6.8 oz. magnet. 5" tweeter with 1.47 oz. magnet. Power handling capacity: 20 watts. Delivers outstanding bass response. Range: 45-12,000 cycles. Crossover fre-800 cycles. Shpg. wt., 11 lbs. 81 DX 608. NET.....

#### 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" and 5" 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	E:-	Size	Magnet	Max.	Wt.,	NET	EACH
No.	Fig.	Size	Weight	Watts	Lbs.	I to 5	6 or More
81 D 616	C	4" sq.	.68 oz.	3.0	1/2	1.40	1,26
81 D 617	В	5″	.68 oz.	3.5	3/4	1.70	1.53
81 D 536	D	5x7"	1.0 oz.	5.0	1	2.03	1.83
81 D 534	D	6x9"	1.47 oz.	8.0	11/4	2.75	2.47
82 D 250*	D	6x9"	1.47 oz.	8.0	11/4	2.85	2.56
81 D 507	В	8"	2.15 oz.	9,0	11/2	2.85	2.56
81 DX 508	В	12"	3.16 oz.	10.0	33/4	4.56	4.10



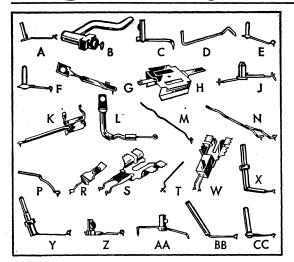








# **knight** Quality Phonograph Needles



#### **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.

#### FOR ASTATIC CARTRIDGES

Stock No.	Type No.	Fig.	For Cartridge Numbers	Tip	NET
68 R 362 68 R 363 68 R 364 68 R 365 68 R 366	A-67 A-67LP A-672 A-68	A A A B B	94-TB, 405, 406, Series: 62, 64, 66, 68 Series: 57-T (Series: 55-T, GCD, 409	Std. MG All Twin Twin	1.27 1.27 1.27 1.89 1.89
68 R 367 68 R 368 68 R 369 68 R 370 68 R 371	A-70* A-70LP* A-702*	C C BB BB	Series: 14L3, 15L3	Std. MG All Std. MG	.79 .79 .79 1.27
68 R 372 68 R 373 68 R 374	A-74	BB D D	LT-AG Series: 402, 51, 53, 59, GC, MG	All Std. MG	1.27
68 R 375 68 R 376 68 R 377 68 R 378	A-742 A-75 A-75 <b>LP</b>	овене	10L3, 11L3, Series AC, ACD, 40, 41, 42, 90	All Std. MG All	1.27 1.27 1.27 1.27
68 R 379 68 R 380 68 R 381 68 R 382	A-81 A-81LP A-812	FFG	Series: CAC, CQ, LQD, QT   36, 38, 44, 46, 48; 4031;   Magnavox 560052   Series: 310, 312, 414, 420,	Std. MG All	1.27 1.27 1.27 1.27
68 R 383	CRA-55	G	\$ 422, 424   Series: 310,312,420,422,424	MG Std.	1.27

#### FOR RONETTE CARTRIDGES

68 R 383 CRA-55 68 R 382 CRA-55LP	G G	Studio O, Studio P, RA-284, TO-284 Series TO-222, TO-400, 7447, DT-60, RA-395	Std. MG	1.27
68 R 715 CRA-56 68 R 716 CRA-56LP	H	TX-88A	Std. MG	1.27

#### FOR MAGNAVOX CARTRIDGES

68 R 388	M-50	J	560133, 560133-4, 560151-5, 560151-6, 560158-1	Twin	1.89

#### FOR SONOTONE CARTRIDGES

L V | Corios 2D

00 N 343 3-00LF	· N	Selles or	MG	11.76
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		Series 1P	All	1.47
l l		Series 2T; 7T; W-9980;		1
68 R 347 S-66	L	Magnavox560161-1;RCA78748	Twin	2.06

#### FOR ELECTRO-VOICE CARTRIDGES

68 R 384 E-90 68 R 385 E-90LP	M	10,12,14,30,32,33,34,36,40,42,43,44,46,80,82,84,86,96,		1.27
68 R 386 E-902 68 R 387 E-91	N	J Admiral 409A13-1 16TT, 22TT	All Twin	1.27



#### QUALITY DIAMOND NEEDLES

#### LOWEST PRICES

Valuable diamond needles for greatest record pro-

Precision
Diamond Tips

tection and best long-run economy. Retain their shape for up to 1000 playing hours! Diamonds listed 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	Equativalent in	NET
Stock No.	Type No.	rig.	FOF	Table Below	EACH
68 R 733	A-67LPD	B	Astatic	A-67LP	4.95
68 R 700	A-68SD	B	Astatic	A-68	
68 R 734	A-74LPD	D	Astatic	A-74LP	
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	4.95
68 R 704	M-50SD	J	Magnavox	M-50	
68 R 737	PH-13SD	AA	Philco	PH-13	
68 R 705	CRA-55LPD	G	Ronette	CRA-55LP	
68 R 735	CRA-56LPD	H	Ronette	CRA-56LP	
68 R 706	JPS-30LPD	P	Shure	JPS-30LP	4.95
68 R 736	JPS-35SD	S	Shure	JPS-35	
68 R 707	JPS-36SD	S	Shure	JPS-36	
68 R 708	M-70LPD	X	RCA	M-70LP	
68 R 709	M-74LPD	Y	RCA	M-74LP	
68 R 710 68 R 711 68 R 712 68 R 738	S-60LPD S-61SD S-66SD W-15D	K L CC	Sonotone Sonotone Sonotone Web. Elec.	S-60LP S-61 S-66 W-15	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" for 78 rpm; microgroove, .001" for 33½ and 45 rpm; all-purpose, .002" for all records; twin-tips are .003" and .001". 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

Stock No.	Type No.	Fig.	For Cartridge Numbers	Tip	NET				
68 R 397 68 R 398 68 R 399		P P P	P30, P37, P57, P70, P71, P72, P72, P73, P76, P76V, P77, P79, P81, P81AD, P85, P88, 89, P94, PN30, PC41V, PC42; Philco 35-2671; Series W21, W22, W23, W26, W60, W61, W65, W666, W66, W68, W622; Adjiniral 409A13 and 409A13	Std. MG All	1.27 1.27 1.27				
68 R 320	JPS-32	R	W31AR, W36B, WC24,	Std.	1.27				
68 R 321 68 R 322	JPS-32LP JPS-322	R	WC31AR, WC33B, WC36B, PC9, PC10, PC11, PC40	MG All	1.27				
					1.27				
68 R 739		1 +	PC42AD, W-72	Std. MG	1.27				
68 R 740 68 R 741	JPS-34LP JP <b>S</b> -39	w	Admiral 409B19-8,		1.27				
			WC-6, PC-6, PC-7	Twin	1.27				
68 R 323	JPS-35	S	PC2,PC-3,PC-4,PC-5,WC10	Twin	1.89				
68 R 324	JPS-36	S	∫ML-44	Twin	2.54				

#### FOR RCA CARTRIDGES

68 R 337 M-70 68 R 339 M-70LP	X	39919, 70332, 70338, 70339,	Std. MG	1.27
68 R 341 M-74 68 R 342 M-74LP	Y	72551, 74067 74625, 75475, 75575, 76318, 77779	Std. MG	1.27

#### FOR PHILCO CARTRIDGES

68 R 389 M-60LP 68 R 742 PH-13	45-1609, 45-1612 76-4649; 425-0009, 425-0014	1.27

#### FOR WEBSTER-ELECTRIC CARTRIDGES

68 R 333 W-14	CC	A1, A2, A3, A4, A5, A6, A7, A8,	Std.	1.27
68 R 334 W-15	CC	A1, A2,A3, A4, A5, A6, A7, A8,	MG	1.27
68 R 397 JPS-30	P	A10, A12, AB, AX (O10)	Std.	
68 R 398 JPS-30LP	P	}F10, F11, F11-1	MG	



#### CONVENTIONAL SHANK PHONO NEEDLES

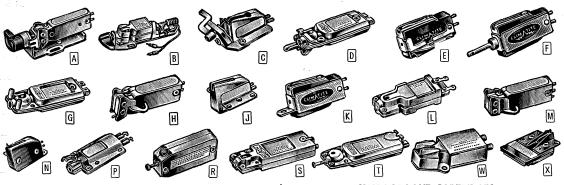
Designed to fit cartridges with screw-type chuck. Needles have "flat side" on shank for proper positioning, \*Nylon needles—have flexible nylon material from tip to shank to reduce pickup of record scratch. Shpg. wt., 2 oz.

l	Stock No.	Type No.	Fig.	Tip material	Tip size	NET
١	68 R 391	NY-253*	EE	Sapphire	Standard	1.27
l	68 R 392	J-10	DD	Osmium	Standard	.59
l	68 R 393	NY-252*	EE	Sapphire	All-purpose	1.27
ı	68 R 394	NY-152*	EE FF	Osmium	All-purpose	.79
١	68 R 395	J-152		Osmium	All-purpose	.79
١	68 R 396	NY-251*	EE	Sapphire	Microgroove	1.27
١	68 R 743	J-252	FF	Sapphire	All-purpose	1.27

69 D 242: C COLD

## Astatic Replacement Cartridges

#### CRYSTAL AND CERAMIC CARTRIDGES



#### **TURNOVER CARTRIDGES**

High-quality dual-needle cartridges for 78, 45 and 33½ rpm records. For direct replacement in most popular record players. Types 310-T through 424-TS are new Climatite types; crystals are specially treated to resist heat and humidity. All have sapphire needles; 001" tip for microgroove records and .003" tip for standard records. With bracket (standard ½" mounting centers) except \*\*less bracket. \*Ceramic type, others are Rochelle-salt crystal. Needle pressure. †6 grams; ‡8 grams; §10 grams; #Sub-miniature. Av. shpg. wt., 4 oz.

Stock No.	Model No.	Fig.	Replaces Astatic Models	Output Volts	Response CPS	List	NET EACH
65 R 240	40-TB†	Α	ACD-1 series, ACD-2 series, 11L3	1.0	50-6000	\$ 8.45	4.97
65 R 216	44-TB6	В	CAC-D, 44T series	0.7	30-15.000	10.50	6.17
65 R 576		C	57-TJ series	0.7	30-15,000	9.50	5.59
65 R 236	62-TY‡	Ď	LQD-1 series	1.0	50-7000	7.95	4.67
65 R 013	66-TS §	D	66-T(M)S, 68-TS	3.0	50-5000	7.25	4.26
65 R 577	66-TY**§	D	LT-4D1, 14L3-DM,	ł	Į.		
	ì		15L3-DM, 66-T(M)Y,	ļ	!	!	·
		_	68-T(M)Y	3.0	50-5000	6.50	3.82
61 R 300	310-T**‡	E		3.0	30-11,000	5.45	3.20
61 R 301	310-TB1	F		3.0	30-11.000	5.45	3.20
61 R 302	312-TB‡	F		0.75	30-13,000	6.45	3.79
61 R 303	420-TS**1	F		3.0	30-11,000	5.45	3.20
61 R 304	422-TS**‡	F		0.75	30-13,000	5.95	3.50
61 R 305	424-TS**‡	F		3.0	30-11,000	6.50	3.82
61 R 313	41-TB†	A	ACD-C-1 series,				
		l	ACD-C-2 series	0.6	50-5000	10.00	5.88
61 R 314		H	AC series	0.7	30-15,000	7.95	4.67
61 R 310	118-TS#‡	F		0.75	30-13,000	6.45	3.79
	120-TS#‡	F	1	3.0	30-11,000	6.45	3.79
61 R 312	124-TS#‡	F	l	3.0	30-11,000	6.45	3.79

#### **ALL-GROOVE CARTRIDGES**

Convenient single-needle cartridges play 78, 45 and 33½ rpm records. All have .002" sapphire needle for both standard and microgroove records, except ††.002" osmium needle. §Less needle—have screw-type chuck for conventional needle. See page 362 for suitable type. All are designed for ½" mounting centers, Model 51-2 fits RCA 45-rpm changer arms. Model 310-2 is for new Astatic "B" arm; crystal is chemically treated to resist heat and moisture. \*Has heat and humidity-resistant ceramic element; all others have Rochelle-salt crystal element. Needle pressure, 10 grams, except †6 grams, ‡8 grams, #12 grams. Av. shpg. wt., 4 oz.

Stock No.	Model	Fig.	Replaces Astatic	Volts	CPS	List	NET
65 R 559	16§	G	16L3, 17L3	3.5	50-5000	\$3.95	2.32
65 R 229	22§	G	L-29, L-92-33, 18L3	3.0	50-5000	3.95	2.32
61 R 316	28#	L	M-22, M-23	3.5	50-6500	3.95	2.32
65 R 242	40-2†	M	AC-AG series	1.0	50-10,000	6.50	3.82
65 R 571	51-2*1	J	GC-AG series	0.7	30-10,000	7.40	4.35
61 R 315	53-2‡	N	52-2-3 series	0.7	30-10,000	7.40	4.35
65 R 097	66-2††	G	LT-2M, LT-5AG, 68-2		· .	l i	
			14L-AGM, 15L3-AGM	3.0	50-5000	4.95	2.91
61 R 306	310-2±	K		3.0	30-11.000	4.95	2.91

#### MICROGROOVE CARTRIDGES

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" sapphire needle for 45 and 331/3 rpm long-playing records.

Model 51-1 fits RCA 45-rpm changer arms. Model 44-1 equalized for Columbia 33½ 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 ‡8 grams, †6 grams. Av. shpg. wt., 4 oz.

Stock No.	Model No.	Fig.	Replaces Astatic Models	Output Volts	Response CPS	List	NET EACH
65 R 241	40-1† 44-1	H	AC series CAC, 441, QT-33,	1.0	50-10,000	\$6.50	3.82
65 R 234		3	CQ series GC series	1.0 0.7	30-15,000 30-15,000	7.50 7.40	4.41 4.35
61 R 325 61 R 307	62-1 414-1‡	P E	62-1-M	3.0 3.0	50-50,000 30-11,000	4.95 4.45	2.91 2.62

#### STANDARD-GROOVE CARTRIDGES

Popular Rochelle-salt crystal and ceramic cartridges, designed for rophar Rochelle-salt crystal and cerainic carringes, designed for use with 78-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" needles. With osmium needle. All others are supplied less needle; have screw-type chuck for conventional needle. See page 362 for complete liceties of englist needles. listing of quality needles.

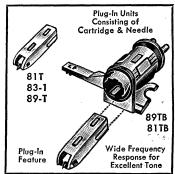
Model 12-U used in Admiral, RCA, and Webster phonographs; Model 2 used in Magnavox; 12 in Webster; 402 in Admiral. †Output with capacitor (supplied); delivers 4.0 volts when capacitor is not used. Needle pressure: Models 2 and 4—234, oz.; Models 6, 24 and 26—1/4 oz.; Models 12 and 12-U—1 oz. Model 32—1/2 oz.; and Model 402—12 grams. Av. shpg. wt., 4 oz.

No.	Model No.	Fig.	Replaces Astatic Models	Volts	CPS CPS	List	EACH
65 R 158	2	R	B-1, B-2, B-3, B-4	2.5	50-4000	\$9.00	5.29
65 R 156	4	s	L22A, L-26A, L-27A	1.4	50-4500	4.45	2.62
65 R I 53	6	S	L-40A, L-41A	0.6	50-4500	4.45	2.62
65 R 226	12	ΙT	L-10. L-12	4.0	50-5000	4.45	2.62
65 R 227	12-U	T	L-12Ú	1.25†	50-5000	4.95	2.91
65 R 163	24	S	L-25A, series L-70,				
	1	1	L-71, L-75, L-76	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	L-24A, L-36A, L-82A,				
	i -	1	L-92, L-92A, 34	3.5	50-5000	4.95	2.91
65 R 149	402*§	Х	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 permits accurate tracking of wide lateral groove variations. Assures excellent transient response and low distortion. Frequency response extends from 30 to 15,000 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" stylus for 45 and 33½ rpm, long-play records and .003" 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.	Туре	Description	Styli	Volts	List	NET EACH
61 R 308 61 R 309 61 RC 317 61 RC 318 61 R 319	81T 81TX 81TBX	Cartridge/styli & mtg. brkt. Cartridge/styli Cartridge/styli Cartridge/styli & mtg. brkt, Cartridge/stylus	S001", S003" S001", S003" D001", S003" D001", S003" S001"	1.0 1.0 1.0 1.0 1.0	\$ 4.95 3.95 16.50 17.00 3.50	2.91 2.32 9.70 10.00 2.06
61 RC 320 61 R 321 61 R 322 61 RC 323 61 RC 324	89T 89TB 89TX	Cartridge/stylus Cartridge/styli Cartridge/styli & mtg. brkt. Cartridge/styli Cartridge/styli & mtg. brkt.	D001" S001", S003" S001", S003" D001", S003" D-,001", S003"	1.0 1.3 1.3 1.3 1.3	16.00 4.95 5.95 17.50 18.00	9.41 2.91 3.50 10.29 10.58



## Sonotone & RCA Cartridges—Pickups

#### SONOTONE CERAMIC PHONO CARTRIDGES















#### WIDE-RANGE CARTRIDGES

Deluxe Series "3" cartridges. Provide unusually clean, natural reproduction. Response: ±1.5 db from 20 to 15,000 cps; gradual roll-off to 20,000 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 only 6 grams. Cartridges are self-equalizing; match modern (RIAA, LP, NARTB, AES, etc.) recording curves without using actual proceedings of the component of the page actuary. external record compensators. Also, have sufficient output (0.5 v.) to require no preamp. Ceramic elements are unaffected by heat or moisture. Have standard ½" and ½" mounting centers to fit most phonos. 3P-1S 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.

St	ock	No.	Туре	Styli	NET
					6.17
65	RC	928	3P-1D	D001" S001", S003"	12.35
65	R	929	3T-S_	S001", S003"	7.35
65	RC	948	3T-SD	D001" S003"	13.23

#### SINGLE-NEEDLE CARTRIDGES

For exact replacement in many popular phonos. Do not require preamplification or equalization. Ceramic construction provides protection against heat and moisture; vides 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" all-purpose (microgroove and standard), 1P-1S, 1P-2S, and 1P-1D have bracket for ½" or 5½" mtg. centers. 1P-LB-1S, 1P-LB-2S, and 1P-LB-1D less bracket for narrow pickup arms. Response, ±3 db 30-15,000 cps. Output, 1 v. Needle pressure 8-10 grams. Shpg. wt., 3 oz.

Stock No.	Type	Styli	NET
65 R 615	1P-1S	.001"	4.41
65 R 523	1P-2S	.002"	4.41
61 RC 350	1P-1D	.001"	11.47
61 R 351	1P-LB-1S	.001"	4.41
65 R 843	1P-LB-2S	.002"	4.41
61 RC 352	1P-LB-1D	.001"	11.47

#### 2T TURNOVER CARTRIDGES

Ceramic cartridges used as original equipment in many modern phonographs—im-prove sound quality when used in older prove 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, ±3 db 30-15,000 cps. Cartridges easily installed; require no cut-out for turnover mechanism. Models 2T-S and 2T-SD have bracket for ½" or ½" mtg. centers; ZT-LB-S and 2T-LB-SD less bracket for narrow pickup arms. "D" is diamond tip; "S", sapphire. Shpg. wt., 3 oz.

Stock No.	Туре	Styli	NET
65 R 533	2T-LB-\$	S001", S003"	5.00
65 RC 844		D001", S003"	12.94
65 R 528		S001", S003"	5.00
61 RC 353		D001", S003"	12.94

#### 7T TURNOVER CARTRIDGES

New series of ceramic cartridges. Have unique fluid damping compound for high compliance and low distortion. Response, ±2 db 20-12,000 cps. 0.6 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 simplified by ingenious turn-over design Mountapplications as "".

applications as "".

poses in players. Needle replacement simplified by ingenious turn-over design. Mounting brackets have elongated holes to permit use with any popular tone arm having mounting centers spaced 1/6" to 5/8" apart. 7T-LB types are ideal for use with unusually narrow tone arms. 001" tips are for microgroove (LP), 003" for standard 78's. "S" in stylus description means sapphire, "D" in stylus description means sapphire, diamond. Shpg. wt., 3 oz.

Stock No.	Туре	Styli	NET	
61 R 355	7T-S	S001", S003"	5.29	
61 RC 356	7T-SD	D001", S003"	13.23	
61 RC 357	7T-D	D001", D003"	20.29	
61 R 358	7T-LB-S	S001", S003"	5.29	
61 RC 359	7T-LB-SD	D001", S003"	13.23	
61 RC 360	7T-LB-D	D001", D003"	20.29	

#### **NEW STEREO CARTRIDGES**



Series "8T" ceramic

Series "8T" ceramic turnover cartridges. Provide excellent 2-channel sound reproduction. Response: 20-20,000 cps. .3 volt output. Needle pressure, 6 grams. Type 8T-4S has .0007" and .003" sapphire needles; 8T-4SD, .0007" diamond and .003" sapphire needles. Both have 4 terminals, two for each channel. Standard ½" mounting centers. Wt., 3 oz.
68 R 205. 8T-4S. List, \$14.50 NET. .8.53
68 RC 208. 8T-4SD List; 24 50 NFT 14.41

68 RC 208, 8T-4SD, List, 24,50 NET 4.41

#### SONOTONE REPLACEMENT NEEDLES

S—Sapphire; D—Diamond. Interchangeable types: 7T-S, 7T-SD, 7T-D; 3P-1S, 3P-1D; 3T-S, 3T-SD; 2T-S, 2T-SD; 1P-1S, 1P-1D, 1P-2S. Shpg. wt., 2 oz.

Stock No.	For	Tip	NET
68 R 319	1P-1S	S001"	1.47
61 R 354	1P-1D	D001"	9.11
65 R 519	1P-2S	S002"	1.47
65 R 534	2T-S	S001", S003"	2.06
65 RC 529	2T-SD	D001", S003"	9.70
68 R 317	3P-1S	S001"	1.76
68 RC 316	3P-1D	D001"	9.41
68 R 318	3T-S	S001", S003"	2.06
68 RC 315	3T-SD	D001", S003"	9.70
61 R 361	7T-S	S001", S003"	2.06
61 R 362	7T-SD	D001", S003"	9.70
61 RC 363	7T-D	D001", D003"	14.41
68 R 217	8T-S	S0007", S003"	2.06
68 R 209	l 8T-SD	D0007",S003"	9.70

#### POPULAR ASTATIC PICKUP



Model KR314-T. Lightweight, balanced pickup arm, complete with high out-put crystal, turnover cartridge. Ideal for replacement in manual record players. Turnover mechanism permits instant selection of .003" standard or .001" microgroove sapphire needles. Ivory finish. 8½" long. Wt., 1 lb. 4.00 61 R 326. NET...

## **RCA PHONO COMPONENTS**









#### REPLACEMENT CARTRIDGES

All are Rochelle-salt crystal type, except \*heat and humidity-resistant ceramic element. All are supplied complete with needle. Needle types: †Sapphire standard, ††sapphire microgroove, §sosmium microgroove, §osmium standard and sapphire microgroove, ‡sapphire standard and microgroove. Av. shpg. wt., 5 oz.

Stock No.	Туре	Fig.		List EACH	NET
65 R 26	9890†	A	6QU, 7QV5, 0-50, R60, R93F, R100, R103S, QU56C, U8, U9, U10, VA21, V100, V101, V105, Radiola 560P	\$8.58	5.05
65 R 27	0 70338-A†	В	6J, 6JM, 55AU, 62-1, 63È, 63ÈM, 65AU, 65AU1, 65U, 65U1, 67AV1, 67V1, 75ZU, 77V1, 77V2	7.25	4.26
65 R 25	3 74067††	D	9EY3,9EY35,9EY36,9EYM3,9JY,9JYM,9TW333, 9TW390, 9W101, 9W102, 9W103, 9W105, 9Y7,		
	1	l	9Y51, 45EY, 45EY15, 45J, 45J2	6.40	3.76
	4 75575††	D	2T81, 4T141, 6T84, 6T86, 7T132, 9T89, 9T147, 9Y510, A82, A101	6.40	3.76
65 R 91		A	58AV, 58V, 59AV1, 59V1, 66E, 610V1, 610V2, 641TV, 711V1, 711V2, 711V3, QU61, QU62, QU72, QU72A	7.50	4.41
65 R 21	5 76257§§		45J3	6.50	3.82
65 R 25	5 77779§	C	2ES3, 2ES31, 2ES38, 2JS1, 2S7, 2S10, 2T81, 2US7,		
65 R 91	3 100653*1		3US5, 4T141, 6T84, 6T86, 6T87, 7T143, 9T89, 9T147, 15E, 21D346, 21D395, 21T242, 21T342 4ES31Q, 4ES38Q, 4JS1Q, 6ES4Q, 6ES5, 6HF3, 6HF4,	7.50	4.41
	1		6HF4Q,6HF5,6HF5Q,6JS1Q,6JS2Q,7HFP1,7HFP1Q	8.50	5.00





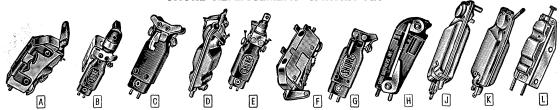
#### **PHONO SWITCHES**

E Type 240X1 Radio-Phono Switch. For operation of record players through radios that do not have a phono input. Slide switch 

F Type 202W1 Record Player Selector Switch. For using either of two record players or changers with one radio or ampli-

## Replacement Phono Cartridges

#### SHURE REPLACEMENT CARTRIDGES



#### **CRYSTAL CARTRIDGES**

High-quality replacement cartridges for most record changers and players. All have sapphire .001" needle for LP and .003" needle for 78-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 E14 E15 E16 E18 E19 E20 and E21 cartridges. Av show. Series F14, F15, F16, F18, F19, F20, and F21 cartridges. Av. shpg. wt., 4 oz.

Stock No.	Model No.	Fig.	Replaces Shure Models	Volts	CPS	List	EACH
65 R 904	W9	A	Series P7, P8 & P9	3.5	50-10,000	\$ 9.50	5.59
65 R 338	W22T	В	P76, P77, P79, PC2, PC4, PC40, PC41	1.2	50-10,000	10.00	5.88
65 R 342	W22	C	Series P72, P76, P77, P79: W22AB	1.2	50-10,000	9.50	5.59
65 R 911	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. shops. wt., 4 oz.

	•						
Stock No.	Model No.	Flg.	Replaces Shure Models	Output Volts	Response, CPS	List	NET EACH
68 R 725 68 R 726 65 R 313 65 R 902	WC6 WC6-TM WC10 WC25	A F A E	Series PC6 PC6SAM & PC6SEM Series P71, P72 Series PC42	0.5 0.5 0.8 0.7	30-15,000 30-15,000 35-12,000 50-7000		

#### ALL-GROOVE CARTRIDGES

Single-needle cartridges for playing both standard and microgroove records. All have .002" osmium needles, except Model W26 which has .002" sapphire needle. Needle pressure, 8-9 grams, except W26 -41/2 grams. Shpg. wt., 4 oz.

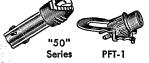
No.	Model	Fig.	Replaces Shure	Volts	CPS	List	NET
68 R 340	W26	G	W26A, W26B	0.9	50-8000	\$6.50	3.82
65 R 319	WC38	H	PC10, PC13, WC36B	0.9	50-10,000	7.50	4.41
65 R 348	W66B	J	Series P37	2.0	50-4500	7.00	4.12

#### STANDARD GROOVE CARTRIDGES

Ruggedly-built Rochelle-salt crystal cartridges. Model W78 can be 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 10-15 grams. W56N is used in Wilcox-Gay disc recorders; supplied with stellite .003" cutting needle and .003" 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.	Fig.	Replaces Shure Models	Output Volts	Response, CPS	List	NET EACH
65 R 349	W56N	К	P86R, W56R, W65R,	4.3	50-10,000	\$10.00	5.88
65 R 591	W68	J	Series P89 PP30W, W65B, Series	1.6	50-4500	7.50	4.41
65 R 592 65 R 590	W70 W78*	L K	P30, W60, W61 (see above) Series P35, P87, P88	3.8	50-5000	4.95	2.91
0511570			P90,P92,P93,W42,W56 W58, 99-180, 99-181	4.0	50-6000	5.55	3,26

#### **ELECTRO-VOICE REPLACEMENT CARTRIDGES**



**POWER POINT TRANSDUCERS** 

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

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 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 76S and 76DS, 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 need. wears. Mechanisms fit ½" and ½" mounting centers. Requires only 5 to 8 grams tracking force. Output, 1 volt. Av. shpg. wt., 3 oz.

shpg. wt., 3 oz. Stock

65 R 518

65 R 598

65 RC 599

Mfrs Type

51-1

76S

High Output, Low Tracking Force





## MODEL 60 DUO-VOLT CARTRIDGE

Versatile crystal cartridge permits easy se-lection of either high or low output voltage. High output makes it an ideal replacement cartridge for use with 1-tube or 2-tube low-amplification phonographs. May substantially improve reproduction. On LP records, simply connect leads to the two outer terminals for 4 volts output; or to center terminal and 4 voits output; or to center terminal and 4 voits output; or to 2 voits. Provides 6 voits or 3 voits on stand-ard groove. ½" mounting hole center. Less standard shank needle . Shpg. wt., 3 oz. 65 R 422. List, \$4.95. NET. . . . . 2.91

#### HOLDING MECHANISMS

Model PFI-1. Fixed Type. Designed for use with E-V Power Point models 51-1, 52-2, and 53-3. Can be used with model 56.





#### STEREO "POWER POINT" CARTRIDGES

- For Stereo and Monaural Playback
- Excellent Reproduction Quality
- Delivers High Output Voltage

Ceramic cartridge for playing both stereo 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, ½" dia., ¾" long. S—Sapphire needle. D—Diamond needle. 0007" plays both stereo and monaural. .003" monaural only. Shpg. wt 4 og.

No	Mfrs Type	Styli	NET EACH	3-Up, EACH
68 R 727 68 RC 728 68 R 729 68 RC 730	61DS 66	S- 0007", S- 0007" S- 0007", D- 0007" S- 0007", S- 003" D- 0007", S- 003"	15.29 4.66	3.50 11.47 3.50 11.47

#### HOLDING MECHANISMS

For above. Fit any arm. Shpg. wt., 2 oz								
Stock	Mfrs Type	Description	NET EACH	3-Up, EACH				
68 R 731 68 R 732	PT-3 PFT-3	Turnunder Fixed	.78 .39	.59 .29				

#### .001" sapphire .001" sapphire .002" sapphire .002" sapphire 3.10 2.32 65 R 444 52-2 .003 sapphire .003" sapphire .001" sapphire .003" sapphire 65 R 448 53-3 3.10 2.32 65 R 509 65 RC 464 56DS .001" diamond .003" sapphire 12.94 9.70

.001" sapphire .003" sapphire

.001" diamond .003" sapphire

Styll

3.32 2.50 12.94 9.70

NET | EACH 3-Up EACH

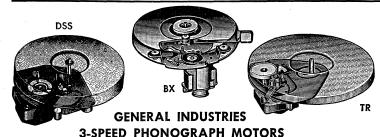
> High-quality replacement turnover cartridges. Each has both .001" and .003" sapphire styli. Type 1: high output; replaces Ronette cartridge TO-222; delivers 1.8 v. output, LP; 3 v., 78-rpm. Type 2: low output; replaces Ronette cartridge TO-284-OV; delivers 0.5 v. output, LP; 0.9 v., 78-rpm. Type 3: medium output; replaces Ronette cartridge TO-400-OV; delivers 0.9 v., LP; 1.5 v., 78-rpm. Cartridges fit present Ronette holding or mounting mechanisms. Av. shpg. wt., 4 oz. Туре Туре 68 R 723 4.09 68 R 721



For 78 and 33 1/3 Wide-Range Response Clear Reproduction

1, 2, 3,

## Phono Accessories—Cartridges



MODEL DSS. 3-speed phonograph motor with 10" turntable. Features 4-pole, shadedpole motor. For high-fidelity phono systems. For use with all types of phono cartridges, including magnetic. Plays 33/3, 45, and 78 rpm records. Turntable is rim driven by diller 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 turn-

85 R 276. List, \$10.95. NET......6.57

BATTERY-OPERATED PHONO MOTORS. Highquality phonograph motors for portable use. Perform on 4 flashlight cells (below). Have 6" plastic turntable. Constant speed 2-pole motors are rubber grommet mounted for extra cushioning. Enclosed motors have self-lubricastology, 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, 6½x4½x2¾. Require 2″ below mtg. sur-face. Shpg. wt., 1 lb.

No.	Type	Speeds	NET
85 R 203	ВХ	45, 331/3, 162/3 rpm	8.70
85 R 204	BX-45	45 rpm	7.65

TYPE 2 BURGESS BATTERY. For use with above (4 required). Wt., 6 oz. 



## RONETTE "FONOFLUID" PHONO CARTRIDGES

#### 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 cps. 0.7 volts output. Requires 4 to 6 grams needle pressure. Supplied complete with hardware and .001" sapphire stylus. 5%" mtg. centers. Shpg. wt., 4 oz. 65 R 015. List, \$7.25. NET...... 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 rpm players. Response from 50 to 9000 cps. Output is 5 volts. Requires 4 to 10 grams tracking pressure. 5% 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 high-compliance, dual-elements. Requires only 4 compilance, 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 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......11.76

## **DUAL-STYLUS CARTRIDGES**

MODEL TO-284-OV. Dual-stylus, turnover crystal cartridge with .001" and .0025" sapphire tips. "Fonofluid" construction assures excellent reproduction. Response, 50-11,000 cps. Stylus pressure 4-6 grams. 0.7 volt output. With hardware. ½" 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

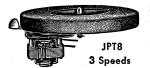
MODEL TO-222. Dual-stylus, turnover-type crystal cartridge with .001" and .0025" sapphire tips. Similar to TO-284-OV above but has 5 volt output. With ½" mtg. centers. Shpg. wt., 4 oz.

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 accufrequency 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. Self-equalized for RIAA recording curve. Features two separate stylus assemblies: .001" sapphire for LP's and .0025" sapphire for 78-rpm records. Has ½" mounting centers. Shog, wt. 3 oz. 

Replacement needles for Ronette cartridges are on page 362

#### **ALLIANCE PHONO MOTORS**



MODEL JPT8, 3-speed phono motor with 8" MODEL 1718, 3-speed photo motor, turntable. Constant-speed, 2-pole motor. Plays 33½, 45, and 78 rpm records. Speed selector moves idler to position for desired speed. Rubber shock-mounted motor, With special Rubble 30.4 A5-rpm record adapter. Mounts in 4½x5¼" cutout. Requires 2½" below base plate. For operation from 110-120 volts, 60 cycle AC. Shpg. wt., 3½ lbs. 85 R 440. List, \$10.95. NET....... 6.44

MODEL JPQ8. As above, but 4 speeds: 78, 45, 331/3, and 162/3 rpm.

85 R 442. List, \$13.50. NET........7.94

MODEL DPT-0302 BATTERY-OPERATED PHONO MODICR. (Not illus). For battery-operated, portable phonographs. Operates at 16%, 331% and 45-rpm speeds. Has 6" metal, gray-flocked turntable with speed shift lever. Requires 13%" below mounting surface. Operates on 6 volts—takes 4 Type 2 flashlight cells, below. 11% lbs. 85 R 205. List, \$15.00. NET....... 8.84

TYPE 2 BURGESS BATTERY. For use with above (4 required). Shpg. wt., 6 oz. 53 J 009. NET EACH......14c

#### WALSCO REPLACEMENT **PARTS**



The reference list below is arranged alphabetically by manufacturers. It lists model numbers of equipment

and Walsco type numbers of equipment and Walsco type numbers of replacement parts. To select parts, check the Walsco type numbers given for your equipment, against the descriptive list at bottom of page. When ordering give Allied's Stock No., Walsco type number, and descriptive scription.

#### REFERENCE LIST

Mfr. and Models Walsco Type No. 

330	330 1403, 1404 & 1403							
Stock No.	Туре	Description	NET					
43 N 401 43 N 402 43 N 406 43 N 408	1414 1415 1432 1437	Belt, 5%" I.D. Belt, 11/6" I.D. Idler, 2" O.D. Idler, 21/8" O.D.	(Pr.).17 (Pr.).15 .59 1.03					
43 N 432 43 N 433 43 N 412 43 N 434	1444 1445 1447 1449	Inter-wh.,2"O.D. Inter-wh.,2"O.D. 45rpm Wheel Idler, 21/2" O.D.	1.47 1.47 .65 1.18					
43 N 435 43 N 413 43 N 414 43 N 415 43 N 416	1452 1460 1461 1462 1463	Idler, 1½" O.D. 78 rpm Pulley 45 rpm Pulley 33⅓ rpm Pulley 78 rpm Pulley	.59 .76 .68 .68					
43 N 417 43 N 418 43 N 419 43 N 420 43 N 421	1464 1465 1466 1467 1468	45 rpm Pulley 33½ rpm Pulley 78 rpm Pulley 45 rpm Pulley 33½ rpm Pulley	1.47 1.47 .73 .73					

## Selected Feature Values

#### NEW WALSCO "KLEEN-TAPE"



#### knight CRYSTAL MIKE

Attractive crystal mike for 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. Qutput level: -45 db. Gray plastic case. Size: 211/6x21/6x11/. 5-ft. cable. Shpg. wt., 1 lb. 98 5 19. NET. 2.95



#### NEW SENCORE BATTERY TESTER



#### **BUD WIRELESS PHONO OSCILLATOR**

Model WO-6. Compact, easy-to-operatic phono oscillator for use with any record player having 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 between record player and radio. Just connect to cartridge. Any unused frequency from 1100-2150 kc can be used. Regulate tone, volume at radio. 4/x 22/x 23/s". For operation from 110-120 v., 50-60 cycle AC. Shgs. wt., 3 lbs.



60 R 336. NET......II.81

#### 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 neat-law folded in plactic bear. ly folded in plastic bags.



						Shpg.	Wt.	NET
12x12"	43 N	605	43	N	608	2 0		.47
13x24" 36x36"	43 N	606	43	N	609	4 o		3.70
30230	43 N	607	45		610	00	۷.	13.70

#### FLOCK-COATED GRILLE SCREENING

Galvanized wire mesh, flocked on both sides. Soft, brown color. Durable and attractive. 86, N 060, 8x11". Wt., 4 oz. NET.......56¢, 86 N X 061, 18x24". Wt., 12 oz. NET.....188

#### Values in Polaris TV Picture 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 year. Take advantage of these low prices and order now. Values like this but tank to be best All bars. this just can't be beat. All have magnetic deflection and magnetic

focus except ‡magnetic deflection and electrostatic focus. \*Aluminized screens. When ordering, give Dept. and Type No.—see page 442 for shipping instructions.



1 Year Guarantee

	Stock No.	NET	l	NET	
Dept.	Туре	EACH	Dept.	Туре	EACH
AU6	12LP4A	15.10	AU6	20DP4A/CP4A	21.30
AU6	14EP4/CP4/BP4	16.05	AU6	20DP4C/CP4D*	24.80
AU6	16AP4A	22.40	AU6	21ACP4/AMP4	24.45
AU6	16DP4A	20.80	AU6	21ACP4A/AMP4A*	27.95
AU6	16GP4B	23.25	AU6	21ALP4A/ATP4A*‡	29.35
AU6	16RP4/KP4	17.50	AU6	21AP4	31.30
AU6	16RP4A/KP4A*	21.00	AU6	21AVP4/AUP4‡	25.90
AU6	16WP4A	25.95	AU6	21AVP4A/AUP4A*‡	29.40
AU6	17AP4	19.75	AU6	21EP4A	22.60
AU6	17AVP4/ATP4;	21.30	AU6	21EP4B*	26.10
AU6	17AVP4A/ATP4A*‡	24.80	AU6	21FP4A‡	23.85
AU6	17BP4A	19.75	AU6	21FP4C*‡	27.35
AU6	17BP4B*	23.25	AU6	21MP4‡	33.15
AU6	17CP4	25.80	AU6	21WP4	25.90
AU6	17HP4/RP4‡	21.40	AU6	21WP4A*	29.40
AU6	17HP4B/RP4C*‡	24.90	AU6	21YP4‡	26.25
AU6	17LP4/VP4‡	20.40	AU6	21YP4A*‡	29.75
AU6	17LP4A/VP4B*‡	23.90	AU6	21ZP4A	24.65
AU6	17QP4	18.75	AU6	21ZP4B*	28.15
AU6	17QP4A*	22.25	AZ6	24CP4	41.10
AU6	17TP4‡	28.10	AZ6	24CP4A*	45.60
AU6	19AP4A	27.15	í		

#### PHILMORE BUILDER KITS & CRYSTAL SETS









TR-101

Model 7000 "Little Wonder" Radio Receiving Set. One of the smallest crystal sets made. Complete with attractive bakelite case. Less headphones and antenna. Wt., 6 oz.

Model T R-101 Transistor Radio Kit. Low-cost transistor radio kit designed to cover the broadcast band. Includes sensitive germanium diode crystal detector and transistor audio amplifier stage. Handsome polystyrene cabine measures 3½x2½x1½x1½". Kit includes 1000-ohm headphone and headband. Less battery (see below). Shag. wt. 8 oz.

Model TR-22 Transistor Radio Kit. Popular loudspeaker type transisor radio kit. Pro-vides excellent reception of broadcast band. Complete with case, transistors, diode, and all necessary parts and detailed instructions. Less battery (see below). Wt., 1 lb.

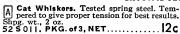
Type VS300 RCA Battery. 9-volt battery for above. Shpg. wt., 4 oz. 

Model 7001 "Supertone" Crystal Set. 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 antenna. Shpg. wt., 12 oz. 

Type Z Battery. For above. Wt., 3 oz. 53 J 031. NET.....

83 C 100. Antenna Kit. 1 lb. NET.... 1.03

#### **CRYSTAL SET ACCESSORIES**



Detector Mount Kit on Base. As above, but all parts mounted on base with Fahnestock clips—ready to use. Wt., 5 oz. 







Meter-Tested Crystal. Highest-quality Galena 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. 



## Selected Feature Values



#### DYNAKIT QUALITY HI-FI KITS







## DSC-1 STEREO CONTROL KIT

Here's an advanced-design kit that provides flexible, centralized control of two preamplifiers in stereo operation. Introduces no noise or distortion, and only a negligible amount of signal attenuation. Requires no modification of the preamplifiers—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 Features include a blend control—continuously variable from pure stereo to pure monaural. "In between" positions feed a portion of channel A to amplifier 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 loudness control. Channel reverse switch operates without unbalancing signal levels. Includes balance control and stereo tape AB monitor facility. Supplied complete with cables. Size, 5½x3¾x6″. Slps. wt., 2 lbs. 83.5 037. NET

#### PS-1 PREAMP POWER SUPPLY KIT

#### PREAMPLIFIER KIT

Unique-design, high-gain preamplifier. Maintains constant audio quality over entire volume range. Features complete feedback circuitry, with both current and voltage loops including all four stages of gain, a DC heater supply and a printed-circuit module. Can be used in pairs for outstanding stereo.

for outstanding stereo.

Response: ±0.5 db, 6 to 60,000 cps. IM: 0.05% at 2-v. output. Inputs: High and low-level ing. phono, tuner, TV, tape and low-level input that may be wired as extra RIAA phono, tape head, or mike input. Phono Equalization: RIAA, 78, original LP. Gain: 54 db at 1 kc on RIAA input. Controls: Input selector equalization, bass, treble, volume, tape monitor switch, loudness compensation switch, hum balance. Tubes: 2—12AX7 (ECC-83), selenium rectifier stack. rectifier stack.

Includes 4 convenience outlets. 2¾x12x6". Less power supply (takes power from Dynakit basic amplifier or PS-1 at left). Wt., 7 lbs. 34.95

#### MARK III BASIC AMPLIFIER KIT

Even a beginner can easily assemble this audio perfectionist's basic amplifier! Outstanding features include: choke filtering for absolute minimum noise; premium KT88 (or 6550) tubes supplied in matched pairs; printed circuit board with parts pre-mounted for trouble-free construction in less than 4 hours; "Biaset" feature for simple, accurate bias setting; no balancing or critical adjustments.

Output: Rated, 60 watts; peak, 120 watts. Response: ±½ db, from 6 to 60,000 cps. Distortion: IM, less than 1% at 60 watts—less than ½% at 50 watts—about .04% at average listening levels; Harmonic, less than 1%. ±1 db, 20 to 20,000 cps at 60 watts. Noise: —90 db. Output Impedances: 4, 8 and 16 ohms. Tubes: 6ANS, 2—K T88 (or 6550); GZ34 and selenium rectifiers. Size, 6½x3x3. For 110-120 v., 60 cycle AC. Shpg. wt., 28 lbs.

83 SU 004. NET... 28 lbs.

#### MILLER HIGH-FIDELITY AM **TUBELESS TUNER**



TUBELESS TUNER

Model 565.
Unique tubeless, high fidelity AM tuner kit.
Provides outs tand in g broadcast reception at unusually low cost.

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 input signal—ranges from .07 to .7 volts on stations within a 25-mile radius, depending upon the signal strength. Output circuit is equipped with a volume level control. Size of ebony bakelite cabinet is 4x7x3/x². Sing. wt., 21bs. 14.70

Model 595. Same as above, but factory-wired and tested. Shore up 21bs.

#### ARGOS PORTABLE EXTENSION SPEAKER SYSTEM





Bring thrilling hi-fi to any room in your house with this moderately priced, portable speaker system. It's pre-wired and ready to use. Includes the Argos AD-1 bass reflex enclosure with a 12" full-range, twin-cone speaker installed. Has built-in L-pad for adjusting speaker volume. Enclosure is constructed of ½" 5-ply wood with malogany grained leatherette covering. Uniform frequency response from 55 to 12,000 cps. Power handling capacity, 15 watts. Impedance, 8 ohms Includes 50-ft. cable. Size, 22½x19½x13½". Shgs. wt., 35 lbs. 

#### **NEW ARGOS TSE-1 ENCLOSURE**



Top-value en-closure with "Forward-Front" styling —grille secton

Argos TSE-1/KN-808. Above enclosure with British-made Knight KN-808 wide-range speaker installed. (See page 56 for description of speaker.) Provides superior, distortion-free reproduction—ideal for stereo. Response: 40 to 12,000 cps. Power handling capacity: 15 watta program material, 30-watt peaks. Shpg. wt. 20 lbs. Save \$3.00.

79 DU 208. Mahogany. NET

EACH.....23.12 79 DU 209, Blonde.

#### **NEW WALCO WC-100 STEREO CONVERSION KIT**



Amplifier



Speaker & Enclosure



#### Convert To Stereo With Ease Hum-Free Performance

Enjoy breathtaking stereophonic sound Enjoy breathtaking stereophonic sound with your present phonograph or phono console. Don't let your system become obsolete—convert to stereo with this Walco conversion kit. Permits you to play stereo records—makes monaural records sound better than ever.

Includes stereo cartridge with .0007" Includes stereo cartridge with .0007<sup>w</sup> diamond needle, four-watt, five-tube, hum-free amplifier, and 6<sup>w</sup> full-range speaker with enclosure. Cartridge is installed in present pickup arm and connected to preamp section of the Walco amplifier. 0.2 volt cartridge signal is boosted to 5 volts—one channel is then fed to present phono amplifier and speaker, other channel continues through Walco amplifier to Walco speaker for thrilling stereo.

Speaker for turning steres; speaker, 10x12½x5½". Shpg. wt., 9 lbs. 68 RX 744, Mahogany. 68 RX 745. Blonde. 47.95

#### ARGOS TELEVISION TUBE CADDIES





Carry Caddy

Super Tube Caddy. New, ruggedly built, double-door type tube caddy for quick accessibility to tubes and tools. Carries up to 325 tubes—one of the largest tube caddies available! Extra space accommodates meters, tools, probes, etc. Removable tool tray. "Egg crate" design for smaller tubes and parts. Styled in gray tweed leatherette. Size (HWD), 16½x 24x8½". Shpg. wt., 16½ lbs.

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.

37 Years of Ham-to-Ham Service

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.



olling Deluxe Amateur Gear





A Complete New SSB Station

#### **COLLINS KWM-1 TRANSCEIVER**

Compact, top-performing 3-band transceiver—designed for mobile or fixed operation. Input power is 175 watts PEP on SSB, 160 watts CW. Covers any ten 100-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 never ne er 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), 100the tributed vivo stable within 100 cps, 100-kc calibrator, mechanical filter for trans-mitting (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, 50 ohms unbalanced. Less speaker, power supply (use either the 516F-1 listed below, or the 516E-1 at right). Size (HWD): 61/4x 14x10". Shpg. wt., 22 lbs. 94 SU 877. NET......820.00

312B-1 MATCHING SPEAKER. Size, 61/4x75/8x 

516F-1 POWER SUPPLY. Supplies all necessary voltages for operation of KWM-1. With cables. For 110-120 volts, 50-60 cycle AC. Size, 61/4x75/4x10". 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

#### **RWS-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 32S-1 offers exceptional operating convenience and superior all-around performance. It's the ideal companion for the 75S-1 receiver a tright.

Outstanding features include: mechanical filter-type SSB generator, permeability-tuned 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 frequency control system consists of VFO functioning with crystal oscillator that accommodates 13, heterodyne crystals—this permits coverage of any 13—200-kc ranges from 3.4-30 mc. 11 crystals supplied provide complete coverage of 80, 40, 20 and 15 meters, and 28.5-28.7 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 feed-through and mixer products. Has 600-ohm phone-patch input. Output impedance is 50 ohms. 67\%x14\%x11\%". Less power sup-ply (below). Shpg. wt., 17 lbs.

516F-2 POWER SUPPLY. Supplies all necessary voltages for operation of 32S-1. With cables. For 110-120 volts, 50-60 cycle AC. Size, 61/4x71/2x10". Shpg. wt., 27 lbs. 

516E-1 POWER SUPPLY. For mobile or portable operation of the 32S-1 and 75S-1, or the KWM-1 at left. Designed for 12 VDC input. LUTIES of power transistors as switching elements at 600 cps, eliminating vibrators and rotating machinery. Provides superior efficiency and minimum maintenance. With cables, Size, 4½x5x9°. Shpg. wt., 18 lbs. 

#### **NEW COLLINS 75S-1** SSB RECEIVER

New, advanced-design receiver for SSB, AM 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 32S-1 transmitter (at left) to make a compact, efficient station. Receiver VFO can be used to control both with for transmitter 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-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 mc. (Note that there are 2 open crystal positions that can be used to cover 2 more ranges on 10-11 meters.)

Features dual conversion with crystal-conreatures dual conversion with crystal-con-trolled 1st beating oscillator, bandpass 1st IF, permeability-tuned VFO (stable within 100 cps), mechanical filter for high selec-tivity and sideband selection, 100-kc cali-brator and product detector. Other impor-tant 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.

MATCHING SPEAKER. 73/4x10x8". Wt., 4 lbs. 

312B-4 SPEAKER CONSOLE. Integrates 32S-t and 75S-1. Houses speaker, RF directional wattmeter, phone patch and func-tion controls. 73/4x8x121/4". Wt., 10 lbs. 92 SU 395. NET...... 185.00



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 with the series of the selector suitable and convince placement. cannet 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. 0-100 scale

Other features: built-in 5" 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. 12½x7x9½". For 105-125 v. DC, or 50-60 cycle AC. (See 220 v. adapter cord below.) Shpg. wt., 14 lbs.

#### S-38E in Furniture Finishes

The S-38E in metal cabinets with lustrous, simulated wood grain finishes.

220-VOLT ADAPTER CORD. Permits 220 v. AC-DC operation of S-38E receivers. 5 oz. 49 T 580. NET.....

#### **LOW-COST S-38E RECEIVER**

HIGH-FIDELITY AUDIO. Push-pull 6V6 output furnishes 10 watts of audio power. Four-position tone control; phono jack. FOR SWI'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 control for pin point reset accuracy. Has pointer for pin-point reset accuracy. Has BFO for reception of code signals. Front Panel Controls: Dial Pointer Reset; Band Selector; Receive/Standby; Calibration

Precision built to meet the most exacting rection but to fleet the flow exacting standards—incorporates every modern refinement in all-wave receiver engineering. Six ranges: 540-1620 kc; 1620 kc; 4.9 mc; 4.9-15 mc; 15-32 mc; 27-56 mc (AM-FM); 54-109 mc (AM-FM). Beautifully styled.

Selector; Receive/Standby; Calibration Crystal; Noise Limiter; Tuning; On-Off-Volume; 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, 10½x20x16". Less speaker. (See R.46B and R.47 matching speakers on page 371.) For 105-125 volts, 50-60 cycle AC. Shpg. wt., 66 lbs. 

#### **TOP-VALUE SX-99 RECEIVER**

An outstanding value in a medium-priced 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—provides increased separation of stations; "S' meter calibrated in units of 6 db to S9 and in db above 89 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. 8½x18¾x11". For 105-125 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 FEATURES: Bandspread dial calibrated for 

A highly sensitive and selective receiver at A figury sensitive and scientify receiver action to control of the first and sensitive and standard broadcasts and standard broadcast programs. Has high signal-to-noise ratio. Built-in 5" PM speaker.

TUNES 10 54.5 MC. Range 1, 540-1630 kc; Range 2, 2.5-6.3 mc; Range 3, 6.3-16 mc; Range 4, 14-31 mc; Range 5, 48-54.5 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 matte Noise Elimiter, and Filone-code switch. Electrical bandspread control, with 0-100 logging scale plus mc calibration for 48-54.5 mc, simplifies tuning on crowded bands. Speaker-Headphone switch, head-phone and phono jacks on rear panel.

#### **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 world-wide 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; 3-position tone control; built-in 5" PM speaker; 4 tuning ranges—standard broadcast plus 3 shortwave. Temperature-compensated oscillator for stability.

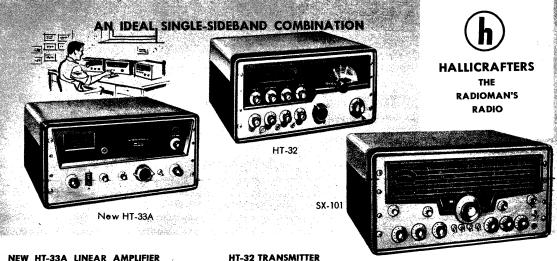
TUBES USED: 6SG7 RF amplifier, 6SA7 converter, 2—6SK7 IF amplifiers, 6SC7 BFO and audio amplifier, 6K6GT audio output. 6H6 ANL-AVC-detector; rectifier is 5Y3GT

FRONT PANEL CONTROLS: Sensitivity, band selector switch, volume, main tuning, band-spread, AVC on-off, noise limiter on-off, AM-CW, tone (high-medium-low) and AC AM-CW, tone (figh-mentini-low) and According to con-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. 87/8x181/2x10". For operation from 105-125 v., 50-60 cycle AC. 

FOR AMATEUR AND SWL



- Covers 540 kc to 34 mc
- Precision Construction
- Many Outstanding Features



#### **NEW HT-33A LINEAR AMPLIFIER**

The perfect companion to the HT-32—identical in size and styling. Provides the maximum legal input on SSB and CW—up to a full, kw\_on AM linear. Employs a PL-172 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 loads and 

#### MATCHING SPEAKERS FOR HALLICRAFTERS RECEIVERS

MODEL R-46B 10" SPEAKER. For Hallicrafters SX-62A, SX-99, SX-100, SX-101 or other receivers having 3.2-ohm output. Silverblack steel cabinet, 15x107/x107/x". Employs heavy-duty construction throughout. With 5', 2-cond. cable, Shpg. wt., 15 lbs. 98 SX 758. NET.....

#### **SX-100 SELECTABLE SSB RECEIVER**

The SX-100 communications receiver offers an array of outstanding features. In addition 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 crystal-controlled 2nd conversion oscillator. 12 tubes; 5Y3-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 500-0hm output. Black cabinet with chrome trim. Size, 8½x18¾x10¾". For 105-125 v., 50-60 cycle AC. Less speaker. (See R-46B, R-47 above.) Shpg. wt.. 43 lbs. 295.00 98 SU 769. NET.....

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 fil-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 300 cycles of reference point; distortion products down 30 db; carrier suppressed 50 db; unanted 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; 5V4 LV rectifier; OA2 voltage regulator. voltage regulator.

MODEL R-47 4" SPEAKER. Designed for speech and CW reproduction only—extremely effective on SSB. For use with Hallicrafters SX-99, SX-100 and SX-101. Input imped-

#### 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 v. AC, or 6 or 12-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 1μν for 10 db S/N ratio on 2 and 6 meters. 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 operations. 

**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. 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-µv sensitivity on all bands and 5 steps of selectivity from 500 to 5000 cps. 7 bands cover: 1.8-2.0 mc; 3.5-4.0 mc; 7.0-7.3 mc; 14.0-14.4 mc; 21.0-21.5 mc; 26.95-27.35 and 28.0-29.7 mc—all Amateur bands from 160 through 10 meters. 10-mc position for zero-beating crystal calibrator with WWV.

DELUXE FEATURES: Crystal-controlled conversion oscillators; Tee-notch fi conversion oscillators; Tee-notch filter; gear drive tuning mechanism with 50:1 ratio; vernier dial-pointer adjustment; 100tatio, vernier dat-pointer adjustment; too-ke crystal calibrator; individually illumi-nated band scales; dual-scale S-meter with zero point independent of sensitivity control —functions with AVC off or on; direct-coupled series noise limiter.

CONTROLS: Tuning; Pointer Reset; Antenna Trimmer; Tee-Notch Frequency; Tee-Notch Depth. Sensitivity; Band Selector; AC Off-On/Volume; Selectivity; BFO Pitch; Response (Upper or Lower-Sideband and Tone); AVC Off-On; BFO Off-On; ANL Off-On; Marker (crystal calibrator) Off-On; Standby, Receive Standby-Receive.





2000 Watts P. E. P.

#### VIKING "THUNDERBOLT" SSB LINEAR AMPLIFIER

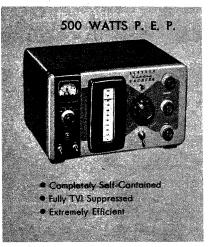
MODEL 240-353-2. Compact, bandswitching linear amplifier—provides 2000 watts P.E.P. on SSB to smash through the QRM. Gives maximum "talk power" on all amateur bands, 3.5 to 30 mc. Has a full kw input on CW, 800 watts on AM linear. Completely self-contained—a highly efficient, flexible, table-top unit.

Drive requirements are 10 watts in class AB2 linear and 20 watts CW. Makes a perfect companion for any of the Viking low-power 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 

MODEL 240-353-1. As above, but in kit form. 



MODEL 240-301-2. Completely self-contained AM-CW-SSB transmitter of 90 watts input—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 mc range for maximum stability on all bands. Five crystals provide heterodyning frequencies to reach the desired bands. SSB is generated by phasing method with unperquencies 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 trol and anti-trap circuits. Completely TVI suppressed. With crystals; less mike and key. For 110-120 volts, 50-60 cycle AC. 11½x21x14½." Shpg. wt., 73 lbs. 

#### VIKING "KILOWATT" AMPLIFIER

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 deliv-ery. Shpg. wt.. 155 lbs. 

#### VIKING "COURIER" AMPLIFIER

MODEI 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. 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\x15\/\x14''. For 110-120 v., 50-60 cycle AC. Shog. wt., 68 lbs. 94 SZ 861. NET...... 289.50

MODEL 240-352-1. As above, but in kit form. 83 SZ 893. NET......244.50

MODEI 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.

MODEL 240-500-1. As above, in kit form. 

#### VIKING "RANGER" TRANSMITTER

MODEI 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 rectance. Time-sequence (grid-block) keving actance. Time-sequence (grid-block) keving ohm loads; tunes out large amounts of re-actance. 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 cal-ibrated, VFO bandspread scales for each band—9" of dial scale on 10 meters. A 6-to-1 planetary drive mechanism allows accurate tuning with velvet smooth control 100%. 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, 6CL6 buffer, 6146 final, 6AQ5 clamper, 12AU7 keyer, 12AX7 speech amplifier, 12AU7 audio driver, 2—1614 modulators; 0A2 voltage regulator, 5R4GY high-voltage rectifier and 6AL5 bias rectifier. Less crystal, key and mike. Size, 15x115/6x9". For operation from 110-120 v., 50-60 cycle AC. Shpg. wt., 54 lbs. 

MODEL 240-161-1. As above, in kit form. 

250-29 POWER REDUCER. Permits using medium-power transmitters to drive Viking amplifiers. 3½x2½". dia. 1 lb. 







#### **JOHNSON**

FOR FULL COMMUNICATION POWER

attack Co.



'Navigator''

"Mobile"

#### VIKING "NAVIGATOR" TRANSMITTER

MODEL 240-126-2. High-performance transmitter-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 bearing for chirp-free clean, crips signals. keying for chirp-free, clean, crisp signals.

Transmitter may be crystal-controlled-Transmitter may be crystal-controlled-has front-panel provision for 2 crystals. TVI suppression includes filtering and by-passing; aluminum cabinet effectively shields unit. Wide-range pi-network output cir-cuit matches transmission line impedances from 40-600 ohms. Meter on front panel reads final grid and plate currents.

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

#### 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 amps, 300 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-mc. input. 13½x 14 lbs. wt., 14 lbs. wt., 14 lbs. existing power supply and modulator of the

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 VDC at 200-240 ma and 6 

MOBILE VFO KIT. MODEL 240-152-1. For above. With tubes. 4x41/4x5". 4 lbs. 

240-152-2 VFO. As above, but wired. 

## VIKING "VALIANT" TRANSMITTER

"Valiant"

MODEI 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 power. Offers complete bandswitching from 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 remission. and modulator screens are voltage regulated for excellent stability.

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.....



#### VIKING 6N2 VFO KIT

MODEL 240-133-1. Compact new 6 and 2-meter VFO kit. Replaces 8-9 mc crystals in multiplying 6 and 2 meter transmitters, in multiplying o 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 seriest transd cerillator is tomperature companies. quency shift due to vibration. 6BH6 series-tuned oscillator is temperature compensat-ed 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 With cables and instructions. Maroon gray case, 4x4½x5°. Wt., 3 lbs.

33 S 899. NFT.

MODEL 240-133-2. As above, but wired. Maroon and 34.95

83 \$ 869. NET......54.95

#### VIKING VFO KIT

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 ma, 6.3 v. at 0.3 amp. With cables. 7x 67/6x6%. 7 lbs. 

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. 41/x 43/6x44". Less mike. 1 lb. 



#### **'VIKING "ADVENTURER"** TRANSMITTER KIT

MODEL 240-181. Here is the ideal rig for 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 level simplest approaches. 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.).



#### NATIONAL

TUNED TO TOMORROW



#### **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, 10x16<sup>13</sup>/<sub>6</sub>x10<sup>7</sup>/<sub>6</sub>\* deep. Less speaker. For 110-120 volts, 50-60 cycle AC. Shpg. wt., 35 lbs.

94 SU 834. \$20.00 Down. NET. . . 199.95



# POPULAR NATIONAL AMATEUR EQUIPMENT





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 receiver for amateurs 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 kc, 60 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: 50-300 ohms, balanced or unbalanced. Case has handsome two-tone gray wrinkle finish. Size: 10" H, 1613/6" W, and 101/6" 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

#### NEW NC-60 SPECIAL RECEIVER

A modern, ultra-compact communications receiver at low cost. Completely restyled and redesigned version of the popular SW-54—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 front-panel headphone jack for late listening, built-in speaker. Selectivity: 6 db for 5 kc, 60 db for 70 kc. Controls: tuning, band-spread, 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, 50C5 audio output, 35W4 rectifier. 7½x13½x 8½". For operation from 110-120 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, and DF beacons. Long-scale electrical 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 for marine use.

Built-in fixed-tuned CW oscillator for code reception. Quality 5" 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: 1U4 RF amplifier, 1L6 converter, 1U4 CW oscillator/IF amplifier, 1U5 2nd detector/AVC/1st audio amplifier, 3V4 audio output; selenium rectifier. Chrome-trimmed case measures 911/6 x125/6x107. For 110-120 volts, 50-60 cycle AC, or DC, or battery (less battery, below). Shpg. wt. 16 lbs.

#### 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, 7x81/xx10". Takes power from NC-66. Sppg. 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 King-Size 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.



NC-183D

The First Self-Powered 6 & 2 Meter VFO

NC-303

HRO-60



#### **NATIONAL**

TUNED TO **TOMORROW** 

## **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 Covers 340 kc to 31 mc and 47-35 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. Six selectivity positions; 5 crystal and 1 non-crystal. Selectivity is 80 cycles at 6 db and 7.0 kc at 60 db. Better than 1½ μν constitution. sensitivity.

Two RF stages; amplified and delayed AVC; ANL; PP 8-watt audio. 15 tubes plus VR and rectifier. 101/4x193/x163/4". 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 oscilla-Use with transmitters having 5-inc oscillator circuits for complete coverage of 6 and 2 meters. Frequency stability better than 0.005% after warm-up. Can be used with 1 mc crystal as a crystal calibrator. Rugged modern gray case, 51/4x61/2x51/2". For 110-120 v., 50-60 cycle AC. Wt., 6 lbs. 92 \$ 386. \$7.00 Down. NET. .... 69.95

#### NATIONAL HRO-60 RECEIVER

Latest of the great HRO receivers. Superb "weak signal" sensitivity, remarkable selec-tivity and extreme stability. Covers 50 kc to 54 mc with suitable coils. Precision tuning dial has effective scale length of 12 ft.l. 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 tivity variable from 80 cps to 3.5 kc at 6 db points. Plug-in coils supplied provide general coverage from 1.7-30 mc or bandspread on 80, 40, 20 and 10-11 meters (other coils below). 15 tubes plus rectifier and regulators. 19½x10½x17½". For 115/230 v., 50-60 cycle AC. Less speaker. Wt., 84 lbs. 97 5Z 722. \$64.50 Down. NET. 645.00 MATCHING 10" TABLE SPEAKER. Shpg. wt., 10 lbs.

10 lbs

97 SX 663. \$2.00 Down. NET.... HRO-60-XCU-2, Crystal calibrator, Wt., 1 lb. 97 \$ 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 lhs

HRO-60-F. 480-960 kc coil. Wt., 21/2 lbs. 98 \$ 049, \$3.75 Down. NET.......37.50 Coil units not listed are available on special order. Allow 30 days for delivery.



#### **NEW NATIONAL NC-303 RECEIVER**

Deluxe new version of the renowned NC 300 amateur-band receiver. Covers 160-10 meters; 160-10/4 meters and WWV with units below. Dual-conversion with 5 positions of selectivity—sharp down to 400 cycles at 640. Stdakend above and the statement of th tions of selectivity—sharp down to 400 cycles at 6 db. Sideband choice with selectivity switch eliminates retuning. "Q" multiplier provides 60-db tunable notch. Separate noise limiters for AM and CW-SSB. Vernier dial for precision tuning. Excellent stability, sensitivity. 11/4x19/½x15". For 110-120 v. 50-60 cycle AC. 64 lbs.

92 SZ 384. \$45.00 Down. NET . 449.95
Units below for NC-300, 303. \*NC-303 only.

CONVERTERS. For above. Shpg. wt., 2 lbs.

	Type No.	Band	NET				
83 S 870	NC-300C6A NC-300C2	6 meters					
83 S 871	NC-300C2	2 meters					
83 S 872	NC-300C1	11/4 meters	45.95				
100-KC CRYSTAL CALIBRATOR. Wt., 1 lb.							

83 S 873. \$2.40 Down. NET ... 23.95
\*CRYSTAL/W WV CALIBRATOR 1½ 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 23.95

#### RME AMATEUR EQUIPMENT



DB-23 Preselector



4301 SSB Detector-Selector



RADIO

**MANUFACTURING ENGINEERS** 

4350A Receiver

#### **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 s/n ratio better than 7.5 db. Requires no tuning. 3—6J6's plus rectifier. 5x75/xx6". For 110-120 v., 50-60 cycle AC. Shpg. wt., 6½ lbs. 98 \$ 751. \$4.95 Down. NET.....

#### **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. 10x8½x10". For 110-120 v., 50-60 cles AC. Shpg. wt., 16 lbs. 

#### RME 4350A RECEIVER

Dual-conversion receiver designed specifically for amateur-band coverage. Offers many deluxe features usually found only in higher-priced 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. 8½" 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), stand-by switch, crystal selectivity, crystal phasing/rejector, ANL switch. 10x16/½x10", 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. 10x8½x5½". 6 lbs. NET. . 17.50



PRECISION STANDARDS **SINCE 1910** 





HAMMARLUND AMATEUR-BAND RECEIVERS



#### 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. Dial-scale reset allows precise calibration of tuning dials. Separate BFO is 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 µv. for a 10 db signal-to-noise ratio. 10 tubes plus rectifier and VR. Size, 9½×0½×16½". Less speaker (listed below). For 110-120 v... 50-60 cycle AC. Shpg. wt.. 31 lbs. 

94 SU 821, HQ-110. Above less clock-timer, NET. . . . . . . 249.00

94 SX 828. S-100 Matching 6x9" Speaker. Wt., 10 lbs. NET14.95

#### **HAMMARLUND HQ-170C RECEIVER**

92 SU 477. HQ-170. Above less clock-timer. NET. . . . . . . . 359.00

83 SX 599. S-200 Matching Speaker. 11x12x9". 91/2 lbs. NET. . 19.95

#### **HAMMARLUND HC-10 CONVERTER**

A complete IF and audio system—use with any superhet having a 450-500 kc IF for outstanding SSB, AM and CW reception. Extremely easy to install. Includes slot filter, linear detector, 3-speed AVC and  $\pm 3$  kc vernier similar to those of the HQ-170C. 7 selectivity positions, 9 tubes plus rectifier.  $91/291/4271/6^n$  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

## TMC GPR-90 RECEIVER





#### HAMMARLUND HQ-160 RECEIVER

Extremely sensitive and selective general coverage receiver. Covers 540 kc to 31 mc, continuously, in 6 bands. Offers dual-conversion 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 "Auto-Response' automatic audio passband control, 100-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 se lectivity. Dual-conversion on 10, 15 and 20 meters. Adjustable notch filter gives up to 60 db attenuation, ±5 kc. Low-loss coil forms and rugged construction for high stability. 11 tubes; plus rectifier, VR, 10½x 19x13". For 110-120 v., 50-60 cycle AC. Less speaker (below). Shpg. wt., 47 lbs. 94 SU 816. \$37.90 Down. NET. 379.00

83 SX 599. S-200 6x9" Matching Speaker. 

#### HAMMARLUND HQ-100C RECEIVER

Popular communications receiver offering Popular communications receiver offering Hammarlund quality at moderate cost. Covers 540 kc to 30 mc in 4 bands. Features include: "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 μν for 10 db S/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 IF's, 6AL5 det./ANL,
12AN7 audio amp/Q-mult./BFO. 6AQ5
audio out.; 5Y3 rectifier. OB2 voltage regulator. Size, 9½x16½x9½%. Less speaker
(above, left), For 110-120 v., 50-60 cycle AC.
Shgs, 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. 



precision-built communications receiver designed for the most discriminating user. Employs heavy-duty construction and the Employs neavy-duty construction and the finest quality components throughout. Continuously tunable from 540 kc to 31 mc in star accurately calibrated bands with full electrical bandspread. Dual-conversion above 5.4 mc for image rejection of better than 60 db. 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 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-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  $\mu$ v from 540 to 1500 kc and 1  $\mu$ v on higher bands at a 10 db. signal-to-noise ratio. Has coaxial IF output for SSB slicer. 2 watts audio output. Employs 1.3 tubes, plus rectifier and VR. Size. 10x20x15%. 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. 

## knight-kits for the Ham



Unexcelled Values . . . Outstanding Features

Professional quality—pace-setting design and performance and substantial savings over the cost of factory-built units-are yours with these Knight-Kit components for the amateur. Building a Knight-Kit is remarkably easy and cost is amazingly low. For full enjoyment from Amateur Radio, set up your station with famous Knight-Kit equipment.



#### knight-kit

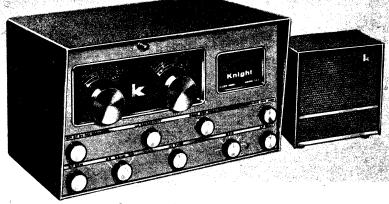
**BUILD THE BEST...** SAVE UP TO HALF



#### 50-Watt CW Transmitter Kit

A completely self-contained bandswitching CW transmitter kit—covers 80, 40, 20, 15 and 10 meters. Can be operated crystal-controlled, or with a VFO such as the Knight-Kit VFO below. Rated at 50 watts input—actually operates at up to 60 watts input on 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; ceramicbuilt-in pi-section antenna coupler; ceramicinsulated tank capacitor; pre-wound parasitic chokes; ceramic coil forms; RF-type coax connector; crystal and VFO socket on coax connector; crystal and VFO socket on 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. 8½x10½x8½". 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-fidelity 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 the mest kit values ever one ed. 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 dress." Designed by Ham engineers to meet every Ham need, this receiver has all the features, selectivity and sensitivity of many higher-priced, factory-built 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 B+ on BFO and HF oscillator lets you switch from standby to receive with no drift; VR-tube regulated B+ on HF oscillator; built-in Q-multiplier peaks signal or nulls interferference (60-db notch really takes out interference); delayed AVC; noise limiter; 455-kc IF; and provision for installing crystal pathence listed below. Hes archest PBO OUTSTANDING FEATURES. Covers 540 kc to IF; and provision for installing crystal calibrator listed below. Has exalted BFO injection for SSB. Vernier dials—no strings.

Selectivity is variable from 300 cps to 4.5 kc at 6 db down. Outstanding sensitivity 1.5 microvolts for 10 db s/n ratio, even on 10 meters! Controls: main tuning, band-spread tuning, band selector, Q-multiplier selectivtuning, 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 and screw-terminal antenna connectors. *Tubes:* 6BZ6 RF amp.; 6BH8 mixer and HF osc.; 6AZ8 RI sti F and 1st audio; 6AZ8 2nd IF and S-meter amp.; 6BC7 delayed AVC, 2nd det., ANL; 6AW8 output and BFO; 12AX7 "Q" mult. 10x1034x16". 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. 

SPEAKER FOR ABOVE. In matching cabinet. Special-design cone reduces QRN; peaks voice frequencies. Imp., 8 ohms. Wt. 4 lbs. 83 Y 728. NET. 7,50 83 Y 728. NET.....

#### **Amateur Accessories** knight-kit

#### 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 Complete with built-in, transformer-type power supply. Features extremely high stability, oscillator keying for fast break-in, and compact construction. Drift-free, series-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 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: 6BH6. 6AK6; 6X4 rectifier, OA2 regulator. 6x6x83/4." 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., 11 lbs.

83 Y 725. \$2.95 Down. NET. ... 29.50

#### AMATEUR Z-BRIDGE KIT

#### 100-KC CRYSTAL CALIBRATOR KIT

100-kc crystal 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 v. DC at 3-6 ma—easily obtainable from any DC at 3-6 ma—easily obtainable from any receiver. Trimmer for beating with WWV Off-On switch. With all parts, tube, crystal, .....10.95





#### MODEL 100V EXCITER/TRANSMITTER

Deluxe, 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 vides high stability; less than 25 cps drift in any 10-minute interval after 5-minute warm-up. Direct-reading dial is calibrated in 1-kc steps—two tuning ratios for 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 cps.

Built-in 2" scope monitors RF linearity. Specially designed audio limiter makes it impossible to overmodulate the balanced modpossible to overmodulate the balanced mod-ulator. Meter reads power input, RF out-put, degree of carrier suppression and line voltage. Seldom-used controls such as Voice-Control Trip Level and FSK Devia-tion are concealed behind front-panel mag-netic doors. Output adjustable down to 10 watts. TVI suppressed; two 6550's in final.

Frequency ranges: 3.5-4.5 mc, 6.5-7.5 mc, 13.5-14.5 mc, 20.5-21.5 mc, 27.7-29.7 mc. Spare switch position provided for 160 meters. With heterodyne crystals. Gray case, 8½x18x15". 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" oscilloscope with built-in low-distortion 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 200 mc. 91/2x61/4x141/2". For 110-120 v., 50-60 cycle AC. Shpg. wt., 19 lbs. 94 SU 842. NET. 

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 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 600L LINEAR AMPLIFIER

MODEL 600L 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 AB, 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, 834x18x15". For operation from 110-120 v., 60 cycle AC. Shpg. wt., 117 lbs. wt., 117 lbs. 

#### **MODEL 20-A SSB EXCITER**

Bandswitching, voice-controlled exciter for SSB, AM, PM and CW. Covers 160-16 meters. Choice of sideband. Over 40 db sideband suppression. Provides blocking bias. Has 9-mc heterodyne osc—requires external VFO or crystal. 143/4x10x83/4". For operation from 110-120 v., 50-60 cycle AC. Shop wt 34 the 

MODEL 20-A EXCITER KIT. Above in kit form. 83 SU 810. NET......219.50 83 S 815. 458-K. Converts BC-458 to VFO 

83 \$ 812. QT-1 ANTI-TRIP UNIT. Plugs into 20-A to prevent loud signals from tripping break-in circuits. 2 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. 91/8x61/4x141/2". For 110-120 v., 50-60 cycle AC. Shpg. wt., 17 lbs. 

MODEL GC-1 AMPLIFIER KIT. Above, in kit 

#### MODEL B SIDEBAND SLICER

Converts receivers with 450-500 kc IF's for outstanding SSB reception. Selects either sideband. Built-in Q-multiplier. 5½x8¾x13″. For 110-120 v.. 60 cycle AC. 17 lbs. 83 SX 817. NET.....

## Gonset-Drake-

#### 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-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 phasing-filtering 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 30-200 ohms. All crystals supplied, except those for 11 meters and the CW portion of 10. Size, 101/4x191/4x18". For 110-120 v., 50-60 cycle AC. Shpg. wt., 120 lbs. 

Shopping for a big trade-in on your old gear? Just write our Ham Shack—tell 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

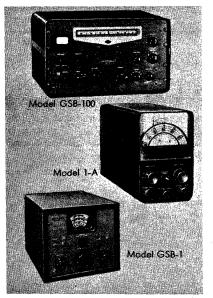
-TMC SSB Gear

Crystal-controlled triple-conversion receiver for SSB, CW and AM. Seven 600-kc ranges -80, 40, 20, 15, and three 10-meter ranges. New VFO circuit provides extreme stability—less than 300 cps drift after 15 minutes. 2.5-kc filter tunes through both sidebands. Product detector for distortion-free reception. Has 100-kc crystal calibrator. Receives AM by exalted-carrier method. IF frequencies of 2900-3500, 1100 and 50 kc. Selectivity of 2.5 kc at 6 db, 8.1 kc at 60 db.

Sensitivity, better than  $1 \mu v$  for 20 db signal-to-noise ratio. 12 tubes plus rectifier. Built-in speaker. 11x63 $\mu$ x15". For 110-120 v., 50-60 cycle AC. Wt., 20 lbs. 

#### TMC GSB-1 SSB ADAPTER

Top-performance filter-type slicer for easy, accurate SSB tuning with any receiver hav-ing 455-kc IF. Also for AM and CW. Has additional AVC and noise limiter and in-cludes built-in audio amplifier. Electrical bandspread calibrated in cycles eliming to critical additationate. Barya 452 459 be 



#### AMATEUR PERFORMANCE

#### NEW P&H LINEAR AMPLIFIER



MODEL LA-400B. Here's an excellent grounded-grid linear amplifier for high power at minimum cost. Employs nigh 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 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, 10½x14½x8¾". For operation from 105-125 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



#### NEW "PHASEMASTER" II-B

"Bandhopper

"Time-Master"

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-cps stability), temperature-compensated 9-mc osc., VOX, pi-network, speech filter, TVI suppression. 6146 final. 50-600 ohm output. 9/4x10/4x 11¼". 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-mc SSB generation. Covers 160-10 meters. 100-cps stability. 91/6x71/6x111/8". For 110-120 v., 50-60 cycle AC. Shpg. wt., 22 lbs. 

#### "TONE-MASTER"

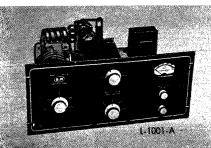
Transistorized audio sine wave generator. Ideal for two-tone SSB test, etc. Less 2 Burgess Type 7 penlight cells. 41/sx25/sx 23/4°. Shpg. wt., 2 lbs. 

#### 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 variode circuitry. Uses 4—6UN6 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. 9/xx19/xx 11/x" For 110-120 v., 50-60 cycle AC. Shpg. wt. 50 lbs. 

#### "TIME-MASTER"

Gong sounds every 10 minutes to remind amateur to give his call. No resetting, Ideal for VOX. 41/x25/x23/4". For 110-120 v.. 50-60 cycle AC. Shgg. wt., 2 lbs. 83 S 860. NET.....



380-B TR SWITCH

Provides automatic electronic antenna changeover. Handles 1 kw SSB and CW, 300 watts AM phone. Action is instanta-

neous. Negligible insertion loss. For 52 or 75 ohm lines. Has coax connectors; requires Amphenol 83-1T fitting. 37x31/x57. For 110-120 v., 50-60 cycle AC. Wt., 2 lbs.

98 S 775. NET.....

23.70

L-1001-A LINEAR AMPLIFIER







#### 5100-B TRANSMITTER

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-B. TVI suppressed. 11½x10x 14¾". Shpg. wt., 27 lbs. 

#### COMPONENTS AND ACCESSORIES

2Q4 AUDIO PHASE-SHIFT NETWORK. Will split any 300-3000 cps audio signal into two components, equal in amplitude, but 90° (±1.5°) out of phase with respect to each other. In octal-based shell. 1 lb. 

550-A COAXIAL SWITCH. 5 positions. Handles up to 1 kw RF, AM modulated. 2 lbs.

551-A COAXIAL SWITCH. 2 positions. Han-

1½x1½x4½" 1½ 7.50 2x2½x5" 2½ 9.90 73 S 067 FC-15 15 73 S 066 FC-30 30

97 \$ 608. NET......8.25

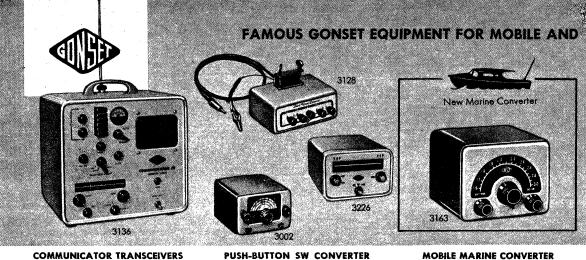
FILAMENT CHOKES. For GG amplifiers.

\*maximum total filament current. Mfrs Type Amps\* Size

Self-contained all-band transmitter of su-perior 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 P.E.P. on SSB when used with gener-ator at left. Gear-driven VFO dial can be read to 1 kc on all bands.

#### 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 ad-



#### **COMMUNICATOR TRANSCEIVERS**

MODEI 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" speaker. 2E26 in transmitter delivers 6-8 watts output, heavily AM modulated by 6L6GB. Gang-tuned circuits with adjustment knobs for all tunable circuits. Meter measures exciter and final output, and receiver signal level. Uses 8-mc crystals (1/2") or VFO (right). Less crystals (see page 386), whip and mike. Size (HWD): 101/x111/6x 711/6". Shgg. wt., 23 lbs. MODEL 3136 COMMUNICATOR III. Complete

MODEL 3212 LINEAR AMPLIFIER. For use with Model 3136 above. Provides power output of 50-60 watts. 10x103/x117. For 110-120 v., 50-60 cycle AC only. 30 lbs. 92 SU 306. NET....

CIVÍL DEFENSE MODELS. CD versions of the above units approved for matching funds are available on special order. Allow 4 weeks for delivery.

#### **PUSH-BUTTON SW CONVERTER**

MODEL 3128. Ultra-compact, push-button converter for world-wide shortwave reception in your car. Covers frequencies employed by foreign and domestic shortwave broadcast stations, air bases, time stations, amateur radio stations, etc.

Can be used with any 12 v. auto radio that can be manually tuned. Quickly and easily installed—no internal connections to car radio. Just plug patch cable into antenna receptacle and clip power lead to 12 v. DC.

Four push-buttons select the 49, 31, 19 and 13 meter bands. Depress the desired button. and the corresponding shortwave band will appear across your tuning dial. Fifth button is for standard broadcast operation. Size, 21/45/441/2". Shpg. wt., 2 lbs. 92 S 303. NET...

#### **NEW 2 AND 6-METER VFO**

MODEL 3226. Compact, highly stable VFO for frequency control of either the 2 or  MOBIL BMARINE 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 160meter amateur band; and marine weather
broadcasts. Requires only 12 v. DC—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 an-

3-30 MC MOBILE CONVERTER

3-30 MC MOBILE CONVERTER

MODEL 3002. An excellent general-coverage
converter—perfect for all-band mobile installations. Covers 3-30 mc continuously in
3 ranges. High sensitivity with a short whip
antenna. 4 tubes: 6BH6 RF amp., 6AV6
mixer, 6C4 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, 5½x3½x
5½". Slpg. wt., 5 lbs.

49.50 

**NEW "SUPER-12" MOBILE CONVERTER** 

NEW "SUPER-12" MOBILE CONVERTER MODEL 3261. (Not illus.). Compact, high y sensitive converter covering 75, 40, 20, 15, 11 and 10 meters, plus the 19 and 49-meter shortwave bands. An up-to-the-minute 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 (@12 amps). Has low drift, noise factor and image response. Utilizes low-noise RF stage with front-panel antenna trimmer, lowwith front-panel antenna trimmer, low-noise triode mixer and modified Clapp oscillator. Hi-lo impedance antenna switch for 40 and 75 meters. Output, 1430 kc. With all necessary cables. Gray case is 5½x3½x5½... Shpg. wt., 5 lbs.

#### **FM TUNERS**

For mobile or fixed installations. Include squelch circuit. Easily connected to AM receiver. Require 150 v. DC at 14 ma; 6.3 v. at 1.8 amp. Size (HWD): 51/4x31/2x51/4". Shpg. wt., 5 lbs.

83 \$ 822. Model 3009, 30-40 mc.

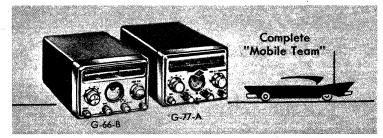
83 S 823. Model 3010. 40-50 mc.

84 \$ 925. Model 3011. 88-108 mc.

#### **MOBILE ACCESSORIES**

MODEL 3001 NOISE CLIPPER. Greatly reduces ignition interference. Easily installed on any receiver with conventional diode 2nd detector. 2x4x1½". Wt., 2 lbs. 

TYPE 3006 STEERING-POST BRACKET. For mounting Gonset converters or tuners on right or left side. Wt., 1 lb. 84 S 994. NET......4.50



#### **G-66-B MOBILE RECEIVER**

Latest model of this deluxe double-conver-

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. 4½x6½x4¾%". 8½ lbs. 83 S 832. NET...

MODEL 3098 "THIN-PACK" 12 VDC SUPPLY. For G-66 series. Shpg. wt., 6 lbs. 

#### **G-77-A MOBILE TRANSMITTER**

Latest model of this compact, bandswitching mobile transmitter, complete with built-in 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 single-knob exciter control. Press-to-talk system with built-in antenna relay. 6146 final has pi-network output.



#### **GONSET G-28 FIXED-STATION COMMUNICATOR**

MODEL 3204. A complete 10-meter station-MODEL 3704. A complete 10-meter station— transmitter, 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 in-put 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 op-tional 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 ohm unbalanced loads; built-in low-pass filter permits TVI-free operation. 6AU6, 12BV7A, 6146, 12AX7, 2—6L6GB.

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 7½x13x12½". 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 @ 100 ma from -22° F. to 104° F., continuous duty.

Complete electronic overload protection. Full-load specifications: regulation, less than 10%; ripple, less than 0.1%; efficiency, 75% minimum. 41/4x8x4". Shpg. wt., 41bs.

MODEL 2D12. (Not illus.). Designed for operation of mobile receivers, converters and low-power transmitters. Only 2x4½x2″. As above, except: 3 amps input; 250 volts DC output at 100 ma from -22 to 122° F., continuous duty. 118 continuous duty. 1 lb.

83 S 586. NET.....

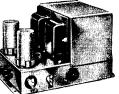
MULTI-ELMAC **AMATEUR EQUIPMENT** 

PMR-7





THE NAME HEARD "ROUND THE WORLD"



M-1050



#### **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 kc. Illuminated slide-rule dial has scales for each band.

1st IF is 2238 kc, 2nd IF is 262 kc. 2nd osc. is crystal controlled for maximum stability. Adjustable squelch operates on ½ μν. Variable beat frequency injection for SS. Includes noise limiter, variable BFO, RF gain control, delayed AVC and individually shielded coils. Ten tubes—filaments operate from 6 or 12 v. 4½x7x9½". Less power supply and speaker. Shpg. wt., 11 lbs.

MODEL PSR-612 POWER SUPPLY. For above, 6 or 12 v. DC input. Size,  $4\frac{1}{2}x4\frac{1}{2}x9\frac{1}{2}$ . Shpg. wt., 10 lbs. 

Mounting rack available for PMR-7—write to Allied's Ham Shack.

#### M-1050 MOBILE POWER SUPPLY

Dual-vibrator mobile power supply for op-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. DC 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., DC input. 6½x10x6". Wt., 13 lbs.

80 S 15.6 NFT

MODEL M-1051. As above, but in kit form

83 SU 112. NET......39.95

#### AF-67 "TRANS-CITER"

PS-2V 115V. AC POWER SUPPLY. For above. 7x11½x8½″. Shpg. wt., 30 lbs. 49.50 CFS-1 CONNECTING CABLE. Connects PS-2V and AF-67. Shpg. wt., 8 oz.

98 S 761. NET..... 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 supleft. Dual-vibrator mobile/fixed power supply for operation of both transmitter and receiver. Works from 12 v. DC or 110-120 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, 61/2x10x6%. Shpg. wt.. 13 lbs.

80 SU 159. NET. 69.95



#### COMPLETE PORTABLE BC-AMATEUR RECEIVING COMBINATION

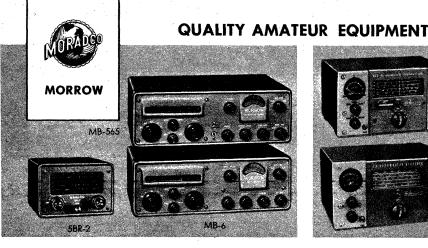
ATC-1 AMATEUR-BAND CONVERTER. Unique. transistorized ham-band converter! Entirely self-contained and self-powered, this tiny converter provides amazing performance on SSB, AM and CW in the 80 to 10-meter bands. Operates with any radio; connects instantly to TCR-2A matching receiver. Includes modified Q multiplier and BFO with variable injection. Has drum-type slide rule dial, break-in jack, high Q permeability-tuned coils. Less penlight cells. 31/4x41/4x41/6". Shpg. wt.. 21/2 lbs. 79.50 

TYPE Z PENLIGHT CELL. For above. Three required. Wt., each, 2 oz. 53 J 031. NET EACH...............................9c

TCR-2A ALL-TRANSISTOR RECEIVER. Versatile, ultra-compact portable receiver—complete broadcast-band coverage with a 7-transistor circuit and built-in speaker for full-toned, high-volume output. This light, rugged unit can be taken anywhere—use in vour houre in a cer or as a personal part. 

TYPE 2Z3 BATTERY. For above. 5 oz. 53 J 096. NET..... ..1.22

TCR-2A



#### **NEW MORROW MB-565 MOBILE TRANSMITTER**

#### **NEW MORROW MB-6 MOBILE RECEIVER**

#### **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. 4x5%x7". Complete with mounting bracket and cable. Shpg. wt., 10 lbs. .....89.95 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/x 111/x63/4". Shpg. wt., 20 lbs. NET...... 119.95 77 \$ 702. 010-020. RTV connecting cables. 11/2 lbs. NET.... 12.85 MB-565. 51/4x111/6x53/6". 17 lbs. NET. For final and modulator of MB-565. 51/4x111/6x53/6". 17 lbs. NET. 79.50 84 \$ 920, SH-7. Spkr. for MB-6, 51/2x77/ax31/2", 31/2 lbs. NET 11,50 



#### **BANDMASTER T-90 TRANSMITTER**

BANDMASIEK 1-70 IKATOMILIEK

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 634x123x1012". Less power supply and mike. Shpg. wt., 18 lbs.

179.50 

99 SU 043. APS-90 115 VAC Power Supply. For above. Size, 63/4x 123/8x101/2". Shpg. wt., 35 lbs. NET..... 99 SU 044. VPS/T-90 Mobile Supply. For above, 6 or 12 VDC. Size, 

#### **BANDMASTER R-9A RECEIVER**

Double-conversion receiver for 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 oscillator 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. 6½x12½x10½". Less speaker. For 110-120 v. 50-60 cycle AC. Shgs. wt., 18 lbs.

159.95 Double-conversion receiver for 80, 40, 20, 15, and 11-10 meters. 

VPS-R9 MOBILE POWER SUPPLY. For above 6 or 12 v. DC. With cable, connector.  $6\frac{3}{4}x7\frac{1}{2}x4\frac{3}{4}$ ". Shpg. wt., 12 lbs. 

#### BANDMASTER Z-MATCH ANTENNA COUPLER

A highly versatile, efficient antenna coupling and measuring device—combines an antenna matching network, 50-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 non-reactive loads, 10 to 2500 ohms. 500-watt maximum transmitter input. 63/4x121/4x111/2". Shpg. wt., 161/4 lbs. 



#### 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 powers of the control of 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. 5x15x9". 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. MODEL 730-K MODULATOR KIT. For above. Delivers 50 watts of undistorted audio. Multi-impedance output. Inputs for crystal mike and phone patch. 6x14x8". Less cage. For operation from 110-120 v. 60 cycle AC. Shpg. wt., 21 lbs.

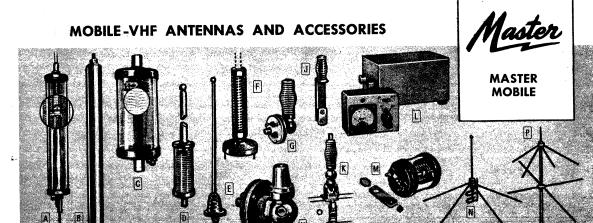
83 SU 057. \$5.00 Down. NET. ... 49.95
77 SU 707. As above, wired. NET. 79.95

77 \$ 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/κα/κα/9. With AC line cord, DC line cord, cera nic mike and antenna. For 110-120 v. 50-60 cycle 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 v. AC or 12 v. DC. 92 SU 377. Only \$9.20 Down. NET. 92.00



#### ANTENNA LOADING COILS

750 "DELUXE ALL-BANDER". CoutinJune 10 wously 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 while, dright) or similar units. Includes lock. 2½x
13½f. Shg. wt., 2½ lbs. 14.65

666 "ALL-BANDER". Similar to 750 loading 

B B-1080 "SLIM-JIM". All-band base-load-ing coil. Covers 10 through 80 meters, con-tinuously. Use with 96" whip—slide in or out of coil to loading point and lock in place. 134x19". 34" dia. stud. 4½ lbs. B3 SX 590. NET.

© 900"ARISTOCRAT". Loading coil tapped for 10, 15, 20, 40 and 75 meters. Plug at base connects antenna to desired tap. Use with 88-60 whip (at right) or similar units. 3x6". Shg. wt. 1½ lbs.

83 5 588. NET.

999 "VICTORY". As above, but for top efficiency on 10, 15 and 20 meters only. 3x 3½". Shop, wt., 1½ lbs. 44.65

"ULT RA-HI-'Q'" COILS. Newly developed loading coils for top single-band performance. Feature a "Q" of well over 515! Use with 88-60 whip (at right) or similar units. Shpg. wt., 1 lb.

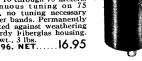
Stock No.	Band	Size	NET EACH
92 \$ 352	80	2½x8"	5.14
92 \$ 353	40	2½x5"	
92 \$ 354	20	2½x3"	

#### WHIP ANTENNAS

97 CU 155, 100-96S 96" WHIP. Stainless steel. 3/2" dia. stud. Less mount. Shpg. wt., 2 lbs. Express or truck only. NET......5.14 

#### JOHNSON "WHIPLOAD 6" COIL

MODEL 250-26. Bandswitch-



#### **BELL CARBON MICROPHONES**

BELL CARBON MICKE
MODEL CM-1SC. Deluxe,
hand-held communicationstype 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-ft. cord. With mtg.
bracket. Shpg. wt., 1½ lbs.
94 S 898. NET. 7.79
MODEL CM-1CC. WITH
RETRACTABLE CORD.
As above. but with 5-ft.
coiled cord.
94 S 899. NET. 9.75



98 CU 302. 9-96T LOW-COST 96" WHIP. Cadmium plated. 3/8" 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" and 60"). Comes apart to allow insertion of coils. Serves as 10-meter whip without coils. 3/4" dia. stud. Less mount. Shpg. wt., 6 lbs. 9.70 

#### VHF MOBILE ANTENNAS

97 SX 149, 114 COAXIAL ANTENNA. For 140-165 mc. Provides an extremely low radiation angle from a closed or open vehicle, or a fixed location. 10' coax cable. \( \frac{1}{2} \) dia stud. Shgs wt. 5 lbs. NET. ... 9,75

#### **MOUNTS AND SPRINGS**

Mounts are for antennas with  $\frac{3}{6}$ " dia. threaded stud. Av. shpg. wt., 3 lbs.

#### **ACCESSORIES**

Shpg. wt., 1 lb. NET ... 3.43
92 S 223, 10-H "TENNAHOLD". Ties down end of whip to clear garage roofs, etc. Fastens to car gutter. Wt., 3 oz. NET ... 98¢
83 S 591, 295 "E-Z-OFF" ANTENNA CONNECTOR. Allows easy removal of whips or coils. Fits between mount (or coil) and whip or coil. ½" dia. stud. Wt., ½ lb. NET ... 2.89

MODEL 2495-12. As above, but 12 v. DC. 92 S 221. NET......24.45

MODEL 825 "MICRO-Z-MATCH".

W Variable inductor for matching any coaxial cable to any mobile antenna. Mounts on standard coax fitting (requires Amphenol 83-1T." That dapter). Permits adjustment to minimum SWR 4 μh. max. inductance. Micrometerstyle adjustment. Shpg. wt., 2 lbs.

7.79

## VHF GROUND-PLANE ANTENNAS

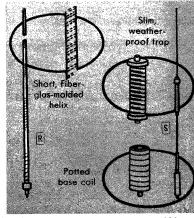
P 300 "MASTER-PLANE". A highly effective 2-meter antenna. Features 4 drooping and 4 adjustable straight radials. With 3-ft. mast and coax fitting. 52-ohm impedance. Shpg. wt., 3 lbs. 98 SX 357. NET. 12.69

## New Mark "Heliwhip" and Mosley "Trapmobile" Antennas

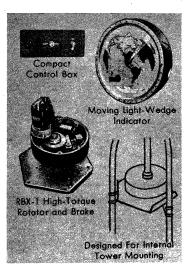
HW "HELIWHIP" SERIES. Fiberglasmolded, continuously loaded miniature
whips for all amateur bands. Resemble standard auto antennas. Employ variable pitch
spiral conductor winding along a Fiberglas
rod—provides essentially uniform current distribution for maximum radiation efficiency.
For mounting on fender, 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.	Lbs.	EACH
92 SX 92 SX 92 CX	323 324	HW-15 HW-20	10 M 15 M 20 M	1000 500 250	4 4 6	3/4 3/4 1	15.00 15.00 18.00
92 CX 92 CX 92 CX	326 333	HW-80 †HW-3	40 M 80 M 10-15-20M	100 60	6 6 6	1 3	18.00 18.00 27.50
92 S	327	HWM-1	Molded b	ase mo	unt	1/2	7.50

MA-3 "TRAPMOBILE". Streamlined 3-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 center trap to automatically cover 10, 15 and 20 meters. Use with standard base loading coils to cover 40 and 80. Stainless steel whip section Fits std. mounts. 92½". Shpg. wt., 6 lbs. 19.55



## ROTATORS, ANTENNAS, ACCESSORIES



#### **NEW! 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, precision-made rotator-brake. Twin motor unit with stainless steel gears develops 780 in.-lbs torque—brake provides 10,000 in.-lbs braktorque—brake provides 10,000 in.-lbs braking torque. Rated to 1000 lbs downthrust. Mounts in towers with 10-18" between uprights. Height: 9". 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 Down. NET... 99.95

CONTROL SYSTEM. Consists of a translucent box. Selsyn-controlled wedge of light rotates with beam. Use only with RBX-1 (above). For Central U.S.A. Indicator, 3½x18" dia. Wt., 3 lbs. Express or truck.

83 SU 692. \$5.00 Down. NET.... 50.00 83 SU 693. Above for E. Coast. NET50.00 83 SU 694. Above for W. Coast. NET 50.00

49 W 474. 9-Cond. Coble. For above system. 4 lbs. per 100'. NET PER FT.....9c



#### 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-of-rotation power cut-off. Vertical load rating over 1000 lbs—heavy plates distribute stresses. Indicator can be read without startstresses. Indicator can be read without starting motor. Meter calibrated with compass points, and in 3° increments. 365 inch-lbs rotating torque; 3500 inch-lbs braking. Accommodates 7/8 to 2" O.D. masts. Less cable (below). For operation from 115 volts, 60-cycle AC. Shpg. wt., 23 lbs. 92 SX 357. \$9.75 Down. NET... 97. 51

47 T 330. 100-Ft. Coil Belden 8448 8-Conductor Cable. For above. 41/2 lbs. NET....6.12

#### Antennas and Accessories

#### **COLLINS DIRECTIONAL RF WATTMETER**

MODEL 302C-1. Precision-constructed watt-MODEL 3072-1. Precision-constructed wattreemeter for measuring up to 1 kw forward and reflected power in 52-ohm coaxial transmission lines. Operates over the frequency range 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 Presents negligible insertion losses when retain transmission line as a monitor. Has 100 and 1000-watt scales, accurate to ±10%. Coupler introduces only 0.1% power loss and 1.05:1 SWR; will take up to 2 kw forward power. Size: meter, 3x3½x6½"; coupler, 2x2½x4". 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 v. DC at 6.2 ma, 6.3 volts at 0.45 amps. 13/8x13/8x23/4". 8 oz. 75 S 139. NET. .. .12.50 75 P 136. DKF-2 Double Male Connector. 

#### **COLLINS PHONE PATCH**

MODEL 189A-2. For phone patch operation with the KWS-1, 75A-4, KWM-1, 32S-1 and 75S-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. 5x47/8x35/8". Wt., 3 lbs.

94 \$ 860. \$6.00 Down. NET......60.00

#### DRAKE HYBRID PHONE PATCHES

MODEL 584-A. High-performance hybrid phone patch for automatic operation with 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. 4½x 5x5". Shpg. wt., 4 lbs.

77 \$ 652. \$3.50 Down. NET..... 34.95 MODEL 584-C. As above, but for quick connection to Collins KWS-1, 75A-4, KWM-1, 32S-1, 75S-1. 77 \$ 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/sx 31/sx55%. Shpg. wt.. 21/2 lbs. 83 \$ 834, \$4.50 Down, NET. 45.00

BALUNS. For coupling antenna bridge to balanced impedance, or for coupling trans-mitter with unbalanced output to balanced line. 4:1 ±5%. 80-meter coil rated 150 w. CW, others 420 w. CW (300-ohm line). 33/x2" max. dia. Av. shpg. wt., ½ lb.

No.	Туре	Band	EACH
83 S 695	46672-10	10-11 M	7.50
83 S 696	46672-15	15 M	7.50
83 S 697	46672-20	20 M	7.50
83 5 698	46672-40	40 M	7.50
83 \$ 699	46672-80	80-75 M	7.50

#### **AMPHENOL FOLDED DIPOLES**

Folded-dipole antennas cut for most popu-Folded-dipole antennas cut for most popular amateur bands. Excellent broadband characteristics. Antenna sections use high-strength 300-ohm twin-line with copper-clad steel conductors. May be cut for shortwave, FM or other bands. (Use 20-meter dipole for cutting to 15-meter length, 40-meter dipole for the 9 or 12-mc SW band.) Supplied with T-block assembly and 75 feet of twin-line feeder. of twin-line feeder.

No. Type	Band	Feet	Lbs.	EACH
98 S 318 139-0	10 10	18	2	5.23
98 SX 319 139-0	20 . 20	35	3	5.88
98 SX 320 139-04		70	4	7.64
98 SX 321 139-0	80 80	135	5	11.02

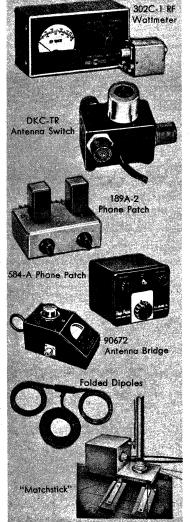
#### JOHNSON VIKING "MATCHSTICK"

High-efficiency, vertical antenna for 80-75, 40, 20, 15 and 11-10 meters. Features motor-40, 30, 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° 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, 31%x33/x33/x6. 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. 5c 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 transmisand 20 meters. Employs only one transmission line—uses no coils or capacitors. Operates with 3 elements on 10 meters, 2 elements on 15 and 20. 5.5 db gain and 19 db F/B ratio achieved on 15 and 20 meters, 7 db gain and 22 db F/B ratio on 10. Fanned dipole matches 52-ohm coaxial line—presents better than 1.3:1 VSWR. Will bandle 2 bw Ruilt of beave steel and aluminated of the server of the ser handle 2 kw. Built of heavy steel and aluminum to withstand hurricane-force winds. Has gusset mounting plate for 2" masts. Has gusset—mounting plate for 2" masts. Boom: 14'x2" O.D. Turning radius: 18 ft. 56 lbs. Express or truck only.

92 CZ 358. \$15.80 Down. 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 pat-tern and minimum TVI. Has taper-swaged elements for minimum wind drag. Includes stainless steel fastenings and hairpin-resonated elements. Provides 8.7 db gain and 24 db F/B ratio. Has best signal-to-noise and signal-to-interference ratios ever noise 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" masts. Boom: 18'x2" 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	IL	R	Lbs.	EACH
91 CZ 994	10M-3	26	8.5	9	81/2		39.50
92 CZ 250		26	8.8	6			16.25
92 CZ 252		22	12.7	231/3	13		57.50
92 CZ 219		18	9.4	2%	3	21/4	
92 CZ 273	2M-6	22	12.7	81/2	51/5	4	12.50

#### **NEW HY-GAIN ANTENNAS**

TRI-BAND ROTARY BEAMS. Cover 10, 15 and 20 meters—employ aluminum-alloy elements, galvanized 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 F/B; †5.8 db gain, 12-20 db F/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-kw types take 2 kw P.E.P. Express or truck only.

Stock No.	Туре	Elements	Watts	L	R	Shpg. Wt.	EACH
92 CZ 492-2		3	1000	18'	18'31/2"		99.75
92 CZ 491-2	152TG-2†	2	1000	7'	15'	43 lbs.	69.50
92 CZ 498-2		3	1000	12'	14'4"	57 lbs.	69.95
92 CZ 499-2	152MT-2	2	1000	6'	13'4"	34 lbs.	49.95

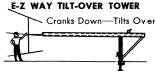
MULTI-BAND VERTICALS. Pre-tuned verticals for operating on up to 5 bands without switching. Weatherproof traps adjustable for phone or CW operation—26 AV uses decoupling sleeve. Less than 2:1 SWR, all bands. Match 52-ohm line. Take 1 kw, 2 kw P.E.P. Include base insulator and mast mount. Have: \*"capacity hat," †ground plane, §side-intg. kit.

Stock No.	Туре	Bands (Meters)	Height	Shpg. Wt.	NET EACH
92 CZ 490	§*18-AV	10, 15, 20, 40, 80	38 ft.	20 lbs.	69.50
92 CX 488	*14-AV	10, 15, 20, 40	21 ft.	12 lbs.	27.95
92 CX 486	12-AV	10, 15, 20	14 ft.	9 lbs.	19.95
92 CX 485	†26-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 

SINGLE-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 Q-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	Db Gain	F/B Ratio	R	L	Shpg. Wt.	EACH
92 CZ 484		20M	3	8.5	24	19'21/2"			59.95
92 CZ 483		15M	3	8.5	24	13'6"	11'10"		34.95
92 CZ 482		10M	3	8.5	24	11'	8' 8"	21 lbs.	24.95
92 CX 481		6M	5	10.5	26	7'1"	8' 8"	10 lbs.	15.95
92 CX 480	210	2M	10	12	30	5'5"	9' 4"	7 lbs.	12.95



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 rt 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 expanded mount for CDR, Telrex 200 or rotators of similar size). Express or truck F.O.B. Tampa, Fla., or Chicago, whichever is neaver. Send full remittance on cash orders—no C.O.D. We can supply E-Z Way Towers from 40' to 120'—write for details.

92 SZ 246. \$29.50 Down. NET. . 295.00

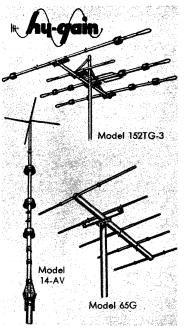
#### **MOSLEY ANTENNAS**

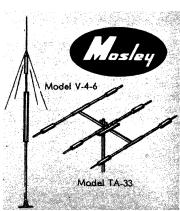
TA-33. High-gain, broadbanded, 3-element beam—provides top performance on 10, 15 beam—provides top performance on 10, 15 and 20 meters. Up to 8 db gain with 25 db, or better, F/B. Streamlined, weatherproof traps easily take 1 kw. 14' aluminum boom has full ½" wall thickness. Matches 52-ohm line, less than 1.1:1 SWR at resonance. Fits masts up to 1½". Turning radius, 15½ 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 db F/B. 12' boom. 1434' t.r. Express or truck. 28 lbs. NET.... 69.50

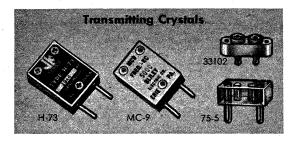
V-4-6. Cover 10 to 40 meters with this verti--no bandswitching. Low SWR with flat response. Employs weatherproof traps and base-loading coil. Rated 1 kw. Aluminum tubing telescopes to 20 ft. With mtg. plate, hardware, nylon guy rope. 12 lbs. 92 CX 363. \$2.74 Down. NET.... 27.39

76 S 073. D-4BC. 80-75 meter base loading 





#### POPULAR AMATEUR STATION ACCESSORIES



#### JAMES KNIGHTS "STABILIZED CRYSTALS"

TYPE H-73 AMATEUR CRYSTALS. In black phenolic holder. Pin spacing .486". Pin dia., .093". Tolerance,  $\pm$ .03%. Size,  $1\frac{1}{6}$ x".\%". Specify frequency. Supplied  $\pm$ 5 kc (except \*  $\pm$ 30 kc) of frequency specified. The H-73 crystals itseld 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 254	3.5-3.7 & 3.75-4.0 6.25-6.8	199 SS 268	14.0-14.8*	
99 SS 267	7.0-7.15 & 7.2-7.5	99 SS 294	3.7-3.75	2.95
99 SS 259	8.0-8.23	99 SS 295	7.15-7.2	
99 SS 296	8.34-9.0	99 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". Pin dia., .050". 3/x3/x1/4". Special order only. Allow 30 days for delivery. Specify frequency. Shpg. wt., 3 oz.

Stock No.	Frequency	Supplied Within:	EACH
99 S 263	21-40 mc	±15 kc	4.95
99 S 264	40-54 mc	±25 kc	5.95

TYPE H-93 FREQUENCY-STANDARD CRYSTALS. Black phenolic base; anodized aluminum can. Silver-plated crystal. Pin spacing, .486". Pin dia., .093". Tolerance, ± .005%. 2" long; 1\%" dia. 3 oz. 99 S 284. 100 kc. 99 S 287. 1000 kc. NET EACH. . . . . . 6.95 SPECIAL-APPLICATION CRYSTALS. Size,  $\frac{3}{4}x^{23}/2x^{5}/6^{n}$ . Pin spacing, 486". Pin dia., 093. \*3rd overtone type. Av. shpg. wt., 3 oz.

Stock	No.	Туре	Frequency	Tolerance	Application	EACH
						4.80
99 S	258	H-17L*	27.255 mc	±.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, 1½4x1¾6x¾6″.

Tol., ±.02%. Pin spacing, 486″ (½7); dia., .093″. 3 oz.

99 \$ 143. 5.0 mc. 99 \$ 145. 10.7 mc. NET EACH...........3,95

TYPE MC-7 SHIP-TO-SHORE CRYSTALS. Available from 2.0 to 3.5 mc. Tol., ±.02%. Holder is 13% 11/8 x21/2." Pin spacing is .750". Pin dia., .125" (1/4"). Specify frequency or location of shore station. On special order only. Allow 30 days for delivery. 3 oz. 99 \$ 165, NET.....

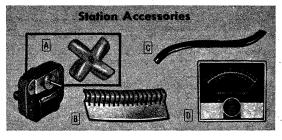
#### MILLEN LOW-LOSS STEATITE CRYSTAL SOCKETS

Phosphor-bronze contacts; tinned lugs. Av. shpg. wt., 2 oz.

Stock No.	Туре	Pin Spacing	Pin Diameter	NET EACH
72 H 035 72 H 075	33102 33302 33002	.487" .487" 3/4"	.094" .050" 125"	36¢ 24¢
72 H 029	33002	3/4"	.125"	36¢

MOSLEY ADAPTERS

TYPE 75-5 ADAPTER. Adapts 3/4"-spaced holders to .486" sockets. 72 C 707. NET..... TYPE 5-75 ADAPTER. Adapts .486"-spaced holders to 3/4" sockets. 



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 rpm. 21\(\frac{9}{2}\timex21\gamma\_2\frac{7}{2}\tilde{\ell}^{\ell}\ell}^{\ell}\ell}\). 4-blade fan. dia., 2\(\frac{1}{2}\tilde{\ell}^{\ell}\ell}\). 60 cycle AC. Shpg. wt., 1\(\frac{1}{2}\tilde{\ell}\ell}\) ibs. 

B EIMAC CONTACT FINGER STOCK. Silver-plated allo Makes excellent contact; prevents RF leakage thro	y stripping. ugh cabinet
doors. Secured mechanically or by soldering, 12 oz.	_
42 P 086. 3' long; 11/32" wide. NET	4.95
42 P 087. 3' long; 31/32" wide. NET	
42 P 088. 3' long; 13%" wide. NET	

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. Slpg. wt., 100 ft., 4 lbs. 49 W 495. NET PER FOOT.....

HALLICRAFTERS "S" METER KIT. An easily installed "S" meter for panel mounting. For use with Hallicrafters \$-40B, \$-20R, \$-40A, \$X-62, \$-77, \$-77A, \$-85, etc., as well as other receivers. Can be installed in any RF or IF stage with AVC action. 3½x2½%" meter has black dial with white markings. Two-scales; has microvolt scale calibrated from 0-1000K; "S" unit scale is calibrated to 80 db over \$9. Requires 2½"-diameter round hole for meter barrel and four ½% holes for mounting studs. Can be separately mounted in individual meter case (see page 238). Kit consists of 5.0 milliampere meter, 500-ohm potentiometer for electrical zero-set, one 82-ohm ½-watt 10% resistor, one 330-ohm ½-watt 10% resistor, and instructions. Shgg. wt., I lb. 



TRIPLETT 3256 FREQUENCY METER. Bandswitching—covers 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 71/2x21/2x21/2. Shpg. wt., 1 lb. 

> BUD FCC-90A FREQUENCY CALIBRATOR. Consists of 100-kc crystal oscillator, trimmers, built-in power supply. Produces 100-kc signals across all amateur band through 30 mc. A valuable



M. C. JONES MODEL 261.1 "MICROMATCH" ANTENNA COUPLER, For use with Model 262 indicator for measuring RF power and VSWR. Rated for 1 kw at 1:1 VSWR. 52-ohm, coaxial UHF type connectors. Range: 5-225 mc. Less than 0.1 db power loss. 3x 4347" Short 11 b. Shpg. wt., 1 lb.

MODEL 262 INDICATOR. Measures relative power, forward or reflected; 0-10-100-1000 watts. 41/4x41/4x41/6". 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. .45.00

94 S 885. NET..... 94 \$ 886. As above, but 72-ohm. NET. 45.00

#### General Crystal All-Band Antennas and Coils

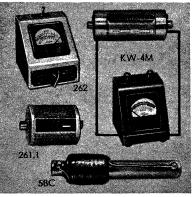
All-band loading coils and antennas. Permit All-band loading coils and antennas. Permit operation on 80 through 10 meters with one 109-ft. dipole and untuned feeder. SWR is 3:1 or better when operated within 100 kc of resonance. Peaked for either CW or phone bands. \*Transmitter input.

COIL SETS. Complete with instructions.

Stock No.	Type	Application	Wt.	Per Pr.
83 S 888	5BC-F	*¼ kw phone *1 kw CW *1 kw phone	2 lbs.	12.50
83 5 889	5BC-C	*1 kw CW	2 lbs.	12.50
83 2 886	no-or	1 KW DIIONE	3 103.	19.93

COMPLETE ANTENNAS. Wired and tested. Include copperciad wire, all insulators, coil set, 88-ft. 72-ohm twin lead. Overall length of dipole, 111 ft. Peaked for phone bands. 

TYPE HA-5F. 1 kw input. Wt., 11 lbs. 







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. Built-in transmit-receive relay. Has adjustment for matching antenna to receiver Coaviel 

MODEL 250-30 KILOWATT "MATCHBOX". Similar to above, but rated at 1000 watts. Handles unbalanced lines from 50 to 1206 ohms, balanced lines from 50 to 2000 ohms. Includes time delay system for relay, providing "fast-make, slow-break" action. 171/4x 121/8x107/8". 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 mc. Use with multimeter, or indicator below. 25/6x61/4". 2 lbs. 92 \$ 380. NET. II.75

250-38 INDICATOR. 43/8x4x41/4". 4 lbs. 92 \$ 379. NET......25.00

#### Johnson Accessories

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 probe. 4½x4½x5½". For 110-120 v., 50-60 cycle AC. Wt., 5 lbs. 27.75

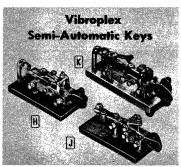
MODEL 250-20 LOW-PASS FILTER. TVI 

MODEL 250-28 CRYSTAL CALIBRATOR. Accurate and stable 100-kc crystal standard. Produces 100-kc check points up to 55 mc. With 6BH6 tube, crystal, cable and extension leads. 3\(\frac{4}{3}\timex^2\frac{1}{2}\timex^1\tieq^2\). Requires 6.3 v. \(\tilde{0}\).15 amp and 150-300 v. DC \(\tilde{0}\tieq^2\) 2 ma. Slpg. wt., 1 lb. 

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 amp. 37\(\frac{34}{345}\)\(\frac{347}{347}\)\(\frac{347}{347}\) Uses 12AZ7 and 12AU7. All cables and connectors are included. Shpg. wt., 3 lbs.

22.00 

G MODEL 250-24 STANDING WAVE RATIO BRIDGE. A valuable aid in the adjustment E) BRIDGE. A valuable and 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 coar connectors and color coded phone tip jacks for connection of 0-1 ma meter (not supplied). Size, 2\%cx4\%z". Shpg. wt., 1 lb. 9.75 99 S 028. NET ..... .....9**.7**5



"ORIGINAL." A precision-built, semi-automatic key for all speeds. Minimum effort for smooth, rapid sending. Preferred and used by veteran operators. Chrome-plated mechanism. Gray finish cast-iron base. Lesscord and wedge. Wt., 51bs. 

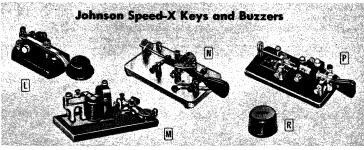
DELUXE "ORIGINAL." As above, but jeweled bearings, chrome-plated base. Wt., 5 lbs. 76 \$ 038. NET. 23.95

"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. 

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. 

DELUXE "BLUE RACER". As above, but jeweled 

CORD AND WEDGE SET. Shpg. wt., 3 oz. 76 S 156. NET. . . . . . 1.75



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, ½" silver contacts. Adjustable spacing and tension. Heavy brass connector concealed under base. Black diecast base. Shpg. wt.. 2 lbs. 

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 

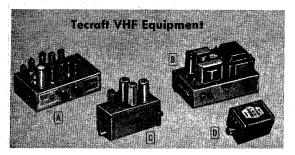
MODEL 114-112 TELEGRAPH SOUNDER. Not illustrated. Designed for instant response. Brass sounder provides strong, clear signal. Steel bar frame with black enamel finish. Brass bridge and adjustment screws with lacquer finish. Black lacquered steel sounder plate. On mahogany finished wood base. Non-slip rubber mounting feet; won't mar tabletop. Sounder has 4 ohms resistance. Brass binding posts for convenient connection. Shyg. wt., 3 lbs. 76 S 067. NET. 9.95 76 S 067. NET..................9.95

MODEL 114-500 DELUXE SEMI-AUTOMATIC KEY. A smooth operating key with 1/8" contacts. Vibrator arm, 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. 61/4x31/xx1/s". 5 lbs. 

P MODEL 114-520 SEMI-AUTOMATIC KEY. 

R MODEL 114-400 HIGH-FREQUENCY BUZZER. 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 v. battery combination. Shpg. wt., 5 oz. 

#### VHF GEAR - SELECTED AMATEUR ACCESSORIES



TR-20/144 TRANSMITTER. Same as above, but for 2 meters—has additional 5763 buffer-multiplier.

B PTR-2 POWER SUPPLY. For above transmitters and the Tecraft converters. Delivers 6.3 volts @ 6 amps. 6.3 volts @ 4 amps. and 250 volts DC @ 1/4 amp. Has send-receive switch. 53/4x 91/2x6". For 110-120 v., 60 cycle AC. Shpg. wt., 17 lbs. ...39.95 83 S 855. NET.....

M-6 6-METER CONVERTER. The "Mini-Verter" for 6 meters. A natural for mobile use. Chassis is only 21/4x5x21/4", excluding tubes and crystal. Uses wide-band circuit to achieve 1-mc. coverage of the 6-meter band. Tune broadcast receiver from 550 kc to 1550 kc to cover 50-51 mc. Crystal-controlled oscillator. Requires 6.3 v. @ 3/4 amp and 100 v. DC @ 8 ma. Shpg. wt., 3 lbs. 83 S 852. NET.....

CC-50 DELUXE 6-METER CONVERTER. Not illustrated. 36 db gain sensitivity; 1/10  $\mu$ v for 6 db SNR. Noise figure: 4 db. Has 4-mc passband, down 6 db at 6 mc. IF output frequency: 14-18 mc, crystal controlled. Requires 6.3 v. @ 2 amps and 150-250 v. DC @ 43 ma. 50-54 mc coverage. With tubes and crystal. 9½x3x4½". Wt., 5 lbs. 

CC-144 2-METER CONVERTER. As above, but 2 meters. (144-148 mc). 

CC-108 108-MC DELUXE CONVERTER. Satellite-tracking converter for use with general-coverage receivers. IF output frequency: 14 mc. (Other specs same as CC-50). 83 S 859. NET.....

P-1 POWER SUPPLY. Not illus. For Tecraft converters above. Delivers 6.3 v. AC @ 3 amps and 200 v. DC @ 50 ma. Size, 5½x 9½x5″. For 110-120 v., 50-60 cycle AC. Shpg. wt., 6 lbs. 83 S 853. NET.....

D NEW SWR BRIDGE. Effective to 150 mc. Standard coax connectors. Measures SWR on 52 or 72-ohm lines. Wt., 1 lb. 

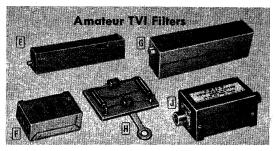


Conelrad units will soon be used for emergency weather warning as well as Civil Defense. Local U.S. Weather Bureaus will warn local radio stations of impending storms. Stations then send out signals to Conelrad sets which trip speakers, lights or alarms to call listener's attention to storm warnings 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. 61/4x33/4x2". For 110-120 v.. 50-60 cycle AC. Shpg. wt., 21/2 lbs.

94 S 888, NET.... 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" speaker is muted in C-D position; audio note is produced only when carrier is interrupted. Less batteries; below. 43/4x31/4x41/6". 21/2 lbs.

99 \$ 164, NET... 53 J 031. Burgess Z cell. 1 required. 3 oz. NET..... 80 J 684. Burgess 2N6. 1 required. 5 oz. NET.....



BUD 1F-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 mc, 93 db above 70 mc. 12x2½x2¼". Wt., 2½ lbs. 73 \$ 047, NET...

BUD HF-600 HIGH-PASS FILTER. High-pass filter for TV set. Rejects signals below 42 mc. Reduces interference from low-frequency sources. For 300-ohm line. 31/4x21/8x11/8". 6 oz.

B & W 425 LOW-PASS FILTER. 52 ohms. 1 kw RF. 2 "M"-derived end sections; 4 constant-K center sections. 85 db attenuation on TV channels. 11x3x2". 1½ lbs.

MODEL 426. As above, but for 72-ohm lines.

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. 11/2x7/2x3/4". 3 oz. 77 S 673. NET. . . . .

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. 2\frac{1}{2}\time x2x1\frac{1}{2}''. Wt., 5 oz. 77 S 686. NET. 77 S 686. NET.....

AMECO IN-2 LOW-PASS FILTER. Handles up to 200 watts RF. For 52 to 72-ohm coaxial cable. Has 2—SO-239 connectors. bracket, etc. Aluminum case. 45/x23/x13/4". Wt., 1 lb.

LN-1 LOW-PASS FILTER. As above, but has RCA-type phono jacks. 

#### **Books for the Beginning Amateur**



GATEWAY TO AMATEUR RADIO. Four A.R. GATEWAY TO AMATEUR RADIO. FOUR A.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, 6½x8½."

37 K 369. Postpoid in U.S.A................... 1.50

RADIO AMATEUR'S LICENSE MANUAL. Stand-

ard 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. 6½x9½". 111 pages.

37 K 555. Postpaid in U.S.A.... 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 chapter is followed by questions and answers. Chapters: Electricity and Magnetism; Ohm's Law; Resonant Circuits; Vacuum-Tube Fundamentals; Modulation; etc. 103 pages. 6½x9½." 37 K 564. Postpaid in U.S.A.....

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: High-Speed Operation; Operating on the Air; Code Practice; Class Instruction, etc. 48 pages. Size, 6½x9½".

#### Pennwood 24-Hour Station Clock



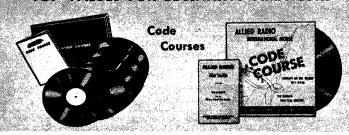
37 K 562, Postpaid in U.S.A...

MODEL 100-J-241/4. Numeral type, 24-hour station clock. Ideal for Amateur 

MODEL 100-J-24H1/4. Ebony case.

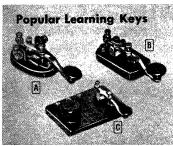
78 B 340. NET Incl. F.E.T.... 14.85

#### TOP VALUES FOR BEGINNING AMATEURS



AMECO CODE COURSES. Three courses. Junior Course: five 45 or 78-rpm records or one 33½-rpm LP; from start to 7½ wpm. Advanced: six 45 or 78-rpm records or one 33½ LP; 8½ to 18 wpm. Senior: eleven 45 or 78-rpm records or two 33½-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
77 \$ 616	Junior	78 rpm	4 lbs.	6.95
77 \$ 647		45 rpm	1½ lbs.	5.95
76 \$ 075		33⅓ rpm	1 lb.	4.95
77 S 619	- Advanced	78 rpm	4 lbs.	5.95
77 S 648		45 rpm	1½ lbs.	4.95
76 S 076		33⅓ rpm	1 lb.	4.95
77 \$ 617	Senior	78 rpm	7 lbs.	11.50
77 \$ 649		45 rpm	4 lbs.	10.50
76 \$ 077		33½ rpm	2 lbs.	9.50



JOHNSON MODEL 114-310 STANDARD durably finished in handsome black wrinkle enamel; mechanical parts are nickel-plated. 
%" silver contacts. Dual adjustments for 

B JOHNSON MODEL 114-300 PRACTICE KEY, A well-built, low-cost general pur-person 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" silver contacts With beginners code card. Shpg. tacts. Wwt., 8 oz 

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 for code practice. Requires 3 v. DC (2—1½ v. batteries). Shpg. wt., 2 lbs. 76 \$ 059. NET.... .....4.90

NEW—ALLIED'S COMPLETE 10-LESSON CODE COURSE ON SINGLE 12", 331/2-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.....

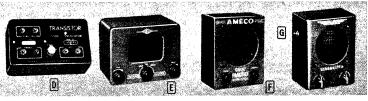
ALLIED'S 5-RECORD CODE COURSE. "Eyeeye follows the letters as the ear hears the sounds. Five 10", 78 rpm records recorded on each side. From 2 to 15 wpm in 10 lessons. Includes album and instruction book.

Shpg. vt., 6 lbs. 77 S 643. NET... .....**5.9**5

#### MAKE ALLIED YOUR SUPPLY HEADQUARTERS

Beginners in amateur radio—for best service, best selection and low-est prices, make Allied your supply headquarters. You can choose from the world's finest array of equipthe world's linest array of equip-ment, and receive personal service from our staff of experienced ama-teurs. Allied's amateurs have stud-ied your needs and have selected a group of beginner's items that will make the road to your amateur license short and smooth. You'll find low-cost code-practice equip-ment and books to prepare you for ment and books to prepare you for written license exams.

If you have any problems in getting on the air, Allied's friendly ama-teurs stand ready to assist you. If you are on the air, remember that you are on the air, remember that Allied is making bigger and better trade-in allowances than ever. We'll take trades on your old equipment whenever you're ready—you'll not only be given a terrific trade-in allowance, but you'll be able to take advantage of our Easy Pay Plan. Just drop a card or letter to Allied's Ham shack for expert, practical advice or trade-in information. vice or trade-in information.



#### **Code Practice Oscillators**

JACKSON 562 CODE PRACTICE OSCILLA-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. 614x334x2". Shpg. wt., 2 lbs. 

BATTERY FOR ABOVE. 11/2 v. Wt., 3 oz. 53 J 009. NET......14c

AMECO CPS-WT CODE PRACTICE OSCIL-AACO. A deluxe practice oscillator with a built-in 4" 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 server terminal strings Has rear, mounted server terminal strings. 

G BUD CPO-128A CODEMASTER. High-quality code practice oscillator with built-in 4" 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. 6½x5½x3½". For 110-120 v., AC or DC. Shpg. wt., 5 lbs. 73 \$ 044. NET. 18.75

STANDARD PHONE PLUG. For attaching keys and headphones to CPO-128A above. 3 oz. 41 H 641, NET......44c

CABLE. Extension cord for keys. 2 oz. 

#### **SAVE \$2.48**

#### **ALLIED'S SPECIAL** CODE PRACTICE KIT COMBINATION OFFER

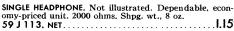
A complete code practice equipment package, at a remarkably low price. Contains everything needed for be-ginners just learning the code, or for experienced amateurs who want to improve their "fist". Consists of:

ALLIED CODE COURSE	
(5 RECORDS)\$	5.95
SURPLUS J-38 KEY	1.49
DUAL HEADPHONES	2.00
KNIGHT-KIT CODE PRACTICE	,
OSCILLATOR KIT	3.95
GATEWAY TO AMATEUR RADIO	
(SET OF 4 BOOKS)	1.50
STANDARD PHONE PLUG	.44
5-FT EXTENSION CABLE	
FOR KEY	.10
TOTAL VALUE \$15	5.43
SPECIAL INTRODUCTORY PRICE 12	

YOU SAVE \$2.48 77 \$ 683. Wt., 11 lbs. 

#### Allied's Own American Bell Quality Headphones

STANDARD DUAL HEADPHONES. Moderately priced, light-weight headphones. Adjustable, flexible headbands. Employ hyflux Alnico magnets and solenoid coils firmly mounted in headphone shell. Molded bakelite cap and case. With 4½-ft. cord; standard phone tip terminals. 2000 ohms. 1¼ lbs. 59 J 110. 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 FM receivers for superb reception of commercial or public service reception of commercial of public service frequencies. Model S-94 covers 30-50 mc; Model S-95 covers 152-173 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 ex-ceptional sensitivity. Has wide-range anceptional sensitivity. Has wide-range antenna input impedance for excellent results with any type antenna. Low-noise, grounded-grid amplifier. Designed for low oscillator radiation. Adjustable, built-in relay-type squelch system silences entire audio system until signal is received—permits quiet standby operation. Built-in 5" PM speaker. 1.5 watts audio output. Phone tip jacks for headphone operation—switch selects speaker or headphone outswitch selects speaker or headphone out-put. Terminals for single-wire or twin-lead antenna input (external antenna supplied). 0-100 logging scale. 8 tubes plus selenium rectifier. 7x12/sx71/4". For 110-120 v., 50-60 cycle AC. Shpg. wt., 121/2 lbs.

MODEL S-94. Covers 30-50 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 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 op-erating convenience. Have tuned RF stage for added sensitivity. Feature choice of crystal-controlled (fixed frequency) or tun-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. to-noise ratio. Low oscillator radiation. Wide-range antenna input impedance for all types of antennas. 5" PM speaker; headphone jack. 3 watts of audio. Tubes: SX-104, 8 plus rectifier; SX-105 9 plus rectifier, SX-105, 7x12½x7¾". For 110-120 v., 50-60 cycle AC. Less crystals. Shpg. wt., 18½ lbs.

Crystals for fixed-frequency operation are available from Allied on special order at \$7.72 each for the SX-104 and \$5.29 each for the SX-105. Specify receiving frequency required. Allow 3 weeks for delivery

MODEL \$X-104. For 30-50 mc FM. 94 SU 803. \$9.00 Down. NET..... 89.95

MODEL SX-105. For 153-173 mc FM. 94 SU 804. \$9.00 Down. NET..... 89.95

# MONITORADIO FM RECEIVERS MR-10, MR-33 DR-200 PR-31, PR-9

MODEL MR-10. Deluxe FM receiver for full coverage of 152-174 mc. Excellent for emercoverage of 152-174 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° PM speaker; 4 µv sensitivity. 7 tubes; 6X4 rectifier. 77/xx11/xx6½°. For 110-120 v., 50-60 cycle AC. Wt., 18 lbs.

99 SU 002. \$6.45 Down. NET.....64.50

MODEL MR-33. As above, but for 30-50 mc. 99 SU 003. \$6.45 Down. NET..... 64.50

MODEL PR-31 "POLICE-ALARM." Low-cost 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 µv. Built-in 5° PM speaker. 5 tubes; 35W4 rectifier. Antenna impedance. 72 ohms. Size, 7x10½x6½". For 110-120 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 mc coverage, and includes 14" indoor antenna. 97 SU 908. \$5.00 Down. NET. . . . . 49.95

MODEL DR-200 2-8AND FM RECEIVER. Excellent for central installation with very weak outlying stations. Ranges: 30-50 mc and 152-174 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 mc, 1µv; 152-174 mc, 2 µv. 14 tubes; 5Y3GT rectifier. 8x141/xs91/x". Less speaker (see below). For 110-120 v., 60 cycle AC. Speg. wt., 21 lbs. Crystals for fixed-frequency reception available on special order at \$11.95 each. Specify desired receiving frequency. Allow 3 weeks for delivery. 97 SU 939. \$15.00 Down. NET...

MODEL DRS-1 6" SPEAKER IN METAL ENCLOSURE. 8x71/2x71/2". 6 lbs. 

MODEL CA-2 COAXIAL ANTENNA. Use with 152-174 mc. receivers, 1 lb. 

MODEL A-30 WHIP ANTENNA. For use with while Anilernal. 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°. Less cable. Uses 72-ohm coaxial cable. Shpg. wt., 1 lb. 99 SU 001. NET.....

#### **GONSET** VHF MONITOR RECEIVERS

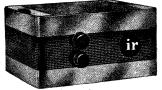


- FM and AM VHF Coverage
- Sensitive and Stable

VHF communications receivers for monitorv Hr communications receivers for monitor-ing municipal, commercial and industrial services. Efficient 8-tube circuit has ad-justable squelch for quiet between trans-missions, temperature-compensated oscil-lator for high stability. Built-in speaker. 4½πδ/½π19¾". For 110-120 v., 60 cycle AC. Shpg. wt., 10½ lbs.

Stock No.	Model No.	Freq. (Mc)	Recep- tion	NET EACH
92 S 319		30-50	FM	
92 \$ 320	3156	112-132	AM	79.50
92 \$ 321	3158	152-174	FM	1

#### INDUSTRIAL RADIO "VOLUNTEER" FM RECEIVERS



- Meet Civil Defense Requirements
- For Police, Fire, Forestry, Etc.

Single-frequency FM receivers. Dual-crystal-controlled. Built-in Single-requerty FM receivers. Data-conversion: crystal-controlled. Built-in speaker; adjustable squelch. 4½x6½x8½″. With crystal. 10 lbs. Specify exact receiving frequency and allow 30-days for delivery.

Stock No.	Model No.	Range (Mc)	Power Req'd	NET EACH
92 5 3 1 3	AC/40	25-55	117 VAC	
92 5 3 1 4	12/40	25-55	12 VDC	135.00
92 S 315	6/40	25-55	6 VDC	135.00
92 5 3 1 6	AC/150	140-175	117 VAC	125.00
92 5 317	12/150	140-175	12 VDC	135.00
92 5 3 1 8	6/150	140-175	6 VDC	135.00
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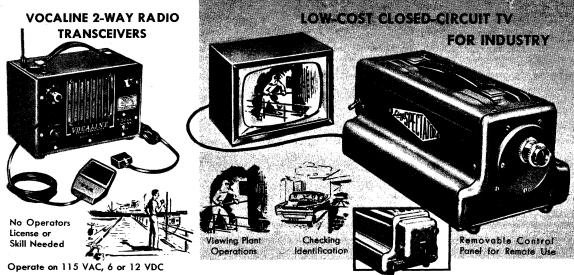
#### KAAR CONELRAD MONITOR



Built For Continuous Operation

MODEL 1178905 "CONALERI II." Precision-engineered receiver for 24-hour Conelrad monitoring. Now can also be used for emer-gency weather or disaster alerts—Conelrad system of interrupting carrier precedes an-nouncement. Monitors any one of 5 pre-set channels including 640 and 1240 kc. Loss of carrier lights indicator, connects 5" PM speaker and activates external alarm syscarrier lights indicator, connects 5" PM speaker and activates external alarm system. Has fail-safe circuit which activates alarm if major component or tube fails. Alarm sensitivity, 5 µv. 7 tubes plus rectifier. 15x9x10½", Less external alarm. For operation from 110-120 v., 50-60 cycle AC. Shpg. wt., 27 lbs.

94 SU 890. \$14.00 Down. NET... 140,00



MODEL JRC-400 STANDARD. Low-cost, highly reliable 2-way communication is yours with these Vocaline transceiver units! Ruggedly 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 tuning—no adjustment. ing-no adjustment.

Transceivers operate on 465 megacycles 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 indus--in warehouses or docks, storage yards, construction fields, etc. Power Output: V<sub>3</sub> 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., 3½ lbs. 83 SU 881. For 115VAC/6 VDC.

83 SU 881. For 115 VAC/12 VDC. ....59.80 NET EACH.....

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 VAC/6 VDC 83 SU 885. 115 VAC/12 VDC.

NEW MODEL CUB-1/MT-1. Remote controlled transceiver similar to Model JRC-425, but for base station operation. Built-in antenna 

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.....

Other GP4 antennas with cable lengths up to 100' available on special order.

MODEL AD-3 DIRECTIONAL ANTENNA. extending point-to-point communications range up to 10 miles between all transceivers (except CUB-1/MT-1). 7 lbs. 

NEW LING MODEL V-1051 "SPECTATOR". Self-contained, lightweight closed-circuit TV camera. Designed for rugged industrial use—vertical stability is unaffected by power line changes. Has f/1.9 lens for excellent pictures without special lighting, Can be used any place where personal viewing would used any place where personal viewing wound 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 received, without order to the descentification. 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 trol panel is removable for remote operation up to 1000 feet away. Produces a composite video signal for use with any number of video 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, 51½/6x7½/6x15½". With 30' remote cable. For 110-120 v., 60 cycle AC. Shpg. wt., 15 lbs.

91 SU 999. NFT 595.00 

#### 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. 161/4x161/4x161/2". For 110-120 v., 60 cycle AC. Shpg. wt., 67 lbs. 

LING MODEL V-1008 BRIDGING TRANSFORM-ER. Use with each standard TV receiver in a multi-set installation. (One "Video" Jeep still required in system.) Wt., 6 lbs. 



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 wasterul "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 "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 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 frequency—no tuning required; has adjustable squelch circuit. Includes: transmitter-receiver unit; shock-mount base; cable for 6 and 12 volt operation; carbon mike with push-to-talk switch and antenna. Size, 5½x12½x8½/x°. Sing, 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 avoidable on special order for 25-50 mc, 108-152 mc, and 152-174 mc. Specify frequency desired—allow 30 days for delivery.

# WT-110A

WT-110A AUTOMATIC TUBE TESTER For testing receiving tubes. Saves valuable time—simply insert pre-punched card into tester! Tests transconductance, gas, shorts and twin tube balance. Meter registers "RENEW—?—GOOD." Two gold-plated printed circuit boards set up a combination.

WG-325A. 24 blank cards. Wt., 1 lb. 

WG-337A. Four adapters—for testing tubes with small 4, 5 and 6-pin bases, and small and medium 7-pin bases. Wt., 5 oz.

WG-338A. Tube-socket adapter for testing

W.G-339A. Tube-socket adapter for testing 8-lead circular, subminiature tubes. 2 oz.

7-lead, in-line subminiature tubes. 2 oz 

## FAMOUS RCA TEST EQUIPMENT FOR SERVICE,

Renowned RCA VoltOhmysts

#### WV-98A SENIOR VOLTOHMYST

WV-98A

Includes an outstanding array of "plus" features: easy-reading, zero-center scale; electronic protection against burnout; rugged, 200-microamp meter movement; ±1% ged, 200-indexian meet involved in the multiplier resistors; die-cast aluminum case; etc. Has 61/2" meter, accuracy improved to ±3%, and single-unit DC-AC-Ohms probe with built-in selector switch. Excellent for measurement of complex TV waveforms reads 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, 6½x7x3¾. With WG-299C probe, shielded cable and instruction booklet. For 105-125 volts, 50-60 cycle AC. Shpg. wt., 7 lbs.

79 50 

#### WV-87B MASTER VOLTOHMYST

This deluxe VTVM has a 71/2" mirrored-scale meter. Has the accuracy and stability necessary for many laboratory applications. Its peak-to-peak scales are useful for TV, 

#### WV-77C JUNIOR VOLTOHMYST

WV-77C

Has easy-to-read 4½" meter. 5 ranges on all functions. Reads AC rms and DC to 1200 volts. Accuracy on AC and negative DC volts is ±5%; on positive DC volts, ±3%. Measures resistance from 0.2 ohms to 1000 megohms. AC input impedance 0.2 megohms and 75 mmf to 2 megohms and 50 mmf. Input resistance, 11 megs. 8x5½x4½". With WG-299C pro.b. For 105-125 volts, 50-60 cycle AC. Shpg. wt., 5 lbs. 87 F 0.51. NFT 59.50 87 F 051. NET.... .....59.50

#### **VTVM & VOM PROBES**

WG-290 HV PROBE. As above, but with phone tip connectors.

MULTIPLIERS. For WG-289 & WG-290. 2 oz.

84 F 079. WG-206. 1090 meg. 84 F 080. WG-207. 991 meg. 84 F 083. WG-210. 900 meg. EA. . 2.80

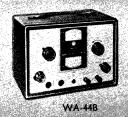
WG-299C DC/AC-OHMS PROBE. Replacement unit for VoltOhmysts. 1 lb. 87 F 077. NET......8.75

WG-301A CRYSTAL DIODE PROBE. Slips on WG-299A, B or C. Extends RF to 250 mc. Shpg. wt., 8 oz.

WG-264 CRYSTAL DIODE PROBE. Slip-on type for older-model VoltOhmysts using WG-218 probe. Shpg. wt., 12 oz.









#### WR-49B RF SIGNAL GENERATOR

Highly accurate RF signal generator. Continuous coverage from 85 kc-30 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/xx101/xx6". For 105-125 v., 50-60 cycle AC. Wt., 10 lbs. 87 FU 079. NET.....

#### WR-99A MARKER-GENERATOR

Crystal-calibrated marker-generator for aligning FM and TV receivers and other electronic equipment in the 19-260 mc frequency range. Crystal calibrator provides 240 check points for accurate calibration at 1 or 10 mc intervals. Modulation frequencies: 1, 10, 4.5 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 0.1v. rms on all frequencies. Double-shielded oscillator for reduced leakage. 10x13\frac{1}{3}\frac{1}{3 87 FU 069. NET..... .....242.50

#### WA-44B AUDIO SIGNAL GENERATOR

For measuring intermodulation, response, input and output impedances, resonant frequency of speakers, amplifiers, etc. 4 ranges: 11-110 and 110-1100 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, ±1 db (1100 cps reference). Total harmonic distortion, 2% (max.) from 30 cps to 15 kc. Hum level, 0.1% or less. Size, 7x101466. Exc. 103.153, x. 50.6 cycle AC. Shorg with 20 lbs. 87 FU 053, NET.....

#### 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 generative peaks (narrow band). negative peaks (narrow band). Use with marker and sweep generators. Marker signal is added after sweep passes through receiver—eliminates 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 output circuits of TV receiver under test. 7½x10½x6½". For 105-125 v., 30-60 cycle AC. Shpg. wt., 12 lbs.

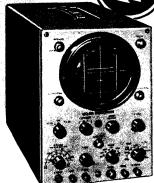
74.50











#### **WR-46A DOT-BAR GENERATOR**

WR-40A DOI-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. allows convergence adjustment independent of receiver characteristics. 10x13½x8". For 110-120 v., 60 cycle AC. 20 lbs.

#### 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 os-cillator output on TV channels; filtered beat-

#### 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. 5x5¾x4¾°. For 50-60 cycle AC. With 5 ft. line cord. Wt., 15 lbs. 22.00 62 G 516, NET..

WR-61B COLOR-BAR GENERATOR

For checking color TV sets, and for adjusting 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 chrominance signals. "Sync level Pedestals" for checking signal ratio through the productions of the production of for checking signal ratio through the three chrominance channels to indicate potential troubles. Size: 9½x13½x7½". For operation from 105-125 volts, 50-60 cycle AC. Shpg. wt., 18 lbs.

.259.50 87 FU 065. NET .....

#### OTHER RCA INSTRUMENTS

WG-295B VIDEO MULTIMARKER. For with sweep generator on black-and-white and color sets. Checks response of chromin-ance bandpass filter, and alignment of I and O filters. 7 simultaneous absorption-type markers (mc): 0.5, 1.5, 2.5, 3, 3.58, 4.1, and 4.5. Size: 5x23/8x21/2". Wt., 1 lb.

87 F 054. NET...

WG-307A TV BIAS SUPPLY. For black-and-white 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: 2½x3x5½". For 105-125 v., 50-60 cycles AC. Shpg. wt., 2 lbs. 

WG-304A RF MODULATOR. Crystal-type mixer. For use with WR-69A and WR-99A to check TV response from antenna to pic-ture tube. 15/8x4x2/y". Wt., 1 lb.

#### WO-91A 5" OSCILLOSCOPE

5" wide-band oscilloscope for black-and-white and color TV servicing. Features: Dual-band response; wide-band position flat within ±1 db from 10 cps to 4.5 mc and flat within ±1 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 band position. Vertical mplit impediance 75 mmf and 1 meg direct, and 11 mmf and 10 meg low-capacity position, with WG-300B probe supplied. 5UP1 CRT. 13½x9x16½7. For 105-125 v., 50-60 cycle AC. Shp. wt., 33 lbs.

WG-300B DIRECT/LOW-CAPACITANCE PROBE. Shpg. wt., 1 lb. 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....

#### 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 ±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 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-to-read meter for all measurements. Regulated power supply for DC voltages. Blue-gray case. 8x18/2x23/2". For 105-125 v., 50-60 cycle AC. Shpg. wt., 110 lbs. 87 FZ 087. NET. 949.00

#### 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 from 900 to 90,000 megohms. Reads to 1000 microamps in 6 ranges; reads current below 1-billionth amp. Voltage drop at full scale. V2-volt, all ranges. Overall accuracy, ±4%. Negligible loading of circuit under test. Meter protected from burnout. Includes 2 multiplier resistors. Less batteries (requires 2—V5004 1½-v. and 2—V5102 22½-v. batteries, below). Blue-gray case, 7½x10½x 6½". Shpg. wt., 10 lbs.

RCA VS00411/2-V. BATTERY. Shpg. wt., 11/21bs. RCA VS102 221/2-V. BATTERY. Wt., 11/4 lbs. 

#### 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 quency 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 6½" meter, with rugged 200-microamp movement. High input impedance of 1 meg shunted by 58 mmf, permits measurement in circuits sensitive to loading. 9 AC voltage ranges in 3-to-1seps:0.01-0.03-01-0.3-0-03-01-03-001 ov. rms full scale. Wide frequency response, flat within ±½ db from 20 to 500,000 cps on all ranges. Accuracy, ±4%. Reads from -40 db to +40 db in 9 ranges. Built-in amplifier may be used as preamp—only 0.5% distortion; 38 db gain on 10 mv range. 6½x7x3¾". With WG-300B direct/low-capacitance probe. For 105-125 v., 50-400 cycles AC. Wt., 7 lbs. .99.50

87 FU 083. NET.....

# **TUBE TESTERS AND TEST INSTRUMENTS** FICEROR 750 539R

#### **NEW MODEL 800 TUBE TESTER**

800

Lightweight, portable dynamic mutual conductance tube tester. Weighs only 16 pounds—ideal for professional radio and TV servicemen to use for both on-location 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 subminiature-type tubes and 600-ma seriesstring-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. Easily detects hard-to-locate weak tubes. Tests for gas content and for shorts. The easy-to-read triple-scale 5" lucite-case meter has ranges of 0-3000-6000-15,000 mi-cromhos and "REPLACE—?—GOOD". The roll chart groups the most commonly-used tubes separately—making it easy to quickly locate desired tube type. Housed in a red leatherette-covered case.

#### **MODEL 750 TUBE TESTER**

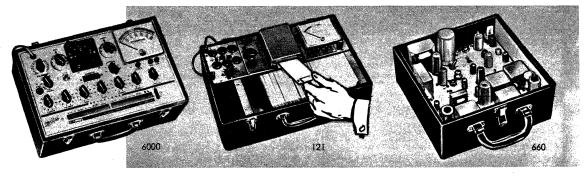
Portable dynamic mutual conductance tester for accurately testing all types of radio and TV receiving tubes—including the 600-ma series-string types. Also checks ruggedized types used by airlines, hearing aid tubes and voltage regulator tubes—accurate DC voltmeter measures 0-200 volts; DC milliammeter. 0-200 ma. Permits matching of tubes such as 6SN7 for critical circuits. 5" meter reads 0-1500-300-6000-15,000-30,000 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/ax163/ax71/x". For operation from 110-125 v., 50-60 cycle Portable dynamic mutual conductance test-

**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° meter with accurately calibrated scale.

**MODEL 539B TUBE TESTER** Laboratory-type dynamic mutual conduct-

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. 1634.1834x71/2. For 110-120 volts, 50-60 cycle AC. Shpg. wt., 50 lbs. 84 FU 187. NET ...... 217.85



#### **MODEL 6000 TUBE TESTER**

- Latest Version 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 identi-

CRT TESTER ADAPTER. 1 lb.

84 F 184. NET.....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 An automatic inducial conductance time 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 eliminates chance for error. Features "Tailord Test", schools under study execution. lored Tests"-checks under actual operating conditions according to application. For example, a 6SN7 can be tested either as an 87 FU 186. NET.....

#### **MODEL 660 DOT-BAR GENERATOR**

Compact, portable white dot-bar color display generator designed for "on-the-spot" 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 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, 10½x10½x5/x. For operation from 105-125 v., 50-60 cycle AC. Shpg. wt., 20 lbs.

SERVICE, INDUSTRIAL AND LABORATORY INSTRUMENTS 455A 675A

### **MODEL 770 LABORATORY SCOPE**

760

Wide-band, 5" 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 mc, 3 db down;—sensitivity, 10 rms mv/inch. Horizontal response,—3 db from 0 to 500 kc—sensitivity, 75 rms mv/inch. Sweep frequency from 2 to 30,000 cps. 14x12x18". For operation from 110-120 v., 50-400 cycle AC. Shog. wt., 60 lbs.

84 FZ 606. NET. 398.00

84 F 162. Model TVP-1 Probe. Low imped-

### **MODEL 675A WIDE-BAND SCOPE**

Wide-band, high sensitivity, 5" oscilloscope for color TV as well as FM and AM use. Features 4.5-mc bandwidth and 20 rms my/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-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 from 1 cps to 450 kc—sensitivity is 250 rms mv/inch. Sweep frequency, 10 cps to 100 kc. Has input for intensity modulation. 13x10x 16". 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 for TV servicing. Can also be used to project advertisements or signs on TV sets in store or in window. Will operate any black-and-white or color TV receiver. Portable—for on-location servicing.

on-focution serveng.

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 

### 656XC TV COLOR BAR GENERATOR

415

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-V & B-V signals. 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; 300 dots, less those in blanking; 300 dots, less those in blanking. For vides vertical and horizontal lines. Sound carrier for setting local oscillator. Leatherette-covered case. Size, 7½x16¾x18¾". For 110-120 v. 60 cycle AC. Shpg. wt., 42 lbs.

495,00 Accurate white dot crosshatch and color bar 

### **MODEL 415 VTVM**

Compact vacuum tube voltmeter. Ideal for

87 F 178. NET.......82.00

HELMON

### MODEL 209A VTVM

- Light Loading-Only 7 mmf
- Flat Response to 300 mc
- Big, Zero-Center 9" Meter

A professional-quality VTVM that includes A professional-quality V1VM that includes provisions for measuring inductance and capacitance. Large, zero-center 9" laboratory-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. megls). Measurements as low as 1/10 obs. 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 henries / ranges; inductance, 50 into 100 nentries (with conversion chart provided); db, -20 to +25 in 3 ranges; AC peak-to-peak, 0-3-12-30-120-300, 13½x16½x7". With AC and DC probes, test leads. For 105-125 v., 50-60 cycle AC. Shpg. wt., 25 lbs.

84 FU 136. NET..... PR-30KVA PROBE. For above. Extends range to 30 KV DC. Shpg. wt., 1½ lbs.

### MODEL 455A INDUSTRIAL VOM

Compact, portable VOM. Rugged design withstands hard use. Unique overload circuit cut-out and fuse system protects meter cuit 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 µ2, 0-1-10-100-1000 ma, 0-10 amps. 3x57\x81\y''. With test leads. Less batteries. Uses 1 Burgess V20 and 1 No. 2; see page 425. 51\zeta lbs.

44 F 609. NFT 66.50 

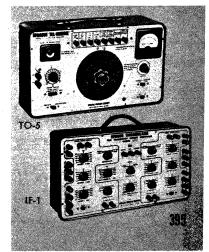
CARRYING CASE. For 455A or 415. 1/2 lb. 84 F 635, NET......9.00

### Sprague Test Instruments

### MODEL TO-5 TEL-OHMIKE

### **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). 51/4x141/4x81/2". Shpg. wt., 111/2 lbs. 







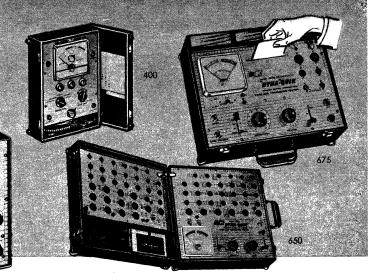
A miniature TV transmitter, specially designed to reduce time and labor in black-and-white and color TV trouble-shooting—one of the most valuable servicing aids ever developed. Injects RF, IF, video, or audio signal into TV set for easy isolation of effective stage. Supplied with slide transparencies 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.

**Television Analyst** 

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-mc FM sound channel: 400-cvcle tone generator. nel; 400-cycle tone generator.

Generates RF frequencies for channels 2-13; covers IF range from 25-45 mc. May be used as a store sales aid—you can instruyour own "sales message" slides and they will appear in black-and-white on any set to which unit is connected. 161/2x103/x03/x". 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 emission, grid bias cut-off volfage. Repairs shorts between elements, open connections to elements, and restores weak emission. Predicts probable tube life. 4½" meter. In portable, leatherette-covered case. 5x7½x 11½". For operation from 105-125 v., 60 cycle AC. Shpg. wt., 8½ 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° and color picture tubes. Checks each gun of color CRT for continuity, inter-element shorts, opens, leakage, etc. Stpg. wt., 1 lb. 9.75

### **MODEL 675 AUTOMATIC 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. 4½" meter has "Good-Bad," 0-6000-18,000 µmhos 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. 15½x12½x6". With cards and index. For 105-125 v., 60 cycle AC. Shpg. wt., 14 lbs.

87 FU 284. \$16.66 Down. NET. 166.55 dynamic mutual conductance tester. Card

### **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 4½" plastic-faced meter has "Good-Bad." 0-6000 and 0-18,000 µmhos scales. 7 and 9-pin miniature tube pin straighteners and 16 spare sockets mounted on panel 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, lugagage-type carrying case. 15¼x 15x6½". For operation from 105-125 volts, 60 cycle AC. Shpg. wt., 22 lbs. 87 FU 280. \$16.66 Down. NET. 166.55



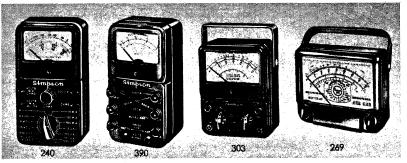
### 750 TEST EQUIPMENT CALIBRATOR

Combination voltage, resistance, and frequency standard. Quickly checks the accuracy of any test instrument. Provides the following voltages ±1% or better: DC -2, 5, 25, 100 and 300; AC-5, 25, 100 and 300. Resistances: 10, 100, 1000, 10,000, 100,000 ohms and 10 megs. Built in crystal or illustration of the control 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: 8½xxx5½". Supplied with 5-mc crystal. For 110-120 v., 60 cycle AC. Shpg. wt., 8 lbs. 87 F 253. NET.....

### **150 TRANSISTOR TESTER**

Clearly measures grounded emitter current Clearly measures grounded emitter current gain of all transistors, including power types. Uses 1 kc signal for true small signal measurement. Meter reads 0-50-250 beta; 0-500 µa 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 provides chapter of 4 collector voltages; mercular tors at 100 ms bias current. Tester also provides choice of 4 collector voltages; mercury cell power supply (cells included). Ruggedly constructed case has convenient handles for easy portability. Size, 14x8½x75%". Shpg. wt. 11 lbs. 

### 100 SHORTED TURNS INDICATOR



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, 3x5/%x21/2. Complete with battery, leads. Shpg. wt., 3 lbs.

84 F 787. \$2.84 Down. NET..... 28.37

MODEL 390 VOLT-AMP-WATTMETER. Accu-MODEL 390 VOLT-AMP-WATTMETER. Accurately measures power consumption of any 60 cycle AC appliance, radio or TV. Speeds trouble-shooting. Ranges: AC volts, 0-150 and 0-300; amps, 0-3 and 0-15; watts, 0-300, 0-600, 0-1500 and 0-3000. Has 3" meter. Size, 57\(\prec{4}\)x\(\prec{2}\)x\(\prec{2}\)x\(\prec{2}\)x\(\prec{2}\)\(\prec{2}\)x\(\prec{2}\)x\(\prec{2}\)x\(\prec{2}\)x\(\prec{2}\)\(\prec{2}\)x\

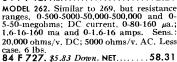
84 f 788. \$4.31 Down. NET..... 43.07 MODEL 370 AC AMMETER. (Not illus.) Ranges: 0-1-2.5-5-10-25 amperes. Built-in current transformer. 3" meter. Size: 3x57x21/2". Less leads. For measurement of 60 cycle AC only. Shpg. wt., 3 lbs.

84 F 794.. \$2.15 Down. NET..... 21.51

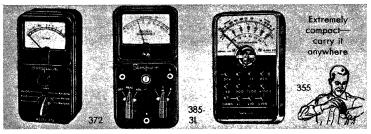
### MODEL 269 MICROAMMETER VOM AND ACCESSORIES

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 microamps, 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; resistance, 0-2000-20,000-200,000 ohms, 0-2-20-200 megohms. Size: 8x6x3". Supplied complete with test leads, 4000-v. DC probe, batteries and highly informative operator's batteries and highly informative operator's manual. Shpg. wt., 6 lbs. 84 F 726. \$8.62 Down. NET. . . . . 86.24

MODEL 303 VTVM. Compact, accurate VTVM. Ranges: AC and DC volts, 0-1,2-12-60-300-1200; 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 4½" dial scale with easy-to-read calibrations. Bakelite case, 7x5/4x3½". With DC and ACOhms probes; less RF probe (listed below). For operation from 110-120 volts, 60 cycle AC. Shpg. wt. 6½ lbs. 84 F 712. \$6.66 Down. NET. .... 66.64 MODEL 303 RT. As above, but in "roll top" case. Shpg. wt., 8 lbs. 84 F 725. \$7.45 Down. NET.......74.48 HV PROBE. Extends DC volts range to 30,000 volts. Shpg. wt., 1 lb. 84 F 715. NET......9.75 HI-VOLTAGE PROBE. Extends DC range of Model 269 to 40,000 volts. 2 lbs. 84 F 742. NET.....



MODEL 5262 CARRYING CASE. Vinyl case for 269 and 262. 7x8x4". Shpg. wt., 2 lbs. 84 F 728, NET......9.75



MODEL 372 OHMMETER. Accurate, widerange ohmmeter. 3" meter. Basic movement has a sensitivity of 85 microamperes. Ranges: 0-500 (5 ohms center), 0-500 (50 ohms center), 0-50 megohms (50,000 ohms center), 0-50 megohms (50,000 ohms center), 0-50 megohms (500,000 ohms center), With batteries and test leads. 3x574x21/x". 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: 3x57/8x21/2" Shpg. wt., 3 lbs. 87 F 117. NET. 19.55

MODEL 374 DC MICROAMMETER. 0-50-100-250-500-1000 µa. 3x5½x2½". 3 lbs. 87 F 118. NET......22.54

MODEL 385-31 TEMPERATURE METER. For serv icing refrigeration equipment. Range: -50° to +70° F. 3x5½x2½". 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 ohm/volt sensitivity on AC and DC. Checks motors, relays, control circuits, house voltages, starting switches, fuses, etc. Accuracy: ±3% on DC; ±5% on AC, 100 microamp, self-shielded and shockproof meter move ment. Handy ohms zero-adjust thumbwheel on side of case. Ranges: AC and DC volts. 0-3-12-60-300-1200. Resistance: 0-10,000 0.3-12-00-300-1200. Resistance: 0-14,000-100,000 ohms. 0-1-10 megs. Function and range selection by insertion of leads. Rug-ged, molded styrene case. Size: 23/x41/x1". Supplied complete with batteries, test 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 63.55 CASE. For above, High quality, black leather with zipper. Convenient belt loop. Shpg. wt., 3 oz.

TYPE 8600 SPARE TEST LEADS. For above. 



### TEST EQUIPMENT



**NEW** 

### Series III Model 260 VOM

Latest version of this time-tested VOM. Latest version of this time-tested VOM. Has polarity reversing switch, 5000 ohms/v. AC sensitivity, rugged printed circuit, full-wave bridge rectifier, response to 500,000 ops. DC sensitivity, 20,000 ohms/v. Ranges: DC mv, 0-250; AC and DC v., 0-2.5-10-50-250; DC µa, 0-50; DC ma, 0-1-10-100-500; DC amps, 0-10; resistance, 0-20 megs in 3 ranges. 5½x½x3½%, With batteries and test leads. Shpg. wt., 5 lbs.

87.F.111. \$4.30 Down NFT. 43.0.7 87 F 111. \$4.30 Down. NET. . . . . 43.07

MODEL 260RT. As above, but in "roll top" case. 63/4x9x43/4". Shpg. wt., 9 lbs. 87 F 112. \$4.90 Down. NET........48.95

HIGH-VOLTAGE PROBE. Extends DC range to 25,000 volts. Shpg. wt., 8 oz. 84 F 771. NET........................9.75

TYPE 0248 PROBE. Extends DC range to 50,000 volts. Shpg. wt., 8 oz. 87 F 115, NET.....

TYPE 7500 SPARE LEADS. Wt., 1 lb. 

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...... 9.55

84 F 782. Standard Case. NET...... 7.59



### NEW

Big 4 1/2" meterprovides readings at a glance

### Model 311 VTVM

Highly sensitive VTVM. Easy-to-read ranges: 0-1.5-5-15-50-150-500-1500 DC volts; 22 megohms input impedance. AC voltage: 0-1.5-5-15-50-150-500-1500; 2.2 megohms input impedance minimum. Resistance: 0-1K-10K-100K ohms and 0-1-10sistance: 0-1K-10K-100K ohms and 0-1-10-100-1000 megohms. AF voltage: 0-1.5-5-15-50-150-500-1500. 30 cycles to 100KC ±5%, Peak-to-Peak: 0-4-14-40-140-400-1400-4000. Zero center scale for discriminator alignment. Complete with single DC-AC/ohms probe. Sturdily constructed case, 7½x 5½x4½". 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. Ex-

tends DC range to 30,000 v. 1 lb. 

397



"In-or-out-of-circuit" capacitor leakage tester. Indicates leakage and measures tester. Indicates leakage and measures capacitance of paper, mica or ceramic capacitors. No unsoldering is necessary. Pulse test quickly detects "borderline" capacitors. 4½" meter. Indicates leakage in ohms—checks for direct short, open, or intermittent conditions in all types of bypass, capaling and blocking capacitors from 10. 

### MODEL 388-3L THERM-O-METER

Thermocouple thermometer. For gases, liquids or solids. Reads -50° to 1000°F, on nguing or sonds. Reads – 50° to 1000°F, on 7° scale. Has 7½-ft, general-purpose probe (Type 0190), with provisions for 3 probes. Allows temperature readings in 3 different areas by rotating switch. 6x71%x21%c°. With battery. Shpg. wt., 6 lbs. 

84 F 738. NET..... Type 0187 SURFACE TEMP. PROBE. For 388-3L and 388 above. Shpg. wt., 1 lb. 84 F 745. NET ...

Type 0190 GENERAL-PURPOSE PROBE. For 388-3L and 388. Shpg. wt., 1 lb. 84 F 746. NET..... .4.85

TYPE 5262 CASE. For 388, 388-3L. 5 oz. ...9.75

84 F 728. NET 9.75
MODEL 389-31 THERM-O-METER. Same as 388-3L but employs thermistor principle of operation. Reads -50° to 250°F. 6 lbs.

398

### NEW MODEL 466 "HANDISCOPE"

New MODEL 466 "HANDISCOPE"

New, low-priced general-purpose 5" scope.
Rugged, compact and easy to carry—ideal for AM, FM or black-and-white TV servicing. Vertical response: ±1 db from 15 to 100 kc; 6 db down at 250 kc; usable to 1 mc. Vertical sensitivity: 30 rms mv/inch max. Input resistance and capacitance: 0.1 mcg, 40 mm (at atten.x1) 0.5 mcg, 35 mm (at atten.x10). Swep range: 15 cycles to 80 kc. Maximum input voltage, 400 v. peak. Size: 12½x8x16½". With lead and operator's manual. For 110-120 v., 50-60 cycle AC Shgs. wt., 24 lbs.
87 FU 113, \$14.21 Down. NET. ...142.05 87 FU 113. \$14.21 Down. NET. .. 142.05

### **MODEL 458 COLORSCOPE**

7" dual bandwidth, oscilloscope, For blackand-white and color TV. Vernier and com-pensated decimal step attenuator. Hori-zontal sweep to 250 kc for expanding high-frequency waveform detail and color burst. Intensity modulation input. Graph screen. Frequency response: Wide-band, ±2 db to 5 Frequency response: Wide-band, ±2 db to 5 mc; narrow band, ±1 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-mc color burst. 135%x11x 171/4". For operation from 110-120 v., 50-60 cycle AC. Shpg. wt., 32 lbs. 84 FU 631. \$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., 1½ lbs. .....10.73 87 F 104. NET.....

circuit testing

### **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" dial indicates percentage of rated plate 4½" 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): 15½x11½x6". For operation from 110-120 volts, 60 cycle AC. Shgg. 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 dubect system for shorts or partial 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). 4½" meter. Supplied complete with test leads. Size: 7½x1'½x1'½". 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" "Tele-Check" Compact and portable, the "Tele-Check" speeds pix

MODEL CR-118. Portable CRT substitution unit. Saves time and 

MODEL CR-117. As above, but less 8AXP4. Shpg. wt., 9 lbs. 87 FX 296. \$2.70 Down. NET.....

### Chicago Industrial Test Meters



MODEL 431-A VOM WITH HINGED, REMOV-ABLE COVER. Accurate 18-range volt-ohm-ABLE COVER. Accurate 18-range volt-ohmeter. Rugged, military-type aluminum case withstands hard usage. 1% shunts and multipliers. Has 860 µa meter movement. Ranges: AC-DC 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 meg. (centre cole readings: 50 600 and 6000 ohms 

MODEL 431-A-LESS COVER. Wt., 31/2 lbs 84 F 309. NET......19.11



MODEL 312 VOM. Pocket-size, 6-function VOM. 2" 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, 3/%x2/%x13/4". Less test leads. For operation from 110-120 volts, 60 cycles AC. Shpg. wt., 1/4 lbs. wt., 11/4 lbs. 











232-K



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 ma and 0-0.1-1 amp; resistance, 0-500-100,000 ohms and 

### MODEL 221-K VTVM KIT

easy-to-build, sensitive VTVM for making measurements in high-resistance circuits, 20 ranges, with DC input resistance of 25 megohms, 4½" meter is protected against burnout. Includes zero center for alignment of FM and TV discriminators. 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; db -20 to +55. Tubes used: 6H6, 6SN7; and 6X5 rectifier. With leads, less solder, 6x9%c35". For 105-125 volts, 50-60 cycle AC Shop wt 10 lbs

cycle AC. Shpg. wt., 10 lbs. 25.95 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" 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: 6/4x33/4x2". Shpg. wt., 3 lbs.

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. MODEL 526. As above, but factory-wired.

### **MODEL 232-K VTVM KIT**

MODEL 232-K VTVM KIT

A high-quality, moderately-priced service instrument. Balanced-bridge circuit provides accuracy and stability. Meter movement protected against burn-out. Easy-to-read 4½" scale. 1% multiplier resistors. Easily calibrated without removal from case. "Uni-Probe" provides convenient 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-yolts, 0.4-14-42-140-420-1400-4200 volts; DC/rms volts, 0-1.5-5-15-50-150-500-1500 volts; resistance 0 to 1000 megvolts; DC/rms volts, 0-1.5-5-15-30-150-500-1500 volts; resistance 0 to 1000 megohms in 7 ranges. Has zero-center scale for TV and FM discriminator alignment. Tubes: 12AU7, 6AL5, selenium rectifier. Size: 7x4x5". Less solder. For 105-125 volts, 50-60 cycle AC. Shpg. wt., 7 lbs. 

MODEL 232. As above, but factory-wired. 

### NODEL 249-K DELUXE VTVM KIT

As Model 232-K, but has 7½" meter. 8½x13x5". Less solder. Wt., 9 lbs. MODEL 249. As above, but factory-wired. 84 F 660 NET......59.9 5

### 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 7½" meter. 13½xxx6". Shpg. wt., 11 lbs. 34.95

### 666-K TUBE & TRANSISTOR TESTER KIT

This versatile tester indicates mutual con-

MODEL 666. As above, but factory-wired. 

### 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

84 F 662. Model PRF-25. 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. 

MODEL 625-K TUBE TESTER KIT Short and open test for each element. Full-vision, 41/2" meter with Replace-Weak-Good scale. An overload bulb indicates transform-

MODEL L-1. Lid (cover) for 625-K or 625. 

### 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. 

MODEL CRA-110. Same as above but with 

### Model 565-K **Multimeter** Kit

- Sensitivity, 20,000
- Ohms/V. • 31 Ranges
- Bakelite Case

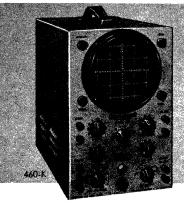


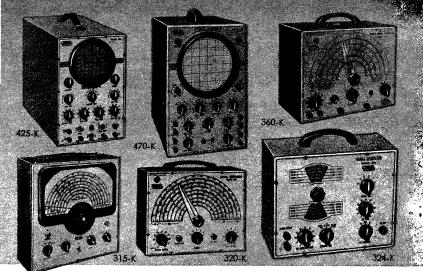
Performance-proven, wide-range multimeter for radio-TV servicing, etc. Features easy-to-read, 4½" meter—50-microamp meter movement. High-impact bakelite case with carrying handle.

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 amps; resistance, 0-2000-200,000 ohms and 0-20 megohms. Five db ranges, -12 to +55. Size, 6\[^4\lambda\xi\_0

83 F 172. NET.......24.95 MODEL 565. As above, but factory-wired. 84 F 346. NET......29.95 MODEL 555. As above, but factory-wired. 84 F 391. NET......34.95

# TEST EQUIPMENT





### MODEL 460-K 5" OSCILLOSCOPE KIT

- For Black and White and Color TV
- 4-Step Attenuator in DC and AC
- Vertical Sensitivity: 25 mv/inch Built-in Voltage Calibrator

Wide-band scope for lab and color TV use.

MODEL 460. As above, but factory-wired 



### MODEL 368-K SWEEP & MARKER **GENERATOR KIT**

GENERATOR KIT

Sweep generator and marker for highly accurate alignment of FM. color and blackand-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 mc. Supplied with built-in 4.5-mc crystal marker for oscillator. Provides dual markers for RF or IF alignment. Provision for adding external marker. Continuously variable 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: 

MODEL 368. As above, but factory-wired.

### MODEL 425-K 5" OSCILLOSCOPE KIT

For AM, FM and TV. Push-pull outputs 

### MODEL 470-K 7" OSCILLOSCOPE KIT

Push-pull amplifiers and cathode follower 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 ±2 db from 10 cps to 1 mc with sensitivity of 0.1 volt rms/inch, horizontal amplifier, ±2 db from 10 cps to 500 kc with sensitivity of 3 volt rms/inch Input inpedance; vertical 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. MODEL PSD. As above, but factory-wired. MODEL PD-K. Direct Probe Kit. MODEL PD. As above, but factory-wired. MODEL PLC-K. Low Capacity Probe Kit. 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. 10x8x4½". With instructions. Less solder. For 105-125 v., 50-60 cycle AC. MODEL 322. As above, but factory-wired.

### 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 mc. Crystal 

MODEL 360. As above, but factory-wired. 84 FU 342. NET......49.95

### **MODEL 315-K DELUXE** RF SIGNAL GENERATOR KIT

## 320-K RF SIGNAL GENERATOR KIT

Well-designed circuit uses a stable Hartley oscillator, Covers 150 kc to 34 mc on fundaoscillator. Covers 150 kc to 34 mc on fundamentals—to 102 mc on harmonics. 400-eps modulation. Has 9" dial calibrated in 7 bands. Complete with tubes, portable case, parts, shielded cable, instructions, etc. Less solder. 10x8x4%". 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 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 kc, 1.2-3.5 mc, 3.5-11 mc, 11-37 mc and 37-145 mc. One harmonic band covers 111-435 mc. Calibration accuracy is ±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. Coltrol for use with external modulator. Colpitts RF oscillator is directly modulated by cathode follower. Fine and coarse RF at-

MODEL 324. As above, but factory-wired. 

# Eico Test Equipment Kits









944-K

377-K

### 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, 0-7.5, 15, 150, 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" meter. Has handsome, etched aluminum panel and black bakelite case. With leads. Less solder. Size, 6½x 3¾x3½". Shpg. wt., 3 lbs.

MODEL 540. As above, but factory-wired. 

### 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 prinyokes, speakers, etc. Features grid-dip principle and separate calibration for air and iron-core flybacks to assure accurate testing. Has easy-to-read 4½" meter with 3 separate colored scales. Handsome, satin finish aluminum panel. Housed in sturdy gray wrinkle steel case with convenient carrying strap. Size, 8½x5x5". Less solder. For operation from 105-125 volts, 50-60 cycle AC. Shpg. wt., 5 lbs.

83 F 184. \$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

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, 90, 22.5, 45, 6.7, 5.7, 90, plus a spare position. 3½" meter calibrated: Good, Usable and Bad. Black bakelite case and aluminum panel. 6½x3½x2". Less solder. With test leads. Shpg. wt., 2 lbs.

MODEL 584-K BATTERY TESTER KIT

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 cps; 50-400 cps; 250-2000 cps; all variable. Freq. resp. 0-30,000 cps 2 db; usable to 300,000 cps. Size, 6x8x6″. Less solder and leads. For operation from 105-125 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**

MODEL 377-K AUDIO GENERATOR KIT
Provides sine and square waves. 1% resistors in Wien bridge-type oscillator circuit. Sine wave: 20-200,000 cps in 4 bands, ±1.5 db. from 60-150,000 cps, less than 1% distortion. Square wave: 60-50,000 cps in 4 bands, 5% tilt at 50 cps, 5% rounding at 50,000 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 ±3% or 1 cps, whichever is greater. 6½" dial has 0-100 reference scale. 7½x11½x 7½". 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

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. Balanc-ing control dial is calibrated to indicate tube condition directly. Supplied with two test sockets, each with 2½ 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. 6½x9½x3″. For 105-125 volts, 50-60 cycle AC. Shpg. wt., 6 lbs.

MODEL 630. As above, but factory-wired. 







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. 71% x5% x5% x5% x5% for 105-125 v., 50-60 cycle AC. Shpg. wt., 7 lbs. 

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. 7/yx5x4/y. For 105-125 v., 50-60 cycle AC. Shpg. wt., 4 lbs.

MODEL 352. As above, but factory-wired. 84 F 651. \$2.00 Down. NET.......19.95



### 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-K L-C filter to aid servicing of transistor sets. Can be used as a battery charger or eliminator. Features: 2 DC ranges with the result of the results 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.

overload relay in secondary.

Specifications: low range, 0.8 v., 10 amps continuous, 20 amps intermittent, 0.3% ripple at 2 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; voltimeter range, 0.20 v.; ammeter, 0.10, 0.20 amps. With steel case, parts, and instructions. Less solder. Size: 8½x10½x74%. For 105-125 volts, 50-60 cycle AC. Shpg. wt., 19 lbs.

83 FX 875 \$3.00 Down NET. 38 9.5

83 FX 875. \$3.90 Down. NET..... 38.95 MODEL 1060. As above, but 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 pernal 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 channels—magic eye and 5° PM speaker. Calibrated wattmeter circuit indicates wattage consumption in unit under test. Has noise localizer circuit. Aluminum panel. grav localizer circuit. Aluminum panel, gray wrinkled steel case. Size, 9x10x5". 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







495



1140

1120

### MODEL 950B-K RESISTANCE-CAPACITANCE 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 exceptions of the state o pacitance, 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, 10x8x4½". For 105-125 volts, 50-60 cycle AC. Shpg. wt., 10 lbs. 

MODEL 950B. As above, but factory-wired. 84 F 387. NET......29.95

### MODEL 1171-K RESISTANCE DECADE BOX KIT



MODEL 1171. As above, but factory-wired. 84 F 388. NET......24.95

### MODEL 1100-K RESISTANCE SUBSTITUTION BOX KIT

POPULAR EICO TEST EQUIPMENT

- Values from 15 Ohms to 10 Megs
- **All I-Watt Resistors**

Enables rapid substitution of resistances for 

MODEL 1100. As above, but factory-wired. 84 F 652. NET........................9.95

### **MODEL 495-K SCOPE VOLTAGE CALIBRATOR KIT**

Injects a calibrated, semi-square wave on 

84 F 384. NET......17.95

### MODEL 1180-K DECADE **CAPACITOR BOX KIT**



Useful in every laboratory for Useful in every laboratory for determination of proper capacitance values by substitution. Range: 100 mm to .111 mfd in steps of 100 mmf; voltage rating, 350 volts DC continuous. Mica capacitors are ±1% Zero capacitance approx. 7 mmf. Positive detent, ceramic wafer switches. Low-loss lucite terminal board. 9x3½x3½". Less solder and leads. Shpg. wt., 3 lbs.

MODEL 1180. As above, but factory-wired. 84 F 656. NET......19.95

### 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-K and 1120-K substitution units. 1100-K and 1120-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-K and 1120-K for specifications.) Less solder and leads. Show ut 3 the solder and leads. Shpg. wt., 3 lbs. 

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 

MODEL 1120. As above, but factory-wired. 84 F 665. NET.................9.95

### MODEL 710-K **GRID-DIP METER KIT**



Extremely compact, accurate grid-dip meter kit-may also be operated as oscillating detector or wavemeter. Covers 300 kc to 250 mc in 7 overlap-

MODEL 710. As above, but factory-wired. 87 F 353. NET......49.95

### PYRAMID AMPROBES—"SNAP-AROUND" METERS







Amprobes measure current without breaking the circuit or the 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 ±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. measure resistance.

MODEL RS-1. Switch permits range selection by a flick of the thumb—only one scale is visible at a time. Reads 0.5-15-40-100 amps and 0.150-600 volts, AC. Impact-proof case has non-slip ribbing. Circular conductor capacity: 1½6" dia. Scale length: 2.25". Overall length: 73/32". With test leads and leather case. 2 lbs.

MODEL RS-3. Similar to Model RS-1 at left. Reads 0-5-15-40-100-300 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. 5.76 NET 

B AMPROBE JUNIORS. Small versions of Amprobe "snap around" meters. Circular conductor capacity:  $\frac{1}{2}$ ". Scale length: 1.8". Overall length: 434". 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				l	

MODEL P-1 LEATHER CARRYING CASE. For Amprobe Juniors. 12 oz. 

# Radio City Products Test Equipment











**MODEL 750 GENERATOR** 

Combination signal, marker and pattern generator. Covers all UHF-VHF channels for FM and TV receiver servicing. Cocks and aligns front ends, sound IF's and picand angins front ends, sound Ir's and picture traps, linearity, sync circuits, sweep circuits, focus and deflection. Accuracy of 0.5%. All VHF frequencies are covered on fundamental. Ranges: 9-11, 21-47, 54-220, 465-900 and 650-900 mc. RF's and IF's are clearly calibrated on large etched dial. Proclearly calibrated on large etched dial. Provides horizontal or vertical bars or crosshatch pattern on all channels. Internal modulation: 360 cps and 141.75 kc. Provides unmodulated carrier signal. 4½" dial. With leads and instructions. 10½x6½x 5½6". For operation from 105-125 volts, 60 cycle AC. Shpg. wt., 10 lbs.

### **MODEL 327P TUBE TESTER**

A modern, accurate tube tester. Checks tubes currently used in radio and TV receivers. Will check transmitting, hearing receivers. Will check transmitting, hearing aid, ballast, gaseous rectifier and tuning indicator types. Checks tubes for emission and shorts. Slide-lever switches permit fast, easy testing. Will also check black-and-white picture tubes when used with the PTA-1 CRT adapter listed below. Dim or weak black and white tubes can be reactivated with this tester. "Finger-flip" tube index—permits rapid insertion of new tube data.3-color meter provides POOR-7-GOOD tests. CRT scale indicates DIM-BRIGHT readings. readings.

In a rugged oak combination counter-portable case. Size 9½x11x5½". For operation from 105-125 volts, 50-60 cycle AC. Shpg. 84 FU 339. NET......50.91

MODEL PTA-1 CRT ADAPTER. Picture tube adapter for black-and-white tubes. Permits 

### MODEL 655 DO-ALL VTVM

Highly dependable, AC-operated VTVM. 41/2" meter reads peak-to-peak and rms waveshapes. 7 ranges on all functions. ranges on all functions. DC volts, 0-1.5-5.15-50-150-500-1500. Input resistance, 11 megohms. Acuracy on DC ranges ±3%. AC voltage ranges: peak-to-peak, 0-4,2-14-42-140-4200; rms, 0-1.5-5-15-50-150-600-1500. Accuracy on AC 500-1500. Accuracy on AC



MODEL HVMP-2 HIGH VOLTAGE MULTIPLIER PROBE. For use with above. Extends DC volts range to 30 KV. Shpg. wt., 1 lb.

### 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 flycapacitors; tests for continuity in all fly-back 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 convergent under test 5. exercises. 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 scale for transformers. In steel case. 10x6x 5". For operation from 105-125 volts, 50-60 cycle AC. Shpg. wt., 8 lbs. 41,94

### MODEL 555 OSCILLOSCOPE

Wide-band 5-inch oscilloscope for black-and-white and color TV servicing. Push-pull, 3-stage vertical amplifier has 25 my/ 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, retroes blacking built in core size control; retrace blanking; built-in spot size control and versatile 5-way binding posts. Metal cabinet. Size: 9½x12½x18″. For operation from 105-125 volts, 50-60 cycle AC. Shpg. wt., 23 lbs. 

### **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 ac-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 4½" meter indicates "GOOD-

Illuminated 4½" meter indicates "GOOD-?-REPLACE," plate conductance, grid con-ductance, and transistor gain. Lever switch-es preyent obsolescence. Transistor current gain is measured under full load by a unique constant-current bridge circuit. Separate controls for transistor tests; spe-Separate controls for transistor tests; spe-cial diode limiter protects meter against shorted transistors. Safety buttons protect meter against misuse. Easy-to-read, fast-action 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, 15½x14x5¾". For 105-125 v., 50-60 cycle AC. Shpg. wt., 17 lbs. 

### MODEL 480 1000 OHM PER VOLT VOM

• Low-Cost, Highly Versatile Multitester



### 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 indicators are responsed to the stage gain measurements.

cator 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, 7½x10½x6½". With audio probe. For 110-120 v. 60 cycle AC. Shpg. wt., 11 lbs. 84 FX 197. NET..... 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.

# 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-the-spot testing. Self-shielded for checking in spot testing. Sen-sinetuct for freeking 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 μa, 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. 4½x2¾x1¾6". Supplied complete with leads, batteries and instruction manual. Shpg. wt., 1 lb. 

### **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. 4½x3½x1½". 2¾ lbs. 87 F 152. NET. 

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., 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 5 1/2" Meter
- Uses 1% Precision Resistors

Popular, accurate VOM for industry, etc. Has 5½" meter with 4½" scale. Uses 1% resistors, each sealed in its own molded com-partment. "Unit construction"— all resistpartment. "Unit construction"—all resistrors, 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 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. 7½x5½x3½x". With batteries and 50" leads and instructions. Wt., 6 lbs. leads and instructions. Wt., 6 lbs.

630-A



631



630-NA



625-NA

630-PL





660

MODEL 630-A VOM

### 84 F 574. NET......53.41

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 +560; ohms, 0-1500-15,000; megohms, 0-1.5-150. 3½"x5½x7½". With batteries and 48" leads with alligator clips. Shpg. wt., 5 lbs. 63.21 84 F 546. NET......63.21

MODEL 631 VTVM-VOM

### MODEL 630-NA VOM

### 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 μa, 0-1-10-100-1000 ma. and 0-10 amps; resistance, 0-2000-200,000 ohms, 0-40 megs. AC volts, 0-2.5-10-50-250-1000-5000 at 10,000 ohms/volt. 5½x2½x6″. With batteries and leads. Wt., 6 lbs.

84 F 575. NET......53.41 MODEL 629 CASE. Leather case with handle. 

### NEW MODEL 630-PL VOM

NEW MODEL 630-PL VOM

Portable VOM. 5½" meter with 4½" scale.

AC and DC v., 6 ranges each, to 5000 v.

(DC at 20,000 ohms/v., AC at 5000 ohms/v.); DC current, 0-100 µa, 0-10-100-1000

ma, and 0-10 amps; resistance, 0-1000-10,000 ohms and 0-1-100 megs; db, -20

to +75 in 7 ranges; output v., 0-3-10-50-250-1000 at 5000 ohms/v. Accuracy: ±3%

on DC (2.5 v. to 1000 v.); ±4% on AC (3 v. to 1000 v.); ±5% on AC-DC (at 5000 v.).

7½x\$½x3¹½". With batteries, 50" lead, test prods. Shog. wt., 61bs. test prods. Shpg. wt., 6 lbs. 

MODEL 630-APL. As above, but has 4.66'' mirrored scale;  $\pm 112'\%$  accuracy on DC (2.5 v. to 1000 v.);  $\pm 3\%$  on AC (3 v. to 1000 v.). Shpg. wt., 6 lbs.

87 F 151. NET......53.41

### MODEL 660 LOAD-CHEK

Wattmeter-voltmeter. Detects overloads and underloads. Load-Chek shows if power drawn from line exceeds or is less than the proper value. Power cord of unit under test plugs into receptacle on Load-Chek. Two 3" meters provide simultaneous wattage and velters redirect. Two wattrages 

### MODEL 650 VTVM

H. V. PROBE. 0-50,000 v. DC. Wt., 8 oz 84 F 564. NET......14.21 MODEL 659 LEATHER CARRYING CASE, Shog, wt., 1½ lbs. 84 F 559. NET......10.29

### VOM ACCESSORIES

HIGH-VOLTAGE PROBE MODEL T-79-70. For Series 630 and 631 meters. Extends DC range to 30,000 volts. Shpg. wt., 8 oz. MODEL 639-N CASE. Leather carrying case for Series 630 and 631 meters. Meter can be read while in case. Shpg. wt., 1½ lbs.

9.4 5 60 NFT

9.31 

Allied is Headquarters for Test Equipment

# Triplett, Millen & Pyramid Test Equipment

# 3441-A





### TRIPLETT TEST EQUIPMENT



666-R





3423

3413-B

### MODEL 3441-A TV-FM OSCILLOSCOPE

MODEL 3441-A TV-FM OSCILLOSCOPE
Wide-range 5" TV-FM oscilloscope. Suitable
for color TV. Push-pull vertical and horizontal
output amplifiers. 4.5 megacycle bandwidth,
usable to 9 mc. Vertical sensitivity: 10 rms
mv/inch maximum. Horizontal response, 20
cps to 150 kc. Peak-to-peak, 21% volumeter
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:
151/gx16x11/gx". For 110-120 volts, 50-60 cycle
AC. Shpg. wt., 42 lbs.
244.51
9898 Crystal Probe. For use with above.

9989 Crystal Probe. For use with above.

### **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 NPN-type transistors. Single switch selects 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" leads and batteries. Molded plastic case, 6x5/x2/y'. Removable black leather carrying handle. Shyg. wt., 3 lbs. 28.91

### MODEL 666-R VOM

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 range-function switch selects all ranges—minimizes chance of incorrect settings and burnouts. Handy, recessed ohms-adjust thumbwheel. 3" meter. Sensitivity, 1000 ohms-per-volt. Accuracy, ±3%. Ranges: DC and AC volts, 0-10-50-250-1000-5000; DC ma, 0-10-100; DC amps, 0-1; ohms, 0-300-300,000; megohms, 0-3. Output volts; 0-150-250-1000; jack with capacitor in series with AC ranges. Employs replaceable, pre-calibrated AC rectifier. Banana jacks at top of panel. Model black plastic case, 5%x 3/kx2%c. With batteries and 48" test leads, alligator clips, etc. Shgz. wt., 4 lbs. 28.91

Model 669 Case. Black cowhide case for Model 666-R or 666-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, low-power transmitting types, etc. Includes tests for series-string tubes. Reads mutual conductance directly in micromhos; also BAD—?—GOOD scale. Tests selenium rectifiers, crystal diodes and transistors. Direct leakage measurement on meter from 0 to 10 megs between any one element and all other elements. Has 0-100 scale for thyratron tubes. Checks pilot lamps and continuity of motors, etc. Checks for shorts and leakage between elements. Indicates gassy 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, 143/4x1834/xx613/4. For operation from 110-120 v., 50-60 cycle AC. Shpg. wt., 24 lbs.

84 FU 541. NET. 195.51

### **MODEL 3413-B TUBE TESTER**

- Top Performance at Low Cost
- **Dual Sensitivity Neon Short Test**
- Easy-to-Read, 3-Color 6" Meter

An extremely versatile tube tester. Checks all radio receiving tubes, including series-string types, ballasts, miniatures, and hearing aid types. Dual-sensitivity, neon-type short test—shows 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 future 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" meter with 3-color scale. Accurate BAD—",—GOOD tests. Built-in, Speed-Roll chart. Counter-portable metal case; handle and removable cover. Size, 151½x11½x x6½". For operation from 110-120 volts, 50-60 cycle AC. Shpg. wt., 28 lbs. 77.9|

T-2247-BV Adapter. Adapts models 3413-B and 3423 for picture tubes. Shpg. wt., 1 lb. 84 F 539. NET.................5.29

### MODEL 666-HH VOM



3432-A

### **MODEL 3438 DOT GENERATOR**

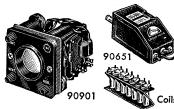
MODEL 3438 DOT GENERATOR

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 cps) and vertical bars (189 kc, crystal-controlled); white dot
pattern; and square block cross hatch. Crystal
controlled accuracy for varying colors through
approx. 330° of the color spectrum with any
combination of the function selectro. Will
produce red, blue and green color spectrum and
colors corresponding to R-Y, B-Y, I and Q axis.
Has both positive and negative video outputs.
Completely self-contained. Includes shielded,
coax output cable. 6/kx11/kgx15/½. For operation from 110-120 v., 50-60 cycle AC. Shgs.

\*\*Transport of the control of the color of 84 FU 598. NET.......224.91

### **MODEL 3432-A SIGNAL GENERATOR**

### MILLEN TEST EQUIPMENT



Model 90901 1" Scope. For Amateur or inwoodel 99901 "Scope. For Amateur or industry. Use as: Modulation indicator, null indicator, Lissajous screen, etc. Controls: Intens., Vert. Ctr., Hor. Ctr. Sens.: Vert., rms v/mm; Hor., 2.5 rms v/mm. Requires 600-950 v. DC @ 3.2 ma. and 6.3 v. @ 0.6 a. 2½x2½x4½%. With 1CPI tube. Shpg. wt., 2 lbs. 38.25

Model 90651 Grid Dip Meter. Useful as oscillator, detector, wavemeter, etc. 2" meter. 7 direct reading free, scales and 0-100 scale. Plug-in coils supplied cover 1.7 to 300 mc. 7x33/x33/x". For 110-120 v., 50-60 cycle AC. Terminals for battery operation. Shpg. wt., 3½ lbs. 84 F 962. NET.

### LOW FREQUENCY COILS FOR GRID DIP METER

No.	Туре	Range KC	EACH
84 F 966	46702	925-2000	6.72
84 F 967	46703	500-1050	
84 F 968	46704	325-600	
84 F 972	46705	220-350	

### PYRAMID ANALYZER

In-Circuit Checks

Versatile and Easy to Use



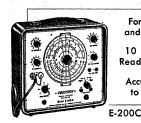
Model CRA-2 Capacitor-Resistor Analyzer. An extremely versatile, multipurpose capacitor-resistor analyzer. Perfect for the lab, radio-TV servicing and industrial applications. Makes quick "in-circuit" checks for open and shorted capacitors, intermittents, etc. Also measures resistance, capacitance, power factor, leakage and insulation resistance.

and insulation resistance.

A combination Wien and Wheatstone bridge accurately measures capacitance from 10 mm to 2000 mfd in four ranges, at line frequency. Calibrated potentiometer measures power factor of wet or dry electrolytic 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 megohns at line frequency. Highly accurate, 4½ meter provides readings in two ranges of insulation-resistance measurements for ceramic, mica, air and paper dielectric capacitors. Two milliammeter ranges give direct leakage-current readings (from 0 to 50 ma) with rated working voltage (0-600) applied to the capacitor. Rotary switch selects test function and range. Push-button for safe discharge of capacitors. 12x16½x9°. For 110-120 v., 50-60 cycle AC. Shpg. wt., 15 lbs.

84 FU 642. NET.

# **Precision Test Equipment**



For Lab and Shop

10 Easily Read Bands

Accuracy to 1%



E-400





960

ES-550

### MODEL E-200C DELUXE SIGNAL-MARKER GENERATOR

87 FU 000. Only \$9.31 Down. NET.....

### MODEL E-400 DELUXE SWEEP GENERATOR

Deluxe portable sweep generator for television and FM servicing. Frequency range is 3-900 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 mc and 0-15 mc. Built-in base-band sweep—frequency widths: 0-1 mc and 0-15 mc. Built-in base-band sweep—frequency widths: 0-1 mc and 0-15 mc. Built-in base-band sweep—frequency built-incompation may be received. baint sweep—requency within and via me, buttern dase line reference. Self-contained multiple crystal marker-calibrator. Supplied with 2 crystals (2 mc and 4.5 mc). Special socket accommodates 4 crystals. Full vision, 6½ inch dial. Phasing control. Internal retrace blanking circuit simplifies alignment—eliminates return traces. Employs ceramic and air dielectric capacitors; mica-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, 11½x13x6½°. For operation from 110-120 volts, 50-60 cycle AC. Shpg. wt., 24 lbs.

### 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 Lebo, 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 5½°, 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, Isx10½x6½″. 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. New, expertly engineered portable transistor and crystal diode test-

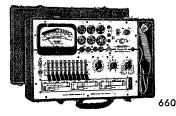
### MODEL ES-550 DELUXE 5" OSCILLOSCOPE

Excellent for servicing and lab work, including color TV; offers a Excellent for servicing and lab work, including color 1 V; offers a 5-mc bandwidth. Push-pull vertical amplifier has 10 mv/inch sensitivity; response within 1 db, 10 cps to 3.5 mc; (3 db at 5 mc). Push-pull horizontal amplifier rated 100 mv/inch sensitivity; response within 1 db, 20 cps to 1 mc (3 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. 81/4x141/2x181/2". For 110-120 volts, 50-60 cycle AC. Shpg. wt., 47 lbs.

87 FU 002. \$23.03 Down. NFT. 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.

### **TUBE AND TRANSISTOR CHECKERS**



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 forodes 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 24-position rotary switch for selection of filament voltages from 34 to 117 volts. 5½" meter; accuracy to ±2%. Smooth action, 3-window roll chart has "Tube Finder" feature Leatherette-covered carrying case feature. Leatherette-covered carrying case with handy tool compartment; hinged, removable cover. 18x10½x6½". For operation from 110-120 volts, 50-60 cycle AC. Shpg. wt., 16 lbs. 87 FU 028. \$10.68 Down. NET....106.82



**MODEL 640 CATHODE** CONDUCTANCE TUBE TESTER

Here's a moderately priced cathode conductance tube tester—checks merit, leakage and shorts in TV, FM and AM tubes; tuning eyes and gas rectifiers; etc. Checks TV picture tubes with Model PTA and PAA adapters (listed under Model 10-60, at right). Designed to test each section of multi-section and ballast resistor-type tubes. Smooth-action, 24-position rotary switch selects filament voltages from ¾ to 117 volts—minimizes obsolescence due to 117 volts—minimizes obsolescence due to new tube releases. Dual short-check sensitivity for standard and special short tests. Has handy built-in 7 and 9-pin straighteners. Easy-to-read 5½" meter accurate to ±2%. High-speed, 3-window roll chart locates desired reference easily, quickly with "Tube Finder" feature. Leatherette-covered, solidly constructed carrying case with 



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 regulator tubes for both voltage regulation and current limits. Ultrasensitive gas test readings directly on 50-microamp, 5½" meter. Checks actual beam current of TV picture tubes with PTA and PAA adapters, below. Special low-voltage that the best shock shock is read-activity decades. 

PICTURE TUBE ADAPTERS. For checking TV 87 F 031. Type PAA. NET..........4.90

# Precision and Seco Test Equipment

### PRECISION TEST EQUIPMENT













98-MCP

### MODEL 98-MCP DELUXE VTVM

MODEL TV-8 SUPER-HIGH VOLTAGE PROBE. For Model 88 or 98-MCP VTVM. Extends DC range to 60,000 v. 2 lbs. 84 F 681. NET.....

MODEL RF-10A HIGH-FREQUENCY PROBE, For 98-MCP listed above. Extends response to 300 mc. Shpg. wt., 2 lbs. 84 F 419. NET......14.11

### **MODEL 68 VTVM**

Highly dependable AC-operated VTVM. Accurate and versatile. Has 5 zero-center ranges for FM discriminator balancing, etc. Large, 5¼" wide-angle meter with 400-microampere sensitivity. Accuracy ±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. 0-8-32-160-800-3200.

Steel cabinet 57/8x73/4x31/2". With battery and 3-way probe. For 110-120 volts, 60 cycle AC. Shpg. wt., 7 lbs.

87 F 018. \$5.34 Down. NET......53.41

### MODEL 110 MULTIMETER

Highly useful, expertly constructed pocket-size VOM. Combines full-range instrument size 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—"on-hand" 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, 0-2000-2000,000 ohms and 0-20 megohms; db, from -20 to +70. 3½" meter with long, easy-reading scales; sensitivity 50 microamps. Full scale accuracy ±2%. Supplied complete with vinyl-plastic cover; heavy-duty, banana-plug test leads; and batteries. Size (HWD), 53/6x3/2x111/6" deep. Shpg. wt., 3 lbs.

87 F 023. \$3.38 Down. NET......33.81

### **MODEL 88 VTVM**

Highly sensitive vacuum tube voltmeter for 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 5¼" meter with easy-to-read, 3-color scales. 200 microamp sensitivity, ±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 resistences of 1000-10000 obuss. 0-1.100ance ranges: 0-1000-10,000 ohms; 0-1-100-1000 megohms. 6 zero-center DC ranges: 1200-300-60-12-6-1.2-0-1.2-6-12-60-300-1200 v. with 26½ meg input resistance. Also 6-DC v. and 6 +DC v. ranges: 0-1.2-6-12-60-300-1200, with 13½ meg input resistance. In phenolic case 5½x7x3½". With ohmmeter battery and probe. For 110-120 volts, 50-60 cycle AC. Wt., 8 lbs. 84 F 680. \$7.30 Down. NET......73.01

### MODEL 120 MULTI-RANGE TESTER

- Extra-Large 5 1/4" 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; ±2% accuracy at full scale; many other features. Ranges: AC, +DC, -DC, and output v., 0-1.2-3-12-60-300-600-1200-6000 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 µa, 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. 5¼" meter. With batteries and test leads. 53½x7x3". 5 lbs.

84 F 490. \$4.41 Down. NET. 44.05 MODEL 120M. As above, but ½% multipliers and 1% meter with mirrored scale. Shpg. wt., 5 lbs.

87 F 080. \$5.19 Down. NET.... 51.89 

MODEL TV-2B HV PROBE. Extends DC range to 30,000 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 ......98c

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/xs31/xs1". 1 lb. 

# Sloping Panel Meter 208







### **NEW MODEL 208 VTVM**

NEW MODEL 208 VTVM
Easy-to-use VTVM offering many deluxe features. Superior design includes: "shift-lever" function selector; 200 μa, 4½" sloping panel meter—protected against burn-out; 1% film-type resistors; special RETMA (ELA) 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-meg DC input resistance. Reads AC RMS and DC volts: 0-1.5-5-15-50-150-500-1500 (50 kv DC with 1100 meg probe, not supplied). Ohms: 0-1000-100,000-100,000. Megohms: 0-1-10-100-1000. Center scale reading of 10. Size, 3½x5½x8½".
With leads and battery. For operation from 110-120 v. 50-1200 

**NEW MODEL PS-2 TRANSISTOR RADIO BATTERY ELIMINATOR** 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' leads. 1\(\frac{1}{2}\text{x5''}\). For 105-125 v., 50-60 cycle AC Shor ut 114 lbs Shpg. wt., 11/2 lbs.

### NEW MODEL GCT-8 GRID CIRCUIT TESTER

### 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-7-Bad" meter shows results of dynamic mutual conductance test and cathode emission test; electron-eye indicates "control-grid-emission" test. Also checks for filament continuity, element leakage, open elements, and gassiness. Only 6x9x13½"; weight is only a fraction over 11 pounds! Handy "flip-chart" tube index. For 110-120 volts, 60 cycle AC. Shpg. wt., 14½ lbs. 

# Precise Test Equipment—Kits or Wired



- Both Emission & **Gm Testing**
- For Receiving & **CR Tubes**
- Simplified Operation



Ideal, spacesaving power kit - takes the place of 11 separate pieces of equipment.



- · Versatile, New, Precision VTVM
- Easily Read Tilting Meter
- Etched Circuit Easy to Build
- 1% Resistors

904-K

### 111 TUBE TESTER-KIT OR WIRED

MODEL 111-K. Advanced-design tube tester kit. Checks both emission and mutual con-ductance 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 

83 FU	133. NET.			/	9.93
MODEL	111W. As	above,	but	factory	-wired

84 FU 692. NET......139.95 MODEL PTA-K. CRT ADAPTER KIT. For above. 

MODEL PTA-W. As above, but factory-wired. 84 F 694. NET......4.25

### 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 v. at .75 amps. (1 amp intermittent). AC power available is 0-24 v. at 20 amps; 90-140 v. at 10 amps (1000 watts continuous) and 20 amps (2000 MODEL 713-W. As above, but factory-wired. MODEL 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. Full-sized 41/2" meter has special construction permits tilting dial up, down, or sideways for accurate readings at any angle. Dial includes zero-center scale for FM and TV 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; ±DC and AC rms v. 0-1.5-5.15-150-500-1500; AC peak to peak: 0-4.14-40-140-400-1400-4000. Resistance: 0-1000-10K-100K ohms; 0-1-10-100-1000 megohms. Complete with test leads. Size: 9½x6x5". Wt., 10 lbs. 83 F 905. NET.

MODEL 904-W. Similar to above, but factory wired and tested.

83 FU 906. NET......44.95











9071-K

### MODEL 300-K 7" SCOPE KIT

High-quality 7" scope kit. Vertical response, ±3 db up to 5 megacycles with sensitivity of 10 millivoits. Frequency-compensated vertical and horizontal stepping attenuators. Push-pull DC amplifers; push-pull horizontal. Astigmatic focus control. Linear sweep from 1 cycle to 80 kc. Internal square wave calibrator with pot. 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 saw tooth 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, 11x14x17". With all parts less solder. For 110-120 v., 60 cycle AC. Shpg. wt., 35 lbs. 83 FU 131. NET.

MODEL 960 CAPACITY ATTENUATOR PROBE. For use with Models 300 and 308 oscilloscopes. Range, through 100 mc. Input capacity, 7 mmf. Shpg. wt., 1½ lbs. 84 F 691. NET......5.95

MODEL 308-K 81/2 " SCOPE KIT

Unusually fine, easily assembled, 8½" scope kit at very moderate cost. Many deluxe features; excellent for any radio-TV servicing or laboratory application. Edge-illuminated 8½" screen and magnifier positioner permit extremely accurate waveform analysis. Bridge type horizontal and vertical positioning does not vary tube characteristics at thick productions of the screen state. type nonzontal 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; ±1.5 db to 5 mc. Sensitivity, 10 mv/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, 11x14x19". With all parts, wire, tubes and instructions; less solder. For operation from 110-120 60 cycle AC. Shpg. wt., 36 lbs. ......129.50

116 TUBE TESTER-KIT OR WIRED

MODEL 116-K. Accurate tube tester kit for rapid testing of all receiving-type tubes and transistors. Multiple-socket design permits ing-type tubes and transistors. Multiple-socket design permits testing of up to five similar tubes in 20 seconds. Makes emission Gm, gas, life, and short tests. Checks individual sections of multi-section tubes. Cover chart lists all popular tubes—gives switch settings. Sturdy wood case,  $7\sqrt{2} \times 16\sqrt{2} \times 14\sqrt{2}$ . Complete with instructions. For 110-120 v., 60 cycle AC. Shpg. wt., 16 lbs.

83 FU 104. NET..... MODEL 116W. Similar to above but factory wired. 84 FU 695, NET......119.95

MODEL 9071-K VTVM KIT

Deluxe professional VTVM kit. Features: 7½" meter, voltage regulation, 1% resistors, zero-center. Ranges: DC/AC volts, 0-5-25-250-500-1000; ohms, 0-1K-10K; megs., 0-1-10-1000; db, -20 to +55. Steel cabinet, 12x8½x5". With test leads and instructions. For 110-120 v., 60 cycle AC. Shpg. wt., 11 lbs. 

MODEL 912A RF PROBE. For above. Extends RF range to 250 mc. With shielded cable and connector. Shpg. wt., ½ lb. 87 F 260. NET.....

### 630 SIGNAL GENERATOR-KIT OR WIRED

MODEI 630-KA, RF-AF-TV signal generator and marker kit. Reaches 110 mc on fundamentals; 330 mc on harmonics. Preassembled calibrated RF heads; audio, 20-20,000 cps; cathode follower output; variable percent modulation; external modulation; speech amp.; crystal marker; RF and AF stand-by; Wien bridge AF osc.; Colpitts RF osc.; coax fittings. Also has constant output imp.; vernier tuning and complete shielding. Steel cabinet, 8x11x5". For 110-120 v., 60 cycle AC. Shpg. wt., 11 lbs. 

MODEL 630-W. Similar to above, but factory-wired. 84 FU 197......53.95

83 FU 132, NET.....

# Selected Test Equipment

### WINTRONIX ANALYZERS FOR SIMPLIFIED SERVICING









### 820

### 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 trouble-shooting 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. 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, 7x10½x6". For 105-125 v., 50-60 cycle AC. Shpg. wt., 12 lbs.

87 FU 239, \$17.00 Down. NET... 169.95

### DYNAMIC AGC CIRCUIT ANALYZER

MODEL 825, Advanced-design instrument 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 kc 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 circuit; monitors DC value of AGC circuit; monitors DC value of AGC circuit; monitors DC value of AGC circuit; monitors DC value of AGC circuit; monitors DC value of AGC circuit; monitors DC value of AGC circuit; monitors DC value of AGC circuit; monitors DC value of AGC circuit; monitors DC value of AGC circuit; monitors DC value of AGC circuit; monitors DC value of AGC circuit; monitors DC value of AGC circuit; monitors DC value of AGC circuit; monitors DC value of AGC circuit voltage and peak-to-peak value of gate pulse.

Adjustable for signal ranges to 100,000 μν. (1000-25,000; 25,000-50,000; 50,000-100,000). Has 4½" 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, 7x10½x6°. 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-megohm insulation resistance. Determines resonant frequencies from 150kc to 44 mc. May be used for RF-IF alignment of all-mayer and shortware receivers and IF align. May be used for RF-IF alignment of all-wave 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, 13x8/x6°. 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 Servicina 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 kc, ±1 db. Audio generator: 20-30,000 cps, 3 ranges; 0-5 v output. Watt-meter: 0-.15-1,5-15-150 mw and 0-1,5-150 W; response, 10 cps to 55 kc, ±1 db; spkr. loads, 4, 8, 16, or 600 ohms. Db meter: -65 to 52 db, 10 ranges.

te, 7x10½x6". With cables. For 105-125 50-60 cycle AC. Wt., 12 lbs.

87 FU 327. \$17.00 Down. NET. .. 169.95

### DYNAMIC SWEEP CIRCUIT ANALYZER

- Features Both Signal Substitution and Component Testing
- For Black and White or Color

MODEL 820. Employs signal substitution to quickly locate troubles in deflection circuits. Supplies 15-kc sawtooth for grid of horizontal output tube and 15-kc square wave for plate circuit to determine whether loss of high voltage is due to failure of oscillator or high voltage components. Built-in fly-back and yoke checker detects even one shorted turn. Provides 60-cycle sawtooth for checking vertical output stage. Use with adapter (below) to service sync circuits, With leads, 10x13½x9". For 105-125 v. 50-60 cycle AC. Shpg. wt., 10 lbs. 84 FU 637. \$7.00 Down. NET.... 69.95

MODEL 915/960 SYNC PULSE ADAPTER. Selector switches provide positive or negative vertical and horizontal sync pulses. 4x21/2x

11/4". Shpg. wt., 11/2 lbs. 

### JACKSON TEST EQUIPMENT

### MODEL 648A DYNAMIC TUBE TESTER

Easy-to-operate tube tester applies separate loads and voltages, selected to match normal operating condi-tions, 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 250K 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 trans-conductance. Portable case, 16½x13¾x6". For 110-120 v., 60 cycle AC. Shpg. wt., 23 lbs.



### **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 indication—Good or Replace—on 3" meter. Shows voltage drop across rectifier under load. Lineadjust control for precise readings. Case size,  $3\frac{1}{4}$ x7 $\frac{1}{8}$ x4 $\frac{1}{4}$ ". Supplied with test leads. 

### BARKER AND WILLIAMSON TEST EQUIPMENT



For Critical Distortion Measurements

> **Provides** Stable, distortion-Free Output



### 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, 300audio measurements. Kanges: 30-300, 3000, 3000-30,000 cps. Output: 10 volts into 500-ohm load. Less than 1% rms harmonics from 30-15,000 cps, with 500-ohm load. Response: Better than ±1 db from 30-15,000 cps. Calibration accuracy, 3% of scale reading. Rugged steel case is 133/xx 7/xx9/2". For operation from 105-125 volts, 50-60 cycles AC. Shpg. wt., 17 lbs.

84 FU 482. \$13.80 Down. NET. 138.00

### **MODEL 400 DISTORTION METER**

Sensitive field or laboratory instrument for 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, Narmonics 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: 0.003.01.03.1..3 v. AC. 0.3 v. minimum input for noise and distortion readings. Calibration accuracy: distortion, ±0.5 db; voltage, ±5% of full scale at 1000 cycles. 4½" meter. 9½x13¾x7¼". 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





BE-3



LC-3





FC-4

TRC-4

H-36

### 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 v.) and tests for continuity of conditions where its latest processing the continuity of conditions where its latest process. of appliances, motor windings, etc. Size, 3½x4x1½". With leads. For 110-120 v., AC or DC. Shpg. wt., 1 lb. 

### **BE-3 TV BIAS SUPPLY**

Isolated variable bias supply. Provides all DC battery voltages for TV alignment—especially useful for AGC trouble-shooting. Output, 0 to 18 volts DC, positive or negative, with AC ripple of less than 0.1%. Includes 28" leads. 2½x4x4", For 110-120 v., 60 cycle AC. Shpg. wt., 2 lbs. 

### 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 leak-age up to 50,000 ohms. Tests capacitors by applying 50 volts. Indicates leakage up to applying 30 viols. Inductes learned applying 50,000 ohms in electrolytic capacitors and up to 100 megohms in paper types. With leads, 7x6x31/2", 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 

### H-36 SUBSTITUTION UNIT

Handy for shop or outside service. 3-pole, 12-position switch selects any one of 36 components. Has 12—1-watt resistors, 10 to 5K ohms; 12—1/2-watt, 10K to 5.6 megs; 10—600 v. capacitors, 100 mmf. to .5 mid; 1 ea. 10 and 40 mid. 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: 2x4<sup>3</sup>/<sub>4</sub>x3<sup>3</sup>/<sub>4</sub>". Shpg. wt., 2 lbs. 87 F 269. NET..... ..12.49

### VB-2 "VIBRA-DAPTOR"



Permits any tube tester to check vibrators. Plug VB-2 into tube tester, and set for 6AX4 for 12-volt vibrators. Has sockets for 3- or 4-prong vibrators. Two lamps on the adaptor indicate condition of the vibratory Uses. condition of the vibrator. Uses 2 #51 lamps, recessed for protection. Steel case with instruc-

tions on front. Size, 3\(^3\/\delta\x1\(^3\/\delta'\). Shpg. wt., 5 oz. 

### CORNELL-DUBILIER TEST EQUIPMENT











BF-70

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 condi-tion even when connected across resistances as low as 50 ohms. Capacitors from .1 mfd as low as 30 mils. Capacitors from 1 mils to 2000 mfd can be checked for short circuit even when connected in parallel with a resistance as low as 1 ohm. Size: 7x10x5\(\frac{y}{z}\). With leads and test clips. For 110-125 volts, 60 cycle AC. Shpg. wt., 81bs. 84 F 619. \$3.80 Down. NET. . . . . 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 mmf-.005 mfd, .001-5 mfd, .1-50 mfd, .20-1000 mfd. Resistance ranges: 100-50,000 ohms and 10,000 ohms 

### **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, CDB-5, and CDC-5, ±5%; CDB-3 and CDC-3, ±3% tolerance. CDA-5 has mica capacitors; others have oil-impregnated paper capacitors. 33/x5x31/2". Wt., 4 lbs.

Stock	Mfr's	Range	Mfd./	NET,
No.	Type	Mfd	Step	EACH
84 F 452 84 F 453 84 F 455 84 F 454 84 F 456	CDB-5 CDB-3 CDC-5	.01-1.1 .01-1.1 1.0-10	.0001 .01 .01 1.0 1.0	12.25 12.25 14.55 21.51 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. 35/8x5x3". Wt., 13/4 lbs.

	Mfr's Type		Ohms /Step	
84 F 615	RDA	1-110	1	13.08
84 F 616	RDB	100-11.000	100	13.47
84 F 617	RDC	10,000-1,100,000	10,000	13.47

### **BF-70 CAPACITANCE-RESISTANCE** ANALYZER

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, 2.5-2500 ohms, 250-250,000 ohms, 250,000 ohms to 25 megs. Metal case. Gray. 11x10x5½". For 110-125 v., 50-60 cycle AC. Shpg. wt., 11 lbs.

84 FU 613. \$7.87 Down. NET...... 78.65

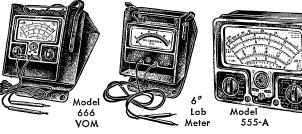
### **BF-80 FLYBACK-YOKE CHECKER**

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. 4½" microammeter; 50 microamp full-scale sensitivity. Meter scale indicates "GOOD" and "REPLACE"; scale is also numbered for quantitative readings. Sturdy metal case; recessed carrying handle. 5½x7x10". With test leads. For operation from 110-125 v., 60 cycles AC. Shop wt 914 lbs Shpg. wt., 91/2 lbs. 84 FU 618. \$5.11 Down. NET......51.10

## Phaostron Testers and Meters

### MODEL 666 VOM

- Meter Overload Protection Feature
- Illuminated Dial for Easier Reading



### **MODEL 555-A MULTIMETER**

MODEL 555-A MULTIMETER

Highly accurate volt-ohm-milliammeter. Has very large (41%) meter scale, 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. DC current ranges: 0-1.5-5-155-50-150-500-1500 milliamperes and 0-15 amperes. Resistance ranges: 0-1.50-150-500-1500 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 colie 1-10,5-5-15-50-150-500-1500 volts. Ac colie 1-10,5-5-15-50-150-500-1500 volts. Ac decibel ranges —16 to +56. Meter movement is protected up to 1000 times overload by a rectifier network. Supplied complete with probes and batteries. Size, 44%x0/x21/x°. Shpg. wt., 5 lbs.

44.05

MODEL 555-CC LEATHER CARRYING CASE. Shpg. wt., 6 oz. 7.79

84 F 686. NET...

DC MILLIAMMETERS

### 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,  $\pm \frac{1}{2}$ %, except \* $\pm 1$ %. Scale size, 4.37°. With test leads. †Range switch.  $3\frac{3}{4}$ x6\sqrt{8}x7\sqrt{7}". Shpg. wt., 5 lbs.

Stock No.		Ranges	NET
67 F 736	DC Milliameter AC Voltmeter* DC Current Meter†	0-1 0-150 0-50-150-500 microamps;	58.80 58.80
67 F 738	DC Voltmeter† DC Voltmeter†	1.5-5-15 milliamps 0-0.1-0.5-1-5-10-50 0-5-15-50-150-500-1500	137.20 91.14 91.14

### **CUSTOM METAL-CASED PANEL METERS**

Rectangular Custom Panel Meters. (Not illustra-d.) Combine dependable performance with high-style be Hectangular Custom Panel Meters. (Not illustrated.) Combine dependable performance with high-style functional 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, ±2%; all others, ±1%. Flange size, 41½xx6½"; barrel depth, ½%" barrel dia. 21½%". Solid black finish. Av. shpg. wt., 2¾ lbs. 4½" 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, ±2%. Flange, 4½% +2½", Elack finish. Av. shgg. wt., 2¼ lbs. 4½" meters finished in black with polished chrome besel available on special order. Write for prices and delivery.



D	С	٧	О	L	N	۱E	TE	R

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D	41/2	" Rectan	gular		6" Rectangular			A½" Rectangular			6" Rectangular						
Range Volts	Stock	N	ET EAC	1	Stock		NET EAC	Н	Range Ma	Stock	1 1	NET EAC	Н	Stock	l N	IET EACH	1
Voits	No.	1-9	10-24	25-Up	No.	1-9	10-24	25-Up	IVIa	No.	1-9	10-24	25-Up	No.	1-9	10-24	25-Up
0-10 0-15	67 F 709 67 F 758	16.46	14 92	13.99	67 F 725 67 F 768	21.61	19.45	18.36	0-1 0-5	67 F 704 67 F 756	1.E. 2.4	13.72	12.04	67 F 720 67 F 766	20.43	18 38	1736
0-50	67 F 710	10.40	14.02	13.77	67 F 726	21.01	17.43	10.30	0-10	67 F 757	13.24	13.72	12.70	67 F 767	20.43		
0-150 0-300	67 F 711	16.46	14 82	13 99	67 F 727 67 F 728	21.61	19.45	18.36	0-50 0-100	67 F 705 67 F 706	15.24	12 72	12.04	67 F 721 67 F 722	20.43	18 38	17 36
0-500		10.40	14.02	13.77	67 F 729	21.01	17.45	10.50	0-500	67 F 707	13.24	13.72	12.90	67 F 723	20.45	10.50	

### DC MICROAMMETERS

D	41/	2" Rectan	gular			6" Rectan	gular		D	4	½" Recta	ngular		6'	Rectang	ular	
Range	Stock	N	IET EAC	Н	Stock		NET EAC	H	Range	Stock	١	NET EACH	1	Stock	1	VET EAC	H
μα	No.	1-9	10-24	25-Up	No.	1-9	10-24	25-Up	μa	No.	1-9	10-24	25-Up	No.	1-9	10-24	25-Up
0-20				20.99		38.07		33.02	0-500	67 F 778	15.88				22.83	20.55	19.40
0-50	67 F 700			18.16		35.62	32.06	30.28		67 F 779	18.86	16.97	16.03				29.03
0-100	67 F 701	18.86	16.97	16.03	67 - 717			29.03		67 F 702	16.46			67 F 718	24.06	21.66	20.45
0-200	6/1//	16.46	14.82	13.99	67 F 787	24.06	21.66	20.45	500-0-500	67 F 703	15.24	13.72	12.96	67 F 719	20.43	118.38	117.36

			DC	AMME	TERS					,	VOLUME UNI	T METERS-S	CALE A	
Range Amps.	Stock No.	½" Rectar	igular NET EAC   10-24	H I 25-Up	Stock No.	Rectan	gular NET EAC	CH 25-Up	NET EACH	2½" Rnd. 67 F 946	2½" Sq. 67 F 947	3½" Rect. 67 F 999	4½" Rect. 67 F 715	6" Rect. 67 F 73 I
0-1 0-10 0-50	67 F 759 67 F 708			12.96	67 F 769			17.36	1-9 10-24 25-110	20.14	20.14 18.12	24.35 23.87 20.70	25.58 23.02 21.74	30.77 27.69 26.15

### JERROLD FIELD STRENGTH METERS

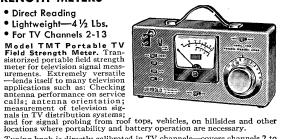
- Direct Reading
- Reads Down to 5 μν
- Covers 54-220 Mc.

Model 704-B Portable VHF Field Strength Meter. Useful for field intensity surveys, balancing TV distribution systems, testing color response of antenna systems, checking per cent of amplitude modulation of FM carriers or RF signal generators, measuring radiation, studying antenna patterns, locating and measuring noise losses, calibrating signal generators, adjusting traps and numerous other applicaand 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: 9 db below signal level.

- Direct Reading
- Lightweight—4 1/2 Lbs.
- For TV Channels 2-13



Tuning knob is directly calibrated in TV channels—covers channels 2 to 13. In operation, the meter is relatively immune to noise and interfering signals—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.

# Triplett Glass Front Panel Meters





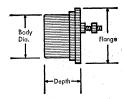
meter but does not include terminals.



2 1/2", 3 1/2"



41/5"



### METER DIMENSIONS

ROUND FLUSH MOUNTING

Model No.	Flange	Body Dia.	* Depth	Scale Length
221T	211/16"	27/32"	15/16"	1.76"
231S	211/16"	27/32"	15/16"	1.58"
321T	31/2"	23/4"	15/16"	2.49"
331S	31/2"	23/4"	15/16"	2.22"
361	31/2"	23/4"	15/16"	2.22"

### RECTANGULAR FLUSH MOUNTING

Model No.	Flange	Body Dia.	* Depth	Scale Length
227T	23/8×23/8"	25/32"	1"	1.76"
237S 327T	2%x2%" 3x3"	23/32"	13/8"	1.58"
3375	3x3"	23/4"	13/8"	2.22"
420 430	4%x4%6" 45%x43%6"	23/4"	1116"	4.06" 3.6"

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.

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., 1½ lbs. When ordering, include Range and Model Number of meter. \*In size table indicates depth of

### DC MILLIAMMETERS

Range	221T 227T 2½" Rnd. 2½" Rect.	1 to 9, EACH	10 to 24, EACH			1 to 9, EACH	10 to 24, EACH		420 4½" Rect.		10 to 24, EACH	25 to 49, EACH
0-1.5	66 F 150 66 F 170 66 F 151 66 F 171 66 F 165 66 F 185	9.70	8.73	8.25	66 F 120 66 F 100 66 F 121 66 F 101 66 F 118 66 F 115	10.29	9.26	8.75	66 F 136 66 F 196 66 F 197	11.37	10.23	9.66
0-5 0-10 0-15	66 F 152 66 F 172 66 F 153 66 F 173 66 F 154 66 F 174	9.70	8.73	8.25	66 F 122 66 F 102 66 F 123 66 F 103 66 F 124 66 F 104	10.29	9.26	8.75	66 F 137 66 F 138 66 F 139	11.37	10.23	9.66
0-25 0-50 0-75	66 F 155 66 F 175 66 F 156 66 F 176 66 F 166 66 F 186	10.09	9.08	8.58	66 F 125 66 F 105 66 F 126 66 F 106 66 F 119 66 F 116	10.68	9.61	9.07	66 F 140 66 F 141 66 F 198	11.76	10.58	10.00
0-100 0-150 0-200	66 F 157 66 F 177 66 F 158 66 F 178 66 F 159 66 F 179	10.09	9.08	8.58	66 F 127 66 F 107 66 F 128 66 F 108 66 F 129 66 F 109	10.68	9.61	9.07	66 F 142 66 F 143 66 F 144	11.76	10.58	10.00
0-250 0-300 0-400	66 F 160 66 F 180 66 F 161 66 F 181 66 F 167 66 F 187	10.09	9.08	8.58	66 F 130 66 F 110 66 F 131 66 F 111 66 F 135 66 F 117	10.68	9.61		66 F 145 66 F 146 66 F 199	11.76	10.58	10.00
0-500 0-750 0-1000	66 F 162 66 F 182 66 F 163 66 F 183 66 F 164 66 F 184	10.09	9.08	8.58	66 F 132 66 F 112 66 F 133 66 F 113 66 F 134 66 F 114	10.68	9.61	9.07	66 F 147 66 F 148 66 F 149		10.58	10.00

### DC MICROAMMETERS

221T   227T	1 to 9. 1	10 to 24. 25	to 49.1	327T	321T (	1 to 9.	10 to 24.	25 to 49.	420	1 to 9,	10 to 24,	25 to 49.
Range 21/2" Rnd. 21/2" Rect.	EACH	EACH E	ACH	3" Rect.	31/2" Rnd.	EACH	EACH	EACH	41/2" Rect.	EACH	EACH	EACH
0-20 66 F 054 66 F 015					66 F 049		16.05	15.16	66 F 065	18.91	17.02	16.08
0-50   66 F 055   66 F 0   6	14.60				66 F 050		13.58		66 F 066		14.55	13.75
0-100   66 F 056   66 F 017   0-200   66 F 057   66 F 018	12.74				66 F 051		11.91		66 F 067		12.88	12.16
0-500 66 F 058 66 F 019					66 F 053		9.75		66 F 069		10.76	10.16

### DC AMMETERS

	221T   227T			327T	321T		10 to 24,				10 to 24,	
Range	2½" Rnd. 2½" Rect.	EACH EACH	EACH 3'	" Rect. 3	31/2" Rnd.	EACH'	EACH	EACH	4½" Rect.	EACH	EACH	EACH
	66 F 510 66 F 525	9.70 8.73		6 F 450	66 F 440	10.29	9.26	8.75	66 F 460	11.37	10.23	9.66
	66 F 511 66 F 526	10.49 9.44			66 F 44 I	10.98	9.88		66 F 461		10.85	10.25
0-10	66 F 512 66 F 527	10.49 9.44	8.91 66	6 F 452	66 F 442	10.98	9.88		66 F 462	12.05	10.85	10.25
0-15	66 F 513 66 F 528	10.49 9.44	8.91 66	6 F 540	66 F 560	10.98	9.88	9.33	66 F 465	12.05	10.85	10.25
	66 F 514 66 F 529	10.49 9.44	8.91 66	6 F 453	66 F 443	10.98	9.88	9.33	66 F 463	12.05	10.85	10.25
0-30	66 F 515 66 F 530	10.49 9.44			66 F 561	10.98	9.88		66 F 466		10.85	10.25
0-50	66 F 517 66 F 532	10.49 9.44	8.91 66	6 F 542	66 F 562	10.98	9.88	9.33	66 F 467	12.05	10.85	10.25
0-100	66 F 518 66 F 533	17.25   15.52	14.66 66	6 F 543 6	66 F 563	17.84	16.05	15.16	66 F 468	18.91	17.02	16.08
0-200	66 F 519 66 F 534	17.25 15.52			66 F 564	17.84	16.05		66 F 469		17.02	16.08
0-300	66 F 520 66 F 535	18.72   16.85	15.91 66	6 F 545	66 F 565	19.31	17.38		l66 F 458l		18,35	17.33
0-500	166 F 521 66 F 536	23.52 21.17	1 19.99 166	6 F 546	66 F 566	24.11	21.70	20.49	166 F 4591	25.19	22.67	21.41

### AC AMMETERS

Range	2315 2375 2½" Rnd. 2½" Rect.	1 to 9, EACH	10 to 24, EACH	25 to 49, EACH	337S 3" Rect.	331S 3½″ Rnd.		10 to 24, EACH		430 4½" Rect.		10 to 24, EACH	EACH
0-3 0-5	66 F 340 66 F 350 66 F 341 66 F 351 66 F 342 66 F 352 66 F 343 66 F 353	9.70	8.73	8.25	66 F 321 66 F 322	66 F 300 66 F 301 66 F 302 66 F 303	10.00	9.26	8.75	66 F 330 66 F 331 66 F 332 66 F 333	11.37	10.23	9.66
0-10 0-15 0-25 0-50 0-75	66 F 344 66 F 354 66 F 347 66 F 357 66 F 345 66 F 356 66 F 346 66 F 356	9.70	8.73	8.25	66 F 328 66 F 325 66 F 326	66 F 308 66 F 305 66 F 306 66 F 307	10.29 10.29 10.29	9.26 9.26 9.26 9.26 10.67	8.75 8.75 8.75	66 F 334 66 F 335 66 F 336 66 F 337	11.37	10.23 10.23 10.23 10.23	9.66 9.66 9.66 11.00

### **AC MILLIAMMETERS**

Rang	231S 2½" Rnd.	2375 2½" Rect.		10 to 24, EACH	25 to 49, EACH	337S 3" Rect.	331S 3½″ Rnd.	1 to 9, EACH	10 to 24, EACH	25 to 49 EACH	430 4½" Rect.		10 to 24, EACH	25 to 49, EACH
0-10 0-15 0-25 0-50	66 F 571 66 F 572	66 F 580 66 F 581 66 F 582 66 F 583	9.70	8.73	8.25	66 F 491	66 F 470 66 F 471 66 F 476 66 F 472	10.29	9.26	8.75	66 F 496 66 F 446 66 F 447 66 F 448	11.37	10.23	9.66
0-100 0-200 0-250 0-500	66 F 574 66 F 575 66 F 576 66 F 577	66 F 585	9.70	8.73	8.25	66 F 489 66 F 494	66 F 473 66 F 477 66 F 474 66 F 475	10.29	9.26	8.75	66 F 497 66 F 449 66 F 498 66 F 499	11.37	10.23	9.66

# **Triplett Glass-Front Panel Meters**

1000 OHMS PER VOLT-WITH CARBON, FILM-TYPE RESISTORS

Economical units.	For use where hi	gh humidity is no	t encounter	red. †Have	external	resistors.	Specify Rang	e and Type I	Io. when o	rdering.
221T Range 2½″ Rnd.	227T 1 to 9, 2½" Rect. EACH	10 to 24, 25 to 4 EACH EACH	9, 327T 1 3" Rect.	321T 3½" Rnd.	1 to 9,	10 to 24, 25 EACH	5 to 49, 42 EACH 4½" F	ect. EACH	10 to 24,	EACH
0-10 66 F 903 0-15 66 F 904	66 F 923		66 F 943 66 F 944	66 F 963			66 F			

Range	2½" Rnd. 2½" Rect.	EACH	EACH	EACH	3" Rect.	31/2" Rnd.	EACH	EACH	EACH	41/2" Rect.	EACH	EACH	EACH
0-10 0-15 0-25 0-50	66 F 903 66 F 923 66 F 904 66 F 924 66 F 905 66 F 925 66 F 906 66 F 926	10.49	9.44	8.92	66 F 944 66 F 945	66 F 963 66 F 964 66 F 965 66 F 966	10.98	9.88	9.33	66 F 983 66 F 984 66 F 985 66 F 986	12.05	10.85	10.25
0-100 0-150 0-200 0-250 0-300	66 F 907 66 F 927 66 F 908 66 F 928 66 F 909 66 F 929 66 F 910 66 F 930 66 F 911 66 F 931	10.49	9.44	8.92	66 F 948 66 F 949 66 F 950	66 F 968 66 F 969 66 F 970 66 F 971	10.98	9.88	9.33	66 F 987 66 F 988 66 F 989 66 F 991	12.05	10.85	10.25
0-500 0-750	66F912† 66F932† 66F913† 66F933†	10.98	9.88	9.33	66 F 952 66 F 953	66 F 972 66 F 973	11.56	10.40	9.83	66 F 992 66 F 993	12.64	11.38	10.75
0-2000 0-3000 0-4000	66F914† 66F934† 66F915† 66F935† 66F916† 66F936† 66F917† 66F937† 66F918† 66F938†	13.03	11.73	11.08	66F955† 66F956† 66F95 <b>7</b> †	66F974† 66F975† 66F976† 66F977† 66F978†	13.62	12.26	11.57	66F994† 66F995† 66F996† 66F997† 66F998†	14.70	13.23	12.49

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.

0-1 0-3 0-5 0-10	66 F 900 66 F 920 66 F 739 66 F 750 66 F 740 66 F 751 66 F 741 66 F 752	10.49	9.44	8.92	66 F 762 66 F 763 66 F 430	66 F 960 66 F 424 66 F 425 66 F 420	10.98	9.88	9.33	66 F 980 66 F 770 66 F 771 66 F 435	12.05	10.85	10.25
0-25 0-50	66 F 743 66 F 754 66 F 744 66 F 755	12.84	11.55	10.92	66 F 765 66 F 766	66 F 427 66 F 428	13.33	12.00	11.33	66 F 773 66 F 774	14.41	12.97	12.25
0-100 0-150	66 F 745 66 F 756 66 F 746 66 F 757		12.00	11.33	66 F 767 66 F 431	66 F 429 66 F 421	13.92	12.52	11.83	66 F 775 66 F 436	14.99	13.49	12.75
0-300 0-500	66 F 748 66 F 759 66 F 749 † 66 F 760 †		14.64	13.83 15.49	66 F 432 66 F 433	66 F 422 66 F 423	16.86 18.72	15.17 16.85	14.33 15.92	66 F 437 66 F 777	17.93 19.80	16.14 17.82	15.25 16.83

### **AC VOLTMETERS**

	231S 2½" Rnd.	237S 21/ <sub>2</sub> " Rect.		10 to 24, EACH	25 to 49, EACH	337S 3" Rect.	331S 3½″ Rnd.	1 to 9, EACH	10 to 24, EACH		430 4½" Rect.		10 to 24, EACH	25 to 49, EACH
0-5 0-10	66 F 259 66 F 250 66 F 251 66 F 252	66 F 270 66 F 271	9.70	8.73	8.25	66 F 220 66 F 221	66 F 209 66 F 200 66 F 201 66 F 202	10.29	9.26	8.75	66 F 239 66 F 230 66 F 231 66 F 232	11.37	10.23	9.66
0-25 0-50 0-100	66 F 253 66 F 254 66 F 255		9.70	8.73	8.25	66 F 224	66 F 203 66 F 204 66 F 205		9.26	8.75	66 F 233 66 F 234 66 F 235	11.37	10.23	9.66
0-150 0-250 0-300 0-500	66 F 256 66 F 260 66 F 257 66 F 258	66 F 280 66 F 277	11.17	9.61 10.05 10.58 13.85	9.50	66 F 219 66 F 227	66 F 206 66 F 210 66 F 207 66 F 208	11.76	10.05 10.58 11.02 14.38	10.00	66 F 236 66 F 240 66 F 237 66 F 238	12.84	11.02 11.55 12.00 15.35	10.41 10.92 11.33 14.49

### **VOLUME UNIT METERS**

Highly damped volume unit meters for measurement of sound or noise levels. Used 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 are 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 600 ohm lines. Metal dials have black and red calibrations. Bakelite cases. \*Illuminated, †Portable in 3x3x13// bakelite case; has 18" cord, phone plug and jack.

327T	1 to 9,	10 to 24,	25 to 49,
3" Rect.	EACH	EACH	EACH
66 F 075	18.72	16.85	15.92
66 F 076*	20.48	18.43	17.41
66 F 077†	22.54	20.29	19.16
420	1 to 9,	10 to 24,	25 to 49,
4½" Rect.	EACH	EACH	EACH
66F071	23.52	21.17 24.07	20.00
66F072*	26.75		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.

3 Kect.	EACH	EACH	EACH
66 F 263	14.99	13.49	12.75
66 F 264*	16.95	15.25	14.42
420 [4½" Rect.	1 to 9, EACH	10 to 24,	25 to 49, EACH
66 F 265	16.76	15.08	14.25
66 F 266*	18.03	16.23	15.35

327T | 1 to 9, | 10 to 24, | 25 to 49,

### DC MILLIVOLTMETERS

Range 327T	321T	1 to 9,	10 to 24,	25 to 49,	420	1 to 9,	10 to 24,	25 to 49,
Rect.	3½" Rnd.	EACH	EACH	EACH	4½″ Rect.	EACH	EACH	EACH
0-50 66 F 078 0-100 66 F 079	66 F 088 66 F 089	10.29	9.26	8 <i>.75</i>	66 F 098 66 F 099	11.37	10.23	9.66

### ZERO-CENTER DC MICROAMMETERS

50-0-50 | 66 F 086 | 66 F 084 | 13.23 | 11.91 | 11.25 | 66 F 094 | 14.31 | 12.88 | 12.16 | 100-0-100 | 66 F 087 | 66 F 085 | 11.47 | 10.32 | 9.75 | 66 F 095 | 12.54 | 11.29 | 10.66

### **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	I-9, EACH	10-24, EACH	25-49, EACH
66 F 286 66 F 285	0-150 0-300	150 150	1 2	23.52	21.17	20.00

### **NEW TRIPLETT UNIMETERS**

Versatile new Unimeters feature use of 2 Basic Movements with "slide-in" Dial Components for almost any type Dial Components for almost any type meter.

### **BASIC MOVEMENTS**

MODEL 327-U. 0-1 DC MA BASIC MOVEMENT. Top-quality, 3½" D'Arsonval movement—self-shielded and dustproof. Turning a single thumbscrew secures range insert.

87 F 336. NET......10.78 MODEL 327-U. 0-50 DC UA BASIC MOVEMENT. Extremely sensitive movement. Similar to above but designed for use with \*micro-range Dial Components below.



Front

Side

### **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 μa movement).

No.	Range	Description	No.	Range	Description	No.	Range	Description
87 FF 337	0-1	DC MA 8	7 FF 337	0-500		87 FF 339		DC Ammeter
87 FF 337	0-5	DC MA 8	7 FF 338	0-10	DCVM 1000 Ω/v	87 FF 339		DC Ammeter
87 FF 337	0-10	DC MA 8	7 FF 338	0-25	DCVM 1000 Ω/v	87 FF 340		ACVM
87 FF 337	0-15	DC MA 8	7 FF 338	0-50	DCVM 1000 Ω/v			ACVM
87 FF 337	0-25	DC MA 8	7 FF 338	0-150	DCVM 1000 Ω/v			ACVM
87 FF 337	0-50	DC MA 8	7 FF 338	0-300	DCVM 1000 Ω/v	87 FF 342	0-50	DC μa*
87 FF 337	0-100		7 FF 338	0-500	DCVM 1000 Ω/v		0-100	DC μa*
87 FF 337	0-150		7 FF 339	0-1		87 FF 342		DC μa*
87 FF 337	0-200		7 FF 339	0-5		87 FF 342	0-500	DC μa*
87 FF 337	0-250		7 FF 339	0-10	DC Ammeter	[ [		
87 FF 337	0-300	DC MA 8	7 FF 339	0-15	DC Ammeter			J
NET EACH	1							2.45

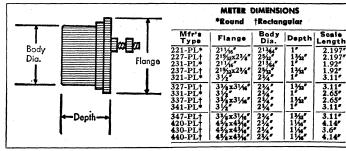
### TYPE PL PLASTIC-FRONT PANEL METERS





41/2" Rectangular,

2½" and 3½" Round



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., 11/2 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

Panes	221-PL		NET EACH	1	227-PL	N	ET EACH	1	321-PL	1	NET EAC	H	327-PL	1	ET EAC		420-PL		IET EACH	
Range	21/2 'Rnd.		10-24		21/2" Rct.		10-24		3½"Rnd.				3½" Rct.		10-24		4½" Rct.			5-49
0-50	66 F 807	15.0	13.58	12.83	66 F 809	15.09	13.58	12.83	66 F 836	15.58	14.02	13.24	66 F 873	15.58	14.02	13.24	66 F 874	16.17	14.55 13	3.74
0-100	66 F 808	13.2	3 1 1 . 9 1	11.25	66 F 810	13.23	11.91	11.25	66 F 837	13.72	12.35	11.66	66 F 876	13.72	12.35	11.66	66 F 875	14.31	12.88 12	2.]6
0-200	66 F 737	11.3	7 10.23	9.66	66 F 738	11.37	10.23	9.66	66 F 838	11.96	10.76	110.16	66 F 8//	11.96	10.76	10.16	100 L 8\T	12.55	111.30110	3.66

### DC MILLIAMMETERS

Dongo	221-PL		IET EACH	1	227-PL I	N	ET EACH	1	321-PL	1	AFT FACI	H	327-PL		IET EACH	<u> </u>	420-PL		IEI EAC	H
Kange	2½ "Rnd.	1-9	10-24	25-49	2½" Rct.	1-9	10-24	25-49	3½"Rnd.	1-9	10-24	25-49	3½′ Rct.	1-9	10-24		4½" Rct.		10-24	25-49
	66 F 812			8.66	66 F 814	10.19	9.17	8.66	66 F 843	10.78	9.70		66 F 793	10.78	9.70	9.16	66 F 878	11.37	10.23	9.66
	66 F 813			9.00	66 F 815	10.58	9.53	9.00	66 F 844	11.17	10.05		66 F 794	11.17	10.05	9.50	66 F 879	11.76	10.58	10.00
****	66 F 824				66 F 551				66 F 845				66 F 795							
	66 F 827			9.00	66 F 552 66 F 553	10.58	9.53	3.00	66 F 846 66 F 847	• 7	10.05		66 F 796 66 F 797	11:17	10.05	9.50	66 F 882	11.76	10.58	10.00
	66 F 849	10.58	9.53	9.00	66 F 554	10.58	9.53 9.53	9.00	66 F 848	111.17	10.05	9.50	66 F 798	11.17	10.05	9.50	66 F 883	11.76	10.58	10.00

### **AC VOLTMETERS**

Danas	231-PL	1	ET EACH	ł	237-PL	١	ET EACH	i	331-PL		IET EACH	1	337-PL	N	IET EACH	1	430-PL		ET EAC	1 :
Range	21/2"Rnd.	1-9	10-24	25-49	2½" Rct.	1-9	10-24		3½"Rnd.		10-24		3½° Rct.		10-24		4½" Rct.	1-9	10-24	25-49
0-50									66 F 859	10.78	9.70	9.16	66 F 780	10.78	9.70	9.16	66 F 799 66 F 888 66 F 889	11.37	10.23	9.66
	66 F 825	11.17	10.05	9.50	66 F 826	11.17	10.05	9.50	66 F 860	11.66	10.50	9.91	66 F 781	11.66	10.50	9.91	66 F 888	12.25	11.02	10.41
0-300	[								66 F 861	12.74	11.47	110.83	66 F 782	12.74	11.47	110.83	66 F 889	13.33	12.00	11.33

### **AC AMMETERS**

Dance	231-PL		NET EAC	Η	237-PL		NET EAC	Н	331-PL		NET EACH	H	337-PL		NET EACI	·	430-PL		NET EAC	Η
Range	21/2 "Rnd.	1-9	10-24	25-49	2½' Rct.	1-9	10-24	25-49	3½ "Rnd.	1-9	10-24	25-49	3½" Rct.	1-9	10-24	25-49	4½" Rct.	1-9	10-24	25-49
0-5	66 F 828				66 F 784				66 F 865				66 F 787			-	66 F 892			
0-10	66 F 829		0 17		66 F 783				66 F 866				66 F 788				66 F 893			
0-25 0-30	66 F 833	10.19	9.17	8.66	66 F 792	10.19	9.17	8.66	66 F 868	10.78	9.70	9.16	66 F 790	10.78	9.70	9.16	66 F 858 66 F 862	11.37	10.23	9.66
0-50	66 F 835 66 F 832		1 1		66 F 785		1 1		66 F 869				66 F 791				66 F 896			

### DC AMMETERS

D	221-PL	1	IET EACH	1	227-PI		IET EACH	1	321-PL		IET EACH	1	327-PL	1	ET EAC	H	420-PL	1	VET EACH	d
Range	21/2 'Rnd.	1-9	10-24	25-49	2½ Rct.	1-9	10-24	25-49	3½ 'Rnd.	1-9	10-24	25-49	3½" Rct.	1-9	10-24	25-49	4½' Rct.	1-9	10-24	25-49
0-5									66 F 855				66 F 880				66 F 885			
	66 F 822	10.98	9.88	9.33	66 F 830	10.98	9.88	9.33	66 F 856	11.47	10.32	9.75	66 F 881	11.47	10.32	9.75	66 F 886	12.05	10.85	10.25
0-50	66 F 823	10.98	9.88	9.33					66 F 857		1		[ <u> </u>							

### **AC MILLIAMMETERS**

Range 331-	FL	BNET EAC	• • • • • • • • • • • • • • • • • • • •	337-PL		ET EACH		430-PL		ET EACH	·
3½" F	ind. 1-9	10-24	25-49	31/2" Rect.	1-9	10-24	25-49	41/2" Rect.	1-9	10-24	25-49
0-100 66 F	863 10.7	9.70	9.16	66 F 864	10.78	9.70	9.16	66 F 854	11.37	10.23	9.66

# DC VOLTMETERS 1000 OHMS PER VOLT—FILM-TYPE MULTIPLIER RESISTORS

	221-PL		IEI EACE		227-PL	N	EI EAUN	·	321-PL		IEI EACH		327-PL		VEI EACH	·	420-PL		NEI EAUN	<u> </u>
Naligo	21/2"Rnd.	1-9	10-24	25-49	21/2" Rct.	1-9	10-24	25-49	31/2 "Rnd.	1-9	10-24	25-49	31/2" Rct.	1-9	10-24	25-49	41/5" Rct.	1-9	10-24	25-49
0-50	66 F 804	10.98	9.88	9.33	66 F 805	10.98	9.88	9.33	66 F 834	11.47					10.32	9.75	66 F 872	12.05	10.85	10.25

### **DB METER**

Decibel meter. 6 milliwatts. 5% accuracy. Has internal resistance of 5000 ohms. 1.73 volts at zero db.  $3\frac{1}{2}$  round.

	Ñ	ο.	Type		Calibration	1-9	ET EAC   10-24	25-49
66	F	81	321-PL	+6 to-10db	for 500 ohm line	15.68	14.11	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.

Stock		Description	D	, NI	ET EACH !
No.			Range		10-24 25-49
66 F 897	321-PL	31/2" Round	-20  to  +3	19.31	17.38 16.41

### THERMO-AMMETERS (RF)

Range	341-PL		NET EAC	H	347-PL		NET EACI	1	440-PL		NET EAC	CH
nange	31/2" Rnd.	1-9	10-24	25-49	31/2" Rect.	1-9	10-24	25-49	41/2" Rect.	1-9	10-24	25-49
0-5	66 F 818	11.86	10.67	10.08	66 F 817	11.86	10.67	10.08	66 F 819	12.45	11.20	10.58

# impson 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°. ±2% accuracy, except rectifier-type ±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 29 37 39 47 49 57 59 79	3.12x3.00" 4.20x4.66" 3.12x3.00" 4.20x4.66" 3.12x3.00" 4.20x4.66" 3.12x3.00" 4.20x4.66" 4.20x4.66" 3.34x4.25"	2.75° 2.75" 2.75" 2.75" 2.75" 2.75" 2.75" 2.75" 2.00" 3.25"	1.36" 1.00" 1.36" 1.00" 1.36" 1.00" 1.45" 1.09" 1.68"	2.56" 3.91" 2.56" 3.91" 2.56" 3.91" 2.56" 3.91" 3.91"						





Rectangular

Rectangular

### DC MILLIAMMETERS

	Mo	del 27		Model 29				
Stock	N	ET EAC	H		Stock	N	ET EAC	H
No.	1-9	10-24	25-Up	Range	No.	1-9	10-24	25-Up
67 F 520 68 F 800 67 F 521 67 F 522 67 F 530	10.44	9.40	8.87	0-1 0-3 0-5 0-10 0-15	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	0-25 0-50 0-75 0-100	67 F 423 67 F 424 67 F 431 67 F 425	12.20	10.99	10.37
67 F 532 67 F 526 67 F 533 67 F 527	10.73	9.66	9.12	0-200 0-250	67 F 432 67 F 426 67 F 433 67 F 427	12.20	10.99	10.37
67 F 528 67 F 529	10.73	9.66	9.12		67 F 428 67 F 429	12.20	10.99	10.37

### DC VOLTMETERS

\*Have external multiplier resistors. 3 to 300 v. units are 1000 ohms per volt, 500 to 5000 v. units are 2000 ohms per volt.

		Model 2	7	Model 29					
Stock	NET EACH		Bana Stock		N	ET EAC	Н		
No.	1-9	10-24	25-Up	Range	No.	1-9	10-24	25-Up	
67 F 515 67 F 516 67 F 500 67 F 501	11.17	10.05	9.50	0-5 0-8	67 F 415 67 F 416 67 F 401 67 F 402	12.35	11.11	10.50	
67 F 502 67 F 517 67 F 518 67 F 507	11.17	10.05	9.50	0-25	67 F 403 67 F 417 67 F 418 67 F 405	12.35	11.11	10.50	
67 F 504 67 F 519 67 F 505 67 F 508	11.17	10.05	9.50	0-200 0-250	67 F 406 67 F 419 67 F 407 67 F 408	12.35	11.11	10.50	
67 F 509	11.76	10.58	10.00	0-500	67 F 409	12.79	11.51	10.87	
67 F 510 67 F 514 67 F 511 67 F 512 67 F 513	13.96	12.57	11.87	*0-1500 *0-2000	67 F 410 67 F 411 67 F 412 67 F 413 67 F 414	15.14	13.63	12.87	

### DC AMMETERS

Wode' 27					Model 29				
Stock	N	ET EAC	H	I	Stock	N	ET EAC	Н	
No.	1-9	10-24	25-Up	Range	No.	1-9	10-24	25-Up	
67 F 535 67 F 536 67 F 537 67 F 538 67 F 539	10.58	9.53	9.00	0-1 0-2 0-3 0-5 0-10	67 F 435 67 F 436 67 F 437 67 F 438 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		67 F 440 67 F 442 68 F 805 68 F 806 68 F 807	11.76	10.58	10.00	

### DC MICROAMMETERS

Model 27				Model 29				
Stock	N	ET EAC		<b>B</b>	Stock	N	ET EAC	Н
No.	1-9	10-24	25-U p	Range	No.	1-9	10-24	25-Up
68 F 808	20.58	18.52	17.49		68 F 809	22.49	20.24	19.12
67 F 544 67 F 545	18.23	16.41	15.49		67 F 444		18.26	17.25
67 F 546	13.52	13.90	13.12		67 F 445 67 F 446		15.08	14.25
67 F 547	11.61	10.46	9.87		67 F 447	12.94	11.64	11:00
67 F 548	11.02	9.93	9.37		67 F 448	12.35	11.11	10.50
67 F 684	15.58	14.02	13.25		67 F 691	16.90	15.22	14.37
67 F 685 67 F 686	13.67	12.31	11.62		67 F 692	15.29	13.76	13.00
67 F 687	10.58	9.53	9.00		67 F 693 67 F 694	13.23	10.58	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.

6/ F 591. 1-9, NET EACH	
10-24, EACH9.53	25-Up, EACH9.00
75-0-75 Microamp. Same as a	above, except 75-0-75 microampere
range, 2000-ohm approximate	internal resistance. Shpg. wt., 1 lb.
67 F 592. 1-9, NET EACH	12.49
	25-Up, EACH10.62

### AC MILLIAMMETERS

	Мо	del 57		Model 59				
Stock		ET EAC		1	Stock	NET EACH		
No.	1-9	10-24	25-Up	Range	No.		10-24	25-Up
67 F 565 67 F 566 67 F 567 67 F 568	10.14	9.13	8.62	0-100 0-250	67 F 465 67 F 466 67 F 467 67 F 468	11.71	10.72	10.12

### **AC VOLTMETERS**

	Model 57					Model 59				
Stock	N	ET EAC	H	I_	Stock	N	ET EAC	Н		
No.	1-9	10-24	25-Up	Range	No.	1-9	10-24	25-Up		
67 F 558 67 F 550 67 F 559 67 F 551	10.14	9.13	8.62		67 F 458 67 F 450 67 F 459 67 F 451	11.76	10.58	10.00		
67 F 552 67 F 560 67 F 553	10.44	9.13 9.40 9.40	8.62 8.87 8.87		67 F 452 67 F 460 67 F 453	11.76	10.58	10.00		
67 F 555 67 F 561 67 F 556 67 F 557	11.32 11.32 11.32 16.02	10.20 10.20 10.20 14.43	9.62 9.62 9.62 13.62	0-250 0-300	67 F 455 67 F 461 67 F 456 67 F 457	12.35 12.35 12.35 17.20	.     .     .     5.48	10.50 10.50 10.50 14.60		

### **AC AMMETERS**

Model 57					Model 59			
Stock	N	ET EAC	H	i _	Stock	N	ET EAC	Н
No.	1-9	10-24	25-Up	Range	No.	1-9	10-24	25-Up
67 F 575 67 F 577 67 F 578 67 F 579	10.00	9.00	8.50	0-1 0-3 0-5 0-10	67 F 475 67 F 477 67 F 478 67 F 479	11.91	10.72	10.12
67 F 582 67 F 580 67 F 581 68 F 810	10.00 10.29 11.17 10.00	9.00 9.26 10.05 9.00	8.50 8.76 9.50 8.50	0-15 0-25 0-50 0-75	67 F 482 67 F 480 67 F 481 68 F 811	11.91 12.49 14.55 11.91	10.72 11.25 13.10 10.72	10.12 10.62 12.37 10.12

### RF AMMETERS (INTERNAL THERMOCOUPLE TYPE)

	Mo	del 37		Model 39				
Stock	N	NET EACH			Stock	NET EACH		
No.	1-9	10-24	25-Up	Range	No.	1-9	10-24	25-Up
67 F 585 67 F 586 67 F 587 67 F 588 67 F 589	12.49	11.25	10.62		67 F 485 67 F 486 67 F 487 67 F 488 67 F 489	15.14	13.63	12.87

### RECTIFIER-TYPE AC VOLTMETERS-1000 OHMS PER VOLT

		Model 4	17	i	Model 49				
Stock	N	ET EAC	H	Range	Stock	N	ET EACH		
No.	1-9	10-24	25-Up	Range	No.	1-9	10-24	25-Up	
67 F 569 67 F 570 67 F 571 67 F 572	15.29	13.76	13.00	0-5 0-10	67 F 490 67 F 491 67 F 492 67 F 493	16.90	15.22	14.37	
67 F 573 67 F 583 67 F 584	15.29	13.76	13.00	0-150	67 F 494 67 F 496 67 F 497	16.90	15.22	Į4.37	

### **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, ±5%. Dials have 100° arc. VU scale A, -20 to +3. 3900 ohm internal impedance across 600 ohm lines (zero reference, 1 milliwatt). \*Illuminated type (25%" deep). Av. shpg. wt., 11/4 lbs.

Stock			NET EACH	
No.	Model	1-9	10-24	25-Up
67 F 597	47	18.82	16.93	16.00
67 F 598	142	20.00	18.00	17.00
67 F 599	142*	22.93	20.64	19.49

### **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. sions and scale length listed at top of page. Shpg. wt., 1 lb. . Dimen-

Stock	Range,	Max.	Max.	}	NET EACH	
No.	Watts	Amps	Volts	1-9	10-24	25-Up
68 F 812	0-75	1.0	150	30.72	27.65	26.11
68 F 8 I 3	0-300	4.0	150	30.72	27.65	26.11
68 F 814	0-1500	10.0	300	33.07	29.76	28.11
68 F 815	0-3000	20.0	300	33.07	29.76	28.11

# Simpson Panel Meters & Instruments

### "WIDE-VUE" PANEL METERS



- Ultra-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 pro-tection to the meter face. Feature longer scales than conventional-type meters—3½"

scales than conventional-type meters—3½"

"Wide-Vue" meter scale is over ½" longer

than standard 3½" meter scale. All DC meters

except 0-25, 0-50 DC microammeters have "self-shielded" core

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 DC microammeters have external magnet type movement; AC meters have moving-vane type movement. Both calibrated for non-magnetic panels. 3½" meters have 3¾'s cale; 4½" meters have 3½" scale. Polished and shock-mounted jewels. Size of 3½" meters: 3½" square flange; body diameter, 2¾"; body depth, 1½". Accuracy ±2%. With mounting hardware and template. Av. shpg. wt., 1 lb.

### DC VOLTMETERS

	Model	1327—3½"		1	. Mo	del 1329—		
	i	NET EACH			Stock		NET EACH	
Stock No.	1-9	10-24	25-Up	Range	No.	1-9	10-24	25-Up
68 F 149 68 F 150 68 F 151		10.58	10.00	0-10 0-15 0-50	68 F 157 68 F 158 68 F 159	12,94	11,64	11.00
68 F 152 68 F 153 68 F 155	11.76	10.58	10.00	0-100 0-150 0-300	68 F 160 68 F 161 68 F 163	12.94	11,64	11.00
			DC M	ILLIAM	METERS			
68 F 181 68 F 182 68 F 183 68 F 184 68 F 185	11.02	9.93 9.93 10.20 10.20	9.37 9.37 9.62 9.62	0-1 0-10 0-50 0-100 0-150	68 F 186 68 F 187 68 F 188 68 F 189 68 F 190	11.76 11.76 12.35 12.35	10.58 10.58 11.11	10.00 10.00 10.50 10.50

### DC AMMETERS

68 F 165 68 F 166 68 F 168 68 F 170 68 F 171	0-1 DC 68 F 173 0-5 DC 68 F 174 0-10DC 68 F 176 0-15DC 68 F 178 0-25DC 68 F 179	12.35	11.11	10.50
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### DC MICROAMMETERS

68 F 191   18.23   16.41	15.49 I	0-25 68 F 195	20.29	18.26	17.25
68 F 192   15.43   13.90	13.121	0-50 68 F 196	16.76	15.08	14.25
68 F 193   4.11   12.70	12.00	0-100 68 F 197	15.73	14.16	13.37
68 F 194   4.26   12.84	12.12	50-0-50 68 F 198	15.88	14.29	13.49

### **AC VOLTMETERS**

	Model 1357—3½"   Model 1359—4½"							
I		NET EACH			I I		NET EACH	1
Stock No.	1-9	10-24	25-Up	Range	Stock No.	1-9	10-24	25-Up
68 F 154 68 F 156	11.91	10.72	10.12	0-150 0-300	68 F 162 68 F 164	12.94	11.64	11.00
			AC	AMME	TERS			

	70 7000		
68 F 167   10.58   9.	53   9.00   0-5	168 F 175   12.49	111.25   10.62
68 F 169   10.58   9.	53 9.00 0-10	68 F 177   12.49	11.25 10.62
68 F 167   10.58   9. 68 F 169   10.58   9. 68 F 172   11.76   10.	58 10.00 0-50	68 F 180   15.14	13.63   12.87

### **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 2½" 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, 1½". Accuracy: ±2% of full scale. DC voltmeters have 1000 ohms/volt sensitivity. Dustproof, molded lucite case is 12½x2½x3½". Requires only 1½6x2½%" cutout for rear mounting. All have solder lug terminals except 0-5, 0-10 DC ammeters which have stud-type terminals. White meter face with black numerals. With all mounting hardware. Av. shpg. wt., ¾ lb.

Stock I	Mfr's	D	NET EACH				
No.	Туре	Range	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	12.35	11.11	10.50		
67 F 679	1502	0-500 DC Voltmeter	12.49	11.25	10.62		
67 F 681	1502	0-5 DC Ammeter	13.08	11.77	11.12		
67 F 682	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 F 689	1502	0-100 DC Milliammeter	12.79	11.51	10.87		
67 F 690	1502	0-500 DC Milliammeter	12.79	11.51	10.87		
67 F 695	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 F 697	1507	VU Meter "A" Scale	22.64	20.38	19.25		
67 F 698	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 4½" mirrored, hand-drawn scale; knife-edge pointer. D'Arsonval movement is accurate to within ±0.5% of full scale. Cases formed of durable, heavy molded black bakelite. With strap for cost carning. Binding post terminals. Zero d. easy carrying. Binding post terminals. Zero adjustment. Less leads. Size, 7x51/4x31/8". Shpg. wt., 6 lbs.

87 F 136. NET	.47
Model 9 Triple-Range Voltmeter. For 0-150-300-600 volts DC. 87 F 137. NET	4.68
Model 9 Milliammeter, For measuring 0-1 ma. DC. 87 F 138. NET	6.01
Model 9 Double-Range Milliammeter. For 0-10-100 ma. DC. 87 F 139. NET	3.90
Model 9 Triple-Range Ammeter. For 0-2.5-10-25 A DC. 87 F 140. NET	9.24

### **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-Rang 87 F 141. NET	e Voltmeter. For 0-150-300-600 v. AC
	For 0-30 amperes AC

### **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 cps. Size, 7x51/x31/x''. Shpg. wt., 6 lbs.

Model 880 Double-Current Range Wattmeter, Ranges: 0-500-1000-2000 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. 

Model 880 Triple-Range		
87 F 144. NET	 	

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 clock motor. Counter indicates up to 9999.9 hours, then recycles to 0. Matches Simpson standard 31/2'' meters exactly in panel appearance. Flange size, 31/8x3"; body diameter, 23/4''; body depth, 219/82''. For 120 v., 60 cycle AC. Shpg. wt., 2 lbs.

87 F 146, NET... 240-Volt Type. As above, but for 240 v., 60 cycle AC. 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 Alone

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 engineer to quickly determine the exact diode for experimental, "breadboard" circuits. Offers a selection of any one of eleven basic zener diode types, ranging from the 1N1518 (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, 6x3½x2½". Shpg. wt., 1½ lbs. 

# Panel Meters and Accessories

### **VOLTAGE AND BATTERY TESTERS**

### **EMICO AC VOLTAGE TESTER**

Handy, low-cost, AC line-voltage tester. Gives accu-Handy, low-cost, AC line-voltage tester. Gives accurate, instantaneous check at receptacle. Has 2-prong male plug to fit conventional outlets—no test leads are required. Features 90° swivel head for easier reading at angle. Range: 0-150 volts. Scale has 5-volt graduations between 50 and 150 volts. Meter size: 2". Damped movement. Overall accuracy: 5% of full scale. Black metal case. Shpg. wt., 8 oz. 294



### **EMICO HEARING AID BATTERY TESTER**

2" 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. 



STERLING BATTERY TESTERS

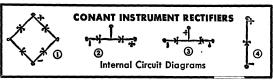
Pocket size battery testers in sturdy, watch-type nickel-finished cases. For checking hearing aid batteries, "B" batteries, dry cells, etc. White dial face. 21/4" dia., 5/4" thick. Av. shpg. wt., 6 oz.

TYPE 31A HEARING AID BATTERY TESTER. Tests 22½, 30 or 45-v. "B" and 1½-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. NET2.20
TYPE 38A. 0-2-100 volts. 78 F 025. NET2.35
TYPE 39A. 0-2-150 volts.
78 F 026. NET2.35 TYPE 40A. 0-10-150 volts.
78 F 027. NET2.50



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 mc. Diameter .500° with .166° center hole. 0.038° thick. Copper oxide with 24K gold contacts, 3° 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°; .038° thick. Copper-oxide with 24K gold contacts. Have 3° lead wires. Two holes for No. 2 mounting screw. Sealed in housing with polystyrene base; moisture-proofed. Series 160-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	Series	Body Color	Internal Circuit	No. of Terms.	ward DC MA	Av. Output DC MA	NET EACH
68 F 04 I	M	500	Yellow	1	4	60	100	2.06
68 F 043	HS	500	Black	2	3	60	50	1.50
68 F 047	T	500	Red	3	3	60	50	1.50
68 F 042	H	500	Green	4	3 2	60	50	1.18
68 F 040	В	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	2 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	2	3	10	5	1.50
68 F 049	BH-C	160-C	Green	4	2	10	5	1.18

INSTRUMENT RECTIFIERS. Booklet by H. B. Conant. Includes graphs, curves, plus other helpful data. 

### 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" in diameter. Shpg. wt., 3 oz.

### **EMICO PANEL METERS**

Sturdy panel meters. Black enamel steel cases. Have screw enamel steel cases. Have screw terminal binding posts and lugs for soldered connections. Model NF-2C (round); flange, 2¼"; overall depth, 1½". Model RF-2C (square): flange, 2½"; overall depth, 1½%". With mtg. bracket. Both types mount in 2½" hole. 5% accuracy. Av. shpg. wt., 9 oz.





NF-2C

RF-2C

### DC MILLIAMMETERS

	Model NF-2C					Model	RF-2C	
Ma	Stock No.	1-24, EA	25-49, EA.	50-99, EA.	Stock No.	1-24, EA.	25-49, EA.	50-99, EA.
0-1 0-10	67 F 609 67 F 600	3.53 2.06	3.18	3.00	67 F 614 67 F 615	3.58	3.22 1.89	3.04 1.79
0-20 0-30 0-50 0-100	67 F 601 67 F 602 67 F 603 67 F 604	1.71	1.54	1.46	67 F 616 67 F 617 67 F 618 67 F 619	1.81	1.63	1.54
0-150 0-200 0-300	67 F 606	1.71	1.54	1.46	67 F 620 67 F 621 67 F 622	1.81	1.63	1.54

### DC AMMETERS

Amps.	Stock No.	1-24, EA.	25-49, EA.	50-99, EA.	Stock No.	1-24, EA.	25-49, EA.	50-99, EA.
20-0-20	67 F 650 67 F 651 67 F 652 67 F 653	1.71	1.54	1.46	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.	1-24, EA.	25-49, EA.	50-99, EA.
0-15	67 F 665	2.84	2.56	2.42	67 F 670	2.94	2.65	2.50
0-150	67 F 666	3.43	3.09	2.92	67 F 671	3.53	3.18	3.00
<b>0</b> -300	67 F 667	4.02	3.62	3.42	67 F 672	4.07	3.66	3.46

### DC VOLTMETERS

	Stock No.							
0-3 3-0-3 0-10	67 F 630 67 F 631 67 F 632	1.71	1.54	1.46	67 F 635 67 F 636 67 F 637	1.81	1.63	1.54

### **AC AMMETERS**

								50-99, EA.
0-5 6 0-10 6	7 F 646 7 F 647	2.84	2.56	2.42	67 F 648 67 F 649	2.94	2.65	2.50

### AC MILLIAMMETERS

Ma	Stock No.	1-24 EA.	25-49 EA.	50-99, EA.	Stock No.	1-24, EA.	25-49, EA.	0-99, EA.
0-500	67 F 640	2.84	2.56	2.42	67 F 643	2.94	2.65	2,50

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, 3½". Mounts in 2¾" hole; overall depth, 3¼". For 110-120 v., 60 cycle AC. Shpg. wt., 1¼ lbs. [F. 4.2] 66 F 689. NET.....



### **AC FREQUENCY METERS**

Vibrating reed meters. \*Measures frequency in 1-cycle steps; †in 5-cycle steps. ±0.3% at 77° F. Flange, 3½%; body, 21½%; overall depth, 3½4″. 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. 2½ scale reads from 0-650° F. in 10° divisions. Automatically compensated for ambient temperature changes. Meter is mounted on a black metal panel. With attached 5½-ft. calibrated thermocouple, clip, and convection shield. Black top-grain leather case. Size, 41/2x23/4x41/4" 

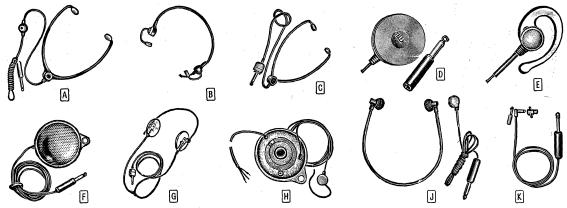


### BENCH-TYPE METER CASE

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, 3¾x4″. 2¾″ diameter hole. Less meter. Shpg. wt., 1 lb.



# 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.

MEIAL MONOSEI

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.

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.

An important innovation in headset design—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.

WITH CORD. Twinsets as above, with 5-foot

### HI-FI DYNASET

Model 6701. Under-the-chin dynamic headset of superior quality. Receiver consists of a tiny, \( \frac{4}{3}\) diameter 6-ohm loud-speaker 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

Exceptionally small; for radio and TV listening through a pillow without disturbing others. For home or institutional use. Red waterproof plastic. ½x2¼" 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.

Extremely lightweight individual ear-sets—weigh only ½ ounce! Carefully designed holder is scientifically contoured designed notes is sterniteally confoured 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 bow	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 bow	2000

List Each, \$6.50. NET EACH.......3.90

### WITH CORD

Stock No.	Type	Description	Ohms
59 J 202	18134	Plastic ear bow	15
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
59 J 212	18140	Metal ear bow	2000
List Each	\$10.00 h	JET FACH	6.00

### DYNAMIC PILLOW SPEAKER

Model 8110. An under-the-pillow loud-speaker 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. 3½" dia. 1½" thick. Wt., 6 oz. 59 1.276. List \$10.20 NFT 6.12 59 J 276. List. \$10.20. NET.......6.12

MODEL 8130. As above, but 10,000 ohms. 

### 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.

### 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.  $31/2x1^{\circ}$ . Control unit is equipped with 10° cord; earset, 4' cord. Shpg. wt., 8 0z. 50.1263. List \$1.25. MET. 9.75 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 how in dual set and mounted on plastic ear bow in seconds, for one-ear use. Weighs only ½ 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. 

### CORD AND MINIATURE PLUG

MODEL 9200. 5-ft. cord with 90° plug. Length of plug. 34". Dia., 94". For computers, dictating machines, and similar equipment. Shpg. wt., 5 oz. 

### **CORDS, EXTRA TIPS AND ACCESSORIES**

00.120,			
*Has bui	lt-in volume c	ontrol. 4 oz.	
No.	Description	For Use With	NET
	ard cord	Twinset & Magnetic pillow Speaker	2.10
<b>59 J 27</b> 2	*Volume control cord w/5,000 ohm pot.	59 J 224 59 J 285	5.94
59 J 245	*Volume control cord w/20,000 ohm pot	59 J 222, 59 J 226, 59 J 281, 59 J 290	5.94
59 <b>J</b> 246	*Volume control cord w/1,000 ohm pot	59 J 280, 59 J 265, 59 J 286, 59 J 291, 59 J 223, 59 J 203, 59 J 225, 59 J 227	5.94
59 J 297	Type 18036 Plas- tic Earframe	Tele-Fi & Plastic Midget Earset	.48
59 J 269	Type 8555 5-ft. Extension Cord	Monoset, Twinset & Magnetic Pillow Speaker	2.10
59 J 242	Type 9245 Panel Mounted Jack	59 J 252 Cord/ Plug	.24
	Type 9231 Minia- ture Straight Plug	59 J 252 Cord/ Plug	.36
	Type 12102 Jack	"TV Listener," 9231 Straight Plug	.24
59 J 253	Type 9241 std. cord w/std. phone plug	Allsets, except Twin- set & Magnetic Pillow Speaker	2.10
59 J 295 59 J 296	Ear Tips Ear Tips	All Twinsets All Monosets	.09

# American Bell & Cannon Headphones

### C. F. CANNON HEADPHONES AND ACCESSORIES

BRANDES BS-2 "SU-PERIOR" 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 diameter is 21/8".



Has double coils, one in each receiver. Flexible metal headband, Easily adjustable for maximum com-

CANNON-BALL "MAS-TER" 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 magnets produce strong



field, and resist corrosion. With cord. Wt., 11/4 lbs. 59 J 215. MC-2. 2000 ohms. NET.... 2.44 59 J 125. MC-3. 3000 ohms. NET.....2.65 59 J 126. MC-5. 5000 chms. NET....3.38

CANNON-BALL CC-2 "CHIEF" PHONES. Sensitive and practical headset for all general use. Ingeneral use. Inside terminal connections. 21/16" diaphragms; bakelite case and cap. lite case and cap.
Vinyl plastic covered headband.
2000 ohms. With
4½-ft. cord. Shpg. wt., 1¼ lbs.
59 J 172. NET



REPLACEMENT CAPS AND DIAPHRAGMS. For "Master" and "Chief" phones, above. 59 J 127. Caps. Wt., 2 oz. EACH.....21c 59 J 129. Diaphragms. 2 oz. Pkg. of 2.13c

### CANNON TV HEADPHONE KIT



High-quality listening device to aid hard-of-hearing, or provide private, "silent" listenhearing, or provide private, "silent" listen-ing when others might be disturbed by loud-speaker operation. Volume control and Speaker-Phones switch on control box. Sup-plied with 15-ft. cord, and two pairs of headphones. Shpg., wt., 3 lbs.

59 J 175. NET8.82
SINGLE HEADSET KIT. Same kit as above, but with only one pair of phones. 2 lbs.
59 J 176. NET
CONTROL BOX ONLY. Shpg. wt., 9 oz.
59 J 177. NET4.41
11-OHM DUAL HEADSET. Shpg. wt., 11/4 lbs.
59 I 173, NFT. 2.23

### **ALLIED'S OWN** AMERICAN BELL **HEADPHONES**

- Designed for Comfort
- Excellent Tonal Fidelity
- 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 4½-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

Have double headband with firmly gripping, easily adjustable yokes. 11/4" daphragm. 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
<b>59 J 141.</b> 11 Ohms, <b>NET</b>	2.00

### 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 in-corporated: Durable bakelite cases and caps which are easily cleaned; inside terminal connections, to prevent tampering; diaphragm is 1½" in diameter; Hyflux Alnico permanent magnets assure excellent sensitivity. Provide crisp, clear reproduction of voice and music. 4½-ft. braided cord. Comfortable, vinyl-plastic headband is easily adjustable. Shpg. wt., 11/4 lbs.

59 J	100.	2000	Ohms.	NET		 	 	2.	12
59 J	101.	3000	Ohms.	NET				. 2.2	2(

### SINGLE HEADPHONES

Dependable, economy-priced single phones. Suitable for hard-of-hearing installations, receivers, crystal sets, Geiger counters, etc. Diaphragm is 11% in diameter. Has spring-metal headband which is permanently attached to back of case. Equipped with 4½-ft. cotton covered cord. Shpg. wt., 8 oz.

Supg. wt., o oz.	
59 J 112. 1000 Ohms.	NET
0 / 2 / 1 Z. 1000 Chimb.	
59 J 113. 1500 Ohms.	NET
- · · · · · · · · · · · · · · · · · · ·	

### **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	.13c
BAKELITE CAP. Shpg. wt., 2 oz. 59 J 106. NET EACH	.13c
DOUBLE HEADBAND WITH YOKES. As able vinyl-covered double headband wyokes. Shpg. wt., 9 oz. 59 J 174. NET	ith .2

### AMERICAN BELL TRANSISTOR RADIO EARPIECES

Quality, lightweight ear-pieces; 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. Stock No.



59 J 147	Regency, Admiral, Motorola, Roland, Zenith (except 500), Gambles, Philco T-7, Trav- Ler, Hoffman, Airline (1100, 1102, 1106), Western Auto, Emerson, RCA, Arvin
59 J 193	Zenith 500 and Philco 500
59 J 109	Magnavox, Sonora, Bulova, Sparton, Sylvania
59 J 142	G.E. 5-Trans. (plastic case)
59 J 145	G.E. 6 and 7-Transistor (leather case)
59 J 133	Westinghouse, Airline 1108
59 J 116	Dewald
NET EACH	1.07

SEPARATE EARPIECE. Receiver and comfortable earpiece. Equipped with cord but less plug. Impedance, 8000 ohms. Excellent tonal quality. Shpg. wt., 4 oz. 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 Motorola TV sets. With plug. NET......2.42

59 J 192. For all TV sets except Emerson and Motorola. Alligator clips connect to voice coil. 8 oz. NET.......3.75

### **EARPIECES WITH PL-55 PLUGS**

High-sensitivity ear pieces. Supplied complete with standard PL-55 plug attached 5-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 ohms 59 J 131. 1000 ohms

NET EACH.....

### **CANNON-BALL RADIO HEARING AID**

59 J 118. NET.....



# **Headphones and Accessories**













### CLEVITE "BRUSH" HEADPHONES

A BA-200 Headphones. Very sensitive headphones with high imped-

Model BA-2008 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..

B BA-201 Headphone. Similar to model BA-200 but, single headphone. 90,000 ohms (1000 cps); Shpg. wt., 1 lb.

C Lorgnette BA-202 Phone. For group hearing aid systems. Extends to 17", 90,000 ohms. With 5-ft. cord. Shpg. wt., 1 lb. 59 J 157. NET. 9.80

Hi-Fi Headsets. Double headphone sets that feature uniform frequency response, low distortion, and excellent bass response. Lightweight 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 cps	19.40
59 J 153	*BA-205B	150,000 ohms	100-10,000 cps	20.58
59 J 163	BA-206	50,000 ohms	60-8000 cps	20.38
59 J 154	*BA-206B	100,000 ohms	60-8000 cps	21.56

### MYTRON HEADPHONES

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 cps. Impedance at 1000 cps is in excess of 50,000 ohms. Phones employ crystal elements for high sensitivity. Blocking capacitor required in presence of DC. With 4½-ft. flexible cord attached. Shpg. wt., 1 lb. 59 J 186. NET......9.26

N-130 Headphones. Extended frequency, crystal-type headphones, similar to model N-98 above; designed for high fidelity listening. Have remarkably wide response of from 60 to 13,000 cps. Impedance is 50,000 ohms at 1000 cps. Have cushioned headband for maximum comfort. Blocking capacitor required in presence of DC. With 4½-ft. cord. Shpg. wt., 1 lb. 59 J 187. NET......

### S. G. BROWN TYPE K HEADPHONES

Professional-type, high-fidelity dynamic headphones for broadcast use, monitoring, etc. Can be connected to any sound system, amplifier, radio, phonograph, recorder, or similar equipment. Headphones are actually 2 miniature high-fidelity loudspeakers—remarkable tonal fidelity and sensitivity. Uses moving-coil type armature 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. Headbands are adjustable. Response: 50-10,000 cps. Rubber ear cushions; 61/4-ft cord 52 ohms. Model in England Shop wt 11/4 lbs. bands are adjustable. Response: 30-10,000 cps. Additional Street of 6½-ft. cord. 52 ohms. Made in England. Shpg. wt., 1½ lbs. 28.95 59 J 337. NET.....

600-OHM HI-FI HEADPHONES. As above, but 600 ohms. 

### TRIMM HEADPHONES AND ACCESSORIES









G "Military" Type. Constructed to meet military headphone specifications. Impedance, 20,000 ohms; DC resistance, 2,000 ohms. Metal shell with bakelite cap. 6 ft. cord. Inside terminals. Rubber-covered headband. Shpg. wt., 1½ lbs. "Military" Type. Constructed to meet mil-59 J 040. NET.....

"Featherweight" Type. Weigh less than o ounces. Black bakelite caps and shells. Forged magnets; pole pieces of permalloy. Impregnated coils. Supplied with flexible 6-ft. moisture-proof cord. Shpg. wt., 9 oz. "Featherweight" Type. Weigh less than 5 59 J 000. Standard. 4000 ohms.

59 J 001. Special. 24,000 ohms. 

59 J 013. Replacement Caps. For "Featherweight" phones. EACH.....47c

59 J 042. Diaphragms. For "Military" and "Featherweight" types. EA. 15c

### LORGNETTE TYPE EARPHONE INDIVIDUAL VOLUME CONTROL



Hand-held type hearing aid. Same construction as "Featherweight" phones above. Excellent for use in churches, and small theaters. Earphone size, 2½" dia. x ¾" thick. Handle extends to 14". Impedance, 4500 ohms: DC resistance, 1000 ohms: DC resistance, with flexible. 1000 ohms. Supplied with flexible, braided 6-ft. cord with phone tips. Shpg. wt., 10 oz.

59 J 036. NET............4.85

"Professional" Type. Magnetic headphones for general use. Bakelite caps and shells. Forged magnets of chrome steel, impregnated coils. 5-ft. cord. Inside terminals. 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...38c 59 J 031. Extra Diaphragms. EACH....12c

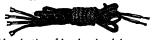
Acme "Deluxe" Type Headphones. Sensitive headphones designed for every use. 2000 ohm impedance. Sturdily constructed for dependable performance under all conditions. 41/2-ft. cord. Shpg. wt., 8 oz. 59 J 070. NET.....

Extra Diaphragms. For above. 2 oz. 59 J 012. EACH......12c



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: 334x 2½x1¼". Shpg. wt., 1 lb. 59 J 056. Brown wrinkle. 59 J 057. Ivory wrinkle. 

### **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.

4½ Ft. Double Cords

Stock	*********	For Use	NET
No.	*Terminals	With	EACH
59 J 220	Eyelet type. For inside terminals.	59 J 100,-101, -110,-111,-125, -126,-172,-135, -136,-137,-215	50c
59 J 205	Eyelet type.	59 J 130	
59 J 206	Has phone tips on both ends	Govt. and military types	50c
59 J 002	Small blunt tips	59 J 070	
	5 Ft. Double	Cords	
	Large blunt tips Eyelet type	59 J 020,-021 59 J 151,-158, -163	54c

6 Ft. Double Cords 59 J 004 (Eyelet type 59 J 000,-001 59 J 007 (Large blunt tips 59 J 040 58c

8 Ft. Double Cords 59 J 221 Eyelet type 59 J 130 Govt. and 74c 59 J 2 I 8 Eyelet type 59 J 2 I 9 Has phone tips on both ends Military type

Single Cords 59 J 200 | 4 ft. cord with eye-let type 59 J 182 | 6 ft cord with eyelet | 59 J 157 33¢ 50¢ type

### RUBBER PHONE CUSHION



Molded rubber ear cushions slip over phones. Provide maximum wearing comfort. Wt., 6 oz. 59 J 168. NET, PAIR. . 64c

10 or More Pairs,

# Headsets, Converters and Chargers

### GENERAL PHONES MODEL CLC-B HIGH-FIDELITY BINAURAL HEADSET

For Private Stereophonic Listenina



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 response—from 30 to 16,000 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., 1½ lbs.

59 J 339. NET. 29.40

### FEDTRO "PRIVATE-LEE" RADIO-TV EARPHONE SET



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-ft. cable.

Control box has two jacks for earpiece-

### CORNELL-DUBILIER DC TO AC CONVERTERS

The famous line of Cornell-Dubliler "Powercon" DC to AC converters. Efficient vibrator-type recommended for operating AC appliances from DC power sources. All units have well-regulated output of 110 volts, 60 cycle AC. Feature improved RF filtering. Now have a higher rating for intermittent overloads. Wattage figures for intermittent use are rated for power factors from 70-100%. Superior filtering assures output free of "hash". Model 12/SS14 comes in case of size indicated, providing room for 12 v. battery (supplied less 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 portable types. Converters listed according to inputs: 6 volt battery, 12 volt battery or 110 volts DC. Models 110H25 and 110H35 are approved for TV sets and are TVI-proofed.



Stock No.	Mfr's Type	TypicalApplications	Input V. DC	Wa Cont.			Wt., Lbs.	List	NET
80 P 300 80 P 301 80 P 302 80 PU 304	6SP2 6L6 6S8 6SH15	Electric shaver Phono motor, amplifier Radio, phono, recorder Radio, recorder, PA	6	20 60 80 150	80 100 175	25/8 x 2 1/2 x 3 7/12" 5 1/2 x 6 1/4 x 8" 5 1/2 x 6 1/4 x 9" 8 x 9 1/2 x 1 3"	12 14 35	41.28 49.60 79.68	5.05 24.27 29.16 46.85
80 P 263 80 P 305 80 P 306 80 P 307	12SP2 12M6	Dictating Machines* Electric shaver Radio, phono, amplifier Radio, phono, recorder		60 20 60 80	75 20 80 100	5½x7¾x6¼" 25½x2½x3½" 45½x315½x55½" 5½x6¼x8"	12	13.40 34.50 44.95	29.40 7.88 20.29 26.43
80 P 308 80 PZ 199 80 PU 309 80 PU 198	12SS14 12H15	Radio, recorder, PA TV, recorder, PA Radio, recorder, PA TV, recorder, PA	12 12 12 12	100 140 150 200	125 175 175 250	5½x6¼x9" 9½x9½x14" 6½x7½x11" 8x9½x13"	14 60 20 35		42.63 77.91 58.51 76.15
80 P 311 80 PU 312	110L10 110H25	Phono, amplifier Radio, recorder, PA TV, recorder, PA TV, recorder, PA	110 110 110 110	50 100 250 350	60 150 325 450	3½x3x4 <sup>1</sup> ¾6″ 5½x6¼x8″ 6½x7½x11″ 6½x7½x11″	12 20 20	57.50 89.50	16.76 33.81 52.63 79.38

### TERADO 6 AND 12 V. DC TO 110 V. AC CONVERTERS

Convenient DC-to-AC converters for operating 110-volt AC electrical devices from automobile batteries. Converter plug fits automobile cigarette-lighter socket, except for models marked t, 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, before selecting converter.

N/1 6 -- 1 --



Watts



114/4 | .....

50103

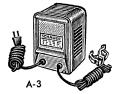
STOCK	IVITE'S	Input	Output V.,			Size	Wt.,	NET
No.	Туре	DC Volts	60 cycles	Cont.	Inter.	3120	Lbs.	
80 P 194 80 P 196	50102 50103	12 6	110 110	10 15	15 20	2x3x4"	2	7.77 7.77
80 P 272 80 P 273	50115 50116	6 12	110 110	35 40	40 50	2½x2½x4½"	31/4	13.17
80 P 270 80 P 271	50120 50127	6 12	110 110	60 75	75 8 <b>5</b>	6x5x4"	8	28.17 28.17
80 P 276 80 P 277	50137† 50138†	6 12	110 110	75 100	100 125	6x5x4"	9	38.97 38.97
80 <b>P</b> 28 <b>7</b>	50135	6 12	110	55 85	75 110	6x5x4"	9	32.97
80 P 197	50134†	6 12	110	55 85	75 110	4x5x6"	9	31.17
80 PU 193	50153	12	110	175	200	6x6x11"	24	59.97

I Innut | Quenus V |





**SCHAUER QUALITY** BATTERY **CHARGERS** 





### **10-AMPERE CHARGERS**

10-AMPERE CHARGERS

Dependable, safe chargers utilizing the finest available materials and components; designed especially to re-charge heavy-duty batteries as used in trucks, tractors and farm and mobile equipment. 10 ampere charging rate permits over-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 overharging output for high operating efficiency. Has accurate ammeter, which indicates exact rate of charge. Supplied with cords and clips. 71/4x61/4x61/8". For operation from 110-120 v., 60 cycle AC. Shpg. wt., 10 lbs.

Model C3. For 6-volt batteries.

Model C312. For one 12-volt or two 6-volt batteries in series. Otherwise as above. 80 P 164. List, \$32.95. NET..........21.80

### **4-AMPERE CHARGERS**

Model A3. Efficient, 6-volt overnight battery 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 Guard." Pays for itself in longer battery life and protection from battery failure. With cables and clips. Size, 6/4x4/4x4/4/.", For 110-120 v. 60 cycle AC. Shpg. wt. 4 lbs. 9.23

### **6-AMPERE CHARGERS**

Model B3. 6-volt, 6-ampere battery charger. 

# **Power Supplies & Rectifiers**

### **ELECTRO-PRODUCTS POWER SUPPLIES**





Model KPS-2 DC Power Supply Kit. A highly efficient, easy-to-flue unit. For servicing transistor portables and 6/12 v. auto sets. Two output ranges with separate current meters and output traminals. Delivers 0-20 volts at 75 ma and 0-16 at 5 amps. Variable transformer provides smooth voltage adjustment. 0-20 v. range has 75-ma meter and fused secondary for transistor protection. 0-16 v. range has 10-amp meter. Maximum ripple: 0-20 v. range, 0.15% at 75 ma; 0-16 v. range, 0.5% at 5 amps. Special pi-type filter. Selentium rectifiers have conduction cooling for long life. Includes fused primary. With assembly instructions. Sturdy metal case. 8½x8x5¾\*. For 110-120 v. 50-60 cycle AC. Shpg. wt., 15 lbs.
80 PX 038. NET.

39.95

Model PS-2. Same as above, but factory wired and tested. 80 PX 039, NET.....





.....235.00

### MALLORY POWER SUPPLIES



### **6 AND 12-VOLT BATTERY CHARGERS**

b AND 12-VOLI BATIERT CHARGERS
Highly efficient selenium-rectifier battery chargers.
May also be used as power supplies for electroplating, model trains, telegraph systems, vending 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 battery clips. Pilot light on all units except 6SAC4. Pilot 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 Type	DC Max	Amps Taper	Max DC Amps Continuous	Sizes H. W. D.	Wt. Lbs.	List	NET EACH
80 P 086 80 P 093 80 P 094 80 P 087	6SAC6 6SAC10	4 6 10 5	4 4 7 3	3 5 8 4	4% x4¼ x4% * 6% x4% x4% * 7% x6½ x5¾ * 7% x6½ x5¾ *	5¼ 6 9	\$19.95 22.95 33.95 33.95	13.03 14.99 22.18 22.18

### 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, 5\%\( 2x\)3\%\( x\)4\%\( 2'\)2''.

Stock	Mfr's	Input	Output	Max.	Wt.	List	NET
No.	Type	VDC	VDC	Ma.	Lbs.		EACH
80 P 116 80 P 117	VP6 -260 VP12-260 VP24-260 VP6 -325 VP12-325 VP24-325	6 12 24 6 12 24	260 260 260 325 325 325	60 60 60 100 100 100	5 5 6 6 6	\$28.95 28.95 30.95 29.95 29.95 32.95	17.02 17.02 18.20 17.61 17.61



### 12RS6DF BENCH POWER SUPPLY

Dual-range power supply for servicing car, Dual-range power supply for servicing car, truck and transistor radios. Range "A" supplies 0.16 v. at 6 amps continuously, or 14 amps intermittently. Range "B" provides 0.8 v. at 10 amps continuously or 20 amps intermittently. 2½" voltmeter and ammeter; ranges: 0.10 v. DC and 0.20 amps DC. Provides for observable and ammeter of the province of the

vision for plugging in external ammeter. Includes built-in filter pack similar to Type 6 volts at less than 1 v. rms ripple; 12 volts at less than 0.5 v. rms ripple; 12 volts at less than 0.5 v. rms ripple; 12 volts at less than 0.5 v. rms ripple; 0.0 cycle AC. Shpg. wt., 12½ lbs. v., 60 cycle AC. Shpg 80 PX 291, NET.... ......58**.7**5

### 12RS14D "RECTOPOWER" BENCH SUPPLY

T2RS14D "RECIOPOWER" 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 vibrator powered equipment. Uses selenium reconstructions of the power storage for operation for 110-120 volts, 60 cycle hogs, wt., 35 lbs.

# 1B12C1J



1B8R

**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. Single-phase, full-wave bridge type. Unaffected by temperature extremes (-90° to +265°;). Constant output without adjustments. "Self-healing" rectifying film. ‡At full load. Type of mounting: \*Insulated bolt; tgrounded foot; §insulated stud. J suffix indicates universal design for all types of mounting.

Stock No.	Mfr's Type	Max. ACV Input	DC Volts Output‡	Cont. Duty Amps	Size H. W. D.	Replacement in Equipment	Wt. Lbs.	List	NET EACH
56P 174 56P 175 56P 176 56P 179	1B4R* 1B8R* 1B12R* 1B12L5*	3.2 6.4 9.7 9.7	1.7 3.4 5.2 5.0	1.5 1.5 1.3 4.5	%x <sup>9</sup> / <sub>6</sub> x1" %x <sup>9</sup> / <sub>6</sub> x1%" %x <sup>9</sup> / <sub>6</sub> x1%" 2%x2½x2½"	GTC Battery Eliminator GTC Battery Eliminator Electric Fence Supplies Mallory 6AC4-2 Charger	1/4 1/4 1/4 1/2	\$2.90 3.45 3.95 7.10	1.89 2.25 2.59 4.65
56 P 180 56 P 170 56 P 177	IB12C5* IB12C1J* IS16CB7*	9.7 9.8 12.8	5.0 5.1 6.6	5.3 3.2 6.0	25% x21% x3" 15% x114 x234" 3x21/2 x334"	Mallory 6AC6-3 Charger Mallory 3C, 6AC4 Booster Mallory 5535B, 6AC6, IS16CB7M	34 34 1½	8.95 7.25 12.00	5.85 4.74 7.84
56 P 181	IS16B7§	12.8	6.5	8.3	3x2½x5½* 4¼x3½x5½*	6-AC-10-2, 107, IS16B7M Mallory 6AC10	3	13.60 15.50	8.89
56 P   7   56 P   84 56 P   86	F16C3† F20C7† IS24C7J§	13.0 16.2 19.4	6.8 8.4 10.1	3.9 4.8 4	21/4 x 13/4 x 3" 33/46 x 21/2 x 43/4" 33/46 x 21/2 x 43/4"	Mallory 5535 ATR Battery Eliminators Mallory 12-AC-5-2	1 1 2½	10.70 15.40 15.45	6.99 10.06 10.09

### MALLORY MA-6 FILTER PACK



MALLORY MA-6 FILTER PACK

Model MA-6 Filter
Pack. Designed for use with 12RSoD or other similarly rated bench 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 12RSoD. Equipped with an accurate-reading ammeter automatic spring return switch located on the front panel. Matches the 12RSoD in appearance. Housed in handsome Hammertone case. Size, 4½x5½x6½°. Shgs. wt., 5½ lbs. 17.15

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 or push-button switch. Size, 4½x5½x4½°. Shgs. wt., 3½ lbs. 10.53

Shpg. wt., 3½ lbs. 80 P 293. NET 10.53

# Converters and Power Supplies

# A

### 6-12 V. DC POWER SUPPLIES

Type 610C-ELIF. Features either 6 volts © 10 amperes continuous, or 12 volts © 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, 6½x9½x8½°, Shpg. wt., 22 lbs. 42.95

Type 620C-ELIT. Heavy-duty model. Uses dual rectifiers—full wave assures noiseless operation. Rated output: 6 volts at 20 amperes or 12 volts at 10 amperes. Has voltmeter and ammeter. Gray steel case with handle 8-position voltage selector control. Size, 61/2x 121/2x81/2. For 105-125 volts, 50-60 cycle AC. Sings. wt., 33 lbs. 

### 6 AND 12 V. SHAV-PAKS

Miniature inverters especially designed to operate standard AC electric shavers from 6 and 12-volt storage batteries in autos, buses, trucks, boats and planes. Ideal for salesmen, sportsmen. Plugs into cigarette lighter receptacle. Both 6 and 12-volt models provide 115 volts 60 cycle AC output at 15 watts. In attractively finished Hammerloid steel case. 4x25/x23/x\*. Shgg. wt., 2½ lbs.

Model 6-SPB. For 6-volt operation. 81 P 944. List, \$9.95. NET...........6.63 Model 12-SPB. For 12-volt operation. 81 P 945. List, \$9.95. NET...........6.63

### 6-12 V. BATTERY **CHARGER**



### 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 districts. Designed especially for standard 110-volt AC tape recorders, 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 17 vsets 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 strans. Sizes: Standard Model RSF, 8/x29/x85/4°; Heavy-Duty Model RHG, 6/x11/x88/4°; Extra-Heavy-Duty Model RHG, 6/x11/x88/4°. Extra-Heavy-Duty Model RHG, 6/x11/x88/4°. Extra-Heavy-Duty Model RHG, 6/x11/x88/4°. Extra-Heavy-Duty Model RHG, 6/x11/x88/4°. Extra-Heavy-Duty Model RHG, 6/x11/x88/4°. Extra-Heavy-Duty Model RHG, 6/x11/x88/4°. Extra-Heavy-Duty Model RHG, 6/x6/x11/x88/4°. Extra-Heavy-Duty Model RHG, 6/x6/x11/x88/4°.

Stock	Mfr's	Input	Output		tts	Wt.,	List	NET
No.	Туре	DC Volts	60 Cycle	Cont.	Inter.	Lbs.		EACH
81 PU 922	6U-RSF	6	110 v.	80	100	22	\$75.00	50.00
81 PU 923	6U-RSF-P	6	110 v.	80	100	22	75.00	50.00
81 PU 924	6U-RHG	6	110 v.	125	150	27	89.95	59.97
81 PU 925	6U-HSJ	6	110 v.	150	175	37	125.00	83.34
81 PU 926	12U-RSF	12	110 v.	100	125	22	75.00	50.00
81 PU 927	12U-RSF-P	12	110 v.	100	125	22	75.00	50.00
81 PU 928	12U-RHG	12	110 v.	150	175	27	89.95	59.97
81 PU 929	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 PU 931	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 PU 933	32U-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 PU 935	32U-HSJ	32	110 v.	225	325	37	145.00	96.67
81 PU 936	50U-RSF	50	110 v.	100	150	22	89.95	59.97
81 PU 937	110U-RSF	110	110 v.	150	250	22	75.00	50.00
8 i PU 938	110AU-RHG	110	110 v.	250	325	27	89.95	59.97
81 PU 939	110BU-RHG	110	110 v.	350	450	30	105.75	70.50
81 PU 940	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 DC 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, test equipment, etc. Not recommended for tape recorders and large motor driven appliances such as refrigerators, washing machines, etc. Gray Hammerloid case with leather carrying strap. Sizes: DME, 5/4x4/4x/3/7, RME and RMF, 8/4x883/4/, \*Recommended for 24-volt operation. Check wattage ratine of equipment before ordering. rating of equipment before ordering.



Stock	Mfr's	Input	Output	Wat	ts	Wt.,	List	NET
No.	Туре	DC Volts	60 Cycle	Cont.	Inter.	Lbs.	LIST	EACH
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-RMF	6	110 v.	60	80	12	45.00	30.00
81 P 941	6C-RMF	6/12	110 v.	60	80	12	49.50	33.00
80 P 249	12-DME	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 P 942	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

### CARTER CONVERTERS

### Super Converters For Tape & Wire Recording



Type B1010CBW4. 12 v. DC to 115 v. AC. 130 watts. Size, 5x81/x41/". Shpg. wt., 15 lbs. 80 P 059. List, \$123.00 NET......90.40

Type A1010CBW4. Same as above, but 6 v input. Shpg. wt., 15 lbs. 80 P 069. List, \$123.00. NET.......90.40



### **PERMA-POWER** QUALITY **PRODUCTS**

Versatile Power Supply and Radio **Battery Eliminator** 



### RADIO BATTERY ELIMINATOR

- Ideal for Any 1½-Volt Radio
- Provides Hum-Free Operation
- Universal Sockets—Installs Easily

Model "A". Converts battery-operated radios and other appliances requiring low power for operation from 110 volts AC house current. 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: 90 volts DC at 13 milliamperes. Will operate 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—2½" high, 6½" wide and 4½" deep. Variety of sockets permit use with most portable radios. U.L. Approved. 

### TRANSISTOR POWER SUPPLY

- Tests Transistor Portable Radios
- Operates Low-Power Circuits
- Highly Accurate, D'Arsonval Meters

Model A-400. Exceptionally precise, versatili power supply for testing, servicing and operating all types of low power transistorized equipment, including radios, phonographs, etc. Continously variable output uses autoforme control; two voltage ranges for exact setting o voltage required. Continuous current monitoring of single transistor or entire set.

Meters have precision D'Arsonval movement Input Voltage: 115 v., 50-60 cycles. Output Voltage: 0-15 and 0-30 volts DC. Output Cur rent: 0-15 and 0-60 ma. Ripple less than 0.002 % 10x6/zx3½". Sing. wt., 16 lbs. 

Model A-410. As above, but output current 0-20 and 0-200 ma. Shpg. wt., 16 lbs. 80 P 099. NET......73.0

# **Burgess Portable 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.





PORTA	ARLE	** A **	BATT	FRIFS

						PORTAB	LE "A" BATTER	IES				
Stock	Burgess	Std.	List	l	EACH	Volts	Size	Shpg. Wt.,		٠.	Replaces	
No.	Туре	Pkg.	Price	Single   Lots	Std. Pkg.	, , , , ,	0.20	Lbs.	Eveready	RCA	Philco	Zenith
53 J 029	1	12	\$0.20	.14	.13	11/2	115/16x63/64" dia. 29/16x19/32x231/32"	1/4	935	VS035	С	Z7
53 J 069 53 J 000	2D 2F	1 1	.90 1.00		.63	1 ½ 1 ½ 1 ½	29/16×19/32×231/32" 219/32×13/8×41/4"	1/4 1/2 3/4 21/2	720 W353	VS069 VS141	••••	••••
53 J 001	2F4	1 1	3.55	l ::::	.70 2.49	6	4x213/6x57/6"	21/2	718	VS010		
53 J 063	2R	48	.20	.14	.13	1 1/2	4x2 <sup>13</sup> / <sub>16</sub> x5 <sup>7</sup> / <sub>16</sub> " 2 <sup>25</sup> / <sub>64</sub> x1 <sup>21</sup> / <sub>64</sub> " dia.	1/4	950	VS036	P912	Z2NL/Z4NL
80 J 641	21 R	12	.40	.31	.28	1½ 1½	41/8x121/64" dia.	1/2	964	VS236	P77	Z5
53 J 049 53 J 003	37 4F	6	.98 1.50	1.16	.65 1.05	1 1/2	6 1/8 x 1 5/16" dia. 2 5/8 x 2 5/8 x 4 3/32"	11/2	742	VS004	P94	Ż94
53 J 045	5R	12	.20	.14	.13	1 1/2	215%4x <sup>2</sup> 9%4" dia. 43/ <sub>32</sub> x23/4x41/ <sub>16</sub> "	1/4				
80 J 629	6F	1	2.15		1.51	11/2		21/4	743	VS007		Z96
53 J 006 53 J 046	8F 8R	1 24	2.85 .60	.46	1.99 .42	1½ 1½	3 <sup>2</sup> 9/ <sub>32</sub> x2 <sup>2</sup> 3/ <sub>32</sub> x5 1/2" 3 <sup>1</sup> 5/ <sub>16</sub> x1 <sup>3</sup> / <sub>32</sub> " dia.	1/4	741 960P	VS070		Z1/Z955
53 J 047	9R	12	.17	.13	.12	11/2	163/64X35/64" dia.	1/4	1015E			21/2500
53 J 042 53 J 043	B5 C5	6	1.80 1.35	1.39	1.26	1 1/2 7 1/2 7 1/2	329/ <sub>32</sub> x <sup>7</sup> / <sub>8</sub> x2 <sup>27</sup> / <sub>32</sub> " 27/ <sub>32</sub> x1 <sup>1</sup> 5/ <sub>16</sub> x3 <sup>1</sup> / <sub>32</sub> "	1/4 1/4 1/2 3/4	713 717	VS129 VS065	P31	Ż750
53 J 070	D3	6	.98	.76	.95	41/2	37/8×15/16×215/16"	3/4	726	VS072	131	Z450
80 J 624	F3	6	1.05	.81	.74	41/2	4x17/16x41/8"	11/4	736	VS067	P38	Z736
53 J 011	F4PI	6	1.35	1.05	.95	6	221/32x221/32x41/8"	11/2	744	VS009	P4F4R	2024
53 J 013 53 J 071	G3 T5	6 3	1.20 1.65	.94 1.29	.85 1.17	4½ 7½	41/16x17/8x411/16" 217/32x219/32x229/32"	11/4	746 W360	VS002	P100	Z83A
80 J 625	Z4	1	.90		.63	6	13/16x13/16x27/32"	1/4	724	VS068	1	
						PORTA	SLE "B" BATTER	IES				
80 J 535	A30	1 2	3.25	2.50	2.27		3%16x21/4x45/16"		W359	VS014	1 P210	Z530
80 J 536	B30	2	3.85	2.97	2.70	45	4½6x2¹¾32x55/16"	$\frac{13/4}{21/4}$	484	VS012	P305	Z550
80 J 631 80 J 546	K45 M30	6	3.15 3.15	2.43	2.21	67½ 45	2 <sup>1</sup> / <sub>16</sub> x1 <sup>5</sup> / <sub>16</sub> x2 <sup>1</sup> / <sub>4</sub> " 5 <sup>1</sup> / <sub>2</sub> x1 <sup>3</sup> / <sub>4</sub> x3 <sup>9</sup> / <sub>16</sub> "	2 1/2	457 482	VS082 VS013	P45	Z457 Z783
80 J 632	N60	6	4.25	3.28	2.98	90	311/16x19/32x319/32"	1	490	VS090	P132	Z490
80 J 693	N60X	1	4.25		2.97	90	17/8×15/16×7"	1½8 3/4 3/4	495		P190	Z495
80 J 642 80 J 645	P45 P45M	6	3.10 4.00	2.39 3.03	2.17 2.75	$67\frac{1}{2}$ $67\frac{1}{2}$	129/ <sub>32</sub> x1x59/ <sub>32</sub> " 129/ <sub>4</sub> x1x59/ <sub>32</sub> "	3/4	477 477	VS218 VS215	P149 P175	. Z477
80 J 665	P60	6	3.75	2.89	2.63	90	129/32×1×713/32"	1 1 74	479	VS219	P176	ż90
80 J 646	U30	1	2.50		1.75	45	13/32×19/32×117/32"	1/4	415	VS086	P150	Z415
80 J 692	UX45 W30PI	1	2.95		2.07	671/2	13/16x15/16x33/8" 231/32x17/32x329/32"	1/2	416		P217	• • • • •
80 J 539 80 J 545	XX30	6	3.33 2.45	1.89	2.33	45 45	217/ <sub>32</sub> x31/ <sub>32</sub> x321/ <sub>32</sub> "	3/4 3/4	733 455	VS055	P105	Ž455
80 J 544	XX45	6	3.50	2.70	2.45	671/2	23/4×111/32×343/64"		467	VS016	P67	Z67
80 J 613	XX50	6	3.95	3.05	2.77	75	127/32x15/16x615/16"	11/4	437	VS217	P144	Z144/Z437
80 J 588 80 J 537	XX69 Z30	1 2	5.95 3.95	3.04	4.19 2.76	103½ 45	111/ <sub>32</sub> x111/ <sub>32</sub> x123/ <sub>32</sub> " 3x25/ <sub>16</sub> x41/ <sub>16</sub> "	11/4	W361 738	VS015	P7R30/P104	
	·	<del></del>		·		PORTA	BLE "AB" PACI		·	<del></del>		<del></del>
	2TXX40		5.35		3.59	11/2, 60	213/32X111/32X75/32"	11/2	W370		P89	
80 J 551 80 J 676	4GA42 4TZ60	1 1	7.75 5.75	1::::	5.40 4.03	1½, 63 1½, 90	9½6x2½8x4¾″ 75/8x2½8x3¾″	4	W366 729	VS053 VS064	P41A4FL P364	
80 J 555	6TA60	i	7.15		4.80	11/2, 90	931/32x21/4x47/16"	41/2	W369	VS054		
80 J 584	F6A60	1	7.25	• • • • •	5.08	71/2, 9, 90	05/cx221/cx45/c"	6	753	VS019	P841A	Z979
80 J 616 80 J 570	F6A60P G6B60	1 1	6.85 7.75	• • • • •	4.80 5.43	9, 90	97/16x23/4x411/32"	61/2	757 752	VS058 VS047	P60B6F6	Z909 Z985
80 J 585	G6M60	i	7.85		5.50		13 <sup>29</sup> / <sub>32</sub> x2 <sup>1</sup> 3/ <sub>16</sub> x4 <sup>2</sup> 1/ <sub>32</sub> "  10 <sup>3</sup> / <sub>16</sub> x3 1/ <sub>8</sub> x4 <sup>1</sup> / <sub>32</sub> "	6	754	VS018	1000010	2,363
80 J 615	T5Z50	1	6.25		4.38	6 71/2 75	81/4×311/2×23/6"	4	755	VS050	P350	
80 J 675 80 J 614	T5Z50P T6Z60	1 1	6.25 6.75	• • • • •	4.38 4.73	71/2, 75	8½x31½x2¾″	31/2	785 756	VS060	P361/P363/P371	Ż775
	T6Z60P	i	6.85	::::	4.80	9, 90	23/16x815/16x313/16" 23/16x815/16x313/16"	41/2	727	VS059		Ž962
		<del></del>		PC	ORTABL		IES FOR TRANS	ISTOR	RADIOS			
53 J 089		12	.20	.15	.14	11/2	15/16x63/64" dia.	1 1/4	635	VS035	C/1311	Z7
80 J 684 80 J 664		1 1	1.85 1.65		1.30	9	2 <sup>3</sup> / <sub>4</sub> x1 <sup>3</sup> / <sub>8</sub> x1 <sup>3</sup> / <sub>8</sub> " 1 <sup>7</sup> / <sub>8</sub> x <sup>3</sup> 9/ <sub>6</sub> 4x1"	1/4 1/4 1/4 3/8	246 216	VS305	P178	
53 J 096	2 <b>Z</b> 3	12	1.59	1.22	1.11	41/2	13/8x13/8x23/4"	3/8	1	:::::		
78 J 243	7	24	.125		.08	11/2	13/4x13/32" dia.	1/8	912	VS074	ĸ	
53 J 090 80 J 683	230	48 1	3.95	.17	.155 2.76	11/2	2 <sup>25</sup> / <sub>6</sub> x1 <sup>2</sup> 1/ <sub>6</sub> 4" dia. 7 <sup>5</sup> / <sub>16</sub> x2x2 <sup>1</sup> 7/ <sub>32</sub> "	1/5 21/2	A100 274	VS336	P920	
53 J 091	930	12	.17	.13	.12	11/2	131/32x35/64" dia.	1/10	1015E	VS034	P15	Ż8
80 J 690	A4 C6V	1	1.00		.69	6	211/32x19/32x19/32"	1/10 1/4 3/4			••••	
80 J 694 53 J 087	D5	$\frac{1}{1}$	$\frac{1.60}{1.45}$		1.10	71/2	25/16x11/32x61/16" 29/16x2x2 <sup>23</sup> /32"	7/8	707	VS315	P26	Z707
80 J 666		1 1	1.65		1.16	9	35/32x2x29/16"	1 1	276	VS306	P88	Z276
80 J 691	D6PI	1	1.65		1.16	3, 6, 9	7 <sup>2</sup> 7/ <sub>32</sub> x1 <sup>7</sup> / <sub>16</sub> x2 <sup>1</sup> 9/ <sub>32</sub> " 2 <sup>1</sup> / <sub>4</sub> x1 <sup>1</sup> / <sub>4</sub> x7 <sup>2</sup> 9/ <sub>32</sub> "	11/4	2506	VS301		• • • • • • • • • • • • • • • • • • • •
53 J 093 53 J 092		1 1	1.50 1.50		1.05	9	113/16x113/16x27/16"	11/8	266	VS322	••••	
80 J 689		48	.125		.08	11/2	111/64x7/6" dia	1/4		1		<b></b>
53 J 086	P6	1	1.10		.77	9	31/32X31/32X131/32"	1/4 1/4 1/8		170000		
53 J 088 80 J 679	YX9	1 1	1.35 1.35	::::	.93	9 131/4	31/ <sub>32</sub> x31/ <sub>32</sub> x163/ <sub>64</sub> " 19/ <sub>32</sub> x <sup>2</sup> 9/ <sub>32</sub> x2 <sup>1</sup> 7/ <sub>32</sub> "	1/8	226 239	VS300 VS304	P91	
00 0 0/7	,2227	<u> </u>	1 1.00	<del></del>	, .,,	, ,, 10/2	1 - 124 - 1244 - 125	. 74	_ 207	, , 550-1		

# **Burgess Batteries**



### **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	Burgess	Std.	List	NET EA.		1	Shpg.		Repl	aces	Acous-
No.	Type	Pkg.	Price	Std. Pkg.	Volts	Size	Wt.	Zenith	Sono- tone	Ever- eady	ticon
53 J 072 53 J 073 53 J 074 53 J 094 53 J 095	XX15 XX22 XX30PI K-10 K-15	1 1 1 1	\$1.80 2.05 2.50 1.50 1.65	1.27 1.44 1.75 1.05	22½ 33 45 15 22½	11/ <sub>32</sub> x <sup>15</sup> / <sub>16</sub> x3 <sup>7</sup> / <sub>8</sub> " 21 <sup>7</sup> / <sub>22</sub> x <sup>3</sup> / <sub>32</sub> x3 / <sub>8</sub> " 21 <sup>7</sup> / <sub>32</sub> x <sup>3</sup> / <sub>32</sub> x4 / <sub>32</sub> " 1/ <sub>4</sub> x <sup>7</sup> / <sub>8</sub> x1 1 / <sub>32</sub> " 1/ <sub>4</sub> x <sup>7</sup> / <sub>8</sub> x2 / <sub>32</sub> "	4 6 12 2 2	Z 30	230	425P 433P 455P 417 420	22EW 33EW 45EW
53 J 075 53 J 076 53 J 077 53 J 078	K20 U10 U15 U20	1 1 1	1.95 1.15 1.50 1.75	1.37 .81 1.05 1.23	30 15 22½ 30	2 <sup>2</sup> 3/ <sub>32</sub> x <sup>1</sup> 5/ <sub>16</sub> x1 1/4" 1x <sup>3</sup> 9/ <sub>64</sub> x1 7/6" 1x <sup>3</sup> 9/ <sub>64</sub> x1 31/ <sub>32</sub> " 1x <sup>3</sup> 9/ <sub>64</sub> x2 17/ <sub>32</sub> "	3 2 2 2 2	Z 11 Z 12 Z 13	211 212 213	430 411 412 413	711G 712H 713G
53 J 080 53 J 081 53 J 079 53 J 084	Y10 Y15 Y20 Y20S	1 1 1	1.15 1.50 1.85 1.85	.81 1.05 1.30	15 22½ 30 30	19/ <sub>32</sub> x19/ <sub>32</sub> x1 <sup>23</sup> / <sub>6</sub> 4" 19/ <sub>32</sub> x19/ <sub>32</sub> x131/ <sub>32</sub> " 19/ <sub>32</sub> x13/ <sub>16</sub> x113/ <sub>16</sub> " 19/ <sub>32</sub> x19/ <sub>32</sub> x29/ <sub>16</sub> "	3 3 3	Z 6	Z5 Z6 Z7	504 505 506 507	715G 722G

### STANDARD DRY BATTERIES

Suitable for all radio and laboratory requirements. Burgess quality construction and insulators allow use of very active ingredients, providing maximum useful life. Letters following battery type numbers denote terminals: P.I.—plug-in terminals; S.C.—spring-clip terminals. All others have screw terminals.



### "A" BATTERIES

Stock No.	Burgess Type	Volts	Size	Shpg. Wt., Lbs.	Std. Pkg.	£1	Std. Pkg.
80 J 621 53 J 017 53 J 037 53 J 036	2BBP 2F2H 2F2BP 2FBP	1½ 3 1½	11 <sup>3</sup> / <sub>32</sub> x <sup>2</sup> / <sub>32</sub> x <sup>2</sup> 1 <sup>1</sup> / <sub>16</sub> " 2 <sup>5</sup> / <sub>8</sub> x <sup>2</sup> / <sub>8</sub> x <sup>4</sup> / <sub>16</sub> " 5 <sup>3</sup> / <sub>16</sub> x <sup>4</sup> / <sub>12</sub> " 2 <sup>2</sup> / <sub>32</sub> x <sup>1</sup> <sup>3</sup> / <sub>8</sub> x <sup>4</sup> / <sub>32</sub> "	1 1/2 1 1/2 1 1/2	6 5 1 5	1.16	1.05 .99 2.23 .79
80 J 604 53 J 038 53 J 035 53 J 023	2Z2PI 422 432 44	3 3 4½ 1½	15/ <sub>32</sub> x15/ <sub>32</sub> x213/ <sub>32</sub> " 25/ <sub>6</sub> x <sup>2</sup> 3/ <sub>32</sub> x111/ <sub>32</sub> " 21/ <sub>4</sub> x131/ <sub>32</sub> x <sup>2</sup> 1/ <sub>32</sub> " 12/ <sub>32</sub> dia.x45/ <sub>32</sub> "	1/4 1/4 1/4 3/4	12 10 10 10	.67 .56 .65	.61 .51 .59
53 J 085 80 J 591 53 J 018 53 J 016	532 B2BP F2BP F4BP	4½ 3 3 6	215/32x13/16x223/32" 15/8x13/16x211/16" 221/32x13/8x41/32" 25/8x25/8x4"	1/4 1/4 1/2	1 6 5 1	1.03	.62 .94 .79

### "B" BATTERIES

		1	1	Shpg.		Net	Each
Stock No.	Burgess Type	Volts	Size		Std. Pkg.		Std. Pkg.
80 J 504 80 J 505 80 J 501 80 J 507	10308PI 10308SC 21308SC 2308SC	45 45 45 45	81/32×41/32×73/6" 81/32×41/32×73/6" 81/8×415/32×79/32" 83/32×231/32×71/4"	11½ 11¾ 13 8	1 1 1		4.40 4.40 4.88 3.50
80 J 510 80 J 511 80 J 512 80 J 508	4156 5156PI 5156SC 5308	22½ 22½ 22½ 45	31½x2½8x2½32″ 4½4x2¾x25½4″ 4½x2½x2¾″ 4½6x2½x2¾″	1 13/4 13/4 3	1 1 5 1		1.61 2.32 2.32 3.05
80 J 626 53 J 097 53 J 098 80 J 519	U-200 D30 Z30T W30BPX	300 45 45 45	23/4 x29/32 x37/8" 51/16 x21/32 x75/16" 3 x25/16 x41/8" 3 x11/4 x325/32"	1 4½ 1½ 34	1 1 1 1	·····	7.70 2.98 2.62 2.27
80 J 524 80 J 634	Z30NX	45 90	17/8 x31/32x419/32" 33/4 x211/32x515/16"	1 1/2 23/4	5 1		2.45 8.90

### "C" BATTERIES

Stock	Burgess		1	Shpg.	Std.		Each
No.	Type	Voits	Size	Wt., Lbs.	Pkg.	Sgl. Lots	Std. Pkg.
80 J 593 80 J 513 80 J 515	2370 2370PI 5360	4½ 4½ 4½ 4½	315/16×13/8×27/8" 41/64×127/64×263/64" 213/32×27/32×221/32"	1 1/4	5 5 10	1.17	
80 J 514 80 J 623 80 J 516 80 J 521	5540 A9BP B5P W5BP	7½ 13½ 7½ 7½ 7½	4x <sup>7</sup> / <sub>8</sub> x2 <sup>3</sup> / <sub>4</sub> " 2 <sup>3</sup> / <sub>32</sub> x2 <sup>3</sup> / <sub>32</sub> x2 <sup>13</sup> / <sub>32</sub> " 4 <sup>5</sup> / <sub>32</sub> x1 <sup>13</sup> / <sub>32</sub> x2 <sup>2</sup> / <sub>32</sub> " 2 <sup>3</sup> / <sub>32</sub> x2 <sup>3</sup> / <sub>32</sub> x1 <sup>3</sup> / <sub>4</sub> "	1/2 3/4 1/4	5 1 1 6	1.34	1.22 2.94 1.94 1.34

### 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.	Type No.	Volts	Size	Wt., Lbs.	NET EACH
53 J 099	2X62X†	1½, 9	2½x1 <sup>25</sup> / <sub>32</sub> x2 <sup>1</sup> / <sub>32</sub> "	1/2	1.82
53 J 100	2X7†	10½	2½x1 <sup>25</sup> / <sub>32</sub> x2 <sup>1</sup> / <sub>32</sub> "	1/2	1.82
53 J 101	3XX7*	10½	1¾x1 <sup>9</sup> / <sub>32</sub> x3 <sup>5</sup> / <sub>8</sub> "	1/2	2.00

### CAMERA MOTOR AND SOUND PROJECTION BATTERY

External power source for operating motion picture cameras as well as sound projection equipment. Spring-clip terminals.

	I _			124	c	NET	EACH	
Stock No.	No.	Volts	Size	Wt., Lbs.	Pkg.	Single	Std.	
53 J 102	10338	491/2	81/4×43/32×711/16"	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 steel. Type 1—for abby tubular flashlights; Type 2—for standard flashlights; Type Z—for standard penlights; Type 7-for slim penlights; Type N—for miniature and novelty lights.





	_				1	NET	EACH
Stock No.	Burgess Type	Size	Wt., Oz.	Std. Pkg.	LIST	Sgl. Lots	Std. Pkg.
53 J 029	1	115/16X63/64"	4	12	.20	.14	.13
53 J 009	2	23/8 x 121/64"	6	50	.20	.14	.13
78 J 243	7	13/4 x13/32"	2	12	.125	.09	.08
53 J 082	N Z	111/64×7/16"	3	24	.125	.09	.08
53 J 031	Z	131/32X35/64"	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 4F2H and 4FH recommended for general ignition, telephone and lantern service, etc.

		1	I	Shpg.		NET	EACH
Stock No.	Burgess Type	Voits	Size	Wt., Lbs.	Std. Pkg.	Sgl. Lots	Std. Pkg.
53 J 024 53 J 027 53 J 025 80 J 601 53 J 033	4FH 4F2H 4F4H 4F5H 4F6H	1½ 3 6 7½ 9	25/8 x25/8 x4" 329/32 x21 1/16 x 51 3/2" 85/16 x 21 3/16 x 51 3/16" 73/16 x 33 1/32 x 51 3/16" 8 1/2 x 33 1/32 x 51 3/16"	1 ½ 23¼ 6¼ 7½ 9	12 1 1 1 1	.84	.76 1.32 3.17 4.07 4.73
80 J 638 80 J 639 80 J 644 80 J 640	6-Ign. 6-Tel. 6-Ind. S461	1½ 1½ 1½ 1½	2½x65/8" 2½x65/8" 2½x65/8" 10½x23/x713/2"	2 2½ 2 8½	12 12 12 16	.84 .84 .97	.76 .76 .88

### **LANTERN BATTERIES**

For use with railroad-type lanterns. Type F4H has positive coilspring contacts—a favorite of railroadmen. Type TW1S for underwater use.

Stock	Burgess			Wt	Std.	NET EACH	
No.	Туре	Voits	Size	Lbs.		Single	Pkg.
53 J 027	4F2H	3	329/32×211/16×513/32"	23/4	1		1.32
53 J 028		6	25/8x25/8x43/8"	11/2	12	.87	.79
53 J 016	F4BP	6	25/8×25/8×4"	11/2	1		.79
53 J 103	F4SC	6	25/8×25/8×41/2"	11/2	1		.79
80 J 680	TW1	6	53/8×27/8×415/16"	31/4	1	1	1.63
53 J 104	TW1S	6	53/8×27/8×415/16"	31/4	1	1	1.82

### PHOTO-FLASH BATTERIES

Designed for high initial current discharge.

Stock	Туре	l		Std.	Shpg.	NET E	ACH	Replaces
No.	No.	Volts	Size	Pkg.	Wt.	Single	Pkg.	Eveready
53 J 040	120§	11/2	115/16x1"	12	4 oz.	.14	.13	835
53J 039	220§	11/2	225/64X111/32"	12	6 oz.	.14	.13	850
53 J 04 I 53 J 070	920§ D3	11/2	131/32X35/64" 37/8X15/16X215/16"	24	4 oz. ¾ lb.	.10½ .76	.09½	815
								726
801631	K45	671/2	211/16x15/16x21/4"	6	½ lb.	2.43	2.21	457
80J 546	M30	45	319/ <sub>32</sub> x1¾ x5½ "	6	2 lbs.	2.43	2.21	482
801681	N150	225	39/16x2¾ x4¾ "	1	1½ lbs.		5.56	492
80 J 63 2	N60	90	311/16x19/32x319/32"	6	1 lb.	3.28	2.98	490
53J076	U10	15	1x39/64x17/16"	1	2 oz.		.81	411
53 J 044		221/2	3 1/32 X 9/16 X 1 3 1/32"	1	4 oz.		1.05	412
80J678	U160	240	29/16x15/16x413/32"	1	¾ ib.		5.56	491
53 J 078	U20	30	139/64X217/32"	1	2 oz.		1.23	413
80J626	U200	300	2¾ x29/32x37/8"	1 1	1 lb.		7.70	
80J682	U320	510	215/16x117/32x57/16"	1	21/2 lbs.		11.16	497
80J677	XX150		41/4 x25/8 x41/4"	1	21/2 lbs.		6.96	
80J 544		671/2	234 x111/32x343/64"	6	34 lb.	2.70	2,45	467
53 J 080	Y10PF	15	19/32X19/32X123/64"	1	3 oz.		.81	504
53 J 08 I	Y15PF	221/2	19/32X19/32X131/32"	1 1	3 oz.		1.05	505

### **FARM RADIO PACKS**

Stock No.	Туре	Volts	Size	Wt., Lbs.	NET EACH
80 JX 572	17GD60	1½, 90	1511/6x43/8x71/6"	20	7.21
80 J 635	4SD60	1½, 90	1011/6x45/6x613/6"	15	7.21
80 J 636	S6D60	7½, 9, 90	97/8x41/8x713/6"	17	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. Fealed in steel containers. §Other voltage taps: 1½, 3, 4½, 6. ‡Other voltage taps: 3, 4½, 6, 9, 10½, 16½.

POPT	ARIE	44 A 47	RΔ	TTEDIES

Stock	RCA	Std.	List	NET	EACH	i i	° C:	Wt.,	l In	terchang	eable Wit	h
No.	Type	Pkg.	Price	Single Lots	Std. Pkg.	Volts	Size	Lbs.	Burgess	Eveready		Zenith
80 1 901 80 1 900	VS002 VS004	6 6	1.20 1.50	.94 1.16	.85 1.05	4½ 1½	411/16x13/8x4"	11/4	G3 4F	746 742	P100 P94	Z83A Z94
80 J 902	VS009	6	1.35	1.05	.95	6	4½6x25/8x25/8" 315/6x25/8x25/8"	11/2	F4P1	744	P4F4R	l <b></b>
80 J 947 80 J 948	VS034 VS035†	12 12	.125	.09 .135	.08 .125	1½ 1½	9/16x2" 1x1 <sup>1</sup> 5/16"	1/4	Z 1	915 935	AA C	Z8 Z7
80 J 903	VS036†	48	.20	.135	.125	11/2	15/16x23/8"	1/2	2R	950	P912	Z2NL
80 J 962	VS065	12	1.35	1.05	.95	71/2	3½6x2x25/16"	13/4	C5	717	P31	Z750
80 J 963 80 J 965	VS067 VS068	6 24	1.05 .90	.81 .69	.74 .63	4½ 6	4x13/8x41/8"	1/4	F3 Z4	736 724	P38	Z736
80 J 966	VS069	12	.90	.69	.63	11/2	13/16x13/16x23/8" 29/16x15/16x27/8"	1/4 3/4	2D	720		
80 J 967	VS072	12	.98	.76	.69	41/2	315/16x15/16x215/16"	1	D3	726		Z450
80 J 904 80 J 897	VS073 VS074	48 12	.125	.09	.08 80.	11/2 11/2	7/16x13/16" 7/16x11/4"	2 1/8	N 7	W463 912	K	
80 J 912	VS236†	12	.40	.31	.28	11/2	13/8×43/16"	1/2	21R	964	P77	<b>Z</b> 5
80 J 294	VS315	6	1.45	1.10	PORTA	71/2	29/ <sub>16</sub> x21/ <sub>32</sub> x213/ <sub>16</sub> " BATTERIES	1 1	D5	707	P26	Z707
80 J 905	VS012	6	3.85	2.97	2.70	45		3	B30	484	P305	Z550
80 J 906	VS013	6	3.15	2.43	2,21	45	4½x25/8x55/16" 39/6x113/6x51/2"	2	M30	482	P45	Z783
80 J 907 80 J 908	VS014 VS015	6 6	3.25 3.95	2.50 3.04	2.27 2.76	45 22½-45	3 <sup>7</sup> / <sub>16</sub> x2 <sup>1</sup> / <sub>4</sub> x4 <sup>9</sup> / <sub>16</sub> " 3x2 <sup>1</sup> / <sub>4</sub> x4"	13/4 11/2	A30 Z30	W359 738	P210 P104	Z530
80 J 909	VS016	12	3.50	2.70	2.45	671/2	23/213/23//	1	XX45	467	P67	Z67
80 J 910	VS055	12	2.70	2.08	1.89	45	211/16x1x311/16"	3/4 3/4	XX30	455	P105	Z455
80 J 889	VS082 VS084	12 12	3.15 1.50	2.43	2.21 1.05	671/2	21½6x1x31½6" 2½x1¾8x21¾6" 1x5/8x2"	1/4	K45 U15	457 412	P612	Z457 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	311/16x13/8x33/4"	1 5/8	N60	490	P132	Z490
80 J 898 80 J 968	VS215 VS217	24 12	3.50 3.95	2.70 3.05	2.45 2.77	67½ 75	1 <sup>29</sup> / <sub>32</sub> x1x57/ <sub>16</sub> " 1 <sup>13</sup> / <sub>16</sub> x1 <sup>3</sup> / <sub>8</sub> x6 <sup>1</sup> / <sub>4</sub> "	1 78	P45M XX50	477 437	P175 P144	Z437
80 J 999	VS218	12	3.10	2.39	2,17	671/2	57/16×1×1 <sup>29</sup> /32"	1	P45	477	P149	Z477
80 J 984 80 J 297	VS219 VS316	12 6	3.75 4.25	2.89 3.27	2.63 2.97	90 90	1 <sup>1</sup> / <sub>32</sub> x1 <sup>1</sup> / <sub>32</sub> x7 <sup>1</sup> 5/ <sub>32</sub> " 1 <sup>1</sup> 5/ <sub>16</sub> x1 <sup>1</sup> 5/ <sub>32</sub> x7/ <sub>8</sub> "	1 1	P60 N60X	479 495	P176 P190	Z90
80 J 296	VS318	6	2.95	2.28	2.07	671/2	121/64x63/64x31/2"	i		416		
					PORTAB		BATTERIES					
80 J 916 80 J 920	VS019 VS047	6	7.25 7.75	5.59	5.08	7½-9-90 9-90	4 <sup>3</sup> / <sub>4</sub> x2 <sup>3</sup> / <sub>4</sub> x9 <sup>3</sup> / <sub>16</sub> " 13 <sup>5</sup> / <sub>8</sub> x2 <sup>3</sup> / <sub>4</sub> x4 <sup>9</sup> / <sub>16</sub> "	6	F6A60 G6B60		P841A P60B6F6	Z979 Z985
80 J 920 80 J 921	VS050	6	6.25	5.97 4.82	5.43 4.38	6-71/2-75	89/16x27/8x311/16"	8 4	T5Z50		P350	2963
80 J 933	VS057W	6	6.75	5.20	4.73	71/2-9-90	89/16x27/8x311/16" 811/16x23/16x334"	4	T6Z60	756	P371	
80 J 928 80 J 888	VS058 VS059	6 6	6.85 6.85	5.28 5.28	4.80 4.80	9-90 9-90	9½x2¾x4¾ 81½6x2¾6x3¾	5 5	F6A60P T6Z60P	757 727		Z909 Z962
80 J 896	VS060	ő	6.25	4.82	4.38	71/2-75	311/16x27/16x89/16"	31/2	T5Z50P	785		Z775
						SISTOR B.						
80 J 961 80 J 991	VS300 VS301	24 12	1.75	1.35	1.23	3,6,9	131/ <sub>32</sub> x31/ <sub>32</sub> " 23/ <sub>4</sub> x19/ <sub>6</sub> x8"	11/4	P6 D6P1	226 2506	P91	• • • • • •
80 J 837,	VS304	12	1.35	1.05	.95	9,131/2	23/4x19/6x8" 23/4x11/8x13/4" 23/4x13/8x13/8"	1/4	XX9	239		
80 J 838 80 J 839	VS305 VS306	12 6	1.85 1.65	1.43 1.28	1.30	9	2 <sup>3</sup> / <sub>4</sub> x1 <sup>3</sup> / <sub>8</sub> x1 <sup>3</sup> / <sub>8</sub> " 3 <sup>5</sup> / <sub>32</sub> x2 <sup>1</sup> / <sub>32</sub> x2 <sup>9</sup> / <sub>16</sub> "	1 1/4	2N6 D6	246 276	P178 P88	Z276
80 J 840	VS307	12	1.44	1.11	1.01	51/2	19/32X31/32"	1/8				
80 J 841	VS308	12	1,28	.99	.90	4	11/16X31/32"	1/8				
80 J 842 80 J 843	VS309 VS310	12 12	1.61 1.29	1.24	1.13 .91	9 5½	1 <sup>29</sup> / <sub>32</sub> × <sup>35</sup> / <sub>64</sub> " 1 <sup>1</sup> / <sub>4</sub> × <sup>35</sup> / <sub>64</sub> "	1/16 1/32			::::::	
80 J 844	VS311	12	1.10	.85	.77	4	11/32x35/64"	1/32				
80 J 845 80 J 846	VS312 VS313	12 20	2.75	2.04 .56	1.85	8 1.4	1x1 <sup>15</sup> / <sub>16</sub> " 9/ <sub>16</sub> x1 <sup>31</sup> / <sub>32</sub> "	1/8 1/16	2U6	216 E9		
80 J 847	VS314	12	1.10	.85	.51 .77	9	1x1x1 <sup>1</sup> 5/ <sub>16</sub> "	1 1/8		226		
80 J 298	VS321	12	2.75	2.12	1.93	4	213/16x13/4x811/32"	3		2731		• • • • • • •
80 J 299 80 J 095	VS322 VS336	12 48	1.50 .25	1.15	1.05 .155	9 1½	1 <sup>21</sup> / <sub>64</sub> x2 <sup>13</sup> / <sub>32</sub> " 11 <sup>3</sup> / <sub>6</sub> x1 <sup>13</sup> / <sub>6</sub> x2 <sup>7</sup> / <sub>6</sub> "	1/2	M6 230	266 A-100		• • • • • •
80 J 949	VS400	10	2.65	1.98	1.80	4	1 <sup>13</sup> / <sub>16</sub> x1 <sup>13</sup> / <sub>16</sub> x2 <sup>7</sup> / <sub>16</sub> " 1 <sup>31</sup> / <sub>32</sub> x1 <sup>1</sup> / <sub>32</sub> "	1/4		E233		
	1700010					TRIAL BA		. 01/		CT	,	
80 J 870 80 J 871	VS006C VS026	12 3	1.15 5.00	.84 3.85	.765 3.50	$\frac{1\frac{1}{2}}{22\frac{1}{2}-45}$	25/8x65/8" 81/16x33/16x73/16"	21/4 71/2	2308PI	GL6 W365 <b>P</b>	P30D	3544
80 J 937	VS028	5	1.05	.80	.73	41/2	27/8x7/ <sub>32</sub> x213/ <sub>32</sub> "	1/2	5360	781		
80 J 938 80 J 942	VS029 VS039	10 3	1.75 4.75	1.34 3.49	1.22 3.17	7½§	2 <sup>15</sup> / <sub>16</sub> x1 <sup>13</sup> / <sub>16</sub> x3 <sup>7</sup> / <sub>8</sub> " 10 <sup>3</sup> / <sub>8</sub> x2 <sup>7</sup> / <sub>8</sub> x7 <sup>3</sup> / <sub>8</sub> "	11/2	5540 S461	773 1461	P5B P64	
80 J 992	VS040C	10	1.19	.87	.79	6	211/ex211/ex45/e"	11/4	F4H		P4F	Z107G
80 J 950	VS040S	10	1.19	.87	.79	6	21/16x21/16x43/16" 15/16x41/16" 11/32x5/6x17/16" 29/16x5/8x11/32"	13/4	F4BP	1060		
80 J 993 80 J 890	VS070 VS083	25 12	.60 1.15	.46 .89	.42 .81	1½ 15	1 <sup>3</sup> /16X4 <sup>1</sup> /16" 1 <sup>1</sup> / <sub>32</sub> x <sup>5</sup> / <sub>8</sub> x 1 <sup>7</sup> / <sub>16</sub> "	1/2	8R U10	1060 411	::::::	Z1 Z11
80 J 914	VS085	12	1.75	1.35	1.23	30	29/16x5/8x11/32"		U20	413		Z13
80 J 989 80 J 986	VS093 VS101	3 8	11.00 1.15	8.47	7.70	300	25/8x23/16x313/16" 25/8x13/8x49/16"	11/4	U200 22FBP	493 W354		
80 J 951	VS102	6	2.35	.87 1.77	.79 1.61	1½ 22½	3 <sup>3</sup> / <sub>8</sub> x2 <sup>1</sup> / <sub>8</sub> x2 <sup>3</sup> / <sub>4</sub> "	1 1/4	4156	763	:::::	
80 J 957	VS106	10	1.15	.84	.765	11/2	211/16x211/16x43/16"	1½ 1½ 3¼	4FH	735		
80 J 952 80 J 988	VS112 VS114	<u>5</u> 5	3.50	2.70	3.05 2.45	221/2-45	57/16x25/8x41/8" 3x17/6x415/6"	2	5308 Z30NX	W376 W350	<del></del>	
80 J 873	VS127W	3	6.30	4.85	4.41	22½-45 22½-45 1½-3-4½	3x17/8x415/16" 8x4x73/8" 315/16x13/8x3"	11	10308SC 370ST			
80 J 959 80 J 960	VS130 VS131	8 5	1.50 3.30	1.17 2.55	1.06	11/2-3-41/2 221/2‡	41/6v21/6v35/6"	1 2	370ST 5156SC	761T 778		
80 J 987	VS133	5	.90	.68	2.32 .62	41/2	$3\frac{1}{16}x^{1}\frac{3}{16}x^{2}\frac{3}{8}''$	1/2	532	703	[	
80 J 892	VS134	10	.75	.56	.51	3	17/16x3/4x29/16"	1/2	422	750		· · · · · · · ·

# 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 conventional types. As new mercury batteries become available from the manufacturer, Allied will stock them. Av. shpg. wt., 2 oz.



Stock Mallory		Std.	NET EACH			Size	Interchangeable				
No.	Type	Pkg.	Single	Std.	Volts 7	(Dia. x Ht.)	l		With		
			Lots	Pkg.			Eveready	Burgess	RCA	Philco	Zenith
80 J 727	ZM-9	2	.56	.51	11/2	17/ <sub>32</sub> ×113/ <sub>32</sub> "	E9	Z	VS-034	AA	Z8 or Z9
80 J 749	DM-9N	2	.59	.54	11/2	17/32×113/32"					
80 J 787	TR-145R	2	1.60	1.45	71/2	21/32×13/64"					
80 <b>J 7</b> 85	TR-146R	12	2.04	1.85	9	1x <sup>1</sup> 7/ <sub>32</sub> x1 <sup>15</sup> / <sub>16</sub> "	E146	2U6	VS-312		· · · · · · · ·
80 J 849	TR-233R	10	1.98	1.80	4	11/64×131/32"	E233		VS-400	P696	
80 J 788	TR-246R	10	2.20	2.00	9 '	13/16x211/16"	246	2N6	VS-305	P178	
80 J 784	RM-42R	10	2.48	2.25	11/2	1½x2¾″	1			l	l

### **MERCURY "A" BATTERIES**

Extremely long shelf life and uniform discharge voltage. Reshumidity. †With ½" tab on positive terminal. Shpg. wt., 2 oz. Resistant to

Stock	Mfr's	Size	Volts	Std.	NET	EACH
No.	Туре	(Dia. x Ht.)	VOICE	Pkg.	Single	Std.Pkg.
80 J 878	RM1R	5/8×5/8"	1.34	4	.42	.38
80 J 879	RM3R	1x5/8"	1.34	4 2 4	.59	.54
80 1 880	RM4R	17/32X5/8"	1.34	4	.76	.69
80 1 88 I	RM12R	5/8 x115/16"	1.34	2	.90	.82
80 J 740	RM4RT†	13/16x11/16"	1.34	4	.84	.76
80 J 742	RM42RT†	13/16x23/8"	1.34	10	2.55	2.32
80 J 743	RM400R	7/16×1/8"	1.34	6	.28	.25
80 J 884	RM401R	7/16×1 1/8"	1.34	2	.37 .37	.34
80 J 744	RM450R	7/16×9/16	1.34	4	.37	.33
80 J 882	RM502R	1/2×115/16	1.34	2	.68	.62
80 J 147	RM520R	15/32×1/4"	1.34	4	.16	.15
80 J 883	RM625RT+	5/8×15/64"	1.34	4 2 4	.40	.36
80 J 745	RM601R	5/8 x 1 1/8"	1.34	2	.56 .33	.51
80 J 746	RM625R	5/8×1/4"	1.34	4	.33	30
80 J 747	RM630R	5/8×1/4"	1.34	4	.33	.30
80 J 748	RM640R	5/8×7/16"	1.34	4	.35	.32
80 J 148	RM675R	29%4X13%4"	1.34	6	.29	.26

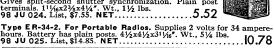
### BIAS CELL CLIPS

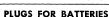
Clips to hold grid bias cells listed at right. 11/2" tinned

reads. Cells easily inscreed, removed. 2 oz.									
Stock No.	Mfr's Type	Used With	Capacity	List	EACH				
9 M 952 9 M 953	GB-15 GB-16	BC-3 or BC-5	2-cell 4-cell	40c 40c	26c				
9 M 954	GB-17	BC-3 01 BC-3		40c					

### WILLARD RECHARGEABLE BATTERIES









\*With 3 small prongs only. †5 prongs, 5 Fahnestock clips. §3 prongs. Av. shpg. wt., 1 oz. 2 per pkg.

Stock No.	Fig.	For Burgess Batt.	For RCA Battery	Per Pkg.
54 J 021	A B*	2F4, F4P1 XX15, XX22,	VS009	6¢
54 J 022	_	XX30P1		14¢
54 J 023	С	6TA60, 4SD60, 4TZ60, 17GD60	VS054	
54 J 024	D	2F, 4F, 6F, 8F,	VS004, VS069,	8¢
54 J 026	F	2D, 8R D3, F3, G3	VS070, VS141 VS067, VS072	5¢ 10¢
54 J 027	G	B-5, C-5, T-5	VS065	,7¢
54 J 028	H	2TXX40, 4GA42		14¢
54 J 03 I	E	F6A60, G6M60,	170010 170010	
	(	S6D60, T5Z50, T6Z60	VS018, VS019, VS050, VS057W	104
54 J 034	В	A30, B30, M30,		10¢
34 J U34	ь		VS012, VS013,	
54 J 036	+	W30P1, Z30	VS014, VS015	14¢
			<u> </u>	40¢
54 J 035	§	2370P1	VS030	30¢ ∣
54 J 067		Male snap-on		6¢
54 J 068		Female snap-on		7¢
54 J 037		U30	VS086	86¢
78 J 269	J	10308P1, 21308P1,		
	1	2308P1	VS026	9¢

### **MERCURY TRANSISTOR POWERPAKS**

The batteries listed below are ideal for original or replacement use in transistor radios. Mallory Mercury Transistor Powerpaks are widely used by designers and manufacturers of all types of electronic equipment. Their excellent performance has led to their use in geophysical, transceiver, radiation and recording instruments, and in many other electronic applications. Av. shpg. wt., 3 oz.

Stock	Mfr's	Size	Volts	Std.	NET	EACH
No.	Туре	5.20		Pkg.	Single	Std. Pkg.
80 J 789 80 J 790 80 J 728 80 J 729 80 J 730	TR-113R TR-114R TR-115R TR-132R TR-133R	21/32X27/32" 21/32X1" 21/32X19/32" 21/32X15/16" 21/32X131/32"	4.0 5.0 6.5 2.5 4.0	2 2 2 2 2 2	1.42 1.65 1.80 .92 1.30	1.29 1.50 1.64 .84
80 J 731 80 J 732 80 J 733 80 J 734 80 J 735	TR-134R TR-135R TR-136R TR-140R TR-152R	21/32×219/32" 21/32×37/32" 21/32×329/32" 1×1/2×17/32" 1/2×1 1/8"	5.0 6.5 8.0 1.3 2.5	2 2 2 2 2 2	1.68 2.04 2.53 1.23	1.53 1.85 2.30 1.12 .72
80 J 791 80 J 792 80 J 793 80 J 794 80 J 795	TR-153R TR-162R TR-163R TR-164R TR-165R	1/2 x1 <sup>23</sup> /32" 23/32 x <sup>29</sup> /32" 21/32 x11 <sup>5</sup> /6" 21/32 x1 <sup>25</sup> /32" 21/32 x2 <sup>3</sup> /6"	4.0 4.0 4.0 5.0 6.5	2 2 2 2 2 2	1.01 .96 1.21 1.49 1.80	.92 .87 1.10 1.35 1.64

### **GRID BIAS CELLS**



EVEREAD 1 DRY CEL

For biasing first audio amplifier tubes. No by-pass to ground needed. Stack with bias cell clips listed at left. Size, 11/4,123/4,4°. Shg. wt., 2 oz.

Stock No.	Mfr's Type	Volts	List	NET EACH
9 M 948	BC-3	11/2	60c	400
9 M 949	l BC-5	13/4	60c	1 4UC

### **EVEREADY BATTERIES**

Type 493. Compact, 300-volt power source. Designed for low-drain, high-voltage applications such as: Geiger counters, photoflash units (gas discharge type), multiplier-photo cells, small lightweight insulation testers. Size. 21/6x27/4x324/x². Shpg. wt., 11/4 lbs. 7.70

### **KEYSTONE BATTERY HOLDERS**

Battery holders for transistor assemblies, radios, meters, model airplanes, etc. Feature snap-clips, moisture-proof fibre washers, spring temper aluminum alloy, nickel-plated eyelets, coated terminals for easy soldering, and mounting holes. Av. shog. wt., 3 oz.



	No.	Type	Holds	Burgess	Mallory	Eveready	NET
54 54	J 042 J 043 J 044 J 045	139 140 171 182	1 2 3 4	Z,9R,Y15	RM12R,TR133R, RM502R,ZM-9	E-9,E-12, E133,E502, 915,1015E, 505	.23 .38 .49
	J 046 J 047	174	1 2	1	TR233R	E233,635, 935	.30
54	J 048 J 049	137 138	1 2	7		912	.23
	J 055 J 056		1 2	N	TR152R	W468,E401	.23 .38
54	J 057		1		TR132R,TR163R, TR115R	E132	.30
	J 040 J 060	175 176	1 )	2,24	RM42R	D-99,A-100 724,950	.30 .38
	J 058 J 059		1 2	U10		411	.30 .38
	J 041 J 061	177 178	1 2	U15	RM412R	412	.30 .38
	J 062 J 063	183 184	1 2	U20		413	.30 .38
	J 064		1 2	Y10		504	.23

### HOWARD W. SAMS RADIO-TV SERVICE PUBLICATIONS



### PHOTOFACT FOLDER SETS: THE OUTSTANDING RADIO-TV SERVICE DATA

Service data covers over 30,000 post-war TV and radio sets, record changers, hi-fi units, etc. Based on actual lab analysis of production-run equipment, it is highly accurate, verified data. Each folder includes schematics, photos of chassis showing location of parts, alignment instructions, tube placement charts, replacement parts lists, and trouble-shooting hints. Used extensively by up-to-date radio and TV service shops—they will pay for themselves in time saved.

ALL FOLDER SETS IN STOCK. We stock all sets from No. 1 and up. Use the free Index listed below to determine the folder set you require, or write to Allied giving Make and Model No. of receiver. When ordering, be sure to specify Stock No. (38 KK 500), and Folder Set No., (or Make and Model No.).

FREE CUMULATIVE INDEX. Tells you instantly which Sams' Folder Set contains the servicing information you require. Lists sets by make and model.

38 K 576 FREE

BINDER FOR FOLDER SETS. Hardbound. Covered in durable, attractive, black leatherette. Prevents misplacing or damaging of individual folders, and keeps them in neat well-organized form to permit fast, convenient reference. Holds 10 folder sets. Size, 9½x11½x6°. Shpg. wt., 4 lbs.

3.50

PRODUCTION CHANGES, A-400. Changes made by manufacturers in models covered in Folder Sets 341 through 400. 1.95

SAMS' EASY-BUY PLAN. You can pay-as-you-profit with Photofact folder sets. Sets of individual folders as well as folders bound in manual form (10 sets per manual) may be purchased on Sams' time payment plan. This liberal plan requires only a small down payment, and there is no carrying charge or interest. The down payments starts as low as \$10.00—the balance can be completed in as many as 24 monthly payments. To qualify under this plan, a minimum order of 60 Photofact folder sets (or 6 manuals) is required. Only folder sets already published may be ordered under this plan. Write to Allied for full information.



### ALL-STEEL FILE CABINET FREE WITH PHOTOFACT FOLDER SETS

Take advantage of this opportunity to build your Photofact Service Data Library, and get absolutely free, a quality, all-steel file cabinet. Order any 60 Photofact Folder Sets (as a cash purchase, or on Sams' Easz-Buy Plan—only \$10.00 down with no interest or carrying charges), and receive the cabinet free. The cabinet alone is worth \$8.951 Order 120 Photofact sets and you get 2 free cabinets; 180 sets and you receive 3 cabinets. Cabinet size, HWD, 11x13/yx25'. Each cabinet holds 60 Photofact folder sets. Specify folder set numbers you want when ordering. No shipping charges in U.S.A. 60 Folder Sets and Cabinet.

Stock No | Vol | FolderSets

### PHOTOFACT SERVICE MANUALS

Photofact Service Manuals are compact and convenient binders consisting of 10 Folder Sets. These Manuals contain complete information on the servicing of radios, television sets, and other equipment produced up to the present. They are assembled as numbered volumes with each volume covering a particular time period. New volumes are stocked by Allied as soon as they are released.

Stock No.	Vol.	Folder Sets	Period
38 K 864	40	391-400	10/57- 1/58
38 K 863	39	381-390	6/57-10/57
38 K 862	38	371-380	3/57- 6/57
38 K 861	37	361-370	1/57- 3/57
38 K 860	36	351-360	10/56- 1/57
38 K 859	35	341-350	7/56-10/56
38 K 634	34	331-340	5/56- 7/56
38 K 633	33	321-330	2/56- 5/56
38 K 632	32	311-320	12/55- 2/56
38 K 637	31	301-310	10/55-12/55
38 K 630	30	291-300	7/55-10/55
38 K 629	29	281-290	5/55- 7/55
38 K 628	28	271-280	1/55- 4/55
38 K 627	27	261-270	12/54- 3/55
38 K 626	26	251-260	9/54-12/54
38 K 625	25	241-250	6/54- 9/54
38 K 624	24	231-240	12/53- 5/54
38 K 584	23	221-230	8/53-12/53
38 K 583	22	211-220	5/53- 8/53
38 K 575	21	201-210	2/53- 5/53

Stock No.	VO1.	roluersets	reriou
38 K 574 38 K 573	20 19	191-200 181-190	11/52- 2/53 7/52-11/52
38 K 572 38 K 571	18 17	171-180 161-170	4/52- 7/52 1/52- 4/52
38 K 570	16	151-160	$\frac{11/51-1/52}{8/51-10/51}$
38 K 563 38 K 562	14	131-140 121-130	4/51-8/51 1/51-4/51
38 K 561	12	111-120	10/50- 1/51
38 K 560 38 K 559	11	91-100	$\frac{7/50-10/50}{3/50-7/50}$
38 K 558 38 K 557	9	81-90 71-80	12/49-3/50 10/49-12/49
38 K 556 38 K 555	8 7 6	61-70 51-60	5/49-10/49 12/48- 5/49
38 K 554	-5	41-50	7/48-12/48
38 K 553	3	31-40 21-30	1/48- 7/48 7/47- 1/48
38 K 551 38 K 550	2	11-20 1-10	1/47- 7/47 Postwar-1/47
	·	·	

### **AUDIO AMPLIFIER MANUALS**

AUDIO AMPLIFIER MANUALS

Bound volumes of Photofact Folder Sets covering all types of audio equipment, including hifi amplifiers, public address amplifiers, premplifiers, public address amplifiers, premplifiers, and tuners. Invaluable to the audio engineer, sound technician, serviceman, custom installer and experimenter. Each volume includes schematic diagrams complete with recommended voltage and resistance measurements at various points in the circuits. Detailed alignment instructions with provisions for use of oscilloscope (desired patterns are shown) or YTVM. Standard replacement parts are easily found through Sams' easy-to-use interchangeability charts. Profusely illustrated with front, top and bottom photographs. Photos are keyed to show exact locations. All controls clearly labelled. Dial stringing guides included. Page size, 8½x11°. Postpaid in U.S.A.

Stock Vol. Period NET

Stock	Vol.	Period	NET
No.	No.	Covered	EACH
37 K 366 37 K 361 37 K 352 37 K 353 38 K 617	AA-9 AA-8 AA-7 AA-6 AA-5	1956 1955-1956 1955 1953-1954 1952-1953	3.95 3.95 3.95 3.95

### **AUTO RADIO MANUALS**

AUIO RADIO MANUALS

These manuals provide complete coverage of auto radio receivers. Indispensable for rapid servicing. Offer full servicing information and alignment instructions. Replacement of parts is simplified through the use of the interchangeability charts which show standard replacements available from various manufacturers. Numerous photographs with keyed components are included; permit identification and location of all parts. Gives schematic diagrams with normal voltage and resistance readings. Dial cord stringing diagrams are also provided. 8½x11°.

Postpaid in U.S.A.

Stock	Vol.	Period	NET
No.	No.	Covered	EACH
37 K 367	AR-7	1956-1957	3.75
37 K 362	AR-6	1955-1956	3.95
38 K 641	AR-5	1954-1955	3.50
38 K 612	AR-4	1953	3.00
38 K 603	AR-3	1950-1952	3.00
38 K 602	AR-2	1949-1950	3.00
38 K 597	AR-1	1946-1948	4.95

### RECORD CHANGER AND TAPE RECORDER MANUALS

TAPE RECORDER MANUALS

These information-packed manuals make it far easier to service record changers and players. They're invaluable aids for fast, efficient servicing of these intricate components. Each contains complete descriptions of every unit, exploded views; mechanical disassembly procedures; schematic diagrams of electrical circuits; trouble-shooting hints; cleaning lubrication and adjustment procedures; and complete parts lists. Volumes CM-3 through CM-9 include wire, tape and disc recorder coverage. Volume RC-10 is devoted exclusively to record changers. Size, 8½x11°. Postpaid in U.S.A.

Stock No.	No.	Period Covered	EACH
37 K 368	RC-10	1956-1957	2.95
37 K 363	CM-9	1956	3.95
37 K 356	CM-8	1955-1956	3.95
37 K 354	CM-7	1954-1955	3.95
38 K 614	CM-6	1953-1954	3.00
38 K 615	CM-5	1951-1952	3.00
38 K 582	CM-4	1950-1951	3.00
38 K 567	CM-3	1949-1950	3.00

### DIAL CORD STRINGING GUIDES

Popular, time-saving aids for radio and television servicemen. The only manuals devoted vision servicemen. The only manuals devoted to the baffling problems of stringing radio and TV set dial cords. Cover both permeability-tuned and capacity-tuned sets. Clear, easy-to-follow illustrations. Size, 5½x8½".

No.	Vol.	Period Covered
37 K 364	DC-6	mid 1955-mid 1957
37 K 355	DC-5	1953-mid 1955
38 K 611	DC-4	1951-1953
38 K 610	DC-3	1950-part 1951
38 K 568	DC-2	1947-Oct. 1949
38 K 564	DC-1	1938-1946

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### **HOWARD W. SAMS RADIO-TV SERVICE PUBLICATIONS**



TV TUBE LOCATION GUIDES. These books tell you the position and function of every tube in hundreds of popular TV sets. A valuable addition to any TV service shop. Include clear, accurate diagrams of each receiver. Volumes 4, 5, 6 and 7 include tube failure check charts which list the most likely tube failures for no sweep or sync, loss of picture or sound and power supply failure. Each volume beginning with No. 2 indexes the sets in the previous volumes. 5½x8½°.

Stock No.	Туре	Volume	Period
38 K 865 38 K 858	TGL-7 TGL-6	7	1956-1957 1955-1956
38 K 857 38 K 606	TGL-5 TGL-4	5 4	1953-1954 1952-1953
38 K 601	TGL-3 TGL-2	3 2	1951-1952 1950-1951
38 K 855	ŤĞĽ-Ĩ	l ī	1948-1950

NET EACH. Postpaid in U.S.A.....2.00

KEY CHECK POINTS IN TV RECEIVERS. A compilation of proved, time-saving servicing information based on careful analysis of TV sets. This practical book tells how to make quick tests at key points to localize the trouble; how to check over-all performance of the set to insure against call-backs. Also describes other general TV servicing applications. Illustrated. Size, 5½x8½°.

TV SERVICING GUIDE, SGS-1, A quick reference guide showing how to use proper trouble-shooting techniques based on analysis of symptoms. Includes trouble-shooting and servicing hints for locating and curring trouble in each section of TV set. 132 pages. 8½x11". 2,00 37 K 261. Postpaid in U.S.A.........2.00

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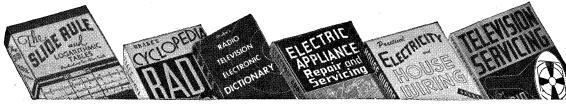
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Size, 5/x8/\*. 210 pages.
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## **TUBE CURVES**

By Technical Publishing House. 20-sheet graph pads of tube characteristics. Include plate, screen, positive grid, mu, Gm, and Rp curves; plus physical and electrical data for all equivalent tube types. Graphs have 1, 2, or 5 units per scale division for simplified readings. 8½x 11″. Postpaid in U.S.A.

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39 K 200	12AU7, 5814, 5963, 6C4, 6135,
39 K 201 39 K 202 39 K 212	6189, 6100 12AT7, 6AB4, 6201, 12AZ7 12AX7, 6AV6, 6BK6 6AQ5, 6005, 6V6GT, 6CM6, 7C5, 5871, 6287, 5992 (triode)
39 K 203	As above, pentode connected
39 K 204	6SN7, 6J5, 6CG7, 1633, 7A4, 5692, 7N7, 12G4, 12H4
39 K 205	6SL7, 6SU7GTY, 5691, 7F7, 6188
39 K 206 39 K 211	6L6, 5932, 1631, 5881 (triode) As above, pentode connected
39 K 207 39 K 208 39 K 209 39 K 210	5965, 6829 5687 5751 5718
39 K 213 39 K 214 39 K 215	6211 6350 6AK5, 5654, 5702WA, CK605CX (pent.) As above, but triode connected
39 K 217 39 K 218 39 K 219 39 K 220	6AU6, 12AU6, 6136 (pentode) As above, but triode connected 6CL6, 6197, 6677 (pentode) As above, but triode connected
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Above charts. NET EACH...........89c

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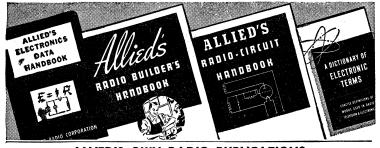
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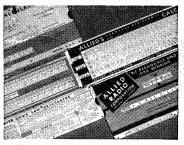
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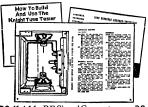


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## DO-IT-YOURSELF HIGH-FIDELITY COMPONENTS









HF-65K

HF-32K

HFT-90K (Less Case)

## **NEW MODEL HF-65K PREAMPLIFIER KIT**

- Versatile Master Control High-Fidelity Audio Center
- Deluxe 3-Stage Tone Control Circuit With Feedback
- Expertly Designed, "Low-Silhouette" Construction

Hi-fi preamplifier kit for versatile control of music systems—offers the audiophile a wide range of controls and switching facilities for any type of installation. Six inputs (3 high-level and 3 low-level) any type of installation. Six inputs (3 high-level and 3 low-level) accommodate all hi-fi equipment including magnetic, crystal or ceramic cartridges, tuner, tape, TV, etc. Some of its features include: 4 phono equalizations (including RIAA) and NARTB tape head equalization; separate bass and treble controls; 3-stage tone control circuit; single switch to select any input and/or equalization; low-impedance tape output; built-in high and low noise elimination filters; cathode follower output; hum balance control; switched AC outlets; pilot lamp; concentric loudness and level controls.

outlets; pilot lamp; concentric loudiness and level controls. SPECIFICATIONS: Frequency Response: ±0.3 db, 5-200,000 cps up to 3 v. RMS output. Harmonic Distortion: (20-20,000 cps): 0.1% at 3 v. RMS output. Filter Cut-Off Frequencies: rumble filter, 50 or 100 cps at 9 db/octave, scratch filter, 5 or 10 kc at 9 db/octave. Phono Equalizations: RIAA, LONdon, COLumbia, 78. Tape Head Equalization: NARTB for 7½ jps. 3—12AX7/ECC83 tubes plus rectifier. 3½x12x8½". Complete with all parts, tubes, perforated steel cover (metallic-gold painted), brushed brass panel, and step-by-step instructions to permit quick, easy assembly. Less solder. For 110-120 volts, 50-60 cycle AC. Shpg. wt., 10 lbs.

MODEL HF-65-A-K. As above, less power supply. Wt., 8 lbs.

#### NEW MODEL HF-32K 30-WATT AMPLIFIER KIT

- Powerful Amplifler With Full Set of Controls
- Wide Response—Extremely Low Harmonic Distortion
- Superbly Designed—Employs Williamson-Type Circuit

Powerful 30-watt Williamson-type high-fidelity amplifier kit. Comrowerth 30-watt willamson-type nign-nearity ampliner kit. Com-bines versatility and superb performance. Neatly styled in keeping with the "low-silhouette" design. Can be easily constructed—even by a person having no previous technical experience. Has 3 high-level switched inputs for tuner, TV, crystal cartridge or tape; 3 low-level inputs for magnetic cartridges, tape head and microphone. Low-impedance tage recorder output Low-impedance, tape recorder output.

Includes 4-position record equalizer plus NARTB tape head equalizer; separate bass and treble controls; scratch and rumble filters; loudness and level controls; hum balance control; auxiliary AC outlets; DC on preamp filaments; push-pull parallel (4) EL84 output stage; hum and noise is 60 db below rated output on low level input. SPECIFICATIONS: Rated Output: 30 watts. Frequency Response: ±0.5 37co Chick Holm Read Output: 3 wates, Prequency Response. 3 wates, Prequency Response. 3 water Traced output: Distortion: below 1% harmonic; 2% IM. Speaker Outputs: 4, 8 and 16 ohms. 43/x15x101/2". Supplied with all parts, tubes, brass panel and instructions. For 110-120 v., 50-60 cycle AC. Shpg. wt., 25 lbs. 

## MODEL HF-60K 60-WATT BASIC AMPLIFIER KIT

- 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



needed for electrostatic and other type low-efficiency speakers. Uses ultra-linear connected push-pull EL34 output tubes operated with fixed bias. Output: 60 watts, 130 watts peak. Response: ±0.1 db, 15-35,000 cps. Harmonic Distortion: less than 0.5% at 54 watts, 20-20,000 cps. IM: less than 0.5% at 50 watts; less than 1% at 60 watts. Hum and Noise: 90 db below rated output. Damping Factor: 17. Sensitivity: 0.55 volts for 60 watts output. Excellent stability and transient response. Speaker Outputs: 4, 8, and 16 ohms. Fully-potted Acro TO-330 output transformer. Input level control. Standard output leocket provided for presembling roover take off TylAy8" Brown enamel finish. With all parts, tubes, wire and instructions. Less solder. For 110-120 v., 50-60 cycle AC. Wt., 30 lbs.

MODEL HF-50K. As above, but with Chicago Standard output trans-

87 SX 235. E-2 Cover. For HF-50K or HF-60K. 3 lbs. NET. 4.50

- - NEW MODEL HF-81K STEREO AMPLIFIER KIT
- Excellent Music Control Center—Full Controls
- Dual 14 Watts for Stereo—Full 28 Watts Monaural Employs Dual Williamson-Type Push-Pull Amplifiers

Highly versatile, combination stereo preamp and amplifier kit for the budget-minded hi-fi enthusiast. Permits selection, preamplification and control of any stereophonic source—tape, discs or broadcasts. Dual 14-watt Willamson-type amplifiers—mounted on one chassis—deliver a full 28 watts when unit is used for monaural reproduction. Has provisions for a tape mechanism, record changer and tuner for full enjoyment of both stereo and monaural. Simply add the speakers and program sources of your choice for rich, exciting sound. Suited for either regular or custom mounting.

Features include: individual low-level input in each channel for reatures include: individual low-level input in each channel for tape head, magnetic phono and microphone; front-mounted switch to choose NARTB tape head equalization for 334, 7½, or 15 ips tape speeds; individual high-level inputs for FM tuner, AM tuner and FM multiplex; auxiliary inputs (2 in each channel); level controls and separate balance control; separate bass and treble tone controls in each channel; push-pull EL84 power amplifiers (Williamson-type); hum balance control; pilot lamp; convenience outlets; panel-mounted fuse; "low-silhouette" construction.

SPECIFICATIONS: Response: ±0.5 db, 10-100,000 cps (1 watt each channel). IM Distortion: 2% at 28 watts. Speaker Outputs: 4, 8 and 16 ohms. Harmonic Distortion: less than 1% from 30 to 10,000 cps at 16 watts. 4½x15x10½. With all parts, tubes, cover and instructions. Less solder. For operation from 110-120 v., 50-60 cycle AC. wt., 25 lbs. 

#### NEW MODEL HFT-90K BASIC FM TUNER KIT

- Impressive High-Fidelity Performance at Low Cost
   "Low-Silhouette," Highly Attractive Styling
- Newly-Designed, Sensitive Tuning Indicator

A basic FM tuner kit offering excellent performance at moderate cost. Features temperature-compensated components for drift-free operation. Ideally suited for custom installations—provides exceptionally clean, faithful reproduction of the entire audio spectrum. Use it with any hi-fi amplifier having volume and tone controls.

Additional features include: pre-wired and pre-aligned front-end for exceptional ease of assembly; up-to-the-minute travelling tuning indicator; effortless, fly-wheel tuning; automatic gain control; cathode follower output; broad-band ratio detector; full-wave rectifier and heavy-filtering; very low distortion.

SPECIFICATIONS. Sensitivity: 1.5 µv for 20 db quieting. Bandwidth: 260 kc at 6 db down. Controls: Tuning, Level/Power ON-OFF. Frequency Response: ±1 db, 20-20,000 cps. With all parts, tubes and instructions. Less solder and cover. 37\(\xi\)x128\(\xi\)x". For operation from 110-120 v., 50-60 cycle AC. Shpg. wt., 10 lbs.

87 SX 245. Only \$4.00 Down. NET... 87 SX 246. Cover For Above. Shpg. wt., 3 lbs. NET .......3.95

## NEW MODEL HF-30K 30-WATT BASIC AMPLIFIER KIT

- Excellent Hi-Fi Response
- Four EL84 Output Tubes
- Ideal for Custom Systems

A value-packed 30-watt basic amplifier kit at remarkably low



amplifier kit at remarkably low cost. Designed for use with any high-quality tuner or preamplifier with full set of controls. Uses four EL84 power output tubes to deliver full 30-watt output. Output transformer is constructed with interleaved windings for reduced leakage inductance. Amplifier has no controls—may be placed in any convenient, out-of-the-way location or easily installed in cabinet. Ideally suited for use in moderately priced, custom high-fidelity music systems.

use in moderately priced, custom migh-mentry music systems.

SPECIFICATIONS: Rated Output: 30 watts. Response: ±0.5 db, 15-50,000 cps at rated output. Harmonic Distortion: less than 1% (from 20-20,000 cps). Intermodulation: less than 2% at rated output. Inverse Feedback: 20 db. Sensitivity: 1.24 volts for rated output. Speaker Outputs: 4, 8 and 16 ohms. Tubes: 1—6AV6, 1—EC90/6C4, —EL84; 2—EZ81 rectifiers. 5x12x7". With all parts, tubes, cadmium-plated steel chassis and instructions. Less solder and cover. For 110-120 v., 50-60 cycle AC. Shpg. wt., 17 lbs.

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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	Add	Add	Add	Add	Add	Add	Add	Add
Extra Lb.		4c	5c	7c	91/4c	12c	151/4c	18c
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(Rates are about 10% higher to eastern states.)

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Pounds	50	150	300	500	750	1000	1500	2250
5 10 15 20 25	2.01 2.01 2.01 2.03 2.12	2.01 2.01 2.08 2.23 2.37	2.01 2.08 2.30 2.52 2.72	2.01 2.24 2.53 2.82 3.11	2.01 2.37 2.72 3.08 3.45	2.08 2.51 2.92 3.35 3.79	2.22 2.77 3.33 3.90 4.45	2.41 3.17 3.94 4.70 5.46
35 45 55 70 80	2.32 2.51 2.69 2.98 3.17	2.66 2.93 3.22 3.66 3.95	3.16 3.60 4.02 4.67 5.11	3.69 4.27 4.87 5.73 6.32	4.16 4.89 5.60 6.68 7.38	4.63 5.49 6.34 7.62 8.47	5.57 6.70 7.82 9.51 10.63	6.99 8.52 10.04 12.33 13.85
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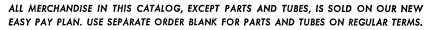






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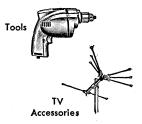


Ham Gear



Power Supplies





Easy Payment Table						
If Unpaid Balance is	Carrying Charge	Monthly If Unpaid Payment Balance is		Carrying Charge	Monthly Payment	
Up to \$ 20.00	\$ 2.00		\$130.01 to \$140.00	\$14.00	\$11.00	
20.01 to 30.00	3.00	\$ 5.00	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	7.00	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		350.01 to 400.00	40.00	24.00	
110.01 to 120.00	12.00	10.00	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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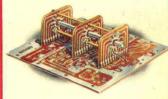
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