WANG

6104

VS-15/25/45 COMPUTER SYSTEMS
SCHEMATICS MANUAL

Customer Engineering
Product Maintenance Manual

WANG LABORATORIES, INC.
ONE INDUSTRIAL AVENUE, LOWELL, MASSACHUSETTS 01851, TEL (617) 459-5000, TWX 710 343-6769, TELEX 94-7421

741-1185

PRINTED IN U.S.A.

PREFACE

This document contains schematics for the Wang VS-15/25/45 Computer System. It is used with the VS-15/25/45 Computer System Standard Maintenance Manual (document no. 741-1404/741-1032) and is organized in accordance with the approved STD outline established at the Field/Home Office Publications meetings conducted on September 14th and 15th, 1982. The scope of these manuals reflect the type of maintenance philosophy selected for this product (swap unit, printed circuit assembly, chip level or any combination thereof).

The purpose of the Standard Maintenance Manual and this Schematics Manual is to provide the Wang-trained Customer Engineer (CE) with instructions to operate, troubleshoot and repair the VS-15/25/45 Computer System. This manual will be updated on a regular schedule.

3rd Edition (November, 1984)

This edition of the VS-15/25/45 Schematics Manual obseletes documents no. 729-1185-A and 729-1185-A1. The material in this document may only be used for the purpose stated in the Preface above. Updates and/or changes to this document will be published as Publications Update Bulletins (PUB's) or subsequent editions.

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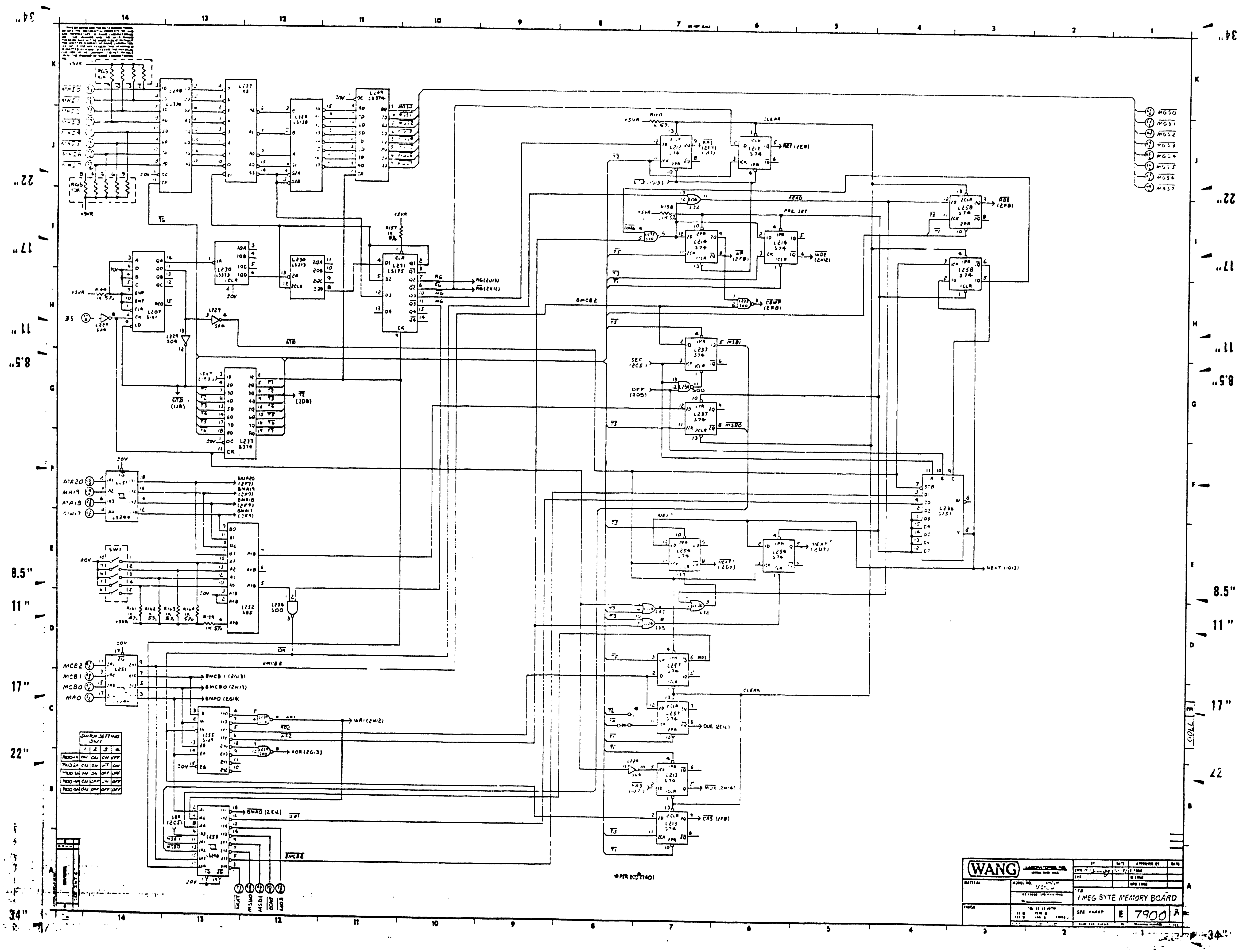
The following electrical schematics are the latest revisions available at the time of publication of this manual. Periodically, as changes, additions, or deletions occur, updates to this manual will be made available to field personnel.



WANG
1 MEG BYTE MEMORY BOARD
7900
READ
CLEAR
PRE SET

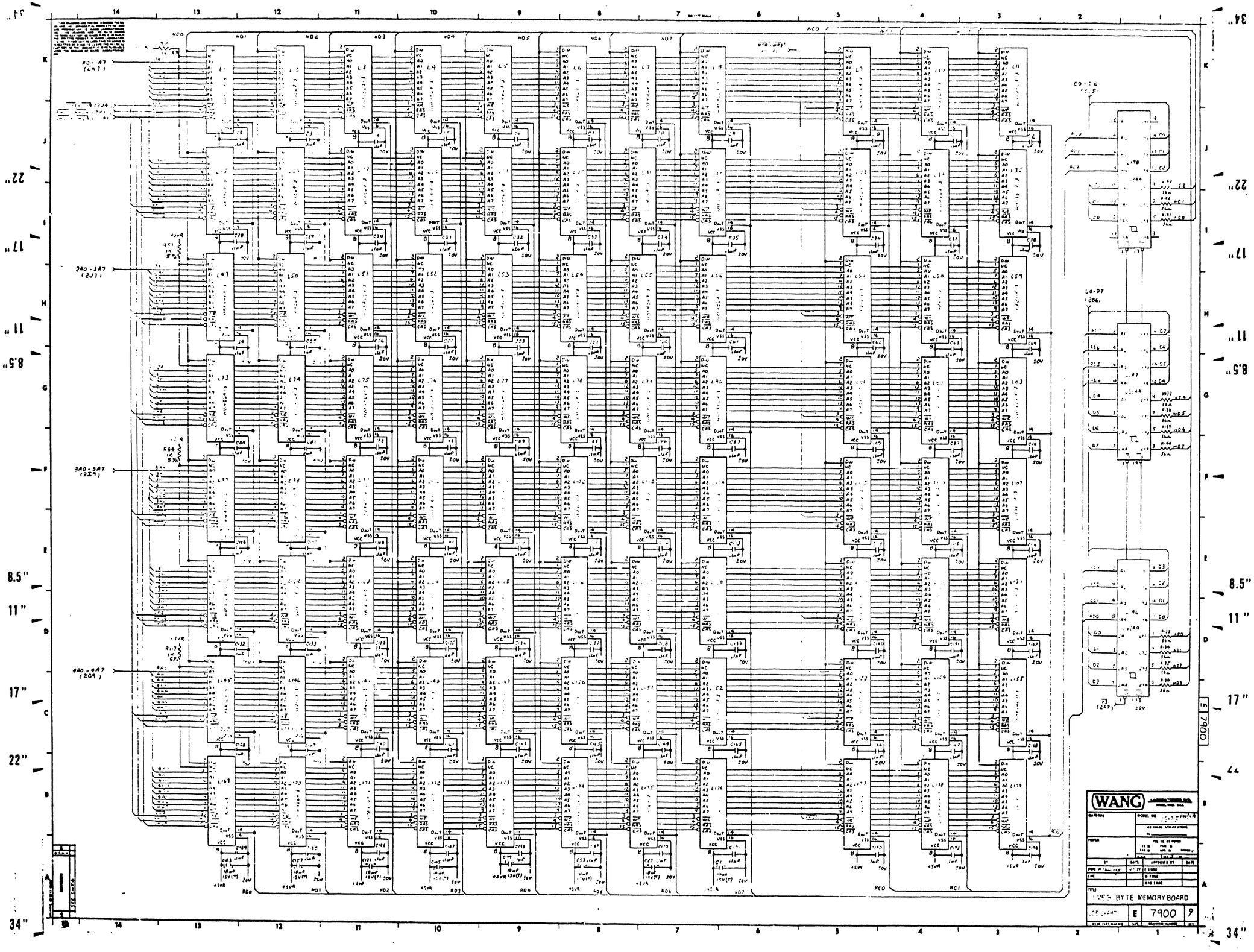
WANG

MODEL NO VS-25

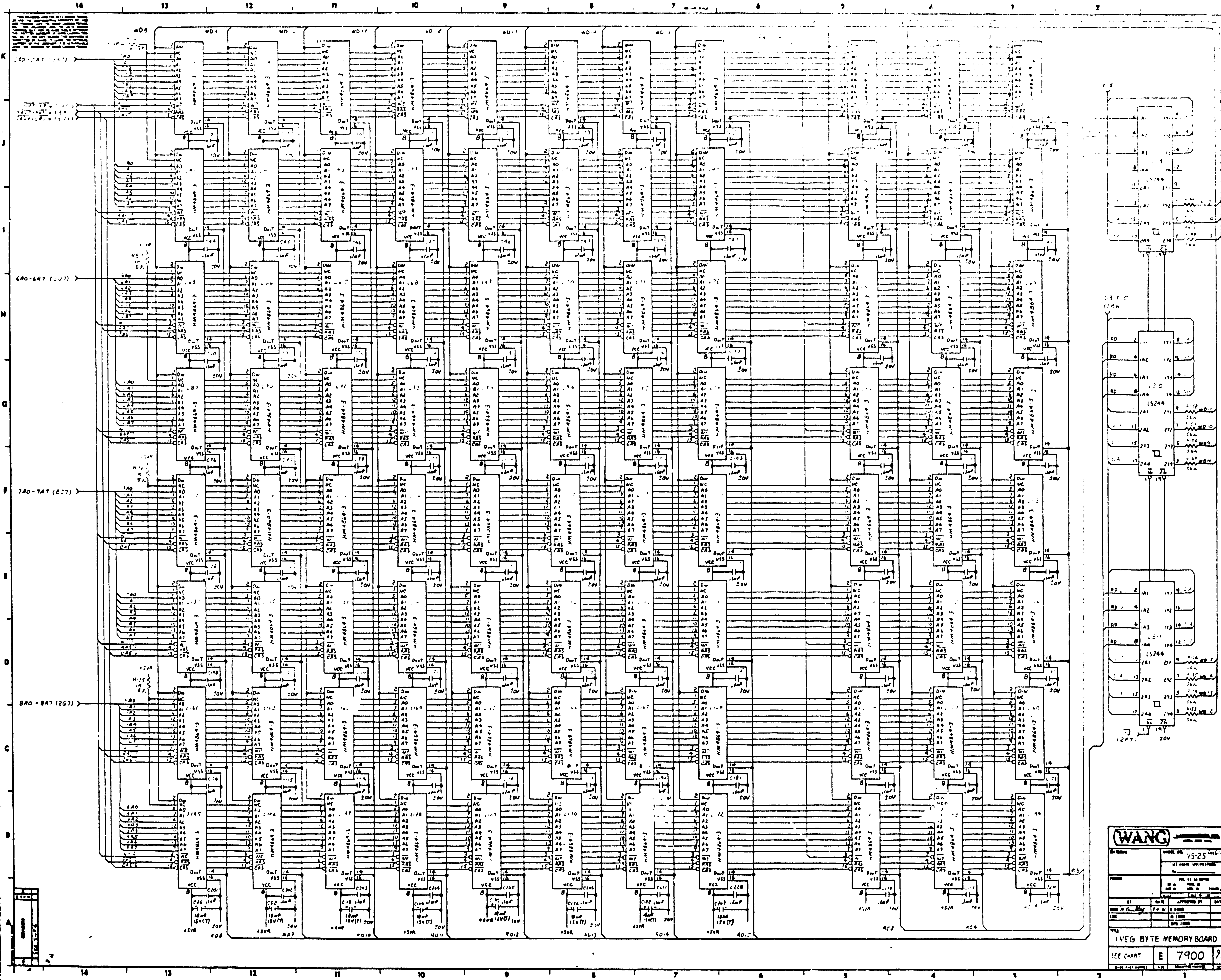
TITLE 1 MEG BYTE MEMORY BOARD

SEE CHART | E | 7900 | 9

E 7900

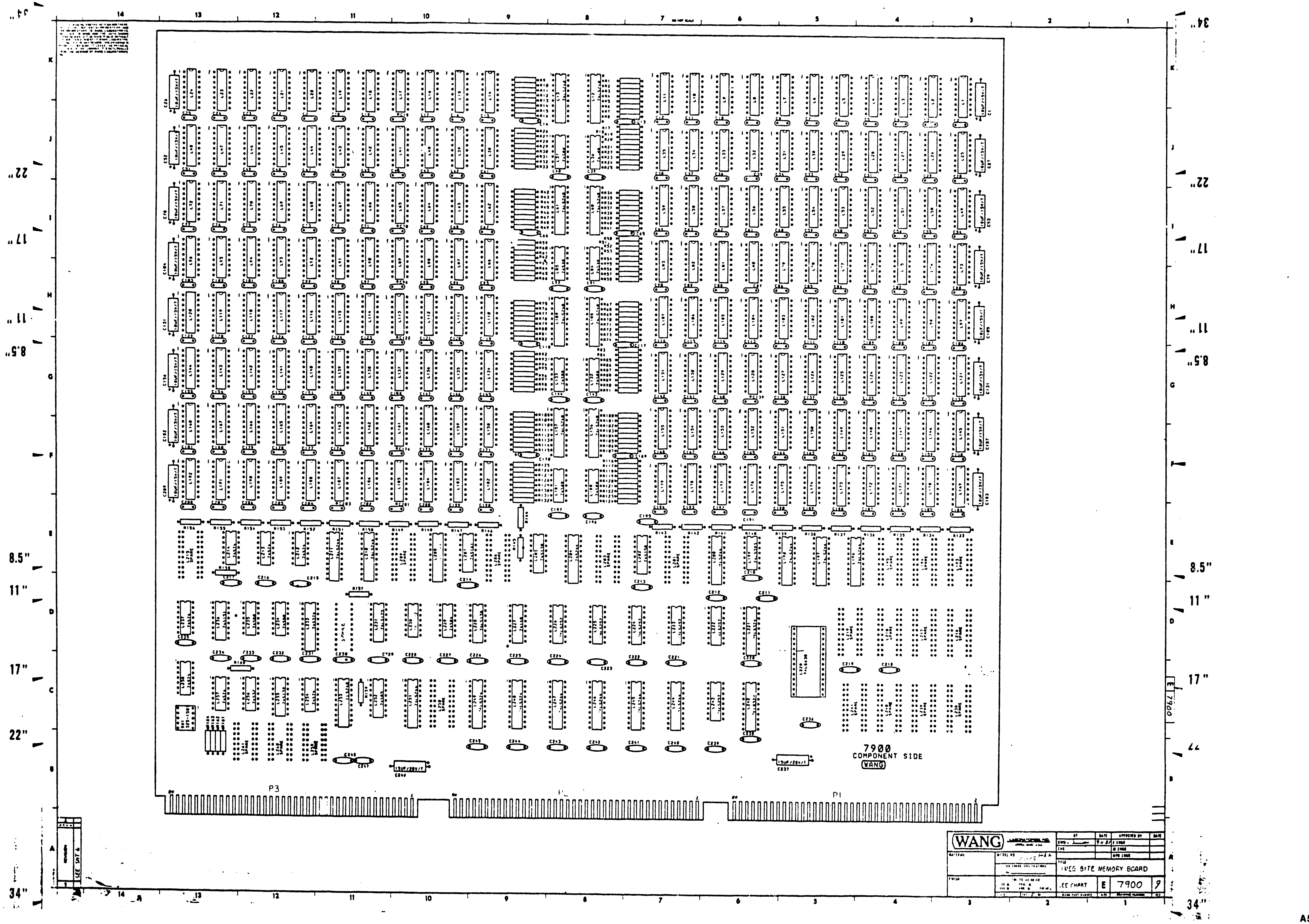


A3



WANG
VS-25
1 MEG BYTE MEMORY BOARD
SEE CHART
E
7900
9
LS244
HM4864-3
5A0-5A7 (2G7)
6A0-6A7 (2G7)
7A0-7A7 (2G7)
8A0-8A7 (2G7)

A4

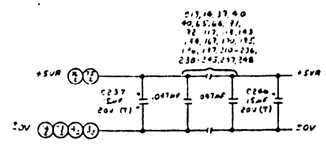

7900
COMPONENT SIDE
WANG
P3
P1
WANG
1 MEG BYTE MEMORY BOARD
SEE CHART
E
7900
9
SEE SHT 6
A5

COMPONENT	TYPE	WL PART NO
[illegible]	[illegible]4964-3	SEE CHART
L1?,13,?29,153, 97,154,57,?	74LS240	376-0297
L16,17,34,? 132,133,180,181	74S08	376-0200
L?,12,?25,231,233, 236,?,2?5-?9, 238-241,250, 257-261,262	SPARE	
L?11,-?19,200, 208,210,211,244, 245,246,247,251	74LS244	376-0288
L?9,230	74LS393	376-0297
L202	74S158	376-0301
L204	74S244	376-0338
L205	74S138	376-0278
L207	74S161	376-0279
L212,213,214, 237,254,257,258	74S74	376-0202
L220	74LS610	SEE CHART
L222-226,243	74LS257	376-0204
L227	74196	376-0111
L228	74LS138	376-0294
L2?4	74S04	376-0177
L231	74LS175	376-0160
L233	74S374	376-0305
L234,235	74S?0	376-0228
L236	74S151	376-0336
L239,241,2??,??2	74LS374	376-0246
L2??	74S?5	376-0257
L2??	74S??	376-0333
L256	74S32	376-0235
L220	28 PIN SKT	376-7015

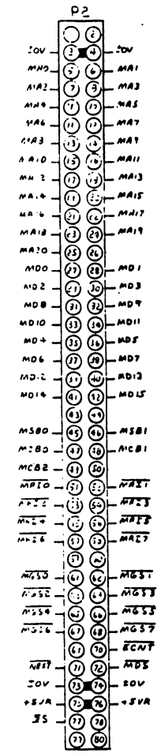
TYPE	IC LOCATION	SPARES
74S04	L227	1

COMPONENT	TYPE	WL PART NO
R1-1?,34-49, 67-82,100-115, 133-148,166-156	56Ω 1/4W 5%	330-1056
R1,?,17,18,26,50,51, 59,83,84,92, 116,117,125,149, 145,157-164	1K 1/4W 5%	330-3011
R ?-25,27-33, 52-58,60-66, 85-91,93-97, 118-124,126-132	47Ω 1/4W 5%	330-1047
R165	10K 5%	333-0809
C1,26,27,52,53, 78,79,130,131,156, 157,182,183,209, 104,105	10µF 15V	300-4018
C2-12,15-25, 28-39,41-51,54-64, 67-77,80-90,93-103, 106-116,119-129, 132-142,145-155, 158-168,171-181, 184-194,198-208	.1µF 50V	300-1930
C13,14,39,40, 65,66,91,92,117, 118,143,144,167, 170,175,196,197, 210-236, 238-245,247,248	.047µF 50V	300-1766
C237,246	[illegible]	300-4022
SW1	[illegible]	325-1501
STIFFENER	UPPER	452-2708
STIFFENER	LOWER	452-2707
SCREW	[illegible]	650-2100
NUT	[illegible]	651-2000
NYLON WASHER	#6	653-2007

MNEMONICS	COORD
$\overline{ECNT}$	1A12
3S	1H14
MA0	1E14
MA1 - MA16	2K14
MA17 - MA20	1E14
MD0 - MD15	2B14
MCB0 - MCB2	1C14
$\overline{MDS}$	1A12
MSB0	1A12
MSB1	1A12
$\overline{MGS0}$ - $\overline{MGS7}$	1J1
$\overline{MAS0}$ - $\overline{MAS7}$	1K14
$\overline{NEST}$	1A13



210 = 209 = 377 OR 378							
210	209	L1-11,14-25, 38-48	L49-59,62-85,86-96	L97-107, 110-120	L121-131, 134-144	L145-155,158-179,182-192	L220
7900-1A(256K)	7900-1					377-0415	377-0416
7900-2A(384K)	7900-2				377-0415	377-0415	377-0416
7900-3A(512K)	7900-3			377-0415	377-0415	377-0415	377-0416
7900-4A(768K)	7900-4		377-0415	377-0415	377-0415	377-0415	377-0416
7900-5A(1024K)	7900-5	377-0415	377-0415	377-0415	377-0415	377-0415	377-0416



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2

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WANG LABORATORIES, INC.		BY	DATE	APPROVED BY	DATE
		DWN			
		CHK			
MATERIAL	MODEL NO.	TITLE			
		1 MEG BYTE MEMORY BOARD			
FINISH		SEE CHART	E	7900	9

WANG LABORATORIES, INC. RUN DATE: 08/24/84 13:19

>>>>> ELECTRICAL PARTS LIST <<<<< SHEET 7 OF 13 PAGE 1

(FINAL PARTS LIST)

BOARD NO. & TITLE: C7900 PCA VS-25 MEM. BOARD CREATED: 07/23/84 14:22
ASSEMBLY LEVEL & TITLE: 200--1 VS25 256K BYTE LAST MODIFIED: 08/24/84 13:18 BY: MS
PARTS LIST REVISION (P): 0 EDITING REVISION: 11
ARTWORK REVISION (B): 02
ASSEMBLY REVISION (A): 05
SCHEMATIC REVISION (S): 09
DWG OR MOST RECENT ECO: 33330

* REF. DES.	* WANG PART NO.	* VALUE/TYPE *	DESCRIPTION	* DRAWING NO. *	QTY. *
C2 - C12	300-1930-	.1U	CAP CERAMIC MONO RAD +80% -20% 50V Z5U		176
C15 - C28					
C30 - C38					
C41 - C51					
C54 - C64					
C67 - C77					
C80 - C90					
C93 - C103					
C106 - C116					
C119 - C129					
C132 - C142					
C145 - C155					
C158 - C168					
C171 - C181					
C184 - C194					
C198 - C208					
C13 - C14	300-1966-	.047U	CAP CERAMIC MONO AXIAL +80 -20% 50V Z5U		84
C39 - C40					
C65 - C66					
C91 - C92					
C117 - C118					
C143 - C144					
C169 - C170					
C195 - C197					
C210 - C236					
C238 - C246					
C247 - C248					
C1	300-4018-	10U	CAP TANT AXIAL 10% 15V		16
C26 - C27					
C52 - C53					
C78 - C79					
C104 - C105					
C130 - C131					
C156 - C157					
C182 - C183					
C209					
C237	300-4022-	15.0U	CAP TANT AXIAL 10% 20V		2

BOARD NO. & TITLE: C7900 PCA VS-25 MEM. BOARD SCHEMATIC REVISION (S): 09 SHEET OF PAGE 2

* REF. DES.	* WANG PART NO.	* VALUE/TYPE *	DESCRIPTION	* DRAWING NO. *	QTY. *
C246					
SW1	328-1501-	SWITCH	SLIDE SPST 4 POS DIP		1
R19 - R25	330-1047-	47.000	RES FIXED 1/4W 10%		56
R27 - R33					
R52 - R58					
R60 - R66					
R85 - R91					
R93 - R99					
R118 - R124					
R126 - R132					
R1 - R16	330-1057-	56.000	RES FIXED METAL FILM 1/4W 5% 200PPM		66
R34 - R49					
R67 - R82					
R100 - R115					
R133 - R143					
R146 - R156					
R17 - R18	330-3011-	1K	RES FIXED METAL FILM 1/4W 5% 200PPM		22
R26					
R50 - R51					
R59					
R83 - R84					
R92					
R116 - R117					
R125					
R144 - R145					
R157 - R166					
R165	333-0809-	10K	RESISTOR NETWORK TYPE: 10/09/C/SS		1
L231	376-0160-	74LS175	IC QUAD D-TYPE FLIP-FLOP		1
L227	376-0171-	74148	IC 8-LINE-TO-3-LINE OCTAL PRIORITY ENCODER		1
L229	376-0197-	74S04	IC HEX INVERTER USE 376-0666 OR 0772		1
L36 - L37	376-0200-	74S08	IC QUAD 2 INPUT POSITIVE USE 376-0667 OR 0773		8
L84 - L85					
L132 - L133					
L180 - L181					
L212 - L214	376-0202-	74S74	IC DUAL D-TYPE POS EDGE TUSE 376-0682 OR 0815		7
L237					
L254					
L257 - L258					
L222 - L226	376-0204-	74LS257A	IC QUAD 2-LINE TO 1-LINE DATA SEL/MUX		6
L243					
L256	376-0205-	74S32	IC QUAD 2-INPUT OR GATE USE 376-0678 OR 0755		1
L234 - L235	376-0228-	74S00	IC QUAD 2-INPUT NAND GATEUSE 376-0664 OR 0770		2
L252	376-0259-	74S85	IC 4-BIT MAGNITUDE COMPARATOR		1
L207	376-0276-	74S161	IC SYN 4-BIT BINARY COUNTER W/DIRECT CLEAR		1
L221	376-0286-	74LS374	IC OCTAL D-TYPE FLIP-FLOP TRI-STATE		4
L242					
L248 - L249					
L196 - L198	376-0288-	74LS244	IC OCTAL BUFFER/LINE DRIVER W/TRI STATE		12
L209					
L208					

BOARD NO. & TITLE: C7900 PCA VS-25 MEM. BOARD SCHEMATIC REVISION (S): 09 SHEET OF PAGE 3

* REF. DES.	* WANG PART NO.	* VALUE/TYPE *	DESCRIPTION	* DRAWING NO. *	QTY. *
L210 - L211					
L244 - L247					
L251					
L228	376-0294-	74LS138	IC 3-LINE TO 8-LINE DECODER/MULTIPLEXER		1
L12 - L13	376-0297-	74LS240	IC OCTAL BUFFER/LINE DRIVER/LINE RECEIVER		9
L60 - L61					
L108 - L109					
L156 - L157					
L253					
L201	376-0298-	74S138	IC 3-LINE TO 8-LINE DECODER/MULT USE 376-0671		1
L202	376-0301-	74S158	IC QUAD 2 TO 1-LINE DATA SELECTO USE 376-0810		1
L233	376-0305-	74S374	IC OCTAL D-TYPE EDGE-TRIGUSE 376-0614 OR 0758		1
L199	376-0307-	74LS393	IC DUAL 4-BIT BINARY COUNTER		2
L230					
L255	376-0333-	74S139	IC 2 TO 4-LINE DECODER/MULTIPLEX USE 376-0672		1
L236	376-0336-	74S151	IC 1-OF-8 DATA SEL/MUX USE 376-0613		1
L204	376-0338-	74S244	IC OCTAL BUFFER/LINE DRIVER/RECE USE 376-0611		1
L220	376-9015-	SKT 28	IC SOCKET 28 PIN DIL MOUNT		1
L145 - L155	377-0415-	4164	IC 64KX1 DRAM 200NS REF REQUIRE 4MS/256 ROW		44
L158 - L179					
L182 - L192					
02	452-2707-	STIFFNER	STIFFNER LOWER		1
03	452-2708-	STIFFNER	STIFFNER UPPE		1
04 - 05	465-1238-	EXTRACTR	EXTRACTR CAR .LON W/ROLL		2
01	510-7900-		PCB		1
06 - 012	650-2100-	PAN HEAD	4-40 X 1/4 PAN HD PHL MS		7
013 - 019	652-2000-	NUT	#4 NUT		7
020 - 026	653-2009-	WASHER	#4 NYLON WASHER		7
027	660-0341-	#222	#222 LOCKTITE (7 PLACES)		1

BOARD NO. & TITLE: C7900 PCA VS-25 MEM. BOARD SCHEMATIC REVISION (S): 09 SHEET OF PAGE 4

*	*WANG PART NO.	* VALUE/TYPE *	DESCRIPTION	* DRAWING NO. *	QTY. *

(CAUTION - THE FOLLOWING PARTS/COMPONENTS CONTAINED IN THIS B.O.M. ARE NOT RECOMMENDED FOR NEW DESIGNS)

330-1047-	47.000	RES FIXED 1/4W 10%		56
376-0197-	74S04	IC HEX INVERTER USE 376-0666 OR 0772		1
376-0200-	74S08	IC QUAD 2 INPUT POSITIVE USE 376-0667 OR 0773		8
376-0202-	74S74	IC DUAL D-TYPE POS EDGE TUSE 376-0682 OR 0815		7
376-0205-	74S32	IC QUAD 2-INPUT OR GATE USE 376-0678 OR 07[illegible]		1
376-0228-	74S00	IC QUAD 2-INPUT NAND GATEUSE 376-0664 OR 0770		2
376-0298-	74S138	IC 3-LINE TO 8-LINE DECODER/MULT USE 376-0671		1
376-0301-	74S158	IC QUAD 2 TO 1-LINE DATA SELECTO USE 376-0810		1
376-0305-	74S374	IC OCTAL D-TYPE EDGE-TRIGUSE 376-0614 OR 0758		1
376-0333-	74S139	IC 2 TO 4-LINE DECODER/MULTIPLEX USE 376-0672		1
376-0336-	74S151	IC 1-OF-8 DATA SEL/MUX USE 376-0613		1
376-0338-	74S244	IC OCTAL BUFFER/LINE DRIVER/RECE USE 376-0611		1

*** END-OF-REPORT ***

		BY	DATE	APPROVED BY	DATE
WANG	WANG LABORATORIES, INC. LOWELL, MASS. U.S.A.	DWN		E ENGR	
		CHK		M ENGR	
MATERIAL	MODEL NO			MFG ENGR	
	SEE ENGRG SPECIFICATIONS No.	TITLE PCA VS-25 MEMORY BD			
FINISH	TOL UN AS NOTED .XX ± .010 FRAC ± 1/64 .XXX ± .005 ANG ± 1°30'	SEE CHART	C	7900	9
	SCALE WT 7 OF 13	WANG PART NUMBER	SIZE	DRAWING NUMBER	REV

WANG LABORATORIES, INC. RUN DATE: 08/24/84 13:21

>>>>> ELECTRICAL PARTS LIST <<<<< SHEET 8 OF 13 PAGE 1

(FINAL PARTS LIST)

BOARD NO. & TITLE: C7900 PCA VS-25 MEM. BOARD
ASSEMBLY LEVEL & TITLE: 209--2 VS25 384K BYTE
PARTS LIST REVISION (P): 0
ARTWORK REVISION (R): 02
ASSEMBLY REVISION (A): 05
SCHEMATIC REVISION (S): 09
DWR OR MOST RECENT ECO: 33230

CREATED: 07/23/84 14:22
LAST MODIFIED: 08/24/84 13:18 BY: WS
EDITING REVISION: 11

* REF. DES.	* WANG PART NO.	* VALUE/TYPE *	DESCRIPTION	* DRAWING NO. *	QTY. *
C2 - C12	300-1930-	.1U	CAP CERAMIC MONO RAD +80% -20% 50V Z5U		176
C15 - C25					
C28 - C38					
C41 - C51					
C54 - C64					
C67 - C77					
C80 - C90					
C93 - C103					
C106 - C116					
C119 - C129					
C132 - C142					
C145 - C155					
C158 - C168					
C171 - C181					
C184 - C194					
C198 - C208					
C13 - C14	300-1966-	.047U	CAP CERAMIC MONO AXIAL +80 -20% 50V Z5U		54
C39 - C40					
C65 - C66					
C91 - C92					
C117 - C118					
C143 - C144					
C169 - C170					
C195 - C197					
C210 - C236					
C238 - C245					
C247 - C248					
C1	300-4018-	18U	CAP TANT AXIAL 10% 15V		16
C26 - C27					
C52 - C53					
C78 - C79					
C104 - C105					
C130 - C131					
C156 - C157					
C182 - C183					
C209					
C237	300-4022-	15.0U	CAP TANT AXIAL 10% 20V		2

BOARD NO. & TITLE: C7900 PCA VS-25 MEM. BOARD SCHEMATIC REVISION (S): 09 SHEET OF PAGE 2

* REF. DES.	* WANG PART NO.	* VALUE/TYPE *	DESCRIPTION	* DRAWING NO. *	QTY. *
C94b					
SW1	325-1501-	SWITCH	SLIDE SPST 8 POS DIP		1
R19 - R25	330-1047-	47.000	RES FIXED 1/4W 10%		56
R27 - R33					
R52 - R58					
R60 - R66					
R85 - R91					
R93 - R99					
R118 - R124					
R126 - R132					
R1 - R16	330-1057-	56.000	RES FIXED METAL FILM 1/4W 5% 200PPM		86
R34 - R49					
R67 - R82					
R100 - R115					
R133 - R143					
R146 - R156					
R17 - R18	330-3011-	1K	RES FIXED METAL FILM 1/4W 5% 200PPM		22
R26					
R50 - R51					
R59					
R83 - R84					
R92					
R116 - R117					
R125					
R144 - R145					
R157 - R164					
R165	333-0809-	10K	RESISTOR NETWORK TYPE: 10/09/C/SS		1
L231	376-0160-	74LS175	IC QUAD D TYPE FLIP FLOP		1
L227	376-0171-	74148	IC 8-LINE-TO-3-LINE OCTAL PRIORITY ENCODER		1
L229	376-0197-	74S04	IC HEX INVERTER USE 376-0666 OR 0772		1
L36 - L37	376-0200-	74S08	IC QUAD 2 INPUT POSITIVE USE 376-0667 OR 0773		8
L84 - L85					
L132 - L133					
L180 - L181					
L212 - L214	376-0202-	74S74	IC DUAL D-TYPE POS EDGE TUSE 376-0682 OR 0818		7
L237					
L254					
L257 - L258					
L222 - L226	376-0204-	74LS25/A	IC QUAD 2-LINE TO 1-LINE DATA SEL/MUX		6
L243					
L256	376-0205-	74S32	IC QUAD 2-INPUT OR GATE USE 376-0678 OR 0786		1
L234 - L235	376-0228-	74S00	IC QUAD 2-INPUT NAND GATEUSE 376-0664 OR 0770		2
L252	376-0259-	74S85	IC 4-BIT MAGNITUDE COMPARATOR		1
L207	376-0278-	74S161	IC SYN 4-BIT BINARY COUNTER W/DIRECT CLEAR		1
L221	376-0286-	74LS374	IC OCTAL D-TYPE FLIP-FLOP TRI-STATE		4
L242					
L248 - L249					
L196 - L198	376-0288-	74LS244	IC OCTAL BUFFER/LINE DRIVER W/TRI STATE		12
L200					
L208					

BOARD NO. & TITLE: C7900 PCA VS-25 MEM. BOARD SCHEMATIC REVISION (S): 09 SHEET OF PAGE 3

* REF. DES.	* WANG PART NO.	* VALUE/TYPE *	DESCRIPTION	* DRAWING NO. *	QTY. *
L210 - L211					
L244 - L247					
L251					
L228	376-0294-	74LS138	IC 3-LINE TO 8-LINE DECODER/MULTIPLEXER		1
L12 - L13	376-0297-	74LS240	IC OCTAL BUFFER/LINE DRIVER/LINE RECEIVER		9
L60 - L61					
L108 - L109					
L156 - L157					
L253					
L205	376-0298-	74S138	IC 3-LINE TO 8-LINE DECODER/MULT USE 376-0671		1
L202	376-0301-	74S158	IC QUAD 2 TO 1-LINE DATA SELECTO USE 376-0810		1
L233	376-0305-	74S374	IC OCTAL D-TYPE EDGE-TRIGUSE 376-0614 OR 0758		1
L199	376-0307-	74LS393	IC DUAL 4-BIT BINARY COUNTER		2
L230					
L255	376-0333-	74S139	IC 2 TO 4-LINE DECODER/MULTIPLEX USE 376-0672		1
L236	376-0336-	74S151	IC 1-OF-8 DATA SEL/MUX USE 376-0613		1
L204	376-0338-	74S244	IC OCTAL BUFFER/LINE DRIVER/RECE USE 376-0611		1
L220	376-9015-	SKT 28	IC SOCKET 28 PIN DIL MOUNT		1
L131 - L131	377-0415-	4164	IC 64KX1 DRAM 200NS REF REQUIRE 4MS/256 ROW		64
L134 - L135					
L158 - L179					
L182 - L192					
#2	452-2707-	STIFFNER	STIFFNER LOWER		1
#3	452-2708-	STIFFNER	STIFFNER UPPER		1
#4 - #5	465-1238-	EXTRACR	EXTRACTR CARD - LOW W/ROLL		2
#1	510-7900-		PCB		1
#6 - #12	650-2100-	PAN HEAD	4-40 X 1/4 PAN HD PHL MS		7
#13 - #19	652-2000-	NUT	#4 NUT		7
#20 - #26	653-2009-	WASHER	#4 NYLON WASHER		7
#27	660-0341-	#222	#222 LOCKTITE (7 PLACES)		1

BOARD NO. & TITLE: C7900 PCA VS-25 MEM. BOARD SCHEMATIC REVISION (S): 09 SHEET OF PAGE 4

*	*WANG PART NO.	* VALUE/TYPE *	DESCRIPTION	* DRAWING NO. *	QTY. *
(CAUTION - THE FOLLOWING PARTS/COMPONENTS CONTAINED IN THIS B.O.M. ARE NOT RECOMMENDED FOR NEW DESIGNS)					
	330-1047-	47.000	RES FIXED 1/4W 10%		56
	376-0197-	74S04	IC HEX INVERTER USE 376-0666 OR 0772		1
	376-0200-	74S08	IC QUAD 2 INPUT POSITIVE USE 376-0667 OR 0773		8
	376-0202-	74S74	IC DUAL D-TYPE POS EDGE TUSE 376-0682 OR 0818		7
	376-0205-	74S32	IC QUAD 2-INPUT OR GATE USE 376-0678 OR 0786		1
	376-0228-	74S00	IC QUAD 2-INPUT NAND GATEUSE 376-0664 OR 0770		2
	376-0298-	74S138	IC 3-LINE TO 8-LINE DECODER/MULT USE 376-0671		1
	376-0301-	74S158	IC QUAD 2 TO 1-LINE DATA SELECTO USE 376-0810		1
	376-0305-	74S374	IC OCTAL D-TYPE EDGE-TRIGUSE 376-0614 OR 0758		1
	376-0333-	74S139	IC 2 TO 4-LINE DECODER/MULTIPLEX USE 376-0672		1
	376-0336-	74S151	IC 1-OF-8 DATA SEL/MUX USE 376-0613		1
	376-0338-	74S244	IC OCTAL BUFFER/LINE DRIVER/RECE USE 376-0611		1

*** END-OF-REPORT ***

WANG	WANG LABORATORIES, INC. LOWELL, MASS. U.S.A.	BY	DATE	APPROVED BY	DATE
		DWN		E ENGR	
		CHK		M ENGR	
MATERIAL	MODEL NO			MFG ENGR	
	SEE ENGRG SPECIFICATIONS No.	TITLE PCA VS-25 MEMORY BD			
FINISH	TOL EX AS NOTED .XX ± .010 FRAC ± 1/64 .XXX ± .005 ANG ± 1° 32 FINISH	SEE CHART	C	7900	9
	SCALE SHT 9 OF 13	WANG PART NUMBER	SIZE	DRAWING NUMBER	REV

A8

WANG LABORATORIES, INC. RUN DATE: 08/24/84 13:24

>>>>> ELECTRICAL PARTS LIST <<<<< SHEET 9 OF 13 PAGE 1

(FINAL PARTS LIST)

BOARD NO. & TITLE: C7900 PCA VS-25 MEM. BOARD
ASSEMBLY LEVEL & TITLE: 209--3 VS28 512K BYTE
PARTS LIST REVISION (P): 0
ARTWORK REVISION (B): 02
ASSEMBLY REVISION (A): 05
SCHEMATIC REVISION (S): 09
DWG OR MOST RECENT ECO: 33230
CREATED: 07/23/84 16:22
LAST MODIFIED: 08/24/84 13:18 BY: RS
EDITING REVISION: 11

* REF. DES.	* WANG PART NO.	* VALUE/TYPE *	DESCRIPTION	* DRAWING NO. *	QTY. *
C2 - C12	300-1930-	.1U	CAP CERAMIC MONO RAD +80% -20% 50V Z5U		176
C15 - C25					
C28 - C38					
C41 - C51					
C54 - C64					
C67 - C77					
C80 - C90					
C93 - C103					
C106 - C116					
C119 - C129					
C132 - C142					
C145 - C155					
C158 - C168					
C171 - C181					
C184 - C194					
C198 - C208					
C13 - C14	300-1966-	.047U	CAP CERAMIC MONO AXIAL +80 -20% 50V Z5U		84
C39 - C40					
C65 - C66					
C91 - C92					
C117 - C118					
C143 - C144					
C169 - C170					
C195 - C197					
C210 - C236					
C238 - C245					
C247 - C248					
C1	300-4018-	10U	CAP TANT AXIAL 10% 16V		16
C26 - C27					
C52 - C53					
C78 - C79					
C104 - C105					
C130 - C131					
C156 - C157					
C182 - C183					
C209					
C237	300-4022-	15.0U	CAP TANT AXIAL 10% 20V		2

BOARD NO. & TITLE: C7900 PCA VS-25 MEM. BOARD SCHEMATIC REVISION (S): 09 SHEET OF PAGE 2

* REF. DES.	* WANG PART NO.	* VALUE/TYPE *	DESCRIPTION	* DRAWING NO. *	QTY. *
C245					
SW1	325-1501-	SWITCH	SLIDE SPST 8 POS DIP		1
R19 - R25	330-1047-	47.000	RES FIXED 1/4W 10%		56
R27 - R33					
R52 - R58					
R60 - R66					
R85 - R91					
R93 - R99					
R118 - R124					
R126 - R132					
R1 - R16	330-1057-	56.000	RES FIXED METAL FILM 1/4W 5% 200PPM		86
R34 - R49					
R67 - R82					
R100 - R115					
R133 - R143					
R146 - R156					
R17 - R18	330-3011-	1K	RES FIXED METAL FILM 1/4W 5% 200PPM		22
R26					
R50 - R51					
R59					
R83 - R84					
R92					
R116 - R117					
R125					
R144 - R145					
R157 - R164					
R165	333-0809-	10K	RESISTOR NETWORK TYPE: 10/09/C/SS		1
L231	376-0160-	74LS175	IC QUAD D-TYPE FLIP-FLOP		1
L227	376-0171-	74148	IC 8-LINE-TO-3-LINE OCTAL PRIORITY ENCODER		1
L229	376-0197-	74S04	IC HEX INVERTER USE 376-0666 OR 0772		1
L36 - L37	376-0200-	74S08	IC QUAD 2 INPUT POSITIVE USE 376-0667 OR 0773		8
L84 - L85					
L132 - L133					
L180 - L181					
L212 - L214	376-0202-	74S74	IC DUAL D-TYPE POS EDGE TUSE 376-0682 OR 0815		7
L237					
L256					
L257 - L258					
L222 - L226	376-0204-	74LS257A	IC QUAD 2-LINE TO 1-LINE DATA SEL/MUX		6
L243					
L256	376-0205-	74S32	IC QUAD 2-INPUT OR GATE USE 376-0678 OR 0755		1
L234 - L235	376-0228-	74S00	IC QUAD 2-INPUT NAND GATEUSE 376-0664 OR 0770		2
L252	376-0259-	74S85	IC 4-BIT MAGNITUDE COMPARATOR		1
L207	376-0278-	74S161	IC S/N 4-BIT BINARY COUNTER W/DIRECT CLEAR		1
L221	376-0286-	74LS374	IC OCTAL D-TYPE FLIP-FLOP TRI-STATE		4
L242					
L248 - L249					
L196 - L198	376-0288-	74LS244	IC OCTAL BUFFER/LINE DRIVER W/TRI STATE		12
L200					
L208					

BOARD NO. & TITLE: C7900 PCA VS-25 MEM. BOARD SCHEMATIC REVISION (S): 09 SHEET OF PAGE 3

* REF. DES.	* WANG PART NO.	* VALUE/TYPE *	DESCRIPTION	* DRAWING NO. *	QTY. *
L210 - L211					
L234 - L247					
L251					
L228	376-0294-	74LS138	IC 3-LINE TO 8-LINE DECODER/MULTIPLEXER		1
L12 - L13	376-0297-	74LS240	IC OCTAL BUFFER/LINE DRIVER/LINE RECEIVER		9
L60 - L61					
L108 - L109					
L156 - L157					
L253					
L205	376-0298-	74S138	IC 3-LINE TO 8-LINE DECODER/MULT USE 376-0671		1
L202	376-0301-	74S158	IC QUAD 2 TO 1-LINE DATA SELECTO USE 376-0810		1
L233	376-0305-	74S374	IC OCTAL D-TYPE EDGE-TRIGUSE 376-0614 OR 0758		1
L199	376-0307-	74LS393	IC DUAL 4-BIT BINARY COUNTER		2
L230					
L255	376-0333-	74S139	IC 2 TO 4-LINE DECODER/MULTIPLEX USE 376-0672		1
L236	376-0336-	74S151	IC 1-OF-8 DATA SEL/MUX USE 376-0613		1
L204	376-0338-	74S244	IC OCTAL BUFFER/LINE DRIVER/RECE USE 376-0611		1
L220	376-9018-	SKT 28	IC SOCKET 28 PIN DIL MOUNT		1
L97 - L107	377-0418-	4164	IC 64KX1 DRAM 200NS REF REQUIRE 4MS/256 ROW		88
L110 - L131					
L134 - L155					
L158 - L179					
L182 - L192					
02	462-2707-	STIFFNER	STIFFNER LOWER		1
03	462-2708-	STIFFNER	STIFFNER UPPER		1
04 - 05	465-1218-	EXTRACTR	EXTRACTR CARD NYLON W/ROLL		2
01	510-7900-		PCB		1
06 - 012	650-2109-	PAN HEAD	6-32 X 1/4 PAN HD PHL MS		7
013 - 019	652-2000-	NUT	#6 NUT		7
020 - 026	653-2009-	WASHER	#6 NYLON WASHER		7
027	660-0341-	#222	#222 LOCKTITE (7 PLACES)		1

BOARD NO. & TITLE: C7900 PCA VS-25 MEM. BOARD SCHEMATIC REVISION (S): 09 SHEET OF PAGE 4

*	* WANG PART NO.	* VALUE/TYPE *	DESCRIPTION	* DRAWING NO. *	QTY. *

(CAUTION - THE FOLLOWING PARTS/COMPONENTS CONTAINED IN THIS B.O.M. ARE NOT RECOMMENDED FOR NEW DESIGNS)

330-1047-	47.000	RES FIXED 1/4W 10%	56
376-0197-	74S04	IC HEX INVERTER USE 376-0666 OR 0772	1
376-0200-	74S08	IC QUAD 2 INPUT POSITIVE USE 376-0667 OR 0773	8
376-0202-	74S74	IC DUAL D-TYPE POS EDGE TUSE 376-0682 OR 0815	7
376-0205-	74S32	IC QUAD 2-INPUT OR GATE USE 376-0678 OR 0755	1
376-0228-	74S00	IC QUAD 2-INPUT NAND GATEUSE 376-0664 OR 0770	2
376-0298-	74S138	IC 3-LINE TO 8-LINE DECODER/MULT USE 376-0671	1
376-0301-	74S158	IC QUAD 2 TO 1-LINE DATA SELECTO USE 376-0810	1
376-0305-	74S374	IC OCTAL D-TYPE EDGE-TRIGUSE 376-0614 OR 0758	1
376-0333-	74S139	IC 2 TO 4-LINE DECODER/MULTIPLEX USE 376-0672	1
376-0336-	74S151	IC 1-OF-8 DATA SEL/MUX USE 376-0613	1
376-0338-	74S244	IC OCTAL BUFFER/LINE DRIVER/RECE USE 376-0611	1

*** END-OF-REPORT ***

		BY	DATE	APPROVED BY	DATE
WANG	WANG LABORATORIES, INC. LOWELL, MASS. U.S.A.	DWN		E ENGR	
		CHK		M ENGR	
MATERIAL	MODEL NO			MFG ENGR	
	W/ ENGRG SPECIFICATIONS No.	TITLE PCA VS-25 MEMORY BD			
FINISH	TOL UN AS NOTED XX ± .010 FRAC ± 1/64 XXX ± .005 ANG ± 1°30' FINISH	SEE CHART	C	7900	9
	SCALE	SHT 9 OF 13	WANG PART NUMBER	SIZE	DRAWING NUMBER	REV

WANG LABORATORIES, INC. RUN DATE: 08/24/84 13:26

>>>>> ELECTRICAL PARTS LIST <<<<< SHEET 1 OF 13 PAGE 1

(FINAL PARTS LIST)

BOARD NO. & TITLE: C7900 PCA VS-25 MEM. BOARD CREATED: 07/23/84 14:22
ASSEMBLY LEVEL & TITLE: 209--4 VS25 76AX BYTE LAST MODIFIED: 08/24/84 13:18 BY: MS
PARTS LIST REVISION (P): 9 EDITING REVISION: 11
ARTWORK REVISION (R): 02
ASSEMBLY REVISION (A): 05
SCHEMATIC REVISION (S): 09
CHR OR MOST RECENT ECO: 33230

REF. DES.	WANG PART NO.	VALUE/TYPE	DESCRIPTION	DRAWING NO.	QTY.
C2 - C12	300-1938-	.1U	CAP CERAMIC MONO RAD +80% -20% 50V Z5U		176
C15 - C25					
C28 - C38					
C41 - C81					
C84 - C84					
C87 - C77					
C80 - C90					
C93 - C103					
C106 - C116					
C119 - C129					
C132 - C142					
C145 - C155					
C158 - C168					
C171 - C181					
C184 - C194					
C198 - C208					
C13 - C14	300-1966-	.047U	CAP CERAMIC MONO AXIAL +80 -20% 50V Z5U		56
C39 - C40					
C65 - C66					
C91 - C92					
C117 - C118					
C143 - C144					
C169 - C170					
C195 - C197					
C210 - C236					
C238 - C246					
C247 - C248					
C1	300-4018-	18U	CAP TANT AXIAL 10% 16V		16
C26 - C27					
C52 - C53					
C78 - C79					
C104 - C105					
C130 - C131					
C156 - C157					
C182 - C183					
C209					
C237	300-4022-	15.0U	CAP TANT AXIAL 10% 20V		2

BOARD NO. & TITLE: C7900 PCA VS-25 MEM. BOARD SCHEMATIC REVISION (S): 09 SHEET OF PAGE 2

REF. DES.	WANG PART NO.	VALUE/TYPE	DESCRIPTION	DRAWING NO.	QTY.
C246					
SW1	325-1501-	SWITCH	SLIDE SPST 8 POS DIP		1
R19 - R25	330-1047-	47 000	RES FIXED 1/4W 10%		56
R27 - R33					
R52 - R58					
R60 - R66					
R85 - R91					
R93 - R99					
R118 - R124					
R126 - R132					
R1 - R16	330-1057-	56.000	RES FIXED METAL FILM 1/4W 5% 200PPM		86
R34 - R49					
R67 - R82					
R100 - R115					
R133 - R143					
R146 - R156					
R17 - R18	330-3011-	1K	RES FIXED METAL FILM 1/4W 5% 200PPM		22
R26					
R50 - R51					
R59					
R83 - R84					
R92					
R116 - R117					
R125					
R144 - R145					
R157 - R164					
R165	333-0809-	10K	RESISTOR NETWORK TYPE: 10/09/C/SS		1
L231	376-0160-	74LS175	IC QUAD D-TYPE FLIP-FLOP		1
L227	376-0171-	74148	IC 8-LINE TO-3-LINE OCTAL PRIORITY ENCODER		1
L229	376-0197-	74S04	IC HEX INVERTER USE 376-0666 OR 0772		1
L36 - L37	376-0200-	74S08	IC QUAD 2 INPUT POSITIVE USE 376-0667 OR 0773		8
L84 - L85					
L132 - L133					
L180 - L181					
L212 - L214	376-0202-	74S74	IC DUAL D-TYPE POS EDGE TUSE 376-0682 OR 0815		7
L237					
L254					
L257 - L258					
L222 - L226	376-0204-	74LS257A	IC QUAD 2-LINE TO 1-LINE DATA SEL/MUX		6
L243					
L256	376-0205-	74S32	IC QUAD 2-INPUT OR GATE USE 376-0678 OR 0755		1
L234 - L235	376-0228-	74S00	IC QUAD 2-INPUT NAND GATEUSE 376-0664 OR 0770		2
L252	376-0259-	74S85	IC 4-BIT MAGNITUDE COMPARATOR		1
L207	376-0278-	74S161	IC SYN 4 BIT BINARY COUNTER W/DIRECT CLEAR		1
L221	376-0286-	74LS374	IC OCTAL D-TYPE FLIP-FLOP TRI-STATE		4
L242					
L248 - L249					
L196 - L198	376-0288-	74LS244	IC OCTAL BUFFER/LINE DRIVER W/TRI STATE		12
L200					
L208					

BOARD NO. & TITLE: C7900 PCA VS-25 MEM. BOARD SCHEMATIC REVISION (S): 09 SHEET OF PAGE 3

REF. DES.	WANG PART NO.	VALUE/TYPE	DESCRIPTION	DRAWING NO.	QTY.
L210 - L211					
L244 - L247					
L251					
L228	376-0294-	74LS138	IC 3-LINE TO 8-LINE DECODER/MULTIPLEXER		1
L12 - L13	376-0297-	74LS240	IC OCTAL BUFFER/LINE DRIVER/LINE RECEIVER		9
L60 - L61					
L108 - L109					
L156 - L187					
L253					
L205	376-0298-	74S138	IC 3-LINE TO 8-LINE DECODER/MULT USE 376-0671		1
L202	376-0301-	74S158	IC QUAD 2 TO 1-LINE DATA SELECTO USE 376-0810		1
L233	376-0305-	74S374	IC OCTAL D-TYPE EDGE-TRIGUSE 376-0614 OR 0758		1
L199	376-0307-	74LS393	IC DUAL 4-BIT BINARY COUNTER		2
L230					
L255	376-0333-	74S139	IC 2 TO 4-LINE DECODER/MULTIPLEX USE 376-0672		1
L236	376-0336-	74S151	IC 1-OF-8 DATA SEL/MUX USE 376-0613		1
L204	376-0338-	74S244	IC OCTAL BUFFER/LINE DRIVER/RECE USE 376-0611		1
L220	376-9018-	SKT 28	SOCKET 28 PIN DIL MOUNT		1
L49 - L59	377-0418-	4164	IC 64KX1 DRAM 200NS REF REQUIRE 4MS/256 ROW		132
L62 - L83					
L86 - L107					
L110 - L131					
L134 - L155					
L158 - L179					
L182 - L192					
02	482-2707-	STIFFNER	STIFFNER LOWER		1
03	482-2708-	STIFFNER	STIFFNER UPPER		1
04 - 05	465-1238-	EXTRACTR	EJECTOR CARD NYLON W/ROLL		2
01	510-7900-	PCB			1
06 - 012	650-2100-	PAN HEAD	4-40 X 1/4 PAN HD PHL MS		7
013 - 019	652-2000-	NUT	#4 NUT		7
020 - 026	653-2009-	WASHER	#4 NYLON WASHER		7
027	660-0341-	P222	#222 LOCKTITE (7 PLACES)		1

BOARD NO. & TITLE: C7900 PCA VS-25 MEM. BOARD SCHEMATIC REVISION (S): 09 SHEET OF PAGE 4

WANG PART NO.	VALUE/TYPE	DESCRIPTION	DRAWING NO.	QTY.

(CAUTION - THE FOLLOWING PARTS/COMPONENTS CONTAINED IN THIS B.O.M. ARE NOT RECOMMENDED FOR NEW DESIGNS)

330-1047-	47.000	RES FIXED 1/4W 10%		56
376-0197-	74S04	IC HEX INVERTER USE 376-0666 OR 0772		1
376-0200-	74S08	IC QUAD 2 INPUT POSITIVE USE 376-0667 OR 0773		8
376-0202-	74S74	IC DUAL D TYPE POS EDGE TUSE 376-0682 OR 0815		7
376-0205-	74S32	IC QUAD 2-INPUT OR GATE USE 376-0678 OR 0755		1
376-0228-	74S00	IC QUAD 2 INPUT NAND GATEUSE 376-0664 OR 0770		2
376-0298-	74S138	IC 3-LINE TO 8-LINE DECODER/MULT USE 376-0671		1
376-0301-	74S158	IC QUAD 2 TO 1-LINE DATA SELECTO USE 376-0810		1
376-0305-	74S374	IC OCTAL D-TYPE EDGE TRIGUSE 376-0614 OR 0758		1
376-0333-	74S139	IC 2 TO 4-LINE DECODER/MULTIPLEX USE 376-0672		1
376-0336-	74S151	IC 1-OF-8 DATA SEL/MUX USE 376-0613		1
376-0338-	74S244	IC OCTAL BUFFER/LINE DRIVER/RECE USE 376-0611		1

*** END-OF-REPORT ***

WANG LABORATORIES, INC. LOWELL, MA U.S.A.		BY	DATE	APPROVED BY	DATE
		DWN		E ENGR	
		CHK		M ENGR	
MATERIAL	MODEL NO			MFG ENGR	
	WE ENGR SPECIFICATIONS No.	TITLE PCA VS-25 MEMORY BD			
FINISH	TOL UX AS NOTED XX ± .010 FRAC ± 1/64 XXX ± .005 ANG ± 1/2 MP FINISH	SEE CHART	C	7900	9
	SCALE SHT 10 OF 13	WANG PART NUMBER	SIZE	DRAWING NUMBER	REV

A10

WANG LABORATORIES, INC. RUN DATE: 08/24/84 13:38

>>>>> ELECTRICAL PARTS LIST <<<<< SHEET 11 OF 13 PAGE 1

(FINAL PARTS LIST)

BOARD NO. & TITLE: C7900 PCA VS-25 MEM. BOARD
ASSEMBLY LEVEL & TITLE: 210--1A VS25 256K BYTE
PARTS LIST REVISION (P): 0
ARTWORK REVISION (B): 02
ASSEMBLY REVISION (A): 05
SCHEMATIC REVISION (S): 09
DWR OR MOST RECENT ECO: 33230
CREATED: 07/23/84 14:22
LAST MODIFIED: 08/24/84 13:18 BY: NS
EDITING REVISION: 11

REF. DES.	WANG PART NO.	VALUE/TYPE	DESCRIPTION	DRAWING NO.	QTY.
01	209-7900--1		PCA		1
L220	377-0416-	74LS630	IC 16-BIT PARALLEL ERROR DETECT AND CORRECT		1

*** END-OF-REPORT ***

WANG LABORATORIES, INC. RUN DATE: 08/24/84 13:38

>>>>> ELECTRICAL PARTS LIST <<<<< SHEET OF PAGE 1

(FINAL PARTS LIST)

BOARD NO. & TITLE: C7900 PCA VS-25 MEM. BOARD
ASSEMBLY LEVEL & TITLE: 210--2A VS25 384K BYTE
PARTS LIST REVISION (P): 0
ARTWORK REVISION (B): 02
ASSEMBLY REVISION (A): 06
SCHEMATIC REVISION (S): 09
DWR OR MOST RECENT ECO: 33230
CREATED: 07/23/84 14:22
LAST MODIFIED: 08/24/84 13:18 BY: NS
EDITING REVISION: 11

REF. DES.	WANG PART NO.	VALUE/TYPE	DESCRIPTION	DRAWING NO.	QTY.
01	209-7900--2		PCA		1
L220	377-0416-	74LS630	IC 16-BIT PARALLEL ERROR DETECT AND CORRECT		1

*** END-OF-REPORT ***

WANG LABORATORIES, INC. RUN DATE: 08/24/84 13:38

>>>>> ELECTRICAL PARTS LIST <<<<< SHEET OF PAGE 1

(FINAL PARTS LIST)

BOARD NO. & TITLE: C7900 PCA VS-25 MEM. BOARD
ASSEMBLY LEVEL & TITLE: 210--3A VS25 512K BYTE
PARTS LIST REVISION (P): 0
ARTWORK REVISION (B): 02
ASSEMBLY REVISION (A): 05
SCHEMATIC REVISION (S): 09
DWR OR MOST RECENT ECO: 33230
CREATED: 07/23/84 14:22
LAST MODIFIED: 08/24/84 13:18 BY: NS
EDITING REVISION: 11

REF. DES.	WANG PART NO.	VALUE/TYPE	DESCRIPTION	DRAWING NO.	QTY.
01	209-7900--3		PCA		1
L220	377-0416-	74LS630	IC 16-BIT PARALLEL ERROR DETECT AND CORRECT		1

*** END-OF-REPORT ***

WANG LABORATORIES, INC. RUN DATE: 08/24/84 13:38

>>>>> ELECTRICAL PARTS LIST <<<<< SHEET OF PAGE 1

(FINAL PARTS LIST)

BOARD NO. & TITLE: C7900 PCA VS-25 MEM. BOARD
ASSEMBLY LEVEL & TITLE: 210--4A VS25 768K BYTE
PARTS LIST REVISION (P): 0
ARTWORK REVISION (B): 02
ASSEMBLY REVISION (A): 05
SCHEMATIC REVISION (S): 09
DWR OR MOST RECENT ECO: 33230
CREATED: 07/23/84 14:22
LAST MODIFIED: 08/24/84 13:18 BY: NS
EDITING REVISION: 11

REF. DES.	WANG PART NO.	VALUE/TYPE	DESCRIPTION	DRAWING NO.	QTY.
01	209-7900--4		PCA		1
L220	377-0416-	74LS630	IC 16-BIT PARALLEL ERROR DETECT AND CORRECT		1

*** END-OF-REPORT ***

WANG LABORATORIES, INC. LOWELL, MASS.		BY	DATE	APPROVED BY	DATE
		DWN		E ENGR	
		CHK		M ENGR	
				MFG ENGR	
MATERIAL	MODEL NO.	TITLE: PCA VS-25 MEMORY BD			
	SEE ENGRG SPECIFICATIONS NO.				
FINISH	TOL EX AS NOTED XX ± .010 FRAC ± 1/64 XXX ± .005 ANG ± 1° 30'	SEE CHART	C	7900	9
	SCALE WHT 11 OF 13	WANG PART NUMBER	SIZE	DRAWING NUMBER	REV

A11

WANG LABORATORIES, INC. RUN DATE: 08/24/84 13:28

>>>>> ELECTRICAL PARTS LIST <<<<< SHEET 12 OF 13 PAGE 1

(FINAL PARTS LIST)

BOARD NO. & TITLE: C7900 PCA VS-25 MEM. BOARD CREATED: 07/23/84 14:22
ASSEMBLY LEVEL & TITLE: 209--5 VS25 1MEG BYTE LAST MODIFIED: 08/24/84 13:18 BY: MS
PARTS LIST REVISION (P): 0 EDITING REVISION: 11
ARTWORK REVISION (R): 02
ASSEMBLY REVISION (A): 06
SCHEMATIC REVISION (S): 09
DWR OR MOST RECENT ECO: 33230

* REF. DES.	* WANG PART NO.	* VALUE/TYPE *	DESCRIPTION	* DRAWING NO. *	QTY. *
C2 - C12	300-1930-	.1U	CAP CERAMIC MONO RAD +80% -20% 50V Z5U		176
C18 - C25					
C28 - C38					
C41 - C51					
C56 - C64					
C67 - C77					
C80 - C90					
C93 - C103					
C106 - C116					
C119 - C129					
C132 - C142					
C145 - C155					
C158 - C168					
C171 - C181					
C184 - C194					
C198 - C208					
C13 - C14	300-1966-	.047U	CAP CERAMIC MONO AXIAL +80 -20% 50V Z5U		54
C39 - C40					
C65 - C66					
C91 - C92					
C117 - C118					
C143 - C144					
C169 - C170					
C195 - C197					
C210 - C236					
C238 - C246					
C247 - C248					
C1	300-4018-	18U	CAP TANT AXIAL 10% 15V		16
C26 - C27					
C52 - C53					
C78 - C79					
C104 - C105					
C130 - C131					
C156 - C157					
C182 - C183					
C209					
C237	300-4022-	15.0U	CAP TANT AXIAL 10% 20V		2

BOARD NO. & TITLE: C7900 PCA VS-25 MEM. BOARD SCHEMATIC REVISION (S): 09 SHEET OF PAGE 2

* REF. DES.	* WANG PART NO.	* VALUE/TYPE *	DESCRIPTION	* DRAWING NO. *	QTY. *
C246					
SW1	325-1501-	SWITCH	SLIDE SPST 6 POS DIP		1
R19 - R25	330-1047-	47.000	RES FIXED 1/4W 10%		56
R27 - R33					
R52 - R58					
R60 - R66					
R85 - R91					
R93 - R99					
R118 - R124					
R126 - R132					
R1 - R16	330-1057-	56.000	RES FIXED METAL FILM 1/4W 5% 200PPM		86
R34 - R49					
R67 - R82					
R100 - R115					
R133 - R143					
R146 - R156					
R17 - R18	330-3811-	1K	RES FIXED METAL FILM 1/4W 5% 200PPM		22
R26					
R50 - R51					
R59					
R83 - R84					
R92					
R116 - R117					
R125					
R144 - R145					
R157 - R164					
R165	333-0809-	10K	RESISTOR NETWORK TYPE: 10/09/C/SS		1
L231	376-0160-	74LS174	IC QUAD D-TYPE FLIP-FLOP		1
L227	376-0171-	74148	IC 8-LINE-TO-3-LINE OCTAL PRIORITY ENCODER		1
L229	376-0197-	74S04	IC HEX INVERTER USE 376-0666 OR 0772		1
L36 - L37	376-0200-	74S08	IC QUAD 2 INPUT POSITIVE USE 376-0667 OR 0773		8
L84 - L85					
L132 - L133					
L180 - L181					
L212 - L214	376-0202-	74S74	IC DUAL D-TYPE POS EDGE TUSE 376-0682 OR 0815		7
L237					
L254					
L257 - L258					
L222 - L226	376-0204-	74LS257A	IC QUAD 2-LINE TO 1-LINE DATA SEL/MUX		6
L243					
L256	376-0205-	74S32	IC QUAD 2-INPUT OR GATE USE 376-0678 OR 0755		1
L234 - L235	376-0228-	74S00	IC QUAD 2-INPUT NAND GATEUSE 376-0664 OR 0770		2
L252	376-0259-	74S85	IC 4-BIT MAGNITUDE COMPARATOR		1
L207	376-0278-	74S161	IC SYN 4-BIT BINARY COUNTER W/DIRECT CLEAR		1
L221	376-0286-	74LS374	IC OCTAL D-TYPE FLIP-FLOP TRI-STATE		4
L242					
L248 - L249					
L196 - L198	376-0288-	74LS244	IC OCTAL BUFFER/LINE DRIVER W/TRI STATE		12
L200					
L208					

BOARD NO. & TITLE: C7900 PCA VS-25 MEM. BOARD SCHEMATIC REVISION (S): 09 SHEET OF PAGE 3

* REF. DES.	* WANG PART NO.	* VALUE/TYPE *	DESCRIPTION	* DRAWING NO. *	QTY. *
L210 - L211					
L244 - L247					
L261					
L228	376-0294-	74LS138	IC 3-LINE TO 8-LINE DECODER/MULTIPLEXER		1
L12 - L13	376-0297-	74LS240	IC OCTAL BUFFER/LINE DRIVER/LINE RECEIVER		9
L60 - L61					
L108 - L109					
L156 - L157					
L253					
L205	376-0298-	74S138	IC 3-LINE TO 8-LINE DECODER/MULT USE 376-0671		1
L202	376-0301-	74S158	IC QUAD 2 TO 1-LINE DATA SELECTO USE 376-0810		1
L233	376-0305-	74S374	IC OCTAL D-TYPE EDGE-TRIGUSE 376-0614 OR 0788		1
L199	376-0307-	74LS393	IC DUAL 4-BIT BINARY COUNTER		2
L230					
L255	376-0333-	74S139	IC 2 TO 4-LINE DECODER/MULTIPLEX USE 376-0672		1
L236	376-0336-	74S151	IC 1-OF-8 DATA SEL/MUX USE 376-0613		1
L204	376-0338-	74S244	IC OCTAL BUFFER/LINE DRIVER/RECE USE 376-0611		1
L223	376-9018-	SKT 28	IC SOCKET 28 PIN DIL MOUNT		1
L1 - L11	377-0418-	4164	IC 64KX1 DRAM 200NS REF REQUIRE 4MS/256 ROW		176
L14 - L36					
L38 - L59					
L62 - L83					
L86 - L107					
L110 - L131					
L134 - L155					
L158 - L179					
L182 - L192					
02	482-2707-	STIFFNER	STIFFNER LOWER		1
03	482-2708-	STIFFNER	STIFFNER UPPER		1
04 - 05	463-1238-	EXTRACTR	EXTRACTR CARD NYLON W/ROLL		2
01	810-7900-		PCB		1
06 - 012	690-2100-	PAN HEAD	4-40 X 1/4 PAN HD PHL MS		7
013 - 019	652-2000-	NUT	#4 NUT		7
020 - 026	653-2009-	WASHER	#4 NYLON WASHER		7
027	660-0341-	#222	#222 LOCKTITE (7 PLACES)		1

BOARD NO. & TITLE: C7900 PCA VS-25 MEM. BOARD SCHEMATIC REVISION (S): 09 SHEET OF PAGE 4

*	* WANG PART NO.	* VALUE/TYPE *	DESCRIPTION	* DRAWING NO. *	QTY. *
(CAUTION - THE FOLLOWING PARTS/COMPONENTS CONTAINED IN THIS B.O.M. ARE NOT RECOMMENDED FOR NEW DESIGNS)					
	330-1047-	47.000	RES FIXED 1/4W 10%		56
	376-0197-	74S04	IC HEX INVERTER USE 376-0666 OR 0772		1
	376-0200-	74S08	IC QUAD 2 INPUT POSITIVE USE 376-0667 OR 0773		8
	376-0202-	74S74	IC DUAL D-TYPE POS EDGE TUSE 376-0682 OR 0815		7
	376-0205-	74S32	IC QUAD 2-INPUT OR GATE USE 376-0678 OR 0755		1
	376-0228-	74S00	IC QUAD 2-INPUT NAND GATEUSE 376-0664 OR 0770		2
	376-0298-	74S138	IC 3-LINE TO 8-LINE DECODER/MULT USE 376-0671		1
	376-0301-	74S158	IC QUAD 2 TO 1-LINE DATA SELECTO USE 376-0810		1
	376-0305-	74S374	IC OCTAL D-TYPE EDGE-TRIGUSE 376-0614 OR 0788		1
	376-0333-	74S139	IC 2 TO 4-LINE DECODER/MULTIPLEX USE 376-0672		1
	376-0336-	74S151	IC 1-OF-8 DATA SEL/MUX USE 376-0613		1
	376-0338-	74S244	IC OCTAL BUFFER/LINE DRIVER/RECE USE 376-0611		1

*** END-OF-REPORT ***

WANG	WANG LABORATORIES, INC. LOWELL, MA U.S.A.	BY	DATE	APPROVED BY	DATE
		DWN		E ENGR	
		CHK		M ENGR	
MATERIAL	MODEL NO			MFG ENGR	
	ME ENGRG SPECIFICATIONS No.	TITLE PCA VS-25 MEMORY BD			
FINISH	TOL UNLESS NOTED XX ± .010 FRAC ± 1/64 XXX ± .005 ANG ± 1°	SEE CHART	C	7900	9
	SCALE SHT 13 OF 13	WANG PART NUMBER	SIZE	DRAWING NUMBER	REV

WANG LABORATORIES, INC. RUN DATE: 08/24/84 13:30

>>>>> ELECTRICAL PARTS LIST <<<<< SHEET 13 OF 13 PAGE 1

(FINAL PARTS LIST)

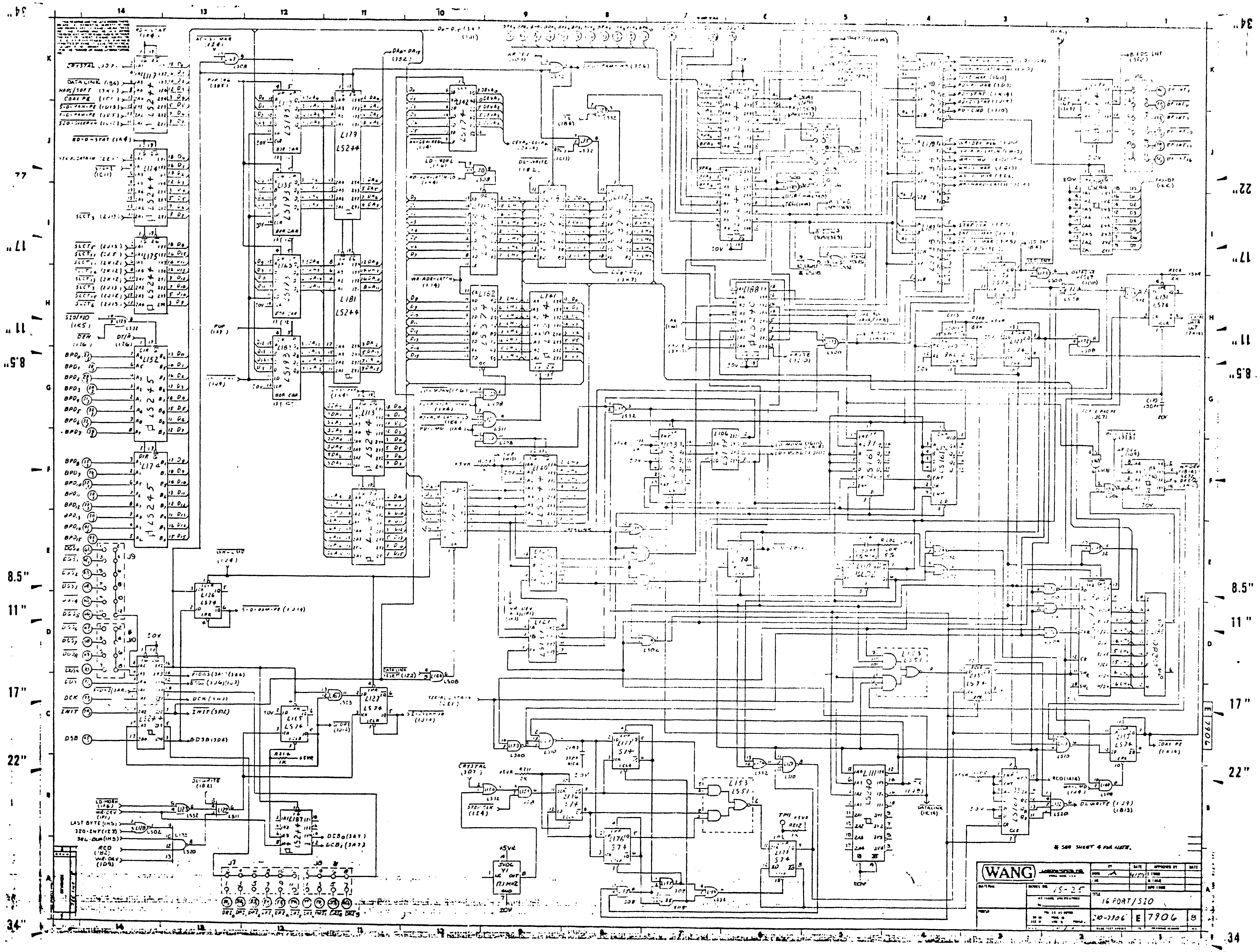
BOARD NO. & TITLE: C7900 PCA VS-25 MEM. BOARD
ASSEMBLY LEVEL & TITLE: 210--6A VS25 1MEG BYTE
PARTS LIST REVISION (P): 0
ARTWORK REVISION (R): 02
ASSEMBLY REVISION (A): 05
SCHEMATIC REVISION (S): 09
DVR OR MOST RECENT ECO: 13230

CREATED: 07/23/84 14:22
LAST MODIFIED: 08/24/84 13:18 BY: MS
EDITING REVISION: 11

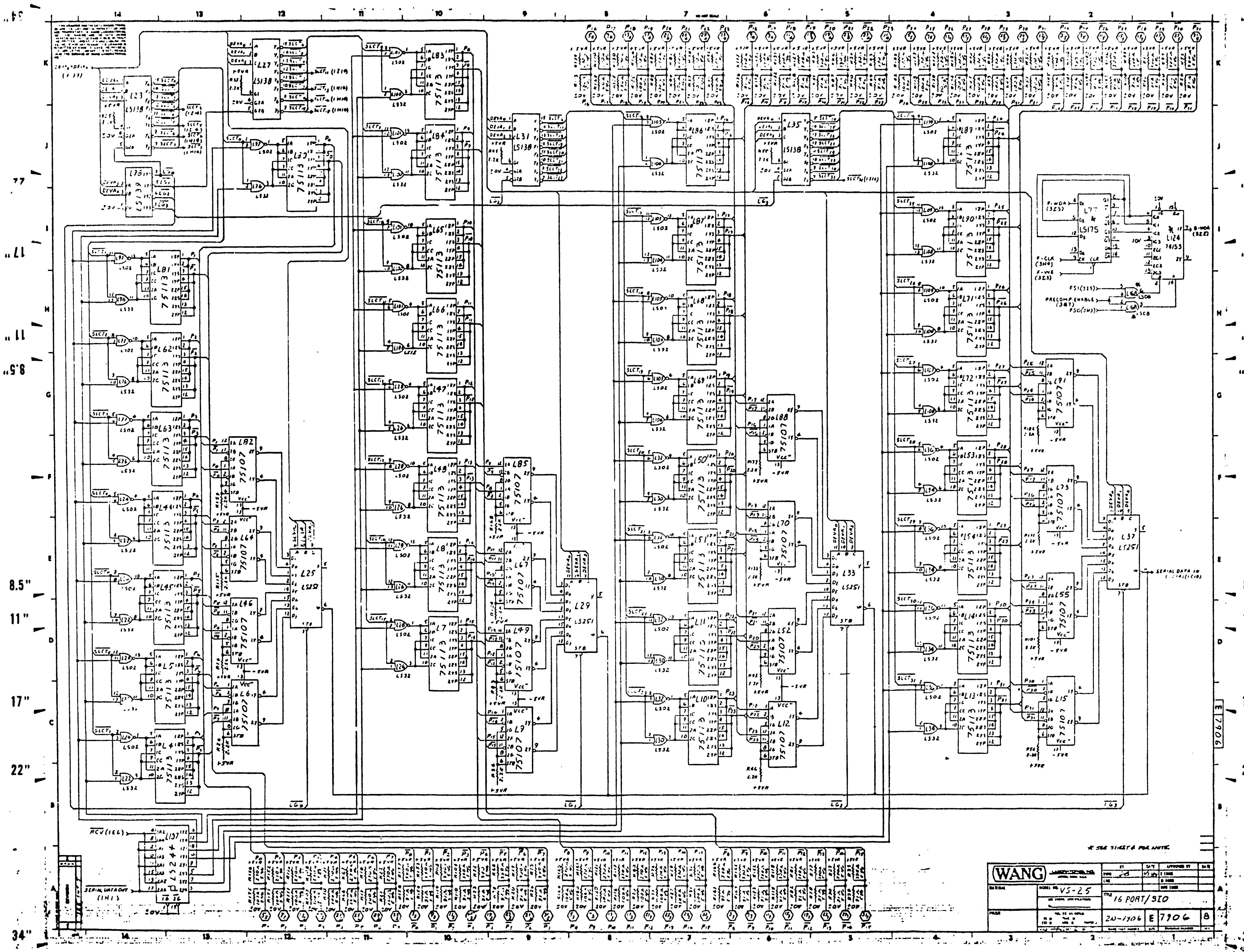
* REF. DES.	* WANG PART NO.	* VALUE/TYPE *	DESCRIPTION	* DRAWING NO. *	QTY. *
01	209-7900--B		PCA		1
L220	377-0416-	74LS630	IC 16-BIT PARALLEL ERROR DETECT AND CORRECT		1

*** END-OF-REPORT ***

WANG LABORATORIES, INC. LOWELL MASS. U.S.A.		BY	DATE	APPROVED BY	DATE
		DWN		E ENGR	
		CHK		M ENGR	
				MFG ENGR	
MATERIAL	MODEL NO	TITLE PCA VS-25 MEMORY BD			
	ME ENGRG SPECIFICATIONS No				
FINISH	TOL EX AS NOTED .XX ± .010 FRAC ± 1/64 .XXX ± .005 ANG ± 1°30' FINISH 125	SEE CHART	C	7900	9
	SCALE SHT 13 OF 13	WANG PART NUMBER	SIZE	DRAWING NUMBER	REV

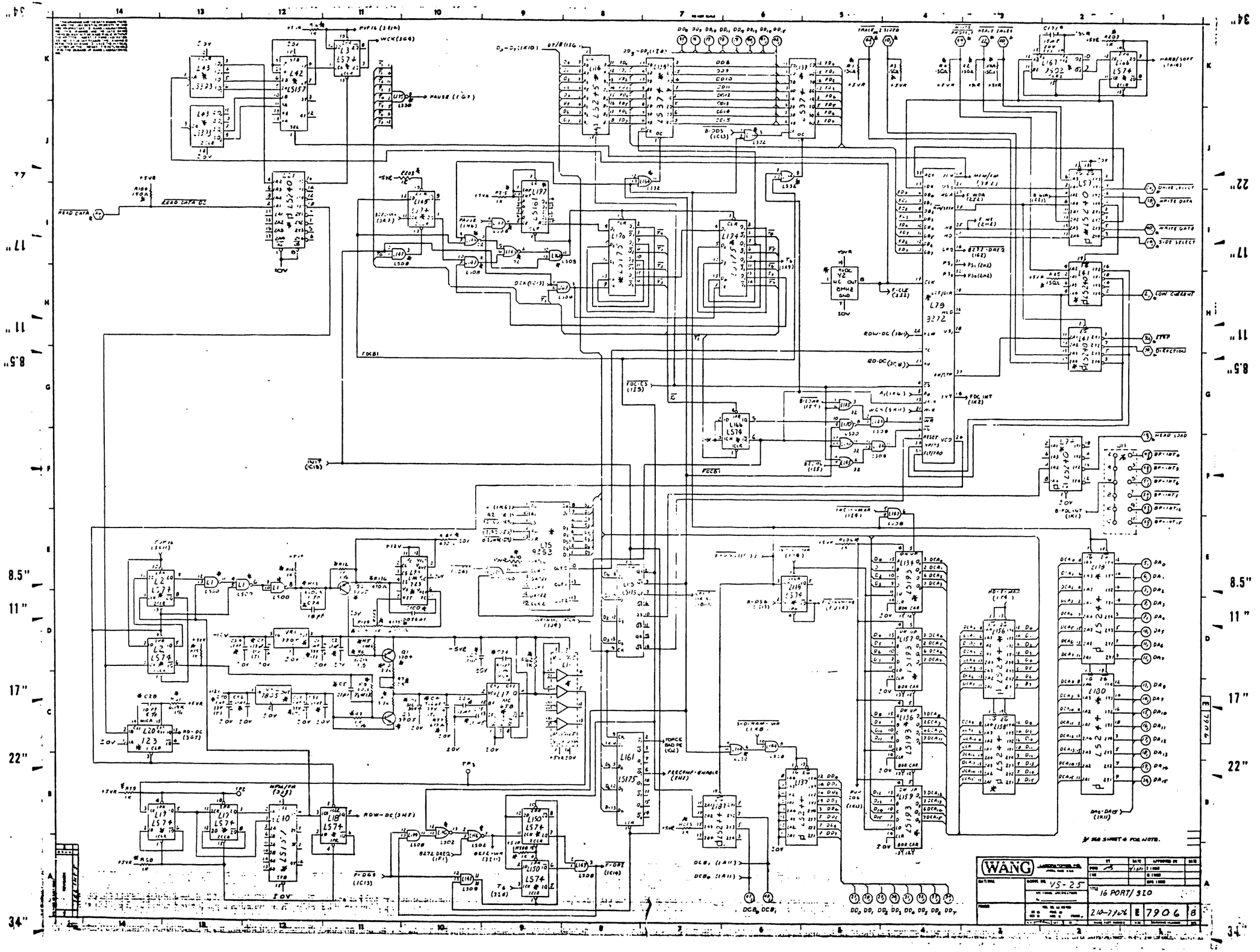


B1

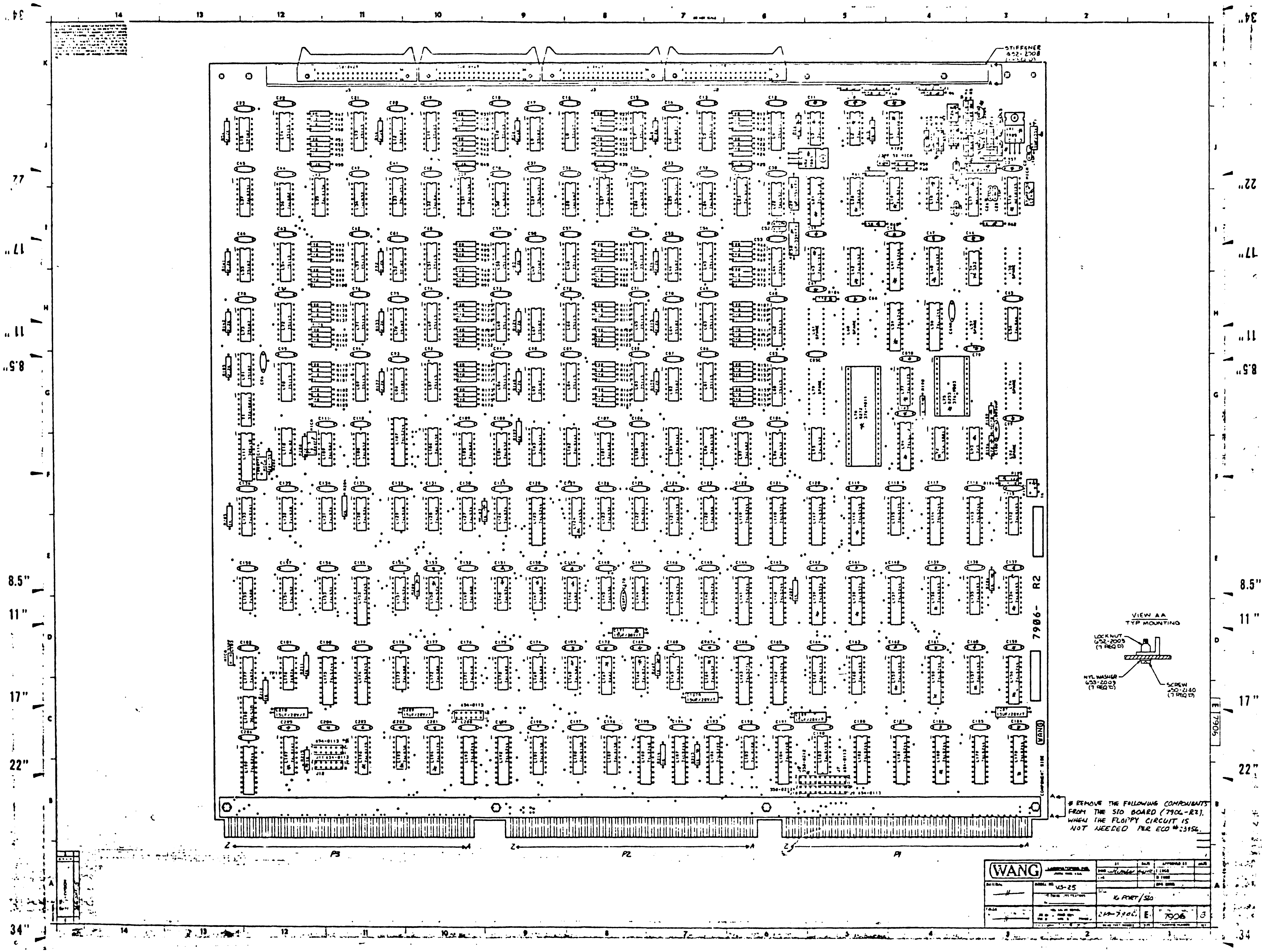


* SEE SHEET 4 FOR NOTE
WANG
MODEL NO. VS-25
TITLE 16 PORT/SIO
210-7906
E
7906
8

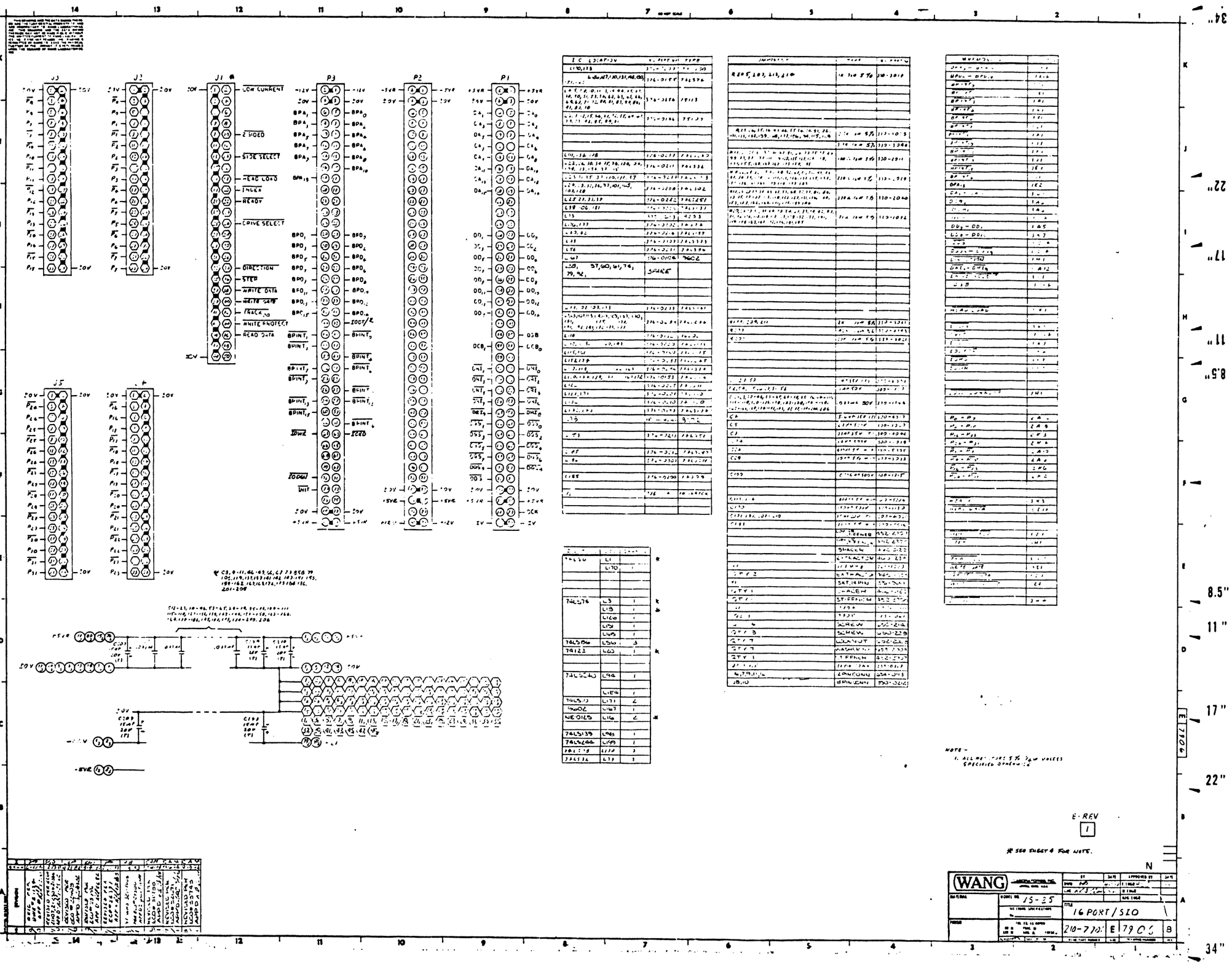
B2


WANG
VS-25
16 PORT/ 310
2107706
E 7906 8
READ DATA
READ DATA OC
PAUSE (1G7)
WCK(3G4)
PWF16 (3E4)
INIT (1C15)
FDC81
FDC-CS (1I5)
FDC INT (1H2)
RDW-DC (3H1)
RD-DC (3G7)
F-DRQ (1C13)
F-DRT (1C14)
FORCE BAD PE (2K2)
PRECOMP-ENABLE (2H2)
F-CLK (2I2)
MFM/FM (3B1)
DRIVE SELECT
WRITE DATA
WRITE GATE
SIDE SELECT
LOW CURRENT
STEP
DIRECTION
HEAD LOAD
HARD/SOFT (1A14)
DAG-DACK (1K11)
SEE SHEET 4 FOR NOTE.

B3


STIFFENER
652-2008
7906- R2
VIEW AA
TYP MOUNTING
LOCKNUT
652-2003
(7 REQ'D)
NYL WASHER
653-2003
(7 REQ'D)
SCREW
650-2140
(7 REQ'D)
P3
P2
P1
REMOVE THE FOLLOWING COMPONENTS FROM THE SIO BOARD (7906-R2), WHEN THE FLOPPY CIRCUIT IS NOT NEEDED PER ECO #:3156.
WANG
VS-25
16 PORT/SIO
210-7906
E
7906
3

B4



I C LOCATION	[illegible]	TYPE
L110,118	[illegible]	[illegible]
L60,87,130,131,148,169, [illegible]	376-0155	74LS74
[illegible]	376-0156	[illegible]
[illegible]	376-0166	[illegible]
L111,132,128	376-0217	[illegible]
[illegible]	376-0211	[illegible]
[illegible]	376-0208	74LS02
L25,27,33,39	376-0282	74LS251
L98,106,181	[illegible]	[illegible]
L75	[illegible]	[illegible]
L67	376-0108	9602
[illegible] 57,60,61,74, 79,92,	SPARE	

74LS30	L1	
	L170	1
74LS74	L3	1
	L19	1
	L120	1
	L151	1
	L165	1
74LS86	L56	3
74123	L60	1
74LS240	L94	1
	L124	1
74LS10	L171	2
9602	L167	1
NE0125	L16	2
74LS139	L98	1
74LS244	L199	1
[illegible]	[illegible]	[illegible]
[illegible]	[illegible]	[illegible]

	STIFFENER	352-[illegible]
	SPACER	[illegible]
	EXTRACTOR	[illegible]
	SKT,14 PIN	[illegible]
QTY 1	SPACER	[illegible]
	STIFFENER	[illegible]
	SCREW	[illegible]
QTY 3	SCREW	[illegible]
QTY 7	LOCKNUT	[illegible]
QTY 7	WASHER	[illegible]
QTY 1	STIFFENER	[illegible]
6,7,9,11,12	2PIN CONN	[illegible]
J8,10	8PIN CONN	[illegible]

NOTE -
1. ALL RESISTORS 5% 1/4W UNLESS SPECIFIED OTHERWISE

E-REV
1

* SEE SHEET 4 FOR NOTE.

N

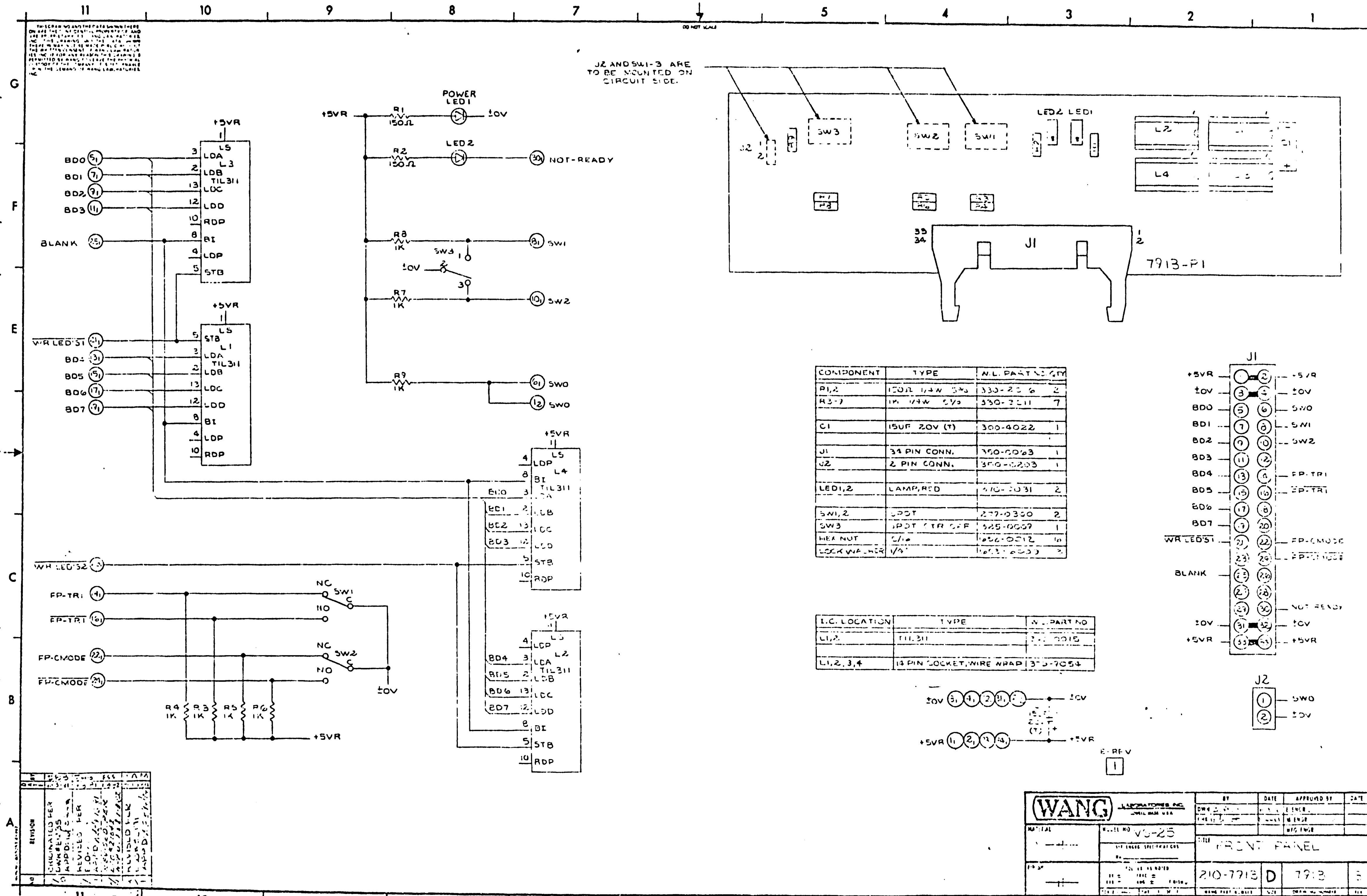
WANG LABORATORIES, INC.

MODEL NO. 15-25

TITLE 16 PORT/SIO

210-7701 | E | 7906 | B

B5



COMPONENT	TYPE	W.L. PART NO.	QTY
R1,2	150Ω 1/4W 5%	330-2[illegible]	2
R3-7	1K 1/4W 5%	330-3[illegible]	7
C1	15UF 20V (T)	300-4022	1
J1	34 PIN CONN.	350-0063	1
J2	2 PIN CONN.	350-[illegible]	1
LED1,2	LAMP,RED	[illegible]-2031	2
SW1,2	SPDT	277-0330	2
SW3	SPDT CTR OFF	325-[illegible]	1
HEX NUT	[illegible]	6[illegible]-0212	[illegible]
LOCK WASHER	1/4"	[illegible]	[illegible]

I.C. LOCATION	TYPE	W.L. PART NO
L1,2	TIL311	[illegible]
L1,2,3,4	14 PIN SOCKET,WIRE WRAP	3[illegible]-7054

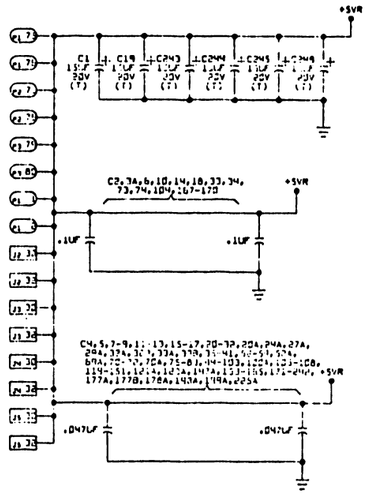
WANG LABORATORIES INC.

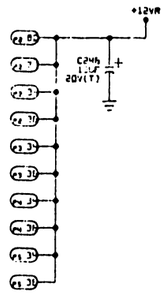
VS-25

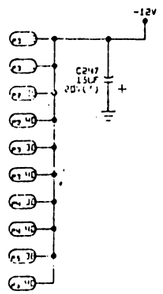
TITLE: FRONT PANEL

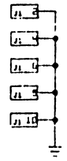
210-7913 D 7913

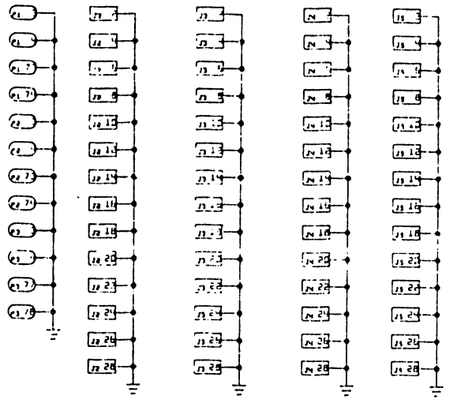
C1

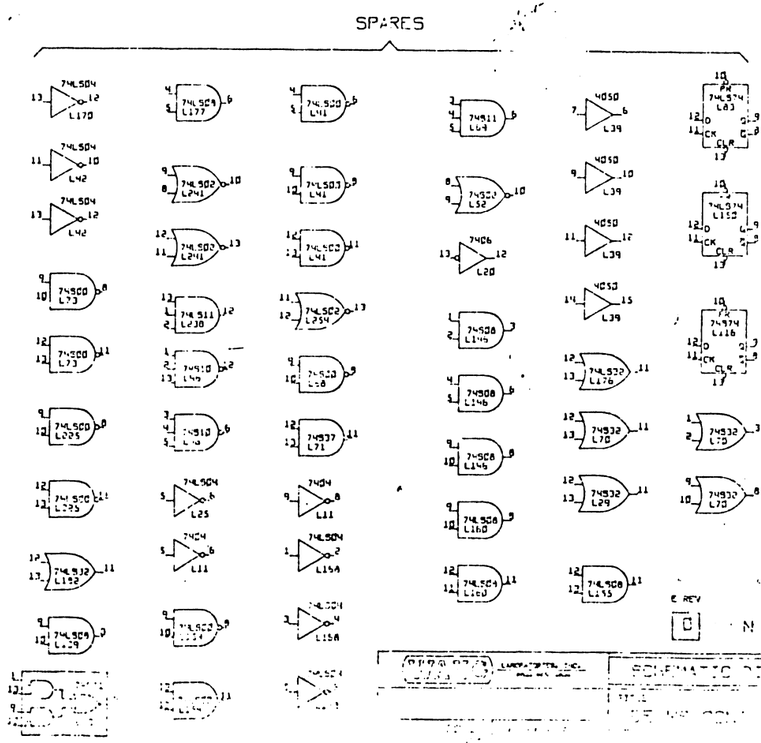












NOTES

1. ALL RESISTOR VALUES IN OHMS.
2. ALL CAPACITOR VALUES IN MICROFARADS UNLESS OTHERWISE INDICATED.
3. ALL RESISTORS 1/4W 5% UNLESS OTHERWISE INDICATED.

SPARES

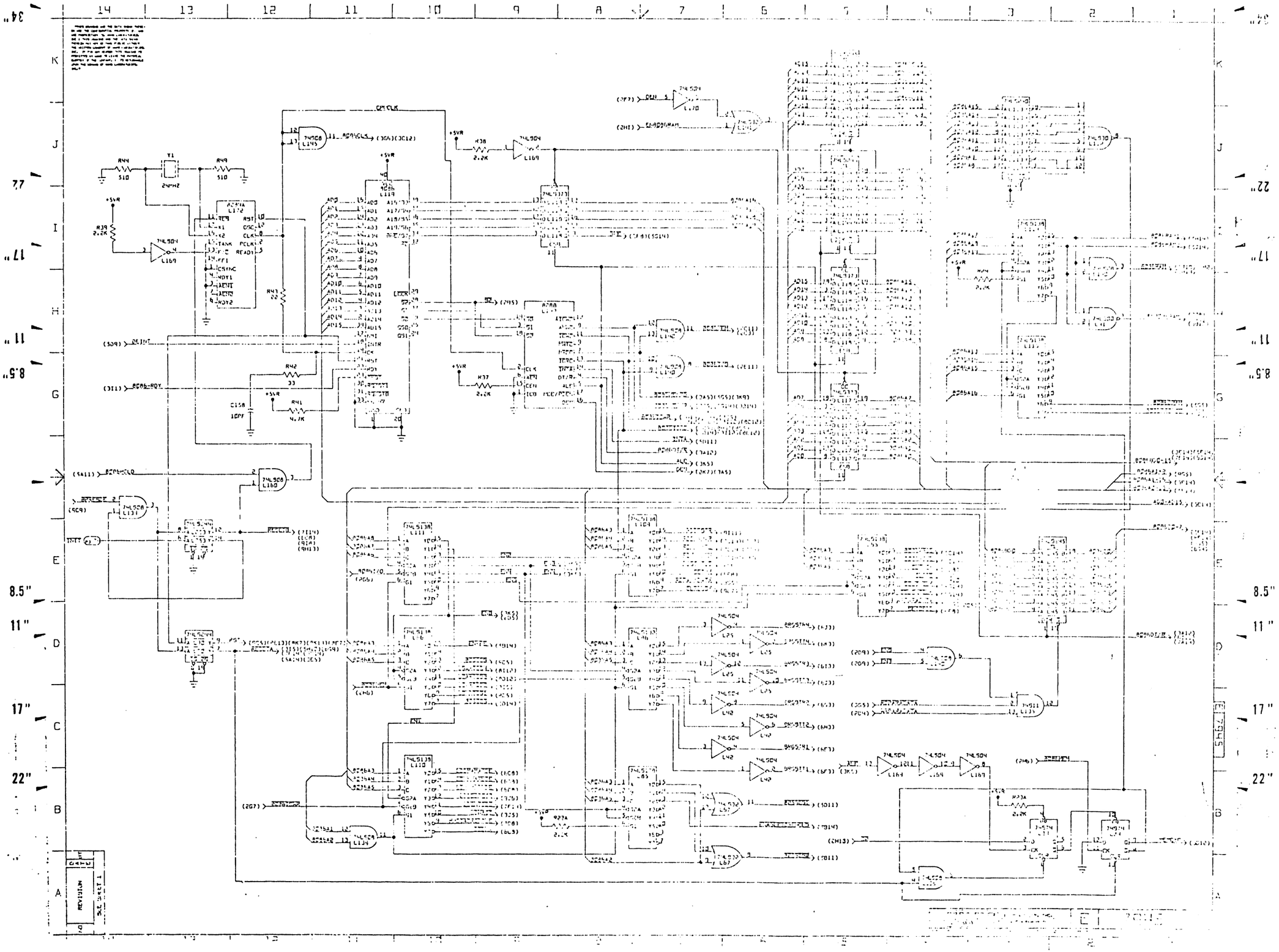
MNEMONICS	LOCATION
[illegible]	9E14
MD0-MD15	6F9
CD0-CD15	6C9
BPIN[illegible]-17	6D3
DA0-DA15	7H7
DCB0-DCB1	7G1
MA0-MA20	7K1
MCB0-MCB2	[illegible]J1
DATA1-DATA8	9H3
US0-US1	9H1
RESET	9B1
DSTB IN	9G1
DSTB OUT	9A1
DAV	9G6
ACK	9E9
BUSY	9A5
PE	9G7
FAULT	9F7
SLCT	9F7
[illegible]	9F7
POWER ON	9F7
[illegible]	9F14
ICND	9K12

MNEMONICS	LOCATION
ICSEN	9E14
DGS0-9	9K14
MGS0-6	9J14
GR10-4	9K3
MR10-6	9J3
CDS	9I14
MDS	9I14
DSB	9I14
[illegible]-1	9I14
SPA1-3	9C14
SPA4-7	9E14
SPA9-10	9C14
SPC0-7	9G8
SPC8-15	9H4
TXD1	9D1
TXD2	8E1
TXD3-4	8J1
TXD5	8E3
TXD6	8C9
TXD7-8	8J9

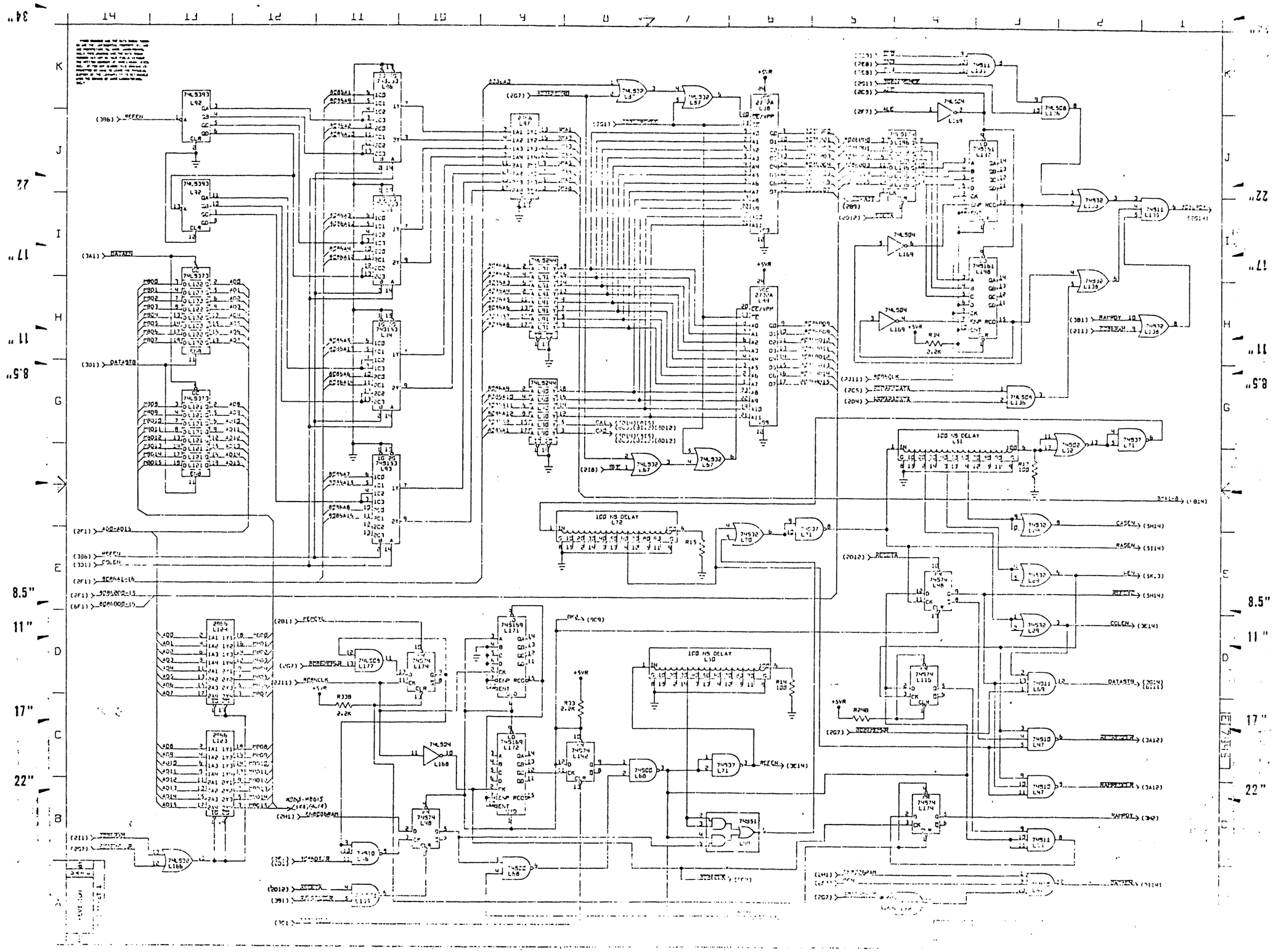
MNEMONICS	LOCATION
EXTXC1	8D7
EXTXC2	8C7
EXTXC3	[illegible]G7
EXTXC4	3G7
EXTXC5	[illegible]
EXTXC6	8C14
EXTXC7	[illegible]D14
EXTXC8	[illegible]14
EXRXC1	[illegible]A7
EXRXC2	[illegible]
EXRXC3	[illegible]
EXRXC4	9F7
EXRXC5	8A14
EXRXC6	3D14
EXRXC7	[illegible]
EXRXC8	[illegible]
RXD1	[illegible]CA
RXD2	9C8
RXD3-4	[illegible]
RXD5	9C14
RXD6	8D14
RXD7-8	8I14

MNEMONICS	LOCATION
RTS1	[illegible]
RTS2	[illegible]B1
RTS3	[illegible]J1
RTS4	[illegible]
RTS5	[illegible]
RTS6	8B9
RTS7	[illegible]
[illegible]	[illegible]
[illegible]-2	[illegible]
[illegible]	[illegible]
[illegible]	[illegible]
[illegible]-8	[illegible]
[illegible]	9D1
[illegible]	[illegible]
[illegible]	9C8
[illegible]-3	[illegible]
[illegible]	9C8
[illegible]	[illegible]
[illegible]	[illegible]
[illegible]	[illegible]
[illegible]	[illegible]
[illegible]	[illegible]

SCHEMATIC DIAGR[illegible]



D2


74LS393
74LS373
74LS153
74LS244
74LS74
74LS169
74LS08
74LS32
74LS04
74LS00
74LS10
74LS11
74LS51
74LS37
74LS22
74LS86
74LS20
74LS27
74LS04
74LS86
74LS09
74LS30
2716
27128A
74S181
100 NS DELAY
R33 2.2K
R34 3.3K
R36 2.2K
R48 2.2K
R14 100
R15 100
+5VR
DATA15
DATA07
ADD-AD15
MEMCYC
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RFSHCLR
RFSHCLK
RFSHADR
RFSHDATA
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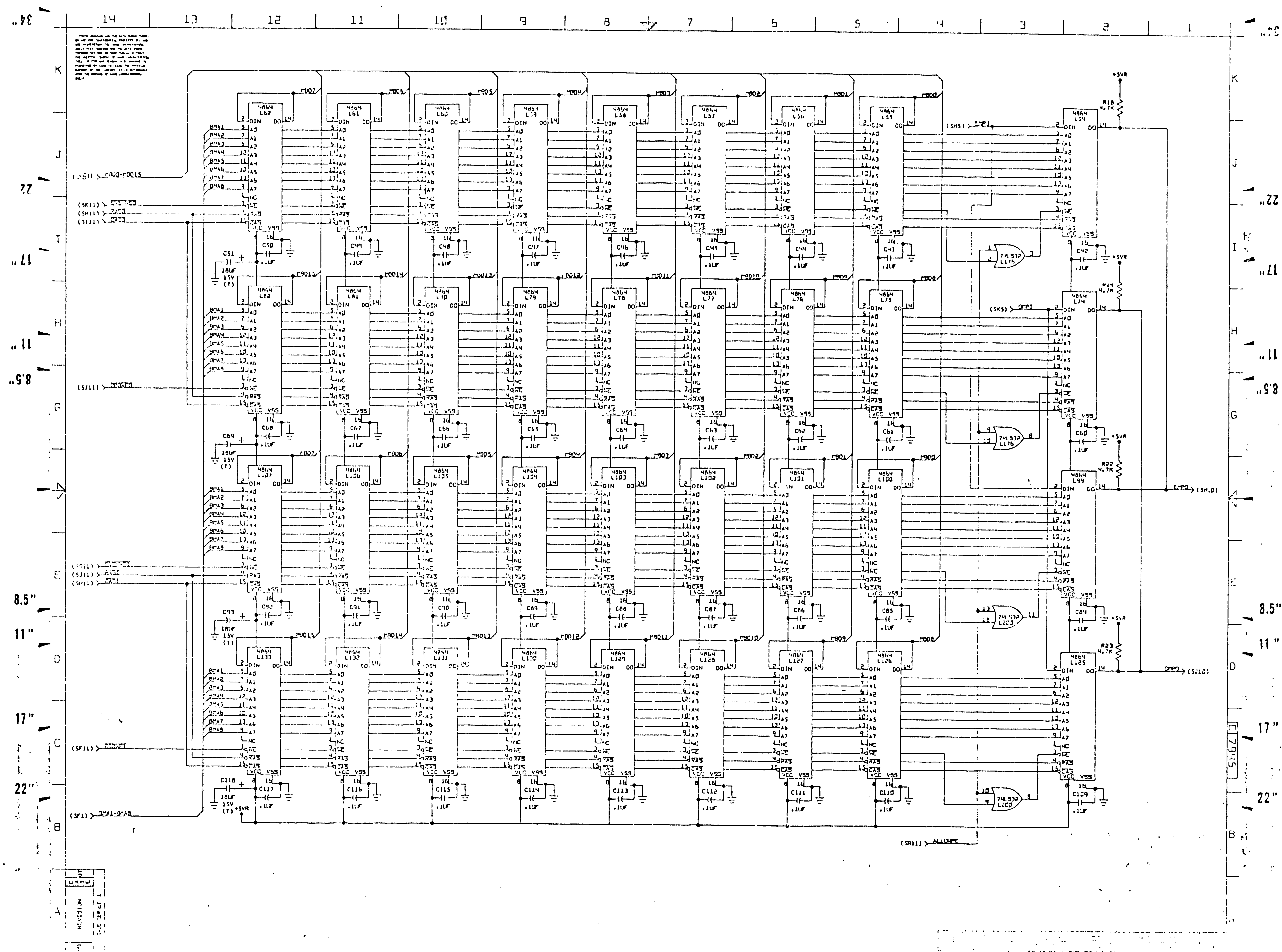

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74LS32
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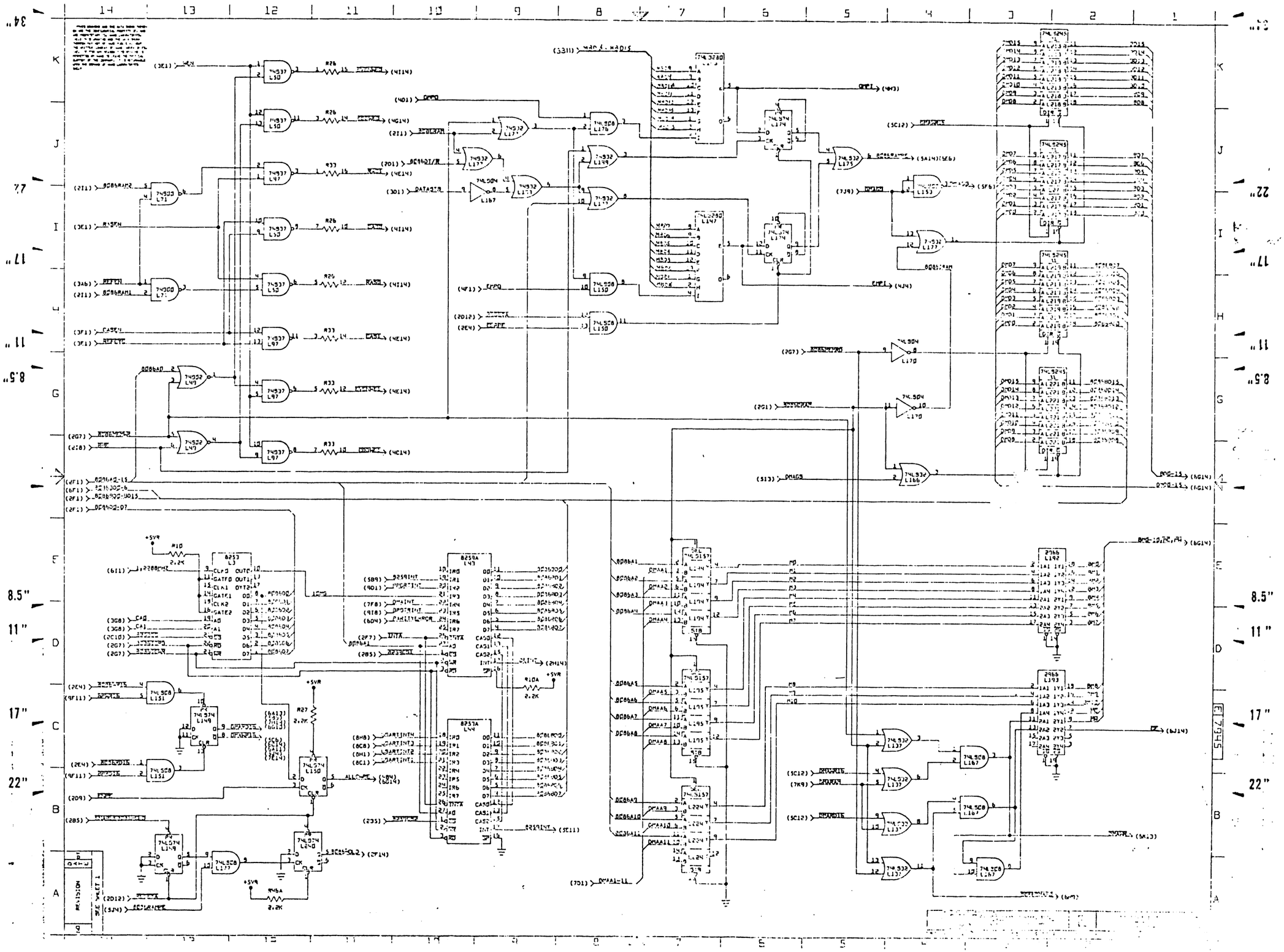
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(3E1) WEN
74S37 L50
R26
(4I14)
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(401) DMPO
(2I1) 8086RAM
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74S32 L177
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R33
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CAS1
74S02 L47
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74S08 L176
74S32 L199
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(4F1) EMPO
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(2D12)
(2E4)
(4H3)
EMP1
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(5C12)
74LS32 L175
(5A14)(5E6)
(7J9)
74LS08 L153
(5F6)
74LS245 L213
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74LS245 L215
74LS245 L221
(2G7)
74LS04 L170
(2G1)
74LS04 L170
(5I3) DMAGS
74LS32 L166
BMD-15 (6G14)
BMD-15 (6G14)
BMD-10,20,A1 (6G14)
+5VR
R10 2.2K
(6I1) 2288MHZ
8253 L3
CLK0
GATE0
CLK1
GATE1
CLK2
GATE2
OUT0
OUT1
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A0
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(3G8) CA0
(3G8) CA1
(2C10)
(2G7)
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8259A L43
IR0
IR1
IR2
IR3
IR4
IR5
IR6
IR7
(5B9) 8259INT
(9D1)
(7F8)
(9I8)
(6D4) PARITYERROR
(2F7) INTA
8086A1
(2B5)
CAS0
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(2H14)
R10A 2.2K
+5VR
(2E4)
(9F11)
74LS08 L151
74LS74 L149
R27 2.2K
74LS74 L150
(4B4) (6G14)
(2D9)
(2B5)
74LS74 L159
74LS08 L177
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+5VR
R46A 2.2K
(2D12)
(5J4)
(8H8) USARTINT0
(8C8) USARTINT1
(8H1) USARTINT2
(8C1) USARTINT3
8259A L44
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8086A1
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8086A4
74LS157 L194
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74LS157 L224
8086A5
8086A6
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8086A10
8086A11
(7D1) DMAA1-11
M0
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2966 L192
2966 L193
74LS32 L137
74LS08 L167
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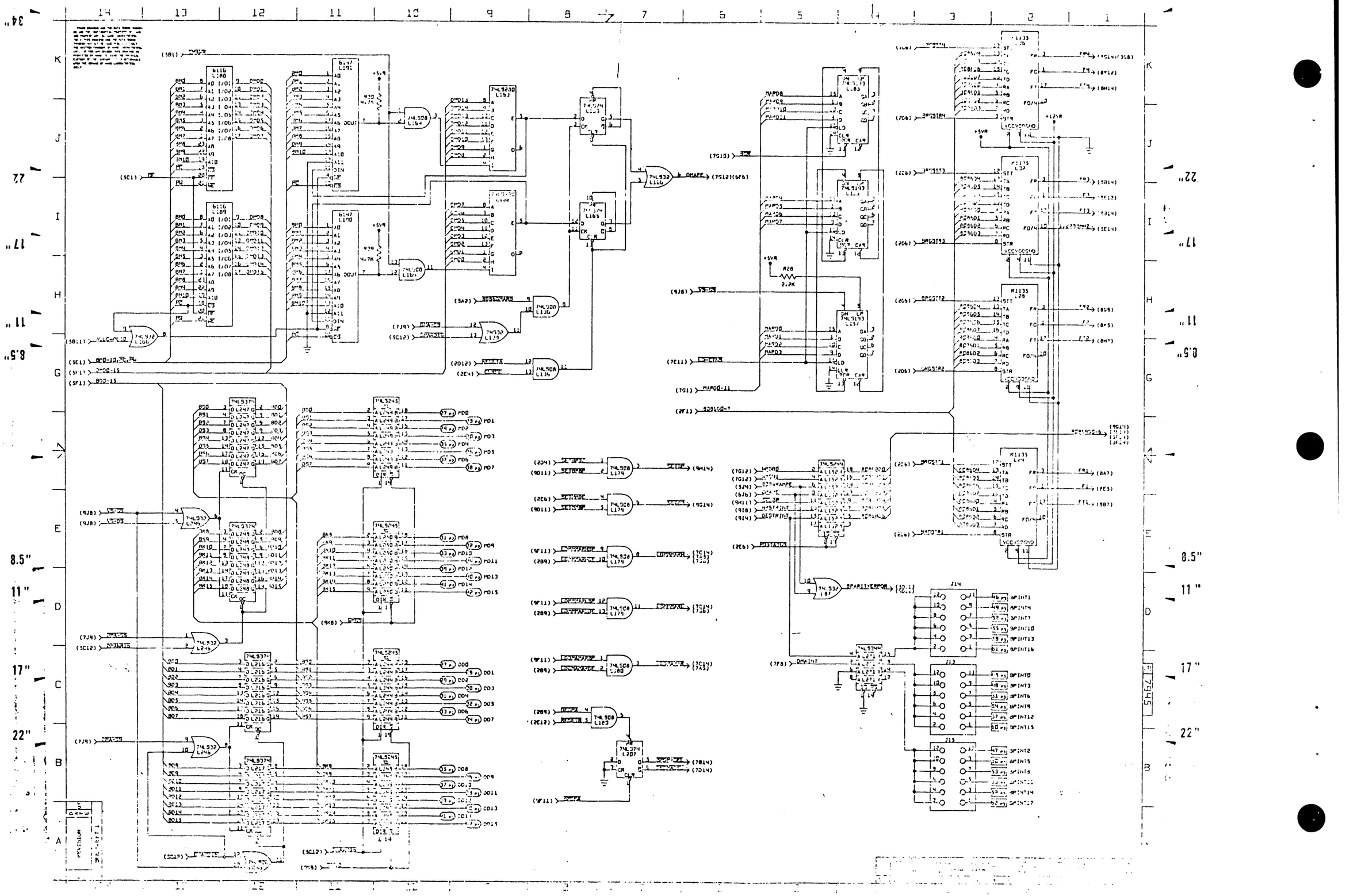
(5A13)
74LS08 L167
(6A7)
REVISION
SEE SHEET 1
E7945



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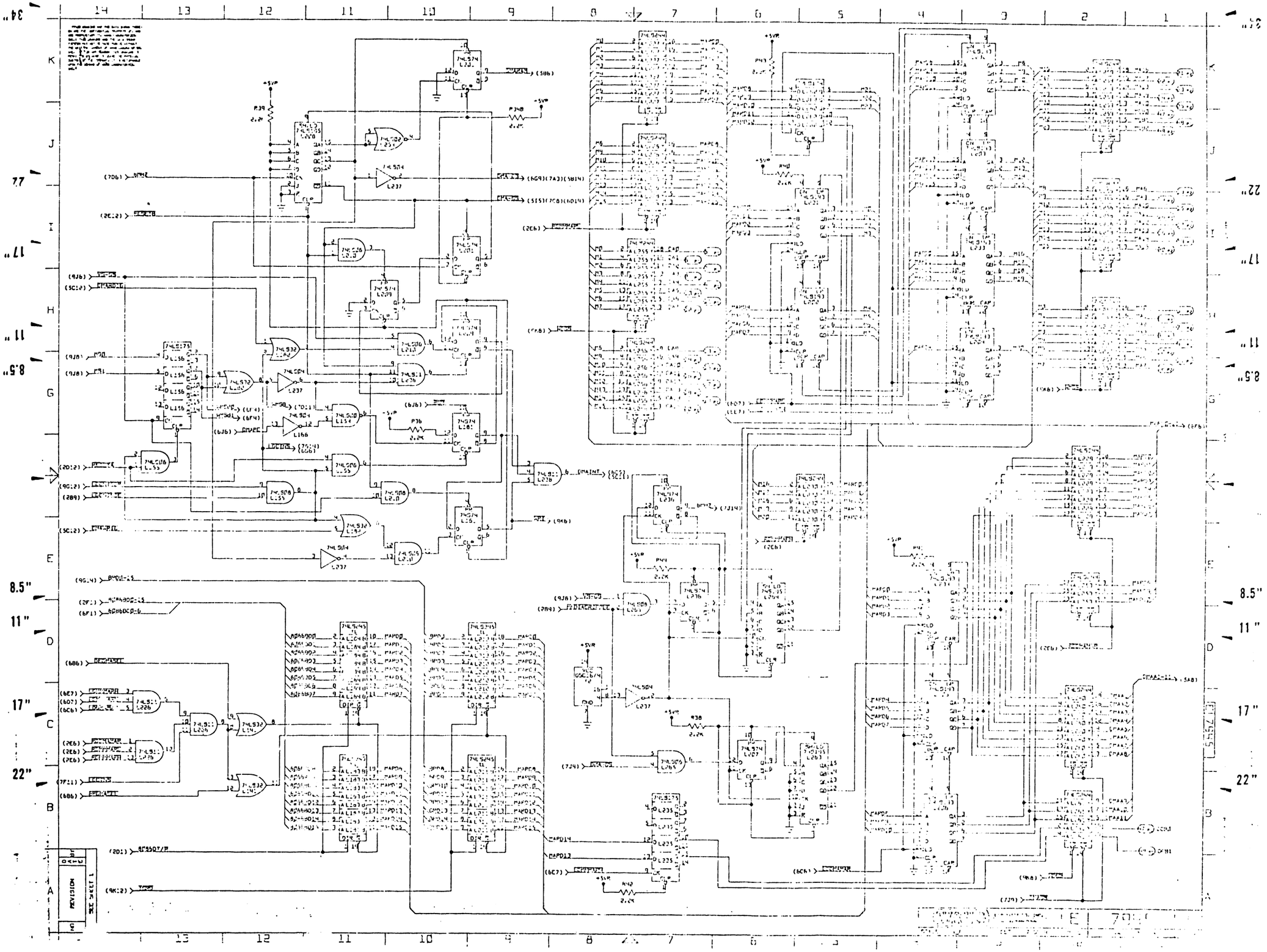
REVISION
SEE SHEET 1
+5VP
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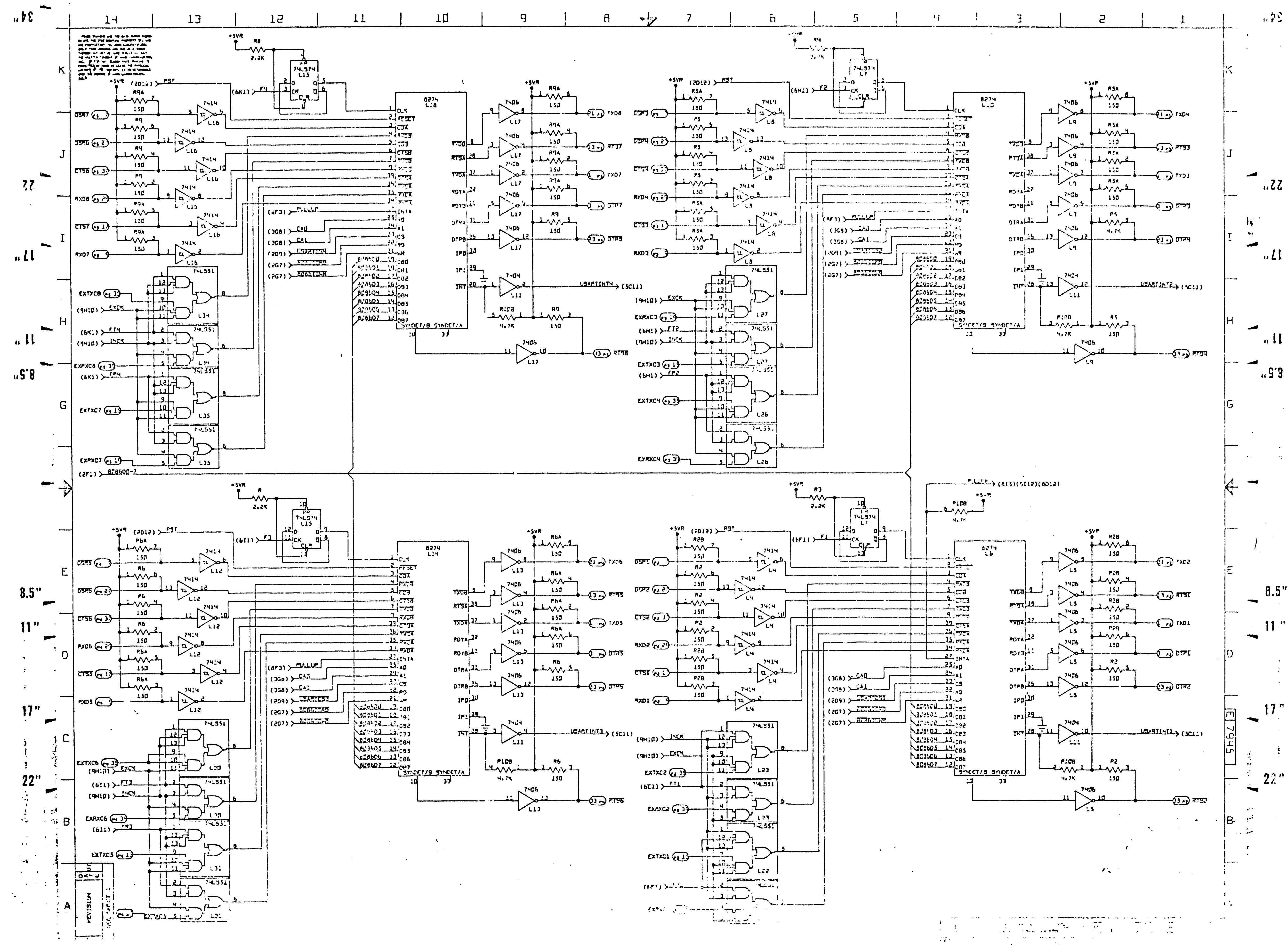
8274
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74LS51
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7406
+5VR
USARTINT1 > (SC11)
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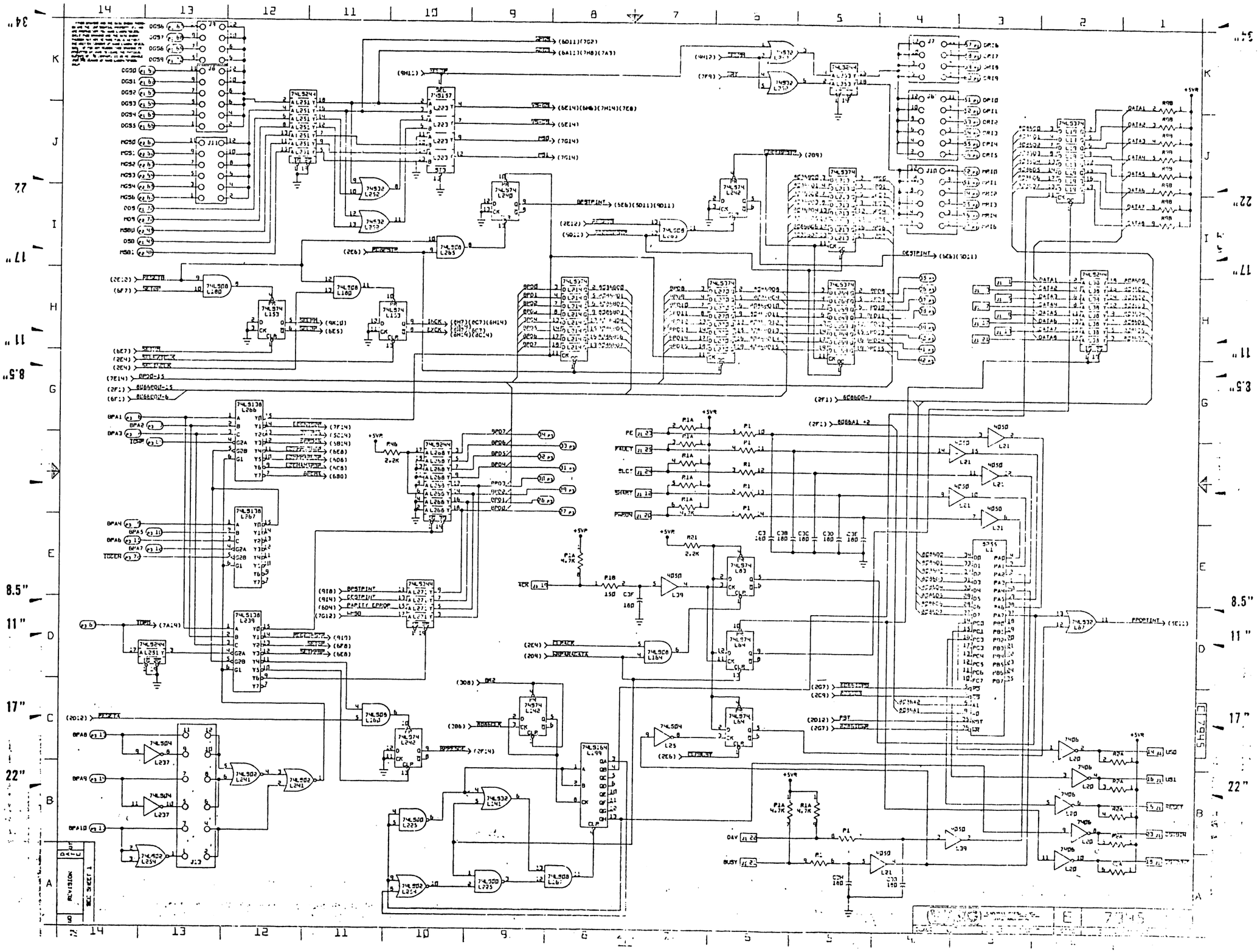 14
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74LS164
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7406
BESTPINT
SETUP
DESTPINT
PARITY ERROR
PROPTINT
+5VR
+5VP
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FAULT
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SHRT
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DATA1
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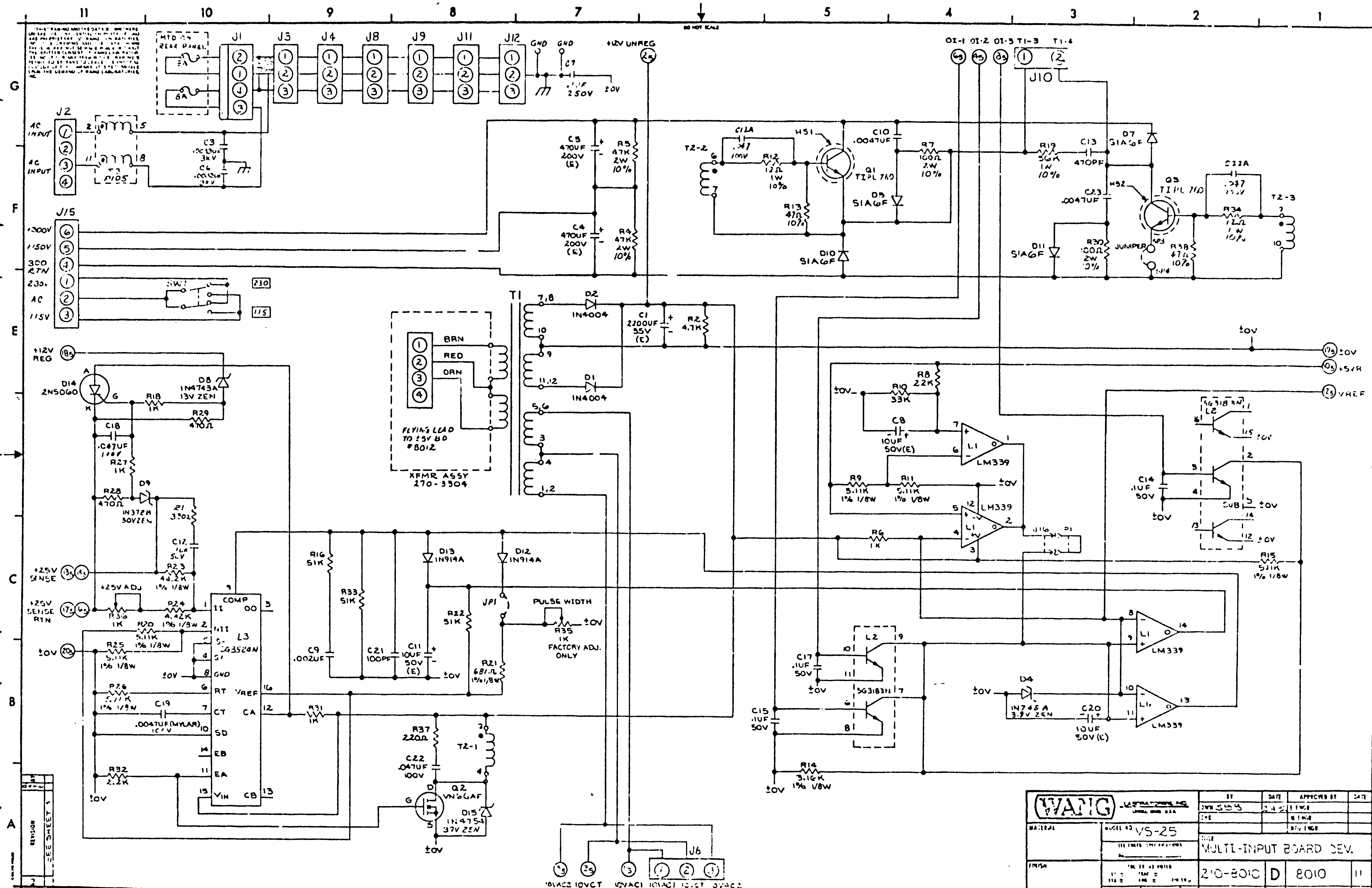
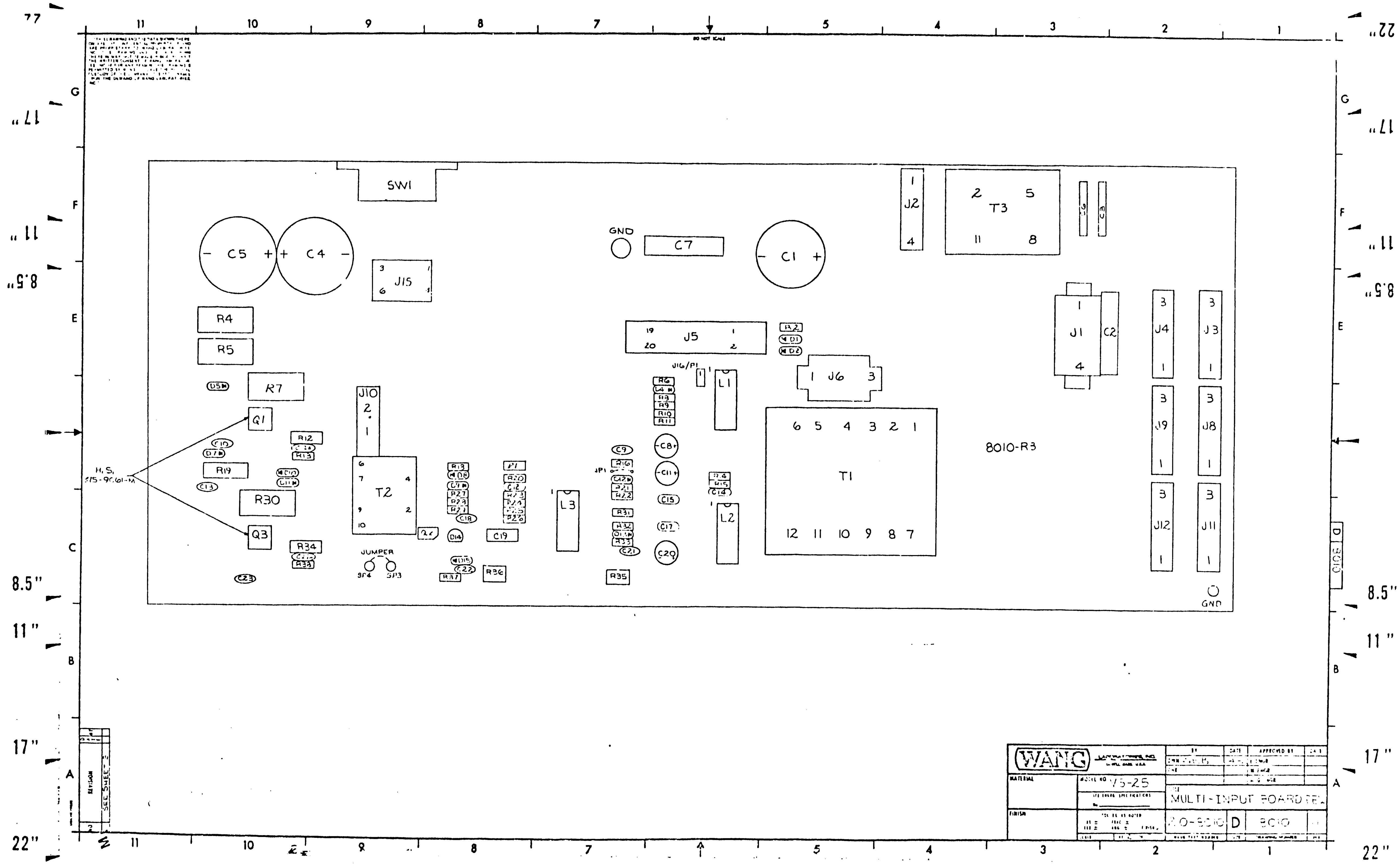

WANG LABORATORIES INC.
VS-25
MULTI-INPUT BOARD DEV.
210-8010 D 8010
XFMR ASSY 270-3304
PULSE WIDTH
FACTORY ADJ. ONLY


SW1
GND
C5
C4
C7
C1
J2
T3
J15
R4
R5
R7
J5
J6
J1
C2
J4
J3
J10
Q1
Q3
R12
R19
R30
R34
T2
L1
L2
L3
T1
8010-R3
J9
J8
J12
J11
JUMPER
R35
R36
H.S.
MULTI-INPUT BOARD
8010
D

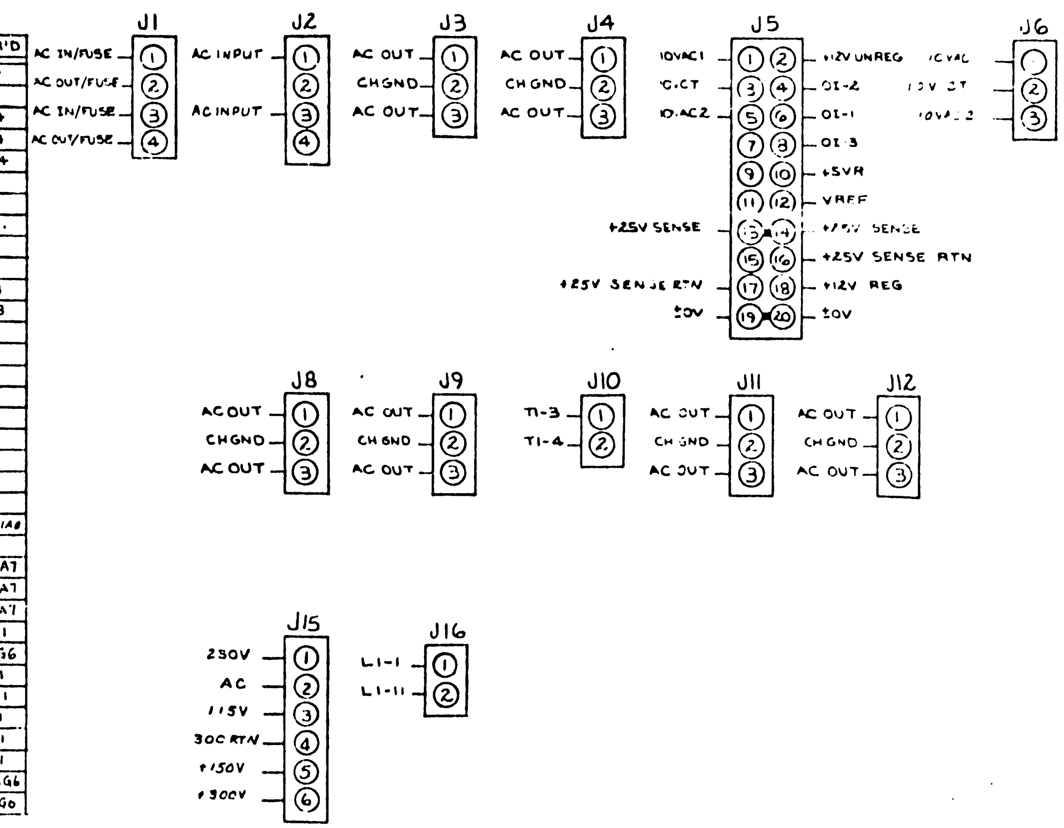
E2

COMPONENT	TYPE	W.L. PART NO.
R1	330Ω 5% 1/4W	330-2[illegible]
R2	4.1K 5% 1/4W	330-3048
R4,5	47K 10% 2W	337-4047
R9,11,[illegible]	5.11K 1% 1/8W	333-0088
R7,30	100Ω 10% 2W	337-2010
R8	22K 5% 1/4W	330-4023
R10	33K 5% 1/4W	330-4034
R12,34	12Ω 10% 1W	332-1012
R13,38	47Ω 5% 1/4W	330-1049
R14	3.16K 1% 1/8W	333-0210
R21	681Ω 1% 1/8W	333-0058
R15,22,33	51K 5% 1/4W	330-4052
R18,27,31,6	1K 5% 1/4W	330-3011
R19	56K 10% 1W	332-4056
R71	1K 1% 1/8W	333-0033
R24	4.42K 1% 1/8W	330-0170
R23	[illegible] 1% 1/8W	333 0186
R28,29	470Ω 5% 1/4W	330-2045
R32	2.2K 5% 1/4W	330-3023
R35,36	1K SIDE ADJ.	336-1014
R37	220Ω 5% 1/4W	330-2023
C1	2200UF 35V (E)	300-3323
C3,6	.0033UF 3KV	300-1934
C4,5	470UF 200V (E)	300-3324
C7	.1UF 250V	300-2430
C8,11,20	10UF 50V (E)	300-3321
C9	.002UF 500V	300-1913
C12,14,15,17	.1UF 50V	[illegible]
C10,23	.0047UF 500V	300-1910
C13	470PF 500V	300-1470
C?A,18,22,22A	.047UF 100V	300-1919
C19	.0047UF (MYLAR)	300-2075
C21	100PF 500V	300-1100
D1,2	1N4004	380-4000
D4	1N748A 3.9V ZEN	330-2037
D5,7,10,11	S1A6F	380-4003
D8	1N4743A 13V ZEN	380-2113
D9	1N? 3.3V ZEN	330-2??
D12,13	1N914A	330-1012
D14	2N5060	380-4001
D15	1N4754 39V ZEN	330-1019

COMPONENT	TYPE	W.L. PART NO.
Q1,3	TIPL760	375-1116
Q2	VN66AF	375-1125
T1	XFMR ASSY	270-3304
T2	PULSE, 3CKH 60AC	410-0200
T3	PICS FILTER	320-0711
J1,2	4 PIN CONN.	350-0215
J3,4,8,9,11,12,6	3 PIN HEADER	350-0217
J5	20 PIN CONN.	350-0[illegible]
J10	2 PIN HEADER	350-0216
J15	6 PIN CONN	350-0218
J16	2 PIN CONN	350-0203
P1	2 PIN SHUNT	350-4506
SW1	SLIDE, DPDT 90°	325-2119
3"	18GA. WHITE STRANDED	600-0009
HS1,2	HEATSINK	375-2061M
QTY 4	4-40 x 1/4 SCREW	650-2120
QTY 4	#4 FLAT WASHER	653-2001
QTY 2	6-32 x 1/2 SCREW	650-3160
QTY 1	CHANNEL INSULATOR	654-0033

MNEMONICS	COOR'D
A.C. INPUT	1G11
A.C.	1E11
OI-1	1G4
OI-2	1G4
OI-3	1G4
Q2-D	1A8
Q3-C	1F1
Q3-E	1F1
T1-3	1G3
T1-4	1G3
VREF	1E1
±0V	1B11,1E1,1A8
+5VR	1E1
10VAC1	1A6,1A7
10VAC2	1A6,1A7
10VCT	1A6,1A7
+12VREG	1E11
+12UNREG	1A7,1G6
+25V SENSE	1C11
+25V SENSE RTN	1C11
115V	1E11
+150V	1F11
230V	1F11
+300V	1F11, 1G6
300 RTN	1F11, 1G6

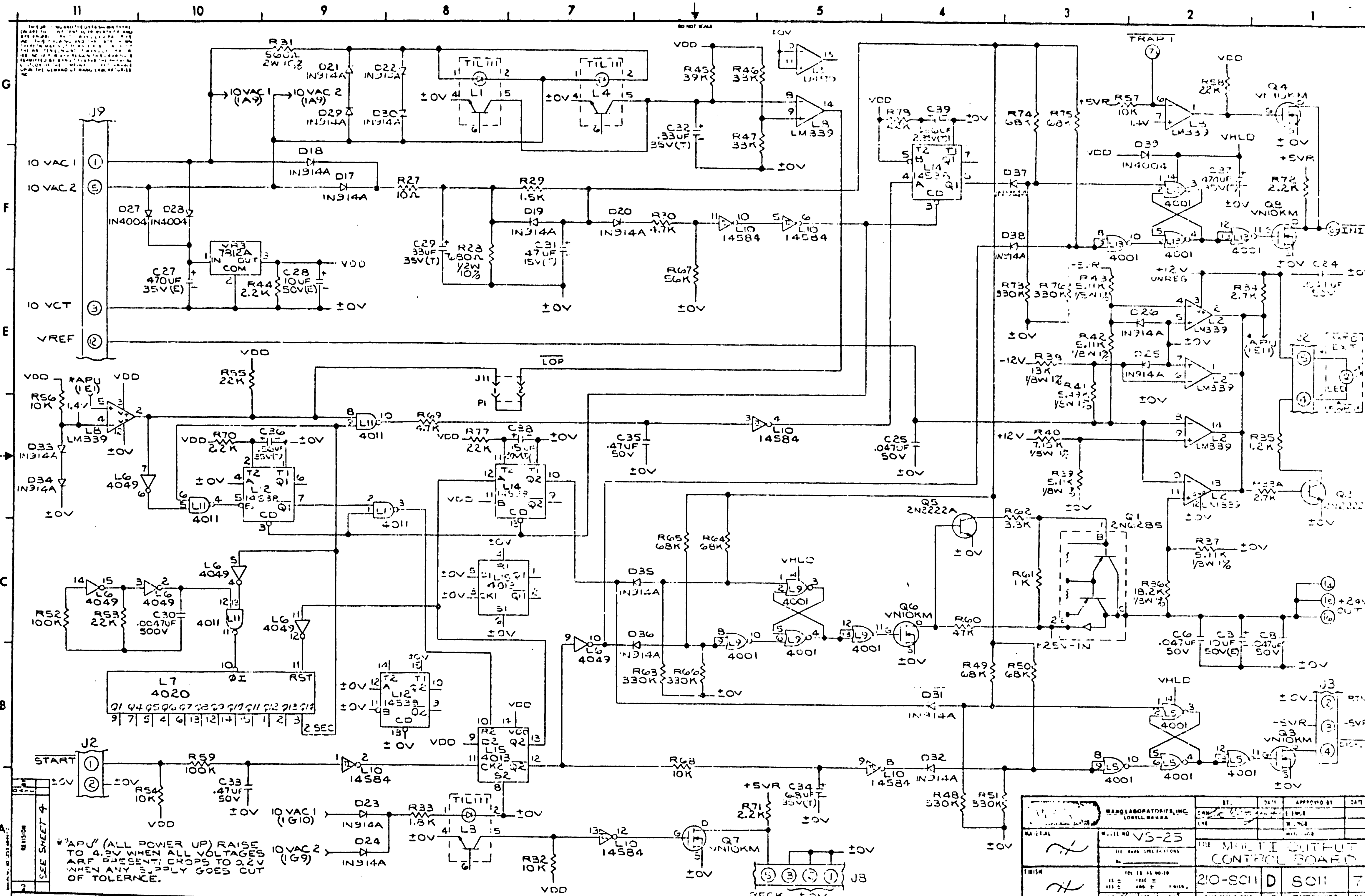
I.C. LOCATION	TYPE	W.L. PART NO.
L1	LM339	376-0240
L2	SG3183N	379-1121
L3	SG3524N	374-0033

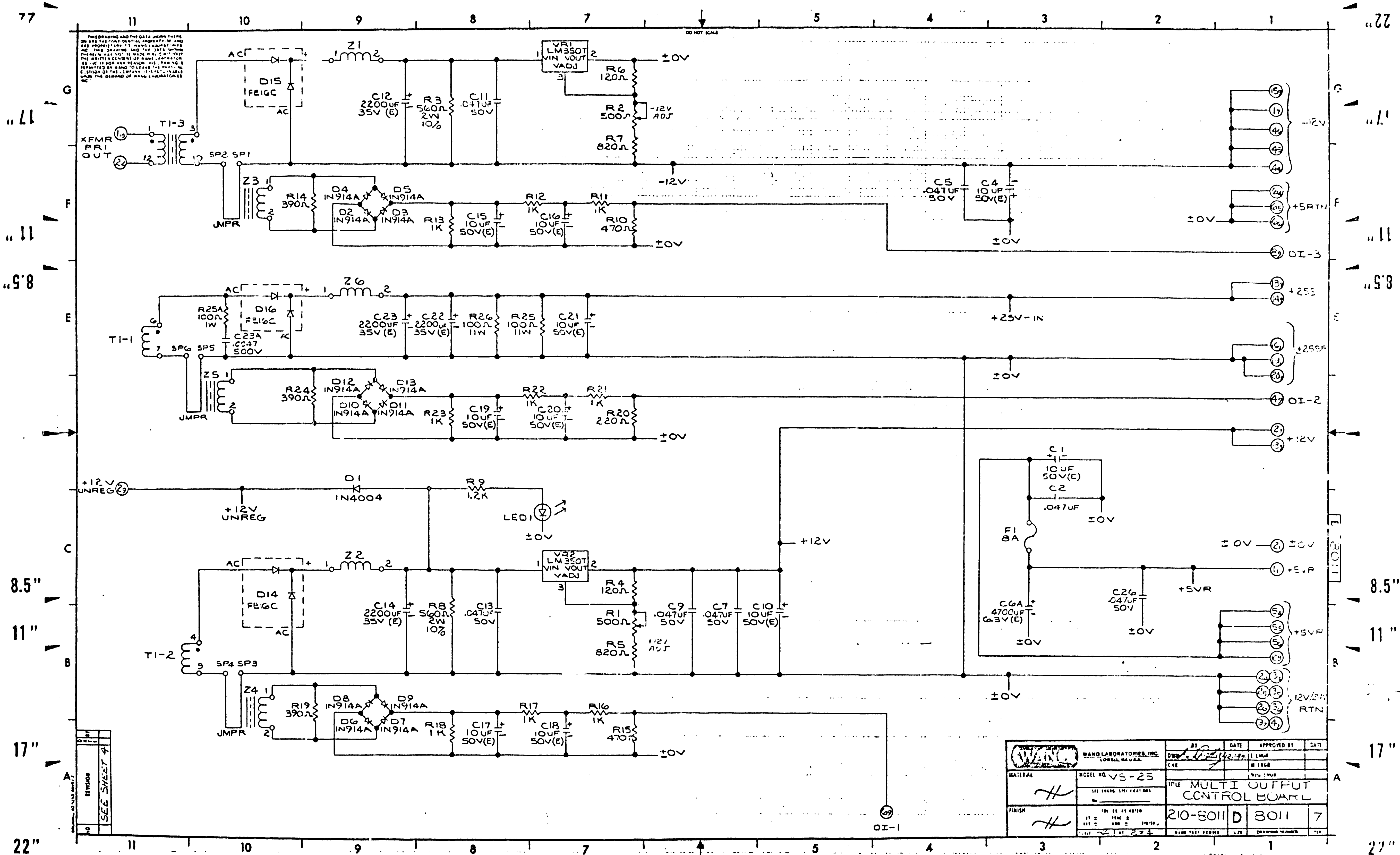


NOTE:
1. ALL RESISTOR ARE 5% 1/4 W UNLESS OTHERWISE SPECIFIED

E-REV 2

WANG LABORATORIES, INC.	MODEL NO. VS-25	TITLE	MULTI-INPUT BOARD DEV.
		210-8010	D	8C10	11


*"APU" (ALL POWER UP) RAISE TO 4.3V WHEN ALL VOLTAGES ARE PRESENT; DROPS TO 0.2V WHEN ANY SUPPLY GOES OUT OF TOLERANCE.
WANG LABORATORIES, INC.
VS-25
MULTI OUTPUT CONTROL BOARD
210-SC11
D
SC11
7
SEE SHEET 4



XFMR PRI OUT
T1-3
T1-1
T1-2
SP1 SP2 SP3 SP4 SP5 SP6
JMPR
D15 FE16C
D16 FE16C
D14 FE16C
Z1 Z2 Z3 Z4 Z5 Z6
VR1 LM350T VIN VOUT VADJ
VR2 LM350T VIN VOUT VADJ
C12 2200UF 35V (E)
R3 560Ω 2W 10%
C11 .047UF 50V
R6 120Ω
R2 500Ω
-12V ADJ
R7 820Ω
±0V
-12V
R14 390Ω
D4 IN914A
D5 IN914A
D2 IN914A
D3 IN914A
R13 1K
C15 10UF 50V(E)
R12 1K
C16 10UF 50V(E)
R11 1K
R10 470Ω
C5 .047UF 50V
C4 10UF 50V(E)
-12V
+5RTN
OI-3
R25A 100Ω 1W
C25A .0047 500V
C23 2200UF 35V (E)
C22 2200UF 35V(E)
R26 100Ω 11W
R25 100Ω 11W
C21 10UF 50V(E)
+25V-IN
+25S
+25SR
R24 390Ω
D12 IN914A
D13 IN914A
D10 IN914A
D11 IN914A
R23 1K
C19 10UF 50V(E)
R22 1K
C20 10UF 50V(E)
R21 1K
R20 220Ω
OI-2
+12V
+12V UNREG
D1 IN4004
R9 1.2K
LED1
C1 10UF 50V(E)
C2 .047UF
F1 8A
+5VR
C14 2200UF 35V (E)
R8 560Ω 2W 10%
C13 .047UF 50V
R4 120Ω
R1 500Ω
+12V ADJ
R5 820Ω
C9 .047UF 50V
C7 .047UF 50V
C10 10UF 50V(E)
C26 .047UF 50V
C6A 4700UF 6.3V (E)
12V/24V RTN
R19 390Ω
D8 IN914A
D9 IN914A
D6 IN914A
D7 IN914A
R18 1K
C17 10UF 50V(E)
R17 1K
C18 10UF 50V(E)
R16 1K
R15 470Ω
OI-1
REVISION
SEE SHEET 4
WANG LABORATORIES, INC. LOWELL, MA U.S.A.
MODEL NO. VS-25
MULTI OUTPUT CONTROL BOARD
210-8011 D 8011 7

H.S. 375-9060-M (3)

8011-R3

SEE SHEET 4

WANG LABORATORIES, INC. LOWELL, MA U.S.A.	BY	DATE	APPROVED BY	DATE
MATERIAL #	MODEL NO VS-25			
FINISH #		210-S011	D	8011	7
		TITLE: MULTI OUTPUT CONTROL BOARD		

COMPONENT	TYPE	W.L.PART NO.
R1,2	500Ω [illegible]	33[illegible]-1024
R3,8,31	560Ω 2W 10%	337-2056
R4,6	120Ω 1/4W 5%	330-201[illegible]
R5,7	[illegible]0Ω 1/4W 5%	330-20[illegible]
R9,35	1.2K 1/4W 5%	330-3013
R10,15	470Ω 1/4W 5%	330-[illegible]
R20	220Ω 1/4W 5%	330-2023
R11-13,16-18, 21-23,61	1K 1/4W 5%	330-3011
R14,19,24	390Ω 1/4W 5%	330-2040
R25,26	100Ω 1W 5%	334-[illegible]
R27	10Ω 1/4W 5%	330-1011
R25A	100Ω 1W 5%	332-2011
R28	680Ω 2W 10%	331-2068
R29	1.5K 1/4W 5%	330-3016
R30,69	4.7K 1/4W 5%	330-3048
R54,56,32,57, 68	10K 1/4W 5%	330-4011
R33	1.8K 1/4W 5%	330-3019
R34,33A	2.7K 1/4W 5%	330-3028
R36	13.2K 1/8W 1%	333-0108
R37,39,42,43	5.11K 1/8W 1%	333-00[illegible]
R38	13K 1/8W 1%	333-0144
R40	7.15K 1/8W 1%	333-0163
R41	5.49K 1/8W 1%	333-0107
R44,70-72	2.2K 1/4W 5%	330-3023
R45	39K 1/4W 5%	330-4040
R46,47	33K 1/4W 5%	330-4034
R48,51,63,66, 73,76	330K 1/4W 5%	330-5034
R49,50,64,65, 74,75	68K 1/4W 5%	330-4069
R52,59	100K 1/4W 5%	330-5011
R53,55,[illegible],77,78	22K 1/4W 5%	330-4023
R60	47K 1/4W 5%	330-4048
R62	3.3K 1/4W 5%	330-3034
R67	56K 1/4W 5%	330-4057

NOTES:
1. ALL RESISTORS ARE 1/4W 5% UNLESS OTHERWISE SPECIFIED.

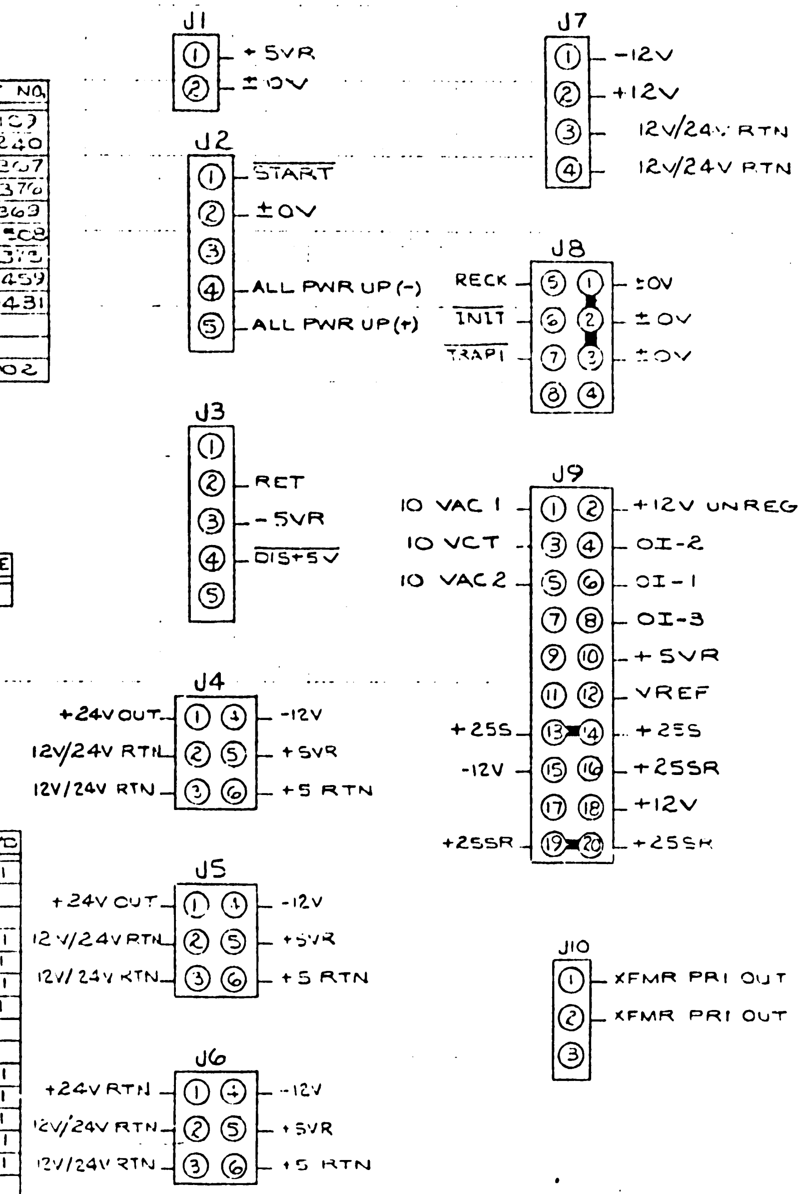
COMPONENT	TYPE	W.L. PART NO.
C1,3,4,[illegible]	10UF 50V(E)	300-3321
C2,5-9,26 C11,13,24,25	.047UF 50V	300-1966
C12,14,22,23	2200UF 35V(E)	300-3323
C27,37	470UF 35V(E)	300-3322
C28A	4700UF 6.3V(E)	300-3325
C29	33UF 35V(T)	300-4029
C31	47UF 15V(T)	300-4020
C33,35	.47UF 50V	300-1963
C34	6.8 UF 35V(T)	300-4029
C32	.33UF 35V(T)	300-4003
C36,39	.56UF 35V(T)	300-4010
C38	15UF 20V(T)	300-4022
C23A,30	.0047UF 500V	300-1910
D1,27,28,39	1N4004	380-4000
D2-5,6-9, 10-13,17-26, 29-[illegible]	1N914A	380-1012
D14,15,16	FE16C	380-4022
Q2 Q5	TRANS.PAD	375-9004
Q1	2N6285	375-1047
Q2,5	2N2222A	375-1005
Q3,4,6,7,8	VN10KM	375-1115
LED1	MV5154 CFN	370-0027
VR1,2	LM350T	374-0044
VR3	7812A	374-0035
Z1,2,6	40V OUTPUT	320-0720
Z3,4,5	SHORT CIRCUIT	320-0124
QTY 2	FUSE CLIP	360-0005
F1	3A	360-1030
T1	OUTPUT	410-0207
J1	2 PIN CONN	350-0216
J2,3	5 PIN CONN	350-0227
J4,5,6	6PIN CONN	350-0218
J7	4 PIN CONN	350-0215
J8	8PIN CONN	350-0212
J9	20 PIN CONN	350-0456
J10	3 PIN CONN	350-0217
J11	2 PIN CONN	350-0203
P1	SHUNT	350-4506
QTY 5	#6-32 x 1/4	650-3030
QTY 1	#4-40 LOCKNUT	652-2005
QTY 2	#6-32 x 3/8	650-3120
QTY 2	HEATSINK	375-9059-M
QTY 3	HEATSINK	375-9060-M
QTY 1	HEATSINK	375-9063
QTY 1	SCREW	650-2100

I.C. LOCATION	TYPE	W.L. PART NO.
L1,3,4	TIL 111	375-2109
L2,8	LM339	376-0240
L5,9,13	CD4001AE	376-0307
L6	F4049BP	376-0376
L7	CD4020AE	376-0369
L10	MC14584	376-0508
L11	F4011BP	376-0373
L12,14	MC14538	376-0459
L15	CD4013AE	376-0431
L16	SPARE	
L6	16 PIN SOCKET	376-9002

TYPE	I.C. LOC.	SPARE
LM339	L8	1

MNEMONICS	COORD
ALL PWR UP	1E1
DIS+5V	1B1
INIT	1F1
OI-1	2A4
OI-2	2D1
OI-3	2F1
RECK	1A5
START	1B11
TRAP1	1G2
VREF	1E11
±0V	1A11
±0V	1A5
±0V	2C1

MNEMONICS	COORD
+5VR	2C1
+5VR	2B1
-5VR	1B1
+5 RTN	2F1
10 VAC 1	1F11
10 VAC 2	1F11
10 VCT	1E11
+12V	2D1
-12V	2G1
+25S	2E1
+12V UNREG	2C11
12V/24V RTN	2B1
+24V OUT	1C1
+25SR	2E1



E-REV 1

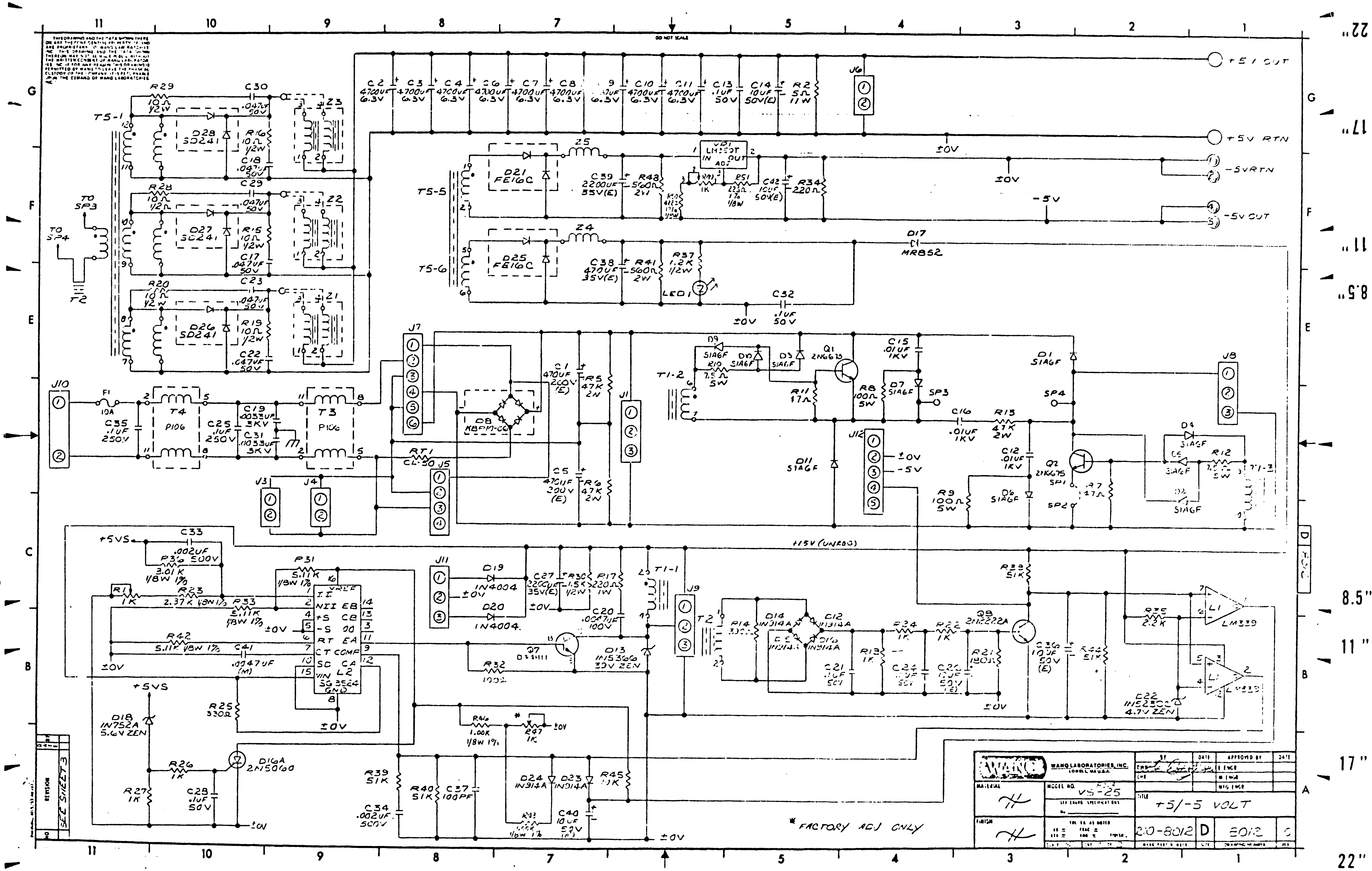
WANG LABORATORIES, INC. LOWELL, MASS.

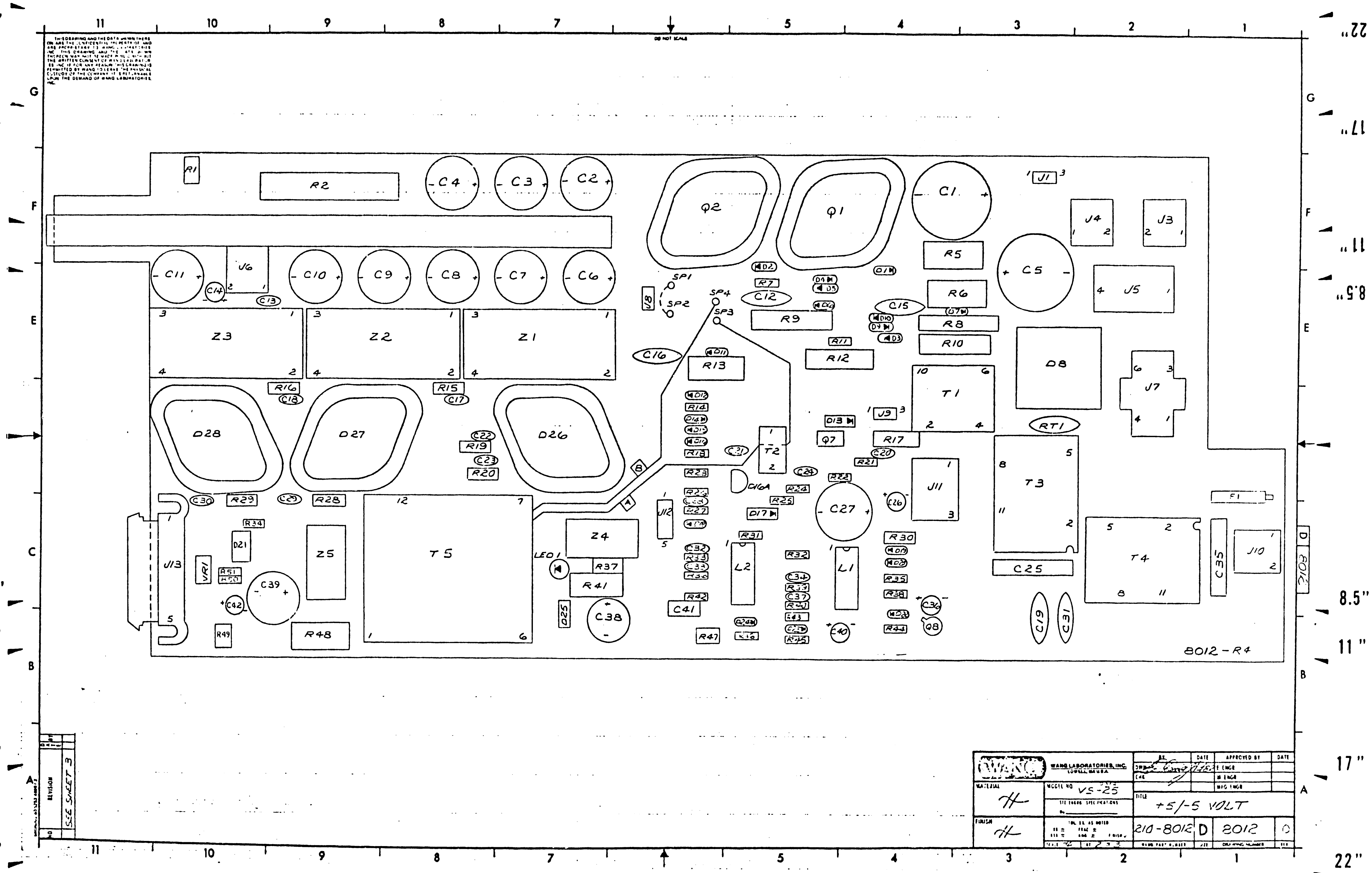
MODEL NO VS-25

TITLE MULTI OUTPUT CONTROL BOARD

210-8011 | D | 801 | 7

F4


+5V OUT
+5V RTN
-5V RTN
-5V OUT
±0V
-5V
115V (UNREG)
+5VS
T5-1
T5-5
T5-6
T1-1
T1-2
T1-3
J1
J3
J4
J5
J6
J7
J8
J9
J10
J11
J12
D28 SD241
D27 SD241
D26 SD241
D21 FE16C
D25 FE16C
D17 MR852
D8 KBPM-06
Q1 2N6635
Q2 2N6675
Q8 2N2222A
L2 SG3524
L1 LM339
VR1 LM337T
LED1
FACTORY ADJ ONLY
WANG LABORATORIES, INC.
VS-25
+5/-5 VOLT
210-8012
D
8012
SEE SHEET 3
DO NOT SCALE

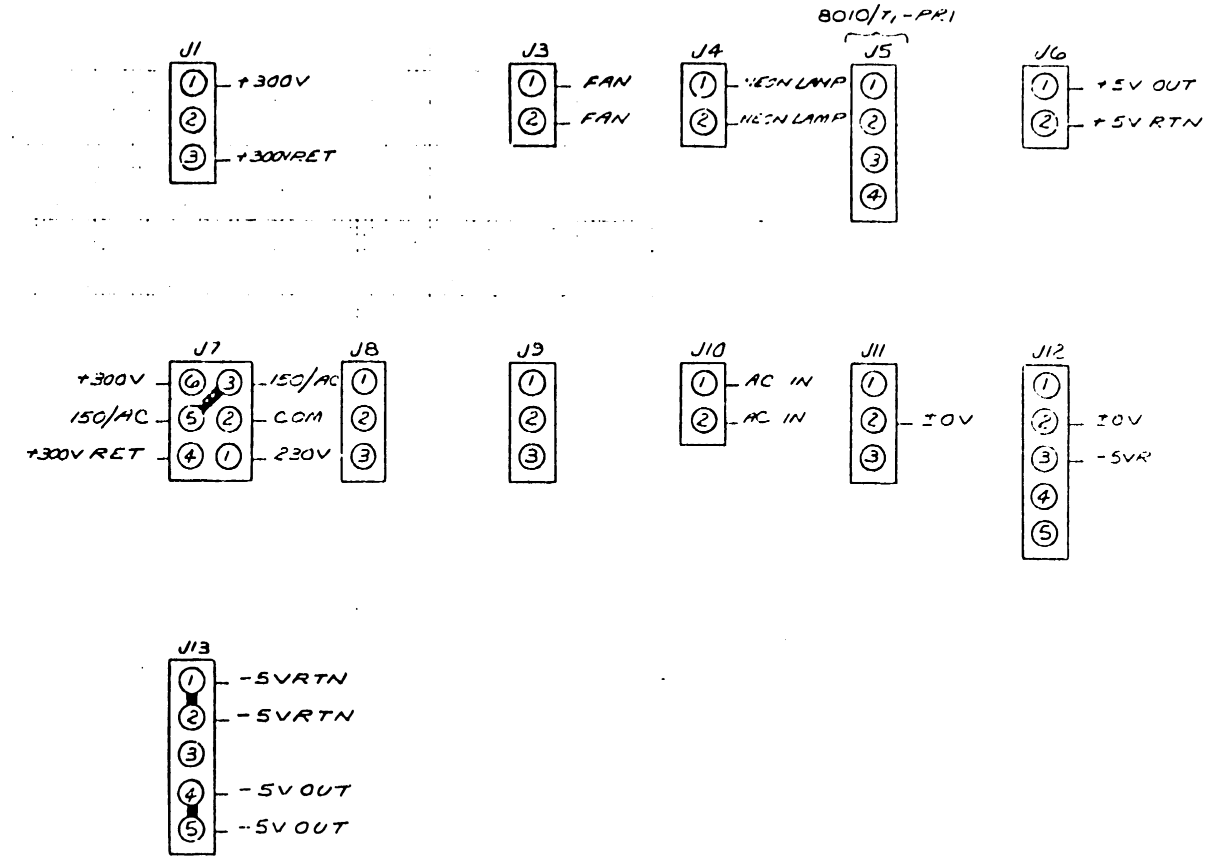

DO NOT SCALE
REVISION
SEE SHEET 3
8012-R4
WANG LABORATORIES, INC.
LOWELL, MASS.
VS-25
+5/-5 VOLT
210-8012
D
2012

I.C. LOCATION	TYPE	W.L. PART NO.
L1	LM339	376-0240
L2	SG3524	374-0033

TYPE	I.C. LOCATION	SPARE
LM339	L1	2

COMPONENT	TYPE	W.L. PART NO.
R1,49	1K SIDE ADJ	336-1014
R2	5Ω 11W	334-0068
R5,6,13	47K 2W 10%	337-4047
R7,11	47Ω 1/4W 5%	330-1043
R8,9	100Ω 5W	334-0020
R10,12	7.5Ω 5W 3%	334-0069
R14	330Ω 1/4W 5%	330-2040
R15,16,19,20,28,29	10Ω 1/2W 5%	331-1011
R17	220Ω 1W 10%	332-2022
R36	3.01K 1/8W 1%	333-0063
R18,22,24,26,27	1K 1/4W 5%	330-3011
R21	180Ω 1/4W 5%	330-2019
R23	2.37K 1/8W 1%	333-0078
R30	1.5K 1/2W 10%	331-3015
R31,33,42	5.11K 1/8W 1%	333-0088
R32	100Ω 1/4W 5%	330-2011
R35	2.2K 1/4W 5%	330-3023
R34	220Ω 1/4W 5%	330-2023
R37	1.2K 1/2W 10%	331-3012
R38,39,40,44	51K 1/4W 5%	330-4052
R41,48	560Ω 2W 10%	337-2056
R43,46	1.00K 1/8W 1%	333-0087
R25	330Ω 1/4W 5%	330-2034
R45	10K 1/4W 5%	330-4011
R47	1K TOP ADJ	336-1027
R50	422Ω 1/8W 1%	333-0056
R51	226Ω 1/8W 1%	333-0136
RT1	CL-50	330-3002
VR1	LM350T	374-0044
LED 1	ORANGE	379-0027

COMPONENT	TYPE	W.L. PART NO.
C1,5	470UF 200V(E)	300-3324
C2-4,6-11	4700UF 6.3V(E)	300-3325
C12,15,16	.01UF 1KV	300-1333
C13,21,24,28,32	.1UF 50V	300-1330
C14,26,36,40,42	10UF 50V(E)	300-3321
C17,18,22,23,29,30	.047UF 50V	300-1966
C19,31	.0033UF 3KV	300-1994
C20	.0047UF 100V	300-1320
C25,35	.1UF 250V(M)	300-2430
C27,39	2200UF 35V(E)	300-3323
C33,34	.022UF 500V	300-1913
C37	100 PF	300-1100
C38	470UF 35V(E)	300-3322
C41	.0047UF 100V(M)	300-2075
D1-7,9-11	S1A6F	380-4008
D8	KBP10-06	380-4023
D12,14-16,23,24	1N914A	380-1012
D13	1N5366 39V ZEN	380-2141
D16A	2N5060	380-4001
D17	MR852	380-3012
D18	1N752A 5.6V ZEN	380-2056
D19,20	1N4004	380-4000
D21,25	FE16C	380-4022
D22	1N5230C 4.7V ZEN	380-2043
D26-29	SD241	380-1016
Q1,2	2N6675	375-1124
Q5	2N2222A	375-1005
Q7	D44H11	375-1131
F1	10 AMP	360-1100
Z1-3	CHOKE	320-0121
Z4	COIL	320-0752
Z5	265uH INDUCTOR	329-0746
T1	PWR POWER DRIVER	410-0200
T2	S/C COIL	320-0124
T3,4	EMI COIL	320-0731
T5	OUTPUT XFORMER	410-0208
J1,8,9	3 PIN CONN	654-0104
J3,4,6,10	2 PIN CONN	350-0216
J5	4 PIN CONN	350-0215
J7	6 PIN CONN	350-0218
J11	3 PIN CONN	350-0217
J12	5 PIN CONN	350-0227
J13	5 PIN CONN	350-0234



NOTE: ALL RESISTORS ARE 1/4W 5% UNLESS OTHERWISE SPECIFIED

E REV 5

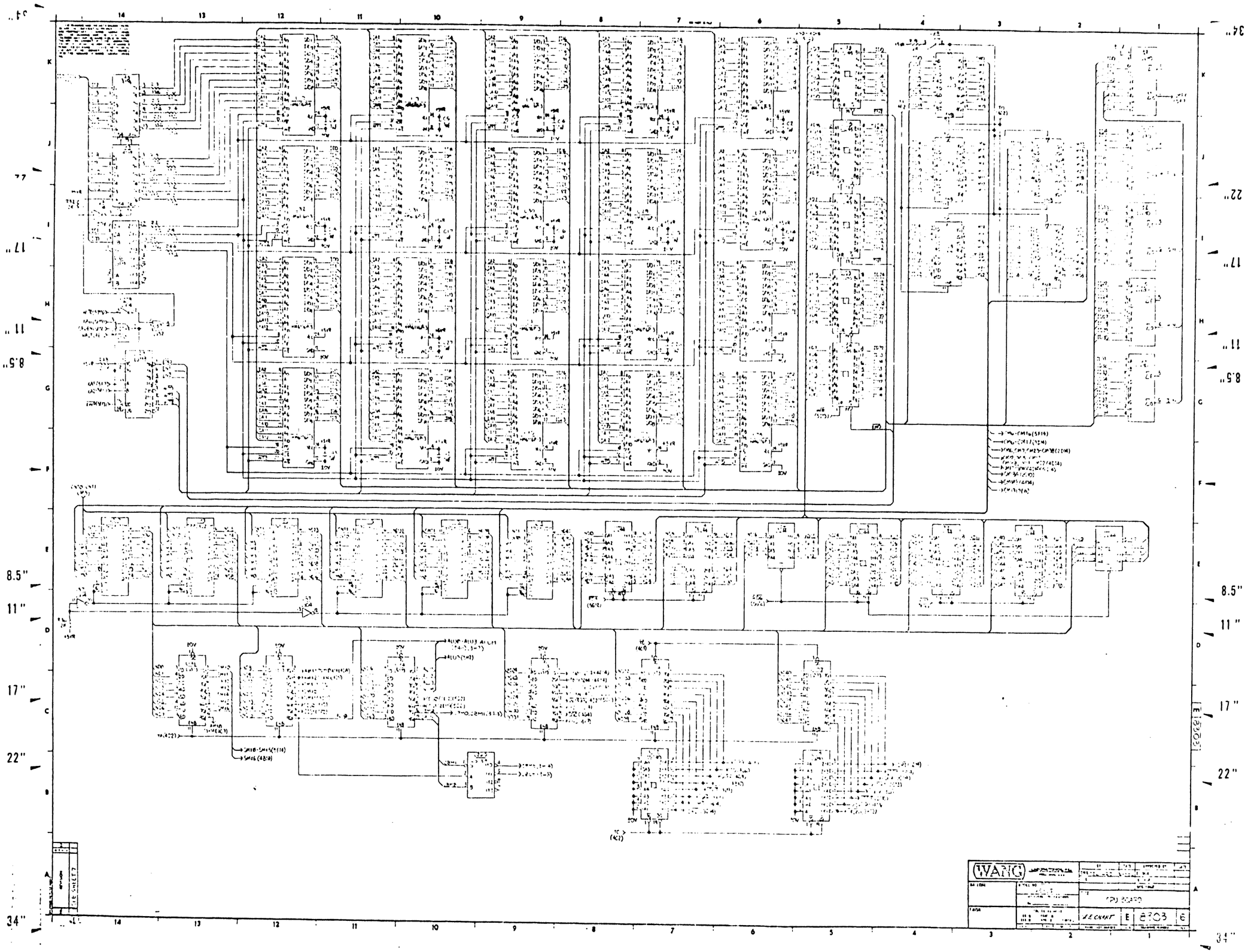
WANG LABORATORIES, INC. LOWELL, MASS.

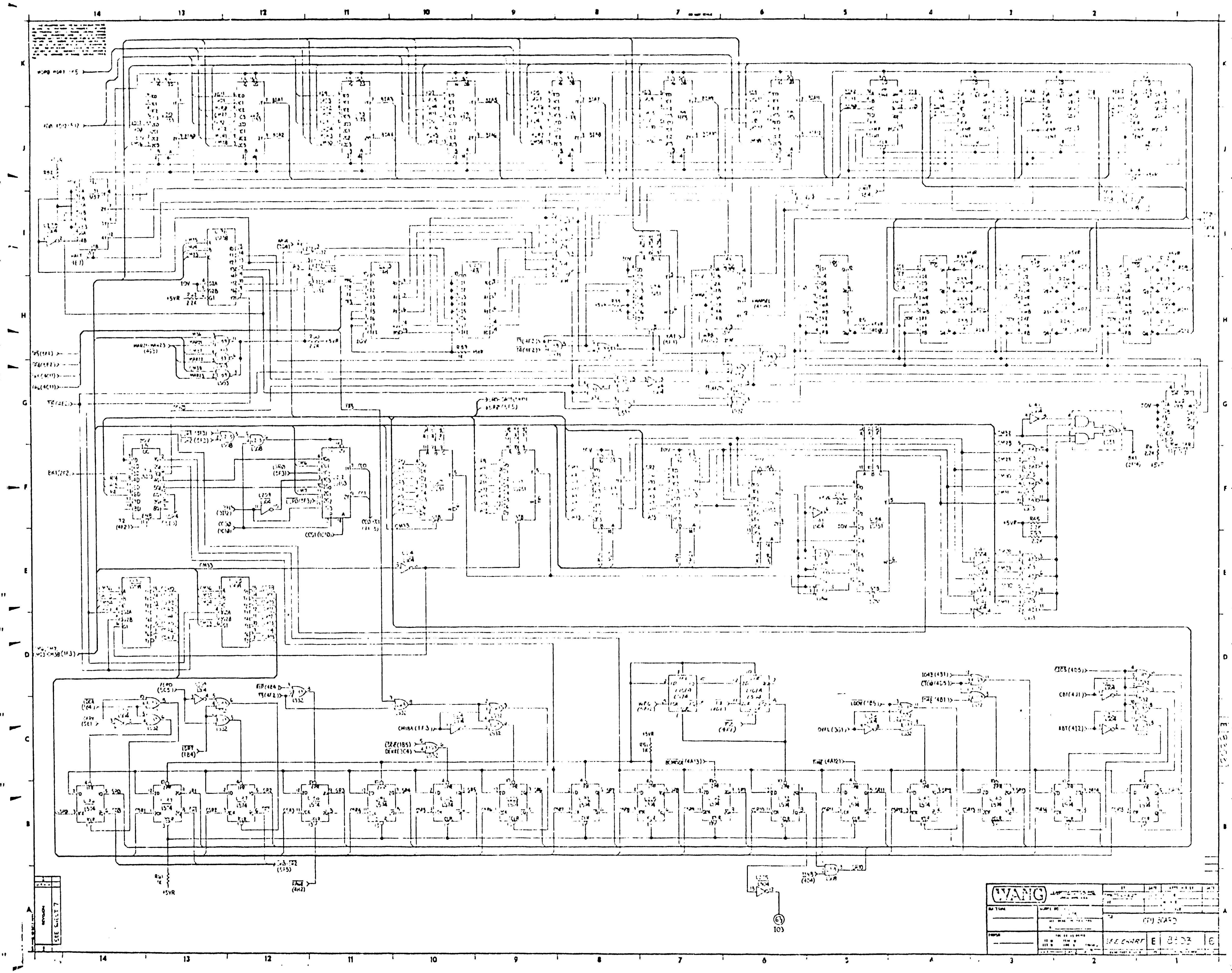
VS-25

+5/-5 VOLT

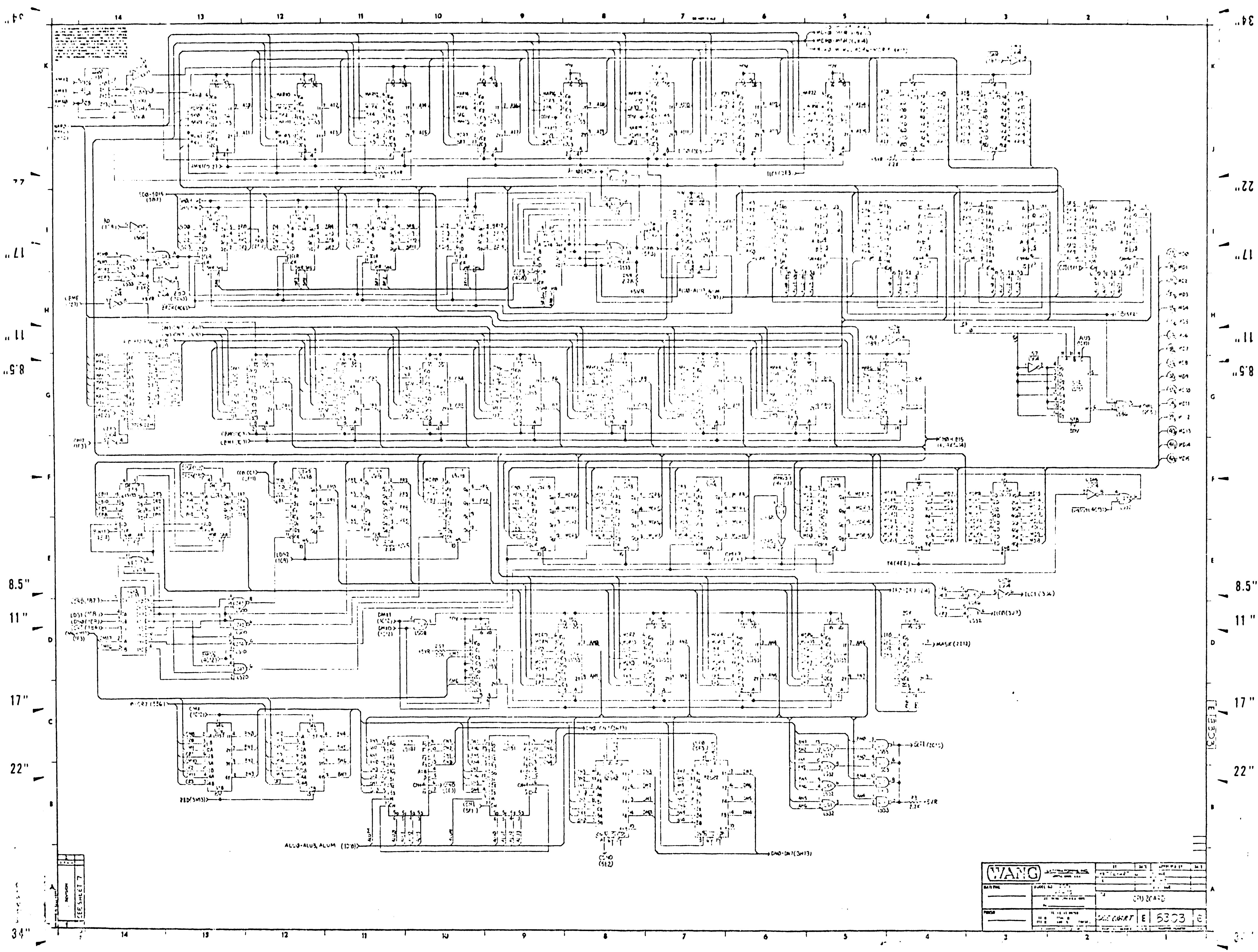
210-3012 D 3012

G3

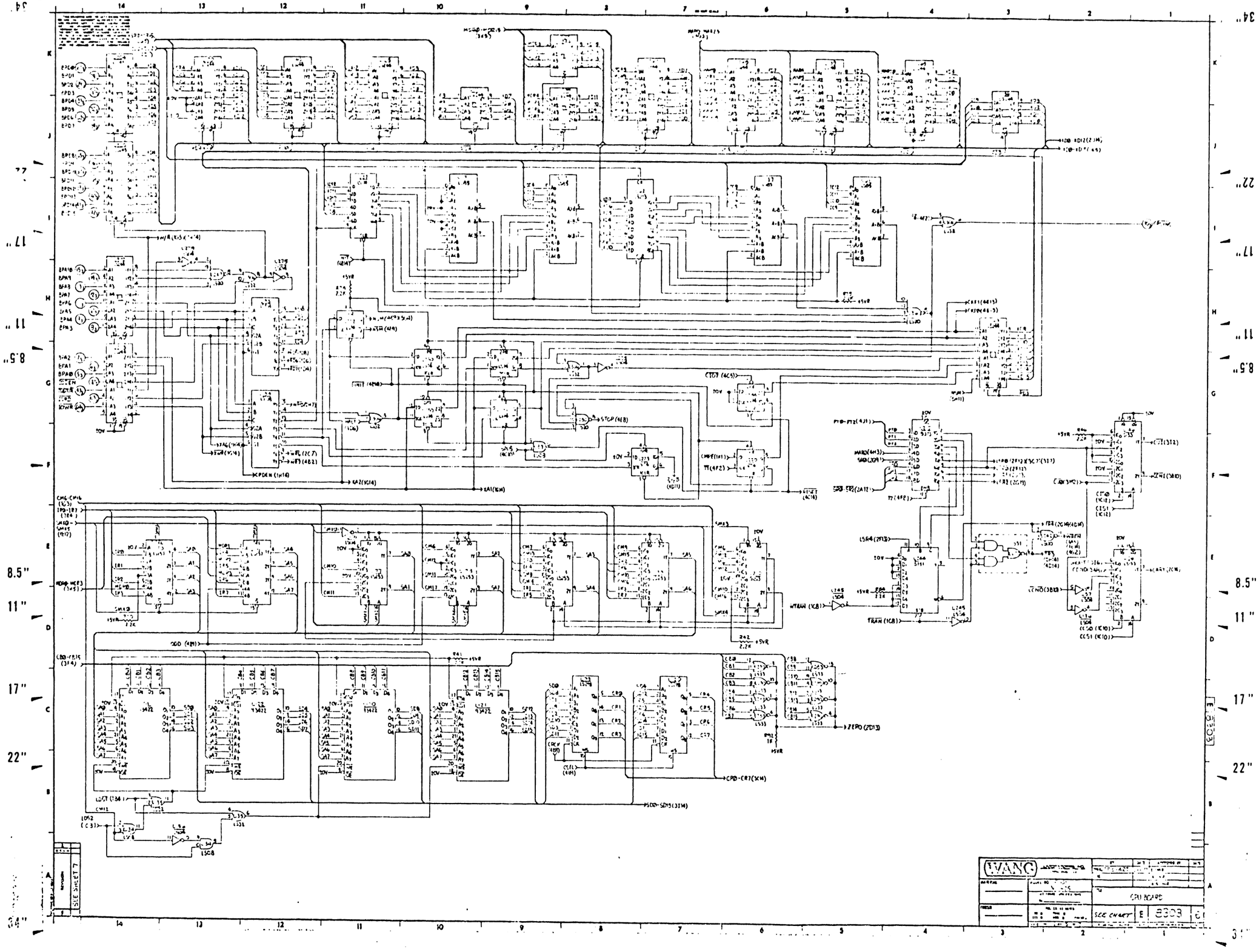

WANG
CPU BOARD
TECHNIT
E
8203
6
34"
22"
17"
11"
8.5"



H2



WANG
CPU BOARD
E
5303
E
SEE SHEET 7
H3


WANG
CPU BOARD
SEE CHART
E
8303
SEE SHEET 7
+5VR
+10V
STOP (4E8)
INIT (4E9)
RUN (4E10)
ZERO (2D13)
CPD-CR7(3CM)
PSDO-SD15(3E14)
CMO-CM16
IPO-IR7
MEMO
MEMR
MEMW
MCP3
CBO-CB15
LDS2
LDS8
WTRAM (1CB)
TRAM (1CB)
LSR4 (2F13)
CTO (4C5)
CTO (4C6)
CTO (4C12)
CTO (3C10)
CTO (3B10)
CCSO (4C10)
CCS1 (4C11)
CCSO (3C10)
CCS1 (3C11)
CBR (3H2)
CBR (2G14)
CBR (2G13)
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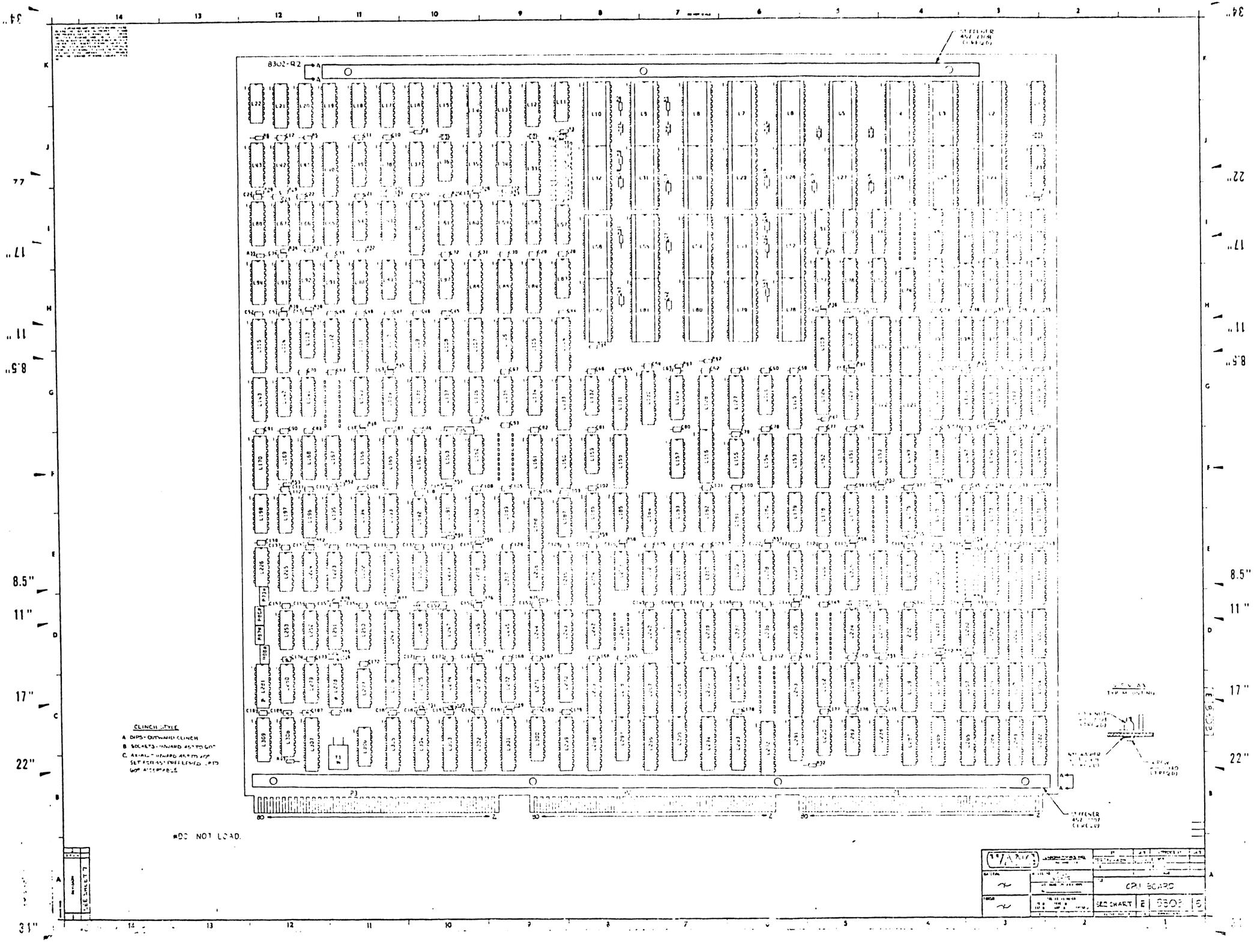
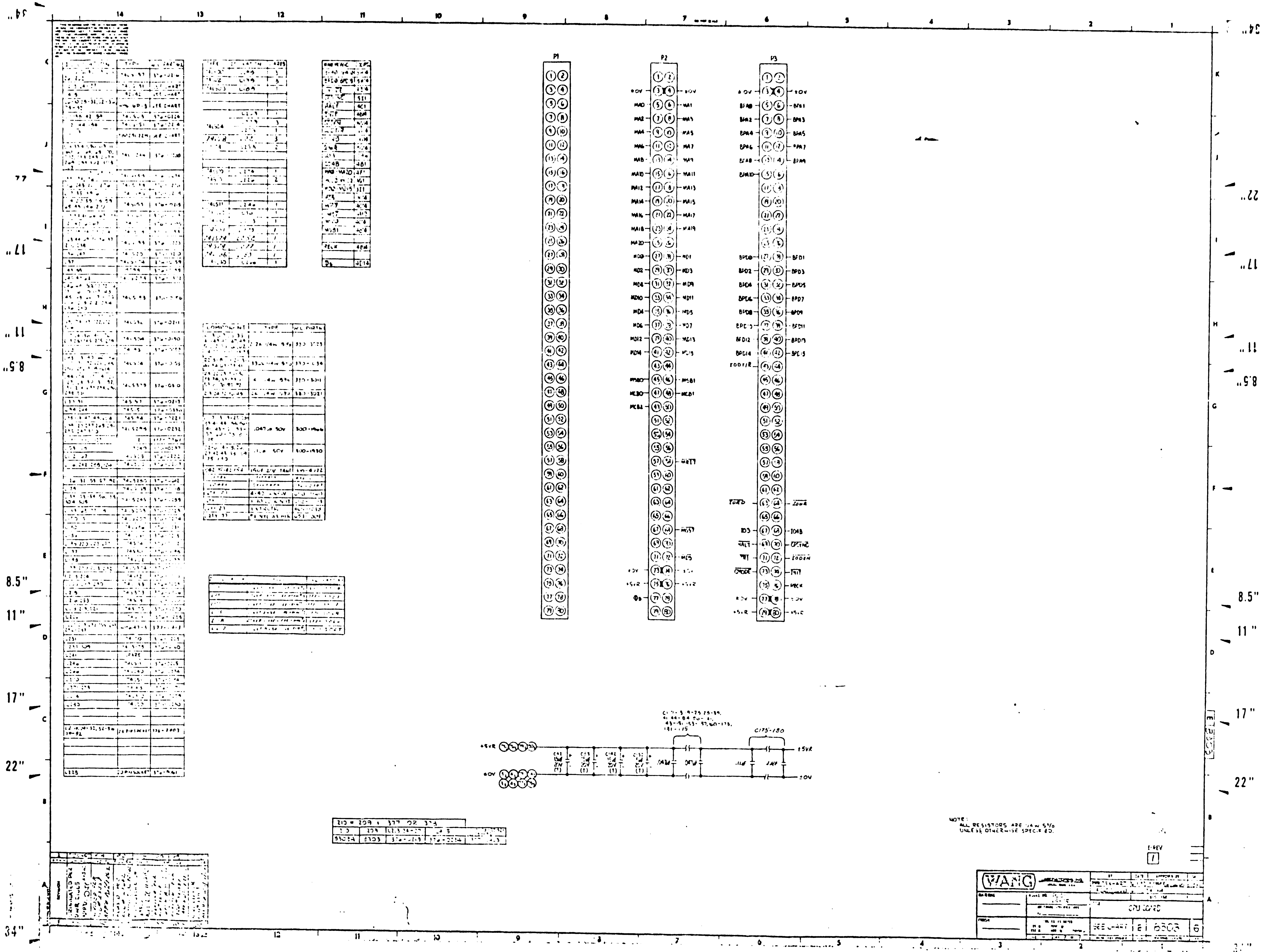
CBR (2A4)
CBR (2A3)
CBR (2A2)
CBR (2A1)
CBR (2A0)


8302-02
CLINCH STYLE
A DIPS - OUTWARD CLINCH
B SOCKETS - INWARD 45° TO 60°
C AXIALS - INWARD 45° TO 60° SET FOR 45° PREFERRED LEAD 60° ACCEPTABLE
*DO NOT LOAD.
SEE SHEET 7
CPU BOARD
SEE CHART
8302


P1
P2
P3
+5VR
+0V
NOTE:
ALL RESISTORS ARE 1/4 W 5%
UNLESS OTHERWISE SPECIFIED.
I-REV
1
WANG
CPU BOARD
SEE CHART
E
6
H7

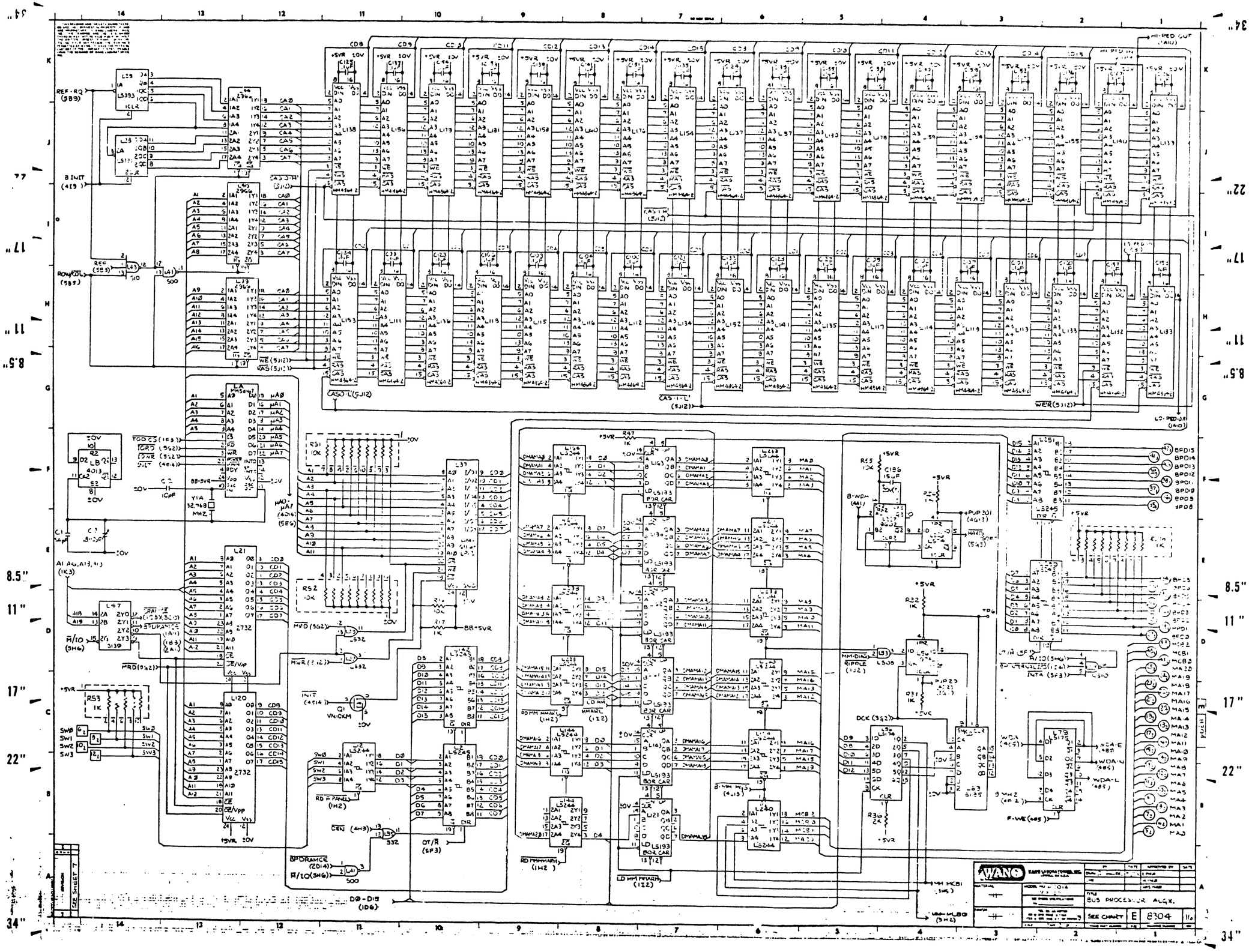
NOTE.
ADDED ETCHES AND JUMPERS
PER ECO # 31645

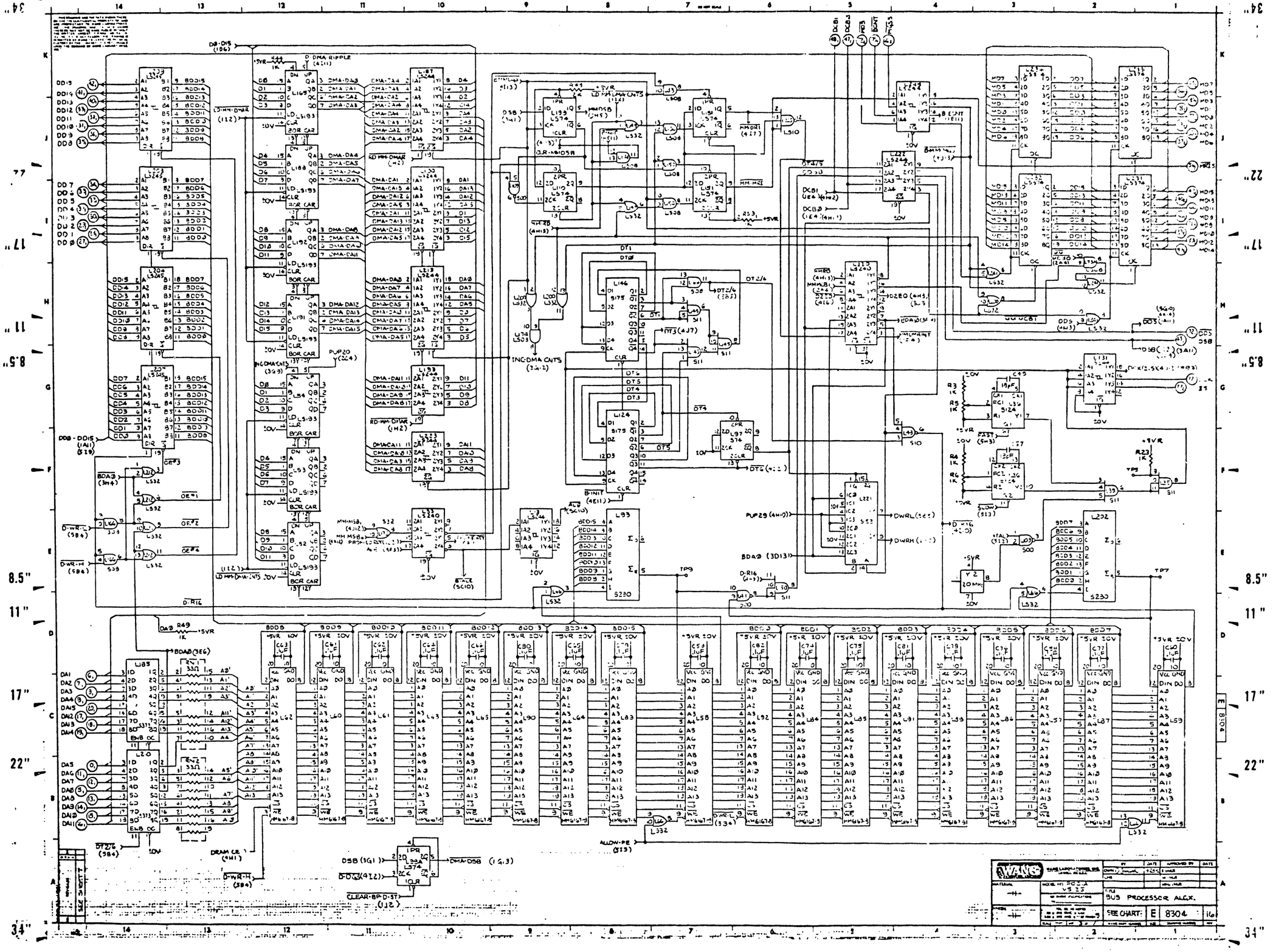
WANG LABORATORIES INC.

MODEL NO P3014
VS-25

TITLE
BUS PROCESSOR ALGA.

SEE CHART E 8304 16


WANG
BUS PROCESSOR ALGX.
SEE CHART
E
8304
SEE SHEET 7
REF-RQ (5B9)
BINIT (4E9)
REF (5B9)
ROWADR (5B9)
MRD (5G2)
MWR (5H2)
WE (5J12)
RAS (5J12)
CAS0-L (5J12)
CAS1-L (5J12)
WER (5J12)
HI-PED OUT (4A10)
LO-PED OUT (4A10)
MAD0-MA7 (4D14) (5E6)
FOD23 (1G3)
IOR3 (5H2)
IOW3 (5H2)
INT (4E14)
Y1A 32.768 MHZ
A1 A6, A13, A1 (1K3)
R/IO (5H6)
BPDRAMCE (2D14)
CBEN (4H9)
OT/R (5F3)
INTA (5F3)
DCK (3H2)
B-WDM (4A1)
MMDIAG (1L2)
RD MM MMAR (1H2)
LD MM MMAR (1I2)
RD MMMMAR (1H2)
WDA (4C5)
9 MHZ (4B2)
F-WE (4B5)
MCB1 (1H5)
MREQ (5H4)
DO-D15 (1D6)
BPD15
BPD14
BPD13
BPD12
BPD1.
BPD0
BPD9
BPD8
BA15
BA14
BA13
BA12
BA11
BA10
BA9
BA8
BA7
BA6
BA5
BA4
BA3
BA2
BA1
BA0
+5V
+10V
-10V
88+5V
GND



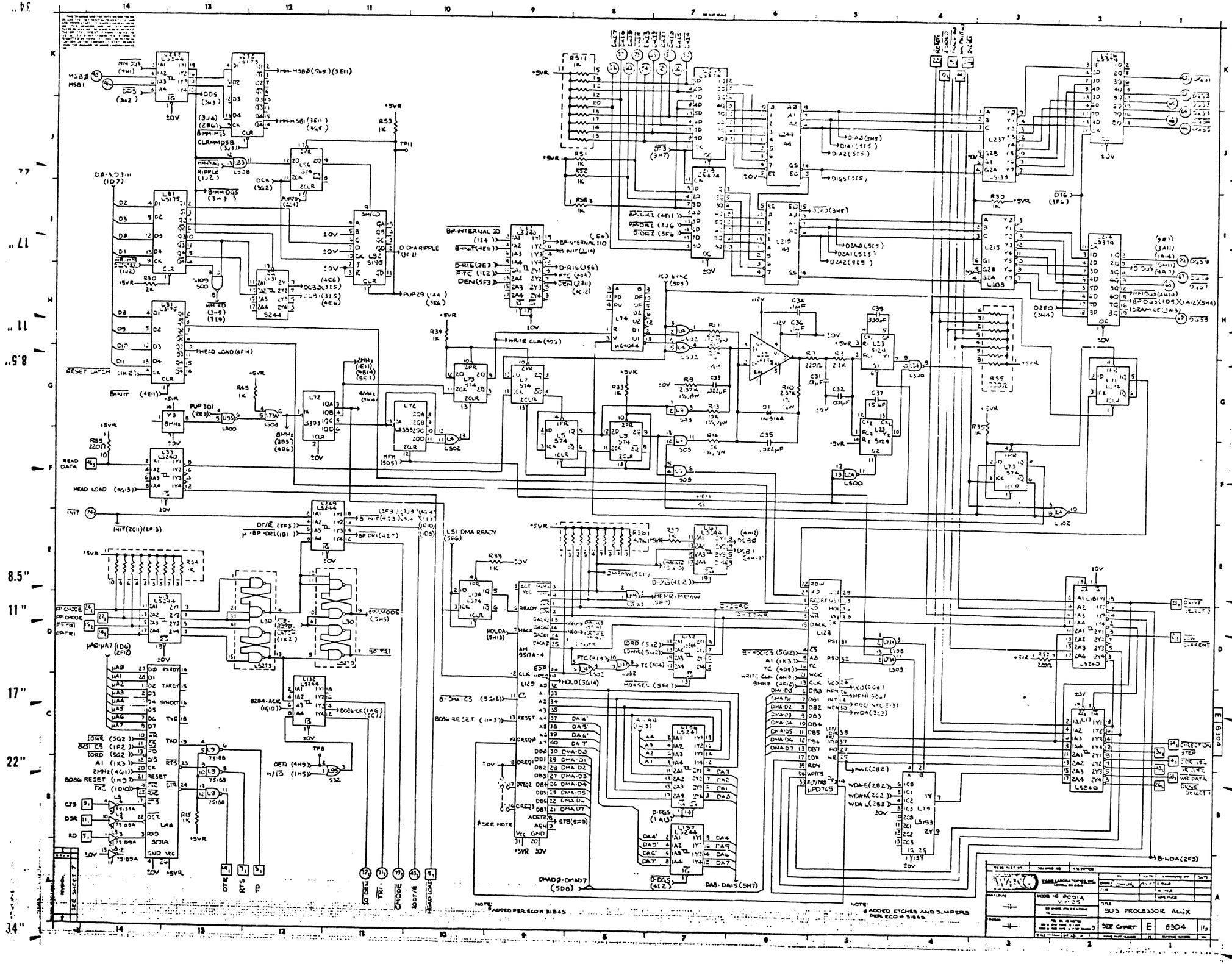
WANG LABORATORIES, INC.
LOWELL, MA U.S.A.

MODEL NO. PC3.A
VS 25

TITLE
BUS PROCESSOR ALGX.

SEE CHART: E 8304 16

J3



NOTE:
* ADDED PER ECO # 31845

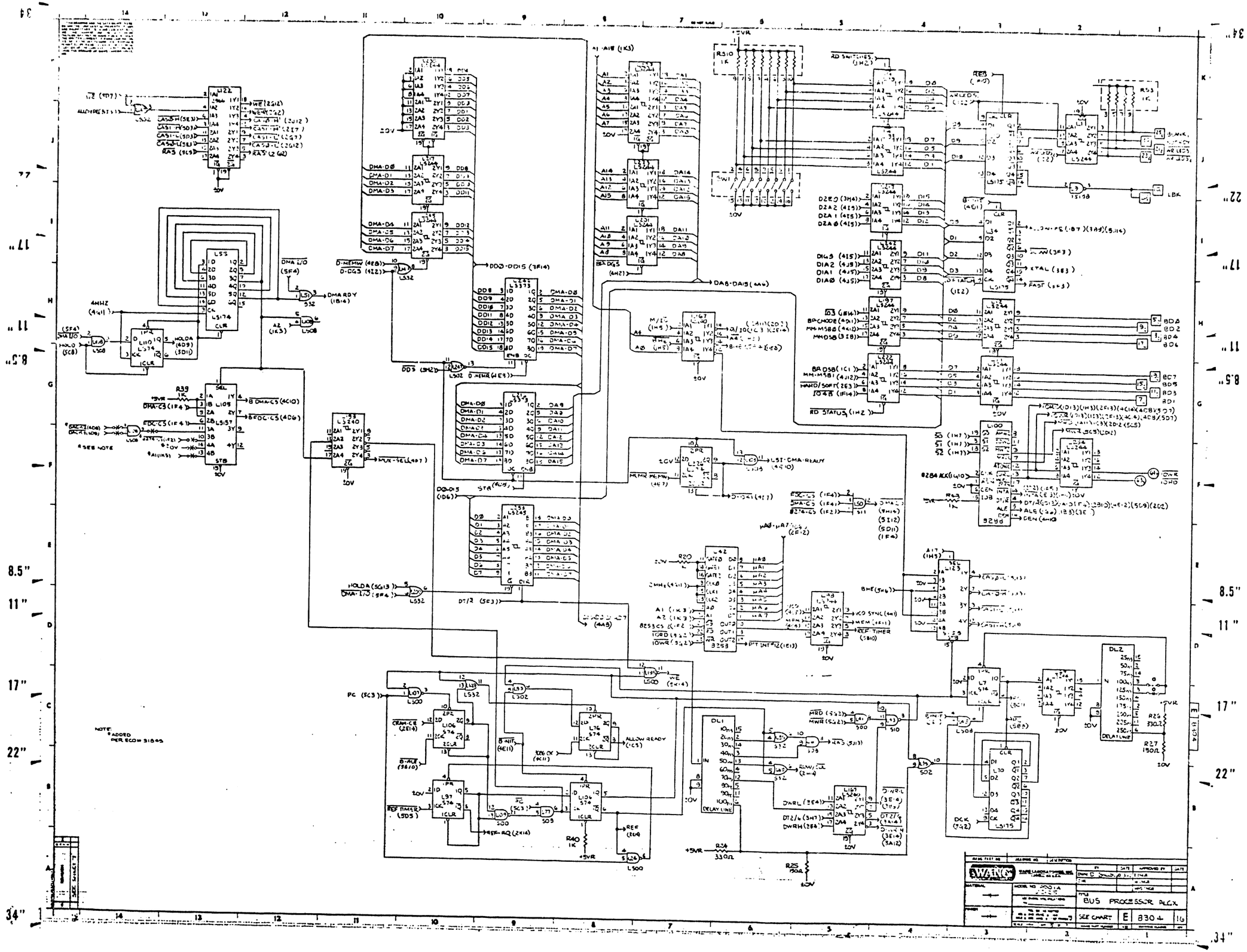
NOTE:
* ADDED ETCHES AND JUMPERS PER ECO # 31865

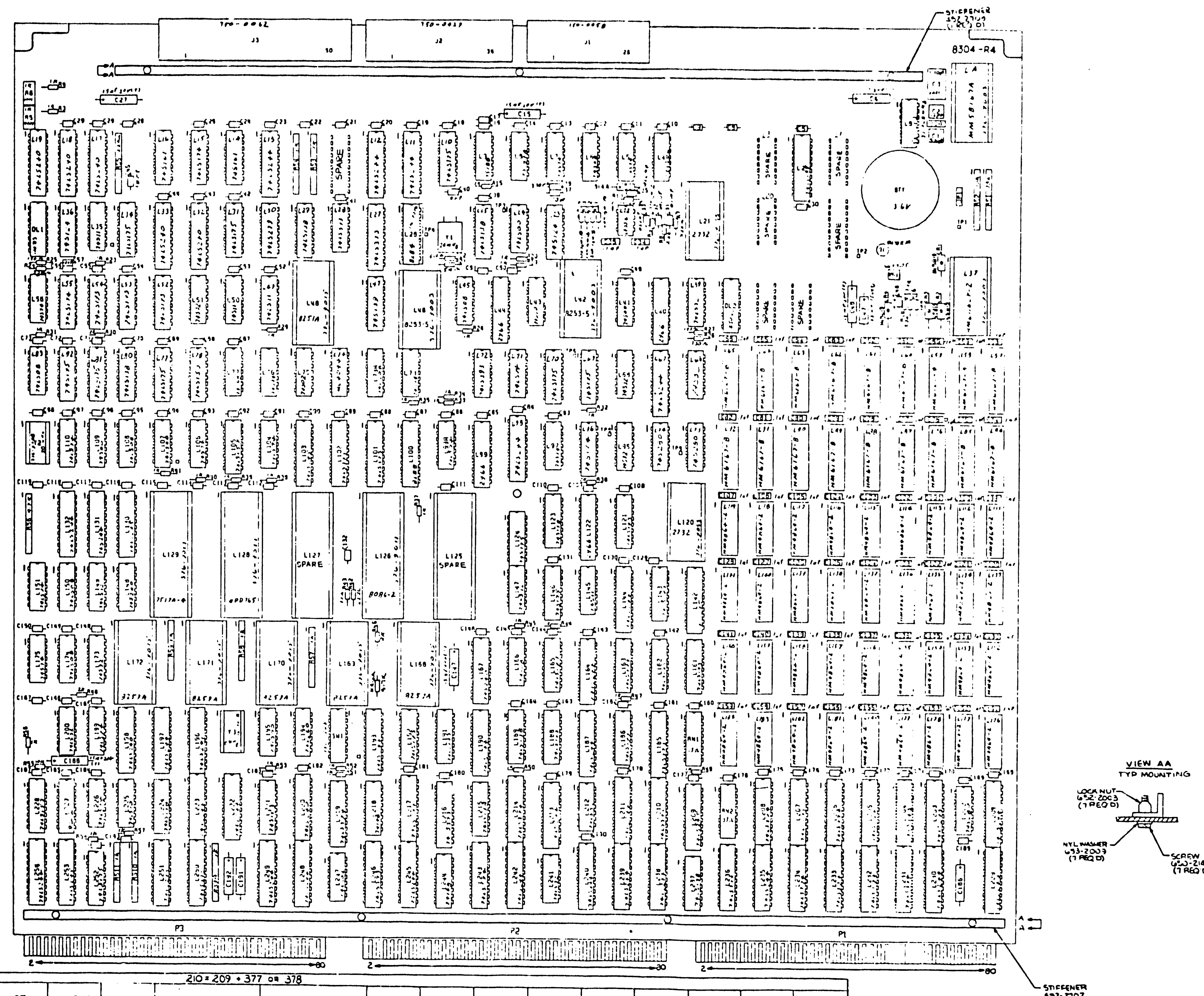
WANG LABORATORIES, INC.

MODEL NO PC01A V0-25

TITLE
BUS PROCESSOR ALIX

SEE CHART | E | 8304 | 1/3


BUS PROCESSOR PLCX
SEE CHART
E
8304
16
SEE SHEET 7
NOTE: 9 ADDED PER ECO# 31849
* SEE NOTE
DMA-DO8
DMA-D1
DMA-D2
DMA-D3
DMA-D4
DMA-D5
DMA-D6
DMA-D7
D-MEMW (4E8)
D-DA3 (4I2)
DO3-DO15 (3F14)
DMA RDY (1B14)
4MHZ (4J11)
HOLDA (5D1)
HOLD (5C8)
DMA-CS (1F4)
FDC-CS (1F4)
MUX-SEL (4D7)
STB (4C13)
DO-D15 (1D6)
HOLDA (5G13)
DMA I/O (5F4)
DT/R (5E3)
REF-RQ (2H14)
REF (2G9)
ALLOW READY (1C5)
REF TIMER (5D5)
PC (5C3)
+5VR
+10V
R40 1K
R24 330Ω
R25 150Ω
R26 330Ω
R27 150Ω
DAL0-DAL15 (4A4)
MEMR (4E7)
MEMW (4E8)
MRD (5G2)
MWR (5G2)
IOWR (3G4)
IORD (3G4)
INTA (5E3)
ALE (3G4)
DEN (4H13)
DT/R (5E3)
8284 RDY (1J10)
8284 ACK (1J10)
RD STATUS (1H2)
RD SWITCHES (1H2)
LBK
BLANK
FAST (3F3)
XTAL (3B3)
SLOW/WAIT (3F3)
BDA BD2 BD4 BD6
BD7 BD5 BD3 BD1
DLY
DELAY LINE
DCK (5H2)
SEE NOTE



210 = 209 + 377 OR 378

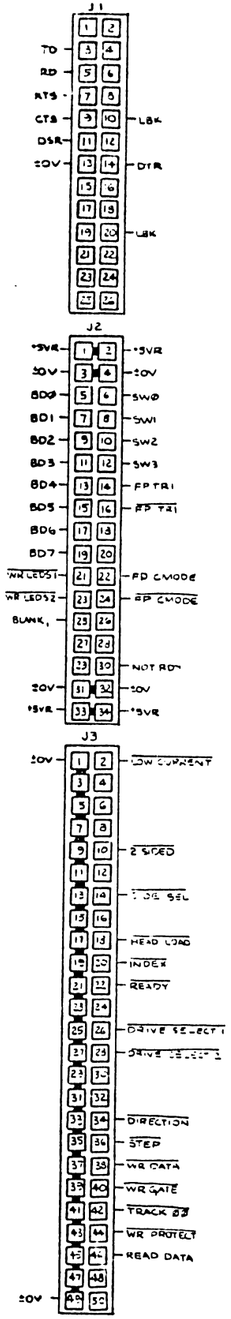
210	209	L21	L37	L42,46	L49					L126	L128	L129	L168-172	BT1	LA	L120
8304-A	8304	378-8014	377-0423	377-0409	377-0352					377-0437	377-0426	377-0411	377-0404	666-1005	[illegible]	378-[illegible]
8304-1A	8304-1	378-8014-R3	377-0428	377-0446	377-0352					377-0437	377-3426	377-0411	377-0404	666-1005	377-0436	378-8015-R3

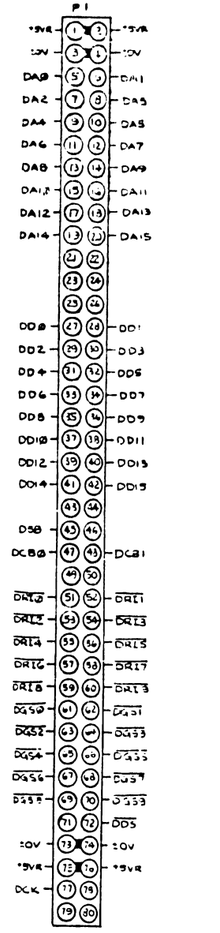
WANG LABORATORIES, INC.

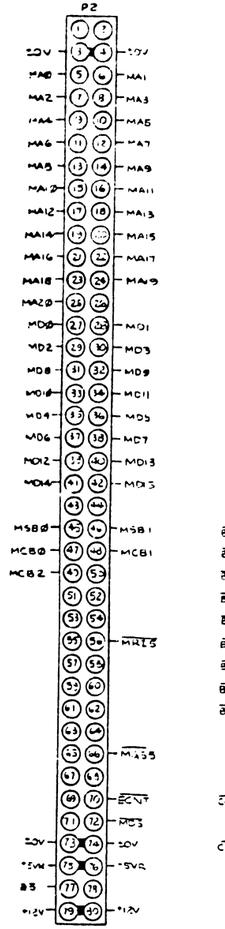
MODEL NO. 5501A VS-25

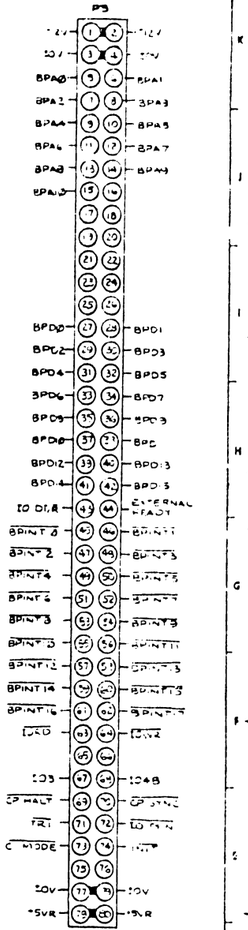
TITLE: BUS PROCESSOR ALGX.

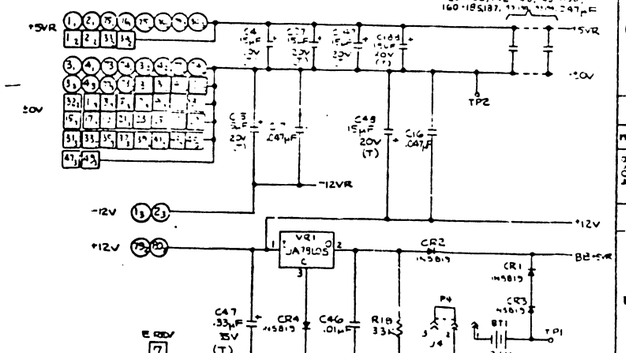
SEE CHART | E | 8304 | 16











I.C. LOCATION	TYPE	WL PART NO.
[illegible] ,125,127	[illegible]	
L2,105,130,142,203,204,207,209,250,251,253	74LS245	376-0285
L4,247	74LS02	376-0229
L5,7,56,73,76,37,106,175	74S74	376-0202
L8	CD4013	[illegible]
L6,11,166	74S09	376-0200
L9	[illegible]	376-0144
L7	75 33	376-0345
L10,31,34,70,79,91,252	74LS175	376-0160
L11,12,13,93,132,144,164,187,190,193,197,201,205,211,213,217,222,223,229,230,235,238,239,240,242,245,248,249,254,67	74LS244	376-0213
L14,16	74S161	376-0279
L15,35	74LS174	376-0193
L17,18,19,32,33,193,220	74LS240	376-0297
L21,122	2732	SEE CHART
L22	LF356	375-0547
L23,36	74S124	376-0273
L24,107,139	74LS00	376-0237
L25,29,80,183,215,224,237	74LS138	376-0294
L26	8294	376-0433
L27,101,102,185,20,216,246	74LS373	376-0310
L28,72	74LS393	376-0307
L30	74LS219	376-0316
L35,50,145	74S11	[illegible]
L37	HM6116LP-2	SEE CHART
LA	[illegible]	SEE CHART
L39,147,149,200,212,241	74LS32	376-0211
L40,44,39,122	2966	376-0353
L41,109	74S00	376-0223
L42,46	3253-5	SEE CHART
L43	74S10	376-0233
L45,83,138,150,174,7A	74LS04	376-0133
L47	74S133	376-0333
L48	8251A	SEE CHART
L49	74LS11	376-0227
L51,69,95,173,66	74S32	376-0235
L52,53,54,121,143,161,162,163,165,156,139,181,182	74LS133	376-0220
L57-65,84-92	[illegible]	[illegible]
L131	74S244	376-0339
L62,92	[illegible]	376-0427
L71,104,110,151,199,226,93A	74LS74	376-0135
L74	[illegible]	376-0264
L75	[illegible]	[illegible]
L78,229	[illegible]	[illegible]
L93,94,148,222	74S240	376-0246
L100	[illegible]	377-0440
L96	74S174	376-0247
L95	74LS57	376-0216
L111-119,133-141,152-160,176-184	HM 4864-2	377-0417
L123	74S189	376-0301
L124,146	74S175	376-0270
L126	[illegible]	SEE CHART
L23	[illegible]	SEE CHART
L129	8517A-4	SEE CHART
L167	74S140	376-0314
L68-172	8253A	SEE CHART
L194	74S240	376-0226
L136	74LS241	376-0234
L206,208,214,219,231,232,233,234,236,243	74LS374	376-0186
L213,244	74138	376-0171
L221	74S133	376-0225
L225	74LS10	376-0209
L227	9602	[illegible]

I.C. LOCATION	TYPE	WL PART NO.
[illegible]	24 SOCKET	[illegible]
L49,163-172	18 SOCKET	376-4019
[illegible]	40 SOCKET	[illegible]
[illegible]	24 SOCKET	[illegible]
L26	8 SOCKET	376-9016

COMPONENT	TYPE	WL PART NO
R5,41,17,10,20,23,28,29,31-35,37-41,44,45,47,49-54,56,59	1K,1/4W 5%	330-3011
R56	1K, VARI	330-014
R30	2.37K,1/4W 1%	333-0633
R43	33Ω,1/4W 5%	332-1034
R7	220Ω,1/4W 5%	330-2023
R9	22K,1/4W 5%	330-3023
R11,12	2K,1/4W 1%	333-0110
R13,14	10K,1/4W 1%	333-0090
R21,22	510Ω,1/4W 5%	330-2392
R23,27	[illegible]	330-2216
R24,26	330Ω,1/4W 5%	330-2274
R16,35	3K,1/4W 5%	330-4011
R19	33K,1/4W 5%	330-3014
R37,36,40,43	[illegible] 1/4W 5%	330-3021
R42	[illegible] 1/4W 5%	330-1023
R46A	4.7K,1/4W 5%	330-3049
RN1,2	33Ω DIP	333-0833
RS1,2	10K SIP	333-0103
RS3 4,7-11 514	1K SIP	333-0937
RS5	220Ω SIP	333-0311
RS6	4.7K SIP	333-0812
C	5.6pF	300-1014
C3	1-10pF,VAR	300-9007
C4,15,27,48,147,186,188,192	15pF,20V(T)	300-4022
C68-14,16-26,28-30,39,41-44,43-56,67-73,83-98,103-119,129-132,142-146,149-150,160-185,187,189,90,173,174	.047μF,50V	300-1266
C45,57	3pF 500V	300-1013
C33,35	[illegible]	[illegible]
C38	330pF [illegible]	300-1310
C37	150pF [illegible]	300-1150
C40	10pF [illegible]	300-0[illegible]
C31,46	.01μF,25V	300-1333
C32	.001μF,50V	300-1136
C34,36,39,66,74-87,89,97,20,23,35-141,151-159	.1μF,50V	300-1990
C47	.33μF,15V(T)	300-4034
SW1	8 POS. SPST	325-1503
D1	IN914A	350-1012
CR1-CR4	1N5819	350-4019
DL1	100ns DELAY	375-9002
DL2	250ns DELAY	376-3001
J1	26PIN. CONN	350-2033
J2	34PIN. CONN	350-3423
J3	50 PIN CONN	350-0062
Q1	VN10KM	375-1115
VR1	UA78L05	374-0032
Y1	24 MHz	321-0065
Y1A	32.768 MHz	321-0060
Y2	20 MHz	321-1201
Y3	5 MHz	321-1200
BT1	3.6V	SEE CHART
J4	3 PIN, HDR.	354-0034
P4	[illegible] SHUNT	350-[illegible]
P2,3	[illegible]	[illegible]

MNEMONIC	COORD.
IO3-IO17	5H1
BPA0-BPA13	1E1
BPD0-BPD15	2D1
BPINT0-BPINT17	1K14
BLANK,	3J1
[illegible]	[illegible]
[illegible]	4A11
[illegible]	1E14
CTS	4B14
DA0-DA15	3B14
DD0-DD15	3K3
[illegible]	3J1
[illegible]	3H1
[illegible]	3E14
[illegible]	4K1
[illegible]	4C1
[illegible]	4B1
[illegible]	4B1
[illegible]	4A7
DSB	3H1
DSR	4B14
DTR	4A13
ECNT	3K5
EXTERNAL RDY.	1B14
FP CMODE	4D14
[illegible]	4D14
FP TRI	4D14
[illegible]	4D14
HEAD LOAD	4A10
[illegible]	4K4
[illegible]	4E14
[illegible]	4A11
IO DIR [illegible]	4A10
[illegible]	5F1
IOW2	5F1
IO3	1F14
IO18	1F14
B5	3J1
LBK	5J1
LOW CURRENT	4D1
MA0-MA[illegible]	[illegible]
MCB0-[illegible]	[illegible]
MD0-MD[illegible]	[illegible]
MD3-MD15	[illegible]
[illegible]	3K5
[illegible]	3K5
[illegible]	3J1
MSB0-MSB1	4K4
NOT READY	5J1
RD	4B14
READ DATA	4F14
READY	4K4
RTS	4A13
SIDE SEL	4C1
STEP	4C1
SW0-SW3	2C14

TYPE	I.C. LOCATION	SPARES
CD4013	L8	1
74LS02	L247	2
74S02	L15	1
74LS08	L73A	1
74S08	L77	2
	L166	1
74LS10	L225	1
74LS11	L49	2
74S11	L35	1
74LS32	L147	1
74S32	L51	1
	L69	3
	L173	1
74LS74	L93A	1
74LS244	L201	1
	L234	1
9602	L227	1

I.C. LOCATION	TYPE	WL PART NO.
	CARD EJECTORS	4[illegible]-1239
	STIFFENER-LOWER	432-2[illegible]
	STIFFENER-UPPER	432-2[illegible]
Y1	INSULATOR	615-[illegible]
QTY 7	SCREW	[illegible]-2140
QTY 7	WASHER	653-2009
QTY 7	NUT	652-2009

MNEMONIC	COORD
TD	4A12
TRACK 00	4K4
TRI	4A11
WR DATA	4B1
WR GATE	4C1
[illegible]	5J1
[illegible]	5J1
WR PROTECT	4K4
[illegible]	4K4

NOTE: ALL RESISTORS ARE 1/4W, 5% UNLESS OTHERWISE SPECIFIED.

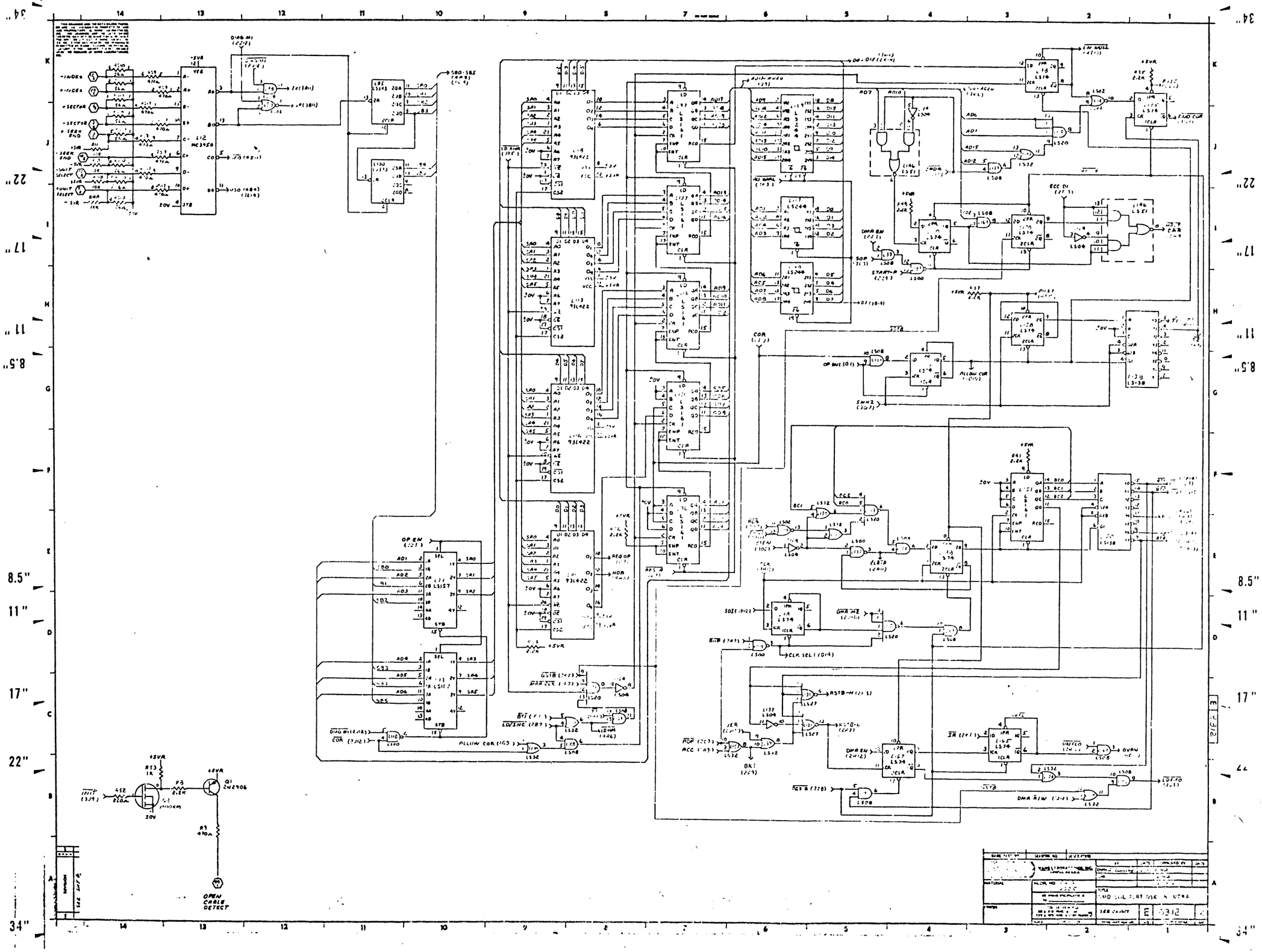
WANG LABORATORIES, INC.

MODEL NO. 2001A

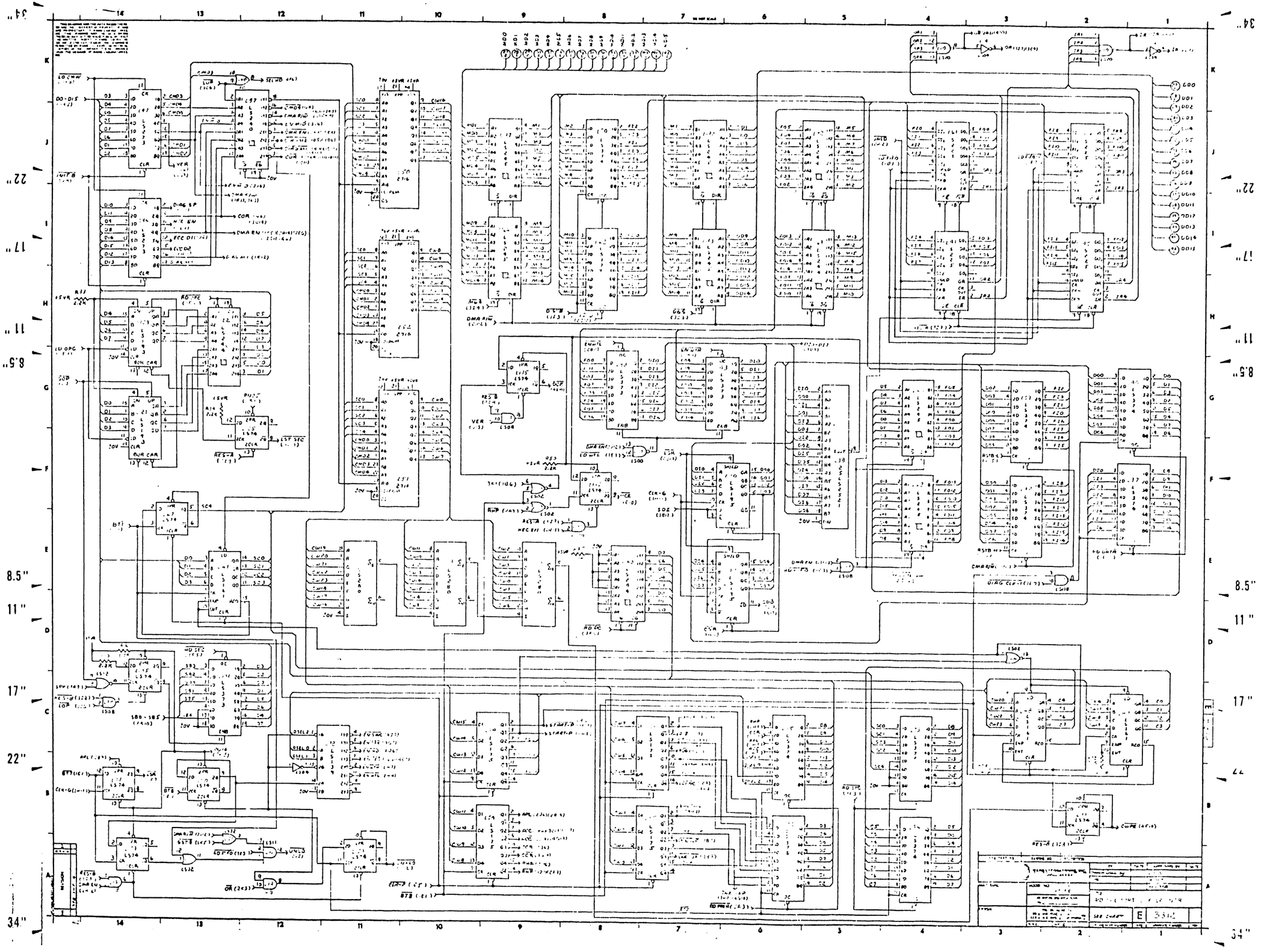
TITLE BUS PROCESSOR ASSY.

SEE CHART | E | 8304 | 1/5

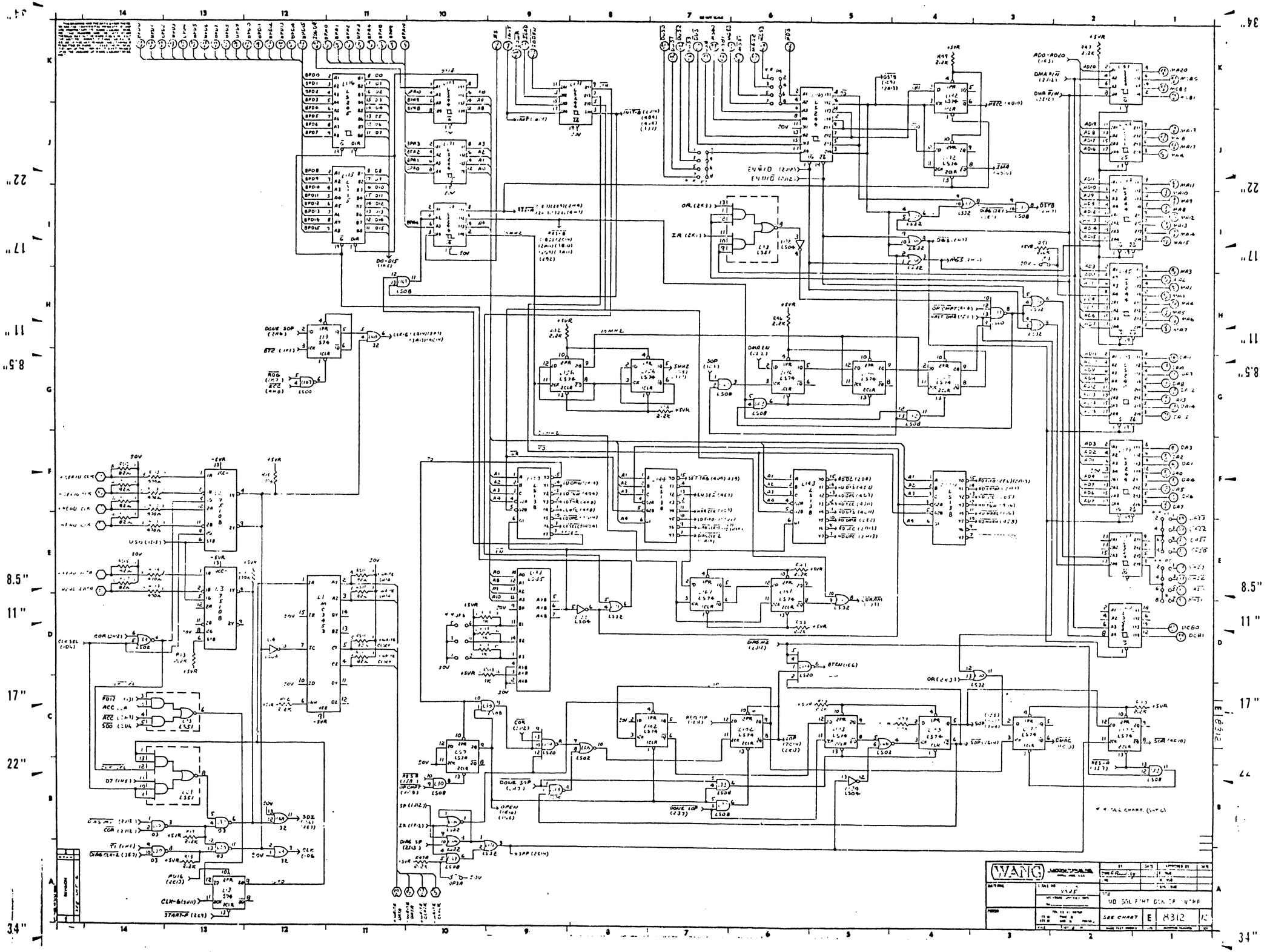
J7

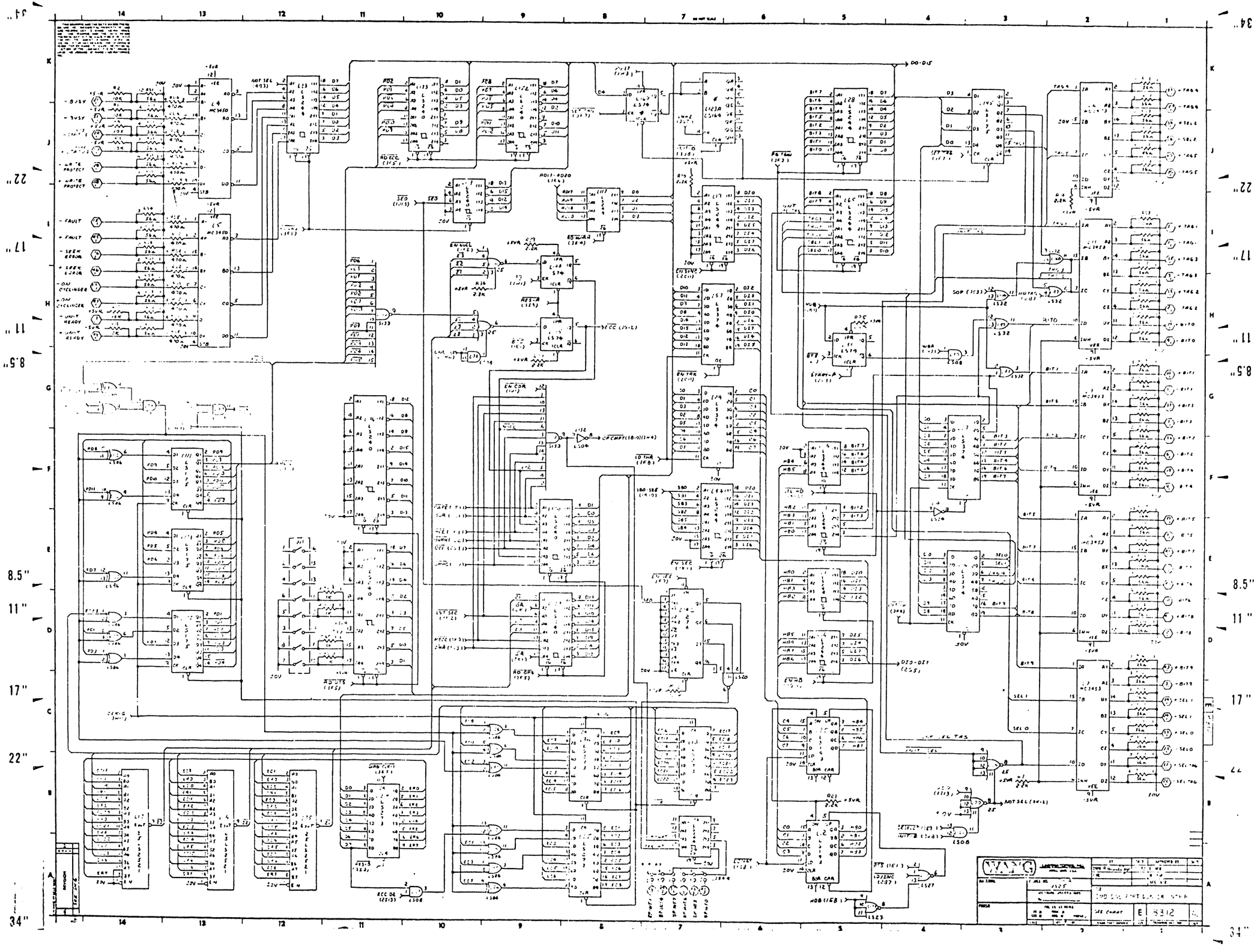

L12
MC3450
-INDEX
+INDEX
+SECTOR
-SECTOR
+SEEK END
-SEEK END
-UNIT SELECT
+UNIT SELECT
L85
LS393
SB0-SB5
L130
L119
93L422
L113
93L422
L116
93L422
L121
93L422
OPEN EN
L171
LS157
L112
LS157
ALLOW COR
DIAG MIT
COR
L174
LS74
L158
LS74
L138
LS138
L170
LS74
L146
LS51
L157
LS244
L147
LS244
LS20
LS32
LS08
LS04
LS00
LS27
L162
LS74
L165
LS74
L167
LS74
L120
LS138
DMA EN
START-P
SOP
OP BV
ALLOW COR
CLK SEL
RSTB-H
RSTB-L
OVRUN
LDFIFO
DMA R/W
BK1
OPEN CABLE DETECT
Q1 2N2906
Q2
+5VR
ZOV
R53 1K
R1 470Ω
END CUR
EN NULL
ECC DI
CAB
REQ OP
MDB
ADIT
14
13
12
11
10
9
8
7
6
5
4
3
2
1
K
J
I
H
G
F
E
D
C
B
A
34"
22"
17"
11"
8.5"
E 0312
TITLE
SMD ... FORT DISK ... INTERF
SEE CHART

K1



K2


WANG
SEE CHART
E
8312


WANG
1325
SMD DISK PORT BUFFER
SEE CHART
E
8312
- BUSY
- WRITE PROTECT
+ WRITE PROTECT
- FAULT
+ FAULT
- SEEK ERROR
+ SEEK ERROR
- ON CYLINDER
+ ON CYLINDER
- UNIT READY
+ UNIT READY
MC3450
MC3453
L4
L5
NOT SEL
DO-D15
D10-D17
OPCMPT
ECC
RES-A
NOT SEL (3H1L)
-5VR
+5VR
20V
+ TAG 1
- TAG 1
+ TAG 2
+ TAG 3
+ TAG 4
- TAG 5
+ SEL 1
+ SEL 0
+ SEL TAG
- SEL TAG
+ BIT 0
+ BIT 1
+ BIT 2
+ BIT 3
+ BIT 4
+ BIT 5
+ BIT 6
+ BIT 7
+ BIT 8
+ BIT 9
LS86
LS08
LS32
LS27
LS04
LS74
LS169
LS175
LS374
S133
8.5"
11"
17"
22"
34"

K4

8312 R4

P3

P2

P1

* * SEE CHART (SHT 6)

NOTE: ALL UNMARKED CAPS ARE

WANG

SEE CHART | E | 8312

MNEMONICS	CONN'S
+ BIT 0 - BIT 7	4 E1
- BIT 0 - BIT 7	4 C1
BPA0 - BPA8	3 A11
BPA0 - BPA8	3 A13
BPA0 - BPA8	4 A3
BPA0 - BPA8	4 A5
+ BUSY	4 J10
- BUSY	4 J10
DA0 - DA15	3 E1
- CRD	3 D1
DCB1	3 D1
DA0 - DA15	4 J1
DB3	3 A7
DA3 - DA7	3 A7
DA0 - DA15	3 E1
DSB	1 A7
+ FAULT	4 E10
- FAULT	4 C10
+ INDEX	12 J9
- INDEX	1 K10
INIT	1 K7
ISOCK	1 K7
LOD T/R	3 K12
LOW	3 K7
MA3 - MA13	3 E1
MC3 - MC7	3 A1
MD0 - MD15	2 A8
MD3	3 A5
MSB0 - MSB1	3 K10
MSB1 - MSB2	3 K12
MSB0	3 K7
MSB1	3 K7
+ ON CYLINDER	4 K10
- ON CYLINDER	4 K10
OPEN CABLE DETECT	1 A13
+ READ CLK	12 A
- READ CLK	12 K9
+ READ DATA	3 K9
- READ DATA	3 K10

MNEMONICS	CONN'S
+ SECTOR	1 J10
- SECTOR	1 J10
+ SEEK ERROR	4 K9
- SEEK ERROR	4 C10
+ SEEK END	1 J10
- SEEK END	1 J10
+ SEL 0	4 C1
- SEL 0	4 C1
+ SEL 1	4 C1
- SEL 1	4 C1
+ SEL 2	4 J1
- SEL 2	4 J1
+ SEL TAG	4 B1
- SEL TAG	4 B1
+ SERVO CLK	3 - 10
- SERVO CLK	12 J9
+ TAG 1	4 E1
- TAG 1	4 E1
+ TAG 2	4 H1
- TAG 2	4 H1
+ TAG 3	4 E1
- TAG 3	4 E1
+ TAG 4	4 H1
- TAG 4	4 H1
+ TAG 5	4 E1
- TAG 5	4 E1
+ UNIT READY	4 K10
+ UNIT SELECT	4 H10
+ WRITE CLOCK	4 E10
+ WRITE DATA	4 E10
- WRITE PROTECT	4 K10
PS	3 H7

NOTE
EACH MEMORY IS MADE UP OF 1213 PIN MEMORIES

E - REV
4

L.D.C.

WANG LABORATORIES, INC.

>>>>> ELECTRICAL PARTS LIST <<<<<

M SHEET 7 OF 8 PAGE 1

(FINAL BILL-OF-MATERIALS)

BOARD NO. & TITLE: C8312 SMD SGL PORT DR INTR
ASSEMBLY LEVEL & TITLE: 239 8312
ARTWORK REVISION (R): 34
ASSEMBLY REVISION (A): 77
SCHEMATIC REVISION (S): 12
DWR OR MOST RECENT SCO: 32702

CREATED: 04/12/83 13:02
LAST MODIFIED: 08/14/84 08:58 BY: LAB
EDITING REVISION: 7

REF. DES.	WANG PART NO.	VALUE/TYPE	DESCRIPTION	DRAWING NO.	QTY.
C1 - C186	300-1966-	.047U	CAP CERAMIC MONO AXIAL +80 -20% 50V Z5U		186
C187 - C191	300-4022-	15U	CAP TANT AXIAL 10% 20V		5
L178	325-1533-	SWITCH	SLIDE SPST 8 POS		1
R52	330-2023-	220.000	RES FIXED 1/4W 5%		1
R15	330-2034-	330.000	RES FIXED 1/4W 5%		2
R17					
R9	330-2048-	470.000	RES FIXED 1/4W 5%		1
R53	330-3011-	1K	RES FIXED 1/4W 5%		1
R7 - R8	330-3023-	2.2K	RES FIXED 1/4W 5%		39
R12 - R14					
R16					
R18 - R22					
R24 - R30					
R32 - R51					
RA43					
R1 - R6	330-4011-	10K	RES FIXED 1/4W 5%		10
R10 - R11					
RA14					
RB14					
RS1	333-0802-	56.000N	RESISTOR NETWORK TYPE: 10/09/C/SS		7
RS3 - RS4					
RS6 - RS8					
RS10					
RS2	333-0803-	470.000N	RESISTOR NETWORK TYPE: 10/05/F/SS		7
RS5					
RS9					
RS13 - RS14					
RS16 - RS17					
RS11 - RS12	333-0804-	82.000N	RESISTOR NETWORK TYPE: 10/09/C/SS		3
RS15					
RS18 - RS20	333-0837-	1.000KN	RESISTOR NETWORK TYPE: 10/09/C/SS		3
J1	350-0057-	60 CCNT	CONN PC HEADER DUAL ROW .100 R/A W/LOCK/EJECT		1
J2	350-0058-	26 CCNT	CONN PC HEADER DUAL ROW .100 R/A W/LOCK/EJECT		1
JP1 - JP2	350-0212-	8 CCNT	CONN PC HEADER DUAL ROW .100		4
JP4 - JP5					
032 - 039	350-4506-	2 CCNT	CONN SHUNT .100 CTR		8
Q1	375-1017-	2N2906A	TSTR NPN TO-18 400MW 60V 150MA		1
Q2	375-1115-	VN10KM	FET N-CH TO-237 1W 60V .5A		1

BOARD NO. & TITLE: C8312 SMD SGL PORT DR INTR SCHEMATIC REVISION (S): 12 SHEET OF PAGE 2

REF. DES.	WANG PART NO.	VALUE/TYPE	DESCRIPTION	DRAWING NO.	QTY.
040	375-9004-	125-088	TRANSIPAD TO-18 (SMALL)		1
L30	376-0028-	7403	IC QUAD 2-INPUT NAND GATE O/C OUTPUTS		1
L94	376-0081-	7408	IC QUAD 2-INPUT AND GATE		1
L2 - L3	376-0089-	75108	IC DUAL LINE RECEIVER 14 PIN DIP		2
L70	376-0092-	7425	IC DUAL 4-INPUT NOR GATE		2
L126					
L68	376-0093-	7432	IC QUAD 2-INPUT POSITIVE OR GATE		1
L33	376-0153-	74LS08	IC QUAD 2-INPUT AND GATE		8
L88					
L93					
L139					
L139					
L147					
L162					
L169					
L67	376-0155-	74LS74	IC DUAL D-TYPE POSITIVE EDGE TRIG FLIP-FLOP		20
L77					
L91					
L98					
L102 - L103					
L105					
L110					
L125					
L154					
L156					
L158					
L161					
L165					
L167					
L170					
L172					
L175					
L186					
L192					
L15	376-0160-	74LS175	IC QUAD D-TYPE FLIP-FLOP		8
L54					
L71					
L74					
L111					
L134 - L135					
L145					
L14	376-0180-	74LS04	IC HEX INVERTER		3
L124					
L132					
L13	376-0202-	74S74	IC DUAL D-TYPE POS EDGE TRIGRD F/F W/PRESET/C		2
L148					
L107	376-0207-	74LS00	IC QUAD 2-INPUT NAND GATE		2
L118					
L58	376-0208-	74LS02	IC QUAD 2-INPUT NOR GATE		3
L66					

BOARD NO. & TITLE: C8312 SMD SGL PORT DR INTR SCHEMATIC REVISION (S): 12 SHEET OF PAGE 3

REF. DES.	WANG PART NO.	VALUE/TYPE	DESCRIPTION	DRAWING NO.	QTY.
L108					
L10	376-0210-	74LS20	IC DUAL 4-INPUT NAND GATE		5
L104					
L115					
L141					
L149					
L89	376-0211-	74LS32	IC QUAD 2-INPUT OR GATE		8
L106					
L130					
L140					
L157					
L168					
L171					
L188					
L29	376-0213-	74LS51	IC DUAL 2-WIDE 2-INPUT AND-OR-INVERT GATE		3
L93					
L146					
L114	376-0214-	74LS151	IC 1-OF-8 DATA SEL/MUX		1
L79	376-0216-	74LS157	IC QUAD 2-INPUT MULTIPLEXER		2
L99					
L193	376-0218-	74LS85	IC 4-BIT MAGNITUDE COMPARATOR		1
L22	376-0220-	74LS193	IC UP/DOWN BINARY COUNTER		4
L25					
L121					
L123					
L181	376-0225-	74LS11	IC TRIPLE 3-INPUT AND GATE		1
L92	376-0226-	74LS139	IC 2-TO-4-LINE DECODER/MULTIPLEXER		1
L56	376-0231-	74LS86	IC QUAD 2-INPUT EXCLUSIVE-OR GATE		4
L95					
L112					
L155					
L48 - L49	376-0233-	74LS161	IC SYNCHRONOUS 4-BIT BINARY COUNTER W/DIRECT CLEAR		8
L69					
L96 - L97					
L136 - L137					
L151					
LA123	376-0236-	74LS164	IC SERIAL-IN PARALLEL-OUT SHIFT REGISTER		1
L31 - L32	376-0242-	74LS280	IC 9-BIT ODD/EVEN PARITY GENERATOR/CHECKER		3
L53					
L128	376-0245-	74LS27	IC TRIPLE 3-INPUT NOR GATE		2
L131					
L20	376-0248-	74LS195	IC 4-BIT UNIVERSAL SHIFT REGISTER		2
L39					
L1	376-0274-	3453	IC QUAD LINE DRIVER 16 PIN DIP		6
L6 - L9					
L11					
L4 - L5	376-0275-	3450	IC QUAD LINE RECEIVER 16 PIN DIP		3
L12					
L133	376-0276-	74S133	IC 13-INPUT NAND GATE		2
L173					

BOARD NO. & TITLE: C8312 SMD SGL PORT DR INTR SCHEMATIC REVISION (S): 12 SHEET OF PAGE 4

REF. DES.	WANG PART NO.	VALUE/TYPE	DESCRIPTION	DRAWING NO.	QTY.
L60	376-0285-	74LS245	IC OCTAL BUS TRANSCEIVER TRI-STATE OUTPUTS		8
L63					
L166					
L176					
L182 - L183					
L187					
L195					
L24	376-0286-	74LS374	IC OCTAL D-TYPE FLIP-FLOP TRI-STATE		13
L27					
L37					
L40					
L42					
L46					
L57					
L59					
L62					
L72 - L73					
L75					
L80					
L19	376-0288-	74LS244	IC OCTAL BUFFER/LINE DRIVER W/TRI STATE		23
L21					
L23					
L26					
L28					
L64 - L65					
L82					
L84					
L117					
L122					
L159 - L160					
L163 - L164					
L179 - L180					
L184 - L185					
L189 - L191					
L194					
L120	376-0294-	74LS138	IC 3-LINE TO 8-LINE DECODER/MULTIPLEXER		6
L127					
L138					
L143 - L144					
L150					
L87	376-0297-	74LS240	IC OCTAL BUFFER/LINE DRIVER/LINE RECEIVER		8
L119					
L129					
L133					
L152					
L174					
L177					
L196					
L18	376-0302-	74LS273	IC OCTAL D-TYPE FLIP-FLOP W/CLEAR		6
L34					

WANG LABORATORIES, INC. LOWELL, MA U.S.A.		BY	DATE	APPROVED BY	DATE
		DWN		E ENGR	
		CHK		M ENGR	
MATERIAL	MODEL NO.			MFG ENGR	
	SEE USING SPECIFICATIONS No.	TITLE SMD SGL PORT DR INTRF			
FINISH	TOL EX AS NOTED	SEE CHART	C	8312	12

K7

BOARD NO. & TITLE: CA312 SMD SGL PORT DR INTR SCHEMATIC REVISION (S): 12 M SHEET 8 OF 8 PAGE 5

* REF. DES.	* WANG PART NO.	* VALUE/TYPE *	DESCRIPTION	* DRAWING NO. *	QTY. *
L36					
L47					
L55					
L86					
L85	376-0307-	74LS393	IC DUAL 4-BIT BINARY COUNTER		2
L100					
L43	376-0310-	74LS373	IC OCTAL D-TYPE LATCH TRI-STATE OUTPUTS		5
L83					
L101					
L16 - L17	376-0347-	25LS2521	IC 8-BIT COMPARATOR		4
L35					
L38					
L142	376-0318-	74276	IC QUAD J-K FLIP-FLOP		1
L41	376-0323-	745225	IC 16 X 5 BI POLAR ASYNCH FIFO		4
L44 - L45					
L61					
U1 - U3	376-9003-	SAT 24	IC SOCKET 24 PIN DIL PC MOUNT		3
U4 - U7	376-9013-	SAT 22	IC SOCKET 22 PIN DIL PC MOUNT		4
STF2	452-2707-	STIFFNER	STIFFNER LOWER		1
ST1	452-2708-	STIFFNER	STIFFNER UPPER		1
U9	465-1218-	EXTRACTOR	EXTRACTORS		2
U17					
U8	510-8312-		PCB		1
U10	633-5007-	STRIP	WIRE SOLID UNINSULATED TINNED COPPER ***(QTY A/R)*		1
U18 - U24	650-2100-	SCREW	SCREW 4-40 X 5/16		7
U25 - U31	652-2000-	NUT	NUT 4-40		7
JP6 - JP8	654-0104-	3 CONT	CONN PC HEADER SINGLE ROW .100		3

BOARD NO. & TITLE: CA312 SMD SGL PORT DR INTR SCHEMATIC REVISION (S): 12 SHEET OF PAGE 6

*	*WANG PART NO.	* VALUE/TYPE *	DESCRIPTION	* DRAWING NO. *	QTY. *

(CAUTION - THE FOLLOWING PARTS/COMPONENTS CONTAINED IN THIS R O M ARE NOT RECOMMENDED FOR NEW DESIGNS)

376-0202-	74S74	IC DUAL D-TYPE POS EDGE TRIGRD F/F W/PRESET/C	2
376-0274-	3453	IC QUAD LINE DRIVER 16 PIN DIP	6
376-0318-	74276	IC QUAD J-K FLIP FLOP	1
376-0323-	745225	IC 16 X 5 BI POLAR ASYNCH FIFO	4

*** END OF-REPORT ***

WANG LABORATORIES, INC.

>>>>> ELECTRICAL PARTS LIST <<<<< SHEET OF PAGE 1

(FINAL BILL OF MATERIALS)

BOARD NO. & TITLE: CB312 SMD SGL PORT DR INTR
ASSEMBLY LEVEL & TITLE: 210 8312-A
ART-WORK REVISION (R): 04
ASSEMBLY REVISION (A): 07
SCHEMATIC REVISION (S): 12
DWR OR MOST RECENT ECO: 32732

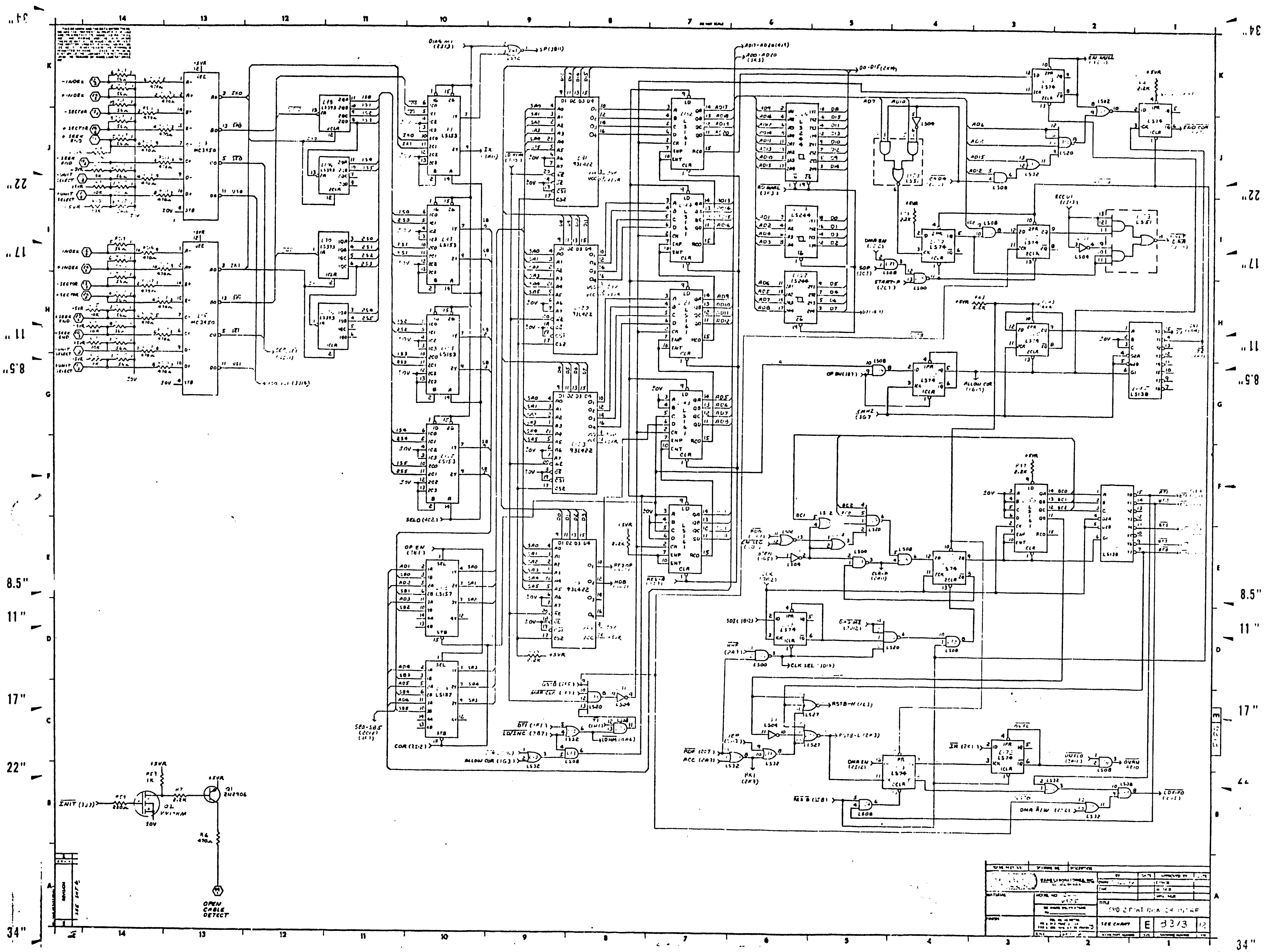
CREATED: 04/12/83 13:02
LAST MODIFIED: 08/14/84 09:50 BY: LAB
EDITING REVISION: 7

* REF. DES.	* WANG PART NO.	* VALUE/TYPE *	DESCRIPTION	* DRAWING NO. *	QTY. *
U1	209-8312		PCA		1
L78	377-0384-	93L422	IC 256 X 4 BIPOLAR RAM 60NS L PWR 22 PIN		4
L81					
L113					
L116					
L50 - L52	377-0398-	2716	IC 2K8 UV EPROM 450NS (5V)		3

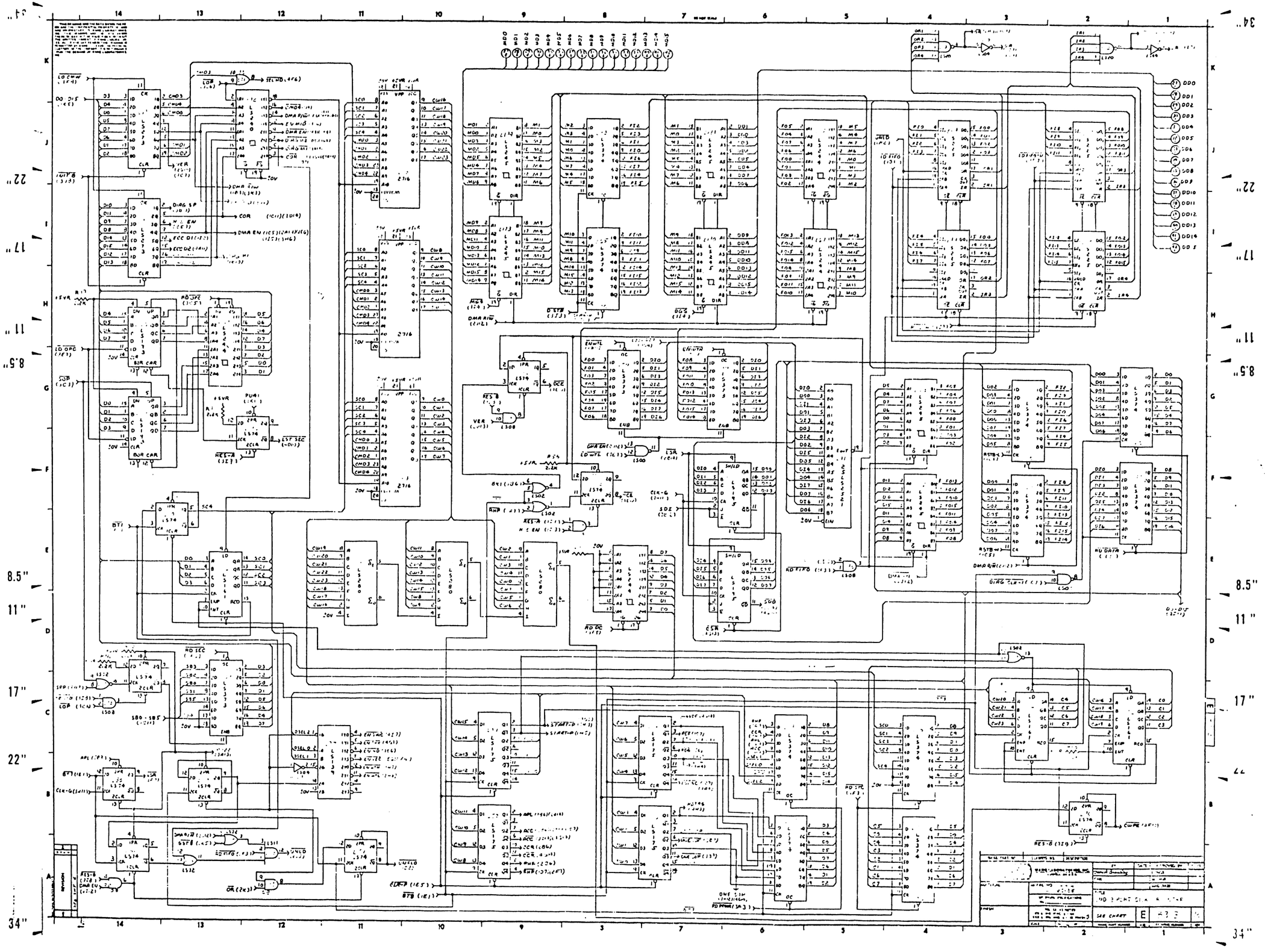
*** END-OF-REPORT ***

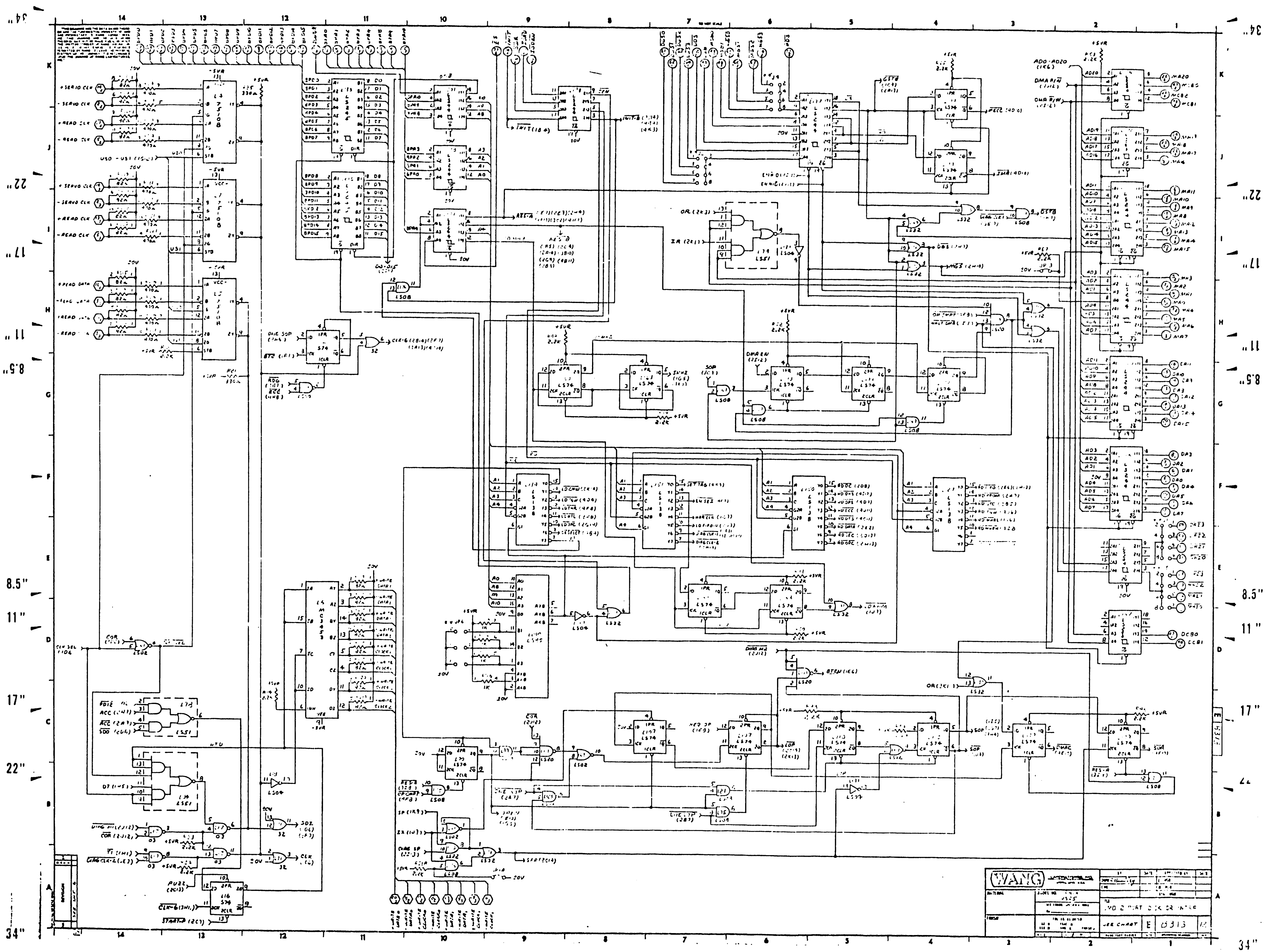
		BY	DATE	APPROVED BY	DATE
	WANG LABORATORIES, INC. LOWELL, MA. U.S.A.	DRAWN			
		CHECK			
MATERIAL	MODEL NO				
	SEE DRAWING SPECIFICATION NO.	TITLE	SMD SGL PORT DR INTRF		
FINISH		SIZE	SEE CHART C	8312	12
		SCALE			

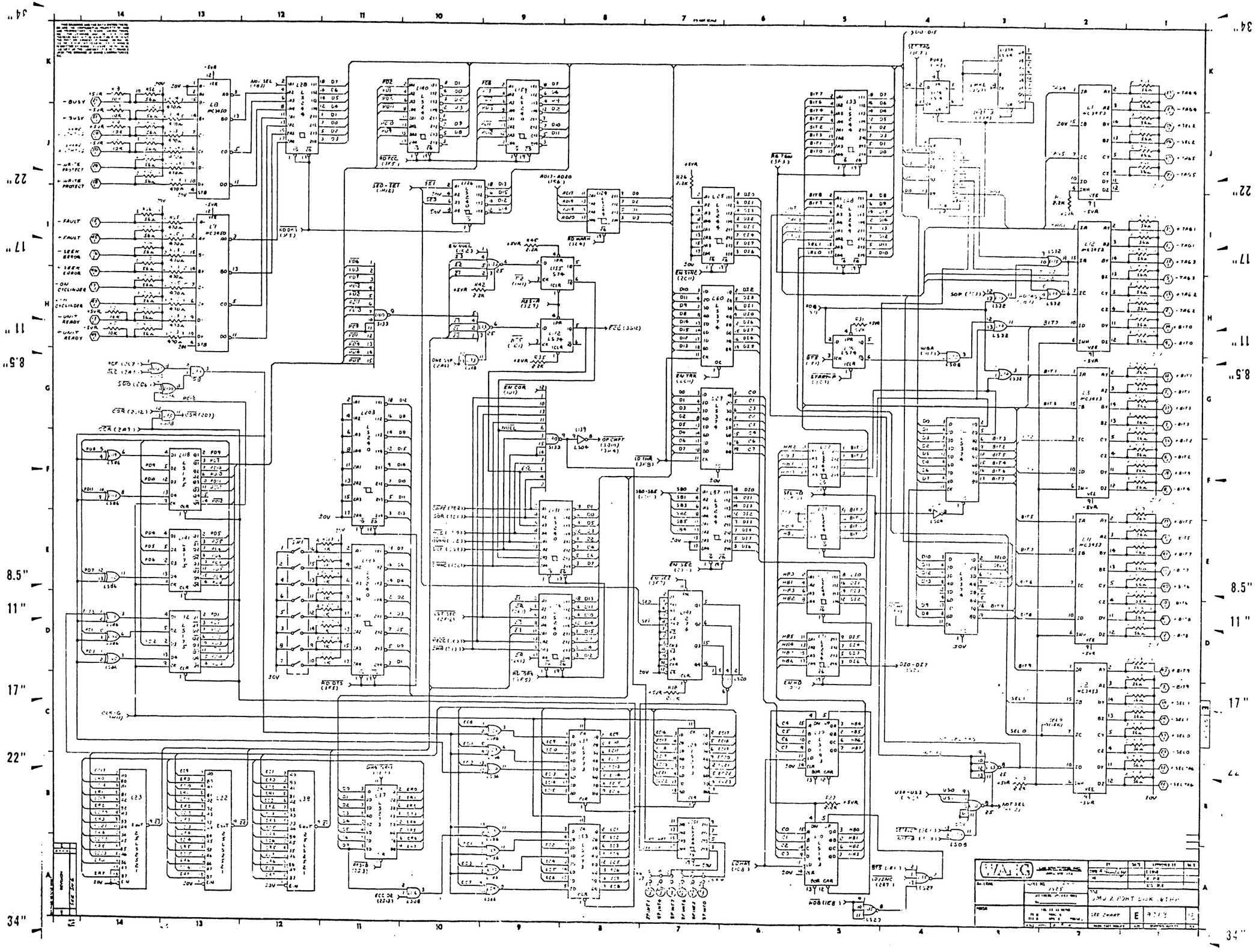
K8

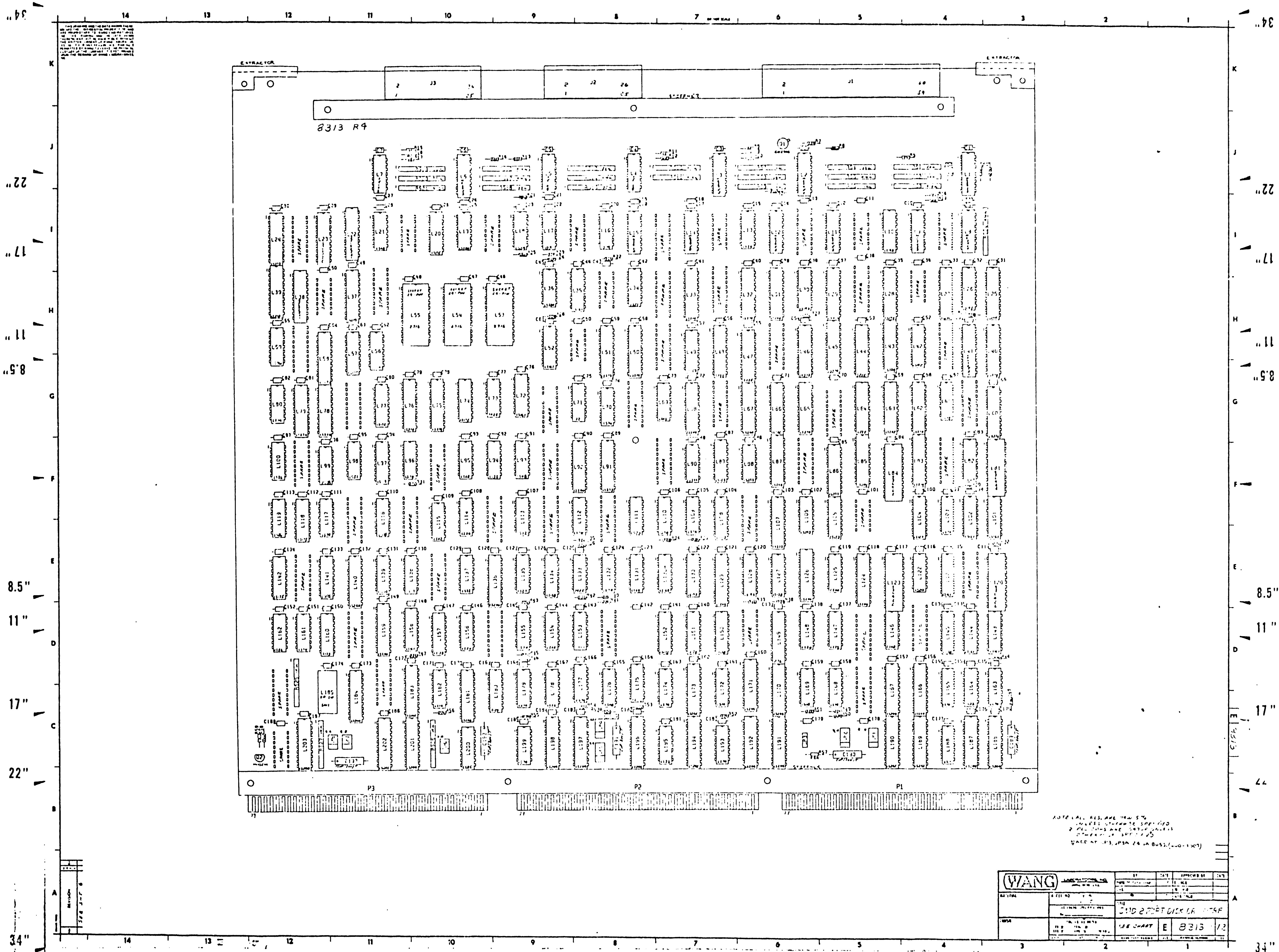

MC3450
LS153
93L422
LS157
LS374
LS244
LS74
LS138
OPEN CABLE DETECT
SEE CHART
E
3373

L1

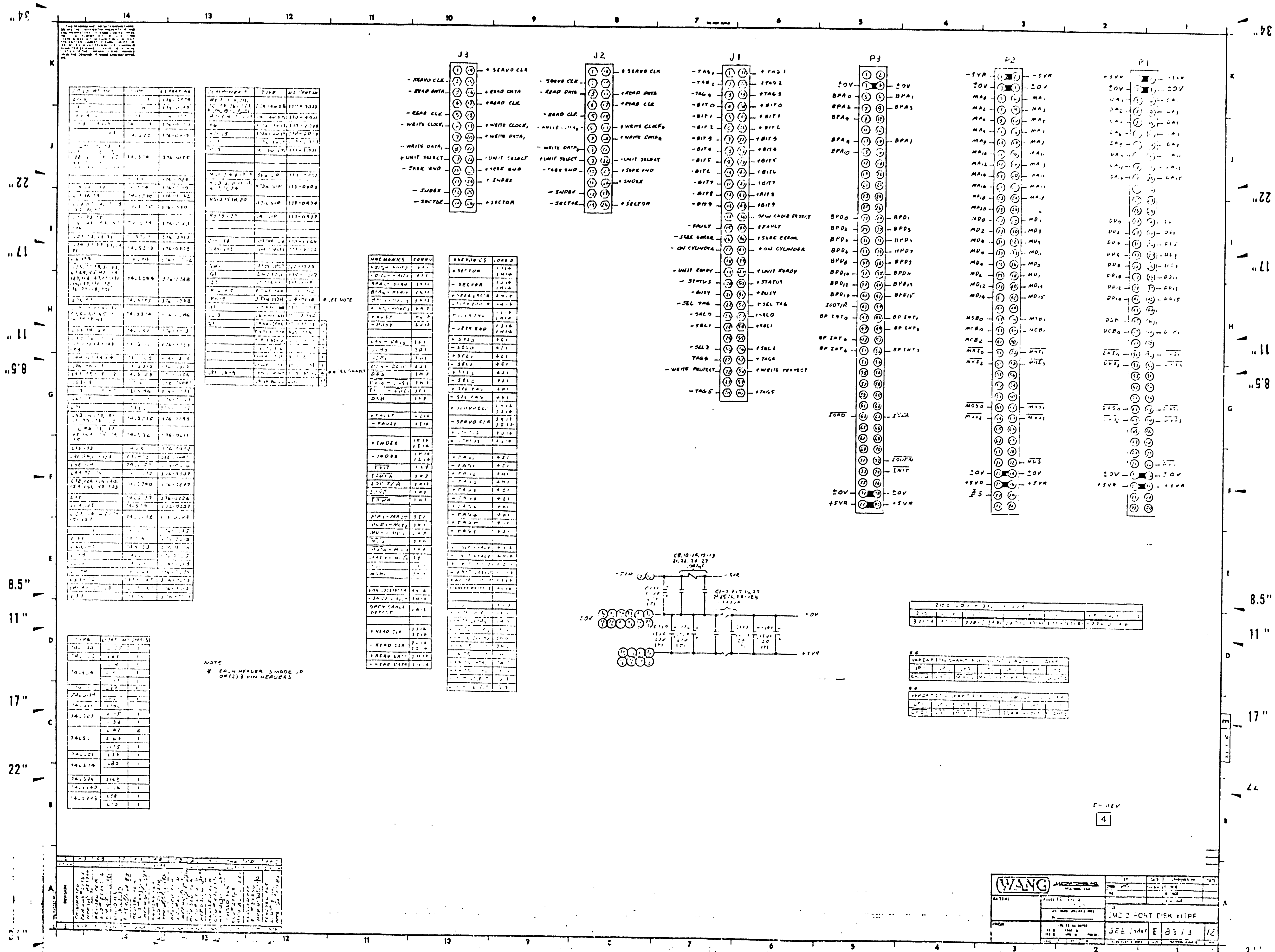



WANG
SEE CHART
E





L5


J3
J2
J1
P3
P2
P1
- SERVO CLK
+ SERVO CLK
- READ DATA
+ READ DATA
- READ CLK
+ READ CLK
- WRITE CLOCK
+ WRITE CLOCK
- WRITE DATA
+ WRITE DATA
+ UNIT SELECT
- UNIT SELECT
- SEEK END
+ SEEK END
+ INDEX
- INDEX
- SECTOR
+ SECTOR
- SEEK ERROR
+ SEEK ERROR
- ON CYLINDER
+ ON CYLINDER
- UNIT READY
+ UNIT READY
- STATUS
+ STATUS
- BUSY
+ BUSY
- SEL TAG
+ SEL TAG
- WRITE PROTECT
+ WRITE PROTECT
+ FAULT
- FAULT
MNEMONICS
+ 5VR
+ 5V
+ 0V
NOTE
EACH HEADER IS MADE UP OF (2) 3 PIN HEADERS
WANG
SMD 2 PORT DISK INTF
SEE CHART
E
8373
12
4

WANG LABORATORIES, INC.

L.D.C.

ELECTRICAL PARTS LIST

SHEET 8 OF 8 PAGE 1

(FINAL BILL-OF-MATERIALS)

BOARD NO. & TITLE: C8313 SMD 2 PORT DISK OR INTRF
ASSEMBLY LEVEL & TITLE: 2C9 8313
ARTWORK REVISION (R): 04
ASSEMBLY REVISION (A): 77
SCHEMATIC REVISION (S): 12
OWR OR MOST RECENT ECO: 32752

CREATED: 04/12/83 16:56
LAST MODIFIED: 08/14/84 08:49 BY: LAB
EDITING REVISION: 6

* REF. DES.	* WANG PART NO.	* VALUE/TYPE *	DESCRIPTION	* DRAWING NO. *	QTY. *
C1 - C188	300-1966-	.047U	CAP CERAMIC MONO AXIAL +80 -20% 50V Z5U		188
C189 - C193	300-4022-	15U	CAP TANT AXIAL 10% 20V		5
L185	325-1503-	SWITCH	SLIDE SPST 8 POS		1
R58	330-2033-	220.000	RES FIXED 1/4W 5%		1
R21	330-2034-	330.000	RES FIXED 1/4W 5%		2
R25					
R6	330-2048-	470.000	RES FIXED 1/4W 5%		1
R59	330-3011-	1K	RES FIXED 1/4W 5%		1
R1	330-3023-	2.2K	RES FIXED 1/4W 5%		39
R7					
R13 - R14					
R29					
R22 - R24					
R26 - R28					
R30 - R36					
R38 - R57					
RA53					
R2 - R5	330-4011-	10K	RES FIXED 1/4W 5%		14
R8 - R12					
R15 - R19					
RS1 - RS2	333-0802-	56.000H	RESISTOR NETWORK TYPE: 10/09/C/SS		8
RS4					
RS6 - RS9					
RS19					
RS3	333-0803-	470.000H	RESISTOR NETWORK TYPE: 10/05/F/SS		11
RS5					
RS10 - RS11					
RS14					
RS16 - RS17					
RS21 - RS24					
RS13	333-0804-	82.000H	RESISTOR NETWORK TYPE: 10/09/C/SS		4
RS15					
RS18					
RS20					
RS25 - RS27	333-0837-	1.000KH	RESISTOR NETWORK TYPE: 10/09/C/SS		3
J1	350-0057-	60 CONT	CONN PC HEADER DUAL ROW .100 R/A W/LOCK/EJECT		1
J2 - J3	350-0058-	26 CONT	CONN PC HEADER DUAL ROW .100 R/A W/LOCK/EJECT		2
JP1 - JP2	350-0212-	8 CONT	CONN PC HEADER DUAL ROW .100		4

BOARD NO. & TITLE: C8313 SMD 2 PORT DISK OR INTRF SCHEMATIC REVISION (S): 12 SHEET OF PAGE 2

* REF. DES.	* WANG PART NO.	* VALUE/TYPE *	DESCRIPTION	* DRAWING NO. *	QTY. *
JP4 - JP5					
P32 - 039	350-4506-	2 CONT	CONN SHUNT .100 CTR		8
Q1	375-1017-	2N2906A	TSTR PNP TO-18 625MW 60V 150MA		1
Q2	375-1115-	VN10KM	FET N-CH TO-237 1W 52V .5A		1
Q40	375-9004-	125-080	TRANSIPAD TO-18 (SMALL)		1
L17	376-0228-	7403	IC QUAD 2-INPUT NAND GATE O/C OUTPUTS		1
L99	376-0081-	7408	IC QUAD 2-INPUT AND GATE		1
L4 - L5	376-0089-	75108	IC DUAL LINE RECEIVER 16 PIN DIP		3
L7					
L73	376-0092-	7425	IC DUAL 4-INPUT NOR GATE		2
L133					
L71	376-0093-	7432	IC QUAD 2-INPUT POSITIVE OR GATE		1
L21	376-0153-	74LS08	IC QUAD 2-INPUT AND GATE		8
L93					
L95					
L116					
L146					
L154					
L169					
L176					
L70	376-0155-	74LS74	IC DUAL D-TYPE POSITIVE EDGE TRIG FLIP-FLOP		19
L80					
L103					
L109 - L110					
L112					
L117					
L132					
L161					
L163					
L165					
L168					
L172					
L174					
L177					
L179					
L182					
L193					
L199					
L49	376-0156-	74LS153	IC DUAL 4-INPUT MULTIPLEXER		4
L89					
L105					
L108					
L20	376-0160-	74LS175	IC QUAD D-TYPE FLIP-FLOP		8
L57					
L76					
L77					
L118					
L141 - L142					
L152					
L18	376-0180-	74LS04	IC HEX INVERTER		3

BOARD NO. & TITLE: C8313 SMD 2 PORT DISK OR INTRF SCHEMATIC REVISION (S): 12 SHEET OF PAGE 3

* REF. DES.	* WANG PART NO.	* VALUE/TYPE *	DESCRIPTION	* DRAWING NO. *	QTY. *
L131					
L139					
L16	376-0202-	74S74	IC DUAL D-TYPE POS EDGE TRIGRD F/F W/PRESET/C		2
L155					
L114	376-0207-	74LS00	IC QUAD 2-INPUT NAND GATE		2
L125					
L61	376-0208-	74LS02	IC QUAD 2-INPUT NOR GATE		3
L69					
L115					
L13	376-0210-	74LS20	IC DUAL 4-INPUT NAND GATE		5
L111					
L122					
L148					
L156					
L94	376-0211-	74LS32	IC QUAD 2-INPUT OR GATE		8
L113					
L137					
L147					
L164					
L175					
L178					
L195					
L14	376-0213-	74LS51	IC DUAL 2-WIDE 2-INPUT AND-OR-INVERT GATE		3
L98					
L153					
L82	376-0216-	74LS157	IC QUAD 2-INPUT MULTIPLEXER		2
L104					
L200	376-0218-	74LS85	IC 4-BIT MAGNITUDE COMPARATOR		1
L10	376-0220-	74LS193	IC UP/DOWN BINARY COUNTER		4
L39					
L128					
L130					
L188	376-0225-	74LS11	IC TRIPLE 3-INPUT AND GATE		1
L97	376-0226-	74LS139	IC 2-TO-4-LINE DECODER/MULTIPLEXER		1
L59	376-0231-	74LS86	IC QUAD 2-INPUT EXCLUSIVE-OR GATE		4
L100					
L119					
L162					
L35	376-0233-	74LS161	IC SYNCHRONOUS 4-BIT BINARY COUNTER W/DIRECT CLEAR		9
L52					
L72					
L101 - L102					
L121					
L143 - L144					
L158					
LA130	376-0236-	74LS164	IC SERIAL-IN PARALLEL-OUT SHIFT REGISTER		1
L19	376-0242-	74LS280	IC 9-BIT ODD/EVEN PARITY GENERATOR/CHECKER		3
L36					
L56					
L135	376-0248-	74LS27	IC TRIPLE 3-INPUT NOR GATE		2

BOARD NO. & TITLE: C8313 SMD 2 PORT DISK OR INTRF SCHEMATIC REVISION (S): 12 SHEET OF PAGE 4

* REF. DES.	* WANG PART NO.	* VALUE/TYPE *	DESCRIPTION	* DRAWING NO. *	QTY. *
L138					
L26	376-0248-	74LS195	IC 4-BIT UNIVERSAL SHIFT REGISTER		2
L42					
L1 - L3	376-0274-	3453	IC QUAD LINE DRIVER 16 PIN DIP		6
L6					
L11 - L12					
L8 - L9	376-0275-	3450	IC QUAD LINE RECEIVER 16 PIN DIP		4
L14 - L15					
L160	376-0276-	74S133	IC 13-INPUT NAND GATE		2
L180					
L63	376-0285-	74LS245	IC OCTAL BUS TRANSCEIVER TRI-STATE OUTPUTS		6
L66					
L173					
L183					
L189 - L190					
L194					
L202					
L29	376-0286-	74LS374	IC OCTAL D-TYPE FLIP-FLOP TRI-STATE		14
L32					
L40					
L43					
L45					
L50					
L60					
L62					
L65					
L75 - L76					
L78 - L79					
L83					
L25	376-0288-	74LS244	IC OCTAL BUFFER/LINE DRIVER W/TRI STATE		23
L27 - L28					
L31					
L33					
L67 - L68					
L85					
L87					
L124					
L129					
L166 - L167					
L170 - L171					
L186 - L187					
L191 - L192					
L196 - L198					
L201					
L127	376-0294-	74LS138	IC 3-LINE TO 8-LINE DECODER/MULTIPLEXER		6
L134					
L145					
L150 - L151					
L157					
L52	376-0297-	74LS240	IC OCTAL BUFFER/LINE DRIVER/LINE RECEIVER		8

WANG LABORATORIES, INC. LOWELL, MASS. U.S.A.		BY	DATE	APPROVED BY	DATE
		DWN		E ENGR	
		CHK		M ENGR	
MATERIAL	MODEL NO.			MAG ENGR	
	MI ENGRG SPECIFICATIONS No.	TITLE: SMD 2 PORT DD INTERFACE			
FINISH	TOL. UNLESS NOTED XX ± .010 FRAC ± 1/64 XXX ± .005 ANG ± 1° 30'	SEE CHART	C	8313	12

BOARD NO. & TITLE: C8313 SMD 2 PORT DISK OR INTRF SCHEMATIC REVISION (S): 12 SHEET 7 OF 8 PAGE 5

* REF. DES.	* WANG PART NO.	* VALUE/TYPE *	DESCRIPTION	* DRAWING NO. *	QTY. *
L126					
L136					
L140					
L159					
L181					
L184					
L203					
L24	376-0302-	74LS273	IC OCTAL D-TYPE FLIP-FLOP W/CLEAR		6
L37					
L39					
L51					
L58					
L91					
L88	376-0307-	74LS393	IC DUAL 4-BIT BINARY COUNTER		3
L90					
L106					
L46	376-0310-	74LS373	IC OCTAL D-TYPE LATCH TRI-STATE OUTPUTS		3
L86					
L107					
L22 - L23	376-0317-	29LS2521	IC 8-BIT COMPARATOR		4
L38					
L41					
L149	376-0318-	74276	IC QUAD J-K FLIP-FLOP		1
L44	376-0323-	745225	IC 16 X 5 BI POLAR ASYNCH FIFO		4
L47 - L48					
L64					
01 - 03	376-9003-	SKT 24	IC SOCKET 24 PIN DIL PC MOUNT		3
04 - 07	376-9010-	SKT 22	IC SOCKET 22 PIN DIL PC MOUNT		4
STF2	452-2707-	STIFFNER	STIFFNER LOWER		1
STF1	452-2708-	STIFFNER	STIFFNER UPPER		1
09 - 010	465-1238-	EXTRCTOR	EXTRACTOR		2
08	510-8313-		PCB		1
011	600-9007-	24AWG	WIRE SOLID UNINSULATED TINNED COPPER ***(QTY A/R)*		1
018 - 024	650-2100-	SCREW	SCREW 4-40 X 5/16		7
025 - 031	652-2000-	NUT	NUT 4-40		7
JP6 - JP8	654-0104-	3 CONT	CONN PC HEADER SINGLE ROW .100		3

BOARD NO. & TITLE: C8313 SMD 2 PORT DISK OR INTRF SCHEMATIC REVISION (S): 12 SHEET OF PAGE 6

*	*WANG PART NO.	* VALUE/TYPE *	DESCRIPTION	* DRAWING NO. *	QTY. *
(CAUTION - THE FOLLOWING PARTS/COMPONENTS CONTAINED IN THIS B.O.M. ARE NOT RECOMMENDED FOR NEW DESIGNS)					
	376-0202-	74S74	IC DUAL D-TYPE POS EDGE TRIGRD F/F W/PRESET/C		2
	376-0274-	1453	IC QUAD LINE DRIVER 16 PIN DIP		6
	376-0318-	74276	IC QUAD J-K FLIP-FLOP		1
	376-0323-	745225	IC 16 X 5 BI POLAR ASYNCH FIFO		4

*** END-OF-REPORT ***

WANG LABORATORIES, INC.

>>>>> ELECTRICAL PARTS LIST <<<<< SHEET OF PAGE 1

(FINAL BILL-OF-MATERIALS)

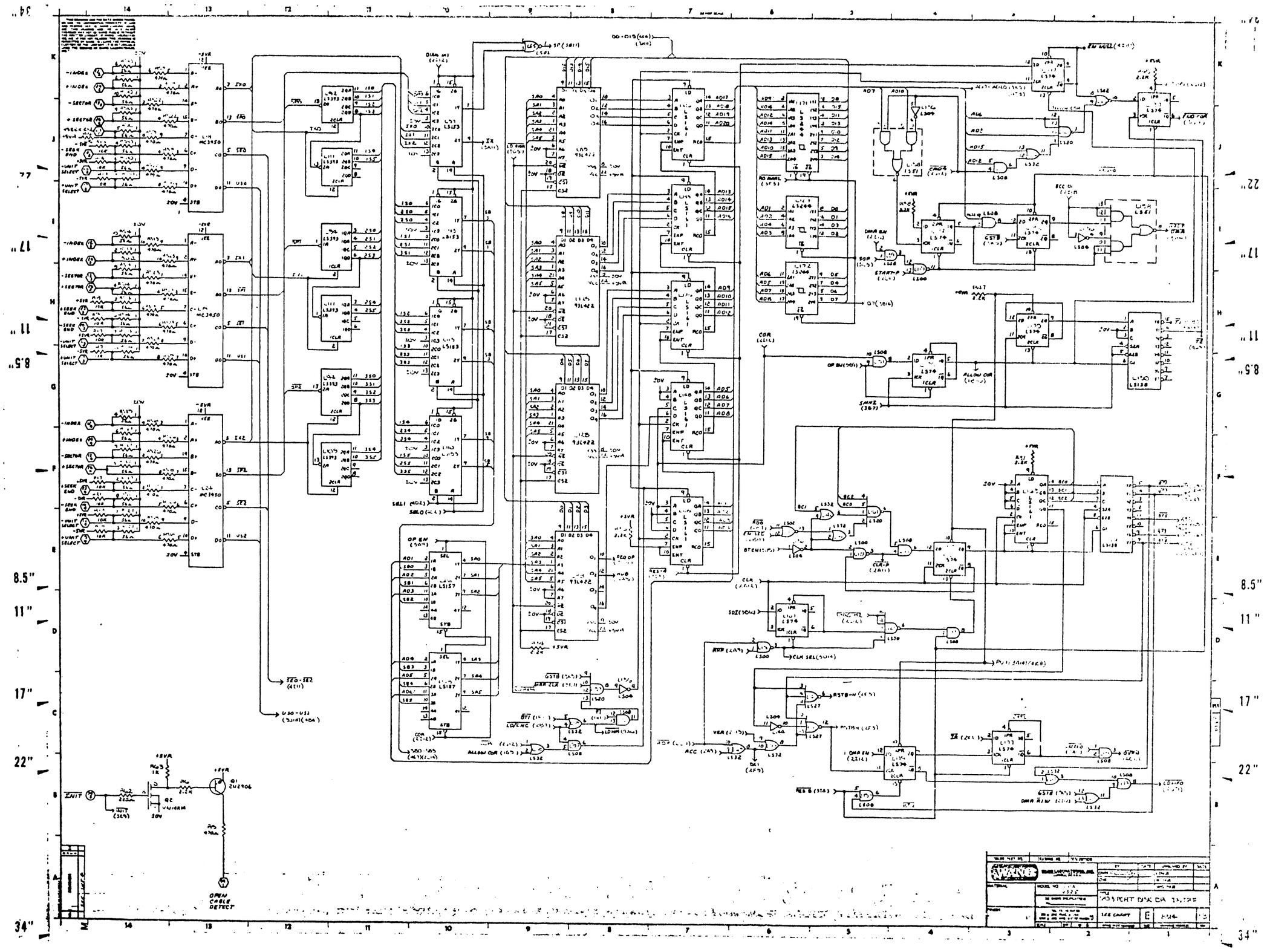
BOARD NO. & TITLE: C8313 SMD 2 PORT DISK OR INTRF
ASSEMBLY LEVEL & TITLE: 210 8313-A
ARTWORK REVISION (R): 04
ASSEMBLY REVISION (A): 77
SCHEMATIC REVISION (S): 12
DWG OR MOST RECENT ECO: 32702

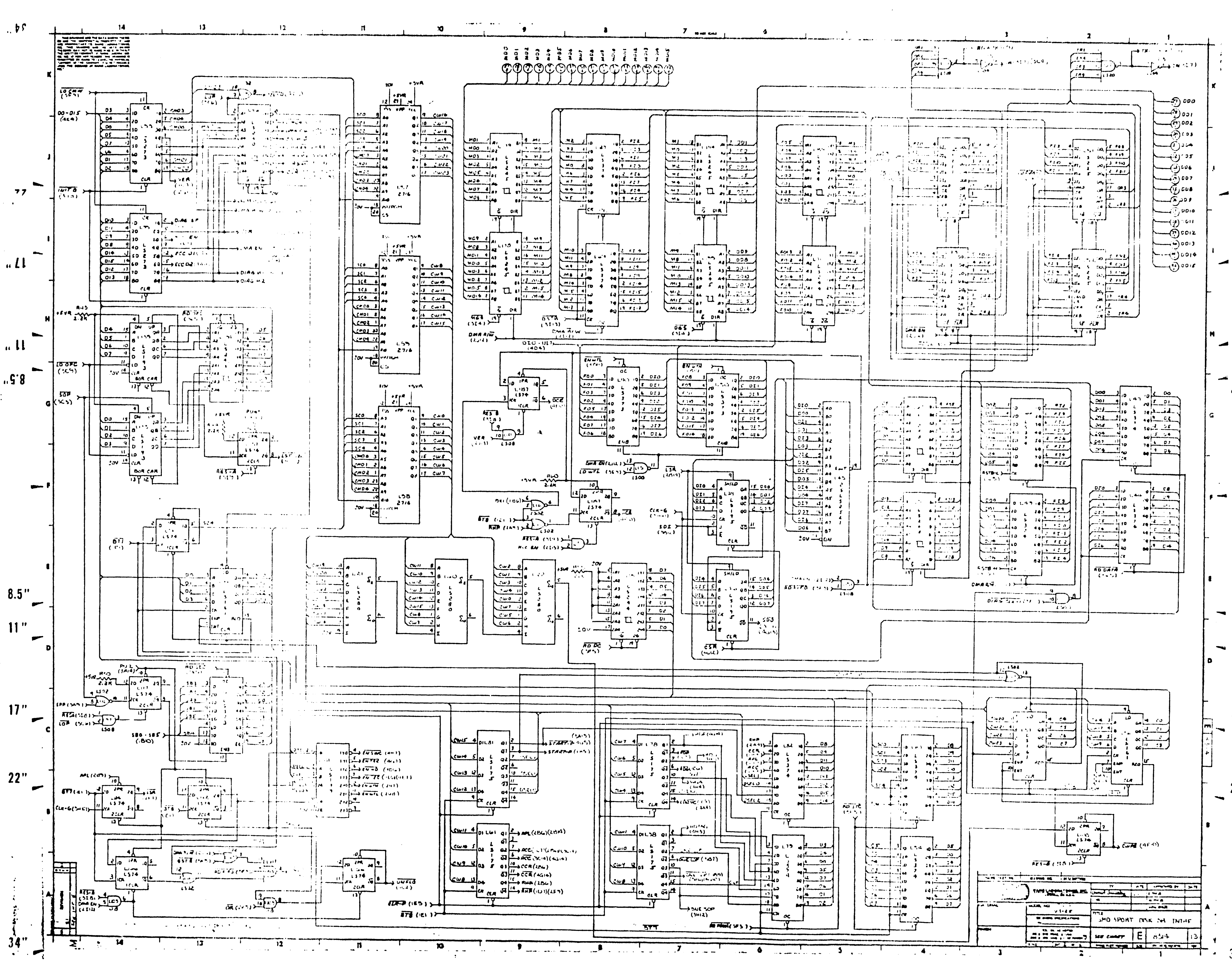
CREATED: 04/12/83 16:56
LAST MODIFIED: 08/14/84 08:49 BY: LAB
EDITING REVISION: 6

* REF. DES.	* WANG PART NO.	* VALUE/TYPE *	DESCRIPTION	* DRAWING NO. *	QTY. *
01	209-8313-		PCA		1
L81	377-0384-	93L422	IC 256 X 4 BIPOLAR RAM 60NS L PWR 22 PIN		4
L84					
L120					
L123					
L53 - L55	377-0398-	2716	IC 2KX8 UV EPROM 450NS (5V)		3

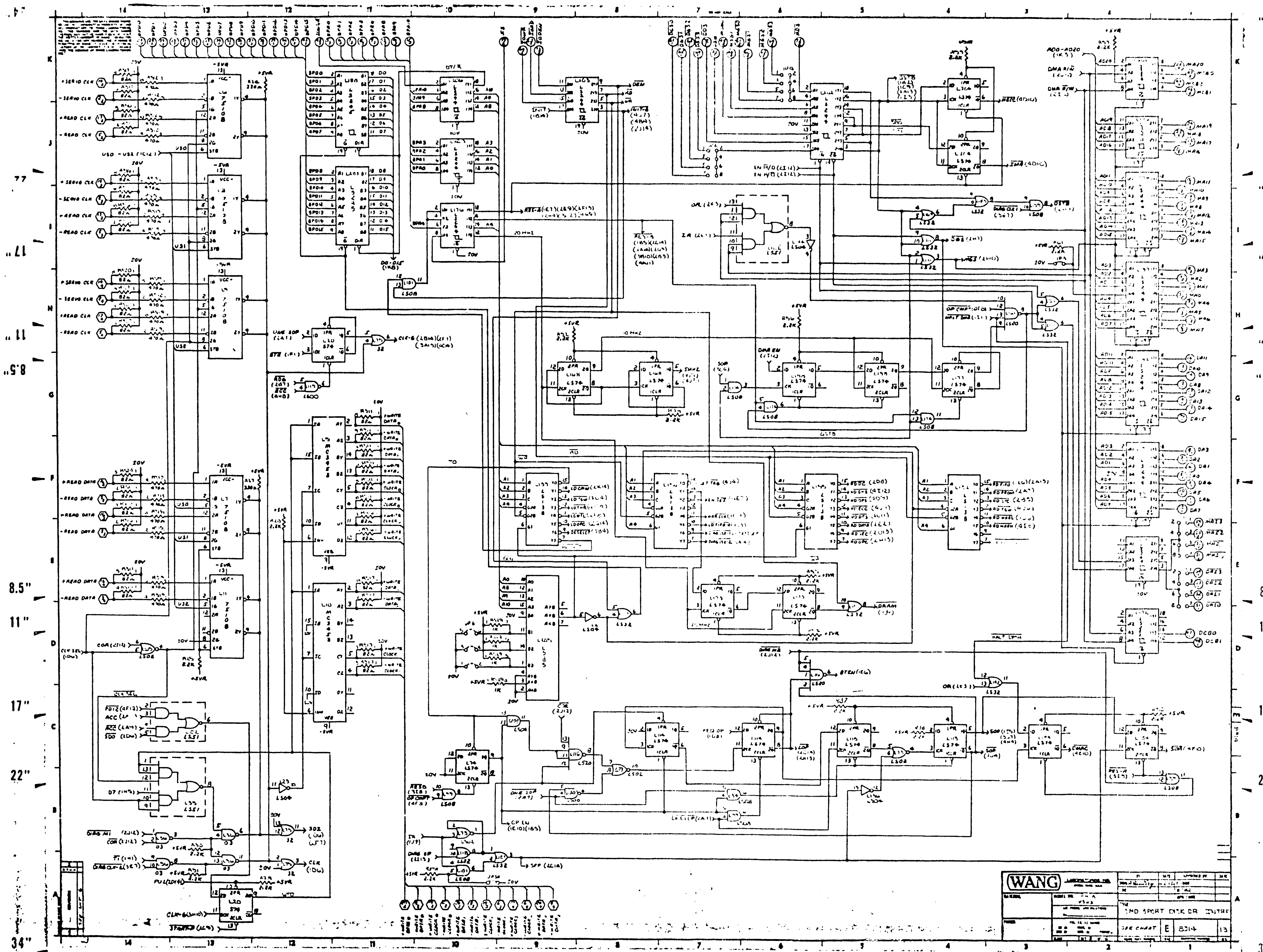
*** END-OF-REPORT ***

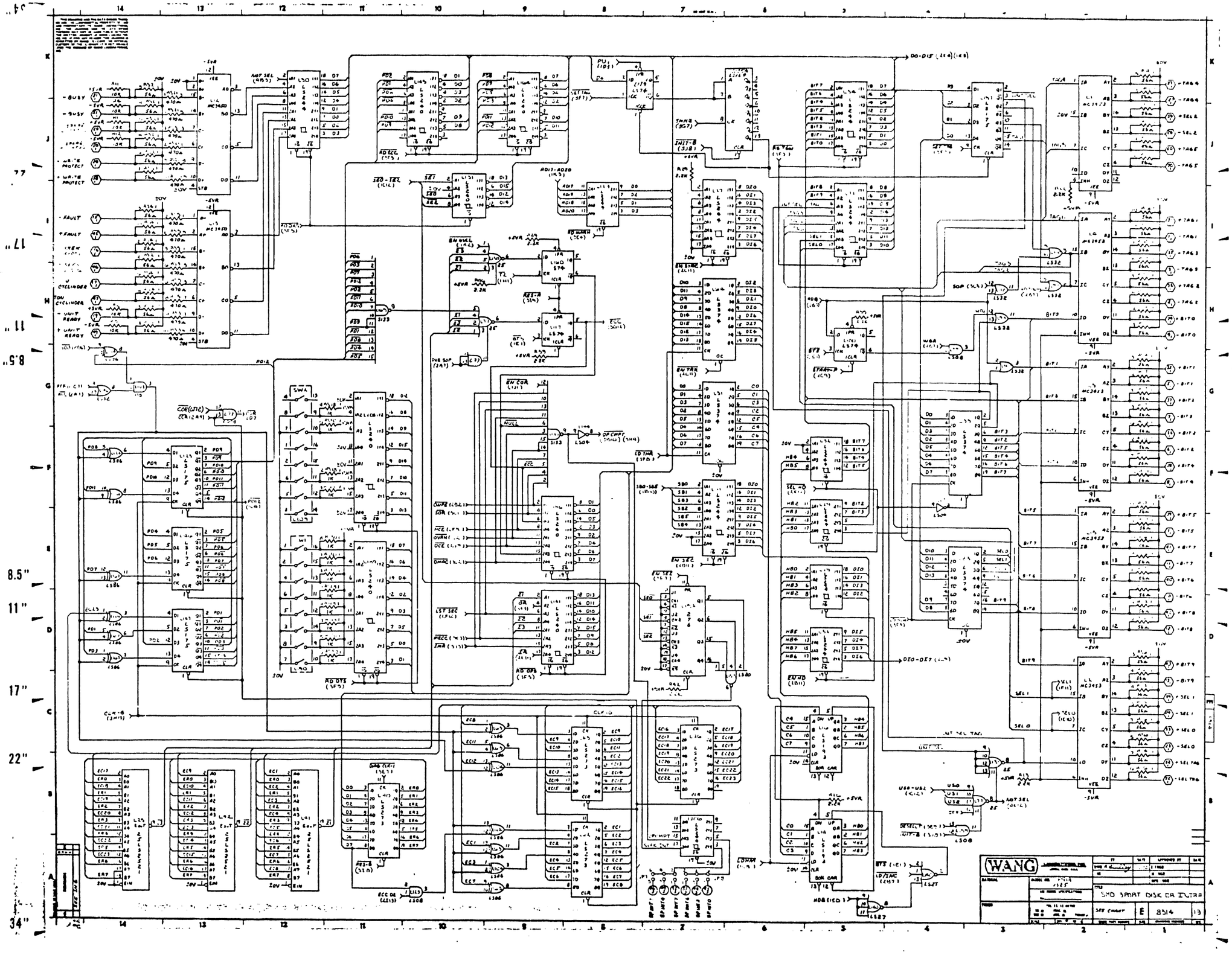
			BY	DATE	APPROVED BY	DATE
WANG LABORATORIES, INC. LOWELL, MASS.			DRAWN		ELNGR	
			CHKD		MECHNGR	
MATERIAL	MODEL NO.				MFG ENGR	
	SEE ENGR'G SPECIFICATIONS NO.		TITLE SMD 2 PORT DD INTERFACE			
FINISH	TOL. EX. AS NOTED XXX ± .010 FRAC. ± 1/64 XXX ± .005 ANG. ± 0°30'		SEE CHART	C	8313	12
	SCALE	WT.	WANG PART NO. & DASH	SIZE	DRAWING NO.	REV


MC3450
LS393
LS153
93L422
LS157
LS374
LS138
LS161
LS32
LS08
LS04
LS00
-INDEX
+INDEX
-SECTOR
+SECTOR
+SEEK END
-SEEK END
-UNIT SELECT
+UNIT SELECT
DIAG WI
DD-D19 (4A4)
SP (3D11)
EN NULL (4D11)
CNTR
OP EN (3D4)
SEL1 (4D2)
SEL0 (4C4)
SE0-SE2 (4D11)
US0-US3 (3D11)(4D4)
SB0-SB5 (4E7)(2D4)
ALLOW CUR (1G7)
ALLOW COR
GSTB (3A5)
WRR CLR
LD/INC (2G7)
CLR
CLR SEL (3D14)
START-P (2C4)
STARTEN
RSTB-H (2F5)
PSTSH (2F5)
DMA EN (2E12)
DMA R/W (2D4)
RES B (3A4)
CLR-P (2A11)
SOP (3C5)
D7 (3D14)
COR (2G11)
SMNZ (3B7)
VER (2H5)
ACC (2A9)
INIT
OPEN CABLE DETECT
+5VR
2N2906
VN10KM
0OV
WANG
V325
SEE CHART
E



M2


WANG
VS
SEE CHART
E
8314
13


WANG
SMD SMART DISK CR INTFC
SEE CHART
E
8514
13
- BUSY
- FAULT
+ FAULT
- SEEK COMPLETE
- CYLINDER
+ CYLINDER
- UNIT READY
+ UNIT READY
- WRITE PROTECT
+ WRITE PROTECT
+5VR
-5VR
20V
10V
MOT SEL (4K5)
AD ECC (1F5)
AD STA (1F5)
AD DTA (1F5)
SEL0 - SEL2 (1C1)
AD17-AD20 (1K5)
BD17-BD20 (1K4)
BD MARK (3C4)
BD STA (1F5)
BD DTA (1F5)
EN WRT (4K3)
EN STRB (4C11)
EN TRK (4C11)
EN COR (4J2)
EN SEC (4B11)
EN WD (4B11)
EN SER (4B11)
T2 (1H1)
RES CR (3K4)
DRIVE SEL (2A1)
NULL
OP CMPT (3G4)
LD TMR (3F3)
SWITCH (3K3)
SWB
SWA
ECC (3G12)
COR (3G12)
CLK-10
CLK-16
CLK-6
DMA CLK (3K7)
RES-CR (3J3)
ECC DS (4J13)
SEC CNT
SEC CMPT
SEC SET
SEC INT
SEC MATCH
SEC MISS
SEC HIT
SEC MISS
SEC HIT
SEC MISS
SEC HIT
SEC MISS
SEC HIT
DO-DI5F (2E4)(1K8)
DI0-DI7 (1J4)
BIT7
BIT6
BIT5
BIT4
BIT3
BIT2
BIT1
BIT0
SEL2
SEL1
SEL0
SEL TAG
TAG3
TAG2
TAG1
TAG0
SDP (5C3)
WRA (1C1)
MOT SEL (3E4)
USO-US2 (1C12)
SERDES (3C1)
UNIT SEL
LOAD
LS00
LS02
LS04
LS08
LS10
LS20
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LS86
LS93
LS109
LS125
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LS163
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LS175
LS193
LS240
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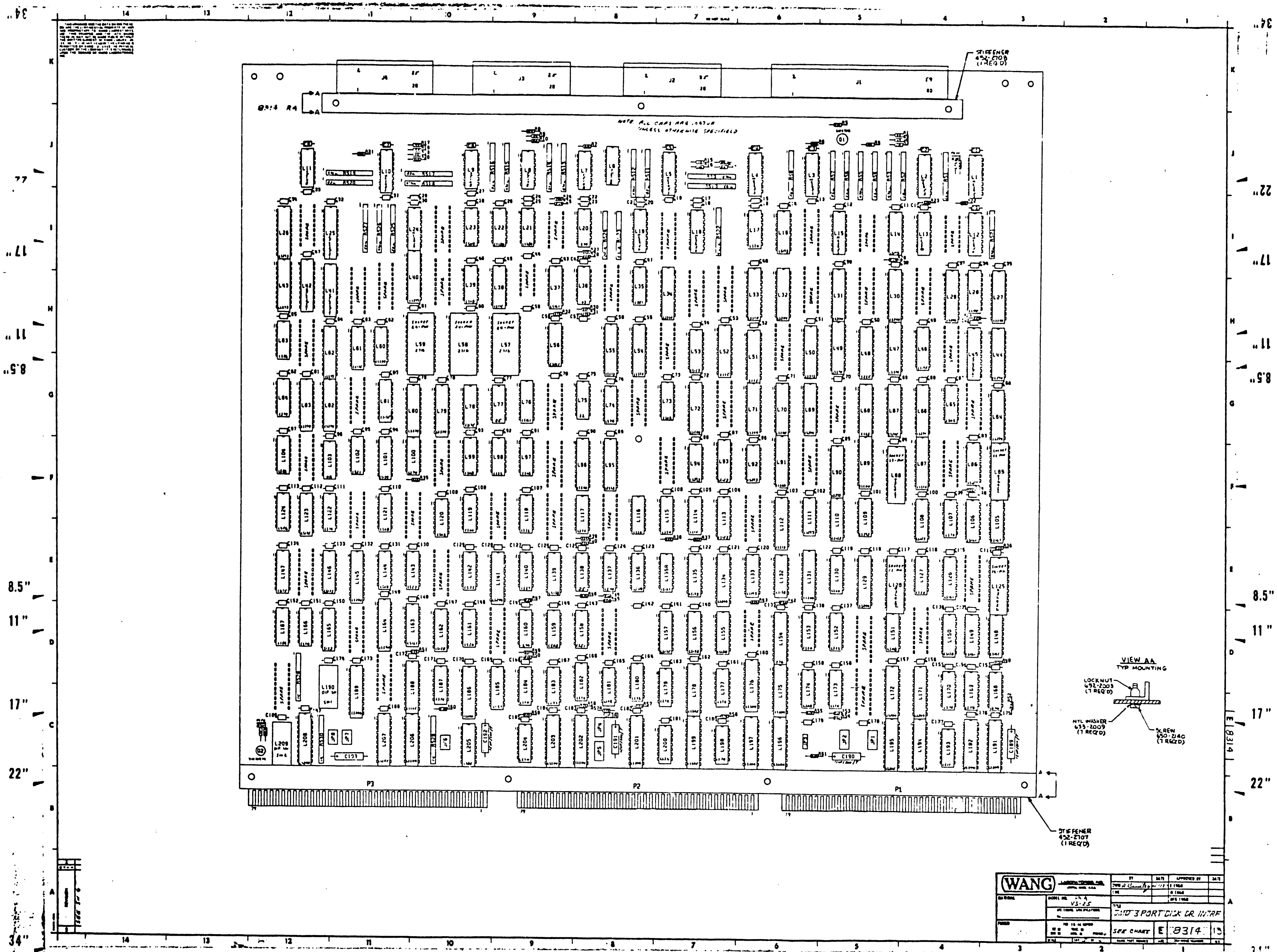
LS273
LS280
LS283
LS298
LS365
LS373
LS374
LS377
LS378
LS379
LS390
LS393
LS670
MC1489
MC3453
MC3486
MC3487
MC3488
MC3489
8.5"
11"
17"
22"
34"

M4


STIFFENER
452-2109
(1 REQ'D)
J4
J3
J2
J1
NOTE: ALL CAPS ARE .047UF
UNLESS OTHERWISE SPECIFIED
P3
P2
P1
STIFFENER
452-2107
(1 REQ'D)
VIEW AA
TYP MOUNTING
LOCKNUT
452-2003
(7 REQ'D)
NYL WASHER
455-2009
(7 REQ'D)
SCREW
650-2140
(7 REQ'D)
8.5"
11"
17"
22"
34"
WANG
MODEL NO.
VS-25
TITLE
3 PORT DISK CR INTRF
SEE CHART
E
8314
13

M5

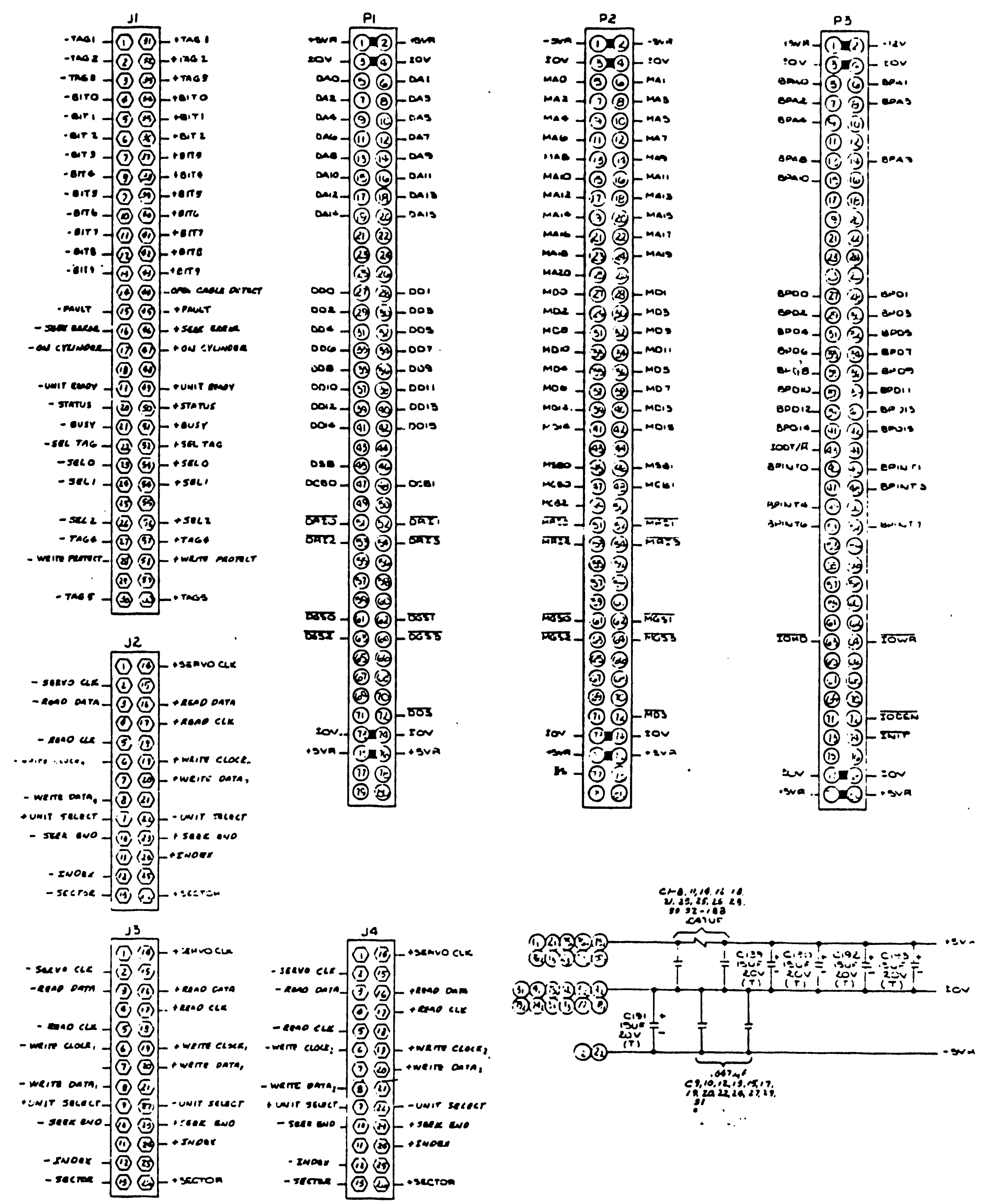
COMPONENT	TYPE	W.L. PT NO.
R1-4,7-19,21	10K 1/4W 5%	330-4011
R5	470Ω 1/4W 5%	330-2048
R6,22,23,25,[illegible] 36,38-32,34-40, 42-50,52-61,[illegible]	2.2K 1/4W 5%	330-3025
[illegible]	330Ω 1/4W 5%	330-2034
R62	[illegible]Ω 1/4W 5%	330-2023
R63	1K 1/4W 5%	330-3011
RS1,2,4,6-8,10, 14,45,47	560Ω SIP	333-0062
RS3,5,9,12,13, 15,[illegible],19,21-23,[illegible]	470Ω SIP	330-[illegible]03
RS11 16,17,20,24	82K SIP	333-0024
RS25-30	1K SIP	333-C037
C1-188	.047UF	300-1966
C189-193	15UF 20V(T)	300-4026
Q1	2N2906	375-0017
Q2	[illegible]	375-[illegible]5
SW1,2	8 BANK SW	325-1503
J1	60 PIN CONN	350-0057
J2-4	26 PIN CONN	350-0056
JP1,2,4,5	3 PIN HDR	350-0212
JP3 4A		[illegible]
JP6-A	3 PIN HDR	654-0104
(31 REF)	RAN [illegible]	[illegible]
	STIFFENER	452 [illegible]
	[illegible]	[illegible]
	STIFFENER	[illegible]
(QTY [illegible])	[illegible]	[illegible] 60
(QTY 7)	LOCK NUT	[illegible]
(QTY 7)	[illegible]	353 2307

I.C. TYPE	LOCATION	SPARE
74LS00	L190	1
74LS02	L83	1
74LS04	L23	2
	L150	1
	L143	1
74LS11	L43	2
74LS27	L140	1
	L43	1
74LS32	L32	2
	L69	1
	L20	1
74LS51	L55	1
74LS[illegible]	[illegible]	
	[illegible]	1
74LS55	L104	1
	L67	1
74LS240	L131	1
74LS393	L92	1
	L109	1
7438	L[illegible]	1
74LS23	L34	1
	L97	1
	L81	1

IC LOCATION	TYPE	W.L. PT NO
L1-5,10,15	MC3453	376-0274
L6,9,11	75108	376-0029
L12,13,18,19,24	MC3450	376-0215
L14,16,133,135	74LS195	376-0220
L17,116,127,153, 161	74LS20	376-0210
L74,84,100 107,114,[illegible],117, 122,137,[illegible] 163,170,[illegible]17, 179,182,184,187, 198,204	74LS74	376-0155
L21,[illegible]	74LS[illegible]	376-0242
L25 [illegible],144	74LS04	376-0160
L25,41,42,45	25LS2521	376-0517
L26,40,43,53, 62,95	74LS215	376-0302
L27 [illegible]	74LS244	376-0260
L28,46	74LS195	376-0243
L31,33,44,41, 49,54,64,66, 63,7[illegible],80,82, 85,87	74LS374	376-0206
L35,102,[illegible]	74LS51	376-0215
L36	7403	376-0028
L37,56,76,103, 106,126,148,143, 165	74LS161	376-0233
L38,61,7[illegible],81,[illegible] 146,147,157	74LS175	376-0160
L39,57,89 121,[illegible]	74LS08	376-0155
L48,51,52,[illegible]	74LS245	376-0329
L50 [illegible]	74LS373	376-0310
L53,[illegible]	74LS153	376-0150
L57-[illegible]	[illegible]	SEE CHART
L63,[illegible]	74LS86	376-0231
L65,73,1[illegible]	74LS02	376-0230
L20 1[illegible]	74S74	376-0262
L75	7432	376-3075
L67,70,178,188, 134,135,[illegible],231	74LS245	376-0285
L68,113,142, 152,169,150,[illegible] 200	74LS32	376-0211
L77,138	7425	376-0092
L85,86,125,128	93L422	SEE CHART
L36,108	74LS157	376-0216
L92,94,109,111	74LS393	376-0307
L96,131,141,145 [illegible]	74LS240	376-0247
L101	74LS138	376-022[illegible]
[illegible]	[illegible]	[illegible]
L119,150	74LS00	376-0207
L1[illegible],153,[illegible] 155,[illegible]	74LS15[illegible]	376-0244
L135A	74LS1[illegible]	376-0236
L140,145	74LS[illegible]	376-0245
L157	74[illegible]	376-0215
L163,185	74S139	376-0276
L175	74LS11	376-0229
L205	74LS85	376-0215
L57-59	24PIN SKT	376-9003
L85,[illegible],125,128	22 PIN SKT	376-[illegible]

MNEMONICS	COORD
+BIT0 - +BIT9	4F1
-BIT0 - -BIT9	4F1
BPD0 - BPD15	5K13
BPA0 - BPA4	5K11
BPA8 - BPA10	5K11
BPINT0 - BPINT7	4A7
+BUSY	4J14
-BUSY	4J14
DC30	4D1
DC31	5D1
DA0 - DA15	3F1
D00 - D015	2J1
DS3	3K7
DS30 - DS33	3K7
DFS0 - DFS3	3E1
LS8	3K7
+FAULT	4I14
-FAULT	4I14
+INDEX	1K14 1I14 1F14
-INDEX	1K14 1I14 1G14
[illegible]	3K9
INIT	1B14
[illegible]	3K9
[illegible]	3K9
IODT/R	3K12
IOFD	3K9
IOWR	3K9
MA0 - MA20	3I1
MCB0 - MCB2	3K1
MD0 - MD15	2K8
MDS	3K6
MDS0 - MDS3	3K6
MWE0 - MWE3	3E1
MSB0	3K7
MSB1	3K7
+ON CYLINDER	4H14
-ON CYLINDER	4H14
OPEN CABLE DETECT	4A13
+READ CLK	3J14 [illegible]
-READ CLK	3J14 [illegible] 3H14
+READ DATA	3F14 [illegible] 3E14
-READ DATA	3F14 3E14 3E14
+SEL0	4G1
-SEL0	4G1
+SEL1	4G1
-SEL1	4G1
+SEL2	4J1
-SEL2	4J1

MNEMONICS	COORD
+SERVO CLK	3K14 3J14 3H14
-SERVO CLK	3K14 3I14 3H14
+SEEK END	1J14 1H14 1F14
-SEEK END	1J14 1H14 1F14
+SEEK ERROR	4H14
-SEEK ERROR	4H14
+SECTOR	1J14 1H14 1F14
-SECTOR	1J14 1H14 1F14
+SEL TAG	4B1
-SEL TAG	4B1
+STATUS	4J14
-STATUS	4J14
+TAG1	4I1
-TAG1	4I1
+TAG2	4H1
-TAG2	4H1
+TAG3	4I1
-TAG3	4I1
+TAG4	4K1
-TAG4	4K1
+TAG5	4J1
-TAG5	4J1
+UNIT SELECT	1I14 1G14 1E14
-UNIT SELECT	1J14 1H14 1E14
+UNIT READY	4H14
-UNIT READY	4H14
+WRITE CLOCK,	3A10
-WRITE CLOCK,	3A10
+WRITE CLOCK,	3A10
-WRITE CLOCK,	3A12
+WRITE CLOCK,	3A9
-WRITE CLOCK,	3A9
+WRITE DATA,	3A11
-WRITE DATA,	3A11
+WRITE DATA,	3A10
-WRITE DATA,	3A10
+WRITE DATA,	3A7
-WRITE DATA,	3A7
+WRITE PROTECT	4J14
-WRITE PROTECT	4J14



210 : 209 / 377 OR 378						
210	209	L51	L36	L59	L85	125,128
8314A	8314	378-5138 #1	378-5140 #1	378-5139 #1	3[illegible]	0364

NOTE:
ALL RES ARE 1/4W 5%
UNLESS OTHERWISE
SPECIFIED.

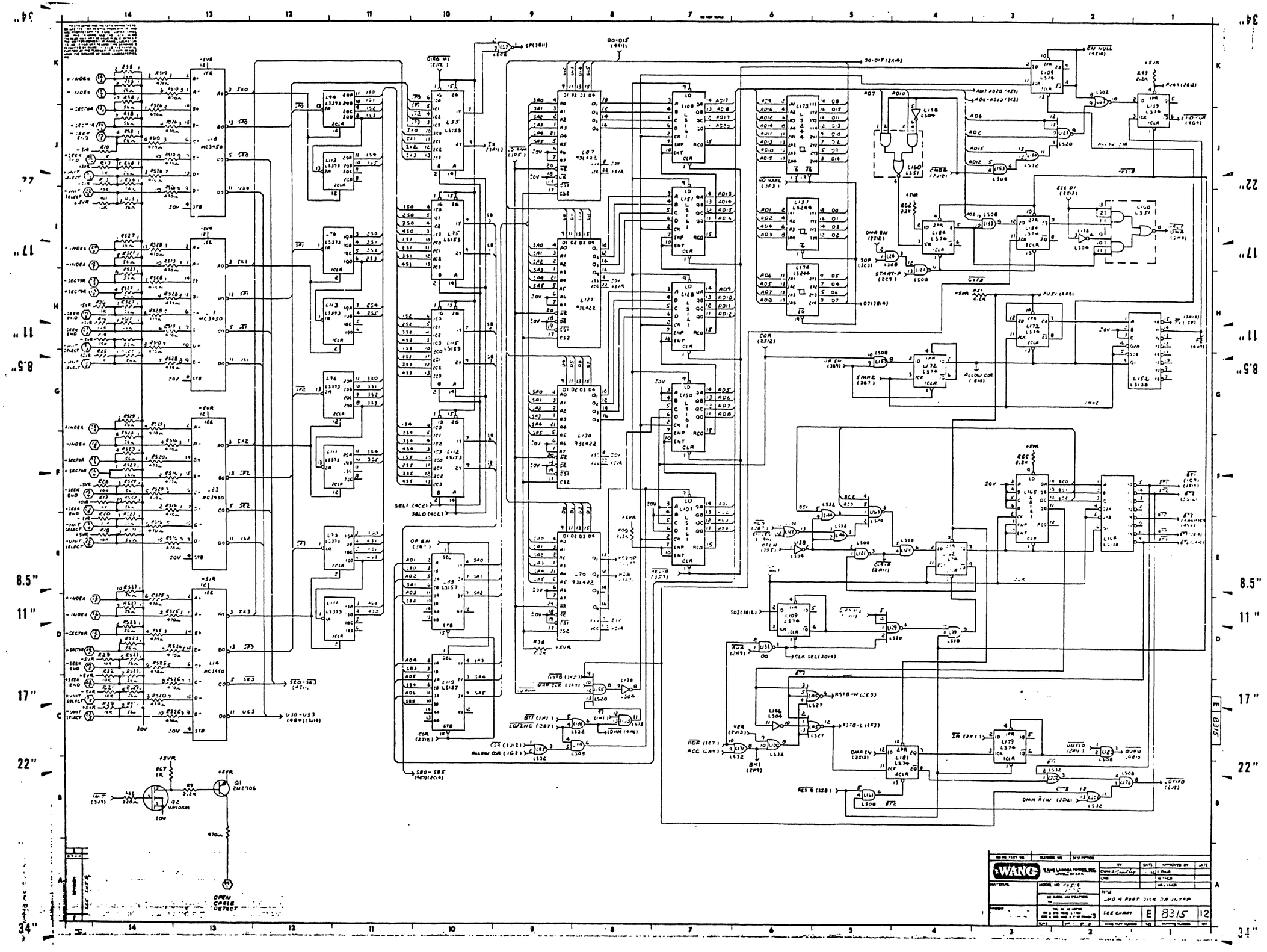
EREV 4

N

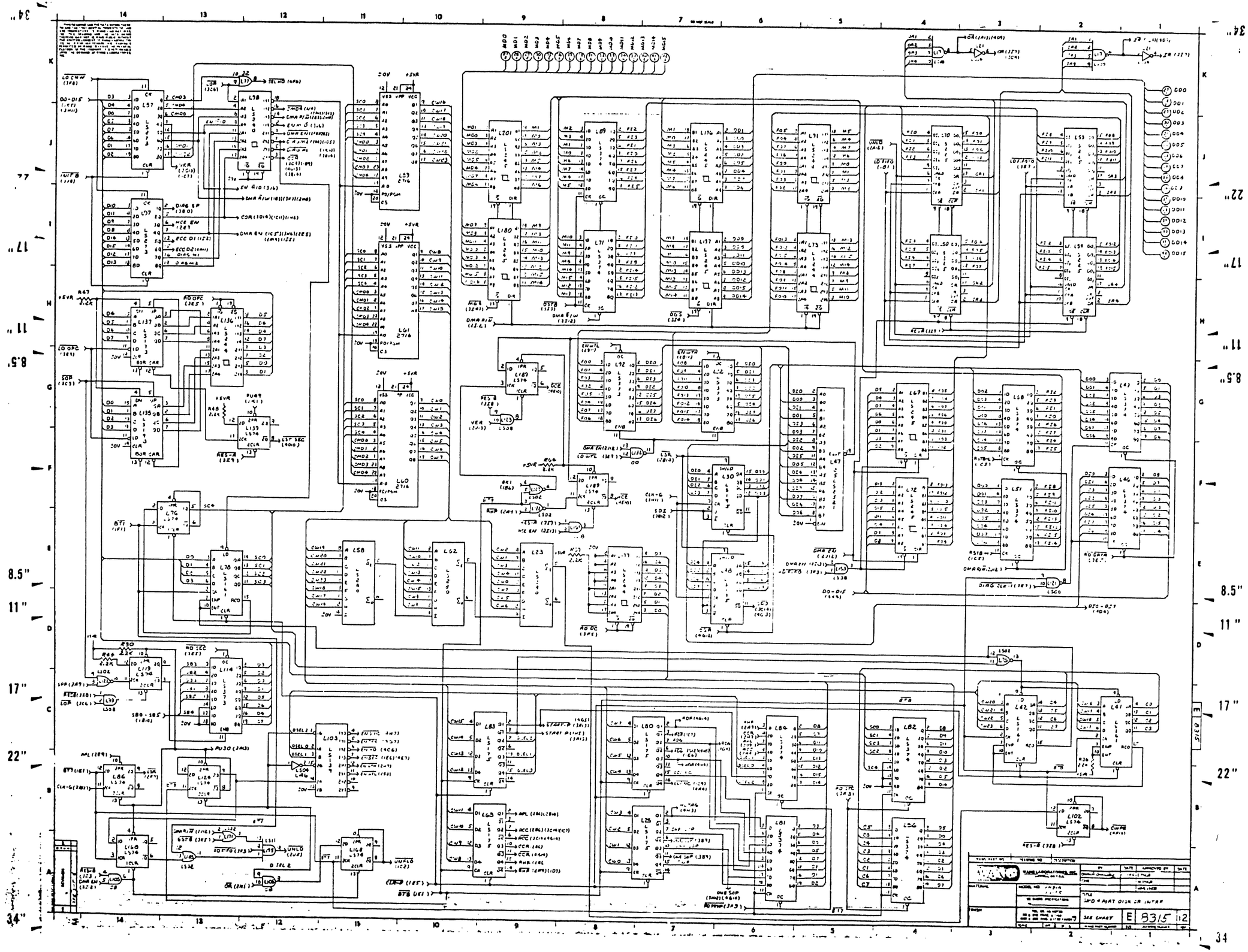
WANG

SMD SPORT DISK CR INTRF

SEE CHART | E | 8314 | 3



WANG LABORATORIES, INC.
MODEL NO 4458
TITLE
MD 4 PORT DISK DR INTRF
SEE CHART
E
8315
12


SDO SD1 SD2 SD3 SD4 SD5 SD6 SD7 SD8 SD9 SD10 SD11 SD12 SD13 SD14 SD15
L701
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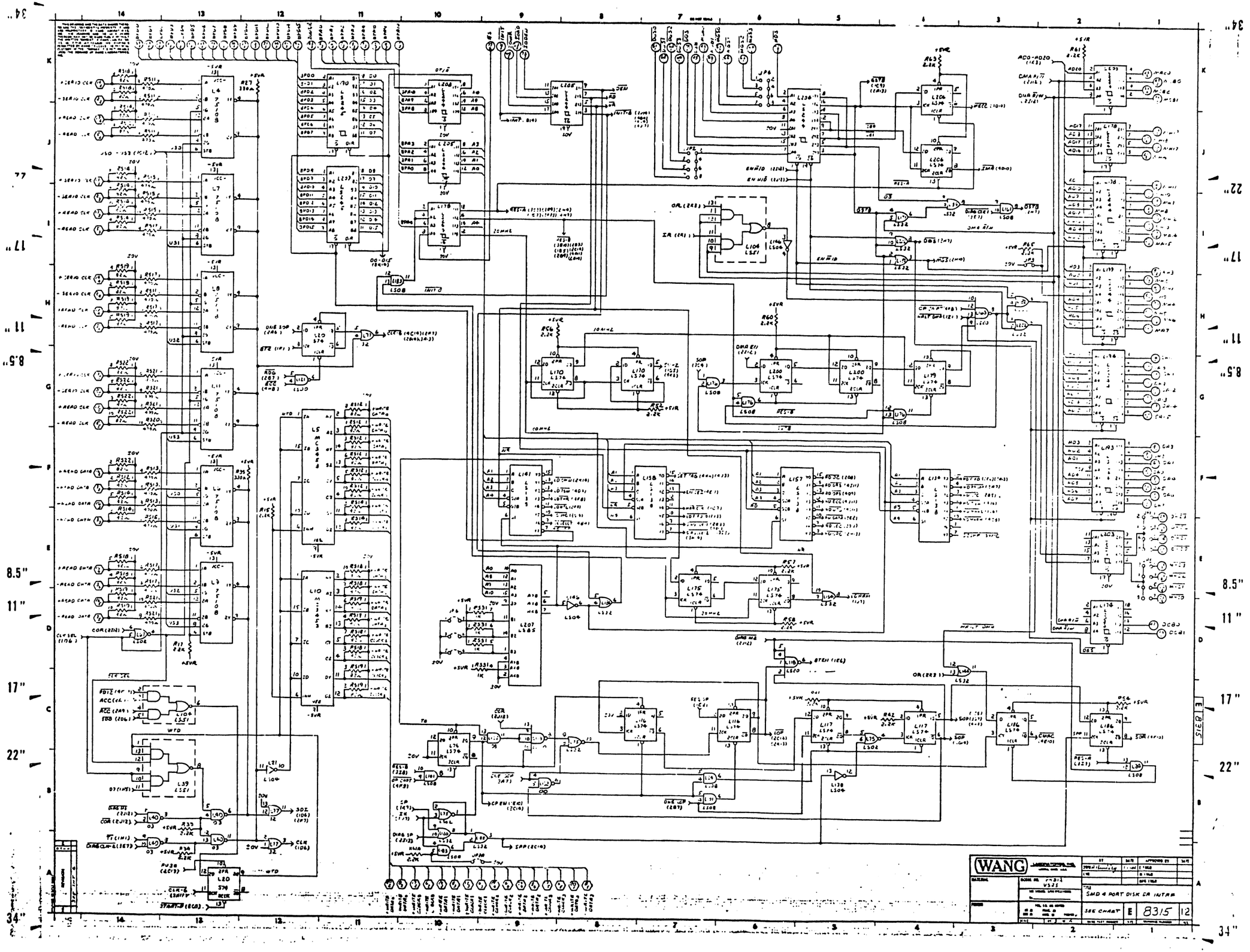
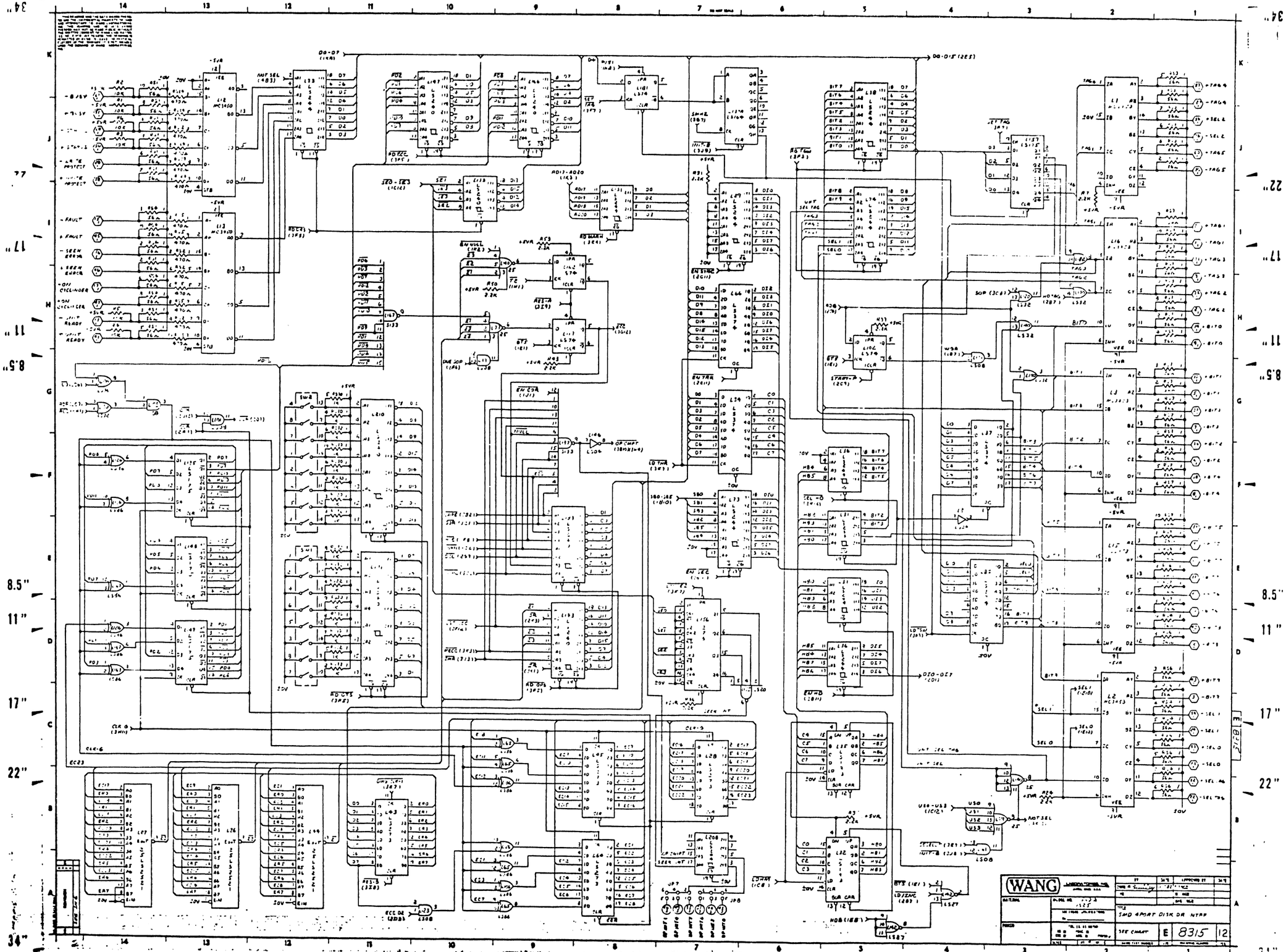
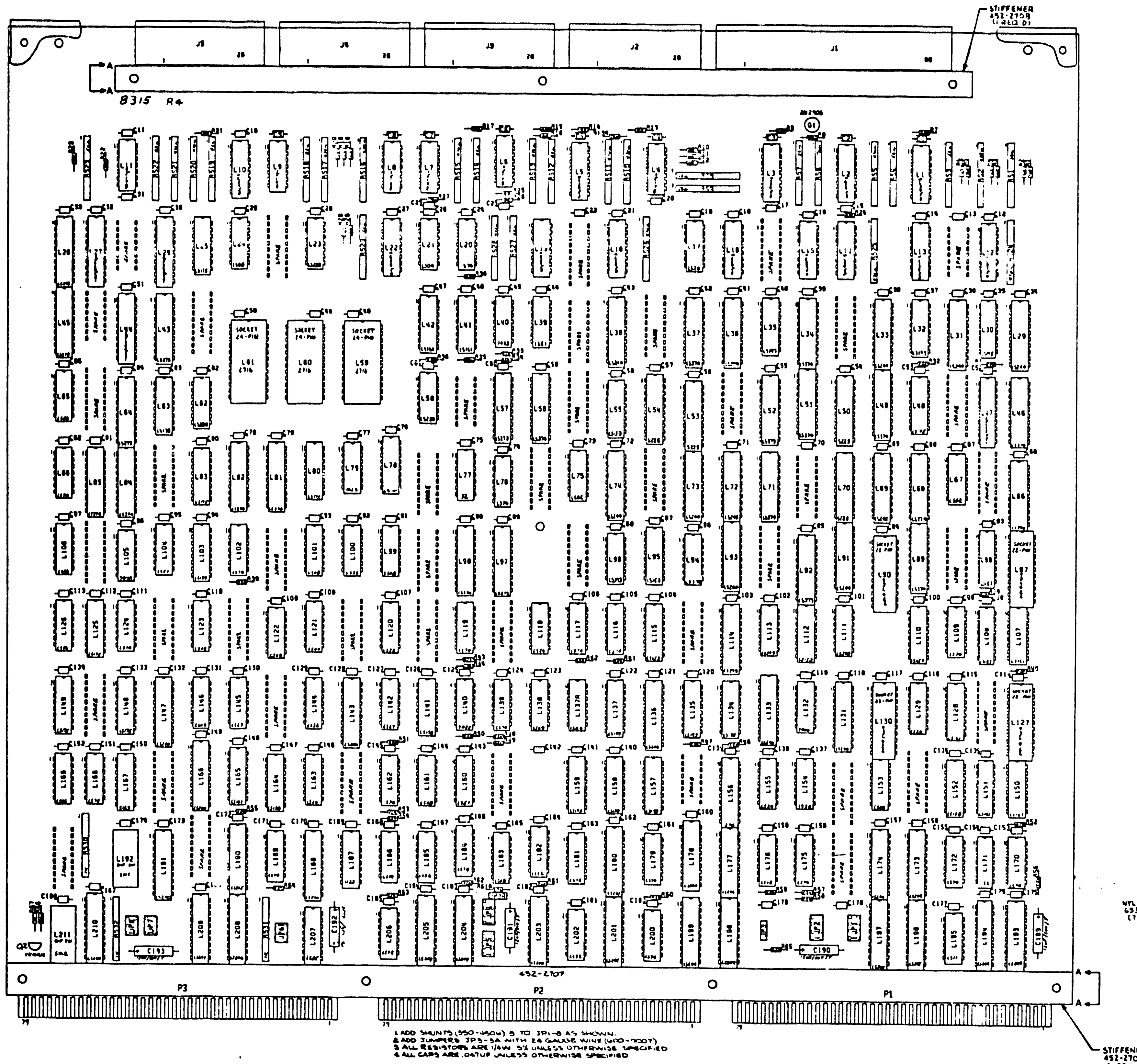
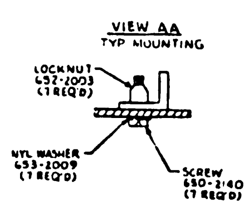

WANG
SMD 4 PORT DISK CR INTFC
SEE CHART
8315
12


WANG
SMD 4PORT DISK DR NTRP
SEE CHART
E 8315 12



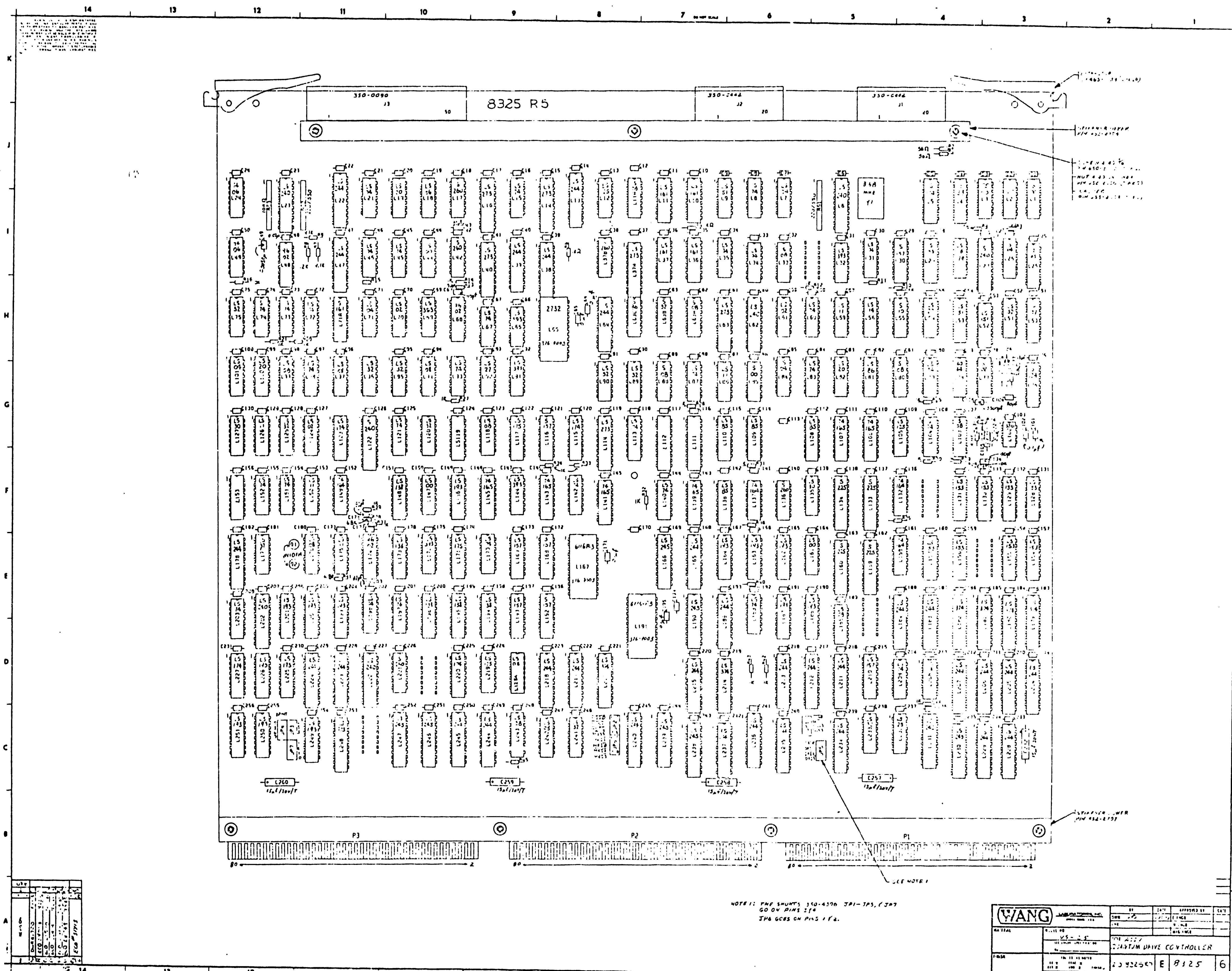
1. ADD SHUNTS (550-4506) 5 TO JP1-8 AS SHOWN.
2. ADD JUMPERS JP5-5A WITH 24 GAUGE WIRE (400-7007)
3. ALL RESISTORS ARE 1/4W 5% UNLESS OTHERWISE SPECIFIED
4. ALL CAPS ARE .047UF UNLESS OTHERWISE SPECIFIED



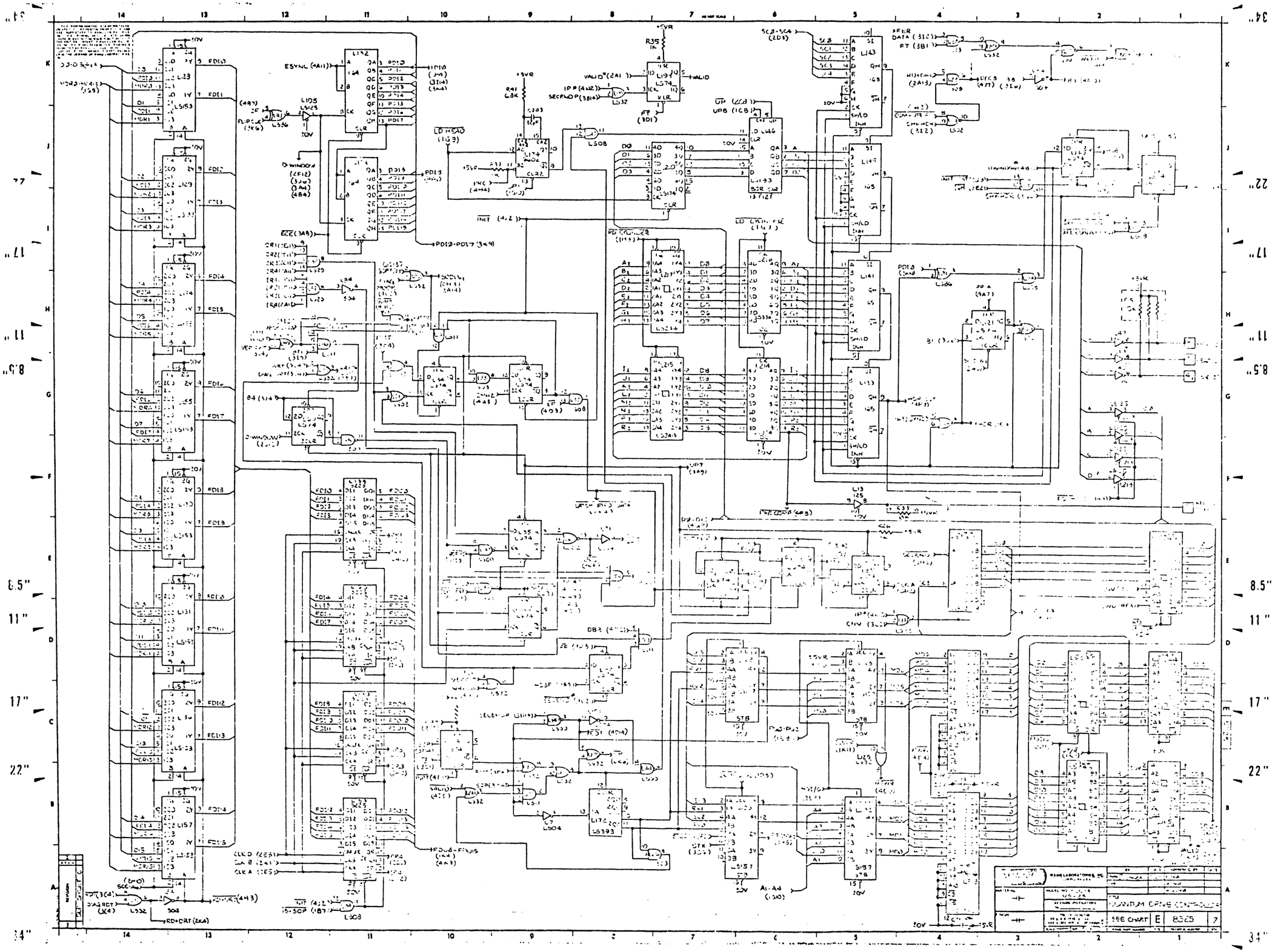
WANG	MODEL NO. VS25	TITLE: SMD 4 PORT DISK CR INTRF.	
SEE CHART	E	8315	12

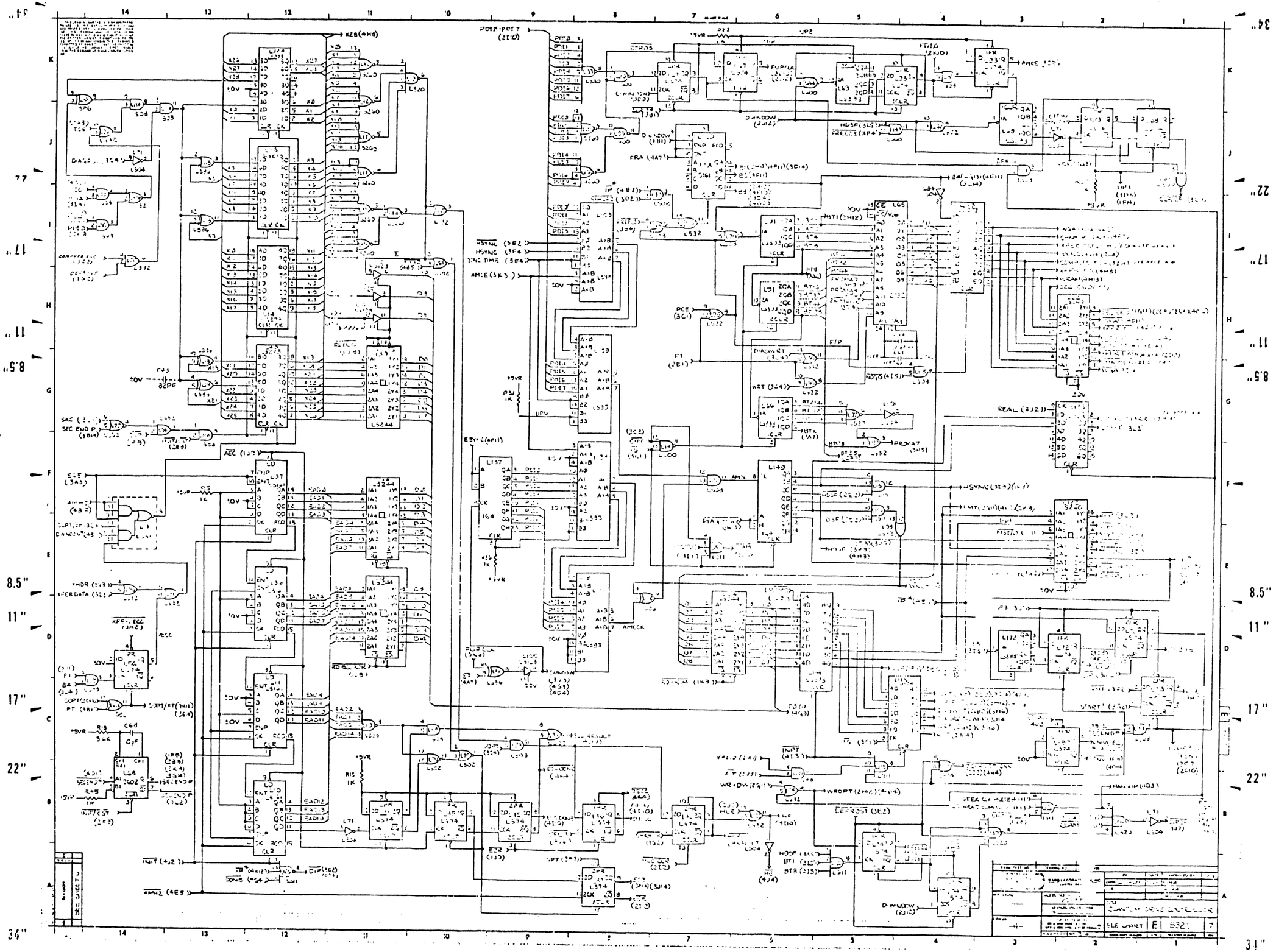
N5

NOTE:
ALL RES. ARE 1/4W 5%
UNLESS OTHERWISE
SPECIFIED

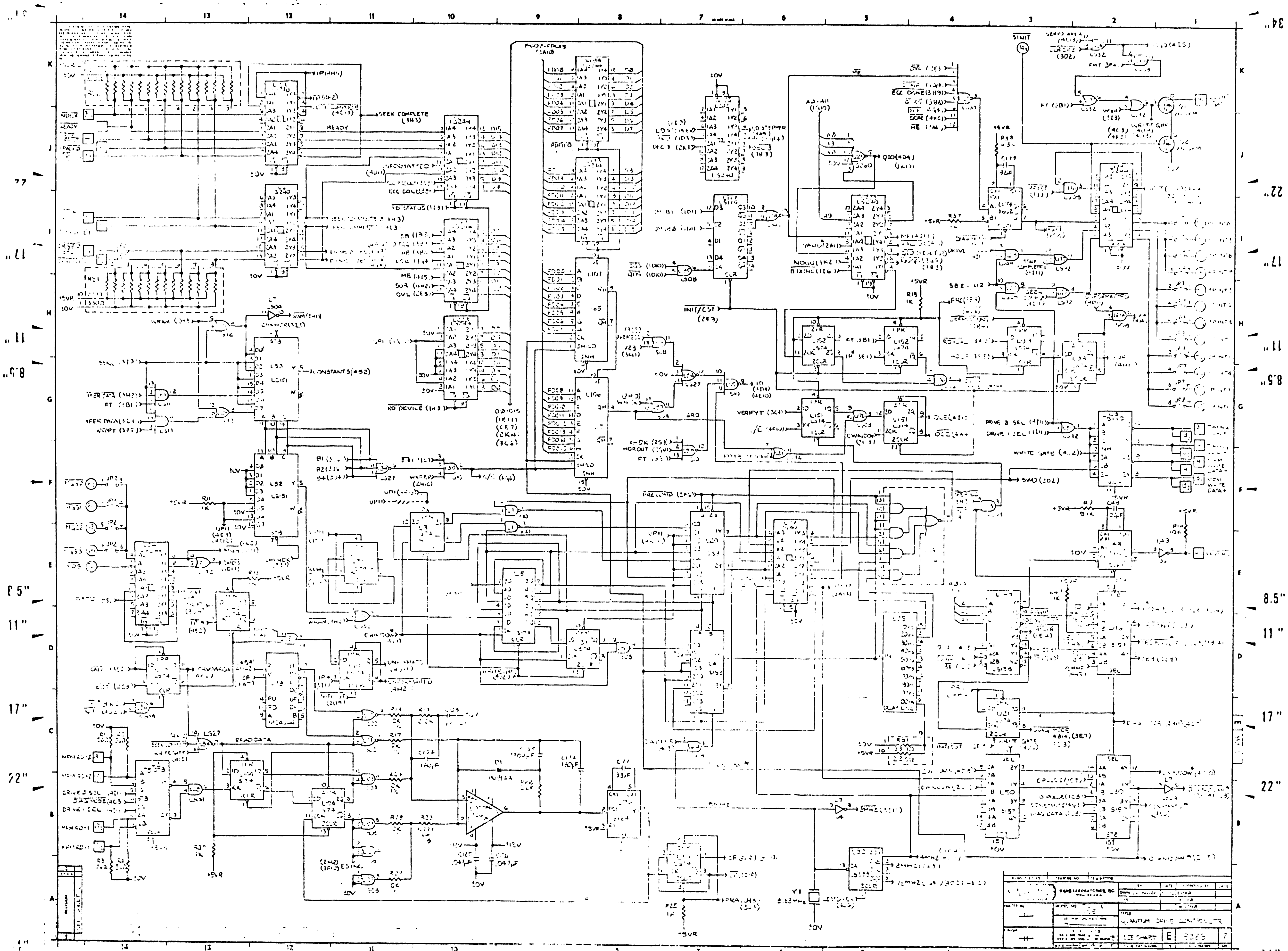


8325 R5
350-0090
350-2446
350-C446
P3
P2
P1
SEE NOTE 1
NOTE 1: THE SHUNTS 350-4396 JP1-JP5, & JP7 GO ON PINS 3&4
JP6 GOES ON PINS 1 & 2.
WANG
VS
QUANTUM DRIVE CONTROLLER
E
8325
6


QUANTUM DRIVE CONTROLLER
SEE CHART
E
8525
7

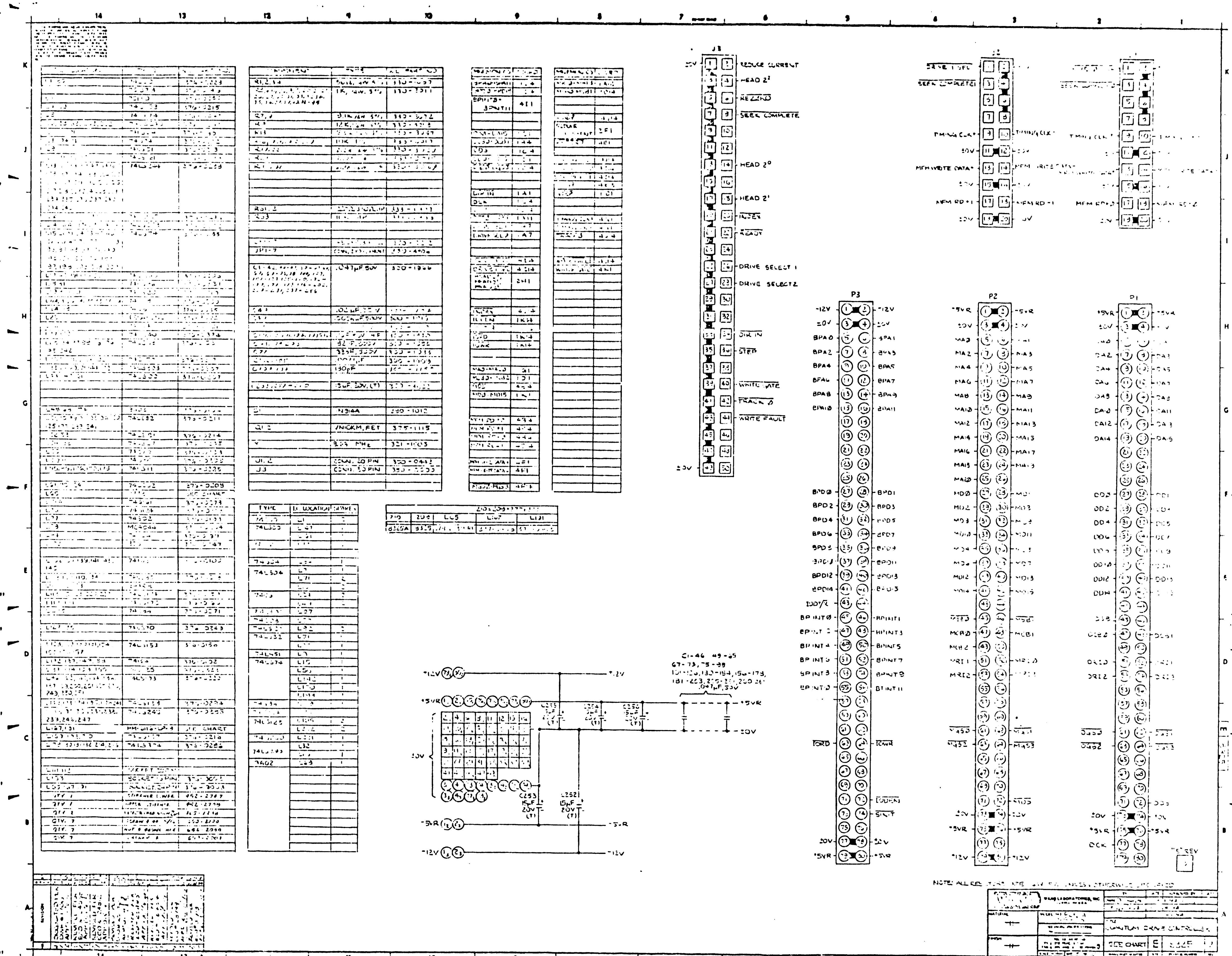


P3

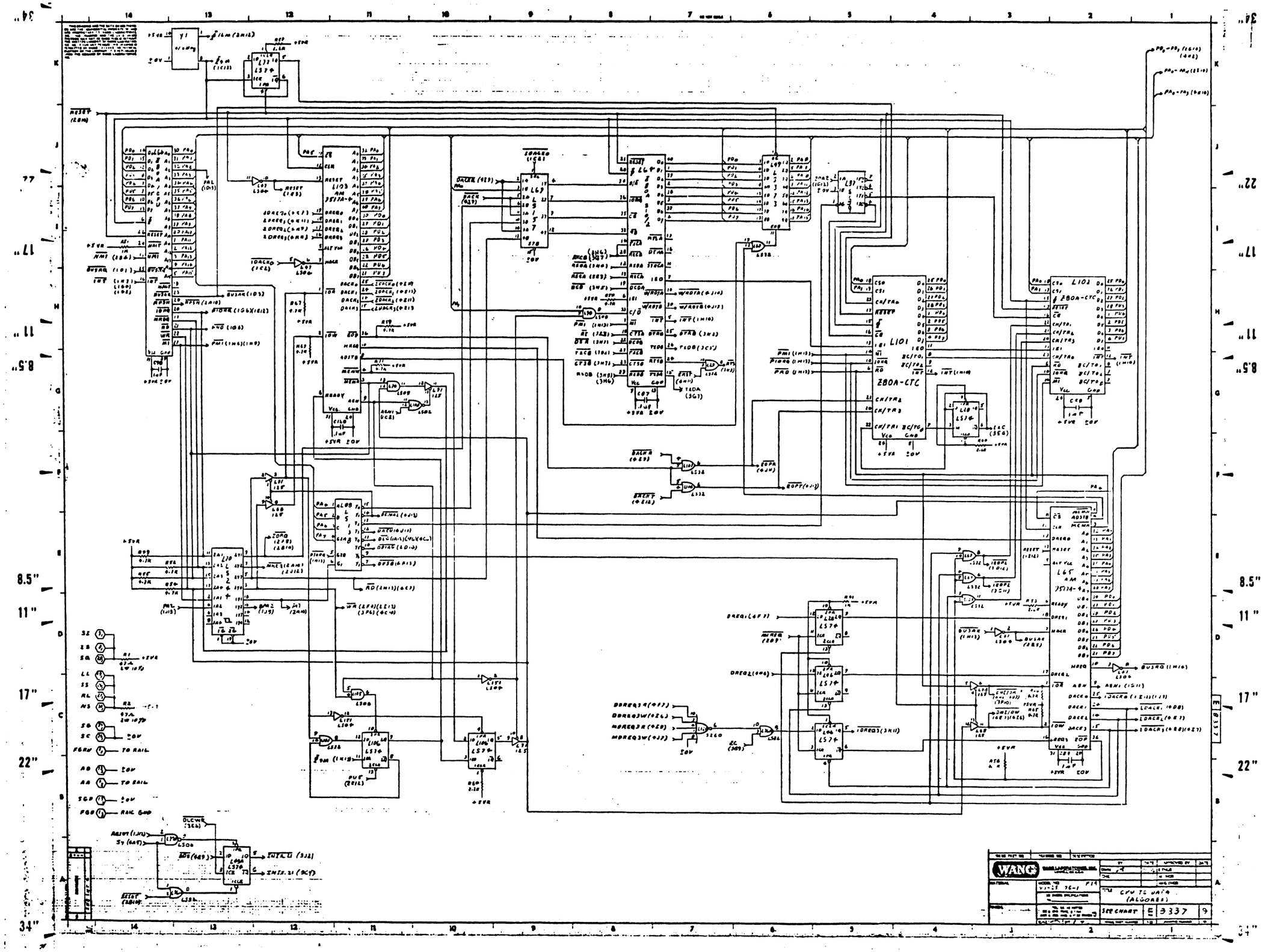


SEEK COMPLETE
READY
FORMATTED
ECC DONE
ND STATUS
ND DEVICE
CONSTANTS
READ DATA
WRITE GATE
SWD
SEL
TITLE
QUANTUM DRIVE CONTROLLER
SEE CHART
E

P4

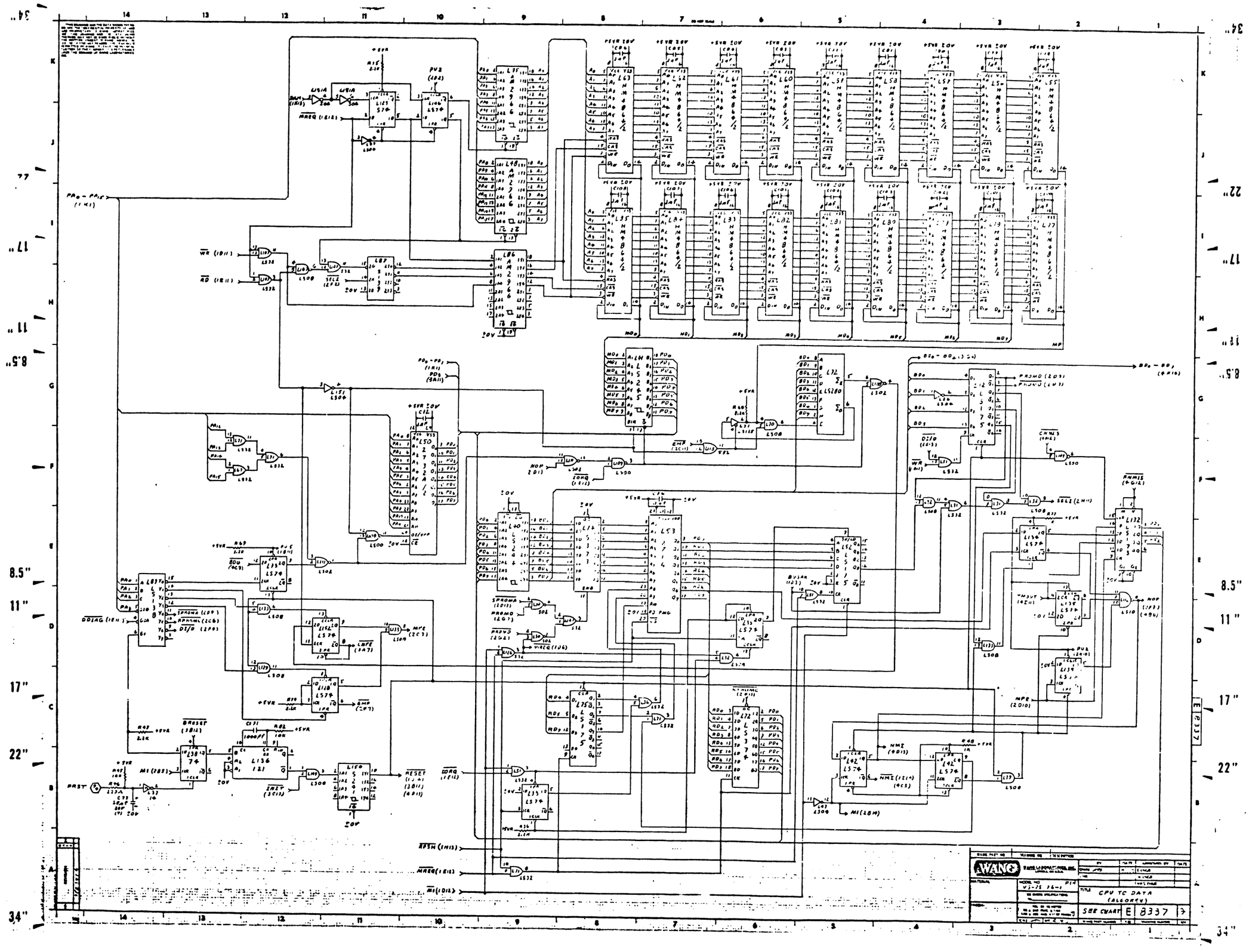


J3
REDUCE CURRENT
HEAD 2²
REZERO
SEEK COMPLETE
HEAD 2⁰
HEAD 2¹
INDEX
READY
DRIVE SELECT 1
DRIVE SELECT 2
DIR IN
STEP
WRITE GATE
TRACK 0
WRITE FAULT
P3
P2
P1
+12V
+5VR
C1-46, 49-65
.047µF,50V
NOTE: ALL RESISTORS ARE 1/4W, 5% UNLESS OTHERWISE SPECIFIED
WANG LABORATORIES, INC.
QUANTUM DRIVE CONTROLLER
SEE CHART



14
13
12
11
10
9
8
7
6
5
4
3
2
1
K
J
H
G
F
E
D
C
B
A
Y1
L73 LS74
RESET (2B14)
L103 AM 9517A-4
L64
L63
L101 Z80A-CTC
L102 Z80A-CTC
L65 AM 9517A-4
L70
L68 LS74
L66 LS74
L69
L106 LS74
L104 LS74
L105 LS74
L108 LS74
L100 LS74
L99
+5VA
ZOV
TO RAIL
RAIL GND
8.5"
11"
17"
22"
34"
WANG
WANG LABORATORIES, INC.
MODEL NO
VS-25 76-1
P14
CPU TC DATA
(ALGORES)
SEE CHART
E
3337
9

R1



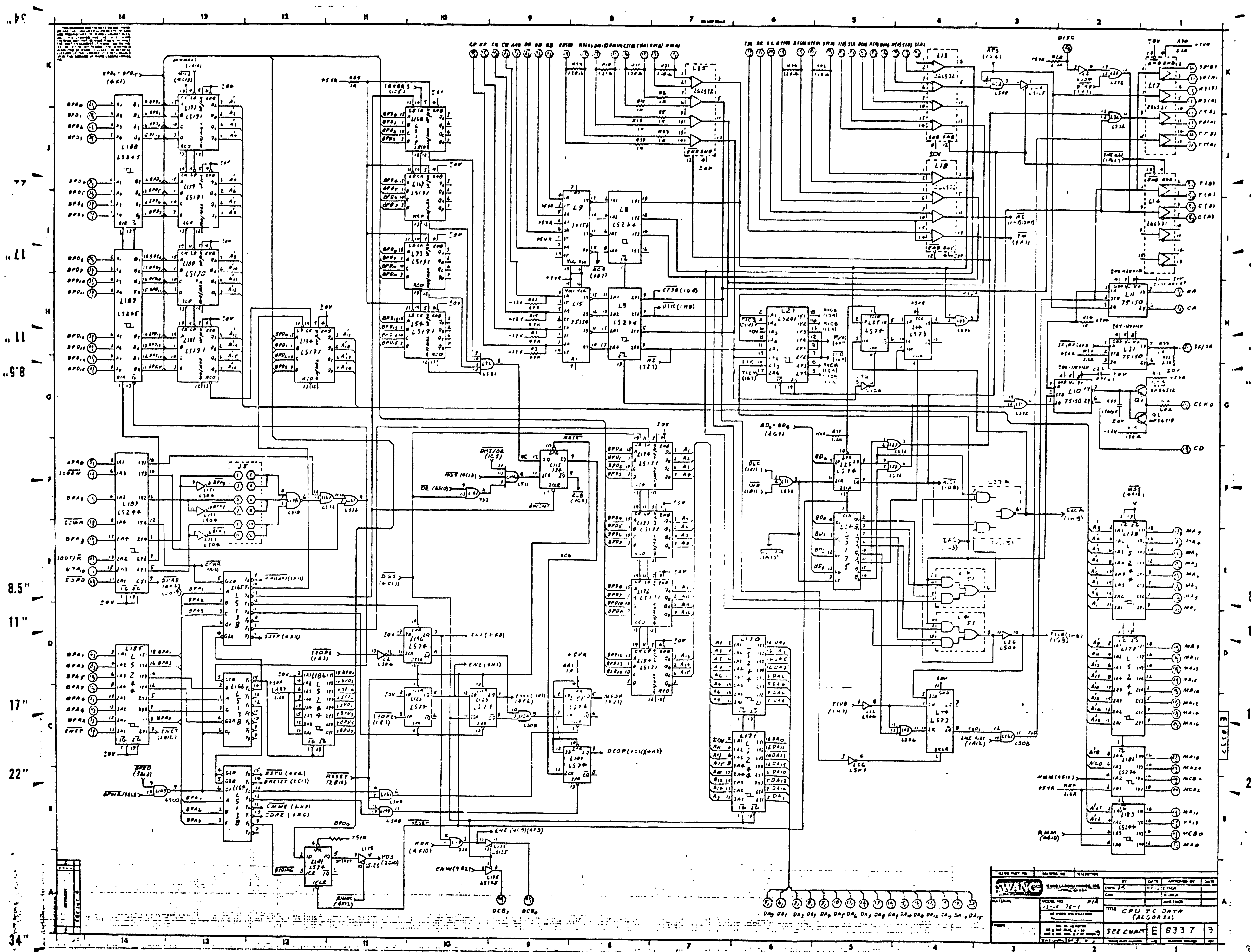
WANG LABORATORIES, INC.
LOWELL, MA U.S.A.

MODEL NO. VS-25 76-1
P14

TITLE CPU TC DATA (ALGOREV)

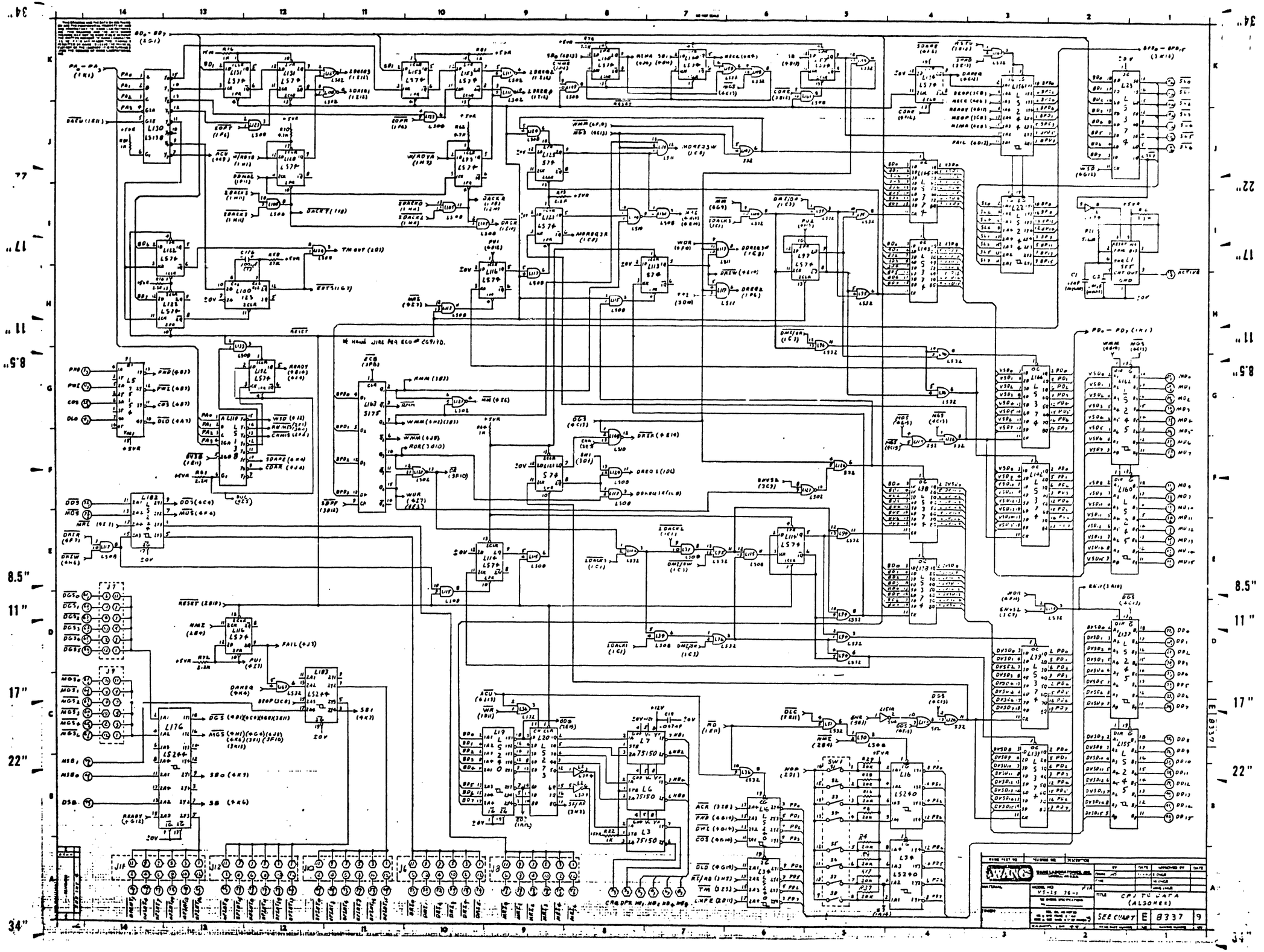
SEE CHART E 8337 7

R2



WANG LABORATORIES, INC.
MODEL NO 15-05 7C-1
TITLE CPU TC DATA (ALGOREX)
SEE CHART
E
8337
9

R3


WANG
WANG LABORATORIES, INC.
MODEL NO VS-25 76-1
TITLE CPU TC DATA (AL30NER)
SEE CHART
E
8337
9
* Hand wire per ECO# C6917D.
RESET
READY
FAIL (4J3)
ACTIVE
SW1

R4

I.C. LOCATION	TYPE	WL PART No.
L1	555	376-0146
L2, L6, 92, 151	74LS26	376-0110
L3, 4, 7, 12, 11, 21	75152	376-0316
L8	7451	376-7012
L5, 9, 15	75154	376-0077
L14, 19, 30	74LS240	376-0217
L18, 29, 75	74LS175	376-0160
L13, 10, 15	26LS32	376-0211
L16, 17	26LS31	376-0110
L20	74LS273	376-0302
L22, 48, 79, 156, 170, 171, 14, 178, 179, 182, 185, 185-187, 8	74LS244	376-0280
L23, 23, 189, 138, 137, 81-88	74LS374	376-0186
L25, 28, 32, 82, 90, 92, 93, 106, 114, 115, 122, 123, 128, 131, 139, 135, 140, 141, 148, 152, 153, 157, 158	74LS74	376-0155
L27	74LS161	376-0204
L28, 31, 36, 37, 67, 71, 70-76, 34, 38, 141, 158, 162	74LS32	376-0211
L30	74S02	376-0133
L33, 39, 90, 105, 119, 117, 104, 133, 137, 163, 161	74LS38	376-0163
L37	7414	376-0139
L38	9674	376-0006
L41, 137, 158, 160, 161, 180, 189	74LS245	376-0235
L43	74LS86	376-0231
L44	74LS73	376-0304
L45, 90, 86	AM2966	376-0553
L47	74LS373	376-0310
L50	2732A-2	SEE CHART
L52	74LS195	376-0298
L53	2716	SEE CHART
L54, 73, 154, 157, 160, 169, 178, 172, 175, 177, 180, 181, 186	74LS191	376-0445
L55-63, 77-85	4164	377-0068
L64	Z80ASIO-2	SEE CHART
L65, 103	75174-4	SEE CHART
L66	Z80A CPU	SEE CHART
L68, 91, 115	74LS125	376-0406
L69	74LS157	376-0216
L74	74S373	376-0306
L76	74LS21	376-0566
L87	74S133	376-0311
L88, 89, 119, 134, 108, 105, 166	74LS138	376-0294
L92	74LS280	376-0202
L100	74123	376-0090
L101, 102	Z80A-CTC	SEE CHART
L108, 111, 127	74LS02	376-0208
L112, 140	74LS10	376-0201
L113, 131, 129	74S74	376-0301
L118, 126, 107	74S32	376-0205
L117, 135A	74LS11	376-0225
L120	74S260	376-0236
L133A L103	74LS30	376-0207
L132	74LS173	376-0281
L136	74121	376-0351
L150	74S281	376-0506
L163	74S115	376-0270
L151A	74S04	376-0117
(VI REF)	16 PIN SKT	376-7001
L50, 53	24 PIN SKT	376-7003
L64, 56, 103	40 PIN SKT	376-7011
L101, 102	28 PIN SKT	376-7015
L27A	74LS21	376-0213

COMPONENT	TYPE	WL PART No.
R1, 2	[illegible]	117-1507
R3, 7, 14, 15	47Ω 1/4W 5%	110-6700
R6, 8, 9, 10, 26, 27, 35, 37	100 1/4W 5%	110-6061
R5, 6, 9, 20, 23, 24, 37, 39, 40, 60, 61, 75, 79, 36, 40, 76, 80	1K 1/4W 5%	110-3011
R10, 11, 16, 29, 36, 64, 68	120 1/4W 5%	110-6013
R12	3.3K 1/4W 5%	110-6034
R13	110Ω 1/4W 5%	111-6013
R21	5.6K 1/4W 5%	110-6057
R22, 29, 33, 32, 34, 38, 45, 56, 58, 60, 62, 68, 71, 72, 73, 74, 78, 78, 83, 85, 86	2.2K 1/4W 5%	110-3023
R16	68 1/2W 5%	110-1067
R30	3.16K 1/4W 1%	110-3016
R31	2K 1/4W 5%	110-3021
R41, 91	10K 1/4W 5%	110-4011
R47, 48, 50, 51, 53, 54, 57, 58, 60, 61, 62, 64, 65, 66, 67, 70, 37	4.7K 1/4W 5%	110-3006
R57	27K 1/4W 5%	110-4023
R44	220 1/4W 1%	110-2023
C2	.001 100V	100-2110
C1	[illegible]	100-2110
C3, 7, 19, 35, 38, 121, 105, 140, 130-137	15μF 20V (T)	300-9022
C4-6, 8-33, 37-50, 60-71, 76-78, 83-101, 110-120, 122-131, 135-140, 146-159, 161-169, 170-173	.047μF 50V	300-1966
C53	1500PF 5%	100-1727
C79	6.8μF 16V T	130-4010
C72, 74, 81-90, 108-112, 122, 124	.1μF 50V	130-171
C132	100pF 25V	100-4067
C131	1000PF 50V	130-1706
(QTY ?)	[illegible]	[illegible]
Q1	MPS 6521	115-1012
Q2	MPS 6519	115-1014
(QTY 7)	4100 1/4	4?3-2140
Y1	4/16 MHz	121-1034
SW1	8 SPST	141-1523
J1	40 POS CONN	170-0241
J2, 3	26 POS CONN	170-0237
J4, 13	20 POS CONN	170-0210
J5-12	[illegible]	650-0113
(QTY 7)	NYL WASHER	459-2009
(QTY 1)	STIFFNER	452-2707
(QTY 1)	STIFFNER	452-2709
(QTY 2)	EXTRACTOR	465-1238

I.C. TYPE	LOC	SPARES
74LS02	L110	1
74S02	L33	2
74LS08	L77	1
	L47	1
74LS10	L112	2
7414	L11	5
74LS21	L70	1
74LS11	L155A	2
74LS32	L164	2
7474	L35	1
74LS74	L154	1
74LS86	L43	2
74123	L100	1
74LS125	L75	1
74S241	L159	1
74S260	L123	1
74LS00	L133A	3
74S04	L151A	3
74LS04	L2	1
74LS38	L121	1
74LS04	L26	1

MNEMONICS	COORD
R(A)	3K1
R(B)	3K5
RC	3K6
RD(A)	3K7
RD(B)	3K7
RL	1C16
RM(A)	3K8
RM(B)	3K8
RS(A)	3K1
RS(B)	3K1
RT(A)	3K6
RT(B)	3K6
S(A)	3K7
S(B)	3K6
SC	1C16
SD(A)	3K1
SD(B)	3K1
SR/SA	1H1
SG	1C16
SGD	1D14
SI	1D16
SL0 - SL7	8J1
SS	1C16
ST(A)	3K5
ST(B)	3K5
SQ	1D14
T(A)	3J1
T(B)	3J1
TM	3K6
TR(A)	3J1
TR(B)	3J1
TT(A)	3J1
TT(B)	3J1

MNEMONICS	COORD
AA	[illegible]
AB	[illegible]
ACR	3K7
[illegible]	4H1
B(A)	3K5
B(B)	3K5
BA	3H1
BB	3K9
BPA0	1F4
BPA1 - BPA7	[illegible]
BPA8	3E16
BPA9	3F16
BPA10	3F16
BPD? - BPD15	[illegible]
BPINT? - BPINT??	4A12
C(A)	3J1
C(B)	3J1
CA	3H1
CB	3K7
CC	3K1
CD	3A1
CE	3K8
CF	3K10
CLKO	3D1
COS	4G16
CRQ	4A8
CS(A)	3K8
CS(B)	3K8
DA0 - DA15	3A15
DB	3K7
DCB0, DCB1	3A7
DD	3K9
DD0 - DD15	[illegible]
DDS	[illegible]
DGS? - DGS15	[illegible]
DISC	3H2
DLO	[illegible]
DM(A)	[illegible]
DM(B)	[illegible]
DPR	4A8
ENE0 - ENE?	[illegible]
DSB	4B16
FGD	1B16
FGRN	1C17
E(A)	3K5
E(B)	3K5
EC	3K6
ENET	3F16
EO DEN	1F16
BOOT/R	3C16
EOWO	[illegible]
[illegible]	1G16
ES	1D14
LL	1C16
MA0 - MA15	[illegible]
MCB0 - MCB?	3E1
MD0 - MD15	4F1
MRS	4E16
MGS0 - MGS?	4C16
MRE0 - MRE?	4A1
MSB0, MSB1	4B6
NB1	4A7
NB2	4A7
NB4	4A7
NB8	4A7
NS	1C16
P??	[illegible]
PRST	[illegible]
PWE	4G4

Z1? = Z09 + 377 OR 378								
Z10	207	L50	L53		L64	L65, 103	L66	L101, 102
8337-A	8337	378-3612-91	378-5137		377-0333	377-0411	377-0368	377-0371

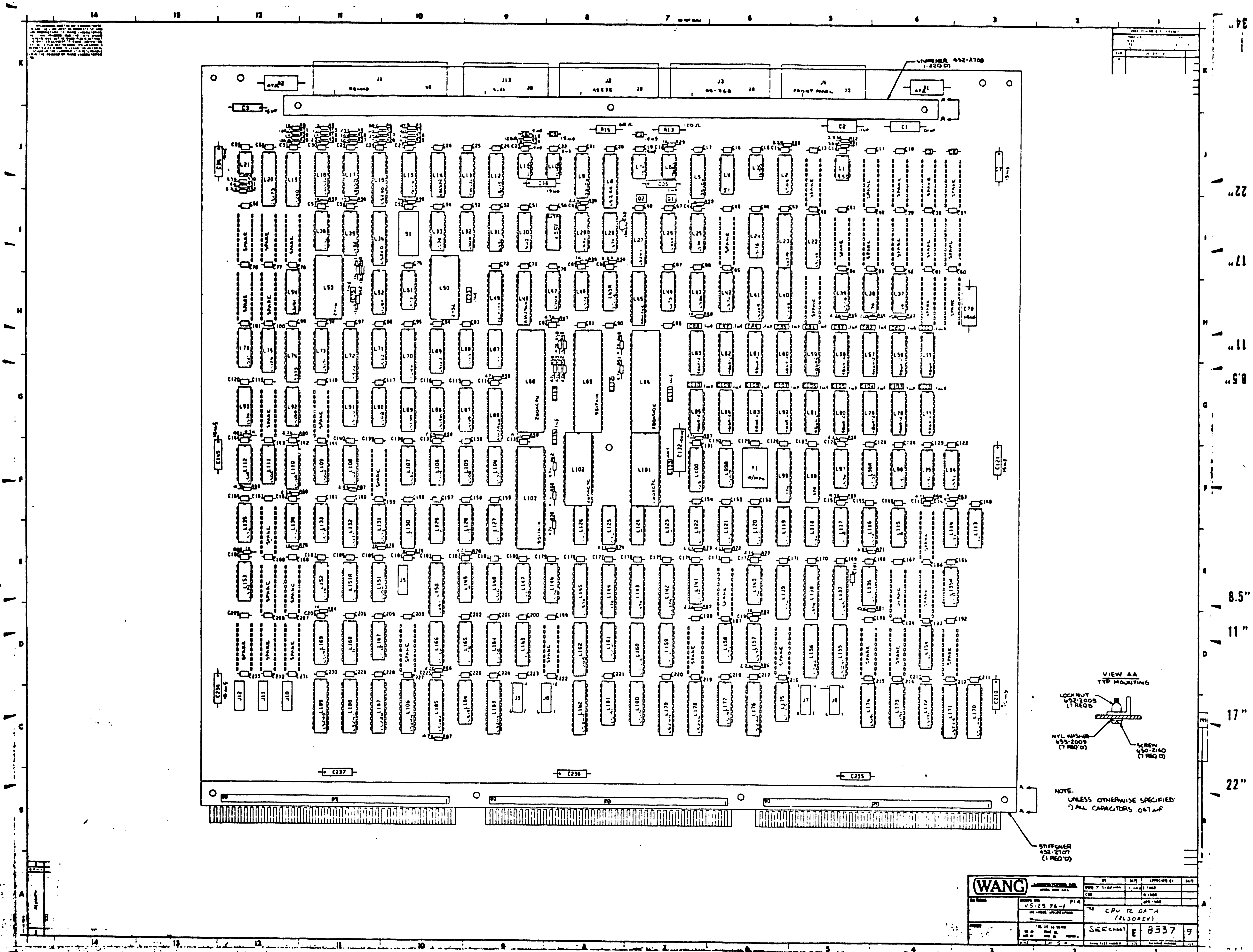
NOTE-
ALL RESISTORS ARE 1/4W 5% UNLESS SPECIFIED OTHERWISE

E-REV
2

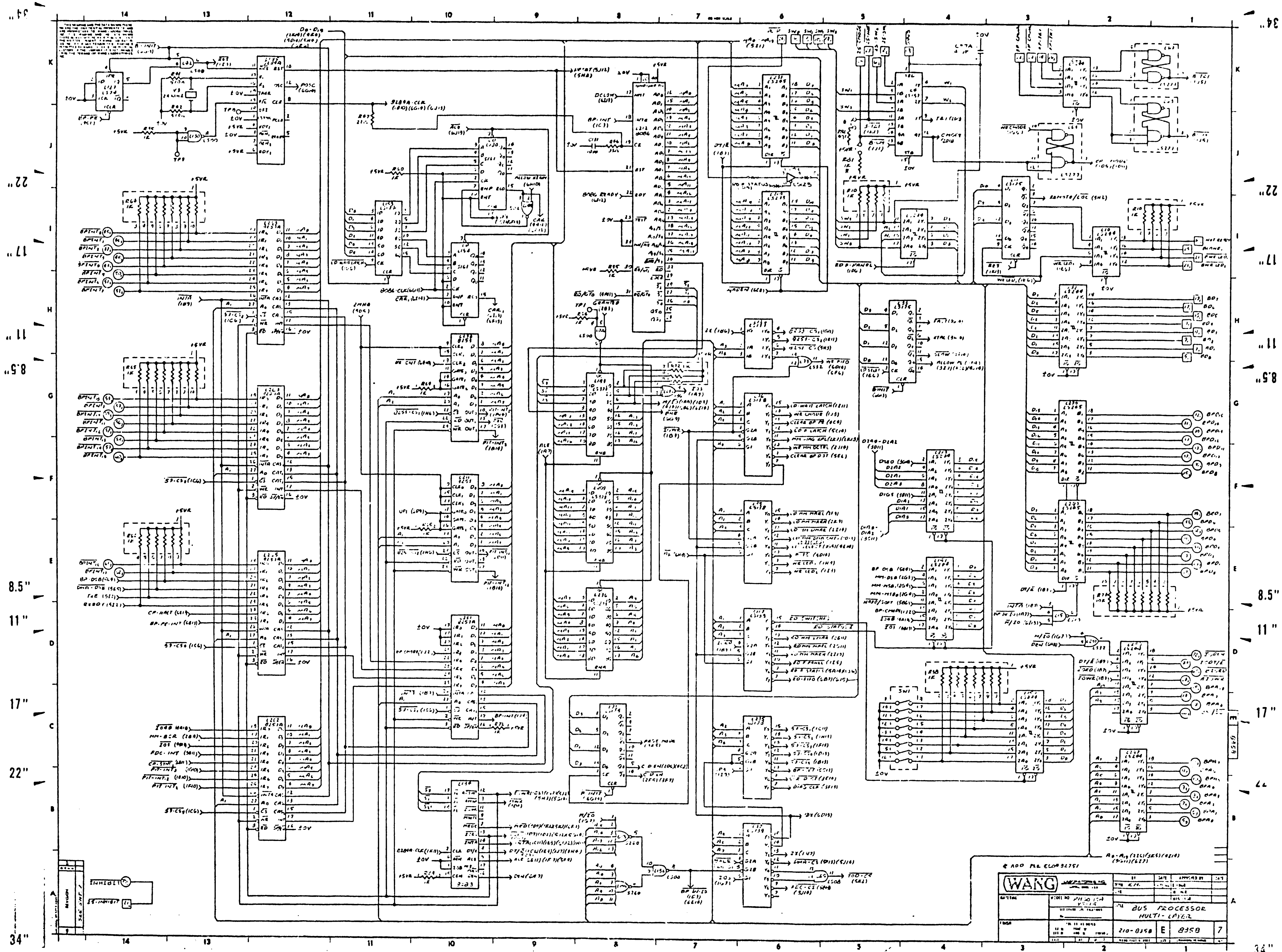
WANG
WANG LABORATORIES, INC.
MODEL NO.
TITLE CPU ... DATA
SEE CHART E 8337

E 8337

R5


STIFFENER 452-2700 (1 REQ'D)
FRONT PANEL
VIEW AA
TYP MOUNTING
LOCKNUT 452-2009 (7 REQ'D)
NYL WASHER 453-2009 (7 REQ'D)
SCREW 450-2140 (7 REQ'D)
NOTE:
UNLESS OTHERWISE SPECIFIED:
1) ALL CAPACITORS .047 uF
STIFFENER 452-2707 (1 REQ'D)
WANG
VS-25 76-1
P/A
CPU TC DATA
(ALSOREV)
SEE CHART
E
8337
9

R6

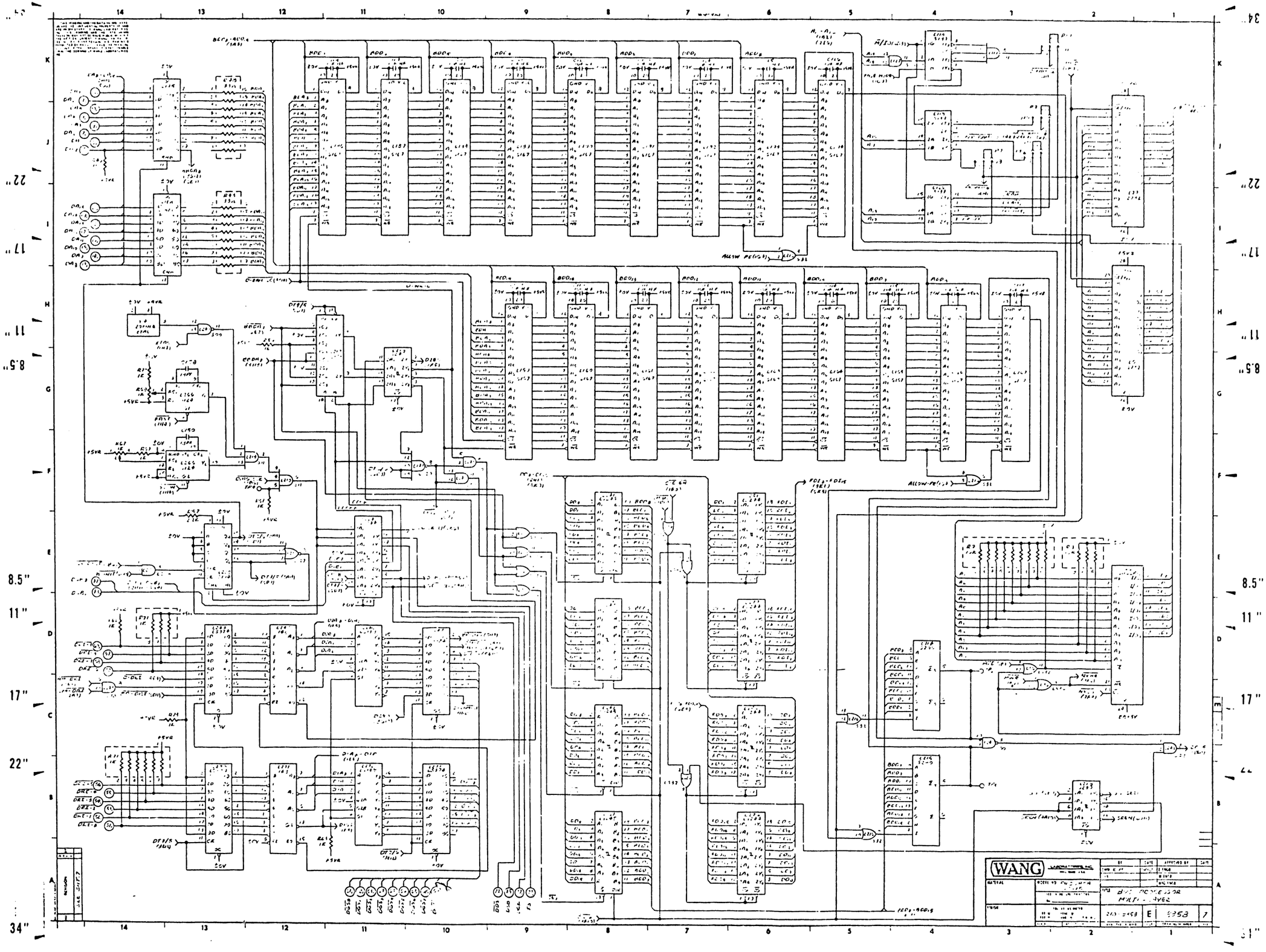


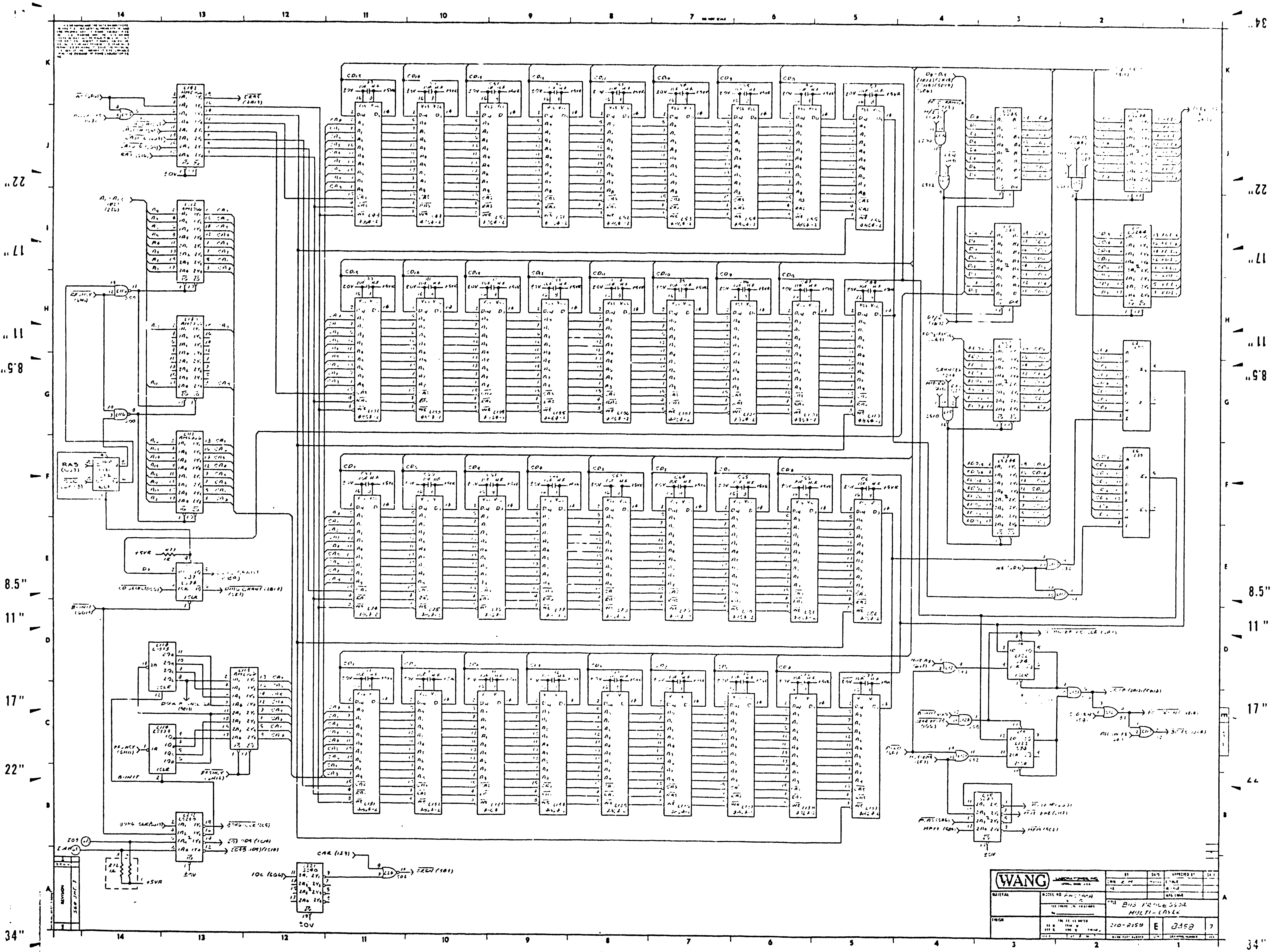
S1

WANG

TITLE	BUS PROCESSOR MULTI-LAYER		
210-8358	E	8358	7

S2


WANG
8.5"
11"
17"
22"
34"



S4

22"

17"

11"

8.5"

8.5"

11"

17"

22"

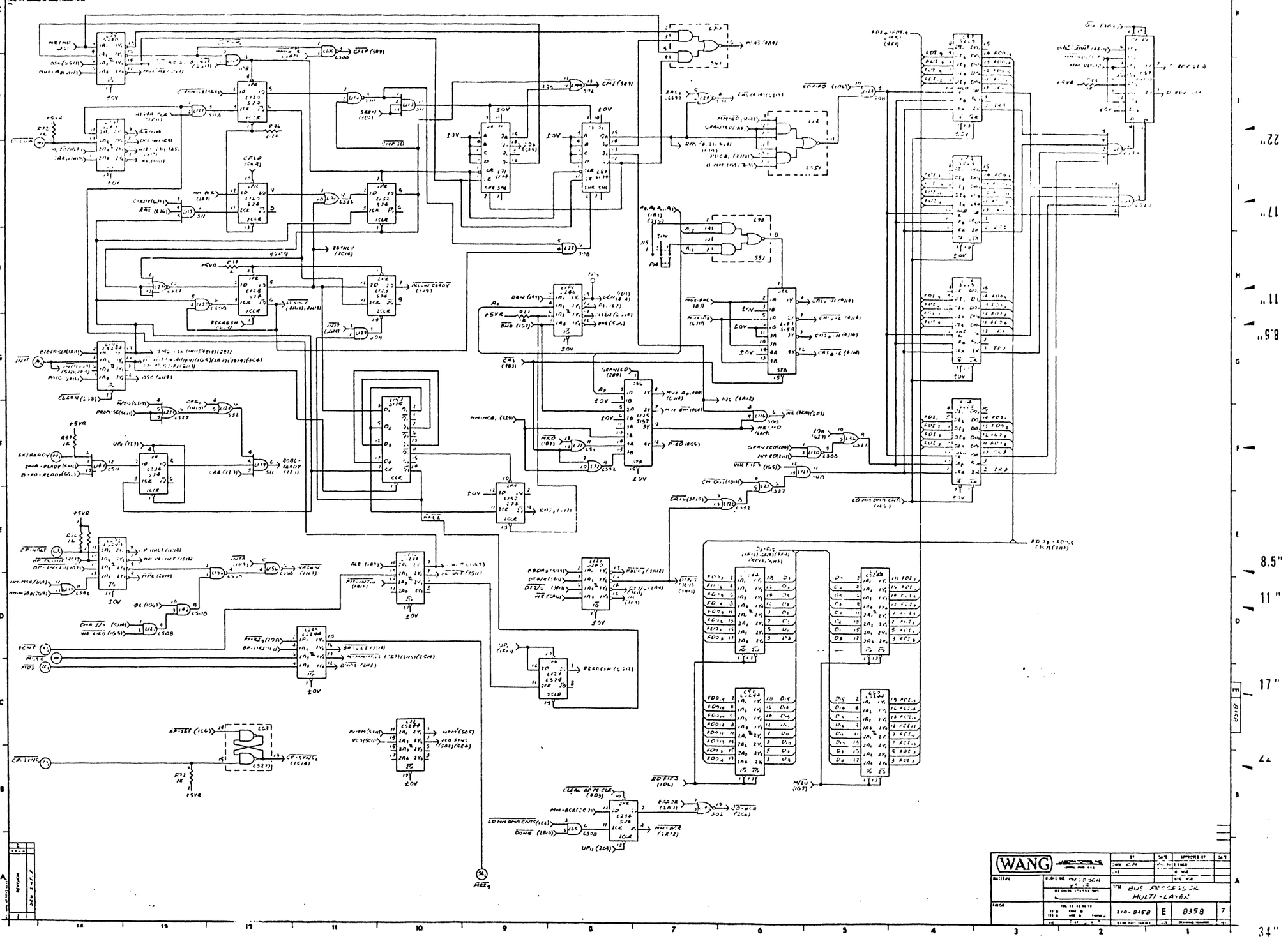
34"

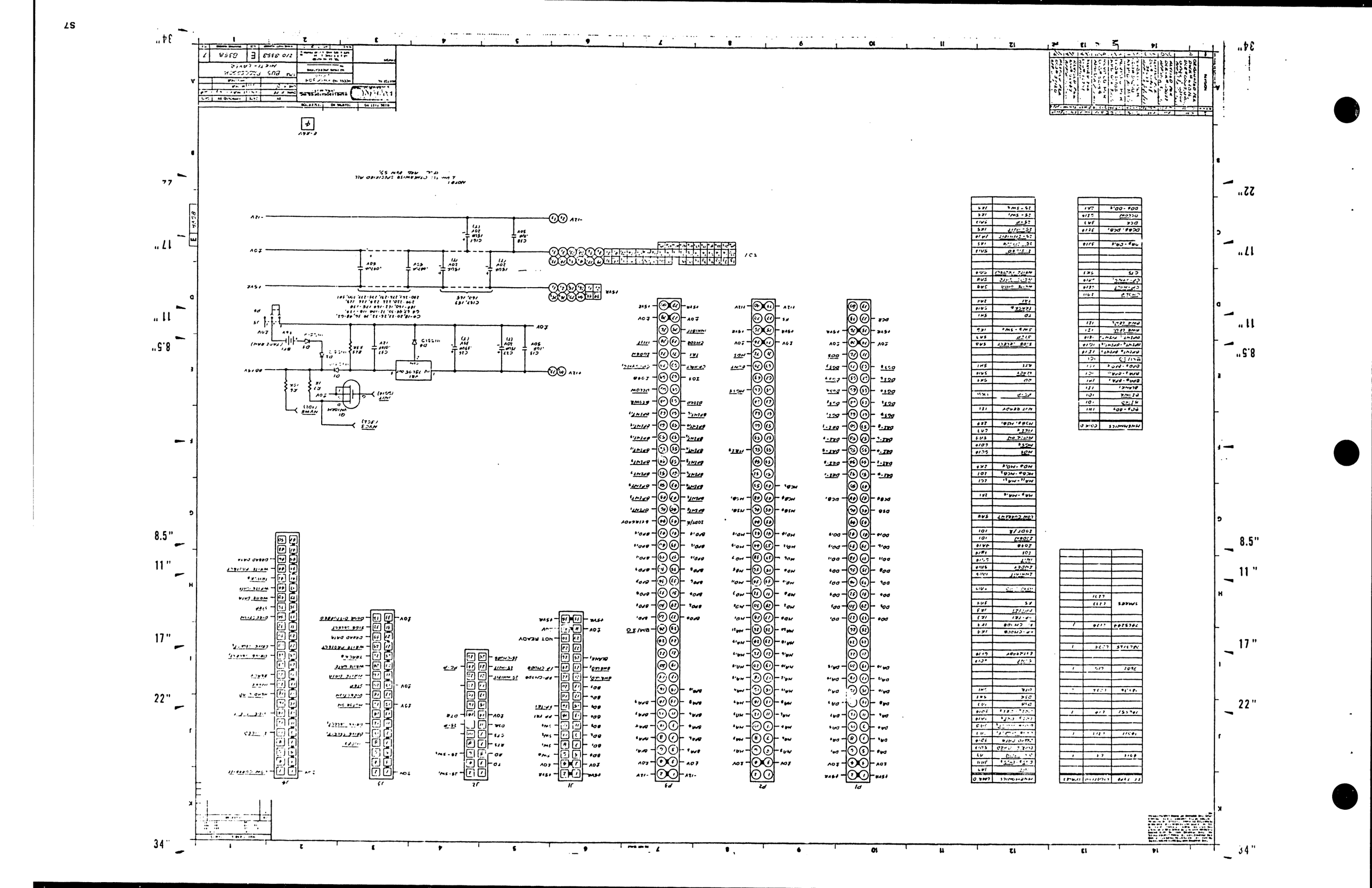
WANG

BUS PROCESSOR
MULTI-LAYER

210-8958 E 8958 7

S5


WANG
BUS PROCESSOR
MULTI-LAYER
210-8458
E
8358
7



WANG LABORATORIES, INC.

>>>>> ELECTRICAL PARTS LIST <<<<< M SHEET 8 OF 10 PAGE 1

(FINAL BILL-OF-MATERIALS)

BOARD NO. & TITLE: CB358 BUS PROCESSOR M/L — CREATED: 03/08/84 13:23
ASSEMBLY LEVEL & TITLE: 209 8358 — LAST MODIFIED: 08/16/84 13:09 BY: LAB
ARTWORK REVISION (B): 02 — EDITING REVISION: 14
ASSEMBLY REVISION (A): 05
SCHEMATIC REVISION (S): 07
DWB OR MOST RECENT ECO: 33120

* REF. DES.	* WANG PART NO.	* VALUE/TYPE *	DESCRIPTION	* DRAWING NO. *	QTY. *
C23	300-1014-	5.6P	CAP CERAMIC MONO RADIAL 50V +/-0.5PF NPO		1
C156	300-1018-	18P	CAP CERAMIC DISC 10% 500V NPO		2
C158					
C22	300-1021-	10P	CAP CERAMIC DISC 5% 100V N750 TEMP COMP		2
C131					
C48	300-1150-	150P	CAP CERAMIC DISC 10% 500V X5P		1
C30	300-1330-	330P	CAP CERAMIC DISC 10% 500V X5F		1
C49 - C57	300-1833-	.1U	CAP CERAMIC MLNO AXIA LEADED +80%-20% 50V Z5U		54
C59 - C67					
C80 - C97					
C109 - C126					
C28	300-1903-	.01U	CAP CERAMIC DISC +80% -20% 25V Z5F		2
C37					
C29	300-1906-	.001U	CAP CERAMIC DISC 10% 500V X5F		1
C7	300-1914-	.022U	CAP CERAMIC DISK 20% 25V Z5P		2
C25					
C1 - C6	300-1966-	.047U	CAP CERAMIC MONO AXIAL +80 -20% 50V Z5U		83
C9 - C16					
C19 - C21					
C31 - C36					
C38					
C43 - C47					
C68 - C79					
C97A					
C98 - C108					
C127 - C130					
C132 - C149					
C151 - C156					
C162 - C164					
C9A	300-4001-	.47U	CAP TANT AXIAL 10% 35V		1
C26	300-4009-	.39U	CAP TANT AXIAL 10% 35V		1
C18	300-4022-	15U	CAP TANT AXIAL 10% 20V		9
C27					
C36					
C88					
C157					
C159 - C161					
C165					

BOARD NO. & TITLE: CB358 BUS PROCESSOR M/L — SCHEMATIC REVISION (S): 07 — SHEET OF — PAGE 2

* REF. DES.	* WANG PART NO.	* VALUE/TYPE *	DESCRIPTION	* DRAWING NO. *	QTY. *
C8	300-8007-	8.0-10P	CAP VARIABLE AIR, 250V MCR.TUNING		1
Y1	321-0060-	32.768	CRYSTAL MINIATURE 32.768 KHZ		1
Y3	321-0065-	24 MHZ	CRYSTAL QUARTZ 24.2MHZ .33% HC-18/U		1
Y2	321-1000-	8 MHZ	CLOCK OSCILLATOR 8.30 MHZ +- .01% TTL		1
Y4	321-1001-	20 MHZ	CLOCK OSCILLATOR 20 MHZ +- .01% TTL		1
SW1	325-1503-	SWITCH	SLIDE SPST 8 POS		1
R47	330-1023-	22.100	RES FIXED METAL FILM 1/4W 5% 200PPM		1
R46	330-1234-	33.930	RES FIXED METAL FILM 1/4W 5% 200PPM		1
R17	330-2023-	220.000	RES FIXED METAL FILM 1/4W 5% 200PPM		1
R41 - R42	330-2252-	510.000	RES FIXED METAL FILM 1/4W 5% 200PPM		2
R6 - R7	330-3G11-	1K	RES FIXED METAL FILM 1/4W 5% 200PPM		42
R11					
R13 - R14					
R22					
R25 - R29					
R31					
R33 - R35					
R37					
R39 - R40					
R44 - R45					
R49					
R52 - R56					
R58 - R63					
R69 - R70					
R73					
R75 - R81					
R50	330-3021-	2.000K	RES FIXED METAL FILM 1/4W 5% 200PPM		1
R18 - R19	330-3023-	2.200K	RES FIXED METAL FILM 1/4W 5% 200PPM		5
R36					
R51					
R57					
R23	330-3034-	3.300K	RES FIXED METAL FILM 1/4W 5% 200PPM		1
R20 - R21	330-3048-	4.700K	RES FIXED METAL FILM 1/4W 5% 200PPM		5
R24					
R30					
R32					
R12	330-4011-	10.000K	RES FIXED METAL FILM 1/4W 5% 200PPM		1
R82	330-4048-	47K	RES FIXED METAL FILM 1/4W 5% 200PPM		1
R4 - R5	333-0090-	10.000K	RES FIXED METAL FILM 1/8W 1% 100PPM RNSS		2
R1	333-0093-	2.370K	RES FIXED METAL FILM 1/8W 100PPM RNSS		2
R16					
R2 - R3	333-0110-	20.000K	RES FIXED METAL FILM 1/8W 1% TC: D RNSS		2
R8 - R9	333-0809-	10.000KN	RESISTOR NETWORK TYPE: 13/09/C/SS		3
R74					
R15	333-0811-	220.000N	RESISTOR NETWORK TYPE: 10/09/C/SS		1
R43	333-0835-	33.000 N	RESISTOR NETWORK TYPE: 16/08/F/D		2
R48					
R10	333-0837-	1KN	RESISTOR NETWORK TYPE: 10/09/C/SS		7
R38					
R64 - R66					

BOARD NO. & TITLE: CB358 BUS PROCESSOR M/L — SCHEMATIC REVISION (S): 07 — SHEET OF — PAGE 3

* REF. DES.	* WANG PART NO.	* VALUE/TYPE *	DESCRIPTION	* DRAWING NO. *	QTY. *
R71 - R72					
R67 - R68	336-1014-	1K	RES TRIMMER .375" SQUARE SIDE ADJ 10% 1 TURN		2
J2	350-0058-	26 CONT	CONN PC HEADER DUAL ROW .100 R/A W/LOCK/EJECT		1
J4	350-0228-	50 CONT	CONN PC HEADER W/LOCK/EJECT R/A		1
J1	350-0429-	34 CONT	CONN HEADER R/A W/LOCK EJECT		2
J3					
VR1	374-0032-	78L05A	IC REG 78L05A +/- 5% TO-92		1
Q1	375-1115-	VN10KM	FET N-CH TO-237 1W 60V .5A		1
L16	376-0104-	9602	IC DUAL RETRIG/RESET MONOSTABLE MULTIVIBRATOR		1
L40	376-0153-	74LS08	IC QUAD 2-INPUT AND GATE		5
L42					
L65					
L177					
L203					
L18 - L19	376-0155-	74LS74	IC DUAL D-TYPE POSITIVE EDGE TRIG FLIP-FLOP		9
L71					
L87					
L129					
L150					
L176					
L206					
L208					
L64	376-0156-	74LS153	IC DUAL 4-INPUT MULTIPLEXER		3
L39					
L223					
L17	376-0159-	74LS174	IC HEX D-TYPE FLIP-FLOP		3
L153					
L201					
L11	376-0160-	74LS175	IC QUAD D-TYPE FLIP-FLOP		7
L23					
L33					
L92					
L98					
L178					
L202					
L245	376-0171-	74148	IC 8-LINE-TO-3-LINE OCTAL PRIORITY ENCODER		2
L271					
L90	376-0184-	74S51	IC DUAL 2 WIDE 2-INPUT AND-OR-INVERT GATES		1
L24	376-0199-	74S02	IC QUAD 2-INPUT POSITIVE-NOR GATES		2
L148					
L25	376-0200-	74S08	IC QUAD 2 INPUT POSITIVE AND GATES		5
L121					
L124					
L127					
L243					
L44	376-0202-	74S74	IC DUAL D-TYPE POS EDGE TRIGRD F/F W/PRESET/C		11
L73					
L88					
L120					
L122					

BOARD NO. & TITLE: CB358 BUS PROCESSOR M/L — SCHEMATIC REVISION (S): 07 — SHEET OF — PAGE 4

* REF. DES.	* WANG PART NO.	* VALUE/TYPE *	DESCRIPTION	* DRAWING NO. *	QTY. *
L128					
L141					
L182					
L205					
L229					
L234					
L115	376-0205-	74S32	IC QUAD 2-INPUT OR GATE		3
L123					
L216					
L155	376-0206-	74S260	IC DUAL 5-INPUT EXPANDER		1
L130	376-0207-	74LS00	IC QUAD 2-INPUT NAND GATE		3
L156					
L206					
L100	376-0208-	74LS02	IC QUAD 2-INPUT NOR GATE		1
L15	376-0209-	74LS10	IC TRIPLE 3-INPUT POS NAND GATES		1
L61	376-0210-	74LS20	IC DUAL 4-INPUT NAND GATE		2
L147					
L36	376-0211-	74LS32	IC QUAD 2-INPUT OR GATE		9
L39					
L93					
L97					
L207					
L222					
L230					
L269					
L284					
L14	376-0213-	74LS51	IC DUAL 2-WIDE 2-INPUT AND-OR-INVERT GATE		1
L217	376-0215-	74S153	IC DUAL 4-INPUT MULTIPLEXER		1
L4	376-0216-	74LS153	IC QUAD 2-INPUT MULTIPLEXER		1
L70	376-0217-	74S157	IC QUAD 2 TO 1 LINE DATA SEL/MUL		2
L125					
L144 - L146	376-0220-	74LS193	IC UP/DOWN BINARY COUNTER		13
L171 - L173					
L198 - L200					
L225 - L227					
L281					
L89	376-0221-	74S194	IC 4 BIT SHIFT REGISTER		3
L91					
L220					
L149	376-0225-	74LS11	IC TRIPLE 3-INPUT AND GATE		1
L116	376-0228-	74S00	IC QUAD 2-INPUT NAND GATE		2
L240					
L119	376-0237-	74S11	IC TRIPLE 3-INPUT AND GATE		3
L179					
L213					
L233	376-0245-	74LS27	IC TRIPLE 3-INPUT NOR GATE		1
L6	376-0246-	74S280	IC 9-BIT PARITY GENERATOR/CHECKER		4
L28					
L214 - L215					
L43	376-0264-	MC4044	IC PHASE FREQUENCY DETECTOR 14 PIN DIP		1

WANG LABORATORIES INC. LOWELL, MA U.S.A.	BY	DATE	APPROVED BY	DATE
	DWN		E ENGR	
	CHK		M ENGR	
MATERIAL	MODEL NO.		MFG ENGR	
	SEE ENGRG SPECIFICATIONS NO.	TITLE: BUS PROCESSOR M/L		

BOARD NO. & TITLE: C8358 BUS PROCESSOR M/L SCHEMATIC REVISION (S): 07 SHEET 5 OF 10 PAGE 5

* REF. DES.	* WANG PART NO.	* VALUE/TYPE *	DESCRIPTION	* DRAWING NO.*	QTY. *
L157	376-0278-	74S174	IC QUAD D-TYPE FLIP-FLOP		1
L232	376-0271-	74S86	IC QUAD 2 IN EXCLUSIVE OR GATE		1
L45	376-0273-	74S124	IC DUAL VOLTAGE CONTROLLED OSC (VCO)		2
L266					
L156	376-0278-	74S161	IC SYN 4-BIT BINARY COUNTER W/DIRECT CLEAR		2
L180					
L9	376-0285-	74LS245	IC OCTAL BUS TRANSCEIVER TRI-STATE OUTPUTS		11
L31					
L69					
L210					
L237					
L241 - L242					
L267 - L268					
L289 - L290					
L246	376-0286-	74LS374	IC OCTAL D-TYPE FLIP-FLOP TRI-STATE		10
L247					
L256 - L257					
L259					
L270					
L273					
L282 - L283					
L285					
L7 - L8	376-0288-	74LS244	IC OCTAL BUFFER/LINE DRIVER W/TRI STATE		46
L10					
L29 - L30					
L32					
L38					
L41					
L59 - L60					
L62					
L66					
L72					
L85 - L86					
L96					
L151					
L158					
L169 - L170					
L174					
L182					
L196 - L197					
L219					
L224					
L248 - L255					
L258					
L260					
L274 - L280					
L286 - L288					
L35	376-0294-	74LS138	IC 3-LINE TO 8-LINE DECODER/MULTIPLEXER		7
L37					
L96					

BOARD NO. & TITLE: C8358 BUS PROCESSOR M/L SCHEMATIC REVISION (S): 07 SHEET OF PAGE 6

* REF. DES.	* WANG PART NO.	* VALUE/TYPE *	DESCRIPTION	* DRAWING NO. *	QTY. *
L117					
L235					
L246					
L272					
L70 - L22	376-0297-	74LS240	IC OCTAL BUFFER/LINE DRIVER/LINE RECEIVER		4
L293					
L143	376-0301-	74S158	IC QUAD 2 TO 1-LINE DATA SELECTOR/MUX INVERT		1
L101	376-0307-	74LS393	IC DUAL 4-BIT BINARY COUNTER		2
L114					
L66 - L67	376-0310-	74LS373	IC OCTAL D-TYPE LATCH TRI-STATE OUTPUTS		7
L168					
L183					
L195					
L209					
L216					
L61	376-0316-	74LS279	IC QUAD SET-RESET LATCH		1
L57 - L58	376-0323-	74S225	IC 16 X 5 BI POLAR ASYNCH FIFO		4
L83 - L84					
L118	376-0333-	74S139	IC 2 TO 4-LINE DECODER/MULTIPLEXER		2
L126					
L95	376-0334-	74S240	IC OCTAL BUFFER/LINE DRIVER		5
L181					
L218					
L221					
L231					
L12	376-0346-	75189A	IC QUAD LINE RECEIVER		1
L36	376-0345-	75188	IC QUAD LINE DRIVER 14 PIN DIP		1
L175	376-0427-	74S195	IC 4-BIT PARRALLEL ACCESS SHIFT REGISTER		2
L228					
L3	376-0431-	4013	CMOS IC DUAL D-TYPE FLIP-FLOP		1
L293	376-0486-	74LS125	IC QUAD BUS BUFFER TRI-STATE OUTPUTS		1
L1	376-0547-	LF356	IC LF356 FET INPUT OP AMP 8 PIN DIP		1
L111 - L113	376-0553-	AM2966	IC OCTAL DYN MEM DRIVER W/3-ST OUT		5
L140					
L142					
L48 - L56	376-9002-	SKT 16	IC SOCKET 16 PIN DIL PC MOUNT		36
L74 - L82					
L102 - L110					
L131 - L139					
L2	376-9003-	SKT 24	IC SOCKET 24 PIN DIL PC MOUNT		6
L5					
L26 - L27					
L211					
L238					
028 - 029	376-9008-	SKT 16	IC SOCKET 16 PIN ANTI-WICKING SPACER FOR (Y2,Y4)		2
L46 - L47	376-9011-	IC ACCES	SOCKET 40 PIN DIL PC MOUNT		5
L212					
L185	376-9014-	SKT 18	IC SOCKET 18 PIN DIL PC MOUNT		1
L13	376-9015-	SKT 28	IC SOCKET 28 PIN DIL MOUNT		6
L261 - L268					

BOARD NO. & TITLE: C8358 BUS PROCESSOR M/L SCHEMATIC REVISION (S): 07 SHEET OF PAGE 7

* REF. DES.	* WANG PART NO.	* VALUE/TYPE *	DESCRIPTION	* DRAWING NO. *	QTY. *
L159 - L167	376-9020-	SKT 20	IC SOCKET 20 PIN DIL PC MOUNT		19
L184					
L186 - L194					
D5	380-1012-	1N914A	DIO SIG 75V 250MA 4NS DO-35		1
J1 - J4	380-4019-	1N5819	DIO SCKY BARRIER 40V 1A 500MW AXIAL		4
026	510-8358-		PCB		1
J5 - J15	654-0104-	3 CONT	CONN PC HEADER SINGLE ROW .100		11

BOARD NO. & TITLE: C8358 BUS PROCESSOR M/L SCHEMATIC REVISION (S): 07 SHEET OF PAGE 8

*	*WANG PART NO.	* VALUE/TYPE *	DESCRIPTION	* DRAWING NO. *	QTY. *
	(CAUTION - THE FOLLOWING PARTS/COMPONENTS CONTAINED IN THIS B.O.M. ARE NOT RECOMMENDED FOR NEW DESIGNS)				
	300-4001-	.47U	CAP TANT AXIAL 10% 35V		1
	376-0199-	74S02	IC QUAD 2-INPUT POSITIVE-NOR GATES		2
	376-0200-	74S08	IC QUAD 2 INPUT POSITIVE AND GATES		5
	376-0202-	74S74	IC DUAL D-TYPE POS EDGE TRIGRD F/F W/PRESET/C		11
	376-0205-	74S32	IC QUAD 2-INPUT OR GATE		3
	376-0217-	74S157	IC QU-D 2 TO 1 LINE DATA SEL/MUL		2
	376-0221-	74S194	IC 4 BIT SHIFT REGISTER		3
	376-0228-	74S00	IC QUAD 2-INPUT NAND GATE		2
	376-0237-	74S11	IC TRIPLE 3-INPUT AND GATE		3
	376-0246-	74S280	IC 9-BIT PARITY GENERATOR/CHECKER		4
	376-0264-	MC4044	IC PHASE FREQUENCY DETECTOR 14 PIN DIP		1
	376-0270-	74S175	IC QUAD D-TYPE FLIP-FLOP		1
	376-0271-	74S86	IC QUAD 2 IN EXCLUSIVE OR GATE		1
	376-0301-	74S158	IC QUAD 2 TO 1-LINE DATA SELECTOR/MUX INVERT		1
	376-0323-	74S225	IC 16 X 5 BI POLAR ASYNCH FIFO		4
	376-0333-	74S139	IC 2 TO 4-LINE DECODER/MULTIPLEXER		2
	376-0334-	74S240	IC OCTAL BUFFER/LINE DRIVER		5

*** END-OF-REPORT ***

		BY	DATE	APPROVED BY	DATE
WANG	WANG LABORATORIES, INC. LOWELL, MA U.S.A.	DWG		E ENGR	
		CHK		M ENGR	
MATERIAL	MODEL NO			MFG ENGR	
	SEE DRAWG SPECIFICATIONS NO.	TITLE 309 PROCESSOR M/L			
FINISH	TOL EX. AS NOTED XXX ± .010 FRAC ± 1/64 XXX ± .005 ANGS ± 1°30' 125	210-8358	C	8358	7
	SCALE NOT 5 OF 10	WANG PART NUMBER	M/F	DRAWING NUMBER	REV

WANG LABORATORIES, INC.

>>>>> ELECTRICAL PARTS LIST <<<<< SHEET 1 OF 10 PAGE 1

(FINAL BILL-OF-MATERIALS)

BOARD NO. & TITLE: CB358 BUS PROCESSOR M/L
ASSEMBLY LEVEL & TITLE: 210 8358-A
ARTWORK REVISION (R): 02
ASSEMBLY REVISION (A): 05
SCHEMATIC REVISION (S): 07
DWR OR MOST RECENT ECO: 33120

CREATED: 03/08/84 13:23
LAST MODIFIED: 08/16/84 13:09 BY: LAB
EDITING REVISION: 16

* REF. DES.	* WANG PART NO.	* VALUE/TYPE *	DESCRIPTION	* DRAWING NO. *	QTY. *
01	209-8358-		PCA		1
P4 - P14	350-4506-	2 CONT	CONN SHUNT .100 CTR		11
L105	376-0493-	8284	IC CLOCK GENERATOR & DRIVER		1
L13	377-0352-	9251A	IC PROGRAMMABLE COMMUNICATION INTERFACE		1
L261 - L265	377-0406-	8259A	IC PROGRAMMABLE INTERRUPT CONTROLLER		5
L46	377-0411-	9517A-4	IC MULTIMODE DMA CONTROLLER 4 MHZ		1
L48 - L56	377-0417-	4864-2	IC 64KX1 DRAM 150NS REF REQUIRE 4MS/256 ROW		36
L74 - L82					
L102 - L110					
L131 - L139					
L47	377-0426-	768	IC SINGLE/DOUBLE DENSITY FLOPPY DISK CONTROLLER		1
L26	377-0428-	MM6116	IC 2K X 8 SRAM CMOS 120NS 24 PIN		1
L159 - L167	377-0431-	MM6167-8	IC 16KX1 CMOS SRAM 100NS		18
L186 - L194					
L2	377-0436-	MM58167	IC CMOS REAL TIME CLOCK FOR MPU		1
L212	377-0437-	8086-2	IC 16 BIT MICROPROCESSOR 8 MHZ		1
L184	377-0440-	8288	IC 8238 BUS CONTROLLER FOR 8086/8088 BURNED/IN		1
L211	377-0446-	8253-5	IC PROGRAMMABLE INTERVAL TIMER		2
L238					
L5	378-8061-	PROM	IC 4KX8 UV EPROM 450 NS (5V)		1
L27	378-8062-	PROM	IC 4KX8 UV EPROM 450 NS (5V)		1
02	452-2707-	STIFFNER	STIFFNER LOWER		1
03	452-2708-	STIFFNER	STIFFNER UPPER		1
04 - 05	465-1238-		EXTRACTOR W/ROLL PIN		2
06 - 012	650-2100-	SCREW	SCREW 4-40 X 5/16		7
013 - 019	652-2000-	NUT	NUT HEX #4-40		7
020 - 025	653-2009-	WASHER	WASHER FLAT NYLON		6
BT1	666-1005-	BATTERY	LITHIUM/THIONYL CHLORIDE 3.6V BATTERY		1

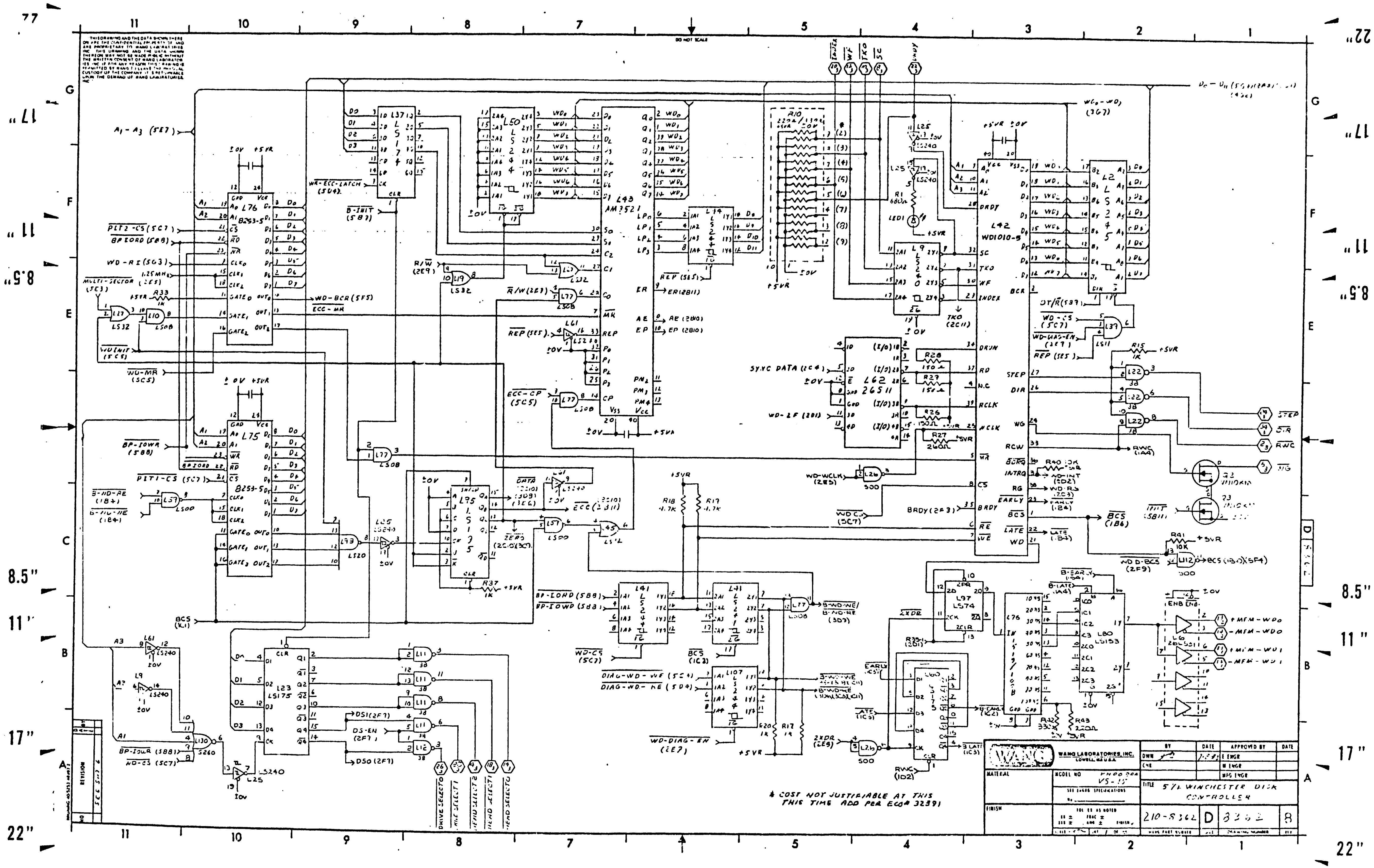
*	*WANG PART NO.	* VALUE/TYPE *	DESCRIPTION	* DRAWING NO. *	QTY. *

(CAUTION - THE FOLLOWING PARTS/COMPONENTS CONTAINED IN THIS B.O.M. ARE NOT RECOMMENDED FOR NEW DESIGNS)

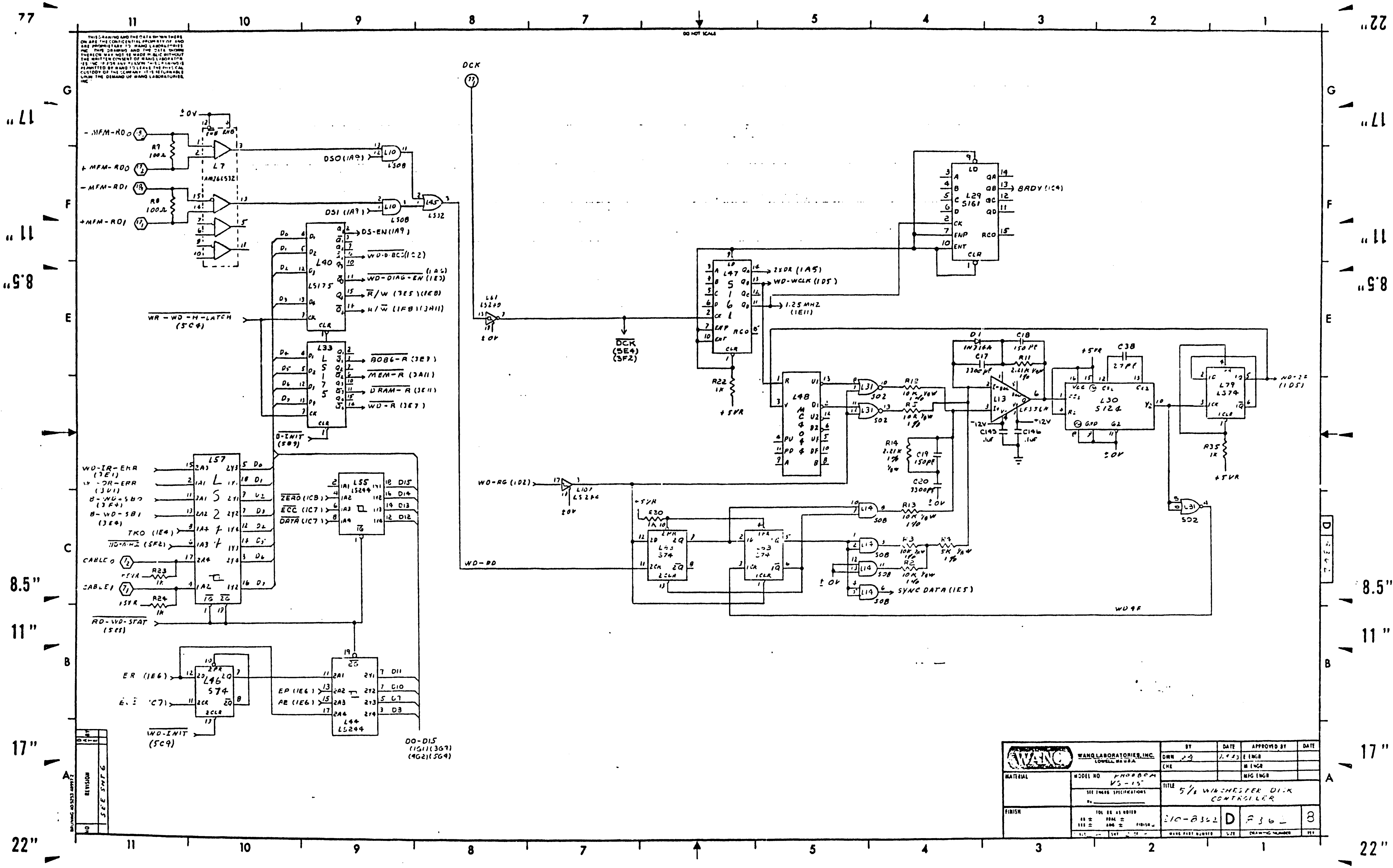
377-0352-	9251A	IC PROGRAMMABLE COMMUNICATION INTERFACE		1

*** END-OF-REPORT ***

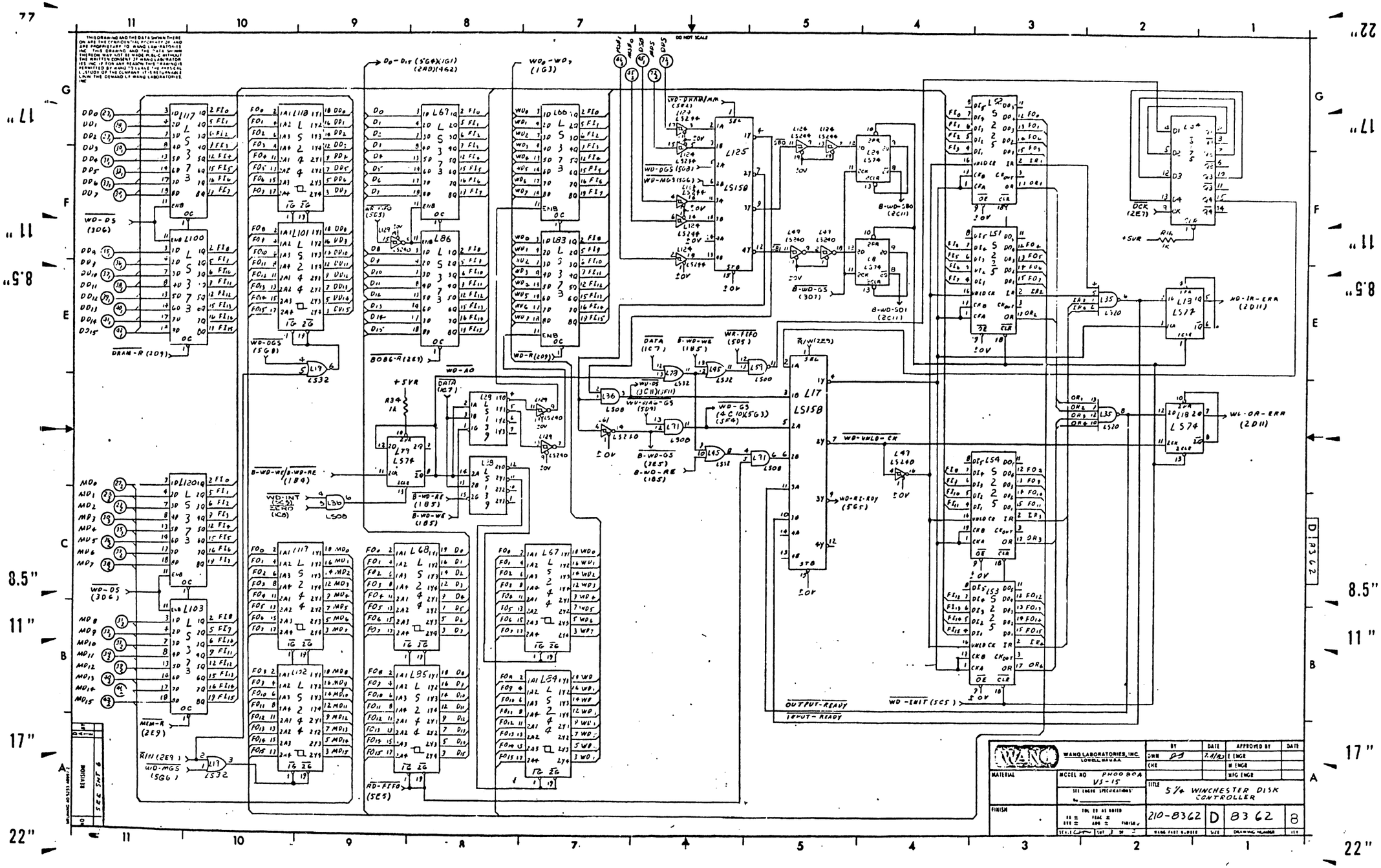
WANG LABORATORIES, INC. LOWELL, MA U.S.A.		BY	DATE	APPROVED BY	DATE
		DWN		E ENGR	
		CHK		M ENGR	
				MFG ENGR	
MATERIAL	MODEL NO	TITLE: BUS PROCESSOR M/L			
	WL ENGRG SPECIFICATIONS No.				
FINISH	TOL UX AS NOTED .XX ± .010 FRAC ± 1/64 .XXX ± .005 ANGS ± 1°30' FINISH √	210-8358	C	8358	7
	SCALE SHT 10 OF 10	WANG PART NUMBER	S/E	DRAWING NUMBER	REV

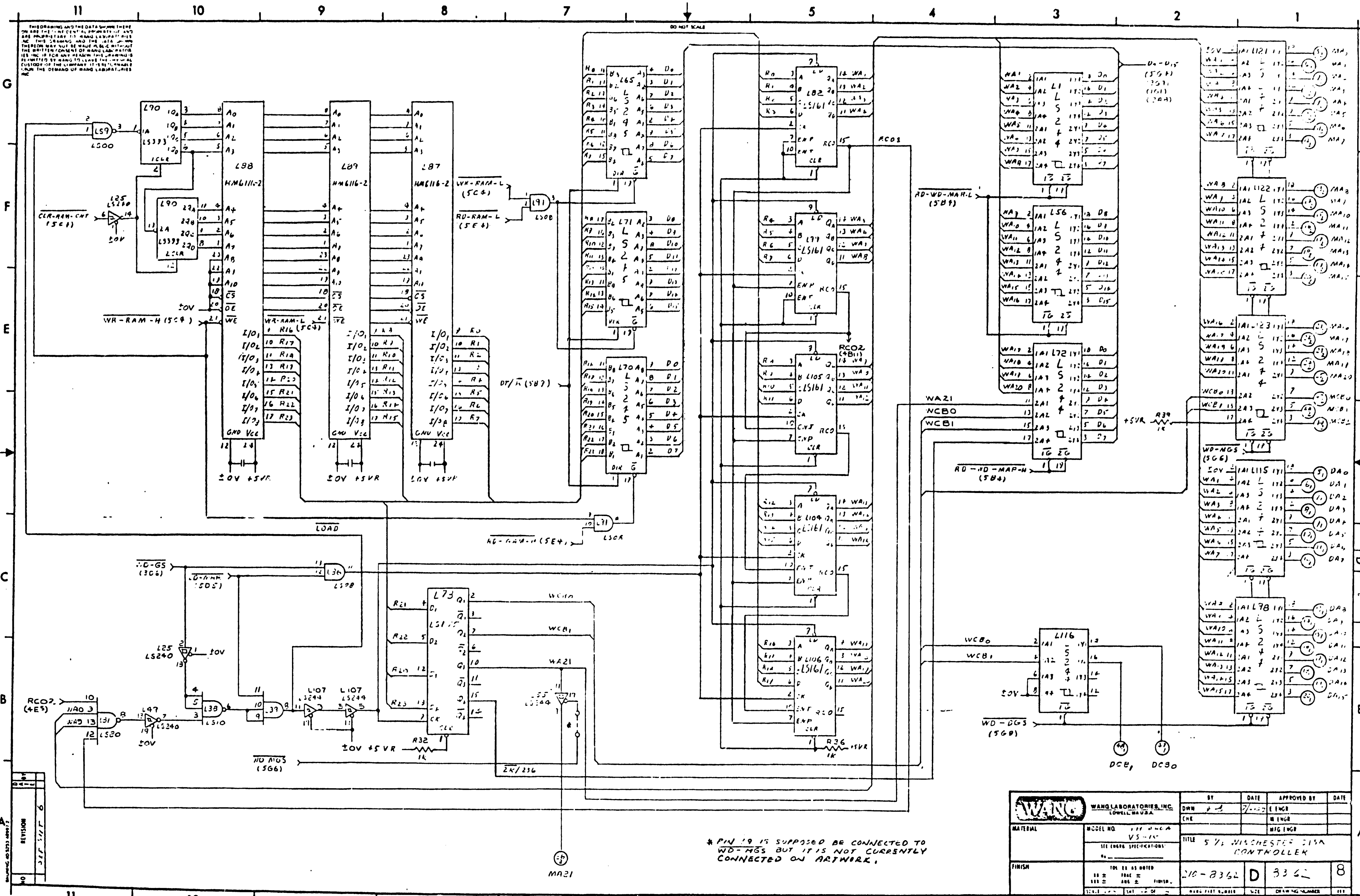

DO NOT SCALE
AM 2521
WD1010-5
2651I
LS175
LS74
LS153
B253-5
* COST NOT JUSTIFIABLE AT THIS TIME ADD PER ECO# 32391
WANG LABORATORIES, INC.
LOWELL, MASS. U.S.A.
5 1/4 WINCHESTER DISK CONTROLLER
210-8362
D
B

T1

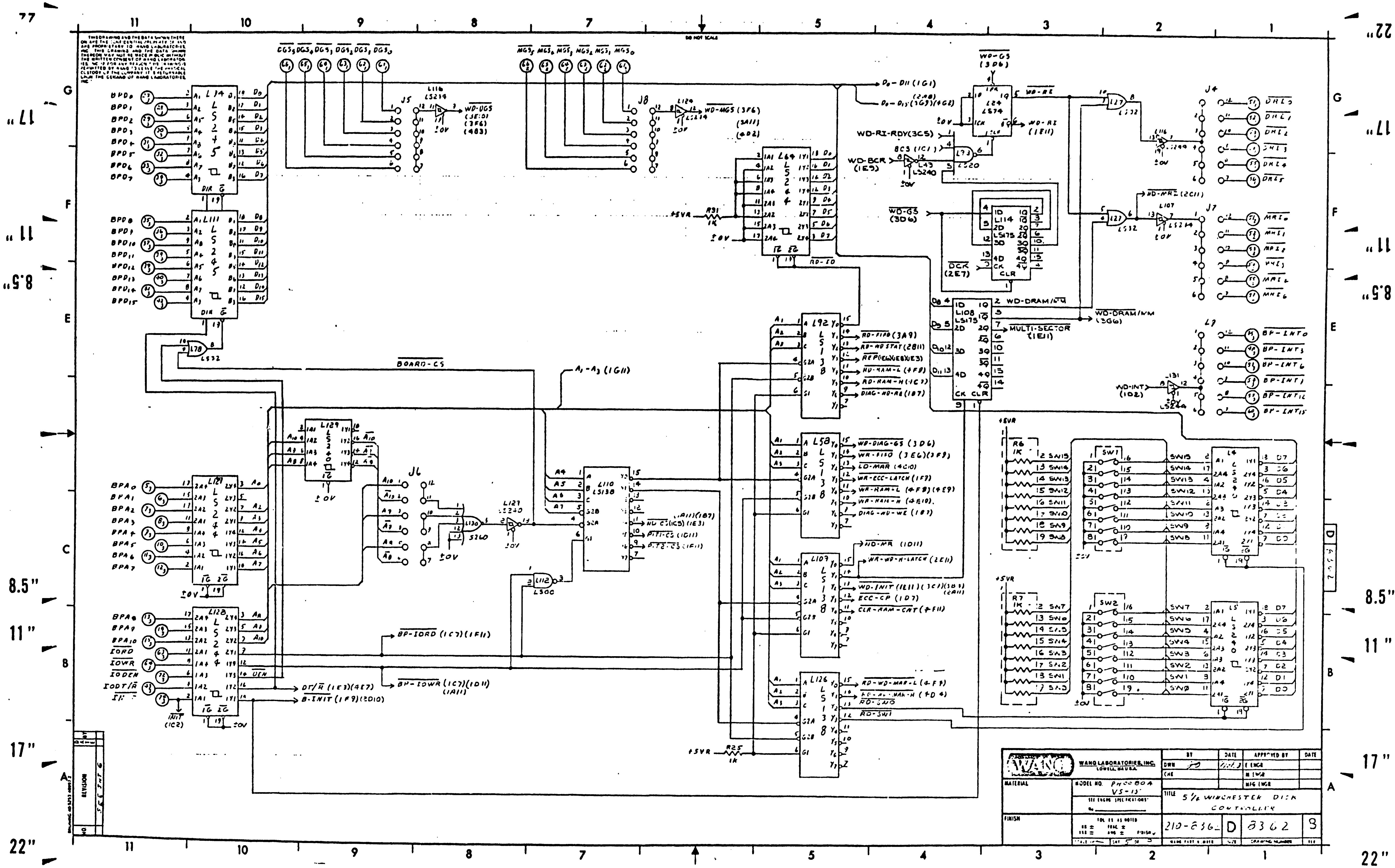

DO NOT SCALE
DCK
- MFM-RD0
+ MFM-RD0
- MFM-RD1
+ MFM-RD1
L7
AM26LS32
DS0 (1A9)
DS1 (1A9)
L10
LS08
L45
LS32
L40
LS175
DS-EN (1A9)
WD-D-BCS (1C2)
WD-DIAG-EN (1E3)
R/W (1E5)(1E8)
H/W (1F8)(3A11)
WR-WD-M-LATCH (5C4)
L33
LS175
8086-R (3E7)
MEM-R (3A11)
DRAM-R (3E11)
WD-R (3E7)
D-INIT (5B9)
L57
LS244
L55
LS244
ZERO (1C8)
ECC (1C7)
DATA (1C7)
CABLE 0
CABLE 1
RD-WD-STAT (5E5)
L46
S74
ER (1E6)
WD-INIT (5C9)
L44
LS244
EP (1E6)
AE (1E6)
D0-D15
L61
LS240
DCK (5E4) (3F2)
L47
S161
2XDR (1A5)
WD-WCLK (1D5)
1.25 MHZ (1E11)
R22 1K
+5VR
L29
S161
BRDY (1C4)
L48
MC4044
L31
S02
L13
LF356N
D1
1N316A
C18 150PF
C17 3300PF
R11 2.21K
C145
C146
L30
S124
C38 27PF
L79
LS74
R35 1K
WD-CL (1D5)
WD-RG (1D2)
L101
LS240
R30
L45
S74
L43
S74
L14
S08
R12
R13
R3
R4 5K
R2
R14 2.21K
C19 150PF
C20 3300PF
SYNC DATA (1E5)
WD-RD
WD4F
WANG LABORATORIES, INC.
LOWELL, MASS.
VS-15
5¼ WINCHESTER DISK CONTROLLER
210-8362
D
8
REVISION
SEE SHT 6

T2

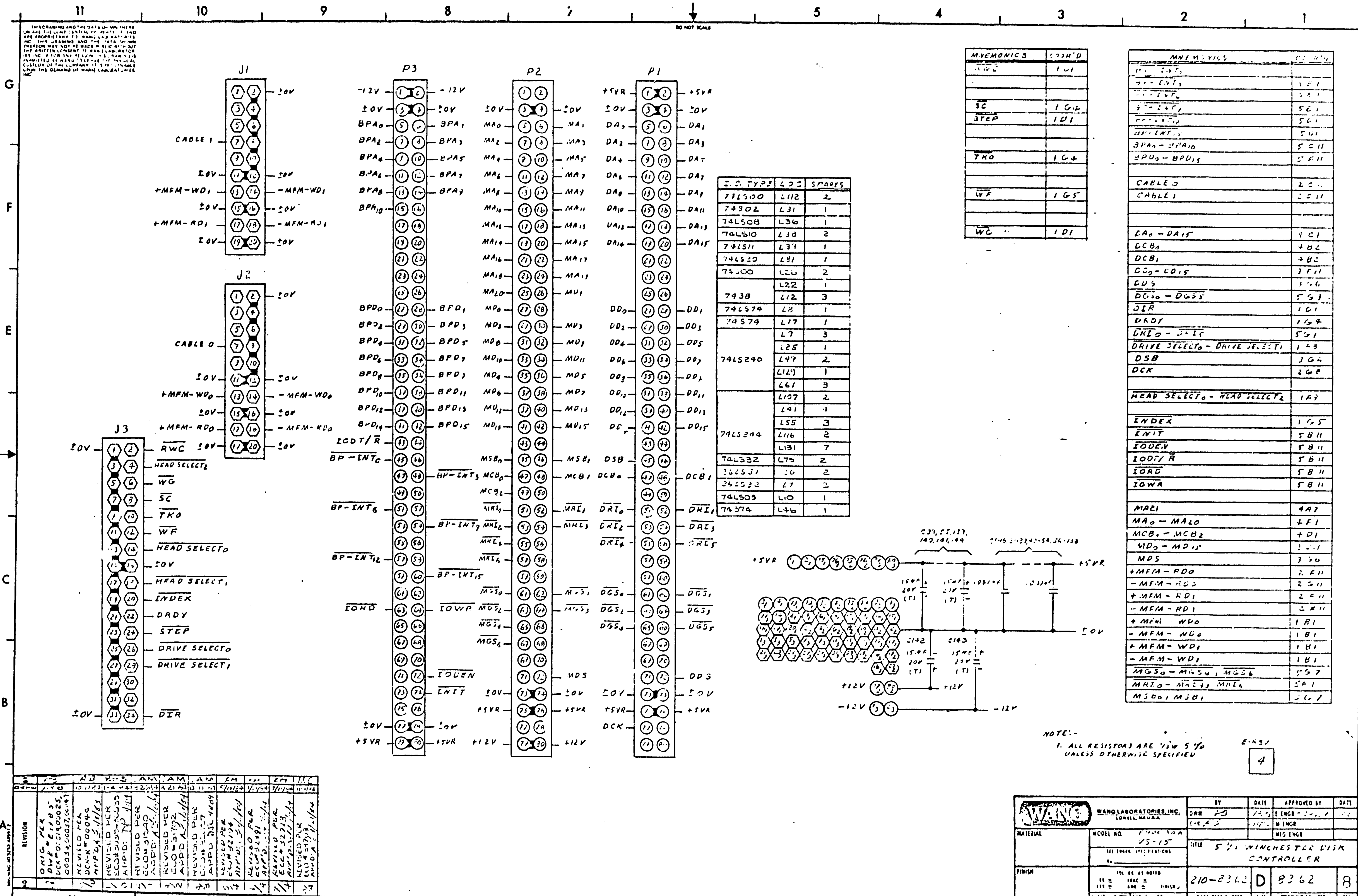

THIS DRAWING AND THE DATA SHOWN THEREON ARE THE CONFIDENTIAL PROPERTY OF WANG LABORATORIES INC. THIS DRAWING AND THE DATA SHOWN THEREON MAY NOT BE MADE PUBLIC WITHOUT THE WRITTEN CONSENT OF WANG LABORATORIES INC. IT FOR ANY REASON THIS DRAWING IS PERMITTED BY WANG TO LEAVE THE PHYSICAL CUSTODY OF THE COMPANY IT IS TO REMAIN THE PROPERTY OF WANG LABORATORIES INC
DO NOT SCALE
WD-DS (3D6)
DRAM-R (2D9)
WD-DGS (5G8)
WD-MGS (5G6)
MEM-R (2E9)
RIN (2E9)
WD-AO
DATA (1C7)
B-WD-WE (18E)
WR-FIFO (5D5)
R/W (2E9)
WD-WE (3C11);(5F11)
WD-DIAG-GS (5D9)
WD-G3 (4C10)(5G3)
(5F9)
B-WD-GS (3E5)
B-WD-RE (18E)
WD-WE (18E)
WD-INT (5C8)
B-WD-WE/B-WD-RE (18E)
WD-WRLO-CK
WD-RE-RDY (5G5)
OUTPUT-READY
INPUT-READY
WD-EXIT (5C5)
RD-FIFO (5E5)
B-WD-SBO (2C11)
B-WD-GS (3D7)
B-WD-SDO (2C11)
WD-IN-ERR (2D11)
WL-OR-ERR (2D11)
DCK (2E7)
+5VR
R34 1K
R14 1K
WANG LABORATORIES, INC. LOWELL, MASS.
MATERIAL
FINISH
MODEL NO PHOBOA VS-15
SEE ENGR SPECIFICATIONS
No.
TOL EX AS NOTED
TITLE 5¼ WINCHESTER DISK CONTROLLER
BY DWN PJ
CHK
DATE 2.1.82
APPROVED BY
E ENGR
M ENGR
MFG ENGR
210-8362 D 8362 8
WANG PART NO. B/SIZE
DRAWING NUMBER
REVISION
SEE SHT 6


WANG LABORATORIES, INC. LOWELL, MASS.
5 1/4 WINCHESTER DISK CONTROLLER
210-8362 D 8362 8
DO NOT SCALE
* PIN 19 IS SUPPOSED BE CONNECTED TO WD-MGS BUT IT IS NOT CURRENTLY CONNECTED ON ARTWORK.
L88 HM6116-2
L89 HM6116-2
L87 HM6116-2
L73 LS175
L116 LS244
CLR-RAM-CNT (5C4)
WR-RAM-H (5C4)
WR-RAM-L (5C4)
RD-RAM-L (5E4)
RD-WD-MAH-L (5B4)
RD-WD-MAP-H (5B4)
WD-MGS (5G6)
WD-DGS (5G6)
NO MGS (5G6)
LOAD
DCB1
DCB0
MA21

T4



WANG LABORATORIES, INC.
LOWELL, MASS. U.S.A.
MODEL NO. PHCC80A
VS-15
TITLE 5 1/4 WINCHESTER DISK CONTROLLER
210-8362 D 8362 B
DO NOT SCALE
BOARD-CS
A1-A3 (1G11)
WD-DRAM/NM
MULTI-SECTOR (1E11)
WD-RI-RDY(3C5)
WD-BCR (1E9)
WD-GS (3D6)
WD-RI (1E11)
WD-UGS (3E01)(3F6)(4B3)
WD-MGS (3F6)(3A11)(4D2)
D0-D11 (1G1)
BP-IORD (1C7)(1F11)
BP-IOWR (1C7)(1D11)(1A11)
DT/R (1E3)(4E7)
B-INIT (1F9)(2D10)



I.C. TYPE	LOC	SPARES
74LS00	L112	2
74902	L31	1
74LS08	L36	1
74LS10	L38	2
74LS11	L37	1
74LS32	L91	1
74S00	L26	2
	L22	1
7438	L12	3
74LS74	L8	1
74S74	L17	1
	L7	3
	L25	1
74LS240	L47	2
	L129	1
	L61	3
	L107	2
	L41	4
	L55	3
74LS244	L116	2
	L131	7
74LS32	L75	2
26LS31	L6	2
26LS32	L7	2
74LS05	L10	1
74374	L46	1

T6

WANG LABORATORIES, INC.

»»» ELECTRICAL PARTS LIST «««

(FINAL PARTS LIST)

RUN DATE: 09/24/84 14:29
SHEET 7 OF 8 PAGE 1

BOARD NO. & TITLE: C8362 5 1/4 WINCHESTER DISK CNTRL
ASSEMBLY LEVEL & TITLE: 209 8362
PARTS LIST REVISION (P): 1
ARTWORK REVISION (R): 07
ASSEMBLY REVISION (A): 06
SCHEMATIC REVISION (S): 08
CUR OR MOST RECENT ECO: 33703

CREATED: 03/08/84 11:26
LAST MODIFIED: 09/24/84 14:26 BY: NS
EDITING REVISION: 13

REF. DES.	WANG PART NO.	VALUE/TYPE	DESCRIPTION	DRAWING NO.	QTY.
C38	300-1027-	27P	CAP CERAMIC DISC 10% 500V N750		1
C18 - C19	300-1150-	150P	CAP CERAMIC DISC 10% 500V X5P		2
C17	300-1909-	3300P	CAP CERAMIC DISC 20% 500V Z5P		2
C20					
C145 - C146	300-1930-	.1U	CAP CERAMIC MONO RAD +80% -20% 50V Z5U		2
C1 - C16	300-1966-	.047U	CAP CERAMIC MONO AXIAL +80 -20% 50V Z5U		131
C21 - C37					
C40 - C54					
C56 - C138					
C39	300-4022-	15U	CAP TANT AXIAL 10% 20V		8
C55					
C139 - C144					
SW1 - SW2	325-1503-	SWITCH	SLIDE SPST 8 POS		2
R8 - R9	330-2011-	100.000	RES FIXED METAL FILM 1/4W 5% 200PPM		2
R26	330-2016-	150.000	RES FIXED METAL FILM 1/4W 5% 200PPM		3
R28 - R29					
R43	330-2023-	220.000	RES FIXED METAL FILM 1/4W 5% 200PPM		1
R42	330-2034-	330.000	RES FIXED METAL FILM 1/4W 5% 200PPM		1
R27	330-2057-	560.000	RES FIXED METAL FILM 1/4W 5% 200PPM		1
R1	330-2069-	680.000	RES FIXED METAL FILM 1/4W 5% 200PPM		1
R15 - R17	330-3011-	1.000K	RES FIXED METAL FILM 1/4W 5% 200PPM		17
R20					
R22 - R25					
R30 - R37					
R39					
R18 - R19	330-3048-	4.7K	RES FIXED METAL FILM 1/4W 5% 200PPM		2
R40 - R41	330-4011-	10.000K	RES FIXED METAL FILM 1/4W 5% 200PPM		2
R2 - R3	333-1090-	10.000K	RES FIXED METAL FILM 1/8W 1% 100PPM RN55		5
R5					
R12 - R13					
R11	333-0183-	2.21K	RES FIXED METAL FILM 1/8W 100PPM RN55		2
R14					
R4	333-0202-	4.99K	RES FIXED METAL FILM 1/8W 1% 100PPM		1
R10	333-0807-	220/330N	RESISTOR NETWORK TYPE: 10/16/T/SS		1
R6 - R7	333-0837-	1.000KN	RESISTOR NETWORK TYPE: 10/09/C/SS		2
J1 - J2	350-0240-	20 CONT	CONN HDR 10-10 PC R/A W/LK-EJT		2
J3	350-0429-	34 CONT	CONN HEADER R/A W/LOCK EJECT		1

BOARD NO. & TITLE: C8362 5 1/4 WINCHESTER DISK CNTRL SCHEMATIC REVISION (S): 08 SHEET OF PAGE 2

REF. DES.	WANG PART NO.	VALUE/TYPE	DESCRIPTION	DRAWING NO.	QTY.
LED1	370-0075-	LED	LED RED DIFFUSED RED 1MCD TYP		1
Q2 - Q3	375-1115-	VN10KM	FET N-CH TO-237 1W 60V .5A		2
L11 - L12	376-0128-	7438	IC QUAD 2-INPUT NAND BUFFER O/C OUTPUTS		3
L22					
L10	376-0153-	74LS08	IC QUAD 2-INPUT AND GATE		4
L36					
L77					
L91					
L8	376-0155-	74LS74	IC DUAL D-TYPE POSITIVE EDGE TRIG FL. FLOP		4
L18					
L24					
L79					
L30	376-0156-	74LS153	IC DUAL 4-INPUT MULTIPLEXER		1
L37	376-0159-	74LS174	IC HEX D-TYPE FLIP-FLOP		1
L23	376-0160-	74LS175	IC QUAD D-TYPE FLIP-FLOP		8
L33 - L34					
L40					
L60					
L73					
L108					
L114					
L31	376-0199-	74S02	IC QUAD 2-INPUT POSITIVE NOR GATES		1
L14	376-0200-	74S08	IC QUAD 2 INPUT POSITIVE AND GATES		1
L46	376-0202-	74S74	IC DUAL D-TYPE POS EDGE TRIGRD F/F W/PRESET/C		3
L63					
L97					
L130	376-0206-	74S260	IC DUAL 5-INPUT EXPANDER		1
L59	375-0207-	74LS00	IC QUAD 2-INPUT NAND GATE		2
L112					
L38	376-0209-	74LS10	IC TRIPLE 3-INPUT POS NAND GATES		1
L35	376-0210-	74LS20	IC DUAL 4-INPUT NAND GATE		3
L81					
L93					
L19	376-0211-	74LS32	IC QUAD 2-INPUT OR GATE		4
L27					
L45					
L78					
L39	376-0225-	74LS11	IC TRIPLE 3-INPUT AND GATE		1
L28	376-0226-	74LS139	IC 2-TO-4-LINE DECODER/MULTIPLEXER		1
L26	376-0228-	74S00	IC QUAD 2-INPUT NAND GATE		1
L82	376-0233-	74LS161	IC SYNCHRONOUS 4-BIT BINARY COUNTER W/DIRECT CLEAR		5
L99					
L104 - L106					
L95	376-0248-	74LS195A	IC 4-BIT UNIVERSAL SHIFT REGISTER		1
L48	376-0264-	4044	IC PHASE FREQUENCY DETECTOR 14 PIN DIP		1
L30	376-0273-	74S124	IC DUAL VOLTAGE CONTROLLED OSC (VCO)		1
L29	376-0278-	74S161	IC SYN 4-BIT BINARY COUNTER W/DIRECT CLEAR		2
L47					
L2	376-0285-	74LS245	IC OCTAL BUS TRANSCEIVER TRI-STATE OUTPUTS		6
L65					

BOARD NO. & TITLE: C8362 5 1/4 WINCHESTER DISK CNTRL SCHEMATIC REVISION (S): 08 SHEET OF PAGE 3

REF. DES.	WANG PART NO.	VALUE/TYPE	DESCRIPTION	DRAWING NO.	QTY.
L70 - L71					
L94					
L111					
L1	376-0288-	74LS244	IC OCTAL BUFFER/LINE DRIVER W/TRI STATE		28
L41					
L44					
L50					
L55 - L57					
L64					
L67 - L68					
L72					
L84 - L85					
L98					
L101 - L102					
L107					
L115 - L116					
L118 - L119					
L121 - L124					
L127 - L128					
L131					
L17	376-0293-	74LS158	IC QUAD 2-INPUT MULTIPLEXER		2
L125					
L58	376-0294-	74LS138	IC 3-LINE TO 8-LINE DECODER/MULTIPLEXER		5
L92					
L109 - L110					
L126					
L4 - L5	376-0297-	74LS240	IC OCTAL BUFFER/LINE DRIVER/LINE RECEIVER		7
L9					
L25					
L49					
L61					
L129					
L90	376-0307-	74LS393	IC DUAL 4-BIT BINARY COUNTER		1
L66	376-0310-	74LS373	IC OCTAL D-TYPE LATCH TRI-STATE OUTPUTS		8
L69					
L83					
L86					
L100					
L103					
L117					
L120					
L51 - L54	376-0323-	74S225	IC 16 X 5 BI POLAR ASYNCH FIFO		4
L6	376-0470-	26LS31	IC QUAD LINE DRIVER 16 PIN DIP		1
L7	376-0471-	26LS32	IC QUAD LINE RECEIVER 16 PIN DIP		1
L13	376-0547-	LF356	IC LF356 FET INPUT OP AMP 8 PIN DIP		1
L62	376-0548-	26S11	IC 26S11 QUAD BUS TRANSCEIVER 16 PIN DIP		1
L56	376-4002-	DEL LINE	IC DELAY LINE 100NS 10NS 10 TAP		1
L75 - L76	376-9003-	SKT 24	IC SOCKET 24 PIN DIL PC MOUNT		5
L87 - L89					
L42 - L43	376-9011-	IC ACCES	SOCKET 40 PIN DIL PC MOUNT		2

BOARD NO. & TITLE: C8362 5 1/4 WINCHESTER DISK CNTRL SCHEMATIC REVISION (S): 08 SHEET OF PAGE 4

REF. DES.	WANG PART NO.	VALUE/TYPE	DESCRIPTION	DRAWING NO.	QTY.
D1	380-1012-	1N914A	DIO SIG 75V 250MA 4NS DO-35		1
#2	452-2707-	STIFFNER	STIFFENER LOWER		1
#3	452-2708-	STIFFNER	STIFFENER UPPER		1
#4 - #5	465-1238-	EJECTOR	CARD EJECTOR		2
#1	510-8362-		PCB		1
#6 - #12	650-2140-	SCREW	SCREW 4-40 X 7/16		7
#13 - #19	652-2003-	NUT	LOCK NUT 4-40		7
#20 - #26	653-2009-	WASHER	WASHER 4 FLAT NYL		7
J4 - J9	654-0113-	12 CONT	CONN PC HEADER DUAL ROW .100		6

WANG LABORATORIES, INC.	BY	DATE	APPROVED BY	DATE
	DWN			
	CHK			
MATERIAL / MODEL NO / SEE WANG SPECIFICATIONS NO.	TITLE 5 1/4 WINCHESTER DISK CNTL			
FINISH	210-8362 (WANG PART NUMBER)	C (SIZE)	8362 (DRAWING NUMBER)	8

8.5"

11"

17"

T7

*	WANG PART NO.	* VALUE/TYPE *	DESCRIPTION	* DRAWING NO. *	QTY. *

(CAUTION - THE FOLLOWING PARTS/COMPONENTS CONTAINED IN THIS B.O.M. ARE NOT RECOMMENDED FOR NEW DESIGNS)

376-0199-	74S02		IC QUAD 2-INPUT POSITIVE-NOR GATES	1
376-0200-	74S08		IC QUAD 2 INPUT POSITIVE AND GATES	1
376-0202-	74S74		IC DUAL D-TYPE POS EDGE TRIGRD F/F W/PRESET/C	3
376-0228-	74S00		IC QUAD 2-INPUT NAND GATE	1
376-0264-	4044		IC PHASE FREQUENCY DETECTOR 14 PIN DIP	1
376-0323-	74S225		IC 16 X 5 BI POLAR ASYNCH FIFO	4

*** END-OF-REPORT ***

WANG LABORATORIES, INC. RUN DATE: 09/24/84 14:29

>>>>> ELECTRICAL PARTS LIST <<<<< SHEET OF PAGE 1

(FINAL PARTS LIST)

BOARD NO. & TITLE: C8362 5 1/4 WINCHESTER DISK CNTRL
ASSEMBLY LEVEL & TITLE: 210-A 8362
PARTS LIST REVISION (P): 1
ARTWORK REVISION (R): 02
ASSEMBLY REVISION (A): 06
SCHEMATIC REVISION (S): 08
DWR OR MOST RECENT ECO: 11703

CREATED: 03/08/84 11:26
LAST MODIFIED: 09/24/84 14:26 BY: MS
EDITING REVISION: 13

* REF. DES.	* WANG PART NO.	* VALUE/TYPE *	DESCRIPTION	* DRAWING NO. *	QTY. *
B1	209-8362-		PCA		1
P25 - P32	350-4506-	2 CONT	CONN SHUNT .100 CTR		8
L87 - L89	377-0428-	6116-2	IC 2K X 8 SRAM CMOS 120NS 24 PIN		3
L75 - L76	377-0446-	8253-5	IC PROGRAMMABLE INTERVAL TIMER		2
L43	377-0460-	9521	IC BURST ERROR PROCESSOR		1
L42	377-0510-	WD1010-5	IC WINCHESTER DISK CONTROLLER		1

*** END-OF-REPORT ***

	WANG LABORATORIES, INC.	BY	DATE	APPROVED BY	DATE
		DWN		ENGR	
		CHK		ENGR	
MATERIAL	MODEL NO			ENGR	
	SEE ENGRG SPECIFICATIONS NO.	TITLE 5¼ WINCHESTER DISK CNTL			
FINISH	TOL UNLESS NOTED	210-8362	C	8362	8
	SCALE	WANG PART NUMBER	SIZE	DRAWING NUMBER	REV

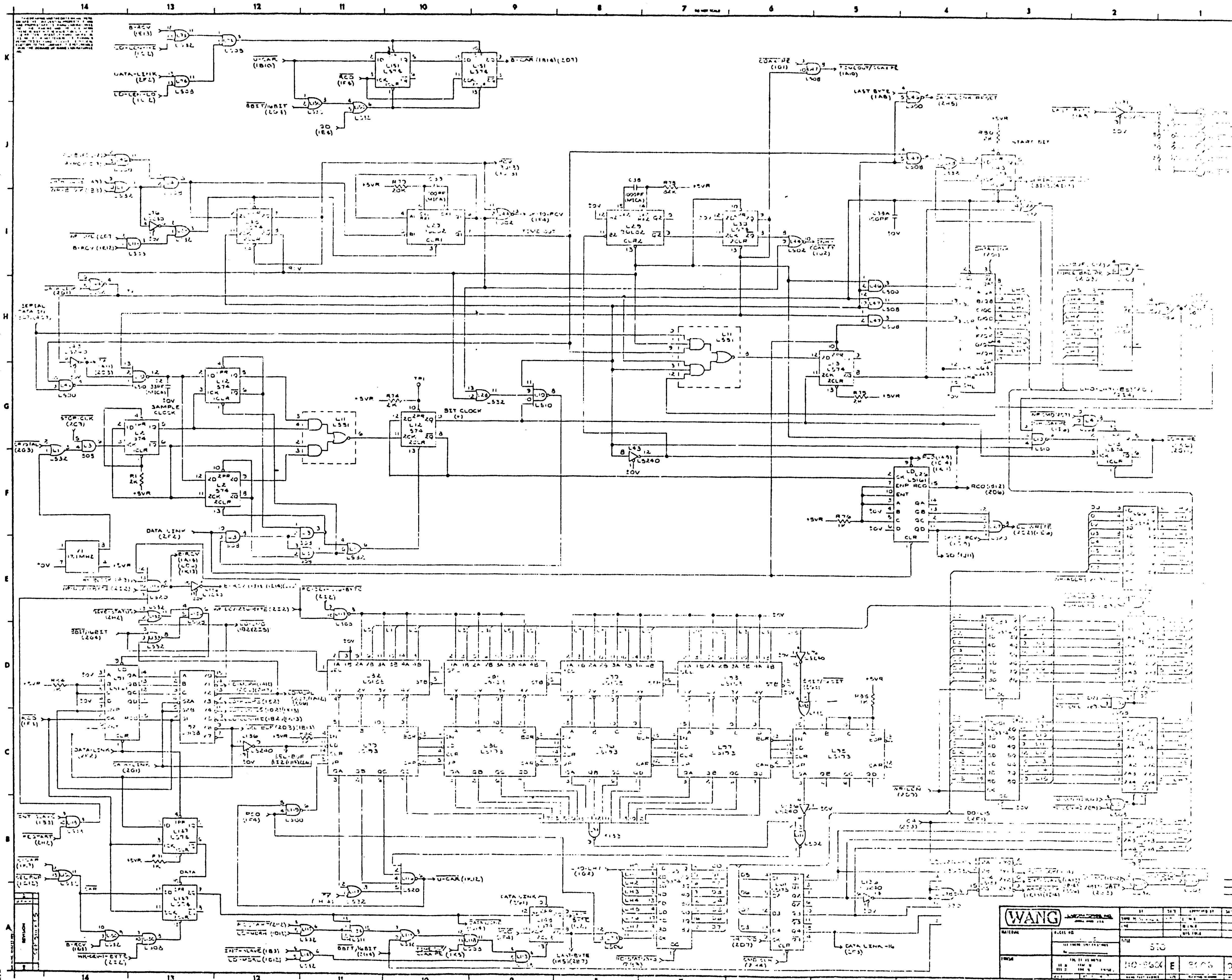
34"

22"

17"

11"

8.5"



8.5"

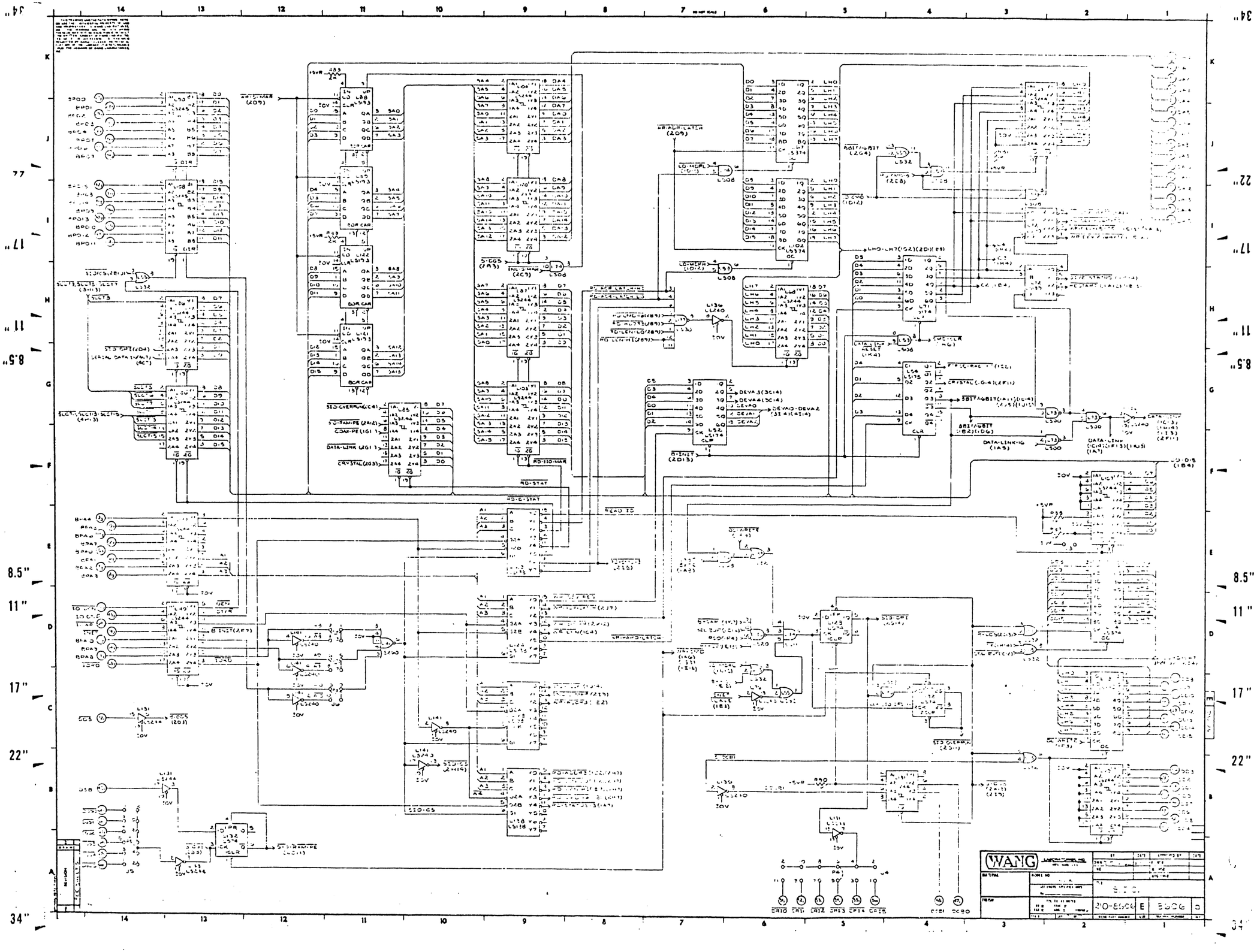
11"

17"

22"

34"

U1


WANG
S.I.O.
210-8606
E
8606
D
LS245
LS193
LS244
LS374
LS175
LS32
LS08
LS240
RD-STAT
RD-SIO-MAR
RD-O-STAT
READ IO
LH0-LH7(1S2)(2D)(E9)
DEVA3(3C14)
DEVA4(3C14)
DEVA0-DEVA2
CRYSTAL(203)
DATA-LINK
SIO-RAMPE
SIO-OVERRUN
SIO-CS
8BIT/16BIT
DATA-LINK-16
B-INIT
COM-PE
SLCT3
SERIAL DATA
+5VR
+5VP
ZOV
14
13
12
11
10
9
8
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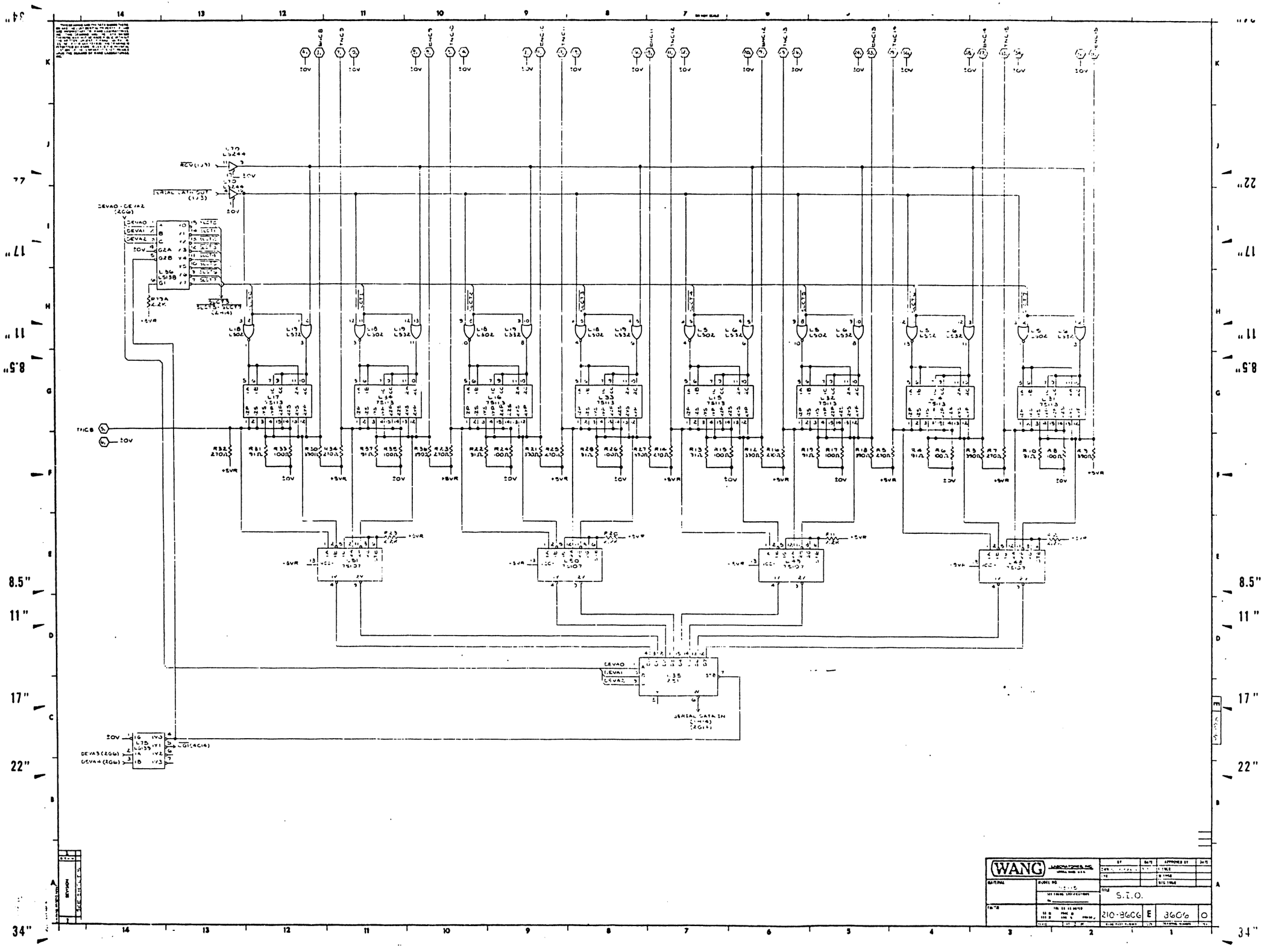
34"
22"
17"
11"
8.5"

U2



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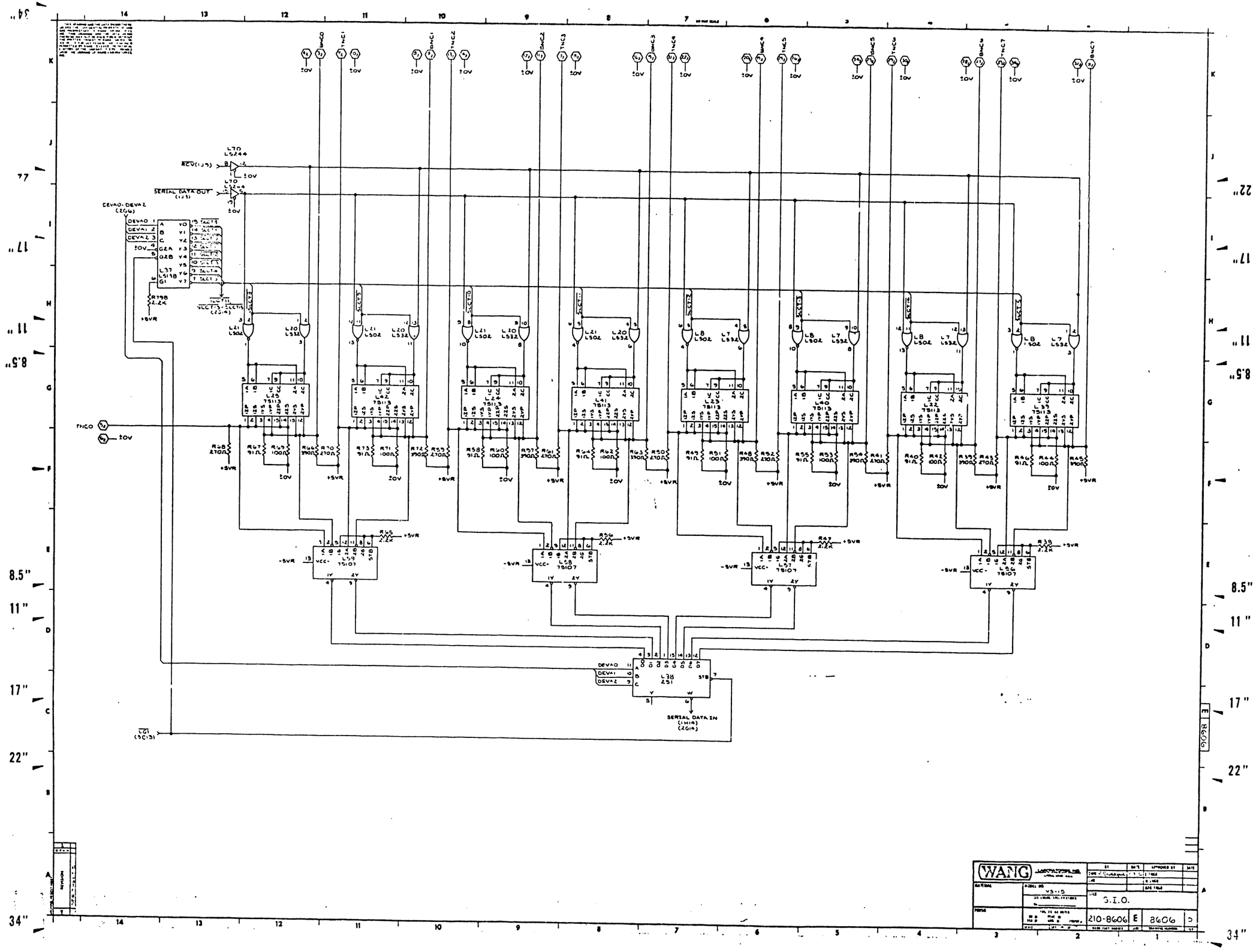
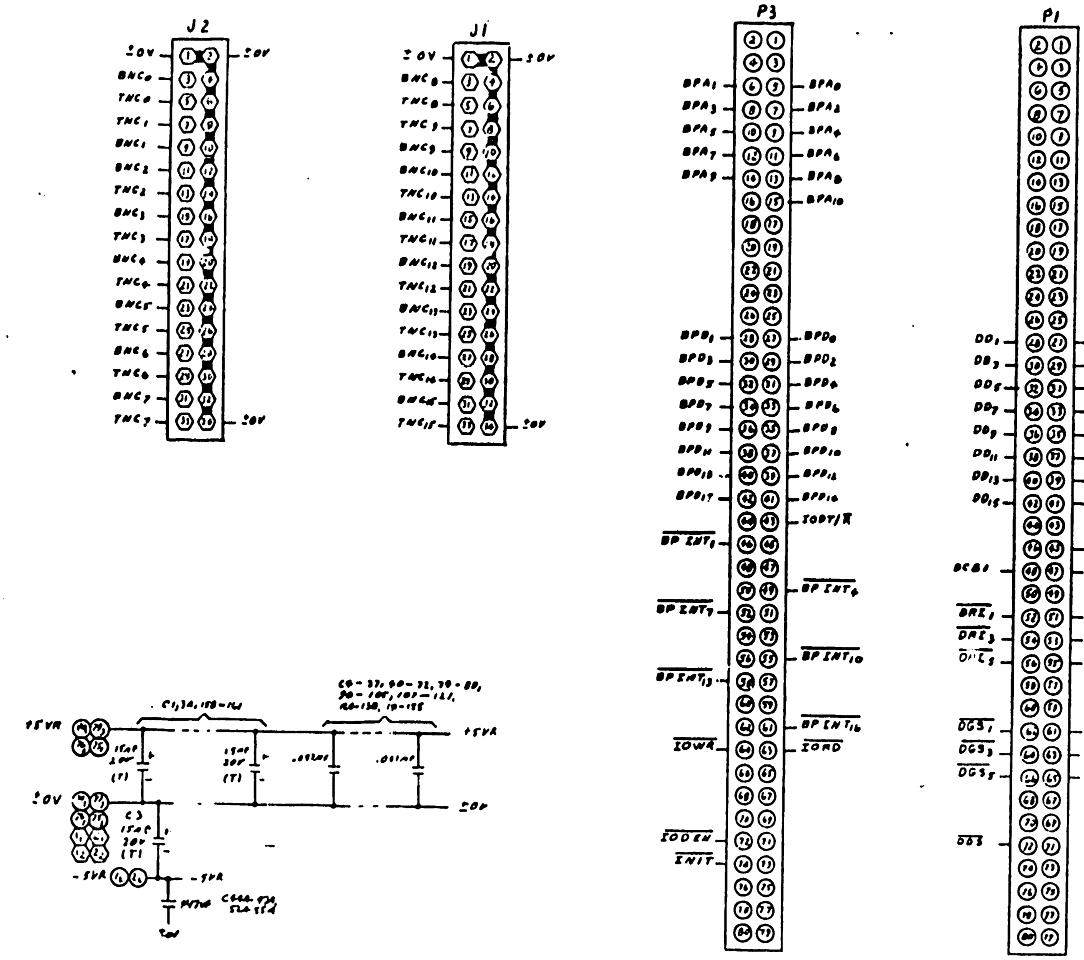


WANG					
MATERIAL	MODEL NO. VS-15			DATE	
FINISH				TITLE S.I.O.	
				210-8606	E 8606 D

U4



I. C. TYPE	LOC	SPARES
74LS00	L119	–
74LS02	L44	1
	L111	3
74LS03	L4	
74LS11	L134	1
74LS20	L27	1
	L135	1
74LS32	L1	1
	L55	1
	L73	1
	L147	3
74LS74	L30	1
	L128	1
	L148	1
74LS86	L7	3
74LS240	L43	5
	L70	5
	L136	1
	L141	3
74LS244	L62	1
	L79	4
	L143	5
74S260	L142	1

MNEMONICS	LOC'D
BNC0	4K12
BNC1	4K10
BNC2	4K9
BNC3	4K7
BNC4	4K6
BNC5	4K5
BNC6	4K3
BNC7	4K2
BNC8	3K12
BNC9	3K10
BNC10	3K9
BNC11	3K7
BNC12	3K6
BNC13	3K5
BNC14	3K3
BNC15	3K2
BP INT1	1J1
BP INT4	1J1
BP INT7	1J1
BP INT [illegible]	[illegible]
BP INT13	1J1
BP INT16	1J1
BPA0 HPA7	[illegible]
BPA8-BPA10	2D14
BPD0-BPD15	2D14
DA0-DA15	2K1
DD0-DD15	2B1
DGS	2E14
DGS0-DGS5	2B14
DRE0-DRE5	2A6
DSB	2B14
DCB0,DCB1	2A4
INIT	2D14
IO DEN	2D14
IO DT/R	2D14
IORD	2D14
IOWR	2D14
TNC0	4G14
TNC1	4K11
TNC2	4K10
TNC3	4K8
TNC4	4K7
TNC5	4K6
TNC6	4K4
TNC7	4K3
TNC8	3G14
TNC9	3K11
TNC10	3K10
TNC11	3K8
TNC12	3K7
TNC13	3K6
TNC14	3K4
TNC15	3K3

NOTES:
1) ALL RES. ARE 1/4W 5% UNLESS OTHERWISE SPECIFIED.

E-REV
0

WANG LABORATORIES, INC.

MODEL NO. 1?43

TITLE: S.I.O.

210-8606 | E | 8606 | 0

WANG LABORATORIES, INC.

>>>>> ELECTRICAL PARTS LIST <<<<< SHEET 7 OF 7 PAGE 1

(FINAL BILL-OF-MATERIALS)

BOARD NO. & TITLE: C8606 SIO
ASSEMBLY: 710
ART-WORK REVISION (R): 00
ASSEMBLY REVISION (A): 00
SCHEMATIC REVISION (S): 00
DWG OR MOST RECENT ECO: E1989

CREATED: 11/14/83 16:42
LAST MODIFIED: 07/17/84 15:02 BY: LAB
EDITING REVISION: 12

* REF. DES.	* WANG PART NO.	* VALUE/TYPE *	DESCRIPTION	* DRAWING NO. *	QTY. *
C38A	300-1150-	150P	CAP CERAMIC DISC 10% 50V X5P		1
C4 - C37 C40 - C44 C44A C45 C45A C46 C46A C47 C47A C48 - C52 C52A C53 C53A C54 C54A C55 C55A C56 - C72 C74 - C105 C107 - C121 C124 - C138 C141 - C155	300-1966-	.047U	CAP CERAMIC MONO AXIAL +80 -20% 50V Z5U		152
C1 C3 C3A C158 - C161	300-4022-	15U	CAP TANT AXIAL 10% 20V		7
C38 - C39	300-5006-	1000P	CAP MICA DIPPED 5% 100V		2
C2	300-5016-	33P	CAP MICA DIPPED 5% 500V		1
Y1	321-1006-	17.1000	CLOCK OSCILLATOR 17.1MHZ +-.01% TTL		1
R4	330-1092-	91.000	RES FIXED 1/4W 5%		16

BOARD NO. & TITLE: C8606 SIO SCHEMATIC REVISION (S): 00 SHEET OF PAGE 2

* REF. DES.	* WANG PART NO.	* VALUE/TYPE *	DESCRIPTION	* DRAWING NO. *	QTY. *
R10 R13 R19 R22 R28 R31 R37 R40 R46 R49 R55 R58 R64 R67 R73					
R6 R8 R15 R17 R24 R26 R33 R35 R42 R44 R51 R53 R60 R62 R69 R71	330-2011-	100.000	RES FIXED 1/4W 5%		16
R5 R7 R14 R16 R23 R25 R32 R34 R41 R43 R50 R52 R59 R61 R68 R70	330-2028-	270.000	RES FIXED 1/4W 5%		16
R3	330-2040-	390.000	RES FIXED 1/4W 5%		16

BOARD NO. & TITLE: C8606 SIO SCHEMATIC REVISION (S): 00 SHEET OF PAGE 3

* REF. DES.	* WANG PART NO.	* VALUE/TYPE *	DESCRIPTION	* DRAWING NO. *	QTY. *
R9 R12 R18 R21 R27 R30 R36 R39 R45 R48 R54 R57 R63 R66 R72					
R76 - R77 R81 - R82 R84 - R88 R90 - R91	330-3011-	1K	RES FIXED 1/4W 5%		11
R1 R74 - R75 R80 R83 R89	330-3021-	2K	RES FIXED 1/4W 5%		6
R2 R11 R20 R29 R38 R47 R56 R65 R79A R79B	330-3023-	2.2K	RES FIXED 1/4W 5%		10
R79	330 4021-	20K	RES FIXED 1/4W 5%		1
R78	330-4083-	82K	RES FIXED 1/4W 5%		1
J3	350-0203-	2 CONT	CONN PC HEADER SINGLE ROW .100 R/A		1
J1 - J2	350-0429-	34 CONT	CONN HEADER R/A W/LOCK EJECT		2
P4 - P9	350-4506-	2 POS	CONN SHUNT .100 CTR		6
L29	376-0132-	96L02	IC DUAL RETRIGGERABLE MONOSTABLE MULTIVIBRATOR		1
L48 - L51	376-0146-	75107	IC DUAL LINE RECEIVER 14 PIN DIP		8

BOARD NO. & TITLE: C8606 SIO SCHEMATIC REVISION (S): 00 SHEET OF PAGE 4

* REF. DES.	* WANG PART NO.	* VALUE/TYPE *	DESCRIPTION	* DRAWING NO. *	QTY. *
L56 - L59					
L4 L47 L53 L74 L105 L118 L130	376-0153-	74LS08	IC QUAD 2-INPUT AND GATE		7
L13 L30 L128 L132 L148 - L149 L151	376-0155-	74LS74	IC DUAL D-TYPE POSITIVE EDGE TRIG FLIP-FLOP		7
L52 L71	376-0159-	74LS174	IC HEX D-TYPE FLIP-FLOP		2
L54 L61	376-0160-	74LS175	IC QUAD D-TYPE FLIP-FLOP		2
L3	376-0200-	74S08	IC QUAD 2 INPUT POSITIVE AND GATES		1
L2 L12	376-0202-	74S74	IC DUAL D-TYPE POS EDGE TRIGRD F/F W/PRESET/C		2
L142	376-0206-	74S260	IC DUAL 5-INPUT EXPANDER		1
L46 L73 L119	376-0207-	74LS00	IC QUAD 2-INPUT NAND GATE		3
L5 L8 L18 L21 L44 L111	376-0208-	74LS02	IC QUAD 2-INPUT NOR GATE		6
L10	376-0209-	74LS10	IC TRIPLE 3-INPUT POS NAND GATES		1
L27 L116 L135	376-0210-	74LS20	IC DUAL 4-INPUT NAND GATE		3
L1 L6 - L7 L19 - L20	376-0211-	74LS32	IC QUAD 2-INPUT OR GATE		12

		BY	DATE	APPROVED BY	DATE
WANG	WANG LABORATORIES, INC. LOWELL, MA U.S.A.	DWN		E ENGR	
		CHK		M ENGR	
MATERIAL	MODEL NO.			MFG ENGR	
	SEE ENGRG SPECIFICATIONS No.	TITLE S10			
FINISH	TOL EX AS NOTED XX ± 010 FRAC ± 1/64 XXX ± 005 ANG ± 1°30' FINISH 125	210-8606	C	8606	0
	SCALE SHT 1 OF 1	WANG PART NUMBER	SIZE	DRAWING NUMBER	REV

U6

BOARD NO. & TITLE: C8606 SIO | SCHEMATIC REVISION (S): 00 | SHEET 6 OF 7 | PAGE 5

* REF. DES.	* WANG PART NO.	* VALUE/TYPE *	DESCRIPTION	* DRAWING NO. *	QTY. *
L28 L55 L93 L115 L117 L133 L147					
L150	376-0213-	74LS51	IC DUAL 2-WIDE 2-INPUT AND-OR-INVERT GATE		1
L11 L79 - L80 L88 - L89 L95 - L97 L121	376-0220-	74LS193	IC UP/DOWN BINARY COUNTER		9
L122	376-0225-	74LS11	IC TRIPLE 3-INPUT AND GATE		1
L75 L112 L134	376-0226-	74LS139	IC 2-TO-4-LINE DECODER/MULTIPLEXER		3
L9	376-0231-	74LS86	IC QUAD 2-INPUT EXCLUSIVE-OR GATE		1
L26 L91	376-0233-	74LS161	IC SYNCHRONOUS 4-BIT BINARY COUNTER W/DIRECT CLEAR		2
L63	376-0242-	74LS280	IC 9-BIT ODD/EVEN PARITY GENERATOR/CHECKER		1
L78 L137	376-0249-	74LS30	IC 8-INPUT NAN GATE		2
L14 - L17 L27 - L25 L31 - L34 L39 - L42	376-0256-	75113	IC DUAL LINE DRIVER 16 PIN DIP		16
L35 L38	376-0272-	74251	IC DATA SELECTOR/MULTIPLEXER TRI-STATE		2
L94	376-0276-	74S133	IC 13-INPUT NAND GATE		1
L90 L108	376-0285-	74LS245	IC OCTAL BUS TRANSCEIVER TRI-STATE OUTPUTS		2
L65 - L67 L84 L101 - L102 L113 - L114	376-0286-	74LS374	IC OCTAL D-TYPE FLIP-FLOP TRI-STATE		8
L62	376-0288-	74LS244	IC OCTAL BUFFER/LINE DRIVER W/TRI STATE		19

BOARD NO. & TITLE: C8606 SIO | SCHEMATIC REVISION (S): 00 | SHEET OF | PAGE 6

* REF. DES.	* WANG PART NO.	* VALUE/TYPE *	DESCRIPTION	* DRAWING NO. *	QTY. *
L68 - L70 L83 L85 - L87 L100 L103 - L104 L106 - L107 L120 L129 L131 L139 - L140 L143					
L81 - L82 L98 - L99	376-0293-	74LS158	IC QUAD 2-INPUT MULTIPLEXER		4
L36 - L37 L92 L123 - L125 L133	376-0294-	74LS138	IC 3-LINE TO 8-LINE DECODER/MULTIPLEXER		7
L43 L76 L136 L141	376-0297-	74LS240	IC OCTAL BUFFER/LINE DRIVER/LINE RECEIVER		4
L64	376-0303-	74LS299	IC 8-BIT UNIVERSAL SHIFT/STORAGE REGISTER		1
028	376-9077-	SKT-04	SCKT,CRYST. OSC. 14 POS. FOOTPRINT-TIN		1
02	452-2707-	STIFFNER	STIFFNER LOWER		1
01	452-2708-	STIFFNER	STIFFNER UPPER		1
025 - 026	465-1250-	CARD EJ	CARD EJECTOR		2
03	510-8606-		PCB		1
04 - 010	650-2100-	SCREW	SCR 4-40 X 5/16		7
011 - 016	652-2000-	NUT	NUT 4-40 HEX		6
017 - 023	653-2009-	WASH #4	WASHER #4		7
J4 - J7	654-0113-	12 CONT	CONN PC HEADER DUAL ROW .100		4
TP1	654-1192-	TERM	TERMINAL SINGLE NECK		1

BOARD NO. & TITLE: C8606 SIO | SCHEMATIC REVISION (S): 00 | SHEET OF | PAGE 7

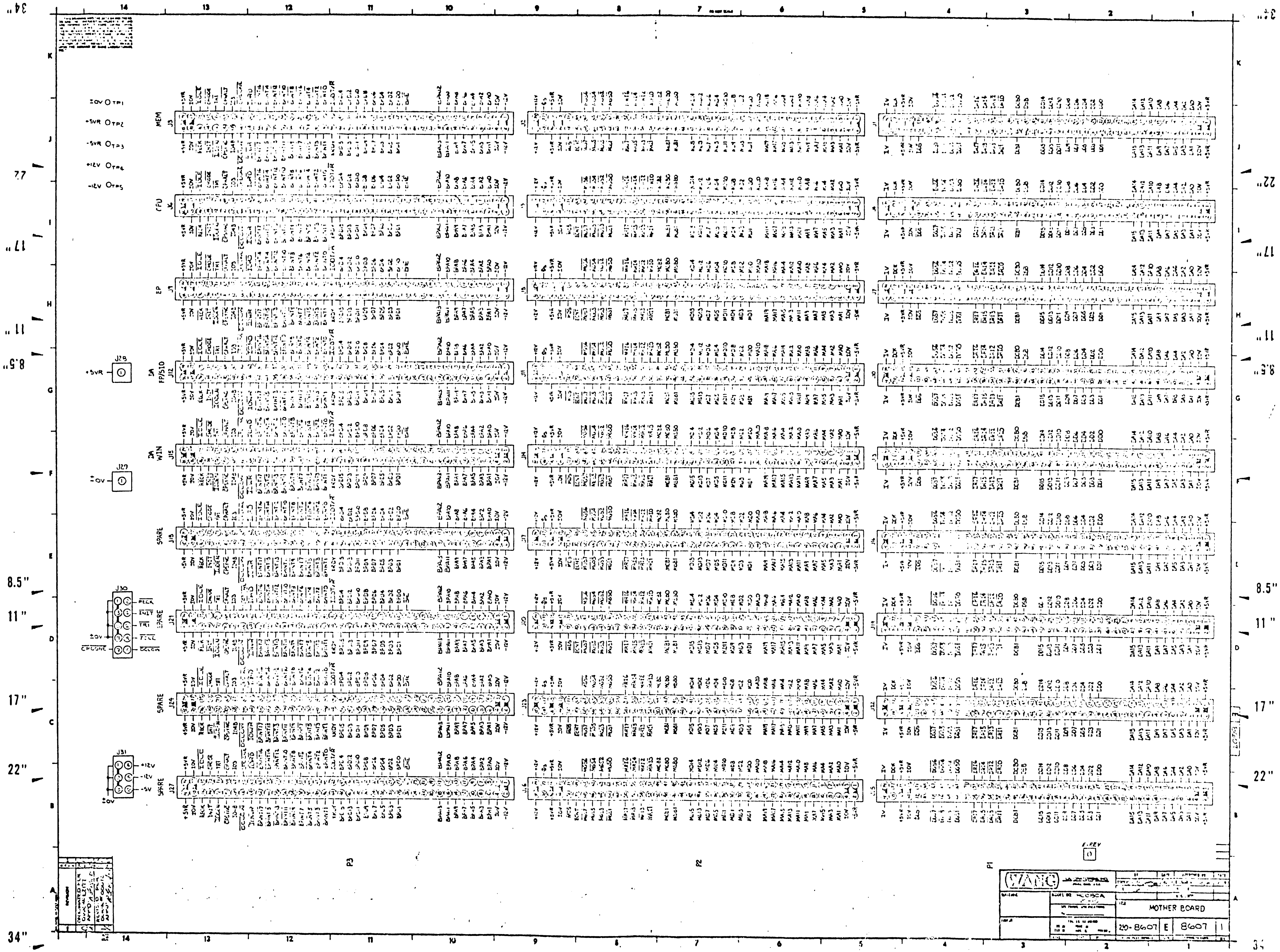
*	* WANG PART NO.	* VALUE/TYPE *	DESCRIPTION	* DRAWING NO. *	QTY. *

(CAUTION - THE FOLLOWING PARTS/COMPONENTS CONTAINED IN THIS B.O.M. ARE NOT RECOMMENDED FOR NEW DESIGNS)

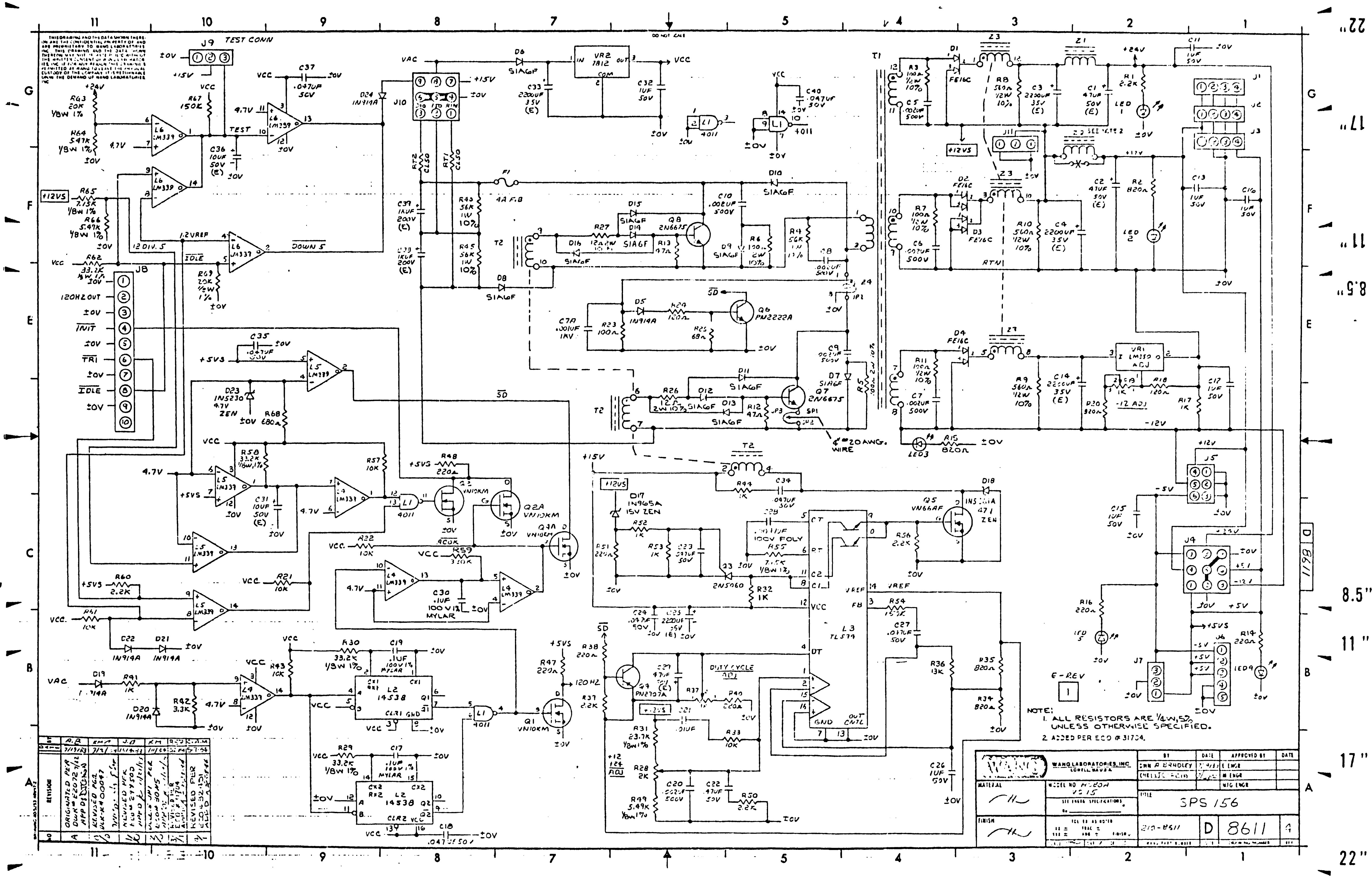
376-0132-	96L02	IC DUAL RETRIGGERABLE MONOSTABLE MULTIVIBRATOR		1
376-0200-	74S08	IC QUAD 2 INPUT POSITIVE AND GATES		1
376-0202-	74S74	IC DUAL D-TYPE POS EDGE TRIGRD F/F W/PRESET/C		2

*** END-OF-REPORT ***

		BY	DATE	APPROVED BY	DATE
WANG	WANG LABORATORIES, INC. LOWELL, MA U.S.A.	DWN		E ENGR	
		CHK		M ENGR	
MATERIAL	MODEL NO.			MFG ENGR	
	SEE ENGRG SPECIFICATIONS No.	TITLE S10			
FINISH	TOL EX AS NOTED XX ± .010 FRAC ± 1/64 XXX ± .005 ANG ± 1° 30' FINISH V	210-8606	C	8606	0
	SCALE SHT 7 OF 7	WANG PART NUMBER	SIZE	DRAWING NUMBER	REV


MEM
CPU
EP
SA FP/SIO
DA WIN
SPARE
SPARE
SPARE
SPARE
J29
J30
J31
WANG
MOTHER BOARD
210-8607
E
8607

V1


NOTE:
1. ALL RESISTORS ARE 1/4W, 5% UNLESS OTHERWISE SPECIFIED.
2. ADDED PER ECO # 31734.
WANG LABORATORIES, INC. LOWELL, MASS.
SPS 156
D 8611
TEST CONN
E-REV

W1

THIS DRAWING AND THE DATA SHOWN THEREON ARE THE ... PROPERTY OF AND ARE PROPRIETARY TO WANG LABORATORIES, INC. ... UPON THE DEMAND OF WANG LABORATORIES INC.

DO NOT SCALE

ITEM NO.	WANG PART NO.	DESCRIPTION	REFERENCE DESIGNATION(S)	QTY.
53				
52	333-0147	RES 33.2K 1/8W 1%	R29,30,62,58	4
51	333-0121	RES 23.7K 1/8W 1%	R31	1
50	333-0110	RES 20K 1/8W 1%	R3,69	2
49				
48				
47				
46	332-4056	RES 56K 1W 10%	R445,46	3
45				
44				
43				
42	331-2056	RES 560Ω 1/2W 10%	R8-10	3
41	331-2010	RES 100Ω 1/2W 10%	R3,7,11	3
40	330-5034	RES 330K 1/4W 5%	R59	1
39	330-5016	RES 150K 1/4W 5%	R54 67	2
38	330-9002	RES CC-50	RT1,2	2
37				
36	330-4014	RES 13K 1/4W 5%	R36	1
35				
34	330-4011	RES 10K 1/4W 5%	R21,27,33,43 57,61	6
33	330-3037	RES 3.3K 1/4W 5%	R42	1
32	330-3023	RES 2.2K 1/4W 5%	R1,37,50,56,60	5
31	330-2057	RES 680Ω 1/4W 5%	R53	1
30	330-3011	RES 1K 1/4W 5%	R17,32,41,44,52,53	6
29	330-2083	RES 820Ω 1/4W 5%	R2,15,20,34,35	5
28	330-2023	RES 220Ω 1/4W 5%	R14,16 39,40,47,48,51	7
27	330-1067	RES 68Ω 1/4W 5%	R25	1
26				
25	330-2013	RES 120Ω 1/4W 5%	R18,24 23	3
24	330-1048	RES 47Ω 1/4W 5%	R12,13	2
23				
22				
21	320-0916	CHOKE	L3	1
20	320-0716	COIL 100UH	L1,2	2
19	320-0124	COIL	L4	1
18				
17				
16				
15	300-3323	CAP 2200UF 35V(E)	C3,4,14 25,33	5
14	300-3321	CAP 10UF 50V (E)	C41,36	2
13				
12	300-3144	CAP 1KUF 200V (E)	C34 39	2
11	300-3132	CAP 47UF 50V (E)	C1,2,29	3
10	300-2214	CAP .1UF 100V(M)	C17,19 30	3
9				
8	300-2075	CAP 4700PF 100V(PXY)	C28	1
7	300-1966	CAP .047UF 50V	C10,23,24,27,34 35,37,40	8
6	300-1963	CAP .47UF 50V	C22	1
5				
4	300-1931	CAP 1UF 50V	C11-13,15,16,26,32	7
3	300-1913	CAP .022UF 50V	C5-10,20	7
2	300-1903	CAP .01UF 25V	C21	1
1	30 -1821	CAP .001UF 1KV	C7A	1

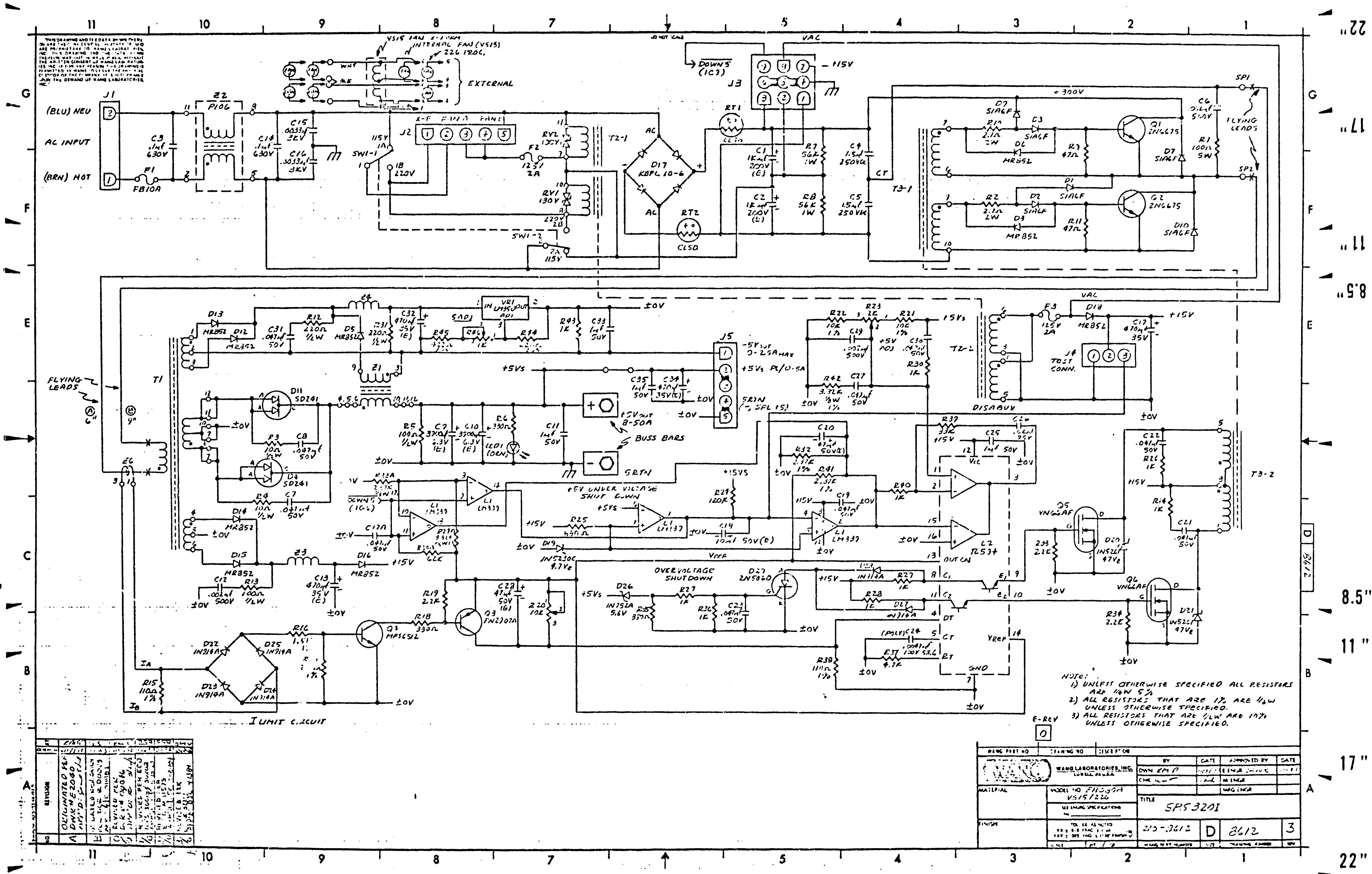
ITEM NO.	WANG PART NO.	DESCRIPTION	REFERENCE DESIGNATION(S)	QTY.
106				
105				
104	325-2071	HEATSINK		3
103	325-2075	HEATSINK		2
102				
101	325-2063	5930R		2
100	325-2063	659168		2
99	325-2054	3273-07		5
98				
97	325-9056	435320		2
96	375-1126	XSTR PN2222A	Q6	1
95	375-1125	XSTR VN66AF	Q5	1
94				
93	375-1124	XSTR 2N6675	Q7,8	2
92	375-1115	XSTR VN10KM	Q1,2,9A,CA	4
91	375-1097	XSTR PN2907A	Q4	1
90				
89				
88				
87	374-0044	REG LM350T	VR1	1
86	374-0035	REG 7812A	VR2	1
85				
84				
83				
82	370-0027	LED (ORN)	LED1-5	5
81				
80				
79				
78	360-1040	FUSE 4AMP	F1	1
77	360-0006	FUSECLIP		2
76				
75				
74	350-0434	CONN 10POS	J3	1
73	350 0234	CONN 5POS	J6	1
72	350-0219	CONN 3POS	J4 10	2
71				
70	350-0212	CONN 6POS	J5	1
69	350-0217	CONN 5POS	J7 11	2
68	350-0217	CONN 4POS	J1 3	3
67				
66				
65				
64	337-2010	RES 100Ω 2W 10%	R5,6	2
63	337-1012	RES 12Ω 2W 10%	R26,27	2
62				
61				
60				
59	336-1022	POT 2K 5106 001	R28	1
58	336-1017	POT 1K 5106 001	R19 37	2
57				
56				
55	333-0187	RES 5.49K 1/8W 1%	R47,64,66	3
54	333-0163	RES 215K 1/8W 1%	R55 65	2

ITEM NO.	WANG PART NO.	DESCRIPTION	REFERENCE DESIGNATION(S)	QTY.
148	654-0104	CONN 3POS	J9	1
147				
146				
145				
144				
143	652-2007	NUT 4-40		2
142				
141				
140	650-3120	SCREW #6-32x3/8		4
139	650-3093	SCREW #6		1
138	650-2120	SCREW #4-40x3/8		2
137				
136				
135				
134	600-1018	WIRE		.25'
133	600-0509	WIRE 20AWG		4
132				
131				
130				
129	410-0264	OUTPUT X-FORMER	T1	1
128	410-0200	DRIVER	T2	1
127				
126				
125				
124	380-4022	DIO FE16C	D1-4	4
123				
122	380-4004	DIO S1AGF	D6-16	11
121	380-4001	DIO 2N5060	Q3	1
120	380-2147	DIO 1N5261A	D18	1
119				
118	380-2116	DIO 1N965A	D17	1
117	380-2048	DIO 1N5230C	D23	1
116	380-1012	DIO 1N914A	D5,17-22,24	6
115				
114				
113				
112	376-0605	IC TL594	L3	1
111				
110	376-0257	IC 14539	L2	
109	376-0375	IC 4011	L1	1
108	376-0240	IC LM339	L4-6	3
107				

WANG LABORATORIES, INC. LOWELL MA U.S.A.		BY	DATE	APPROVED BY	DATE
		DWN KMLC		E ENGR	
		CHK		M ENGR	
				MFG ENGR	
MATERIAL	MODEL NO HC306 V515	TITLE SPS156			
	SEE ENGRG SPECIFICATIONS No.				
FINISH	TOL EX AS NOTED	210-3611	D	B1611	1
SCALE	SHT 2 OF 2	WANG PART NUMBER	SIZE	DRAWING NUMBER	REV

REVISION
SEE SHEET 1

W2


EXTERNAL
J1
(BLU) NEU
AC INPUT
(BRN) HOT
F1
FB10A
J2
J3
T2-1
T3-1
T1
T2-2
T3-2
J4
TEST CONN.
J5
FLYING LEADS
BUSS BARS
SRTN
+5V UNDER VOLTAGE SHUT DOWN
OVERVOLTAGE SHUTDOWN
LIMIT CIRCUIT
DISABUV
NOTE:
1) UNLESS OTHERWISE SPECIFIED ALL RESISTORS ARE 1/4W 5%
2) ALL RESISTORS THAT ARE 1% ARE 1/4W UNLESS OTHERWISE SPECIFIED.
3) ALL RESISTORS THAT ARE 1/2W ARE 10% UNLESS OTHERWISE SPECIFIED.
E-REV
WANG LABORATORIES, INC.
TITLE
SPS320I
D
8612
3

X1

ITEM NO.	WANG PART NO.	DESCRIPTION	REFERENCE DESIGNATION(S)	QTY.
53	333-0056	RES. 422Ω 1/4W 1%	R45	1
52				
51				
50				
49	332-4056	RES. 56K 1W 10%	R7,8	2
48				
47				
46				
45	331-2022	RES. 220Ω 1/2W 10%	R12,31	2
44	331-2010	RES. 100Ω 1/2W 10%	R5,13	2
43	331-1010	RES. 10Ω 1/2W 10%	R3,4	2
42				
41				
40				
39	330-8002	THMS. CL50	RT1,2	2
38	330-5013	RES. 120K 1/4W 5%	R24	1
37	330-4063	RES. 62K 1/4W 5%	R25A	1
36	330-4034	RES. 33K 1/4W 5%	R39	1
35	330-3023	RES. 2.2K 1/4W 5%	R19,33,34	3
34	330-3011	RES. 1K 1/4W 5%	R14,16-30,36,40,43	9
33	330-2034	RES. 330Ω 1/4W 5%	R6,18,35	3
32	330-1043	RES. 47Ω 1/4W 5%	R9,11	2
31	330-3048	RES. 47K 1/4W 5%	R37	1
30	330-2069	RES. 1/4W 680Ω 5%	R25	1
29				
28	325-2113	SW. 220/115 DPDT	SW1	1
27				
26				
25				
24	320-0805	CHOKE 5V(1) CON	Z1	1
23	320-0761	CHOKE P106	Z2	1
22	320-0746	CHOKE	Z3,4	2
21				
20	320-0124	COIL SC	Z6	1
19				
18				
17				
16	300-3322	CAP. 470μf 35V(E)	C13,17,32,34	4
15	300-3321	CAP. 10μf 50V(E)	C18	1
14	300-3147	CAP. 3300μf 6.3V(E)	C9,10	2
13	300-3144	CAP. 1Kμf 200V(E)	C1,2	2
12				
11	300-3132	CAP. 47μf 50V(E)	C20,28	2
10	300-2430	CAP. .1μf 250VAC/600VDC	C3,14	2
9	300-2294	CAP. 1.5μf 250V	C4,5	2
8	300-2075	CAP. .0047μf 100V(P)	C24	1
7				
6	300-1994	CAP. .0033μf 3KV	C15,16	2
5	300-1966	CAP. .047μf 50V	C7,8,17A,19,21-23,30,31,27	10
4	300-1931	CAP. 1μf 50V	C11,25,33,35	4
3				
2	300-1904	CAP. .02μf 25V	C26	1
1	300-1913	CAP. .002μf 500V	C6,12,29	3

ITEM NO.	WANG PART NO.	DESCRIPTION	REFERENCE DESIGNATION(S)	QTY.
106				
105	375-9071	CLIP		1
104	375-7073	HEATSINK		1
103	375-9067	HEATSINK #5201B		4
102				
101				
100	375-1125	XSTR. VN06AF	Q5,6	2
99	375-1124	XSTR. 2N6675	Q1,2	2
98	375-1097	XSTR. FMC2907A	Q3	1
97	375-1012	XSTR MPS6512	Q4	1
96				
95				
94				
93	374-0044	VR. LM350T	VR1	1
92				
91				
90				
89	370-0027	LED ORN	LED1	1
88				
87				
86				
85	360-1155	FUSE 2A PICO	F2,3	2
84	360-1100	FUSE 10A FB	F1	1
83	360-0006	FUSE CLIP	FOR F1	2
82				
81				
80	350-0239	CONN. 5POS	J2	1
79	350-0234	CONN. 5POS	J5	1
78	350-0219	CONN. 3POS HDR	J3	1
77	350-0216	CONN. 2POS	J1	1
76				
75				
74				
73				
72	337-0028	RES 2.7Ω 2W 5%	R2,10	2
71				
70				
69				
68	336-1031	POT 10K TOP ADJ	R20	1
67	336-1022	POT 2K SIDE ADJ	R23	1
66	336-1014	POT 1K SIDE ADJ	R46	1
65				
64				
63	334-0020	RES. 100Ω 5W 5%	R1	1
62				
61				
60				
59	333-0197	RES. 3.32K 1/3W 1%	R24A,42	2
58	333-0136	RES. 226Ω 1/3W 1%	R17,44	2
57	333-0107	RES 1.5K 1/3W 1%	R16	1
56	333-0103	RES. 110Ω 1/3W 1%	R15,38	2
55	333-0093	RES. 2.37K 1/3W 1%	R23A,32,41	3
54	333-0090	RES. 10K 1/3W 1%	R21,22	2

ITEM NO.	WANG PART NO.	DESCRIPTION	REFERENCE DESIGNATION(S)	QTY.
150	660-0123	THERMAL COMPOUND		1
149				
148				
147	658-0104	CONN. 2POS ALCOIC J4		1
146				
145				
144	653-4002	WASHER FLAT #8		8
143				
142	652-0023	NUT HEX 8-32 (KEPS)		4
141				
140				
139	650-3120	SCREW 6-32×3/8 SEMS		8
138				
137	650-4160	SCREW 8-32×1/2		4
136	605-1008	CABLE TIE		1
135	458-1307	BUS BAR		2
134				
133				
132				
131	410-0263	X-FORM OUTPUT	T1	1
130	410-0237	X-FORM DRIVE	T3	1
129	410-0192	X-FORM AC SYNCH	T2	1
128				
127				
126				
125	380-5000	VRIS. 131V .5W	RV1,2	2
124	380-7023	BRIDGE KBPC106	D17	1
123				
122	380-4008	DIODE S106F	D1,2,7-10	6
121	380-4001	DIODE 2N5960	D29	1
120	380-3012	DIODE MR852	D3,5,6,12-16,18	9
119	380-2149	DIODE IN5261A 47V	D20,21	2
118				
117	380-2056	DIODE IN752A 5.6V	D26	1
116	380-2040	DIODE IN5230C 4.7V	D19	1
115	380-1016	DIODE SD241	D4,11	2
114	380-1012	DIODE IN914A	D22-25,27,28	6
113				
112				
111				
110	376-0605	I.C. TL594	L2	1
109	376-0740	I.C. LM339	L1	1
108				
107				

WANG LABORATORIES, INC.
LOWELL, MASS. U.S.A.

BY		DATE	APPROVED BY	DATE
DWN	KMP	4/11/84	E ENGR	
CHK	DJC	5-2-84	M ENGR	
			MFG ENGR	

MATERIAL

MODEL NO. PH030A VS15/22C

FINISH

TITLE: SPS320I

WANG PART NUMBER	SIZE	DRAWING NUMBER	REV
210-3612	D	3612	3

SCALE | SHT 2 of 3

WANG LABORATORIES, INC.

>>>>> ELECTRICAL PARTS LIST <<<<< SHEET 3 OF 3 PAGE 1

(FINAL BILL-OF-MATERIALS)

BOARD NO. & TITLE: C8612 SPS 320 I BOARD
ASSEMBLY: 210
ARTWORK REVISION (R): 02
ASSEMBLY REVISION (A): 03
SCHEMATIC REVISION (S): 03
D+A OR MOST RECENT ECO: 321810

CREATED: 01/30/84 17:26
LAST MODIFIED: 04/23/84 13:59 BY: LAB
EDITING REVISION: 4

* REF. DES.	* WANG PART NO.	* VALUE/TYPE *	DESCRIPTION	* DRAWING NO. *	QTY. *
C26	300-1904-	.02U	CAP CERAMIC DISC +80% -20% 25V Z5P		1
C6	300-1913-	.002U	CAP CERAMIC DISC 20% 500V Z5P		3
C12					
C29					
C11	300-1931-	1U	CAP CERAMIC MONO RAD +80 -20% 50V 25V Z5U		4
C25					
C33					
C35					
C7 - C8	300-1964-	.047U	CAP CERAMIC MONO AXIAL +80 -20% 50V Z5U		10
C19					
C21 - C23					
C27					
C30 - C31					
CA17					
C15 - C16	300-1994-	.0033U	CAP CERAMIC DISC 3KV Y5P		2
C24	300-2075-	.3047U	CAP MYLAR 5% 100V		1
C4 - C5	300-2294-	1.5U	CAP 1.5U 250V		2
C3	300-2430-	.1U	CAP METALIZED MYLAR 10% 630VDC		2
C14					
C20	300-3132-	47.0U	CAP ALUM. ELEC. 50V +/-20% RADIAL LOW ESR		2
C28					
C1 - C2	300-3144-	1000UF	CAP 1000UF 200V ELEC		2
C9 - C10	300-3147-	3900U	CAP 1900UF 6.3V ELEC		2
C18	300-3321-	10.0U	CAP AL EL RADIAL 20 % 50V		1
C13	300-3322-	470.0U	CAP AL EL RADIAL 20 % 35V		4
C17					
C32					
C34					
Z6	320-0124-	COIL	COIL-INDUCTOR (SHORT CIRCUIT)		1
Z3 - Z4	320-0746-	220.0U	COIL 5A +/- %		2
Z2	320-0761-	1.0M	COIL COMCH-MODE 8A		1
Z1	320-0805-	CHOKE	CHOKE 60A SUM		1
SW1	325-2119-	SWITCH	SLIDE DPDT 900E 115/220 PCB W/EARS		1
R9	330-1048-	47.000	RES FIXED 1/4W 5%		2
R11					
R6	330-2034-	330.000	RES FIXED 1/4W 5%		3
R18					
R35					

BOARD NO. & TITLE: C8612 SPS 320 I BOARD SCHEMATIC REVISION (S): 03 SHEET OF PAGE 2

* REF. DES.	* WANG PART NO.	* VALUE/TYPE *	DESCRIPTION	* DRAWING NO. *	QTY. *
R25	330-2069-	680.000	RES FIXED METAL FILM 1/4W 5% 200PPM		1
R14	330-3011-	1K	RES FIXED 1/4W 5%		9
R26 - R30					
R36					
R40					
R43					
R19	330-3023-	2.2K	RES FIXED 1/4W 5%		3
R31 - R34					
R37	330-3348-	4.7K	RES FIXED METAL FILM 1/4W 5% 200PPM		1
R39	330-4034-	33K	RES FIXED METAL FILM 1/4W 5% 200PPM		1
RA25	330-4043-	62K	RES FIXED METAL FILM 1/4W 5% 200PPM		1
R24	330-5013-	120.000K	RES FIXED METAL FILM 1/4W 5% 200PPM		1
RT1 - RT2	333-0002-	CL50	THERMISTER CL50		2
R3 - R4	331-1010-	10.000	RES FIXED 1/2W 10%		2
R5	331-2010-	100.000	RES FIXED 1/2W 10%		2
R13					
R12	331-2022-	220.000	RES FIXED 1/2W 10%		2
R31					
R7 - R8	332-4056-	56.000K	RES FIXED 1W 12%		2
R45	333-3056-	422.000	RES FIXED METAL FILM 1/8W 1% TC: 0 RNSS		1
R21 - R22	333-0090-	10.000K	RES FIXED METAL FILM 1/8W 1% 100PPM RNSS		2
R32	333-0093-	2.37CK	RES FIXED METAL FILM 1/8W 100PPM RNSS		3
R41					
RA23					
R15	333-0103-	110.000	RES FIXED METAL FILM 1/8W 1% TC: 0 RNSS		2
R38					
R16	333-0107-	1.50K	RES FIXED METAL FILM 1/8W 1% TC: 0 RNSS		1
R17	333-0116-	226.000	RES FIXED METAL FILM 1/8W 1% TC: 0 RNSS		2
R44					
R42	333-0197-	3.3200K	RES FIXED METAL FILM 1/8W 1% 100PPM RNSS		2
RA24					
R1	334-0020-	100.000	RES FIXED WIREWOUND 5W 5%		1
R46	336-1014-	1.000K	RES TRIMMER .375" SQUARE SIDE ADJ 10% 1 TURN		1
R23	336-1022-	2.000K	RES TRIMMER .375" SQUARE SIDE ADJ 10% 1 TURN		1
R20	336-1031-	10.000K	RES TRIMMER .375" SQUARE TOP ADJ 10% 1 TURN		1
R2	337-0028-	2.700	RES FIXED WIRE WOUND 2W 5%		2
R10					
J1	353-0216-	2 CONT	CONN PC HEADER UNIVERSAL RED		1
J3	350-9219-	9 CONT	CONN PC HEADER UNIVERSAL RED		1
J6	350-0234-	5 CONT	CONN PC HEADER R/A UNIVERSAL RED		1
J2	350-0238-	5 CONT	CONN PC HEADER UNIVERSAL RED		1
H1 - H2	360-0006-	FUSECLP	FUSE CLIP W/END STOPS PC SOLDER MOUNT (FOR F1)		2
F1	360-1100-	10.00AM	FUSE CERAMIC 3AB 250V NORMAL BLOW		1
F2 - F3	360-1155-	2.00AM	FUSE SUBMINIATURE AXIAL LEAD 2A,125V,NORMAL BLOW		2
LED1	370-0027-	LED	LED ORANGE DIFFUSED 4MCD WAPROW BEAM		1
VR1	374-0044-	350	IC REG LM350 POSITIVE ADJUSTABLE TO-220		1
Q4	375-1012-	MPS6512	TSTR NPN TO-92 35VMW 30V 2MA		1
Q3	375-1097-	PN7907A	TSTR PNP PLASTIC TO-92 400MW 60V 600MA		1
Q1 - Q2	375-1124-	2N6675	TSTR NPN TO-3 175W 100V 15A		2
Q5 - Q6	375-1125-	VN66AF	FET N-CH TO-202AA 15W 60V 2A		2

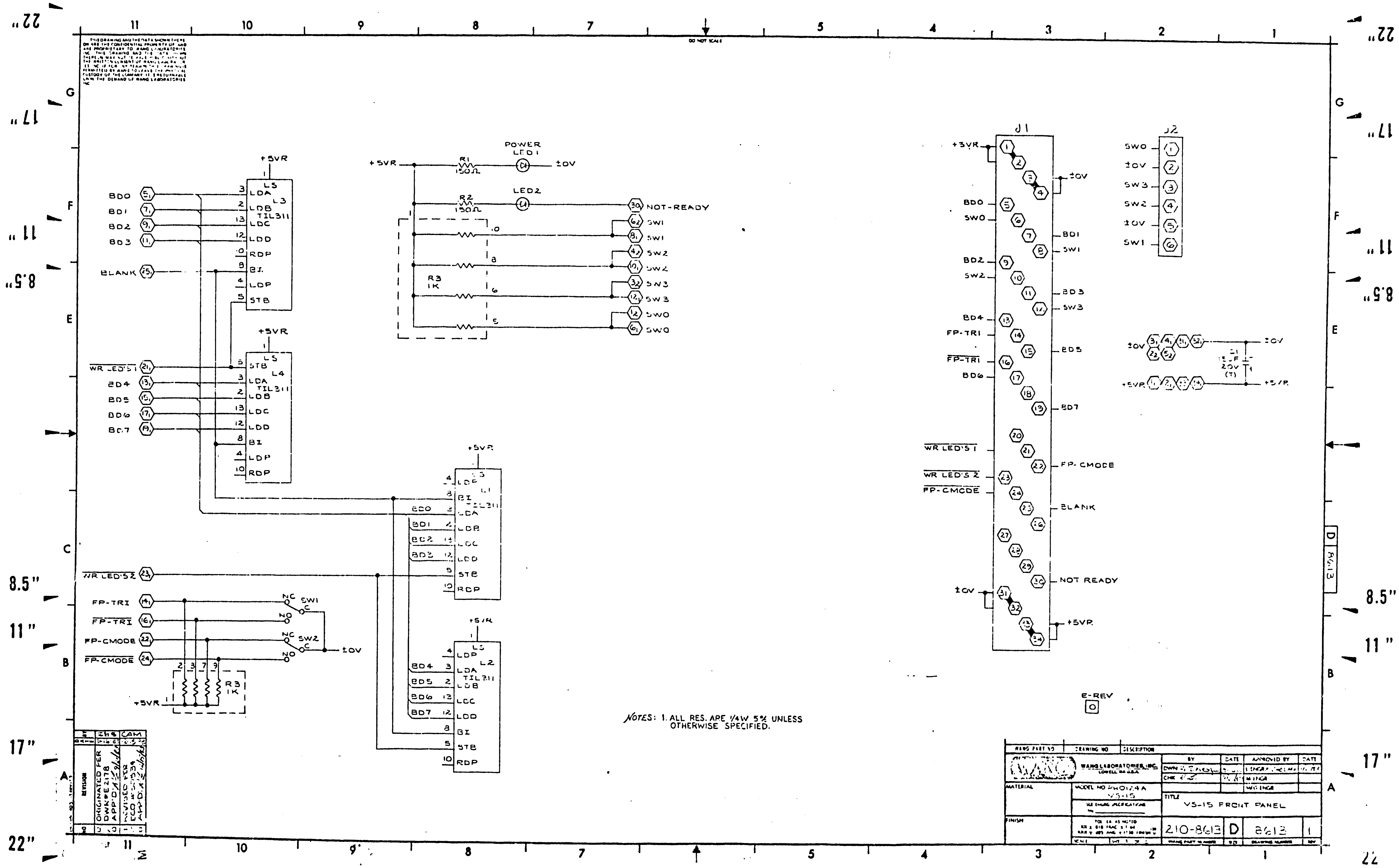
BOARD NO. & TITLE: C8612 SPS 320 I BOARD SCHEMATIC REVISION (S): 03 SHEET OF PAGE 3

* REF. DES.	* WANG PART NO.	* VALUE/TYPE *	DESCRIPTION	* DRAWING NO. *	QTY. *
Q1 - Q6	375-9067-	HEATSINK	HEATSINK (FOR Q1,Q2,Q4,Q11)		4
Q7	375-9070-	VR1	HEATSINK (FOR VR1)		1
Q8	375-9071-	CLIP	CLIP (FOR VR1)		1
L1	376-0240-	LM339	IC QUAD COMPARATOR 14 PIN DIP		1
L2	376-3605-	594	IC TL594 P.W.M. CONTROLLER 16 PIN DIP		1
D22 - D25	380-1012-	1N914A	DIO SIG 75V 250MA 4NS DO-35		6
D27 - D28					
D4	380-1016-	SD241	DIO DUAL STKY 45V 30A TO-3		2
D11					
D19	380-2048-	1N5230C	DIO ZENER 4.7V 2% 500MW DO-7		1
D26	380-2356-	1N752A	DIO ZENER 5.6V 400MW 5% DO7		1
D20 - D21	380-2149-	1N5261A	DIO ZENER 47V 500MW 10% DO-35		2
D3	380-3012-	MR852	DIO FAR 200V 3A AXIAL 200NS		9
D5 - D6					
D12 - D16					
D18					
D29	380-4001-	2N5060	DIO SCR 30V 800MA TO-92		1
D1 - D2	380-4008-	S1AAF	DIO FAR 600V 1A AXIAL 200NS		6
D7 - D10					
D17	380-4023-	KBPC106	DIO F/W BRIDGE 600V 10A BD./MT		1
RV1 - RV2	380-5000-	V130LA10	MOV VARISTOR 130V .5W		2
T2	410-0192-	LINEAR	XFMR 50/60 HZ		1
T3	410-0249-	TRANS	TRANSFORMER		1
T1	410-0263-	TRANS	TRANSFORMER OUTPUT		1
B9 - B10	458-1307-	BUS BAR	BUS BAR		2
B16	510-8612-	PCB	PCB		1
B17	985-1004-	TIE	CABLE TIE		1
H12 - H19	650-3120-	SCREW	SCREW 6-32 X 3/8		8
H20 - H23	650-4160-	SCREW	8-32X1/2		4
H32 - H35	652-0029-	NUT	NUT KEPS 8-32		4
H24 - H31	653-4002-	WASHER	WASHER FLAT #8		8
J4	654-0134-	3 CONT	CONN PC HEADER SINGLE ROW .100		1
H11	660-0123-	THERMAL	THERMAL COMPOUND (A/R)		1

*** END-OF-REPORT ***

WANG LABORATORIES, INC. LOWELL, MASS. U.S.A.		BY	DATE	APPROVED BY	DATE
		DWN		E ENGR	
		CHK		M ENGR	
MATERIAL	MODEL NO			MFG ENGR	
	SEE ENGRG SPECIFICATIONS No.	TITLE SPS 3201			
FINISH	TOL EX AS NOTED XX ± .010 FRAC ± 1/64 XXX ± .005 ANG ± 1°30' FINISH √	210 - 8612	C	8612	3
	SCALE NIT	3 OF 3	WANG PART NUMBER	SIZE	DRAWING NUMBER	REV

X3


+5VR
R1 150Ω
POWER LED1
±0V
R2 150Ω
LED2
NOT-READY
SW1
SW2
SW3
SW0
R3 1K
BD0
BD1
BD2
BD3
BLANK
L3 TIL311
WR LED'S 1
BD4
BD5
BD6
BD7
L4 TIL311
L1 TIL311
L2 TIL311
WR LED'S 2
FP-TRI
FP-CMODE
J1
J2
FP-CMODE
E-REV
NOTES: 1. ALL RES. ARE 1/4W 5% UNLESS OTHERWISE SPECIFIED.
WANG LABORATORIES, INC.
VS-15 FRONT PANEL
210-8613 D 8613

WANG LABORATORIES, INC.

>>>>> ELECTRICAL PARTS LIST <<<<< SHEET OF PAGE 1

(PRELIMINARY BILL OF MATERIALS)

BOARD NO. & TITLE: C3613 VS-15 FRONT PANEL
CREATED: 12/05/83 10:08
LAST MODIFIED: 12/07/83 10:59 BY: LAB
EDITING REVISION: 1

SUB-ASSEMBLY: 210 8613
CREATED: 12/05/83 10:08
LAST MODIFIED: 12/07/83 10:59 BY: LAB
B.O.M. REVISION: 1

ARTWORK REVISION (R): 01
MECHANICAL REVISION (M): 00
ELECTRICAL REVISION (E): 00
SCHEMATIC REVISION (S): 31
MOST RECENT ECO:
DRAFTING WORK REQUEST: E2178
MODEL NUMBER: VS-15
ENGINEER: KIN CHEUNG

* REF. DES.	* WANG PART NO.	* VALUE/TYPE *	DESCRIPTION	* DRAWING NO. *	QTY. *
J1	220-3198-	CABLE	CABLE 34 SOCKET TO TRANS		1
C1	300-4022-	15U	CAP TANT AXIAL 10% 35V		1
SW1	325-2249-	SWITCH	SPDT SWITCH (RED)		1
SW2	325-2250-	SWITCH	SPDT SWITCH (GREEN)		1
R1 - R2	330-2016-	150.000	RES FIXED METAL FILM 1/4W 5% 200PPM		2
R3	333-0837-	1.00ZK	RESISTOR NETWORK TYPE: 10/9P/C/SS		1
L1 - L4	340 0015-	DISPLAY	HEXADECIMAL DISPLAY WITH LOGIC		4
J2	350-0274-	CONN	CONN 6 PIN		1
LED1 - LED2	370-0031-	LED	LED RED RETANGULAR 4MCD		2
P1 - P4	376-9054-	SKT 14	SOCKET 14 PIN WIRE WRAP		4
P5	510-8613-		PCB		1

*** END-OF-REPORT ***

M

WANG LABORATORIES, INC. LOWELL, MASS. U.S.A.	BY	DATE	APPROVED BY	DATE
	DWN		E ENGR	
	CHK		M ENGR	
			MFG ENGR	

MATERIAL | MODEL NO | TITLE: VS-15 FRONT PANEL

SEE ENGRG SPECIFICATIONS No. _____

FINISH | TOL EX AS NOTED XX ± 010 FRAC ± 1/64 XXX ± 005 ANG ± 1°30' FINISH 125 V

SCALE	SHT 2 OF 2	WANG PART NUMBER	SIZE	DRAWING NUMBER	REV
		210-8613	D	8613	1

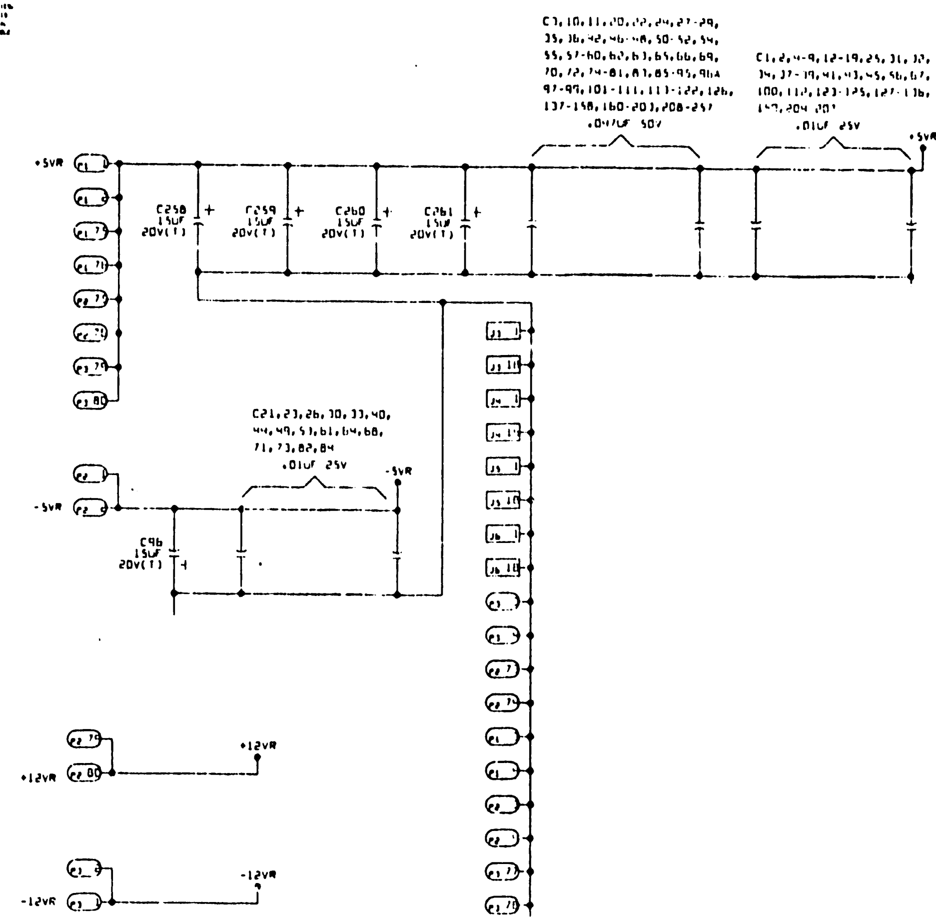
A

3 2 1

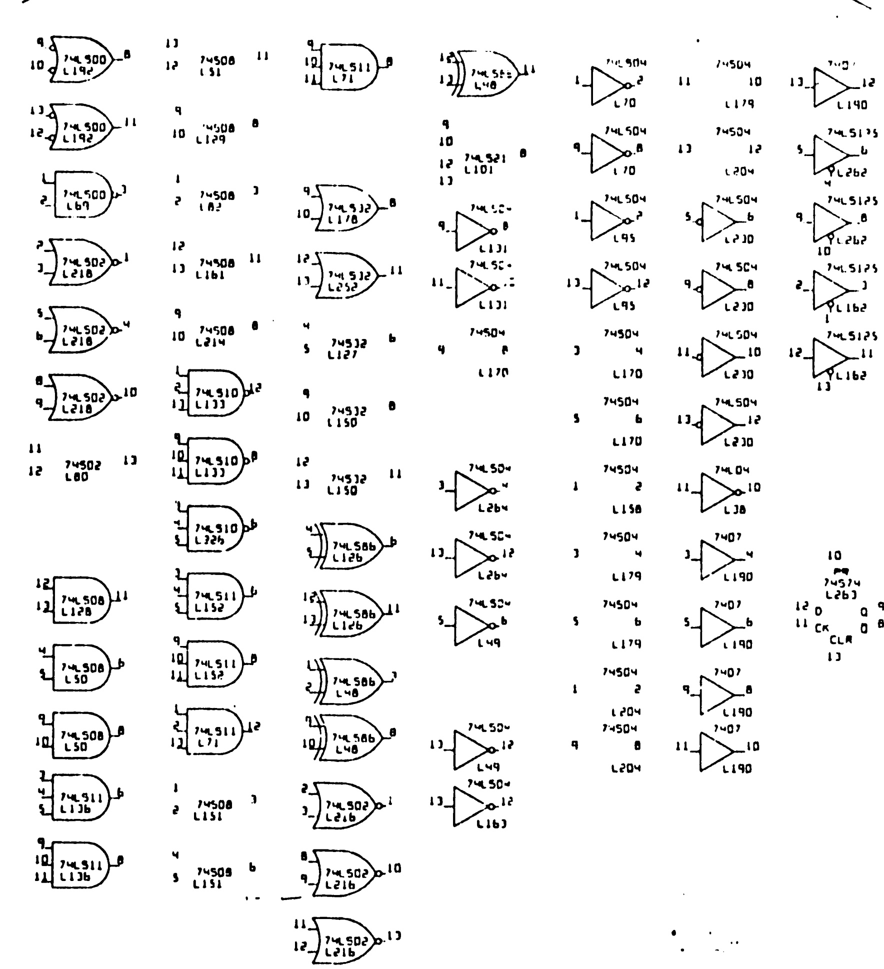
Y2

NOTES

1. ALL RESISTOR VALUES IN OHMS.
2. ALL CAPACITOR VALUES IN MICROFARADS UNLESS OTHERWISE INDICATED.
3. ALL RESISTORS 1/4W 5% UNLESS OTHERWISE INDICATED.



SPARES



MNEMONICS	LOC.
BPA1-BPA7	3D14
BPA8-BPA10	3D14
BPD0-BPD15	9D14
B01	7H9
B02	7H9
B03	7B9
B04	7D12
B05	7A9
B06	7H12
B07	7H12
B08	7A12
B09	7H3
B10	7H3
B11	7B2
B12	7B2
B13	7D5
B14	7H5
B15	7H5
B16	7D5
B17	8D12
B18	8G12
B19	8A9
B20	8H12
B21	8A12
B22	8B9
B23	8H9
B24	8G9
B25	8H5
B26	8H5
B27	8B[illegible]
B28	8D5
B29	8H2

MNEMONICS	LOC.
B10	9H2
B11	9H2
B12	9H2
DA0-DA15	9D1
DCB0	9C3
DCB1	9C1
[illegible]	9H6
DD0-D15	3A14
[illegible]	3C1
[illegible]	3A1
DSR	9C6
INIT	9D2
[illegible]	3H14
[illegible]	6D14
[illegible]	3B14
MA0-MA10	5J1
MCB0-MCB2	9C1
MDS	5G8
MD0-MD15	5E1
MDS0-MDS5	5G1
MR10-MR15	5F10
MSR0	5G7
MSB1	5H7
MSB5	5H9
[illegible]	3D1
[illegible]	3D1
[illegible]	3D1
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[illegible]	3D1
[illegible]	3D1
[illegible]	3D1
[illegible]	3D1
SPAST17	3D1
SPAST18	3D1

MNEMONICS	LOC.
T01	7G9
T02	7H9
T03	7B4
T04	7B12
T05	7A9
T06	7G12
T07	7H12
T08	7A12
T09	7H3
T10	7H3
T11	7B3
T12	7B3
T13	7D[illegible]
T14	7H6
T15	7H6
T16	7B6
T17	6D12
T18	8G12
T19	8A9
T20	8H12
T21	8A12
T22	8B9
T23	8H9
T24	8G9
T25	8H5
T26	8H5
T27	3D6
T28	8H6
T29	8H3
T30	8H3
T31	8H3
T32	8H3

210-209 + 377 OR 378											
210	209	L88,205	L112,113	L115,116	L117-125	L206	L207	L208	Y1	Y2	Y1,Y2
8616A	8616	377-0411	377-0371	377-0403	377-0417	377-0368	378-9025-R2	378-9024-R2	321-1006	321-1004	376-9208

REVISION	ORIGINATED PER DWR NO. E1749	REVISED PER ECO NO. 28616	REVISED PER ECO NO. 30369	REVISED PER ECO NO. 30194	REVISED PER ECO NO. 31176	REVISED PER ECO NO. 33117
DRAWN	JSH	PSD	KTH	KTH	KTH	KTH
DATE	1-21-83	7-7-83	05-14-84	05-14-84	05-14-84	07-16-84

E REV 4 N

WANG LABORATORIES, INC.

SCHEMATIC DIAGRAM

TITLE: I-SIO VS25

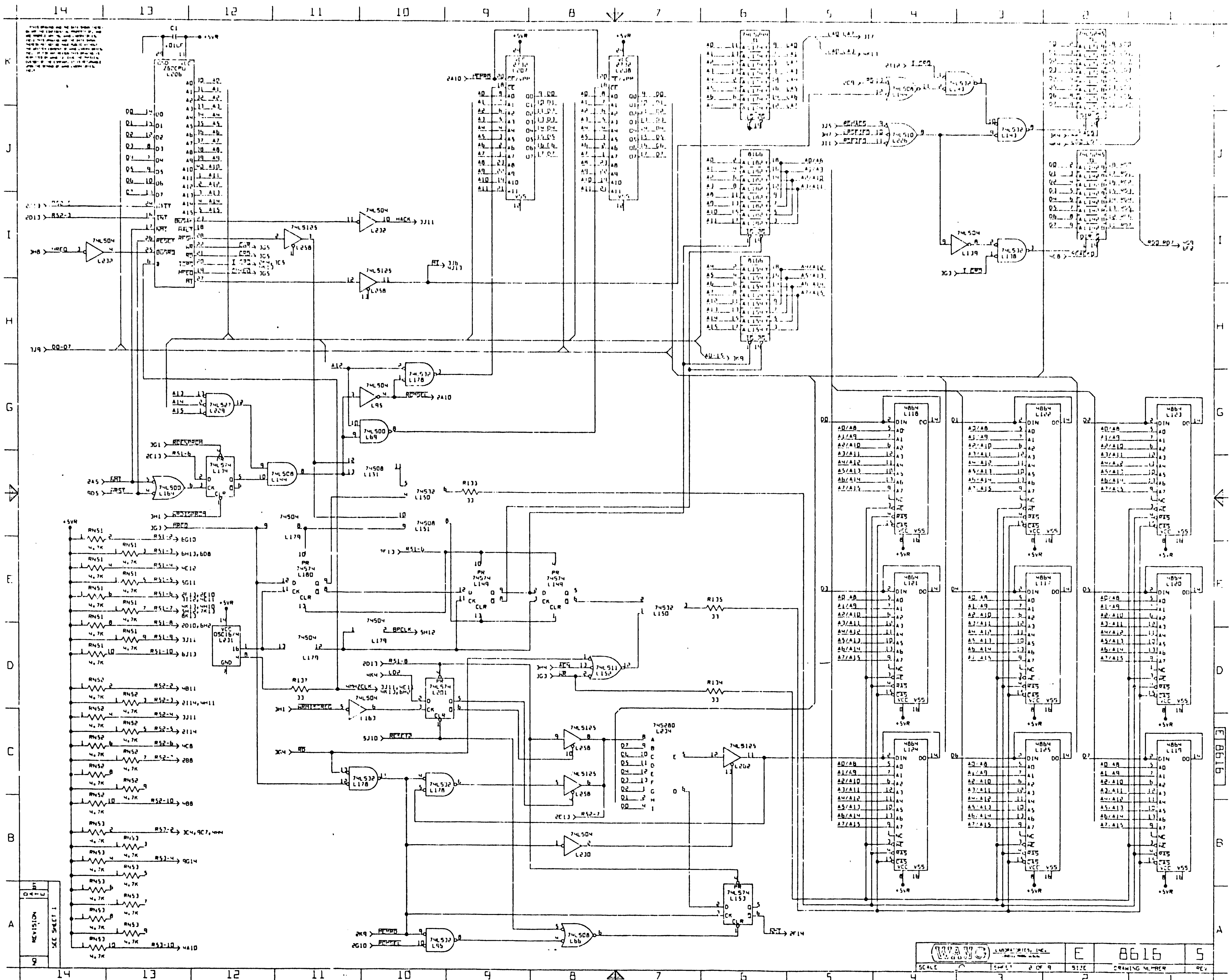
NUMBER: MODICVS25 | WANG PART NUMBER: 210-8616

SIZE: E | DRAWING NUMBER: 8616 | REV: 5

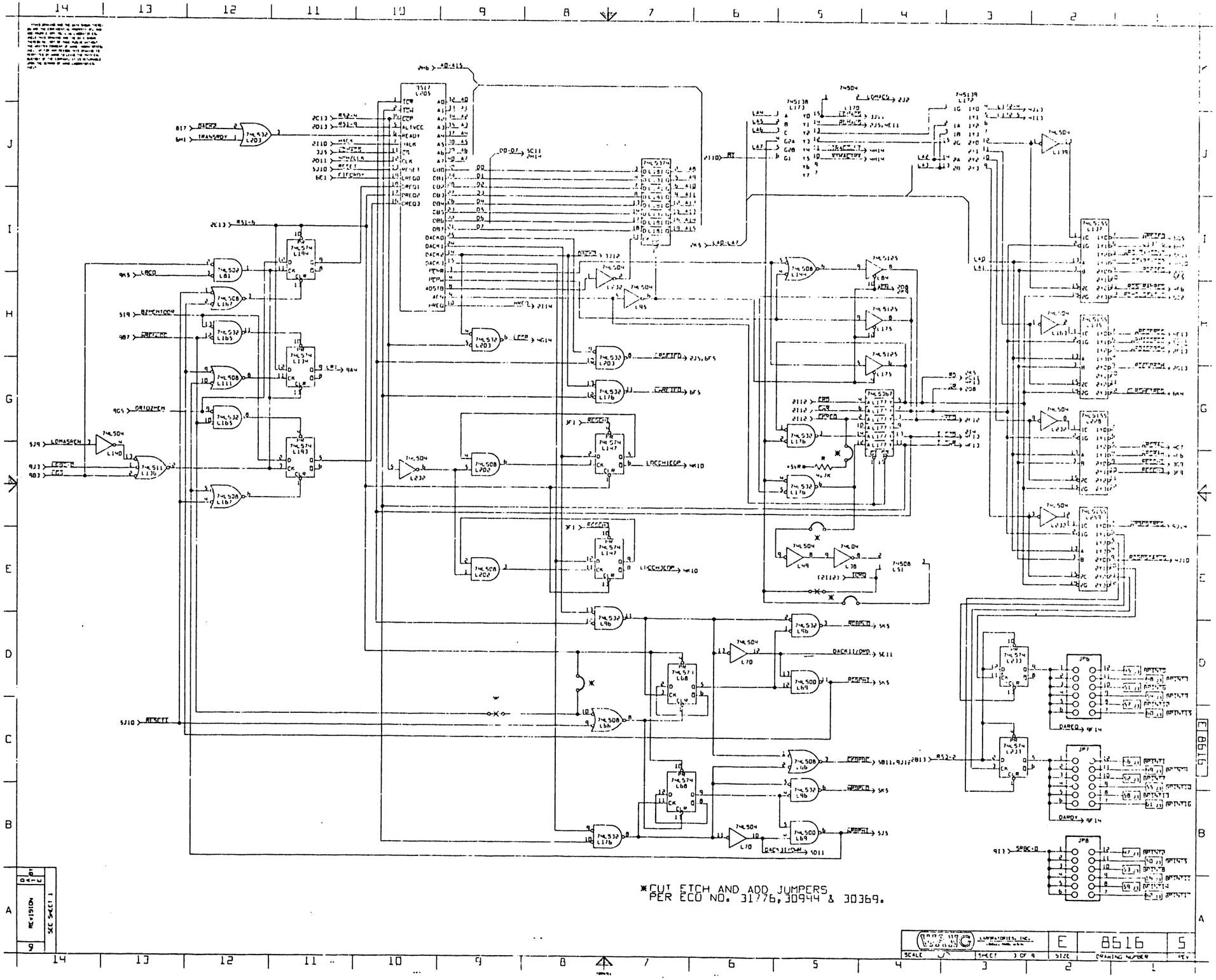
SHEET 1 OF 9

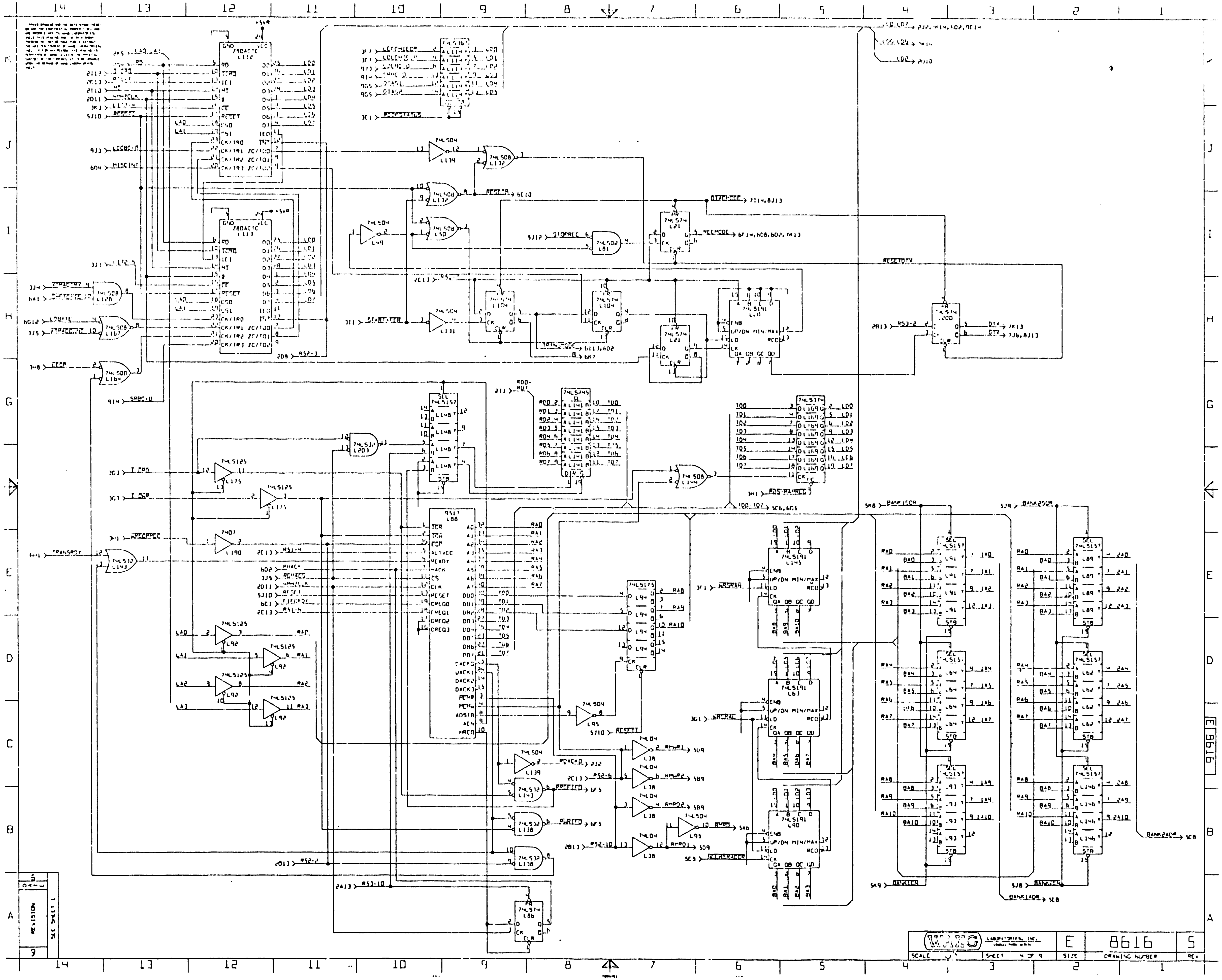
8616 3

Z1

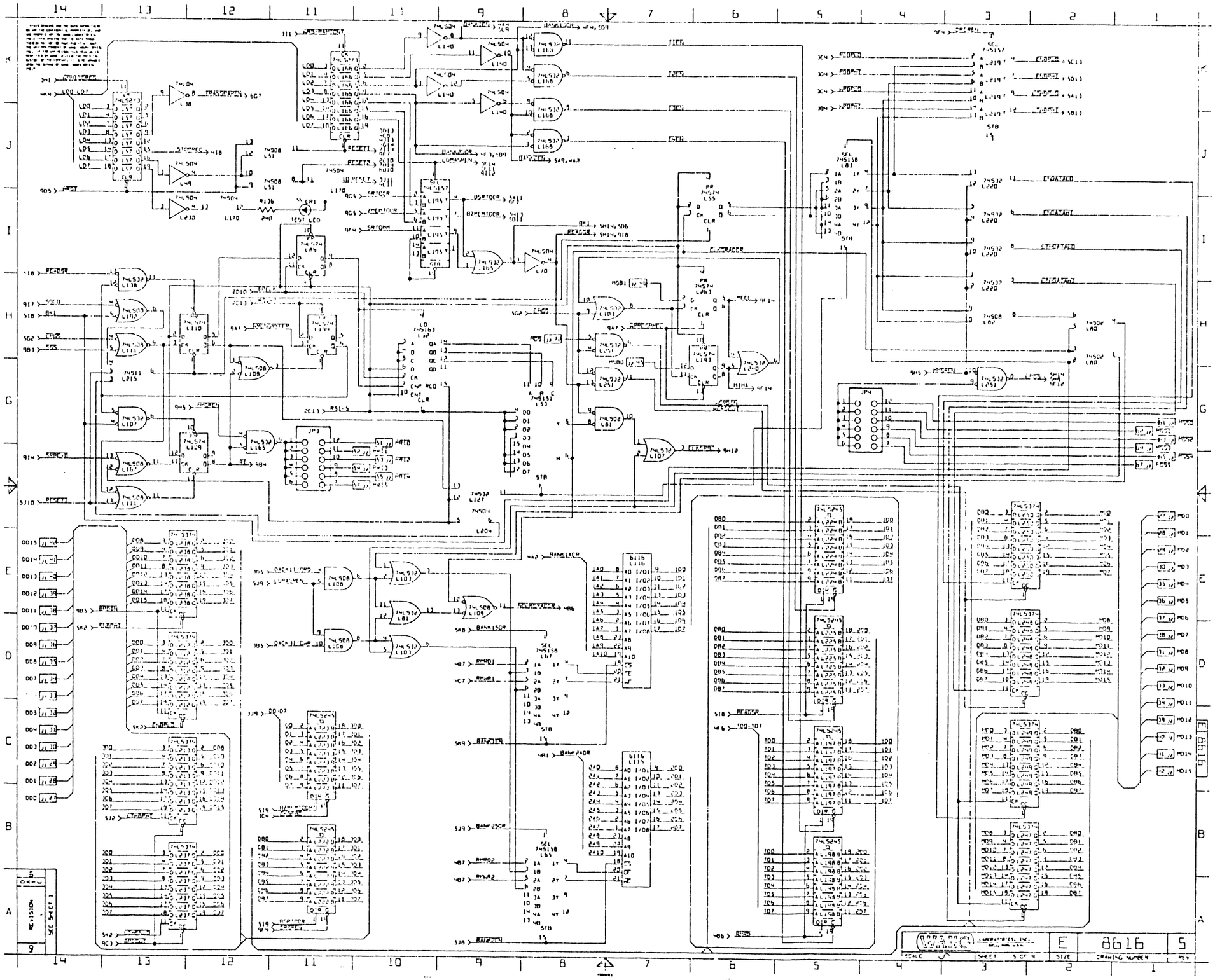

WANG
E
8615
5
SCALE
SHEET 2 OF 9
SIZE
DRAWING NUMBER
REV
REVISION
SEE SHEET 1
Z80CPU
7
6

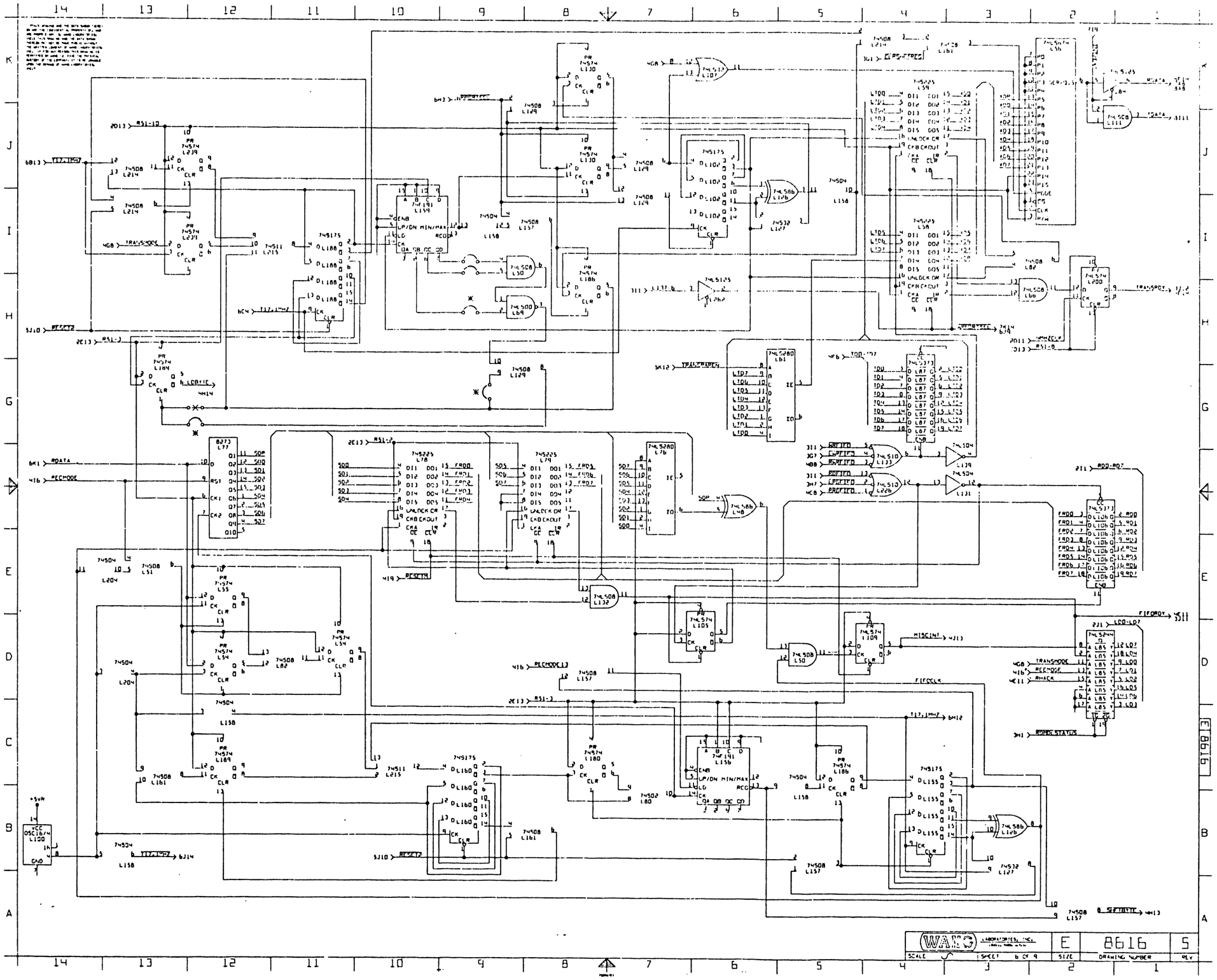
Z2


*CUT ETCH AND ADD JUMPERS PER ECO NO. 31776, 30944 & 30369.
REVISION
SEE SHEET 1
SCALE
SHEET 3 OF 9
SIZE
E
8616
DRAWING NUMBER
REV
5


WANG LABORATORIES, INC.
E
8616
5
SHEET 4 OF 9
SIZE
DRAWING NUMBER
REV
SCALE

Z4




74LS74 L130
74LS08 L129
74LS08 L214
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74LS191 L154
74LS175 L188
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74LS08 L157
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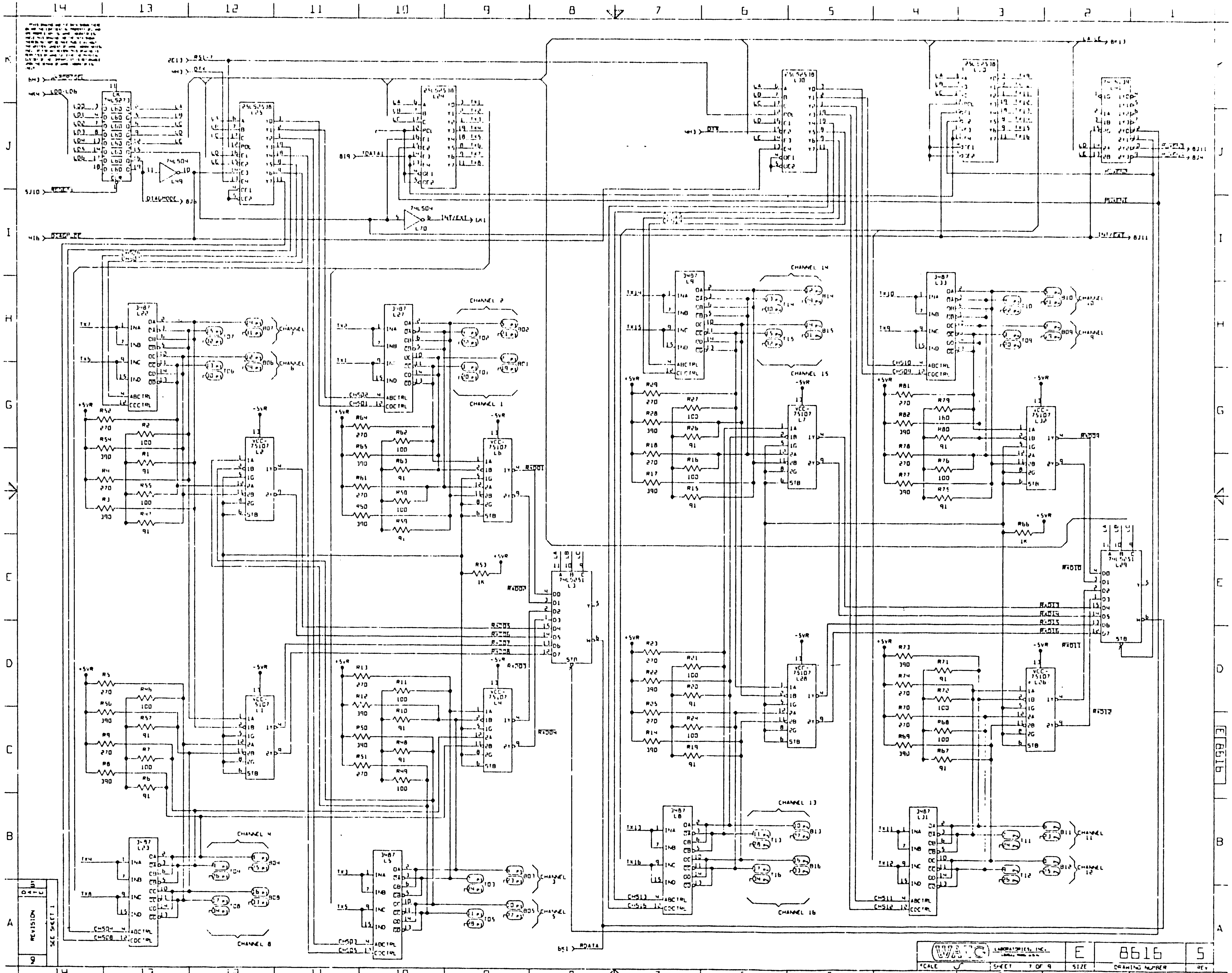
74LS08 L82
74LS08 L161
74LS11 L215
74LS175 L180
74LS02 L80
74LS191 L156
74LS74 L186
74LS04 L158
74LS08 L157
74LS175 L155
74LS86 L126
74LS32 L127
74LS04 L158
74LS08 L157
OSC16/4 L120
+5VA
GND
6A1 RDATA
4I6 RECMODE
2E13 RS1-2
6B13 T17.1MHZ
4G8 TRANSMODE
5J10 RESET2
4I9 RESET4
6C4 T17.1MHZ
5K12 TRANSMITEN
4F6 TDO-TD7
3I1 CRCRTFD
3G7 CRCRTFS
4B8 RDCRTFD
3I1 RDRTFD
3H7 CRCRTFS
4C8 RDCRTFD
2I1 RDO-RD7
FIFORDY
FIFOCLK
MISCINT
RDMODESTATUS
TRANSMODE
RECMODE
RHACK
TRANSPDI
PDI1
PDI3
RS1-0
TDO-TD7
RDO-RD7
LDO-LD7
6J14
6H12
6H13
5J11
4H13
4H14
4I4 LOBYTE
6C4 T17.1MHZ
6J14 T17.1MHZ
2E13 RS1-2
5J10 RESET2
4I6 RECMODE
4I9 RESET4
6A1 RDATA
2D13 RS1-1
6B13 T17.1MHZ
4G8 TRANSMODE
5J10 RESET2
2E13 RS1-2
4I6 RECMODE
2E13 RS1-2
6H12
6H13
5J11
4H13
4H14 LOBYTE
6J14 T17.1MHZ
4I9 RESET4
5J10 RESET2
2I1 RDO-RD7
FIFORDY
MISCINT
RDMODESTATUS
TRANSMODE
RECMODE
RHACK
TRANSPDI
PDI1
PDI3
RS1-0
TDO-TD7
LDO-LD7
WAVE COMPUTER LABORATORIES, INC.
SCALE
SHEET 6 OF 9
SIZE E
DRAWING NUMBER 8616
REV 5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CHANNEL 2
CHANNEL 3
CHANNEL 4
CHANNEL 5
CHANNEL 6
CHANNEL 7
CHANNEL 8
CHANNEL 9
CHANNEL 10
CHANNEL 11
CHANNEL 12
CHANNEL 13
CHANNEL 14
CHANNEL 15
CHANNEL 16
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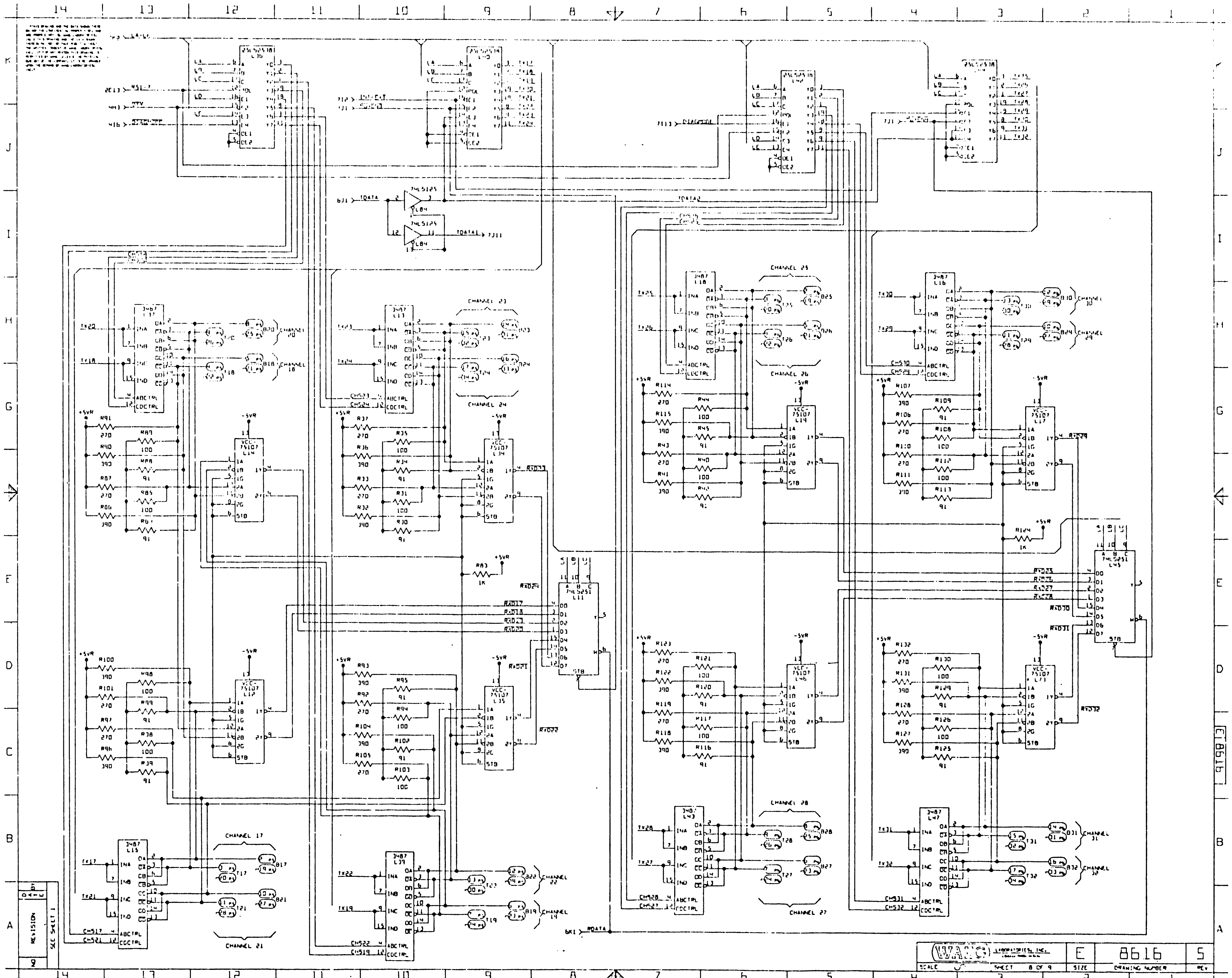
74LS251
75107
3487
REVISION
SEE SHEET 1
E
8616
5
SHEET 7 OF 9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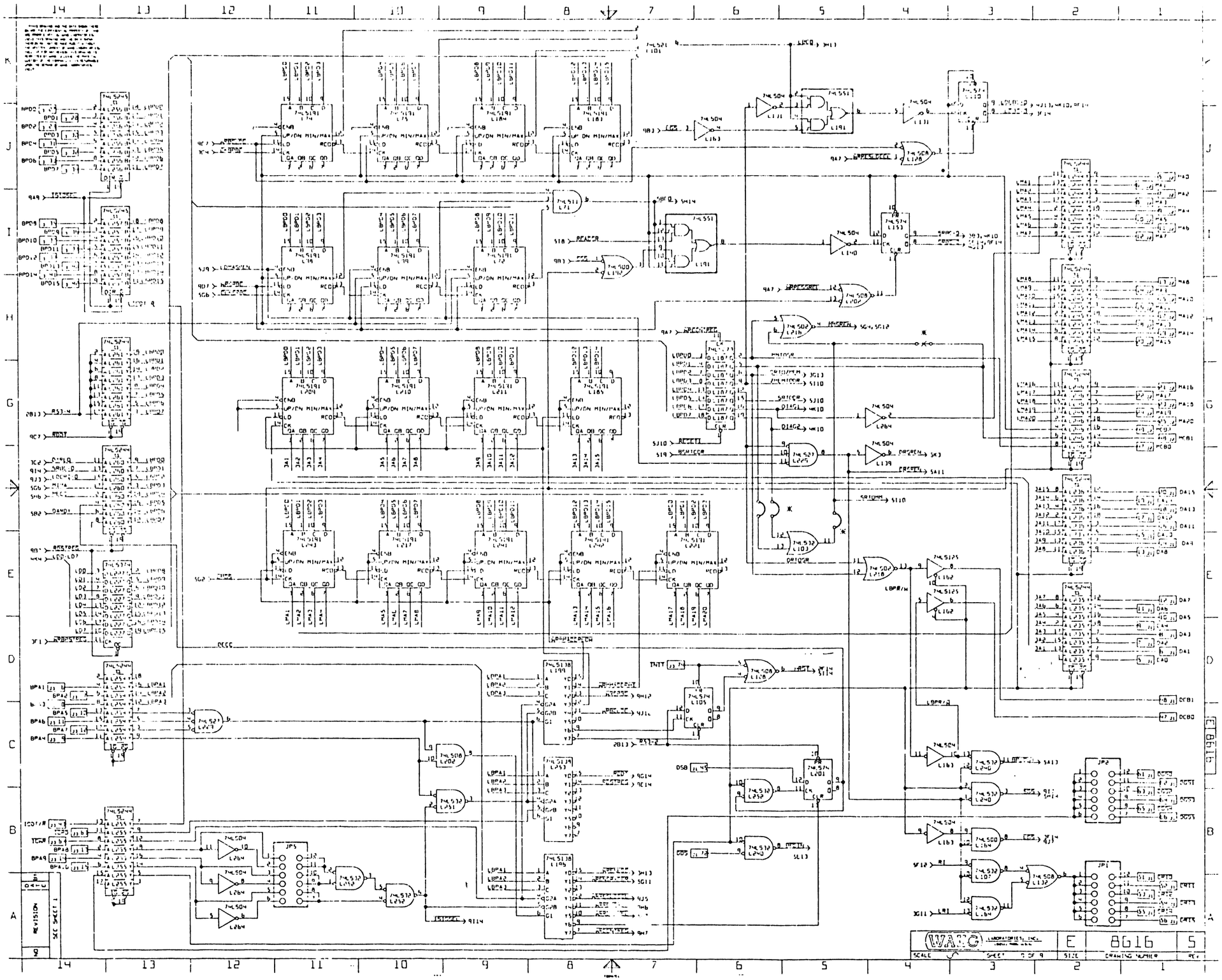
CHANNEL 18
CHANNEL 19
CHANNEL 20
CHANNEL 21
CHANNEL 22
CHANNEL 23
CHANNEL 24
CHANNEL 25
CHANNEL 26
CHANNEL 27
CHANNEL 28
CHANNEL 29
CHANNEL 30
CHANNEL 31
CHANNEL 32
REVISION
SEE SHEET 1
E
8616
5
SHEET 8 OF 9
SIZE
DRAWING NUMBER
REV

 14
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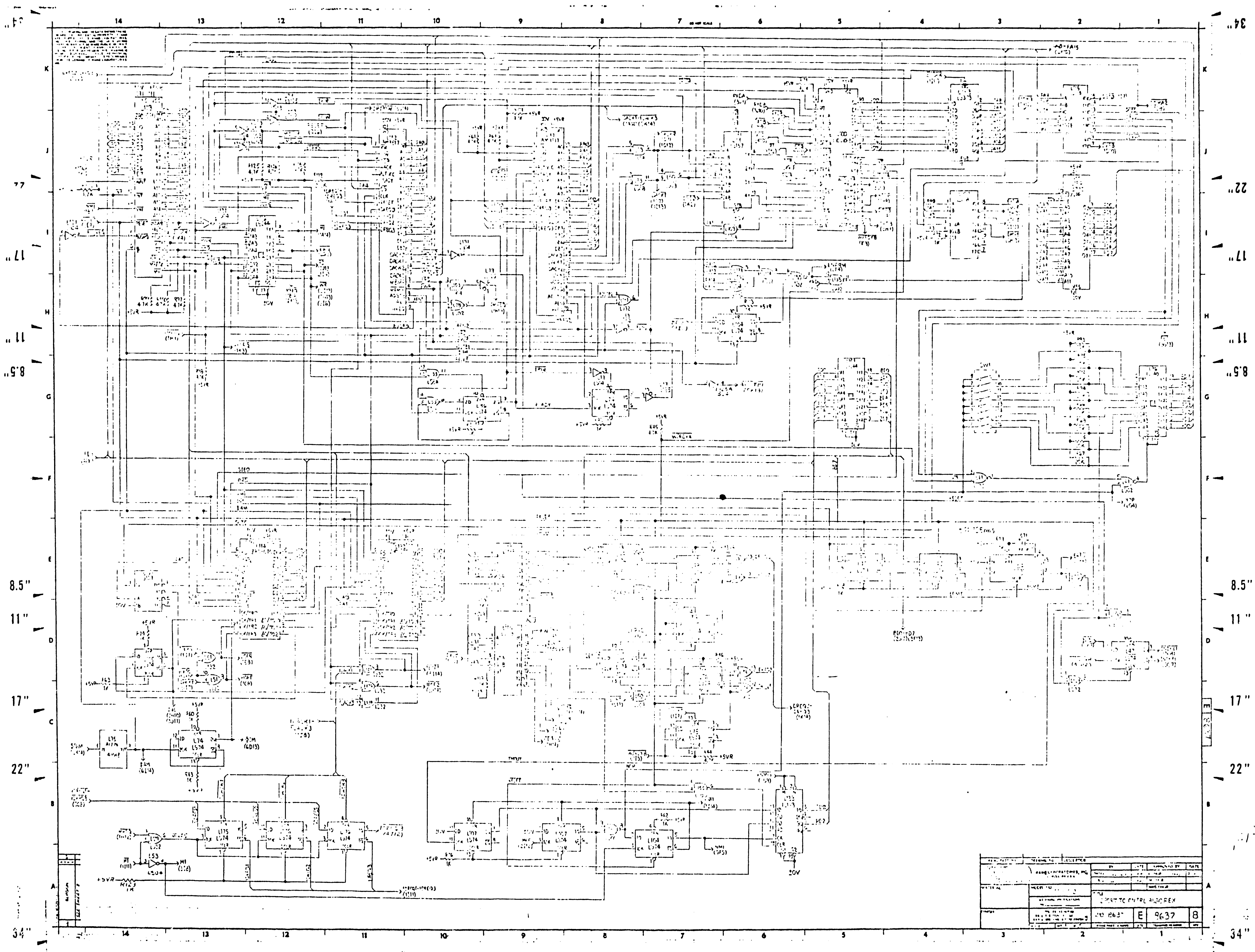
A
74LS244
74LS191
74LS174
74LS374
74LS138
74LS04
74LS08
74LS32
74LS51
74LS02
74LS125
JP1
JP2
JP3
REVISION
SEE SHEET 1
8616
WANG LABORATORIES, INC.
E
8616
5
SCALE
SHEET
OF 9
SIZE
DRAWING NUMBER
REV

Z9



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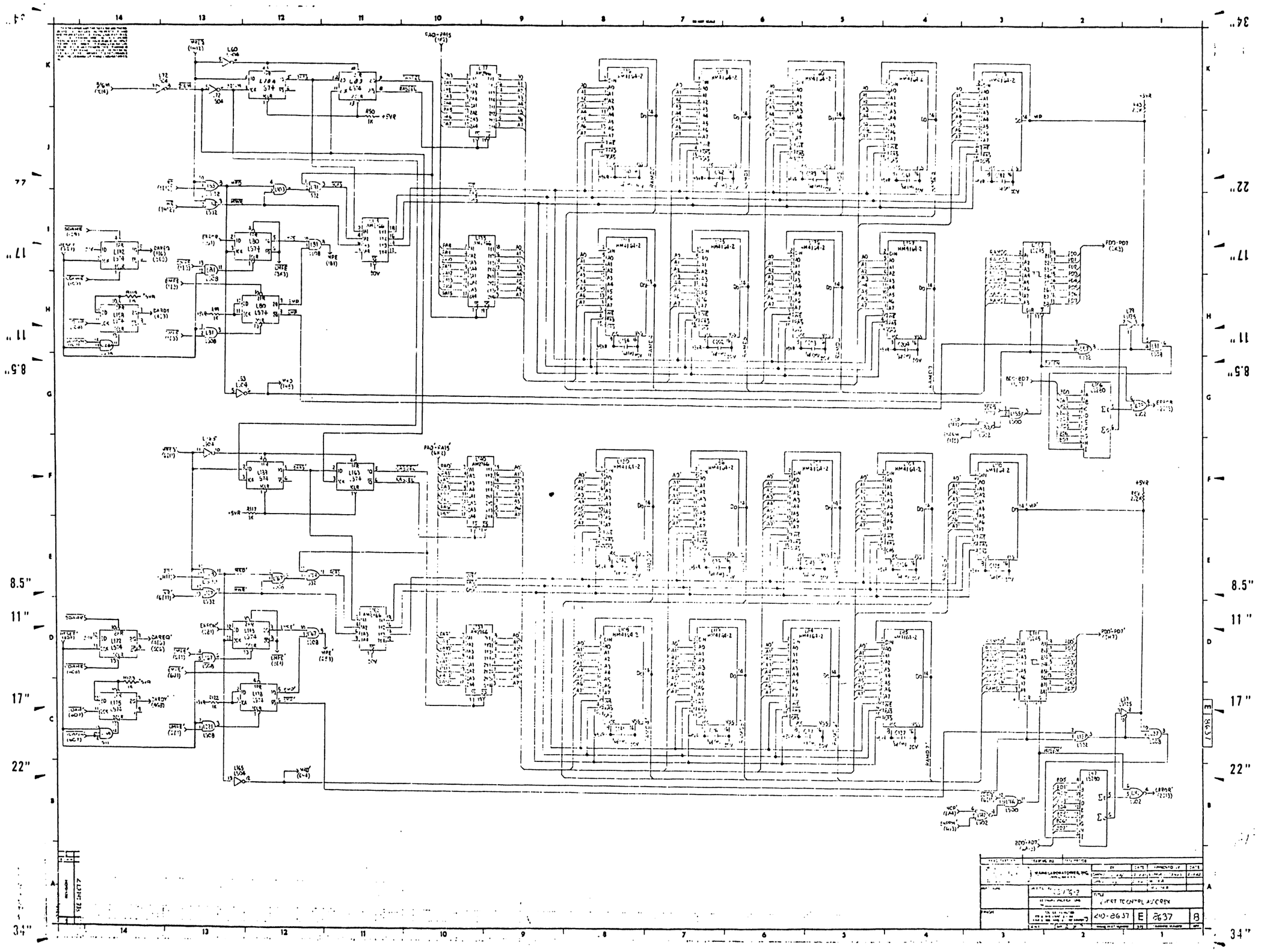

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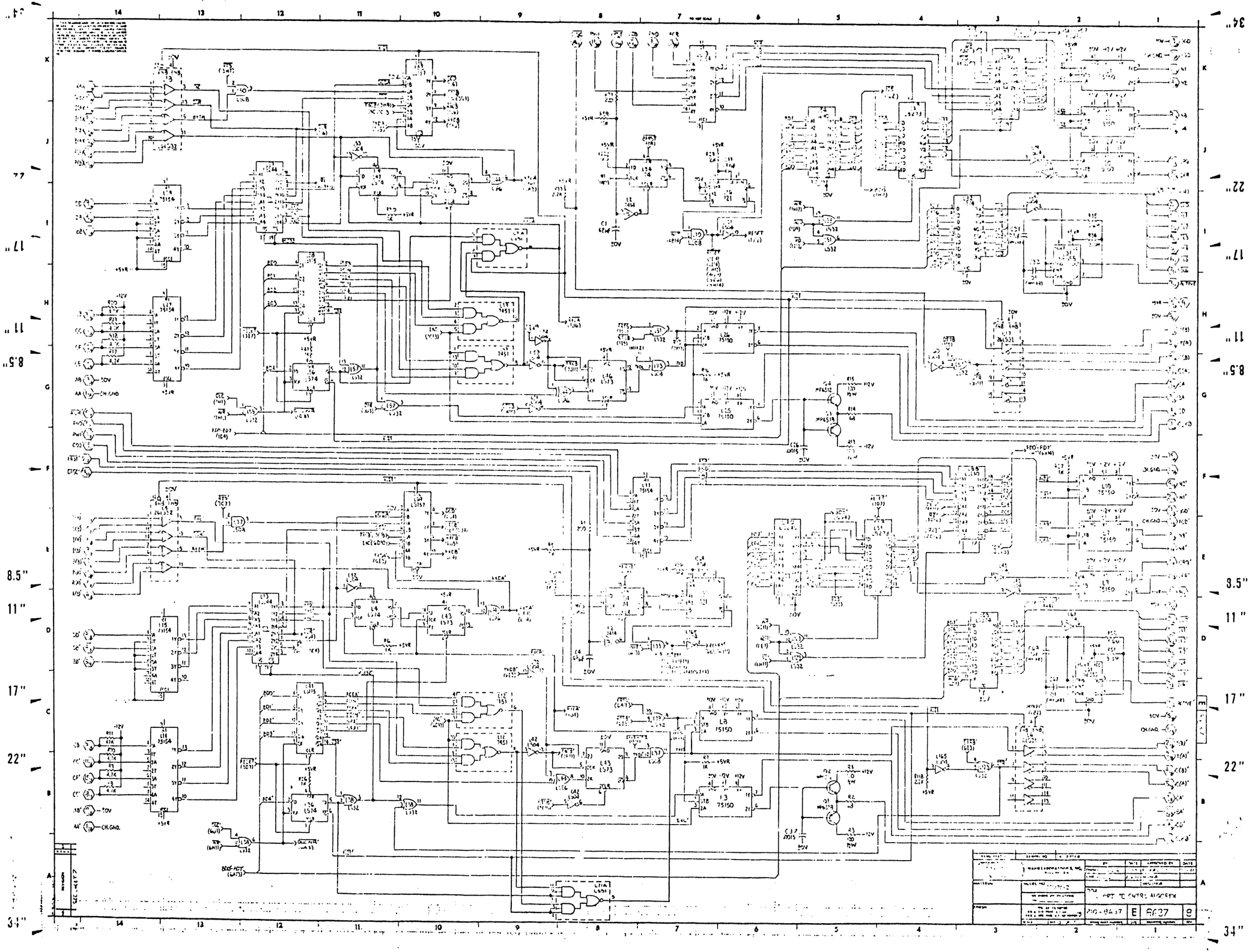

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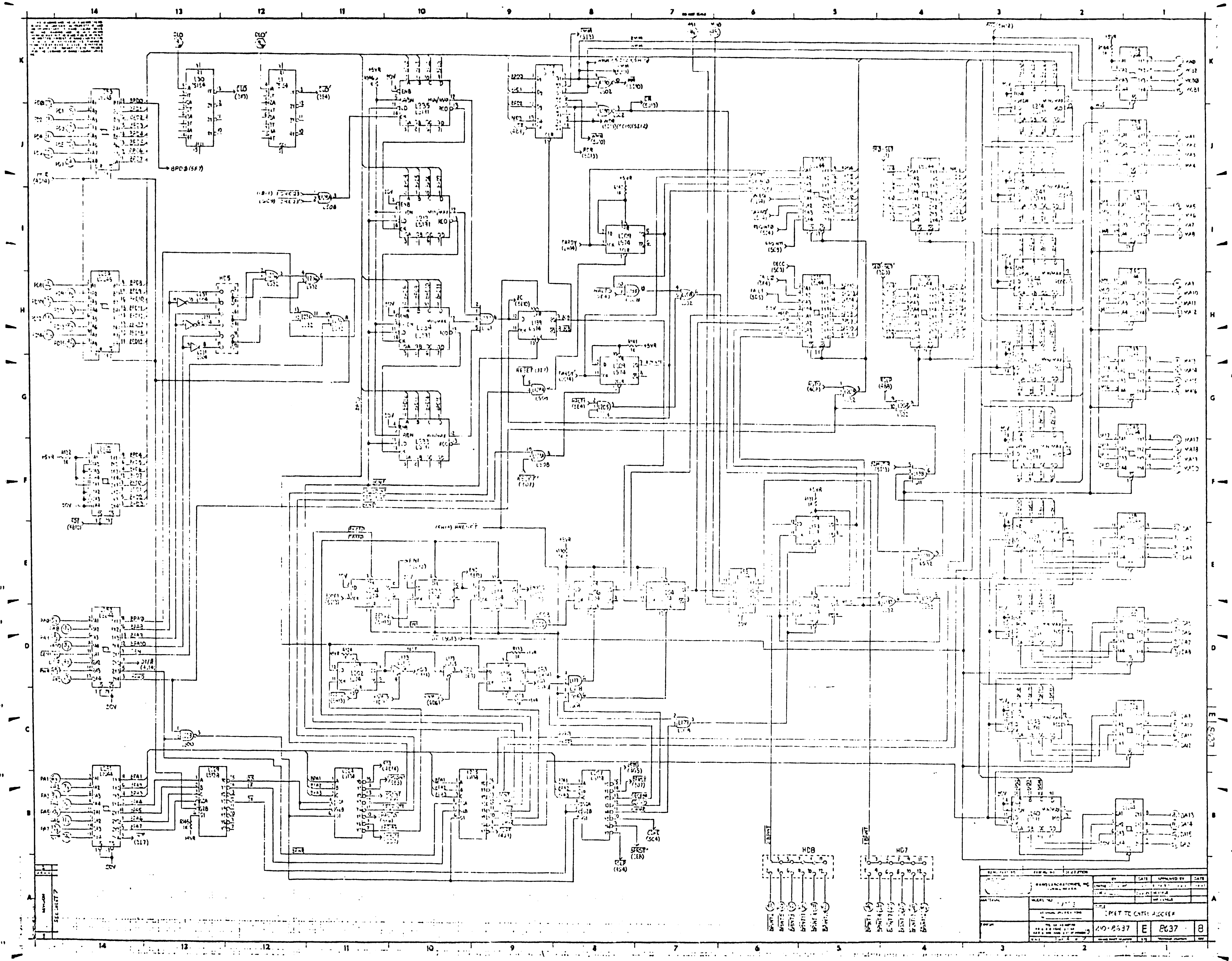

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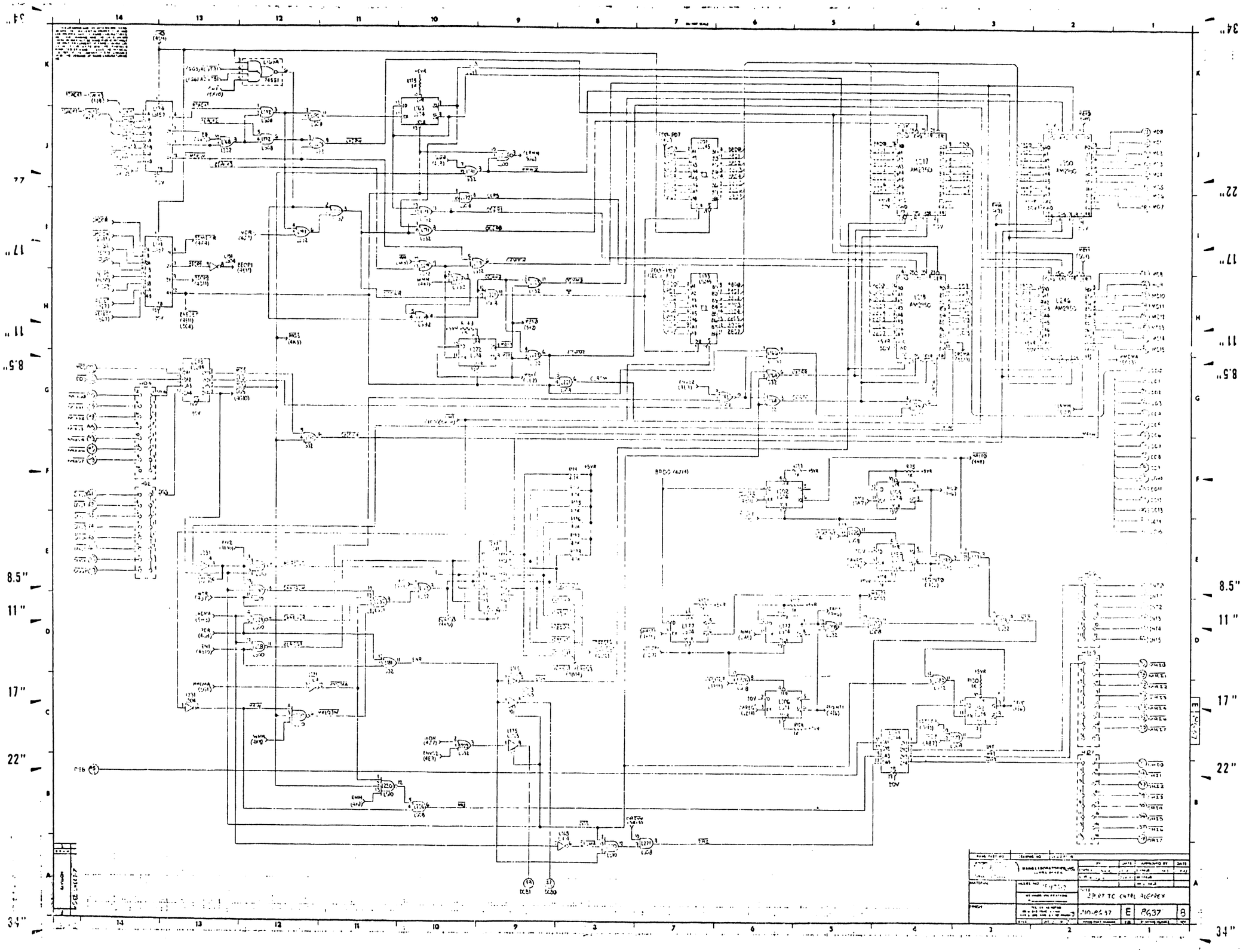
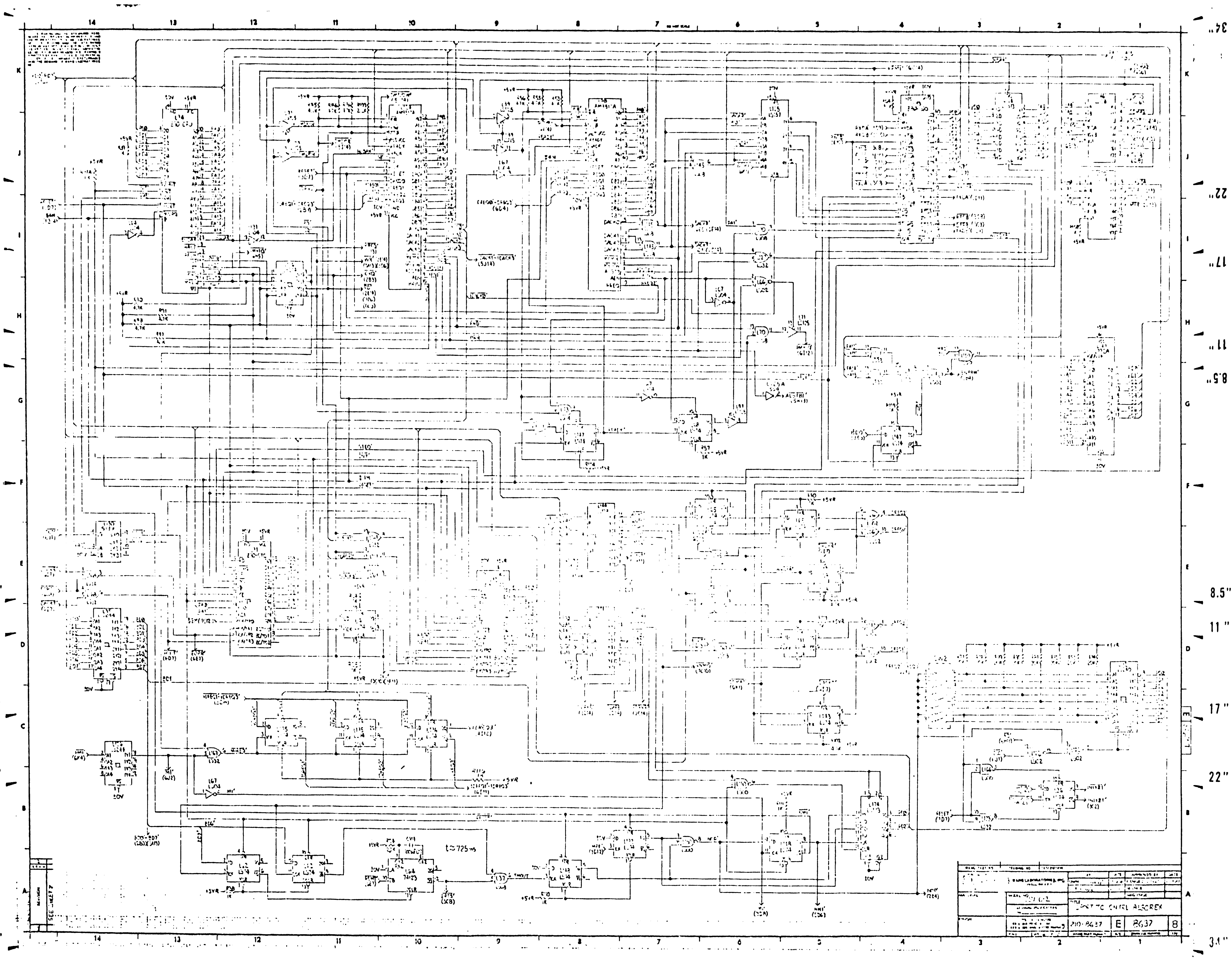

AM2950
L217
L219
L230
L246
74S51
BPDO (4J14)
DCB1
DCB0
+5VR
20V
WANG LABORATORIES, INC.
TITLE
2P0T TC CNTRL ALGPEX
210-8637
E
8637
B
8.5"
11"
17"
22"
34"

AA5



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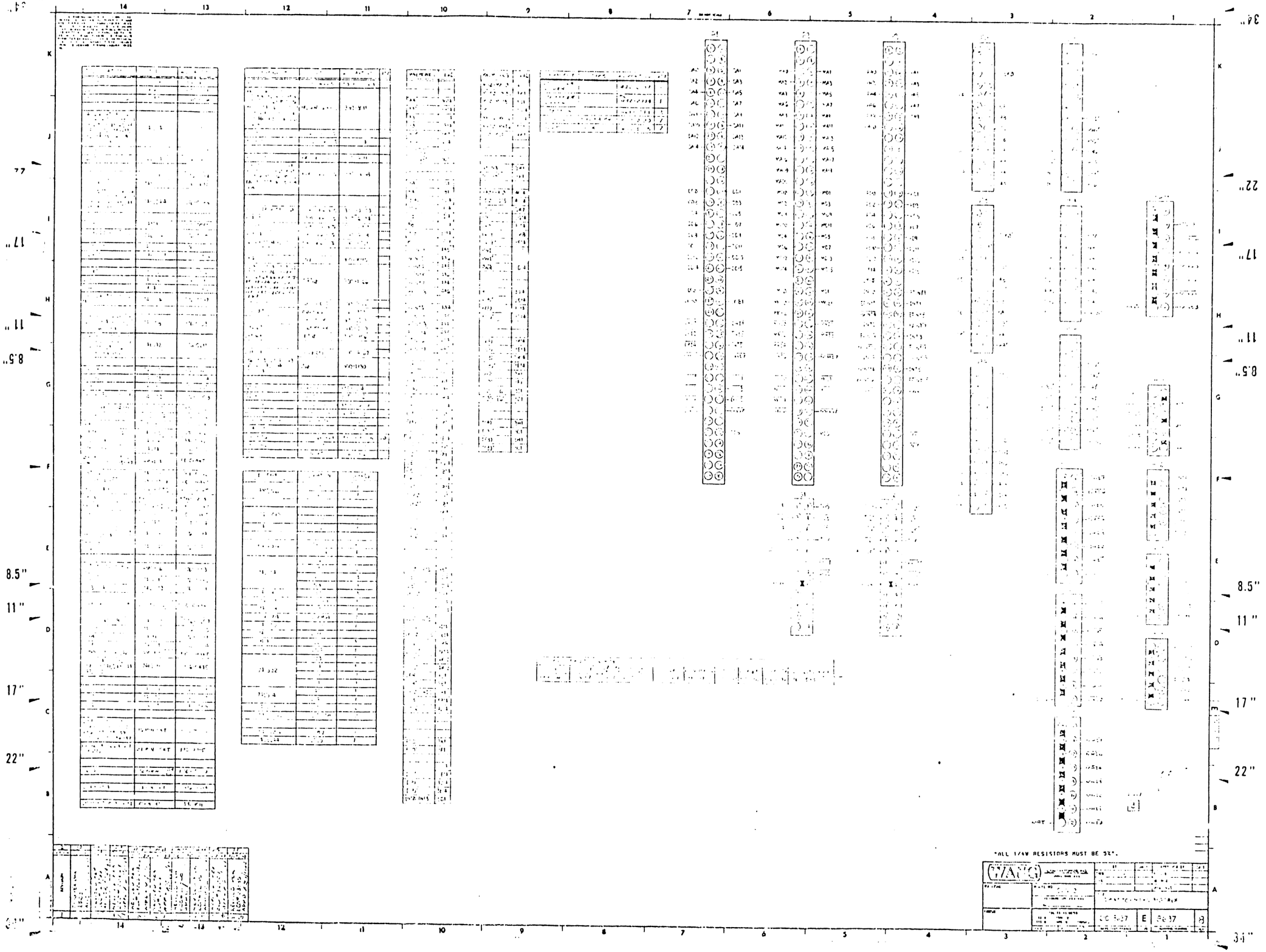

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