WANG

CUSTOMER ENGINEERING

I.B.0-S1

SCHEMATIC RELEASE NO. 31

JUNE 1981

REORDER NUMBER
729-0970

CUSTOMER ENGINEERING

SCHEMATIC RELEASE NO. 31

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JUNE 1981

REORDER NUMBER
729-0970

DATE: June 15, 1981

This release package contains the following logicblock/schematic drawings, applicable to the designated drawing-revision and electrical-revision levels:

DRAWING NUMBER	DRAWING REVISION	ELECTRICAL REVISION	NO. OF SHEETS	EQUIPMENT NOMENCLATURE
210-6727	22/5	5	2	INTEL Memory & Regulator with Underscore
210-6793	10/4	3	1	Registers & I/O
-6793-1		4		
210-7091	11/4	4	1	Victor Printer Control
210-7111	15/12	12	3	10-Meg/Floppy Adapter SSSD
210-7114	21/10	10	4	Large Disk Device Adapter
210-7121	16/7	7	2	Workstation CRT & Controller Board
210-7209	14/8	8	1	Power Supply Regulator with Current Feedback
210-7218	14/6	6	3	IBM 3741 Shugart Board
210-7290	12/3	3	1	8080 Interactive Terminal Controller
-7290-1		3		
210-7309	8/2	2	5	Wang Daisy Control w/Twin Sheet Feeder
210-7332	15/10	4	4	12 Solenoid Head CPU Board
210-7360	22/10	10	3	Servo Control Board
-7360-1		3		
210-7364	12/7	7	2	Power Supply Regulator
-7364-1		0		
210-7390	8/6	6	2	Interface Board
210-7421	7/3	3	4	ALU/Mux Interface Motherboard
210-7422	8/4	4	6	ECC/Device Interface
210-7424	12/9	9	4	I/O Controller
210-7425	13/1	1	2	Workstation CRT Control w/TC Option
-7425-1		1		
-7425-2		1		
-7425-4		0		
210-7426	19/5	5	11	TCP, IOP Motherboard (16K RAM Type)
210-7478	13/4	4	6	Remote TC Workstation Controller
210-7501	16/3	3	6	CPU And Memory
210-7515	5/2	2	4	Triple Controller Motherboard
210-7538	4/3	3	4	Slave Typesetter Controller
210-7546	7/1	1	5	Motherboard
-7546-1		1		
210-7592	26/5	5	8	Single-Board Terminal Electronics
-7592-1		0		
210-7656	6/3	3	2	Two-Board Workstation Regulator (Interconnection Diagram)
-7656-900				
210-7669	8/5	5	2	CRT High Voltage Supply
210-7688	3/2	2	3	Disk/Mux Controller Motherboard
210-7695	7/4	4	5	Fixed/Floppy Disk Controller
210-7696	8/1	1	5	Microcomputer & Memory
210-7887	4/2	2	2	Regulator w/Dual Inlines
210-8695	4/2	2	4	Fixed/Floppy Disk Controller

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DO NOT SCALE

LOCATION	W.L. PART No.	PIN No. +10V	PIN No. +5VR
L1, 12, 25, 29	376-0025	7	14
L2, 4	376-0003	7	14
L3	376-0011	10	5
L14, 22, 31, 33	376-0087	7	14
L5, 6, 15, 17, 27, 35	376-0059	7	14
L7, 9, 26	376-0093	7	16
L8, 23	376-0082	8	16
L10, 28	376-0055	7	14
L11, 30, 32	376-0005	11	4
L16, 24	376-0046		
L17	376-0010	7	14
L18	376-0042	8	16
L19	SEE CHART		12
L20, 21	SEE CHART	12	24
L34	376-0104	8	16
L19, 20, 21	376-9003		

COMPONENT	W.L. PART No.
R1-13, 25-33, 63, 64, 65, 67	330-9047
R14, 15	336-1007
R16 - 24, 62	330-2068
R34 - 42	332-1033
R43 - 51	330-2032
R52-73	336-1014
R53, 59	330-2047
R54	330-1032
R55	330-3039
R56	330-3027
R57	320-2033
R58	331-1033
R60	330-2018
R61, 81, 90	330-4010
R66, 69, 72, 77	330-3012
R68	331-2010
R70, 71	330-3031
R78	330-2082
R79, 87	332-2018
R84, 86	330-3056
R88	332-2043
R89	330-4012
R90	330-3018
R92	330-2015
R93	330-1068
R94	330-2010
R95	320-3018
R96	331-2012
C1	300-1970
C2	300-1680
C3, 19	300-1906
C4, 8	300-1911
C5, 9	300-1915
C6, 7	300-1908
C10, 13	300-4002
C11, 12	300-1910
C15	300-1951
C16, 20, 21, 28	300-4021
C17, 14	300-1903
C18, 22 - 27	300-1920
R29	330-3010
D1-13, 18, 19, 22, 23, 25 - 28	380 - 1001
D12	380-2033
D16, 17	380-3003
D20, 24	380-2002
D21	380-2031
D14	380-2120
Q1	375-1032M
Q2, 7	375-0017
Q3, 6, 11-19	375-1026
Q5, 8, 9, 10	375-1027
Q4	375-0018
SW1 COVER	325-9035
TRAK PAD LARGE	375-9001
TRAK PAD SMALL	375-9004
HEAT SINK	378-9010
SW1 SPANC ROCKER SW	325-1001

CONN. 1

+12V(SW)	A1	-12V(SW)
+5VR	B2	
±0V	C3	
+9V	D4	+9V(SW)
-26V	E5	+18V
	F6	
	H7	VR-5B
	J8	+36V
	K9	
	L10	
+12V	M11	
	N12	
	P13	-12VR
	R14	+5VR
	S15	VR-12B

CONN. 2

EC	A1	EC
SA6	B2	CLR
	C3	CRB
	D4	
	E5	b8
	F6	
b7	H7	
	J8	+12V
	K9	
	L10	
TP1	M11	
	N12	
b5	P13	b3
b4	R14	b4
b2	S15	b1

CONN. 3

-12V	A1	
SFM	B2	
	C3	
	D4	
	E5	
	F6	S3'
+9V(SW)	H7	
S1'	J8	S8'
S5'	K9	S7'
WS	L10	
S8'	M11	S1'
S3'	N12	S2'
	P13	±0V
	R14	+5VR
	S15	

COMP. SIDE — WIRING SIDE

SIGNAL TERMINAL DESIGNATIONS, VIEW FROM BOTTOM (WIRING) SIDE OF CONNECTOR

6727 R6

E - REV 5

WANG PART NO.	ITEM	QTY.	NAME	MATERIAL	DESCRIPTION
FIRST USED ON	ASSY USED ON				

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

BY	DATE	APPROVED BY	DATE
DWN J.S.	6/17/76	E ENGR R. Dion	7/1/76
CHK G.D.	7/1/76	M ENGR	
E.C. CONTROL		MFG ENGR	

MODEL NO. 2221 W

TITLE SCHEMATIC, INTEL MEMORY AND REGULATOR WITH UNDERSCORE

MATERIAL

FINISH

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

SEE CHART | E | 6727 | 12

SCALE | SHT 1 OF 2 | WANG PART NUMBER | SIZE | DRAWING NUMBER | REV.

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DO NOT SCALE

	210 = 209 + 377 OR 378				
MODEL	210	209	L19	L20	L21
2200 ASCII	6727-A	6727	378-0508	378-2004	378-2005
2200 CYRILLIC	6727-B	6727	378-0156	378-2037	378-2038
2200 KATAKANA	6727-C	6727	OPEN	378-2039-R2	378-2040-R2
928 ASCII	6727-D	6727	378-0520-R2	378-2048-R2	378-2049-R2
2221W LATIN	6727-E	6727	378-0531	378-2055	378-2056
2221W FRENCH	6727-F	6727	378-0537	378-2071	378-2072
2221W HEBREW	6727-H	6727	378-0543	378-2074	378-2075
2221W SWEDISH	6727-J	6727	378-0563	378-2241	378-2242
2221W GERMAN	6727-K	6727	378-0563	378-2241	378-2243-R1
2221W NOR/DAN	6727-L	6727	378-0575-R1	378-2309-R1	378-2310-R2
2221W SPANISH	6727-M	6727	378-0563	378-2241	378-2311
2221W AZERTY	6727-N	6727	378-0584-R1	378-2341-R1	378-2342-R1
2221W SWEDISH	6727-P	6727	378-0585	378-2343	378-2344
2221W NORWAY	6727-Q	6727	378-0586	378-2345	378-2346
2221W U.K.	6727-R	6727	378-0587	378-2347	378-2348
2221W NETH.	6727-S	6727	378-0588	378-2349	378-2350
2221W SWISS/FRENCH	6727-T	6727	378-0589	378-2351	378-2352
2221W GERMAN	6727-U	6727	378-0590	378-2353	378-2354
2221W CYRILLIC/LATIN	6727-V	6727	378-0591	378-2355	378-2356
2221W GREEK/LATIN	6727-W	6727	378-0592	378-2357	378-2358
KATAKANA	6727-X	6727	OPEN	378-2452	378-2453
2221W-1 GREEK/LATIN	6727-Y	6727	378-0721	378-2696	378-2697
2221W ST. ASCII	6727-Z	6727	378-0631-R5	378-2523-R5	378-2524-R5
ICELANDIC	6727-AA	6727	378-0727	378-2707	378-2708
2221W GREEK VS	6727 AB	6727	378-0721	378-2696	378-2697
2221W CANADIAN	6727-AC	6727	378-0731	378-2713	378-2714
5521 EAST. EUROPE	6727-AD	6727	378-0726-R1	378-2698-R1	378-2699-R1

D 6727

NO.	REVISION	DATE	BY
	SEE SHEET 1		

OGILVIE PRESS

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

	BY	DATE	APPROVED BY	DATE
DWN	L. D.B.	6-28-80	E ENGR R.CHEN	6-30-80
CHK	D.S.L.	6-30-80	M ENGR	
			MFG ENGR	

MATERIAL

MODEL NO. 2221W
SEE ENGRG. SPECIFICATIONS
No.

TITLE INTEL MEMORY & REGULATOR WITH UNDERSCORE

FINISH

TOL. EX. AS NOTED
.XX ± FRAC. ±
.XXX ± ANG. ± FINISH √

SCALE | SHT 2 OF 2

SEE CHART	D	6727	22
WANG PART NUMBER	SIZE	DRAWING NUMBER	REV.

"E" PKG

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HOLE LEGEND

DRILLED OR PUNCHED HOLE TOLERANCES:	HOLE DIA.	TOL.
	.0135 to .125	+.002 −.001
	.126 to .250	+.004 −.001
	.251 to .500	+.005 −.001

IDENT.	DESCRIPTION	QTY.
A		

6793-1 CHART

COMPONENT	W.L. NO.
L10A	376-0080
R31	330-3010
R32	333-0081
R33	333-0080
C42	300-4014
D1	380-1001

COMPONENT	W.L. PART NO.
R1-18,22-28,30	330-3010
R19,20,21,29	330-4034
C1,2,3,5	300-5005
C4, C41	300-1330
C6-38	300-1900
C39,40	300-4022

LOCATION	W.L. PART NO.	TERM.NO. ±5V	TERM.NO. VCC+5VR
L1,34,44-50,54,61	376-0119	8	16
L2-9	-0100	8	16
L16,39	-0010	7	14
L11,32,41,52	-0125	7	14
L12,29,38	-0194	7	14
L13,31	-0093	7	14
L14	-0238	7	14
L15(17-19),23,47	-0006	7	14
L20,28,40,42	-0002	7	14
L22,24	-0080	8	16
L25	-0012	7	14
L26,35-37,58,60	-0192	8	16
L27	-0096	8	16
L30	-0031	7	14
L33,43,45,55	-0041	8	16
L46,48	-0097	8	16
L49,51,57,59	-0204	8	16
L53	-0200	7	14
L56	-0098	8	16
L62	376-0016	7	14
J1,J2	376-9012		
L10	376-0197	7	14
L2-9	376-9002	16 PIN SOCKET	
BUS BAR	654-0510	QTY. 1	

LOCATION	TYPE	SPARES
L16	7404	1
L19	7474	1
L52	7427	2
L60	74LS367	2
L62	7402	1
L14	74S10	1

COMPONENT LAYOUT

SIGNAL-TERMINAL DESIGNATIONS, VIEW FROM BOTTOM (WIRING) SIDE OF CONNECTOR

REVISION	BY	APP.	DATE
ORIG. PER DWR # E122			6-21-76
ADD D1, R31, R32, R33 PER ECN # 5785			7-29-76
ADD C42 PER ECN # 5965			8-26-76
ADD L10 PER ECO # 6111			10-15-76
REVISED PER ECO # 6444			12-27-76
REVISED PER ECO # 6788			4-28-77
REVISED PER ECN # 11321			11-17-77
REVISED PER ECO # 7288			1-17-78
ADD D2, R34 PER ECO # 7288			1-17-78
REVISED PER ECO # 7288			1-17-78
REVISED PER ECO # 7288			1-17-78
REVISED

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DO NOT SCALE

COMPONENT	W.L. PART NO.
R30-36	330-2082
R42-48	330-4015
R1,3,4,5,7,8,9,13,18,20,21,22,23,24,27,50,53,54	330-3047
R16,	330-2047
R6	332-3015
R2	330-2022
R37-41	330-3027
R15	330-4022
R12	300-5010
R11, 17	330-4022
R28	330-3068
R29	336-1007
R49	334-0020
R25,26	330-4010
R51	330-2015
R52	332-3010
XTAL 17.1MHz	321-0018
C1	300-1069
C2	300-1930
C3,16	300-4025
C4	300-5005
C5-11	300-4011
C12,13	300-3052
C14	300-4005
C15	300-4014
C17-31	300-1900
C32-34	300-4022
D1-4,6-13,32	380-1001
D5	380-2051
D14-20,33,34	380-2063
D21-31	380-4003
Q1,2	375-0017
Q3-9, Q11-14	375-1052
40 PIN SOCKET	376-9011
28 PIN SOCKET	376-9015
24 PIN SOCKET	376-9003
22 PIN SOCKET	376-9010
16 PIN SOCKET	376-9002
R14,19	330-4012
R10	330-4047
Q10	375-1012

COMPONENT	W.L. PART NO.
J1	358-0042

VARIATION CHART (210 = 209, 371 OR 378)				
MODEL	209	210	L5	L6
2251 ENG	7091	7091-A	378-2032-R1	378-2031-R1
2251 CYR	7091	7091-B	378-2034-R1	378-2033-R1
2251 KATA	7091	7091-C	378-2036-R1	378-2035R1
2251 GER	7091	7091-D	378-2245-R1	378-2031-R1
2251 SWED	7091	7091-E	378-2246	378-2031-R1
9024	7091	7091-F	378-2032-R1	378-2282
2251 SPAN	7091	7091-G	378-2339	378-2031-R1
DANISH	7091	7091-H	378-2452	

LOCATION	TYPE	SPARES
L17	74367	2
L26	7406	3
L27	7406	2
L30	7408	2
L32	7474	1

LOCATION	W.L.PART NO.	TERM. NO ±0V	TERM. NO. Vcc +5VR
L1, 2	376-0183	8	16
L3,4	377-0308	8	22
L5,6	SEE CHART	12	24
L7,8,9,16,17	376-0176	8	16
L9	377-0269	2	20
L10	377-0338	14	28
L11,30	376-0081	7	14
L12	377-0337	8	16
L13	376-0180	7	14
L15,25,28,29	376-0119	8	16
L18,19,20	376-0008	8	16
L21,24	376-8104	8	16
L22,32	376-0006	7	14
L23	376-0139	7	14
L26,27	376-0055	7	14
L31	376-0074		

HOLE LEGEND		
DRILLED OR PUNCHED HOLE TOLERANCES:	HOLE DIA.	TOL.
	.0135 to .125	+.007 -.002
	.126 to .250	+.007 -.003
	.251 to .500	+.007 -.004

IDENT.	DESCRIPTION	QTY.
A		

1. ALL I.C. CHIPS ARE 7400 SERIES UNLESS OTHERWISE SPECIFIED.

NOTES

REVISION	BY	DATE	APPROVED BY	DATE
ORIGINATED PER E.C.O. 7091	F. LEE	10-13-76		
REVISED PER E.C.O. 7091	F. LEE	10-13-76		
REVISED PER E.C.O. 7091	F. LEE	2-22-77		
REVISED PER E.C.O. 7091	F. LEE	4-27-77		
REVISED PER E.C.O. 7091	F. LEE	7-11-77		
REVISED PER E.C.O. 7091	F. LEE	7-17-79		
REVISED PER E.C.O. 7091	F. LEE	9-24-79		
REVISED PER E.C.O. 7091	F. LEE	1/2-81		

	BY	DATE	APPROVED BY	DATE
DWN	F. LEE	10-13-76	E ENGR F. LEE	11/1/76
CHK	[illegible]	11-1-76	M ENGR	
E. C. CONTROL			MFG ENGR	

WANG PART NO.	ITEM	QTY.	NAME	MATERIAL	DESCRIPTION
90-2 or 3 FIRST USED ON	ASSY USED ON		WANG LABORATORIES, INC. TEWKSBURY, MASS. U.S.A.		
			MODEL NO. 2251		
			SEE ENGRG SPECIFICATIONS No.		
			TOL. EX. AS NOTED XX ± .010 FRAC. ± 1/64 XXX ± .005 ANG. ± 1°30' FINISH √		
			SCALE NONE SHT 1 OF 1		

TITLE: SCHEMATIC LOGIBLOC VICTOR PRINTER CONTROL

WANG PART NUMBER	SIZE	DRAWING NUMBER	REV.
210-7091	E	7091	11

1602 E

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DO NOT SCALE

MAR RIPPLE IOP CLOCK

HOLE LEGEND

DRILLED OR PUNCHED HOLE TOLERANCE:	HOLE DIA.	TOL.
	.0135 to .125	± .001
	.126 to .250	± .002
	.251 to .500	± .003

IDENT.	DESCRIPTION	QTY.
A		

CCE

** ADDED C58 & C59 PER ECN # 142.56

REVISION	BY	DATE	APPROVED BY	DATE
A THRU E REV. PER DWG. ECO # 14981 APP'D: [illegible]				
F REV. PER ECN # 15016 APP'D: [illegible]				
G REVISED PER ECN # 15116 APP'D: [illegible]				
H REVISED PER ECN # 15216 APP'D: [illegible]				
J REVISED PER ECN # 15316 APP'D: [illegible]				
K REVISED PER ECN # 15416 APP'D: [illegible]				
L REVISED PER ECN # 15516 APP'D: [illegible]				
M REVISED PER ECN # 15616 APP'D: [illegible]				
N REVISED PER ECN # 15716 APP'D: [illegible]				
P REVISED PER ECN # 15816 APP'D: [illegible]				
R REVISED PER ECN # 15916 APP'D: [illegible]				
S REVISED PER ECN # 16016 APP'D: [illegible]				
T REVISED PER ECN # 16116 APP'D: [illegible]				
U REVISED PER ECN # 16216 APP'D: [illegible]				
V REVISED PER ECN # 16316 APP'D: [illegible]				
W REVISED PER ECN # 16416 APP'D: [illegible]				
X REVISED PER ECN # 16516 APP'D: [illegible]				
Y REVISED PER ECN # 16616 APP'D: [illegible]				
Z REVISED PER ECN # 16716 APP'D: [illegible]				
AA REVISED PER ECN # 16816 APP'D: [illegible]				
BB REVISED PER ECN # 16916 APP'D: [illegible]				
CC REVISED PER ECN # 17016 APP'D: [illegible]				
DD REVISED PER ECN # 17116 APP'D: [illegible]				
EE REVISED PER ECN # 17216 APP'D: [illegible]				
FF REVISED PER ECN # 17316 APP'D: [illegible]				
GG REVISED PER ECN # 17416 APP'D: [illegible]				
HH REVISED PER ECN # 17516 APP'D: [illegible]				
JJ REVISED PER ECN # 17616 APP'D: [illegible]				
KK REVISED PER ECN # 17716 APP'D: [illegible]				
LL REVISED PER ECN # 17816 APP'D: [illegible]				
MM REVISED PER ECN # 17916 APP'D: [illegible]				
NN REVISED PER ECN # 18016 APP'D: [illegible]				
PP REVISED PER ECN # 18116 APP'D: [illegible]				
RR REVISED PER ECN # 18216 APP'D: [illegible]				
SS REVISED PER ECN # 18316 APP'D: [illegible]				
TT REVISED PER ECN # 18416 APP'D: [illegible]				
UU REVISED PER ECN # 18516 APP'D: [illegible]				
VV REVISED PER ECN # 18616 APP'D: [illegible]				
WW REVISED PER ECN # 18716 APP'D: [illegible]				
XX REVISED PER ECN # 18816 APP'D: [illegible]				
YY REVISED PER ECN # 18916 APP'D: [illegible]				
ZZ REVISED PER ECN # 19016 APP'D: [illegible]				

WANG PART NO.	ITEM	QTY.	NAME
FIRST USED ON	ASSY USED ON		

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

MATERIAL	MODEL NO. 2200 VS		
	SEE ENGRG SPECIFICATIONS No.		
FINISH	TOL. EX. AS NOTED .XX ± .010 FRAC. ± 1/64 .XXX ± .005 ANG. ± 1°30'		
	SCALE	SHT 1 OF 3	

MATERIAL		DESCRIPTION	
BY	DATE	APPROVED BY	DATE
DWN [illegible]	4/4/71	E ENGR [illegible]	5/17/71
CHK		M ENGR	
		E.C. CONTROL	
		MFG ENGR	

TITLE: 10 MEG/FLOPPY ADAPTER 555D

2/0-7111 | E | 7111 | 16

WANG PART NUMBER | SIZE | DRAWING NUMBER | REV.

12 E-REV

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DO NOT SCALE

HOLE LEGEND

	HOLE DIA.	TOL.
DRILLED OR PUNCHED HOLE	.0135 to .125	±.001
	.126 to .250	±.002
TOLERANCES:	.251 to .500	±.003

IDENT.	DESCRIPTION	QTY.
A		

WRITE GATE

ERASE GATE

WRITE DATA 1

WRITE DATA 2

READ GATE

READ CLOCK 1

READ CLOCK 2

READ DATA 1

READ DATA 2

DIABLO ACK / BCK

SHUGART ACK / BCK

TIMING

$T_1, T_2, T_3, T_4 = 100$ NS

$T_5, T_7 = 200$ NS

$T_6, T_8 = 4.45$

WANG PART NO.	ITEM	QTY.	NAME	MATERIAL	DESCRIPTION
PN/M FIRST USED ON	ASSY USED ON		WANG LABORATORIES, INC. TEWKSBURY, MASS. U.S.A.		BY / DATE / APPROVED BY / DATE
					DWN / 9/10/76 / ENGR
					CHK / ENGR
					E. C. CONTROL / MFG ENGR
MATERIAL			MODEL NO. 2200 VS		TITLE 10 MEG/FLOPPY ADAPTER SSSD
			SEE ENGRG SPECIFICATIONS No.		
FINISH			TOL. EX. AS NOTED .XX ± .010 FRAC. ± 1/64 .XXX ± .005 ANG. ± 1°30' FINISH	210-7111	E 7111 15
			SCALE 2/3 SHT 2 OF 3	WANG PART NUMBER	SIZE DRAWING NUMBER REV.

REVISION — SEE SHEET 1

7111

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DO NOT SCALE

HOLE LEGEND	HOLE DIA.	TOL.
DRILLED OR PUNCHED HOLE TOLERANCES:	.0135 to .125	+.001 -.002
	.126 to .250	+.001 -.003
	.251 to .500	+.001 -.007

IDENT.	DESCRIPTION	QTY.
A		

LOCATION	WL. PART NO.	PIN NO. ±0V	PIN NO. +5VR
L1A, 29, 35, 42, 48	376-0225	7	14
L1-7	376-0128	7	14
L8	376-0011	10	5
L9	376-0069	8	16
L36, 64	376-0180	7	14
L11,12,16-19,22,23,26,30,37,49,50,51,54,61,63,72,78	376-0155	7	14
L13,29,45	376-0081	7	14
L21, 24, 77, 78	376-0233	8	16
L25,27, 66,75	376-0153	7	14
L28, 44,47,52,85	376-0207	7	14
L30, 62	376-0211	7	14
L31,39,41,55,60	376-0209	7	14
L32	376-0940	7	14
L33, 38	376-0213	7	14
L40	376-0249	7	14
L46,54	376-0210	7	14
L53,65	376-0104	8	16
L57-60	376-0198	7	14
L63	376-0605	11	4
L68-71	376-0156	8	16
L72	376-0208	7	14
L79-82	376-0248	8	16
L83	376-0226	8	16
L10	376-0010	7	14
L20	376-0006	7	14
L43	376-0000	7	14

I.C. TYPE	LOCATION	SPARE
7408	L29	1
74LS10	L31	1
74LS11	L1A	1
7438	L7	1

COMPONENT	W.L. PART NO.
R1-12,15,16,19-26,28,30,32,48,50,62,64,68,69,73,74,75,77,79,80,83,84	330-3010
R13,14	330-2082
R17,31,33,41-44,51-57	330-2022
R18,32,34-40,58-64	330-2033
R27,78,81,89,91,92,76	330-4010
R28	330-3021
R49	330-4033
R67	330-3084
R71,72,73,87,88	330-2056
RB2,83,84,90	330-2015
C58	300-1100
C1	300-1903
C2	300-1906
C3,55,59,60	300-1082
C4	300-4026
C5	300-1330
C6,7, 52,53	300-4022
C8-51	300-1900
C54,56,57	300-1907
Q2,3,4	375-1021
Q1	375-1027
J1,2	350-2097
D2	380-0001
D3	380-4000
D4	380-3008
XTAL 10 MHz	321-0008

WANG PART NO.	ITEM	QTY.	NAME	MATERIAL	DESCRIPTION
PC Bd. FIRST USED ON	ASSY USED ON		WANG LABORATORIES, INC. TEWKSBURY, MASS. U.S.A.	BY / DATE / APPROVED BY / DATE	
				DWN JG 9/28/72	E ENGR
				CHK	M ENGR
			MATERIAL	E. C. CONTROL	MFG ENGR
			MODEL NO. 2200VS	TITLE	
			SEE ENGRG SPECIFICATIONS No.	10 MEG/FLOPPY ADAPTER SSSD	
			FINISH	TOL. EX. AS NOTED .XX ± .010 FRAC. ± 1/64 .XXX ± .005 ANG. ± 1°30' FINISH 125	
			SCALE: FULL SHT 3 OF 3	210-7111 / WANG PART NUMBER	E / SIZE / 7111 / DRAWING NUMBER / 15 / REV.

REVISION	DATE	APPROVED
SEE SHEET 1		

7111

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DO NOT SCALE

JUMPERS						
PORT IN USE	1	2	3	4	5	6
PORT 0		X		X		Y
PORT 0 & 1	X			X		X
PORT 0, 1 & 2	X		X			X
PORT 0, 1, 2 & 3	X		X		X	

| | | | | | |

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DO NOT SCALE

WANG PART NO.	ITEM	QTY.	NAME	MATERIAL	DESCRIPTION
DWN. FIRST USED ON	ASSY USED ON		WANG LABORATORIES, INC. TEWKSBURY, MASS. U.S.A.	BY	DATE / APPROVED BY / DATE
				DWN. JJ 2/25/75	E ENGR
				CHK.	M ENGR
			MATERIAL	E. C. CONTROL	MFG ENGR
			MODEL NO. 2200VS	TITLE LARGE DISK DEVICE ADAPTER	
			SEE ENGRG SPECIFICATIONS No.		
			FINISH	TOL. EX. AS NOTED .XX ± .010 FRAC. ± 1/64 .XXX ± .005 ANG. ± 1°30' PARTS	
				SCALE 1/1 SHT 2 OF 2	210-7114 E 7114 21
					WANG PART NUMBER / SIZE / DRAWING NUMBER / REV.

REVISION

SEE SHT 1

PINS 5 & 6 OF L32 ARE HANDWIRED DIFFERENT THAN ETCH VERSION OF R5 AND ABOVE. THE ETCH VERSION HAS THEM REVERSED.

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DO NOT SCALE

HOLE LEGEND

DRILLED OR PUNCHED HOLE TOLERANCES:	HOLE DIA.	TOL.
	.015 to .125	+.001 -.001
	.126 to .250	+.001 -.001
	.251 to .500	+.001 -.001

IDENT.	DESCRIPTION	QTY.
A		

REVISION	BY	DATE	APPROVED BY	DATE
SEE SHT 1				

WANG PART NO.	ITEM	QTY.	NAME	MATERIAL	DESCRIPTION
QTY. PER UNIT / FIRST USED ON / ASSY USED ON			WANG LABORATORIES, INC. TEWKSBURY, MASS. U.S.A.		BY / DATE / APPROVED BY / DATE
				DWN JB 7/8/75	E ENGR
				CHK	M ENGR
				E. C. CONTROL	MFG ENGR
			MATERIAL	MODEL NO. 2200VS SEE ENGNG SPECIFICATIONS No.	TITLE LARGE DISK DEVICE ADAPTER
			FINISH	TOL. EX. AS NOTED .XX = ±.03 FRAC. = 1/16 .XXX = ±.005 ANG. = 1/2° FINISH	210-7114 / E / 7114 / 21
				SCALE NONE / SHT 3 OF 4	WANG PART NUMBER / SIZE / DRAWING NUMBER / REV.

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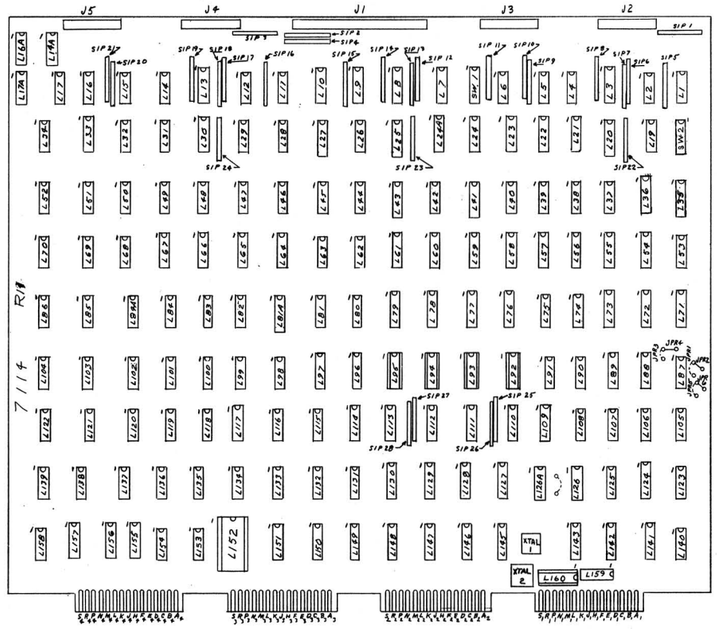
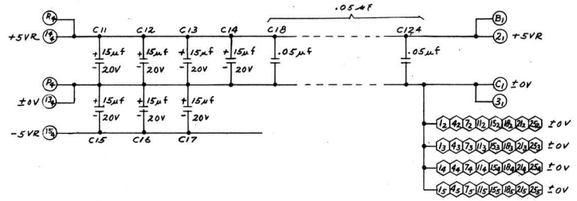
DO NOT SCALE

COMPONENT LAYOUT



I.C. TYPE	LOCATION	SPARE
7404	L46	1
	L87	5
	L90	3
	L108	1
7414	L159	3
7408	L126A	2
7411	L16A	1
7420	L91	1
	L134	1
7427	L140	1
7474	L121	1
7410	L47	1
7486	L137	1
74LS139	L88	1
	L117	1
7404	L160	3

I.C. LOCATION	W.L. PART NO.	PIN NO ±0V	PIN NO +5VR
L1, 2, 5, 6, 11, 12, 15, 14, 26	376-0146	7	14
L3, 8, 13	376-0275	8	16
L4, 85, 91, 134	376-0004	7	14
L7, 54, 58-64, 71, 76-78, 89	376-0048	8	16
L9, 19, 20, 25, 27, 30	376-0274	8	16
L14, 39, 40, 75, 81, 132	376-0031	7	14
L16A, 95, 52, 65, 86, 88, 103, 106, 118, 126A	376-0081	7	14
L17A, 48, 125, 138	376-0198	7	14
L17	376-0184	7	14
L17A, 31, 34, 49, 50, 51, 62, 70, 80, 82, 100, 101, 109, 113, 115, 116, 119-123, 126, 131, 133, 137	376-0006	7	14
L19, 154	376-0093	7	14
L21-29, 56, 57, 110-113, 124	376-0119	8	16
L24A, 33, 142, 143	376-0106	8	16
L28	376-0012	7	14
L29, 68, 136	376-0102	7	14
L32, 135, 138	376-0016	7	14
L35, 36, 109	SPARE		
L38, 42, 74, 137	376-0036	7	14
L41, 93	376-0098	8	16
L44, 46, 85, 87, 90, 108, 157, 160	376-0010	7	14
L47, 139	376-0003	7	14
L53, 55, 72, 73, 92, 114, 141, 157	376-0058-1	8	16
L63, 86, 99, 102, 105	376-0002	7	14
L64	376-0096	8	16
L65, 66, 67	376-0278	8	16
L81A, 96, 149, 150, 151	376-0082	8	16
L90A	376-0092	7	14
L98, 117	376-0226	8	16
L92, – 95	376-0113	8	16
L127, – 130	376-0097	8	16
L140	376-0128	7	14
L145 – 148	376-0138	8	16
L159	376-0139	7	14
L152	376-0090	12	24
L155, 156	376-0220	8	16
L92-95 SOCKET 16PIN	376-9005		
L144 NOT USED	—	—	—



COMPONENT	W.L. PART NO.
R1 – 4, 6, 28, 35, 36, 38, 39	330-2047
R5, 7	330-4012
R8, 9, 10, 18-17, 19-23, 24, 25, 30-32, 37, 42-48, 51, 52, 54, 55, 57-62	330-3010
R11 R18, 55	333-0090
R24, 25, 13, 63	330-2082
R29	330-2027
R40, 41, 50	330-2069
R53	330-2040
R54, 12	330-4010
R33	330-9028
R52	330-4016
SIP1, 33, 20, 22, 24	333-0804
SIP2, 4, 7, 13, 15, 18, 23	333-0802
SIP 5, 6, 8, 16, 15, 19, 14, 17, 21	333-0803
SIP 11, 26-28	333-0805
SIP 25, 27	333-0801
C1	300-5019
C2, 126	300-1082
C9	300-1934
C5, 125	300-1903
C7, 127	300-1820
C8, 6	300-5020
C3, 10	300-5006
C11-17	300-4022
C18-124	300-1900
SW1, 2	325-1503
J1 60 PIN SOCKET CONN.	350-0457
J2, 3, 4, 5 26 PIN SOCKET CONN.	350-0458
P1, 2	380-1001
XTAL1	321-0019
XTAL2	321-0009

J4

±0V	1 / 14	+ SERVO CLOCK
– SERVO CLOCK	2 / 15	±0V
– READ DATA	3 / 16	+ READ DATA
±0V	4 / 17	+ READ CLOCK
– READ CLOCK	5 / 18	±0V
– WRITE CLOCK	6 / 19	+ WRITE CLOCK
±0V	7 / 20	+ WRITE DATA
– WRITE DATA	8 / 21	±0V
	9 / 22	
	10 / 23	
±0V	11 / 24	+ INDEX
– INDEX	12 / 25	±0V
– SECTOR	13 / 26	+ SECTOR

J5

±0V	1 / 14	+ SERVO CLOCK
– SERVO CLOCK	2 / 15	±0V
– READ DATA	3 / 16	+ READ DATA
±0V	4 / 17	+ READ CLOCK
– READ CLOCK	5 / 18	±0V
– WRITE CLOCK	6 / 19	+ WRITE CLOCK
±0V	7 / 20	+ WRITE DATA
– WRITE DATA	8 / 21	±0V
	9 / 22	
	10 / 23	
±0V	11 / 24	+ INDEX
– INDEX	12 / 25	±0V
– SECTOR	13 / 26	+ SECTOR

J1

– TAG1	1 / 31	+ TAG1
– TAG2	2 / 32	+ TAG2
– TAG3	3 / 33	+ TAG3
– BIT0	4 / 34	+ BIT0
– BIT1	5 / 35	+ BIT1
– BIT2	6 / 36	+ BIT2
– BIT3	7 / 37	+ BIT3
– BIT4	8 / 38	+ BIT4
– BIT5	9 / 39	+ BIT5
– BIT6	10 / 40	+ BIT6
– BIT7	11 / 41	+ BIT7
– BIT8	12 / 42	+ BIT8
– BIT9	13 / 43	+ BIT9
– OPEN CABLE DETECT	14 / 44	+ OPEN CABLE DETECT
– FAULT	15 / 45	+ FAULT
– SEEK ERROR	16 / 46	+ SEEK ERROR
– ON CYLINDER	17 / 47	+ ON CYLINDER
	18 / 48	
– UNIT READY	19 / 49	+ UNIT READY
	20 / 50	
	21 / 51	
– UNIT SEL TAG	22 / 52	+ UNIT SEL TAG
– UNIT SEL BIT0	23 / 53	+ UNIT SEL BIT0
– UNIT SEL BIT1	24 / 54	+ UNIT SEL BIT1
	25 / 55	
– UNIT SEL BIT2	26 / 56	+ UNIT SEL BIT2
– UNIT SEL BIT3	27 / 57	+ UNIT SEL BIT3
– WRITE PROTECT	28 / 58	+ WRITE PROTECT
	29 / 59	
	30 / 60	

J2

±0V	1 / 14	+ SERVO CLOCK
– SERVO CLOCK	2 / 15	±0V
– READ DATA	3 / 16	+ READ DATA
±0V	4 / 17	+ READ CLOCK
– READ CLOCK	5 / 18	±0V
– WRITE CLOCK	6 / 19	+ WRITE CLOCK
±0V	7 / 20	+ WRITE DATA
– WRITE DATA	8 / 21	±0V
	9 / 22	
	10 / 23	
±0V	11 / 24	+ INDEX
– INDEX	12 / 25	±0V
– SECTOR	13 / 26	+ SECTOR

J3

±0V	1 / 14	+ SERVO CLOCK
– SERVO CLOCK	2 / 15	±0V
– READ DATA	3 / 16	+ READ DATA
±0V	4 / 17	+ READ CLOCK
– READ CLOCK	5 / 18	±0V
– WRITE CLOCK	6 / 19	+ WRITE CLOCK
±0V	7 / 20	+ WRITE DATA
– WRITE DATA	8 / 21	±0V
	9 / 22	
	10 / 23	
±0V	11 / 24	+ INDEX
– INDEX	12 / 25	±0V
– SECTOR	13 / 26	+ SECTOR

HOLE LEGEND

DRILLED OR PUNCHED HOLE TOLERANCES:	HOLE DIA.	TOL.
	.0135 to .125	+.007 −.001
	.126 to .250	+.009 −.001
	.251 to .500	+.009 −.002

IDENT.	DESCRIPTION	QTY.
A		

SIGNAL – TERMINAL DESIGNATIONS, VIEW FROM BOTTOM (WIRING) SIDE OF CONNECTOR

CONN 1

+5VR	B / 2	+5VR
±0V	C / 3	±0V

CONN 2

D15	A / 1	MDL7
D14	B / 2	MDL6
D13	C / 3	MDL5
D12	D / 4	MDL4
D11	E / 5	MDL3
D10	F / 6	MDL2
D9	H / 7	MDL1
D8	K / 8	MDL0
D7	L / 9	MDH7
D6	M / 10	MDH6
D5	N / 11	MDH5
D4	P / 12	MDH4
D3	R / 13	MDH3
D2	S / 14	MDH2
D1	T / 15	MDH1

CONN 3

D0	A / 1	MDH0
	B / 2	MOF
	C / 3	
	D / 4	RDS
R12	E / 5	
R13	F / 6	
R11	H / 7	
R10	K / 8	
R9	L / 9	PTO
R8	M / 10	PT1
R7	N / 11	CDLI
R6	P / 12	INIT2
R5	R / 13	SIMPT
R4	S / 14	
T03	T / 15	DSM1
DLS	U / 16	DSMH
T00	V / 17	T06

CONN 4

	A / 1	HW16
	B / 2	HR16
	C / 3	HTS
	D / 4	HSB1
	E / 5	HSB2
	F / 6	
	H / 7	
	J / 8	
	K / 9	
	L / 10	
	M / 11	MAR RIPPLE
	N / 12	
±0V	P / 13	±0V
+5VR	R / 14	+5VR
+12V	S / 15	–5V

COMP SIDE — WIRING SIDE

REVISION	DATE	APPROVED
SEE SHT 1		

WANG PART NO.	ITEM	QTY.	NAME	MATERIAL	DESCRIPTION
FIRST USED ON	ASSY USED ON				
			WANG LABORATORIES, INC. TEWKSBURY, MASS. U.S.A.	BY	DATE / APPROVED BY / DATE
				DWN JMS 7/24/73	E ENGR
				CHK	M. ENGR
			MATERIAL	E.C. CONTROL	MFG ENGR
			MODEL NO. 2200VS	TITLE LARGE DISK DEVICE ADAPTER	
			SEE ENGRG SPECIFICATIONS No.		
			FINISH	TOL. EX. AS NOTED .XX ± .010 TRAC ± 1/64 .XXX ± .005 ANG. ± 1°30'	210-7114 / E / 7114 / 29
				SCALE=FULL SHT 1 OF 4	WANG PART NUMBER / SIZE / DRAWING NUMBER / REV.

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DO NOT SCALE

HOLE LEGEND

DRILLED OR PUNCHED HOLE	HOLE DIA.	TOL.
	.0135 to .125	+.002 -.001
	.126 to .256	+.003 -.001
	.257 to .500	+.005 -.001

IDENT.	DESCRIPTION	QTY.
A		

-ADR LINES TO PROM

+ KEY PEND

BI-DIRECTIONAL DATA BUS

-PORT

-PORT2

-PORT4

-SET COLUMN

-SET ROW

-CURSOR ON

-INCREMENT

-DECREMENT

-WRT STB

-READ KEYS

-READ CRT

-KBSTB

-INSTB

+CLICKER

-TONE

XTAL 17.1MHZ

REVISION	BY	DATE	APPROVED
ORIGINAL RELEASE		9-27-77	
ADDED WIRED PER CCR 1502		10-11-77	
REVISED PER CCR 1502		10-17-77	
REVISED PER CCR 1502		10-17-77	
REVISED PER CCR 1502		10-17

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DO NOT SCALE

- DECREMENT
- INCREMENT
- SET COLUMN
- SET ROW
- ALLOW UNDERLINE
- ALLOW CURSOR
- SLOT 9B
+ SLOT BINARY
+ SLOT 8
+ SLOT 1
+ UNDERLINE
+ PAC DECODE DLY
- PAC CLEAR
- HORIZONTAL SYNC
- HORIZONTAL BLANK
- VERTICAL BLANK
- VERTICAL SYNC
+ PRE SYNC
- BLANK
- POR 4
- POR 2
+ LINE 4
+ LINE 8
+ SERIAL DATA
LONTEN
- KEY BUFF FULL
+ KEY PENDING
- KBSTD
- INST B
- READ KEYS
+ SLOT 4
+ SLOT 3
+ SLOT 2
+ SLOT 1
+ SLOT 0
+ SVR
+ 12 VOLTS
+ 5 VOLTS
0 VOLTS
- 5 VOLTS
- 9 VOLTS
- 12 VOLTS
TP30 TP31 TP27 TP28 TP29 TP47 TP48 TP49 TP50

12 - HORIZ. BLANK PRESET
12 - VERTICAL SYNC
KPND

VIDEO OUT WILL TIE VIA TWISTED PAIR TO A CABLE (220-1103) IN ORDER TO CONNECT TO CRT. VIDEO OUT SIGNAL WILL NOT GO TO PC EDGE CONN.

VIDEO OUT TWISTED PAIR — 220-1103

7121 R6

I.C. LOCATION	W.L. NO.	TERM. FOR +5V	TERM. FOR VCC +5VR
L1	376-0205	7	14
L2	376-0228	7	14
L3,4,12	376-0126	1	8
L5,102	376-0208	7	14
L6,33,42,44,46,67	376-0480	7	14
L7,10,16,24,30,31,41,49	376-0155	7	14
L8,80	376-0128	7	14
L9,22,63,99	376-0211	7	14
L11,37,62,66,82,98	376-0209	7	14
L13-15,28	376-0104	8	16
L17,23,25,27,64,65,115	376-0123	7	14
L18,34	376-0202	7	14
L19,32,36,79	376-0210	7	14
L20,29,30,45	376-0207	7	14
L21,88,104	376-0148	7	14
L26	376-0139	7	14
L35,50,85	376-0197	7	14
L39,40	376-0094	8	16
L40,70,75	376-0119	8	16
L43,57,58,60,71,77	376-0160	8	16
L47	376-0008	8	16
L51-54	376-0233	8	16
L55	SEE CHART	12	24
L56	376-0105	8	16
L59	377-0009		12
L68	376-0191	8	16
L69,100,101,103	376-0220	8	16
L72-74,76	376-0183	8	16
L78	376-0096	8	16
L81	376-0005	11	4
L83	376-0120	8	16
L84,87,105	376-0216	8	16
L86	376-0012	7	14
L89-96,106-113	377-0069	9	10
L61,97	376-0006	7	14
L114	376-0055	7	14
L55, 59 SKT.	376-9003		

TYPE	I.C. LOCATION	SPARES
74S32	L1	3
74LS04	L33 L44 L48 L42	2 1 1
74LS74	L10	1
7438	L8 L80	3 1
74LS32	L9	1
74LS10	L82	2
9602	L13 L15	1 1
74LS08	L115	2
74S04	L85	4
74S74	L18	1
74LS20	L32	1
74LS00	L29	1
74S04	L35 L50	1 2
74LS32	L99	1
9321	L78	1
7473	L81	1
7406	L114	4
74LS02	L102	2

COMPONENT	W.L. NO.
R1,2,11-15,20,22,23,28,29,31,35-37,39,41-43,46-48,50,60,61	330-3010
R3-10,30,45	330-1047
R16,31,38,44,49	330-4010
R17,25,26	330-4027
R18,19	330-2033
R24	330-3015
R21,33,59	330-3022
R24,51	330-3047
R27	330-5010
R36	330-3033
R40	331-1039
R50	330-4047
R52	330-2068
R53	330-1015
R56	331-1016
R57	330-2018
R55	330-3012

COMPONENT	W.L. NO.
C1	300-1047
C2,5	300-1330
C3,18	300-1931
C4	300-1903
C6,17	300-3069
C16	300-4022
C112	300-5006
C8,12-14,19,21-109	300-1900
C9,15	300-1220
C10,11	300-3010
C20,110,111	300-4022
C113	300-1150
D1-6	380-1001
XTAL	321-0018
J1	220-1103
Q1	375-1021
Q1 PAD	375-9001
CT	300-4038

210=209+378 OR 377		
210	209	L55
2246P 7121-B	7121	378-2518
2246P 7121-1B	7121	378-0530R1

HOLE LEGEND

DRILLED OR PUNCHED HOLE TOLERANCES:	HOLE DIA.	TOL.
	.0135 to .125	±.001
	.126 to .350	±.002
	.351 to .500	±.003

IDENT.	DESCRIPTION	QTY.
A		

SIGNAL-TERMINAL DESIGNATIONS, VIEW FROM BOTTOM (WIRING) SIDE OF CONNECTOR

CONN.1
- TONE — A1
- TP35 — B2
- TP36 — C3
- TP9 — F6
- TP29 — G7
- TP37 — K11
- TP40 — L12
- TP28 — M13
- TP49 — P16
- TP38 — S19
- TP27 — T20
- TP64 — U21
- TP41 — V22
- TP50 — W23
- +5VR — X24
- +5VR — Y25
- +5VR — Z26
- TP31 — A1
- TP22 — D13
- TP10 — T20
- TP25 — V22
- TP30 — W23
- TP47 — X24
- TP51 — Y25
- TP48 — Z26

CONN.2
- +H0 — A1 — -K PND
- +H7 — B2 — ±0V
- +H6 — C3
- +H5 — D4 — ±0V
- +H4 — E5 — ±0V
- +H3 — F6 — ±0V
- +H2 — H7 — ±0V
- +H1 — J8 — ±0V
- +L0 — K9 — ±0V
- +L1 — L10 — ±0V
- +L2 — M11 — ±0V
- +L3 — P14 — ±0V
- +L4 — R15 — ±0V
- -OUTSTB — S16 — ±0V
- -INSTB — T17 — ±0V

CONN.3
- -K0 — A1 — TP63
- -K1 — B2 — TP62
- -K2 — C3 — TP53
- -K3 — D4 — TP5
- -K4 — E5 — TP26
- -K5 — F6 — TP61
- -K6 — H7 — TP54
- -K5 — J8 — TP52
- -LOCK KEY — K9 — TP65
- -SHIFT KEY — L10 — TP18
- +DAK — M11
- +AET — R12 — TP60
- +CLICKER — S13 — TP55
- +SHIFT IND — T14
- TP44 — V17 — TP42
- TP56 — V18
- TP8 — X20
- TP58 — Z22 — TP57

CONN.4
- TP59 — A1
- TP1 — C3 — TP43
- +5VR — D4 — TP45
- +5VR — E5 — ±0V
- TP4 — F6 — ±0V
- TP7 — H7 — ±0V
- TP2 — J8 — ±0V
- +5VR — K9 — ±0V
- +5VR — L10 — ±0V
- +5VR — M11 — ±0V
- TP12 — P14 — ±0V
- TP11 — R15 — ±0V
- +12V — S16 — ±0V
- +12V — T17 — ±0V
- +12V — U18 — ±0V
- -9V — V19 — ±0V
- -9V — W20 — ±0V
- TP3 — X21 — ±0V
- -5VR — Y22 — ±0V
- -5VR — Z23
- -5VR — Z24

COMP. SIDE — WIRING SIDE

WANG PART NO.	ITEM	QTY.	NAME
			WANG LABORATORIES, INC. TEWKSBURY, MASS. U.S.A.
			MODEL NO. 2200 VS
			SEE ENGRG SPECIFICATIONS NO.
			TOL. EX. AS NOTED .XX ± .010 FRAC. ± 1/64 .XXX ± .005 ANG. ± 1/2° FINISH
			SCALE SHT 2 OF 2

MATERIAL	DESCRIPTION
BY	DATE
DWN F.S.S.	9-6-77
CHK	
E.C. CONTROL	
MFG ENGR	
M ENGR	
E ENGR	

TITLE: WORK STATION CRT & CONTROLLER BOARD

SEE CHART | E | 7121 | 16

WANG PART NUMBER | SIZE | DRAWING NUMBER | REV.

E 7121

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DO NOT SCALE

QA – QG & RES. MOUNTED EXTERNAL

HOLE LEGEND

DRILLED OR PUNCHED HOLE TOLERANCES:	HOLE DIA.	TOL.
	.0135 to .135	±.001
	.136 to .350	±.002
	.351 to .500	±.003

IDENT	DESCRIPTION	QTY.
A		

COMPONENT LAYOUT

COMPONENT	W.L. PART NO.
R1 – 8, 10, 12, 14, 16, 18, 20, 22, 45	330-3022
R9	338-0033
R10, 13, 15, 17, 19, 21, 23, 25, 73 79, 81, 96, 98	330-5012
R26 – 38, 102, 107, 108	330-3033
R82	330-2049
R42 – 49, 109, 111, 113, 115, 118	336-1001
R39 – 41, 123, 124, 125, 127	330-3023
R50, 51, 52, 100, 101	330-2010
R53, 54, 57	330-3047
R60	330-3012
R64, 85, 86, 88	336-0032
R65	336-0018
R83	330-3027
R89	332-2068
R90	331-1027
R70, 80, 135, 136	330-5010
R71, 83, 84, 93, 94	330-3015
R91, 95, 97, 134	330-3010
R75, 105	330-9010
R76, 77	330-3070
R81	330-2068
R84, 96	330-4039
R99, 130	330-2022
R103	330-1047
R103, 119	330-3018
R110, 112, 127	330-1028
R116	330-4019
R128, 129	331-2010
R92, 106	333-0093
C1 – 8, 31, 34, 37, 38, 39, 51, 52	340-1900
C9 – 16, 40, 43, 44, 80	300-6022
C17 – 24, 47, 48	300-1918
C25, 28, 29, 30, 33, 69	300-1908
C26	300-3009
C27	300-6065
C32	300-2147
C35	300-3054
C36	300-3270
C81, 86	300-4032
C42	300-1022
C45	340-1904
R60, 124	332-3013
Q1 – 7, 10, 11	375-1052
Q8	375-1552
Q9, 12	375-1053
Q13	375-1071
Q18	373-1056
Q15, 16	373-1017
R117	330-1027
TRANSIPAD LARGE	378-9001
TRANSIPAD SMALL	378-9008
R34 – 41	330-2048
R120, R122	330-3016

POWER LOCATION	PIN NO 12	PIN NO 3
L13, 19, 15	-7V	+24V
L14, 17, 18	±0V	+12V
L19	-5V	+3V

COMPONENT	W.L. PART NO.
D1 – 8, 10, 11, 15, 24 – 26, 28, 30	380-0001
D9, 13, 14	380-2048
D12	380-2111
D16, 21 – 23, 27, 29, 31, 36	380-1001
D17, 17, 33, 34	380-2009
D18	380-2113
D20	380-1128
D32, 32	380-5000
D35	380-1031 38
D3, 1	370-0024
J1, 2, 3	656-1177
J4	376-9024

LOCATION	W. L. PART NO	PIN NO EOL	PIN NO. +5V
L1 – 8, 10, 11, 12	376-0046	5	
L9, 22	376-0179	9	
L13 – 19	376-0240	7	14
L20	376-0093	7	14
L21	376-0139	7	14

I.C. TYPE	LOCATION	SPARE
7406	L20	2
7414	L21	3
LM339	L13	2
	L15	1

REVISION	BY	DATE	APPROVED BY	DATE
ORIG. ENG. RLS. DWG. # 2200-7209	BH	6/8A	12-1-77	12-16-77
REVISED PWB EDW # 2200-7211	BH	6/8A	12-1-77	12-16-77
REVISED PWB EDW # 2200-7211	BH	6/8A	2-1-78	2-16-78
REVISED PER ECN # 2200-7211	BH	6/8A	6-2-78	6-2-78
REVISED PER ECN # 2200-7211	BH	6/8A	11-7-78	11-30-78
REVISED PER ECN # 2200-7211	BH	6/8A	11-30-78	12-6-78
REVISED PER ECN # 2200-7211	BH	6/8A	2-20-79	2-28-79
REVISED PER ECN # 2200-7211	BH	6/8A	6-21-79	6-27-79
REVISED PER ECN # 2200-7211	BH	6/8A	11-7-79	11-14-79
REVISED PER ECN # 2200-7211	BH	6/8A	11-30-79	12-3-79

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DO NOT SCALE

EXTERNAL

8 LOG JONES STRIP

FAN

BLK

GRN

WHT

115 VAC DISK #2

115 VAC DISK #3

115 VAC DISK #1

4A SWITCH 115/220

115/220 VAC

115

220

MMC 5121

BLU

BLU/BLK

RED

ORN

ORN/BLK

RED/YEL

GRN

BLK/YEL

BRN

BRN/YEL

P2

J2 30PIN CONN.

D33 GE415

D34 GE415

D35 GE415

D36 EM423

D37 EM423

12K 40V

40 K

LOOSE DISCONNECT

3 2 1

3 2 1

402E1 375-1002

402S0 375-1022

2N5301

16A

IN1200A

MOUNTED ON HEAT SINK

P3

J3

12 PIN CONN.

+10V

3.3K

R1 1K

R2 2.2K

R3 2.2K

C1 220pF

L103 723

C50 10V 15uF/20V

S108 33Ω ½ W

+12V

+5VR

R4 2.8K

R5 27K

C2 .001uF MYLAR

2200 CONN P1 J1

8 CASTG

L19 07

M0 M1 M2 M3 M4 M5 M6 M7

L27 03

L28 03

L11 03

L19 04

+5VR

10V

CH. GND

J10 TO FRONT PANEL D6482-66

HOLE LEGEND

	HOLE DIA.	TOL.
DRILLED OR PUNCHED HOLE	.0135 to .125	+.007 -.002
	.126 to .250	+.007 -.002
	.251 to .500	+.007 -.002

IDENT.	DESCRIPTION	QTY.
A		

BSY

CNTRLG 2

R6-19 2.2K

C4 .0015uF

C48 .002uF

C3 .01uF

C47 .02uF

R99 3.3K

R22 2.2K

C49 .002uF MYLAR

L95 L94

L18 174

SCM NRDY ULD

SCMS CASTYS CMDYS IOMS NRDYS NLDS

L6 298

L3 298

L23 157

L24 157

L22 157

L13 181

L14 181

RO-R15

ADI, WTG

ADI

R25-34 2.2K

R35 470Ω

R36 2.2K

L31 9321

L38 9321

L49 155

L41 195

L59 2101-1

L60 2101-1

L61 2101-1

L58 2101-1

L79 174

L81 174

L80 174

L79 174

LTO 793

L57 793

L68 298

L69 298

L71 723

L93 723

L95 L94

L96 L94

L97 L94

L98 L94

L99 L94

L100 L94

L101 L94

L102 L94

L103 723

L104 04

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L167 00

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DO NOT SCALE

P4 PC 6766 FROM DRIVE #1 — P5 PC 6766 FROM DRIVE #2 — P6 PC 6766 FROM DRIVE #3

HOLE LEGEND

DRILLED OR PUNCHED HOLE	HOLE DIA.	TOL.
	.033 to .125	±.001
	.126 to .250	±.002
	.251 to .500	±.003

IDENT.	DESCRIPTION	QTY.
A		

SEE SHT 1

REVISION	
A	
B	
C	
D	
E	

E-REV 6

WANG PART NO.	ITEM	QTY.	NAME	MATERIAL	DESCRIPTION
FIRST USED ON / ASSY USED ON					

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

MATERIAL	MODEL NO. 2270A	BY	DATE	APPROVED BY	DATE
	SEE ENGRG SPECIFICATIONS	DWN AK	C-2377	E ENGR	
FINISH	TOL. EX. AS NOTED .XX ± .010 FR. ± 1/64 .XXX ± .005 ANG. ± 1/2° 32 FINISH	CHK		M ENGR	
		E. C. CONTROL		MFG ENGR	
		TITLE	IBM 3741 SHUGART BOARD		
		SCALE	SHT 2 OF 3	210-7218	E 7218
				WANG PART NUMBER	SIZE DRAWING NUMBER REV.

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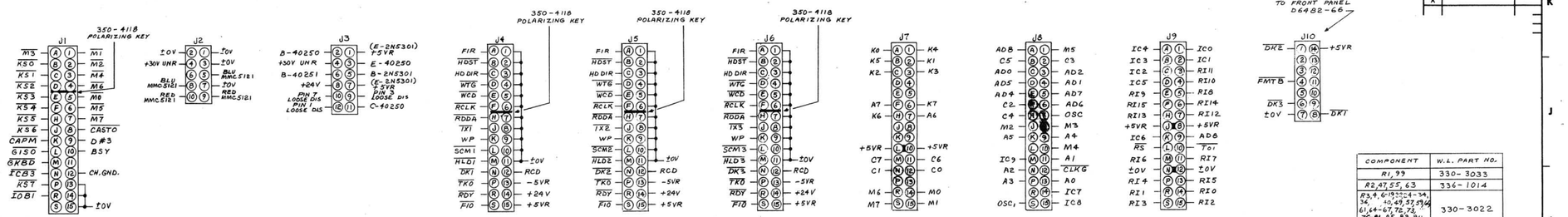
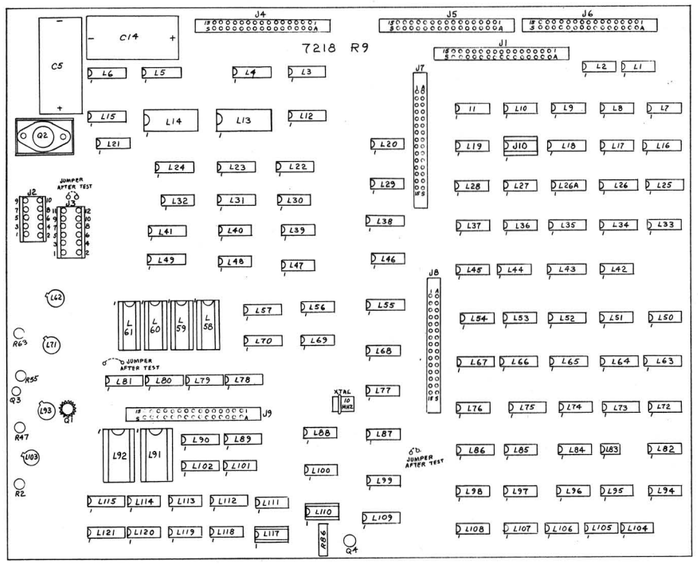
DO NOT SCALE

HOLE LEGEND

DRILLED OR PUNCHED HOLE TOLERANCES:	HOLE DIA.	TOL.
	.0135 to .125	+.007 -.000
	.126 to .250	+.007 -.000
	.251 to .500	+.007 -.000

IDENT.	DESCRIPTION	QTY.
A		



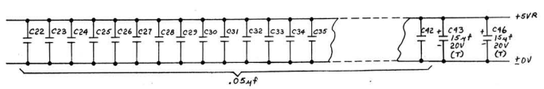


LOCATION	W.L. PART NO.	TERM. NO. +5V	TERM. NO. +5VR
L1,8,94,119	376-0005	11	4
L9-11,20,30,44,72,87,106,120	376-0010	7	14
L3,66,67,6	376-0138	8	16
L4,5,12,15,26	376-0048	8	16
L7,17,33	376-0011	10	5
L13,14	376-0099	12	24
L16,22-25,35,52	376-0082	8	16
L18,65,78,79,80,81	376-0098	8	16
L19	376-0056	7	14
L21	376-0025	7	14
L27,28	376-0028	7	14
L29,42,90,50,68,96	376-0002	7	14
L31,38	376-0096	8	16
L32	376-0012	7	14
L34,43,63	376-0080	8	16
L36,45	376-0194	7	14
L37,97,104,108,113,114	376-0006	7	14
L39,56,82,99,107,118	376-0081	7	14
L26A,40,69,74,98,100,105	376-0093	7	14
L41,49	376-0049	8	16
L46,51,84,111	376-0016	7	14
L47,85	376-0003	7	14
L53	376-0031	7	14
L54	376-0125	7	14
L55,73,109	376-0007	13	5
L57,70,86	376-0053	8	16
L58,59,60,61	377-0308	8	24
L62,71,93,103	376-0066	—	—
L64	376-0119	8	16
L75	376-0047	8	16
L77	376-0073	10	5
L76,88	376-0102	7	14
L83	376-0126	1	8
L89,90,102,115,121	376-0094	8	16
L91,92	SEE CHART	12	24
L101	376-0040	7	14
L110	SEE CHART	7	14
L112	376-0097	8	16
L117	SEE CHART	7	14
L2	376-0189	7	14
L95	376-0180	7	14
L116 NOT USED			

LOCATION	TYPE	SPARES
L19	7407	1
L26A	7432	1
L29	7400	1
L36	7411	1
L48	7400	1
L56	7408	2
L63	74123	1
L72	7404	3
L74	7432	1
L82	7408	1
L95	74LS04	1
L96	7400	1
L107	7408	1
L109	7476	1

COMPONENT	W.L. PART NO.
R1,99	330-3033
R2,47,55,63	336-1014
R3,4,6-19,22-24,34,36,40,49,57,59,60,61,64-67,72,73,76-81 85,89,91,92,94-98,109-111	330-3022
R5,37,38,105	330-4027
R20	330-5010
R21	330-6016
R23,35,107	330-2047
R39	330-2027
R41	330-4047
L111,88	330-2068
R44	330-2033
R45,103	330-3082
R46,48,58	330-3027
R50,51	331-0010
R52,53,93,100,102,106	330-3047
R54	330-2056
R56	330-3015
R62,69	330-3018
R68	330-2018
R70,71	330-2022
R86	336-6036
R87,91	330-3010
R108	331-1039
C1	300-1220
C2,49	300-2010
C3,10,16	300-1903
C4,7	300-1907
C5	300-3055
C6,15,43,46,50	300-4022
C8	300-3011
C9,22-42	300-1900
C11,45,47	300-1904
C12	300-1936
C13	300-1010
C14	300-3054
R104	330-4010
C17	300-5020
C18-20	300-4045
C21	300-1106
C44	300-2068
XTAL	321-0008
D1-3,42-44,46	380-1001
D32	380-2091
D33,34	380-3008
D35,36,39,40	380-4000
D37	380-2051
D38,45	380-0001
D41	380-2062
Q1	375-1027
Q2	375-1031
Q3	375-1006
Q4	375-1061
J2	654-1172
J3	654-1188
J10 14 PIN SOCKET	376-9012
24 PIN SOCKET	376-9003
22 PIN SOCKET	376-9010
J1, 4-9	350-0011
C48	300-1913
R42,43,74	330-2016
R82-84	330-9028
L116,117	376-9001

VARIATION CHART					
MODEL	Z10	L110	L117	L91	L92
2270 A	7218-A	376-0263	376-0264	378-2128	378-2129
2270 MVP	7218-B	376-0263	376-0264	378-2138	378-2139
2270 A	7218-C	376-0263	376-0264	378-2256	378-2257



REVISION
A SEE SHT. 1

WANG PART NO.	ITEM	QTY.	NAME	MATERIAL	DESCRIPTION
PC Bd. FIRST USED ON	ASSY USED ON		WANG LABORATORIES, INC. TEWKSBURY, MASS. U.S.A.		BY DATE APPROVED BY DATE
					DWN AE 6-23-77 E ENGR
					CHK M ENGR
			MATERIAL	MODEL NO. 2270A	E. C. CONTROL MFG ENGR
				SEE ENGRG SPECIFICATIONS	TITLE IBM 3741 SHUGART BOARD
			FINISH	TOL. EX. AS NOTED .XX ± .010 FRAC. ± 1/64 .XXX ± .005 ANG. ± 1°30' FINISH	210-7218 E 7218 14
				SCALE SHT 3 OF 3	WANG PART NUMBER SIZE DRAWING NUMBER REV.

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DO NOT SCALE

HOLE LEGEND		
DRILLED OR PUNCHED HOLE TOLERANCES:	HOLE DIA.	TOL.
	.0135 to .125	± .003
	.126 to .250	± .004
	.251 to .500	± .005

IDENT.	DESCRIPTION	QTY.
A		

SIGNAL TERMINAL DESIGNATIONS VIEW FROM BOTTOM (WIRING) SIDE OF CONNECTOR

CONV.1 — CONV.2 — CONV.3

COMP. SIDE — WIRING SIDE

NOTE JUMPER FOR 7290 IS
JUMPER FOR 7290-1 IS

NOTE ALL JUMPERS

COMPONENT	W.L. PART NO.
R1,2,3	330-4010
R4-9,11,13,14,16, 18,20,21,22,24,26	330-3047
R10,17,19,25	332-1068
R12,15,23	330-4033
R27	330-2057
C1,2,5,7	300-4022
C3,4,6	300-5005
C8-21	300-1900
SW.1	325-1501
SW.2,3,4	325-1503
J5	350-0029M
J6	376-9016
J6	376-9017
J1-4	350-1051
L22-25	376-9015
Q1,3,5,7	375-1012
Q2,4,6,8	375-1014

LOCATION	W.L. PART NO.	TERM.-OFF- TO 0V	TERM. NO. V_{CC} +5VR
L1,33	376-0104	8	16
L2,18,19	-0094	8	16
L3,5,16	-0077	8	
L4	-0193	8	16
L6-9,12-15	-0076	4	8
L17,26	-0008	8	16
L20	-0010	7	14
L21	376-0211	7	14
L22-25	377-0582	4	26
L27,30,33,42	376-0119	8	16
L28,36,40,47	-0192	8	16
L29,37,38,41,50	-0183	8	16
L31	-0222	8	16
L32	-0056	7	14
L34	-0092	8	16
L35	-0160	8	16
L43	-0093	7	14
L44	-0002	7	14
L45,46	-0006	7	14
L48	-0120	8	16
L49	376-0225	7	14

LOCATION	TYPE	SPARES
L1	9602	1
L4	74LS368	2
L20	7404	3
L21	74LS32	2
L36	74LS367	2
L32	7407	2
L34	7425	1
L44	7400	1

REVISION	BY	DATE	APPD
ORIGINATED PER ECN #6952			
REVISED PER ECN #6633			
REVISED PER ECN #6980			
REVISED PER ECO #7117			
REVISED PER ECO #7138			
REVISED PER ECO #7138			
REVISED PER ECO #7138			
REVISED PER ECO #7138			
REVISED PER ECO #7138			
REVISED PER ECO #7138			
REVISED PER ECO #7138			

WANG PART NO.	ITEM	QTY.	NAME	MATERIAL	DESCRIPTION
Qty. per Unit / FIRST USED ON / ASSY USED ON			WANG LABORATORIES, INC. TEWKSBURY, MASS. U.S.A.		BY / DATE / APPROVED BY / DATE
					DWN 4-13-77 E ENGR
					CHK 4-14-77 M ENGR
			E.C. CONTROL		MFG ENGR
			MODEL NO. - MVP 2236 - MVP		TITLE 8080 INTERACTIVE TERMINAL CONTROLLER
			SEE ENGRG SPECIFICATIONS No.		
			TOL. EX. AS NOTED XX = ±10 FRAC. = 1/64 XXX = .005 ANG. = 1°30' FINISH √	FINISH	210-7290 / E / 7290 / 12
			SCALE — SHT 1 OF 1		WANG PART NUMBER / SIZE / DRAWING NUMBER / REV.

7290 E-REV / 7290-1 E-REV

COMPONENT LAYOUT

E 7290

"THIS DRAWING AND THE DATA SHOWN THEREON ARE THE CONFIDENTIAL PROPERTY OF, AND ARE PROPRIETARY TO, WANG LABORATORIES, INC. THIS DRAWING AND THE DATA SHOWN THEREON MAY NOT BE MADE PUBLIC WITHOUT THE WRITTEN CONSENT OF WANG LABORATORIES, INC. IF FOR ANY REASON THIS DRAWING IS PERMITTED BY WANG TO LEAVE THE PHYSICAL CUSTODY OF THE COMPANY, IT IS RETURNABLE UPON THE DEMAND OF WANG LABORATORIES, INC."

DO NOT SCALE

POWER RESET

D0-D7 (2G4)(3E11)(3D11)(3E9)

Ø1T (5S)

A0-A9 (2G10)

A10, A11 (2F11)

A12 (2D4)(2E11)

SYNC (1F9)

MEMR (2C4)

WR (2D4)

MR (3E6)

DSTB (2C11)

BLO (2E11)

BK2 (2E11)

CE9 (2E10)

CE9H (2D3)

CE9L (2D4)

M0N (3E10)(2C3)

M1N (3E10)

M2N (1E11)(2B10)

M3N (2C9)

M4N (3F8)

M5N (2D11)

I4 (3D4)

M80 (3E11)

M00-M60 (3G6)

M30 (2C10)

M40-M60 (2C8)

M70 (1F9)

WANG LABORATORIES, INC. LOWELL, MASS. U.S.A.		BY	DATE	APPROVED BY	DATE
	DWN ER	11-3-79	E ENGR		
	CHK		M ENGR		
			MFG ENGR		
MATERIAL	MODEL NO. 2281W	TITLE	WANG DAISY CONTROL W/TWN SHT FDR		
FINISH	SEE ENGRG. SPECIFICATIONS No.				
	TOL. EX. AS NOTED .XX ± FRAC. ± .XXX ± ANG. ± FINISH √	210-7309A	D	7309	B
	SCALE NONE SHT 1 OF 5	WANG PART NUMBER	SIZE	DRAWING NUMBER	REV.

REVISION

DATE BY

SEE SHEET 5

NO.

OSCILLOSCOPE PRESS

7309

"THIS DRAWING AND THE DATA SHOWN THEREON ARE THE CONFIDENTIAL PROPERTY OF, AND ARE PROPRIETARY TO, WANG LABORATORIES, INC. THIS DRAWING AND THE DATA SHOWN THEREON MAY NOT BE MADE PUBLIC WITHOUT THE WRITTEN CONSENT OF WANG LABORATORIES, INC. IF FOR ANY REASON THIS DRAWING IS PERMITTED BY WANG TO LEAVE THE PHYSICAL CUSTODY OF THE COMPANY, IT IS RETURNABLE UPON THE DEMAND OF WANG LABORATORIES, INC."

DO NOT SCALE

Do-D7 (IG5) (3D11)(3E4)(3E11)

-5VR

±0V

+5VR

+12V

A0-A9 (1F5)

A10 (1E5)

A11 (1E5)

A12 (1E7)

BL0 (1E8)

BK2 (1C6)

L35 154

CE1 CE2 CE3 CE4 CE5 CE6 CE7 CE8 CE9 (1E5)

C6 .1μF C7 .1μF C8 .1μF C4 .1μF C9 .1μF C10 .1μF C11 .1μF C5 .1μF

L1 2708 L2 2708 L3 2708 L4 2708 L5 2708 L6 2708 L7 2708 L8 2708

L9 2101-1 L10 2101-1 L11 2101-1 L12 2101-1

R19 4.7K C12 .1μF C13 .1μF C14 .1μF C15 .1μF

CE9L (1E4) WR (1C7) CE9H (1E4)

M5N (1D4)

PR (A1) CRR (3B) PFR (5B) PWR (C2) DR (1B1)

R20 R21 R22 R23 R24 2.2K C16 C17 C18 C19 C20 .001μF 10V

L31 LS367

D0 D1 D2 D3 D4

SPARE (6B) ToF (T1)

M3N (1D4) JP1 ±0V

M30 (1B4)

R25 15K C21 47pF

DSTB (1C10)

L54 9602 KLR

PRIME (F1)

R29 4.7K +5VR

L37 14

SEL (H2) SEL (T6)

L52 00

R30 4.7K R31 4.7K +5VR

R26 4.7K R27 4.7K R28 4.7K

L19 LS367

R32 4.7K +5VR

12 PITCH

M40-M60 (1A9)

C22 220pF R33 15K +5VR

L13 9602

R34 10K +5VR

R35 4.7K +5VR

L14 74 L15 74 L17 175

R36 4.7K +5VR

R77 4.7K +5VR

L16 00

(22) ACK

(21) (11) RDY/BUSY

(C3) SELECT

(11) (F2) SELECT LAMP

(E3) FAULT

(5B) COVER OPEN

(D3) OUT OF PAPER

(B1) (A2) OUT OF RIBBON

A12 (1E7)

L20 LS367 L21 LS367

MEMR (1C7)

M6N (1D4)

R76 4.7K +5VR

(Y5) A12

(B6) (H5) (M4) (P5) (J6) (K5) (L2) (M3) D0 D1 D2 D3 D4 D5 D6 D7

WANG LABORATORIES, INC. LOWELL, MASS. U.S.A.	BY	DATE	APPROVED BY	DATE
	DWN GR	11-13-79	E ENGR	
	CHK		M ENGR	
			MFG ENGR	
MATERIAL	MODEL NO. 2281W	TITLE WANG DAISY CONTROL W/TWN SHT FDR		
FINISH	SEE ENGRG. SPECIFICATIONS No.			
	TOL: ES; AS NOTED .XX ± FRAC. ± .XXX ± ANG. ± FINISH √	210-7309A	D	7309
	SCALE SHT 2 OF 5	WANG PART NUMBER	SIZE	DRAWING NUMBER

REVISION	BY	DATE
SEE SHEET 5		

7309

3

"THIS DRAWING AND THE DATA SHOWN THEREON ARE THE CONFIDENTIAL PROPERTY OF, AND ARE PROPRIETARY TO, WANG LABORATORIES, INC. THIS DRAWING AND THE DATA SHOWN THEREON MAY NOT BE MADE PUBLIC WITHOUT THE WRITTEN CONSENT OF WANG LABORATORIES, INC. IF FOR ANY REASON THIS DRAWING IS PERMITTED BY WANG TO LEAVE THE PHYSICAL CUSTODY OF THE COMPANY, IT IS RETURNABLE UPON THE DEMAND OF WANG LABORATORIES, INC."

DO NOT SCALE

SPARE 2 · HOME (↓) · SET HOME (↓) · INC-SPACING · CR/LF (↑) · SHIFT

$\overline{M_{00}}$-$\overline{M_{20}}$(1B4) · $\overline{M_{00}}$ · M_{20} · M_{10}

→SSPW(3G11) · D_0-D_7(1G5)(3D11)(3E11) (2G4)

→PO(3G11)

$\overline{MR}$ (1A8) · $\overline{MON}$ (1D4) · M4N (1D4) · I4 (1D4)

OD12 · OD11 · OD10 · OD9 · OD8 · OD7 · OD6 · OD5 · OD4 · OD3 · OD2 · OD1 · $\overline{RL}$ · $\overline{RS}$ · $\overline{OS}$ · $\overline{PWS}$ · $\overline{PFS}$ · $\overline{CRS}$

MTR · MTR GND · MTR GND

WANG LABORATORIES, INC. LOWELL, MASS. U.S.A.	BY	DATE	APPROVED BY	DATE
	DWN EK	11-13-79	E ENGR	
	CHK		M ENGR	
			MFG ENGR	
MATERIAL	MODEL NO. 2281W		TITLE WANG DAISY CONTROL W/TWN SHT FDR	
FINISH	SEE ENGRG. SPECIFICATIONS No.			
	TOL. EX. AS NOTED XX ± FRAC. ± XXX ± ANG. ± FINISH √		210-7309A	D 7309 8
	SCALE	SHT 3 OF 5	WANG PART NUMBER	SIZE DRAWING NUMBER REV.

REVISION · SEE SHEET 5 · NO.

D 7309

"THIS DRAWING AND THE DATA SHOWN THEREON ARE THE CONFIDENTIAL PROPERTY OF, AND ARE PROPRIETARY TO, WANG LABORATORIES, INC.; THIS DRAWING AND THE DATA SHOWN THEREON MAY NOT BE MADE PUBLIC WITHOUT THE WRITTEN CONSENT OF WANG LABORATORIES, INC. IF FOR ANY REASON THIS DRAWING IS PERMITTED BY WANG TO LEAVE THE PHYSICAL CUSTODY OF THE COMPANY, IT IS RETURNABLE UPON THE DEMAND OF WANG LABORATORIES, INC." "

DO NOT SCALE

A5 ◄ ► Z5

C41 C29 XTAL 17.1MHz

L12 L11 L10 L9 L8 L7 L6 L5 L4 L3 L2 L1

L30 L29 L28 L27 L26 L25 L24 L23 L22 L21 L20 L19 L18 L17 L16 L15 L14 L13

L46 L45 L44 L43 L42 L41 L40 L38 L37 L36 L35 L34 L33 L32 L31

L63 L62 L61 L60 L59 L58 L57 L56 L55 L54 L53 L52 L51 L50 L49 L48 L47

J1 J2

Q1 Q2 Q3 Q4 Q5 Q6 Q7 Q8

D1 D2 D3 D4 D5 D6 D7

C56 C36 C57 C35 C58

TP1 TP2

7309-R2

Z4 ◄ ► A4 Z3 ◄ ► A3 S2 ◄ ► A2 Z1 ◄ ► A1

COMPONENT LAYOUT

REVISION	BY	DATE
SEE SHEET 5		

	BY	DATE	APPROVED BY	DATE
DWN	GR	11-13-79	E ENGR	
CHK			M ENGR	
			MFG ENGR	

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

MATERIAL —

FINISH —

MODEL NO. 2281W

SEE ENGRG. SPECIFICATIONS

No.

TOL. EX. AS NOTED
XX ± ANGL. ±
XXX ± MICRO FINISH √

SCALE — SHT 4 OF 5

TITLE WANG DAISY CONTROL W/TWN SHT FDR

210-7309A | D | 7309 | 8

WANG PART NUMBER | SIZE | DRAWING NUMBER | REV.

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DO NOT SCALE

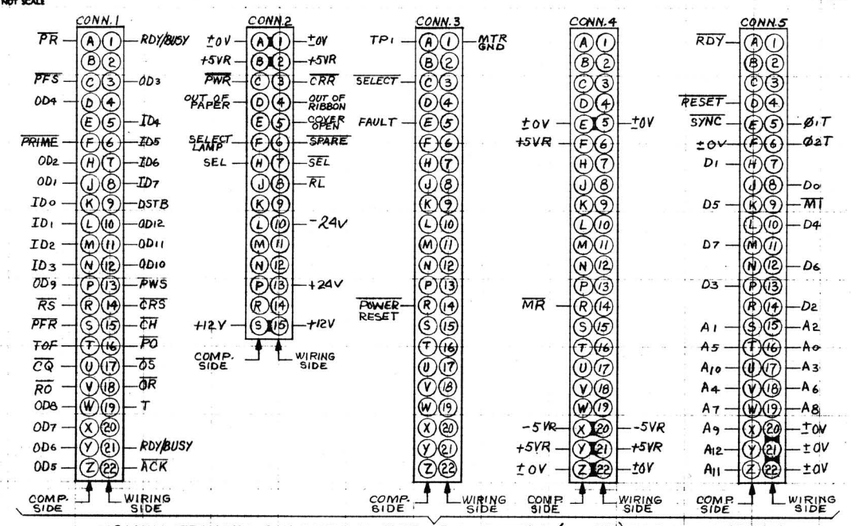
COMPONENT	W.L. PART NO.	TYPE
R1	330-2033	330Ω ¼W 10%
R2,5,20-24,38-41, 58,68,75	330-3022	2.2KΩ ¼W 10%
R3	330-3015	15K ¼W 10%
R4,R6,15-19,26-32, 35,36,42-49,59,61, 65,76,77	330-3047	47K ¼W 10%
R7-14,60,72	330-3010	1K ¼W 10%
R25,33	330-4015	15K ¼W 10%
R34,37,62	330-4010	10K ¼W 10%
R51,52,55	330-4039	39K ¼W 10%
R53,56,57,69	330-4033	33K ¼W 10%
R63,66	330-2082	820Ω ¼W 10%
R64,67	330-2097	470Ω ¼W 10%
R70	331-2056	560Ω ½W 10%
R71	330-2010	100Ω ¼W 10%
R73	330-1047	47Ω ¼W 10%
R74	330-3056	56K ¼W 10%
C1	300-1068	68pf 10% 500V
C2,3,27,42-47,49, 50,52-55,59,60	300-1903	.01μf 25V 10%
C4-13,33,37-40,48,51	300-7900	.1μf 50V 20%
C16-20,34	300-1906	.001μf 20% 500V
C21	300-1470	470pf 10% 500V
C22,30,32	300-1220	220pf 10% 500V
C23-26	300-1913	.002μf 25V 20%
C28,31	300-4016	3.3μf 10% 15V(T)
C29,41	300-1220	220μf 15V(T)
C35,36	300-4032	10μf 35V (T)
C56-58	300-4022	15μf 10% 20V(T)
Q1,2	375-0017	2N3014
Q3	375-1017	2N2906
Q4	375-1053	RCA8203
Q5	375-1052	2N6387
Q6	374-0005	7915
Q7	374-0008	7815
D1,2	380-1001	SIL
D3,6	380-4000	IN4004
D4,5	380-3008	GEA15A
D7	380-2047	IN705A(ZENER)
L1-8,35	376-9003	24PIN BURNDY SKT
L9-12	376-9010	22PIN BURNDY SKT
L26	376-9008	16 PIN TEKNA SKT
L24	376-9011	40PIN BURNDY SKT
L23	376-9015	28PIN BURNDY SKT
J1	376-9012	14PIN CAMBION SKT
J2	654-1186	6POS PIN HEADER
XTAL	321-0018	17.1MHZ CRYSTAL

TYPE	LOCATION	SPARES
7474	L15	1
7400	L16	1
7414	L37	3
7406	L38	1
74368	L42	1
7432	L43	1
7400	L44	1
7474	L53	1
9602	L13, L54	1
74LS04	L58	2
7474	L59	1
7404	L62	2
LM339	L63	1

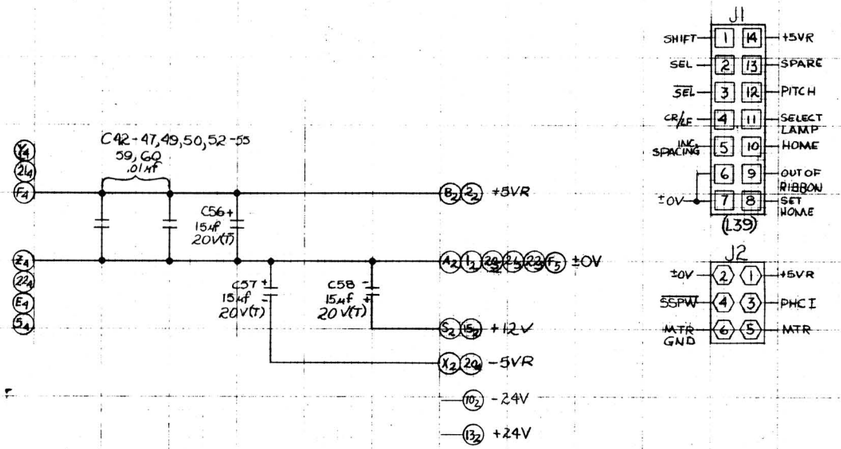
* JP1 – a) WITH JUMPER DISTINGUISH SPECIAL SIZE OF PAPER FOR EUROPE.
b) WITHOUT JUMPER FOR NORMAL 81W FAMILY.

* JP2 – a) WITH JUMPER 81W.
b) WITHOUT JUMPER 81WWP.

LOCATION	W.L. PART NO	TYPE
L1-8	SEE CHART	2708
L9-12	SEE CHART	2101-1
L13,28,29,30,54	376-0104	9602
L14,15,34,46, 53,59	376-0006	7474
L16,44,52	376-0002	7400
L17	376-0119	74175
L18,38	376-0055	7406
L19,20,21,22, 25,31,40	376-0192	74LS367
L23	SEE CHART	8228
L24	SEE CHART	8080
L26	SEE CHART	8224
L27,45,60	376-0081	7408
L32	376-0193	74LS368
L33,34,47,50,51	376-0137	8T10
L35	SEE CHART	74154
L37	376-0139	7414
L41,62	376-0010	7404
L42	376-0179	74368
L43,61	376-0093	7432
L48,49	376-0183	74173
L55,56,57	376-0008	7442
L58	376-0180	74LS04
L63	376-0240	LM339



SIGNAL-TERMINAL DESIGNATIONS, VIEW FROM BOTTOM (WIRING) SIDE OF CONNECTOR



MNEMONIC	COORDINATE
A0-A11	1A7
A12	2B2
ACK	2A6
CH	3G11
COVER OPEN	2A4
CQ	3F11
CR/LF	3G8
CRR	2D11
CRS	3D1
D0-D7	2B2
DSTB	1C11
FAULT	2A5
HOME	3G9
ID0-ID7	1E11
INC. SPACING	3G8
MT	1A8
MR	1A8
MTR	3A5
MTR GND	3A5
OD1-OD12	3F1
OR	2C11
OS	3D1
OUT OF PAPER	2A4
OUT OF RIBBON	2A4
PFR	2D11
PFS	3D1
PHCI	3D11
PITCH	2A9
PO	3G10
PR	2D11
PRIME	2B11
PWR	2D11
PWS	3D1
POWER RESET	1G10
RDY	1F11
RDY/BUSY	2A6
RESET	1F11
RL	3D1
RO	3F11
RS	3D1
SEL	2B11
SEL	2A11
SELECT	2A6
SELECT LAMP	2A5
SET HOME	3G8
SHIFT	3G8
SPARE	2C11
SPARE2	3G9
SSPW	3G7
SYNC	1A9
TOF	2C11
TP1	1D11
ØIT	1G1
Ø2T	1A9

209	210	L1	L3	L4	L5	L6	L7	L8	L9-12	L23	L24	L26	L35
						210 = 209 + 377 OR 378							
7309	7309-A	378-2559-R4	378-2590-R4	378-2568-R4	378-2557-R4	378-2556-R4	378-2555-R4	378-2554-R4	377-0308	377-0338	377-0269	377-0337	376-0090

E-REV 2

NO.	REVISION	BY	DATE	APPROVED	DATE
0	ORIGINATED PER DWR #E754 APP'D PMH 4/26/80	AM	4/26/80	PMH	4/26/80
1	REVISED PER ECN #1965 APP'D PMH 4/26/80	AM	4/26/80	PMH	4/26/80
2	REVISED PER ECN #1980 APP'D: [illegible]	AM	5/20/80	PMH	5/20/80
3	REVISED PER ECN # 16701 APP'D [illegible]	AM	6/26/80	PMH	6/26/80
4	REVISED PER ECN # 16751 APP'D [illegible]	AM	7/5/80	PMH	7/5/80
5	REVISED PER ECO # 17184 APP'D [illegible]	TK	11/6/80	PMH	11/6/80
6	REVISED PER ECO # 17719 APP'D [illegible]	TK	1/23/81	PMH	1/23/81
7	REVISED: PER ECO # 17793 APP'D [illegible]	PSS	4-7-81	PMH	4-7-81
8	REVISED: PER ECO # 17933 APP'D [illegible]	PSS	4-14-81	PMH	4-14-81

	BY	DATE	APPROVED BY	DATE
DWN	AR	11-13-79	E ENGR	4/6/80
CHK	[illegible]	4/2/80	M ENGR	
			MFG ENGR	

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

MATERIAL —

FINISH —

MODEL NO. 2281W

SEE ENGRG. SPECIFICATIONS No.

TOL. EX. AS NOTED .XX ± FRAC. ± .XXX ± ANG. ± FINISH √

SCALE — SHT 5 OF 5

TITLE: WANG DAISY CONTROL W/TWN SHT FDR

210-7309A	D	7309	8
WANG PART NUMBER	SIZE	DRAWING NUMBER	REV.

7309

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DO NOT SCALE

PRINTER PRIME

BK1 (2E2) BK2 (2G2)

SWO (2F2) SWO-2 (2D11)

INT1-L(1C7) IN2-L (1C7) IN3-L (2A8)

PDO-PD7 (2E6)

PRESET PRESET (2B11)

LATCHEN

RD (2C11)(2D7) IORQ (2C11),(2D7) MREQ MI (2C11),(2D7)

BK3 (2F3)

SEL-L (2B11) CTC SEL (2D7)

FWD-L (2G2)

NORM/FAST (2G6) REV-L (2E2) FON-L (2G6)

A1 (2C11),(2D7) A0 (2C11),(2D7)

APLEN (2C8) DSTB F/F1 (2B7)

OUT4-L OUT5-L FWD-L OUT3-L OUT2-L OUT7-L

EVEN SOLEN ODD SOLEN

FMOVLT

JUMPER HAND WIRED PER ECO 17853

CP CLK (2F10) ØCLK (2E9)

A0 A1 A2 A3 A4 A5 A6 A7 A8 A9 A10 A11 A12 A13 A14 A15 RFSH WR RD MREQ

USART OUT7-L Y0 X0 FAULT SL P0 BUSY ACKLG

REVISION	BY	DATE
SEE SH. 4 FOR REV.		

WANG LABORATORIES, INC. LOWELL, MASS. U.S.A.	BY	DATE	APPROVED BY	DATE
	DWN F.S.S.	8-17-78	E ENGR	
	CHK		M ENGR	
			MFG ENGR	

MATERIAL	MODEL NO. 2231W-5/6	TITLE 12 SOLENOID HEAD CPU BOARD
	SEE ENGRG. SPECIFICATIONS No.	
FINISH	TOL. EX. AS NOTED .XX ± FRAC. ± .XXX ± ANG. ± FINISH √	SEE CHART / D / 7332 / 15
	SCALE SHT 1 OF 4	WANG PART NUMBER / SIZE / DRAWING NUMBER / REV.

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DO NOT SCALE

NORM/FAST (1A6) — FON-L (1A6) — +5VR — ±0V

FIRE HE (2D11) — TP6 — FIRE HO (2C11) — INDEX (2C11) — TP5 — TP7

MPA1 (14) — MPA2 (15) — MPB2 (5) — MPB1 (1) — ±0V

CP CLK (1A10) — ØCLK (1A11) — PDO-PD7 (1F3)

DT1 (M3) — DT2 (11) — DT3 (N3) — DT4 (12) — DT5 (P3) — DT6 (13) — DT7 (R3) — DT8 (14)

FIRE HE (2G7) — SW0-2 (1F9) — DSTB F/F1 (2B7) — INDEX (2F9) — B5 (2A9) — TCINT (P1) — FIRE HO (2F7) — RD (1E9) — IORQ (1D9) — M1 (1D9) — IEO (2A6) — AO (1B8) — A1 (1B8) — SEL-L (1C7)

DSTB (15) — RETURN (S3) — PRESET (1G1)

AO (1B8) — A1 (1B8) — RD (1E9) — IORQ (1D9) — M1 (1D9) — CTC SEL (1C7) — IN3-L (1C7)

INT (1C11) — IEO (2C11) — BAVD RATE (9) — A1-L1 (D) — A1-L1 (E)

BK3 (1E8) — SW0 (1F9) — REVL (1A6) — BK1 (1G10)

+12V (C) — -12V (3) — ±0V (J H A1 Z3 L1 22) — +5VR (5 B1 Y3 2 21)

BK2 (1H10) — (1C5) FWD-L — -12V +12V — MO (13)

-12V — +12V — ±0V — +5VR — TP1 — TP2 — TP3 — TP4

+5VR — R62 4.7K — L1 JUMPER — B2 PRY — OPEN FOR 928 CLOSE FOR 114

REVISION NO.	BY	DATE	APPROVED BY	DATE
SEE SH. 4 FOR REV.	DWN F.S.S.	8-17-78	E ENGR	
	CHK		M ENGR	
			MFG ENGR	

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

MATERIAL

MODEL NO. 2231W-5/6

SEE ENGRG. SPECIFICATIONS No.

FINISH

TOL. EX. AS NOTED .XX ± FRAC. ± .XXX ± ANG. ± FINISH √

SCALE — SHT 2 OF 4

TITLE: 12 SOLENOID HEAD CPU BOARD

SEE CHART — WANG PART NUMBER — D — SIZE — 7332 — DRAWING NUMBER — 15 — REV.

D 7332

"THIS DRAWING AND THE DATA SHOWN THEREON ARE THE CONFIDENTIAL PROPERTY OF, AND ARE PROPRIETARY TO, WANG LABORATORIES, INC.: THIS DRAWING AND THE DATA SHOWN THEREON MAY NOT BE MADE PUBLIC WITHOUT THE WRITTEN CONSENT OF WANG LABORATORIES, INC. IF FOR ANY REASON THIS DRAWING IS PERMITTED BY WANG TO LEAVE THE PHYSICAL CUSTODY OF THE COMPANY, IT IS RETURNABLE UPON THE DEMAND OF WANG LABORATORIES, INC."

DO NOT SCALE

I.C. LOCATION	TYPE	W.L. NO.
L1,37	7406	376-0055
L2	74LS155	376-0158
L3,4	74LS42	376-0212
L5,7,9,10,18,36	74LS244	376-0288
L6	CPU 3880	SEE CHART
L8,13	74LS74	376-0155
L12	PIO 3881	SEE CHART
L13A	7404	376-0010
L14,15	9602	376-0104
L16,L14A	74LS08	376-0153
L17	74LS367	376-0192
L19	7425	376-0092
L20	74LS00	376-0207
L21	7432	376-0093
L22	7410	376-0003
L23	7414	376-0139
L24,25	1458	376-0265
L26	DG200	376-0195
L27	74LS14	376-0322
L28	74LS04	376-0180
L29	74LS73	376-0304
L30	CTC 3882	SEE CHART
L32,34,35	74LS374	376-0286
L31, L33	74LS173	376-0289
L6, 12 SKT.	40 PIN	376-9011
L30 SKT.	28 PIN	376-9015

LOCATION	TYPE	SPARES
L1	7406	1
L11	SPARE	
L22	7410	1
L23	7414	2
L28	74LS04	2

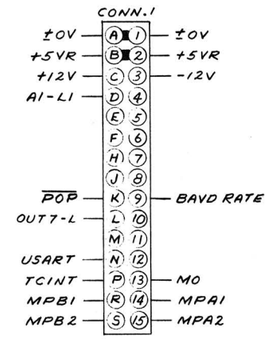
L10 = L09 + L78 OR L77

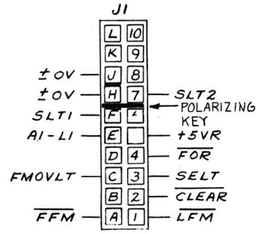
L10	L09	L6	L12	L30
7332-A	7332	377-0349	377-0342	377-0393

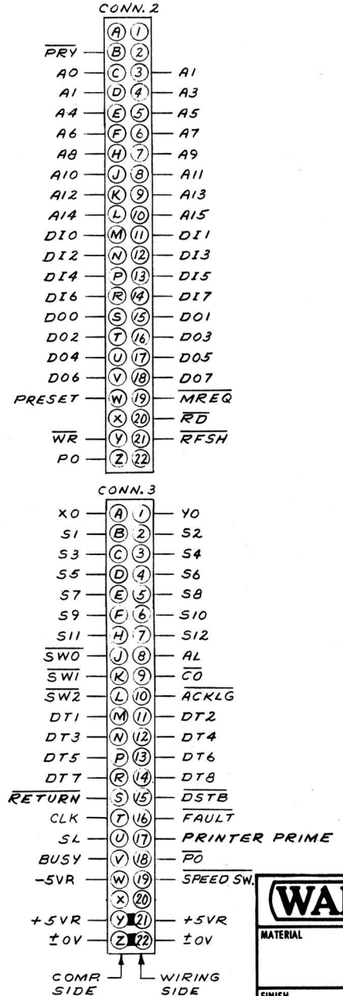
COMPONENT	TYPE	W.L. NO
R1,2,4-6,24,25,29 31,32,34,37,57 62,64,65,70,72,73, 74,75,79,80	4.7K 1/4W 10%	330-3047
R10	1.8K 1/4W 10%	330-3018
R3,19,20	12K 1/4W 10%	330-4012
R7,71,78	470Ω 1/4W 10%	330-2047
R8,9,66,67	220Ω 1/4W 10%	330-2022
R11,63,14	1K 1/4W 10%	330-3010
R12,35,56	330Ω 1/4W 10%	330-2033
R13	10Ω 1/4W 5%	330-1011
R16	5.6K 1/4W 10%	330-3056
R17	560Ω 1/4W 10%	330-2056
R18	22Ω 1/2W 10%	331-1022
R15	680Ω 1/4W 10%	330-2068
R21	8.2K 1/4W 10%	330-3082
R22	50K. POT	336-1012
R23	18K 1/4W 10%	330-4018
R26,30,36,46	15K 1/4W 10%	330-4015
R27	220K 1/4W 10%	330-5022
R28	150Ω 1/4W 10%	330-2015
R33,51	10K 1/4W 10%	330-4010
R38,50	22K 1/4W 5%	330-4023
R39	10K 1/4W 5%	330-4011
R40,52	47K 1/4W 5%	330-4048
R41,53	75K 1/8W 1%	333-0054
R42	249K 1/8W 1%	333-0062
R43	33K 1/4W 5%	330-4034
R68	22Ω 1/4W 10%	330-1022
R44,45	22.1K 1/8W 1%	333-0018
R47,49	2.2K 1/4W 10%	330-3022
R48,58-61	100Ω 1/4W 10%	330-2010
R69,76,77	10Ω 1/4W 10%	330-1010
R54	180K 1/4W 10%	330-5018
R55	100K. POT	336-1019
SIP1, SIP3-7	4.7K	333-0812
J1	20 PIN	350-0028

COMPONENT	TYPE	W.L.NO.
C1,15	.1uf 50V	300-1930
C2,16	.001uf 500V	300-1906
C3	100pf 500V	300-1100
C33	.01UF 25V	300-1903
C4	5.6uf 35V TA	300-4017
C5	.1uf 35V TA	300-4002
C6,18-32,34-39	.05uf 12V	300-1900
C7	.12uf 35V TA	300-4003
C17	330pf 500V	300-1330
C8,12	.047uf 100V MYLAR	300-2147
C9,10	4.7Kpf 100V	300-1932
C11	.15uf 35V TA	300-4004
C13	.0056uf 500V	300-1915
C14	2.2uf 20V TA	300-4014
C40,41	100uf 15V TA	300-4021
C42,43	220uf 15V TA	300-4045
D1,3-5	SIL.	380-1001
D2	3.9V ZENER	380-2039
D5	5.1V ZENER	380-2051
D6,8	1N4607	380-1005
Q1	SPS6551	375-1050
Q2	2N3014	375-0017
Q3	2N2222A	375-1005
XTAL	2.4576MHZ	321-0027
C44,45	10pf 500V	300-1010
C46	390pf 500V	300-1390
C47	22pf	300-1022
C48,49	.02uf 25V	300-1904

MNEMONIC	COORD
A0-A15	1A8
A1-L1	2A4
ACKLG	1A3
AL	1A1
BAUD RATE	2A5
BUSY	1A4
CLK	1A11
CLEAR	1G8
CO	1G5
D00-D07	1G1
DI0-DI7	2G7
DSTB	2B11
DT1-DT8	2E11
FAULT	1A4
FFM	1G8
FMOVLT	1C1
FOR	1G8
LFM	1G8
M0	2G1
MPA1	2G11
MPA2	2G11
MPB1	2F11
MPB2	2F11
MREQ	1A6
OUT7-L	1A5
P0	1A4
PO	1G5
POP	1E11
PRESET	1G1
PRINTER PRIME	1F11
PRY	2B1
RD	1A6
RETURN	2B11
RFSH	1A7
S1-S12	1E1
SELT	2A9
SL	1A4
SLT1	2A11
SLT2	2A11
SPEED SW.	1G8
SW0	1G9
SW1	1G9
SW2	1G9
TCINT	2C11
USART	1A5
WR	1A6
X0	1A4
Y0	1A5







REVISION	BY	DATE
SEE SH.4 FOR REV		

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

	BY	DATE	APPROVED BY	DATE
DWN F.S.S.		8-17-78	E ENGR	
CHK			M ENGR	
			MFG ENGR	

MATERIAL

MODEL NO. 2231W-5/6
SEE ENGRG. SPECIFICATIONS
No.

TITLE 12 SOLENOID HEAD CPU BOARD

FINISH

TOL. EX. AS NOTED
.XX ± FRAC. ±
.XXX ± ANG. ± FINISH √

SCALE SHT 3 OF 4

SEE CHART	D	7332	15
WANG PART NUMBER	SIZE	DRAWING NUMBER	REV.

D 7332

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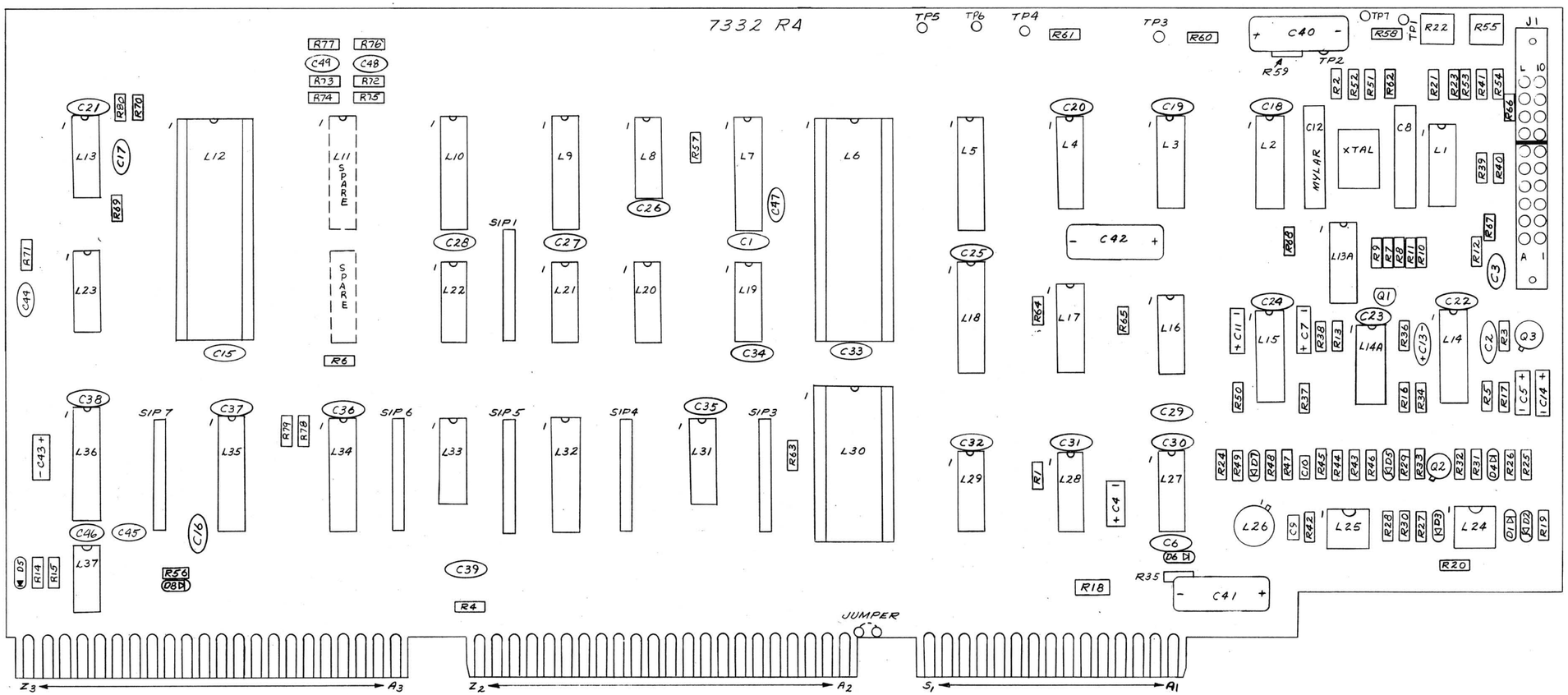
DO NOT SCALE

7332 R4



7332
E-REV
10

REV. NO.	REVISION	BY	DATE
0	ORIGINATED: PER DWG# 4594 APP'D 100M 11/8/74	F.S.S.	8-17-78
1	REVISED: PER ECN# 9455 APP'D 100M 11/8/74	F.S.S.	8-17-78
2	REVISED: PER ECN# 9538 APP'D 100M 11/8/74	F.S.S.	3-28-79
3	REVISED: PER ECN# 9855 APP'D 100M 11/8/74	F.S.S.	5-22-79
4	REVISED: PER ECN#10185 APP'D 100M 11/8/74	F.S.S.	7-6-79
5	REVISED: PER ECN#10484 APP'D 100M 11/8/74	F.S.S.	7-31-79
6	REVISED: PER ECN# 11232 APP'D 100M 11/8/74	A.B.	11-7-79
7	REVISED PER ECN # 11294 APP'D 100M 11/8/74	A.B.	11-7-79
8	REVISED PER ECN # 11462 APP'D 100M 11/8/74	A.B.	11-7-79
9	REVISED PER ECN # 11533 APP'D 100M 11/8/74	A.B.	11-7-79
10	REVISED PER ECN # 13432 APPD: 9.11.80		12-19-80
11	REVISED PER ECN # 13853 APPD: 11.18.80		12-19-80
12	REVISED PER ECN # 16257 APP'D: 12.16.80	R.B.P.	12-10-80
13	REVISED PER ECN # 17276 APPD 100M 11/8/74	Mark	3-17-81
14	REVISED PER ECN # 17853 APPD 100M 11/8/74	Mark	5-17-81

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

BY	DATE	APPROVED BY	DATE
DWN F.S.S	8-17-78	E ENGR D.THERRIAN	11-19-79
CHK [illegible]	11-8-79	M ENGR	
		MFG ENGR	

MATERIAL

MODEL NO. 2231W-5/6

SEE ENGRG. SPECIFICATIONS No.

FINISH

TOL. EX. AS NOTED .XX ± FRAC. ± .XXX ± ANG. ± FINISH √

SCALE SHT 4 OF 4

TITLE 12 SOLENOID HEAD CPU BOARD

WANG PART NUMBER	SIZE	DRAWING NUMBER	REV.
SEE CHART	D	7332	15

D 7332

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MILLIMETERS IN PARENTHESIS.
TOLERANCES TO BE EQUIVALENT TO INCH DIMENSIONS.

DO NOT SCALE

HOLE LEGEND & TOLERANCES

HOLE DIA	TOLERANCE
.0135 - .125	+.003 -.001
.126 - .250	+.004 -.001
.251 - .500	+.005 -.001

SYM.	DESCRIPTION	QTY.

J3
ZESA1 (1E6) → (5) ZSA1
ZESA2 (1E5) → (2) ZSA2
ZSB1 (1E3) → (5) ZSB1
ZSB2 (1E2) → (6) ZSB2
ZSC1 (1F8) → (7) ZSC1
ZCCV (1B4) → (12) ZCCV
ZFB (1D7) → (8) ZFB
ZDT (1A6) → (4) ZDT

NOTE
ALL RESISTORS ARE 1% UNLESS SPECIFIED OTHERWISE

SEE SHT 3

QTY.	ITEM	WANG PART NO.	DRAWING NO.	DESCRIPTION
NEXT ASSY.				

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

	BY	DATE	APPROVED BY	DATE
DWN	ER	1-10-78	E ENGR S.K. HO	
CHK	G.D.	1/19/78	M ENGR	
			MFG ENGR	

MATERIAL
MODEL NO. 81W/81WWP
SEE ENGRG. SPECIFICATIONS
No.
FINISH
TOL. EX. AS NOTED
.XX ± FRAC. ±
.XXX ± ANG. ± FINISH √
SCALE — SHT 1 OF 3

TITLE
SERVO CONTROL BOARD

210-7360	D	7360	22
WANG PART NUMBER	SIZE	DRAWING NUMBER	REV.

"E" SIZE MAC IMAGE

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MILLIMETERS IN PARENTHESIS. TOLERANCES TO BE EQUIVALENT TO INCH DIMENSIONS.

DO NOT SCALE

HOLE LEGEND & TOLERANCES

HOLE DIA	TOLERANCE
.0135 - .125	+ .003 - .001
.126 - .250	+ .004 - .001
.251 - .500	+ .005 - .001

SYM.	DESCRIPTION	QTY.
A		

NOTE
ALL RESISTORS ARE 1% UNLESS SPECIFIED OTHERWISE

QTY.	ITEM	WANG PART NO.	DRAWING NO.	DESCRIPTION
NEXT ASSY.				

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

	BY	DATE	APPROVED BY	DATE
DWN	BK	1-10-78	E ENGR S.K.HO	1/19/78
CHK	G.D.	1-19-78	M ENGR	
			MFG ENGR	

MATERIAL

MODEL NO. 81W/81WWP
SEE ENGRG. SPECIFICATIONS No.

FINISH

TOL. EX. AS NOTED
XX ± FRAC. ±
XXX ± ANG. ± FINISH √

TITLE: SERVO CONTROL BOARD

SCALE — SHT 2 OF 3

WANG PART NUMBER	SIZE	DRAWING NUMBER	REV.
210-7360	D	7360	22

"E" SIZE PACKAGE

REVISION NO.	DATE	BY
SEE SHT 3		

D 7360

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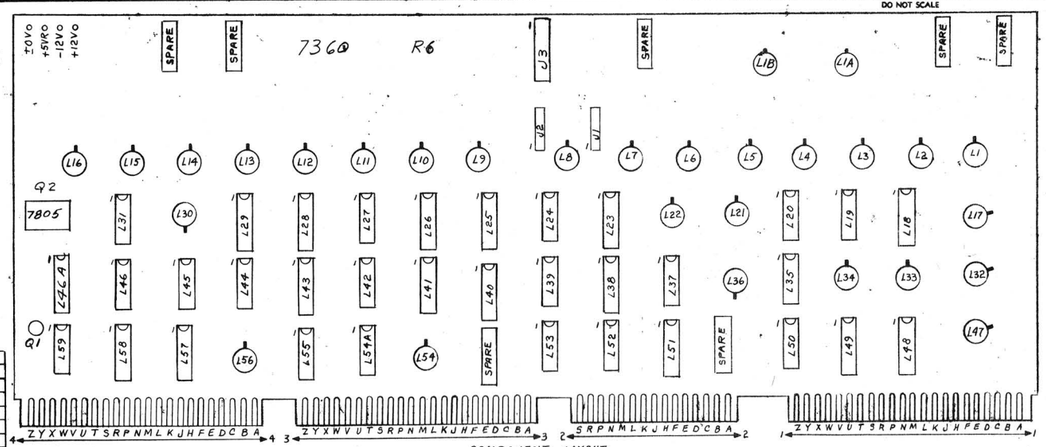
TOLERANCES TO BE EQUIVALENT TO INCH DIMENSIONS.

DO NOT SCALE



LOCATION	W.L. PART NO.	TYPE
L1-17,32,47,48	376-0187	7274?
L18,29,49,57	376-0226	74LS139
L19,20,35,44,45,46,55	376-0236	74LS164
L21,22,30,33,34,36,54,56,1A	376-0195	D6200
L23,25,26,28,38,40,41,43	376-0053	74193
L24,27,39,42	376-0055	7406
L31	376-0073	7490
L53	376-0010	7404
L48,58	376-0158	74LS155
L50,59,37	376-0139	7414
L51	376-0188	74279
L54A	376-0002	7400
L46A	376-0104	9602
L52	376-0266	74132

MNEMONIC	COORDINATE
KEY	2B1
MBP	2A7
POWER RESET	1B1
PWRES	1B1
VCC1	1B3
VCC2	1B3
XCCV	2C5
XDT	2A5
XFB	2C7
XSA1	2E7
XSA2	2E5
XSB1	2D6
XSB2	2D3
XSC1	2G8
ZCCV	1B4
ZDT	1A6
ZFB	1D7
ZSA1	1E6
ZSA2	1E5
ZSB1	1E3
ZSB2	1E2
ZSC1	1F8

* CHART			
C18	*	.033mf	— .068mf
C9	=	.022mf	— .033mf
C15	=	10mf(T)	— 10mf(T)
R191	=	68.1K	— 68.1K
R196	=	26.7K	— 29.4K
R195	=	698K	— 422K
R205	=	26.7K	— 22.6K
R222	=	105K	— 82.5K
R224	=	105K	— 75K
R216	=	1.05M	— 348K
R201	=	1.5K	— 1.5K
R221	=	1K	— 1.5K
R104	=	470Ω 10%	— 64.9Ω
R85	=	422K 1%	— 604K 1%

R11,12,86,127,131.

| COMPONENT | W.L. PART NO. | TYPE | | |

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MILLIMETERS IN PARENTHESIS.
TOLERANCES TO BE EQUIVALENT TO INCH DIMENSIONS.

DO NOT SCALE

HOLE LEGEND & TOLERANCES

HOLE DIA	TOLERANCE ±
.0135 - .125	.003 - .001
.126 - .250	.004 - .001
.251 - .500	.005 - .001

SYM.	DESCRIPTION	QTY.
A		

+24V (E2 S2) −24V (K1 9) +15V (E1 S1) RLS2 (H2) ±0V (A1 C1 P3 11 3 13) MRGND (15 S1) XMD (F3) XHALT (73) RLIFT (63) +12B (S2 15) +12VA (J1 8) −5V (S3 13) −12V (M1 11) +6V +5CL (F1 6 7) +5V (2 M3 K3 B1) LIP MIP HIP (C3 A3 B3) YMDA (E3) YMA (D3) YMDB (B3) YMB (H3) RMDA (K3) RMA (L3) RMDB (N3) RMB (M3) XMD1 (13) XMD2 (B3) XMR2 (93) XMTR (103) XMR1 (123) ZMD (N2) ZHALT (L2) ZM R2 (P2) ZM R1 (R2 M2) ZMT R(+) (62 F2) PT3 (22) PT4 (12) PT1 (B2) PT2 (A2) HF (K2) HAM+ (C2 32) HAM− (P1 31) MR HALT (M2)

E1 680Ω ½W; C1 10μf 35V (T); C2 10μf 35V (T); C3 10μf 35V (T); C4 10μf 35V (T); 7812 Q10; R2 2.2Ω ½W; C5 .1μf 50V; R3 .5Ω/5W 1%; Q1 RCA 8223; Q20 2N3467; 7812 Q2; C6 10μf 35V (T); C7 .1μf 50V H.F.; C8 10μf 35V (T); R4 1K; R5 10K; Q3 2N6387; 7905 Q19; C9 1μf 50V; 7912 Q4; C11 10μf 35V (T); Q7 2N6111; R6 1K ½W; R7 2.7K; R8 3.9K; U1 723; C12 .1μf 50V H.F.; C13 .01μf; R9 470Ω; R10 1K; R11 3.3K; R12 13K; R13 150Ω; Q21 2N3725; D1 IN748A; C14 .1μf 50V H.F.; C15 .1μf 50V (H.F.); R14 1.21K 1%; R15 855Ω 1%; R16 2.55Ω 1%; R17 1.5K 1%; U6 723; C16 470PF; R18 470Ω; R19 2.1K 1%; R20 9.09K 1%; Q6 2N6387; Q35 2N3014; R54 2.2K; R60 10K; +5V; ±0V; −24V; +24V; 20V SW; −20V SW; +20V SW; EXTERNAL CKT.

10Ω 10W STEPPING MTR (M); YMA; YMB; RMA; RMB

C17 .1μf 50V H.F.; C18 .1μf 50V N.F.; Q24 2N3725; Q25 2N4037; R21 220Ω; R22 330Ω ½W; R23 150Ω ½W; R24 220Ω; Q11 2N6107; Q12 2N6292; D2 IN4004; D3 IN4004; Q26 2N3725; Q27 2N4037; R25 220Ω; R26 330Ω ½W; R27 150Ω ½W; R28 220Ω; Q13 2N6107; Q14 2N6292; D4 IN4004; D5 IN4004; D17 IN4004; Q28 2N3725; Q29 2N4037; R29 220Ω; R30 330Ω ½W; R31 150Ω ½W; R32 220Ω; R58 5.6K; C24 C25 C26 C27 1MF (4) 50V; R56 4.7K; Q15 2N6107; Q16 2N6292; D6 IN4004; D7 IN4004; Q30 2N3725; Q31 2N4037; R33 220Ω; R34 330Ω ½W; R35 150Ω ½W; R36 220Ω; R57 4.7K; Q17 2N6107; Q18 2N6292; D8 IN4004; D9 IN4004; D10 IN4004

D11 IN4004; K2; R37 680Ω ½W; Q33 2N3725; Q32 2N4037; R40 330Ω ½W; R41 150Ω ½W; R42 22Ω ½W; C19 .015μf MYLAR; L4 7545 2B; D12 IN4004; K1; R43 680Ω ½W; L3 7545 2B; L2 7545 2B; R44 220Ω; Q22 2N3725; Q23 2N4037; R45 330Ω ½W; R46 150Ω ½W; R47 220Ω; Q8 RCA 8203; Q9 2N6387; R48 .5Ω 5W 1%; C20 .01μF MYLAR; R49 22Ω ½W; D18 1N4934; D19 1N4934; L5 75452B; D13; D14; R51 2.2K ½W; L2 75452B; D15; D16; R53 100Ω; R50 4.7K; Q34 3014; R39 10K; R53 2.2K; R61 4.7K; C21 10μf/35V (T); R52 1Ω 10W 1%; 2N8203 Q5; C24 .1μF 50V H.F.; D20 1N4934; D21 1N4934; 220Ω .25Ω 5W; 290Ω 1.25Ω 5W; −24V; 15Ω 1W 5%; TO SERVO GND; TO SERVO GND; ZMTR; EXTERNAL CKT

ECN NO. PENDING 18556 SDG/BI

E-REV 7364 B1W/WWP; E-REV 7364-1 0 7500T

NO.	REVISION	BY	DATE
0	DWR #1313 APP'D:	BR	10-28-77
1	REVISED PER ECN #1956 APP'D: DWR 11-28-77	DR	12-2-77
2	REVISED PER ECN #8198 APP'D: 4-4-78	AK	2-28-78
3	REVISED PER ECN # 8644 APP'D: BF 12-22-78	AK	6-12-78
4	REVISED PER ECN # 8945 APP'D: BF 222-78	B & W	6-27-78
5	REVISED PER ECN # 9336 APP'D:	AK	9-21-78
6	REVISED PER ECN # 9434 APP'D:	AK	9-21-78
7	REVISED PER ECN # 9516 APP'D: 10-13-78	AK	9-21-78
8	REVISED PER ECN # 9516 APP'D: 10-13-78	SD	12-21-78
9	REVISED PER ECO # 9516 APP'D: 3-23-79	SD	12-21-78
10	REVISED PER ECN # 10243 APP'D: 3-23-79	SD	3-14-79
11	REVISED PER ECO # 13537 APP'D: 3-23-79	SD	3-14-79
12	REVISED PER ECO # 17707, 17724 APP'D: LVA 10-Aug 81	TK	1-2-81
13	REVISED PER ECO # 18911 APP'D: 3-26-81	FSS	3-26-81

QTY.	ITEM
NEXT ASSY.	

WANG PART NO.	DRAWING NO.	DESCRIPTION

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

MATERIAL —

FINISH —

MODEL NO. 81W/81WWP 7500T SEE ENGRG. SPECIFICATIONS No.

TOL. EX. AS NOTED .XX ± FRAC ± .XXX ± ANG. ± FINISH √

SCALE — SHT 1 OF 2

BY	DATE	APPROVED BY	DATE
DWN Bob Fiorito	10-28-77	E ENGR S.M. HO	11/13/80
CHK G.D.	11/28/78	M ENGR	
		MFG ENGR	

TITLE: PS REGULATOR

210-7364 | D | 7364 | 12

WANG PART NUMBER | SIZE | DRAWING NUMBER | REV.

D 7364

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MILLIMETERS IN PARENTHESIS.
TOLERANCES TO BE EQUIVALENT TO INCH DIMENSIONS.

DO NOT SCALE

HOLE LEGEND & TOLERANCES

HOLE DIA	TOLERANCE
.0135 - .125	+ .003 - .001
.126 - .250	+ .004 - .001
.251 - .500	+ .005 - .001

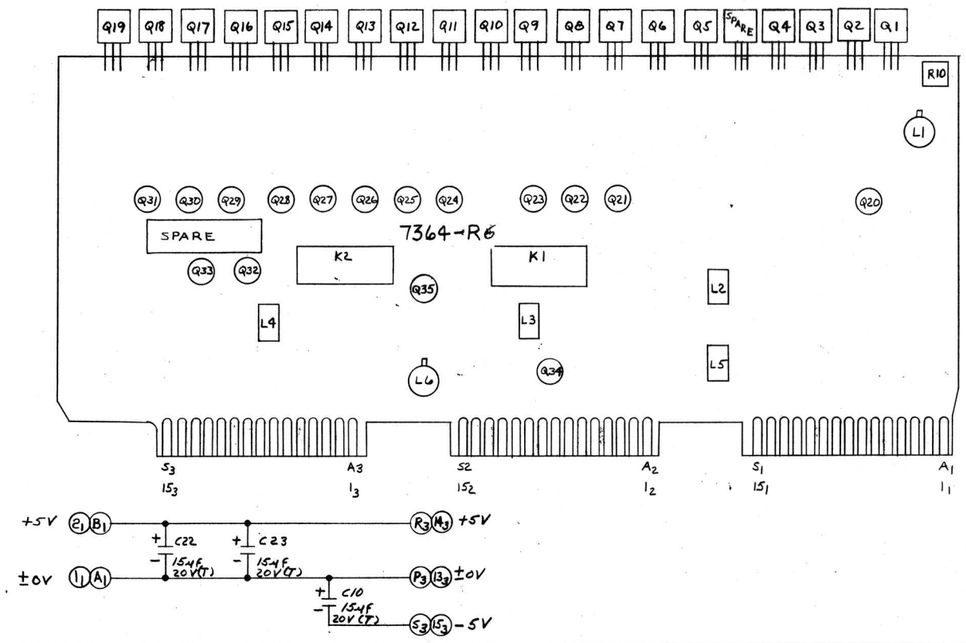
SYM.	DESCRIPTION	QTY.
A		

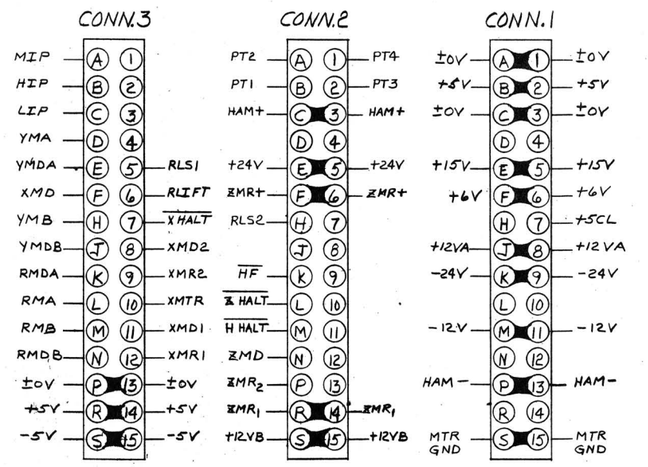
LOCATION	W.L. PART NO.	GND	Vcc
L1,6	376-0066	5	
L2-5	376-0145	4	8

COMPONENT	W.L. PART NO.
R1,37,43	331-2068
R2	331-0022
R3,48	334-0028
R4,	330-3010
R5,39,60	330-4010
R6,59	331-3010
R7	330-3027
R8	330-3039
R9,18	330-2047
R11	330-3033
R12	330-4015
R13	330-2015
R53	330-2010
R14	333-0059
R50,56,57,61	330-3047
R21,24,25,28,29,32,33,36,44,47	330-2022
R22,26,30,34,40,45	331-2033
R23,27,31,35,41,46	331-2015
R42,49	331-1022
R51	331-3022
R52	334-0000
R10	336-1014
R54,55	330-3022
C1-4,6,8,11,21	300-4032
* C5,7,9,24,12,14,15,17,18	300-1930
C16	300-1870
C19	300-2115
C20	300-2110
C10,22,23	300-4022
D1	380-2039
D2-12,17	380-4000
D13	380-2033
Q1,5,8	375-1053
Q2,10	374-0000
Q3,6,9	375-1052
Q4	374-0003
Q34,35	375-0017
Q7	375-1034
Q11,13,15,17	375-1058
Q12,14,16,18	375-1051
Q19	374-0002
Q20	375-1026
Q21,22,24,26,28,30,33	375-1027
Q23,25,27,29,31,32	375-0018

COMPONENT	W.L. PART NO.
C24-31	300-1931
K1,2	320-0047
R38,58	330-3056
R15,16	333-0137
R17	333-0107
R19	333-0114
R20	333-0061
C13	300-1903
D14	380-2062
D15	380-2068
D16	380-2075
D18-21	380-4011

* C24 IS LOADED ON 7364-1 ONLY





REVISION NO.	DATE	BY
SEE SHT. 1		

QTY.	ITEM	WANG PART NO.	DRAWING NO.	DESCRIPTION
NEXT ASSY.				

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

	BY	DATE	APPROVED BY	DATE
DWN	B. Soto	10-31-77	E ENGR S.K. HO	1/13/78
CHK	G.D.	1/13/78	M ENGR	
			MFG ENGR	

MATERIAL —

MODEL NO. 8W/8WWP 7500T
SEE ENGRG. SPECIFICATIONS
No.

FINISH —

TOL. EX. AS NOTED
.XX ± FRAC. ±
.XXX ± ANG. ± FINISH √

SCALE — SHT 2 OF 2

TITLE: PS REGULATOR

210-7364	D	7364	12
WANG PART NUMBER	SIZE	DRAWING NUMBER	REV.

D 7364

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DO NOT SCALE

BUSRQ

BUSRQH

+5VR

±0V

ØZ (1E11)

RESET

RESETH

IBSRQ

RESZ

NMIH

INTH

MREQ

IORQ

IBSRQ

HMODE

WAITH

WAITPB

RHMODE

Z MODE

WAIT

RESET1

BUSAK

RDB

RFHSZ

WRB

IRQHZ

MRQHZ

MIZ

BUSAKH

HALTH

MREQZ

BUSAKZ

IORQZ

RFSHH

MREQH

MIH

IORQH

WRH

RDH

DOH D1H D2H D3H D4H D5H D6H D7H

DOZ' D1Z' D2Z' D3Z' D4Z' D5Z' D6Z' D7Z'

REVISION	BY	DATE
SEE SH.2 FOR REV.		

WANG LABORATORIES, INC. LOWELL, MASS. U.S.A.	BY	DATE	APPROVED BY	DATE
	DWN F.S.S.	6-21-78	E ENGR	
	CHK	5/25/78	M ENGR	
			MFG ENGR	

MATERIAL	MODEL NO.	TITLE
	ZEBUG	INTERFACE BOARD
	SEE ENGRG. SPECIFICATIONS No.	

FINISH	TOL. EX. AS NOTED .XX ± FRAC. ± .XXX ± ANG. ± FINISH √				
	SCALE	SHT 1 OF 2	SEE CHART	D	7390	8
			WANG PART NUMBER	SIZE	DRAWING NUMBER	REV.

D 7390

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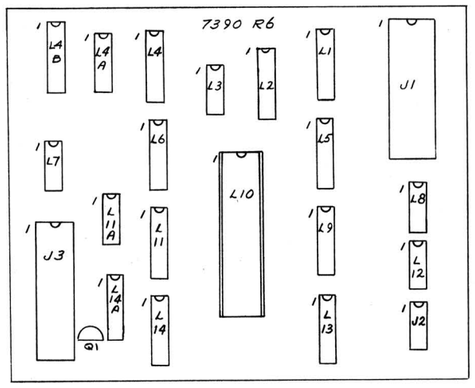
DO NOT SCALE

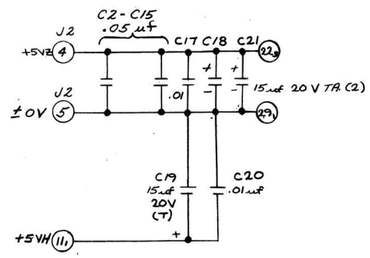
COMPONENT	TYPE	W.L.NO.
R46	390Ω 1/4W 10%	330-2039
R47	470Ω 1/4W 10%	330-2047
R1	1K 1/4W 10%	330-3010
R2	330Ω 1/4W 10%	330-2033
R37,38	10K 1/4W 10%	330-4010
R3	10Ω 1/4W 10%	330-1010
R4,13,44	4.7K	330-3047
R5-21, 24, 25, 29, 30, 42	27K 1/4W 10%	330-4027
R22,23,26,27,31-35,43	2.2K 1/4W 10%	330-3022
C1	100 pf 500V	300-1100
C2-15	.05 mf 12V	300-1900
C18, 19, 21	15 mf 20V TA.	300-4022
C16	220 pf 500V	300-1220
C17, 20	.01 mf 25V	300-1903
C22	270 pf 500V	300-1270
J1,3, L10	SOCKET	376-9011
J2	SOCKET	376-9012
Q1	SPS6551	375-1050

I.C. LOCATION	TYPE	W.L.NO.
L1,4,5,6,9,11	74LS244	376-0288
L2,L4B	74S244	376-0338
L3	7414	376-0139
L4A	74195	376-0097
L7	74132	376-0266
L8,12	7432	376-0093
L10	Z80B CPU	SEE CHART
L11A	7408	376-0081
L13,14	74LS245	376-0285
L14A	74S240	376-0334

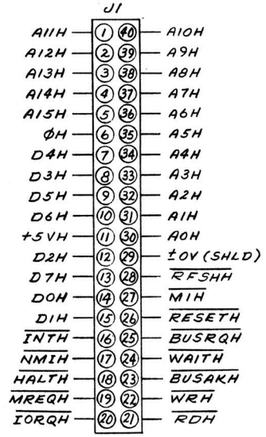
LOCATION	TYPE	SPARES
L3	7414	1
L7	74132	1
L8	7432	2
L11A	7408	1
L12	7432	2
L4B	74S244	1

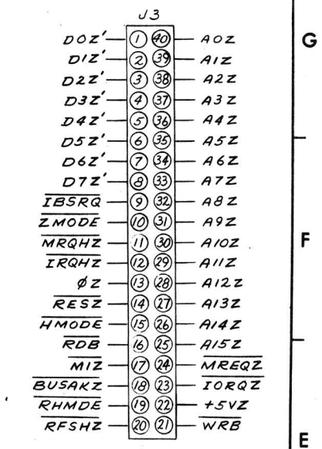
MNEMONIC	COORDINATE
A0H - A7H	1G1
A8H - A15H	1E1
A0Z - A7Z	1D1
A8Z - A15Z	1B1
$\overline{BUSAKH}$	1A8
$\overline{BUSAKZ}$	1A8
$\overline{BUSRQH}$	1G6
D0H - D7H	1A5
D0Z'-D7Z'	1A4
$\overline{HALTH}$	1A8
$\overline{HMODE}$	1B11
$\overline{IBSRQ}$	1B11
$\overline{IBSRQ}$	1D11
$\overline{INTH}$	1C11
$\overline{IORQH}$	1A7
$\overline{IORQZ}$	1A7
$\overline{IRQHZ}$	1A10
$\overline{MIH}$	1A6
$\overline{MIZ}$	1A9
$\overline{MREQH}$	1A7
$\overline{MREQZ}$	1A8
$\overline{MRQHZ}$	1A10
$\overline{NMIH}$	1C11
$\overline{RDB}$	1A3
$\overline{RDH}$	1A6
$\overline{RESETH}$	1D11
$\overline{RESZ}$	1D11
$\overline{RFSHH}$	1A7
$\overline{RFSHZ}$	1A3
$\overline{RHMDE}$	1B11
$\overline{WRB}$	1A3
$\overline{WRH}$	1A7
$\overline{WAITH}$	1B11
$\overline{WAITPB}$	1B11
$\overline{ZMODE}$	1A11
ØH	1G6
ØZ	1F4





	210=209 + 378 OR 377	
210	209	L10
7390A	7390	377-0394





NO.	REVISION	BY	DATE	APPD
0	ORIGINATED: PER DWR #4	FSS	6-24-78	
1	REVISED: PER ECN #8803 APPD: 6-29-78	FSS	6-24-78	
2	REVISED: PER ECN #8803 APPD: 7-18-78	FSS	6-24-78	
3	REVISED: PER ECN #8803 APPD: 8-14-78	FSS	8-19-78	
4	REVISED: PER ECN #9004 APPD: 9-14-78	FSS	9-18-78	
5	REVISED: PER ECN #9033 AS A 27, C19 & C20 APPD: 10-11-78	SD	3-16-79	
6	REV. PER ECN'S 10858 + 11345 APPD:	L.D	5-23-79	
7	REVISED: PER ECN #13370 APPD: 7-30-80	JSW	7-21-80	
8	REVISED: PER ECO #12185 APPD: 12-30-80	F.S.S.	12-30-80	

E-REV. 6

WANG LABORATORIES, INC. LOWELL, MASS. U.S.A.	BY	DATE	APPROVED BY	DATE
	DWN F.S.S.	6-24-78	E ENGR	
	CHK	5-25-79	M ENGR	
			MFG ENGR	
MATERIAL X	MODEL NO. ZEBUG		TITLE INTERFACE BOARD	
FINISH X	SEE ENGRG. SPECIFICATIONS No.			
	TOL. EX. AS NOTED .XX ± FRAC. ± .XXX ± ANG. ± FINISH √			
	SCALE X SHT 2 OF 2			
	SEE CHART	D	7390	8
	WANG PART NUMBER	SIZE	DRAWING NUMBER	REV.

D 7390

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DO NOT SCALE

BK3 (2A5)

BO0 - BO7 (2F1)

SECTOR READY NULL DONE DERROR ERROR W/P (S2) (C3) (B3) (I4) (E3) (J3) (B3)

REQ (2F2) BSY (I4) STROBE (I2)

M0 (S1) R0 (M3) M1 (C2) R1 (9) M2 (D2) R2 (3) M3 (11) R3 (13) — SEL 1A 1B 2A 2B 3A 3B 4A 4B → 1Y 2Y 3Y 4Y — L5 74157 — STB — ±0V

M4 (2) R4 (F2) M5 (S2) R5 (H1) M6 (12) R6 (8) M7 (10) R7 (15) R8 (13) R9 (E1) R10 (4) R11 (6) R12 (7) R13 (H2) R14 (7) R15 (12) — SEL 1A 1B 2A 2B 3A 3B 4A 4B → 1Y 2Y 3Y 4Y — L13 74157 — STB — ±0V

T2 (I3) T4 (B2) F8 (A3) T2-5 (N3)

BUS-1 (10) BUS-2 (11) BUS-3 (12) BUS-4 (13) BUS-5 (4) BUS-6 (3) BUS-7 (2) BUS-8 (1)

R2 R3 R4 R5 R6 R7 R8 R9 1K → +5VR

DATE / TYPE / REVISION / NO. — SEE SH. 4 FOR REVISIONS

BK1 (2E9)

RAO (1E1) M=Ø (1C1) — L10 7411

REG≠MK (1C1) REG≠MMSK (1C1)

L14 74181 — S3 S2 S1 S0 M CN A0 A1 A2 A3 B0 B1 B2 B3 → F0 F1 F2 F3 A=B P G CN+4 CO C1 C2 C3

L22 74181 — AK0 AK1 AK2 AK3 AK4 AK5 AK6 AK7 → A=B C2G 150PF ±0V C4 C5 C6 C7

+5VR R28 * 470Ω EQU (2B11)

L33 7414 ADDER CAR (2D11)

* R28 AND C2G HAND WIRED PER ECO # 18091

L19 7432 L12 7408 L29 7408 L10 7411 L2 7432 L33 7414 L6 7404

R9 R15 R11 R12 R13 R5 R8 RAO (1E1) REG≠MK (1C1) REG≠MMSK (1C1) T2 (1C10)

R0, R1, R6, R7, R9, R10 (2E11)

T2 (1A10) T4 T2, T8, F8, T2-5 (2B11)

BK2 (1D1) — L29 7408 RC2 (2E2) — L19 7432 — AENB ASTB

L7 2905 — BUS0 BUS1 BUS2 BUS3 — CO C1 C2 C3 A0 A1 A2 A3 B0 B1 B2 B3 R8 BE DRCP S OE RLE GND1 GND2 Vcc — 2 AK0 10 AK1 14 AK2 22 AK3 → R0 R1 R2 R3 — ±0V +5VR

L23 2905 — C4 C5 C6 C7 B04 B05 B06 B07 — 2 AK4 10 AK5 14 AK6 22 AK7

L15 2905 — KSTB KENB — 2 AK0 10 AK1 14 AK2 22 AK3

L37 2905 — 2 AK4 10 AK5 14 AK6 22 AK7

L30 74LS240 — 1A1 1A2 1A3 1A4 2A1 2A2 2A3 2A3 — 1G 2G — 1Y1 1Y2 1Y3 1Y4 2Y1 2Y2 2Y3 2Y4 — AK0 AK1 AK2 AK3 AK4 AK5 AK6 AK7

L21 7432 — R4 R8 — 1G 2G 1C0 1C1 1C2 1C3 2C0 2C1 2C2 2C3 — L27 74153 — B A — R5 R14

R8 (2G11)

L36 74154 — D C B A G1 G2 — 0 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15

REG=FLS (2A11) REG≠MK (1D10) REG≠MMSK (1C10) REG=Ø (2B11) M=Ø (1F10),(2B11) REG≠MSK (2A11) CNTRL-1 (2G11) CNTRL-1 CNTRL-2 CNTRL-3 SET=CAR (2C11) LAUX UB SB RETURN

L11 74LS368 — M0 M1 M2 M3 M4 M5 — 1Y 2Y 3Y 4Y 5Y 6Y — IB1 IB2 IB3 IB4 IB5 IB6

L4 74LS368 — M6 M7 — 1Y 2Y 3Y — IB7 IB8 IBS

RB

RAO (1F10), (2E11)

L3 7414 — L12 7408

L18 9321 — R14 R15 E2 — A0 A1 O0 O1 O2 O3

RAO (1A10),(2C11) RAI (2E11) BK2 (1G7) RA2 (2A6),(2C9) RA2 (2B11) R13 (2E11)

L6 7404 — R13 R12 R11

KSTB ASTB

14 KSTB 15 ASTB

WANG LABORATORIES, INC. LOWELL, MASS. U.S.A.	BY	DATE	APPROVED BY	DATE
	DWN F.S.S.	5-18-79	E ENGR	
	CHK		M ENGR	
MATERIAL	MODEL NO. 2200 SMD		MFG ENGR	
	SEE ENGRG. SPECIFICATIONS No.	TITLE	ALU/MUX INTERFACE MTH	
FINISH	TOL. EX. AS NOTED .XX ± FRAC. ± .XXX ± ANG. ± FINISH √	210-7421	D	7421	7
	SCALE	SHT / OF 4	WANG PART NUMBER	SIZE	DRAWING NUMBER	REV.

D 7421

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DO NOT SCALE

ECC SHIFTED SHIFT ECC

CNTRL-1 (1C1)
R8 (1A5)

ICAPM GISO

KS0 KS1 KS2 KS3 KS4 KS5 KS6 KS7

IOB3 IOB1

TO GKBD DN*3 AD7

BO0 BO1 BO2 BO3 BO4 BO5 BO6 BO7 → BO0 - BO7 (1G7)

REQ (1G3)

RC2 (1F7)

CAPM (53)

BK1 (1F9)

ADDER CAR (1D8)

SET = CAR (1B1)

T2, T8, T8, T2-5 (1C10)

EQU (1E8)

RA2 (1D1)

M = 0 (1C1)

REG = 0 (1C1)

REG = FLS (1C1)

REG ≠ MSK (1C1)

REG = LOW

A = B

RA2 (1D1) → 256 BK3 (1G10)

BY	DATE	APPROVED BY	DATE
DWN F.S.S.	5-16-79	E ENGR	
CHK		M ENGR	
		MFG ENGR	

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

MATERIAL

MODEL NO. 2200 SMD

SEE ENGRG. SPECIFICATIONS' No.

FINISH

TOL. EX. AS NOTED
XX ± FRAC. ±
.XXX ± ANG. ± FINISH √

SCALE SHT 2 OF 4

TITLE: ALU/MUX INTERFACE MTH

210-7421 | D | 7421 | 7

WANG PART NUMBER | SIZE | DRAWING NUMBER | REV.

D 7421

NO.	REVISION	BY	DATE
	SEE SHT FOR REV.		

OSLYVE PRESS

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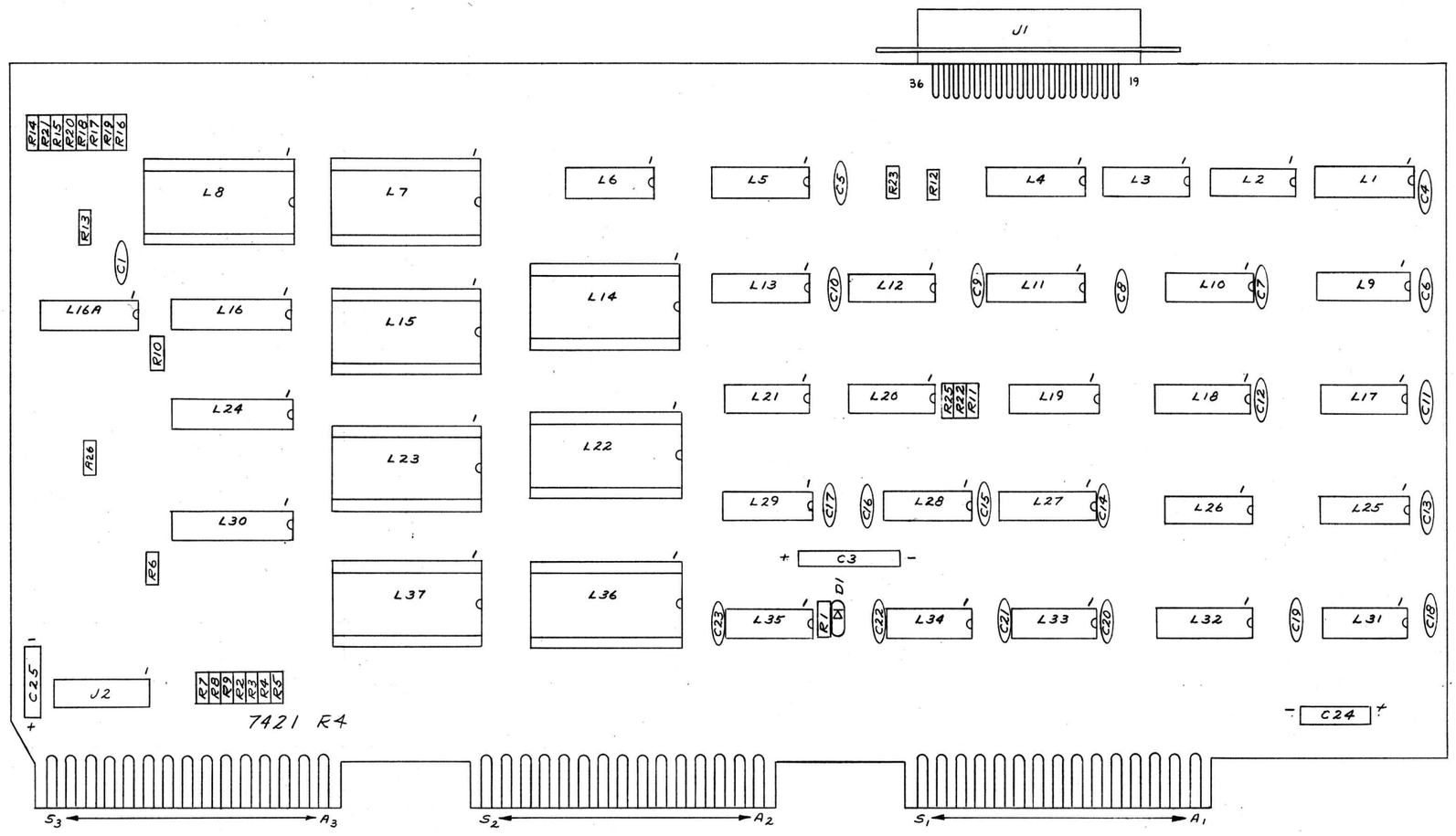
DO NOT SCALE



DATE	BY	REVISION	NO.
		SEE SH.4 FOR REV.	

OMLVIE PRESS

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

	BY	DATE	APPROVED BY	DATE
DWN F. S. S.		5-19-79	E ENGR	
CHK			M ENGR	
			MFG ENGR	

MATERIAL

MODEL NO. 2200 SMD

SEE ENGRG. SPECIFICATIONS

No.

TITLE ALU/MUX INTERFACE MTH

FINISH

TOL. EX. AS NOTED
.XX ± FRAC. ±
.XXX ± ANG. ± FINISH √

SCALE	SHT 3 OF 4	210-7421	D	7421	7
		WANG PART NUMBER	SIZE	DRAWING NUMBER	REV.

D 7421

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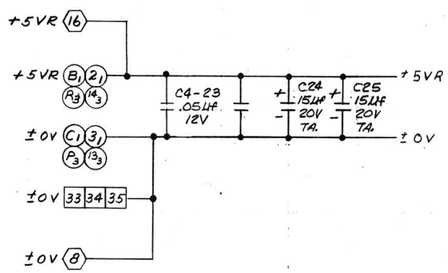
DO NOT SCALE

I.C. LOCATION	TYPE	W.L.NO.
L1	7476	376-0007
L2,19,21	7432	376-0093
L6	7404	376-0010
L4,11	74LS368	376-0193
L5,13	74157	376-0082
L7,15,23,37	AM 2905	377-0353
L8	745412	376-0320
L9	7400	376-0002
L10	7411	376-0194
L12,29,31	7408	376-0081
L14,22	74181	376-0099
L16	74LS299	376-0303
L16A	9602	376-0104
L3,17,20,33,35	7414	376-0139
L18	9321	376-0096
L24	74LS374	376-0286
L25	7451	376-0012
L26	7410	376-0003
L27,32	74153	376-0048
L28	7474	376-0006
L30	74LS240	376-0297
L34	7402	376-0016
L36	74154	376-0090
L7,8,14,15,22,23,36,37	24 PIN SKT.	376-9003

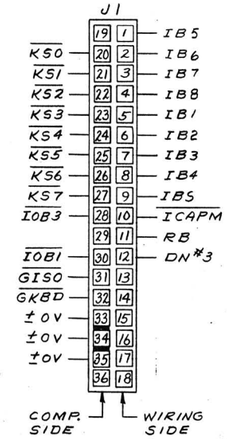
COMPONENT	TYPE	W.L.NO.
R1	100K, 1/4W, 10%	330-5010
R2-10	1K 1/4W 10%	330-3010
R11,12,22,23,25	330Ω 1/4W 10%	330-2033
R13	16.9K 1/8W 1%	333-0097
R14-21	390Ω 1/4W 10%	330-2039
R26	240Ω 1/4W 5%	330-2025
R28	470Ω 1/4W 10%	330-2047
C1	100pf. 500V	300-1100
C3	100μf, 16V(E)	300-3011
C4-23	.05μf 12V	300-1900
C24,25	15μf 20V TA.	300-4022
C26	150Pf 500V	300-1150
D1	SIL.	380-1001
J1	36 PIN CONN	350-2096
J2	16 PIN SKT.	376-9005

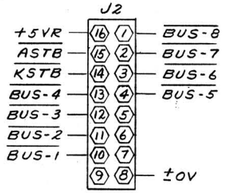
MNEMONIC	COORD.
AD7	2G1
AK0-AK7	1A8
$\overline{ASTB}$	1A1
$\overline{BUS-1}$ - $\overline{BUS-8}$	1B11
$\overline{BSY}$	1G2
$\overline{CAPM}$	2E1
$\overline{CNTRL-1, 2, 3}$	1C1
DERROR	1G5
$\overline{DONE}$	1G5
DN*3	2G2
ECC SHIFTED	2G9
ERROR	1G5
$\overline{GISO}$	2G7
$\overline{GKBD}$	2G2
IB1-IB8	1G1
IBS	1F1
$\overline{ICAPM}$	2G8
$\overline{IOB1}$, $\overline{IOB3}$	2G3
$\overline{KS0}$ - $\overline{KS7}$	2G6
$\overline{KSTB}$	1B1
$\overline{LAUX}$	1B1
M0-M7	1G11
$\overline{NULL}$	1G5

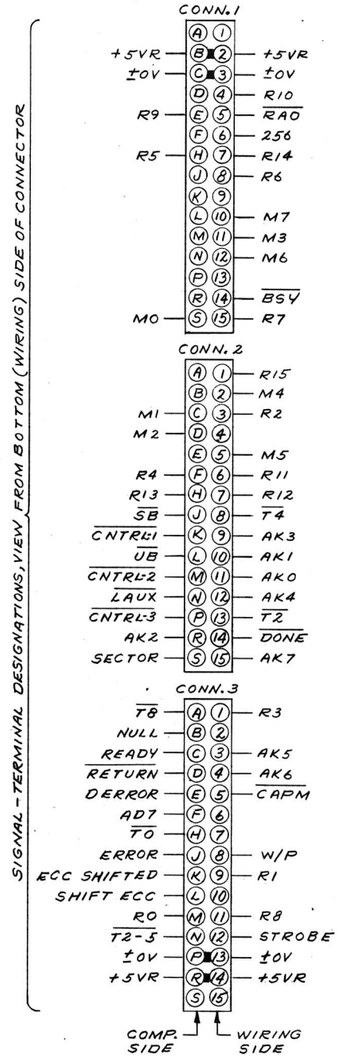
MNEMONIC	COORD.
R0-R15	1G11
$\overline{RA0}$	1E1
RB	1E1
READY	1G5
$\overline{RETURN}$	1B1
$\overline{SB}$	1B1
SECTOR	1G5
SHIFT ECC	2G9
STROBE	1G2
$\overline{TO}$	2G2
$\overline{T2, T4, T8, T2-5}$	1C11
$\overline{UB}$	1B1
W/P	1G4
256	2A5



I.C. LOCATION	TYPE	SPARES
L3	7414	2
L16A	9602	1
L17	7414	1
L21	7432	2
L29	7408	1
L31		1
L34	7402	2
L35	7414	5







NO.	REVISION	BY	DATE
0	ORIGINATED: PER DWR # 1033 APP'D: [illegible]	F.S.S.	5-21-79
1/0	REVISED: PER ECN # 1033 APP'D: [illegible]	F.S.S.	5-22-79
2/1	REVISED: PER ECN # 1588 APP'D: [illegible]	F.S.S.	5-22-79
3/1	REVISED: PER ECN # 1588 APP'D: [illegible]	F.S.S.	5-22-79
4/2	REVISED PER ECN # 12079 APP'D: [illegible]	K.W.	7-16-79
5/2	REVISED PER ECN # 12884 APP'D: [illegible]	J.D.C.	11-7-79
6/3	REVISED PER ECN 1991 APP'D: [illegible]	M.L.	5-16-80
7/3	REVISED PER ECO#18853 APP'D: [illegible]	K.D.B.	4-27-81

E-REV 3

WANG LABORATORIES, INC. LOWELL, MASS. U.S.A.	BY	DATE	APPROVED BY	DATE
	DWN F.S.S.	5-21-79	E ENGR [illegible]	7/20/79
	CHK [illegible]	11/8/79	M ENGR	
			MFG ENGR	
MATERIAL	MODEL NO. 2200 SMD		TITLE ALU/MUX INTERFACE MTH	
	SEE ENGRG. SPECIFICATIONS No.			
FINISH	TOL. EX. AS NOTED XX ± FRAC. ± XXX ± ANG. ± FINISH √		210-7421	D 7421 7
	SCALE	SHT 4 OF 4	WANG PART NUMBER	SIZE DRAWING NUMBER REV.

D 7421

"THIS DRAWING AND THE DATA SHOWN THEREON ARE THE CONFIDENTIAL PROPERTY OF, AND ARE PROPRIETARY TO, WANG LABORATORIES, INC.; THIS DRAWING AND THE DATA SHOWN THEREON MAY NOT BE MADE PUBLIC WITHOUT THE WRITTEN CONSENT OF WANG LABORATORIES, INC. IF FOR ANY REASON THIS DRAWING IS PERMITTED BY WANG TO LEAVE THE PHYSICAL CUSTODY OF THE COMPANY, IT IS RETURNABLE UPON THE DEMAND OF WANG LABORATORIES, INC."

DO NOT SCALE

CLK (3B9)

INIT (B2)

INIT (1E1)

ECC DATA (7I)

WXFER ECC (B3)

INIT (1E11)

EC33

CLK (3B9)

R1 1K +5VR

R2 1K +5VR

ECB11 (3E4)

ECB10 (3F6)

ECB9 (3E3)

ECB8 (3F3)

ECB7 (3G3)

ECB6 (3E1)

ECB5 (3G3)

ECB4 (3E1)

ECB3 (3G2)

ECB2 (3E1)

ECB1 (3G3)

ECB0 (3D1)

N1 ECB0

Z1 (3C3)

Z2 (3C3)

Z3 (3C3)

EC00 EC01 EC02 EC03 EC04 EC05 EC06 EC07 EC08 EC09 EC10 EC11 EC12 EC13 EC14 EC15 EC16 EC17 EC18 EC19 EC20 EC21 EC22 EC23 EC24 EC25 EC26 EC27 EC28 EC29 EC30 EC31 EC32

L11 L12 L13 L14 L15 L16 L17 L18 L19 L20 L21 L22 L23 L24 L25 L26 L27 L28 L29 L30 L31 L32 L33 L34 L35 L36 L37 L38 L39 L40 L41 L42 L43

74175 7430 7408 7486 74174

WANG LABORATORIES, INC. LOWELL, MASS. U.S.A.	BY	DATE	APPROVED BY	DATE
	DWN [illegible] 6-7-79		E ENGR	
	CHK		M ENGR	
			MFG ENGR	
MATERIAL	MODEL NO. 2200 SMD SEE ENGRG. SPECIFICATIONS No.	TITLE ECC / DEVICE INTERFACE		
FINISH	TOL. EX. AS NOTED XX ± FRAC. ± XXX ± ANG. ± FINISH √	210-7422	D	7422	8
	SCALE SHT 1 OF 6	WANG PART NUMBER	SIZE	DRAWING NUMBER	REV.

NO.	REVISION	DATE
	SEE SHT 6 FOR REV	

D 7422

"THIS DRAWING AND THE DATA SHOWN THEREON ARE THE CONFIDENTIAL PROPERTY OF, AND ARE PROPRIETARY TO, WANG LABORATORIES, INC. THIS DRAWING AND THE DATA SHOWN THEREON MAY NOT BE MADE PUBLIC WITHOUT THE WRITTEN CONSENT OF WANG LABORATORIES, INC. IF FOR ANY REASON THIS DRAWING IS PERMITTED BY WANG TO LEAVE THE PHYSICAL CUSTODY OF THE COMPANY, IT IS RETURNABLE UPON THE DEMAND OF WANG LABORATORIES, INC."

DO NOT SCALE

READ DATA LO
READ DATA HI
READ CLOCK LO
READ CLOCK HI
SERVO CLOCK LO
SERVO CLOCK HI
WTG
DONE
RESERVED FOR INDEX LO
RESERVED FOR INDEX HI
RESERVED FOR SECTOR LO
RESERVED FOR SECTOR HI
UNIT SELECT HI
UNIT SELECT LO

+0V
-5VR
R3 R4 R5 R6 R7 R8 R9 R10 56Ω
R11 R12 R13 R14 R15 R16 R17 R18 56Ω
R19 R20 R21 R22 R23 R24 R25 R26 56Ω
R27 R28 R29 R30 R31 R32 56Ω
L4 3450 A- A+ B- B+ C- C+ D- D+ VEE STB Ao Bo Co Do
L2 3450
L1 3450
L3 3450
1ON(3E4)
2ON(3E5)
READ DATA (N2)
R33 R34 R35 R36 56Ω
L13 75110
WRITE DATA (S1)
1ON(3E4)
RDG (A2)
+5VR
R37 2.2K
PRIME (K1)
L15 7400
R38 R39 R40 R41 56Ω
L11 75110
WT CLK(2C7)
2ON(3E4)
WRITE CLOCK HI
WRITE CLOCK LO
WRITE DATA HI
WRITE DATA LO
L46 7400
L47 74S10
WT CLK (2B11)
PLO CLOCK (3B11)
READ DATA
PLO CLOCK
7404
1 SELECTED(3E7)
SELECTOR MARK 1(3C11)
INDEX 1(3G11)
2 SELECTED
SECTOR MARK 2(3D6)
INDEX 2 (3D6)
L50 74161 CK A B C D ENP ENT CLR QA QB QC QD RCO LD
L40 74161
L51 7404
THS5 (3D10)
THS4 (3D10)
THS3 (3D10)
THS2 (3D10)
THS1 (3D10)
THS0 (3D10)
SELECT 2(4G3)
2 SELECTED (3E7)
R.W.F.(3B.10)
L39 25L32521 A0 B0 A1 B1 A2 B2 A3 B3 A4 B4 A5 B5 A6 B6 A7 B7 EIN EOUT
BK1(3D6)

REVISION	BY	DATE
SEE SHT 6		

	BY	DATE	APPROVED BY	DATE
DWN	[illegible]	6-7-79	E ENGR	
CHK			M ENGR	
			MFG ENGR	

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

MATERIAL

MODEL NO. 2200 SMD
SEE ENGRG. SPECIFICATIONS
No.

FINISH

TOL. EX. AS NOTED
.XX ± FRAC. ±
.XXX ± ANG. ± FINISH √

SCALE SHT 8 OF 6

TITLE: ECC/DEVICE INTERFACE

210-7422 | D | 7422 | 8
WANG PART NUMBER | SIZE | DRAWING NUMBER | REV.

D 7422

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DO NOT SCALE

INDEX 1 (2E1)

L51 7404

L19 74161 — A B C D CK ENP ENT CLR LD QA QB QC QD RCO

L51 7404

L30 74161 — A B C D CK ENP ENT CLR LD QA QB QC QD RCO

R107 2.2K +5VR

LOAD ECC (P1)

L27 7402

SHIFT ECC (M3)

SHIFT ECC (3B11)

TP1 (P2)

L38 74LS299 — S1 SHL CK CLR SHR G1 G2 SO QH' QH

R108 2.2K +5VR

L37 74LS299 — S1 SHL CK CLR SHR G1 G2 SO QH' QH

R105 2.2K +5VR

ECB8 (14C)

ECB10 (1D4)

ECB8 (1C3) ECB7 (1C4)

ECB1 (1B4) ECB3 (1B4)

ECC SHIFTED

THS 5 (B3)
THS 4 (C3)
THS 3 (E3)
THS 2 (D3)
THS 1 (2B3)
THS Ø (C3)

THS 5 (2C5)
THS 4 (2C5)
THS 3 (2C5)
THS 2 (2B5)
THS 1 (2B5)
THS Ø (2B5)

1 SELECTED (2E1)

SELECT 1 (4G3)

L28 7408

1 ON

L16 7404

1 ON (2E11)

1 ON (2D11)

SELECT 2 (4G3)

L28 7408

2 ON

L16 7404

2 ON (2E9)

2 ON (2B11)

2 SELECTED (2B1)

L27 7402

L48 74S260

L48 74S260

ECB0 (1B5)
ECB2 (1B4)
ECB4 (1B5)
ECB6 (1C4)

L14 7410

L15 7400

L16 7404

L29 25LS2521 — A0 B0 A1 B1 A2 B2 A3 B3 A4 B4 A5 B5 A6 B6 A7 B7 EIN EOUT

±0V

SELECT 2

L17 74157 — 1A 1B 2A 2B 3A 3B 4A 4B 1Y 2Y 3Y 4Y STB

INDEX 2 (2D5)

SELECTOR MARK 2 (2D5)

BK1 (2B3)

L27 7402

EQUALS

SORI

Z1 (1F8)
Z2 (1C8)
Z3 (1F4)

L16 7404
L16 7404
L16 7404

L25 7420

NULL

SECTOR MARK1 (2E1)

R.W.F. (2B5)

R.W.F.

L28 7408

L49 74S32

SHIFT ECC (3G4)

PLO CLOCK (2A6)

CLK (1F11) (1D2)

REVISION	BY	DATE	APPROVED BY	DATE
SEE SHT 6	DWN Kenneth Gardner	6-7-79	E ENGR	
	CHK		M ENGR	
			MFG ENGR	

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

MATERIAL

MODEL NO. 2200 SMD — SEE ENGRG. SPECIFICATIONS No.

FINISH

TOL. EX. AS NOTED .XX ± FRAC. ± .XXX ± ANG. ± FINISH √

TITLE ECC/DEVICE INTERFACE

SCALE — SHT 3 OF 6

210-7422 — WANG PART NUMBER | D — SIZE | 7422 — DRAWING NUMBER | 8 — REV.

D 7422

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DO NOT SCALE

TAG 3 (E2) TAG 2 (K2) TAG 1 (J2) FC 9 (H1) FC 8 (J3) FC 7 (10 3) FC 6 (N3) FC 5 (12 3) FC 4 (L3) FC 3 (K3) FC 2 (H3) FC 1 (T3) FC Ø (F3)

RDG WTG (P3)

ON CYLINDER TO (17B) ON CYLINDER HI (47B) UNIT READY TO (19B) UNIT RESPONSE HI (49B) FAULT LO (15B) FAULT HI (45B) SEEK ERROR LO (16B) SEEK ERROR HI (46B)

WRITE PROTECTED LO (28B) WRITE PROTECTED HI (50B)

SELECT 2 (7 2) SELECT 1 (H 2) PWR ON (5 2) SELECT (6 2) +5VR

SELECT 2 (3E6)(2C2) SELECT 1 (3E6)

R58 2.2K

R66 20K +5VR

R67 20K -5VR

FCO

7400 L2Ø TAG 3 TAG 3 — 7400 L2Ø TAG 2 TAG 2 — 7400 L2Ø TAG 1 TAG 1

LT 3450 A- A+ B- B+ C- C+ D- D+ VEE STB A0 B0 C0 D0 — R42 R43 R44 R45 R46 R47 R48 R49 56Ω — -5VR ±0V

LS 3450 A- A+ B- B+ C- C+ D- D+ VEE STB A0 B0 C0 D0 — R50 R51 R52 R53 R54 R55 R56 R57 56Ω — -5VR ±0V

L27 7402 L26 7408 L15 7400

L10 3453 L9 3453 L8 3453 L6 3453 L18 3453 — 1A 1B 1C 1D INH — AY AZ BY BZ CY CZ DY DZ — VEE -5VR

UNIT SELECT 21 HI (2 3) UNIT SELECT 21 LO (3 3) UNIT SELECT 20 HI (14 3) UNIT SELECT 20 LO (13 3) OPEN CABLE DETECTOR HI (5 4) OPEN CABLE DETECTOR LO (4 4) UNIT SELECT TAG HI (11 2) UNIT SELECT TAG LO (12 2)

R59 R60 R61 R62 R63 R65 R67 R68 56Ω

OPEN CABLE DETECTOR HI (44B) OPEN CABLE DETECTOR LO (44A) UNIT SELECT 20 HI (23B) UNIT SELECT 20 LO (23A) UNIT SELECT 21 HI (24B) UNIT SELECT 21 LO (24A) UNIT SELECT TAG HI (22B) UNIT SELECT TAG LO (22A)

UNIT SELECT 22 LO (27B) R69 680Ω +5VR

UNIT SELECT 23 LO (27B) R71 56Ω ±0V

UNIT SELECT 22 HI (56B) R70 56Ω -5VR

UNIT SELECT 23 HI (57B) R72 680Ω ±0V

R73 R74 R75 R76 R77 R78 R79 R80 56Ω — ±0V

R81 R82 R83 R84 R85 R86 R87 R88 56Ω — ±0V

R89 R90 R91 R92 R93 R94 R95 R96 56Ω — ±0V

R97 R98 R99 R100 R101 R102 R103 R104 56Ω — ±0V

BIT Ø HI (3B) BIT Ø LO (4B) TAG 3 HI (38B) TAG 3 LO (33B) TAG 2 HI (32B) TAG 2 LO (23B) TAG 1 HI (31B) TAG 1 LO (13B) J3

BIT 4 HI (38B) BIT 4 LO (8B) BIT 3 HI (37B) BIT 3 LO (7B) BIT 2 HI (36B) BIT 2 LO (6B) BIT 1 HI (35B) BIT 1 LO (5B) J3

READY (33) DERROR (22) WP (J3)

BIT 8 HI (42C) BIT 8 LO (12B) BIT 7 HI (41B) BIT 7 LO (11B) BIT 6 HI (40B) BIT 6 LO (10B) BIT 5 HI (39B) BIT 5 LO (9B) J3

BIT 9 HI (43B) BIT 9 LO (43A)

SEE SHT 6

REVISION	BY	DATE

	BY	DATE	APPROVED BY	DATE
DWN	Kaspercheck	6-7-79	E ENGR	
CHK			M ENGR	
			MFG ENGR	

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

MATERIAL

MODEL NO. 2200 SMD

SEE ENGRG. SPECIFICATIONS' No.

FINISH

TOL. EX. AS NOTED .XX ± FRAC. ± .XXX ± ANG. ± FINISH √

SCALE SHT 4 OF 6

TITLE ECC/DEVICE INTERFACE

210-7422 WANG PART NUMBER | D SIZE | 7422 DRAWING NUMBER | 8 REV.

7422

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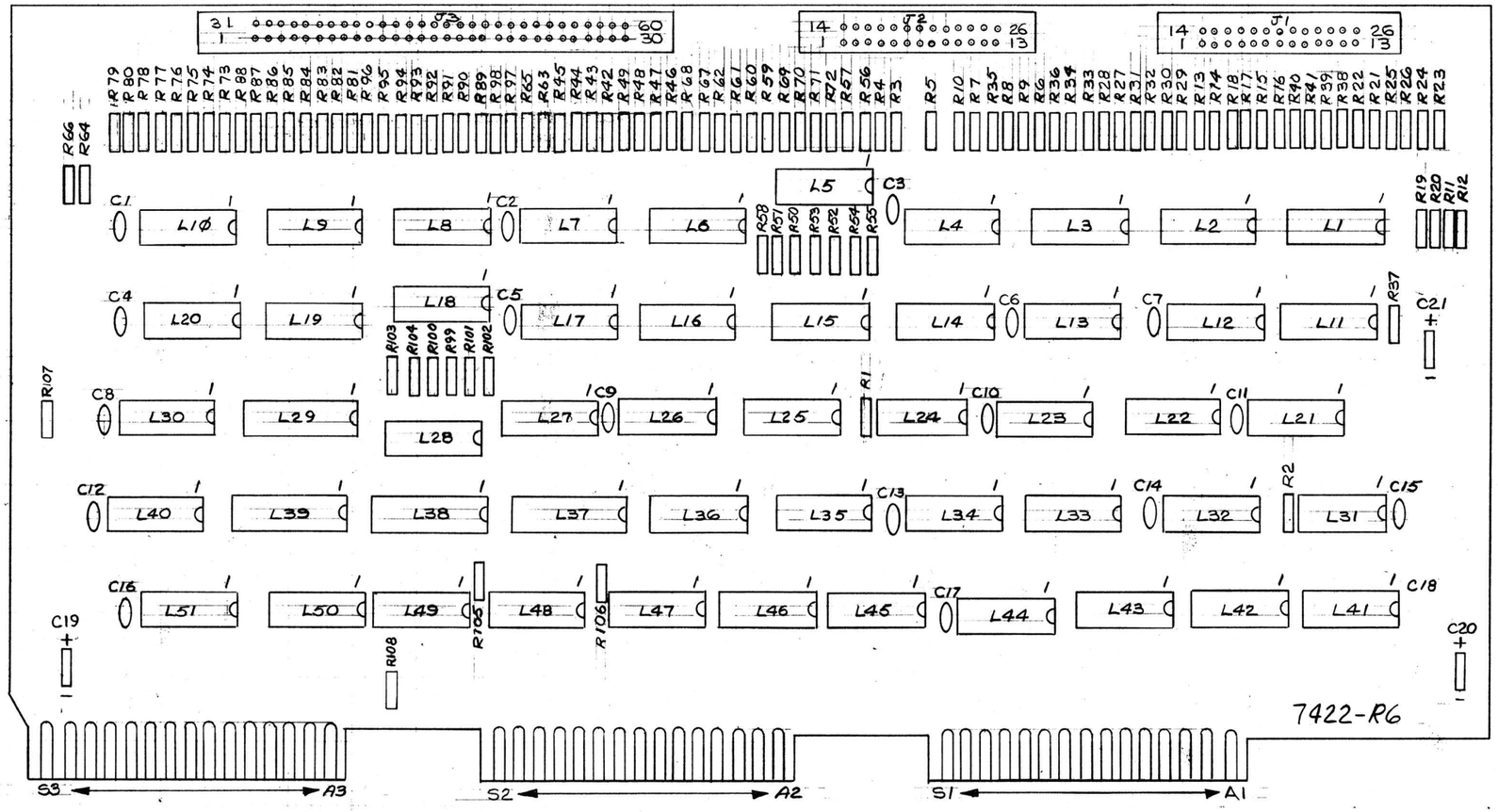
DO NOT SCALE



DATE	BY	REVISION	NO.
		SEE SHT. 6	

DOBLOVE PRESS

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

MATERIAL	MODEL NO. 2200 SMD SEE ENGRG. SPECIFICATIONS No.	TOL. EX. AS NOTED .XX ± FRAC. ± .XXX ± ANG. ± FINISH √ SCALE SHT 5 OF 6
FINISH		

BY	DATE	APPROVED BY	DATE
DWN Ruz Sechur	6-7-77	E ENGR	
CHK		M ENGR	
		MFG ENGR	

TITLE: ECC/DEVICE INTERFACE

WANG PART NUMBER	SIZE	DRAWING NUMBER	REV.
210-7422	D	7422	3

D 7422

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DO NOT SCALE

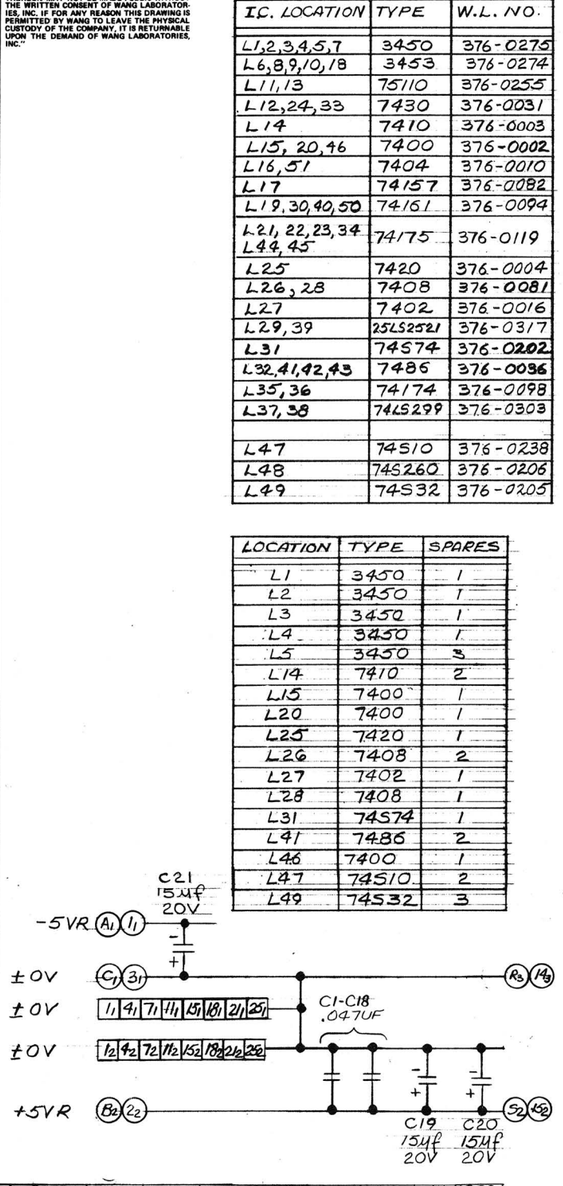
IC. LOCATION	TYPE	W.L. NO.
L1,2,3,4,5,7	3450	376-0275
L6,8,9,10,18	3453	376-0274
L11,13	75110	376-0255
L12,24,33	7430	376-0031
L14	7410	376-0003
L15, 20,46	7400	376-0002
L16,51	7404	376-0010
L17	74157	376-0082
L19,30,40,50	74161	376-0094
L21, 22,23,34 L44, 45	74175	376-0119
L25	7420	376-0004
L26, 28	7408	376-0081
L27	7402	376-0016
L29, 39	25LS2521	376-0317
L31	74S74	376-0202
L32,41,42,43	7486	376-0036
L35, 36	74174	376-0098
L37, 38	74LS299	376-0303
L47	74S10	376-0238
L48	74S260	376-0206
L49	74S32	376-0205

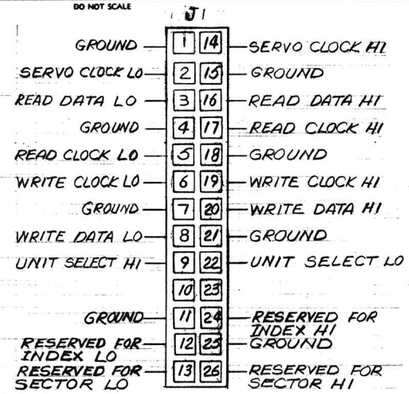
COMPONENT	TYPE	W.L. NO.
R1, R2	1K, 1/4 10%	330-3010
R37, 58, 105, 106, 107, 108	2.2K 1/4W 10%	330-3022
R64,66,	20K, 1/4W 10%	330-4020
R69, 72	680Ω, 1/4W 1%	330-2068
R3-36 R38-57, R59-63 65, 67, 68, 70, 71, 73-104	56Ω 1/4W 10%	330-1056
C1-C18	.047UF, 50V	300-1966
C19, 21	15UF 20VTA	300-4022
J1, 2	26 PIN CONN	350-0058
J3	60 PIN CONN	350-0057

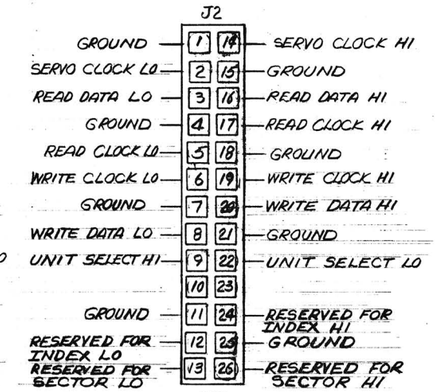
LOCATION	TYPE	SPARES
L1	3450	1
L2	3450	1
L3	3450	1
L4	3450	1
L5	3450	3
L14	7410	2
L15	7400	1
L20	7400	1
L25	7420	1
L26	7408	2
L27	7402	1
L28	7408	1
L31	74S74	1
L41	7486	2
L46	7400	1
L47	74S10	2
L49	74S32	3

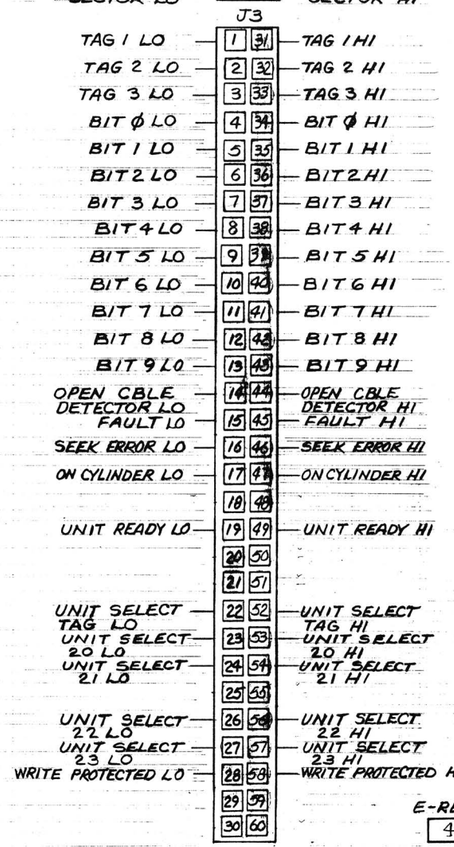
MNEMONIC	COORD
BIT 0-9 LO	4A7
BIT 0-9 HI	4A7
DONE	2G6
DERROR	4A6
ECBØ	1A8
ECC DATA	1G3
ECC SHIFTED	3E1
EQUALS	3A4
FAULT HI	4G7
FAULT LO	4G7
FCØ-FC9	4F11
INIT	1F11
NULL	3C1
LOAD ECC	3G5
ON CYLINDER HI	4G8
ON CYLINDER LO	4G8
OPEN CABLE DETECTOR HI	4D1
OPEN CABLE DETECTOR LO	4D1
PLO CLOCK	2A6
PRIME	2C11
PWR ON	4G2
RDG	2C11
RDG-WTG	4G10
READ CLOCK HI	2G7,2G10
READ CLOCK LO	2G8,2G10
READ DATA	2A7
READ DATA	2E11
READ DATA HI	2G8,2G10
READ DATA LO	2G8,2G10
READY	4A6
RESERVED FOR INDEX HI	2G5

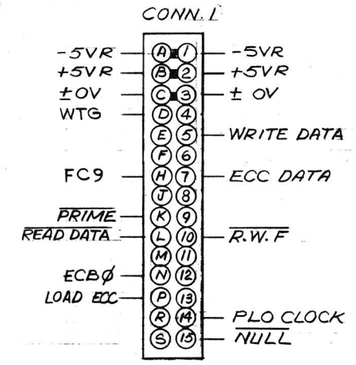
MNEMONIC	COORD
RESERVED FOR INDEX LO	2G5
R.W.F	3B11
RESERVED FOR SECTOR HI	2G3,2G5
RESERVED FOR SECTOR LO	2G3,2G5
SEEK ERROR HI	4G7
SEEK ERROR LO	4G7
SELECT	4G2
SELECT 1,2	4G2
SERVO CLOCK HI	2G7,2G10
SERVO CLOCK LO	2G7,2G10
SHIFT ECC	3G4
SHIFTED	2G8
SORI	3A4
TAG1-3	4G11
TAG1-3 HI	4A10
TAG1-3 LO	4A10
THSØ-5	3E11
TPI	3G3
UNIT SELECT 20-21 HI, LO	4D2
UNIT SELECT 22,23 HI, LO	4D11
UNIT SELECT TAG HI, LO	4D1
UNIT READY HI, LO	4G8
WXFER ECC	1G1
WRITE CLOCK HI	2A8,2A9
WRITE CLOCK LO	2A8,2A9
WRITE DATA	2D11
WRITE DATA HI	2A8
WRITE DATA LO	2A8
WRITE PROTECTED HI, LO	4G5
WP	4A6
WTG	2G6

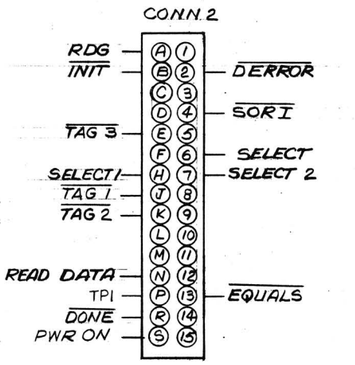


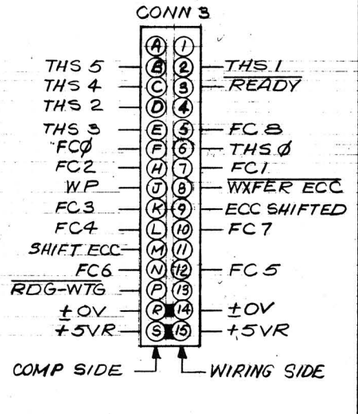












E-REV 4

D 7422

NO.	REVISION	BY	DATE
0	ORIGINATED PER DWR E 5497 APP'D:	R.S.	6-7-79
1/0	REVISED PER ECN #10865 APP'D:	R.S.	6-7-79
2/0	REVISED PER ECN #11170 APP'D:	R.S.	6-7-79
3/1	REVISED PER ECN 11587 APP'D:	R.S.	6-7-79
4/2	REVISED PER ECN 11638 APP'D:	R.S.	6-7-79
5/2	REVISED PER ECN 12283 APP'D:	A.B.	10-2-79
6/3	REVISED PER ECN 14564 APP'D:	S.D.B.	4-22-80
7/4	REVISED PER ECO #18092 APP'D:	J.K.	3-16-81
8/4	REVISED PER ECO #18810 APP'D:	S.D.B.	6/21/81

BY	DATE	APPROVED BY	DATE
DWN			
CHK	7-2-79	M ENGR	
		MFG ENGR	

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

MATERIAL	MODEL NO. 2200 SMD SEE ENGRG. SPECIFICATIONS No.	TITLE ECC/DEVICE INTERFACE
FINISH	TOL. EX. AS NOTED .XX ± FRAC. ± .XXX ± ANG. ± FINISH √	210-7422 WANG PART NUMBER | D SIZE | 7422 DRAWING NUMBER | 8 REV.
	SCALE | SHT 6 OF 6	

"THIS DRAWING AND THE DATA SHOWN THEREON ARE THE CONFIDENTIAL PROPERTY OF, AND ARE PROPRIETARY TO, WANG LABORATORIES, INC.. THIS DRAWING AND THE DATA SHOWN THEREON MAY NOT BE MADE PUBLIC WITHOUT THE WRITTEN CONSENT OF WANG LABORATORIES, INC. IF FOR ANY REASON THIS DRAWING IS PERMITTED BY WANG TO LEAVE THE PHYSICAL CUSTODY OF THE COMPANY, IT IS RETURNABLE UPON THE DEMAND OF WANG LABORATORIES, INC."

DO NOT SCALE

READ DATA (N2)

R6

R10 (4,) → R10(1E6)(2E5)

AK0 (11₂) AK1 (10₂) AK2 (14₂) AK3 (9₂) AK4 (12₂) AK5 (3₃) AK6 (4₃) AK7 (15₂)

R0 (M₃) → R0(2F5)
R1 (9₃) → R1(2G4)
R2 (3₂) → R2(2G4)
R3 (1₃) → R3(2G4)
R4 (F₂)
R6 (B₁)

L51 74LS374 OC — AK0–AK7 → THS0–THS7
LD TRACK (1E4)
TRACK ON(1B8)

L50 74LS374 OC — AK0–AK7 → THS0–THS7
LD HEAD (1E4)
HEADON (1B8)

L49 74LS374 OC — AK0–AK7 → THS0–THS7

L53 74LS374 OC — R0–R4, ±0V → FC2–FC7

L52 74LS244 — THS0–THS7 → THSB0 (1C11), THSB1 (1D11), FC2–FC7

CNTRL38(2E5) R7(2E6) → L38 7400
R10(1G4) R9(2E6) → L37 9321
LD TRACK (1F10)
LD HEAD (1E9)

L27 74LS276 CLR
CNTRL28 (3G5)
PRIME (2D11)
AK6, AK7
TAG 3 REQ (2F3) → L17 7451 → L18 7404 → (5₃) FC8
TK 256 (1B7)
TK 512 (1C7)
TAG 1 REQ (1C11)(2G2) → L28 7408 → (H1) FC9
CMP (3E4) ← L18 7404

(10₃) FC7
(N3) FC6
(12₃) FC5
(L3) FC4
(K3) FC3
(H3) FC2
(73) FC1
(F3) FCØ

L20 7404
ENBC700 (2A4)
+5VR, R1 2.2K
L47 74LS299 — A/QA, B/QB, C/QC, D/QD, E/QE, F/QF, G/QG, H/QH, SR, SL, CK, CLR
L38 7400, L18 7404
PLO CLOCK (2B11)
RDG (3C4), ±0V
RDG·WTG (2F8)
M0–M7
SYNC BIT(2C11)
W DATA(2E8)

THSB1 (1E7), RDG (2F10), THSB0 (1E7), RD/WT GATE(3F2), WTG (2G7)
L10 7451 → L20 7404 → FC1, FCØ

TAG 1 REQ (2G2), TAG 2 REQ (2G2) → L40 9321 → L38 7400, L39 7408
TRACK ON (1F9)
HEAD ON (1D9)
BT1 (2C5), BT2 (2C4), ADDCK (3F5) → L40 9321 → L20 7404 → ENDADD (3D10)
WRITE (P1) → WRITE (3C7)

TK512 (1F1), THS7 (1B1) → L15 7451 → L35 7404
TK256 (1G3), THS6 (1B1) → L15 7451 → L35 7404
L35 7404 → L38 7400 → TRACK ON (1F9)
L39 7408 → HEAD ON (1D9)

L16 7411
R+W(3G5)
L25 7432 → WRITE (3C7)

L48 2521 — THS0–THS5, M0–M7, Eout, Ein (+0V)
ADD ERROR(3D10)
L9 7474 — ID, ICK, ICLR, IPR, IQ
ADDCK (3F5)
C700 (2B7)

(S1) MØ
(C2) M1
(D2) M2
(11₃) M3
(22) M4
(52) M5
(12₁) M6
(10₄) M7

(B3) THS 5
(C3) THS 4
(E3) THS 3
(D3) THS 2
(23) THS 1
(63) THS Ø
THS 7 (1C7)
THS 6 (1B7)
(J3) ERROR

D 17424

REVISION NO.	SEE SHT 4

WANG LABORATORIES, INC. LOWELL, MASS. U.S.A.	BY	DATE	APPROVED BY	DATE
	DWN [illegible]	MAY 79	E ENGR	
	CHK		M ENGR	
MATERIAL —	MODEL NO. 2200 SMD		MFG ENGR	
	SEE ENGRG. SPECIFICATIONS No.	TITLE	I/O CONTROLLER	
FINISH —	TOL. EX. AS NOTED .XX ± FRAC. ± .XXX ± ANG. ± FINISH √	210-7424	D	17424	12
	SCALE — SHT OF 4	WANG PART NUMBER	SIZE	DRAWING NUMBER	REV.

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DO NOT SCALE

WTG (3B4)
BT4 (2C4)
RDG (3C4)
ENBC200 (2B4)
READ DATA
ECBØ
PRIME (3F9)(1E3)(2E3)
FOMT (3C9)
PLO CLOCK (14)
SYNC BIT (1D5)
SYNC ENB (3F4)
PLO CLOCK (1D7)
WTG (1C11)(3G5)
BKL (2B3)
BT256 (2C2)
C700 (2B7)
RDG (1D11)(3G5)
WT12 (3E10)
RDG-WTG (1C7)(3E4)
BIT 4
SORI 13
DONE (3D7)
RFM (3D4)
WDATA (10S)
SORI (3F8)
WT12
FOMT (3E10)
SECTOR (3E10)
C700 (2G9)(3G2)
C700 (3G5)(1A4)
ENBC700
ENBC700 (1D8)
R9
R7 TØ1
CNTRL 3 T4
R8 (3G6) R11(1E10)
R2(1E10)
R3(1E10)
CNTRL 34
R8
TAG1 REQ (1C11)(1F3)
TAG2 REQ (1B11)
TAG3 REQ (1G3)
TAG1
TAG2
TAG3
SELECT1
SELECT2
SELECT
PRIME (2D11)
TØ1
R7(1E6) (3E6)
R9(1E6)
CNTRL 38 (1E6)
R10(1G4)
R0(1E10)
R9
+5V
+0V
R5 2.2K
R3 2.2K
FERSTB (3D9)
BT1 (1B11)
BT2(1B11)
BT4(2G11)
BT8
BT16(3E10)
BT256(2G9)
BKL (2G10)
ENBC200 (2F11)
ENBC500 (3G4)
C100
SEE SHEET 4
C1 WTG
31 C700
P3 RDG·WTG
51 WRITE DATA
71 ECC DATA
R2 DONE
61 DONE
83 WXFER ECC

WANG LABORATORIES, INC. LOWELL, MASS. U.S.A.	BY	DATE	APPROVED BY	DATE
	DWN P. Beaussant	15 MAY 79	E ENGR	
	CHK		M ENGR	
			MFG ENGR	
MATERIAL —	MODEL NO. 2200 SMD SEE ENGRG. SPECIFICATIONS No.		TITLE I/O CONTROLLER	
FINISH —	TOL. EX. AS NOTED .XX ± FRAC. ± .XXX ± ANG. ± FINISH √		210-7424	D	7424	12
	SCALE — SHT 2 OF 4		WANG PART NUMBER	SIZE	DRAWING NUMBER	REV.

REVISION	BY	DATE

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DO NOT SCALE

SOR1 (4Z) · DERROR (A2) · EQUALS (13Z) · T8 (A3) · CNTRL 2 (MZ) · READ (13I) · R8 (11J3)

SOR1 (2E10)

T8(2F6)

R8(2G5)

CNTRL 2B (1F4)

RDG(2F10) → L2 RDG

ENBC 500(2B4) → L12 7414 → L32 7450 → L12 7414 → D1 CRESET

C700(2B7) · WTG(2G7) → L17 7451 → INIT

C700(2B7) → L21 7474 → M1 T500

±0V

INIT → B2 INIT

R7(2E6) → L8 7400 → L18 7404 → INIT

L18 7404 → SECTOR (2C9)

L20 7404 → L19 7474 → ADDCK(1B11) → ADDCK(1A4)

L9 7474 → L28 7432 → SYNC ENB(2B10)

L33 7474 → RD/WTG GATE (1C11)

ADD WER

RDG-WTG(2F8)

±0V → C1 910 pf

PRIME(2D11) → L34 7408

FOMT(2C8) · BT16(2C4) · WT12(2F9) → L14 7420 → L34 7408 → L16 7411

SECTOR

WTM → L45 7408 → 91 WTM·CMP

CMP(1F2) · RFM(2E7) → L45 7408 → F1 RFM·CMP

XFERSTB(2D6)

FOMT

DONE(2F7) → L36 7411

ADDWER

READ → L34 7408

ENDADD(1B9) · ADD ERROR(1B3) → L14 7420

L33 7474

FOMT(2C11)

ADD CK

WRITE(1A9) · READ · L25 7432 → L24 7451 → RDG(1C7)(2F11)

RIW(1A8)

C2 470PF · C3 470PF · ±0V

SECTOR → S2 SECTOR

FOMT → L24 7451 → WTG(2G11)

WRITE

SEE SHEET 4

WANG LABORATORIES, INC. LOWELL, MASS. U.S.A.		BY	DATE	APPROVED BY	DATE
	DWN R Rousseau		15 MAY 79	E ENGR	
	CHK			M ENGR	
				MFG ENGR	
MATERIAL //	MODEL NO. 2200SMD SEE ENGRG. SPECIFICATIONS No.	TITLE I/O CONTROLLER			
FINISH //	TOL. EX. AS NOTED .XX ± FRAC. ± .XXX ± ANG. ± FINISH √	210-7424	D	7424	12
	SCALE 2/ SHT 3 OF 4	WANG PART NUMBER	SIZE	DRAWING NUMBER	REV.

D 7424

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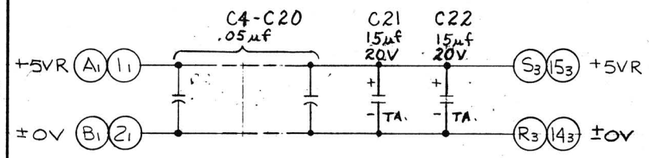
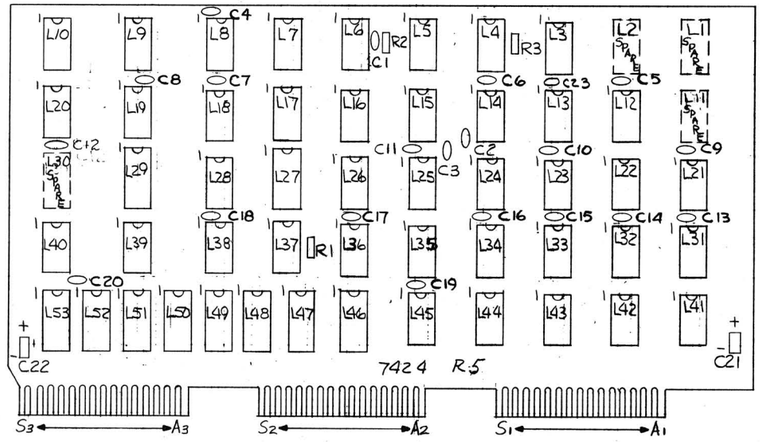
DO NOT SCALE

COMPONENT	WLI NO.	TYPE
C23	300-1220	220pf, 500V
C1, C2, C3	300-1470	470 pf, 500V
C4 -C20	300-1900	.05μF, 12VDC
C21, C22	300-4022	15μF, 20V
R1, R2, R3	330-3022	2.2K, 1/4W 10%



LOCATION	WL PART NO	TYPE
L3, L16, L36, L41	376-0194	7411
L4	376-0298	74S138
L5, L6, L7	376-0053	74193
L10, L17, L15, L24	376-0012	7451
L18, L20, L35	376-0010	7404
L9, L13, L19, L21, L33, L44	376-0006	7474
L14, L43	376-0004	7420
L12	376-0139	7414
L22, L25	376-0093	7432
L23, 28, 34, 39, 45	376-0081	7408
L26, L31	376-0016	7402
L27, L29, L46	376-0318	74276
L32, L42	376-0238	74S10
L37, L40	376-0096	9321
L8, L38	376-0002	7400
L47	376-0303	74LS299
L48	376-0317	25LS2521
L49, L50, L51, L53	376-0286	74LS374
L52	376-0288	74LS244
L1, L2, L11, L30	SPARE	

TYPE	LOCATION	SPARES
7432	L22	1
7414	L12	1
7408	L39	2
7411	L41	1
7474	L44	1



CONN 1

+5VR	A 1	1	+5VR
±0V	B 2	2	±0V
WTG	C 3	3	C700
CRESET	D 4	4	R10
R9	E 5	5	WRITE DATA
RFM·CMP	F 6	6	DONE
FC9	H 7	7	ECC DATA
C100	J 8	8	R6
PRIME	K 9	9	WTM CMP
READ DATA	L 10	10	M7
T500	M 11	11	M3
ECBØ	N 12	12	M6
WRITE	P 13	13	READ
FOMT	R 14	14	PLO CLOCK
MØ	S 15	15	R7

CONN 2

DERROR	A	1	T0I
INIT	B	2	M4
M1	C	3	R2
M2	D	4	SOR1
TAG3	E	5	M5
R4	F	6	SELECT
SELECT 1	H	7	SELECT2
TAG 1	J	8	T4
TAG2	K	9	AK3
RDG	L	10	AK1
CNTRL2	M	11	AKO
READ DATA	N	12	AK4
CNTRL3	P	13	EQUALS
DONE	R	14	AK2
SECTOR	S	15	AK7

CONN 3

T8	A	1	R3
THS5	B	2	THS1
THS4	C	3	AK5
THS2	D	4	AK6
THS3	E	5	FC8
FCØ	F	6	THSØ
FC2	H	7	FC1
ERROR	J	8	WXFER ECC
FC3	K	9	R1
FC4	L	10	FC7
RØ	M	11	R8
FC6	N	12	FC5
RDG·WTG	P	13	
±0V	R	14	±0V
+5VR	S	15	+5VR

MNEMONIC	COORDINATE
AKØ-AK7	1F11
CNTRL2	3G7
CNTRL3	2G5
CRESET	3G1
C100	2B1
C700	2A7
DERROR	3G8
DONE	2A5
DONE	2A5
ECB Ø	2D11
ECC DATA	2A6
EQUALS	3G8
ERROR	1B1
FCØ-FC9	1E1
FOMT	2D11
INIT	3F1
MØ-M7	1D1
PLO CLOCK	2C11
PRIME	2D11
RDG	3G1
RDG·WTG	2A6
READ	3G7
READ DATA	1G8
READ DATA	2E11
RØ-R4, R6	1E11
RFM·CMP	3D1
R7	2G6
R8	3G6
R9	2G5

MNEMONIC	COORDINATE
R10	1G4
SECTOR	3B1
SELECT-SELECT 2	2E1
SOR1	3G9
TAG1 - TAG3	2G1
THSØ - THS 5	1C1
T500	3G1
T0I	2G5
T4	2G5
T8	3G7
WRITE	1B11
WRITE DATA	2B6
WTG	2A9
WTM·CMP	3E1
WXFER ECC	2A4

DATE	BY	NO.	REVISION
6-17-79	RPB	0	ORIGINATED PER DWG ES44 APP: DJL 6/21/79
5-17-79	RPB	1	REVISED: PER ECN# 10725 APP: DJL 6/21/79
5-17-79	RPB	2	REVISED PER ECN# 11117 APP: DJL 6/21/79
5-17-79	RBB	3	REVISED PER ECN# 11639 APP: DJL 6/21/79
6/21/79		4	REV PER ECN# 11832 APP: DJL 6/22/79
7-26-79	D.T.	5	REVISED PER ECN # 12089 APP: DJL 9-18-79
7-26-79	D.T.	6	REVISED PER ECN # 12191 APP: DJL 9-18-79
7-26-79	D.T.	7	REVISED PER ECN # 12231 APP: DJL 9-18-79
9-12-79	A.B	8	REVISED PER ECN # 12490 APP: DJL 9-18-79
9-12-79	A.B	9	REVISED PER ECN # 12497 APP: DJL 9-18-79
3-29-80		10	REVISED PER ECN# 14363 APP: DJL 3-29-80
11-13-80	F.S.	11	REVISED PER ECN# 14706 APP: DJL 11-13-80
11-16-81	ER	12	REVISED PER ECO # 19094 APP'D: [illegible]

E REV. 9

	BY	DATE	APPROVED BY	DATE
DWN	[signature]	APR 79	E ENGR M. GREER	6/21/79
CHK	D.J.L.	6/21/79	M ENGR	
			MFG ENGR	

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

MATERIAL: //

MODEL NO. 2200 SMD — SEE ENGRG. SPECIFICATIONS — No.

FINISH: //

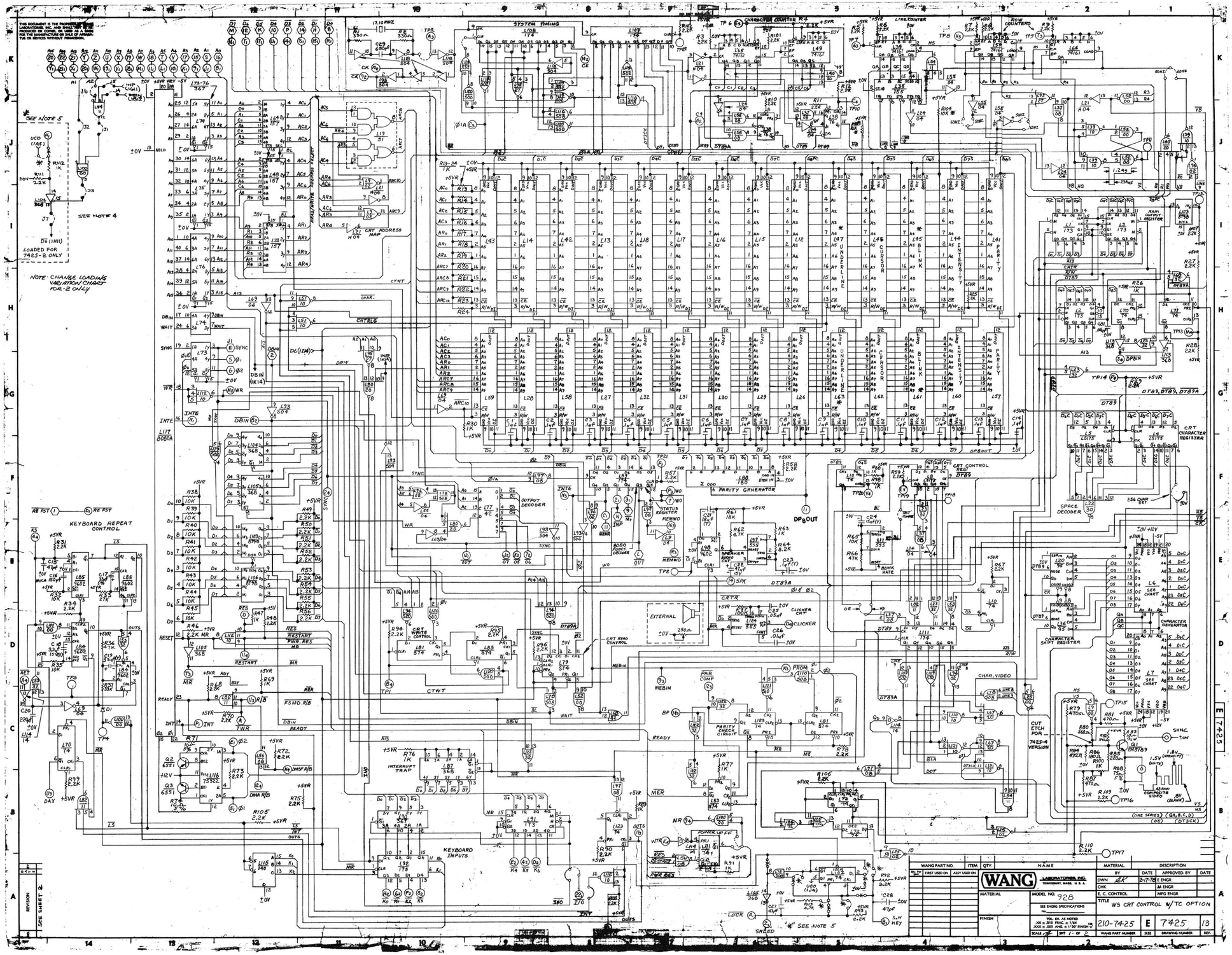
TOL. EX. AS NOTED .XX ± FRAC. ± .XXX ± ANG. ± FINISH √

SCALE: 2/1 SHT 4 OF 4

TITLE: I/O CONTROLLER

210-7424 (WANG PART NUMBER) | D (SIZE) | 7424 (DRAWING NUMBER) | 12 (REV.)

D 7424


SYSTEM TIMING
CHARACTER COUNTER R-S
LINE COUNTER
ROW COUNTERS
RAM OUTPUT REGISTER
CRT CHARACTER REGISTER
CRT CONTROL REGI
CHARACTER GENERATOR
CHARACTER SHIFT REGISTER
KEYBOARD REPEAT CONTROL
KEYBOARD INPUTS
OUTPUT DECODER
8080 SYNC DECODER
STATUS REGISTER
PARITY GENERATOR
PARITY CHECK CIRCUIT
INTERRUPT TRAP
CRT WRITE CONTROL
CRT READ CONTROL
CRT ADDRESS MAP
READ/WRITE ADDRESS SELECT
SPACE DECODER
CURSOR BLINK RATE
CLICKER
EXTERNAL
POWER UP FF
CHAR. VIDEO
CUT ETCH FOR 7425-4 VERSION
SEE NOTE 4
SEE NOTE 5
NOTE: CHANGE LOADING VARIATION CHART FOR 2 ONLY
LOADED FOR 7425-2 ONLY
SEE SHEET 2
REVISION
WANG LABORATORIES, INC.
MODEL NO. 928
TITLE WS CRT CONTROL W/TC OPTION
210-7425
E 7425
13
SCALE 1/1 OF 2
WANG PART NUMBER
SIZE
DRAWING NUMBER
REV.
E 7425

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DO NOT SCALE

LOCATION	W.L. PART NO.	TYPE
L1,2,3,91	376-0183	74173
L4,5,8	376-0160	74LS175
L6,7	SEE LOADING CHART	2708
L9,25,96	376-0016	7402
L10,70,71,72,102,123	376-0006	7474
L11,99,124	376-0126	555
L12-18, 26-32, 41-47, 57-63	SEE CHART	2102A-4
L19	376-0012	7451
L20,36	376-0059	7495
L21	376-0085	74H04
L22	376-0031	7430
L23,53,68,84,122	376-0093	7432
L24,55,69	376-0010	7404
L119	376-0199	74S02
L33,48,64	376-0082	7415T
L34,49,50,65,66	376-0094	74161
L35	376-0049	74155
L37,56,97	376-0081	7408
L38	376-0007	7476
L39,51,112,121	376-0003	7410
L40,67,80	376-0004	7420
L52,100	376-0002	7400
L94	376-0230	74820
L79,81,83	376-0202	74S74
L73,74,75,76,90	376-0176	74367
L77	376-0008	7442
L78,110	376-0200	74808
L54,82	376-0194	7411
L84,85,98	376-0104	9602
L109	376-0205	74332
L87,104,105,113	376-0179	74368
L88	376-0050	74180
L89,107,108,111	376-0098	74174
L92	376-0119	74175
L93,118	376-0197	74S04
L95	377-0125	7427
L103,106	376-0185	8798
L120	376-0228	74S00
L114	376-0139	7414
L116	376-0178	75322
L117	SEE CHART	8080A
L115	376-0069	74145

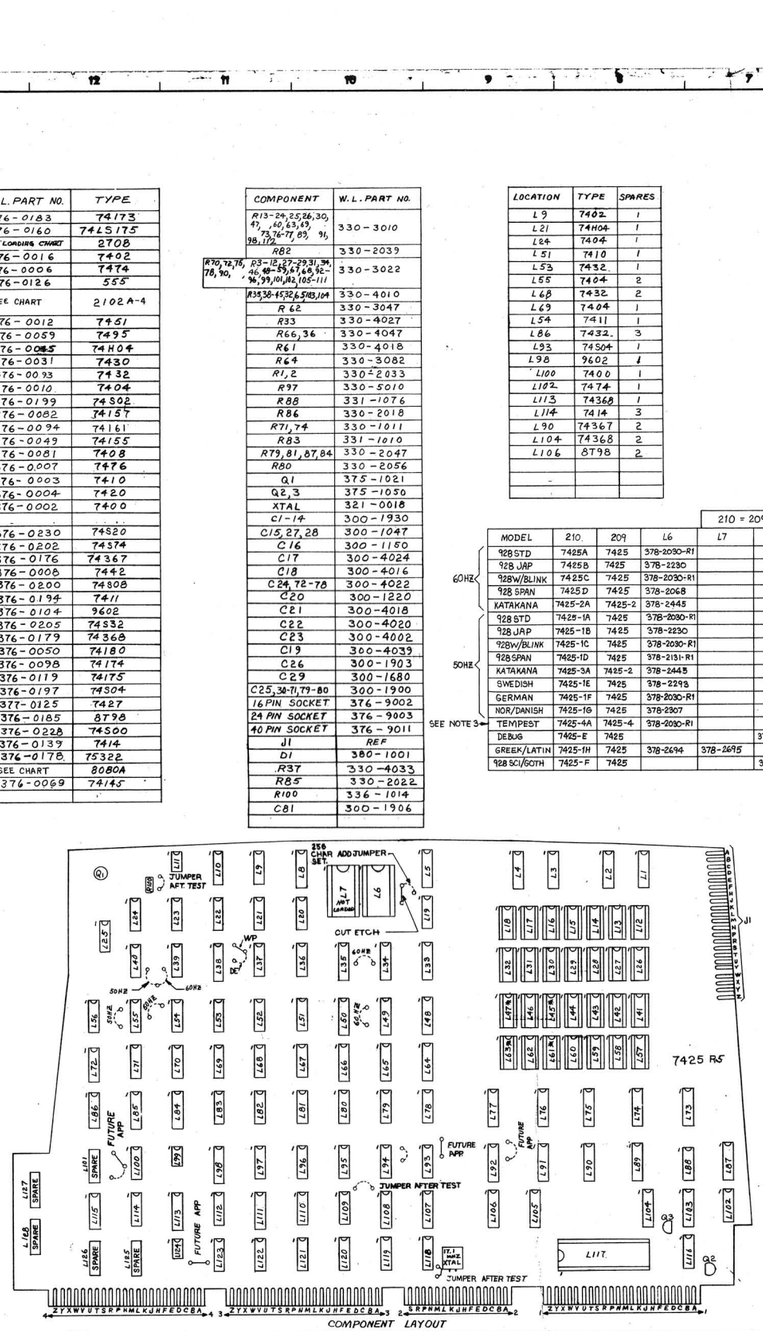
COMPONENT	W.L. PART NO.
R13-24,25,26,30, 47,50,63,69, 73,76-77,85,91, 98,172	330-3010
RB2	330-2039
R3-12,27,29,31,39, 40-59,67,69,92-96,99,101,102,105-111 (R70,72,76,78,90,)	330-3022
R35,36-45,52,65,103,104	330-4010
R 62	330-3047
R33	330-4027
R66,36	330-4047
R61	330-4018
R64	330-3082
R1,2	330-2033
R97	330-5010
R88	331-1076
R86	330-2018
R71,74	330-1011
R83	331-1010
R79,81,87,84	330-2047
R80	330-2056
Q1	375-1021
Q2,3	375-1050
XTAL	321-0018
C1-14	300-1930
C15,27,28	300-1047
C16	300-1150
C17	300-4024
C18	300-4016
C24,72-78	300-4022
C20	300-1220
C21	300-4018
C22	300-4020
C23	300-4002
C19	300-4039
C26	300-1903
C29	300-1680
C25,30-71,79-80	300-1900
16 PIN SOCKET	376-9002
24 PIN SOCKET	376-9003
40 PIN SOCKET	376-9011
J1	REF
D1	380-1001
R37	330-4033
R85	330-2022
R100	336-1014
C81	300-1906

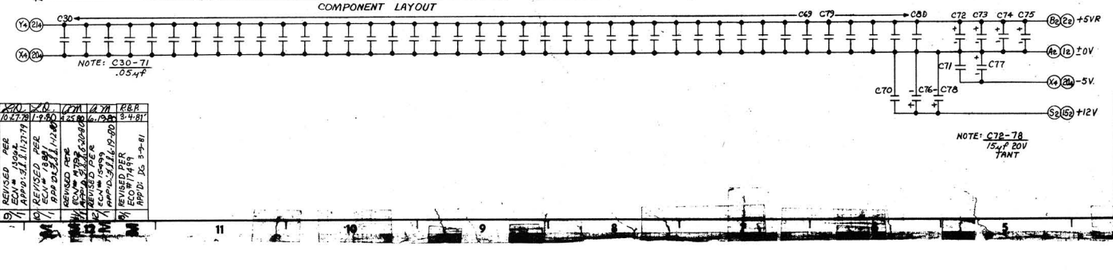
LOCATION	TYPE	SPARES
L9	7402	1
L21	74H04	1
L24	7404	1
L51	7410	1
L53	7432	1
L55	7404	2
L68	7432	2
L69	7404	1
L54	7411	1
L86	7432	3
L93	74S04	1
L98	9602	1
L100	7400	1
L102	7474	1
L113	74368	1
L114	7414	3
L90	74367	2
L104	74368	2
L106	8T98	2

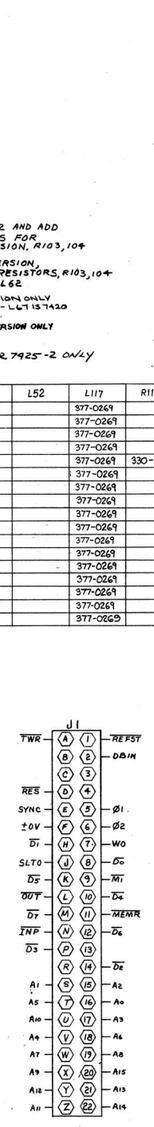
NOTES *

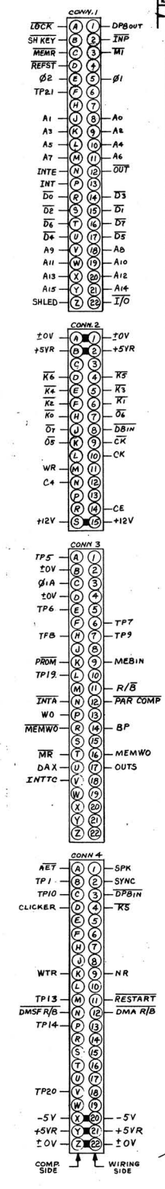
1. REMOVE L44, L46, L60, L62 AND ADD TWO (2) 10K Ω RESISTORS FOR WORD PROCESSING VERSION. R103, 104
2. FOR DATA ENTRY VERSION, DELETE TWO (2) 10KΩ RESISTORS, R103, 104 AND ADD L44, L46, L60, L62
3. LOAD FOR 7425-1 VERSION ONLY L25 IS 7402 - L54 IS 7411 - L67 IS 7420 - L72 IS 7474 - L86 IS 7432
4. R111 + R12 LOADED FOR-2 VERSION ONLY J1-7 ADDED.
5. INDICATES JUMPER FOR 7925-2 ONLY

	MODEL	210	209	L6	L7	L8	L45,61	L45,63	L51	L52	L117	R113
		210 = 209 + 377 OR 378										
60HZ	928 STD	7425A	7425	378-2090-R1			377-0069				377-0269	
	928 JAP	7425B	7425	378-2230			377-0069				377-0269	
	928W/BLINK	7425C	7425	378-2090-R1			377-0069				377-0269	
	928 SPAN	7425D	7425	378-2068			377-0069				377-0269	
	KATAKANA	7425-2A	7425-2	378-2445			377-0069				377-0269	330-0047
50HZ	928 STD	7425-1A	7425	378-2090-R1			377-0069				377-0269	
	928 JAP	7425-1B	7425	378-2230			377-0069				377-0269	
	928W/BLINK	7425-1C	7425	378-2090-R1			377-0069				377-0269	
	928 SPAN	7425-1D	7425	378-2151-R1			377-0069				377-0269	
	KATAKANA	7425-3A	7425-2	378-2443			377-0069				377-0269	
	SWEDISH	7425-1E	7425	378-2295			377-0069				377-0269	
	GERMAN	7425-1F	7425	378-2090-R1			377-0069				377-0269	
	NOR/DANISH	7425-1G	7425	378-2307			377-0069				377-0269	
SEE NOTE 3	TEMPEST	7425-4A	7425-4	378-2090-R1			377-0069				377-0269	
	DEBUG	7425-E	7425			378-2454	377-0069				377-0269	
	GREEK/LATIN	7425-1H	7425	378-2694	378-2695		377-0069				377-0269	
	928 SCI/60TH	7425-F	7425			378-2521	377-0069				377-0269	









SIGNAL-TERMINAL DESIGNATIONS, VIEW FROM BOTTOM (WIRING) SIDE OF CONNECTOR

7425	7425-1 E-REV	7425-2 E-REV	7425-4 E-REV
1	1	1	0

HOLE LEGEND		
	HOLE DIA.	TOL.
DRILLED OR PUNCHED HOLE	.0135 to .125	±.001
	.126 to .250	±.002
	.251 to .500	±.003

IDENT	DESCRIPTION	QTY.
A		

REV	DESCRIPTION	BY	DATE
A	ORIGINATED PER ECO# 3	AK	2-19-76
B	REVISED PER ECO# 3	AK	4-20-76
C	REVISED PER ECO# 3	AK	5-3-76
D	REVISED PER ECO# 3	AK	8-31-76
E	REVISED PER ECO# 3	AK	9-29-76
F	REVISED PER ECO# 3	AK	11-30-76
G	REVISED PER ECO# 3	AK	12-28-76
H	REVISED PER ECO# 3	SD	3-29-77
J	REVISED PER ECO# 3	AK	5-31-77
K	REVISED PER ECO# 3	AK	10-5-77
L	REVISED PER ECO# 3	AK	10-27-78
M	REVISED PER ECO# 3	AK	1-2-80
N	REVISED PER ECO# 3	AK	10-27-80
P	REVISED PER ECO# 3	AK	4-15-81
Q	REVISED PER ECO# 3	AK	5-4-81

WANG PART NO.	ITEM	QTY.	NAME
			WANG LABORATORIES, INC. TEWKSBURY, MASS. U.S.A.
MATERIAL			MODEL NO. 928
FINISH			SEE ENGRG SPECIFICATIONS No.
			TOL. EX. AS NOTED .XX ± .010 FRAC. ± 1/64 .XXX ± .005 ANG. ± 1°30' FINISH
			SCALE 3/4 SHT 2 OF 2

MATERIAL	DESCRIPTION			
	BY	DATE	APPROVED BY	DATE
DWN AK	2/19/76	E ENGR S. JEFFERSON		5/19/76
CHK GD	3/19/76	M ENGR		
		E. C. CONTROL		
		MFG ENGR		
TITLE WS CRT CONTROL W/TC				
210-7425	E	7425	/3	
WANG PART NUMBER		SIZE	DRAWING NUMBER	REV.

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DO NOT SCALE

BPD0 – BPP7 (3G5)

L54 LS244 — BBD0 BBD1 BBD2 BBD3 BBD4 BBD5 BBD6 BBD7 → (7C11) (7D11)

BBD0 – BBD7 (3G3) (4B10) (6C11) (6F11)

BPA1 – BPA12 (2A11)

L51 Z80 CPU — BPA0 → (2F8)(5C10); BPA1 → (5C10); BPA2 BPA3 BPA4 BPA5 BPA6 BPA7 BPA8 BPA9 BPA10 BPA11 BPA12

+5VR R1 4.7K

L21 LS138 — Y0 – READ SWITCH (3F8); Y1 – PCB READ (3F7); Y2 – RD STATUS1 (5G8); Y3 – RD STATUS2 (5E11); Y4 – READ PP (5C11)

L48 LS138 — Y0 – SET IOC BSY (3C6); Y1 – CLR IOC BSY (3B6); Y2 – SET PCB REQ (3B10); Y3 – CLR PCB REQ (3C11); Y4 – ENBLPCB WR (3E3); Y5 – SEL DMA COMD. (4B10)(5B8)

L112 LS138 — Y0 – LD MRR LOW (6E9); Y1 – LD MRR MIDDLE (6E7); Y2 – LD MRR HIGH (6E4); Y3 – LD BASE LOW (6C8); Y4 – LD BASE HIGH (6C10); Y5 – LD LEN LOW (6F10); Y6 – LD LEN HIGH (6G7); Y7 – CLK BP HIGH (7D11)

L32 LS139 — 2Y0 – CLK PCB WR (3D4); 2Y1 – WRITE PP (5B11); 2Y2 – CLK MEM CTRS (6D11)

L47 LS10 — BPA6

L85 LS04 — + BP WRITE (2F11); + BP READ (2F11)

L74 LS74 — PULSE WRITE; (+ WR PULSE)

TP13

R16 4.7K +5VR

-15VUR (J4)

R2 100Ω

Q1 2N6387

L14 723 — R3 1K; R4 470Ω; R5 390Ω; R10 1K; R11 4.7K; C1 .0022MF; C2 15MF 20V (T); R6 470Ω; R9 330Ω → TP12V

-12V (J2) (A2)

L29 161 — R7 4.7K WAIT; R8 4.7K NMI; BUSRQ; INT; RESET; MI; MREQ; RFSH; HALT; BUSAK; IORQ; WR; RD

-PCB TRAP (3C5)

-NO DMA (4C6)

INITIALIZE (8F4)

- MI BP (4F10)
- MREQ BP (2G11)(4F10)
- BP RFSH (2F11)
- HALT (5E5)

R12 82Ω +5VR

C3 150PF; R13 470Ω; R14 470Ω; C4 .01MF; L15 04; XTAL 9.8304 MHz; JUMPER; TP2

L2 LS32 → - 9.83MHZ (3B3)(5D8)

R15 4.7K +5VR; L29 161 (LD, ENP, ENT, CK, A, B, C, D, CLR, RCO); R17 4.7K +5VR; TP3

L30 8T97 — - BP CLK (3D4)(3B8); - PP1 CLK; - PP0 CLK (8E8)(9C11)(8E6)(8B7) (9F4)(8E10)

L58 LS00

L15 04

TP2 TP3

SEE SHT 11

NO.	REVISION

BY	DATE	APPROVED BY	DATE
DWN	4/14/77	E ENGR	
CHK		M ENGR	
		MFG ENGR	

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

MATERIAL

MODEL NO. 2200VS SEE ENGG. SPECIFICATIONS No.

FINISH

TOL. EX. AS NOTED .XX ± FRAC. ± .XXX ± ANG. ± FINISH √

SCALE NONE SHT 7 OF 17

TITLE TCP, IOP MOTHERBOARD (16K RAM TYPE)

SEE CHART | D | 7426 | 19

WANG PART NUMBER | SIZE | DRAWING NUMBER | REV.

D 7426

E PKG.

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DO NOT SCALE

MREQ BP (1D6)
-STB BP (4B3)
+BP DMA WRITE (4F5)
+ BP WRITE (1E4)
+BP DMA READ (4G5)
+BP MRD (1E4)
±0V
-BP RFSH (1D6)
-DMA BP (4B3)
BPBA9 - BPBA12 (6A10)
BA1 - BA8 (6B6)
BPA1 - BPA12 (1G6)
-NBPM (4E10)
-RBPM (4E10)
-IPL (4B6)
BPA0 (1G6)
BPD0 - BPD7 (3G5)
LBD0 - LBD15 (6A4)
EVEN
ODD
JUMPER
2716
2708
±0V +12V -5V +5VR
SEP SHT 11

BY	DATE	APPROVED BY	DATE
DWN	2/7/77	E ENGR	
CHK		M ENGR	
		MFG ENGR	

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

MATERIAL

MODEL NO. 2200 VS
SEE ENGRG. SPECIFICATIONS
No.

FINISH

TOL. EX. AS NOTED
.XX ± FRAC. ±
.XXX ± ANG. ± FINISH √
SCALE — SHT 2 OF 11

TITLE TPC, IOP MOTHERBOARD (16K RAM TYPE)

SEE CHART	D	7426	19
WANG PART NUMBER	SIZE	DRAWING NUMBER	REV.

NO.	REVISION	BY

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DO NOT SCALE

SW 1 · RIB 2.2K · SIP 2 · +5VR · +0V

-READ SWITCH (1G4)

L151 · L152 · L153 · LS240 · LS241 · LS244 · -GATE (3D2) · +GATE (3D2)

DAB0 (5E2) · DAB1 (4E2) · DAB2 (6E2)

BBD0-BBD7 (1F7)

CCB1 (2C2) · CCB2 (3C2) · DAB3 (F2) · DAB4 (E2) · DAB5 (H2) · DAB6 (A2) · DAB7 (D2)

R19 4.7K

BPD0-BPD7 (1G9) (2G7) (5E10) (8A4)

L991Q 173 · L137Q 173 · L100 367

TP16 · R65 2.2K · LS04 L33

-PCB READ (1G4) · +PCBGS (3B10) · CCB1 · CCB2

-ENBL PCB WR (1E2)

-PCBCS (5F5) · TRAP · L72 74 · L85 LS04

SERV · -CLK PCB WR (1C2) · -BP CLK (1B7) · +SERV (5F9) · BK1 (3C9)

L70 LS74 · AUTO RESPN · -GATE (3E10) · +GATE (3D10)

-CLR PCB REQ (1E2) · -RSTA (5F5) · BK1 (3C5) · L62 LS74 · PCBRI (5G4) · -SET PCB REQ (1E2)

TRAP SET · R21 4.7K · TP12 · L32 LS74

-SET IOC BSY (1F2) · -CLR IOC BSY (1F2) · L72 LS74 · -PCB TRAP (1E7)

-BP CLK (1B7) · R20 2.2K · R26 4.7K

R23 4.7K · R22 2.2K · TP6 · -9.83MHz (1C9) · L87 74 · L133 07 · R24 2.2K · PCBSI (11)

PCBGS (1J) · R25 2.2K · +PCBGS (3F7) · L84 14 · L85 LS04

BY	DATE	APPROVED BY	DATE
DWN		E ENGR	
CHK		M ENGR	
		MFG ENGR	

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

MATERIAL · MODEL NO. 2200VS · SEE ENGRG. SPECIFICATIONS · No.

FINISH · TOL. EX. AS NOTED .XX ± FRAC. ± .XXX ± ANG. ± FINISH √

SCALE 1/1 · SHT 3 OF 11

TITLE TCP, IOP MOTHERBOARD (16K RAM TYPE)

SEE CHART | D | 7426 | 19

WANG PART NUMBER | SIZE | DRAWING NUMBER | REV.

NO.	REVISION	DATE	BY
	ISSUE SHT 11	D 18 E	

D 7426

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DO NOT SCALE

11 10 9 8 7 5 4 3 2 1

G F E D C B A

+PP DMA READ +PP DMA WRITE

+PP DMA READ (9F10)
+BP DMA READ (2F11)
+PP DMA WRITE (9F10)
+BP DMA WRITE (2G11)

-MM WRITE (4C4)

-MI PP0 (8D3)
-MI PP1
-MI PP2
-MI PP3
-MREQ PP0 (9G10)
-MREQ PP1
-MRIQ PP2
-MREQ PP3
-RPP0 M (9E9)
-RPP1 M
-RPP2 M
-RPP3 M
-WPP0 M (9E9)
-WPP1 M
-WPP2 M
-WPP3 M

-MI BP (1D6)
-MREQ BP (1D6)
-RBPM (2F9)
-WBPM (2G9)

-READ LOCAL MB (5B8)
-WRITE LOCAL MEM (5B8)
-READ DATA CLK (6B2)
-CLK DMA CTRS (6D11)

BBD0-BBD7 (1F7)
+MAR INCA (5D4)
+MAR INCB (5D4)
+DMA (6F11)
-DMA (6G8)

-SEL DMA COMD (1E2)
-RSTA (5F5)
-MM ERR (5E4)
MCO5 (5D5)
+END DMA (6E7)
+INHIBIT MEM REQ (5A7) (6E11)
MCB1 (5F2) (6F6)
MCB2 (5F2)
-MM DMA (6E11)
+NO DMA (5F9)
-NO DMA (1E7)
+MM DMA (5A8)
-BP DMA
IPL (2F9)

-INITIALIZE (5F4)
-RST PP0
(BD2)(BF1)(BE6)(BE10)(BG3)(9B10)
-RST PP1
-RST PP2
-RST PP3

-MM RDY (5A4)
-M1 SYNC (6E7)
-MM WRITE (4E6)
DMA DATA INT (6F7)
-DMA BP (2F11)
LOCAL MEM STB (5B7)
-STB BP (2G11)

-DMA PP3
-DMA PP2
-DMA PP1
-DMA PP0 (9B9)
-STB PP3
-STB PP2
-STB PP1
-STB PP0 (9G9)

BY	DATE	APPROVED BY	DATE
DWN EB	2/19/74	E ENGR	
CHK		M ENGR	
		MFG ENGR	

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

MATERIAL | MODEL NO. 2200VS SEE ENGRG. SPECIFICATIONS No. | TITLE TCP, IOP MOTHERBOARD (16K RAM TYPE)

FINISH | TOL. EX. AS NOTED .XX ± FRAC. ± .XXX ± ANG. ± FINISH √ | SCALE 1/1 SHT 4 OF 11

SEE CHART | D | 7426 | 19
WANG PART NUMBER | SIZE | DRAWING NUMBER | REV.

D 7426

REVISION | BY | DATE
SEE SHT 11

ONLINE PRESS

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DO NOT SCALE

STATUS REG 2 — STATUS REG 1 — L117 — L116 — L149 — L148 — L150 — L114 — L115 — L134 — L139 — L166 — L167 — L46 — L60 — L47 — L3 — L24 — L37 — L44 — L56 — L57 — L22 — L25 — L33 — L86 — L66 — L51 — L84 — L07 — L08 — L10 — L11 — L20 — L08 — L04 — L10 — L51 — L67 — L68 — L74 — L75 — L86 — L87 — L88 — L89 — L91 — L93 — L94 — L95 — L96 — L97 — L98 — L99 — L100 — L101 — L102 — L103 — L104 — L105 — L106 — L107 — L108 — L109 — L110 — L111 — L112 —

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DO NOT SCALE

- DMA (4C8)
- LD LEN HIGH (1D2)
- LD LEN LOW (1D2)
- BBL0 - BBL7 (1F7)
+ DMA (4D8)
- RSTA (5F5)
+ INHIBIT MEM REQ (4B6)
- MM DMA (4C6)
- CLK MAR (5D3)
- CLK MEM CTRS (1C2)
- CLK DATA CTRS (4E8)
MBC1 (4B7)
- CLK LOCAL MEM LATCH (5D4)
- DMA DATA INT (4C3)
+ END DMA (4B7)
- M. SYNC (4A1)
- LD MAR LOW (1D2)
- LD MAR MIDDLE (1D2)
- LD MAR HIGH (1D2)
- LD BASE HIGH (1D2)
- LD BASE LOW (1D2)
- RSTA (5F5)
BBL0 - BBL7 (1F7)
MA0 - MA18 (5A2)
BA1 - BA12 (7G10)
BA1 - BA8 (2D11)
BPBA9 - BPBA12 (2E11)
LDB0 - LDB15 (2G1)(7A4)
- MSS (5E1)
- READ DATA CLK (4E8)

	BY	DATE	APPROVED BY	DATE
WANG LABORATORIES, INC. LOWELL, MASS. U.S.A.	DWN	3/14/79	E ENGR	
	CHK		M ENGR	
			MFG ENGR	

MATERIAL — MODEL NO. 2200VS — SEE ENGRG. SPECIFICATIONS — No.

TITLE: TCP, IOP MOTHERBOARD (16K RAM TYPE)

FINISH — TOL. EX. AS NOTED: XX ± FRAC. ± / XXX ± ANG. ± / FINISH √

SCALE: 1/1 — SHT 6 OF 11 — SEE CHART — WANG PART NUMBER — D — SIZE — 7426 — DRAWING NUMBER — 19 — REV.

REVISION	BY	DATE
ECO 7426		

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DO NOT SCALE

BA1 - BA12 (6B6)

PPA1 - PPA6 (8G3)
PPA8 - PPA14

L123 LS244 — BA1 BA2 BA3 BA4 PPA1 PPA2 PPA3 PPA4

L124 LS244 — BA9 BA10 BA11 BA12 PPA9 PPA10 PPA11 PPA12

L105 LS244 — BA8 ±0V PPA13 PPA14 PPA8

L106 LS244 — BA5 BA6 BA7 PPA5 PPA6

L139A LS139 — ±0V, BK11 (9B8), SEL CAS (9D4) → 9 RASA2, 10 RASA DMA, 11 CASA2, 12 CASA DMA

BBD5 (1F8), CLK BP HIGH (1C2), BBD4 (1F8) → L193 LS74, L193 LS577, R46 4.7K +5VR

BK2 (8F2)

PPMA0 PPMA1 PPMA2 PPMA3 PPMA4 PPMA5 PPMA6

RAS ODD (9D6), CAS ODD (9D6), WRITE (9F9)

RAS EVEN (9D6), CAS EVEN (9D6), WRITE (9F9)

L107 MK4116 → PPMP0
L125 MK4116 → PPMP1
L126 MK4116 → PPMP2
L108 MK4116 → PPMB3
L127 MK4116 → BBM8+
L109 MK4116 → PPMB5
L110 MK4116 → PPMB6
L128 MK4116 → PPMB7

L120 MK4116 → PPMB8
L102 MK4116 → PPMB9
L121 MK4116 → PPMB10
L103 MK4116 → PPMB11
L104 MK4116 → PPMB12
L122 MK4116 → PPMB13
L101 MK4116 → PPMB14
L119 MK4116 → PPMB15

R47 1K +5VR → L56 LS07 → BK2 (9C8)

READ (9F9)

L138 LS245 — PPMB15..PPMB8 → PPD7..PPD0
L139 LS245 — PPMB15..PPMB8 → LDB0..LDB7
L141 LS245 — PPMB7..PPMB0 → PPD7..PPD0
L140 LS245 — PPMB7..PPMB0 → LDB8..LDB15

SC1 (D2), SC0 (A12)

BK9 (9E8), BK12 (9E8), BK11 (9B8)

LDB0 - LDB15 (6A2)
PPD0 - PPD7 (8G10) (9G3)

WANG LABORATORIES, INC. LOWELL, MASS. U.S.A.	BY	DATE	APPROVED BY	DATE
	DWN	8/9	E ENGR	
	CHK		M ENGR	
MATERIAL	MODEL NO. 2200VS		MFG ENGR	
	SEE ENGRG. SPECIFICATIONS No.	TITLE TCP, IOP MOTHERBOARD (16K RAM TYPE)		
FINISH	TOL. EX. AS NOTED .XX ± FRAC. ± .XXX ± ANG. ± FINISH √	SEE CHART	D	7426	19
	SCALE 1/1 SHT 7 OF 11	WANG PART NUMBER	SIZE	DRAWING NUMBER	REV.

NO.	REVISION	BY	DATE
	SEE SHT 11		

F 84;

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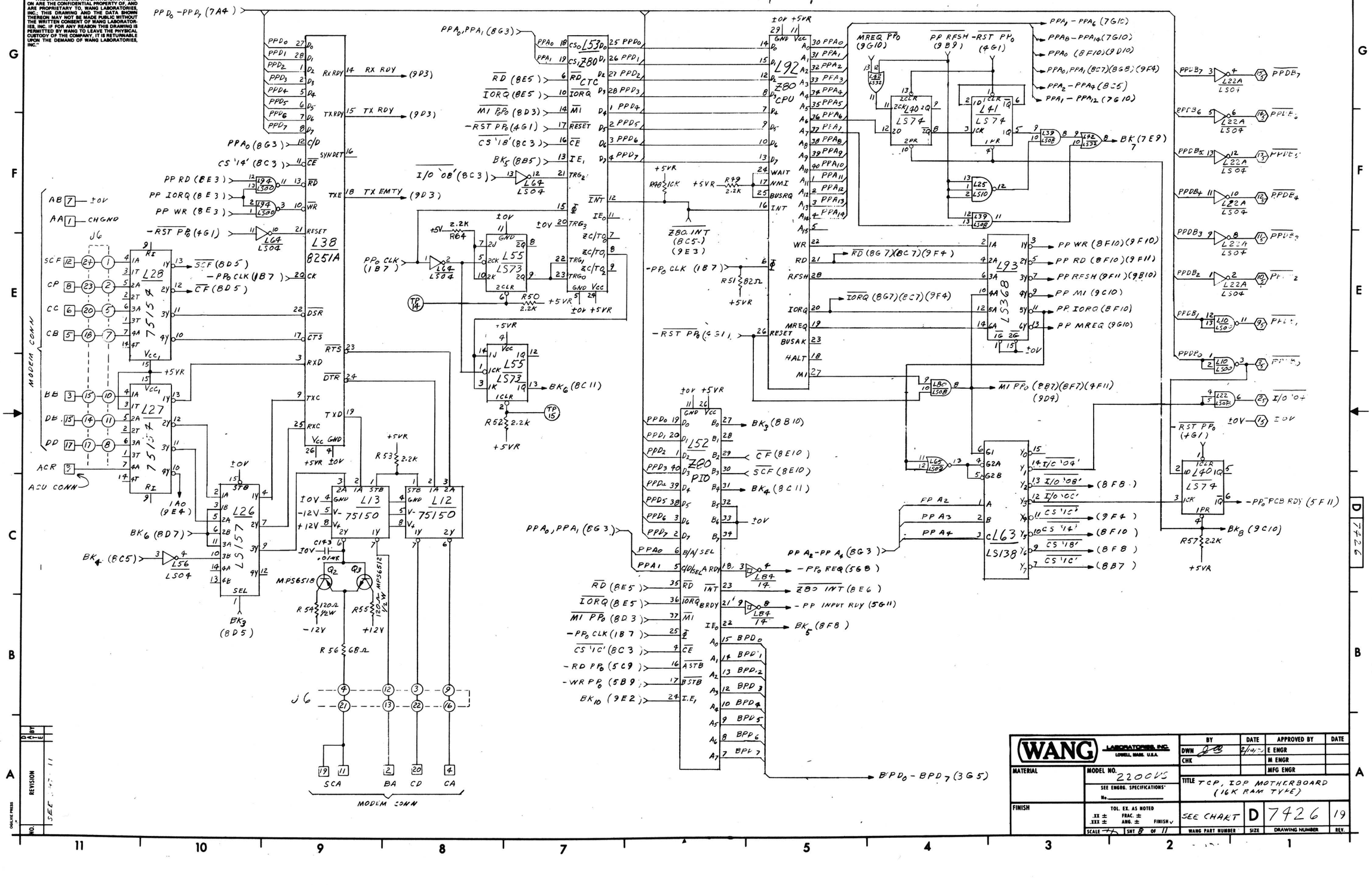
DO NOT SCALE



WANG LABORATORIES, INC. LOWELL, MASS. U.S.A.		BY	DATE	APPROVED BY	DATE
	DWN			E ENGR	
	CHK			M ENGR	
				MFG ENGR	
MATERIAL	MODEL NO. 2200VS	TITLE TCP, IOP MOTHERBOARD (16K RAM TYPE)			
	SEE ENGRG. SPECIFICATIONS No.				
FINISH	TOL. EX. AS NOTED .XX ± FRAC. ± .XXX ± ANG. ± FINISH √	SEE CHART	D	7426	19
	SCALE — SHT 8 OF 11	WANG PART NUMBER	SIZE	DRAWING NUMBER	REV.

NO.	REVISION	BY	DATE
	SEE SHT 11		

D 7426

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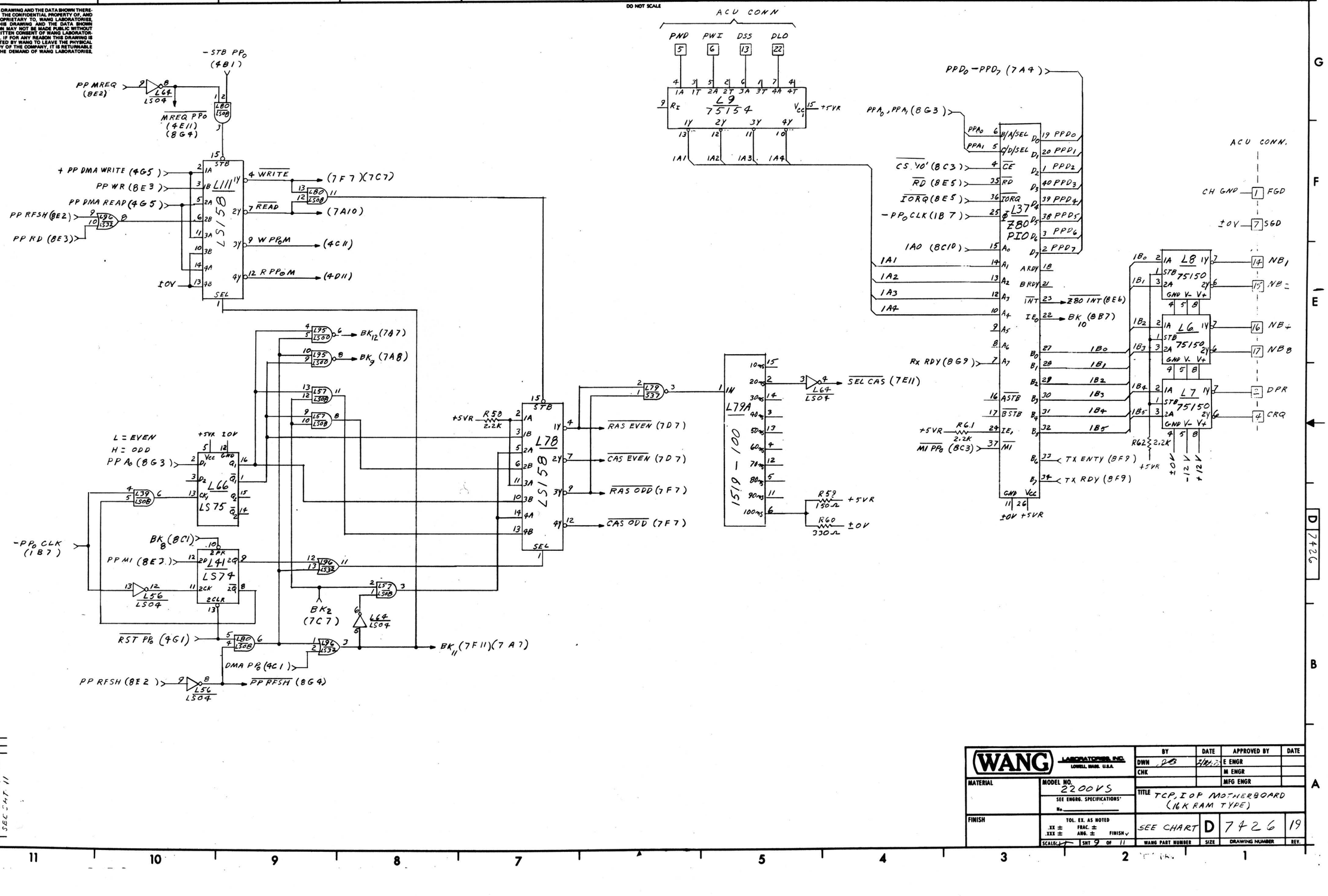

	BY	DATE	APPROVED BY	DATE
WANG LABORATORIES, INC. LOWELL, MASS. U.S.A.	DWN PB	2/27/79	E ENGR	
	CHK		M ENGR	
			MFG ENGR	

MATERIAL

MODEL NO. 2200VS
SEE ENGRG. SPECIFICATIONS
No.

TITLE TCP, IOP MOTHERBOARD (16K RAM TYPE)

FINISH

TOL. EX. AS NOTED
.XX ± FRAC. ±
.XXX ± ANG. ± FINISH √

SCALE — SHT 9 OF 11

SEE CHART | D | 7426 | 19
WANG PART NUMBER | SIZE | DRAWING NUMBER | REV.

NO.	REVISION	BY	DATE
	SEE SHT 11		

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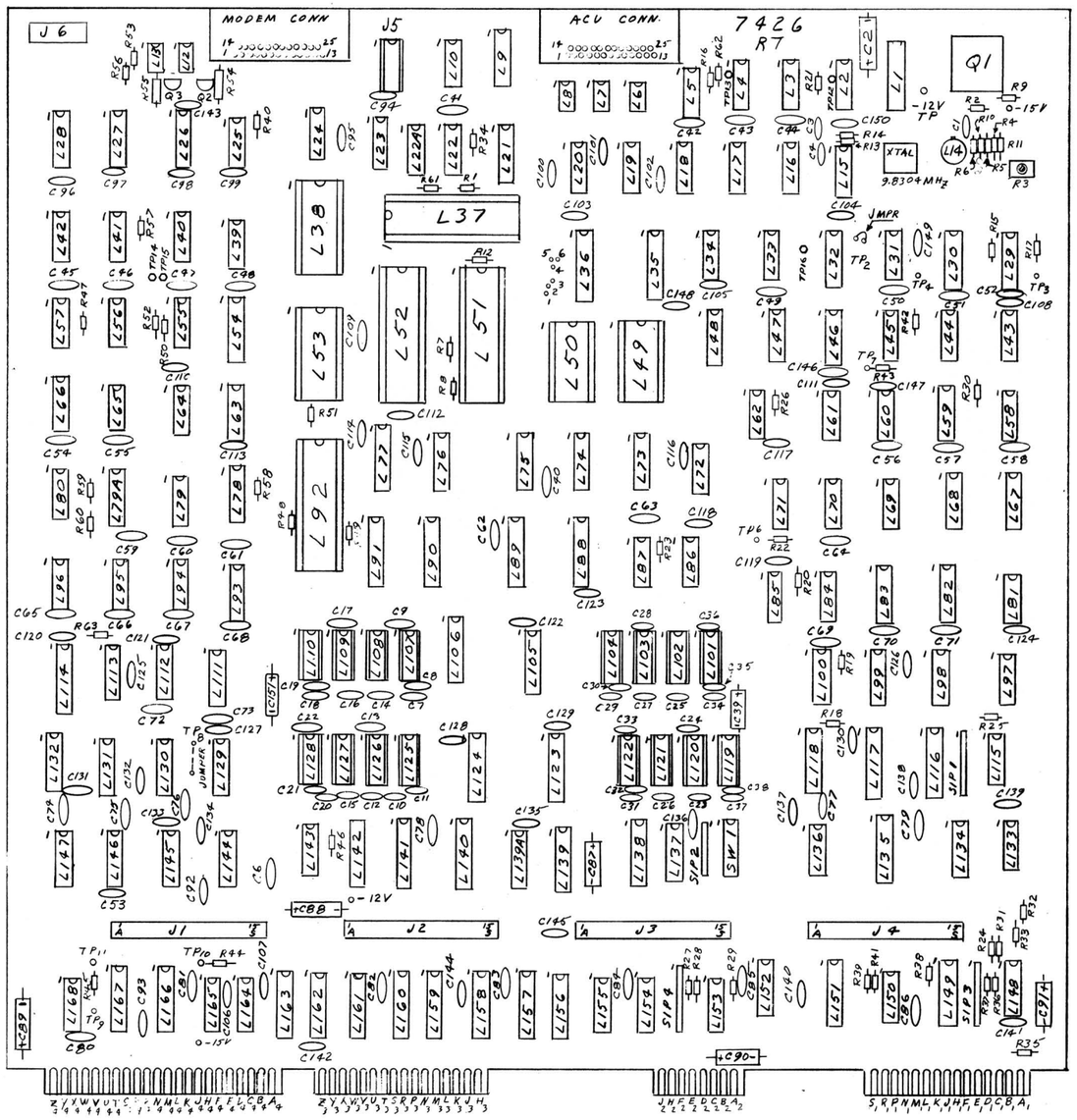
DO NOT SCALE

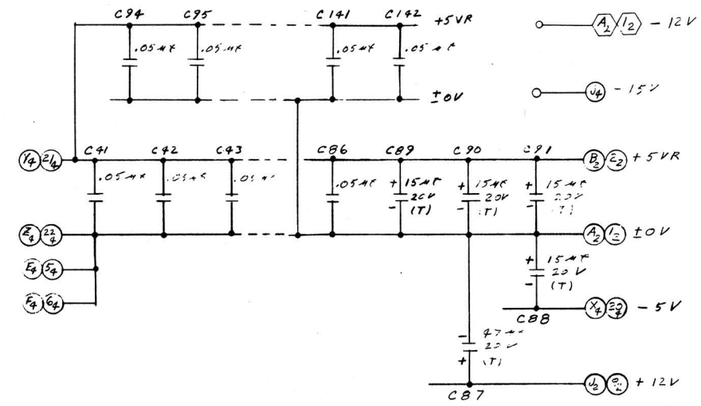
MODEL	L50	L51/92	L53	L73-76	181-184,187-190,192-195
2200	49-4478	4000-R4	377-0344	377-0343	377-0345
SERIAL LOOP DIAG	378-4229		377-0344	377-0343	377-0345
VS-100	7426	378-6001-R2	377-0344	377-0343	377-0345

MODEL	L37,52	L38	L49
2200	377-0342	377-0352	378-4049-R4
SERIAL LOOP DIAG	377-0342	377-0352	378-4229
VS-100	377-0342	377-0352	378-6000-R2

210 = 209 + 377 OR 378

MODEL	209	210
2200	7426	7426-A
SERIAL LOOP DIAG	7426	7426-B
VS-100	7426	7426-C





BY	DATE	APPROVED BY	DATE
DWN	2/19/79	E ENGR	
CHK		M ENGR	
		MFG ENGR	

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

MATERIAL

MODEL NO. 2200 VS
SEE ENGRG. SPECIFICATIONS
No.

FINISH

TOL. EX. AS NOTED
.XX ± FRAC. ±
.XXX ± ANG. ± FINISH √

TITLE TCP, IOP MOTHERBOARD (16K RAM TYPE)

SCALE FS SHT 10 OF 11

SEE CHART | D | 7426 | 19

WANG PART NUMBER | SIZE | DRAWING NUMBER | REV.

NO.	REVISION	BY	DATE
	SEE SHEET 11		

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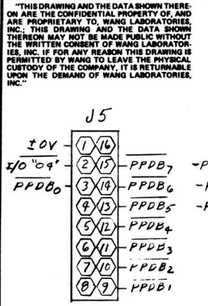
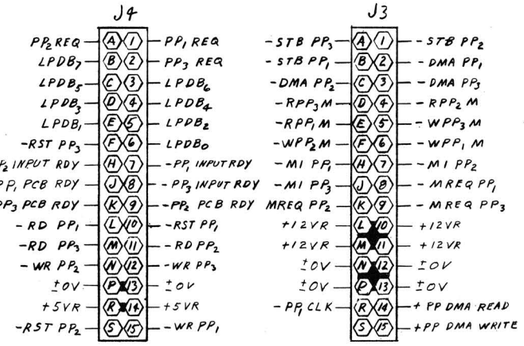
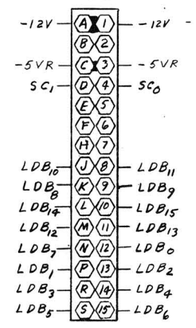
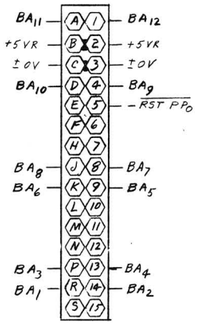
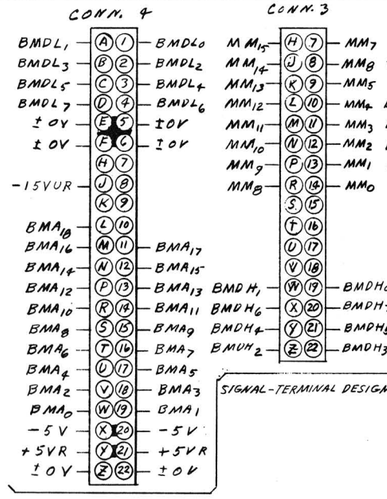
DO NOT SCALE



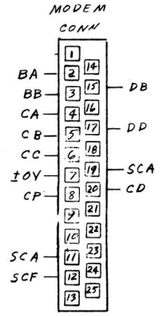


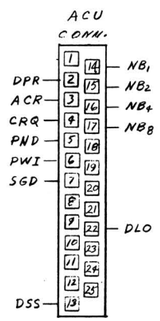






SIGNAL-TERMINAL DESIGNATIONS, VIEW FROM BOTTOM (WIRING) SIDE OF CONN.





LOCATION	W.L. PART NO.	I.C. TYPE
L1, 142		SPARE
L2, 17, 42, 71, 96	376-0211	74LS32
L3, 5, 23, 24, 40, 41, 43, 62, 70, 81, 115, 143, 150	376-0155	74LS74
L4, 18, 72, 87	376-0006	7474
L6, 7, 8, 12, 13	376-0076	75150P
L9, 27, 28	376-0077	75154
L10, 34, 58, 99, 95	376-0207	74LS00
L14	376-0066	723
L15	376-0010	7404
L16, 25, 47	376-0209	74LS10
L19	376-0016	7402
L20	376-0093	7432
L21, 48, 63, 112	376-0294	74LS138
L22, 39, 57, 61, 80, 86, 97	376-0153	74LS08
L22A, 33, 56, 64, 85	376-0180	74LS04
L26, 68	376-0216	74LS157
L29, 129, -132	376-0094	74161
L30	376-0189	8T97
L31	376-0081	7408
L32, 82, 134, 139A, 155	376-0226	74LS139
L35, 36, 88, 89, 135, 138, 139, 140, 144	376-0285	74LS245
L37, 52	SEE CHART	Z80-PIO
L38	SEE CHART	8251A
L44	376-0225	74LS11
L45	376-0036	7486
L46, 83	376-0119	74175
L49, 50	SEE CHART	2716
L51, 92	SEE CHART	Z80-CPU
L53	SEE CHART	Z80-CTC
L54, 105, 106, 118, 116, 117, 123, 129, 143, 157, 159, 160, 162, 166, 167	376-0288	74LS244

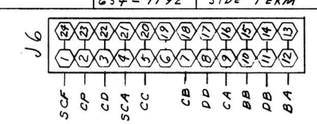
COMPONENT	W.L. PART NO	TYPE
R1, 7, 8, 11, 15, 16, 17, 19, 21, 23, 26, 34, 35, 40, 96	330-3047	4.7K ¼W 10%
R2	330-2010	100Ω ¼W 10%
R3	336-1014	1K POT
R4, 6, 13, 14	330-2047	470Ω ¼W 10%
R5	330-2039	390Ω ¼W 10%
R9, 60	330-2033	330Ω ¼W 10%
R10, 47	330-3010	1K ¼W 10%
R12, 51	330-1082	82Ω ¼W 10%
R18, 20, 22, 25, 30-33, 38, 42-45, 49, 52, 53, 57, 58, 61, 62, 50, 64, 65, 66	330-3022	2.2K ¼W 10%
R24, 27, 28, 29, 36, 37, 39, 41, 48	330-4010	10K ¼W 10%
R54, 55	331-2012	120Ω ½W 10%
R56	330-1068	68Ω ¼W 10%
R59	330-2015	150Ω ¼W 10%
R63	330-1011	10Ω ¼W 5%
SIP1, 3, 4	333-0809	10K SIP RES.
SIP2	333-0806	2.2K SIP RES.
SW1	325-1503	8 BANK ROCKER SW
C1	300-1908	.0022 MF 500V CER.
C2, 88-91	300-4022	15 MF 20V (T)
C3	300-1150	150 PF 500V CER
C4, 143	300-1903	.01 MF 25V CER
C6, 92	300-1220	220 PF 500V CER
C7-38, 40	300-1930	.1 MF 50V CER
C39, 151	300-4017	5.6 MF 35V (T)
C41-86, 93-142, 144, 150	300-1900	.05 MF 12V CER
C87	300-4034	47 MF 20V (T)
Q1	375-1052	2N6387
Q2	375-1014	MPS6518
Q3	375-1012	MPS6512
J1-4	350-0009	30 PIN CONN.
ACU CONN, MODEM CONN.	350-2055	25 PIN CONN
L37, 51, 52, 92	376-9011	40 PIN SOCKET
L38, 53	376-9015	28 PIN SOCKET
L49, 50	376-9003	24 PIN SOCKET
L101-109, 107-110, 119-122, 125-128, J5	376-9005	16 PIN SOCKET
XTAL	321-0030	9.8304 MHz
-12V TP	654-1192	SIDE TERM

MNEMONIC	COORDINATE
-RD PP1	5A9
-RD PP2	5A9
-RD PP3	5A9
RPP1 M	4D11
RPP2 M	4D11
RPP3 M	4D11
-RST PP0	4G1
-RST PP1	4F1
-RST PP2	4F1
-RST PP3	4E1
SCO, 1	7A10
SCA	8A9
SCF	8E11
SGD	9F1
STB PP1	4C1
STB PP2	4C1
STB PP3	4C1
SYSTEM INITIALIZE	5G4
WPP1 M	4C11
WPP2 M	4C11
WPP3 M	4C11
WR PP1	5A9
WR PP2	5A9
WR PP3	5A9

LOCATION	I.C. TYPE	SPARE
L94	74LS00	1
L95	74LS00	2
L65	74LS02	2
L15	7404	2
L33	74LS04	3
L39	74LS08	1
L57	74LS08	1
L61	74LS08	2
L2	74LS32	2
L42	74LS32	1
L96	74LS32	1
L79	74S37	3
L4	7474	1
L150	74LS74	1
L66	74LS75	1
L45	7486	2
L32	74LS139	1
L139A	74LS139	1
L114	74LS244	4
L136	74LS266	1
L152	74367	2

MNEMONIC	COORDINATE
AA	8F11
AB	8F11
ACR	8D11
EA	8A9
BA1 - BA12	6A8
BB	8D11
BMA0 - BMA18	5D1
BMDH0 - BMDH7	6C1
BMDL0 - BMDL7	6D1
CA	8A8
CB	8E11
CC	8E11
CCB1, 2	3G1
CD	8A9
-CM ERROR	5E1
CP	8E11
CRQ	9D1
DAB0 - DAB2	3D11
DAB3 - DAB7	3F1
DB	8D11
DD	8D11
DLO	9G5
DMA PP1	4D1
DMA PP2	4D1
DMA PP3	4D1
DPR	9D1
DSS	9G5
FGD	9F1
IMA	5G7
I/O "D4"	8D1
LDB0 - LDB15	6A5
LPDB0 - LPDB7	5D11
MCOS	5G7
MGS	5G3
MM0 - MM15	6G5
MMCB1	5F1
MMCB2	5F1
MMP	5G7
MIPP - MIPP3	4F11
MREQ PP1	4E11
MREQ PP2	4E11
MREQ PP3	4E11
MRI	5G6
NB1 - 8	9E1
PCBC3	5G5
PCBGS	3B11
PCBR1	5G4
PCBSI	3C1
PPDB0 - PPDB7	8F1
PND	9G6
+PP DMA READ	4G5
+PP DMA WRITE	4G5
-PP1 CLK	1B7
PP1 INPUT RDY	5G11
- PP1 REQ	5G9
PP1 PCB RDY	5F11
PP1 INPUT RDY	5G11
PP2 REQ	5G9
PP2 PCB RDY	5F11
PP3 INPUT RDY	5G11
PP3 REQ	5G9
PP3 PCB RDY	5F11
PWI	9G5

E-REV 5



LOADING CHART ON PAGE 10.

| NO. | REVISION | D ABY | E | | |

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DO NOT SCALE

Z80 CPU L86 HALT INT NMI WAIT BUSRQ RESET M1 RFSH BUSAK WR RD MREQ IORQ D0-D7 A0-A15

NEC 8257 L87 DRQ0 DRQ1 DRQ2 DRQ3 TC HLDA HRQ AEN READY IOR IOW CK RESET CS MARK MWR MRD ASTB DACK0 DACK1 DACK2 DACK3

Z80 SIO/2 L65 TxCA RxCA TxDB RxDB CE CS0 CS1 M1 IORQ RD B/A C/D RESET IEI IEO INT CK/TRA CK/TRB CK/TRC CK/TRD ZC/TO0 ZC/TO1 ZC/TO2 W/RDYA W/RDYB SYNCA DTRA RTSA TxCB RxCB DTRB RTSB

L85 OCTAL D-TYPE LATCH

L87 BIDIRECTIONAL BUS TRANSCEIVER

L97 QUAD 2-INPUT MULTIPLEXER

L83 OCTAL BUFFER

L84 OCTAL BUFFER

L42 BIDIRECTIONAL BUS TRANSCEIVER

L57 DUAL D-TYPE FLIP-FLOP

L49 9602 DUAL MONOSTABLE MULTIVIBRATOR

L30 7474 DUAL D-TYPE FLIP-FLOP

L46 74LS138 3-TO-8 LINE DECODER

L27 74LS536 QUAD 2-INPUT MULTIPLEXER

L26 74LS32 QUAD 2-INPUT OR GATE

L63 L64 75154 4-TO-16 LINE DECODER

L40 L41 L42 L43 L44 L45 L47 L48 L49 L50 L51 L52 L53 L54 L55 L56 L58 L59 L60 L61 L62 L63 L64 L66 L67 L68 L69 L70 L71 L72 L73 L74 L75 L76 L77 L78 L79 L80 L81 L82 L83 L84 L85 L86 L87 L88 L89 L90 L91 L92 L93 L94 L95 L96 L97 L98 L99

WANG LABORATORIES, INC. LOWELL, MASS. U.S.A.		BY	DATE	APPROVED BY	DATE
MATERIAL	MODEL NO. 2246R	DWN RH.S	7-16-79	E ENGR	
	SEE ENGRG. SPECIFICATIONS No.	CHK		M ENGR	
FINISH	TOL. EX. AS NOTED XX ± FRAC. ± XXX ± ANG. ± FINISH √			MFG ENGR	
	SCALE SHT 1 OF 6	TITLE REMOTE TC WS CONTROLLER			
		SEE CHART	D	7478	13
		WANG PART NUMBER	SIZE	DRAWING NUMBER	REV.

REVISION BY DATE APPROVED NO. SEE SHT 1

D 7478

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DO NOT SCALE

A0-A15 (1E3)

74LS138 L103

74LS139 L105

74LS175 L104

74LS04

74LS32

74LS125

74LS157 L68, L67

74LS194 L99

74LS74 L10

74LS00 L7

TMS2716 L95, L88, L89, L90, L91, L92, L93, L94

MK4116 A69, A70, A71, A72, A73, A74, A75, A76, A77

TCWRE (1B1)

BUSAK (3A7)

BPA (3B1)

PARE

BK16 (2A4)

BK15 (2A9)

BK17 (2A9)

BK15 (2E11)

BK14 (2D11)

TCMREQ (1C1)

RD (1G8)

TCRFSH (1C1)

MCKB (3G9)

BK2 (3C5)

BK16 (2F9)

TCNMI (1F11)

D0-D7 (1E11) (4C11)

R13 1K

R14–R17 330Ω

R18–R20 330Ω

R21–R23 330Ω

R24 2.2K

R25 10K

REVISION	BY	DATE	APPROVED BY	DATE
SEE SHT 1	DWN R.H.S.	7-16-74	E ENGR	
	CHK		M ENGR	
			MFG ENGR	

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

MATERIAL

FINISH

MODEL NO. 2246R

SEE ENGRG. SPECIFICATIONS No.

TOL. EX. AS NOTED .XX ± FRAC. ± .XXX ± ANG. ± FINISH √

SCALE SHT 2 OF 6

TITLE REMOTE TC WS CONTROLLER

WANG PART NUMBER: SEE CHART | SIZE: D | DRAWING NUMBER: 7478 | REV: 13

D 7478

"THIS DRAWING AND THE DATA SHOWN THEREON ARE THE CONFIDENTIAL PROPERTY OF, AND ARE PROPRIETARY TO, WANG LABORATORIES, INC.; THIS DRAWING AND THE DATA SHOWN THEREON MAY NOT BE MADE PUBLIC WITHOUT THE WRITTEN CONSENT OF WANG LABORATORIES, INC. IF FOR ANY REASON THIS DRAWING IS PERMITTED BY WANG TO LEAVE THE PHYSICAL CUSTODY OF THE COMPANY, IT IS RETURNABLE UPON THE DEMAND OF WANG LABORATORIES, INC."

DO NOT SCALE

MCK (3E2) → L96 → MCKB (2A11)(3B11)

L96 → MCKB (1B3)(4G4)

BA0 – BA15 (1D1)

74LS157 L80 — BA0, BA7, BA1, BA8, BA2, BA9, BA3, BA10 — R27 33Ω, R28 33Ω, R29 33Ω, R30 33Ω

74LS157 L81 — BA4, BA11, BA5, BA12, BA6, BA13 — R31 33Ω, R32 33Ω, R33 33Ω

L62 L60 L56 L54 L38 L36 L34 L19 L17 — MK4116 — DI, AO–A6, RAS, CAS, WR, DO, VSS, VBB, VCC, VDD

L61 L59 L55 L53 L37 L35 L33 L18 L16 — MK4116

±0V, C38 5.6uf 20V TA, C39 5.6uf 20V TA, C40 5.6uf 20V TA, C41 5.6uf 20V TA

C42–C82 .1uf, C45 .1uf, C49 .1uf, C55 .1uf, C60 .1uf

R34 33Ω, R35 33Ω, R36 33Ω, R37 33Ω

-5VR, +5VR, +12VR, ±0V

L39 — A1–A8, B1–B8, BDO–BD7, DIR, G

BDO-BD7 (1F1)

BUSAK (3A7)

WRE (1B2) → L3 → 74125

TCWRE (1B1) → L3 → 74125

BUSAK (3A7)

BLA (Y3)

ΦB (B1)

BRFSH (3C4)

BMREQ (4Z)

BRFSH (Y1)

L41 LS32, L1 LS08

BA14, BA15

MCKB (3G4)

L21 S194 — CLR, CK, A, B, C, D, SHL, SHR, SO, QA, QB, QC, QD

R38 2.2K +5VR

L2 LS04

L20 LS75 — D1, D2, Q1, Q2, CK1

L4 74LS139 — 1A, 1B, 1G, 1Y0–1Y3

+5VR R26 2.2K → BK2 (2A4)

A15 (1C1)

TCMREQ (1C1)

TCRFSH (1C1)

L10 LS74 — 1PR, 1D, 1CK, 1CLR, 1Q, 1Q

L8 LS08, L9 LS32, L40 LS04

BUFEN (3C3)

NR (4G6)

MPE (4F6)

L41 LS32, L8 LS08, L11 LS32

TCMREQ (1C1)

DBA (P1)

BUSAK (1D2)(2F2)(3D11)(3B3)

ΦB (3B2)

L78 74 — 1CLR, 1D, 1CK, 1PR, 1Q, 1Q

+5VR R43 2.2K → BK18 (4G3)

BUSAK (3D11)

TC WAIT (1F11)

W1 BUSRQ

BUFEN (3B10)

BRFSH (3D10)

L100 LS08, L8 LS08, L5 LS32, L6 74125, L2 74LS04

BUSAK (3A7)

C137 33pf 5% (MICA)

R40 1K, R41 330Ω, R42 10Ω, Q9 SPS6551

ΦZ (1A8)(1F11)(1F4)

ΦB (3A7)(1A10)(4G4)

BPB (2E2)

BY	DATE	APPROVED BY	DATE
DWN R.H.S	7-16-79	E ENGR	
CHK		M ENGR	
		MFG ENGR	

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

MATERIAL

MODEL NO. 2246R — SEE ENGRG. SPECIFICATIONS — No.

FINISH

TOL. ER. AS NOTED .XX ± FRAC. ± .XXX ± ANG. ± FINISH

TITLE: REMOTE TC WS CONTROLLER

SCALE SEE CHART — WANG PART NUMBER — SIZE D — DRAWING NUMBER 7478 — REV. 13

SHT 3 OF 6

D 7478

REVISION — SEE SHT 6 — NO.

OKLYE PRESS

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DO NOT SCALE

Power supply / clock

- ±0V, -12V, +12V, +5VR, ±0V, -5VR, -12V
- C139 .0015uf, C140 .0015uf, C141 .0015uf, C142 .0015uf
- L78 75150, L79 75150
- R44 2.2K
- MPS6512 Q5, MPS6518 Q1, MPS6518 Q2, MPS6512 Q6, MPS6512 Q3, MPS6518 Q7, MPS6518 Q4, MPS6512 Q8
- R45 120Ω 1/2W +12V, R45 SCA 68Ω, R47 120Ω 1/2W -12V, R48 120Ω 1/2W -12V, R49 CA 68Ω, R50 120Ω 1/2W +12V, R51 120Ω 1/2W +12V, R52 BA 68Ω, R53 120Ω 1/2W -12V, R54 120Ω 1/2W -12V, R55 68Ω, R56 120Ω 1/2W +12V
- NR (3B11) (Z1), MPE (3B11) (K2)
- DØ-D7 (1E11)
- MWAIT (21), PROMCS (W3), PROMSW (10Z)
- R39 2.2K +5VR, R69 2.2K +5VR, R81 2.2K +5VR
- S.P. R76 560Ω +12V, S.P R77 220Ω +5VR, S.P R78 10Ω ±0V, S.P R79 220Ω R80 560Ω -5VR, S.P. 560Ω -12V
- CD (7Z), BA (S1), CA (19), SCA (V1)

Switches / data

- +5VR, R57 4.7K, R58 4.7K, R59 4.7K, R60 4.7K, R61 4.7K, R62 4.7K, R63 4.7K, R64 4.7K
- S.W. 2, ±ØV
- L25 74LS240 (2A4 2Y4, 2A3 2Y3, 2A2 2Y2, 2A1 2Y1, 1A4 1Y4, 1A3 1Y3, 1A2 1Y2, 1A1 1Y1, 1G 2G)
- IN40 (1F5)
- NR (3A11), LS04, MPE (3A11), LS04
- +5VR, R65 4.7K, R66 4.7K, R67 4.7K, R68 4.7K
- S.W. 1, ±ØV
- L23 74LS368 (6A 6Y, 2A 2Y, 4A 4Y, 3A 3Y, 5A 5Y, 1A 1Y, G1, G2)
- IN60 (1G5)
- L24 74LS244 (1A1 1Y1, 1A2 1Y2, 1A3 1Y3, 1A4 1Y4, 2A1 2Y1, 2A2 2Y2, 2A3 2Y3, 2A4 2Y4, 1G, 2G)
- DØ, D1, D2, D3, D4, D5, D6, D7
- L45 TIL311, L43 TIL311 (A, B, C, D, LS, BI, STB) +5VR, ±ØV
- ±ØV, IO7X (1F6)

Timing / control

- BK18 (3A6)
- EB (3B2), MCKB (3G8)
- L97 LS74 (1PR 2PR 1D 2D 1CK 2CK 1Q 2Q)
- +5VR, R70 10K
- DACKØ (1A7), DACK2 (1B7)
- L12 74LS08
- R71 10K +5VR
- L11 LS32
- +5VR, R72 2.2K, ±ØV
- L28 74S194 (SØ S1 SHR, CLR, CK, A, B, C, D, QA, QB, QC, QD, SHL)
- 74125 (L29), 74125 (L30), 74125 (L31)
- DMAREQ (1C4), RD (1G6), IORQ (1A6), DACK (1B6)
- XTAL 1 17.1MHZ
- R73 330Ω, R74 330Ω, C138 680pf
- L101 74S04 (13 12), L101 74S04 (3 4), L101 74S04 (5 6), L101 74S04 (9 8), CK (22)

REVISION NO.	BY	DATE
SEE SHT 1		

	BY	DATE	APPROVED BY	DATE
DWN	R.H.S.	7-16-79	E ENGR	
CHK			M ENGR	
			MFG ENGR	

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

MATERIAL	
MODEL NO.	2246R
	SEE ENGRG. SPECIFICATIONS
FINISH	TOL. EX. AS NOTED .XX ± .XXX ± FRAC. ± ANG. ± FINISH √
SCALE 4	SHT 4 OF 6
TITLE	REMOTE TC MS CONTROLLER
SEE CHART	D 7478 13
WANG PART NUMBER	SIZE DRAWING NUMBER REV.

D 7478

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DO NOT SCALE

7478 R2

DATE	BY	REVISION	NO.
		SEE SHT 6	

	BY	DATE	APPROVED BY	DATE
DWN	R.A.L.	7/6/78	E ENGR	
CHK			M ENGR	
			MFG ENGR	

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

MATERIAL

MODEL NO. 2246R

SEE ENGRG. SPECIFICATIONS No.

FINISH

TOL. EX. AS NOTED .XX ± FRAC. ± .XXX ± ANG. ± FINISH √

SCALE | SHT 5 OF 6

TITLE: REMOTE TC WS CONTROLLER

SEE CHART | D | 7478 | 13

WANG PART NUMBER | SIZE | DRAWING NUMBER | REV.

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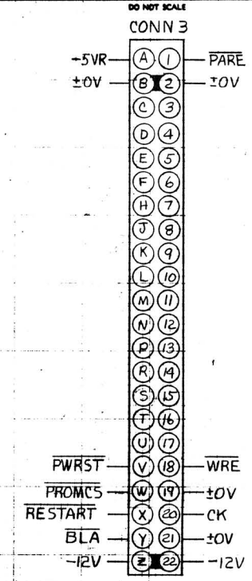
IC LOCATION	TYPE	W.L. PART NO.
L1,8,12,48	74LS08	376-0153
L2,13,40,47, 82,	74LS04	376-0180
L3,6,29,58	74125	376-0324
L4,105	74LS139	376-0226
L5,9,11,26,41	74LS32	376-0211
L7	74LS280	376-0242
L10,57,97,98	74LS74	376-0155
L14,15,31,32, 50,52	SPARES	
L16-19, 33-38, 53-56, 59-62, 69-77	MK4116	SEE CHART
L20,104	74LS75	376-0312
L21,28,99	74S194	376-0221
L23	74LS369	376-0193
L24,83,84	74LS244	376-0288
L25	74LS240	376-0297
L27	74LS367	376-0192
L30	7474	376-0006
L39,42	74LS245	376-0285
L43,45	TIL 311	SEE CHART
L46,103	74LS138	376-0294
L49	9602	376-0104
L63,64	75154	376-0077
L65	Z80 SIO/2	SEE CHART
L66	Z80 CTC	SEE CHART
L67,68,80,81	74LS157	376-0216
L78,79	75150	376-0076
L85	74LS373	376-0310
L86	Z80 CPU	SEE CHART
L87	NEC 8257	SEE CHART
L88-95	2716	SEE CHART
L100	74LS00	376-0207
L102	7404	376-0010
L101,96	74S04	376-0180
L16-19,33-38 53-56, 59-62, 68-77	16 PIN SKT	376-9002
L88-95	24 PIN SKT	376-9003
L65,86,87	40 PIN SKT	376-9011
L66	28 PIN SKT	376-9015
L43,45	14 PIN SKT	376-9001

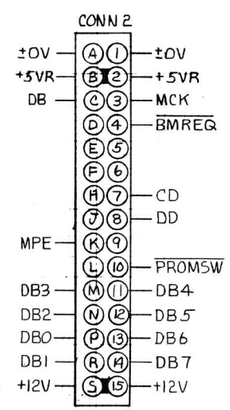
COMPONENT	TYPE	W.L. PART NO.
R1,3,25,70,71	10K 1/4W 10%	330-4010
R4,10,24,26, 38,39,43,44, 69,72,81	2.2K 1/4W 10%	330-3022
R5-9,11,12, 57-68,75	4.7K 1/4W 10%	330-3047
R13,40	1K 1/4W 10%	330-3010
R14-23,27-37	33Ω 1/4W 10%	330-1033
R41,73,74	330Ω 1/4W 10%	330-2033
R42,78	10Ω 1/4W 10%	330-1010
R45,47,48,50, 51,53,54,56	120Ω 1/2W 10%	331-2012
R46,49,52,55	68Ω 1/4W 10%	330-1068
R77,79	220Ω 1/4W 10%	330-2022
R76,80	560Ω 1/4W 10%	330-2056
C1	.0014F 500V 10%	300-1906
C2-23,26-37, 42-81	.1μF 50V (CER.)	300-1930
C24,25,38-41	56μF 35V 10%(TA)	300-9017
C137	33μF 500V 5% MICA	300-5016
C138,139-142	680pF 300V 10%	300-1680
C139-142	.0015μF (C)	300-1907
C143	47μF 20V TA	300-4034
C144-146	15μF 20V TA	300-4022
C82-136	.05μF 12V CER	300-1900
Q1,2,4,7	MPS 6518	375-1019
Q3,5,6,8	MPS 6512	375-1012
Q9	SPS 6551	375-1050
SW1	SPST 5 POS	325-1501
SW2	SPST 8 POS	325-1503
XTAL	17.4 MHz	321-0018
J1,2	2 PIN HEADER	350-0203

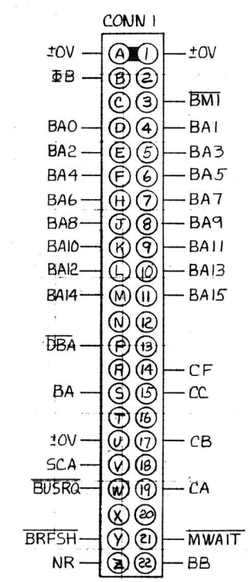
MNEMONIC	COORD
AEN	1A8
BAL	4B9
BA0-BA15	1E11
BB	1D11
BLA	3D11
BMI	1G11
BMREQ	3C11
BRFSH	3C11
BUSRQ	3A4
BD0-BD7	1F1
CA	4A8
CB	1D11
CC	1D11
CD	4A9
CR	4C1
CF	1D11
DB	1D11
DBA	3A11
DD	1D11
HRO	1A8
IB	3D11
MCK	3G10
MPE	4D11
MWAIT	4C11
NR	4D11
PARE	2E1
PROMCS	4C11
PROMSW	4C11
PWRST	1F11
RESTART	1G1
SCA	4A9
WRE	3D11

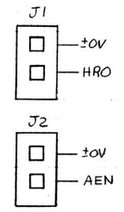
LOCATION	TYPE	SPARES
L1	74LS08	2
L8		1
L48		1
L2	74LS04	1
L13		2
L40		1
L96		2
L101		2
L3	74125	1
L4	74LS139	1
L105		1
L20	74LS75	1
L104		1
L30	7474	1
L41	74LS32	1
L49	9602	1
L98	74LS74	1
L100	74LS00	3
L102	7404	5

DO NOT SCALE

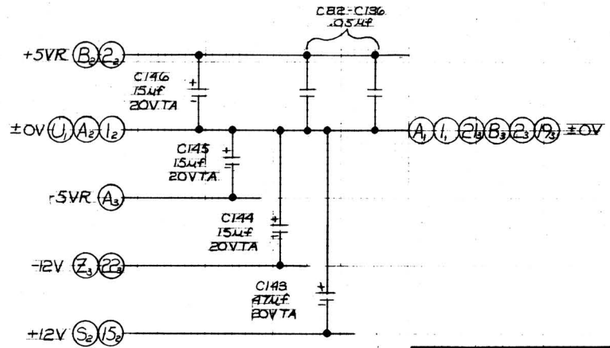








210	209	L16-19, 33-38, 53-56, 59-62, 69-77	L43,45	L65	L66	L86	L87	L88	L89	L90	L91	L92	L93	L94	L95
		210 = 209 + 378 OR 377													
7478-A	7478	377-0345		377-0374	377-0343	377-0344	377-0369	378-4134 R6	378-4133 R6	378-4132 R6	378-4131 R6	378-4130 R6	378-4129 R6	378-4128 R2	378-4135 R6
7478-B	7478	377-0345		377-0374	377-0343	377-0344	377-0369							378-4136	
7478-C	7478	377-0345	340-0015	377-0374	377-0343	377-0344	377-0369							378-4164	378-4165
7478-D	7478	377-0345	340-0015	377-0374	377-0343	377-0344	377-0369							378-4212 R1	
7478-E	7478	377-0345	340-0015	377-0374	377-0343	377-0344	377-0369					378-4211	378-4210	378-4209	
7478-F	7478	377-0345	340-0015	377-0374	377-0343	377-0344	377-0369					378-4215	378-4214	378-4213	



E REV 4

REV	DESCRIPTION	BY	DATE	APPROVED BY	DATE
0	ORIGINATED PER DWR # 6674 APP'D: J.J.L. 2-20-80	R.H.S. 7-16-79			
1/0	REVISED PER ECN # 11714, 12082 APP'D J.J.L. 2-20-80	R.H.S. 7-16-79			
2/0	REVISED PER ECN # 12382, 12388 APP'D J.J.L. 2-20-80	R.B. 9-12-79			
3/1	REVISED PER ECN # 12609 APP'D J.J.L. 2-20-80	S.C.O. 10-2-79			
4/2	REVISED PER ECN # 13987 APP'D: J.J.L. 2-20-80	K.K. 12-13-79			
5/3	REVISED PER ECN # 13766 APP'D: J.J.L. 2-20-80	K.K. 1-16-80			
6/3	REVISED PER ECN # 14060, 14069, 14079 APP'D J.J.L. 2-20-80	K.K. 2-21-80			
7/3	REVISED PER ECN # 14835 APP'D: J.J.L. 4-7-80	K.K. 4-7-80			
8/3	REVISED PER ECN # 15119 APP'D: J.J.L. 6-10-80	K.K. 6-10-80	G. BB		
9/3	REL. PER ECN 15445, 15507, 15508 APP'D J.J.L. 6-10-80	K.K. 6-10-80	T. BB		
10/4	REVISED PER ECN # 15511 APP'D: J.J.L. 7-7-80	J.S.D. 7-3-80			
11/4	REVISED PER ECN # 15932, 16032 APP'D: J.J.L. 9-9-80	K.K. 9-9-80			
12/4	REVISED PER ECN # 16249 APP'D: J.J.L. 11-6-80	K.K. 11-6-80			
13/4	REVISED PER ECO # 16425 APP'D: [illegible]	R.B.R. 3-5-81			

MATERIAL	MODEL NO. 2246R SEE ENGRG. SPECIFICATIONS No.
FINISH	TOL. ER. AS NOTED .XX ± FRAC. ± .XXX ± ANG. ± FINISH √
SCALE	SHT 6 OF 6

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

BY	DATE	APPROVED BY	DATE
DWN A.B	11-15-79	E ENGR Ken O	2/26/80
CHK J.J.L.	2-20-80	M ENGR	
		MFG ENGR	

TITLE: REMOTE TC W/S CONTROLLER

WANG PART NUMBER	SIZE	DRAWING NUMBER	REV.
SEE CHART	D	7478	13

D 7478

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DO NOT SCALE

L92 Z80ACPU

* HAND WIRED PER ECN# 14794.

REVISION	BY	DATE
SEE SHEET 6		

WANG LABORATORIES, INC. LOWELL, MASS. U.S.A.	BY	DATE	APPROVED BY	DATE
	DWN MCWhirtle	10-79	E ENGR	
	CHK		M ENGR	
			MFG ENGR	

MATERIAL	MODEL NO. 140	TITLE
	SEE ENGRG. SPECIFICATIONS' No.	CPU AND MEMORY
FINISH	TOL. EX. AS NOTED .XX ± FRAC. ± .XXX ± ANG. ± FINISH √	SEE CHART / WANG PART NUMBER · D / SIZE · 7501 / DRAWING NUMBER · 16 / REV.
	SCALE · SHT 1 OF 6	E SIZE ARCHIVED

ECN [illegible]

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DO NOT SCALE

MI (1D7)

PARIN 7i

PARIN (4B4)

(1F2) BR3 (1E2) IEO

(1E3) RD

IOR (1C7)

MREQ

MR (1B10)

CL1 (2D7) CL2 (2D7) CL3 (2D7) CL4 (2D7) CL5 (2D7) CL6 (2D7) CL7 (2C7) CL8 (2C7)

CUBSY SCSM1 SCSM2 SCSM3 SCSM4 SCHDA1 SCHDA2

SETINT (1C3)

TEST POINT LUGS

+5VR1 -5V +12V -12V +24V ±0V +5VR2 (1B1)

OCOA (1C4) OCOB (1C4) OCOC (1C4) OCOD (1C4) OCO5 (1D4) OCO7 (1D4) OCO9 (1D4) OCOE (1C4) OCOG (1D4) OCO4 (1D4)

AUTO RESET (1D11)

DSD DSU

PAROUT PAROUT (4B8)

ME (1F11)

MMI/O (1B5) MMI/OWAIT (1G11)

MI WAIT (1F11)

DEVO (1C5)

RD (1A8) MREQ (2B7) CRGRK (4F11) PROM (1D7)

WDI (4C4)

D-BUS (1A5) (4D4) (4B7)

DPB PUSH BUTTON

	BY	DATE	APPROVED BY	DATE
DWN MP		10-79	E ENGR	
CHK			M ENGR	
			MFG ENGR	

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

MATERIAL

MODEL NO. 140 — SEE ENGRG. SPECIFICATIONS — No.

FINISH

TOL. EX. AS NOTED .XX ± FRAC. ± .XXX ± ANG. ± FINISH √

SCALE — SHT 2 OF 6

TITLE: CPU AND MEMORY

SEE CHART | D | 7501 | 16

WANG PART NUMBER | SIZE | DRAWING NUMBER | REV.

E-REV 3

E SIZE PACKAGE

REVISION — SEE SHEET 6

D 7501

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DO NOT SCALE

(16I) A0 - A15

74S04 L75

L63 74S138 → (1D7) PROM(4B8)

L46 74S138

L44 74S157 — R118 A0/7M, R119 A1/8M, R120 A2/9M, R117 A3/10M, 22Ω(4)

L61 74S157 — R19 A4/11M, R18 A5/12M, R20 A6/13M, 22Ω(3)

<BK4 (4EG)

74S30 L62 → L10 74S00 → R111 56Ω 5%

74S30 L45 → L10 74S00 → R112 56Ω 5%

74S30 L11 → L10 74S00 → R113 56Ω 5%

74S20 L29 → L10 74S00 → R114 56Ω 5%

RFSH (1C7)

RAS (4F7)

WRITE (4F5)

CAS 4E7

D8MI (4A8) L1 L19 L35 L52 — D7MI (4A7) L2 L20 L36 L53 — D6MI (4A7) L3 L21 L37 L54 — D5MI (4A7) L4 L22 L38 L55 — D4MI (4A7) L5 L23 L39 L56 — D3MI (4A7) L6 L24 L40 L57 — D2MI (4A7) L7 L25 L41 L58 — D1MI (4A7) L8 L26 L42 L59 — D0MI (4A7) L9 L27 L43 L60

4116 RAM: A0/7M A1/8M A2/9M A3/10M A4/11M A5/12M A6/13M; DIN, RAS, WRITE, CAS, DO; VDD +12V, VBB −5V, VCC +5V; C90–C153 .1µF, C154 2.2µF, C155 .1µF, C156 .1µF, C157 2.2µF, C158 .1µF, C159 .1µF, C160 .1µF, C161 .1µF, C162 .1µF, C163 .1µF, C164 .1µF, C165 .1µF, C166 .1µF, C167 .1µF, C168 .1µF, C169 .1µF, C170 .1µF, C171 .1µF, C172 .1µF, C173 .1µF, C174 .1µF, C175 .1µF, C176 .1µF, C177 .1µF,

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DO NOT SCALE

TP1

R61 +5VR 2.2K

P2 DMAMREQ

74S02 L64

74S32 L90

M1 (1E2)

74S08 L89

74S08 L89

74S32 L90

CRQAK (1D5) (2F5)

L77 74S74

L47 7474

L77 74S74

R73 +5VR 2.2K

MREQ (2B6)

74S08 L31 L30

7408

RAS (3D10)

74S11 L13

RFSH (1C7)

74S08 L30

74S32 L90

74S11 L13

7408 L31

L74 7404

L28 74S74

R115 22Ω 5%

CAS (3B8)

L12 74S74

(3C10) BK4

4MHZ

Φ½ (1B4)

Φz (1B1)

ΦA (1C1)

R94 +5VR 2.2K

ΦA1 (1D1)

R95 +5VR 2.2K

L28 74S74

R116 22Ω 5%

WRITE (3B8)

+5VR R71 2.2K

L47/7474

L51 7404

C89 .01μf

NE555 L33A

R131 3.3M

R127 5.6M

C88 .1μf MYLAR

±0V

19 PWR LED

CBURSQ (1C11)

BUSAK (1A9)

74S02 L64

74S00 L76

74S08 L89

74S32 L90

74S08 L89

L74 7404

74125 L85

74S08 L30

74S20 L88

Φz (1B2)

PROM (3G10)

74S00 L76

(1A9) MREQ

74S32 L86

PROM (1D7)

74S32 L86

CRQAK (1E4)

12 CRQAK

N1 ST DATA

(2F1) PAR OUT

L85 74125

R17 56Ω 5%

D-BUS (2E1) (1A7)

LS244 L71

56Ω (8)

D2MI (3G1) D1MI (3G2) D3MI (3G4) D5MI (3G5) D7MI (3G7)

D8MI (3G7)

L72 LS373

R80 R7 R6 R5 R4 R3 R2 R1 10K (8) +5VR

D8MQ

D8MQ-D8MQ (3A4)

74125 L85

PAR IN (2G8)

L87

R21 10K +5VR

L50A/S174

OCOB (1C3)

MR (1B10)

WDI (2D2)

H4 FPL4 P4 FPL3 13+ FPL2 14+ FPL1

WANG LABORATORIES, INC. LOWELL, MASS. U.S.A.	BY	DATE	APPROVED BY	DATE
	DWN MDMalvile	10-79	E ENGR	
	CHK		M ENGR	
			MFG ENGR	
MATERIAL	MODEL NO. 140		TITLE CPU AND MEMORY	
	SEE ENGRG. SPECIFICATIONS No.			
FINISH	TOL. EX. AS NOTED .XX ± FRAC. ± .XXX ± ANG. ± FINISH √			
	SCALE	SHT 4 OF 6	SEE CHART	D	7501	16
			WANG PART NUMBER	SIZE	DRAWING NUMBER	REV.

E SIZE PACKAGE

7501

SEE SHEET 6

"THIS DRAWING AND THE DATA SHOWN THEREON ARE THE CONFIDENTIAL PROPERTY OF, AND ARE PROPRIETARY TO, WANG LABORATORIES, INC.. THIS DRAWING AND THE DATA SHOWN THEREON MAY NOT BE MADE PUBLIC WITHOUT THE WRITTEN CONSENT OF WANG LABORATORIES, INC. IF FOR ANY REASON THIS DRAWING IS PERMITTED BY WANG TO LEAVE THE PHYSICAL CUSTODY OF THE COMPANY, IT IS RETURNABLE UPON THE DEMAND OF WANG LABORATORIES, INC."

DO NOT SCALE

RESTART DS4 DS3 DS2 DS1 DPB

BZ +24V -12V +12V -5V +5V1 +5V2 GND

7501 RB

SPARE L33A SPARE L88A SW2 SW1 XTAL

SEE SH 6

BY	DATE	APPROVED BY	DATE
DWN M. Morello	10/79	E ENGR	
CHK		M ENGR	
		MFG ENGR	

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

MATERIAL

FINISH

MODEL NO. 140

SEE ENGRG. SPECIFICATIONS

No.

TOL. ER: AS NOTED

.XX ± FRAC. ±

.XXX ± ANG. ± FINISH √

SCALE ## SHT 5 OF 6

TITLE CPU AND MEMORY

SEE CHART | D | 7501 | 16

WANG PART NUMBER | SIZE | DRAWING NUMBER | REV.

NEXT ASSY

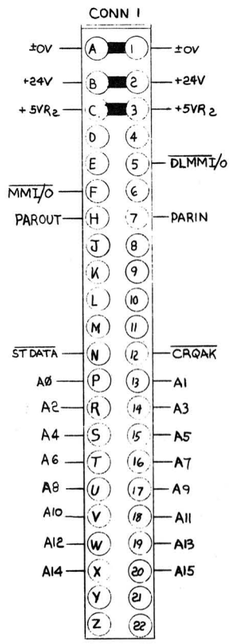
"THIS DRAWING AND THE DATA SHOWN THEREON ARE THE CONFIDENTIAL PROPERTY OF, AND ARE PROPRIETARY TO, WANG LABORATORIES, INC.; THIS DRAWING AND THE DATA SHOWN THEREON MAY NOT BE MADE PUBLIC WITHOUT THE WRITTEN CONSENT OF WANG LABORATORIES, INC. IF FOR ANY REASON THIS DRAWING IS PERMITTED BY WANG TO LEAVE THE PHYSICAL CUSTODY OF THE COMPANY, IT IS RETURNABLE UPON THE DEMAND OF WANG LABORATORIES, INC."

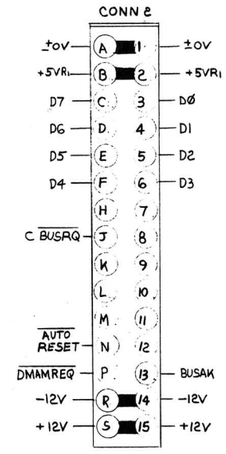
DO NOT SCALE

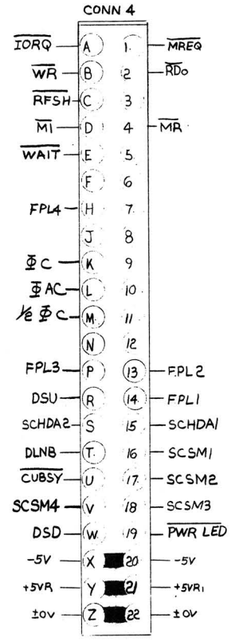
COMPONENT	TYPE	W.L.I *
R1-8, 21-29, 128	10K ¼W 10%	330-4010
R9-17, 111-114	56Ω ¼W 5%	330-1057
R18-20, 115-120, 124	22Ω ¼W 5%	330-1023
R30-96, 132	2.2K ¼W 10%	330-3022
R97-102	4.7K ¼W 10%	330-3047
R103-110	150Ω 1/4W 10%	330-2015
R121-123	330Ω 1/4W 10%	330-2033
R125	1K ¼W 10%	330-3010
R126	12Ω 1/4W 10%	330-1012
R127	5.6MΩ 1/4W 10%	330-6056
R129	390Ω 1/4W 10%	330-2039
R130	220Ω 1/4W 10%	330-2022
R131	3.3MΩ 1/4W 10%	330-6033
C1-8, 77-83	15uf 20V (T)	300-4022
C9-76	.05uf 12V	300-1900
C84-87, 90-121, 123-159, 166	.1uf 50V	300-1930
C88	.1uf (M)	300-2213
C89	.01uf	300-1903
C155-161, 165	47Pf 500V	300-1047
C162	680Pf 500V	300-1680
C163	18 Pf	300-1018
C164	150Pf 500V	300-1150
C167	3.3uf 15V (T)	300-4016

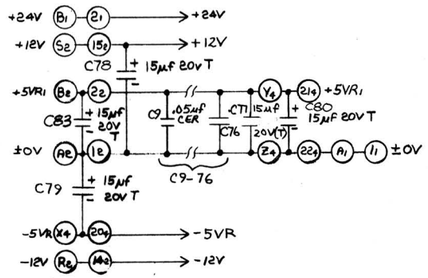
LOCATION	W.L. PART NO.	TYPE
L1-9, 19-27, 35-43, 52-60	SEE CHART	MK4116
L10, 76, 117	377-0345	74S00
L11, 45, 62	376-0198	74S30
L12, 28, 48, 77, 116, 119	376-0202	74S74
L13, 114	376-0237	74S11
L14, 31, 80, 103, 110, 118	376-0081	7408
L15, 47, 70, 78, 84, 108, 109	376-0006	7474
L16	376-0090	74154
L17	376-0176	74367
L18, 72, 91	376-0310	74LS373
L29, 88	376-0230	74S20
L30, 89, 107	376-0200	74S08
L32, 66, 79	376-0092	7425
L33, 85, 113	376-0324	74125
L33A	376-0341	NE555
L34, 65, 86	376-0093	7432
L44, 61	376-0217	74S157
L46, 63, 99	376-0298	74S138
L49	376-0139	7414
L50	376-0003	7410
L50A	376-0247	74S174
L51, 74, 81, 112	376-0010	7404
L64	376-0199	74S02
L67	376-0242	74LS280
L68, 69	376-0297	74LS240
L71, 73, 93, 95, 105	376-0288	74LS244
L75	376-0197	74S04
L82	376-0296	74S37
L83	376-0004	7420
L87	376-0013	7475
L90	376-0205	74S32
L92	SEE CHART	Z80ACPU
L94	SEE CHART	Z80A-CTC
L96	376-0171	74148
L97	376-0286	74LS374
L98	376-0008	7442
L100-102	SEE CHART	2708
L104	376-0194	7411
L106	376-0285	74LS245
L111	376-0104	9602
L115	376-0045	74H04
L120	376-0068	7437

LOCATION	TYPE	SPARE
L30	74S08	1
L33, L85	74125	2, 1
L34, L65	7432	3, 2
L48	74LS74	1
L49, L87	7474	2, 1
L51	7407	3
L64	74S02	1
L75	74S04	2
L76, L117	74S00	2, 1
L79	7425	1
L82	74S37	3
L83	7420	1
L88	74S20	1
L103	7408	1
L107	74S08	2
L112	7404	4
L114	74S11	2
L119	74S74	1
L120	7437	1









MNEMONIC	COORD.
A0-A15	(1F1)
AUTO RESET	(1E11)
BUSAK	(1A9)
CBUSRQ	(1C11)
CRQAK	(4A11)
CUBSY	(4G11)
D0-D7	(1A7)
DLMMI/O	(1A5)
DLNB	(4F11)
DMAMREQ	(4G11)
DSD	(4G2)
DSU	(4G21)
FPL1-FPL4	(4B3)
±AC	(1C1)
±C	(1C1)
½±C	(1C1)

MNEMONIC	COORD.
IORQ	(1A7)
MI	(1A8)
MMI/O	(1A5)
MR	(1A10)
MREQ	(1A9)
PARIN	(4G8)
PAROUT	(4F1)
PWR LED	(4E1)
RD	(1A10)
RFSH	(1A8)
SCHDA1, SCHDA2	(4B11)
SCSM1-SCSM4	(4D11)
STDATA	(4A9)
WAIT	(1G11)
WR	(1A8)

210 = 209 + 378 or 377

210	209	L92	L94	L100	L101	L102
7501-A	7501	377-0345	377-0368	377-0371	378-3048-R4	378-2666-R3	378-2667-R3
DATA LINK DIAG. 7501-B	7501	377-0345	——	377-0371	378-2492-R1	378-2493-R1	378-2494-R1
[redacted]	7501	377-0345	——	377-0371	378-2495R1	378-2496-R1	378-2497-R1
7501-D BOOTSTRAP	7501	377-0345		377-0371	378-3047-R4	378-2666-R3	378-2667-R3

NO.	REVISION	BY	DATE	APPD
1	ORIGD. PER DWR * 5595 APP. RLL 10-79	MRH	9-21-79	
2	REVISED PER ECN * 1171 APP'D RLL 10-79	MRH	10-10-79	
3	REVISED PER ECN * 12676 APP'D RLL 10-79	MRH	10-10-79	
4	REVISED PER ECN * 12767 APP'D RLL 10-79	MRH	10-10-79	
5	REVISED PER ECN # 13072 APP'D 3.11.11879	MRH	11-8-79	
6	REVISED PER ECN'S # 13389 + 13390 APP'D 3.11.11979	MRH	11-16-79	
7	REVISED PER ECN # 13798 APP'D 3.11.12-1379	MRH	12-12-79	
8	REVISED PER ECN # 13854, 13930, 13935, 13953 APP'D 3.11.2 2480	A.B	1-23-80	
9	REVISED PER ECN # 14261 APP'D 3.11.2 22580	A.B	2-22-80	
10	REVISED PER ECN # 14794 APP'D 3.11.2 3-80	A.B	3-31-80	
11	REVISED PER ECN # 9730 APP'D 3.11.2 2480	A.B	4-30-80	

M NO.	T.K.	T.K.	±T.K.	FSS
M1	12-15-80	1-5-81	3423-8[illegible]-6811	
M2				
M3				
M4				

M NO.	REVISED PER
M1	ECN # 15912 APP'D 3.11.11480
M2	REVISED PER ECO # 17057 APP'D 3.11.2 12-1680
M3	REVISED PER ECO # 17427 APP'D: 3.11.2 1-2-81
M4	REVISED PER ECO # 18231, 18331 APP'D 3.11.2 2-2681
M5	REVISED PER ECO # 18850 APP'D 3.11.2 4-2881

M NO.	REVISED PER
M1	FSS 4-22-81
M2	
M3	REVISED PER ECO # 19013 APP'D 3.11.2 4-2281

E-REV 3

WANG LABORATORIES, INC. LOWELL, MASS. U.S.A.	BY	DATE	APPROVED BY	DATE
	DWN [illegible]	10-79	E ENGR P.E.P.	2/3/79
	CHK RLL	10-79	M ENGR	
			MFG ENGR	
MATERIAL	MODEL NO. 140	TITLE	CPU AND MEMORY	
FINISH	SEE ENGRG. SPECIFICATIONS No.	SEE CHART	D	7501	16
	TOL. EX. AS NOTED .XX ± FRAC. ± .XXX ± ANG. ± FINISH √	WANG PART NUMBER	SIZE	DRAWING NUMBER	REV.
	SCALE 6X0 SHT 6 OF 6	E SIZE PACKAGE			

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DO NOT SCALE

SW1 · R1 1K · R2 1K · R3 1K · R30 1K · R4 1K · R5 1K · R29 1K · R31 33K 5% · R32 33K 5% · R33 33K 5% · R36 2.2K · R37 2.2K · R38 2.2K · R39 2.2K · R40 2.2K · R41 2.2K · R42 2.2K · R43 2.2K · R6 1K · C3 470PF MICA · C4 470PF MICA · C5 470PF MICA

L20 74LS374 · L16 74367 · L17 74367 · L10 74367 · L9 74367 · L11 74175 · L8 74175 · L28 · L32 93L24 · L34 9602 · L35 9602 CLR1 · L25 7474 · L40 74LS74 · L19 74LS373 · L18 74LS373 · L31 74LS173 · L29 74251 · L26 LS11 · L27 74LS08 · L39 74LS04 · L38 74LS32 · L36 7403 · L37 7407 · L15 7432 · L30 LS32

ABI ABI-AB3 (2D11) · CPB BCPB (2B8) · INOB INOB (1D8) · INST · GKP0 GKB2 GKA0 GKA2 GKB1 GKB3 GKA1 GKA3 · OBI OB2 OB3 OB4 OB5 OB6 OB7 OB8 · IBI-IB8 (1BG) · BK1 (2BG) · BK2 (2B7) · BK3 (2F7) · CB5 (1D11) · ±0V · +5VR

DATA 8 · DATA 7 · DATA 6 · DATA 5 · DATA 4 · DATA 3 · DATA 2 · DATA 1 · GIOA3 · GIOA2 · GIOA1 · GIOA0 · GIB3 · GIB2 · GIB1 · GIB0

AB4 AB5 AB6 AB7 AB8 · AB4-AB8 (2D11) · AB3 (2C4) · CBS (1E3) · OBS (2F9) · READY · H/S · RST · PRMS (2A7) (2G6) · INPUT · CLR9 · A4 · R/B (2BC) (2AG) · IBS (2A5) · IB1-IB8 (1E5) · INOB (1G8) · IBS IBG

RESET · PRMS · HALT/STEP · IBS · IB9 · STAD · D0 D1 D2 D3 D4 D5 D6 D7 · IB1 IB2 IB3 IB4 IB5 IB6 IB7 IB8

WANG LABORATORIES, INC. LOWELL, MASS. U.S.A.	BY	DATE	APPROVED BY	DATE
DWN.		1-10-80	E ENGR	
CHK			M ENGR	
MATERIAL	MODEL NO. 2200		MFG ENGR	
	SEE ENGRG. SPECIFICATIONS No.	TITLE	TRIPLE CONTROLLER MOTHERBOARD	
FINISH	TOL. EX. AS NOTED .XX ± FRAC. ± .XXX ± ANG. ± FINISH √	210-7515	D	7515	5
	SCALE NONE SHT 1 OF 4	WANG PART NUMBER	SIZE	DRAWING NUMBER	REV.

REVISION · SEE SHEET · NO. · DATE · BY

ORLYE PRESS

D 7515

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DO NOT SCALE

SW2 ±0V 1 2 3 4 5 6 7 8 / 16 15 14 13 12 11 10 9
+5VR R14 1K, R15 1K, R16 1K, R17 1K, R21 1K, R20 1K, R19 1K, R18 1K
ABI-ABB (1E10) (1G10)
SW3 ±0V 9 10 11 12 13 14 15 16 / 8 7 6 5 4 3 2 1
+5VR R23 1K
R8 1K, R9 1K, R10 1K, R11 1K, R12 1K, R13 1K
ABS (1E9)
ABI ABB ABS
L23 LS266, L22 LS266, L12 LS266, L13 LS266
L6 7407
ABB 1 2
30 (1083)
28 (1081)

+5VR R34 33K 5% C1 220 PF MICA
±0V 4 A1 CX1 RX1 L24 9602 B1 5 OBS (1D11)
CLR1 3
CX1 Q1 6 → BK3 (1F2)
Q1 7
±0V 12 2D 2CLR 2Q 8 / 11 2CK L33 7474 2PR 2Q 9 / 10 13
L15 7432 9 / 10 8
L4 7403 → R/B (1C1)

+5VR R22 1K 10 2PR 12 2D L25 7474 2CK 11 2CLR 13 2Q 9 2Q 8
7408 L14 13 12 11
L5 7474 2CLR 13 2D 12 2CK 11 2PR 10 2Q 9 2Q 8
AB7 12
ABB 1 2 L6 7407
LG 12 7407
+5VR R26 1K

PBSY 11 3 ACK 10 3
+5VR R46 2.2K, R47 2.2K
±0V C6 1000PF MICA
PRMS (1B11)
IPR 1 2 ID L33 7474 3 ICK ICLR 4 IQ 6 IQ 5
L15 7432 12 13 11
C7 1000PF MICA ±0V
L14 9 10 8 7408
L6 11 10 7407
PRMS (1B11) 12 DN3, 32 GMBD, 10 GPRN

+5VR R35 33K 5% C2 220 PF MICA
±0V 12 A2 CX2 RX2 L24 9602 B2 11
CX2 Q2 10 / Q2 9
CLR2 13
L37 7407 5 6
R28 1K, R48 2.2K +5VR
BW1 (1F6)
BK2 (1D2) 12 13 L7 7432 11
L7 7432 3 / 9 10 8 / 6 4 5
L6 7407 6 → R/B (1C1)
L6 7407 4 → IBS (1B1)
L37 7407 1 2
31 GISD

+5VR R24 1K 4 IPR L5 7474 2 ID 3 ICK ICLR 1 IQ 6 IQ 5
BCPB (1F9) 5 4 L4 7403 6
+5VR R26 1K
R45 2.2K, R44 2.2K +5VR
13 DSTB

GBSY 11 2 GISN 9 2

9 10 11 L26 74LS11 8

TxD 6 DTR 5 RTS 4 CC 6 BB 3 CB 5
L1 7545 R1 9 VCC 15 +5VR
1A 4 1T 3 2A 5 2T 2 3A 6 3T 1 4A 7 4T 14
1Y 13 2Y 12 3Y 11 4Y 10
13 CTS, P 1 RXD, 14 DSR

L3 75150 GND 4 2A 3 1A 2 STB 1 V- 5 V+ 8 1Y 7 2Y 6
20 CD, 4 CA

+5VR R7 1K
-12V +12V
L2 75150 GND 4 V- 5 V+ 8 STB 1 1A 2 2A 3 1Y 7 2Y 6
Q1 MPSG512
R49 68Ω 1W 21 BA
Q2 MPSG518
-12V

M 2 11 CH GND
1 1 CH GND
36 2 CH GND
17 3 CH GND

SEE SHEET 4

WANG LABORATORIES, INC. LOWELL, MASS. U.S.A.		BY	DATE	APPROVED BY	DATE
		DWN		E ENGR	
		CHK		M ENGR	
				MFG ENGR	
MATERIAL	MODEL NO. 2200	TITLE	TRIPLE CONTROLLER MOTHERBOARD		
	SEE ENGRG. SPECIFICATIONS No.				
FINISH	TOL. EX. AS NOTED .XX ± FRAC. ± .XXX ± ANG. ± FINISH √	210-7515	D	7515	5
	SCALE SHT 2 OF 4	WANG PART NUMBER	SIZE	DRAWING NUMBER	REV.

"THIS DRAWING AND THE DATA SHOWN THEREON ARE THE CONFIDENTIAL PROPERTY OF, AND ARE PROPRIETARY TO, WANG LABORATORIES, INC.. THIS DRAWING AND THE DATA SHOWN THEREON MAY NOT BE MADE PUBLIC WITHOUT THE WRITTEN CONSENT OF WANG LABORATORIES, INC. IF FOR ANY REASON THIS DRAWING IS PERMITTED BY WANG TO LEAVE THE PHYSICAL CUSTODY OF THE COMPANY, IT IS RETURNABLE UPON THE DEMAND OF WANG LABORATORIES, INC."

DO NOT SCALE

7515 R4

J3 J2 J1

CONN 4

CONN 2

CONN 1

L41 SPARE

SEE SHEET 4

REVISION	BY	DATE

	BY	DATE	APPROVED BY	DATE
DWN	M.P. Melville	3/79	E ENGR	
CHK			M ENGR	
			MFG ENGR	

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

MATERIAL

MODEL NO. 2200

SEE ENGRG. SPECIFICATIONS

No.

FINISH

TOL. EX. AS NOTED
XX ± FRAC. ±
XXX ± ANG. ± FINISH √

SCALE SHT 3 OF 4

TITLE TRIPEL CONTROLLER MOTHERBOARD

210-7515 WANG PART NUMBER | D SIZE | 7515 DRAWING NUMBER | 5 REV.

"THIS DRAWING AND THE DATA SHOWN THEREON ARE THE CONFIDENTIAL PROPERTY OF, AND ARE PROPRIETARY TO, WANG LABORATORIES, INC.. THIS DRAWING AND THE DATA SHOWN THEREON MAY NOT BE MADE PUBLIC WITHOUT THE WRITTEN CONSENT OF WANG LABORATORIES, INC. IF FOR ANY REASON THIS DRAWING IS PERMITTED BY WANG TO LEAVE THE PHYSICAL CUSTODY OF THE COMPANY, IT IS RETURNABLE UPON THE DEMAND OF WANG LABORATORIES, INC."

DO NOT SCALE

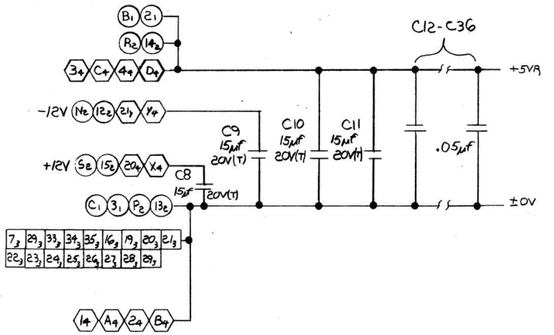
I.C. LOCATION	TYPE	W.L. NO.
L1.	75154	376-0077
L2,3	75150	376-0076
L4,36	7403	376-0028
L5,33,25	7474	376-0006
L6.37	7407	376-0056
L7.15	7432	376-0093
L8,11	74175	376-0119
L9,10,16.17	74367	376-0176
L12,L13,22,23	74LS266	376-0148
L14,	7408	376-0091
L30,38	74LS32	376-0211
L18.	74LS373	376-0310
L20.	74LS374	376-0286
L21.	74LS244	376-0288
L24,34.35	9602	376-0104
L26	74LS11	376-0225
L27	74LS08	376-0163
L28	74LS175	376-0161
L29	74251	376-0272
L31	74LS173	376-0289
L32	93L24	376-0120
L39	74LS04	376-0180
L40	74LS74	376-0155
L19	74LS273	376-0302

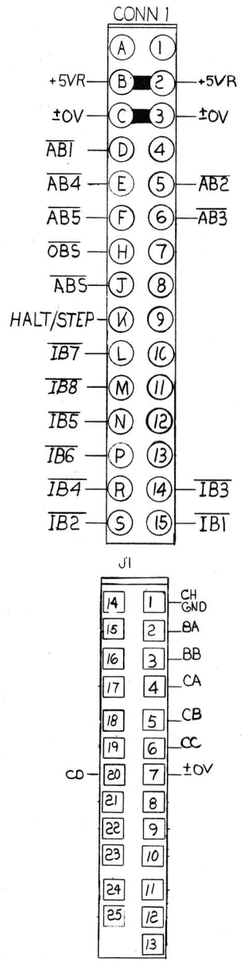
I.C. LOCATION	TYPE	SPARES
L4	7403	2
L13	LS266	2
L14	7408	2
L17	74367	1
L27	74LS08	3
L35	9602	1
L39	LS04	2
L40	SPARE	

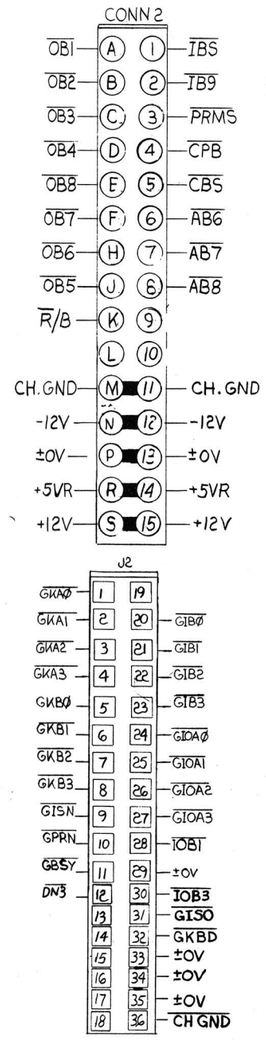
COMPONENT	TYPE	W.L. NO.
R1-30	1K ¼W 10%	330-3010
R36-48	2.2K ¼W 10%	330-3022
R31-35	33K ¼W 5%	330-3033
R49	68Ω 1W 10%	332-4068
C1,2	220 pf Mica	300-5004
C3-5	470 PF MICA	300-5005
C6,7	1000 pf MICA	300-5006
C8-11	15μf/20V(TA)	300-4022
C12-C36	.05 μf Cer Cap	300-7900
SW1	5 BANK SW	325-1501
SW2, SW3	8 BANK SW	325-1503
Q1	MPSG512 TRANS	375-1012
Q2	MPSG518 TRANS	375-1014
J1		350-1051
J2,3		350-2096
CONN 4		350-0082

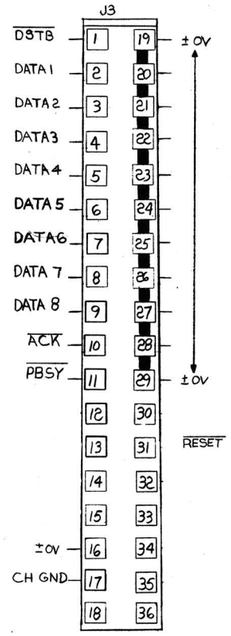
MNEMONIC	CORD
A4	1B11
$\overline{ABI}$-$\overline{AB3}$	1G10
$\overline{AB4}$-$\overline{AB8}$	1E11
$\overline{ABS}$	1E11
$\overline{ACK}$	2G7
BA	2D1
BB	2G2
CA-CD	2E1, 2G2
$\overline{CBS}$	1D11
$\overline{CLR9}$	1A11
$\overline{CPB}$	1G9
$\overline{CTS}$	2G1
D6-D7	1A6
DATA1 - DATA8	1F1
$\overline{DN3}$	2A7
$\overline{DSR}$	2F1
$\overline{DSTB}$	2A4
$\overline{DTR}$	2G3
$\overline{GBSY}$	2G4
$\overline{GIB0}$- $\overline{GIB3}$	1D1
$\overline{GIOA0}$- $\overline{GIOA3}$	1E1
$\overline{GISN}$	2G4
$\overline{GISO}$	2A6
$\overline{GKA0}$ - $\overline{GKA3}$	K4, 1G5
$\overline{GKB0}$	2A7
$\overline{GKB0}$ - $\overline{GKB3}$	1G5
$\overline{GPRN}$	2A6

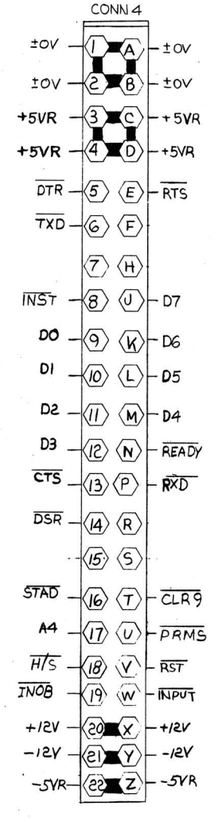
CONT. MNEMONIC	CORD
HALT/STEP	1A10
H/S	1C11
$\overline{IB1}$- $\overline{IB8}$	1A5
$\overline{IB9}$	1A7
$\overline{IB5}$	1A7
$\overline{INOB}$	1G8
$\overline{INPUT}$	1A11
$\overline{INST}$	1G6
IOB1	2A9
IOB3	2A11
$\overline{OB1}$- $\overline{OB8}$	1G7
$\overline{OBS}$	1D11
$\overline{PBSY}$	2G7
$\overline{PRMS}$	1B11, 1A10
R/B	1C1
$\overline{READY}$	1D11
$\overline{RESET}$	1A10
$\overline{RST}$	1C11
$\overline{RTS}$	2G3
$\overline{RXD}$	2G1
$\overline{STAD}$	1A4
$\overline{TXD}$	2G3











E-REV 2

NO.	REVISION	BY	DATE
0	ORIGINATED PER DWR # 2703 AND ECO # 1284	MMM	1-20-80
½	REVISED PER ECN# 1198, 1196 M.P.D. AND ECO # 1287	MPD	1-21-80
1	REVISED PER ECN# 1215 APP'D ECO # 1294	MPD	1-21-80
1½	REVISED PER ECO # 1328 APP'D: 3.11.80	GTM	3.11.80
2	REVISED PER ECO # 1731 APP'D: 11.13.80	L.B.C.	11-30-80
2½	REVISED PER ECO # 1837 APP'D: 3.13.81	L.B.C.	3-13-81

WANG LABORATORIES, INC. LOWELL, MASS. U.S.A.		BY	DATE	APPROVED BY	DATE
		DWN. MPDeWolfe	7/79	E ENGR R Tomasi	2/13/80
		CHK A Gallant	2/13/80	M ENGR	
MATERIAL	MODEL NO. 2200			MFG ENGR	
	SEE ENGRG. SPECIFICATIONS No.	TITLE TRIPLE CONTROLLER MOTHER BOARD			
FINISH	TOL. EX. AS NOTED .XX ± FRAC. ± .XXX ± ANG. ± FINISH √	210-7515	D	7515	5
	SCALE SHT 4 OF 4	WANG PART NUMBER	SIZE	DRAWING NUMBER	REV.

D 7515

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DO NOT SCALE

WANG LABORATORIES, INC. LOWELL, MASS. U.S.A.	BY	DATE	APPROVED BY	DATE
	DWN Kay B	9-6-79	E ENGR	
	CHK		M ENGR	
			MFG ENGR	
MATERIAL	MODEL NO. 38	TITLE SLAVE TYPE SETTER CONTROLLER		
	SEE ENGRG. SPECIFICATIONS No.			
FINISH	TOL. EX. AS NOTED .XX ± FRAC. ± .XXX ± ANG. ± FINISH √	210-7538	D	7538	4
	SCALE 1/4 SHT OF 4	WANG PART NUMBER	SIZE	DRAWING NUMBER	REV.

D 7538

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DO NOT SCALE

TP5 GND
TP6
TP7
TP8

BK10 (2C8)
BK9 (2C8)
BK2 (1C8)
BK1 (1F11)
BK6 (2D8)
BK11 (1A5)
BK7 (1B3)

C54 .047μf 100V(M)
C55 .047μf 100V(M)
R47 50K POT
R46 50K POT
R48 4.7K
R45 4.7K
L62 9602 Q1 Q2 CLR1 CLR2 CX1 CX2 RX1 RX2
L40 7407
R26 5% 470Ω
R27 5% 470Ω
IN914 D32 D33
R28 1K 5%
R29 1K 5%
Q17 SE6021
Q18 SE6021
R30 10K 1W
R31 10K 1W
±0V
C44 10μf (T) 26V
R44 1K 5% +5VR

AO, A1 (1F3)
DO-D7 (1F1)
+5VR R32 4.7K
+5VR R33 4.7K
L39 8255
AO A1 DO D1 D2 D3 D4 D5 D6 D7 VCC
PA0 PA1 PA2 PA3 PA4 PA5 PA6 PA7
PB0 PB1 PB2 PB3 PB4 PB5 PB6 PB7
PC0 PC1 PC2 PC3 PC7 PC4 PC5 PC6
RD WR RST CS

SSW DET (1H)
DSW DET (1J)
EMLMP (12)
R116 1K 5% +5VR
D22 IN914
L48
R36 R35 4.7K R34 4.7K
+5VR ±0V GND
R7 4.7K +5VR IN914 D17
FORP (10c)

L38 7407
R24 R25 R20 R21 R22 R17 R19 R18 R23 R14 R3 R4 R6 470Ω 5%
L52 7407
L3 7406
R13 470Ω 5%
L40 7407 RIPLS (1D10)
R53 470Ω +5VR
RIPLS (13g) SLMP (8g) TURRET DRIVE A/C (D5)

IN914 D30 D29 D28 D27 D26 D25 D24 D31 D20 D3 D4 D16 D21
R5 1K 5%
R11 1K 5%
Q10 Q6 Q13 Q9 Q5 Q12 Q4 Q8 Q14 Q16 Q1 Q2 Q3 Q15 2N6301 2N6646
SE6021

D14 A15A
D15 A15A
Q7 2N6052
Q11 2N6052
C2 .01μf C1 4μf C4 1μf C3 33μf
IN4004 D12 D11 D10 D9 D8 D7 D6 D5
IN2485 D13
IN4820 D1 D2
R1 100Ω, 1W +14V

(A8) (13s) +14V
(11s) LHVSW
(2s) EHVSW
(14s) +60V
(3s) LMW1
(4s) LMW2
(5s) LMW3
(6s) LMW4
(7s) EMW1
(8s) EMW2
(10s) EMW4
(9s) EMW3
(15s) PS GND
(1s) TUR. SOL
(13c) STLMP
(D8) TDS-TWO
(E8) TDS-ONE
(A8) FLENA
(15c) SELMP

REVISION	BY	DATE
SEE SHT 4		

	BY	DATE	APPROVED BY	DATE
DWN		9-13-79	E ENGR	
CHK			M ENGR	
			MFG ENGR	

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

MATERIAL	MODEL NO. 38 SEE ENGRG. SPECIFICATIONS No.	TITLE SLAVE TYPE SETTER CONTROLLER
FINISH	TOL. EX. AS NOTED .XX ± FRAC. ± .XXX ± ANG. ± FINISH √ SCALE SHT 2 OF 4	210-7538 WANG PART NUMBER | D SIZE | 7538 DRAWING NUMBER | 4 REV.

D 7538

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DO NOT SCALE

TP5 TP6 TP7 TP8 TP1 TP2 TP3 TP4

C1 C2 C3 C4 C5 C6 C7 C8 C9 C10 C11 C12 C13 C14 C15 C16 C17 C18 C19 C20 C21 C22 C23 C24 C25 C26 C27 C28 C29 C30 C31 C32 C33 C34 C35 C36 C37 C38 C39 C40 C41 C42 C43 C44 C45 C46 C47 C48 C49 C50 C51 C52 C53 C54 C55 C56 C57 C58 C59 C60 C61 C62 C63 C64 C65 C66 C67 C68 C69 C100 C101 C102 C103 C104 C105 C106 C107 C108 C109 C110

D1 D2 D3 D4 D5 D6 D7 D8 D9 D10 D11 D12 D13 D14 D15 D16 D17 D18 D19 D20 D21 D22 D23 D24 D25 D26 D27 D28 D29 D30 D31 D32 D33 D34

Q1 Q2 Q3 Q4 Q5 Q6 Q7 Q8 Q9 Q10 Q11 Q12 Q13 Q14 Q15 Q16 Q17 Q18

R1 R2 R3 R4 R5 R6 R7 R8 R9 R10 R11 R12 R13 R14 R15 R16 R17 R18 R19 R20 R21 R22 R23 R24 R25 R26 R27 R28 R29 R30 R31 R32 R33 R34 R35 R36 R37 R38 R39 R40 R41 R42 R43 R44 R45 R46 R47 R48 R49 R50 R51 R52 R53 R54 R55 R56 R57 R58 R59 R60 R61 R62 R63 R64 R65 R66 R67 R68

L1 L2 L3 L4 L5 L6 L7 L8 L9 L10 L11 L12 L13 L15 L16 L17 L18 L19 L20 L21 L22 L23 L24 L25 L26 L27 L28 L29 L30 L31 L32 L33 L34 L35 L36 L37 L38 L39 L40 L41 L42 L43 L44 L45 L46 L47 L48 L49 L50 L51 L52 L53 L54 L55 L56 L57 L58 L59 L60 L61 L62 L63 L64 L65 L66 L67 L68 L69

XTAL 1

SPARE

MODULE

7538 - R2

D 7538

Z4 A4 Z3 A3 Z1 A1

SEE SHEET 4

NO.	REVISION	DATE

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

	BY	DATE	APPROVED BY	DATE
DWN	Ray D	9-20-79	E ENGR	
CHK			M ENGR	
			MFG ENGR	

MATERIAL

MODEL NO. 38

SEE ENGRG. SPECIFICATIONS

No.

FINISH

TOL. EX. AS NOTED
XX ± FRAC ±
XXX ± ANG. ± FINISH √

SCALE SHT 3 OF 4

TITLE SLAVE TYPESETTER CONTROLLER

WANG PART NUMBER	SIZE	DRAWING NUMBER	REV.
210-7538	D	7538	4

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DO NOT SCALE

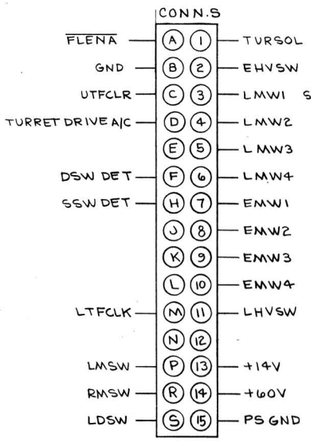
I.C. LOCATION	TYPE	W.L. NO.
L1	74150	376-0361
L2,43	1K RES PCK	50331-0186
L4	8085	SEE CHART
L38,40,62	7407	376-0056
L39	8255A	SEE CHART
L44	9318	376-0443
L45	74LS08	376-0153
L46,55	74LS00	376-0207
L47	8212	SEE CHART
L51,62	9602	376-0104
L54	74LS02	376-0208
L56	8155	SEE CHART
L57,68	74157	376-0082
L58,59	2708	SEE CHART
L60	74LS04	376-0180
L63,3	7406	376-0055
L66,67	74LS139	376-0226
L1,47,58,59	84 PIN SKT	376-9003
L4, 39, 56	40 PIN SKT	376-9011
L5-37,41,49,50,53,61,65	SPARES	

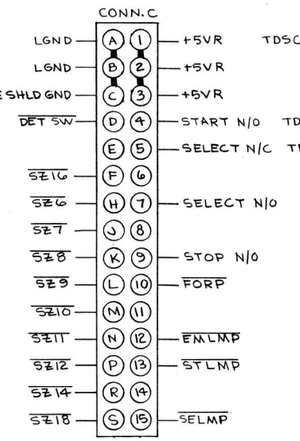
TYPE	LOCATION	SPARES
7400	L55	1
74LS02	L54	3
7404	L60	3
7406	L3	4
	L63	1
7407	L52	3
74LS08	L45	1
7474	L64	1
7486	L69	2

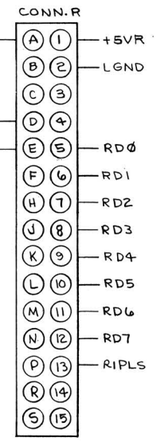
COMPONENT	TYPE	W.L. NO.
R1	100Ω,10% 1W	332-2010
R 5,10,11,16,28,29, 44,49,53, 57-65	1K,5% 1/4W	330-3011
R3,4,6,13,14,17-27	470Ω,10% 1/4W	330-2047
R7,32-36,39, 41-43,45-48,50,51	4.7K, 10% 1/4W	330-3047
R8,12,15	10K, 5% 1/4W	330-4011
R9	47K, 5% 1/4W	330-4048
R30,31	10K. 1W	332-4010
R38,46,47	50K POT	3336-1027
R40,2	20K,5% 1/4W	330-4021
R56,66	2K, 10% 1/4W	330-3020
C53	.022uf 100V(M)	300-2123
C1	4uf, 50V ELEC.	300-3080
C2	.01uf, 25V CER.	300-1903
C3	3.3uf, 15V TA.	300-4016
C4	1uf, 50V	300-1943
C7,108	1uf, 35V(T)	300-4000
C16,17,26-41,51,107,109	.05uf, CER.	300-1900
C42	1uf, 12V CER.	300-1901
C5,6,43-45,47-50,104	10uf, 20V DISC	300-3047
C46	.47uf, 35V TA.	300-4001
C52,53	.0022uf, 100V MYL	300-2023
C54,55	.047uf, 100V MYL	300-2147
C105,106	680pf, 500V CER.	300-1680
C110	5.6uF (TANT)	330-3011
D1,2	SIL. IN4820	380-1240
D3,4,16,17,19-33	SIL. IN914	380-1012
D5-12	SIL. IN4004	380-4004
D13	SIL. IN2483	380-3013
D14,15	SIL. A15A	380-3008
Q1,2,4-6,8,9, 10,12,13,14	NPN 2N6301	375-1075
Q3,17,18	NPN SE6021	375-1077
Q7,11	PNP 2N6052	375-1076
Q15,16	NPN 2N3646	375-1004
XTAL 1	6.114 MHZ	321-0033
VR1	7905	374-0002

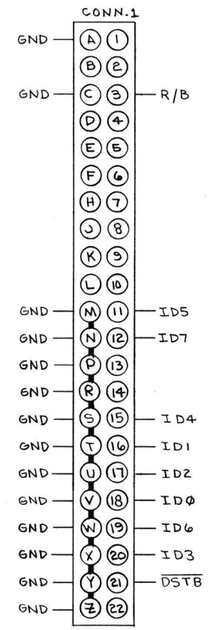
MNEMONIC	COORDINATE
DETSW	1A9
DSTB	1C11
DSW DET	2D11
EHVSW	2F1
EMLMP	2D11
EMW 1-4	2D1
FLENA	2B1
FORP	2D11
GR/B	1C11
GST	1A8
IDØ-ID7	1G7
LDSW	1E11
LMSW	1E11
LMW1-LMW4	2F1
LTFCLK	1G11
PWS GND	2C
R/B	1A9
RDØ-RD7	1G8
RIPLS	2A8
RMSW	1D11
SELECT N/C	
SELECT N/O	1E11
SELMP	2A1
START N/O	1E11
STOP N/O	1E11
SSW DET	2D11
SZ6-SZ12	1C11
SZ14	1B11
SZ16	1B11
SZ18	1B11
SLMP	2A8
TDS ONE	2B1
TDS TWO	2B1
TURRET DRIVE A/C	2A7
TURSOL	2C1
UTFLK	1F11

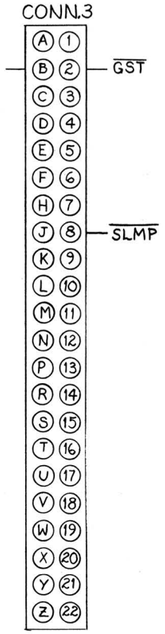
210 = 209 + 377 OR 378						
210	209	L4	L39	L47	L56	L58	L59
7538-A	7538	377-0366	377-0380	377-0370	377-0364	378-2490	378-2491

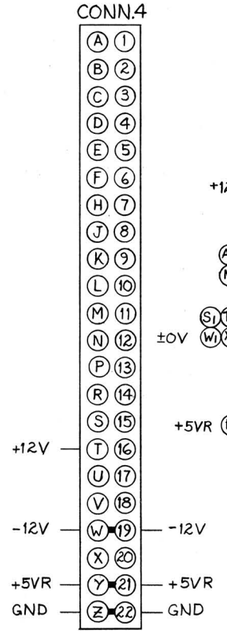


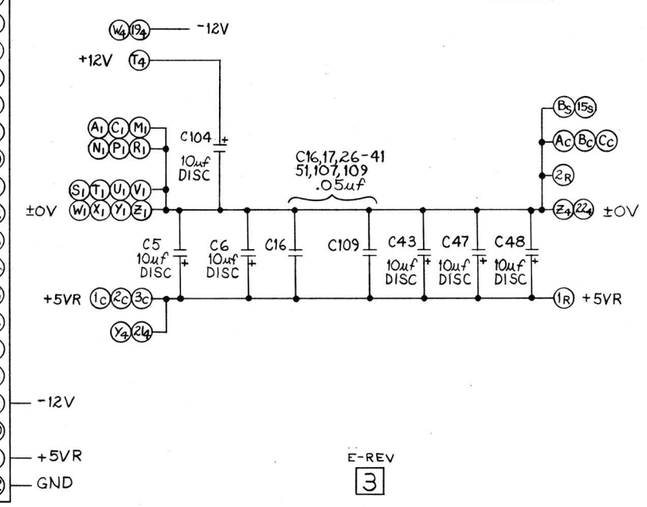












E-REV 3

NO.	REVISION	DRAWN BY	CHK'D BY	ENG'G APPR. BY	MFG APPR. BY
0/0	ORIGINATED PER DWR #ET20 APP'D: RAY 12-23-80	R.S. 9-21-79	R.S. 10-29-79	W.W. 11-20-79	L.BC 4-10-80	L.BC 12-17-80
1/0	REVISED PER ECN# 13536 APP'D: RAY 12-23-80					
2/1	REVISED PER ECN# 12809 APP'D: RAY 12-23-80					
3/1	REVISED PER ECN # 14335 APP'D: RAY 12-23-80					
4/3	REVISED PER ECN# 15910 APP'D: RAY 12-23-80					

ORLIVE PRESS

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

	BY	DATE	APPROVED BY	DATE
DWN	Ray S.	3-20-79	E ENGR	T. D. L.	12/13/79
CHK	R.K. Blum	12-23-80	M ENGR	
			MFG ENGR	

MATERIAL

MODEL NO. 38

SEE ENGRG. SPECIFICATIONS' No.

FINISH

TOL. EX. AS NOTED .XX ± FRAC. ± .XXX ± ANG. ± FINISH √

SCALE SHT 4 OF 4

TITLE SLAVE TYPESETTER CONT.

210-7538	D	7538	4
WANG PART NUMBER	SIZE	DRAWING NUMBER	REV.

D 7538

SIGNAL	UNIV. MEM.	CRT/CPU	ARCH. DISK	REGULATOR	SPARE	SPARE	J1	J2	J3	J4	J5	J6	J7	J8	S.P.
ARCHIVER SYSTEMS	7544 7410 SYS5	7545 ARCH	7712 SYS5	7543 ARCH/ SYS5	ARCH	SYS5	ARCH SYS5	ARCH SYS5	ARCH SYS5	ARCH/ SYS5	ARCH SYS5	ARCH SYS5	ARCH/ SYS5	ARCH/ SYS5	ARCH/ SYS5
AET		44	44	S3	S3					13					
AUTO RESET		15	15	J											
A0	D1	D1	D1		D1	D1	D1								
A1	41	41	41		41	41	41								
A2	E1	E1	E1		E1	E1	E1								
A3	51	51	51		51	51	51								
A4	F1	F1	F1		F1	F1	F1								
A5	61	61	61		61	61	61								
A6	H1	H1	H1		H1	H1	H1								
A7	71	71	71		71	71	71								
A8	J1	J1	J1		J1	J1	J1								
A9	81	81	81		81	81	81								
A10	K1	K1	K1		K1	K1	K1								
A11	91	91	91		91	91	91								
A12	L1	L1	L1		L1	L1	L1								
A13	101	101	101		101	101	101								
A14	M1	M1	M1		M1	M1	M1								
A15	111	111	111		111	111	111								
BASE Q1	BASE Q1			M/11											
BTORG	2,				2,	2,									
BPF	20,														
BWR	C1				C1	C1									
BWRE	183/34				34	34									
BLA	NOT USED	Y3/U4	Y3/U4	U4	U4	U4									
BMI	31	31	31	Z1	31	31									
NOT USED	CAR									9					
NOT USED	CE0B		74	74			C4	C4	C4						
	CE0C	13	E4	E4	E4	E4	74	74	74						
	CE0E	54	54	54	54	54	E4	E4	E4						
NOT USED	CE0F	F4	F4	F4			54	54	54						
	CE03	H4	H4	H4			F4	F4	F4						
	CE04	64	64	64			H4	H4	H4						
	CE05	82	82	82			64	64	64						
	CE06	J2	J2	J2			82	82	82						
	CE07	72	72	72			J2	J2	J2						
	CE08	H2	H2	H2			72	72	72						
NOT USED	CF	CHECK/FAULT	14,	14,	S1,	S1,	H2	H2	H2						
CK SHIELD 1	NOT USED	193	84	84	U3	U3	S1,	S1,	S1,						
CK SHIELD 2	NOT USED	213	104	104			U3	U3	U3	10					
CR	NOT USED	203	94	94											
CLICK	CLICK		62	62											
NOT USED	CM5						S4	S4	S4						
NOT USED	CO						A3	A3	A3						
CLICK WS	NOT USED	L4	L4	L4	L4	L4				12					
NOT USED	DATA						J4	J4	J4						
NOT USED	DA2A						84	84	84						
NOT USED	DA34						A4	A4	A4						
NOT USED	DA5A						213	213	213						
NOT USED	DA6A						44	44	44						
NOT USED	DATA						D4	D4	D4						
NOT USED	DABA						54	54	54						
NOT USED	DA9A						203	203	203						
NOT USED	DA10A						84	84	84						
NOT USED	DA11A						K4	K4	K4						
NOT USED	DA12A						94	94	94						
D0	D0	P2	P2	P2	P2	P2	L4	L4	L4						
D1	D1	R2	R2	R2	R2	R2	P2	P2	P2						
D2	D2	N2	N2	N2	N2	N2	R2	R2	R2						
D3	D3	M2	M2	M2	M2	M2	N2	N2	N2						
D4	D4	112	112	112	112	112	M2	M2	M2						
D5	D5	122	122	122	122	122	112	112	112						
D6	D6	132	132	132	132	132	122	122	122						
D7	D7	142	142	142	142	142	132	132	132						
DAX	DAX		P1	C2	P1	C2	142	142	142	11					
DBA	DBA	P1	C2	P1	C2		R4	R4	R4						
DBUS RQ		W1	P1	C2			124	124	C2						
NOT USED	DC	161	W1	W1			C2	P1							
DKS	NOT USED	33	161	161	161	161	W1	W1							
DLE	NOT USED	143	33	33	33	33	161	161	161						
	DR		143	143	143	143	33	33	33						
	DRC		T1	T1	T1		143	143	143						
	DRV		E2	E2	E2	E2	T1	T1	T1						
DRY	DS		19,	19,	19,	19,	E2	E2	E2						
D PARE			Y1	Y1	Y1	Y1	19,	19,	19,						
DL RESTART			24	24	24	24	Y1	Y1	Y1						
			74X3	T4	T4	T4	24	24	24						
							T4	T4	T4						
EDK	NOT USED	C3	C3	C3	C3	C3	C3	C3	C3	11					
EOR							83	83	83						
ERGT/WRGT	ERGT/WRGT						F2	F2	F2						
										D	D				
NOT USED	FL						124	124	124						
NOT USED	F/R	X1	X1	X1	X1	X1	X1	X1	X1	48					

DO NOT SCALE

NO.	REVISION	DATE	BY
	SEE SHEET 5		

	BY	DATE	APPROVED BY	DATE
DWN		2-9-80	E ENGR	
CHK			M ENGR	
			MFG ENGR	

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

MATERIAL —

FINISH —

MODEL NO. ARCHIVER/SYSTEM 5 — SEE ENGRG. SPECIFICATIONS — No.

TOL. EX. AS NOTED: .XX ± FRAC. ± .XXX ± ANG. ± FINISH √

SCALE — SHT 1 OF 5

TITLE: MOTHERBOARD

210-7546	D	7546	5
WANG PART NUMBER	SIZE	DRAWING NUMBER	REV.

7546 D

SIGNAL ARCHIVER	SYSTEM 5	UNIV. MEM. 7544 ARCH.	7410 SYS5	CRT/CPU 7545 ARCH	7712 SYS5	ARCH. DISK 7543 ARCH.	7411 SYS5	REGULATOR ARCH/ SYS5	SPARE ARCH	SPARE SYS5	SPARE ARCH	SPARE SYS5	J1 ARCH/ SYS5	J2 ARCH/ SYS5	J3 ARCH/ SYS5	J4 ARCH/ SYS5	J5 ARCH/ SYS5	J6 ARCH/ SYS5	J7 ARCH/ SYS5	J8 ARCH/ SYS5	S.P. ARCH/ SYS5
+GA	NOT USED	K3	M3																		+GA
+GB	NOT USED	L3	L3																		+GB
HDIR	HDIR					92	92						C	C							
HDL1	HDL1					102	102						M	M							
HDL2	HDL2					K2	K2						B	B							
HSTP	HSTP					31	31														
INT	INT	121	181			181	N1						J	J							
INDEX1	INDEX1					B1	B1														
INDEX2	INDEX2					11	11														
INT/EXT	INT/EXT	121		121		121	121														
IORQ	IORQ		21		21		N1														
ENOS	ENOS			N1		104															
ENO6	ENO6			R1		R1															
EM2	EM2	54		54		193															
INTTC	INTTC			64		64															
KOMS	NOT USED	113	113	113	113	113	113								1						
KP	KP			H4		H4															
KS	KS			N4	N4										2						
KWR	NOT USED	E3	E3	E3	E3	E3	E3		E3	E3					3						
K0	K0			R4	R4										4						
K1	K1			174	174										5						
K2	K2			P4	P4										6						
K3	K3			154	154										7						
K4	K4			134	134										8						
K5	K5			S4	S4																
K6	K6			144	144																
LED1	LED1					194										LED-1					
LED2	LED2					W4	W4									LED-2					
LOCK	LOCK			J4	J4											-					
LTT2	LTT2			171	171	171	171								9						
MCK	NOT USED	32	32	32	32	32	32		32	32						P					
MDE	MDE	K2	164	K2	164		164		K2	164						P					
MR	MR	L2	L2	L2	L2	L2	L2		L2	L2											
MREQ	MREQ	42	14/W4	42	14	42	163		14	42											
MWAIT	NOT USED	211	211	211	211	211	211		211	211											
NOP	NOT USED	24	24	24	24		24		24	24											
NR	NOT USED	Z1	Z1	Z1	Z1	Z1	Z1		Z1	Z1											
OUT 04				D2		D2			D2												
OUT 05						82															
OUT 0C						72															
OUT 03						U2															
OUT 08						H2															
PARE		13		E4		E4															
P/C WAIT		C2		C2		C2															
NOT USED	PFR					X3									7						
NOT USED	PFS					P4									17						
NOT USED	PL					114									50						
NOT USED	PO					T3									12						
NOT USED	PRIME																				
PROM CS		W9/14		14		163															
PROM SW	NOT USED	102	102	102	102										14						
NOT USED	PRYA					34	34														
PWRST		A4/13		A4		Y3			A4	A4					34						
NOT USED	PWR					Y3															
NOT USED	PWS					144									8						
NOT USED	PSC					N4									16						
															49						
																SW1.6					
-RA	NOT USED	53	53														-RA				
-RB	NOT USED	63	63														-RB				
RCK	RCK					141	141														
RD	RD	E2	A4/13	E2	A4	E2	15														
RDD	RDD					151	151														
NOT USED	REST					184	184														
RFSH	RFSH	Y1	C4	Y1	C4	Y1	R3														
NOT USED	RL					M4	M4														
NOT USED	RLT					174	174														
NOT USED	RXRDY			13	13	131	131														

NO.	REVISION	DATE	BY
	SEE SHEET 5		

DO NOT SCALE

WANG LABORATORIES, INC. LOWELL, MASS. U.S.A.	BY	DATE	APPROVED BY	DATE
	DWN S.D.	2.9.80	E ENGR	
	CHK		M ENGR	
			MFG ENGR	
MATERIAL H	MODEL NO. ARCHIVER/SYSTEM 5 SEE ENGRG. SPECIFICATIONS No.		TITLE MOTHERBOARD	
FINISH H	TOL. EX. AS NOTED .XX ± FRAC. ± .XXX ± ANG. ± FINISH √			
	SCALE H SHT 2 OF 5	210-7546	D 7546	5
		WANG PART NUMBER	SIZE DRAWING NUMBER	REV.

9956 D

OGILVIE PRESS

NO.	REVISION	DATE	BY
	SEE SHEET 5		

SIGNAL		UNIV. MEM.		CRT/CPU		ARCH. DISK		REGU-LATOR	SPARE		SPARE		J1	J2	J3	J4	J5	J6	J7	J8	S.P.
ARCHIVER	SYSTEM 5	7544 ARCH.	7410 SYS 5	7545 ARCH	7712 SYS 5	7543 ARCH.	7411 SYS 5	ARCH / SYS 5	ARCH	SYS 5	ARCH	SYS 5	ARCH / SYS 5	ARCH / SYS 5	ARCH / SYS 5	ARCH / SYS 5	ARCH / SYS 5	ARCH / SYS 5	ARCH / SYS 5	ARCH / SYS 5	ARCH / SYS 5
	$\overline{SCA}$				N1		10₄														
	$\overline{SCF}$				R1		R1														
$\overline{SECTOR1}$	$\overline{SECTOR1}$					A1	A1						L								
$\overline{SECTOR2}$	$\overline{SECTOR2}$					21	21							L							
NOT USED	$\overline{SEL}$					15₄	15₄								20						
NOT USED	$\overline{SEL}$					13₄	13₄								21						
$\overline{SFL1}$	$\overline{SFL1}$					52	52						N								
$\overline{SFL2}$	$\overline{SFL2}$					13	13							N							
$\overline{SH\ KEY}$	$\overline{SH\ KEY}$			11₄	11₄											10					
$\overline{SHLED}$	$\overline{SHLED}$			M4	M4											14					
NOT USED	$\overline{SL}$					U4	U4								24						
	$\overline{SOC}$				U1		U1														
	$\overline{SOR}$				18₁		18₁														
$\overline{SPK}$	$\overline{SPK}$			F2	F2											15					
NOT USED	$\overline{SPKD}$					W3	W3								19						
$\overline{SPKWS}$	NOT USED	K4	K4	K4	K4				K4	K4	K4	K4									
	$\overline{SPO}$		20₁		20₁		20₁														
	$\overline{SRE}$		W1		W1		W1														
$\overline{SWMUX}$		12₁		12₁		12₁															
	$\overline{TC\emptyset}$		T4/X3		T4		T4			T4		T4									
NOT USED	$\overline{TFB}$					15₃	15₃								32						
NOT USED	$\overline{TFP}$					17₃	17₃		17₃	17₃	17₃	17₃			33						
NOT USED	$\overline{TFS}$	13₃	13₃	13₃	13₃	13₃	13₃		13₃	13₃	13₃	13₃			18						
NOT USED	$\overline{TMR}$	P3	P3	P3	P3	P3	P3		P3	P3	P3	P3			13						
NOT USED	$\overline{TOF}$					N3	N3								22						
	TX RDY		B1		B1		P1			B1		B1									
$\overline{WCD}$	$\overline{WCD}$					D2	D2						E	E							
$\overline{WP}$	$\overline{WP}$			V1	V1	V1	V1						K	K							
	$\overline{WR}$		B4		C1		C1			C1		C1									
	$\overline{WRE}$		39/183		34		183			34		34									
WTR				D4																	
$\emptyset A$		T1		T1		T1			T1												
$\emptyset B$		B1		B1		P1			B1		B1										
$\emptyset A$ SHIELD				U1		U1															
28 VAC 1	28 VAC 1							P/13										3			
28 VAC 2	28 VAC 2							N/12										4			
+27VUR	+27VUR							S/15										1			
+24 VR	+24 VR							E/5	W9/194	W9/194	W9/194	W9/194	14	14		18/86					
14 VAC 1	14 VAC 1							K/9											2		
14 VAC 2	14 VAC 2							L/10											1		
+14 VUR	+14 VUR							R/19										2			
+12V	+12V	S2/152	S2/152	S2/152	S2/152	S2/152	S2/152	A/1	S2/152	S2/152	S2/152	S2/152				17/35					
+5VR	+5VR	B2/22 14/216	B2/22 14/216	B2/22 14/216	B2/22 14/216	B2/22 14/216	B2/22 14/216	D/4	B2/22 14/216	B2/22 14/216	B2/22 14/216	B2/22 14/216	15	15							
±0V	±0V	12/A2 49/U1 B3/23 22₄/24 A1/11 U3/93	12/A2 22₄/24 A3/11 B3/23 A1/11 U3	12/A2 22₄/24 49 B3/23 A1/11 U3	12/A2 22₄/24 B3/23 A1/11 U3	12/A2 22₄/24 J3/23	12/A2 22₄/24 J3/23	H/7	12/A2 22₄/24 B3/23 49/U3 A1/11 U1	12/A2 22₄/24 B3/23 49/U3 A1/11 U1	12/A2 22₄/24 B3/23 49/U3 A1/11 U1	12/A2 22₄/24 B3/23 49/U3 A1/11 U1	1,2,3 6,7,8 9,10 11,12,A	1,2,3 6,7,8 9,10 11,12,A	36,37,38 39,40,41 42,43,44 45,46,47 48,49,50 51,52,53 54,55,56 57,58,59 60,61 62,63,64	10,11,12 13,14,15 16,17,18 19,20,21 22,23,24 25,26,27 28,29,30 31,32,33 34					1,2,3 SW1-C
-5VR	-5VR	204/X4 A3	204/X4 A3	204/X4	204/X4	204/X4	204/X4	F/6	204/X4 A3	204/X4 A3	204/X4 A3	204/X4 A3	13	13							
-12VR	-12V	223/223	223/223	223/223	223/223	223/223	223/223	B/2	223/223	223/223	223/223	223/223									
	NOT USED		K2		K2					K2		K2									
NOT USED		164		164		164			164		164										
	NOT USED		42		42		42			42		42									
	NOT USED		P1		P1					P1		P1									
SPARE	SPARE	N1	N1						N1	N1	N1	N1									
		12₁	12₁						12₁	12₁	12₁	12₁									
		13₁	13₁						13₁	13₁	13₁	13₁									
		12₁	12₁						12₁	12₁	12₁	12₁									
		14₁	14₁						14₁	14₁	14₁	14₁									
		S1	S1						S1	S1	S1	S1									
		15₁	15₁						15₁	15₁	15₁	15₁									
									16₁	16₁	16₁	16₁									
		17₁	17₁						17₁	17₁	17₁	17₁									
		V1	V1						V1	V1	V1	V1									
		18₁	18₁						18₁	18₁	18₁	18₁									
									W1	W1	W1	W1									
		19₁	19₁						19₁	19₁	19₁	19₁									
									X1	X1	X1	X1									
									20₁	20₁	20₁	20₁									
									21₁	21₁	21₁	21₁									
		22₁	22₁	22₁	22₁	22₁	22₁		22₁	22₁	22₁	22₁									
		52	52	52	52																
SPARE	SPARE	92	92	92	92																

FINISH	MATERIAL	WANG LABORATORIES, INC. LOWELL, MASS. U.S.A.	
TOL. EX. AS NOTED FRAC. ± ANG. ±	SCALE NONE SHT. 3 OF 5	MODEL NO. ARCHIVE SYSTEMS SEE ENGRG SPECIFICATIONS No.	
WANG PART NUMBER 210-7546	SIZE D	TITLE MOTHER BOARD	DRAWN CHK
DRAWING NUMBER 7546	REV. 5		MFG ENGR M ENGR E ENGR

DO NOT SCALE

7546 D

7546

SIGNAL	UNIV. MEM	CRT/CPU	ARCH. DISK	REGULATOR
ARCHIVER SYSTEM 5	7544 ARCH. / 7410 SYS5	7545 ARCH / 7112 SYS5	7543 ARCH	7411 SYS5

SIGNAL	SPARE	SPARE	J1	J2	J3	J4	J5	J6	J7	J8	S.P.
			ARCH/SYS5	ARCH/SYS5	ARCH/SYS5	ARCH/SYS5	ARCH/SYS5	ARCH/SYS5	ARCH/SYS5	ARCH/SYS5	ARCH/SYS5
SPARE	SPARE	SPARE	52	52	52	52	52	52	52	52	52
F2	F2	F2	F2	F2	F2	F2	F2	F2	F2	F2	F2
62	62	62	62	62	62	62	62	62	62	62	62
H2	H2	H2	H2	H2	H2	H2	H2	H2	H2	H2	H2
72	72	72	72	72	72	72	72	72	72	72	72
J2	J2	J2	J2	J2	J2	J2	J2	J2	J2	J2	J2
82	82	82	82	82	82	82	82	82	82	82	82
92	92	92	92	92	92	92	92	92	92	92	92
102	102	102	102	102	102	102	102	102	102	102	102
13	13	13	13	13	13	13	13	13	13	13	13
D3	D3	D3	D3	D3	D3	D3	D3	D3	D3	D3	D3
53	53	53	53	53	53	53	53	53	53	53	53
F3	F3	F3	F3	F3	F3	F3	F3	F3	F3	F3	F3
63	63	63	63	63	63	63	63	63	63	63	63
H3	H3	H3	H3	H3	H3	H3	H3	H3	H3	H3	H3
73	73	73	73	73	73	73	73	73	73	73	73
83	83	83	83	83	83	83	83	83	83	83	83
K3	K3	K3	K3	K3	K3	K3	K3	K3	K3	K3	K3
93	93	93	93	93	93	93	93	93	93	93	93
L3	L3	L3	L3	L3	L3	L3	L3	L3	L3	L3	L3
103	103	103	103	103	103	103	103	103	103	103	103
M3	M3	M3	M3	M3	M3	M3	M3	M3	M3	M3	M3
N3	N3	N3	N3	N3	N3	N3	N3	N3	N3	N3	N3
123	123	123	123	123	123	123	123	123	123	123	123
R3	R3	R3	R3	R3	R3	R3	R3	R3	R3	R3	R3
S3	S3	S3	S3	S3	S3	S3	S3	S3	S3	S3	S3
T3	T3	T3	T3	T3	T3	T3	T3	T3	T3	T3	T3
163	163	163	163	163	163	163	163	163	163	163	163
U3	U3	U3	U3	U3	U3	U3	U3	U3	U3	U3	U3
V3	V3	V3	V3	V3	V3	V3	V3	V3	V3	V3	V3
183	183	183	183	183	183	183	183	183	183	183	183
W3	W3	W3	W3	W3	W3	W3	W3	W3	W3	W3	W3
193	193	193	193	193	193	193	193	193	193	193	193
X3	X3	X3	X3	X3	X3	X3	X3	X3	X3	X3	X3
203	203	203	203	203	203	203	203	203	203	203	203
V3	V3	V3	V3	V3	V3	V3	V3	V3	V3	V3	V3
			84	84	84	84	84	84	84	84	84
			04	04	04	04	04	04	04	04	04
			44	44	44	44	44	44	44	44	44
			F4	F4	F4	F4	F4	F4	F4	F4	F4
			64	64	64	64	64	64	64	64	64
			H4	H4	H4	H4	H4	H4	H4	H4	H4
			74	74	74	74	74	74	74	74	74
			J4	J4	J4	J4	J4	J4	J4	J4	J4
			84	84	84	84	84	84	84	84	84
			94	94	94	94	94	94	94	94	94
			104	104	104	104	104	104	104	104	104
			M4	M4	M4	M4	M4	M4	M4	M4	M4
			114	114	114	114	114	114	114	114	114
			N4	N4	N4	N4	N4	N4	N4	N4	N4
			124	124	124	124	124	124	124	124	124
			P4	P4	P4	P4	P4	P4	P4	P4	P4
			134	134	134	134	134	134	134	134	134
			R4	R4	R4	R4	R4	R4	R4	R4	R4
			144	144	144	144	144	144	144	144	144
			S4	S4	S4	S4	S4	S4	S4	S4	S4
			154	154	154	154	154	154	154	154	154
			174	174	174	174	174	174	174	174	174
			V4	V4	V4	V4	V4	V4	V4	V4	V4
			184	184	184	184	184	184	184	184	184
		SPARE	SPARE	SPARE	SPARE	SPARE	SPARE	SPARE	SPARE	SPARE	SPARE
		SPARE	SPARE	SPARE	SPARE	SPARE	SPARE	SPARE	SPARE	SPARE	SPARE

DO NOT SCALE

NO.	REVISION	DATE	BY
	SEE SHEET 5		

WANG LABORATORIES, INC. LOWELL, MASS. U.S.A.	BY	DATE	APPROVED BY	DATE
	DWN [illegible]	2-11-80	E ENGR	
	CHK		M ENGR	
			MFG ENGR	

MATERIAL	MODEL NO.	TITLE
4	ARCHIVER SYSTEMS SEE ENGRG. SPECIFICATIONS No.	MOTHERBOARD
FINISH 4	TOL. EX. AS NOTED .XX ± FRAC. ± .XXX ± ANG. ± FINISH √ SCALE 4 SHT 4 OF 5	210-7546 / D / 7546 / 5 (WANG PART NUMBER / SIZE / DRAWING NUMBER / REV.)

7546 D

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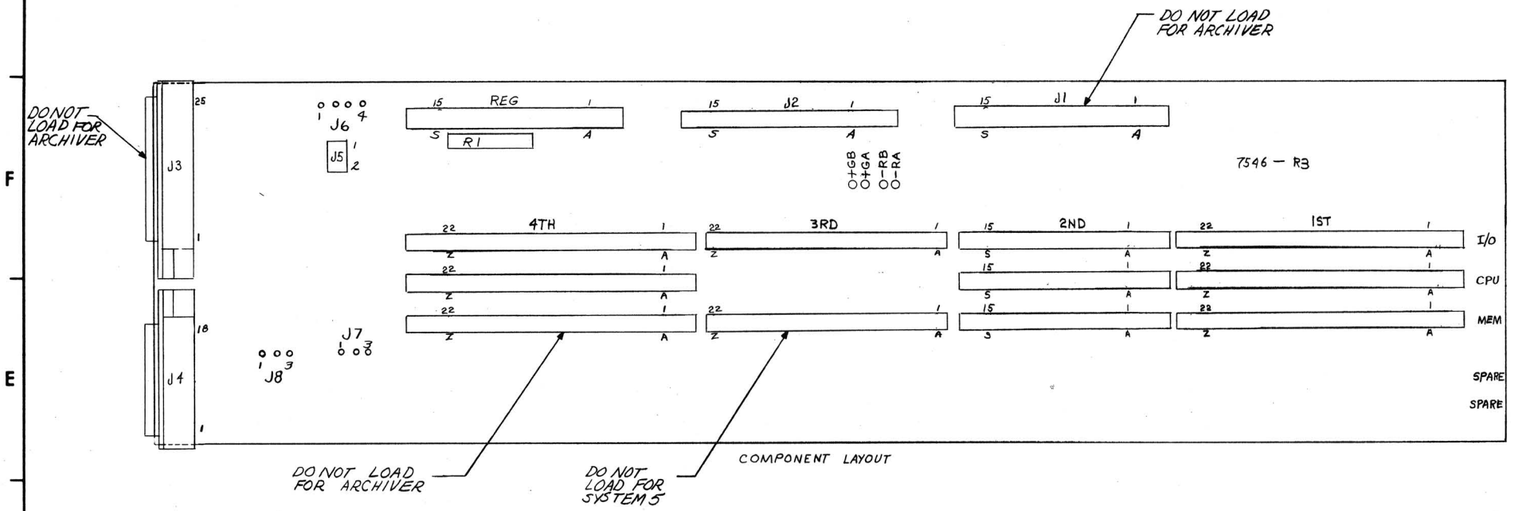
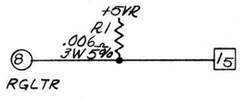
DO NOT SCALE



COMPONENT	W.L.PART NO.	TYPE
R1	334-0031	.006Ω 3W 5%
J1,2, REG 1, CONN 2	350-0011	30 PIN SKT.
J3	350-1062	50 PIN SKT.
J4	350-1060	36 PIN SKT.
J5	654-1198	CONN 2 POS.
CONN. 1,4	350-0021	44 PIN SKT
CONN 3	350-0039	44 PIN SKT



NO.	REVISION	BY	DATE
0	ORIGINATED PER DWR # E641 APP'D: WM 1-12-76	GK	7-3-79
1	REVISED PER ECN # 1367 APP'D: WM 2-13-76	GK	7-3-79
2	REVISED PER ECN # 1752 APP'D: WM 2-13-76	GK	7-3-79
3	REVISED PER ECN # 12,498, 13092, APP'D: WM 2-20-79	GK	7-3-79
4	REVISED PER ECN # 14,457 APP'D: WM 1-28-81	GK	7-3-79
5	REVISED PER ECO # 17861 APP'D: SAS 1-30-81	JGC	1-30-81

7546-1 E-REV 1 — ARCHIVER

7546 E-REV 1 — SYSTEM 5

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

	BY	DATE	APPROVED BY	DATE
DWN	GK	7-3-79	E ENGR	
CHK			M ENGR	
			MFG ENGR	

MATERIAL

MODEL NO. ARCHIVER/SYSTEM 5 — SEE ENGRG. SPECIFICATIONS — No.

TITLE MOTHERBOARD

FINISH

TOL. EX. AS NOTED .XX ± FRAC. ± .XXX ± ANG. ± FINISH √

SCALE — SHT 5 OF 5

210-7546	D	7546	5
WANG PART NUMBER	SIZE	DRAWING NUMBER	REV.

D 7546

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DO NOT SCALE

17.4 MHz

17.4 MHz

17.4 MHz (3C6)(3F2)

17.4 MHz (3F9)(3B11)(3C9)(4E11)

XTAL 17.4000 MHz

C1 .01MF

R1 270Ω R2 270Ω

L13 50Ω

L12 16

L12 14

L42 04

L43 32

L23 27

L24 32

L12 1A

L12 1B

L13 50Ω

L12 161

L11 LS74

L14 LS138

L3 LS139

L8 LS244

L9 Z80 CPU

L51 LS245

L7 LS367

L94 367

L35 555

L72 75150

L5 2114

L4 2114

L18 2716

L17 2716

L16 2708

SEE NOTE 2 SHT. 8

SEE NOTE 1 SHT 8

TP15

TP14

TP1

+5VR

+10V

C2 47.4F 15V (T)

R7 2.2K

D1 3.9Z

R8 330Ω

R3 4.7K

R4 1K

R5 330Ω

R6 10Ω

Q1 SPS6551

R9 4.7K

R10 4.7K

R11 4.7K

R12 4.7K

R13 4.7K

R82 4.7K

R75 4.7K

R63 1.5K

1K

C3 1.4F

C4 1.4F

C5 1.4F

C6 1.4F

C7 15MF 20V (T)

C8 .05MF

C9 .01MF

POR (4D5,1B5)

POR (4C8)

RESET

WAIT (3A6)

WAIT

BUSRQ

NMI

HALT

INT

INT (4D4)

MI

MREQ

IORQ

RD

WR

RFSH

Vcc GND

+5VR 10V

10V

BAB0, BAB1 (4F4)

BAB0 – BAB12 (2G11)

BAB0 – BAB3 (3G11)

MREQ (1B8)

RAM SEL (1D7)

B'ABB

BAB9

BAB10

WR (1B8)

BDB0 – BDB7 (2G3)

DB0 – DB7 (4G11)(3F11)

RATE SEL (4C11)

CTC SEL (4D6)

PIO SEL (4F5)

CRT CONTROL SEL (3E11)

PRINTER REG SEL (4D3)

STATUS REG SEL (4F2)

UART SEL (4C11)

PROM SEL

RAM SEL (1G7)

CRT RAM SEL (2A10)(3A8)

SDTR (1B5)

PR REST (4E3)

BLINK (3B9)

NO BLINK (3A9)

BLK CR (3B3)

S DYCR (3B3)

BEEP (4A10)

M1 (4E6)

MREQ (1G7)

IORQ (4E6)

RD (2B10)(4E6)(4C11)

WR (2B10)(4E3)(4C11)(1E6)

TEST DB0 DB1 DB2 DB3

CLICKER

CLG2 CLG1

100Ω CCW

MTD EXTERNAL

POR (1E10)

SDTR (1D8)

DTR

+12VR

-12V

PROG

CS (PROG)

CS (PE)

WE

CS

BDB0 BDB1 BDB2 BDB3 BDB4 BDB5 BDB6 BDB7

BAB0 BAB1 BAB2 BAB3 BAB4 BAB5 BAB6 BAB7 BAB8 BAB9 BAB10 BAB11 BAB12 BAB13 BAB14 BAB15

REVISION

SEE SHT 8

WANG LABORATORIES, INC. LOWELL, MASS. U.S.A.	BY	DATE	APPROVED BY / DATE
	DWN GB	6/8/77	E ENGR
	CHK		M ENGR
			MFG ENGR
MATERIAL	MODEL NO. 2236 E		TITLE SINGLE BOARD TERMINAL ELECTRONICS
FINISH	SEE ENGRG. SPECIFICATIONS No.		
	TOL. EX. AS NOTED .XX ± FRAC. ± .XXX ± ANG. ± FINISH √		SEE CHART D 7592 26
	SCALE 1 SHT 1 OF 8		WANG PART NUMBER / SIZE / DRAWING NUMBER / REV.

D 7592

2 "E" SIZE PKG.

"THIS DRAWING AND THE DATA SHOWN THEREON ARE THE CONFIDENTIAL PROPERTY OF, AND ARE PROPRIETARY TO, WANG LABORATORIES, INC.; THIS DRAWING AND THE DATA SHOWN THEREON MAY NOT BE MADE PUBLIC WITHOUT THE WRITTEN CONSENT OF WANG LABORATORIES, INC. IF FOR ANY REASON THIS DRAWING IS PERMITTED BY WANG TO LEAVE THE PHYSICAL CUSTODY OF THE COMPANY, IT IS RETURNABLE UPON THE DEMAND OF WANG LABORATORIES, INC."

DO NOT SCALE

$C_0 - C_6$ (3G9)

$BAB_0 - BAB_{12}$ (1G7)

$R_0 - R_4$ (3G9)

$BDB_0 - BDB_7$ (1E1)

$CC_0 - CC_7$ (3E7)

$DC_0 - DC_7$ (3C10)

SW MUX (3B7)

RD (1B8)

GATE (3A6)

WR (1B8)

CRT RAM SELECT (1D7)

BAB7

L63 157 STB SEL ±0V

L64 157 STB SEL ±0V

L78 157 STB SEL ±0V

L77 2158 SEL STB ±0V

L74 04

L76 502

L75 LS10

L73 00

L79 07

L73 08

L58 155

L46 L48 L45 L47 L60 L62 L59 L61 2114 I/O CS WE

L49 L50 LS245 D/R G

L76 502

BDB0 BDB1 BDB2 BDB3 BDB4 BDB5 BDB6 BDB7

CC0 CC1 CC2 CC3 CC4 CC5 CC6 CC7

DC0 DC1 DC2 DC3 DC4 DC5 DC6 DC7

D 7592

REVISION	BY	DATE
SEE SHT B		

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

	BY	DATE	APPROVED BY	DATE
DWN	JB	6/8/72	E ENGR	
CHK			M ENGR	
			MFG ENGR	

MATERIAL

MODEL NO. 2236E

SEE ENGRG. SPECIFICATIONS No.

FINISH

TOL. EX. AS NOTED .XX ± FRAC. ± .XXX ± ANG. ± FINISH √

TITLE SINGLE BOARD TERMINAL ELECTRONICS

SCALE — SHT 2 OF 8

SEE CHART | D | 7592 | 26

WANG PART NUMBER | SIZE | DRAWING NUMBER | REV.

8½" SIZE ARK.

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DO NOT SCALE

BAB0 – BAB3 (1G7)
DB0 – DB7 (1C6)
CRT CONTROL SEL (1E7)
BK9 (3B9)
+12V +5VR ±0V
CRT 5037
C0 – C6 (2G11)
R0 – R4 (2D11)
TP28
TP29
BK15 (3B2)
BK6 (3C8)
12.4MHz (1G9)
BK7 (3B9)
L91
CURSOR (3B2)
BK1 (3E4)
VSYN (3A5)(4D6)
HSYN (3A8)
BK2 (3G2)
CC0 – CC7 (2E1)
BK8 (3B9)
BK3 (3D2)
BK4 (3D2)
BK5 (3C4)
BLINK (3C4)
BK6 (3F9)
BK10 (3D2)
BK7 (3F9)
BK8 (3E7)
BK9 (3E11)
SW MUX (2B10)
BK11 (3C2)
TP6
DC0 – DC7 (2B1)
17.4MHz (1G9)
BLINK (1C6)
NO BLINK (1C6)
CRT RAM SEL (1D7)
HSYN (3E10)
VSYN (3E9)
GATE (2B10)
WAIT (1E10)
TP22
TP25
BK12 (3E3)
BK13 (3E3)
BK14 (3F2)
BK13 (3D5)
BK12 (3D5)
BK14 (3E4)
BK2 (3F8)
17.4MHz (1G9)
TO CRT MONITOR
-5VR
TP20
TP16
TP23
TP26
TP10
TP7
TP21
TP24
TP9
TP27
TP17
BK15 (3G9)
BK5 (3C8)
5DYCR (1D6)
BLK CR (1D6)
CURSOR (3F7)
TP18
TP19
BK4 (3D8)
BK3 (3D8)
BK10 (3B6)
BK11 (3B7)

REVISION NO.	REVISION	BY	DATE
	SEE SHT 8		

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

	BY	DATE	APPROVED BY	DATE
DWN		6/8/79	E ENGR	
CHK			M ENGR	
			MFG ENGR	

MATERIAL

MODEL NO. 2236E
SEE ENGRG. SPECIFICATIONS
No.

FINISH

TOL. EX. AS NOTED
.XX ± FRAC. ±
.XXX ± ANG. ± FINISH √

TITLE: SINGLE BOARD TERMINAL ELECTRONICS

SCALE NONE | SHT 3 OF 8 | SEE CHART | D | 7592 | 26

WANG PART NUMBER | SIZE | DRAWING NUMBER | REV.

D 7592

"E" SIZE PKG

"THIS DRAWING AND THE DATA SHOWN THEREON ARE THE CONFIDENTIAL PROPERTY OF, AND ARE PROPRIETARY TO, WANG LABORATORIES, INC.. THIS DRAWING AND THE DATA SHOWN THEREON MAY NOT BE MADE PUBLIC WITHOUT THE WRITTEN CONSENT OF WANG LABORATORIES, INC. IF FOR ANY REASON THIS DRAWING IS PERMITTED BY WANG TO LEAVE THE PHYSICAL CUSTODY OF THE COMPANY, IT IS RETURNABLE UPON THE DEMAND OF WANG LABORATORIES, INC."

DO NOT SCALE

TP31 (5G) TP32 (6G) TP30 (6G) TP33 (3G)

AET (11/12) UCO (8F/12) PRINTER ACK (13) 50Hz (11) ±0V (11)

EVEN PARITY (4F4)

B5 (4F4)

BAB0, BAB1 (1G7)

DB0 – DB7 (1C6)

SW1

BRS D2 BRS D1 BRS D0

R34 R35 R36 R37 R38 1K

+5VR

±0V

L101 51

LS05 04

L11 161

LD ENP ENT CK CLR RCO

17.4MHz (1G9)

TP13 (1G) TP34 (2G)

R42 R43 1K

L83 161

L84 LS374

L82 161

L81 LS374

L100 74

R41 R44 1K

L102 1Y

L102 75150

L129 Z80 CTC

L130 Z80 PIO

L102 1Y

MI (1B8) RD (1B8) IORQ (1B8) Φ (1F8)

PIO SEL (1E7) A STB (4B2)

A STB (4F5) B STB (4F5) B RDY (4F5) IEO (4F7)

B4 (4F4) B5 (4F4) B6 (4F7) B7 (4F7)

A RDY (4C1) INT (1B10)

R46 4.7K

CTC SEL (1E7)

T READY (4B9) V SYN (3E9.)

R READY (4F2) POR (1E10)

L102 75150

THRE (4F2) TRE (4F2) TRO (4F2)

L102 1Y

L102 75150

B7 (4E4)

C63 .0047μF

C62 1μf C61 1μf

Q9 MPS6518 Q8 MPS6512

-12V +12V

R59 68Ω 1W

L602 A

L602 A

L602 A

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DO NOT SCALE

7VAC-T1 (13)
7VAC-T2 (23)
17VAC-T1 (53)
17VAC-T2 (53)
±10V-T1 (43)
±10V-T2 (63)
±10V

D5 SR5605
D6 EM403
D7 SR5605
D8 EM403
C19 9.5K MF 15V
C20 9.5K MF 15V
C21 1K MF 25V
±10V

D9 A15A
D10 EM403
D11 A15A
D12 EM403
C25 4K MF 30V
C26 1.15K MF 50V
±10V

R65 680Ω
R66 1K
R67 2.2K
C22 .1MF
±10V

L21 723
C23 100PF
C24 .015MF 400V MYLAR
R68 1.5K
R69 .15Ω 5W 5%
+5VR

+17V

C27 .01MF
±10V

L20 723
R70 680Ω
R71 .15Ω 5W 5%
C28 100PF
C67 .047MF 100V (M)
R72 1K
R73 680Ω
±10V

Q6 MA7905
C29 .47MF 50V MYLAR
C30 1MF
±10V

Q7 MA7912
C31 .47MF 50V MYLAR
C32 1MF
±10V

MTD EXT 2N6282 Q8A
Q9A 2N6282 MTD EXT

(19) +5VR
(18) +5VR
(16) +17V
(12) +17V
(16) +17V
+17V
(14) +12V
(24) +12V
+12V
(7) -5V
(17) -5V
(8) -12V
(18) -12V

REVISION	BY	DATE
SEE SHT 8		

	BY	DATE	APPROVED BY	DATE
DWN	[illegible]	6/8/79	E ENGR	
CHK			M ENGR	
			MFG ENGR	

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

MATERIAL

MODEL NO. 2236E
SEE ENGRG. SPECIFICATIONS
No.

FINISH

TOL. EX. AS NOTED
.XX ± FRAC. ±
.XXX ± ANG. ± FINISH √

TITLE SINGLE BOARD TERMINAL ELECTRONICS

SCALE	SHT 5 OF 8	WANG PART NUMBER	SIZE	DRAWING NUMBER	REV.
		SEE CHART	D	7592	26

"E" SIZE PKG

D 7592

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DO NOT SCALE

7592 R6

220-1136

220-1103

C19 C20 C25 C26 C31 C21 C17 C29

J1 PRINTER

J2 RS-232

J12 KEYBOARD

SEE NOTE 1 SHT 8

SPARE

SEE SHT 8

REVISION	BY	DATE

	BY	DATE	APPROVED BY	DATE
DWN	JB	6/8/78	E ENGR	
CHK			M ENGR	
			MFG ENGR	

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

MATERIAL

MODEL NO. 2236E
SEE ENGRG. SPECIFICATIONS
No.

TITLE SINGLE BOARD TERMINAL ELECTRONICS

FINISH

TOL. EX. AS NOTED
.XX ± FRAC. ±
.XXX ± ANG. ± FINISH √

SEE CHART. | D | 7592 | 26

SCALE FF | SHT 6 OF 8 | WANG PART NUMBER | SIZE | DRAWING NUMBER | REV

"E" SIZE ARG

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DO NOT SCALE

		210 = 209 + 378 OR 377											
210		209	L45,45-48,59-62	L9	L16	L17	L18	L29	L30	L55	L56	L79	L80
2236 DW	7592-1	7592-1	377-0341-L	377-0344	377-0317	377-0348		377-0343	377-0342	378-2447-R1	377-0323	377-0372	377-0071
7592-A		7592	377-0341-L	377-0344	378-2446-R2	378-4095-R2	378-4094-R2	377-0343	377-0342	378-2447-R1	377-0323	377-0372	377-0071
AZERTY	7592-B	7592	377-0341-L	377-0344	378-2620	378-4095-R1	378-4094-R1	377-0343	377-0342	378-2447-R1	378-2415	377-0372	377-0071
SWEDISH	7592-C	7592	377-0341-L	377-0344	378-2624	378-4095-R1	378-4094-R1	377-0343	377-0342	378-2447-R1	378-2416	377-0372	377-0071
U.K.	7592-D	7592	377-0341-L	377-0344	378-2627	378-4095-R1	378-4094-R1	377-0343	377-0342	378-2447-R1	378-2418	377-0372	377-0071
GERMAN	7592-E	7592	377-0341-L	377-0344	378-2629	378-4095-R1	378-4094-R1	377-0343	377-0342	378-2447-R1	378-2420	377-0372	377-0071
SWISS/GER.	7592-F	7592	377-0341-L	377-0344	378-2620	378-4095-R1	378-4094-R1	377-0343	377-0342	378-2447-R1	378-2419	377-0372	377-0071
SWISS/FR.	7592-G	7592	377-0341-L	377-0344	378-2625	378-4095-R1	378-4094-R1	377-0343	377-0342	378-2447-R1	378-2414	377-0372	377-0071
NL	7592-H	7592	377-0341-L	377-0344	378-2630	378-4095-R1	378-4094-R1	377-0343	377-0342	378-2447-R1	378-2419	377-0372	377-0071
NO.	7592-J	7592	377-0341-L	377-0344	378-2622	378-4095-R1	378-4094-R1	377-0343	377-0342	378-2447-R1	378-2417	377-0372	377-0071
CYRILLIC	7592-K	7592	377-0341-L	377-0344	378-2628	378-4095-R1	378-4094-R1	377-0343	377-0342	378-2447-R1	378-2413	377-0372	377-0071
DANISH	7592-L	7592	377-0341-L	377-0344	378-2623	378-4095-R1	378-4094-R1	377-0343	377-0342	378-2447-R1	378-2417	377-0372	377-0071
GR/LT	7592-M	7592	377-0341-L	377-0344	378-2621-R1	378-4095-R1	378-4094-R1	377-0343	377-0342	378-2447-R1	378-2421	377-0372	377-0071
AL	7592-N	7592	377-0341-L	377-0344	378-2647	378-4095-R1	378-4094-R1	377-0343	377-0342	378-2447-R1	378-2648	377-0372	377-0071
DIAG.	7592-P	7592	377-0341-L	377-0344	378-2519	378-4144-R1	378-4143-R1	377-0343	377-0342			377-0372	377-0071
KATAKANA	7592-Q	7592	377-0341-L	377-0344	378-2500	378-4095-R1	378-4094-R1	377-0343	377-0342	378-2447-R1	378-2044-R3	377-0372	377-0071
EURO-SPAN.	7592-R	7592	377-0341-L	377-0344	378-2673	378-4095-R1	378-4094-R1	377-0343	377-0342	378-2447-R1	378-2672	377-0372	377-0071
REPAIR AID	7592-S	7592	377-0341-L	377-0344	378-2673	378-4227	378-4226	377-0343	377-0342	378-2447-R1	378-2672	377-0372	377-0071
ICELANDIC	7592-T	7592	377-0341-L	377-0344	378-2706			377-0343	377-0342	378-2447-R1	378-2705	377-0372	377-0071
CANADIAN	7592-U	7592	377-0341-L	377-0344	378-2716			377-0343	377-0342	378-2447-R1	378-2715	377-0372	377-0071

NO.	REVISION	DATE	BY
	SEE SHEET 8		

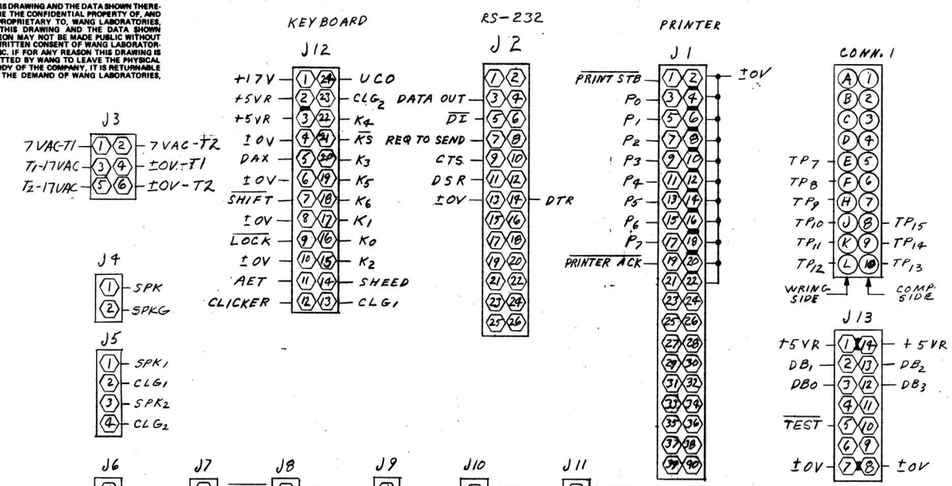
WANG LABORATORIES, INC. LOWELL, MASS. U.S.A.		BY	DATE	APPROVED BY	DATE
	DWN			E ENGR	
	CHK			M ENGR	
				MFG ENGR	
MATERIAL	MODEL NO. 2236E SEE ENGRG. SPECIFICATIONS No.	TITLE SINGLE BOARD TERMINAL ELECTRONICS			
FINISH	TOL. UN. AS NOTED .XX ± FRAC. ± .XXX ± ANG. ± FINISH √	SEE CHART	D	7592	26
	SCALE SHT 7 OF 8	WANG PART NUMBER	SIZE	DRAWING NUMBER	REV.

"E" SIZE PAT'D

D 7592

"THIS DRAWING AND THE DATA SHOWN THEREON ARE THE CONFIDENTIAL PROPERTY OF, AND ARE PROPRIETARY TO, WANG LABORATORIES, INC.; THIS DRAWING AND THE DATA SHOWN THEREON MAY NOT BE MADE PUBLIC WITHOUT THE WRITTEN CONSENT OF WANG LABORATORIES, INC. IF FOR ANY REASON THIS DRAWING IS PERMITTED BY WANG TO LEAVE THE PHYSICAL CUSTODY OF THE COMPANY, IT IS RETURNABLE UPON THE DEMAND OF WANG LABORATORIES, INC."

DO NOT SCALE



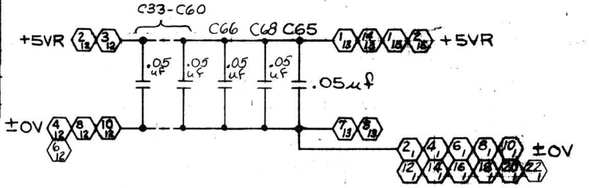
LOCATION	W.L. PART No.	I.C. TYPE
L1	376-0312	74LS75
L2, 11, 82, 83	376-0094	74161
L3	376-0226	74LS139
L4,5,45-48,58-62	SEE CHART	
L6,7	SPARE	
L8,19,65	376-0288	74LS244
L9	SEE-CHART	
L10, 66		NOT USED
L12	376-0139	7414
L13	376-0137	74S04
L14,98	376-0294	74LS138
L15	376-0297	74LS240
L16,17,18	SEE CHART	
L20,21	376-0066	723
L22,42,74,85	376-0010	7404
L23	376-0125	7427
L24,43,93,99	376-0093	7432
L25,87		SPARE
L26,27	376-0104	9602
L28,31,32,33,89,100	376-0006	7474
L29	SEE-CHART	
L30	SEE-CHART	
L34,53,73,90,97	376-0002	7400
L35,36	376-0126	5555
L37,41,57	376-0310	74LS373
L38	376-0085	7409
L39,92	376-0016	7402
L40	376-0081	7408
L44	376-0176	74367
L49,50,51	376-0285	74LS245
L52	376-0270	74S175
L54,70	376-0109	74166
L55,56	SEE CHART	
L58	376-0049	74155
L63,64,78	376-0082	74157
L67	376-0186	7497
L68	376-0191	74160
L69	376-0119	74175
L71	376-0232	74LS298
L75	376-0209	74LS10
L76,88	376-0199	74S02
L77	376-0301	745158
L79	SEE-CHART	
L80	SEE-CHART	
L81	376-0286	74LS374
L84	376-0077	75154
L86	376-0003	7410
L91	376-0194	7411
L94	376-0206	745260
L95	376-0271	74S86
L96	376-0309	74LS378
L101	376-0012	7451
L102,72	376-0076	75150

COMPONENT	W.L. PART No.	TYPE
R1, 2	330-2027	270Ω ¼W 10%
R3,9-12,22-29,31-52,33,46,52,53,60,64,74,75-82	330-3047	4.7K ¼W 10%
R4,34-39,41-44,46,49,50,56,88	330-3010	1K ¼W 10%
R5,8	330-2033	330Ω ¼W 10%
R6	330-1010	10Ω ¼W 10%
R7,40,67	330-3022	2.2K ¼W 10%
R13	330-4047	47K ¼W 10%
R14	330-2078	470Ω ¼W 5%
R15	330-1057	56Ω ¼W 5%
R16	330-2013	120Ω ¼W 5%
R17	330-2011	100Ω ¼W 5%
R18,19	330-3052	5.1K ¼W 5%
R20,21,58	330-1022	22Ω ¼W 10%
R30	330-2022	220Ω ¼W 10%
R45,54	330-4010	10K ¼W 10%
R47,51	330-3076	7.5K ¼W 5%
R55	330-3082	8.2K ¼W 10%
R57	330-2016	150Ω ¼W 5%
R59	332-1068	68Ω 1W 10%
R61	330-1082	82Ω ¼W 10%
R62	330-2040	390Ω ¼W 5%
R65,70,73	330-2068	680Ω ¼W 10%
R66,72	336-1001	1K POT
R68,63	330-3015	1.5K ¼W 10%
R69,71	334-0015	.15Ω 5W 5%
C1,9,64,27	300-1903	.01MF 25V CER
C2,15	300-4020	47MF 15V (T)
C3-6,30,32,61,62	300-1931	1MF 50V CER
C7	300-4022	15MF 20V (T)
C67	300-2147	.047MF 100V (M)
C12	300-1560	560 PF 500V CER
C13	300-4082	3.3MF 20V (T)
C16,22	300-1930	.1MF 50V CER
C17	300-3010	50MF 50V ELEC
C18	300-1150	150 PF 500V CER
C19,20	300-3081	2.5MF 15V ELEC
C21	300-3082	1MF 25V ELEC
C23,28	300-1100	100 PF 500V CER
C24	300-2417	.015MF 400V MYLAR
C25	300-3080	4MF 30V ELEC
C26	300-3055	1.5MF 50V ELEC.
C29,31	300-2248	.47MF 50V MYLAR
C33-60,65,66,68	300-1900	.05MF 12V CER
C63	300-1920	.0047MF 100V CER
C14	300-1220	220PF 500V CER
Q1	375-1050	SPS6551
Q2,9	375-1014	MPSU518
Q3	375-1062	MPSU514
Q4	375-1027	2N3725
Q6	374-0002	UA7905
Q7	374-0003	UA7912
Q8	375-1012	MPS6512
D1,2,3,4	380-1001	SIL DIODE 30V 100MA
D9,11	380-3008	A15A RECT.
D6,8,10,12	380-4000	EM403/IN4004
D5,7	380-3015	SR5605
XTAL	321-0029	17.4000MH*
SW1	325-1501	SPST 5 POS.

MEMONIC	COODINATE
AET	4G4
CLG1	1A4
CLG2	1A5
CLICKER	1A5
CTS	4B11
DATA OUT	4A5
DAX	4B1
DB0-DB3	1A7
DI	4B11
DSR	4B11
DTR	1B1
K0-K6	4E1
K3	4A4
LOCK	4A5
P0-P7	4G1
PRINTER ACK	4G3
PRINT STB	4D1
REQ TO SEND	4A6
SHEED	4E1
SHIFT	4A4
TEST	1A7
TP7	3D1
TP8	3G2
TP9	3C1
TP10	3E1
TP11	4C1
TP12	4D1
TP13	4E11
TP14	1F11
TP15	1F11
TP16	3F1
TP17	3B1
TP18	3B2
TP19	3A4
TP20	3F1
TP21	3D1
TP22	3A10
TP23	3F1
TP24	3C1
TP25	3A5
TP26	3E1
TP27	3C1
TP28	3G9
TP29	3G7
TP30	1G8
TP31	4G8
TP32	4G8
TP33	4G7
TP34	4E11
UCO	4G4
17.4 MHZ	1G10
50 HZ	4G3
SPK1	4A7
SPK2	4A6
SPKG	4A6
SPK	4A6

I.C. TYPE	LOCATION	SPARE
7400	L34	2
7402	L39	1
74S02	L88	2
7404	L22	3
	L42	1
	L85	1
7408	L40	1
7410	L86	2
74LS10	L75	2
7411	L91	2
7432	L24	1
	L93	2
7451	L101	1
7474	L28	1
7414	L12	2
7432	L93	1
74S86	L95	1

NOTE:
1. THESE COMP MAY OR MAYNOT BE ON BOARD. E REV. 2 & BELOW COMP NOT PRESENT. E REV. 3 & ABOVE COMP SHOULD BE PRESENT. SEE 1D7, 1D8, 1B3 & 4F3.
2. PLACE AN OPAQUE COVERING OVER THE ERASURE WINDOW OF L16, 17, 18



E-REV 5 (7592)
E-REV 0 (7592-1)

BY	REVISION	NO.
JEP 6-8-79	ORG. PER ECN #6457 APPD: [illegible]	0/0
JEP 6-8-79	REV. PER ECN #11118 APPD: [illegible]	1/0
JEP 6-8-79	REV. PER ECN #E 11762 APPD: [illegible]	2/0
L.D. 6-22-79	REV PER ECN # 11900, 11987 APP'D: [illegible]	3/0
KB 8-2-79	REV. PER ECN# 12051 APPD: [illegible]	4/0
KB 8-2-79	REV. PER # 12314 ECN#12379 APPD: [illegible]	5/0
JEP 9-17-79	REV. PER ECN # 12345 APPD: [illegible]	6/1
JEP 9-17-79	REV. PER ECN # 12382 APP: D [illegible]	7/2
JEP 9-17-79	REV. PER ECN #13390 APPD: [illegible]	8/2
JEP 11/12/79	REV PER ECN #12345 #12347 APPD: [illegible]	9/3
JEP 11/12/79	REV PER ECN #12945 #12954 APPD: [illegible]	10/3
JEP 11/12/79	REMOVED PER ECN# 13376 APPD: [illegible]	11/4
L.D. 11-13-79	REVISED PER ECN# 13393 APPD: [illegible]	12/4
L.D. 12-7-79	REVISED PER ECN# 13445 APPD: [illegible]	13/4
L.D. 12-11-79	REVISED PER ECN# 13452 APPD: [illegible]	14/2
L.D. 12-11-79	REVISED PER ECN# 13515 APPD: [illegible]	15/2
L.D. 2-25-80	REVISED PER ECN# 13950 APPD: [illegible]	16/2
J-B-80	REVISED PER ECN# 14247 APP'D: [illegible]	17/2
J-B-80	REVISED PER ECN# 13945 APP'D: [illegible]	18/2
L.D. 4-1-80	REVISED PER ECN# 14681 APPD: [illegible]	19/2
A.M. 6-18-80	REVISED PER ECN# 15278 APPD: [illegible]	20/2
L.D. 9-9-80	REVISED PER ECN# 15672, 16036 APPD: [illegible]	21/2
L.D. 10-23-80	REVISED PER ECN# 16631 APPD: [illegible]	22/2
T.K. 12-31-80	REVISED PER ECO# 17371 APP'D: [illegible]	23/5
JEP 2-13-81	REVISED PER ECO# 17773 APP'D: [illegible]	24/5
M.T.K. 3/3/81	REVISED PER ECO# 18485 APP'D: [illegible]	25/5
M.K. 3/27/81	REVISED PER ECO# 18813 APP'D: [illegible]	26/5

	BY	DATE	APPROVED BY	DATE
DWN	[illegible]	4/8/79	E ENGR	4/8/79
CHK	[illegible]	11/26/79	M ENGR	
			MFG ENGR	

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

MATERIAL

MODEL NO. 2236E
SEE ENGRG. SPECIFICATIONS
No.

FINISH

TOL. EX. AS NOTED
.XX ± FRAC. ±
.XXX ± ANG. ± FINISH √

TITLE SINGLE BOARD TERMINAL ELECTRONICS

SCALE — SHT 8 OF 8

SEE CHART | D | 7592 | 26
WANG PART NUMBER | SIZE | DRAWING NUMBER | REV.

E SIZE ANSI

D 7592

"THIS DRAWING AND THE DATA SHOWN THEREON ARE THE CONFIDENTIAL PROPERTY OF, AND ARE PROPRIETARY TO, WANG LABORATORIES, INC.; THIS DRAWING AND THE DATA SHOWN THEREON MAY NOT BE MADE PUBLIC WITHOUT THE WRITTEN CONSENT OF WANG LABORATORIES, INC. IF FOR ANY REASON THIS DRAWING IS PERMITTED BY WANG TO LEAVE THE PHYSICAL CUSTODY OF THE COMPANY, IT IS RETURNABLE UPON THE DEMAND OF WANG LABORATORIES, INC."

DO NOT SCALE

MTD EXTERNAL 2N5301
+8V
.01Ω 3W 3%
+5VR
+5V DRIVE (5)
(S) +5V RETURN (15)

MTD EXTERNAL
8VAC
500UF 50V
J5 (CLICKER SUPPLY) +17
5.1V
18 VAC T1 (B)
18 VAC T2 (A)
-18V (11) (M)
D12 1N1200A
D13 1N1200A
D1 A15F
D2 A15F
R1 2.2K
R2 2.2K
R3 3.3K

±0V (R) (14)
Q2 2N6387
WTR (P)
+18V
R7 270Ω
R4 600Ω 5%
R5 1K
R6 1.5K 5%
C1 .1UF
L2 723
D3 SIL
C2 18UF 15V (T)
R8 2.2K
R9 2.2K
R10 2.2K
R11 3.3K
C3 50UF 50V (E)
R12 270Ω
R13 820Ω 1/2W
R14 100Ω
R15 4.7K
D5 4.7V ZEN
R16 1K 5%
Q1 2N3014
L5 339
C4 .047UF
D4 SIL

R17 1K 5%
C5 .22UF
R18 12.0K 5%
R19 2.2K 5%
R20 2.7K 5%
L1 723
R21 220Ω
R22 6.8K
R23 820Ω 1/2W
R24 10K
R49 100Ω
D6 6.2V ZEN
C6 .0056UF
C7 .1UF
R28 220Ω
D7 SIL
D8 SIL
R25 2.2K
R26 1K
R27 6.8K

MTD EXTERNAL
2N6285
+18V
+12 REG
.02Ω 3%
(F) BASE DRIVE
(4) +12V SENSE
(6) +12V RETURN

5V SENSE (C)
R29 2.2K 5%
C8 .047UF
R31
R30 120K 5%
390Ω 2W
+18V
-7V

R32 2.37K 1% 1/8W
R35 27Ω 5%
C10 .047 UF MYLAR
C9 .1UF
L3 LM304 ADJ BOOST COM OUT
R33 2K
R34 5.1K 5%
R36 1.5K
R38 220Ω
Q3 8203A
Q4 2N2906
C11 .047UF
R39 100K
R40 120K 5%
R41 820Ω 5%
L6 741
D10 SIL
R42 33K
D9 IN4372 +3V ZEN
R37 1.8K
+18V (10) (L)
±0V

"A" JMPR
R43 .050Ω 3W 3%
-12V
"B" JMPR
C12 10UF 35V TA
R44 20Ω 11W
DN SIL
R45 2.2K
L4 LM304 ADJ BOOST COM OUT
R46 2K
R47 1.5K
C13 10UF 35V (T)
C14 .01 UF
R48 2.7Ω
Q5 2N4234

(7) -12V DRIVE
(8) JD
(H) -12VR
(12) -5VR

NO.	REVISION	BY	DATE
A	SEE SHEET #2		

WANG LABORATORIES, INC. LOWELL, MASS. U.S.A.	BY	DATE	APPROVED BY	DATE
MATERIAL	DWN SSB	10-16-74	E ENGR	
MODEL NO. 5536-1,-2 SEE ENGRG. SPECIFICATIONS No.	CHK		M ENGR	
FINISH			MFG ENGR	
TOL. EX. AS NOTED .XX ± FRAC. ± .XXX ± ANG. ± FINISH √ SCALE — SHT 1 OF 2	TITLE: TWO BOARD WS REGULATOR			
	210-7656 WANG PART NUMBER	D SIZE	7656 DRAWING NUMBER	6 REV.

D 7656

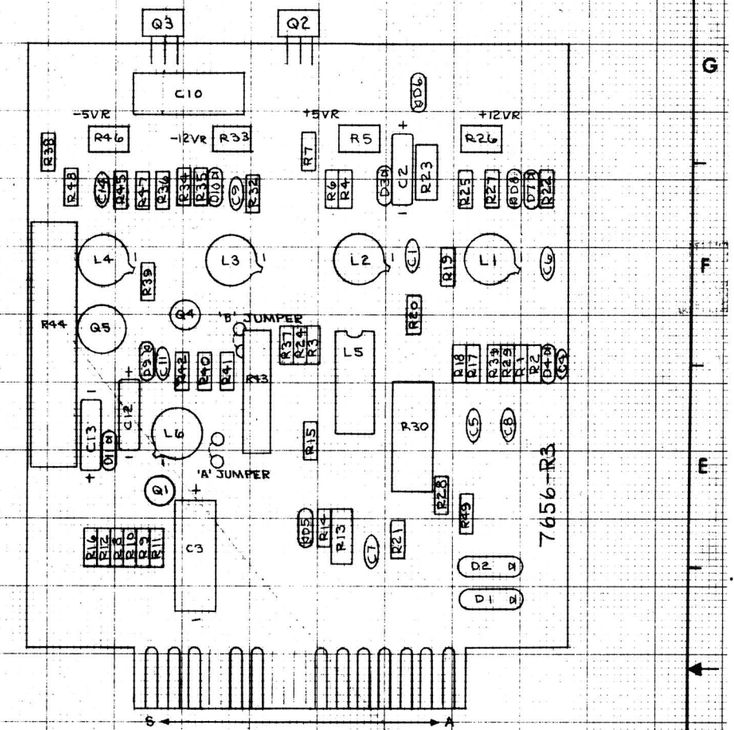
THIS DRAWING AND THE DATA SHOWN THEREON ARE THE CONFIDENTIAL PROPERTY OF, AND ARE PROPRIETARY TO, WANG LABORATORIES, INC. THIS DRAWING AND THE DATA SHOWN THEREON MAY NOT BE MADE PUBLIC WITHOUT THE WRITTEN CONSENT OF WANG LABORATORIES, INC. IF FOR ANY REASON THIS DRAWING IS PERMITTED BY WANG TO LEAVE THE PHYSICAL CUSTODY OF THE COMPANY, IT IS RETURNABLE UPON THE DEMAND OF WANG LABORATORIES, INC.

DO NOT SCALE

I.C. LOCATION	TYPE	W.L. NO.
L1,2	723	376-0866
L3,4	LM304	376-0134
L5	LM339	376-0240
L6	741C	376-0074

MNEMONIC	COORDINATE
BASE DRIVE	1 F2
	1 L1
JD	1 B6
WTR	1 F6
5V DRIVE	1 F8
5V SENSE	1 D11
+5V RETURN	1 F7
12V DRIVE	1 B7
12V RETURN	1 F1
12V SENSE	1 F2
18 VAC T_1	1 F11
18 VAC T_2	1 E11
±0V	1 F9
−5VR	1 B4
−12V	1 B6
+18V	1 B11
−18V	1 E11

COMPONENT	TYPE	W.L. NO.
R1,2,8,10,25,45	2.2K 10% 1/4W	330-3022
R3,11	3.3K 10% 1/4W	330-3033
R4	680Ω 5% 1/4W	330-2069
R5,26	1K ADJ. POT.	336-1014
R6	1.5K 5% 1/4W	330-3016
R7,12	220Ω 10% 1/4W	330-2027
R13,23	810Ω 10% 1/2W	331-2082
R14,39	100Ω 10% 1/4W	330-2010
R15	4.7K 10% 1/4W	330-3047
R17,36	1K 5% 1/4W	330-3011
R18,31,40	120K 5% 1/4W	330-3013
R19,29	2.2K 5% 1/4W	330-3023
R20	2.7K 5% 1/4W	330-3028
R21,28,38	220Ω 10% 1/4W	330-2022
R22,27	6.8K 10% 1/4W	330-3068
R24	10K 10% 1/4W	330-3010
R30	350Ω 10% 2W	331-2039
R32	2.37K 1% 1/8W	333-2093
R33,46	2K ADJ. POT.	336-1022
R34	5.1K 5% 1/4W	330-3052
R35	27Ω 5% 1/4W	330-1028
R37	1.8K 10% 1/4W	330-3018
R39	100K 10% 1/4W	330-3010
R41	820Ω 5% 1/4W	330-2083
R42	33K 10% 1/4W	330-4033
R43	.05Ω 3% 3W	334-0033
R44	20Ω —— 11W	334-0003
R48	2.7Ω 10% 1/4W	330-0027
R36,47	1.5K 10% 1/4W	330-3015
C1,7,9	.1UF 12V CER	300-1901
C2	18UF 15V TA	300-4018
C3	50UF 50V ELEC	300-3010
C4,5,11	.047UF 50V	300-1966
C5	.22UF 100V CER	300-1926
C6	.0056UF 500V CER	300-1915
C14	.01UF 25V CER	300-1903
C10	.047UF 100V MYL	300-2147
C12,13	10UF 35V. TA.	300-4032
D1,2	A15A RECTIFIER	380-3008
D3,4,7,8,10,11	SILICON 30V	380-1001
D5	IN6230 4.1V ZEN	380-2048
D6	IN753A 6.2V ZEN	380-2062
D9	IN4372A 3.0V ZEN	380-2129
Q1	2N3014	375-0017
Q2	2N6387	375-1052
Q3	8203A	375-1053
Q4	2N2906A	375-1017
Q5	2N4234	375-1024



CONN.

18VAC T_2	A 1	
18VAC T_1	B 2	
+5V SENSE	C 3	
	D 4	+12V SENSE
	E 5	+5V DRIVE
+12V BASE DRIVE	F 6	+12V RETURN
-12VR	H 7	-12V DRIVE
	J 8	JD
	K 9	
+18V	L 10	+18V
-18V	M 11	-18V
	N 12	-5VR
WTR	P 13	
±0V	R 14	±0V
+5V RETURN	S 15	+5V RETURN

E-REV 3

7656-R3

D 7656

NO.	REVISION	BY	DATE	CHK	DATE	APPD	DATE
0	ORIGINATED PER DWR #1378	SSB	10-16-79				
1	REVISED PER ECN #1391	SSB	10-16-79				
2	REVISED PER ECN #1716	SSB	10-16-79				
3	REVISED PER ECN # 1719	KN	10-27-79				
4	REVISED PER ECN # 19632	KN	11-23-80				
5	REVISED PER ECO #1773	TK	2-17-81				
6	REVISED PER DWR #1830	LBC	3-13-81				

BY	DATE	APPROVED BY	DATE
DWN SSB	10-16-79	E ENGR SOMMERS	11-27-79
CHK	11-27-79	M ENGR	
		MFG ENGR	

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

MATERIAL

FINISH

MODEL NO. 5536-1,-2

SEE ENGRG. SPECIFICATIONS

No.

TOL. ES. AS NOTED

XX ± FRAC. ±

XXX ± ANG. ± FINISH √

SCALE — SHT 2 OF 2

TITLE TWO BOARD W.S. REGULATOR

210-7656 WANG PART NUMBER

D SIZE

7656 DRAWING NUMBER

6 REV.

"THIS DRAWING AND THE DATA SHOWN THEREON ARE THE CONFIDENTIAL PROPERTY OF, AND ARE PROPRIETARY TO, WANG LABORATORIES, INC.. THIS DRAWING AND THE DATA SHOWN THEREON MAY NOT BE MADE PUBLIC WITHOUT THE WRITTEN CONSENT OF WANG LABORATORIES, INC. IF FOR ANY REASON THIS DRAWING IS PERMITTED BY WANG TO LEAVE THE PHYSICAL CUSTODY OF THE COMPANY, IT IS RETURNABLE UPON THE DEMAND OF WANG LABORATORIES, INC."

DO NOT SCALE

EXTERNAL TO PWR SUPPLY ASSEMBLY

A.C. CHORD

FUSE F1

SW1

BLK

GRN

WHT

VR50LA20

FILTER CONN SEE DETAIL "B"

LINE FILTER 5 AMP

AWG 18

AWG 18

BRN

SW2 BRN/YEL

115 | 230

BLK

T1

BLU

BLU/WHT

BLU

YEL

YEL/BLU

YEL

AWG 18

BLK/YEL

AWG 16

AWG 16

FAN PLUG

R3 100Ω 1W

C2 + 77,000 µf 15V

D2 IN1200A 100V

D3 IN1200A 100V

D4 IN1200A 100V

D1 IN4733A 5.1V 1W

D5 IN1200A 100V

Q2 2N5301

R5 .01Ω 3W

AWG 16

AWG 16

Q1 2N6285

E

C

B

AWG 18

AWG 18

HEATSINK

R2 1/2W 5%

C3 + 27,000 µf 30V

R1 1/2W 5%

C4 + 7,300 µf 40V

+17V

±0V

+12V

+12V

R4 .02Ω 3W

AWG 18

AWG 18

AWG 18

AWG 18

AWG 16

AWG 16

C1

J1

AWG 18 — 1 — -5VR

AWG 14 — 2 — +5VR

AWG 14 — 3 — ±0V

TO MOTHER BD & RD CONN

J2

AWG 18 — 4 — -12V

AWG 18 — 3 — CLICK

AWG 18 — 2 — WTR

AWG 18 — 1 — +12V

TO MOTHER BD CONN

J3

AWG 16 — 2 — +12V

AWG 16 — 1 — ±0V

CRT POWER

J4

18VAC T2	A 1	
18VAC T1	B 2	
+5VR SENSE	C 3	
	D 4	+12V SENSE
	E 5	+5VR DRIVE
+12V DRIVE	F 6	+12V RETURN
-12V	H 7	-12V DRIVE (N/C)
	J 8	
	K 9	
+18V	L 10	+18V
-18V	M 11	-18V
	N 12	-5VR
WTR	P 13	
±0V	R 14	±0V
+5VR RETURN	S 15	+5VR RETURN

+12V RETURN

+12V SENSE

+12V DRIVE

+18V

-18V

+5VR SENSE

+5VR RETURN

+5VR DRIVE

±0V

18VAC T1

18VAC T2

BLK — GRN — WHT

DETAIL "B"

A.C. FILTER CONNECTION

COMPONENT	TYPE	WL. PART NO.
R1, 2	1K 1/2W 5%	331-3011
R3	100Ω 1W 10%	332-2010
R4	.02Ω 3W 3%	334-0032
R5	.01Ω 3W 3%	334-0041
C1	50µf 50V 10%	300-3010
C2	77,000µf 15VDC	300-3049
C3	27,000µf 30VDC	300-3069
C4	7,300µf 40VDC	300-3074
D1 DIODE	IN4733A 5.1V 1W	380-2052
D2-D5 DIODES	IN1200A 100V	380-3000
Q1 TRANSISTOR	2N6285	375-1047
Q2 TRANSISTOR	2N5301	375-1048
SW1	SPST TOGGLE SW	325-0033
SW2	SL. SW. 115/230VAC	325-2112
T1 TRANSFORMER	8 AMP	410-0126
L1 INDUCTOR	125mH 3A	320-0101
F1 FUSE	2.5A S.B. 115VAC 1.5A S.B. 230VAC	360-1025-38 360-1016-38
LINE FILTER	5 AMP CORCOM 5K1	410-2005
VARISTOR	VR50LA20	380-5001

NO.	REVISION	BY	DATE
0	ORIGINATED PER DWR #E7064 APPD	JSW	1.31.81

ORELVE PRESS

	BY	DATE	APPROVED BY	DATE
DWN	J. WOZNIAK	1.30.81	E ENGR	2/24/81
CHK			M ENGR	
			MFG ENGR	

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

MATERIAL —

MODEL NO. 5536

SEE ENGRG. SPECIFICATIONS No.

FINISH —

TOL. EX. AS NOTED .XX ± FRAC. ± .XXX ± ANG. ± FINISH √

SCALE — SHT / OF /

TITLE INTERCONNECTION DIAGRAM

270-0580 | D | 7656-900 | 0

WANG PART NUMBER | SIZE | DRAWING NUMBER | REV.

D 7656-900

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DO NOT SCALE

+15V S.P.
HVD S.P.
±0V S.P.
-15V S.P.

C6 1000MF 25V
C10 1000MF 25V
C7 .1uf (C)
C5 33MF 10V
C3 .1MF (C)
C1 .001MF
C2 220PF MICA
R3 422K 1/8W 1%
R13 2.2K
R15 2.2K
R14 2.2K
R16 2.2K
R5 46.4K 1/8W 1%
R2 22.6K 1% 1/8W
R1 10K
R4 56.2K 1/8W 1%
R6 6.19K 1/8W 1%
C13 .1MF (C)
C4 .0047MF MYLAR

03 L2 03 L2

+5V

U1 SG3524
15 VCC
9 COMP
1 IT
10 SD
16 RO
12 C1
11 E1
2 NIT
3 OSCO
13 C2
6 RT
7 CT
14 E2
4 C.L.(+)
5 C.L.(-)
8 GND

R17 270Ω 1/2W
R7 680Ω
R8 4.7K
D1 S/L
T2
Q3 MPSU04
R18 150Ω 2W
R19 3.3Ω 1/2W
D6 S1F4
D5 S1F4
D4 S1F4
R21 47Ω
Q2 BU124
D7 S1F4
D8 S1F4
C11 2600MF 50V
T1
D9 S1A6F
C8 .1MF 600V MYLAR
C9 .1MF 600V MYLAR
R9 10K
R11 48K
R10 4.7K
Q1 MPS6512
D3 IN5274
D2 IN5274

INPUT ANODE HIGH VOLTAGE TRIPLER GND FOCUS

R12 40 MEG 1.25W
R24 15MEG 1W
R22 82K 1W
R23 15MEG 1W
C12 .001MF 6KV
ANODE
FOCUS
S.P. DYN FOC
S.P. G2

D 7669

NO.	REVISION	BY	DATE
A	SEE SHT 2		

		BY	DATE	APPROVED BY	DATE
WANG LABORATORIES, INC. LOWELL, MASS. U.S.A.	DWN	JS	4/17/80	E ENGR	
MATERIAL	MODEL NO. IP 41	CHK		M ENGR	
	SEE ENGRG. SPECIFICATIONS No.			MFG ENGR	
FINISH	TOL. EX. AS NOTED .XX ± FRAC. ± .XXX ± ANG. ± FINISH √	TITLE: CRT HIGH VOLTAGE SUPPLY			
	SCALE NONE SHT 1 OF 2	210-7669 WANG PART NUMBER	D SIZE	7669 DRAWING NUMBER	8 REV.

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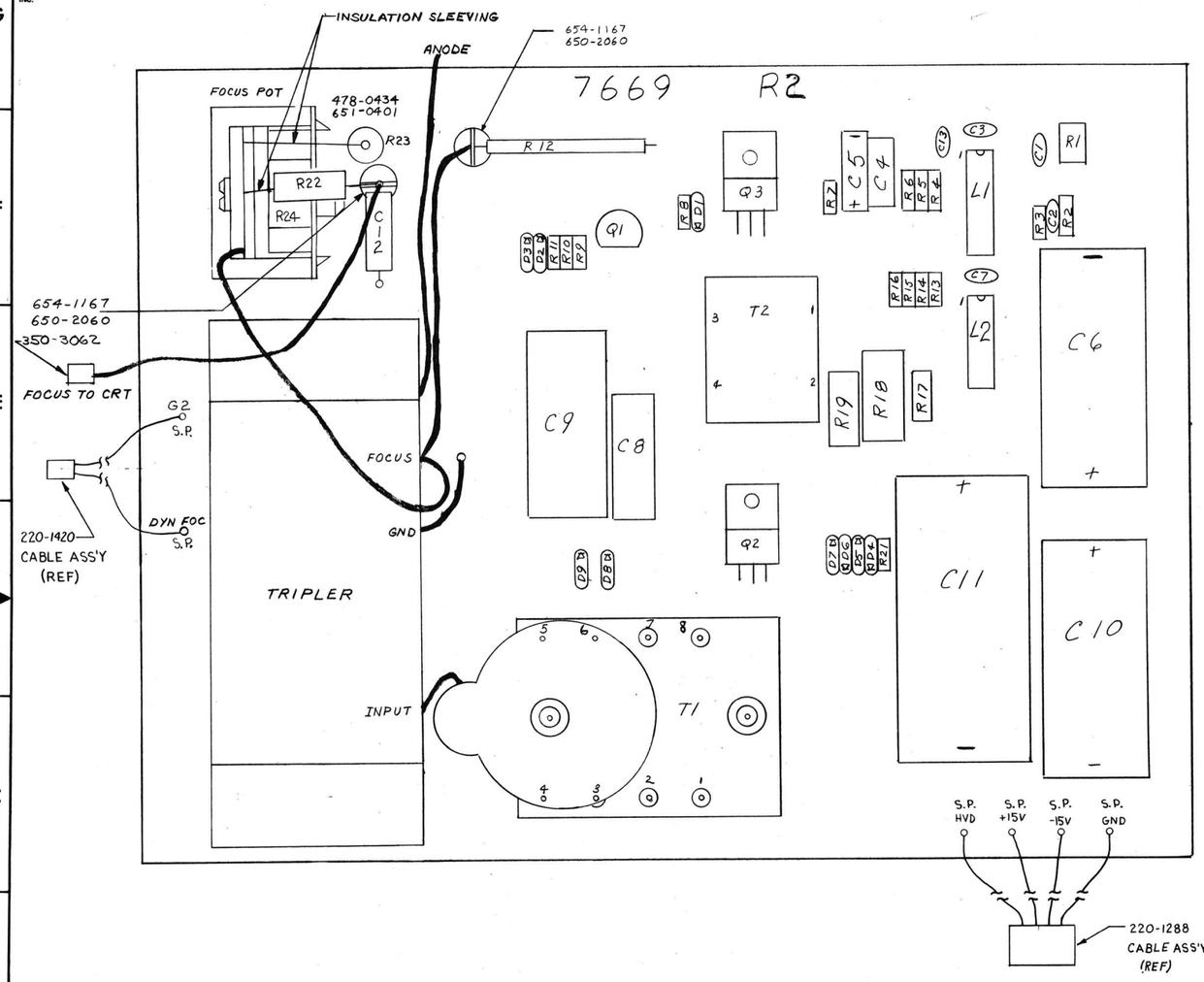
DO NOT SCALE



I.C. LOCATION	W.L. PART NO.	TYPE
L1	376-0468	SG3524
L2	376-0028	7403
L1	376-9002	16 PIN SOCKET

I.C. TYPE	LOC	SPARES
7402	L2	2

COMP.	W.L. PART No.	TYPE
R1	336-1010	10K POT
R2	333-0161	22.6K 1/8W 1%
R3	333-0074	422K 1/8W 1%
R4	333-0064	56.2K 1/8W 1%
R5	333-0109	46.4K 1/8W 1%
R6	333-0069	6.19K 1/8W 1%
R7	330-2068-48	680Ω 1/4W 10%
R8,10	330-3047-48	4.7K 1/4W 10%
R9	330-4010-48	10K 1/4W 10%
R11	330-3019-48	1.8K 1/4W 5%
R12	334-0051	40MEG 1.125W 1%
R13-16	330-3022-48	2.2K 1/4W 10%
R17	331-2027	270Ω 1/2W 10%
R18	337-2015	150Ω 2W 10%
R19	331-0033	3.3Ω 1/2W 10%
R22	332-4082	82K 1W 10%
R23	334-0039	15MEG 1W 10%
R24	336-0041	15MEG POT (H.V.)
R21	330-1047-48	47Ω, 1/4W, 10%
C1	300-1906	.001μF 500V CER
C2	300-5004	220pF 500V MICA
C3,7,13	300-1901	.1μF 12V CER
C4	300-2047	.0047μF 100V MYLAR
C5	300-4024	33μF 10V (T)
C6,10	300-3062	1000μF 25V (E)
C8	300-2310	.1μF, 400V MYLAR
C9	300-2410	.1μF 600V MYLAR
C11	300-3079	2.6KμF 30V (E)
C12	300-1940	.001μF 6KV (C)
D1	380-1001-48	D035 SIL
D2,3	380-2221	IN5274 ZEN
D4-8	380-3010	SIF4
D9	380-4008	SIAGF
Q1	375-1012	MPS6512
Q2	375-1057	BU124
Q3	375-1056	MPSU04
T1	410-1014	TRANS.
T2	410-1006	TRANS
TRIPLER	410-2015	(HV)

E-REV
5

NO.	REVISION	BY	DATE
9	DWR #E831 APP'D: [illegible]	DS	9-16-80
10	REVISED PER ECN #14358 APP'D: [illegible]	ZK	5-8-80
11	REVISED PER ECN#15038 APP'D: [illegible]	ZK	5-8-80
1	REVISED PER ECN#15077 APP'D: [illegible]	ZK	5-A-80
2	REVISED PER ECN#15333 APP'D: [illegible]	ZK	6-25-80
3	REVISED PER ECN# 16030 APP'D: [illegible]	ZK	8-25-80
4	REVISED PER ECO # 17315 APP'D: [illegible]	T.K.	1-22-81
5	REVISED PER ECO #18205 APP'D: [illegible]	ZK	5-12-81
6	REVISED PER ECO #18[illegible] APP'D: [illegible]	FSS	4-1981

WANG LABORATORIES, INC. LOWELL, MASS. U.S.A.	BY	DATE	APPROVED BY	DATE
	DWN DS	4/14/80	E ENGR R. VEINOT	7/24/80
	CHK [illegible]	7/24/80	M ENGR	
			MFG ENGR	
MATERIAL	MODEL NO. IP41		TITLE CRT HIGH VOLTAGE SUPPLY	
	SEE ENGRG. SPECIFICATIONS No.			
FINISH	TOL. EX. AS NOTED .XX ± FRAC. ± .XXX ± ANG. ± FINISH √		210-7669	D 7669 B
	SCALE NONE SHT 2 OF 2		WANG PART NUMBER	SIZE DRAWING NUMBER REV.

D 7669

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DO NOT SCALE

L50 153 · L51 153 · L48 153 · L49 153 · L38 157 · L36 157 · L24 181 · L23 181 · L27 153 · L14 155 · L39 155 · L30 9321 · L17 04 · L21 74 · L40 02 · L42 04 · L43 00 · L44 08 · L45 00 · L15 08 · L20 51 · L41 73 · L29 32 · L2 11 · L26 04 · L22 32

R1 470Ω +5VR · R2 2.2K +5VR · R3 2.2K · R4 470Ω +5VR · C1 150 pf

R8 (2E4) → R8(2E11) · R9 J5 15 → R9(1D4) · R0,R6,R7 (1G1) · T4 (2D7) · BK1 (1E2) · CAPM (2B9) · T8 (1C10) · R9(1E10) · R15(1C10) · M0-M7(2A2) · R0-R7(1E11)(2E11)(2G9) · BK2 (1F9) · C0-C7 (2G11) · CO (2E4) · CNTRLG1 (2F4) · CNTRLG2(2C3) · CNTRLG3(2E4) · R12 (1F3) · R11 J5 9 · R12 J5 14 · R15 J5 14 · R14 J5 13 · R13 34 → R13(1F2) · R14(2E11) · R15(2E11)(1D4) · TO (2D6) · TO-5 (2E7) · 10(2C5) · BK4(2G3) · (1E6) · LOAD AUX · 1024 (1B2) · 1024 (1A7) · SB (1A8) · RETURN · SET CAR · RIO

WANG LABORATORIES, INC. LOWELL, MASS. U.S.A.			
MATERIAL	MODEL NO. 2260B/C — SEE ENGRG. SPECIFICATIONS No.____	TITLE DISK/MUX CONTROLLER MOTHERBOARD	
FINISH	TOL. EX. AS NOTED .XX ± FRAC. ± .XXX ± ANG. ± FINISH √ SCALE SHT 1 OF 3	210-7688 WANG PART NUMBER	D SIZE · 7688 DRAWING NUMBER · 3 REV.

	BY	DATE	APPROVED BY	DATE
DWN	SD	1-25-79	E ENGR	
CHK			M ENGR	
			MFG ENGR	

NO.	REVISION	DATE

D 7688

"THIS DRAWING AND THE DATA SHOWN THEREON ARE THE CONFIDENTIAL PROPERTY OF, AND ARE PROPRIETARY TO, WANG LABORATORIES, INC.; THIS DRAWING AND THE DATA SHOWN THEREON MAY NOT BE MADE PUBLIC WITHOUT THE WRITTEN CONSENT OF WANG LABORATORIES, INC. IF FOR ANY REASON THIS DRAWING IS PERMITTED BY WANG TO LEAVE THE PHYSICAL CUSTODY OF THE COMPANY, IT IS RETURNABLE UPON THE DEMAND OF WANG LABORATORIES, INC."

DO NOT SCALE

WANG LABORATORIES, INC. LOWELL, MASS. U.S.A.	BY	DATE	APPROVED BY	DATE
	DWN SD	1-25-79	E ENGR	
	CHK		M ENGR	
MATERIAL	MODEL NO. 2260810		MFG ENGR	
	SEE ENGRG. SPECIFICATIONS No.	TITLE	DISK/MUX CONTROLLER MOTHER BOARD	
FINISH	TOL. EX. AS NOTED .XX ± FRAC. ± .XXX ± ANG. ± FINISH √	210-7688	D 7688	3
	SCALE SHT 2 OF 3	WANG PART NUMBER	SIZE DRAWING NUMBER	REV.

D 7688

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DO NOT SCALE

COMPONENT	WLI #	TYPE
C1	300-1150	150 pf 500V
C2	300-1913	.002 uf 500V
C3	300-1010	10 pf 500V
C4, 24, 25	300-4022	15 uf 20V (T)
C5, 8	300-1906	.001 uf 500V
C6, 7	300-4045	220 uf 15V (T)
C9	300-1903	.01 uf 25V
C10-23	300-1900	.05 uf 12V
XTAL1	321-0008	10 MHZ
R1,4-12, 35-38, 43, 46, 48	330-2047	470Ω 1/4W 10%
R2, 3, 42, 45, 49-55	330-3022	2.2K 1/4W 10%
R13-20	330-2033	330Ω 1/4W 10%
R21-30	330-2022	220Ω 1/4W 10%
R31	330-2018	180Ω 1/4W 10%
R32	330-3018	1.8K 1/4W 10%
R33	330-3047	4.7K 1/4W 10%
R34	330-1027	27K 1/4W 10%
R39	330-2010	100Ω 1/4W 10%
R40	330-3033	3.3K 1/4W 10%
R41	330-3015	1.5K 1/4W 10%
R44	330-5010	100K 1/4W 10%
R47	330-1047	47Ω 1/4W 10%
J1, 2	350-2097	50 PIN CONN.
J3	350-2096	36 PIN CONN.
J4	350-1029 M	72 PIN CONN.
J5	376-9029	16 PIN SKT.
Q1, 2	375-1005	2N2222
D1, 3	380-1001	SI4.
D2	380-2048	1N5230C 4.7V

LOCATION	W.L. PART NO.	TYPE
L1, 3, 6, 22	376-0038	74LS244
L2, 33	376-0194	7411
L4, 15, 44	376-0081	7408
L5, 17, 26, 31, 42	376-0010	7404
L7, 21, 47	376-0006	7474
L8, 13, 19, 25, 29	376-0093	7432
L9, 12	376-0028	7403
L10, 11	376-0138	74298
L14, 39	376-0049	74155
L16	376-0007	7476
L18	376-0102	74164
L20, 43, 45	376-0002	7400
L23, 24	376-0099	74181
L27, 32, 48-51	376-0048	74153
L28	376-0012	7451
L30	376-0096	9321
L34, 35, 37, 41	376-0005	7473
L36, 38	376-0082	74157
L40	376-0016	7402
L46	376-0240	LM339

CONN: 4

B	1	1024	2	1 / 2
R13	3	R12	4	
WTG	5		6	
	7	ESG	8	
C4	9	CO	10	
C5	11	C1	12	
C6	13	C2	14	
C3	15	C7	16	
RCLK	17	RDDA	18	
	19		20	
	21		22	
	23	WCD	24	
	25	RB	26	
MO	27	M3	28	
RO	29	R3	30	
AO	31	M1	32	
M2	33	R1	34	
R2	35	A1	36	
±0V	37	±0V	38	
A4	39	A5	40	
ADG	41		42	
	43	RA	44	
T01	45	T4	46	
+5VR	47	+5VR	48	
+5VR	49	+5VR	50	
M4	51	M7	52	
R4	53	R7	54	
CRC	55	M5	56	
M6	57	R5	58	
R6	59	A2	60	
A3	61	A6	62	
A7	63	T4-6	64	
AST	65		66	
	67	T8	68	
10 MHZ	69		70	
+12V	71	-12V	72	

LOCATION	TYPE	SPARES
L4	7408	1
L17	7404	1
L29	7432	1
L33	7411	2
L45	7400	1
L46	LM339	2

MNEMONICS	COORDINATE
RO-R7	1G7
AB-BUS	2C11
ABS	2A8
AST	2B8
CO-C7	1D1
CAPM	2A9
CNTRL61	1A5
CPB6	1G5
CRC	1G8
D3	2E1
DRSTB	2G1
EG	2E1
ESG	2G2
FE	1B1
FR	1G9
H3	2E1
I81-E88	2B1
I85	2F1
IM	2G6
KD	1B1
LAT	2G5
LOAD AUX	1A8
MO-M7	1G2
R5	1A10
R8-R88	2G9
R85	2A8
PG	1B1
PRMS	2B11
PUP	1B1
RO-R7	1G2
R8	1F11
R9	1E11
R10	1A4
R11, 12	1C11
R13, 14, 15	1B11
RA	2D11
RB	2E1
RCLK	2A5
RCLK1	2G5
RDAT	2A6
RDDA	2A5
RG	2D3
RC	2D1
RSRW	2G6
RSTRB	2G7
RT	1B1
RTP	1B1
SELECT1	2E1
SELECT2	2E1
SIZE	2G5
SYA	2G6
T01	2A4
T4	2A6
T4-6	2A4
T8	2A4
TA1288	2D1
TA-256	2E1
WCD	2G2
WDD	2G1
WG	2A9
WTCK	2G5
WTG	2G2
8	2A5
1024	1A7
10 MHZ	2D11

NO.	REVISION	BY	DATE
9	ORIGINATED PER DWR # 5331	SD	11-26-79
10	REVISED PER ECN # 13918	SDB	11-26-79
11	REVISED PER ECN # 13918 APPD: 3.1.12-80	[illegible]	1-10-80
12	REVISED PER ECO # 16712 APPD: J.L.12-80	LDC	12-5-80

7688-R2

E-REV 2

WANG LABORATORIES, INC. LOWELL, MASS. U.S.A.	BY	DATE	APPROVED BY	DATE
	DWN SD	1-26-79	E ENGR DOOLEY	3-8-79
	CHK G.D.	3-8-79	M ENGR	
			MFG ENGR	
MATERIAL	MODEL NO. 2260 B/C		TITLE DISK/MUX CONTROLER MOTHERBOARD	
	SEE ENGRG. SPECIFICATIONS No.			
FINISH	TOL. EX. AS NOTED .XX ± FRAC. ± .XXX ± ANG. ± FINISH √			
	SCALE NONE SHT 3 OF 3		210-7688 / D / 7688 / 3	
			WANG PART NUMBER / SIZE / DRAWING NUMBER / REV.	

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DO NOT SCALE

BT1 - BT8 (2B9)

ADD CK (2C6)

WAM (2C6)

PORT GO (P1)

XTDATA (1B6)

XFER (2C11)

PRIME DC (2E11)

FORMAT (2F11)

WRITE (2F10)

R+W+F (2A11) (2B2)

FIXED (2E8)

SDF (2D10) (2A9) (2F6)

FLOPPY (2E11)

R+W+F (2A6) (1B4)

READ (1D2)

READ (1D2)

FMT ENB (2G9)

XT DATA (2C6)

CRC ERROR (2C1)

ADD ERROR (2C1)

ERROR (2C1)

BRD (B3)

PORT4 (H1)

BWR (13)

PORT WRT (2F2) (2F11)

ZWR (2A11)

READ DATA (B2)

NOT A JUMPER INDICATES PINS 3,4 & 5 TIED ONLY

DACK0 (P1)

DACK0 (1D2)

EOP (A3)

SDF (J2)

FLOPPY (J2)

W DATA (2G8)

Z DATA (2G8) (2B5)

B1 - B4 (2D9)

MW DATA (2F10) (2B5)

RW CLOCK (2C11)

WTG (2G8)

CLK 700 (2D10)

RDG (2C6)

XT DATA (2C6) (1E11)

CLK 100 (2E10)

BK1 (1F2)

ADD EQU (2B4)

ADD EQU

WTG (2G9)

BK1 (1B6)

D7 (2F11)

D6 (2F2)

D0 (2A11)

DACK0 (1A10)

READ (1E8)

READ (1E8)

CLK 700 (2D10)

HEX4E (2D6)

HEX4E (2F10)

ADD CLK (2C5)

R+W+F (1E8)

DREQ 0

	BY	DATE	APPROVED BY	DATE
DWN		3/11/80	E ENGR	
CHK			M ENGR	
			MFG ENGR	

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

MATERIAL

MODEL NO. 2200LVP

SEE ENGRG. SPECIFICATIONS

No.

FINISH

TOL. EX. AS NOTED .XX ± FRAC. ± .XXX ± ANG. ± FINISH √

SCALE — SHT 1 OF 3

TITLE: FIXED/FLOPPY DISK CONTROLLER

SEE CHART | D | 7695 | 7

WANG PART NUMBER | SIZE | DRAWING NUMBER | REV

REVISION	BY	DATE
SEE SHT 3		

ORIG. PRINT

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DO NOT SCALE

WTE (2C6) WTG (2C5) (1G2) WTG (IC3) (2F2) (2B6) (2D11) (1C9)
WAM (2C5) BK2 (2A9)
L CLOCK (2G1)
Z DATA (1G5)
RWCLK (2D10)
FMT ENB (1D11)
CRCBO (2B3)
4E/OC/FF (2D8)
MW DATA (1C7)
DONE (2D4)
HEX4E (1C1)
XT DATA (2C6)
XC DATA (2D5)
CNT RESET (2B11)
WRITE (1D9)
PRIME DC (1E10)
POR
FLOPPY (1D9)
ADD CK (2C6)
FIXED (1D9)
CLK100 (1B6)
WTG (2G8)
RW CLOCK (2G6) (2B9) (2F2) (2F8)
SDF (1D9)
HEX4E (2D6)
4E/OC/FF (2F9)
RW CLOCK (1C8)
ERROR (2C1)
AMF (2H2)
AMF (2B5)
XFER (1E10)
GND
TP1
FREEZE (2F1)
CNT RESET (2F8)
R+W+F (1D8)
BT1-BT8 (1F11)
SDF (1D9)
D0 (1E1)
PORT3 (A2)
EWR (1C10)
CLK700 (2D10)
BK2 (2G9)
+12V -5VR +5VR ±0V

2X FREQ
SFD (1D9)
RWCLOCK (2D10)
C40 ±0V 150PF
R16 4.7Ω
R15 22Ω
R3 150Ω
R4 330Ω
R5 2.7K
C39 ±0V 100PF
SERIAL ADM CLK
EWC
WAM (2C6)
RW CLOCK (2D10)
PORT4 WRT (1C10)
D6 (1E1)
WTG (2G8)
L CLOCK (2G8)
FREEZE (2B11)
MFM WRITE DATA

HEX4E (2D10) (IC3) (2F10)
DONE (2F9)
XC DATA (2F9)
ADD CK (2E11) (1F10) (IC2)
WAM (1F10) (2G3)
XT DATA (2F9) (1D11) (1B6)
WTE (2G10)
RDG (1B9)
WAM (2G9)
ADD EQU (1G2)
CLK700 (2D10)
R+W+F (1E9)
WAM
RDG
WTG
DSK DONE INT
RESTART
CRC ERROR (1D11)
ADD ERROR (1D11)
ERROR (1D11) (2C11)
R+W+F (1D8)
WTG (2G8)
AMF (2C11)
Z DATA (1G5)
MW DATA (1C7)
RW CLOCK (2D10)
CRC BO (2G9)

WANG LABORATORIES INC. LOWELL, MASS. U.S.A.	BY	DATE	APPROVED BY	DATE
	DWN	2/14/80	E ENGR	
	CHK		M ENGR	
MATERIAL	MODEL NO. 2200 LVP		MFG ENGR	
	SEE ENGRG. SPECIFICATIONS No.	TITLE FIXED/FLOPPY DISK CONTROLLER		
FINISH	TOL. EX. AS NOTED .XX ± FRAC. ± .XXX ± ANG. ± FINISH √	SEE CHART	D	7695	7
	SCALE 1/1 SHT 2 OF 5	WANG PART NUMBER	SIZE	DRAWING NUMBER	REV.

REVISION | BY | DATE | SEE SHT 5 | NO.

OGILVIE PRESS

D 7695

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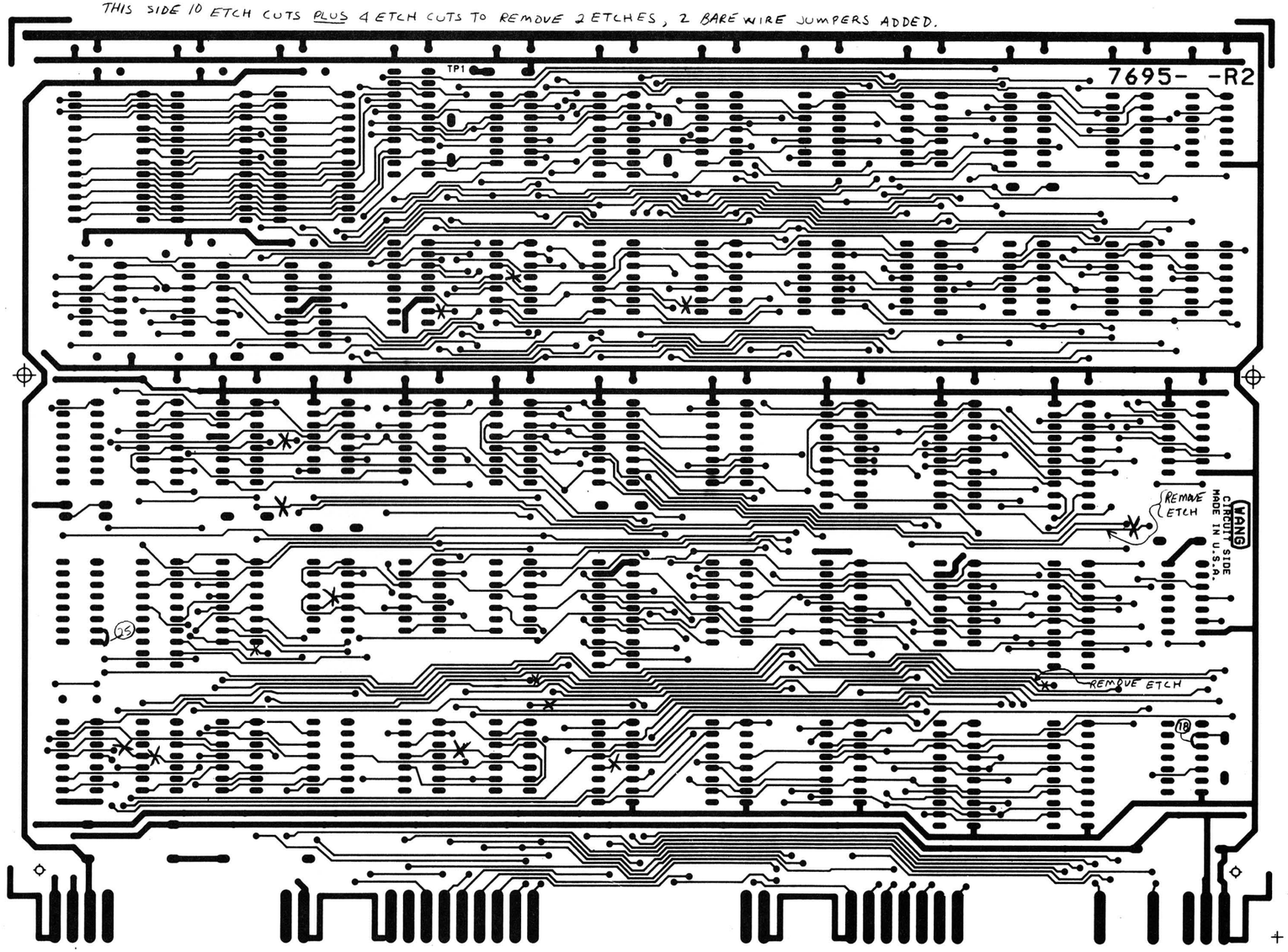
SH 2/2 7695 CIRCUIT SIDE - ADDED JUMPERS, ETCH CUTS, AND ETCH REMOVALS

MBT 11-12-80

THIS SIDE 10 ETCH CUTS PLUS 4 ETCH CUTS TO REMOVE 2 ETCHES, 2 BARE WIRE JUMPERS ADDED.



HOLE LEGEND & TOLERANCES

NO	REVISION	DATE	BY
	SEE SH. 5		

WANG LABORATORIES, INC. LOWELL MASS USA	BY	DATE	APPROVED BY	DATE
	DWN R.C. Cuttle	11-25-80	E ENGR	
	CHK		M ENGR	
			MFG ENGR	
MATERIAL	MODEL NO		TITLE	
	SEE ENGRG SPECIFICATIONS No		FIXED/FLOPPY DISK CONTROLLER	
FINISH	TOL EX AS NOTED .XX ± FRAC ± .XXX ± ANG ± FINISH		SEE CHART	D 7695 -
	SCALE	SHT 3 OF 5	WANG PART NUMBER	SIZE DRAWING NUMBER REV

D 7695

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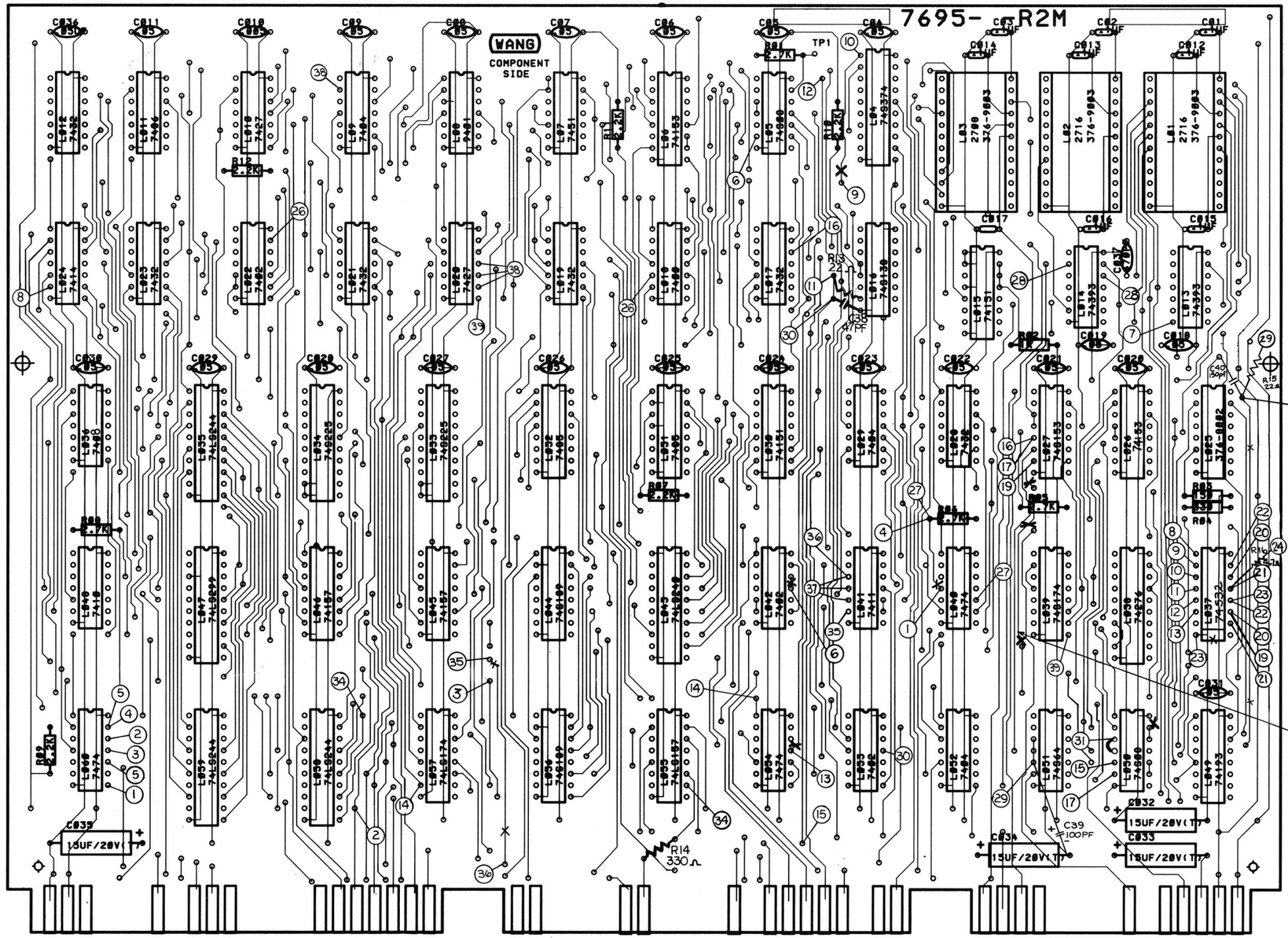
DO NOT SCALE

HOLE LEGEND & TOLERANCES	
HOLE DIA	TOLERANCE
0135 125	+ 003 003
126 250	+ 004 004
251 500	+ 005 005

SYM	DESCRIPTION	QTY
A		

7695-R2M



THIS SIDE 6 ETCH CUTS PLUS 6 ETCH CUTS TO REMOVE 3 ETCHES.

ECN NO. PENDING

NOTE: "(#)" MEANS ONE END OF AN INSULATED WIRE WHICH IS TO BE CONNECTED TO ANOTHER POINT ON THE BOARD WITH THE SAME "(#)" SYMBOL.

NO.	REVISION	BY	DATE
	SEE SH.5		

	BY	DATE	APPROVED BY	DATE
DWN	L.Chaffin	11-25-80	E ENGR	
CHK			M ENGR	
			MFG ENGR	

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

MATERIAL

MODEL NO. 2200 VP
SEE ENGRG. SPECIFICATIONS No. 10-203

FINISH

TOL. EX. AS NOTED
.XX ± FRAC ±
.XXX ± ANG. ± FINISH √

TITLE: FIXED/FLOPPY DISK CONTROLLER ASSEMBLY DRAWING

WANG PART NUMBER	SIZE	DRAWING NUMBER	REV.
210-7695	D	7695	7

SCALE | SHT 4 OF 5

D 7695

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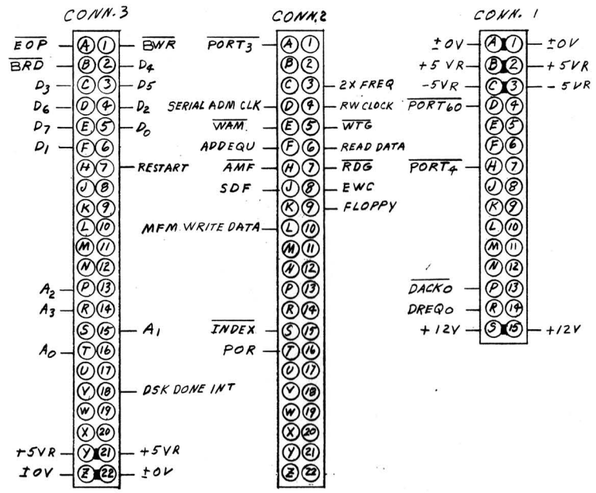
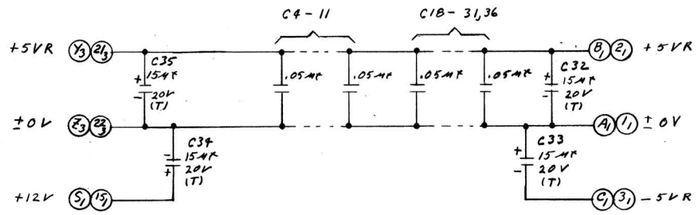
DO NOT SCALE





IC. LOCATION	W. L. PART No	TYPE
L1, 2	SEE CHART	TMS 2716
L3	SEE CHART	TMS 2708
L4	376-0286	74LS374
L5, 50	376-0200	74S08
L6, 26	376-0048	74153
L7	376-0012	7451
L8	376-0440	9401
L9, 24, 29, 52	376-0010	7414
L10, 20	376-0125	7427
L11	376-0036	7486
L12, 17, 19, 21, 23, 28	376-0093	7432
L13, 14	376-0330	74393
L15, 30	376-0047	74151
L16	376-0298	745138
L18	376-0002	7400
L36	376-0081	7408
L22, 42, 53	376-0016	7402
L25	376-8002	1519-100B
L31, 32	376-0087	7485
L33, 34	376-0323	745225
L35, 58, 59	376-0288	74LS244
L37	376-0205	74S32
L38	376-0318	74276
L39	376-0247	745174
L40, 54, 60	376-0006	7474
L41	376-0194	7411
L44, 56	376-0349	745189
L45, 46, 55	376-0082	74157
L47	376-0303	74LS299
L48	376-0003	7410
L49	376-0053	7419.3
L43	376-0297	74LS240
L51	376-0201	7456
L57	376-0159	74LS174
L27	376-0215	74S153
L1, 2, 3,	376-9003	24 PIN SOCKET

210	209	210 = 209 + 377 OR 378 L1	L2	L3
7695-A	7695	378-4224	378-4225	378-2560-R1

COMPONENT	W.L. PART NO	TYPE
R1, 5, 6, 8	330-3027	2.7K ¼W 10%
R2	330-3010	1K ¼W 10%
R3	330-2015	150Ω ¼W 10%
R4, 14	330-2033	330Ω ¼W 10%
R7, 9-12	330-3022	2.2K ¼W 10%
R13, 15	330-1022	22Ω 1/4W 10%
C1, 2, 3, 12-17	300-1930	.1MF 50V (CER)
C4-11, 18-31, 36	300-1900	.05MF 12V (CER)
C32-35	300-4022	15MF 20V (T)
C37	300-1470	470pf 500V (CER)
C38	300-1047	47pF 500V (CER)
C39	300-1100	100 PF 500V
C40	300-1150	150PF 500V
R16	330-0047	4.7Ω 1/4W 10%

IC. TYPE	LOC	SPARES
7402	L21	1
	L22	1
	L42	2
7410	L48	2
7411	L41	1
7427	L10	1
7432	L12	3
	L21	1
7486	L11	2

MNEMONIC	COORDINATE
$A_0 - A_3$	1 G 11
ADD EQU	1 G 1
$\overline{AMF}$	2 C 11
$\overline{BRD}$	1 C 11
$\overline{BWR}$	1 C 11
$D_0 - D_7$	1 E 1
$\overline{DACKO}$	1 A 11
DSK DONE INT	2 D 1
DREQ0	1 B 1
$\overline{EOP}$	1 A 11
EWC	2 G 3
FLOPPY	1 A 9
$\overline{INDEX}$	2 G 11
MFM WRITE DATA	2 E 1
POR	2 E 11
$\overline{PORT_3}$	2 A 11
$\overline{PORT_4}$	1 C 11
$\overline{PORT_{60}}$	1 F 11
RDG	2 A 6
READ DATA	1 B 11
RESTART	2 D 1
RW CLOCK	2 D 11
SDF	1 A 9
SERIAL ADM CLOCK	2 G 3
$\overline{WAM}$	2 A 5
$\overline{WTG}$	2 A 4
2X FREQ	2 G 6

E - REV
A

NO.	REVISION	BY	DATE
0	ORG. PER ECN # 8238 DWR # 8238 APP'D	JAB	2-11-80
1	REVISED PER ECN # 14770 APP'D	JAB	3-27-80
2	REVISED PER ECN # 15905 APP'D:	RNB	6-19-80
3	REVISED PER ECO # 16885 APP'D:	LBC	11-25-80
4	REVISED: PER ECO # 17330 ECO # 17330	T.K.	2-16-81
5	REVISED PER ECO # 17846 APP'D:	ISDB	2-19-81
6	REVISED PER ECO # 18193 APP'D:	DAG	2-11-81
7	REVISED PER ECO # 18304 APP'D:	M.K.	3-24-81

	BY	DATE	APPROVED BY	DATE
DWN	JAB	2/4/80	E ENGR	
CHK			M ENGR	
			MFG ENGR	

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

MATERIAL

MODEL NO. 2200 LVP
SEE ENGRG. SPECIFICATIONS No.

FINISH.

TOL. EX. AS NOTED .XX ± FRAC. ± .XXX ± ANG. ± FINISH √

TITLE FIXED/FLOPPY DISK CONTROLLER

SCALE 4/1 SHT 5 OF 5

SEE CHART | D | 7695 | 7
WANG PART NUMBER | SIZE | DRAWING NUMBER | REV.

D 7695

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DO NOT SCALE

$A_0 - A_{15}$ (2G11)

+5VR R27 2.2K

ZINT (2G9)

ZNMI

+5VR R29 1K

POR (2E7)

OCF WAIT (2B3)

+5VR R19 82Ω

AEN (1B10) 4MHZ (2D6)

L14 LS32 L8 LS04

L30 Z80A CPU

RESET WAIT $\overline{BUSRQ}$ $\overline{NMI}$ $\overline{HALT}$ $\overline{MI}$ $\overline{RFSH}$ $\overline{IORQ}$ $\overline{WR}$ $\overline{RD}$ $\overline{BUSAK}$

D_0 D_1 D_2 D_3 D_4 D_5 D_6 D_7

A_0 A_1 A_2 A_3 A_4 A_5 A_6 A_7 A_8 A_9 A_{10} A_{11} A_{12} A_{13} A_{14} A_{15}

L36 LS139 2Y0 $\overline{CS_0}$ 2Y1 $\overline{CS_1}$ 2Y2 $\overline{CS_2}$ 2Y3 $\overline{CS_3}$

A_{11} A_{12} A_{15} L17 LS32

R37 47K +5VR

$\overline{EMRQ}$ (2D5)

R40 10K R39 10K R41 10K +5VR

IORQ (2F1) (2E3) (2F8) ZRFSH (2D4) ZM1 (2B5) (2F11) (2E8)

L19 LS04 DMACK (2B2)

R35 47K R36 10K +5VR

L25 AMD

HACK DB_0 DB_1 DB_2 DB_3 DB_4 DB_5 DB_6 DB_7 HREQ $\overline{EOP}$ $\overline{IOR}$ READY $\overline{IOW}$ RESET $\overline{CS}$ MEMR MEMW $DREQ_0$ $DREQ_1$ $DREQ_2$ $DREQ_3$ $\overline{ADSTB}$ CK AEN $DACK_2$ $DACK_1$ $DACK_0$ Vcc GND

AMD9517A-1 (ONLY) DO NOT SUBSTITUTE

+5VR R33 10K

$\overline{EOP}$ (A3)

+5VR R18 1K DMARDY (2A10)

POR (2E11)

$PORT_{10}$ (2E1)

$DREQ_0$ (R1) $DREQ_1$ (11) $DREQ_2$ (12)

MHZ (2C7)

+5VR

$\overline{ZRD}$ (2D11)(2F11)(2F8)(2C3)

C12 220pF +0V

$\overline{DMA\ RD}$ (2D5)(2F8)

$\overline{DMA\ WR}$ (2D6)

$\overline{ADSTB}$ (2G9)(2F8)

AEN (2G9)(1F11)

L6 8T97 DIG2

DACK (2F8) (2C6)

L48 LS32

$DACK_2$ (13)

$\overline{BWR}$ $\overline{BRD}$ (13) (R3)

L29 2716 L28 2716 L27 2716 L26 2716

A_0 A_1 A_2 A_3 A_4 A_5 A_6 A_7 A_8 A_9 PROG A_{10} $\overline{CS}$(PE)

Q_1 Q_2 Q_3 Q_4 Q_5 Q_6 Q_7 Q_8

+0V +12V -5VR +5VR

L34 LS257 L35 LS257

A_0 A_7 A_1 A_8 A_2 A_9 A_3 A_{10} A_4 A_{11} A_5 A_{12} A_6 A_{13}

COLEN (1D1)

R25 MA0 R22 MA1 R21 MA2 R26 MA3 R24 MA4 R23 MA5 R20 MA6 22Ω

L32 125

$\overline{PE}$ (2B7) $\overline{PO}$ (2A7)

L33 LS280 EVEN ODD

D7 D6 D5 D4 D3 D2 D1 D0

DO-D7 (2B10)

RAS (2D2) MWR (2B1) L11 S32

L46 L45 L44 L43 L42 L41 L40 L39 L38 MK 4116

D_{IN} D_O A_0 A_1 A_2 A_3 A_4 A_5 A_6 $\overline{RAS}$ $\overline{CAS}$ $\overline{WR}$

MA0 MA1 MA2 MA3 MA4 MA5 MA6

$\overline{RAS}$ (2D1) $\overline{CAS}$ (2D1) MWR (2C1)

V_{CC} V_{DD} V_{BB} V_{SS}

C33 C32 C31 C30 C29 C28 C27 C26 C24 C25 C22 C23 C20 C21 C19 C18 C17 C16 .1μF

+0V +5VR +12V -5VR

$\overline{FCAS}$ (2C1) L18 74 2CK 2PR 2D 2CLR 2Q

L5 7411 $\overline{BMWR}$ (2B1)

$\overline{PODD}$ (2B9)

PARITY ERROR

T3 A0 T5 A1 P3 A2 P5 A3

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

MATERIAL	MODEL NO. 2200LVP	DRWN	BY	DATE
FINISH	SEE LABOR. SPECIFICATION	CHK		
			APPROVED BY	DATE
		TITLE	MICROCOMPUTER & MEMORY	
		SIZE	SEE CHART	D
		DWG NO.	76	REV 9
		SCALE		SHEET

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DO NOT SCALE

A0-A15 (1G10)

L37 Z80A CTC

2200 INT (U3)

DISK DONE (B3)

ZIORQ (1E9)

ZMI (1E8)

ZRD (1C9)

+5VR

CTC EN (2G3)

POR

POR (1C11)

C42 82PF

R38 120Ω

POR (J3)

ZINT (1G11)

AEN (1B10)

L19 LS04

ADSTB (1B10)

L31 LS373

D0-D7 (1B7)

L50 LS241

L49 LS241

D2 D7 D0 D1

BD1 BD0 BD7 BD2

BD6 BD5 BD3 BD4

DMARD (1B9)

DACK0 (1A10)

DACK1 (1A10)

ZIORQ (1E9)

ZRD (1C9)

PORT1 (2G1)

PORT20 (2E1)

L15 LS08 L14 LS32 L51 S08 L16 LS32 L5 7411 L8 LS04

L36 LS139

CTC EN (2F11)

PORT 10

L24 LS138

A3 L17 LS32

A0 A1 A2

PORT 00

PORT0 (9J) PORT1 (2D11) (2E8) PORT2 (6J) PORT3 (FJ) PORT4 (HJ) PORT5 (7J) PORT6 (10J)

L23 LS138

A4 A5 A6 A7

ZIORQ (1E9) ZMI (1E8)

PORT20 (1B11) (2E8) PORT30 (2A9) PORT60 (DJ) PORT70 (2A9)

POR (1F11)

R14 220Ω XTAL 1 8.0 MHZ R15 1.8K C10 10pf R16 330Ω

L22 LS368

4MHz (1F11)

TP2 R13 2.2K

L7 LS163

MHZ (1B11)(2A11) DACK0 (1A10) DACK1 (1A10)

L6 8T97 DIS 4

TP1 R12 1K L19 LS04 +5VR R11 1K

R28 47K R34 47K +5VR

DMAWR (1B9) DMARD (1B9)

ZMRQ (1E9)

ZRFSH (1E9) A15

L15 LS08 L52 LS00 L51 S08 L8 LS04

R31 22Ω RAS (1D6)

L48 LS32 COLEN (1E6)

L47 574 R30 22Ω CAS (1F5) FCAS (1C3) R32 1K +5VR

R10 1K +5VR L18 74 R9 1K +5VR

ZRD (1C9) ZMI (1E8) DMACK (1D9) DMACK (1E9)

L16 LS32 L32 125 R17 22Ω MWR (1F5)(2A8) MWR (1C7)

L20 BMWR (1B3)

OCF WAIT (1F11)

SW1 R1 R3 R5 R7 R8 R6 R4 R2 1K +5VR ±0V

L12 LS244

BD0 BD1 BD2 BD3 BD4 BD5 BD6 BD7 BDACK1 BDACK0

PODD (1B2) L13 LS00 MWR (2E3) L11 S32 PE (1B6) PO (1B6) PORT30 (2E1)

L4 LS74 MHZ (2C7) READY (K1) DMA RDY (1C11)

L17 LS32 PORT1 (2G1) ZRD (1C9)

SEE SHEET 5

REVISION NO. DATE ITEM

	BY	DATE	APPROVED BY	DATE
DWN AB		3-26-80	E ENGR	
CHK			M ENGR	
			MFG ENGR	

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

MATERIAL

MODEL NO. 2200 LVP

SEE ENGRG. SPECIFICATIONS' No.

FINISH

TOL. EX. AS NOTED XX ± FRAC ± XXX ± ANG. ± FINISH

TITLE MICRO COMPUTER & MEMORY

SCALE 1/4 SHT 2 OF 5

SEE CHART | D | 7696 | 8

WANG PART NUMBER | SIZE | DRAWING NUMBER | REV.

7696 D

"THIS DRAWING AND THE DATA SHOWN THEREON ARE THE CONFIDENTIAL PROPERTY OF, AND ARE PROPRIETARY TO, WANG LABORATORIES, INC.. THIS DRAWING AND THE DATA SHOWN THEREON MAY NOT BE MADE PUBLIC WITHOUT THE WRITTEN CONSENT OF WANG LABORATORIES, INC. IF FOR ANY REASON THIS DRAWING IS PERMITTED BY WANG TO LEAVE THE PHYSICAL CUSTODY OF THE COMPANY, IT IS RETURNABLE UPON THE DEMAND OF WANG LABORATORIES, INC."

DO NOT SCALE

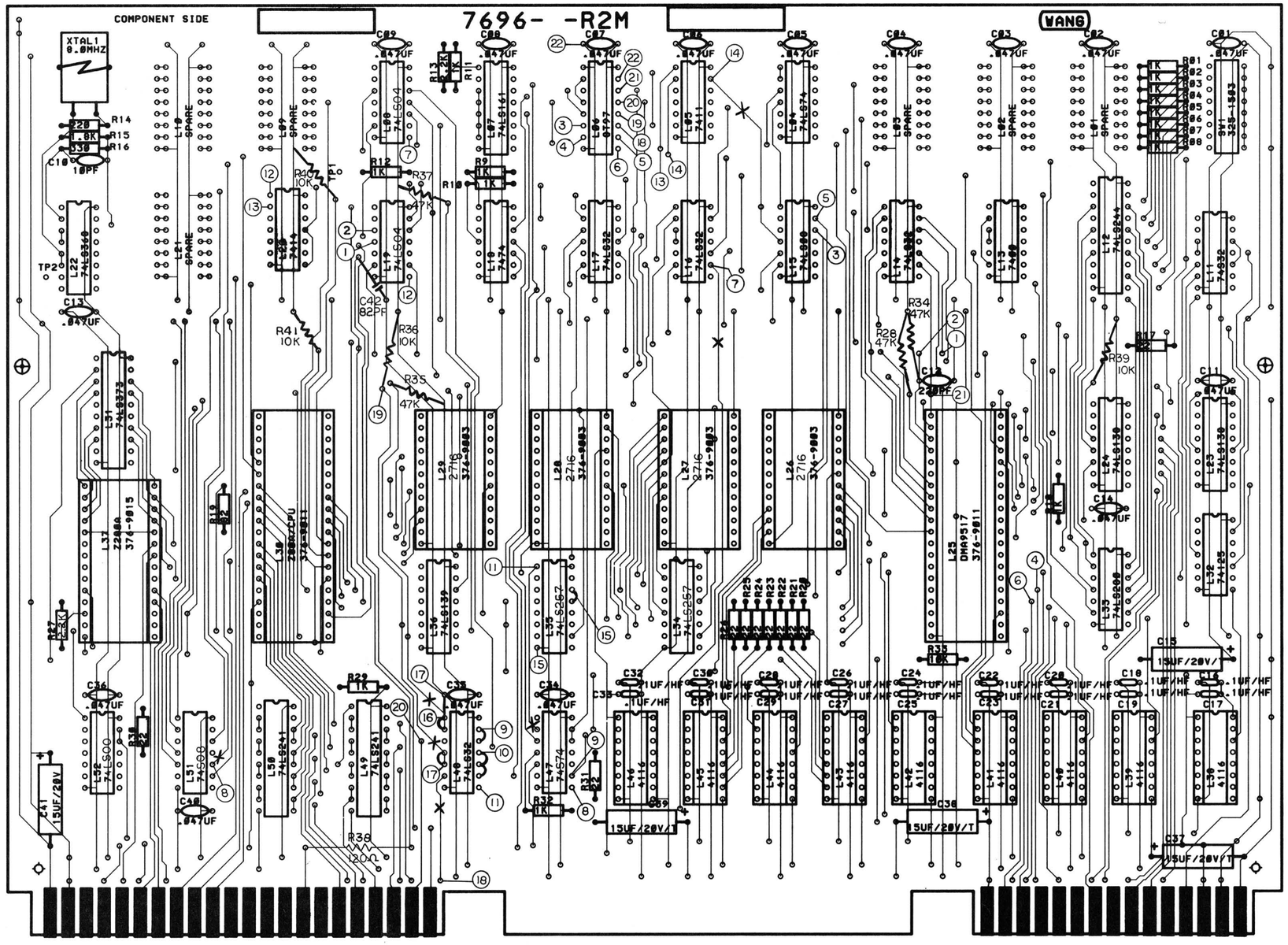
HOLE LEGEND & TOLERANCES	
HOLE DIA	TOLERANCE
.0135 - .125	+ .003 .003
.126 - .250	+ .004 .004
.251 - .500	+ .005 .005

SYM	DESCRIPTION	QTY
A		

COMPONENT SIDE

7696- -R2M

WANG



THIS SIDE 7ETCH CUTS TOTAL

NOTES: "#" MEANS ONE END OF AN INSULATED WIRE WHICH IS TO BE CONNECTED TO ANOTHER POINT ON THE BOARD WITH THE SAME "#" SYMBOL.

NO.	REVISION	DATE	BY
	SEE SH 5 FOR REV		

OGILVIE PRESS

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

MATERIAL	MODEL NO. 2200LVP
	SEE ENGRG. SPECIFICATIONS No.
FINISH	TOL. EX. AS NOTED XX ± FRAC ± XXX ± ANG. ± FINISH √
	SCALE 2/1 SHT 3 OF 5

BY	DATE	APPROVED BY	DATE
DWN R.D.B.	11-24-80	E ENGR	
CHK		M ENGR	
		MFG ENGR	

TITLE MICROCOMPUTER & MEMORY ASSEMBLY DRAWING

WANG PART NUMBER	SIZE	DRAWING NUMBER	REV.
SEE CHART	D	7696	5

D 7696

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DO NOT SCALE

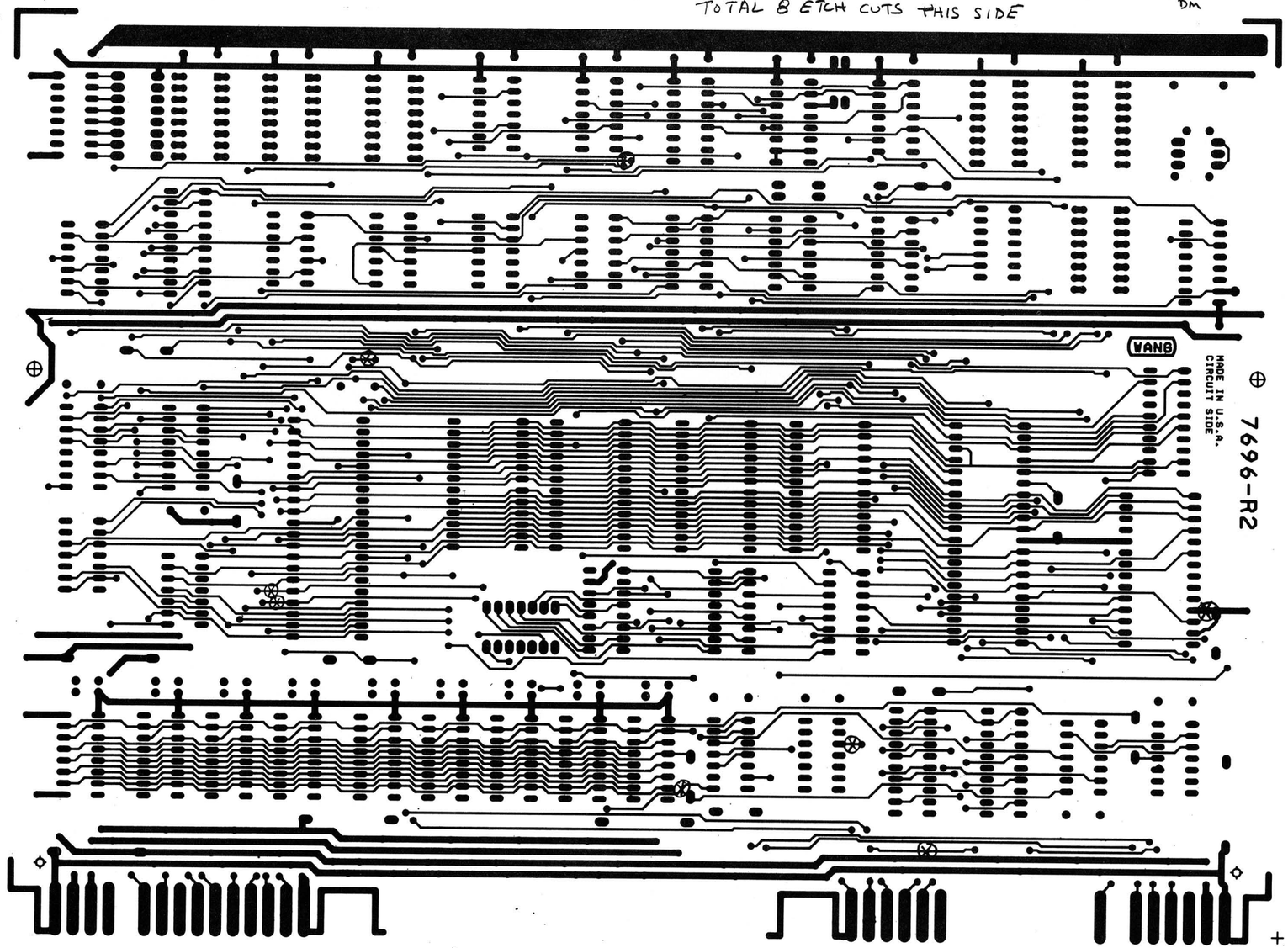
SH 2/2 7696 Circuit Side Etch Cuts

TOTAL 8 ETCH CUTS THIS SIDE

MBT 11-6-80
DM

HOLE LEGEND & TOLERANCES			
HOLE DIA		TOLERANCE	
0135	125	± 003	003
126	250	± 004	004
251	500	± 005	005

SYM	DESCRIPTION	QTY
A		



REVISION	DATE	BY
NO.		
5	11-24-80	LDB

WANG LABORATORIES, INC. LOWELL, MASS. U.S.A.		BY	DATE	APPROVED BY	DATE
		DWN LDB	11-24-80	E ENGR	
		CHK		M ENGR	
				MFG ENGR	
MATERIAL	MODEL NO. 2200 LVP	TITLE MICROCOMPUTER & MEMORY			
	SEE ENGRG SPECIFICATIONS No.				
FINISH	TOL EX AS NOTED XX ± FRAC ± XXX ± ANG ± FINISH √	SEE CHART	D	7696	8
	SCALE FULL SHT 4 OF 5	WANG PART NUMBER	SIZE	DRAWING NUMBER	REV.

D 7696

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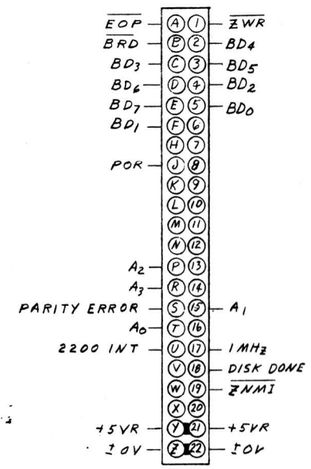
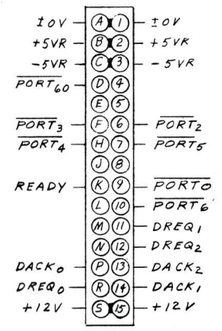
DO NOT SCALE

CONN. 3



CONN. 1

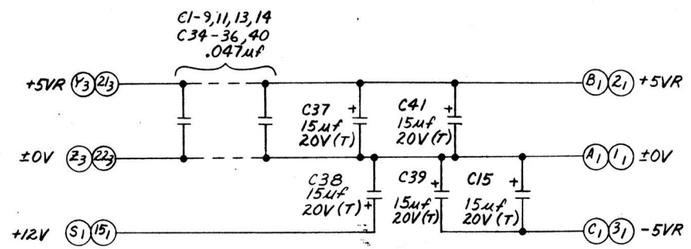


IC LOCATION	SPARES	TYPE
L4	1	LS74
L5	2	7411
L13	2	7400
L14	1	LS32
L20	3	7414
L15	1	7408
L16	1	7432
L19	1	LS04
L22	1	LS368
L52	2	S00
L48	2	LS32

LOCATION	W.L. PART No	TYPE
L1,2,3,9,10, 20,21		SPARE
L4	376-0155	74LS74
L5	376-0194	7411
L6	376-0189	8T97
L7	376-0233	74LS161
L8,19	376-0197	74LS04
L11,14,16,17,48	376-0211	74LS32
L12	376-0288	74LS244
L13	376-0033	74C30
L15	376-0051	74C30
L18,47	376-0006	7474
L22	376-0193	74LS368
L23,24	376-0298	74S138
L25	SEE CHART	DMA 9517
L26-29	SEE CHART	2716
L30	SEE CHART	Z80A-CPU
L31,38	376-0286	74S374
L32	376-0324	74125
L33	376-0242	74LS280
L34,35	376-0204	74LS257
L36	376-0333	74S139
L37	SEE CHART	Z80-A CTC
L38-46	SEE CHART	MS4116
L49,50	376-0284	74LS241
L51	376-0200	74S08
L52	376-0207	74LS00
L25,30	376-9011	40 PIN SOCKET
L26-29	376-9003	24 PIN SOCKET
L37	376-9015	28 PIN SOCKET
L38-46	376-9002	16 PIN SOCKET

COMPONENT	W.L. PART NO.	TYPE
R1-12, 18, 29, 32	330-3010	1K 1/4W 10%
R13,27	330-3022	2.2K 1/4W 10%
R14	330-2022	220Ω 1/4W 10%
R15	330-3018	1.8K 1/4W 10%
R16	330-2033	330Ω 1/4W 10%
R17,20-26, 30,31	330-1022	22Ω 1/4W 10%
R19	330-1082	82Ω 1/4W 10%
R33,36,39-41	330-4010	10K 1/4W 10%
R28,34,35,37	330-4047	47K 1/4W 10%
C1-9,11,13,14 34-36,40	300-1900	.047μf (C)
C10	300-1010	10Pf 10% 500V (C)
C12	300-1220	220Pf 500V (C)
C15,37-39, 41	300-4022	15μf 20V (T)
C16-33	300-1930	.1μf / HF 50V
C42	300-1082	82PF 500V
D1	380-1001	SIL-D IODE
SW1	325-1503	SLIDE SW SPST
XTAL1	321-0009	8MHz 5% QUARTZ
R38	330-5012	120Ω 1/4W 10%

MNEMONIC	COORDINATE
A0-A3	1G1
BD0-BD7	2A5
BRD	1A8
BWR	1A8
BDACK0, BDACK1	2A4
DACK2	1A10
DISK DONE	2F11
DREQ0-DREQ2	1B11
EOP	1C11
PARITY ERROR	2D1
POR	2D11
PORT0,9 PORT2-PORT6	2G1
PORT60	2E1
READY	1C11
ZNMI	1G11
2200 INT	2F11
1MHz	2A6



210	209	210 = 209 + 378 OR 377							
		L25	L26	L27	L28	L29	L30	L37	L38-L46
7696-A	7696	377-0388	378-4223-R5	378-4222-R5	378-4221-R5	378-4220-R5	377-0368	377-0371	377-0345
7696-B	7696	377-0388	378-4230-R5	378-4222-R5	378-4221-R5	378-4220-R5	377-0368	377-0371	377-0345
SYP DUAL FLPY 7696C	7696	377-0388	378-4234	378-4233	378-4232	378-4231	377-0368	377-0371	377-0345
7696-D	7696	377-0388				378-4252	377-0368	377-0371	377-0345
7696-E	7696	377-0388	378-4234	378-4242	378-4241	378-4240	377-0368	377-0371	377-0345

E-REV 1

REVISION	NO.	DWN	DATE	CHK	DATE	ENGR	DATE
ORIG. PER DWN #E803 APP'D #6/4/80	1	RS	4-28-80	LC	5-20-80	GR	5-9-80
REVISED PER ECN# 14347 APP'D 6/4/80	1/1						
REVISED PER ECN# 15260 APP'D: JMK 6-5-80	2						
REVISED PER ECN# 15316 APP'D: JMK 7-25-80	3/1			AM	7.25.80		
REVISED PER ECN# 16896 APP'D 11/21/80	4/1			XXX	11/21/80		
REVISED PER ECN# 16956 ECN# 16956 APP'D 12/17/80	5/1			FS.S	12-17-80		
REVISED PER ECO# 17326 APP'D 1-20-81	6/1			T.K.	1-20-81		
REVISED PER ECO# 17326 APP'D 3-5-81	7/1			T.K.	3-5-81	F.S.S	3-24-81
REVISED PER ECO# 18756 APP'D 4-28-81	8/1						

WANG LABORATORIES, INC. LOWELL, MASS. U.S.A.		BY	DATE	APPROVED BY	DATE
MATERIAL	MODEL NO. 2200LVP	DWN	1/20/81	E ENGR	4/28/81
	SEE ENGRG. SPECIFICATIONS No.	CHK	1/20/81	M. ENGR	
FINISH	TOL. EX. AS NOTED XX ± FRAC. ± XXX ± ANG. ± FINISH √			MFG ENGR	
	SCALE 2/1 SHT 5 OF 5	TITLE	MICROCOMPUTER & MEMORY		
		SEE CHART	D 7696		8
		WANG PART NUMBER	SIZE	DRAWING NUMBER	REV

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DO NOT SCALE

+5VR2 +5VS1 RESTART +24V UNREG T2 +24VS +24FB

115VAC T1 D19 A15A C6 8.2K MF 25V (E) R58 1K ½W ±0V

115VAC T2 D18 A15A

2N6387 Q3 R6 3.3K C2 .05MF ±0V

R46 2.2K 5% R45 120K 5% -7V C21 .05MF L7 LM339

+24 UNREG

±0V D10 SIL -7V R43 120K 5%

15VAC T1 D21 A15A D20 A15A C7 8.2K MF 25V (E) R59 1K ½W R34 390Ω 2W ±0V

15VAC T2 D16 A15A D17 A15A C9 4.7K MF 30V (E) R57 1K ½W

L4 LM723 R25 680Ω +5V ADJ R15 1K R12 1.5K C10 .05MF +5V LOGIC C15 15MF 20V (T) C19 .05MF R51 1.8K

L3 LM723 R22 1.8K R5 560Ω R44 120Ω R33 2.2K 5% R23 2.7K 5% D5 IN752A ZEN R11 6.8K R4 6.8K D3 SIL R10 2.7K +12V ADJ R14 1K R21 6.8K C12 .05MF

RCA B203A Q2 R39 .02Ω 3W 3% R40 .008Ω 3W 3% R47 1K 5% C22 .05MF L7 LM339

D12 IN4372A ZEN

R29 2.37K ⅛W 1% R31 27Ω C14 .001MF -5V ADJ R16 2K R24 1.5K ±0V LM304 BOOST COM. R30 1.5K

6.5VAC T2 D22 A15A C8 8.2K MF 25V (E) R60 1K 1/2W

6.5VAC T1 D23 A15A

RCA B203A Q4 R7 100Ω C3 .1MF 100V MYLAR

Q6 2N2906A C23 .05MF C16 .05MF R41 1.5K 5% R42 120K 5% L6 UA741TC R44 33K

R26 .02Ω 3W 3% R27 .02Ω 3W 3% R28 .006Ω 3W 5%

C5 .33MF 35V (T) Q5 UA7912 C4 2.2MF 20V (T)

R37 820Ω 1W D7 IN5291C ZEN +5V LOGIC R50 1.2K 1W R35 100Ω D9 IN5230C ZEN R36 4.7K C25 10MF 35V (T) R32 10K D6 SIL L5 LM339

R38 1.2K 1W R52 1.5K 1W D8 IN4372A ZEN R53 100Ω D14 IN5230C ZEN R54 4.7K L7 LM339 L5 LM339 D15 SIL C24 15MF 20V (T) D13 GER

RCA B203A Q1 C13 .1MF 50V R2 220Ω C1 .1MF 100V MYLAR R49 680Ω 5% C18 .05MF L7 LM339 R48 120K 5% R3 1K R1 6.8K

L2 LM723 R18 1.8K D4 IN4748 ZEN R19 2.2K 5% R20 2.7K 5% R68 33K D2 SIL D1 SIL R9 10K R8 2.2K +24V ADJ R13 1K R17 18K R67 560Ω 2W C11 100PF C20 15MF 20V (T) D11 SIL

R61 1K R55 1K R62 1K R56 1K R64 4.7K L8 74 L9 03

D1 +24VR

C6 +12V REG

B1 +5V LOGIC

L4 RESET

K1 PRMS

J1 POR

G1 AUTO RESET

M1 -12V REG

S2 C2 A1 S2 C2 A1 ±0V

D1 +5PRI

S1 -5V REG

ECN NO. M104

ECN NO. PENDING 19100

WANG LABORATORIES, INC. LOWELL, MASS. U.S.A.	BY	DATE	APPROVED BY	DATE
	DWN AB	7/3/80	E ENGR	
	CHK		M ENGR	
			MFG ENGR	
MATERIAL	MODEL NO. 2200SVP/125A SEE ENGRG. SPECIFICATIONS No.		TITLE REGULATOR W/DUAL INLINES	
FINISH	TOL. EX. AS NOTED .XX ± FRAC. ± .XXX ± ANG. ± FINISH √ SCALE 1/1 SHT OF 2		210-7887 WANG PART NUMBER	D SIZE 7887 DRAWING NUMBER 4 REV.

NO.	REVISION	BY	DATE
	SEE SHT 2		

D 7887

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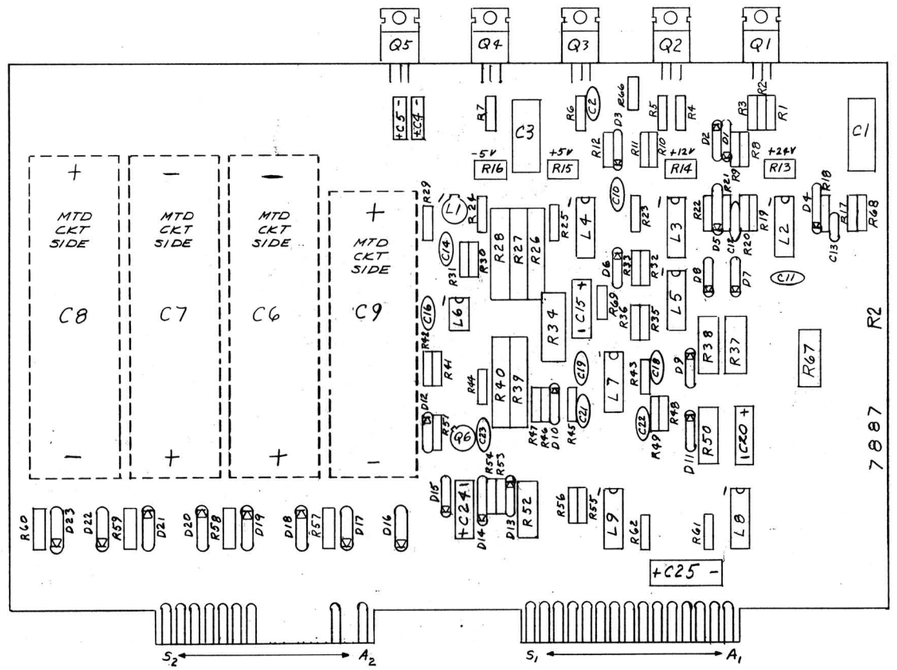
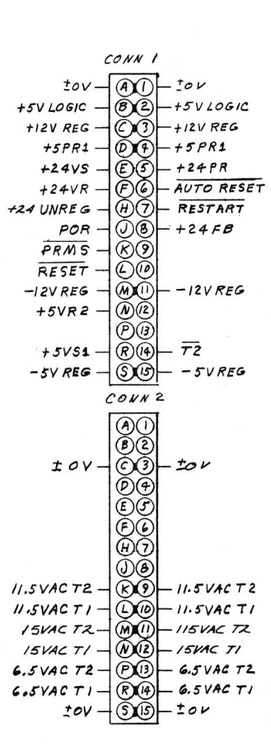
DO NOT SCALE





I.C. LOC.	W.L PART NO	TYPE
L1	376-0134	LM304
L2,3,4	376-0478	LM723
L5, 7	376-0240	LM339
L6	376-0423	UA741TC
L8	376-0006	7474
L9	376-0028	7403

I.C. TYPE	LOC	SPARES
7403	L9	1
7474	L8	1

COMPONENT	W.L. PART No	TYPE
R1,4,11,21	330-3068	6.8K ¼W 10%
R2	330-2022	220Ω ¼W 10%
R3,55,54,61,62,	330-3010	1K ¼W 10%
R5	330-2056	560Ω ¼W 10%
R6	330-3033	3.3K ¼W 10%
R7,35,53	330-2010	100Ω ¼W 10%
R8	330-3022	2.2K ¼W 10%
R9,32	330-4010	10K ¼W 10%
R10	330-3027	2.7K ¼W 10%
R12,24,30	330-3015	1.5K ¼W 10%
R13,14,15	336-1001	1K POT
R16	336-1026	2K POT
R17	330-4018	18K ¼W 10%
R18,22,51	330-3018	1.8K ¼W 10%
R19,33,46	330-3023	2.2K ¼W 5%
R20,23	330-3028	2.7K ¼W 5%
R25	330-2068	680Ω ½W 10%
R26,27,39	334-0032	.02Ω 3W 3%
R29	333-0093	2.37K ½W 1%
R31	330-1027	27Ω ¼W 10%
R34	337-2039	390Ω 2W 10%
R36,54,69	330-3047	4.7K ¼W 10%
R37	332-2082	820Ω 1W 10%
R38,50	332-3012	1.2K 1W 10%
R28,40	334-0031	.006Ω 3W 5%
R41	330-3016	1.5K ¼W 5%
R42,43,45,48	330-5013	120K ¼W 5%
R44,68	330-4033	33K ¼W 10%
R47	330-3011	1K ¼W 5%
R49	336-2069	680Ω ¼W 5%
R52	332-3015	1.5K 1W 10%
R57-60	331-3010	1K ½W 10%
R67	337-2036	5600Ω 2W 10%
R66	330-2012	120Ω ¼W 10%
C1,3	300-2210	.1μF 100V MYLAR
C2,10,12,16,18, 19,21,22,23	300-1900	.05μF 12V
C4	300-4014	2.2μF 20V (T)
C5	300-4008	.33μF 35V (T)
C6,7,8	300-3078	8.2KμF 25V (E)
C9	300-3080	4K μF 30V (E)
C11	300-1100	100μF 300V 10%
C13	300-1330	.1μF 50V
C14	300-1906	.001μF 500V
C15,20,24	300-4022	15μF 20V (T)
C25	300-4032	10μF 35V (T)
D1,2,3,6,10,11,18	380-1001	DO35 SIL
D4	380-2113	IN4743 13V
D5	380-2056	IN752A 5.6V
D7	380-2111	IN5241C 11V
D8,12	380-2129	IN4372A 3V
D9,17	380-2048	IN5230C 4.7V
D13	380-0000	GER
D16-23	380-3008	A15A
Q1,2,4	375-1053	RCA 8203A
Q3	375-1052	2N6387
Q5	374-0003	WA7912
Q6	375-1017	2N2904A

MNEMONICS	COOR'D
AUTO RESET	1B1
POR	1C1
PRMS	1C1
RESET	1C1
RESTART	1G5
T2	1G3
6.5VAC T1	1B11
6.5VAC T2	1B11
11.5VAC T1	1G11
11.5VAC T2	1F11
15 VAC T1	1F11
15 VAC T2	1F11
+5PR1	1A8
+5VLOGIC	1D1
+5VR2	1G8
+5VS1	1G7
-5V REG	1A5
+12V REG	1D1
-12V REG	1B1
+24PR	1G1
+24FB	1G1
+24V UNREG	1G4
+24VS	1G2
+24VR	1E1
±0V	1A10

E-REV
2

NO.	REVISION	BY	DATE
0	ORG PER DWR # E8553 APP'D: [illegible]	GAB	7/9/80
1	REVISED PER ECN # 11430 APP'D: [illegible]	JEP	10-10-80
2	REVISED PER ECO # 17303 APP'D [illegible]	T.K.	1-22-81
3	REVISED PER ECO # 17428 APP'D [illegible]	T.K.	1-23-81
4	REVISED PER ECO # 17851 APP'D: [illegible]	B.B.P.	3-5-81

	BY	DATE	APPROVED BY	DATE
DWN	GAB	7/9/80	E ENGR	11/6/80
CHK	[illegible]	9 Nov 80	M ENGR	
			MFG ENGR	

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

MATERIAL

MODEL NO. 2200SVP/125A
SEE ENGRG. SPECIFICATIONS
No.

FINISH

TOL. EX. AS NOTED
XX ± FRAC. ±
XXX ± ANG. ± FINISH √

SCALE — SHT 2 OF 2

TITLE: REGULATOR W/DUAL INLINES

210-7887 | D | 7887 | 4
WANG PART NUMBER | SIZE | DRAWING NUMBER | REV.

7887 D

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DO NOT SCALE

11 10 9 8 7 5 4 3 2 1

G F E D C B A

L55 74LS157 · L56 74S189 · L44 74S189 · L43 74LS240 · L30 74151 · L31 7485 · L32 7485 · L35 74LS244 · L58 74LS244 · L57 74S174 · L46 74157 · L34 74S225 · L59 74LS244 · L45 74157 · L39 74S225 · L60 7474 · L49 74193 · L47 74S288

FIFO

BRUNING 40-5253 · 47559

NO.	REVISION	BY	DATE
D	SEE SHEET 4		
C			
B			
A			

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

	BY	DATE	APPROVED BY	DATE
DWN	JSW	11-15-80	E ENGR/MGR Freeslat	12-3-80
CHK			M ENGR	
			MFG ENGR	

MATERIAL — MODEL NO. 2200LVP — SEE ENGRG. SPECIFICATIONS No. —

FINISH — TOL. EX. AS NOTED .XX ± FRAC. ± .XXX ± ANG. ± FINISH √ — SCALE — SHT 1 OF 4

TITLE FIXED/FLOPPY DISK CONTROLLER

WANG PART NUMBER	SIZE	DRAWING NUMBER	REV.
209-8695	D	8695	4

D 8695

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DO NOT SCALE

11	10	9	8	7	6	5	4	3	2	1	

G	F	E	D	C	B	A					

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DO NOT SCALE

8695-R2

TP1

C36 C11 C10 C9 C8 C7 C6 C5 C4 C3 C2 C1

R1 R10 R11 R12

L12 L11 L10 L9 L8 L7 L6 L5 L4 L3 L2 L1

L24 L23 L22 L21 L20 L19 L18 L17 L16 L15 L14 L13

C17 C16 C15 C38 C39 R13 R2 C19 C18 C17A

C30 C29 C28 C27 C26 C25 C24 C23 C22 C21 C20

L36 L35 L34 L33 L32 L31 L30 L29 L28 L27 L26 L25

R7 R3 R4 R6 R5 C37

R8

L48 L47 L46 L45 L44 L43 L42 L41 L40 L39 L38 L37

R8A R8B

C31

R9 L60 L59 L58 L57 L56 L55 L54 L53 L52 L51 L50 L49

C31A

R14

C35 C34 C32 C33

J3 A3 J2 A2 J1 A1

D 8695

BY	DATE	APPROVED BY	DATE
DWN JSW	11-15-80	E ENGR	
CHK		M ENGR	
		MFG ENGR	

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

MATERIAL —//—

MODEL NO. 2200LVP

SEE ENGRG. SPECIFICATIONS' No.

FINISH —//—

TOL. EX. AS NOTED .XX ± FRAC. ± .XXX ± ANG. ± FINISH √

SCALE —//— SHT 3 OF 4

TITLE FIXED/FLOPPY DISK CONTROLLER

WANG PART NUMBER	SIZE	DRAWING NUMBER	REV.
209-8695	D	8695	4

NO.	REVISION	BY	DATE
	SEE SHEET 4		

BRUNING 40-5253 47959

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DO NOT SCALE

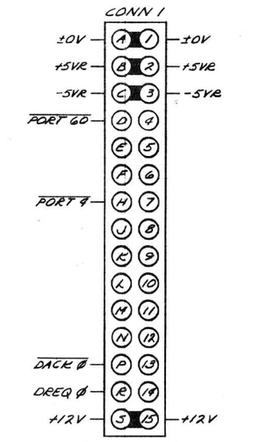
IC LOCATION	TYPE	W.L. PART NO.
L1, 2	TMS2716	SEE CHART
L3	TMS2708	SEE CHART
L4	74S374	376-0305
L5, 50	74S08	376-0200
L6, 26	74153	376-0048
L7	7451	376-0012
L8	9401	376-0440
L9, 29, 52	7404	376-0010
L10, 20	7427	376-0125
L11	7486	376-0036
L12, 17, 19, 21, 23, 28	7432	376-0093
L13, 14	74393	376-0330
L15, 30	74151	376-0047
L16	74S138	376-0298
L18	7400	376-0002
L22, 42, 53	7402	376-0016
L24	7414	376-0139
L25	1519-1008	376-8002
L27	74S153	376-0215
L31, 32	7485	376-0087
L33, 34	74S225	376-0323
L35, 58, 59	74LS244	376-0288
L36	7408	376-0081
L37	74S32	376-0205
L38	74276	376-0318
L39	74S174	376-0247
L40, 54, 60	7474	376-0006
L41	7411	376-0194
L43	74LS240	376-0297
L44, 56	74S189	376-0349
L45, 46	74157	376-0082
L47	74LS299	376-0303
L48	7410	376-0003
L49	74193	376-0053
L51	74S64	376-0201
L55	74LS157	376-0216
L57	74LS174	376-0159
L1, 2, 3	24 PIN SKT	376-9003

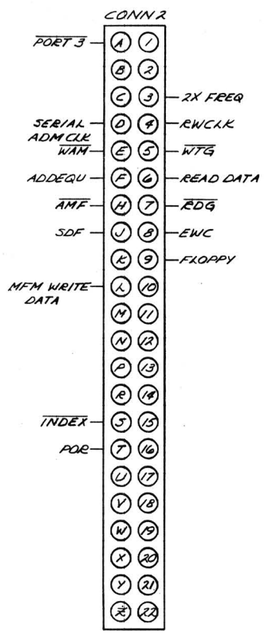
COMPONENT	TYPE	W.L. PART NO.
R1, 5, 6, 8	2.7K 1/4W 10%	330-3027
R2	1K 1/4W 10%	330-3010
R3	150Ω 1/4W 10%	330-2015
R4, 14	330Ω 1/4W 10%	330-2033
R7, 9, 10, 11, 12	2.2K 1/4W 10%	330-3022
R13, 88	22Ω 1/4W 10%	330-1022
RBA	4.7Ω 1/4W 10%	330-0047
C1-3, 12-17	.1μf 50V	300-1930
C9-11, 18-31, 36, 37	.05μf 12V	300-1900
C32-35	15μf 20V (T)	300-4022
C38	470pf 500V	300-1970
C39	47pf 500V	300-1047
C17A	150pf 300V	300-1150
C31A	100 pf 500V	300-1100

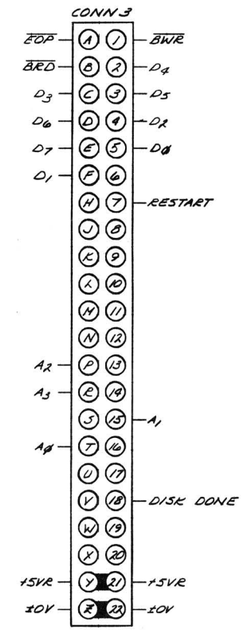
TYPE	IC LOCATION	SPARES
7402	L22	1
74S08	L50	1
7410	L48	2
7427	L10	1
7432	L12	3
	L21	1
7486	L11	2

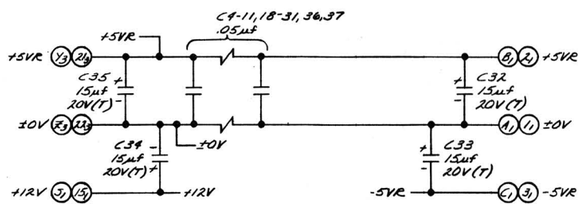
MNENONIC	CODE'D
ADDEQU	1F1
$\overline{AMF}$	2C11
A0-A3	1G11
$\overline{BRD}$	1C11
$\overline{BWR}$	1C11
$\overline{DACK\ 0}$	1A11
DISK DONE	2D1
DREQ 0	1B1
D0-D7	1D1
$\overline{EOP}$	1A11
EWC	2G3
FLOPPY	1A9
$\overline{INDEX}$	2G11
MFM WRITE DATA	2E1
POR	2E11
$\overline{PORT\ 3}$	2A11
$\overline{PORT\ 4}$	1C11
$\overline{PORT\ 60}$	1F11
$\overline{RDG}$	2A5
READ DATA	1C11
RESTART	2D1
RWCLK	2D11
SDF	1A9
SERIAL ADM CLK	2G2
$\overline{WAM}$	2A5
$\overline{WTG}$	2A5
2X FREQ	2G9

210=209+377 OR 378				
210	209	L1	L2	L3
8695-A	8695	378-9229	378-9225	378-2560-R1









E-REV
2

NO.	REVISION	BY	DATE
0	ORIGINATED PER ENGR #2637	JSW	11-15-80
1	REVISED PER ECO #17197	JSW	12-2-80
2/1	REVISED PER ECO # 17847 APP'D: UM 17 MAR 81	JEP	4-16-81
3/1	REVISED PER ECO # 18191 APP'D: UM 17 MAR 81	JEP	4-16-81
4/2	REVISED PER ECO# 18162 APP'D: UM 17 MAR 81	JEP	4-17-81

BY	DATE	APPROVED BY	DATE
DWN JSW	11-15-80	E ENGR M.A. Tressler	12-3-80
CHK UM Grant	5 DEC 80	M ENGR	
		MFG ENGR	

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

MATERIAL —

MODEL NO. 2200LVP
SEE ENGRG. SPECIFICATIONS
No.

FINISH —

TOL. EX. AS NOTED
.XX ± FRAC ±
XXX ± ANG. ± FINISH √

TITLE FIXED/FLOPPY DISK CONTROLLER

WANG PART NUMBER	SIZE	DRAWING NUMBER	REV.
209-8695	D	8695	4

SCALE — SHT 1 OF 1

D 8695

BRUNING 40-5233 47599

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