WANG

6100

VS-85/90/100 Computer Systems
Schematics Manual

Customer Engineering
Product Maintenance Manual

741-1462-1

PREFACE

This document contains schematics for the Wang VS-85/90/100 Computer Systems. It is used with the VS-85/90/100 Standard Maintenance Manuals (document nos. 741-1462 and 729-0871-A) and is organized in accordance with the approved STD outline established at the Field/Home Office Publications meetings conducted on September 14th and 15th, 1982. The scope of these manuals reflects the type of maintenance philosophy selected for this product (swap unit, printed circuit assembly, chip level or any combination thereof).

The purpose of the Standard Maintenance Manual and this Schematics Manual is to provide the Wang-trained Customer Engineer (CE) with instructions to operate, troubleshoot and repair the VS-85/90/100 Computer Systems. This manual will be updated on a regular schedule.

First Edition (August 1984)

The material in this document may only be used for the purpose stated in the Preface above. Updates and/or changes to this document will be published as Publications Update Bulletins (PUBs) or subsequent editions.

CUSTOMER ENGINEERING

PUBLICATION UPDATE BULLETIN

DATE: 01/03/85

This PUB: 741-1462-1

Class Code: 6100

Base Document: 741-1462

Previous Notice(s):

REASON FOR CHANGE:

Addition of VS-85-H/85-S schematics and assembly drawings.

INSTRUCTIONS:

Remove pages and insert attached pages as follows:

	REMOVE	INSERT
1.	Old Front Cover	New Front Cover
2.	Old Title Page	New Title Page
3.	ii	ii
4.	iii	iii
5.		Z11
6.		KK11
7.		QQ1-QQ4
8.		RR1-RR11
9.		SS1-SS8
10		TT1-TT9
11.		UU1-UU8
12.		VV1-VV8
13.		WW1-WW8

This page is to be used as a permanent record of revisions; place it directly following the title page.

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CUSTOMER ENGINEERING

PUBLICATION UPDATE BULLETIN

DATE: 10/04/85

This PUB affects: 741-1462

Class Code: 6100

Previous Notice(s): 741-1462-1

REASON FOR CHANGE:

This PUB adds the VS 22V36 Async Device Controller schematics to the manual.

INSTRUCTIONS:

Remove and insert attached pages and/or microfiche as follows:

	REMOVE PAGES	INSERT PAGES
1.	iii	iii
2.		XX1 thru XX10
3.		YY1 thru YY3
4.		ZZ1 thru ZZ4
5.		
6.		
7.		
8.		
9.		
10.		

	REMOVE FICHE	INSERT FICHE
1.	1 thru 6	1 thru 7
2.		
3.		
4.		

This page constitutes a permanent record of revisions; place it directly following title page.

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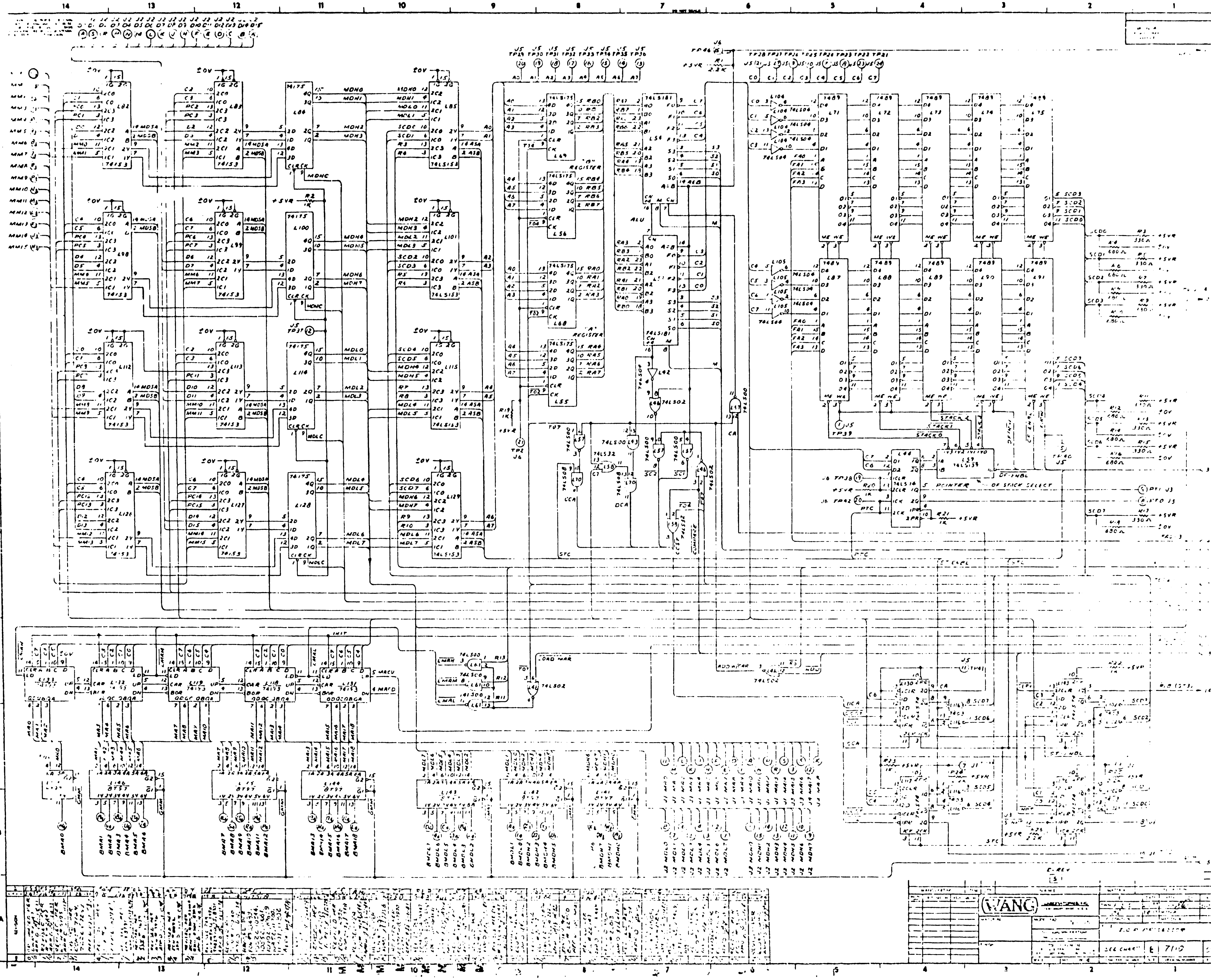
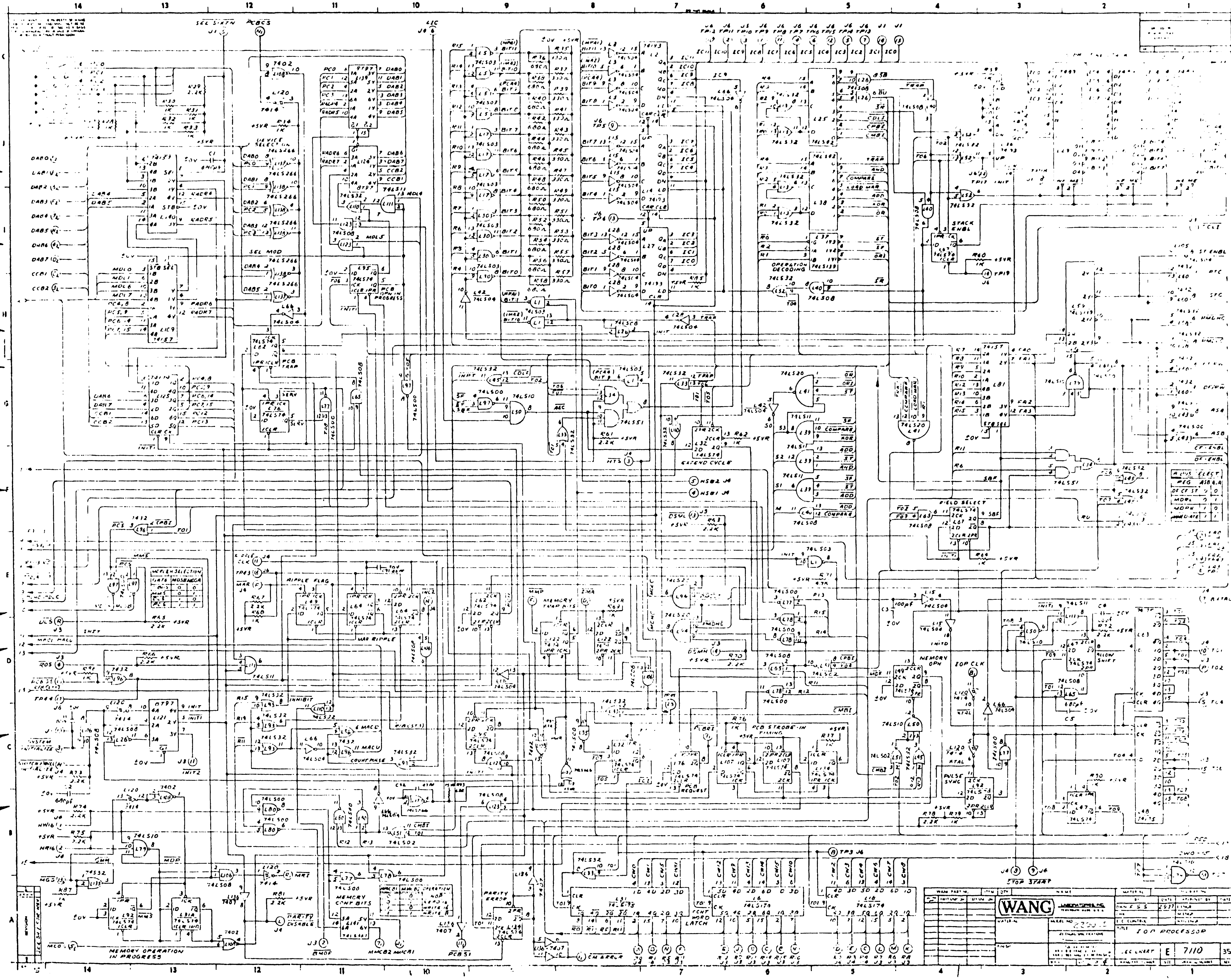
The following electrical schematics are the latest revisions available at the time of publication of this manual. Periodically, as changes, additions, or deletions occur, updates to this manual will be made available to field personnel.



74153
74175
74LS153
74LS175
"B" REGISTER
"A" REGISTER
74LS181
ALU
7489
74LS04
74LS00
74LS02
74LS08
74LS32
74LS139
74193
8T97
MDNC
MDLC
INIT
LOAD MAR
STACK 0
STACK 1
STACK 2
POINTER
OF STACK SELECT
CCA
DCA
STC
PTC
COMPARE
WANG
SEE CHART
E
7110


WANG
I O P PROCESSOR
DWN E S S
2977
E
7110
35
MEMORY OPERATION IN PROGRESS
MEMORY CONT BITS
PARITY DISABLE
PARITY ERROR
RIPPLE FLAG
MAR RIPPLE
COUNT PULSE
MEMORY TRAP BITS
PCB STROBE-IN TIMING
PCB REQUEST
CONT WORD LATCH
EXTEND CYCLE
OPERATION DECODING
FIELD SELECT
STACK ENBL
MEMORY OPN
IOP CLK
PULSE SYNC
ALLOW SHIFT
STOP
START
DEVICE SELECT ON
SEL MOD
PCB TRAP
PCB OPN IN PROGRESS
SYSTEM INITIALIZE
A BUS SELECT
A2

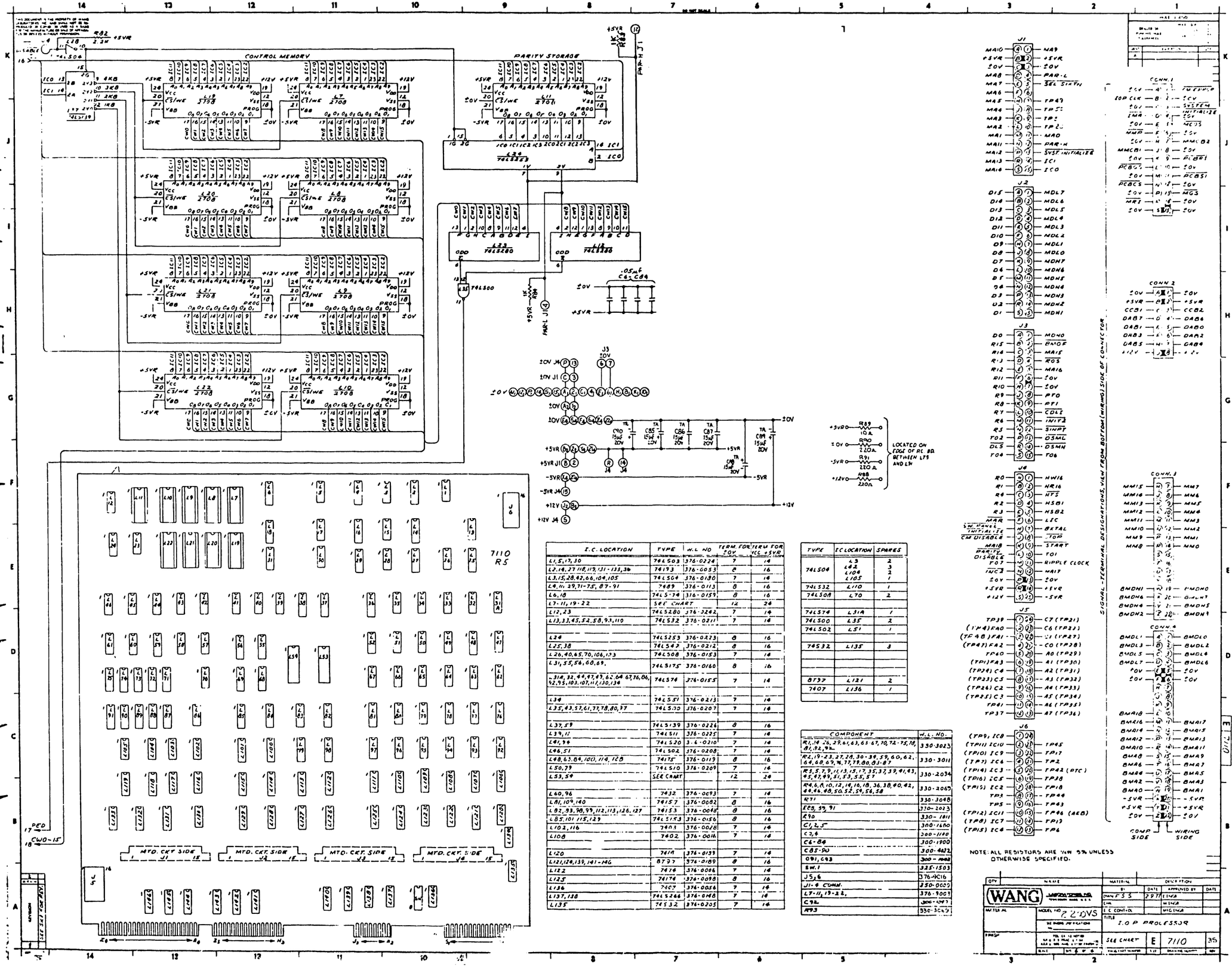
VARIATION CHART

2I0 = 209 + 377 OR 378

MODEL	209	210	L7	L8	L9	L10	L11	L19	L20	L21	L22	L53	L56
2200VS PTR	7110	7110A		378-2113-R3	378-2111-R3	378-2109-R3	378-2116-R3		378-2112-R3	378-2110-R3	378-2108-R3	376-0219	376-0219
2200VS TTY/PPTR 16-BIT	7110	7110B				378-2116	378-2117				378-2115	376-0219	376-0219
2200VS DISK	7110	7110C			378-2121-R3	378-2119-R3	378-2122-R3			378-2120-R3	378-2118-R3	376-0219	376-0219
2200VS TAPE 800 BPI	7110	7110D				378-2172	378-2173				378-2171	376-0219	376-0219
2200VS MODEM	7110	7110E		378-3046-R5	378-2261-R5	378-2259-R5	378-2262-R5		378-3045-R5	378-2260-R5	378-2258-R5	376-0219	376-0219
2200VS 10 PORT SERIAL	7110	7110F			378-2291	378-2289	378-2292			378-2290	378-2288	376-0219	376-0219
2200VS MAG TAPE	7110	7110G			378-2512-R2	378-2510-R2	378-2513-R2			378-1511-R2	378-2809-R2		376-0219
2200VS TEST MULTICODEX	7110	7110H				378-2319	378-2320				378-2316	376-0219	376-0219
2200VS WIRE TEST	7110	7110J				378-2322	378-2323				378-2321	376-0219	376-0219
2200VS TEST #1	7110	7110K			378-2327	378-2326	378-2328			378-2326	378-2324	376-0219	376-0219
2200VS TEST #2	7110	7110L			378-2335	378-2330	378-2333			378-2331	378-2329	376-0219	376-0219
2200VS 32KW ALONE MS	7110	7110M			378-2337	378-335	378-2336			378-2336	378-2334	376-0219	376-0219
2200VS TEST	7110	7110N				378-2526	378-2527				378-2525	376-0219	376-0219
2200VS GRJAB	7110	7110P			378-2337	378-2335	378-2692			378-2691	378-2336	376-0219	376-0219
2200VS STAND ALONE DIAG	7110	7110R		378-2550	378-2548	378-2546	378-2551		378-2549	378-2547	378-2545	376-0219	376-0219
22V25 MAG TAPE	7110	7110S			378-2576-R2	378-2574-R2	378-2577-R2			378-2575-R2	378-2573-R2	376-0219	376-0219
22V28 LG. DISK	7110	7110T			378-2581-R3	378-2579-R3	378-2582-R3			378-2580-R3	378-2578-R3	376-0219	376-0219
22V27 1M PORT	7110	7110U		378-2588-R3	378-2586-R3	378-2584-R3	378-3037-R3		378-2587-R3	378-2585-R3	378-2583-R3	376-0219	376-0219
22V18 DISK 10P	7110	7110V			378-3068	378-3061	378-3066			378-3062	378-3060	376-0219	376-0219
2200VS	7110	7110W		378-3051	378-3049	378-3046		378-3052	378-3050	378-3025	378-3023	376-0219	376-0219
VS-100	7110	7110L	378-3061	378-3059	378-3057	378-3055	378-3062	378-3060	378-3058	378-3056	378-3054	376-0219	376-0219
	7110	7110AA	377-0317	377-0317	377-0317	377-0317	377-0317	377-0317	377-0317	377-0317	377-0317	376-0219	376-0219
	7110	7110AB	377-0317	377-0317	377-0317	377-0317	377-0317	377-0317	377-0317	377-0317	377-0317	376-0219	376-0219
VS-80	7110	7110AC			378-3137	378-3135	378-3138			378-3136	378-3134	376-0219	376-0219
VS-150	7110	7110AD			378-3142	378-3140	378-3143			378-3141	378-3139	376-0219	376-0219
VS160, 6LEVEL	7110	7110AF	378-3160	378-3158	378-3156	378-3154	378-3161	378-3159	378-3157	378-3155	378-3153	376-0219	376-0219
6LEVIS-1/VS80	7110	7110A6		378-3124	378-3122	378-3120	378-3125		378-3123	378-3121	378-3119	376-0219	376-0219
6LEVIS-2/VS100	7110	7110AH			378-3143-R1	378-3127-R1	378-3132-R1			378-3126-R1	378-3124-R1	376-0219	376-0219
[illegible]	7110	7110AQ			378-3177-R1	378-3175-R1	378-3178-R1			378-3174-R1	378-3172-R1		
[illegible]	7110	7110AK			378-3177-R2	378-3175-R2	378-3178-R2			377-3174-R2	378-3176-R2		
VS80/VS150	7110	7110AL		378-3132-R1	378-3130-R1	378-3128-R1	378-3133-R1		378-3131-R1	378-3129-R1	378-3167-R1		
2200VS/VS150 6336 L.P.	7110	7110AM			378-3155	378-3153	378-3156			378-3152	378-3152		

WANG LABORATORIES, INC.	BY	DATE	APPROVED BY	DATE	
MATERIAL	DRWN P.G. GAGNE	4-1-77	E 1968		
	CHK		G 1968		
MODEL NO. 2200VS			SWG 1968		
SEE CHANGE SPECIFICATIONS	TITLE I.O.P. PROCESSOR				
FINISH	SEE CHART	E	7110	35	
	SHEET PART NUMBER	SIZE	DRAWING NUMBER	REV	

A3



I.C. LOCATION	TYPE	W.L. NO	TERM. FOR 5V	TERM FOR VCC +5VR
L1,5,17,30	74LS03	376-0224	7	14
L2,14,27,118,119,131-133,36	74193	376-0053	8	16
L3,15,28,42,66,104,105	74LS04	376-0130	7	14
L4,11,29,71-75,87-91	7489	376-0113	8	16
L6,16	74LS174	376-0159	8	16
L7-11,19-22	SEE CHART		12	24
L12,23	74LS280	376-0242	7	14
L13,33,45,52,58,93,110	74LS32	376-0211	7	14
L24	74LS253	376-0223	8	16
L25,38	74LS42	376-0212	8	16
L26,40,65,70,106,123	74LS08	376-0153	7	14
L31,55,56,60,69,	74LS175	376-0160	8	16
L34,35,44,47,48,62,64,67,76,86, 92,95,103,107,111,130,134	74LS74	376-0155	7	14
L36	74LS51	376-0213	7	14
L43,53,57,61,77,78,80,97	74LS10	376-0207	7	14
L37,59	74LS139	376-0226	8	16
L39,41	74LS11	376-0225	7	14
L42,96	74LS20	3-4-0210	7	14
L46,51	74LS02	376-0208	7	14
L49,63,84,100,114,128	74175	376-0119	8	16
L50,79	74LS10	376-0209	7	14
L53,54	SEE CHART		12	24
L60,96	7432	376-0093	7	14
L81,109,140	74157	376-0082	8	16
L82,93,98,99,112,113,126,127	74153	376-0098	8	16
L85,101 115,129	74LS153	376-0156	8	16
L102,116	7403	376-0028	7	14
L108	7402	376-0016	7	14
L120	7414	376-0139	7	14
L121,124,139,141-MG	8797	374-0189	8	16
L122	7476	376-0086	7	14
L125	74174	376-0098	8	16
L136	7407	376-0056	7	14
L137,138	74LS266	376-0148	7	14
L135	74S32	376-0205	7	14

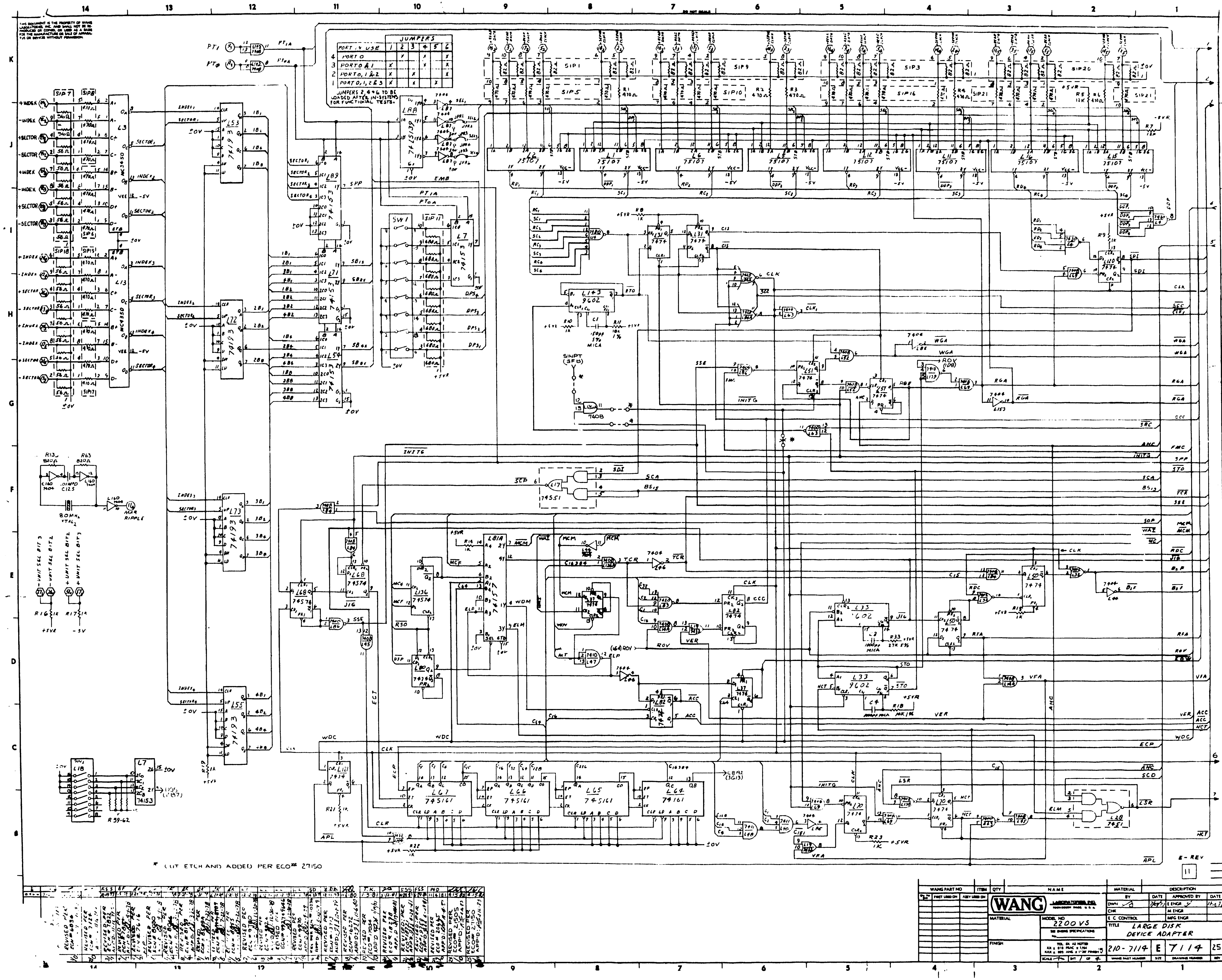
TYPE	IC LOCATION	SPARES
74LS04	L3	2
	L42	3
	L104	2
	L105	1
74LS32	L110	1
74LS08	L70	2
74LS74	L31A	1
74LS00	L35	2
74LS02	L51	1
74S32	L135	3
8797	L121	2
7407	L136	1

COMPONENT	W.L. NO.
R1,14-26,29,61,63,65-67,70,72-75,78, 81,92,94	330-3023
R2,19-23,27,28,30-38,59,60,62, 64,68,69,76,77,79,80,83-87	330-3011
R3,5,7,9,11,13,15,17,35,37,39,41,43, 45,47,49,51,53,55,57	330-2034
R4,6,8,10,12,16,18,36,38,40,42, 44,46,48,50,52,54,56,58	330-2069
R71	330-3068
R88,89,91	330-2023
R90	330-1811
C1,25	300-1680
C2,4	300-1170
C6-84	300-1900
C85-90	300-4672
C91,C93	300-4668
SW.1	325-1503
J5,6	376-4C16
J1-4 CONN.	350-0029
L7-11,19-22,	376-9003
C92	300-4971
A93	330-3049

NOTE: ALL RESISTORS ARE ¼W 5% UNLESS OTHERWISE SPECIFIED.

QTY	NAME	MATERIAL	DESCRIPTION
		BY	DATE APPROVED BY DATE
WANG		DWN F.S.S.	2-9-77 LINCOLN
NOTES:	MODEL NO 2200VS	ENG	M. LINCOLN
		E.C. CONTROL	MFG LINCOLN
FINISH		TITLE I.O.P PROFESSOR	
		SEE CHART	E 7110 35
		SCALE 1/1	DRAWING NUMBER REV

A4



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JUMPERS
PORT IN USE | 1 | 2 | 3 | 4 | 5 | 6
4 PORT 0 | | X | | X | | X
3 PORT 0 & 1 | X | | | X | | X
2 PORT 0, 1 & 2 | X | | X | | | X
1 PORT 0, 1, 2 & 3 | X | | X | | X |
JUMPERS 2, 4 & 6 TO BE LOADED AFTER IN-SYSTEMS FOR FUNCTIONAL TESTS.
* CUT ETCH AND ADDED PER ECO# 27150
E-REV
11
WANG LABORATORIES, INC.
MODEL NO 2200 VS
TITLE LARGE DISK DEVICE ADAPTER
210-7114
E
7114
25

DO NOT SCALE

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

WANG PART NO	ITEM	QTY	NAME	MATERIAL	DESCRIPTION
FIRST USED ON	ASSY USED ON			BY	DATE / APPROVED BY / DATE
				DWN	E ENGR
				CHK	M ENGR
				I C CONTROL	MFG ENGR

MATERIAL — MODEL NO. 2200VS — SE ENGINE SPECIFICATIONS

FINISH — TOL EX. AS NOTED: XX ± .010 FRAC ± 1/64; XXX ± .005 ANG. ± 1°30 THRDS ½

SCALE — WT. LBS.

TITLE: LARGE DISK DEVICE ADAPTER

210-7114 | E | 7114 | 25 — WANG PART NUMBER / REV / DRAWING NUMBER / REV

REVISION — SEE SHT 1

B2

DO NOT SCALE

HOLE LEGEND

SYMBOL	DESCRIPTION	QTY.
	DRILLED OR PUNCHED HOLE TOLERANCES .X = ±.125 .XX = ±.050 .XXX = ±.005	

* ADDED PER ECO# 27150

REVISION	DESCRIPTION	DATE	APPROVED BY	DATE
A				

SEE SHT 1

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

WANG LABORATORIES, INC.

	BY	DATE	APPROVED BY	DATE
DWN			J. ENGR	
CHK			M. ENGR	
E C CONTROL			MFG ENGR	

MATERIAL — MODEL NO 2200 VS — SEE ENGRG SPECIFICATIONS

FINISH — TOL. EX. AS NOTED .XX ± .010 FRAC ± 1/64 .XXX ± .005 ANG. ± 1/2 DEGREES

SCALE — SHT 3 OF 3

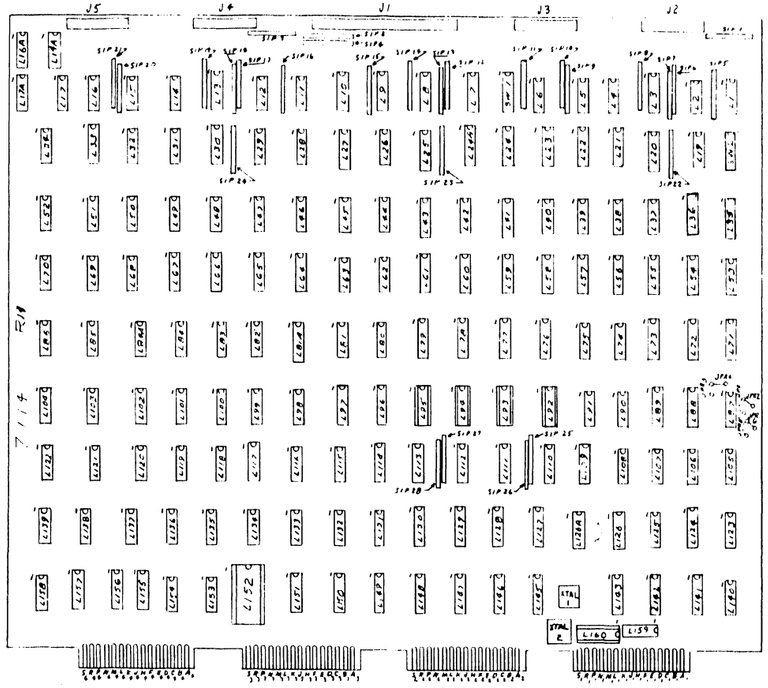
TITLE: LARGE DISK DEVICE ADAPTER

WANG PART NUMBER: 210-7114 | SIZE: E | DRAWING NUMBER: 7114 | REV: 25

B3

DO NOT SCALE

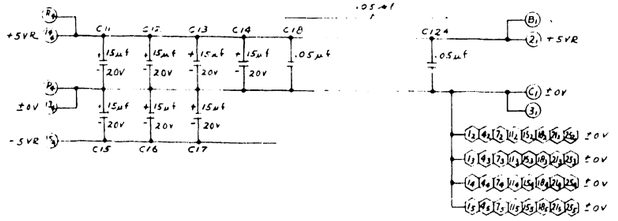
COMPONENT LAYOUT



I.C. TYPE	LOCATION	SPARE
	L44	
7808	L47	1
	L50	3
	L108	1
7414	L159	4
7808	L126A	1
7811	L126A	1
7420	L01	1
	L14	1
7827	L140	1
7474	L21	1
7410	L41	1
7486	L137	1
74LS139	L48	1
	L117	1
7404	L40	5

I.C. LOCATION	WL PART NO	PIN 8 0V	PIN 16 +5V
L1, 2, 5, 6, 11, 12, 15, 16, 26	376-0146	7	16
L3, 4, 13	376-0275	8	16
L6, A3, 71, 96	376-0304	7	16
L7, 54, 58-61, 74, 77, A4	376-0048	8	16
L9, 19, 20, 24, 27, 30	376-0274	8	16
L10, 14, 40, 75, 81, 132	376-0031	7	16
L12A, 85, 87, 88, 89, 107, 108, 118, 126A	376-0081	7	16
L16A, 98, 125, 158	376-0184	7	16
L17	376-0186	7	16
L17A, 31, 34, 49, 50, 51, 62, 70, 90, 91, 100, 101, 104, 107, 115, 118, 119-123, 126, 131, 133, 137	376-0006	7	16
L19, 154	376-0093	7	16
L21-29, 56, 57, 110-113, 124	376-0119	8	16
L28A, 33, 102, 103	376-0196	8	16
L28	376-0012	7	16
L39, 68, 136	376-0202	7	16
L42, 138, 139	376-0216	7	16
L43, 44, 109	SPARE		
L38, 92, 94, 137	376-0036	7	16
L45, 63	376-0098	8	16
L46, 64, 65, 80, 90, 106, 153, 160	376-0210	7	16
L47, 139	376-0003	7	16
L53, 55, 72, 73, 93, 119, 141, 151	376-0055-1		16
L67, 86, 99, 102, 105	376-0002	7	16
L69	376-0094	8	16
L75, 66, 67	376-0218	8	16
L78A, 96, 149, 150, 151	376-0082	8	16
L84A	376-0092	7	16
L88, 117	376-0226	8	16
L95, - 97	376-0173	8	16
L121, - 130	376-0097	8	16
L140	376-0128	7	16
L145 - 148	376-0130	8	16
L159	376-0139	7	16
L 52	376-0090	12	24
L 55, 156	376-0220	8	16
L92-95 SOCKET 16 PIN	376-9005		
L144 NOT USED			

COMPONENT	WL PART NO
R1-4, 6, 28, 35, 36, 38, 39	330-2040
R5	330-6013
R7, 8, 9 (R-17, 19-23, 26, 27, 29, 30-32, 37, 42-48, R51, 54, 55, 57)	330-3011
R11 R-18, 58	333-0090
R24, 25, 53, 56	330-2083
R29	330-2015
R40, 41, 50	330-3069
R49	330-2040
R52, 12	330-4011
R33	330-4028
R52	330-4016
SIP1, 3, 8, 20, 22, 24	333-0806
SIP2, 4, 7, 13, 14, 18, 23	333-0802
SIP5, 6, 9, 16, 17, 19, 16, 17, 18, 21	333-0803
SIP 10, 26-8	333-0805
SIP 25, 27	333-0801
J1	340-5019
C9, 126	300-1088
C9	300-1934
C5, 125	300-1903
C7, 127	300-1220
C8, 6	300-5020
C9, 3, 10	300-5006
C11-17	300-4022
C18-124	300-1900
SW1, 2	325-1803
J1 60 PIN SOCKET CONN.	350-0987
J2, 3, 4, 5 26 PIN SOCKET CONN	350-9958
D1, 2	380-1001
XTAL 1	321-0019
XTAL 2	321-0009



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

J5

1	10	+5V
2	25	0V
3	6	+ READ DATA
4	7	+ READ CLOCK
5	8	0V
6	19	+ WRITE CLOCK
7	20	+ WRITE DATA
8	21	0V
9	22	
10	23	
11	24	+ INDEX
12	25	0V
13	26	+ SECTOR

J4

1	4	+ SERVO CLOCK
2	5	0V
3	6	+ READ DATA
4	7	+ READ CLOCK
5	8	0V
6	19	+ WRITE CLOCK
7	20	+ WRITE DATA
8	21	0V
9	22	
10	23	
11	24	+ INDEX
12	25	0V
13	26	+ SECTOR

J1

	34	
	33	+ TRK0
	32	+ TRK1
	31	+ TRK2
	30	+ TRK3
	29	+ TRK4
	28	+ TRK5
	27	+ TRK6
	26	+ TRK7
	25	+ TRK8
	24	+ TRK9
	23	+ TRKA
	22	+ TRKB
	21	+ TRKC
	20	+ SPARE CABLE LINE
	19	+ FAULT
	18	+ SEEK ERROR
	17	+ CR CYLINDER
	16	
	15	+ UNIT READY
	14	
	13	
	12	+ UNIT SEL TAG
	11	+ UNIT SEL BIT0
	10	+ UNIT SEL BIT1
	9	
	8	+ UNIT SEL BIT2
	7	+ UNIT SEL BIT3
	6	+ WRITE PROTECT
	5	
	4	

J2

1	1	+ SERVO CLOCK
2	25	0V
3	6	+ READ DATA
4	7	+ READ CLOCK
5	8	0V
6	19	+ WRITE CLOCK
7	20	+ WRITE DATA
8	21	0V
9	22	
10	23	
11	24	+ INDEX
12	25	0V
13	26	+ SECTOR

J3

1	4	+ SERVO CLOCK
2	25	0V
3	6	+ READ DATA
4	7	+ READ CLOCK
5	8	0V
6	19	+ WRITE CLOCK
7	20	+ WRITE DATA
8	21	0V
9	22	
10	23	
11	24	+ INDEX
12	25	0V
13	26	+ SECTOR

HEAT LEGEND

DRAWN OR PHOTOMICROGRAPH TOLERANCES	HEAT SINK NO.
	.X = ± .1
	.XX = ± .05
	.XXX = ± .005

IDENT	DESCRIPTION	DATE
A		

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

CONN 1

D_{12}	A 1	WL1
D_{13}	B 2	WL2
D_{14}	C 3	WL3
D_{15}	D 4	WL4
D_{16}	E 5	WL5
D_{17}	F 6	WL6
D_8	H 7	WL7
D_9	J 8	WL8
D_{10}	K 9	WL9
D_{11}	L 10	WL10
D_4	M 11	WL11
D_5	N 12	WL12
D_6	P 13	WL13
D_7	R 14	WL14
D_0	S 15	WL15
D_1	T 16	WL16
D_2	U 17	WL17
D_3	V 18	WL18
D_{18}	W 19	WL19
D_{19}	X 20	WL20
D_{20}	Y 21	WL21
D_{21}	Z 22	WL22

CONN 3

D_{22}	A 1	WL23
	B 2	WL24
	C 3	
R_{15}	D 4	RD3
R_{16}	E 5	
R_{17}	F 6	
R_{18}	H 7	
R_9	J 8	PTo
R_8	K 9	PT1
R_7	L 10	CCLE
R_6	M 11	INITE
R_5	N 12	SWPE
T_{01}	P 13	CSML
DLS	R 14	DSMN
T_{00}	S 15	T_{00}

CONN 2

	A 1	
	B 2	HW_{10}
	C 3	HR_{10}
	D 4	HTS
	E 5	HSB
	F 6	HSDL
	H 7	
	J 8	
	K 9	
	L 10	
	M 11	MAR RIPPLE
	N 12	
	P 13	
+5V	R 14	+5V
+12V	S 15	-5V

CONN 4 — CONN 5 — TO P.C. EDGE

WANG PART NO	ITEM	QTY	NAME	MATERIAL	DESCRIPTION
BY	DATE	APPROVED BY	DATE		
DWN		E ENGR			
CHK		M ENGR			
MATERIAL	MODEL NO. 7114	L C CONTROL		MFG ENGR	
FINISH	WANG SPECIFICATIONS	TITLE	SIGNAL TERMINAL ADAPTER		
	TOL EX AS NOTED .XX ± .010 FRAC ± 1/64 .XXX ± .005 ANG ± 1/2 DEGREE	210-7114	E	7114	25
	SCALE 1/1 SHT 1 OF 1	WANG PART NUMBER	REV	DRAWING NUMBER	REV

B4

DO NOT SCALE

R8 (K3) R11 (F3) R12 (E3) R13 (B3) R14 (C3) R15 (B3) TO2 (P3) CDLI (10) R9 (J3) R10 (H3) TO7 (M3) SINPT (12) STOPS (9) INIT2 (H3) TO6 (S3) TO4 (S3) TO2 (1F10)

L107 74174 +RB8 +RB11 +RB12 +RB13 +RB14 +RB15

+RB11 - +RB15 (1E2)

- DA CMD (3A2) (1A11) L109 7414 L110 132 L93 LS04 BK1 (1E3)

L108 175 +RB9 +LOCAL OP (1B11)(1D11) - LOCAL OP +DATA LINK (3G11)(2F11) -DATA LINK (3D4)(3D11)

+5V DA ACTIVE

+LOCAL OP (1E8) L194 LS74 R84 4.7K +5V L76 LS00 L112 S04 TO7 (1A6) L96 LS08 DL OP RST (3E1) L111 32 PARITY ERR (3B1) L109 14 R1 4.7K +5VR - RST (+F11) LOCAL BUF INC

+RB11 (1G8) L92 LS32 L96 LS08 L111 LS32 L109 14 L95 LS74 TO6 +5V +LOCAL OP (1E8) L82 74S08 TO2 + TO6 (3F3)

R84 4.7K +5V R85 4.7K +5VR L43 LS74 ICLR L79 LS11 - CLK ADDR BUF (2B9)

- SET BUF ADDR (1G6) R/W DF (1E7) L82 LS32 L80 LS08 - LD ADDR BUF (2B9)

LOCAL OP (2D10)(+D11) L91 LS139 - GIVE BUF ADDR (1H3) - SET BUF ADDR - SEL DEVICE (1B7) L92 LS32 (2E10) L78 LS08 - LOCAL BUF INC (2E10)

- RD BUF - WR BUF (1B8) - RD DF (2B7) - WR DF (1B9) L91 LS139 (1B10)

DATA LINK L106 LS139 - RD DEV 1 BYTE (3E11) - RD DEV 256 BYTE (3E11) - WR DEV 256 BYTE (3E11) - GIVE STATUS (1G7)(3F11) - RESTART (3G11) -MDH STB ENB (3G2) L81 LS32 + GIVE STATUS (2E11) L93 LS04

-WR BUF (1F6) L42 LS32 - BUF WR (2E10)

-WR DF (1F6) L42 LS32 - DF WR (2F3)

- SEL DEVICE (1G6) L42 LS32 - WR DEV REG (+G11)

74S04 L112 TO7 (1D11) L81 LS32 L80 LS08 L105 LS05 (13) DSML (14) DSMH (15) DLS

MDL0 MDL1 MDL2 MDL3 MDL4 MDL5 MDL6 MDL7 MDH0 MDH1 MDH2 MDH3 MDH4 MDH5 MDH6 MDH7

-LD STATUS (1D5) L77 LS11 -LD MDL (3F8) -LD MDH (3F8) L78 LS08 W/R DF (1B9)(2D4) BK2 (1G7)

L103 LS373 ENB LL0 LL1 LL2 LL3 LL4 LL5 LL6 LL7

BK1 (1F9) +RB11 - +RB15 (1E8) L84 LS74 CND RES 4.7K +5V -LD CMD (3G8) -LD MDL (3F8) L78 LS08 SEL EVEN (2E9) L10 LS08 L154 LS74 (2A7)

LH0 LH1 LH2 LH3 LH4 LH5 LH6 LH7 L84 LS374 (2E5)(1C4)

	BY	DATE	APPROVED BY	DATE
DWN		4-77	E ENGR	
CHK			M ENGR	
			MFG ENGR	

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

MATERIAL

MODEL NO. 22004 SEE ENGRG SPECIFICATIONS No.

TITLE 16 PORT ADAPTER MODEL A

FINISH

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

SCALE 1:1 SHT 1 OF 6

WANG PART NUMBER 16-7216 | SIZE D | DRAWING NUMBER 7216 | REV 10

"E" SIZE DWG

NO	REVISION	DATE
	SEE SHT 6	

9127

C1

DO NOT SCALE

+ DATA LINK (1E8)

- SEL BUF (3F8)

+ GIVE STATUS (1D4)

- SEL ODD

- SEL EVEN (1D4)

- LOCAL BUF ENB (1F6)

- DL WRITE (3B2)

- BUF WR (1C7)

- RD BUF (1F6)

- TX (3D9)

- GIVE BUF ADDR (1E6)

BA7

L102 2101-A2

L101 2101-A2

L87 2101-A2

L86 2101-A2

- DF WR (1B7)

L77 2114

L76 2114

L75 2114

L74 2114

L58 2114

L57 2114

L56 2114

L55 2114

L99 LS244

L69 LS244

L70 LS244

L84 LS161

L85 LS161

L59 TMS 2716

R3 4.7K

- CLK BUF CTR (3E7)

- CLK ADDR BUF (1A7)

- LD MDL (3F8)

- LD ADDR BUF (1AR)

LL0 - LL3 (1C1)

DA0 - DA3 (4C10)

+ PROM (4G10)

- R/W DF (1E4)

- PROM (4G10)

- RD DF (1E6)

LH0 - LH7 (1E1)

SEE SHT 6

NO.	REVISION	BY	DATE

	BY	DATE	APPROVED BY	DATE
DWN		1/4/78	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 SHT 2 OF 6

TITLE 16 PORT ADAPTER MODEL A

210-7216 WANG PART NUMBER | D SIZE | 7216 DRAWING NUMBER | 10

D 7216

C2

DO NOT SCALE

- RESTART (1D6)
+ DATA LINK (1E8)
- GIVE STATUS (1D5)
- RD DEV 1 BYTE (1E6)
- RD DEV 256 BYTE (1E6)
- WR DEV 256 BYTE (1E6)
- DATA LINK (1E8)
+ SERIAL DATA IN (4D1)
- LD COMD (1D2)
- LD MDH (1F4)
- LD MDL (1F4)(1D2) (2B9)
- SEL BUF (2E11)
- RCV
(4E2)
+ TX (4C9) (4C6)
- TX (2D10)(1D2)
BK3 (3B4)
BK4 (3B3)
BK6 (3B1)
(3045) TIME OUT
- CLK BUF CTR (2C9)
(13.33) LINE TURN AROUND
SAMPLE CLOCK
17.1 MHz
R11 BIT CLOCK
LAST BYTE
DATA LINK RESET
- MDH STB END (1D6)
- DL OK RST (1C9)
START BIT
- SERL DATA OUT (4E10)(4E6)
- DL WRITE (2E10)
BK4 (3E6)
BK5 (3D5)
- PA CMD (1F10)
- PARITY ERR (1C10)
- DATA LINK (1E8)
LH0 - LH7 (1E1)
BK3 (3D9)

REVISION	DATE	BY
SEE SHT 6		

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

	BY	DATE	APPROVED BY	DATE
	DWN	11/4/78	E ENGR	
	CHK		M ENGR	
			MFG ENGR	

MATERIAL

MODEL NO. 2200VS
SEE ENGRG SPECIFICATIONS
No.

FINISH

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

SCALE — SHT 3 OF 6

TITLE 16 PORT ADAPTER MODEL A

210-7216	D	7216	10
WANG PART NUMBER	SIZE	DRAWING NUMBER	REV

C3

DO NOT SCALE

COMPONENTS NOT LOADED ON THE 8 PORT VERSION

REVISION	BY	DATE
SEE SHT 6		

	BY	DATE	APPROVED BY	DATE
DWN		12/4/78	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 | SHT 4 OF 6

TITLE 16 PORT ADAPTER MODEL A

210-7216 | D | 7216 | 10

WANG PART NUMBER | SIZE | DRAWING NUMBER | REV

C4

DO NOT SCALE

J1 2 1 34 33

7216 R6

J2 2 1 34 33

L7 L6 L5 L4 L3 L2 L1

L22 L21 L20 L19 L18 L17 L16 L15 L14 L13 L12 L11 L10 L9 L8

L37 L36 L35 L34 L33 L32 L31 L30 L29 L28 L27 L26 L25 L24 L23

L52 L51 L50 L49 L48 L47 L46 L45 L44 L43 L42 L41 L40 L39 L38

L68 L67 L66 L65 L64 L63 L62 L61 L60 L59 L58 L57 L56 L55 L54 L53

L83 L82 L81 L80 L79 L78 L77 L76 L75 L74 L73 L72 L71 L70 L69

L98 L97 L96 L95 L94 L93 L92 L91 L90 L89 L88 L87 L86 L85 L84

XTAL L112 L111 L110 L109 L108 L107 L106 L105 L104 L103 L102 L101 L100 L99

+C9 +C28 +C3 -C97 +

S R P N M L K J H F E D C B A

S R P N M L K J H F E D C B A

S R P N M L K J H F E D C B A

S R P N M L K J H F E D C B A

NO.	REVISION	DATE	BY
	SEE SHT 6		

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

BY	DATE	APPROVED BY	DATE
DWN	11/4/79	E ENGR	
CHK		M ENGR	
		MFG ENGR	

MATERIAL

MODEL NO. 2200VS
SEE ENGRG SPECIFICATIONS
No.

TITLE 16 PORT ADAPTER MODEL A

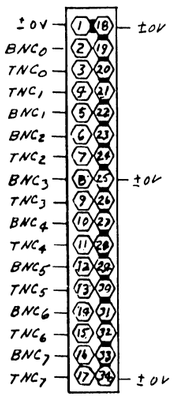
FINISH

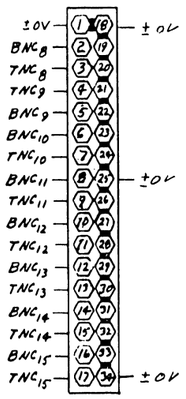
TOL EX AS NOTED
XX ± FRAC ±
XXX ± ANG. ± FINISH √

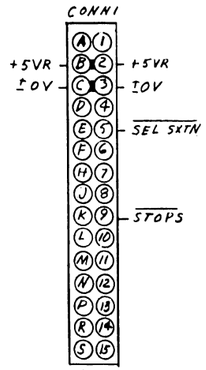
SCALE 1/1 SHT 5 OF 6

WANG PART NUMBER	SIZE	DRAWING NUMBER	REV
210-7216	D	7216	10

DO NOT SCALE







LOCATION	W.L. PART No	TYPE	NOT LOADED FORBPORT VERSION
L1,2,5,6,7,22		SPARE	
L3,4	376-0217	74LS151	L3
L8,13,16,21,23-28,31-36	376-0256	75113	L8,13,23-28
L9-12,17-20	376-0176	75107	L9-12
L14,15,29,30,64,93,112	376-0180	74LS04	L14,29,112
L38	376-0303	74LS299	
L40	376-0160	74LS175	
L41,42	376-0294	74LS138	L41
L43,44,52,68, 94,95	376-0155	74LS74	
L45-48, 84,85	376-0233	74LS161	
L49	376-0210	74LS20	
L50	376-0208	74LS02	
L51	376-0132	96L02	
L53	376-0242	74LS280	
L54, 63,91,106	376-0226	74LS139	
L55-58, 71-74	SEE CHART	2114-3	
L59	SEE CHART	2716	
L60,61,62,81,92,111	376-0211	74LS32	
L82	376-0200	74S08	
L65,76	376-0207	74LS00	
L66,75,78,80, 96,105	376-0153	74LS08	
L67	376-0209	74LS10	
L69,70,89,90,99,104,39	376-0288	74LS244	
L77,79	376-0225	74LS11	
L86,87,101,102	SEE CHART	2101-A2	
L88,103	376-0310	74LS373	
L98	376-0213	74LS51	
L100	376-0285	74LS245	
L107	376-0098	74174	
L108	376-0119	74175	
L109	376-0133	7414	
L110	376-0266	74132	
L83,97	376-0202	7474	
L37	376-0036	7486	
L112	376-0197	74LS04	

	COMPONENT	W.L. PART NO.	TYPE	NOT LOADED FORBPORT VERSION
R1-5,10-14,83-85		330-3047	4.7K 1/4W 10%	
	R6	330-4082	82K 1/4W 10%	
	R7	330-4021	20K 1/4W 5%	
	R8,9	330-2033	330Ω 1/4W 10%	
	R15-18	330-3010	1K 1/4W 10%	R15,16
R18,21-26,28,52,58,61-66		330-2011	100Ω 1/4W 5%	R52,58,61-66
R35,37-42,44,48,68,75,77-82		330-2028	270Ω 1/4W 5%	R68,75,77-82
R20,27,29-34,51,53-58,60		330-1092	91Ω 1/4W 5%	R51,53-58,60
R36,43,45-50,67,69-74,76		330-2040	390Ω 1/4W 5%	R67,69-74,76
C1,2,5-14,20-23,29-97		300-1900	.05MF CER	C20-23,30,37-43,50-52,68
C15,16		300-5006	1000PF 5% MICA	
C17		300-5016	33MF 500V MICA	
C18,98		300-1150	150PF 500V CER	
C19		300-1903	.01MF 25V CER	
C3,4,28,99		300-4022	15MF 20V (T)	
XTAL		321-0018	17.1MHz	
J1,2		350-0429	CONN. 34 PIN	
L55-58,71-74		376-9014	18 PIN SOCKET	
L86,87,101,102		376-9007	22 PIN SOCKET	
L59		376-9003	24 PIN SOCKET	

IC TYPE	LOC.	SPARE
74LS02	L50	1
74LS04	L14	2
	L15	2
	L64	1
	L93	1
	L112	1
74LS32	L61	1
	L92	1
7486	L37	3
7432	L110	1
74LS139	L54	1
	L63	1
74LS244	L99	4

MNEMONIC	COORDINATE
BNC0 - BNC7	4C1
BNC8 - BNC15	4A9
B XTAL	6B7
CDLI	1F11
D0 - D7	1F1
D8 - D15	1B1
DLS	1A5
DSMH	1A6
DSML	1A6
INIT2	1C11
MDH0 - MDH7	1G2
MDL0 - MDL7	1G4
R8,11-15	1311
R9,10	1E11
RIPPLE CLOCK	6B7
SEL SXTN	6B9
SINPT	1C11
STOPS	1C11
TNC0 - TNC7	4F1
TNC8 - TNC15	4A6
TO2	1F11
TO4	1A11
TO6	1B11
TO7	1D11

210 = 209 + 378 or 377

210	209	L55-58,71-74	L59	L86,87,101,102
7216-A	7216	377-0378	378-4192-R1	377-0308
7216-B	7216	377-0378	378-4031	377-0308

E-REV
5

NO.	REVISION	DWN	CHK	ENGR	MFG ENGR
0	ORG PER DWR E 5/1 APP: [illegible]	12-8-78	3-15-79	5-18-79	5-18-79
1	REVISED PER ECN# 10601,10890 APP'D: [illegible]	BLE			
2	REVISED PER ECN# 11107 APP'D: [illegible]				
3	REVISED PER ECN# 11233 APP'D: [illegible]				
4	REVISED PER ECN# 12816 APP'D: [illegible]	10-9-79			
5	REVISED PER ECN# 12939 APP'D: [illegible]	11-6-79			
6	REVISED PER ECN# 14332 APP'D: [illegible]	2-20-80			
7	REVISED PER ECN# 13270 APP'D: [illegible]	4-5-80			
8	REVISED PER ECO# 19822-01 APP'D: [illegible]	4-22-81	FSS	JEP	A.G
9	REVISED PER ECO# 19183 APP'D: [illegible]		7-9-81		5.27.82
10	REVISED PER ECN# 2321 APP'D: [illegible]				

WANG LABORATORIES, INC. LOWELL, MASS. U.S.A.	BY	DATE	APPROVED BY	DATE
	DWN	1/4/79	E ENGR E. WILDE	5/29/79
	CHK J.B.	5/29/79	M ENGR	
			MFG ENGR	
MATERIAL	MODEL NO. 2200VS		TITLE 16 PORT ADAPTER MODEL A	
	SEE ENGRG SPECIFICATIONS No.			
FINISH	TOL EX AS NOTED XX ± FRAC ± XXX ± ANG ± FINISH √		210-7216	D 7216 10
	SCALE	SHT 6 OF 6	WANG PART NUMBER	SIZE DRAWING NUMBER REV

C6

DO NOT SCALE

9 TRK (5D8)

MDL0 MDL1 MDL2 MDL3 MDL4 MDL5 MDL6 MDL7

RD0 RD1 RD2 RD3 RD4 RD5 RD6 RD7

+5VR R41 220Ω R42 330Ω ±0V

+5VR R43 220Ω R44 330Ω ±0V

+5VR R45 220Ω R46 330Ω ±0V

+5VR R47 220Ω R48 330Ω ±0V

+5VR R49 220Ω R50 330Ω ±0V

+5VR R51 220Ω R52 330Ω ±0V

+5VR R53 220Ω R54 330Ω ±0V

+5VR R55 220Ω R56 330Ω ±0V

L15/14 L4/14 L5/14 L02

L74 LS374

L30 LS174 CLR

L45 LS367

NRZI1 (4D9)

NRZI2 (4E9)

L26 LS157

MDH0 MDH1 MDH2 MDH3 MDH4 MDH5 MDH6 MDH7

RDP (11) R57 220Ω R58 330Ω +5VR ±0V

L46 LS173

L32 LS04

ROS (4C6)

L51 LS74

L59 LS367

R1 1K R2 1K +5VR

L50 LS32

RSTR (14) R59 220Ω R60 330Ω ±0V

L68 08

BRSTR (4A6) (1G6) (2G7)

L67 LS32

CRC=0

CCG (5E9)

L51 LS74

RD0 RD1 RD2 RD3 RD4 RD5 RD6 RD7

L29 LS280 Σ EVEN Σ ODD

ODD PAR (4D1)

L31 LS86

L28 08

CCG (5E9)

BRSTR (1810)

RCS (4C6)

L52 LS74

PEK/W (3A5)

READ AFTER WRITE PARITY CHECK

9 TRK (5D8)

L5 7414

L39 74LS08

FI0 FI1

DDC (4F1)

L36 LS32

SCCLK (2D4)

L28 LS157

L115 LS157

L27 LS157

L114 LS157

FIFO INPUT MULTIPLEX

FI0 FI1 FI2 FI3 FI4 FI5 FI6 FI7

STB SEL

MDL0 - MDL7 (3G10)

MDH7

L33 LS51

RD TP (4B2)

L32 LS04

FIP

L70 LS74

NRZ (2E3)

FOP FO0 FO1 FO2 FO3 FO4 FO5 FO6 FO7

B5 74S471

→ 1A (2F7)

MR (2E9)

NRZ (2E2)

L54 S225

L55 S225

OR (2B11) (2C8) (2F3)

PD (2G3)

L61 LS04

PL (2G4)

DDC (4F1)

P GEN (3C8)

ODD PAR (4D1)

L32 LS04

L22 LS51

L55

(4F1)

WDP

MDH0 MDH1 MDH2 MDH3 MDH4 MDH5

L1 06

MDH0 - MDH3 → MDH0, MDH1 (4G4) (3C7)

MDH0 - MDH7 (3G4)

	BY	DATE	APPROVED BY	DATE
WANG LABORATORIES, INC. LOWELL, MASS U.S.A.	DWN	12/5/72	E ENGR	
	CHK		M ENGR	
			MFG ENGR	

MATERIAL | MODEL NO. SEE ENGRG SPECIFICATIONS No. | TITLE MAG TAPE ADAPTER PE/NRZI

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

210-7217 | D | 7217 | 10

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

NO.	REVISION	BY	DATE
	SEE SHT 7		

D1

DO NOT SCALE

NOTE: * ADDED PER ECO NO. 20023.

WANG LABORATORIES, INC. LOWELL, MASS. U.S.A.	BY	DATE	APPROVED BY	DATE
	DWN JB	10/29/70	E ENGR	
	CHK		M ENGR	
			MFG ENGR	
MATERIAL	MODEL NO. SEE ENGRG SPECIFICATIONS No.		TITLE MAG TAPE ADAPTER PE/NRZI	
FINISH	TOL ER AS NOTED XX ± FRAC ± XXX ± ANG ± FINISH	210-7217 WANG PART NUMBER	D SIZE	7217 DRAWING NUMBER	10 REV
	SCALE 1/1	SHT 2 OF 7			

REVISION: NO. — DATE — SEE SHT 7

D2

DO NOT SCALE

MDL0 - MDL7 (1C7)

LD TIE (4E9)

L73 LS173

R17 1K +5VR, R18 1K +5VR, R19 1K +5VR, R20 1K +5VR

L42 LS42

FO0-FOP (1G1)

L40-L41 LS04

FO0, FO1, FO2, FO3, FO4, FO5, FO6, FO7, FOP

CORRECT (4F5)

WRT TP (4C1)

L20 LS08

L58 LS280

ΣE, ΣO

P GEN (1D3)

L40 74LS04

BD0 - BDP (5B11)

TP6 +5VR, R21 1K

L13 MC8502

MATCH → LRC MATCH (5B4)

L75 LS157, L74 LS157

NRBI (4E9)

L12 MC8500

L11 MC8501

TO1 → LD

MATCH → EPR MATCH (5D4)

MDH0 - MDH7 (1B1)

L87 LS161, L86 LS161, L85 LS161, L84 LS161

L88 LS193, L89 LS193, L90 LS193

L100 LS161, L101 LS161

BC0 - BC15

MDH7 (1B2)

L19 LS51

SFT CRC (4D9)

TO4 (3B4)

L35 LS79

TO2 (4G6)

R23 1K +5VR

NRZI (4D9)

NRZI2 (4E9)

PD (2G3)

WRT TP (4C1)

ROS (4C6)

L39 LS74

PAR (5D4) (5D2)

PE/W (1G5)

ODD PAR (4D1)

DDC (4F1)

NRZ (2E2)

9 TRK (5D8)

TO4 (3BB)

LD BY CT (4D9)

WSTR (2G3)

L93 04

TO4

IN CLK (2F5)

OUT CLK (2C6)

P0 - P15 (5B11)

BK2 (2C11)

BC (2F3)

REVISION	BY	DATE
SEE SHT 7		

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

	BY	DATE	APPROVED BY	DATE
	DWN	4-23	E ENGR	
	CHK		M ENGR	
			MFG ENGR	

MATERIAL — MODEL NO. — SEE ENGRG SPECIFICATIONS

FINISH — TOL EX AS NOTED: XX ± FRAC ±, XXX ± ANG ± FINISH

TITLE: MAG TAPE ADAPTER PE/NRZI

SCALE — SHT 3 OF 7 — WANG PART NUMBER 210-7217 — SIZE D — DRAWING NUMBER 7211 — REV 10

D 7211

D3

DO NOT SCALE

REWIND (13/2) OFFLINE (14/2)

R_{15} (B_3) R_{14} (C_3) R_6 (M_3) TMC (4G7) → L123 L500 → RESET (4C7)(4C3)(4B6)

$\overline{DIS}$ (4E1) → L124 38 → L84 74LS00

R_{12} (F_3) R_{11} (F_2) R_{10} (H_3) → L122 LS138 (A, B, C, G, G_{2A}, G_{2B}, Y_0–Y_7)

- Y_1 → $\overline{RD\ BY\ CT}$ (2D2)(5B11)
- Y_2 → $\overline{RD\ TP\ ST}$ (2D2)(5A11)
- Y_3 → $\overline{NRZI\ 2}$ (1E11)(2E3)(3B7)(3E6)
- Y_4 → $\overline{RD\ OP\ ST}$ (2D2)(5A4)
- Y_5 → $\overline{ERROR\ CNTL}$ (4E3)
- Y_6 → $\overline{LD\ TIE}$ (3G8)

R_9 (J_3) R_8 (K_3) → L108 LS32

R_7 (L_3) R_{13} (D_3) → L121 LS138 (A, B, C, G_1, G_{2A}, G_{2B}, Y_0–Y_7)

- Y_0 → $\overline{NRZI_1}$ (1E11)(2E3)(3C8)
- Y_1 → $\overline{LD\ BY\ CT}$ (3B4)(3B10)
- Y_2 → $\overline{SFT\ CRC}$ (3C7)
- Y_3 → $\overline{PAR\ SEL}$

R_5 (N_3) → L125 7404

$\overline{INIT_2}$ (11_3)

DBY (2_4) → R39 220Ω +5VR, R40 330Ω ±0V → L17 14 → DBY (5C4)

BK1 (5F7) → L99 74LS08

PT_0 (B_3) PT_1 (J_3)

C6 .001μF, R28 6.8K +5VR → L107 123 (74LS00) → SINPT (2B10)

R29 1K +5VR

L94 LS74 (1PR, 2PR, 1CLR, 2CLR) → L14 06 → R31 1K +5VR

TO_7 (M_4) → L125 7404 → L109 08 → $\overline{ROS}$ (1C11)(1G5)(2C11)(2E10)(3B6)

TO_2 (P_3) → L125 7404 → $\overline{TO_2}$ (3B9)

$\overline{CDLI}$ (10_3) → L96 LS32

TO_6 (15_3) → L125 7404 → $\overline{TO_6}$ (2D1)

L96 LS32 → L110 LS74 (2PK, 2CK, 2D, 2CLR) → TMC (4F11), $\overline{TMC}$ (2B10)

R26 1K +5VR

±0V → L111 LS74 (1PR, 1CK, 1D, 1CLR) → $\overline{CORRECT}$ (3E11)

L109 08 → $\overline{SET}$ (2D10)

$\overline{RESET}$ (4F10) → L84 74LS00 → L99 74LS08 → L124 38 → BASTR (1B10)

L94 LS74 (2PR) → BK7 (5B7)

L69 LS74 (1PR) → R36 10K, R35 680K, C30 33μF 15V, Q1 2N2222A → L53 9602 (CX1, RX1, 1A, 1B, 1CLR)

L109 LS32 → DIS (4E1)

R6 1K +5VR

MDH_0 – MDH_3, ($1B2$) > , MDH_6, MDH_7

ERROR CNTL (4E9) → L125 7404

MDH_7 → L111 LS74 → $\overline{DIN}$

MDH_0 → L95 LS74 → DDC (1D3)(1F8)(2D11)(5C7), $\overline{DDC}$ (1D3)(2D5)(3A8)(5F7)

MDH_1 → L95 LS74 → $\overline{DIS}$ (4F10), DIS (2B3)(4B4)

MDH_2 → L123 LS500 → $\overline{RDS}$ (2G6)

MDH_3 → L123 LS500 → $\overline{WDS}$ (2D2)(2G3)

R27 1K +5VR

MDH_7 → L112 LS74 → ODD PAR (1D3)(1G7)(3A9) → L3 7406 → $\overline{PAR}$ (11_2)

$\overline{RESET}$ (4F10)

MDH_7 → L97 LS74 → $\overline{WRT\ TP}$ (2D9)(2C11)(3B3), $\overline{WRT\ TP}$ (3B7)(3D11)(2D7)

R30 1K +5VR

MDH_6 → L97 LS74 → RD TP (2C7)(2G10), $\overline{RD\ TP}$ (1B7)(2D11)(2E2)(2G6)

TAD1 (25_2) TADO (B_2) GO (23_2) FEN (12_2) SINPT (12_3)

DATE	BY	REVISION
		SEE SHT 7

WANG LABORATORIES, INC. LOWELL, MASS. U.S.A.	BY	DATE	APPROVED BY	DATE
	DWN	4/24/78	E ENGR	
	CHK		M ENGR	
			MFG ENGR	
MATERIAL	MODEL NO.	TITLE	MAG TAPE ADAPTER HF/NRZI	
	SEE ENGRG SPECIFICATIONS No.			
FINISH	TOL EX AS NOTED XX ± FRAC ± XXX ± ANG ± FINISH	210-7217	D	7217	10
	SCALE — SHT 4 OF 7	WANG PART NUMBER	SIZE	DRAWING NUMBER	REV

D 7217

D4

DO NOT SCALE

HER CER FMK FBY ONL RDY RWD LDP EOT

R61 220Ω R62 330Ω R63 220Ω R64 330Ω R65 220Ω R66 330Ω R67 220Ω R68 330Ω R69 220Ω R70 330Ω R71 220Ω R72 330Ω R73 220Ω R74 330Ω R75 220Ω R76 330Ω R77 220Ω R78 330Ω

+5VR ±0V

L17 14 L2 14 L4 14 L2 14 L2 14 L11 14 L2 14

BK1 (4B11) (4C7)

ID (3J) R79 220Ω R80 330Ω +5VR ±0V L17 14

476 4300 → CCG (1B11)(1G6)(2G7)

L72 LS74 2 PR

BK5 (5D2) BK4 (5D2) BK3 (5C2)

R32 1K +5VR ±0V

XR051 (2C10)

7TK/9TK (9J) R33 220Ω R34 330Ω +5VR ±0V L4 14 → 9TRK (1G10)(3C5)(1F6)

NRZ/PE (13J) R81 220Ω R82 330Ω +5VR ±0V L2 14

FPT (10J) R83 220Ω R84 330Ω +5VR ±0V L2 14

BDP BD7 ±0V HD6 L72 LS157 → DDC (9F1)

BC5 BD5 ±0V BC4 HD4 L105 LS153

BC3 HD3 BC2 BD2 L119 LS153 → EPR MATCH (3D4)

DDC (4F1) → L18 LS08 → NRZ (2E2)

BC1 BD1 BC0 BD0 L105 LS153 → SRC MATCH (3D5), DBY (4C10), LRC MATCH (3F5)

PAR (3B5)

BK3 (5E9)

BK4 (5E8)

BK5 (5E7)

L120 LS157 → IL (2C9), OVRN (2G1)

L106 LS157 → (K2) U2, (K1) U1, (A1) U0

BC0–BC15 (3B1)

BD0–BDP (3G5)

RD BY CT (4F9) NRZ (2E2) RDTP ST (4F9) → L78 LS08

L104 LS153 BC8 BC9 BD0 BD1 HD2

L118 LS153 BC10 BC11 BD2 BD3 BD4

L102 LS153 BC12 BC13 BD4 BD5 BD6 BK7 (4B5) ±0V

L116 LS153 BC14 BC15 BD6 BD7 BDP ±0V

L93 04 → RD OP ST (4E9)

(J2) D8 (H2) D9 (F2) D10 (E2) D11 (D2) D12 (C2) D13 (B2) D14 (A2) D15

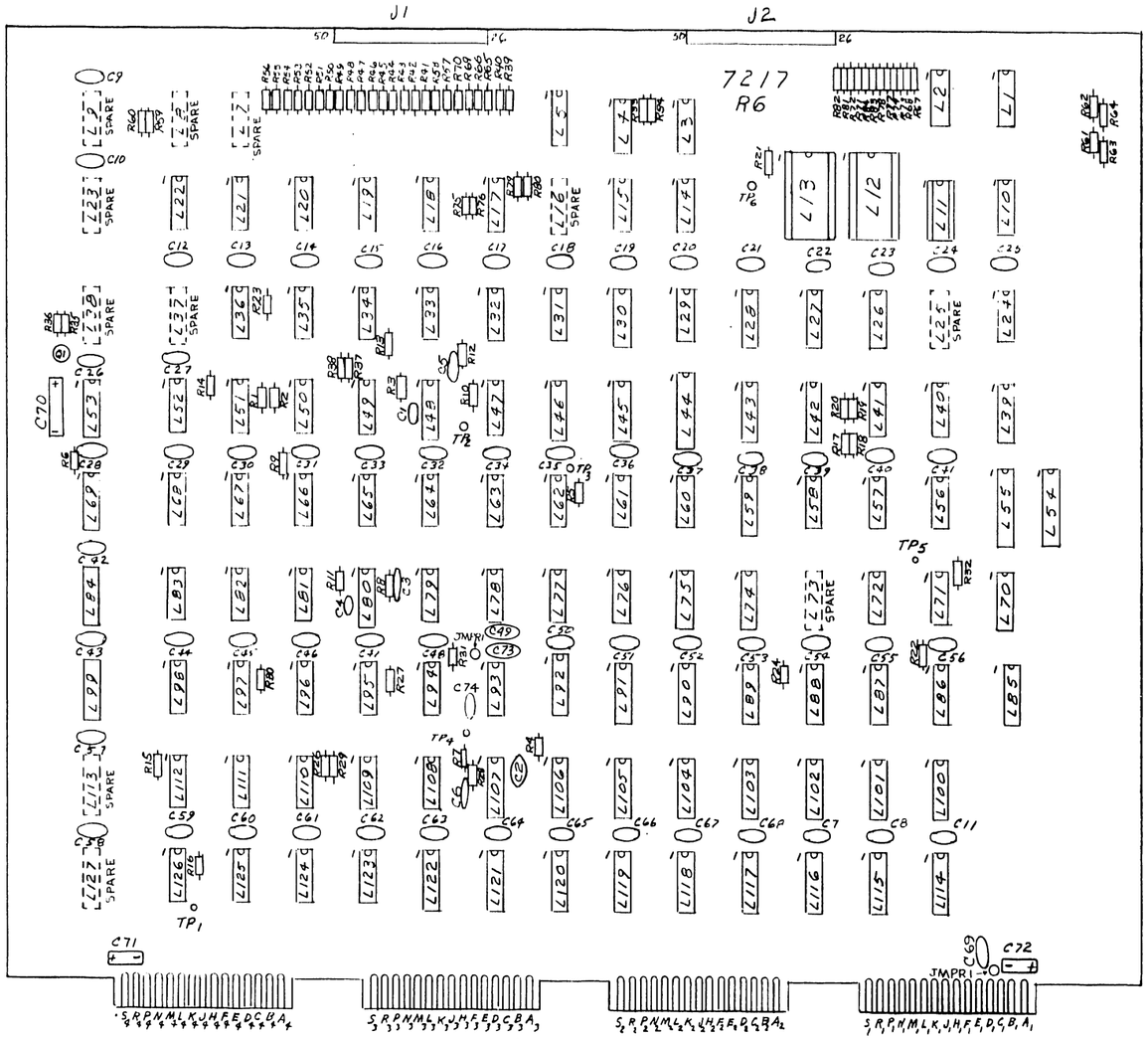
REVISION	BY	DATE	NO.
SEE SHT 7			

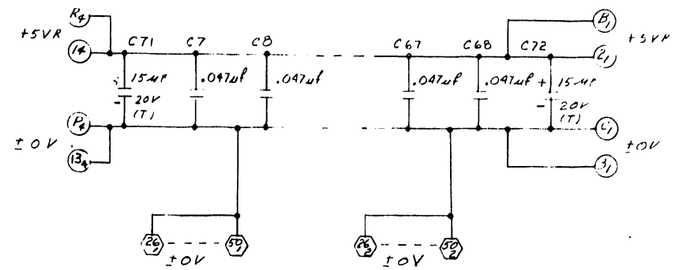
WANG LABORATORIES, INC. LOWELL, MASS. U.S.A.	BY	DATE	APPROVED BY	DATE
	DWN	4/25/78	E ENGR	
	CHK		M ENGR	
			MFG ENGR	

MATERIAL	MODEL NO.	TITLE
	SEE ENGRG SPECIFICATIONS No.	MAG TAPE ADAPTER PE/NRZI
FINISH	TOL EX AS NOTED XX ± FRAC ± XXX ± ANG ± FINISH	210-7217 / D / 7217 / 10
	SCALE — SHT 5 OF 7	WANG PART NUMBER / SIZE / DRAWING NUMBER / REV

D5

DO NOT SCALE





REVISION	BY	DATE
SEE SHT 7		

	BY	DATE	APPROVED BY	DATE
DWN		11/21/78	E ENGR	
CHK			M ENGR	
			MFG ENGR	

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

MATERIAL	MODEL NO.	TITLE
	SEE ENGRG SPECIFICATIONS	MAG TAPE ADAPTER PE/NRZI
FINISH	TOL EX AS NOTED	WANG PART NUMBER: 210-7217A
	SCALE FF	SHT 6 OF 7
	SIZE: D	DRAWING NUMBER: 7217
	REV: 10	

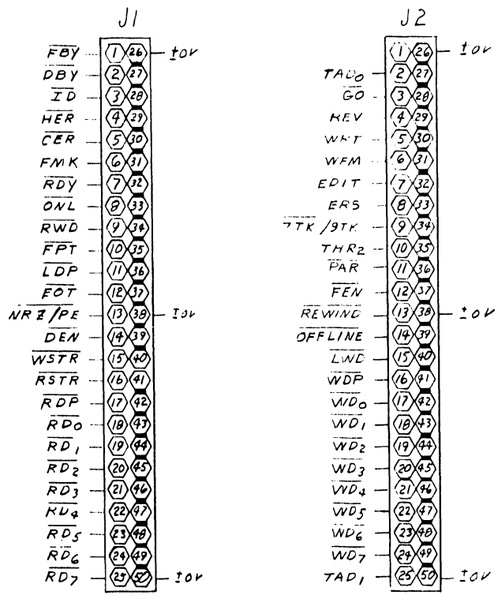
D6

DO NOT SCALE

IC. LOCATION	W.L. PART NO	IC. TYPE
L1,3,14,17	376-0055	7406
L2,4,15,17	376-0139	7414
L53	376-0104	9602
L32,40,41,61	376-0180	74LS04
L6-9,16,23,25,37,38,73, 113,127		SPARE
L10,21,36,50,62,81,83,96,108	376-0211	74LS32
L11	376-0169	8501
L12	376-0168	8500
L13	376-0170	8502
L18,20,24,39, 78,82,98,99	376-0153	74LS08
L19, 33	376-0213	74LS51
L22	376-0208	74LS02
L26-28,74,75,92,106,114,115,120	376-0216	74LS157
L29,58	376-0242	74LS280
L30	376-0159	74LS174
L31, 56, 57, 60	376-0231	74LS86
L34,35,47,51,52,62,63,65,66, 71,72,94,95,97,110-112, 126	376-0155	74LS74
L42	376-0212	74LS42
L43,46	376-0289	74LS173
L44	376-0286	74LS374
L45, 59	376-0192	74LS367
L48, 80, 107	376-0080	74123
L54, 55	376-0323	74S225
L64	376-0209	74LS10
L76, 84, 123	376-0207	74LS00
L79	376-0225	74LS11
L86, 87, 100, 101	376-0233	74LS161
L88-91	376-0220	74LS193
L102-105, 116-119	376-0156	74LS153
L121, 122	376-0294	74LS138
L124	376-0128	7438
L49,68,109	376-0081	7408
L93,L125	376-0010	7404
L63	376-0006	7474
L70,85	376-0192	74LS367
L5	376-0016	7402

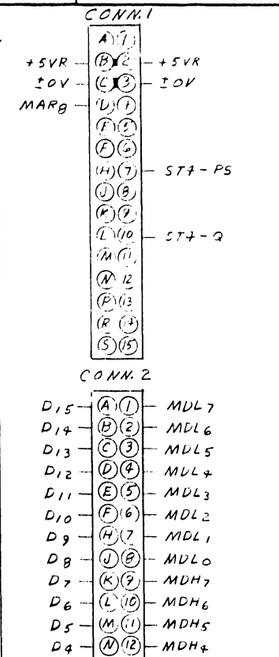
LOC.	TYPE	SPARES
L5	7402	2
L10	74LS32	3
L27		1
L108		1
L15	7414	2
L17		2
L18	74LS08	2
L24		1
L99		1
L19	74LS51	1
L34	74LS74	1

LOC	TYPE	SPARES
L47	74LS74	1
L35		1
L62		
L53	9602	1
L59	74LS367	1
L60	74LS86	2
L31		1
L61	74LS04	2
L17	7406	3
L84	74LS00	1
L93	7404	1
L125		1



COMPONENT	W.L NO.	TYPE
R1,2,5-7,9,10,13-24 26,27,29-32	330-3010	1K, 1/4 W, 10%
R3, 8, 11, 12, 25	330-3068	6.8K, 1/4 W, 10%
R4, 36	330-4010	10K, 1/4 W, 10%
R33,38,39,41,43,45,47, 49,51,53,55,57,59,61, 63,65,67,69,71,73,75, 77,79,81,83	330-2022	220Ω, 1/4 W, 10%
R35	330-5068	680K
C1, 3-5	300-1082	82 PF, 500V CER
C2	300-1100	100 PF, 500V CER
C71,72	300-4022	15.4K, 20V, TANT
C7-68	300-1966	.047uF, 50V CER
C69	300-1270	270 PF, 500V
C70	300-4019	33uF, 15V, TA
C6	300-1906	.001uF, 500V
R34,37,40,42,44,46, 48,50,52,54,56,58, 60,62,64,66,68,70, 72,74,76,78,80,82,84	330-2033	330Ω, 1/4 W, 10%
Q1	375-1005	2N2222A
J1,2	350-1027	57-40500
C73,74	300-1180	180 PF 500V CER

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



MNEMONIC	COORDINATE
B XTAL	2A5
CDLI	4A6
CER	5G3
$D_0 - D_1$	5E1
$D_R - D_{15}$	5A7
DBY	4C11
DEN	4G1
DLS	2D1
DMSH	2C1
DMSL	2C1
EDIT	1C1
EOT	5G4
ERS	1B1
FBY	5G7
FEN	4A6
FMK	5G8
FPT	5C11
GO	4A7
HER	5G9
HR_{16}	2B1
HSB_1-HSB_2	5G2
HW_{16}	2B1
ID	5E11
INC_2	2A6
INIT2	4C11
LDP	5G5
LWD	2F1
MAR_B	2F11
$MDH_0 - MDH_7$	1D11
$MDL_0 - MDL_7$	1G9
NRZ/PE	5D11
OFFLINE	4G10
ONL	5G7

MNEMONIC	COORDINATE
PT0	4E11
PT1	4E11
PAR	2C1
$R_5 - R_{15}$	4F11
$RD_0 - RD_7$	1F11
RLP	1D11
RD1	5G6
REWIND	4G10
REV	1D1
RIPPLE CLOCK	2A5
RSTR	1B11
RWD	5G5
SINPT	4A5
ST4-PS	2G8
ST4-Q	2F11
TAD0	4A5
TAD1	4A8
THR2	1B1
TO2	4G6
TO4	3A4
TO6	4G5
TO7	4G7
$WD_0 - WD_7$	1F1
WDP	1D1
WFM	1C1
WRT	1C1
WSTR	2G3
7TK/9TK	5D11

E-REV
6

REVISION NO.	REVISION	BY	DATE
	ORG. PER ECO 549 DWG. # 2200-7279 APP'D: [illegible]	[illegible]	10-27-79
1/0	REL PER ECN'S 9950 + 10067 APP'D: [illegible]	SD	5-9-79
2/1	REV. PER ECN'S 10493 APP'D: [illegible]	SD	5-13-79
3/1	REVISED PER ECN'S 10557, 11037 APP'D: [illegible]	AD	7-2-79
4/2	REVISED PER ECN # 11994 APP'D: [illegible]	AD	10-4-79
5/2	REVISED PER ECN # 12173 APP'D: [illegible]	AB	10-4-79
6/3	REVISED PER ECN # 12218 APP'D: [illegible]	AB	10-4-79
7/4	REVISED PER ECN # 12376 APP'D: [illegible]	AB	10-4-79
8/4	REVISED PER ECN #12481 APP'D: [illegible]	EP	1-23-80
9/5	REVISED PER ECO #13364 APP'D: [illegible]	FSS	4-1-81
10/6	REVISED PER ECO # 20933 APP'D: [illegible]	T.K.	8-7-81

	BY	DATE	APPROVED BY	DATE
WANG LABORATORIES, INC. LOWELL, MASS. U.S.A.	DWN [illegible]	10/26/79	E ENGR R SMITH	12-79
	CHK [illegible]	12-79	M ENGR	
			MFG ENGR	

MATERIAL — MODEL NO. — SEE ENGRG SPECIFICATIONS No. ____

FINISH — TOL XX AS NOTED, XX ± FRAC ±, XXX ± ANG ±, FINISH

TITLE: MAG TAPE ADAPTER PE/NRZI

SCALE [illegible] | SHT 2 OF 2 | WANG PART NUMBER: 210-7217A | SIZE: D | DRAWING NUMBER: 7217 | REV: 10

E PKG

D7

DO NOT SCALE

$BA_1 - BA_{12}$ (4 G 10)

$PP_1 A_0 - PP_1 A_6$ (2 G 3)
$PP_1 A_8 - PP_1 A_{14}$

BA_1 (R1) BA_2 (14) BA_3 (P1) BA_4 (13) BA_5 (9) BA_6 (K1) BA_7 (B1) BA_8 (J1) BA_9 (4) BA_{10} (D1) BA_{11} (A1) BA_{12} (11)

L106A LS139 — 1 0V, BK10 (3B9), BK9 (3D4)

L92 LS244 — BA_1, BA_2, BA_3, BA_4, PP_1A_1, PP_1A_2, PP_1A_3, PP_1A_4 → PP_1MA_0 … PP_1MA_6

L72 LS244 — BA_5, BA_6, BA_7, PP_1A_5, PP_1A_6, BA_2 (2F2) → PP_1MA_4 … PP_1MA_6

L93 LS244 — BA_9, BA_{10}, BA_{11}, BA_{12}, PP_1A_7, PP_1A_{10}, PP_1A_{11}, PP_1A_{12} → PP_1MA_0 … PP_1MA_6

L73 LS244 — BA8, 1 0V, PP_1A_{13}, PP_1A_{14}, PP_1A_{15} → PP_1MA_0, PP_1MA_6, PP_1MA_5

SC_1 (D2) (4 C10)
SC_0 (H2) (4 C10)

L106 LS04 — BK_1 (3C7), R 1K, +5VR

PP_1MA_0 … PP_1MA_6

$\overline{RAS}$ ODD (3C5), $\overline{CAS}$ ODD (3C5), $\overline{WRITE}$ (3F8)

L89 L68 L88 L69 L90 L70 L71 L91 — MK4116 — $PPMB_0$ … $PPMB_7$

$\overline{RAS}$ EVEN (3D5), $\overline{CAS}$ EVEN (3D5), $\overline{WRITE}$ (3F8)

L74 L94 L75 L95 L96 L97 L77 L76 — MK4116 — $PPMB_8$ … $PPMB_{15}$

$\overline{READ}$ (3F8)

L108 LS245 — $PPMB_{15}$ … $PPMB_8$ → PPD_{15} … PPD_8 — BK_7 (3E7)

L109 LS245 — $PPMB_7$ … $PPMB_0$ → PPD_7 … PPD_0 — BK_{10} (3B9), BK_8 (3D7)

L105 LS245 — $PPMB_7$ … $PPMB_0$ → PPD_7 … PPD_0

L107 LS245 — $PPMB_7$ … $PPMB_0$ → PPD_7 … PPD_0 (2 G 10) (3 G 3)

$LDB_0 - LDB_7$ (4 A 7) → LDB_0 … LDB_{15}

REVISION	BY	DATE	NO.

	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/22V06 — SEE ENGR SPECIFICATIONS — No.

FINISH

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

SCALE — SHT 1 OF 8

TITLE PCA 22V06 DUAL TLP DAUGHTER BOARD NC

210-7427	D	7427	6
WANG PART NUMBER	SIZE	DRAWING NUMBER	REV

E1

DO NOT SCALE

MODEM CONN

PP, D0-PP, D7 (1A4)

L20 8251A

L19 75154

L18 75154

L17 75157

L7 75150

L8 75150

L56 LS73

L55 Z80 CTC

L54 Z80 CPU

L32 Z80 PIO

L53 LS368

L31 LS138

L57 LS74

L58 LS74

L74 LS74

L37 LS04

L33 LS04

L40 LS08

L39 LS00

L38 LS00

L52 LS00

L43 LS04

MPSG5518

MPSG5512

R1 1.5K 1/4W 10%

R2 10K

R3 330Ω

R4 10 2.2K

R5 2.2K

R6 2.2K

R7 2.2K

R8 2.2K

R9 2.2K

C6B .1 MF

+5VR

+10V

-12V

+12V

-MREQ PP, (3G10)

PP, RFSH (3F9)

-RST PP, (3B9)

-PP, M1 (2G8)(2B7)(3D3)

PP, A0 (2F9)(3D9)

PP, A0 (2G3)

CS '14', (2C3)

PP, RD (2E3)

PP, IORQ (2E3)

PP, WR (2E3)

I/O '0B', (2C3)

BK5 (2B5)

RD, (2E5)

IORQ, (2E5)

PP, M1 (2D3)

+PP, CLK, (3E10)

Z80 INT (3E2)

BK3 (2D5)

BK4 (2C5)

BK5 (2D7)

BK2 (2C10)

BK6 (3E2)

BK22 (1=2)

BK23 (2F3)

BK24 (3C3)

SCF, (2D5)

CF, (2D5)

RS RDY

TX RDY

TXE

SYNDET

RTS

DTR

RXD

TXC

TXD

RXC

DSR

CTS

AB

AA

CB

CC

DB

DA

ACR

SCA

BA

CD

CA

J8

PP, A0 - PP, A15 (1A4)(2G10)

PP, A8 - PP, A15 (2G10)

PP, A3, PP, A1 (2C7)(3E3)

PP, A2 - PP, A15 (2C4)(1G10)

PP, A2 - PP, A4 (2G3)

PP, A0, PP, A1 (2G3)

PP, RFSH (3F10)(3F9)

PP, M REQ (3G11)

PP, IORQ (2F10)

PP, RD (2F10)(3E10)

PP, WR (2F10)(3F10)

PP, M1 (3C9)

PP, REQ

INPUT RDY

IOV +5VR

LPDB0 - LPDB7 (5A5)

REVISION	BY	DATE
1. SEE SH - B		

WANG LABORATORIES, INC. LOWELL, MASS. U.S.A.	BY	DATE	APPROVED BY	DATE
MATERIAL	DWN		E ENGR	
MODEL NO. 2200VS/22VC6 SEE ENGR. SPECIFICATIONS No.	CHK		M ENGR	
FINISH			MFG ENGR	
TOL EX AS NOTED .XX ± FRAC ± .XXX ± ANG ± FINISH √	TITLE	PCA 22V06 DUAL TLP DAUGHTER BOARD NC		
SCALE 1/1 SHT 2 OF 8	210-7427	D	7427	6
	WANG PART NUMBER	SIZE	DRAWING NUMBER	REV

E2

DO NOT SCALE

- MREQ PP1 (B3)
- STB PP1 (B2)
- WPP1 M (G3)
- RPP1 M (E3)
PP1 MRIQ (...3)
- MREQ PP1 (2G4)
+PP DMA WRITE (B3) (6F10)
PP1 WR (2E3)
+PP DMA READ (B4) (6F10)
P1 RFSH (2E3)
PP1 RD (2E3)
L139 LS00 L90 LS08 L51 LS158 L62 LS08 L27 LS32
WRITE (1F7)(1D7)
READ (1B10)
+5VR tov
+PP1 CLK1 (2E8)(2B6) (2E9)(2E6) (3E3)
+PP1 CK (B3)
L110 8T97 R10 82Ω R11 82Ω
+PP2 CLK2 (5E9) (5B7)(6E4) (6D11)(5E6)
L10 LS08
PP1 A0 (2G3)
L28 LS75
BK24 (2C2)
PP1 M1 (2E3)
L41 LS74
L43 LS04
BK10 (1B7)(1EM)
-DMA PP1 (2B)
L27 LS32
-RST PP1 (10B)
L30 LS08
-RST 1 P1
(2G4)(2D6)(2F10)...2)(2F7)
PP1 RFSH (2F3)
L43 LS04
PP1 RFSH (2G9)
BK7 (1A9)
BK8 (1A7)
L52 LS08
+5VR R12 2.2K
L42A LS158
BK1 (1C7)
L42 LS08
L23 LS32
L04 LS00
RAS EVEN (1D7)
CAS EVEN (1D7)
RAS ODD (1F7)
CAS ODD (1F7)
L104 LS37 L106 LS04
BK9 (1E10)
L103A 1519-100
R15 150Ω +5VR
R16 330Ω tov
PND (5A) PWI (6A) DSS (13A) DLO (B2A)
+5VR L12 75154
1A1 1A2 1A3 1A4
PP1 D0 - PP1 D7 (1A4)
PP1 A0, PP1 A1 (2G3)
L34 Z80 PIO
IA0 (2C10) IA1 IA2 IA3 IA4
Rx RDY (2G8)
CS 10, (2C3)
RD1, (2E5)
IORQ1 (2E5)
PP1 CLK1 (3E10)
-PP1 M1 (2D3)
A STB
B STB
Z80 INT (2E6)
BK6 (2B7)
1B0 1B1 1B2 1B3 1B4 1B5 1B6 1B7
+5VR R13 2.2K
L7 L10 L11 75150
R14 2.2K +5VR
NA1 NA2 NB+ NB- VR CR2
CH GND (1A) tov (1A) +12V
B0 B1 B2 B3 B4 B5 B6 B7
TX EMPTY (2F8)
TX RDY (2F8)
GND Vcc 11 26
tov +5VR

	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/22106
SEE ENGR. SPECIFICATIONS
No.

FINISH

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

TITLE PCA 22V06 DUAL TLP DAUGHTER BOARD V.C

SCALE FULL SHT 3 OF 8

210-7427 | D | 7427 | 6
WANG PART NUMBER | SIZE | DRAWING NUMBER | REV

NO.	REVISION	DATE	BY
	SEE SHT 9		

7427

E3

DO NOT SCALE

$BA_1 - BA_{12}$ (1 G 10)

$PP_2A_1 - PP_2A_6$ (5 G 3)
$PP_2A_8 - PP_2A_{14}$ (5 C-3)

L82 LS244 — L83 LS244 — L63 LS244 — L100 LS139

PP_2MA_0 PP_2MA_1 PP_2MA_2 PP_2MA_3 PP_2MA_4 PP_2MA_5 PP_2MA_6

$\overline{RAS\ ODD}$ (6 C 5)
$\overline{CAS\ ODD}$ (6 C 5)
$\overline{WRITE}$ (6 F B)

L58 L78 L59 L79 L60 L80 L61 L81 — MK4116

PP_2MB_0 PP_2MB_1 PP_2MB_2 PP_2MB_3 PP_2MB_4 PP_2MB_5 PP_2MB_6 PP_2MB_7

$\overline{RAS\ EVEN}$ (6 D 5)
$\overline{CAS\ EVEN}$ (6 D 5)
$\overline{WRITE}$ (6 F B)

L65 L64 L84 L85 L66 L86 L67 L87 — MK4116

PP_2MB_8 PP_2MB_9 PP_2MB_{10} PP_2MB_{11} PP_2MB_{12} PP_2MB_{13} PP_2MB_{14} PP_2MB_{15}

SC_1 (1 C 11)
SCO (1 C 11)

BK_{11} (6 C 7)

BK_{18} (6 B 9)

$\overline{READ}$ (6 F B)

L103 L102 L99 L101 — LS245

BK_{19} (6 E 7)
BK_{20} (6 D 7)

$PP_2D_0 - PP_2D_7$ (5 G 10) (6 G 3)
$LDB_0 - LDB_{15}$ (1 A B)

TELECOMMUNICATION CONTROL FOR PP_2

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/22VC6 SEE ENGR SPECIFICATIONS No.	TITLE PP4 22VS: DVA- TLP DAUGHTER BOARD
FINISH	TOL EX AS NOTED XX ± FRAC ± XXX ± ANG ± FINISH √	210-7427 WANG PART NUMBER | D SIZE | 7427 DRAWING NUMBER | 6 REV
	SCALE 1/1 SHT 4 OF 8	

NO.	REVISION	DATE
	SEE SHEET 3	

E4

DO NOT SCALE

PP_2D_0-PP_2D_7 (4A4)

PP_2D_0 PP_2D_1 PP_2D_2 PP_2D_3 PP_2D_4 PP_2D_5 PP_2D_6 PP_2D_7

PP_2A_0 (5G3)

$\overline{CS\ '14'_2}$ (5C3)

PP_2 RD (5E3)

PP_2 IORQ (5E3)

PP_2 WR (5E3)

-$RST\ PP_2$ (6B8)

AB' (7) ± 0V

AA' (11) CH GND

J7

SCF' (12) (24) (1) — CP' (8) (23) (2) — CC' (6) (20) (5) — CB' (5) (18) (7) — BB' (3) (15) (10) — DB' (15) (14) (11) — DV' (17) (17) (8) — ACR' (3)

L15 75154 (RI 9) — L14 75154 (RI 9)

$\overline{SCF_2}$ (5D5)

+PP_2 CLK_2 (3D10)

$\overline{CF_2}$ (5D5)

BK_{12} (5D7)

BK_{14} (5C5)

L22 75157 — L2 75150 — L1 75150

+5VR R22 2.2K

±0V -12V +12V

C69 .01MF

MSG512 MSG518 Q2 Q1

R23 120Ω 1% 1/4W 10% R25 GAIN — R24 120Ω 1% 1/4W 10%

BK_{13} (5D5)

J7 SCA' BA' CD' CA'

PP_2D_0 PP_2D_1 PP_2D_2 PP_2D_3 PP_2D_4 PP_2D_5 PP_2D_6 PP_2D_7

PP_2A_0 PP_2A_1

$\overline{RD_2}$ (5E5)

$\overline{IORQ}$ (5E5)

-PP_2 MI (5D3)

-$RST\ PP_2$ (6B8)

$\overline{CS\ '18'_2}$ (5C3)

BK_{15} (5B5)

$\overline{I/O\ '08'_2}$ (5C2)

L23 L504

L49 Z80 CTC

+PP_2 CLK_2 (3D10)

±0V

L38 LS73

K21 2.2K +5VR

BK_{12} (5C11)

RI 9 14 RX RDY — 15 TX RDY — 18 TX EMPTY — SYN DET — C/D — $\overline{CE}$ — $\overline{RD}$ — $\overline{WR}$ — RESET — $\overline{RTS}$ — $\overline{DTR}$ — TXC — TXD — RXC — V_{CC} GND

L16 8251A

RXD 3 — DSR 22 — $\overline{CTS}$ 17

(6E3) (6C2) (6C2)

PP_2D_0 PP_2D_1 PP_2D_2 PP_2D_3 PP_2D_4 PP_2D_5 PP_2D_6 PP_2D_7

$\overline{RD_2}$ (5E5) $\overline{IORQ}$ (5E5) -PP_2 MI (5D3) -$RST\ PP_2$ (6B8) $\overline{CS\ '18'_2}$ (5C3) BK_{15} (5B5) $\overline{I/O\ '08'_2}$ (5C2)

$\overline{CS\ '10'_2}$ (5C2) BK_{21} (6E2)

PP_2A_0 PP_2A_1 (5G3)

PP_2A_2 PP_2A_3 PP_2A_4 (5G3)

L126 Z80 PIO

$\overline{INT}$ 23 — B_0 21 — B_1 28 — B_2 29 — B_3 30 — B_4 31 — B_5 32 — B_6 33 — B_7 34

BK_{13} (5B10)

$\overline{CF_2}$ (5E10)

$\overline{SCF_2}$ (5E10)

BK_{14} (5C11)

±0V

A RDY 18 — B RDY 21 — IE_0 22

BK_{15} (5F7)

$\overline{RD_2}$ (5E5) $\overline{IORQ}$ (5E5) -PP_2 MI (5D3) +PP_2 CLK_2 (3D10) $\overline{CS\ '14'_2}$ (5C2) BK_{21} (6E2)

A STB 16 — B STB 17

A_0 LPDB0 — A_1 LPDB1 — A_2 LPDB2 — A_3 LPDB3 — A_4 LPDB4 — A_5 LPDB5 — A_6 LPDB6 — A_7 LPDB7

GND V_{CC} 11 26 — ±0V +5VR

LPDB0 - LPDB7 (2A4)

-RD PP_2 (14) -WR PP_2 (V4)

±0V +5VR

L78 Z80 CPU

PP_2A_0 PP_2A_1 PP_2A_2 PP_2A_3 PP_2A_4 PP_2A_5 PP_2A_6 PP_2A_7 PP_2A_8 PP_2A_9 PP_2A_{10} PP_2A_{11} PP_2A_{12} PP_2A_{13} PP_2A_{14} A_{15}

D_0 D_1 D_2 D_3 D_4 D_5 D_6 D_7

$\overline{INT}$ $\overline{WAIT}$ $\overline{NMI}$ $\overline{BUSRQ}$

R18 10K +5VR — R19 2.2K +5VR

+PP_2 CLK_2 (3D10)

$\overline{Z80\ INT_2}$ (6E2)

$\overline{RST\ PP_2}$ (6B8)

$\overline{RFSH}$ $\overline{MREQ}$ $\overline{IORQ}$ $\overline{RD}$ $\overline{WR}$ $\overline{RESET}$ $\overline{BUSAK}$ $\overline{HALT}$ $\overline{MI}$

-M REQ PP_2 (6F10) — PP_2 RFSH (6B3) — -RST PP_2 (6B8)

L27 LS32 — L22A LS74 (2 CLR) — L22A LS74 (1 CLR) — 2 PR — 1 PR — R20 2.2K +5VR

L15A LS04 — L36A LS08 — L35 LS32 — BK_{16} (4E7)

L47 LS74 (1A 2A 3A 4A 5A 6A)

PP_2 RFSH (6F10, (6B11)

PP_2 MREQ (6G11)

PP_2 IORQ (5F10)

PP_2 RD (5F10), (6E10)

PP_2 WR (5F10, (6F10)

PP_2 MI (6C3)

-PP_2 MI (5F7) (5B7) (6D3)

L21 LS08

PP_2A_0, PP_2A_1 (5G3) (6G3)

PP_2A_2 - PP_2A_4 (5G4)

PP_2A_0 (5G3) (6D4), (6F9)

L138 LS138 (G1 G2A G2B A B C)

PP_2A_2 PP_2A_3 PP_2A_4

Y_0 Y_1 Y_2 Y_3 Y_4 Y_5 Y_6 Y_7

I/O '08'$_2$ (5F8) — I/O '0C'$_2$ — $\overline{CS\ '10'_2}$ (6E3) — $\overline{CS\ '14'_2}$ (5F7) — $\overline{CS\ '18'_2}$ (5F7) — $\overline{CS\ '1C'_2}$ (5B7)

L36A LS08 — L33 LS04

BK_{17} (6E3)

-$RST\ PP_2$ (6B8)

L136 LS74 (2 PR 2 CLR 2 D 2 CK 2 Q $\overline{Q}$)

R26 2.2K +5VR

$\overline{I/O\ '08'_2}$

PP_2D_0 PP_2D_1 PP_2D_2 PP_2D_3 PP_2D_4 PP_2D_5 PP_2D_6 PP_2D_7

L15A LS04 — L13 LS07

TELECOMMUNICATIONS CONTROL FOR PP_2

REVISION	BY	DATE
DELETE		
ADD		

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

MATERIAL — MODEL NO. 2211V-[illegible]/[illegible] — SEE ENGRG SPECIFICATIONS — No.

TITLE [illegible] DAUGHTER BOARD

FINISH — TOL EX AS NOTED — XX ± FRAC ± — XXX ± ANG ± FINISH

SCALE-FT | SHT 5 OF 8

210-7427 | D | 7427 | 6

WANG PART NUMBER | SIZE | DRAWING NUMBER | REV

DO NOT SCALE

-MREQ PP$_2$L (K$_3$) -STB PP$_2$ (L$_3$) -WPP$_2$M (F$_3$) -RPP$_2$M (A$_3$)

PNU' PWI' DSS' DLO'

-MREQ PP$_2$ (5G9)

+PP DMA WRITE (3F11)

PP$_2$ WR (5E3)

+PP DMA READ (3F11)

PP$_2$ RFSH (5E3)

PP$_2$ RD (5E3)

PP$_2$D$_0$ - PP$_2$D$_7$ (4A4)

PP$_2$A$_0$ PP$_2$A$_1$ (5G3)

RX RDY (5G8)

CS'10' (5C3)

RD$_2$ (5E5)

IORQ (5E5)

+PP$_2$ CLK$_2$ (3D10)

-PP$_2$M1 (5D3)

SEL CAS (4F10)

+PP$_2$ CLK$_2$ (3D10)

PP$_2$ A$_0$ (5G3)

BK$_{19}$ (4A9)

BK$_{20}$ (4A7)

BK$_{17}$ (5C2)

PP$_2$M1 (5E3)

BK$_{11}$ (4C7)

BK$_{18}$ (4F10)

-DMA PP$_2$ (C$_3$)

-RST PP$_2$ (S$_9$)

PP$_2$ RFSH (5F3)

-RST PP$_2$

(5F7)(5E3)(5D2)(5G4)(5F10)

PP$_2$ RFSH (3G4)

RAS EVEN (4D7)

CAS EVEN (4D7)

RAS ODD (4F7)

CAS ODD (4F7)

-WRITE (4F7)(4C7)

-READ (4B10)

ZBO INT (5E6)

BK (5B7)

TX EMPTY (5E8)

TX RDY (5G8)

TELECOMMUNICATIONS CONTROL FOR PP$_2$

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/22,30 SEE ENGRG SPECIFICATIONS No.		TITLE PP$_2$ CONTROL P.C. ASSY SAUGUS, MASS.
FINISH	TOL EX AS NOTED .XX ± FRAC ± .XXX ± ANG ± FINISH		2B-7427 / D / 7427 / 6
	SCALE FULL SHT 6 OF 8		WANG PART NUMBER / SIZE / DRAWING NUMBER / REV

DATE	REVISION	NO.
	ENG RELEASE	A

E6

DO NOT SCALE

LOADED FOR 7427-1

LOADED FOR 7427

PP1

PP2

J4 ACU1 CONN

J3 MODEM1 CONN

J8

J2 ACU2 CONN

J7

J1 MODEM2 CONN

J6

7427

R3

+5VR

±10V

-12V

+12V

C94

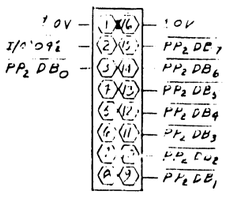
C95

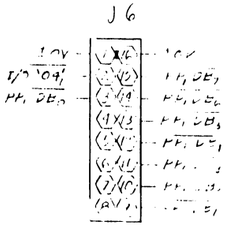
REVISION	BY	DATE

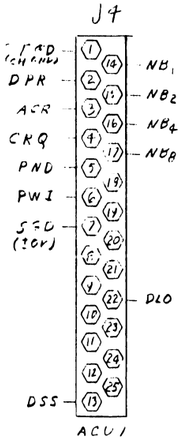
WANG LABORATORIES, INC. LOWELL, MASS. U.S.A.	BY	DATE	APPROVED BY	DATE
	DWN		E ENGR	
	CHK		M ENGR	
			MFG ENGR	

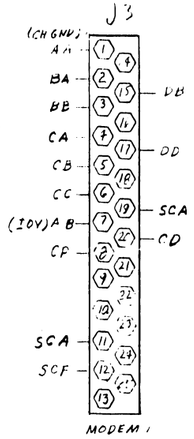
MATERIAL	MODEL NO. 2200T/VP	TITLE	PCA 22V06 DUAL TLP DAUGHTGUARD NC	
FINISH	SEE ENGRG SPECIFICATIONS No.			
	TOL EX AS NOTED XX ± FRAC ± XXX ± ANG ± FINISH √	20-7427	D 7427	6
	SCALE 1/1 SHT 2 OF 8	WANG PART NUMBER	SIZE DRAWING NUMBER	REV

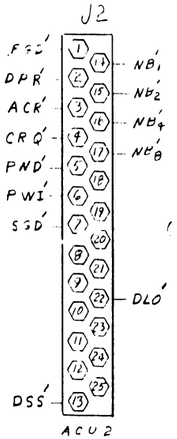
DO NOT SCALE

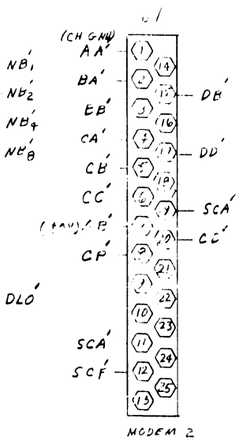


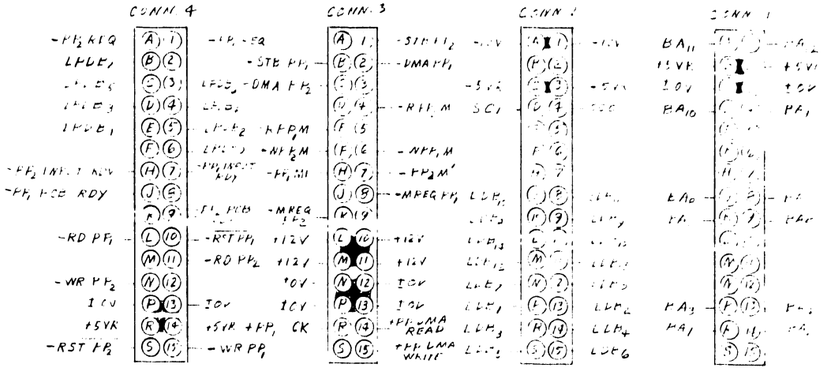












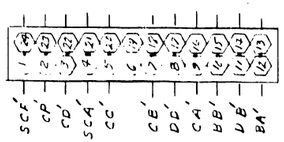
COMPONENT	W.L. PART NO.	TYPE
R2 (TE)	330-4011	10K ¼W 5%
R3,4,5,9,12,13,14, (19-22,26,27,28)	330-3023	2.2K ¼W 5%
R6,7,(23),24	331-2012	120Ω ½W 10%
R8,(25)	330-1063	68Ω ¼W 5%
R10,(TL)	330-1083	82Ω ¼W 5%
R15,(29)	330-2016	150Ω ¼W 5%
R16,(30)	330-2034	330Ω ¼W 5%
R1,17	330-3011	1K ¼W 5%
C1-32,34-65	300-1930	.1MF 50V CER
C33,66,67	300-4017	5.6MF 35V (T)
C68,(69)	300-1303	.01MF 50V CER
C1-(71-75) 79-76,(77) 80-83 (82-83) 85, 87, (90-92) 96, 97	300-1900	.05MF 12V CER
C91-94	300-4026	15MF 25V (T)
C95	300-4034	47MF 20V (T)
(G1),3	375-1012	.1MS6512
(G2),4	375-1014	MPS6518
(J1,2) 3,4	350-1047	25PIN CONN.
(J5),6,(58-61,64-66) 68-74,77-77,(78-81) (84-87),88-91,94-97	376-9005	16PIN SOCKET
(L6) 20,(49) 55	376-3015	28 PIN SOCKET
(L5,26) 32,34,(38) 54	376-9011	40 PIN SOCKET

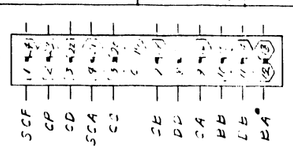
I.C. TYPE	LOCATION	SPARE
74LS02	L29	2
74LS04	L15A	1
	L99A	5
	L106	4
74LS08	L36A	2
74LS32	L44	2
74LS37	L98	3
	L109	3
74LS75	L2A	1
	L95	1
74LS139	L100	1
	L106A	1
RT97	L110	1

LOCATION	W.L. PART NO.	TYPE
(L1,2,4-12) 7-11	376-0076	74S140
(L3)12,(14),(15)16,17	376-0077	74S154
(L13,15A,23) 33,34A,43 (NA) 100	376-0180	74LS04
(L14),35	377-0352	8T97A
111,(22)	376-0216	74LS157
(L1),39 (L2A,37) 40,42	376-0153	74LS00
(L224,36),41,51	376-0155	74LS74
(L27) 31	376-0294	74LS139
(L35,36),36,37	377-0342	Z80 PIO
L27,(35)47	376-0211	74LS32
L28,(45)	376-0312	74LS75
L29	376-0208	74LS02
(L3B) 56	376-0304	74LS73
(L32,46) 52	376-0207	74LS00
L42A (L6A,50) 51	376-0293	74LS158
(L7) 53	376-0193	74LS368
(L48) 54	377-0344	Z80 CPU
(L49) 55	377-0343	Z80 CTC
L58-61,(64-66) 68-71,74-77, (78-81) 84-87,88-91,94-97	377-0345	MK4116
(L62,63) 12,13,(82,83) 92,93	376-0288	74LS244
(L8) 103A	376-8022	1519-100
(L98) 104	376-0296	74S37
L99,101,102,103) 105,107,108,109	376-0291	74LS245
(L100) 106A	376-0226	74LS139
L110	376-0197	RT97

MNEMONIC	COORDINATE
+PP1 DMA READ	3 F 11
+PP1 DMA WRITE	3 E 11
-PP1 INPUT RDY	2 B 1
-PP2 INPUT RDY	5 B 1
- PP1 MI	2 D 1
- PP2 MI	5 D 1
- PP1 PCB RDY	2 C 1
- PP2 PCB RDY	5 C 1
- PP1 REQ	2 B 1
- PP2 REQ	5 B 1
PWI	3 G 5
PWI'	6 G 5
-MREQ PP1	2 A 6
-MREQ PP2	5 A 6
- RPP1 M	3 G 7
- RPP2 M	6 G 7
- RST PP1	3 F 11
- RST PP2	6 H 11
SCG, SCI	1 C 11
SCA	2 A 9
SCA'	5 A 9
SCF	2 E 11
SCF'	5 E 11
SGD	3 F 1
SGD'	6 F 1
-STB PP1	3 G 10
-STB PP2	6 G 10
- WPP1 M	3 G 8
- WPP2 M	6 G 8
- WR PP1	2 A 6
- WR PP2	5 A 6

MNEMONIC	COORDINATE
AA	2 E 11
-A'	5 E
AA'	5 E
AA'	1 E 11
A A'	6 E 1
A A'	1 E 11
BA1 - BA16	1 F 11
BA	2 A 5
BA'	5 A 5
BA'	1 E 11
BA'	6 E 1
BA'	1 E 11
CA	2 A 8
CA'	5 A 8
CB	2 E 11
CB'	5 E 11
CC	2 A 7
CC'	5 A 7
CD'	5 A 8
CE	2 E 11
CE'	5 E 11
CP	3 D 1
CP'	6 D 1
DB	2 E 11
DB'	5 E 11
DD	2 D 11
DD'	5 D 11
DLO	3 G 5
DLO'	6 G 5
- DMA PP1	3 P 11
- DMA PP2	6 P 11
DPR	3 D 1
DPR'	6 D 1
DSS	3 G 5
DSS'	6 G 5
FSC	3 D 1
FSC'	6 D 1
I/O +10V	2 D 1
I/O +10V	5 D 1
LCB1 - LCB15	1 A 2
LPDB1 - LPDB7	2 A 5
- MREQ PP1	3 G 13
- MREQ PP2	6 G 13
MI	3 E 1
MI'	6 E 1
NB1	3 E 1
NB2	3 E 1
NB4	3 E 1
NB8	3 E 1
PWD	3 G 5
PWD'	6 G 5
+PP1 - PP2 REQ	3 E 11
PP1 DB0 - PP1 DB7	2 F 1
PP2 DB0 - PP2 DB7	5 F 1





NOTE:

1. ⬭ LOAD AS A VERSION FOR PP2 7427-1
2. ALL RES. ARE 1/4W 5% UNLESS OTHERWISE SPECIFIED.

E. REV.

7427	7427-1
1	1

NO.	REVISION	BY	DATE	APPROVED
1	ADD 7427-1		3/14	
2	ADD 106A		3-25-74	
3	REVISED PER ECO 1063		12-19	E.C.O. 5483
4	ADD 7427-1			
5	REVISED PER ECO 1063			
6	ADD 7427-1			

REVISED PER ECO 1063 ADDED 7427-1 ADDED DTC/RBID

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

MATERIAL

MODEL NO. 2200T/22VO6

SEE ENGRG SPECIFICATIONS

No.

FINISH

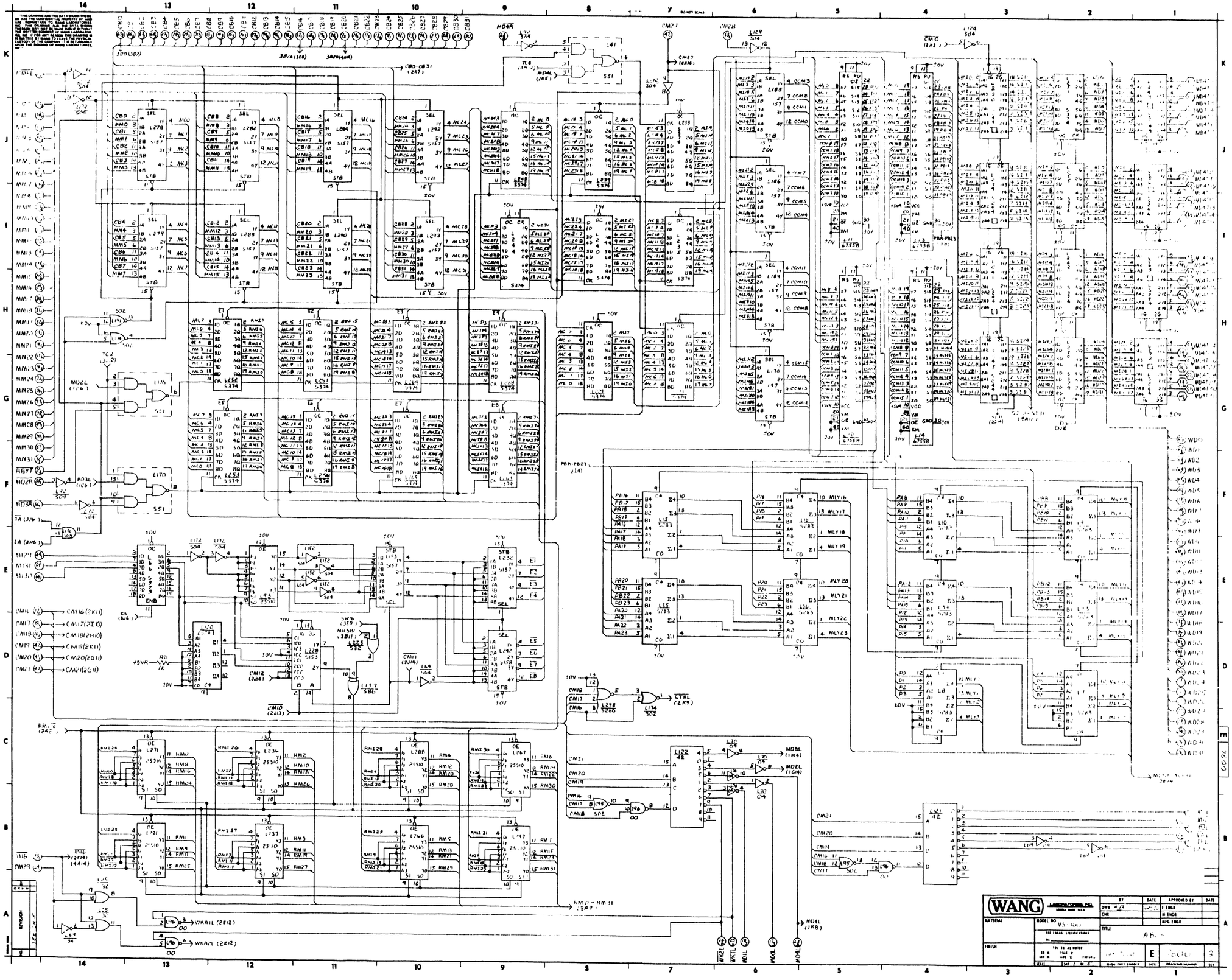
TOL EX AS NOTED
XX ± FRAC ±
XXX ± ANG ± FINISH

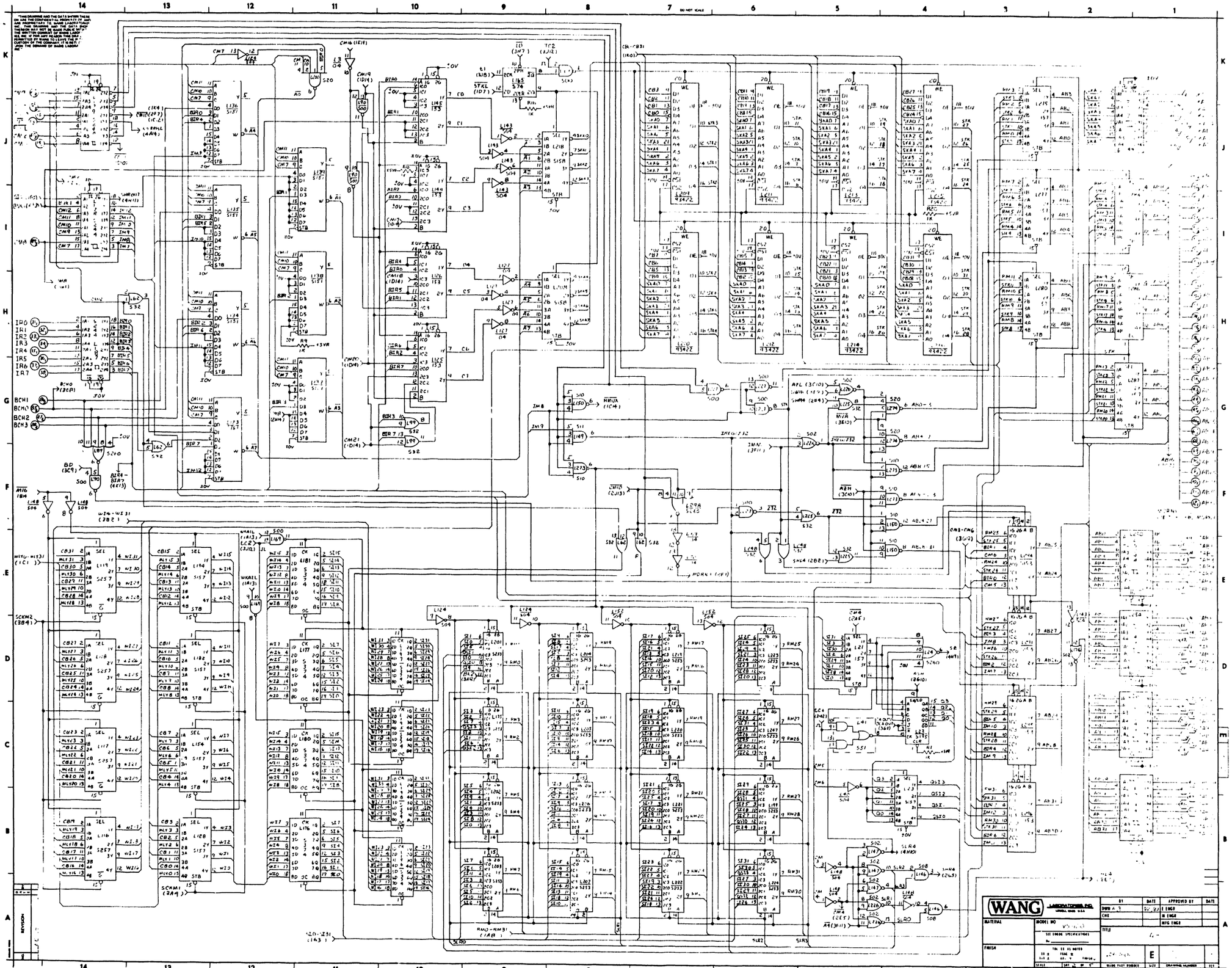
TITLE PCA 2200T/VP [illegible]

SCALE FULL SHT 8 OF 8

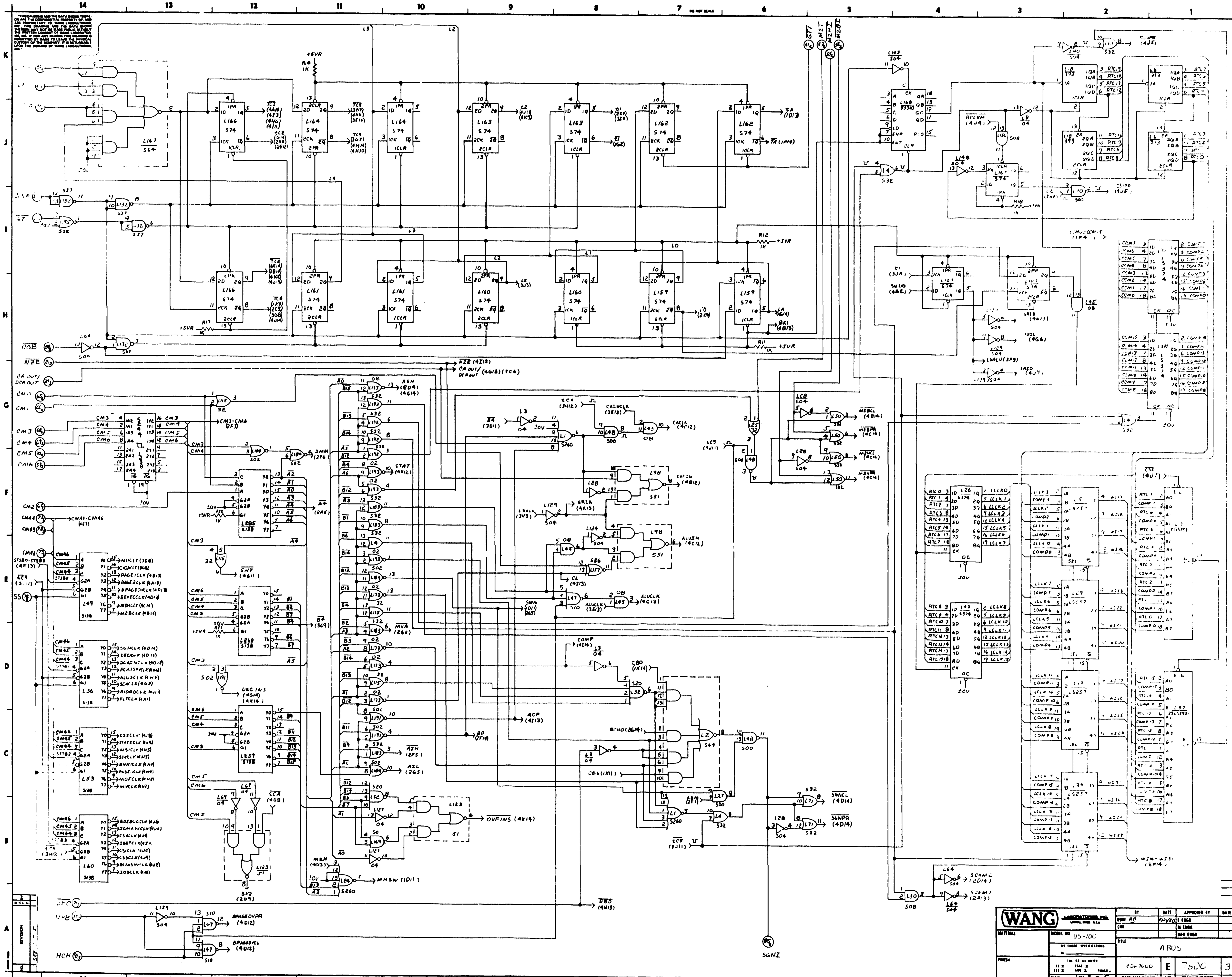
210-7427	D	7427	6
WANG PART NUMBER	SIZE	DRAWING NUMBER	REV

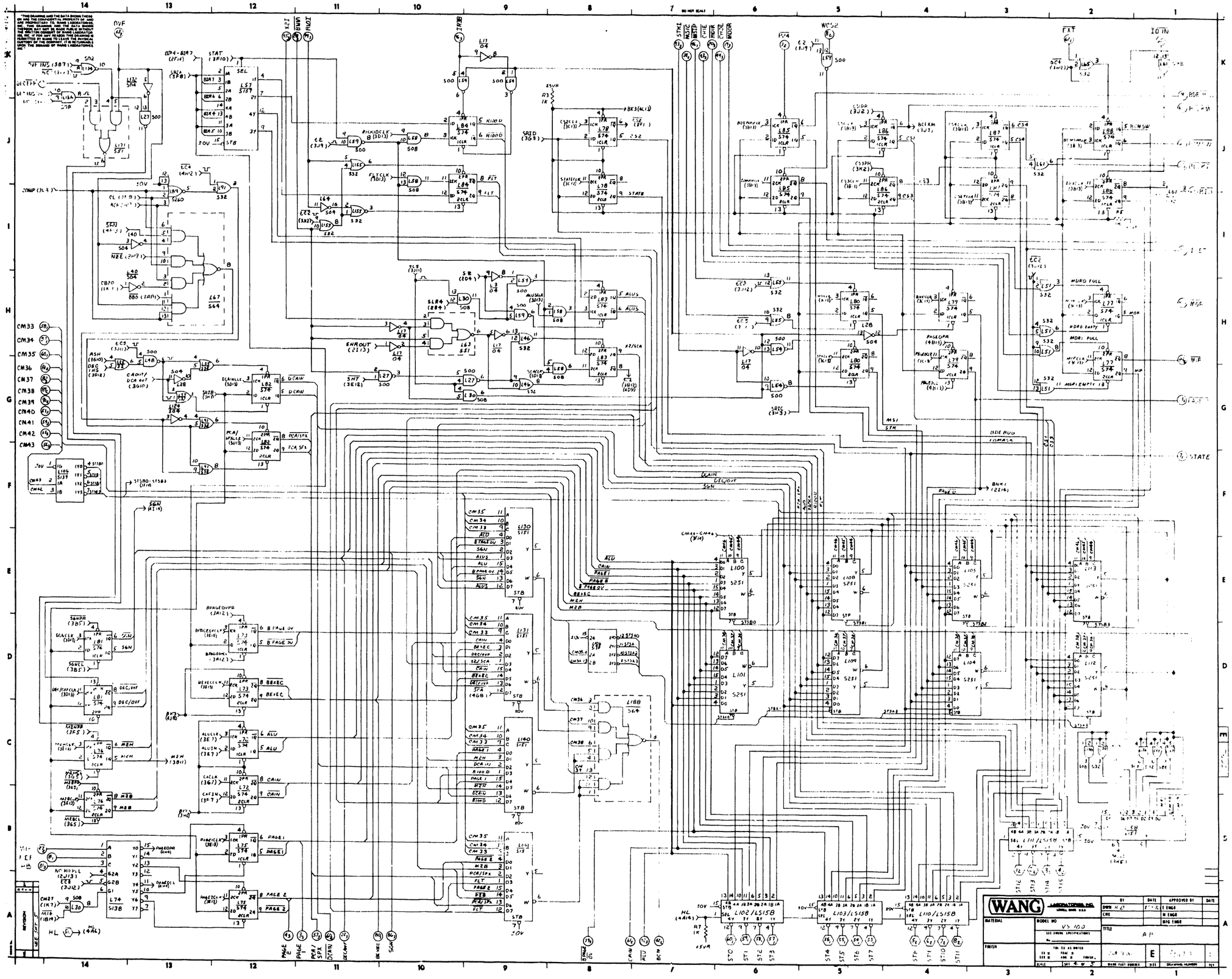
E8


WANG LABORATORIES, INC.
MATERIAL
FINISH
MODEL NO VS-
TITLE
DWN
CHK
APPROVED BY
DATE
SIZE
E
DRAWING NUMBER
REV
SCALE
SHT 1 OF 2
DO NOT SCALE
REVISION


DO NOT SCALE
WANG LABORATORIES, INC.
MATERIAL
FINISH
BY
DATE
APPROVED BY
DATE
DWN A. J.
CHK
E
REVISION

F2


WANG LABORATORIES, INC.
LOWELL, MASS. U.S.A.
MODEL NO VS-100
TITLE A BUS
DWN AP
250-7600
E
7500
3
SPECIFICATIONS
TOL EX AS NOTED
MATERIAL
FINISH
BY
DATE
APPROVED BY
E ENGR
M ENGR
MFG ENGR
REVISION
DO NOT SCALE
7603


"THIS DRAWING AND THE DATA SHOWN THEREON ARE THE CONFIDENTIAL PROPERTY OF AND ARE PROPRIETARY TO WANG LABORATORIES, INC. IT IS LOANED SUBJECT TO A MUTUAL UNDERSTANDING THAT IT WILL NOT BE COPIED OR USED IN THE CREATION OR MANUFACTURE OF ANYTHING WHATSOEVER, INC. IF FOR ANY REASON THIS DRAWING IS FURNISHED BY WANG TO LEAVE THE PHYSICAL CONTROL OF THE COMPANY, IT MUST BE FURNISHED UPON THE DEMAND OF WANG LABORATORIES, INC."
DO NOT SCALE
WANG LABORATORIES, INC.
LOWELL, MASS. U.S.A.
MODEL NO VS 100
SEE PARTS SPECIFICATIONS
TITLE A F
SIZE E
DRAWING NUMBER
DRAWN N.C.F.
CHK
APPROVED BY
DATE
F.F.A. ENGR
H. ENGR
MFG ENGR
MATERIAL
FINISH
DIVISION
SEE SHT. 5
F4

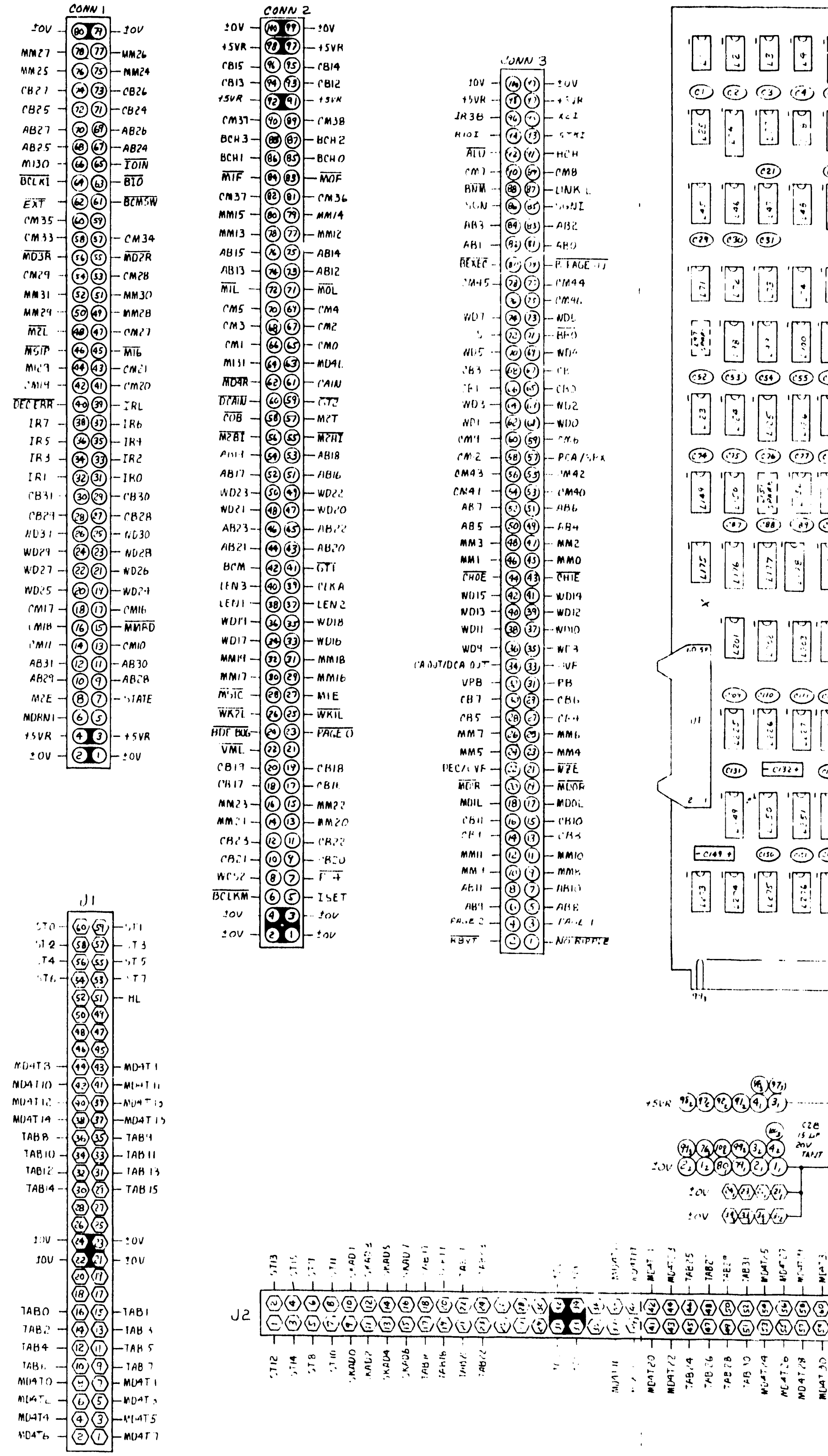
TYPE	IC LOCATION	SPARES
74S02	L95	1
	L147	1
7404	L17	1
74S04	L40	2
	L64	1
	L92	3
74S08	L146	1
74S11	L149	2
74S20	L200	1
74S32	L46	2
	L65	3
	L71	2
	L91	1
	L155	1
	L248	2
74S51	L63	1
	L171	1

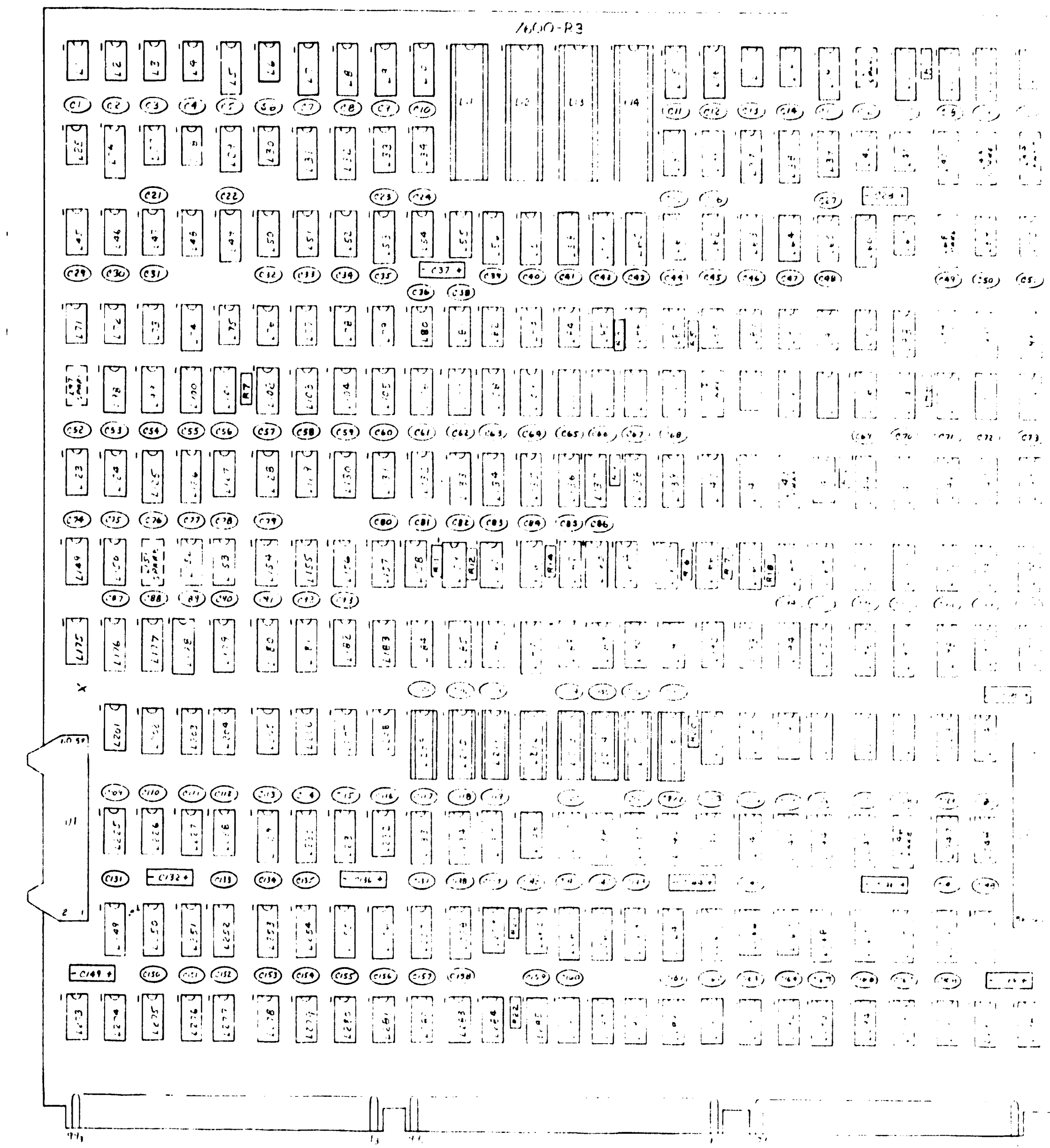
IC LOCATION	TYPE	W.L PART NO.
L1-4, 89-18	[illegible]	396-0206
[illegible]	[illegible]	396-0201
[illegible]	[illegible]	376-3010
[illegible]	[illegible]	396-0205
[illegible]	[illegible]	396-0204
[illegible]	[illegible]	396-0330
[illegible]	74S?83	396-0335
[illegible]	[illegible]	SEE CHART
[illegible]	SPARE	
[illegible]	[illegible]	396-0082
L22	74S??	396-0427
[illegible]	[illegible]	396-0217
L25	[illegible]	396-0073
L26,... [illegible]	74S374	376-0305
L27,48,54,57,90,169,227	74S00	396-0228
L28,40,64,73,... 143,148,152,172	74S?4	376-0177
L30,58,146,156	74S08	396-0200
L31,37	25LS2521	396-0317
L32,38	74LS374	376-0286
L41,63,98,170,171	74S51	396-0184
L45	7408	396-0081
L47,150,273	74S10	396-0238
L49,... 74,251,260,285	[illegible]	396-0298
L52,200,2??	74S20	396-0230
L66	74S373	376-0306
L72,73,75-88,107,159-166	74S74	376-0202
L93,236,237,266,267,276,281,288,??	25S10	376-0339
L95,147,174,184,191,226	74S02	376-0199
L96	7400	376-0002
L100,101,104,105,108,109,112,113	74S251	376-0329
L102,103,110,111	74LS158	376-0293
L106	74S139	376-0333
L116-119	74S257	376-0131
L120	74LS?83	376-0332
L121,122	7442	396-0008
L123	7451	376-0012
L125,126,144,145	74153	376-0048
L132	74S??	376-0296
L149	74S11	396-0237
L157	74S86	376-0271
L168	74S10	396-0281
L173,193	7402	376-0016
L175,177,201,207,219-??,241	74S?53	376-0337
L176,161,230,?34,238,291,??	74S?44	376-0338
L179	74S24?	376-0334
L206,218,242	74S15?	376-0301
L209,21?	93422	SEE CHART
L228,291,294-296	74S153	376-0215
L249,250,259,256,261,263,271,272,??	74LS249	376-0286
L130,131,133-141,158	74S151	376-0336
L11-14	40 PIN SKT	376-9011
L209-216	22 PIN SKT	376-9010

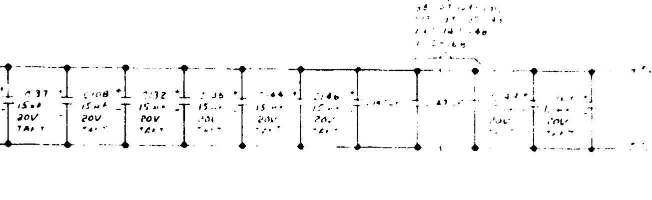
COMPONENT	TYPE	W.L PART NO
R1,3,5,7-12,14,16,18,20-22	1K 1/4W 10%	330 3010
C1-27, 29-36, 38-107, 109-131, 133-135, 137-143, 145, 147, 148, 150-168	.047MF 50V	300-1966
C28, 37, 108, 132, 136, 144, 146, 149, 167	15MF 20V TANT	300-4022
J1,2	60 PIN 90°	350-0491

MNEMONIC	COORD
AB0-AB31	2J1
ALU	4A7
BBO	3A14
BCH0-BCH3	2G14
BCLKM	4K1
BCMSW	4J1
BCLK1	4J1
BCM	4A7
BDE BUG	4K1
BEXEC	4A10
BIO	4J1
BNM	4K1
B PAGE OV	4A8
CAIN	4A8
CA OUT/ DCA OUT	3G14
CB0-CB31	1K14
CHIE	4K7
CHOE	4K6
CLK A	3I14
COB	3H14
CM7	2J14
CM8	2I14
CM9	2K14
CM10-CM12	2J14
CM0-CM6	3G14
CM16-CM21	1D14
CM27	1K7
CM28	1K6
CM29	1B14
CM33-CM43	4H14
CM44-CM46	3F14
DCAIN	4A11
DECERR	4K11
DEC/OVF	4A11
EXT	4K2
GT1	3K5
GT2	3I14
HCH	3A14
HL	4A14
IOIN	4K1
IRL	1B1
IR0-IR7	2H14
IR38	4K10

MNEMONIC	COORD
ISET	[illegible]
LINK L	1B1
LEN1-LEN3	3?4
MDIR	4?7
MDOR	4?6
MCRN1	2F1
MIL, MDOL	1A6
MD4L	1A6
[illegible]	1K9
MD4O-MD4T31	1K1
ML	4E4
[illegible]	4H1
[illegible]	4H1
M2E	4B14
MD2R MD3R	1F14
M2T	3K5
M2HI	[illegible]
M2BI	[illegible]
MI6	1B14
MOL	1B1
MIL	3?
M2L	5?
MI29-MI31	1E14
MMRD	1K14
MM0-MM31	1J14
MSIC	4K7
MSIP	4K7
NO RIPPLE	2J14
N2E	3G14
OVF	4K14
PAGE0	4B1
PAGE1	4A11
PAGE 2	4A12
PB	4B14
PCA/SPX	[illegible]
P24	4K6
RIOI	4K11
RBVF	1F14
[illegible]	1E14
SKAD0-SKAD7	[illegible]
SGNI	3A6
STATE	4F1
STMI	4K7
ST0-ST15	4A6
TAB0-TAB31	2E1
VML	1B1
VPB	3A14
WD0-WD31	1C1
WK1L, WK2L	1A6
WCS2	4K5
X2I	4K12
SGN	4A10





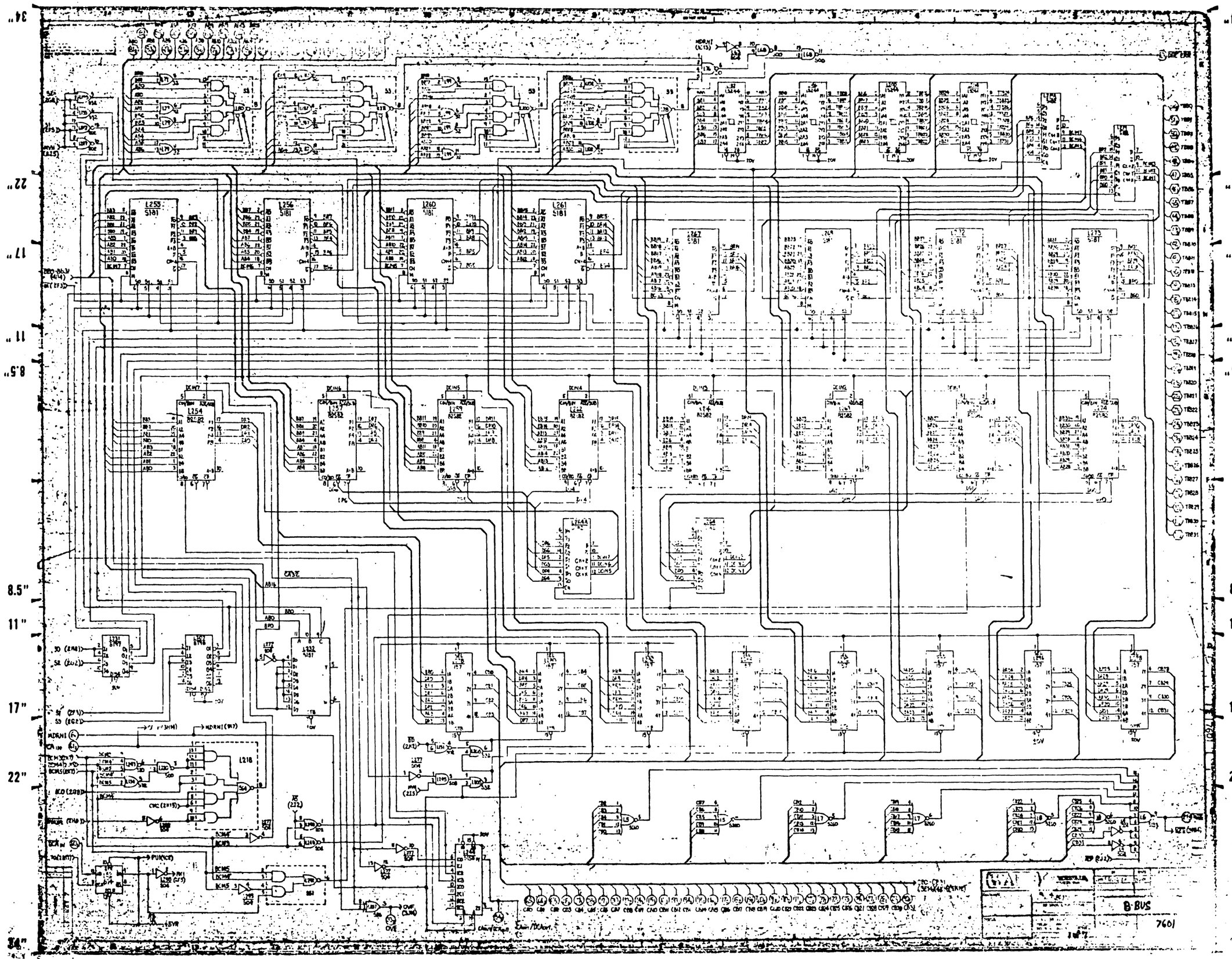


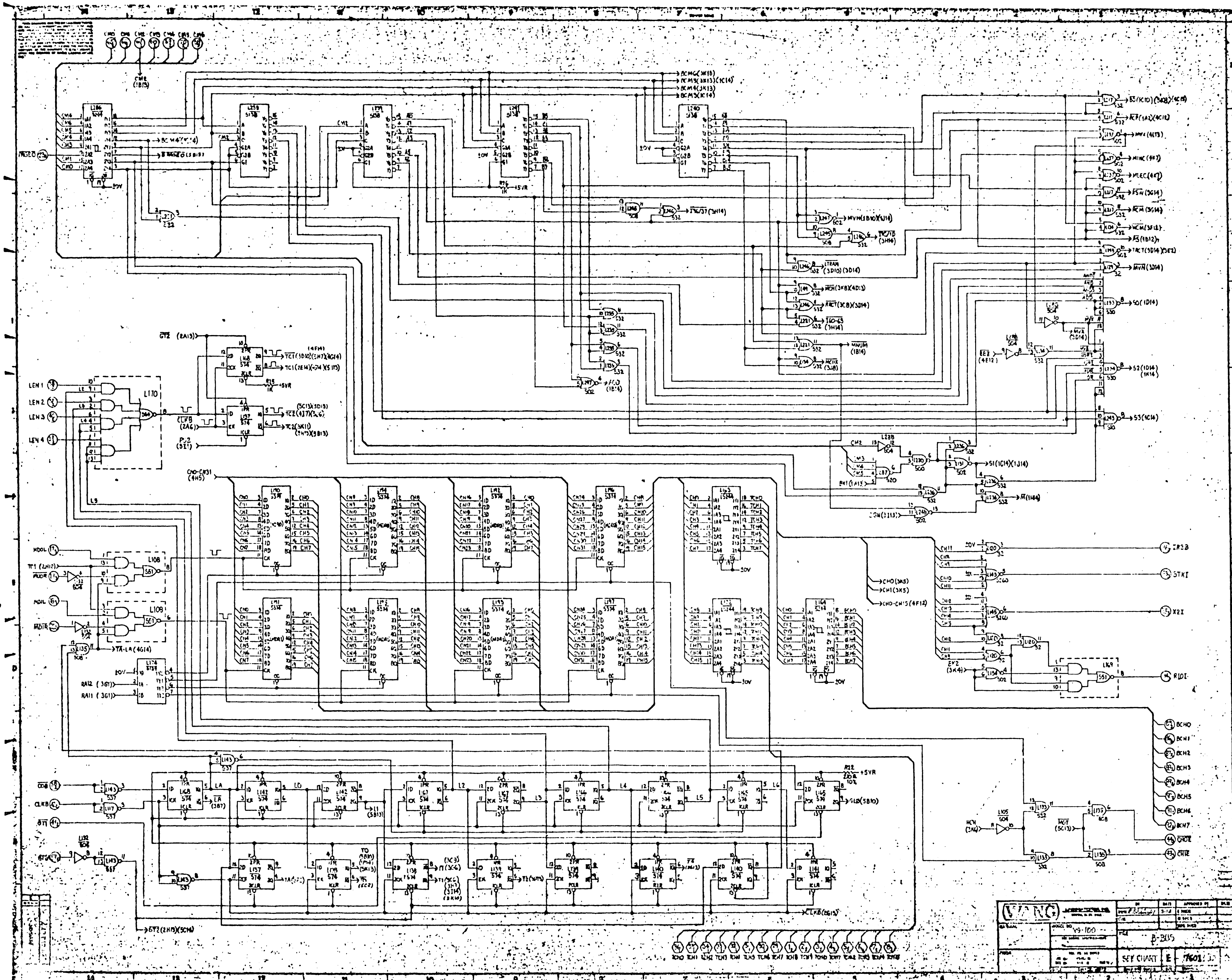
E	4D	4B	A0	A B
[illegible]	[illegible]	[illegible]	2-23-81	2-23-81
REVISION	[illegible] APPD	REVISED PER ECN [illegible] APPD	REVISED PER ECO# 18046, 17892 APPD.	REVISED PER ECO# 18297 APPD

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

MATERIAL	MODEL NO	BY	DATE	APPROVED BY	DATE
	SEE ENGRG SPECIFICATIONS No	DWN		E ENGR	
		CHK		M ENGR	
FINISH	TOL EX AS NOTED			MFG ENGR	
	SCALE	SHT 3 OF 3	WANG PART NUMBER	SIZE E	DRAWING NUMBER	REV

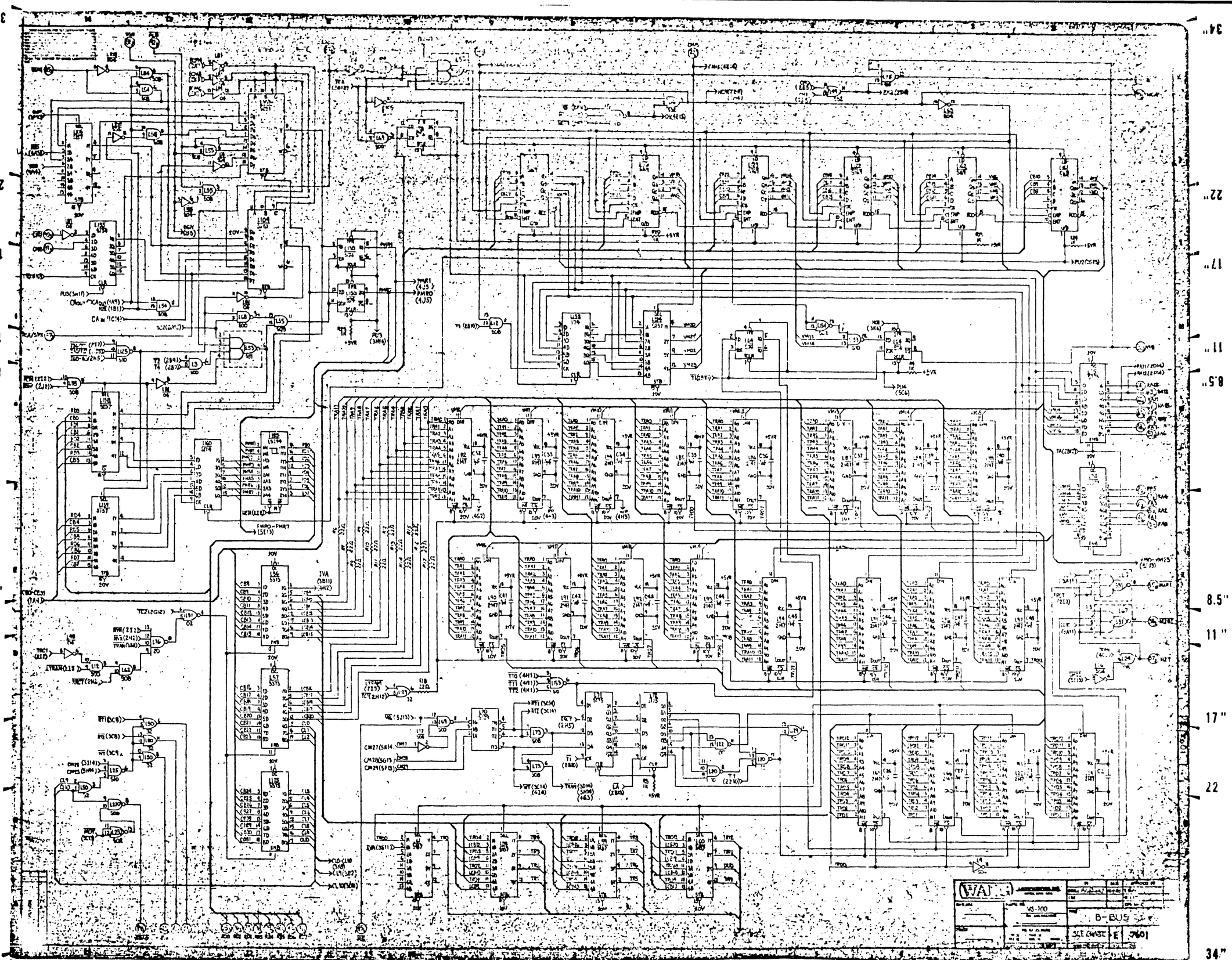
TITLE


B-BUS
7601
34"
22"
17"
11"
8.5"



WANG
VS-100
B-BUS
SET CHART E 7601
BCM6 (3K13)
BCM5 (3K13)(1C14)
BCM4 (3K13)
BCM3 (1C14)
B3 (1C10)(3C8)(4C13)
ACP (1A2)(4C12)
MV4 (4E13)
MINC (4K7)
MLEC (4K7)
FSW (3G14)
RCM (3G14)
WCM (3F12)
F5 (1B12)
TACT (3D14)(3E2)
MVN (3D14)
S0 (1D14)
S2 (1D14)(1K14)
S3 (1C14)
S1 (1C14)(1J14)
MVH (1B10)(1J14)
LTRAM (3D10)(3D14)
MCH (3K8)(4D13)
RACT (3C8)(3D14)
MNUM (1B14)
MCIIX (3J8)
ACO (1B14)
L170
L108
L109
LEN 1
LEN 2
LEN 3
LEN 4
CLKB (2A6)
GT2 (2A13)
TC1 (3D10)(3H7)(4G14)
TC2 (3K11)
CH0-CH31 (4H5)
CH0 (3K5)
CH1 (3K5)
CH0-CH15 (4F12)
IR3B
STKI
X2I
RIDI
BCH0
BCH1
BCH2
BCH3
BCH4
BCH5
BCH6
BCH7
CHOE
CHIE
HCH (3K4)
MOT (5C13)
MDOL
MUOR
MDIL
MDIR
TA·LA (4G14)
RA12 (3G1)
RA11 (3G1)
CDB
CLKB
GT1
GT2 (2H13)(5C14)
CLKB (2G13)
GLD (5B10)
R22 +5VR
TCH0 TCH1 TCH2 TCH3 TCH4 TCH5 TCH6 TCH7 TCH8 TCH9 TCH10 TCH11 TCH12 TCH13 TCH14 TCH15

G2


B-BUS
VS-100
SIZE
DWG NO
REV
SHEET
34"
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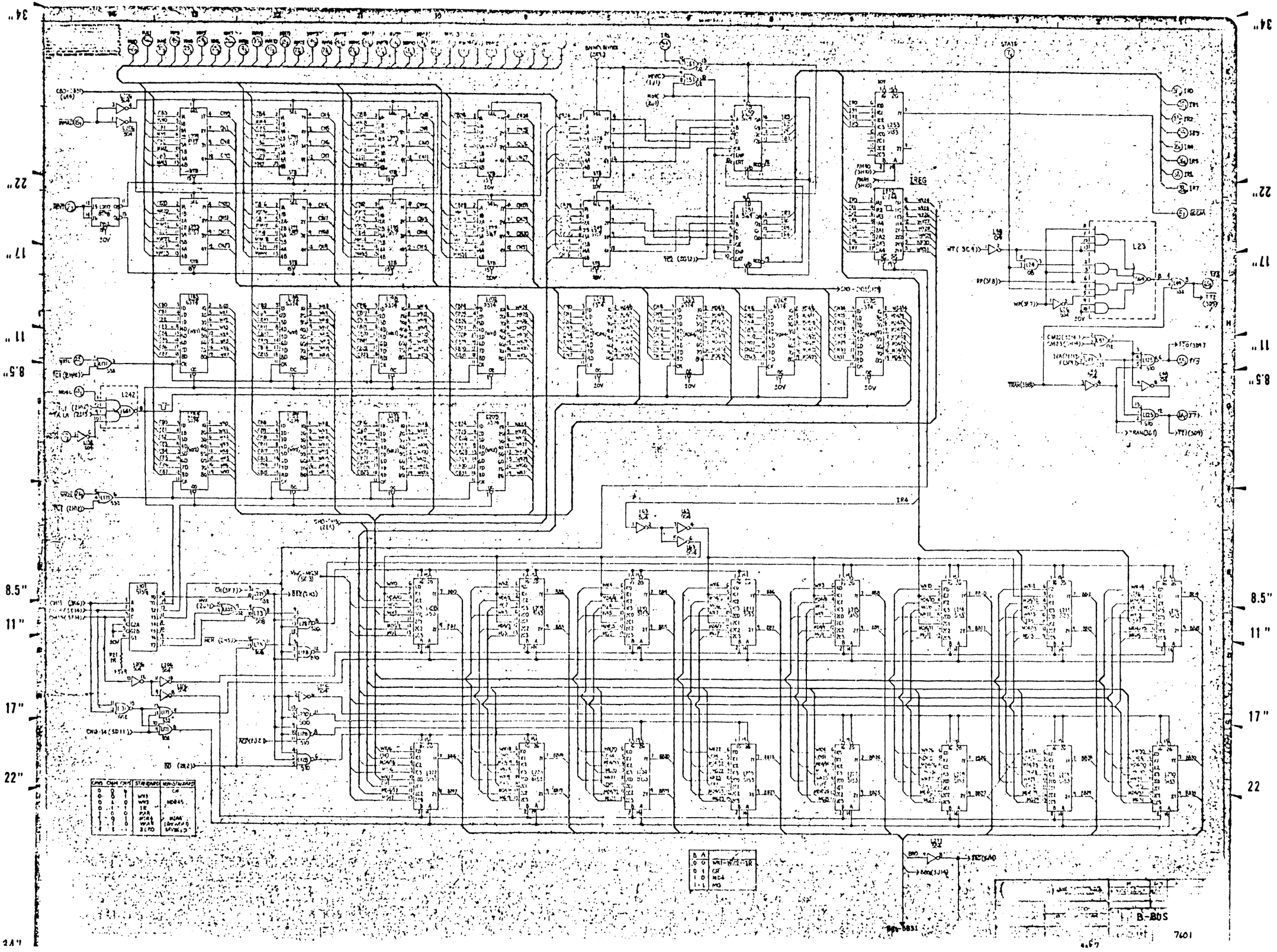
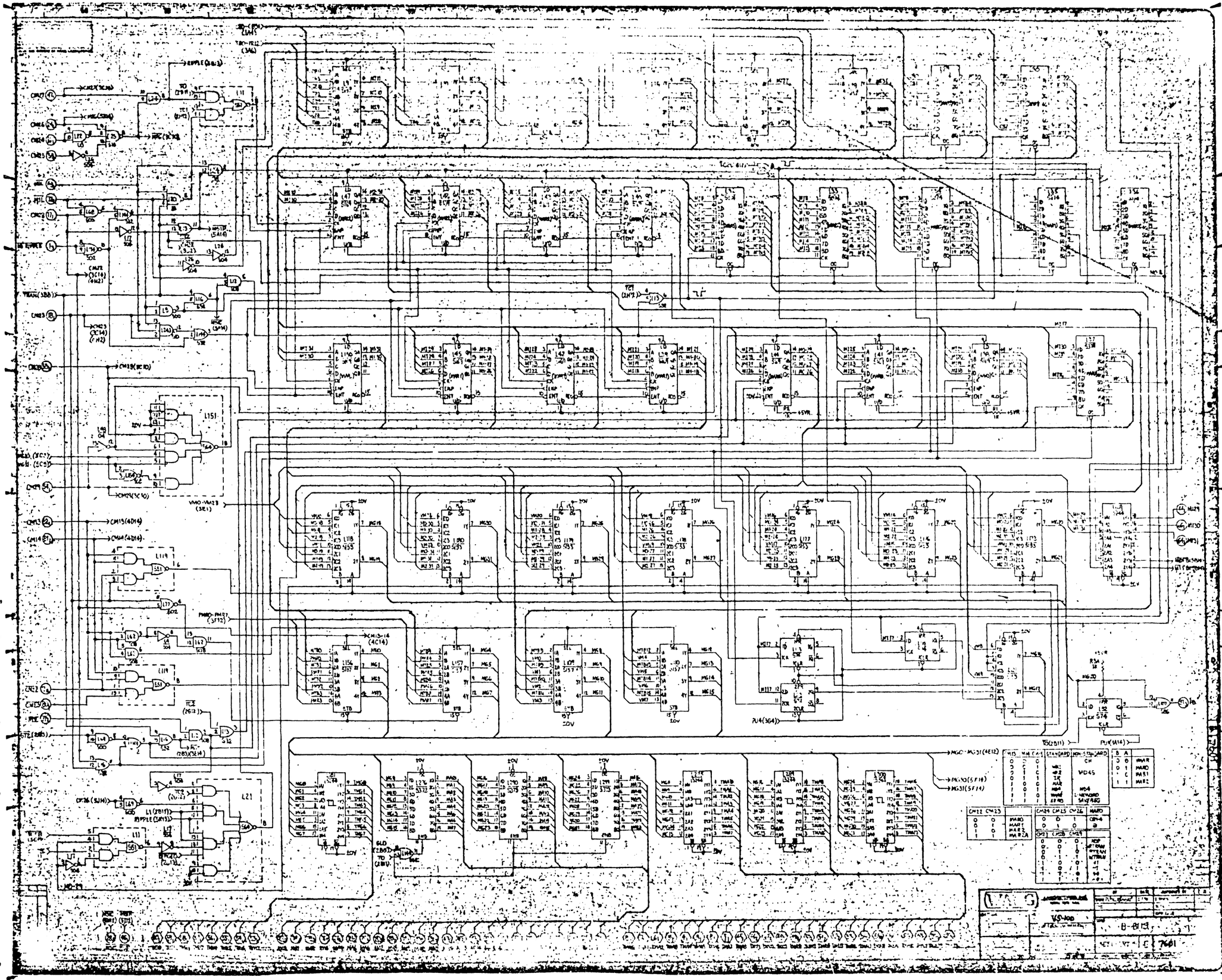
17"
11"
8.5"



G4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CM5
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CM15(4D14)
CM14(4D14)
CM13(4C14)
CM12(4C14)
CM11(3C14)
CM10(3C14)
CM9(3C14)
CM8(3C14)
CM36(5J14)
CM35(5J14)
CM34(5J14)
CM33(5J14)
CM32(5J14)
CM31(5J14)
CM30(5J14)
CM29(3C14)
CM28(3C14)
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CM17(3C14)
CM16(3C14)
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MG31
MG0 - MG31(4E12)
MG30(5F14)
MG31(5F14)
RU4(3G4)
RU4(4J14)
TSO(5J11)
VM0 - VM23
(3E1)
RIPPLE(3J13)
RIPPLE(3J12)
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RIPPLE(3H2)
RIPPLE(3H1)
RIPPLE(3H0)
MAR
MARD
MAR1
MAR2
VG45
VG-100
B-8113
NET
7401
G5

7601-R4

NOTES
1 ALL RESISTORS ARE 1K 1/4W 10% EXCEPT AS NOTED.
2 ALL CAPACITORS ARE 50V X7R CERAMIC EXCEPT AS NOTED

SEE SHEET 7

WANG LABORATORIES, INC.				
MODEL NO VS-100				
TITLE B-BUS				
SEE CHART	E	7601	3	

G6

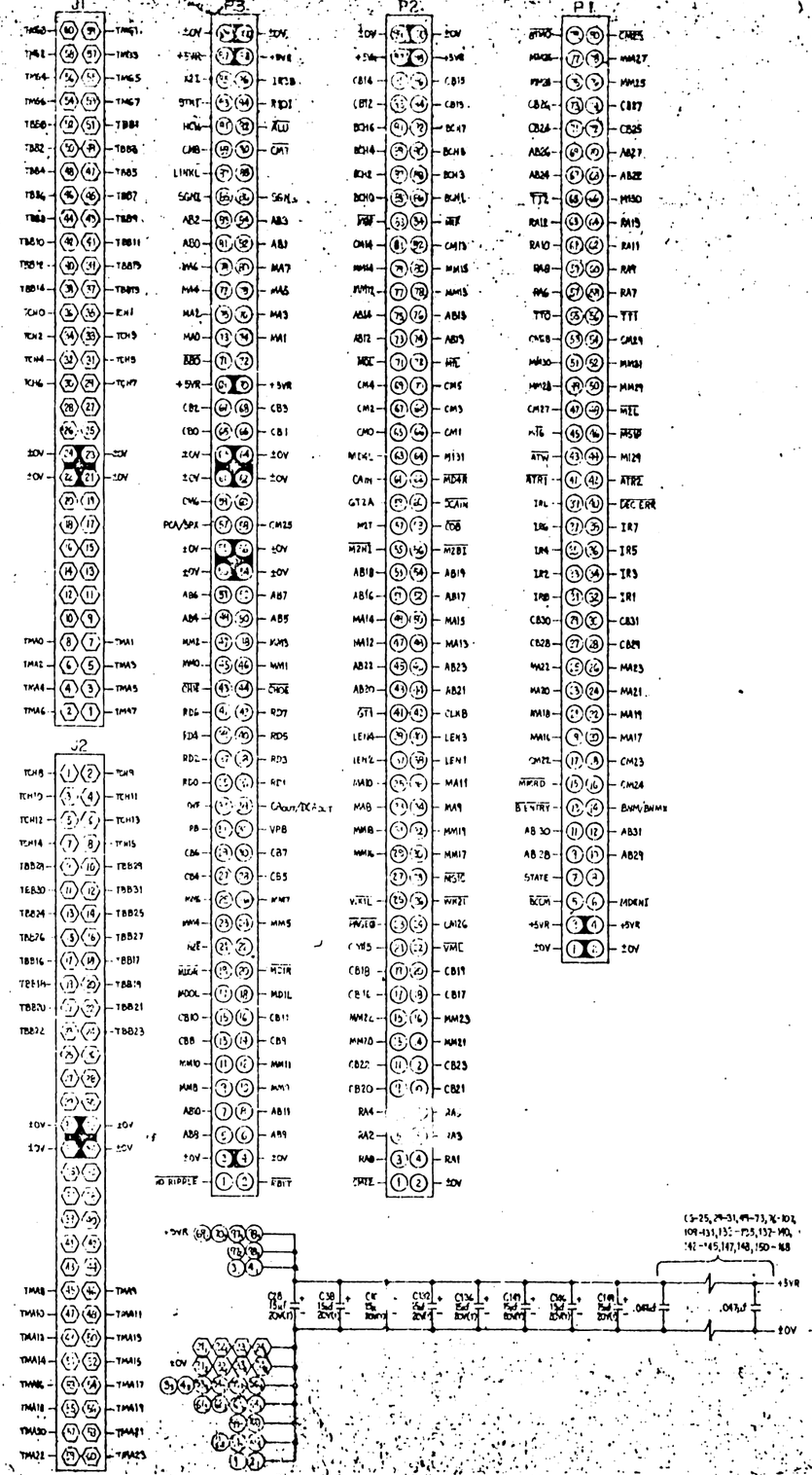
IC LOCATION	TYPE	W.L. PART NO.
L62, 31, 119, 127, 178, 176, 176, 146-149	SPARE	
L3, 68, 69, 180	74ACQ	376-0228
L4, 17, 76, 63, 135, 172, 206, 377, 198	74S04	376-0197
L5, 7, 8, 145	74S240	376-0706
L6	74S195	376-0276
L9, 10, 14-5, 18, 19, 58-61, 66, 69, 80, 89, 96, 97, 124, 249, 278, 281, 283, 286, 291, 293, 296, 297	74S157	376-0217
L11, 53, 67, 68, 144, 148, 241	74S51	376-0154
L12, 13, 55, 62, 75, 132, 245	74S08	376-0210
L15, 16, 44, 153, 154, 166, 177, 205, 217, 221, 235, 236, 246	74S32	376-0208
L20	7410	376-0003
L21, 83, 157, 170, 218	74S64	376-0101
L22	7400	376-0001
L24	74S08	376-0081
L28, 125, 128, 155, 245	74S10	376-0238
L21, 28, 82, 84, 92-97	8147	SEE CHART
L29, 33, 35-37, 183, 196, 198-199, 208, 213, 258, 263, 265, 270	74S374	376-0305
L30-43, 122, 123, 126, 127, 150, 161, 162, 250, 251	74S169	376-0351
L44, 81	7404	376-0010
L50, 79, 99, 101, 180, 189, 187	7432	376-0093
L51	7402	376-0014
L52, 64, 94, 103, 104, 130, 137, 138-142, 168-168,	74S74	376-0208
L70, 174	74S33	376-0335
L71, 72	74S113	376-0270
L74	74LS112	376-0340
L76	7420	376-0004
L77, 151, 154, 257, 261, 268	74S08	376-0199
L78, 80, 100, 212	7453	376-0087
L82, 258-61	74S138	376-0298
L105, 106	74S251	376-0389
L107	74S86	376-0271
L111, 143	74S37	376-0296
L108, 121, 173, 176-80, 208-211, 273-276, 222-229, 237-230, 244, 253	74S153	376-0215
L118, 160	74S174	376-0247
L138	74S257	376-0151
L165, 172, 181, 182, 185, 186, 200, 204, 252, 275, 281, 300	74S244	376-0288
L169, 201, 246	74S244	376-0358
L170, 171, 175, 276, 290, 299, 301	74S373	376-0306
L207	8T98	376-0285
L219, 219A, 264, 264A	74S182	376-0469
L231	8T97	376-0289
L232	74S151	376-0356
L233, 234	74S30	376-0198
L254, 257, 259, 262, 266, 269, 271, 274	8T98	376-0254
L258, 156, 260, 261, 268, 270, 273, 275	74S81	376-0258
L278, 280, 282, 284, 287, 294, 296, 298	74197	376-0082
L287	74S10	376-0230
L288	74174	376-0048
L27, 28, 65, 66, 82-97	8 PIN SKT.	376-1014
L254-257, 259-262, 266-269, 271-274	24 PIN SKT	376-9003
L150-151, 270-273, 285, 289, 290	20 PIN SKT	376-9020

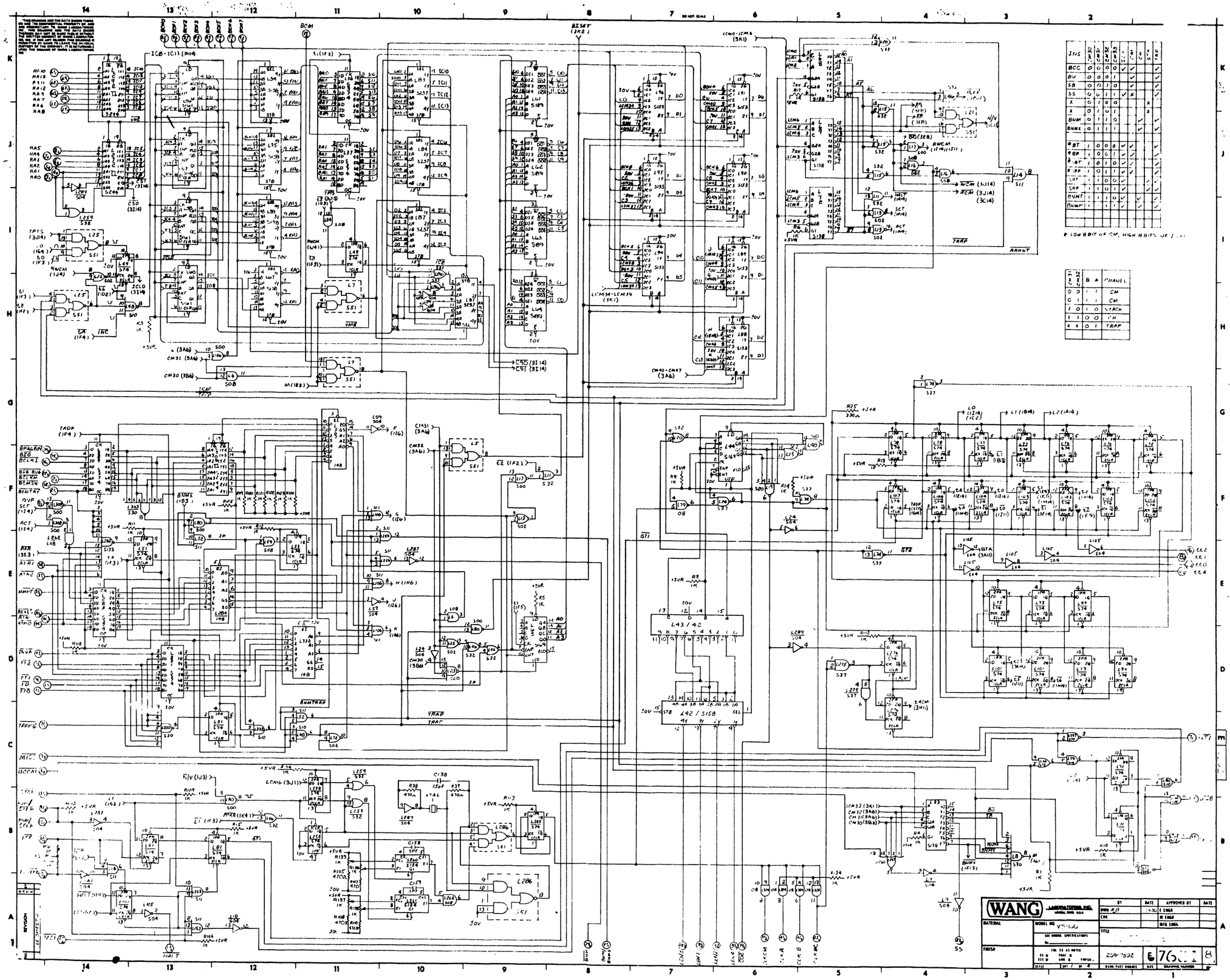
COMPONENT	TYPE	W.L. PART NO.
R1, 2, 3, 54, 55, 70, 71, 73, 76	1K, 1/4W, 5%	330-1041
R5-18	220Ω, 1/4W, 5%	330-1023
R22	270Ω, 1/4W, 5%	330-1027
C1-23, 29-31, 49-52, 76-107, 109, 111, 113, 117-140, 142-145, 147, 148, 150-168	.047μF, 50V	300-1956
C26, 27, 32-37, 38, 48	1μF, 50V	300-1950
C108, 58, 108, 132, 136, 141, 146, 149	15μF, 20V TANT.	300-4022
J1, J2	60 PIN, 90° HEADER	350-0441

TYPE	LOCATION	ERASES
74S00	L3	2
	L17	3
74S02	L151	1
	L106	1
7514	L132	2
	L26	1
	L4	1
74SC8	L135	1
	L245	1
7432	L121	1
74S32	L255	1
74S37	L117	3
74S51	L169	1
74S74	L114	1
	L241	1
74S86	L107	2
74S139	L70	1
	L134	1
74S64	L43	1
74S74	L98	1

MNEMONICS	COORDS.
ABO-AB31	1H16
ACLO	5K15
ADMA	5A13
ATN1	5H13
ATN2	5A13
ATN	5H14
BCHO-BCH7	2C1
BMM, BMMX	5K9
BRINTX	5K1
BWO	6A6
BCTR	4E1
CAM	5C16
CAOUT/DCAOUT	1A9
CBO-CB31	1A8
CLKB	2B14
CMO-CM6	2K15
CM7	5F14
CM13	5F16
CM16	5E14
CM15	3K7
CM22	5C16
CM23	5H16
CM24-M26	5J14
CM27	5K16
CM28	5J14
CM29	5F16
CM27	5F16
CM32	5C16
CPB	2C16
CRSE	2B1
CRTE	2B1
CM33	6J14
DE-ISOL	1A1
DCAIN	1B16
GT2A	2B14
GYT	2B14
HEN	3A1
IML	4K7
IMO-IM7	4K1
IRSB	2E1
LEN1-LEN6	2G16
LINKL	3K11
MDF	5K2
MIR	5K2
MIC	5C16
MIL	5C16
MCI	5J16
MDT	5F1
MXE	3A11
MIR-MIS1	5F1
MMO-MM31	6K16
MOIL	2E14
MOIL	2E14
MM0-MM23	5A11
MOAL	4G14
MOIE	2E14
MOIE	2E14
MMB	4G14
MMRD	4J14
MMC	5A14
MSTB	5A16
MTBI	5D1
MTC	3E1
MERNT	1C16
NO RIPPLE	5F16
NXE	1B1
OVF	1A11
PAGEO	2J14
PB	5D1
PCA/SPX	3H14
RAO-RA5	3F1
PHYT	4J16
RDO-RD7	3A12
RTCI	2D1
RA6-RA13	3G1
SGN	3K13
SGNI	3K14
STATE	4K3
STKI	2E1
TBBO-TBB31	1J1
TCHO-TCH15	2A7
TMAO-TMA23	5A7
TMA0-TMA9	5A13
YTB	4H7
YTT	4G1
YTZ	4H1
VMI	3K11
VPB	3H7
WRIE	4G14
WRIE	4F16
XST	2E1

210 + 209 + 397 OR 398		
210	209	L27, 28, 65, 66, 82-97
7601-A	7601	387-0340




IIS
BCC
BU
SB
SS
X
X
BWM
BWMI
*BT
*BR
*BRF
*XT
SRF
BWNT
BWNF
TRAP
ARNNT
CHANNEL
CM
CM
STACK
CH
TRAP
WANG LABORATORIES, INC.
BOARD NO. VS-130
TITLE
220-7632
DRAWING NUMBER
H1

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DO NOT SCALE

WE0-WE3 (3E10)

K17(C1)

1A0-1A11 (3E13)

1(3E12)

2A0-2A11 (3E13)

P(3E12)

4A0-4A11 (3E11)

P(3E12)

5A0-5A11 (3E11)

CM0-CM47 (3H10)

REVISION	BY	DATE

	BY	DATE	APPROVED BY	DATE
DWN				
CHK				

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

MATERIAL

MODEL NO VS-MCC

SEE SHEET SPECIFICATIONS

No

FINISH

TOL UNLESS NOTED
FRAC ±
DEC ±
ANG ±
FINISH

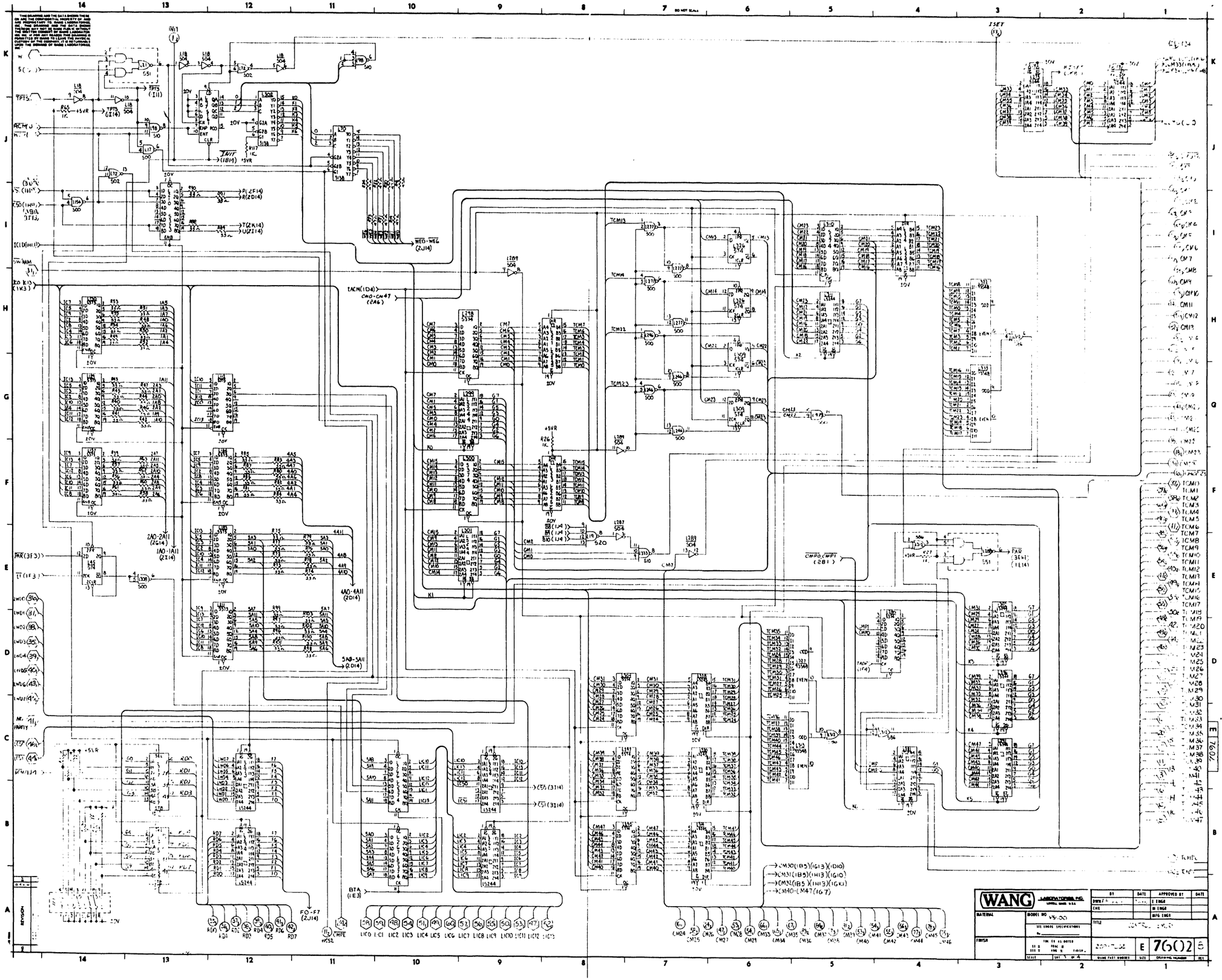
TITLE CONTROLLER

SIZE E

DRAWING NUMBER 700

WANG PART NUMBER

SHT OF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DO NOT SCALE
WANG LABORATORIES, INC.
LOWELL, MASS. U.S.A.
MATERIAL
MODEL NO VS-00
SEE ENGRG SPECIFICATIONS
No
FINISH
TOL EX AS NOTED
XX ± .XXX ± ANG ±
SCALE
SHT 1 OF 4
BY
DRWN / E. [illegible]
CHK
DATE
APPROVED BY
E ENGR
M ENGR
MFG ENGR
DATE
TITLE
CONTROL UNIT
USED ON NEXT ASSY
NEXT ASSY
E
7600 2
DRAWING NUMBER
REV
REVISION
ISET
(F3)
TPTS (I11)
TPTS (I14)
ACM (J
WEO-WE6 (2J14)
ICLD(1H1)
SW WAM (J1)
EO-E15 (1W3)
EACM(1D4) CM0-CM47 (2A6)
+5VR
R26 1K
TCM13
TCM14
TCM22
TCM23
CM13
CM14
CM22
CM23
CMPO,CMPT (2B1)
FAR (3E4) (1E14)
FADF (1F4)
TCM35
TCM36
TCM45
TCM46
CM35
CM36
CM45
CM46
CM30(1B5)(1G13)(1D10)
CM31(1B5)(1H13)(1G10)
CM32(1B5)(1H13)(1G9)
CM40-(M47(1G7)
BTA (1E3)
LIC0 LIC1 LIC2 LIC3 LIC4 LIC5 LIC6 LIC7 LIC8 LIC9 LIC10 LIC11 LIC12 LIC13
CMPE
WR52
RD0 RD1 RD2 RD3 RD4 RD5 RD6 RD7
FO-F7 (2J14)
2A0-2A11 (2G14)
1A0-1A11 (2I14)
4A0-4A11 (2D14)
5A0-5A11 (2D14)
FAR(3F3)
LT(1F3)
P(2F14)
R(2E14)
T(2K14)
U(2I14)
CM0 CM1 CM2 CM3 CM4 CM5 CM6 CM7 CM8 CM9 CM10 CM11 CM12 CM13 CM14 CM15 CM16 CM17 CM18 CM19 CM20 CM21 CM22 CM23 CM24 CM25 CM26 CM27 CM28 CM29 CM30 CM31 CM32 CM33 CM34 CM35 CM36 CM37 CM38 CM39 CM40 CM41 CM42 CM43 CM44 CM45 CM46 CM47
TCM0 TCM1 TCM2 TCM3 TCM4 TCM5 TCM6 TCM7 TCM8 TCM9 TCM10 TCM11 TCM12 TCM13 TCM14 TCM15 TCM16 TCM17 TCM18 TCM19 TCM20 TCM21 TCM22 TCM23 TCM24 TCM25 TCM26 TCM27 TCM28 TCM29 TCM30 TCM31 TCM32 TCM33 TCM34 TCM35 TCM36 TCM37 TCM38 TCM39 TCM40 TCM41 TCM42 TCM43 TCM44 TCM45 TCM46 TCM47

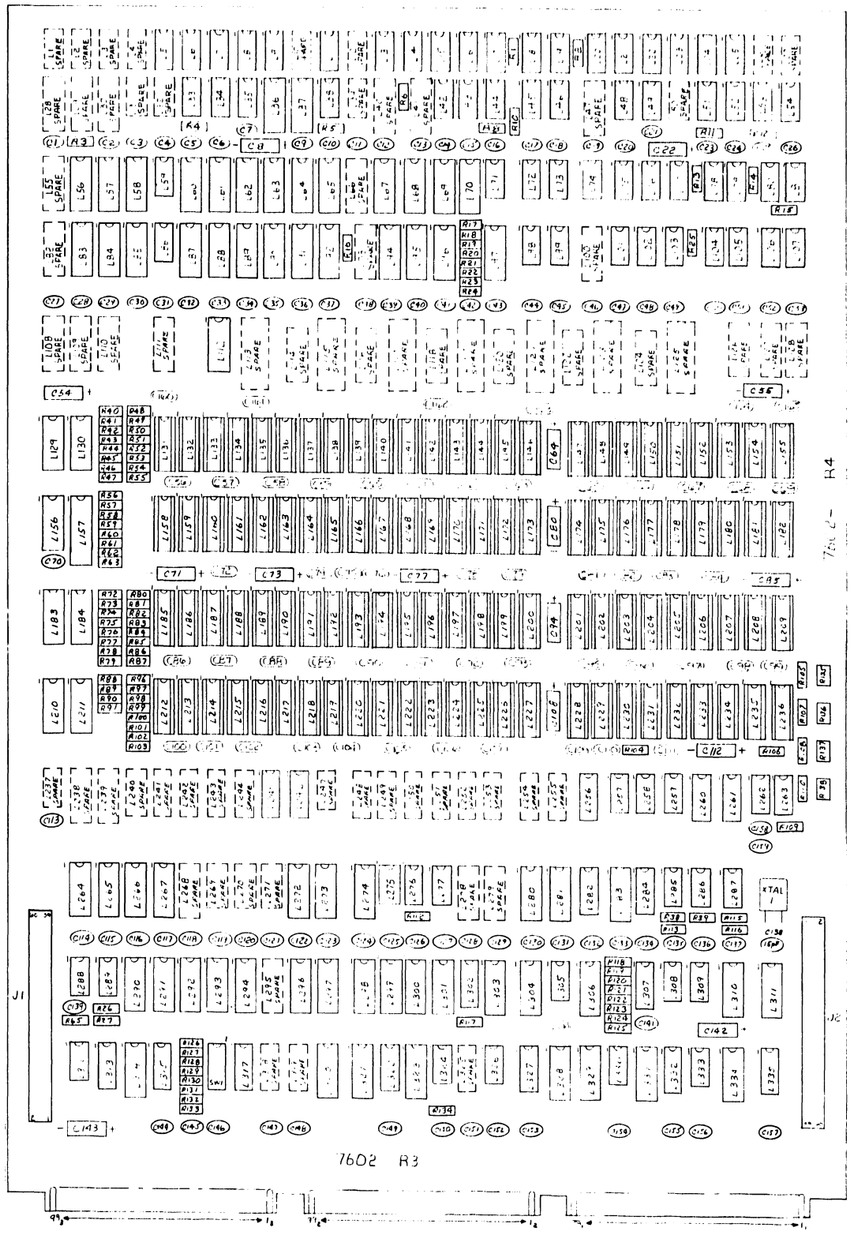
H3

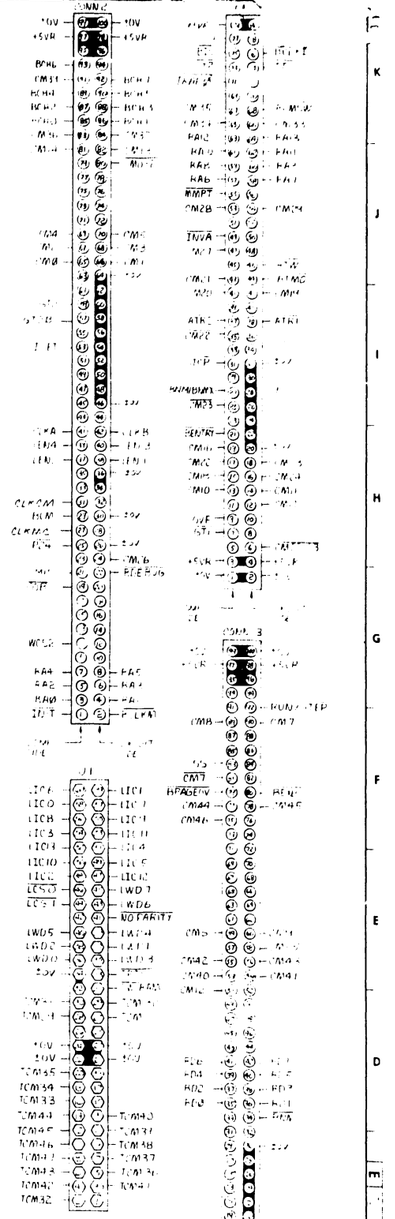
IC LOCATION	TYPE	WL PART NO
L1-9, 11-16, 21, 29-41, 47, 50, 55, 66, 86, 93, 100, 108-110, 114, 116, 119, 120, 122, 124, 126-128, 237-246, 249-255, 268-271, 276, 279, 282, 284, 288, 293, 311, 321, 325, 331	SPARE	
L5, 7, 24, 25, 686, 288	74S51	376-0184
L6, 8, 59, 262	74S08	376-0200
L8, 305, 330	74S30	376-0198
L9, 18, 24, 59, 105, 287, 289	74S04	376-0197
L17, 20, 46, 116, 299	74S32	376-0205
L13, 22, 72	74S02	376-0199
L14, 52, 106, 256, 263	74S11	376-0237
L17, 80, 156, 246, 277, 308	74S00	376-0228
L19, 23	74S20	376-0230
L33, 68-70, 92, 302	74S138	376-0298
L34, 35, 38, 42, 67	74S158	376-0301
L36, 37, 280, 283, 290, 297, 298, 300, 309, 310, 329, 331	74S374	376-0305
L43	7442	376-0008
L44, 65	74S169	376-0331
L45, 49, 51, 53, 71, 73, 75-78, 81, 99, 101-104, 107, 258, 276, 285, 309, 326	74S74	376-0202
L48, 98, 333	74S10	376-0238
L56-58, 60, 97	74S161	376-0278
L61-64	74S189	376-0341
L74, 257, 275	74S37	376-0296
L79, 324	7404	376-0091
L80 A5, A7	74S157	376-151
L88-91, 94-96	74S153	376-0215
L112, 129, 130, 131, 183, 184, 210, 211	74S373	376-0301
L118-155, 159, 160, 212-236, 247-248	2147	111-0001
L145	MM5290	376-0260
L260-261	74S124	376-0293
L269-280, 281-282, 285-286	MM5441	376-0248
L266, 267	74S112	376-0286
L270-274, 692, 306	74S244	376-0338
L275	MM5299	376-0215
L280 (1,3,5)	MM5480	376-0248
L281	MM5481	376-0249
L283, 284, 287	MM5484	376-0250
L285 (2,4,6)	MM5485	376-0251
L288 (1,3,5)	MM5486	376-0252
L365 (2,4,6)	MM5487	376-0253
L366, 367	74S114	376-0286
L370-374, 692, 306	74S244	376-0338
L.S.	MM5299	376-0215
L280 (1,3,5)	MM5480	376-0248
L281	MM5481	376-0249
L283, 284, 287	MM5484	376-0250
L285 (2,4,6)	MM5485	376-0251
L288 (1,3,5)	MM5486	376-0252
L365 (2,4,6)	MM5487	376-0253
L366, 367	74S114	376-0286

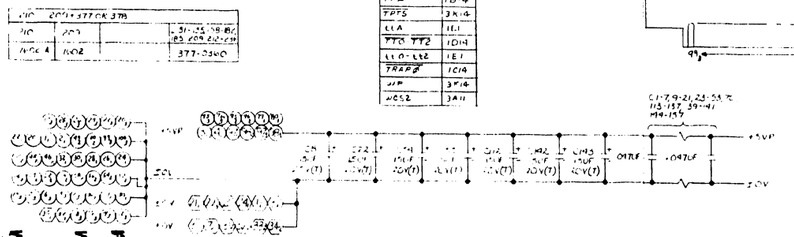
TYPE	IC LOCATION	SPARES
74S00	L17	1
	L156	2
74S02	L22	2
74S04	L233	1
	L1	4
	L14	4
	L230	2
	L59	2
74S08	L6	2
	L16	2
	L54	1
74S10	L12	1
	L14	1
74S11	L52	1
	L256	2
	L263	1
74S20	L23	1
74S32	L15	1
	L20	1
	L86	1
	L27	2
	L289	1
74S37	L27-1	3
	L275	2
74S51	L5	1
	L288	1
74S74	L45	1
	L55	1
	L285	1
74S112	L260	1
	L261	1
74S240	L245	1
7406	L19	3

COMPONENT	TYPE	WL PART NO
R1-6, R10-17, 20, 27, 45, 104, 106, 109, 112, 113, 115-134	1K 1/4W 1%	330-3011
R18-24	47Ω 1/4W 1%	330-1094
R25	330Ω 1/4W 5%	330-2034
R40-63 72-91, 96-103	33Ω 1/4W 5%	330-1014
R38-39, 105, 107, 108, 110	470Ω 1/4W 5%	330-2048
R135-138	1K HOT	336-1014
C1-7, 9-21, 23-33, 35, 36, 113-137, 139-141, 184-187	.047μF 25V	300-1700
CR 22, 34, 35, 70, 71, 73, 79, 80, 85, 94, 96, 112, 142, 143	15mF 20V(TA)	300-4022
C58-63, 65-69, 72, 74, 76, 78, 81-84, 86-93, 95-107, 109, 110, 111, 160-165	.1mF 50V	300-1930
C138	5pF	
C136	15pF	300-1015
XTAL 1	20 MHz	321-0045
J1, 2	60 PIN CONN	350-0441
SW1	SPST 8 POS	325-503

MNEMONIC	COORD.
ATAIO	1D14
ATWD	1D14
ATRI	1B14
ATPC	1B14
BUSINIT	1AB
BUSAT	1D14
BUSRXA	1B13
BUSRX	1D14
BUSTXD	1B14
BUSY	1A11
UCNO-BUS7	1K13
BDE BUG	1B14
BENTRY	1B14
BEXTC	1B14
BTO	1B14
BWM	1AB
CBAISEC	1C14
CMMA	1A6
CMA	1A6
CMB	1A5
CMMC	1A5
CMPE	3A11
CMO-2	3J1
CM7	3J1
CM22	3G1
CM23	3F1
CM27-25	1J1
CMO-CM25	5J1
CM24-CM29	3A7
CM33-CM46	1A6
CMB	1A5
CP1	1C1
CP2	1B1
HALT	1H14
HLTEXB	1B14
INT	3K13
IRVA	1D14
ISET	3K3
LED0	3C13
LED1	3C14
LD	1D14
LEN1-LEN4	1A7
LIC0-LIC13	5A10
LWD0-LWD7	1D14
MBT	1A14
MISS	1C14
MMPT	1E14
NOPARITY	1C14
OVF	1F14
P24	3K1
RA0 NA13	1D14
RDO-RD7	3A12
RMW STEP	1B14
SU	1A4
STOP	1B14
SW/RAI	3J14
TCMA0, TCMA1	3B1
TCMA2, TCMA3	3B1
TCM0-TCM7	3F1
TPE	1B4
TPF5	3K14
TLA	1E1
TTO-TT2	1D14
LL0-LL2	1E1
TRAP	1C14
UP	3K14
WCS2	3A11







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

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

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

MATERIAL — MODEL NO VS-UC — SEE UNLESS SPECIFICATIONS No.

FINISH — TOL ON XX ±0.010, XXX ±, ANG ±, FINISH

TITLE

209-7602 | E

SCALE | SHT 4 OF 4 | WANG PART NUMBER | SIZE | DRAWING NUMBER | REV

H4

DO NOT SCALE

WANG LABORATORIES, INC.	BY	DATE	APPROVED BY	DATE
MATERIAL	DWN AD	7/1/69	[illegible] ENGR	
	CHK		M ENGR	
MODEL NO VS-100			MFG ENGR	
FINISH	TITLE CACHE MEMORY			
SCALE	SEE CHART	SIZE E	DRAWING NUMBER 7604	REV 1
	SHT 1 OF 6			

J1

DO NOT SCALE

REVISION	BY	DATE	APPROVED BY	DATE

MATERIAL	MODEL NO VS-100
	SEE WANG SPECIFICATIONS No.
FINISH	TOL ES AS NOTED .X ± .XX ± .XXX ± FINISH

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

BY	DATE	APPROVED BY	DATE
DWN A/S		E ENGR	
CHK		M ENGR	
		MFG ENGR	

TITLE: CACHE MEMORY

SEE CHART | E | 7604 | 9

SCALE: NONE | SHT E OF G | DRAWING NUMBER | REV

CACHE MEMORY
WANG LABORATORIES, INC.
MODEL NO. VS-100
SEE CHART
7604
9
SCALE: NONE
DRAWING NUMBER
REVISION
SEE SHT. 8
BAEN (4D14)
BA (4D11)
CMAR1 - CMAR23 (4E14)
BBAC1 (9E13)
BBACO (4E13)
MCM24 (9E12)
MCM23 (9E12)
MOP (4E9)
BAN (2G4)
REFF(4D11)
CT (4J11)
CP(4H11)
CI(9E11)
MI(9J2)
CP (4H11)
C2 (4K9)
IPC (4F11)
RG4B (4E13)
C9 (4K10)
BKS (4B14)
CA9 - CA20 (2K14)
CA0 - CA8 (2D6)
GM2 (4F4)
AAB (2B1)
READ (4P1)
READ (2A9)
BK2 (2B5)
MA (4J4)
MI (4J2)
LI-LA (2K14)
LI (4K2)
RAS (4N6)
ICCT (8J4)
TMR (4C8)(4E8)
LCP (8J4)
REFF (4D7)
LCM24 (2K4)
MISS EFF (2B1)
C2 (4J7)
VMA (5G)
MMO
MM1
MM2
MM3
MM4
MM5
MM6
MM7
MMB
MM9
MM10
MM11
MM12
MM13
MM14
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MM25
MM26
MM27
MM28
MM29
MM30
MM31
B CMA
B CMA1
B CMA3
B CMA4
B CMA5
B CMA6
B CMA7
B CMA8
B CMA9
B CMA10
B CMA11
B CMA12
MOREAD
BOARD
JUMPERS
7604
A TO E
B TO F
7604-1
C TO E
D TO F
SW1
+5VR
1K
510
500
508
532
684
SEE CHART
E
7604
9
J3

DO NOT SCALE

PARITY

MATERIAL	MODEL NO. VS-100
FINISH	SEE CHART
NEXT ASSY	USED ON

	BY	DATE	APPROVED BY	DATE
DRN	G.S	12/5/80	E. ENGE	
CHK			E. ENGE	
ENGR			DAVE ENGE	

TITLE: CACHE MEMORY

SEE CHART | E | 7604 | 9

J4

DO NOT SCALE

J1 — SYS LOGIC

J2 — MEM LOGIC

J3 — 350-0861

J4 — 350-0861

NOTES :

1. ALL RESISTORS ARE 1K 1/4W 10% EXCEPT AS NOTED
2. ALL CAPACITORS ARE .047UF EXCEPT AS NOTED.
3. LOAD L50-L61, L76-L87, L101-L112, L126, L127, L129-L137, L151-L162, L176-L187, L200-L211, L226, L227, L229-L237 INTO IC SOCKET # 376-1014.

P3 7604-R4 COMPONENT SIDE P2 P1

REVISION	BY	DATE	APPROVED BY	DATE
SEE SHT 0	DWN BD	2.7.80	E ENGR	
	CHK		M ENGR	
			MFG ENGR	

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

MATERIAL — MODEL NO VS-100 — SEE ENGR. SPECIFICATIONS No. ____

FINISH — TOL. ON AS NOTED .XX ± .01 .XXX ± .005 FINISH

TITLE: CACHE MEMORY

SIZE E | WANG PART NUMBER 760+ | DRAWING NUMBER -

SCALE — SHT OF

J5

COMPONENT	TYPE	WL PART NO.
L1-5,7,8,9 12-15,19-22, 48,10,244	SPARE	
L6,17,40,41, 43,74,75,90, 92,94,99,100, 116,124,126, 149,170,174, 175,178,179,189, 225,299,267, 280,296,306, 307,308,332, 336,346	74574	396-0202
L10,11,24-27, 29,31,84,135, 37,270-273, 275,276,281, 290,295,301, 313,331,336, 338,341	8797	396-0189
L16	355	396-0126
L18,62,68, 138,248,319	74502	396-0199
L23,28,30,32, 33,36,49,63, 123,198,173, 238,250,251, 256-260,262-264,284-286, 289,300,304 316,317,322, 326,328,329	745373	396-0306
L38,49,166, 167,245,316, 323	74508	396-0200
L39,117,119, 269,292,318 318	74504	396-0197
L45	74530	396-0198
L50-52,76-78, 101-103,126,127, 131-133,174 178,200-202, 224,227	6147	SEE CHART
L58-66,79-87, 106-118,127-137,139,154-162, 177-187,203-211,227-237	6147-3	SEE CHART
L62,64,67, 242,291,293 329,340	74532	396-0205
L65,191	745153	396-0215
L66,88,89,91, 113,163-165, 168,189,195, 196,243,247 294,320	74500	396-0628
L69,193	74510	396-0238
L71,72,118, 120,145	74585	396-0259
L89,162,297	745511	396-0184
L95	74367	396-0176
L96,288	745260	396-0206
L97,128,172	93548	396-0348
L98	74586	396-0271
L119,220,278, 279,315	745138	396-0298
L115	7413240	396-0297
L122,322-326	745158	396-0301
L132,147	2515252I	396-0317
L139,140,189, 190,213,219, 239,240,291 292,312,283	745280	396 0246
L141,167	74511	396-0237
L143,144	7413189	396-0349
L146,338	74527	396-0296
L150,196,327	74520	396-0230
L151,228,241, 247	74564	396 0201
L152,216	7413139	396-0333
L215,255	7415244	396-0288
L215	745199	396-0221
L217,218,244, 271,272,287	7413157	396-0217
L221,344	7413175	396-0270
L232,2532A1, 254	7413176	396-0297
L264	7415393	396-0307
L281	7413151	396-0336
L294,299,301, 309,311,350	74157	396-0082
L298,304,78 335,339,339 340,343,277	745374	396-0305
L321,345	7442A	396-0006
L337	8778	396-0185
L342	745249	396-0338
L73	20PIN SOCKET	376-9020
L50-61,76-87, 101-118,126,127, 129-137,151-162, 176-187,201-216, 226,227,229-237	18PIN SOCKET	376-9016

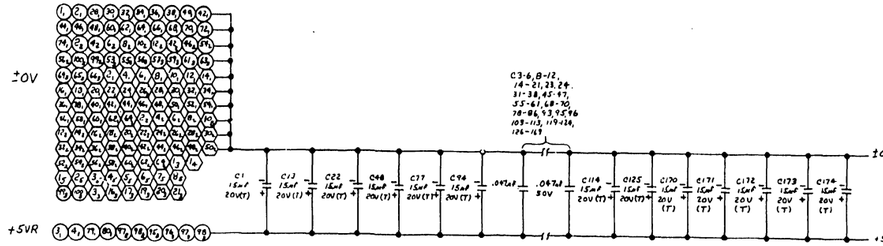
TYPE	IC LOCATION	SPARES
74500	L66	1
	L176	1
74502	L138	1
	L18	1
74504	L39	4
74508	L38	2
	L146	1
74510	L69	1
74532	L42	1
	L248	1
	L291	1
	L293	1
74537	L146	2
74551	L297	1
74574	L6	1
	L90	1
74586	L98	2
74S139	L216	1
8798	L337	1

COMPONENT	TYPE	WL PART NO
R2-9 10A-14A, 26,27 28,53-61, 71-85	1K 1/4W 10%	330-3010
R10-25, 29-52,62-69	15Ω 1/4W 10%	330-1015
R70	330Ω 1/4W 10%	330-0303
R96-97	47Ω 1/4W 10%	330-1047
R1	12K 1/4W 10%	330-4012
C1-3,22,98, 99,99,114,125, 170-174	15uF 20V (T)	300-4082
C2	.001uF, 500V	300-1906
C3-6,8-12, 14-21,23,24, 31-38,45-47, 55-61,68-70, 78-86,93,95, 96,103-113, 119-129,186-193	.047 50V	300-1966
C7	.01uF 25V	300-1903
C85-90,39-44,49-54,62-67,71-76,87-92,97-102, 115-118	.1uF 50V	300-1930
SW1	SKT, 8/PIN	376-9002T
SW1	SPST 8POS	325-1503
U1-U4	44 PIN CONN	350-0061
J5	SKT, 10PIN	376-9010

MNEMONICS	COORD
BA0-BA23	3K8
BA8b-BA23	4G1
BBA	4A10
BINIT	4A10
BAH8b-BAH23	3A11
BAH8-BAH23	3A6
BCMA1-BCMA12	3F1
BCMA21-BCMA23	4A16
BRS	4A16
CAH8b-CAH23	3G14
CBA	4A19
CEID	4K6
CI	4A10
CHECC	4A10
CP	4A10
CLKCAI	4K5
COB	4K5
CMD-2	4B16
CM13-CM6	4J16
CM22-CM26	4G16
CM29	4F16
DIRD0-DIRD31	3K3
DR1-DR74	4C1
GTI	4J19
GT2B	4K6
INA-CP	4A9
INVA	3K1
INT	2K3
IPO-IP7	4C16

MNEMONICS	COORD.
MBO-MB23	3K8
MB8b-MB1R	4G1
MBBR	4F1
MIB3	3B1
MIP	4K5
MOP	4K5
MRBS	4E1
MMC-MM 31	3Z1
MRBA1-MRBA4	4K14
MS1-MS4	3A7
NO HEAD	3B1
NO RIPPLE	4Z1
P0-P3	2A6
PAGE 0	4K5
PAGE 1	4K6
PAGE 2	4K6
PARITY	4K8
RA3	4A14
RBYT	4F1
REF	4A9
RIW	4A9
RIB	4A9
RUN/STEP	4J18
RU	4C1
STCP	4D1
TP	2A5
UNVA	3B1
WP(0-31)	4A11
WP(32-64)	4A11
MIE	4Z1
M2E	4M1

210 + 209 + 397 or 398				
210	209	L53-66,79-87, 106-118,139-137,154-162, 179-187,203-211,229-237	L50-52,76-78,101-103, 126,127,131-133, 174-178,200-202,226,227	L73
7604-A	7604	377-0413	377-0412	396-0305
7604-1A	7604-1	377-0413	377-0412	396-0305
7608-B	7604			
7608-1B	7604-1			



	7604 EREV	7604-1 E REV.
	2	2

REVISION	BY	DATE	APPROVED BY	DATE
ADDED J5	AD	3-7-80	E. LANGE	3-14-80
REVISED PER ECO M-1211 ADDED L73	AD	5-7-80	E. LANGE	5-14-80
REVISED PER ECO M-1211 ADDED L53-66,79-87,106-118,139-187,203-211,229-237	AD	7-3-80	E. LANGE	7-14-80
REVISED PER ECO M-1211 ADDED L50-52,76-78,101-103,126,127,131-133,174-178,200-202,226,227	AD	8-6-80	E. LANGE	8-14-80
REVISED PER ECO M-1211 ADDED L50-52,76-78,101-103,126,127,131-133,174-178,200-202,224,227	AD	9-4-80	E. LANGE	9-11-80

MATERIAL	MODEL NO. VS-100	TITLE	CACHE MEMORY
	SEE ENGR. SPECIFICATIONS No.		
FINISH	TOL. EX AS NOTED .XX ± .YYY ± ANG. ±	SEE CHART	E 7604 9
	SCALE: SHT. 6 OF 6	MAIN PART NUMBER	SIZE DRAWING NUMBER REV

J6

DO NOT SCALE

MMRD32 MMRD33 MMRD34 MMRD35 MMRD36 MMRD37 MMRD38 MMRD39 MMRD40 MMRD41 MMRD42 MMRD43 MMRD44 MMRD45 MMRD46 MMRD47 MMRD48 MMRD49 MMRD50 MMRD51 MMRD52 MMRD53 MMRD54 MMRD55 MMRD56 MMRD57 MMRD58 MMRD59 MMRD60 MMRD61 MMRD62 MMRD63

RDSTR (3F14)

MMRD0 MMRD1 MMRD2 MMRD3 MMRD4 MMRD5 MMRD6 MMRD7 — L301 — LRD0 LRD1 LRD2 LRD3 LRD4 LRD5 LRD6 LRD7

MMRD8 MMRD9 MMRD10 MMRD11 MMRD12 MMRD13 MMRD14 MMRD15 — L297 — LRD8 LRD9 LRD10 LRD11 LRD12 LRD13 LRD14 LRD15

MMRD16 MMRD17 MMRD18 MMRD19 MMRD20 MMRD21 MMRD22 MMRD23 — L289 — LRD16 LRD17 LRD18 LRD19 LRD20 LRD21 LRD22 LRD23

MMRD24 MMRD25 MMRD26 MMRD27 MMRD28 MMRD29 MMRD30 MMRD31 — L287 — LRD24 LRD25 LRD26 LRD27 LRD28 LRD29 LRD30 LRD31

RPH0 RPH1 RPH2 RPH3 RPH4 RPH5 RPH6 — L294 — LRH0 LRH1 LRH2 LRH3 LRH4 LRH5 LRH6

RPL0 RPL1 RPL2 RPL3 RPL4 RPL5 RPL6 — L292 — LRL0 LRL1 LRL2 LRL3 LRL4 LRL5 LRL6

MMRD32 MMRD33 MMRD34 MMRD35 MMRD36 MMRD37 MMRD38 MMRD39 — L300 — LRD32 LRD33 LRD34 LRD35 LRD36 LRD37 LRD38 LRD39

MMRD40 MMRD41 MMRD42 MMRD43 MMRD44 MMRD45 MMRD46 MMRD47 — L296 — LRD40 LRD41 LRD42 LRD43 LRD44 LRD45 LRD46 LRD47

MMRD48 MMRD49 MMRD50 MMRD51 MMRD52 MMRD53 MMRD54 MMRD55 — L298 — LRD48 LRD49 LRD50 LRD51 LRD52 LRD53 LRD54 LRD55

MMRD56 MMRD57 MMRD58 MMRD59 MMRD60 MMRD61 MMRD62 MMRD63 — L286 — LRD56 LRD57 LRD58 LRD59 LRD60 LRD61 LRD62 LRD63

LCMACI (3K10) — L117 — LRL6 LRL5 LRL4 LRL3 LRH2 LRL2 LRH1 LRL1 LRH0 LRL0 → LPO–LP6 (4D2)

L119 — LRH6 LRH5 LRH4 → LP5 LP4 LP3 LP2 LP1 LP0

$\overline{EA}$ (3C7) — L289 — ERCLK (4E14)

CP/C3T1 (4E14) — L289 — PU1 (4E14)

$\overline{EC}$ (3D6) — L115 — MMP (4D5)

$\overline{EB}$ — L116 — PU2 (3E14)

INIT (4K14) (4E12)

ECR5 (4B7) — $\overline{EO}$ (3C6) — L116 — ECCERR (4E14)

MMWP MMPT

SYM0 – SYM6 (4K6)

SYL0 – SYL6 (4K5)

WANG LABORATORIES INC. LOWELL, MASS. U.S.A.		BY	DATE	APPROVED BY	DATE
MATERIAL	MODEL NO. VS-100	DWN R.C.B.		B.S.I. ENGR	
	SEE SHEET SPECIFICATIONS No.	CHK		M. ENGR	
FINISH	TOL. EX. AS NOTED .XX ± .010 .XXX ± .005 FRACT. ±			MFG. ENGR	
		TITLE			
		CAGE NO. 71985	SIZE E	DRAWING NUMBER	REV.

SCALE — SHT. — OF —

REVISION — ECR 5-76

K1

DO NOT SCALE

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

MATERIAL	MODEL NO VS-100	BY	DATE	APPROVED BY	DATE
	SEE OTHER SPECIFICATIONS	DWN R.B	10-1-80	E ENGR	
FINISH		CHK		M ENGR	
	TOL IS AS NOTED: XX ± .XXX ± ANG ± FINISH			MFG ENGR	
	SCALE SHT 2 OF 6	TITLE SYSTEM BUS CONTROL			
		129-7605	E	7605	2

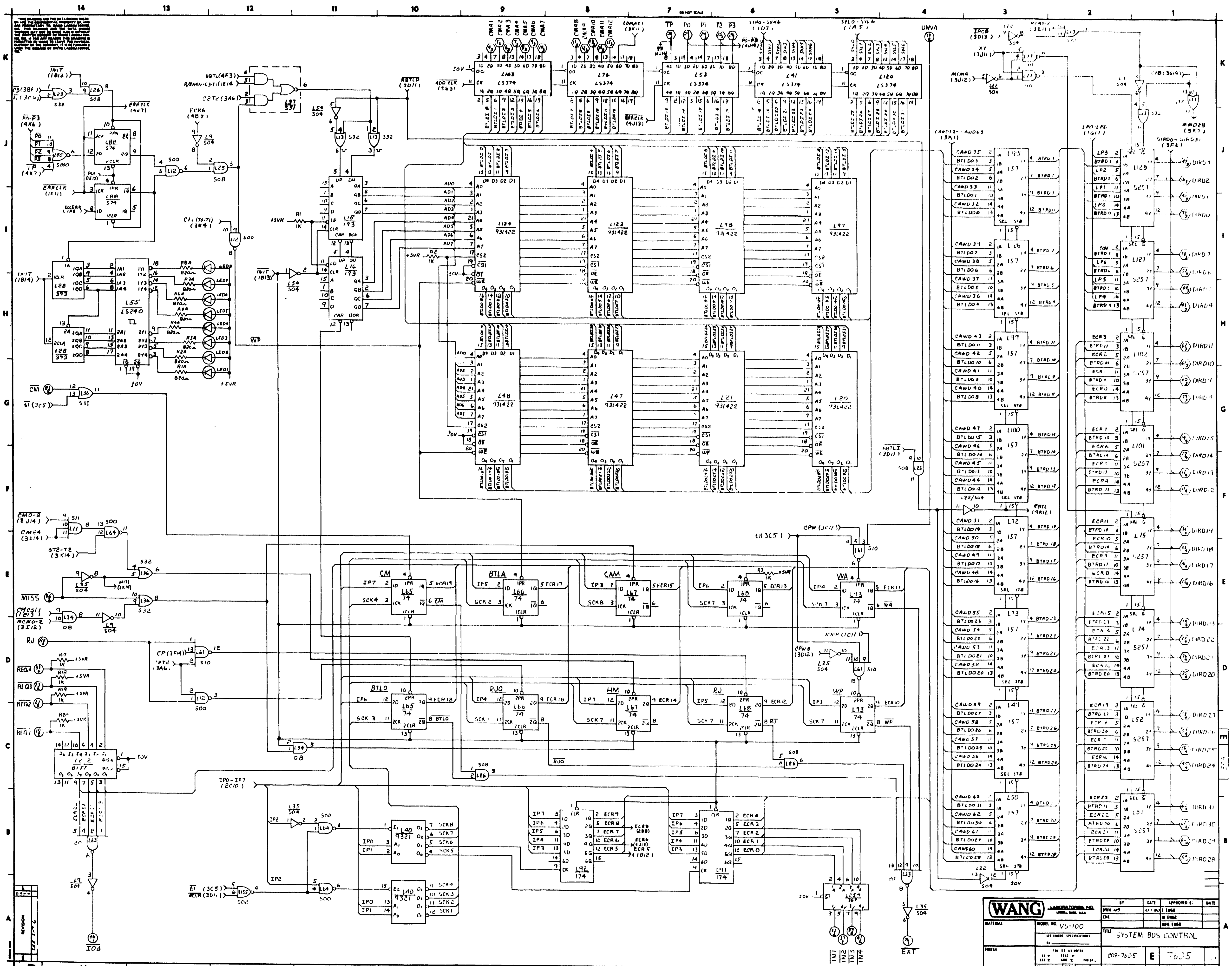
K2

DO NOT SCALE

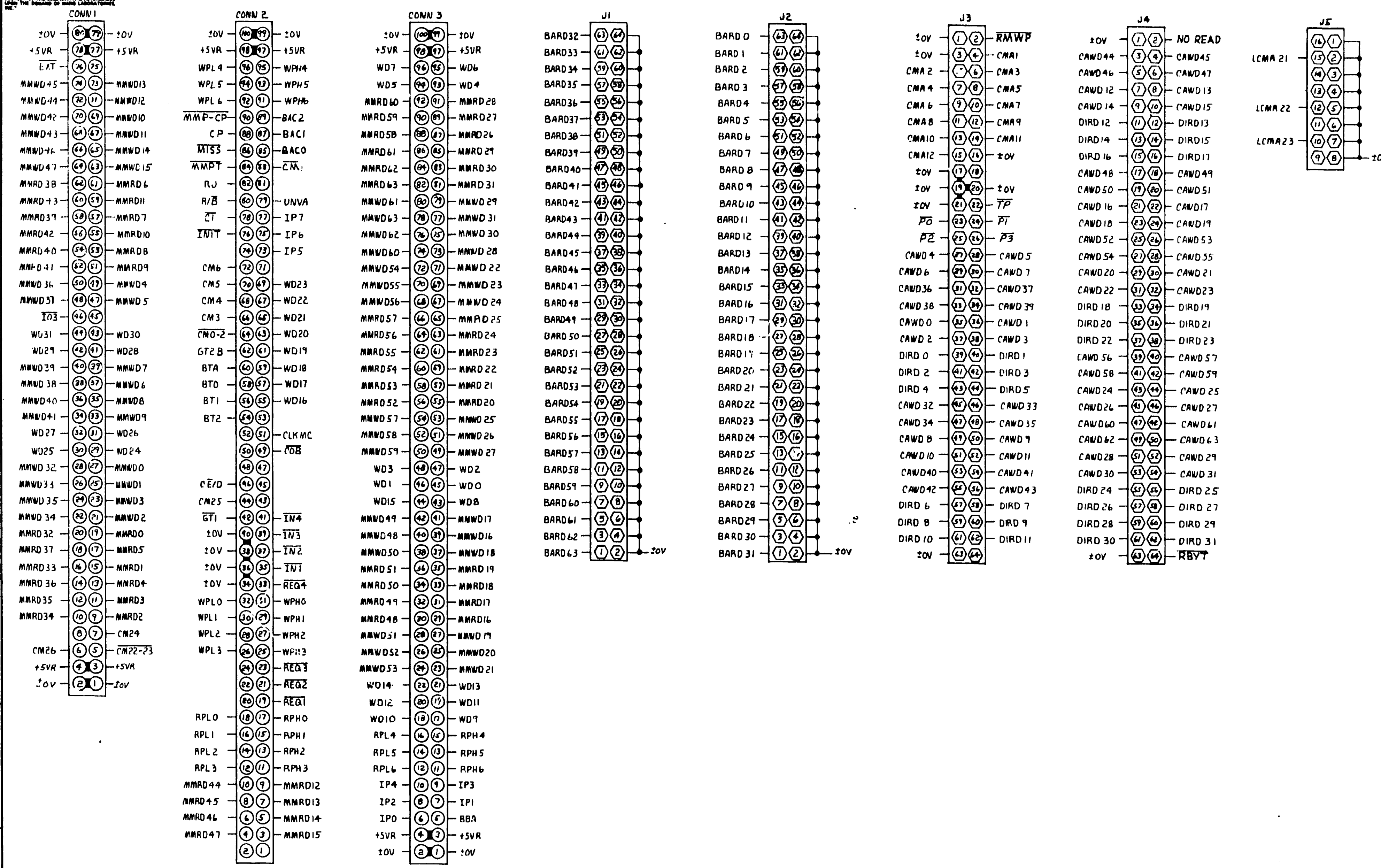
WANG LABORATORIES, INC. LOWELL, MASS. U.S.A.

MATERIAL	MODEL NO	VS-100	BY	DATE	APPROVED BY	DATE
		SYSTEM INTEGRATION	DWN AG	10-1-80	E. ENGR	
FINISH			CHK		M. ENGR	
					MFG. ENGR	
			TITLE	SYSTEM BUS CONTROL		
			SIZE	209-7605	E	7605	-
			SCALE		SHEET 3 OF 6		

K3


WANG LABORATORIES INC.
MODEL NO. VS-100
TITLE SYSTEM BUS CONTROL
209-7605
E
7605
SHT 4 OF 6
DO NOT SCALE
REVISION SEE SH 6

K4



BITS		A	B	C	D	E	F	G	S13B	
00	32	0	1	1	1	0	0	0	A3	C0
01	33	0	0	1	1	0	0	1	A1	C1
02	34	0	0	1	1	0	1	0	A1	C2
03	35	0	0	0	1	0	1	1	A0	C3
04	36	0	0	1	1	1	0	0	A1	C4
05	37	0	0	0	1	1	0	1	A0	C5
06	38	0	0	0	1	1	1	0	A0	C6
07	39	0	0	1	1	1	1	1	A1	C7
08	40	1	1	1	0	0	0	0	A7	B0
09	41	0	1	1	0	0	0	1	A3	B1
10	42	0	1	1	0	0	1	0	A3	B2
11	43	0	0	1	0	0	1	1	A1	B3
12	44	0	1	1	0	1	0	0	A3	B4
13	45	0	0	1	0	1	0	1	A1	B5
14	46	0	0	1	0	1	1	0	A1	B6
15	47	0	1	1	0	1	1	1	A3	B7
16	48	1	1	0	1	0	0	0	A6	C0
17	49	1	1	0	0	0	0	1	A6	B1
18	50	1	1	0	0	0	1	0	A6	B2
19	51	0	1	0	0	0	1	1	A2	B3
20	52	1	1	0	0	1	0	0	A6	B4
21	53	0	1	0	0	1	0		A2	B5
22	54	0	1	0	0	1	1	0	A2	B6
23	55	1	1	0	0	1	1	1	A6	B7
24	56	1	0	1	1	0	0	0	A5	C0
25	57	1	0	0	1	0	0	1	A4	C1
26	58	1	0	0	1	0	1	0	A4	C2
27	59	1	0	0	0	0	1	1	A4	B3
28	60	1	0	0	1	1	0	0	A4	C4
29	61	1	0	0	0	1	0	1	A4	B5
30	62	1	0	0	0	1	1	0	A4	B6
31	63	1	0	0	1	1	1	1	A4	C7
NO	NO	0	0	0	0	0	0	0	A0	B0
C0	C0	1	0	0	0	0	0	0	A4	B0
C1	C1	0	1	0	0	0	0	0	A2	B0
C2	C2	0	0	1	0	0	0	0	A1	B0
C3	C3	0	0	0	1	0	0	0	A0	C0
C4	C4	0	0	0	0	1	0	0	A0	B4
C5	C5	0	0	0	0	0	1	0	A0	B2
C6	C6	0	0	0	0	0	0	1	A0	B1

WANG LABORATORIES, INC.

DWN RB 10-1-80

MODEL NO VS-100

TITLE SYSTEM BUS CONTROL

209-7605 | E | 7605 | 6

SHT 5 OF 6

K5

LOCATION	TYPE	WL PART NO
L1-3,5,7-19, 21-23,25-38, 39,40,45,51, 60,61,67,71, 84,70,74,76, 104,111,116, 139,143,144, 159	SPARE	
L4,20,24,39, 108,118,132, 158,173,175	74S04	376-0197
L70,75,85,188	74S08	376-0200
L1130	74S11	376-0237
L46,64,78,107	74S00	376-0228
L22,23,36	74S32	376-0205
L113,114	74113	376-0053
L120,121,148, 171,178,179, 204	931422	SEE CHART
L124,206	74S20	376-0230
L28	74373	376-0330
L34	7408	376-0081
L37	74S51	376-0184
L40	7321	376-0096
L41,53,76,103, 120	74LS74	376-0286
L99,50,76,73, 97,100,105, 106,136,137, 149,150,153, 153,161,162,170, 172,173,178,181, 187,199,200, 202,203,224, 225,227,228, 240,245,246, 247,248,249, 250,252,253, 254,255,256, 257,258,259, 260,261,262, 263,264,265, 266,267,268, 269,270,271, 272,273,274, 275,276,277, 278,279,280, 281,282,283, 284,285,286, 287,288,289, 290,291,292, 293,294,295, 296,297,298, 299,300,301, 302,303,304, 305,306,307, 308,309,310, 311,312,313, 314,315,316, 317,318,319, 320,321,322, 323,324,325, 326,327,328, 329,330,331, 332,333,334, 335,336	74S157	376-0082
L51,52,74,75, 101,102,142,168	74S257	376-0131
L55	74LS240	376-0297
L56,88,89,109, 110,114,115,131, 261,262,263, 288,292	74S74	376-0202
L61,87	74S10	376-0238
L63	7420	376-0004
L65-68,93	7474	376-0006
L77	7400	376-0002
L79	7432	376-0093
L80	25S10	376-0339
L81,82,350 353	7415 3	376-0048
L85,86	74S260	376-0206
L91,92	74174	376-0098
L109,110,112, 116,133-135, 159,160	74S138	376-0298
L111,112	TBP24-10	377-0042
L117,119	74LS157	376-0216
L129	7414	376-0139
L139-142,155, 169-167,169 192,194,201	74S02	376-0199
L143-147,168-172,193-197, 218-222,302 311,329,339	74S86	396-0271
L148,151,156, 157,173,176, 189,195,198, 201,223,226, 259,284	74S157	396-0217
L154,179,204, 229,253,254	74367	396-0176
L180-183,205, 230,242-249, 255-266 289, 296,297,300, 301,324	74S373	396-0306
L206,207,231-236,238-241, 243-247,256-258,264-265, 266,268 277, 275-279,290, 291,299,295, 303,305,307-309,323,325, 328,329,330, 331,335,337, 338,340	74S280	396-0296
L113,231	74LS174	396-0267
L243,305,333, 336,345,324	74S374	396-0305
L198,251	74S153	396-0215
L202,210, 213,235,340, 342,344,348	8T97	396-0189
L261	74S175	396-0270
L232,274,278, 299	74S299	396-0338
L303	74S194	396-0221
L313,315,317, 320 DFF	74LS373	396-0310
L327,327	74S37	376-0296
[illegible]	16 PIN SKT	376-9010
L251	8T98	396-0185

COMPONENT	TYPE	WL PART NO.
R1 & 10-13,17-20	1K 1/4W 10%	330-3010
R1A - 8A	200Ω 1/4W 10%	330-2082
R21-24	22Ω 1/4W 10%	330 1022
C28,40,145, 165,230,259	15uF 20V (T)	300-4022
C29-39,41-144,146-164, 166-229,231-258,260-277	.047uF 50V	300-1966
J1-J4	64 PIN CONN 90°	350 0440
J5	16 PIN DIP SKT	376-9002
LED1-8	LAMP, RED	370-0026

TYPE	I C LOCATION	SPARES
74S00	L107	2
74S02	L155	2
74S04	L9	1
	L22	1
	L35	2
	L54	4
	L108	1
	L132	1
	L158	1
	L293	2
	L310	2
7408	L34	1
74S08	L70	2
	L85	1
	L26	1
	L188	1
74S20	L84	1
	L346	1
74S32	L13	1
	L23	1
74S37	L322	2
74S51	L37	1
74S74	L282	1
	L193	1
74S86	L218	1
	L311	1
	L329	1
7414	L129	4
8T97	L232	1
8T98	L281	1

MNEMONICS	COORD
BACO-BAC2	3H14
BARDO-BARD63	2G14
BBA	3E14
BTA	3A7
BTO-BT2	3A8
CI	3G14
CAWDO-CAWD63	3J1
CE/D	2A8
CLKMC	3D14
COB	3D14
DP	1E14
DM	4G14
DM22-23	3J14
DM24-DM26	3J14
DMO-2	3J14
DM3-DM6	3J14
DMA1-DMA8	4K9
DIRDO-DIRD31	4J1
EXP	4A9
GT1	1D14
GT2B	3K14
IO3	4A14
IPO-IP7	1A10
INIT	1B14
INI-IN4	4A5
LCMA 21	3K10
LCMA 22	3B14
LCMA 23	3C14
MMPT	1A12
MMPCD	2A8
MISS	4E14
MMRDO-MMRD 31	1J14
MMRD 32-MMRD 63	1K14
MMWD 0-MMWD 31	2J1
MMWD 32-MMWD 63	2A4
NO READ	3A14
PO-P3	4K7
RJ	4D14
RIB	3H14
RMWD	1A12
REQ1-REQ4	4D14
RPHO-RPH6	1P14
RPLO-RPL6	1P14
RSYT	3K8
TP	4K7
UNVA	4K4
WPLO-WPL6	2C1
WPHO-WPH6	2A12
WDO-WD31	2K12

210= 209 + 397-0398		
210	209	L20,21,47,48,97,98,123,124
7605-A	7605	397-0384

7605-R4

REVISION	BY	DATE	APPROVED BY	DATE
24 SPARE LEDS ADDED. ECO # 1754 APD.	AD 10/1/80	PJS 10/15/80		
REVISED PER ECO # 1854 APD.	AD 2-2-81	PJS 2-2-81		
REVISED PER ECO # 1901 AND WL MEMO.	AD 3-5-81	PJS 3-5-81		
REVISED PER ECO # 1944 AND WL MEMO.	AD 4-20-81	PJS 4-20-81		
REVISED PER ECO # 2324 APD.	AD 6/30/82	PJS 7/1/82		
REVISED PER ECO # 2324 APD.	AD 10/1/82	PJS 10/1/82		

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

	BY	DATE	APPROVED BY	DATE
DWN	AD	6-1-80	E ENGR	
CHK	[illegible]	7-14-80	M ENGR	
			MFG ENGR	

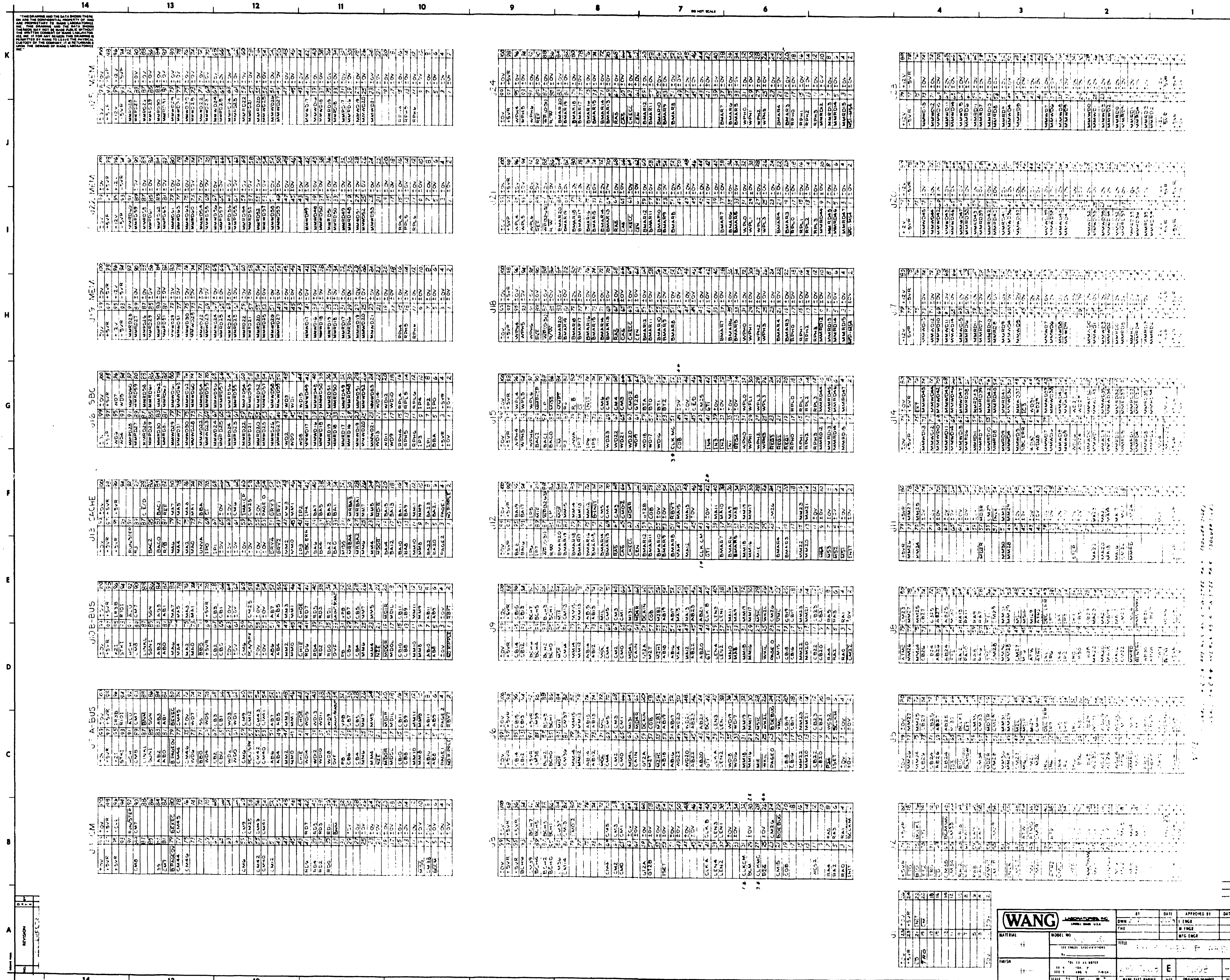
MATERIAL — MODEL NO VS-100 — SEE ENGR SPECIFICATIONS No.

FINISH — UNLESS OTHERWISE SPECIFIED: .XX ± .010, .XXX ± .005, ANG ± 1/2° — finish.

TITLE: SYSTEM PJS CONTROL

SCALE: SHT 6 OF 6 — DRWG PART NUMBER: 7605 — SIZE: E — DRAWING NUMBER: 7605 — REV: 5

K6


"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."
J25 MEM
J22 MEM
J19 MEM
J16 SBC
J13 CACHE
J10 B-BUS
J7 A-BUS
J4 CM
J24
J21
J18
J15
J12
J9
J6
J3
J23
J20
J17
J14
J11
J8
J5
J2
J1
REVISION
WANG LABORATORIES INC.
MATERIAL
MODEL NO
SEE ENGRG SPECIFICATIONS
FINISH
TOL. EX AS NOTED
BY
DATE
APPROVED BY
DATE
DWN
CHK
I ENGR
M ENGR
MFG ENGR
TITLE
E
WANG PART NUMBER
SIZE
DRAWING NUMBER
REV
SCALE
SHT

L1

DO NOT SCALE

REVISION	BY	DATE	APPROVED BY	DATE

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

MATERIAL	MODEL NO VS-100	DWN		
	SEE SHEET SPECIFICATIONS	CHK		
FINISH				
	SCALE	SHT 2 OF 3	WANG PART NUMBER	SIZE E

TITLE

DRAWING NUMBER

REV

L2

DO NOT SCALE

HOLE LEGEND & TOLERANCES

J50 J49 J48 J47

J46 J45 J44

J43 J42 J41

+12 J40 J39 J38

J37 J36 J35

-5 J34 J33 J32

J31 J30 J29

J28 J27 J26

J25 J24 J23

J22 J21 J20

J19 J18 J17

J16 J15 J14

J13 J12 J11

J10 J9 J8

J7 J6 J5

J4 J3 J2

J1

7608 – R4

REV	REVISION	BY	DATE	APPROVED
D	CHANGED PER ECO #M6-0394			
C	REVISED PER ECO #M6-0252			
B	REVISED PER ECO #M6-0152			
A	REVISED PER ECO #M6-0152			

COMPONENT	TYPE	PART NO
J1	26 POSITION	762
J2 J3 J4 J5 J6 J7 J8 J9 J10 J11 J12 J13 J14 J15 J16 J17 J18 J19 J20 J21 J22 J23 J24 J25 J26 J27 J28 J29 J30 J31 J32 J33 J34 J35 J36 J37 J38 J39 J40 J41 J42 J43 J44 J45 J46 J47 J48 J49 J50	100 PIN CONN	
J47-50	60 PIN CONN	350-0949

WANG LABORATORIES INC.

MATERIAL

FINISH

MODEL NO VS 100

SEE ENGR. SPECIFICATION NO

TOL. ON ALL NO. UNLESS OTHERWISE SPECIFIED

	BY	DATE	APPROVED BY	DATE
DWN			E. ENGR	
CHK'D			M. ENGR	
			MFG ENGR	

TITLE CPU MOTHER BOARD

20.0x28.0 | E | 7608

WANG PART NUMBER | SIZE | DRAWING NUMBER | REV

L3

COMPONENT	TYPE	ALL PART NO.
R1,2	820Ω 1/4W 5%	330-3089
C1	.01uF 100V	302-1914
C2	.047uF 12V	300-1968
U	P.C. SOCKET	370-0017
Y1	6.667 MHz	372-0021
J1-4, J7-40	50 PIN CONN	350-0493
J5, 6, 7, 10, 13, 14, 17, 18, 21, 22, 25, 26, 29, 30, 33, 34	40 PIN CONN	350-0001
J1, 11, 15, 19, 23, 27, 31, 35	44 PIN CONN	350-0139
J8, 12, 20, 24, 28, 32, 36	44 PIN CONN	350-0321

EC LOCATION	TYPE	ALL PART NO.
L1	7404	372-0510

WANG

DRAWN	MODEL NO. VS-100	SIZE	TITLE
		E	I/O MOTHER BOARD
ISSUED		210-7609	E 7609

M1

J4 J3 J2 J1

-13VUR

J8 J7 J6 J5

+12V

C2 C1 Y1 L1 R2 R1

J12 J11 J10 J9

-5VR

J16 J15 J14 J13

J20 J19 J18 J17

+5VR

±12V

J24 J23 J22 J21

J28 J27 J26 J25

7609-R3

+5VR

±10V

J32 J31 J30 J29

J36 J35 J34 J33

J40 J39 J38 J37

E-REV 1

WANG

MODEL NO. VS-100

TITLE I/O MOTHER BOARD

210-7609 E 7609 3

DO NOT SCALE

READ DATA (30₁) · INDEX (8₁) · TRACK0 (26₁) · 60 (15) · CPLD (33₆) · SYNC(ID5) · BYTE(IE2) · ERR(IF2) · INØ · IN01 · AI5 · WP

L9 Z80 CPU · L10 2708 · L11 LS240 · L12 LS174 · L13 LS04 · L14 LS74 · L15 LS155 · L16 LS04 · L17 9401 · L18 9602 · L19 LS38 · L20 LS74 · L21 8T98 · L22 LS74 · L23 LS161 · L26 LS240 · L2 LS244 · L5 LS244 · L7 LS164 · L8 LS10

XTAL1 2.4576MHZ · WAIT · BUSRQ · Φ · INT · RESET · NMI

LWD7 (11₆) LWD7 · LWD6 (14₆) LWD6 · LWD5 (30₆) LWD5 · LWD4 (24₆) LWD4 · LWD3 (23₆) LWD3 · LWD2 (32₆) LWD2 · LWD1 (19₆) LWD1 · LWDØ (31₆) LWDØ

LWD7 (25₅) LWD7 · LWD6 (23₅) LWD6 · LWD5 (21₅) LWD5 · LWD4 (19₅) LWD4 · LWD3 (17₅) LWD3 · LWD2 (15₅) LWD2 · LWD1 (13₅) LWD1 · LWDØ (11₅) LWDØ

ERR(IE10) · BYTE(IE7) · BYTE(IE9)

LIC13 (7₆) · LIC12 (4₆) · LIC11 (11₆) · LIC10 (10₆) · LIC9 (12₆) · LIC8 (14₆) · LIC7 (15₆) · LIC6 (13₆) · LIC5 (5₆) · LIC4 (27₆) · LIC3 (2₆) · LIC2 (1₆) · LIC1 (3₆) · LICØ (3₆) · LCS1 (26₆) · LCSØ (16₆)

STEP (20₁) · DIRECTION (18₁) · MOTOR ON (10₁)(16₁) · INIT (31₆)

LDDK (29₆) · HER (35) · TPTS (25₆) · DBY (31₅) · WPT (7₅) · WP (34₆)

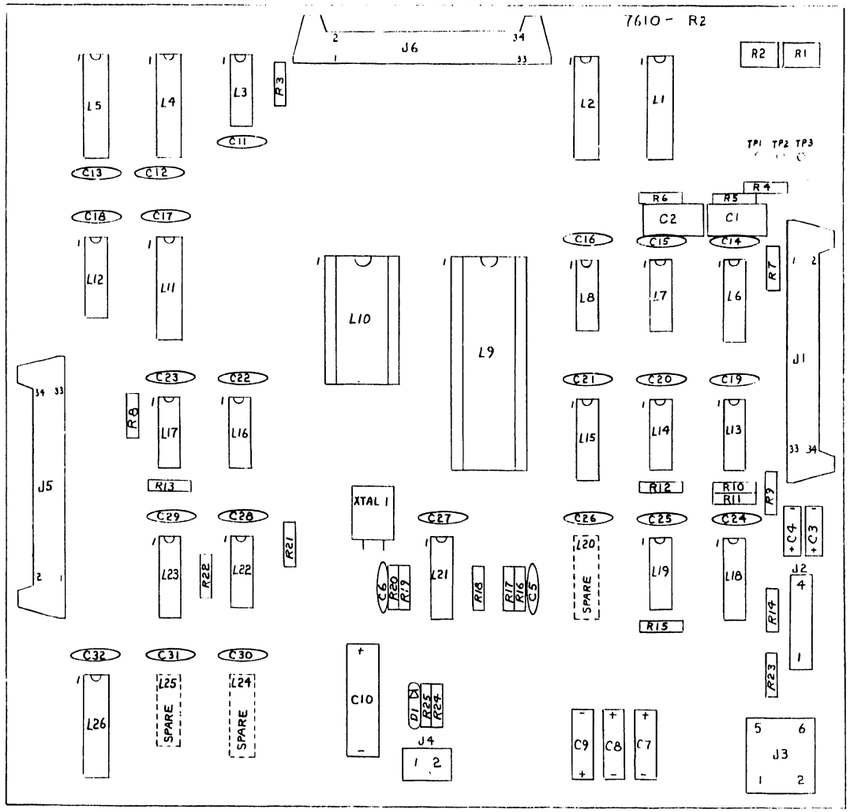
WANG LABORATORIES, INC. LOWELL, MASS. U.S.A.	BY	DATE	APPROVED BY / DATE
	DWN GK	10-19-80	E ENGR
	CHK		M ENGR
			MFG ENGR
MATERIAL: —	MODEL NO VS-100		TITLE: MINI DISK CONTROLLER
	SEE ENGRG SPECIFICATIONS No.		
FINISH: —	TOL EX AS NOTED: XX ± FRAC ±; XXX ± ANG ±; FINISH √		209-7610 / D / 7610 / 6
	SCALE — SHT 1 OF 2		WANG PART NUMBER / SIZE / DRAWING NUMBER / REV

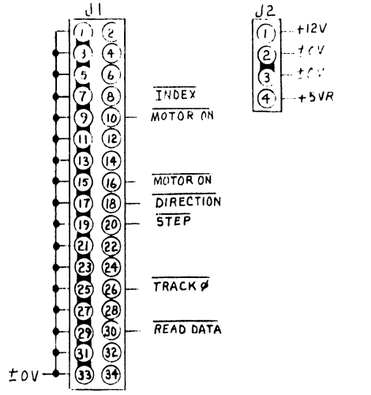
REVISION: SEE SHEET 2

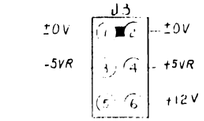
D 7610

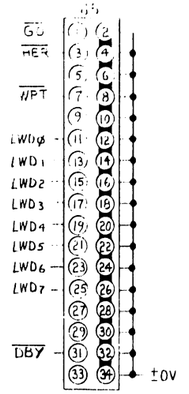
N1

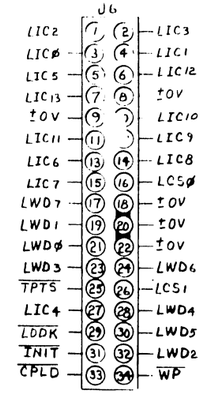
DO NOT SCALE







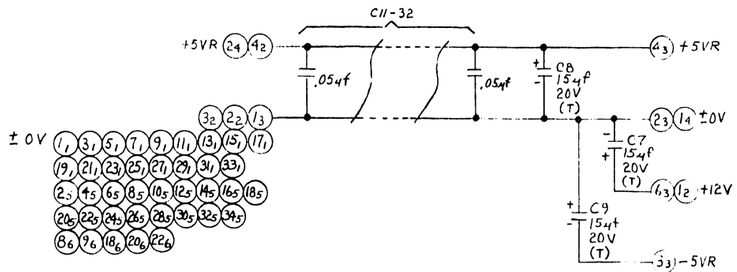




MNEMONIC	BOARD
CPLD	IC11
DBY	IA4
DIRECTION	IB1
GO	IC11
HER	IA4
INDEX	IE11
INIT	IB1
LCSØ	IC1
LCS1	IC1
LDDK	IA4
LICØ-LIC13	IC1
LWDØ-LWD7	IF1
MOTOR ON	IB1
READ DATA	IF11
STEP	IB1
TPTS	IA4
TRACK Ø	ID11
WP	IA3
WPT	IA4

IC LOCATION	TYPE	WL PART NO.
L1,2,5	7415244	376-0288
L3	74LS164	376-0236
L4	74LS374	376-0286
L6,18	9602	376-0104
L7	74LS00	376-0207
L8	74LS10	376-0209
L9	Z80 CPU	SEE CHART
L10	2708	SEE CHART
L11,26	74LS240	376-0297
L12	74LS174	376-0159
L13,16	74LS04	376-0180
L14,22	74LS74	376-0155
L15	74LS155	376-0158
L17	9401	376-0440
L19	7438	376-0128
L20,24,25	SPARE	
L21	8T98	376-0185
L23	74LS161	376-0233
L10	24 PIN SKT	376-9003
L9	40 PIN SKT	376-9011

COMPONENT	TYPE	WL PART NO
C1,2	.0022μF 500V MICA	300-5012
C3	.1μF 35V(T)	300-4002
C4	3.3μF 15V(T)	300-4016
C5	82pf 500V	300-1082
C6	.01μF 25V	300-1903
C7,8,9	15μF 20V(T)	300-4022
C10	50μF 50V ELECT	300-3010
C11-32	.05μF 12V	300-1900
XTAL 1	2.4576MHZ	321-0027
R1,2	5K POT	336-1020
R3,7,8,12,17,21-23,25	2.2K 1/4W 5%	330-3023
R4,9,13,14	150Ω 1/4W 5%	330-2016
R5	3.3K 1/4W 5%	330-3034
R6	4.7K 1/4W 5%	330-3048
R10,11	12K 1/4W 5%	330-4013
R15	1K 1/4W 5%	330-3011
R16	33Ω 1/4W 5%	330-1034
R18	82Ω 1/4W 5%	330-1083
R19,20	330Ω 1/4W 5%	330-2034
R24	2.7K 1/4W 5%	330-3028
D1	SIL	380-1001
J1,6	34 PIN RT ANGLE	350-0429
J2	4 POS HEADER	654-1194
J3	6 POS HEADER	654-1186
J4	2 POS HEADER	654-1198
J5	CONN, 34 PIN	350-0453



TYPE	IC LOCATION	SPARES
74LS74	L14	1
74LS240	L11	1
74LS240	L26	1

210 = 209 + 377 OR 378			
210	209	L9	L10
7610-A	7610	377-0344	378-2592

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

E-REV
O

DATE	BY	REVISION	NO
10-16-80	AK	ORIGINATED PER DWR # E780 APP'D: [illegible]	0
10-31-80	MD	REVISED PER ECN # 1987 APP'D: [illegible]	1
12-31-80	TK	REVISED PER ECO # 1435 APP'D: [illegible]	2
2-13-81	AK	REVISED PER ECO # 1785 APP'D: [illegible]	3
5/4/81	MS	REVISED PER ECO # 2033 APP'D: [illegible]	4
10-26-81	MS	REVISED PER ECO # 20532 APP'D: [illegible]	5
5/12/93	MS	REVISED PER ECO # 2505 & 2976 APP'D: [illegible]	6

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

BY	DATE	APPROVED BY	DATE
DWN AK	10-16-80	E ENGR [illegible]	11/10/80
CHK [illegible]	11/10/80	M ENGR	
		MFG ENGR	

MATERIAL —

FINISH —

MODEL NO. VS-100
SEE ENGRG SPECIFICATIONS
No. ____

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

TITLE MINI DISK CONTROLLER

209-7610 | D | 7610 | 6
WANG PART NUMBER | SIZE | DRAWING NUMBER | REV

D 7610

N2

DO NOT SCALE

REVISION	DATE	APPROVED BY	DATE

SHEET

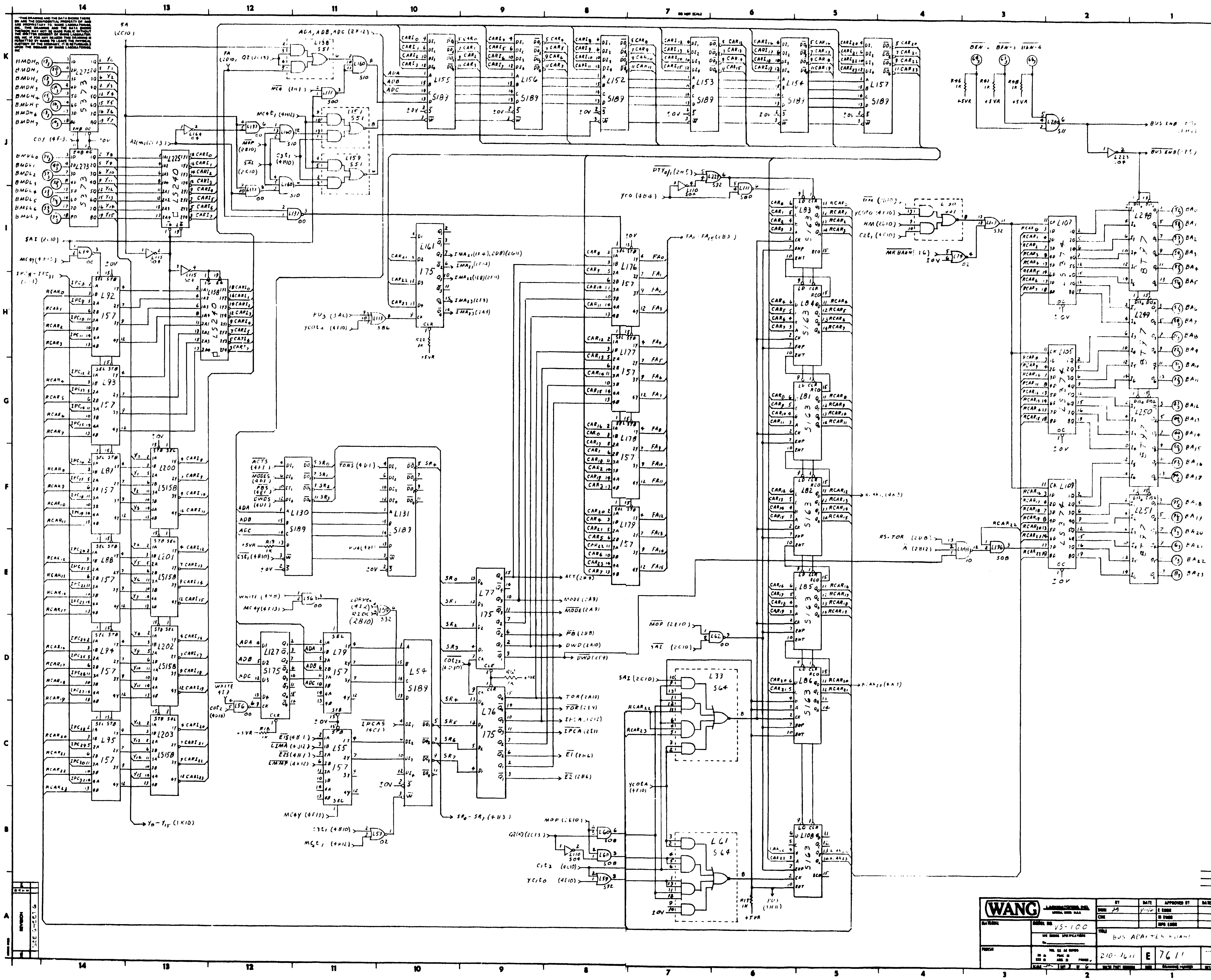
WANG LABORATORIES, INC. LOWELL, MASS. U.S.A.		BY	DATE	APPROVED BY	DATE
		DWN	11/74		
MATERIAL	MODEL NO VS-170	ENG		M ENGR	
	SEE ENGR SPECIFICATIONS No.			MFG ENGR	
FINISH	TOL FR AS NOTED: XX ± .XXX ± .XXX ±	TITLE	BUS ADAPTER BOARD		
	SCALE: FULL	210-7611	E	7611	
	SHT 1 OF 6	WANG PART NUMBER	SIZE	DRAWING NUMBER	REV

DO NOT SCALE

*HANDWIRE PER ECO # 21540

WANG LABORATORIES, INC. LOWELL, MASS. U.S.A.	BY	DATE	APPROVED BY	DATE
MATERIAL	DRWN			
MODEL NO VS 100 SEE ENGR. SPECIFICATIONS No.	CHK			
FINISH				
SCALE	SHT # OF #	DWG PART NUMBER	REV	DRAWING NUMBER
TITLE BUS ARBITER BOARD		210-7611	E	7611

P2


WANG
VS-100
BUS ADAPTER BOARD
E
7611

DO NOT SCALE

WANG	LABORATORIES, INC. LOWELL, MASS. U.S.A.
SIZE	E
MODEL OR	VS-100
SYSTEM	BUS ADAPTER BOARD
DWG NO.	210-7611
REV	E
SHEET	7611

P4

"THIS DRAWING AND THE DATA SHOWN THEREON ARE THE CONFIDENTIAL PROPERTY OF WANG LABORATORIES, INC. AND ARE PROPRIETARY TO WANG LABORATORIES, INC. THEY MAY NOT BE USED OR DISCLOSED WITHOUT THE WRITTEN CONSENT OF WANG LABORATORIES, INC. IF FOR ANY REASON THIS DRAWING IS SURRENDERED IT IS AGREED TO LEAVE THE PHYSICAL CONDITIONS OF THE SURFACE UNCHANGED UNTIL RELEASED UPON THE DEMAND OF WANG LABORATORIES INC."

DO NOT SCALE

J1

J2

P3 P2 P1

7611 R3

REVISION	BY	DATE	APPROVED BY	DATE
			E ENGR	
			M ENGR	
			MFG ENGR	

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

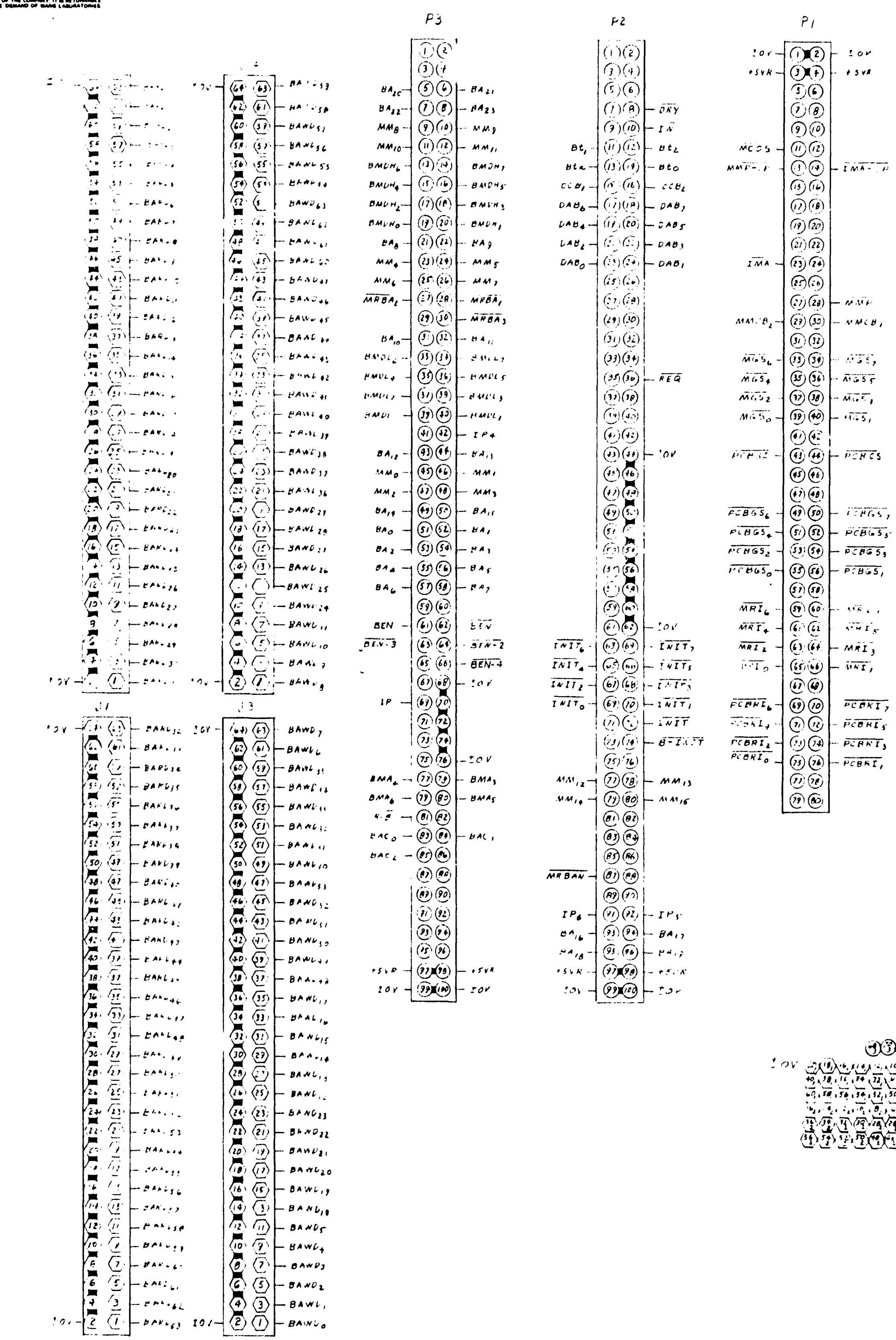
MATERIAL — MODEL NO. [illegible] — SEE WANG SPECIFICATIONS No. —

FINISH — TOL. AS NOTED .XX ± .010 .XXX ± .005 FINISH —

TITLE [illegible]

SCALE — SHT 5 OF 6

WANG PART NUMBER 210-7611 — SIZE E — DRAWING NUMBER —



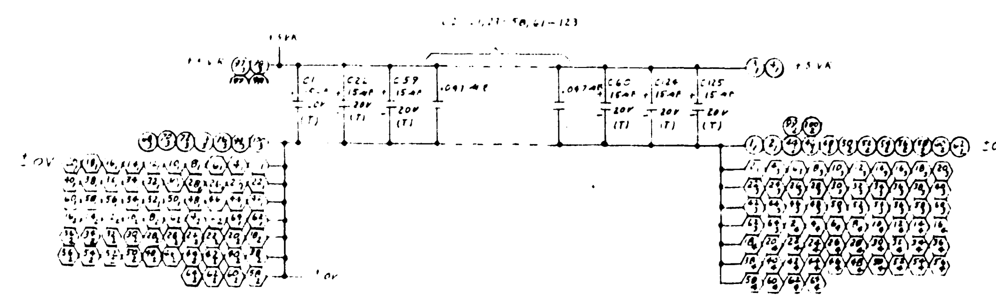
I.C. LOCATION	W.L. PART No	TYPE
[illegible] 3,11,29-28,31,37,19,48-52, 71,75 [illegible] 244		SPARE
[illegible] 257 [illegible]	396 0221	74S194
L5 [illegible] 168 [illegible] 239	396-0247	74S174
L6,195	39[illegible] 0206	74S260
L7,111,133,218	396-0228	74S00
[illegible] 8,114,170,175 [illegible] 285	396 0202	74S74
L9 [illegible] 186	396-0003	7410
[illegible] 0,34,41 [illegible] 62,73,104,106 [illegible] 21, 34 135 [illegible] 265,266,268,137	396-0002	7400
[illegible] 12,14-25,233,273,274	396-0306	74S373
[illegible] 57,78,182 [illegible] 149,190, [illegible] 240,291	396-0081	7408
L32,72,97,112 [illegible] 129,132 [illegible] 267	396-0006	7474
L33 [illegible]	396-0201	74S64
[illegible] 143,275	396-0004	7420
L39,43,44,191	396-0268	74LS244
L42 [illegible] 166	396-0093	7432
[illegible] 45,47,69,96,120 [illegible] 194,196	396-0200	74S08
[illegible] 159,21 [illegible]	396-0184	74S51
L53 [illegible] 212	396 0016	7402
L54 [illegible] 181, 204 [illegible]	396-0349	74S189
[illegible] 59 [illegible] 69 227,40	396-0205	74S32
L63-70,200-203	396-0273	74LS158
[illegible] 76,77 [illegible] 61	396-0119	74175
[illegible] 87,89,92-95,176-179 [illegible] 234,235,252-255,55	396-0082	74157
L8 [illegible] 86 [illegible]	396-0235	[illegible] 5163
L89,105 [illegible] 109	396-0286	74LS374
L90 [illegible] 103,126 [illegible] 189,199, 222,228 [illegible] 246,271	396-0310	74LS373
L101,102,125,149,173 [illegible] 197, 198,221,229,245,247-251, 256 [illegible] 270,274,283, 282	396-0187	8T97
[illegible] 47,167,223,265,115	[illegible] 0197	[illegible]
[illegible]	396-[illegible] 71	74S[illegible]
[illegible] 24 [illegible]	396-0010	7404
L113,132,280	396 0237	74S[illegible]
[illegible] 141,286,287	396-0270	74S175
L14 [illegible]	396-0296	74S37
L116,163	396-0333	74S137
L158 [illegible]	396-0297	74LS240
L165 [illegible]	396-0298	74S138
[illegible] 172	396-0171	74148
[illegible] 188,289	396-0008	7442A
[illegible] 217	396-0177	74S02
L281		7414
L258	396-0079	74174
[illegible] 257 260	396-0204	74LS257
L261	396-0031	7430
L160	396-0238	[illegible]
L27[illegible]-279	396-0139	74278
L292	396-0335	74S24[illegible]
L2[illegible] **	396-0007	7476
L184 *	396-0201	74[illegible]
[illegible] *	SPARE	
[illegible] **	SPARE	

COMPONENT	W.L. PART No	TYPE
R1-8	330-2082	820Ω 1/4W 10%
R9-38,40-60	330-3010	1K 1/4W 10%
R39	330-2018	180Ω 1/4W 10%
R61	333-0815	1K DIP
C1,22,59,60,124,125	180-4022	15μF 20V TANT
C2-21,23-58,61-123	300-1966	.047μF 50V
LED1-LED8	370-0026	RED, MV5024
J1-4	350-2440	64 PIN 90° CONN

MOUNTED OVER L292

I.C. TYPE	LOC	SPARES
7400	L41	1
	L56	1
	L73	3
	L[illegible]7	1
	L264	1
	L268	2
7402	L53	2
7408	L30	3
	L35	1
	L78	1
	L136	1
74S08	L47	1
	L58	1
	L196	1
7410	L9	1
	L60	1
	L79	1
	L123	1
745[illegible]	L172	2
74[illegible]0	L36	1
	L115	1
7432	L42	2
	L116	1
74S32	L40	1
7414	L281	1
74S51	L46	1
	L145	1
	L226	1
74S86	L113	1
74139	L198	1
74S260	L6	1
	L195	1
74S04	L265	1

MNEMONICS	[illegible]
BA0 — BA21	1H1
BAC0 — BAC2	2A4
BARD0 — BARD31	1E1
BARD32 — BARD63	1A6
BAWD0 — BAWD31	1E14
BAWD32 — BAWD63	1[illegible]14
BEN	2I1
$\overline{BEN}$	2I1
$\overline{BEN-2}$ — $\overline{BEN-4}$	3H3
BMA1 — BMA6	2E14
BMDH0 — BMDH7	3K14
BMDL0 — BMDL7	3J14
$\overline{B-INIT}$	2K3
Bt0 — Bt2	4F14
Bta	4G14
CCB1	1A10
CCB2	1A10
DAB0 — DAB7	1A11
$\overline{DRY}$	2F14
$\overline{IN}$	4J14
$\overline{IMA}$	2H4
$\overline{IMA-CP}$	4J14
$\overline{INIT}$	4J14
$\overline{INIT_0}$ — $\overline{INIT_7}$	2K1
IP	2F3
IP4 — IP6	2F3
MM10 — MM15	2C1
[illegible]	4A10
$\overline{MGS_0}$ — $\overline{MGS_7}$	4H1
MM0 — MM9	2D1
MMCB1, MMCB2	2D14
$\overline{MMP}$	2A4
$\overline{MRBA_1}$ — $\overline{MRBA_3}$	2H7
$\overline{MRBAN}$	2C1
$\overline{MRI_0}$, $\overline{MRI_1}$	4[illegible]
$\overline{MRI_2}$ — $\overline{MRI_7}$	4K7
$\overline{MMP-CP}$	4K14
$\overline{PCBGS}$	[illegible]
$\overline{PCBSI}$	1K12
$\overline{PCBGS_0}$ — $\overline{PCBGS_7}$	1I1
$\overline{PCBRI_0}$ — $\overline{PCBRI_7}$	1H4
A/$\overline{B}$	2A5
$\overline{REQ}$	2D1



NOTE

E-REL

3

REVISION								
[illegible]	[illegible]	REVISED PER ECN# 16340	[illegible]	[illegible]	REVISED PER [illegible]	REVISED PER ECO# [illegible] APP'D	REVISED PER ECO# 20205 APP'D	REVISED PER ECO#21540 1-5-81 APP'D: D.J. [illegible]

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

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

MATERIAL

MODEL NO [illegible]S-100

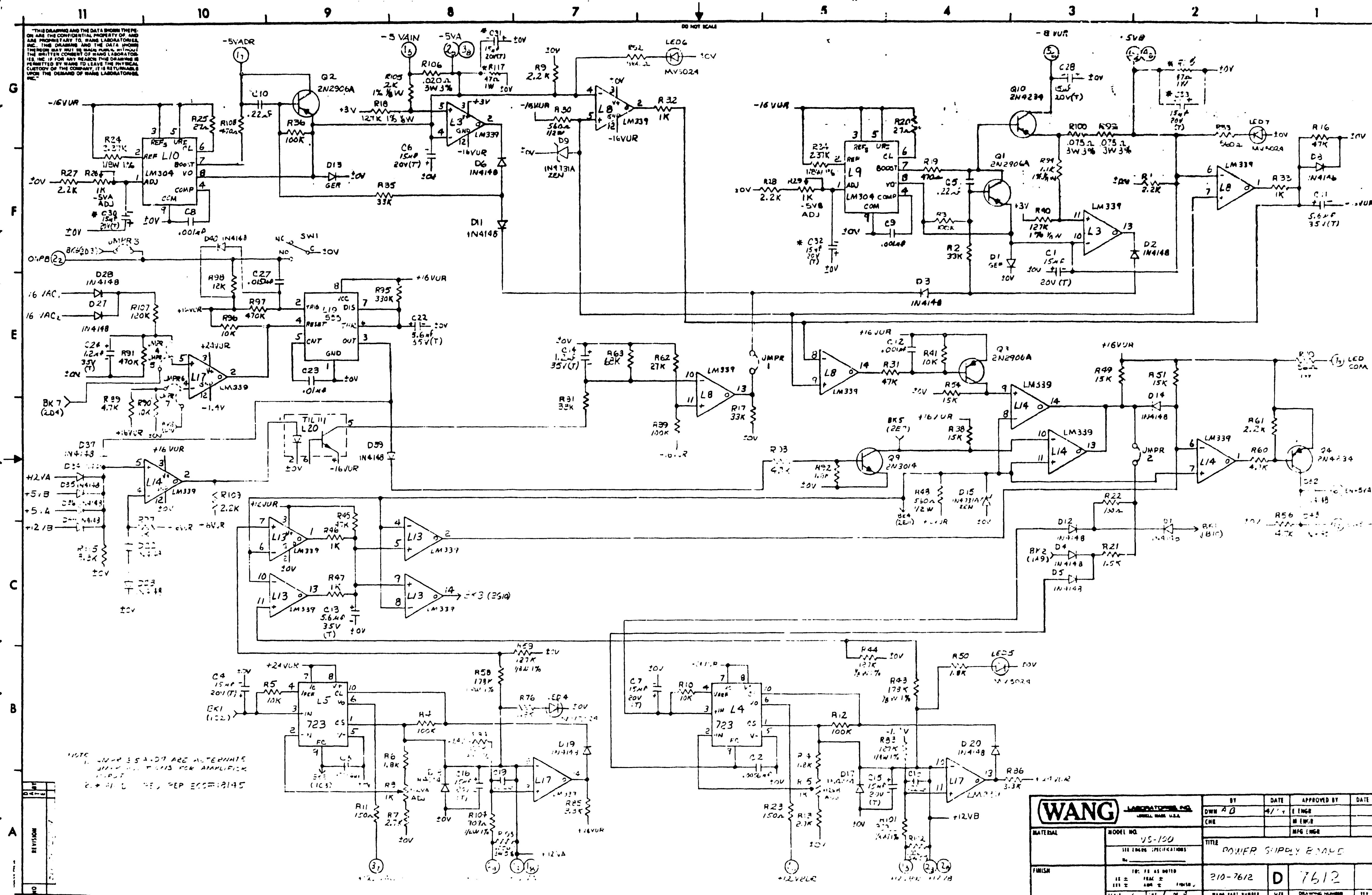
SEE ENGRG. SPECIFICATIONS

FINISH

TITLE BUS ADAPTER BOARD

WANG PART NUMBER 210-76[illegible] | SIZE E | DRAWING NUMBER 7[illegible]

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
-5VADR
-5 VAIN
-5VA
-8 VUR
-16VUR
+16VUR
+24VUR
Q2 2N2906A
Q10 2N4234
Q1 2N2906A
Q3 2N2906A
Q9 2N3014
Q4 2N4234
L10 LM304
L9 LM304
L19 555
L20 TIL 111
L5 723
L4 723
LM339
LED6 MV5024
LED7 MV5024
LED5 MV5024
SW1
JMPR 1
JMPR 2
BK 7 (2D4)
BK5 (2E7)
BK4 (2E11)
BK2 (1A9)
BK1 (1C2)
BK3 (2G10)
+12VA
+5VB
+5VA
+12VB
LED COM
NOTE
1. JMPR 3 5 & D7 ARE ALTERNATE JMPR ... FOR AMPLIFIER INPUT
2. ... REF ECO#18145
REVISION
WANG LABORATORIES, INC. LOWELL, MASS. U.S.A.
MATERIAL
MODEL NO. VS-100
FINISH
BY / DATE / APPROVED BY / DATE
DWN AB 4/7
CHK
E ENGR
M ENGR
MFG ENGR
TITLE POWER SUPPLY BOARD
210-7612
D
7612
WANG PART NUMBER / SIZE / DRAWING NUMBER / REV
SCALE
SHT 1 OF 4
7612

Q1

DO NOT SCALE

OFFPB
SW2
NC
NO
C
±0V
BK3 (1C8)
R42 1K
R57 10K
D21 IN4148
+16VUR
R69 47K
R67 1K
R73 560Ω
LED1
MV5024
+5VA
R72 1K
+16VUR
LI5 LM339
R74 560Ω
LED2
MV5024
+5V8
R71 1K
R68 1K
D16 IN4148
BK5 (1C4)
BK4 (1C4)
C17 5.6mF 35V (T)
+16VUR
LI6 LM339
±0V
16VAC2
16VAC1
-16VUR
D26 A15A
D25 A15A
F1 2.5A SB 250V
C25 15mF 20V(T)
R87 450Ω 1W
-1.4 V
D24 IN4004
* D45 IN4004
+16VUR
6VAC2
6VAC1
D30 IN4004
D29 IN4004
C21 4800mF 50V(E)
C20 4800mF 12V(E)
+29VUR
R37 350Ω 1W
+3V
D10 IN4372A 3EN
+16VUR
R116 15K
LI2 LM339
BK6 (1F11)
D33 IN4148
R111 20K
C29 1.2mF 35V (T)
BK7 (1D11)
R113 20K
BK8 (1D10)
R114 27K
D42 IN4148
D41 IN4148
P2 2.7K
C26 15mF 20V(T)
+16VUR
* P119 10K
* P120 2.2K
* D47 IN4148
* D46 IN4148
* R122 1K
LI2 LM339
LI1 LM339
+16VUR
* P123 2.2K
* D43 IN4148
* R124 1K
* R126 1K
* Q11 2N3725
* R127 1K
±0V
+5VA
* R125 1K
INIT
"ON" LED DR
"OFF" LED DR

WANG LABORATORIES, INC. LOWELL, MASS. U.S.A.		BY	DATE	APPROVED BY	DATE
		DWN FJ	3/4/-	E ENGR	
		CHK		M ENGR	
				MFG ENGR	
MATERIAL	MODEL NO. VS-100	TITLE POWER SUPPLY BOARD			
	SEE ENGRG SPECIFICATIONS No.				
FINISH	TOL ±.1 AS NOTED .XX ± FRAC ± .XXX ± ANG ± FINISH √	219-7612	D	7612	3
	SCALE FULL SHT 2 OF 4	WANG PART NUMBER	SIZE	DRAWING NUMBER	REV

Q2

DO NOT SCALE

+12VA
+12VB
-5VA
-5VB

7612-R1

WANG LABORATORIES, INC. LOWELL, MASS. U.S.A.		BY	DATE	APPROVED BY	DATE
MATERIAL	MODEL NO. VS-100 SEE ENGR. SPECIFICATIONS	DWN	11-6-78	E ENGR	
		CHK		M ENGR	
				MFG ENGR	
FINISH	TOL. U.N.O. AS NOTED .XX ± .XXX ± ANG. ± FINISH ✓	TITLE POWER SUPPLY BOARD			
	SCALE — SHT 1 OF 1	210-7612	D	7612	5
		WANG PART NUMBER	SIZE	DRAWING NUMBER	REV

REVISION
NO
DATE
BY
SEE SHEET 4

DO NOT SCALE

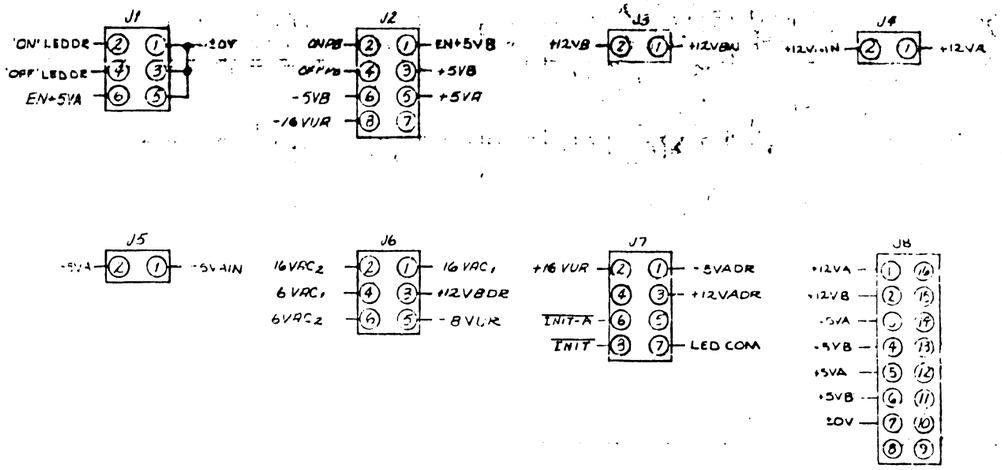
I.C. LOCATION	TYPE	WANG PART NO.
L1,2,6,7,11	SPARE	
L3,8,13-17	LM339	376-0240
L4,5	723	376-0066
L9,10	LM304	376-0124
L19	555	376-0126

COMPONENT	TYPE	WANG PART NO.
R63	68K ¼W 10%	330-4068
R13	20K ¼W 10%	330-4020
R120,123,13[illegible]	2.2K ¼W 10%	330-3022
R2,17,35,81	33K ¼W 10%	330-4033
R34,2,36,39,111	100K ¼W 10%	330-5010
R5,10,41,57,90,96	10K ¼W 10%	330-4010
R6,9,50,76,32	15K ¼W 10%	330-4015
R7,13,112	2.7K ¼W 10%	330-3027
R8,15,24,29	1K POT	336-1014
R11,23	150Ω ¼W 10%	330-4015
R 0,31,46,69	47K ¼W 10%	330-4047
R18,40,44,59,83,84	127K ¼W 1%	333-0091
R19,108	470Ω ¼W 10%	330-2047
R20,29	27Ω ¼W 10%	330-1027
R21	1.5K ¼W 10%	330-3015
R22	100Ω ¼W 10%	330-2010
R24, 34	2.23K ¼W 1%	333-0093
R30,43	562Ω ¼W 5%	33[illegible]-2356
R32,33,42,46,61,67,68,71,72,77,[illegible]	1K ¼W 10%	330-3010
R37	330Ω 1W 10%	330-4033
R38,45,51,53,[illegible]	15K ¼W 10%	330-4015
R39,58	178K ¼W 1%	333-0106
R42,52,73,74	562Ω ¼W 5%	332-2356
R[illegible]	2.21K ¼W 1%	333-0063
R[illegible]4	8.2K ¼W 1%	333-0138
R[illegible]	3.3K ¼W 10%	330-3047
R62,[illegible]4	27K ¼W 10%	330-4027
R 31,37	470K ¼W 10%	330-5047
R35,36[illegible]5	3.3K ¼W 10%	330-3033
R[illegible]7	470Ω ¼W 10%	332-2047
R[illegible]4	1.1K ¼W 1%	333-0113
R[illegible]5	332K ¼W 1%	330-5033
R[illegible]A	12K ¼W 10%	330-4012
R[illegible]5	3[illegible]Ω ¼W 5%	334-0035
R[illegible]8	47Ω ½W 10%	332-1047
R[illegible]6	200Ω 3W 5%	334-0032
R[illegible]2,103	1.00Ω 3W 5%	334-0031
R101,104	383Ω ¼W 1%	333-0059
R[illegible]5	2K ¼W 1%	333-0111
R[illegible]7	120K ¼W 5%	330-5012
R[illegible]	56[illegible] ¼W 1%	332-0[illegible]0

COMPONENT	TYPE	WANG PART NO.
C1,4,6,15,[illegible],25,26,28,39,31,32,33	15μF 20V (T)	300-4022
C2,3	.0056μF 300V	300-1915
C8,9,12	.001μF 300V	300-1906
C11,13,17,22	5.6μF 35V (T)	320-4017
C20	4500μF 12V (E)	300-3043
C21	100μF 50V (E)	300-3052
C23	.01μF 25V	300-1903
C14,24,29	1[illegible]2μF 35V (T)	320-4013
C27	.015 μF	300-1928
C5, C.16,19	.22μF	300-1902
D1,13	ZER	330-3000
CR-8,11, 2,4,16,[illegible] 23,27,28,32,34-44,46,47,49	IN4148	330-1014
D9,15	IN4731A 4.3V	380-2136
D[illegible]2933,[illegible]945	IN4004	330-4000
D25,26	6159	330-3009
D10	IN4372A	380-2129
Q5	TIL111	375-2109
Q1-3	2N2906A	375-1017
Q4	2N4234	375-1026
Q9	2N3904	375-0017
LED 1,2,4-7	LAMP, RED	370-0026
J1,6	HDR, 6 PIN	654-1136
J2,7	HDR, 8 PIN	654-1130
J3,4,5	HDR, 2 PIN	654-1133
J8	SKT, 16 PIN	376-9005
SW1,2	SPDT MINI	345-0041
F1	.6A 250V	360-0006
Q11	2N3725	375-1027

MNEMONIC	COORD.
EN+5VA	1D1
ON/LED	1F11
OFF/LED	2F8
±10V	1D11
+5VAIN	1G8
+5VA	2F11
-5VA	1G8
-5VADR	1G10
+5VB	2F11
-5VB	1G2
INIT	2B1
INIT-A	8B11
6VAC1	2G3
6VAC2	2G1
-8VUR	1G3
+12VA	1A7
+12VADR	1A8
+12VAIN	1A8
+12VB	1A9
+12VBDR	1A5
+12VBU	1A9
16VAC1	2G6
16VAC2	2G4
+16VUR	1G4
-16VUR	2G5
LED COM	1E1
EN+5VB	1C1
ON LED DR	2A8
OFF LED DR	2A7

I.C. TYPE	LOCATION	QUANTITY
LM339	L3	2
LM329	L12	1
LM339	L15	1
LM339	L16	2
LM339	L7	1



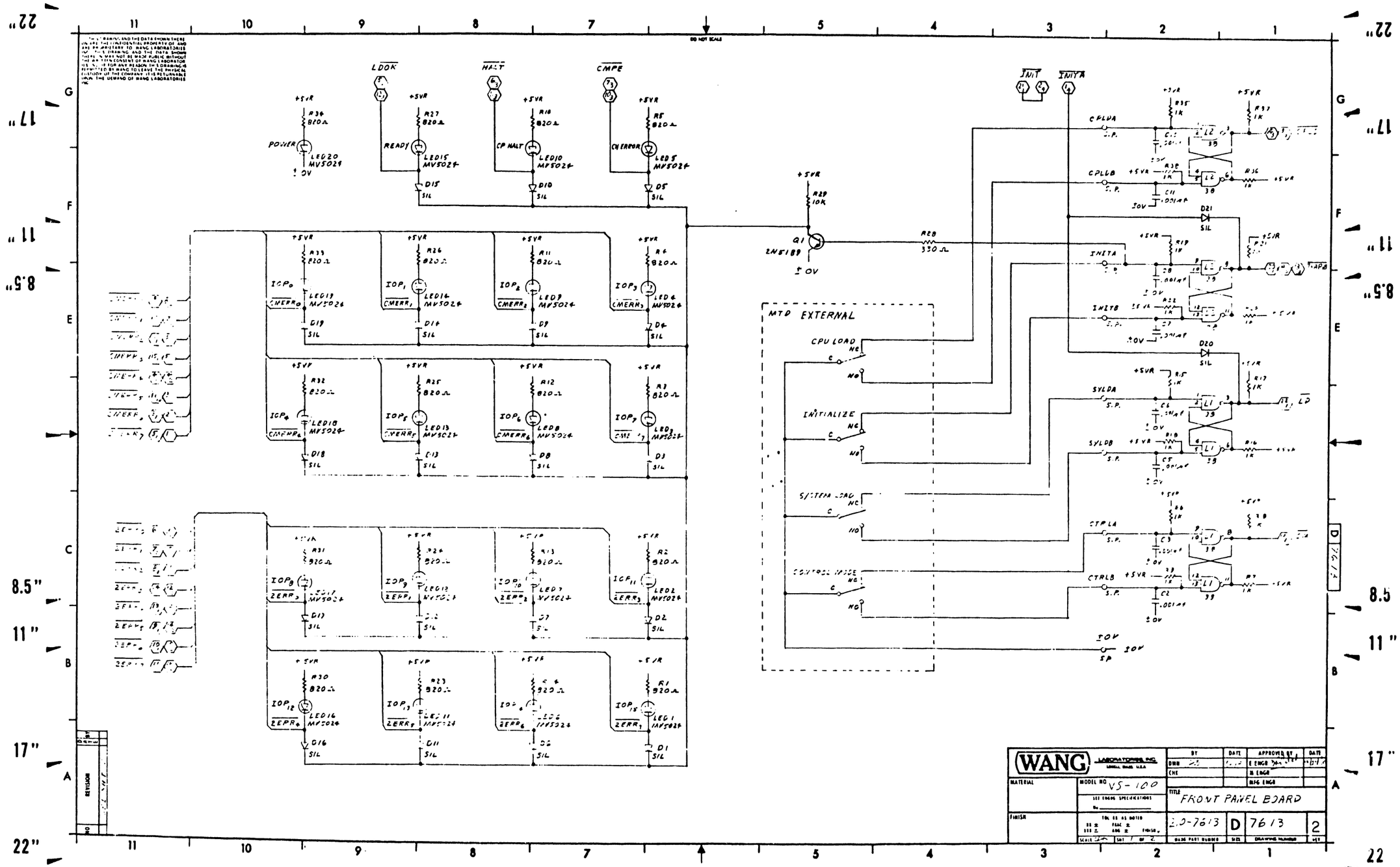
E-REV
2

REVISION	BY	DATE	APPROVED BY	DATE
	DWN	5/13/81	E ENGR	11/1/81
	CHK	10/26/81	M ENGR	
			MFG ENGR	

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

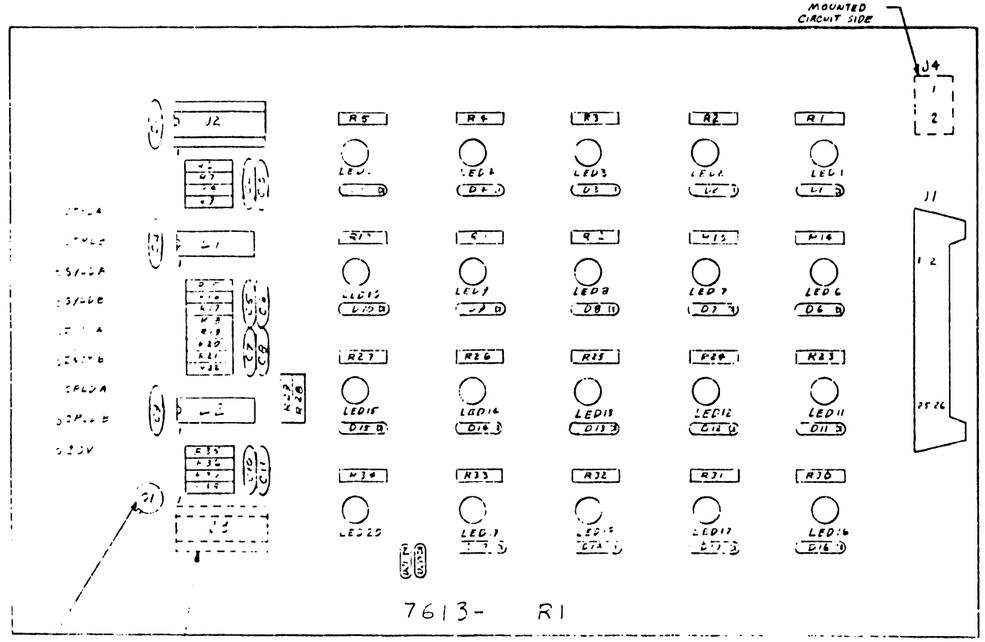
MATERIAL	MODEL NO. VS-100	TITLE POWER SUPPLY BOARD
	SEE ENGR. SPECIFICATIONS No.	
FINISH	TOL. OF ALL UNITED .XX ± .XXX ± FRAC. ± ANG. ± FINISH	210-7612 / D / 7612 / WANG PART NUMBER / SIZE / DRAWING NUMBER / REV
	SCALE 4 / SHT 1 OF 2	

Q4


LDOK
HALT
CMPE
INIT
INITA
+5VR
POWER
READY
CP HALT
CP ERROR
LED20 MV5024
LED15 MV5024
LED10 MV5024
LED5 MV5024
R34 820Ω
R27 820Ω
R18 820Ω
R8 820Ω
D15 SIL
D10 SIL
D5 SIL
R29 10K
Q1 2N5189
R28 330Ω
IOP0 CMERR0 LED19 MV5024 D19 SIL R33 820Ω
IOP1 CMERR1 LED14 MV5024 D14 SIL R26 820Ω
IOP2 CMERR2 LED9 MV5024 D9 SIL R11 820Ω
IOP3 CMERR3 LED4 MV5024 D4 SIL R4 820Ω
IOP4 CMERR4 LED18 MV5024 D18 SIL R32 820Ω
IOP5 CMERR5 LED13 MV5024 D13 SIL R25 820Ω
IOP6 CMERR6 LED8 MV5024 D8 SIL R12 820Ω
IOP7 CMERR7 LED3 MV5024 D3 SIL R3 820Ω
IOP8 ZERR3 LED17 MV5024 D17 SIL R31 820Ω
IOP9 ZERR4 LED12 MV5024 D12 SIL R24 820Ω
IOP10 ZERR2 LED7 MV5024 D7 SIL R13 820Ω
IOP11 ZERR3 LED2 MV5024 D2 SIL R2 820Ω
IOP12 ZERR0 LED16 MV5024 D16 SIL R30 820Ω
IOP13 ZERR5 LED11 MV5024 D11 SIL R23 820Ω
IOP14 ZERR6 LED6 MV5024 D6 SIL R14 820Ω
IOP15 ZERR7 LED1 MV5024 D1 SIL R1 820Ω
MTD EXTERNAL
CPU LOAD
INITIALIZE
SYSTEM LOAD
CONTROL INSTR
NC
NO
C
+10V
CPLDA
CPLDB
INSTA
INSTB
SYLDA
SYLDB
CTRLA
CTRLB
R35 1K
R37 1K
R38 1K
R36 1K
R39 1K
R31 1K
R32 1K
R15 1K
R17 1K
R10 1K
R16 1K
R9 1K
R7 1K
C12 .001MF
C11 .001MF
C10 .001MF
C9 .001MF
C8 .001MF
C7 .001MF
C6 .001MF
C5 .001MF
C4 .001MF
C3 .001MF
C2 .001MF
D21 SIL
D20 SIL
L2 39
L1 39
LD
WANG LABORATORIES, INC.
MATERIAL
MODEL NO VS-100
SEE ENGR SPECIFICATIONS
FINISH
TITLE FRONT PANEL BOARD
2.0-7613
D
7613
2
DRAWN
CHK
ENGR
MFG ENGR
DO NOT SCALE
REVISION

R1

DO NOT SCALE



J1

+5V	1	2	+5V
CMERR6	3	4	CMERR4
CMERR7	5	6	ZERR0
ZERR1	7	8	ZERR2
ZERR5	9	10	ZERR4
ZERR7	11	12	CMERR5
ZERR6	13	14	ZERR3
CMERR7	15	16	CMERR3
CMERR1	17	18	CMERR0
CM	19	20	TRAPB
INIT	21	22	LD
+5VR	23	24	+5VR
+5V	25	26	+5V

J2

CMERR7	1	16	ZERR7
CMERR6	2	17	ZERR6
CMERR5	3	18	ZERR5
CMERR4	4	19	ZERR4
CMERR3	5	20	ZERR3
CMERR2	6	21	ZERR2
CMERR1	7	22	ZERR1
CMERR0	8	23	ZERR0

J3

CPLD	1	2	CPLD
TRAPB	3	4	TRAPB
LOOK	5	6	LOOK
HALT	7	8	HALT
CMPE	9	10	CMPE
+5V	11	12	+5V

J4

INITA	1
INIT	2

I.C. LOC	WL PART NO.	TYPE
L1,2	376-0128	7438

SIGNALS	SOURCE
CM	1 C1
CMERR0-CMERR7	1 E11
CMPE	1 G1
CPLD	1 G1
HALT	1 G1
INIT	32
INITA	1G3
LD	1 J1
LOOK	1 G1
TRAPB	1F1
ZERR0-ZERR7	1 C11

COMPONENT	WL PART NO.	TYPE
R1-5, 10-16, 23-27, 32-34	330-1083	470Ω 1/4W 5%
R6-9, 17-22, 35-38	330-3031	1K 1/4W 5%
R29	330-2034	330Ω 1/4W 5%
R28	330-4011	2K 1/4W 5%
C1, 4, 9	330-1117	.047uf
C2, 3, 5-8, 10-11	300-1120	.01uf
Q1	375-1021	UNISPAD
U1	375-3501	TRANSIPAD
LED1-LED20	370-0004	RED
C-21	300-1117	.047uf
J1	350-0058	26PIN EDGE
J2, 3	376-8029	16PIN SOCKET
J4	654-1198	2 POS

NOTE:
1. ALL RESISTORS ARE 1/4W, 5%, UNLESS OTHERWISE SPECIFIED.
2. Q1 TO BE MOUNTED ON TRANSIPAD.

E-REV
1

NO	REVISION	BY	DATE	APPROVED
1	REVISED PER ECO#73911 & 73907 APPS	VTL	5-1-81	

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

		BY	DATE	APPROVED BY	DATE
MATERIAL	MODEL NO VS-100	DWN		E ENGR	
	SEE ENGRG SPECIFICATIONS No.	CHK		M ENGR	
FINISH	TOL EX AS NOTED .XX ± FRAC ± .XXX ± ANG ±			MFG ENGR	
	SCALE	TITLE FRONT PANEL BOARD			
		210-7613	D	7613	2
		MACH PART NUMBER	SIZE	DRAWING NUMBER	REV

R2

DO NOT SCALE

SW18 — SW 6 … SW13 — ±0V

MD4T0 … MD4T31 — +5VR — L16 … L7 — TIL 311 — LDA LDB LDC LDD STB BI LDP RDP — ±0V

tt1

LIC0 … LIC13

+5VR — L4, L3, L2, L1 — TIL 311 — LDA LDB LDC LDD STB BI LDP RDP — ±0V

L8, L7, L6, L5 — 85 — A3 A2 A1 A0 B3 B2 B1 B0 A>B A=B A<B

SW0 … SW13 — SW17 … SW4 — ON — R4 470Ω — +5VR — ±0V

+5VR — R8 1K

NO PARITY, SW/RAM, TPTS, TPTS, LCS0, LCS0, LCS1, LCS1, LWD0, LWD0, LWD1, LWD1, LWD2, LWD2, LWD3, LWD3, LWD4, LWD4, LWD5, LWD5, LWD6, LWD6, LWD7, LWD7, HLTENB, CMPE, CMPE, HALT, HALT, LOOK, LOOK, INIT, INIT, FLD, FLD

+5VR — R2 1K — STEP — SW3 NC NO — ±0V — R3 1K — +5VR — R7 4.7K — C15 120pF — L17 74 — 2PR 2D 2CLR 2Q — L21 9602 — L20 74 — L19 20 — MBY

RUN/STEP SW2 ON — ±0V — ON — RUN/STEP

BY	DATE	APPROVED BY	DATE
DWN J-S	7/18/80	E ENGR	
CHK		M ENGR	
		MFG ENGR	

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

MATERIAL — MODEL NO VS-100 — SEE ENGRG SPECIFICATIONS — No.

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

TITLE: MAINTENANCE PANEL

210-7614 | D | 7614 | — | SCALE | SHT 1 OF 2 | WANG PART NUMBER | SIZE | DRAWING NUMBER | REV

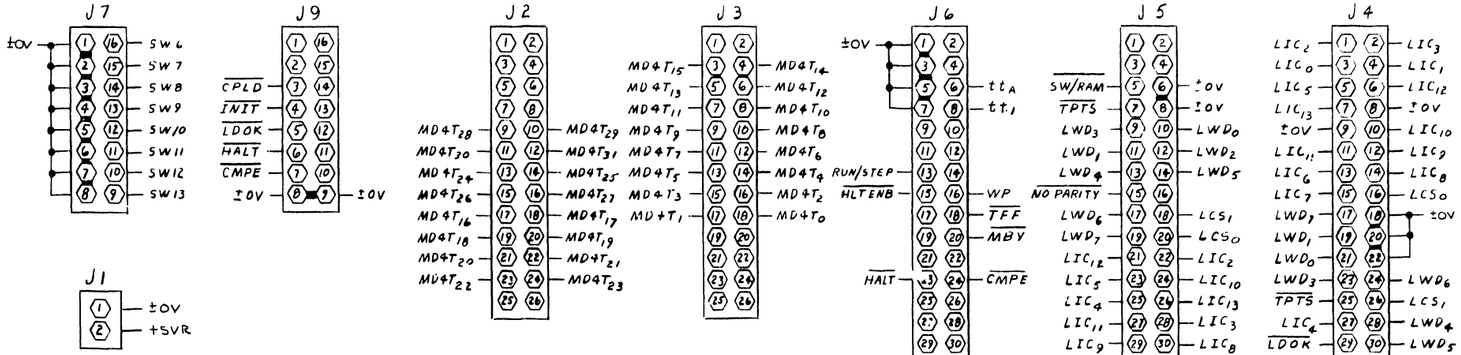
NO	REVISION	BY	DATE
A	SEE SHT 2		

BRUNING 40-5253 A1559

D 7614

S1

DO NOT SCALE

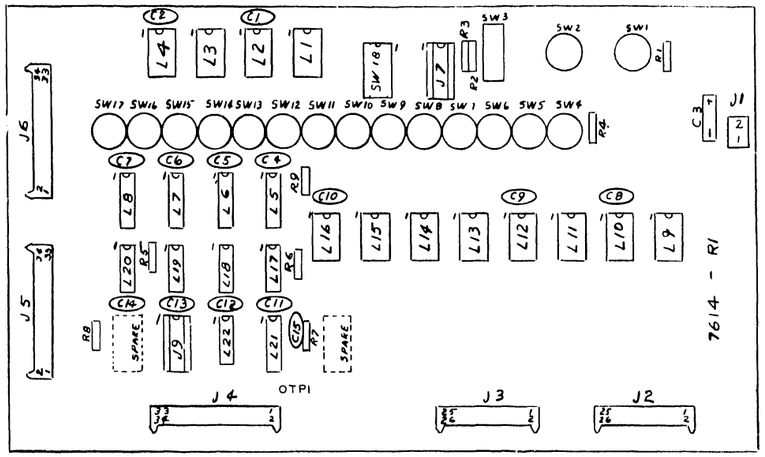


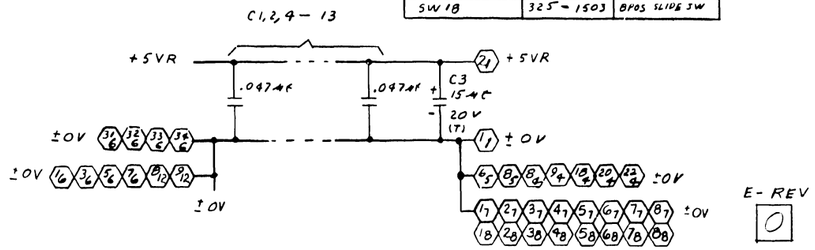
MNEMONICS	COORDINATE
CMPE	1 A 5
CPLD	1 A 4
HALT	1 A 5
HLT ENB	1 A 5
INIT	1 A 4
LCS0	1 A B
LCS1	1 A 7
LDOK	1 A 4
LIC0 – LIC13	1 E 11
LWD0 – LWD7	1 A 7
MBY	1 C 1
MD4T0 – MD4T31	1 G 10
NO PARITY	1 A B
RUN/STEP	1 B 1
SW6 – SW13	1 G 11
SW/RAM	1 A B
TFF	1 D 1
TPTS	1 A B
ttA	1 G 1
tt1	1 F 11
WP	1 F 1
WP	1 G 1

I.C LOC.	W.L PART NO	TYPE
L1-4, 9-16	340-0015	FIL 311
L5-8	376-0087	7485
L17, 20	376-0006	7474
L18	376-0093	7432
L19	376-0007	7420
L21	376-0104	9602
L22	376-0139	7414

I.C. TYPE	LOC.	SPARES
7414	L22	4
7420	L19	1
7432	L18	3
7474	L20	1
9602	L21	1

COMPONENT	W.L. PART No	TYPE
R1, 2, 3, 6, 8, 9	330-3010	1K ¼W 10%
R4	330-2047	470Ω ¼W 10%
R5	330-1033	33Ω ¼W 10%
R7	330-3047	4.7K ¼W 10%
C1, 2, 4-13	300-1962	.047μF 50V
C3	300-4022	15μF 20V (T)
C14, 15	300-1120	120pF
J4, 5, 6	350-0929	34 PIN RT ANGLE
J2, 3	350-0058	26 PIN RT ANGLE
J7, 9	376-9024	16 PIN SOCKET
J1	654-1198	2 POS MOLEX
SW1, 2, 4-17	325-0006	3 PDT CTR OFF
SW3	279-0300	SPDT MICRO
SW18	325-1503	8 POS SLIDE SW





NO	REVISION	BY	DATE
0	ORG. PER DWG. E3P1 APP: D. Williams	DB	9-18-80
1	REVISED PER ECO#1670 APP'D: Williams	R.B.B.	11-4-80
2	REVISED PER ECO#1755 APP'D: [illegible]	RB	3-12-81

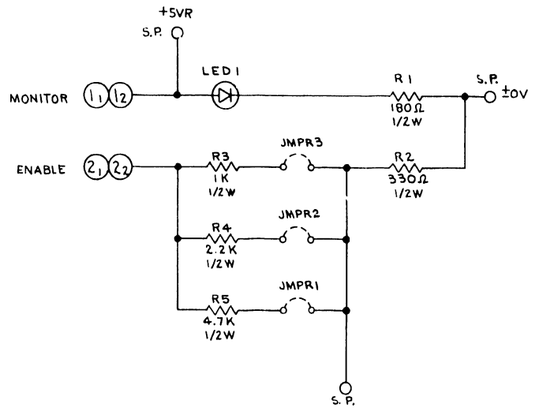
BRUNING 40-3253 47559

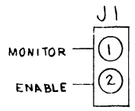
WANG LABORATORIES, INC. LOWELL, MASS. U.S.A.		BY	DATE	APPROVED BY	DATE
		DWN DB	9-18-80	ENGR [illegible]	11/12
		CHK [illegible]	11-4-80	M ENGR	
MATERIAL	MODEL NO. VS-100			MFG ENGR	
	SEE ENGRG SPECIFICATIONS No.	TITLE MAINTENANCE PANEL			
FINISH	TOL ER AS NOTED .XX ± FRAC ± .XXX ± ANG ± FINISH √	210-7614	D	7614	2
	SCALE FULL SHT 2 OF 2	WANG PART NUMBER	SIZE	DRAWING NUMBER	REV

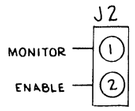
7614

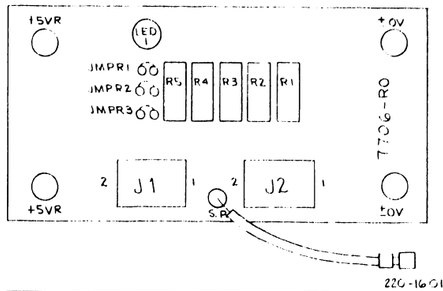
S2

DO NOT SCALE









COMPONENT	TYPE	W.L PART NO.
R1	180Ω 10% 1/2W	331-2018
R2	330Ω 10% 1/2W	331-2033
R3	1K 10% 1/2W	331-3010
R4	2.2K 10% 1/2W	331-3022
R5	4.7K 10% 1/2W	331-3047
LED1	LAMP, RED MV5024	370-0026
WIRE/LUG ASSY	#22 GA.	220-1601
J1,2	HEADER, 2 POS.	654-1198

NO.	REVISION	BY	DATE
0	ORIGINATED PER DVR # E10422 APP'D: W/ 4/4/80	KDB	10-20-80
1	REVISED PER ECO # 22888 APP'D: [illegible]	JEP	6-12-82

E-REV
0

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

	BY	DATE	APPROVED BY	DATE
DWN	KDB	10/20/80	E ENGR	
CHK	[illegible]	11/20/80	M ENGR	
			MFG ENGR	

MATERIAL —

MODEL NO. VS 100
SEE ENGRG SPECIFICATIONS
No.

TITLE SWITCHING REGULATOR INTERFACE

FINISH —

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

SCALE — SHT 1 OF 1

210-7706 | D | 7706 | 1

WANG PART NUMBER | SIZE | DRAWING NUMBER | REV

T1

DO NOT SCALE

FMK DPE OVR REJ ERR RPE COR IDB

WRM RDM REV

ERM DDSO DDSI

HSB2 HSB1

EOT PWO PNR PPT BOT PDT ONL

ERROR 10 ERROR 12 ERROR 14 ERROR 16 ERROR 1 ERROR 3 ERROR 5 ERROR 7

+5V

+5VR

PER(2D7)

LC(2B6)

DMA CMP (4C8)

BUSY (4F10)

L22 LS240 TL

L39 LS240 TL

L40 LS244 TL

L21 LS240 TL

L23 LS240 TL

SB0-SB15 (4B5)

TA1, TA2 (4D7)

DSO

DSI

DSO, DSI (4D7)

L91 LS244 TL

DO-DI5 (4F1)

L107 LS244 TL

R108 2.2K

PR

PTO

PT1

MDL6

MDL7

CLR

L73/276

"TA1" LED2 MV5024

"TA2" LED1 MV5024

R2 180Ω

R1 180Ω

TA1

TA2

DSO

DSI

R4 10K

NOT LOADED

L91 LS244 TL

P98 2.2K

R87 180Ω

R88 390Ω

L77 LS04

BK14 (4F4)

MDH5-MDH7 (2B11)

L57 LS175

MDH5

MDH6

MDH7

CLR

R85 10K

R86 10K

R101 2.2K

ESCI

ESCO

ESCO, ESCI (4C7)

MDLO-MDL7 (2E11)

L56 LS175

MDLO

MDL1

MDL2

MDL3

MDL4

MDL5

MDL6

MDL7

DMA INH (4C6)(3B9)

WTCM (3B6)(3F10)

RDCM (3D7)(3F10)

RDCM (2D9)(3D11)(4C11)

CMDO

CMD1

CMD2

CMD3

CMD4

CMDO - CMD4 (4B6)

RESCM (3B9)

CMD CLK

L92 LS139

EN D-BUS (1B7)

R7

BK1 (4D6)

SEL CNTR (4G5)

R11

R10

R15

R14

R13

R12

L109 LS244

TO4B (4E5)

TO7B (3D3) (4G7)

TO2B (3A5) (4C11)

CDLI

TO4

TO2

TO7

BK8 (1A9)

L93 LS32

L76 LS74

ICK

ICLR

INIT2B (3B10)

L74 LS08

L75 LS02

L108/154

LD CNTR (2F10)

EN D-BUS (1C11)(4F5)

RSB (4F5)

LD FIFO 2 (3D11)

RD FIFO 2 (3D6)

LD FIFO 1 (2A11)

CLK PER (2D9)

LD R LATCH (3G8)

L110 LS04

L58/276

L42 LS00

L75 LS02

L74 LS08

RES CNTR (2F10)

BUSY (4F10)

INIT2B (3B10)

RES (2A8)(2G7)

BK11 (4F7)

L74 LS08

L77 LS04

BK10 (3D7)

L76 LS74

2CLR 2CK 2D 2PR 2Q

START INH (3D7)

EV PAR (2B2)

LP BACK (2D9) (3E11)

R102 2.2K

R110 2.2K

BK8 (1B9)

L6 06

SYS RST

ROS

R109 2.2K

R4 10K

+5VR

TO

PTO

PT1

R11

R10

EN D-BUS (1B7)

R7

R15

R14

R13

R12

TO4

CDLI

TO2

TO7

	BY	DATE	APPROVED BY	DATE
WANG LABORATORIES, INC. LOWELL, MASS. U.S.A.	DWN S.D.B.	7/9/81	E ENGR	
	CHK		M ENGR	
			MFG ENGR	

MATERIAL

FINISH

MODEL NO. VS 80/100

SEE ENGRG SPECIFICATIONS No.

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

SCALE — SHT 1 OF 6

TITLE 1600/6250 BPI GCR MAG TAPE ADPT

210-7800	D	7800	4
WANG PART NUMBER	SIZE	DRAWING NUMBER	REV

NO	REVISION	BY	DATE
	SEE SHEET 9		

BPUNING 40-3253 48997

U1

DO NOT SCALE

WTCLK (1D2)

MDR SEL (3C6)

RES (1B4)

BK5 (4F3)

MDL7 MDL6 MDL5 MDL4 — LD CNTR (1B7) — RESCNTR (1C5) — L87 LS193 — BC15 BC14 BC13 BC12

MDL3 MDL2 MDL1 MDL0 — L88 LS193 — BC11 BC10 BC9 BC8 — MDL0-MDL7 (1D3)

MDH7 MDH6 MDH5 MDH4 — L89 LS193 — BC7 BC6 BC5 BC4

IBEN — MDH3 MDH2 MDH1 MDH0 — L90 LS193 — BC3 BC2 BC1 BC0 — MDH5-MDH7 (1E3) — BC0-BC15 (4F3)

L68 LS74 — CLK PER (1A7) — L102 LS08 — PER (1G6)

L35 LS74 — L79 LS74 — L80 LS73 — L112 LS00 — L61 LS02 — L60 74LS08 — L77 LS04 — L62 LS20

LDWI (3C7) — LDW2 (3C7) — LD FIFO (1A7) — IDR (3E4) — DREQE (3F9)

RDCM (1C2) — LP BACK (1A5) — L51 LS00 — RD+LP (3F10)

L53 LS74 — L54 LS74 — L55 LS74 — L56 LS74 — L57 LS74 — L58 LS74 — L59 LS74 — L60 LS74 — L61 LS74 — L62 LS74

DO0 DO1 DO2 DO3 DO4 DO5 DO6 DO7 — DO0-DO7 (4F3)

IR (3C11) — OR (3E9)

L36 LS374 — L9 L5 L18 L19 75452

R5 R6 R7 R8 R9 R10 R11 R12 R13 R14 R15 R16 R17 R18 R19 R20 — 180Ω / 390Ω

DATA-0 DATA-1 DATA-2 DATA-3 DATA-4 DATA-5 DATA-6 DATA-7

L37 75452 — R96 2.2K

L70 LS280 — DI0 DI1 DI2 DI3 DI4 DI5 DI6 DI7 — ΣE ΣO

L34 LS04 — L20 LS14

R94 2.2K — BK12 (3F8) — L52 LS86 — EV PAR (1A5)

R33 180Ω — R34 390Ω

R111 2.2K — R112 2.2K — BCT (4C9) — BCT (3C9) — BK9 (3C6)

BK16 (3D11) — BK17 (3E8) — IC (1G6)

R113 2.2K — BK13 (3A6)

RES (1R4)

DATA-P

WANG LABORATORIES, INC. LOWELL MASS U.S.A.	BY	DATE	APPROVED BY	DATE
	DWN S.P.B.	7/9/81	E ENGR	
	CHK		M ENGR	
			MFG ENGR	
MATERIAL	MODEL NO V5 80/100 SEE ENGRG SPECIFICATIONS No.	TITLE 1600/6250 BPI GCR MAG TAPE ADPT		
FINISH	TOL EX AS NOTED .X ± FRAC ± .XX ± ANG ± FINISH	SCALE — SHT 2 OF 6	210-7800 WANG PART NUMBER	D SIZE	7800 DRAWING NUMBER	4 REV

NO	REVISION	DATE	BY
	SEE SHEET 6		

BRUNING 413253 48897

7800 D

U2

DO NOT SCALE

DREQ (2C3)
+5VR
R51 180Ω
R52 390Ω
±0V
L20 LS14
RDCM(1D2)
WT CM (1D2)
L24 LS155
DREQE (2A10)
LD R LATCH (1A7)
L25 LS32
BK12 (2B3)
L42 LS00
L25 LS32
RD+LP (2D8)
RD+LP
L8 LS04
L7 LS153
L6 06
OR (2E6)
L34 LS04
BK5 (4F3)
L32 LS74
BK17 (2B6)
LP BACK (1A5)
L42 LS00
BK16 (2B5)
L96 LS11
RDCM (1C2)
L8 LS04
XTAL2 (4A7)
R95 2.2K
OUTRDY (4C9)
XTAL1 (4A7)
R91 2.2K
R92 2.2K
L29 LS74
L26 LS27
L43 LS74
UNLD W (4F4)
WT CLK (2D7)
L27 LS32
L45 LS08
L44 LS74
L49 LS08
L48 LS08
L61 LS02
L28 LS74
BK7 (3B2)
L46 LS74
LDR (2A11)
R100 2.2K
L96 LS74
L27 LS32
R99 2.2K
L49 LS74
L43 LS74
DAK (3E)
LBY (4E)
L101 LS74
R123 2.2K
TO7B (1B10)
BK4 (4C8)
(4C8) DMACMP
BK2 (4C9)
R114 2.2K
WT CM (1D2)
L82 LS74
BK3 (4C9)
L83 LS02
RDCM (1D2)
BK10 (1B3)
START INH (1B5)
L60 LS08
L42 LS00
RDFIFO2 (1B7)
L96 LS11
BK9 (2B6)
L78 LS74
MDR SEL (2G8)
R122 2.2K
R93 2.2K
LD FIFO2 (1B7)
L98 LS74
L31 LS74
L102 LS08
L34 LS04
IR (2E6)
L32 LS74
IN RDY (4D6)
L31 LS74
L50 LS02
BCT (2B7)
L49 LS08
L65 LS175
LDW1 (2B11)
LDW2 (2B11)
L67 LS08
L50 LS02
L49 LS08
L66 LS74
L93 LS32
L86 LS175
UNLDR1 (4E4)
UNLDR2 (4E5)
L102 LS08
L66 LS74
L50 LS02
L102 LS08
BK1 (3E6)
L29 LS74
L81 LS32
BK13 (4D8)
L93 LS32
HWI6
RES CM (1B2)
DMA INH (1D2)
L96 LS11
L49 LS08
WT CM(1D2)
BK13 (2A5)
L49 LS08
102B (1B8)
L78 LS74
DLS EN (4G5)
SELFIFO (4F4)
HTS (34)
INIT2 (13)
BMOF (23)
L109 LS244
INIT2B (1A9)(1B5)
BK11 (4F7)
L93 LS32
WT+RD(4C9)
PGBK(4D9)
L52 LS86
L51 LS00
SINPT (23)
HRI6 (24)

BY	DATE	APPROVED BY	DATE
DWN	7/9/81	E ENGR	
CHK		M ENGR	
		MFG ENGR	

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

MATERIAL

MODEL NO: VS 80/100 — SEE ENGRG SPECIFICATIONS

FINISH

TOL ES AS NOTED: XX ± FRAC ±, XXX ± ANG ±, FINISH √

SCALE — SHT 3 OF 6

TITLE: 1600/6250 BPI GCR MAG TAPE ADPT

210-7800	D	7800	4
WANG PART NUMBER	SIZE	DRAWING NUMBER	REV

NO	REVISION	BY	DATE
	SEE SHEET 6		

BRUNING 40-5257 48997

D 7800

U3

DO NOT SCALE

+5VR
R89 180Ω
R90 390Ω
±0V
BSY (12)
L20 LS14
L1 06
R3 180Ω
"BUSY" LED3 MV5024
BUSY (IC4)(IF5)
R119 2.2K
R118 2.2K
L95 LS74
TO7B (1B10)
L62 LS20
BK11 (IC4) (3A11)
R117 2.2K
TO6 (15)
R115 2.2K
R116 2.2K
L84 LS74
MA8 (D1)
L100 LS04
L85 LS00
PGBK (3A11)
BK15 (3B1)
L99 LS351
BK2 (3D1)
R107 2.2K
TO2B (1B8)
DLSINH (4G5)
L67 LS08
ST4-Q (10)
RDCM (IC2)
WTCM (1D2)
WT+RD (3A11)
BK3 (3D4)
DMA CMP (1F8) (3D2)
BCT(2B8)
OUT RDY (3D7)
BK4 (3D3)
R120 820Ω 5%
R121 820Ω 5%
C85 120pF
L113 LS04
BXTAL (7)
Y1 10MHZ
L112 LS00
XTAL1 (3G7)
XTAL2 (3D9)
R125 2.2K
R126 2.2K
TP1
TP2
RIPPLE CLK (11)
STO-FS STQ-PS (9) (7)
DLSINH (4C9)
R124 2.2K
DLS EN (3A4)
SEL CNTR (1C10)
SELFIFO (3A4)
L111 LS153
L110 LS04
RSB (1B7)
EN D-BUS (1B7)
BK14 (1E3)
UNLD W (3G4)
UNLDR1 (3C2)
L94 LS153
TO4B (1P10)
UNLDR2 (3C3)
L26 LS27
L27 LS32
BK5 (2F7)
BC0-BC15 (2B9)
DO0-DO7 (2D6)
L106 LS257
L105 LS257
L104 LS257
L103 LS257
DO-D15 (1E7)
BK1 (1C10)
IN RDY (3C9)
TA1, TA2 (1F1)
DS0, DS1 (1E1)
ESC0, ESC1 (1D1)
L68 LS74
DMA INH (1D2)
CMD0-CMD4 (1B1)
SB0-SB15 (1F10)
L110 LS04
DSMH (14) DSML (13)

	BY	DATE	APPROVED BY	DATE
WANG LABORATORIES, INC. LOWELL, MASS. U.S.A.	DWN S.P.B.	7/9/81	E ENGR	
	CHK		M ENGR	
			MFG ENGR	

MATERIAL —

MODEL NO. VS 80/100 — SEE ENGRG SPECIFICATIONS — No. —

FINISH —

TOLERANCE AS NOTED: XX ± FRAC ±, XXX ± ANG ±, FINISH √

SCALE — SHT 9 OF 6

TITLE 1600/6250 BPI GCR MAG TAPE ADPT

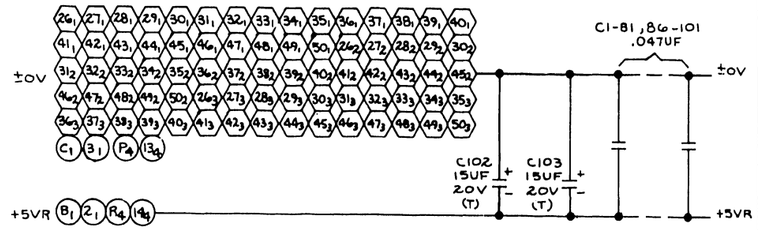
210-7800 (WANG PART NUMBER) | D (SIZE) | 7800 (DRAWING NUMBER) | 4 (REV)

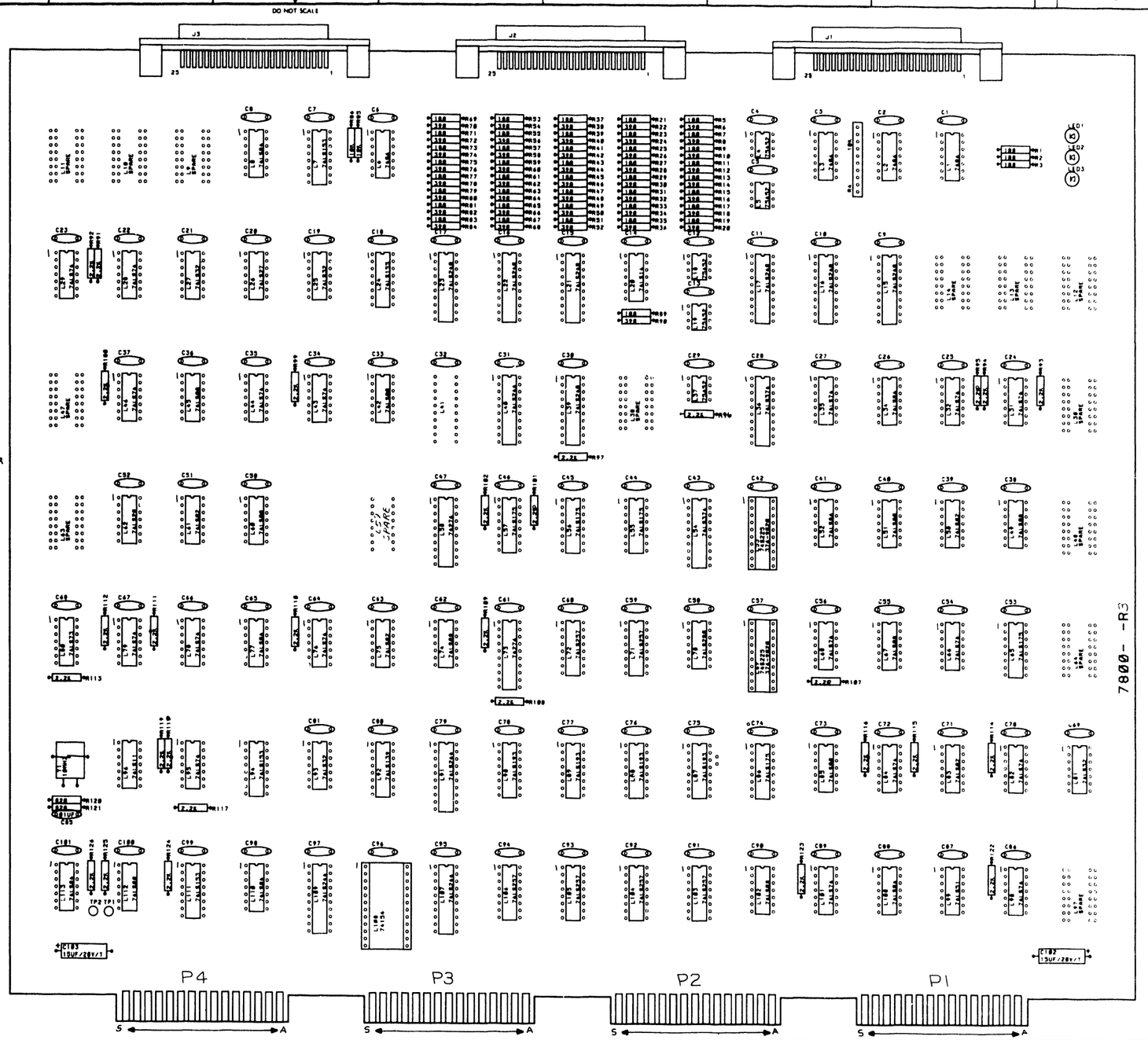
NO	REVISION	DATE	BY
	SEE SHEET 6		

BRUNING 40-5253-48997

U4

DO NOT SCALE





REVISION	BY	DATE
SEE SHEET 6		

	BY	DATE	APPROVED BY	DATE
WANG LABORATORIES, INC. LOWELL MASS U.S.A.	DWN SBB	7/9/81	E ENGR	
	CHK		M ENGR	
			MFG ENGR	

MATERIAL —

MODEL NO. VS80/100
SEE ENGRG SPECIFICATIONS
No. —

TITLE 1600/6250 BPI GCR MAG TAPE ADPT

FINISH —

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

SCALE — SHT 5 OF 6

210-7800	D	7800	4
WANG PART NUMBER	SIZE	DRAWING NUMBER	REV

DO NOT SCALE

I.C. LOCATION	TYPE	W.L. PART NO.
L1-3,6	7406	376-0055
L4,5,18,19,37	75452	376-0145
L7,94,111	74LS153	376-0156
L8,34,77,100,110, 113	74LS04	376-0180
L9-14,30,38,97, 48,63,64,97	SPARE	
L15-17,21-23, 39	74LS240	376-0297
L20	74LS14	376-0322
L24	74LS155	376-0158
L25,27,81,93	74LS32	376-0211
L26	74LS27	376-0245
L28,29,31,32, 35,43,44,46, 66,68,76,78,79, 82,84,95,98,101	74LS74	376-0155
L36,54	74LS374	376-0286
L40,91,107,109	74LS244	376-0288
L42,51,85,112	74LS00	376-0207
L45,49,60,67, 74,102	74LS08	376-0153
L50,61,75,83	74LS02	376-0208
L52	74LS86	376-0231
L53,69	74S225	376-0323
L55-57,65,86	74LS175	376-0160
L58,73	74276	376-0318
L62	74LS20	376-0210
L70	74LS280	376-0242
L71,72,103-106	74LS257	376-0204
L80	74LS73	376-0304
L87-90	74LS193	376-0220
L92	74LS139	376-0226
L96	74LS11	376-0225
L99	74LS51	376-0213
L108	74154	376-0090
L53,69	20 PIN SOCKET	376-9020
L108	24 PIN SOCKET	376-9003

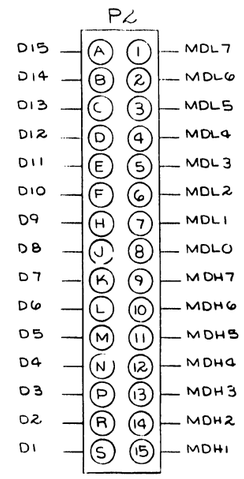
COMPONENTS	TYPE	W.L.PART NO.
R1-3,5,7,9,11,13,15,17,19, 21,23,25,27,29,31,33,35, 37,39,41,43,45,47,49,51, 53,55,57,59,61,63,65, 67,69,71,73,75,77,79, 81,83,89	180 Ω 1/4W 10%	330-2018
R4	10K	333-0809
R6,8,10,12,14,16,18,20, 22,24,26,28,30,32,34, 36,38,40,42,44,46,48, 50,52,54,56,58,60,62, 64,66,68,70,72,74,76, 78,80,82,84,90	390Ω 1/4W 10%	330-2039
R85,86	10K 1/4W 10%	330-4010
R91-97,99-102,107-119,122-126	2.2K 1/4W 10%	330-3022
R120,121	820Ω 1/4W 5%	330-2083
C1-81,86-101	.047UF 50V	300-1966
C85	.01UF 25V	300-1903
C102,103	15UF 20V (T)	300-4022
J1-3	50 PIN CONN.	350-1045
LED1-3	MV5024,RED	370-0026
Y1	10MHZ	321-0008

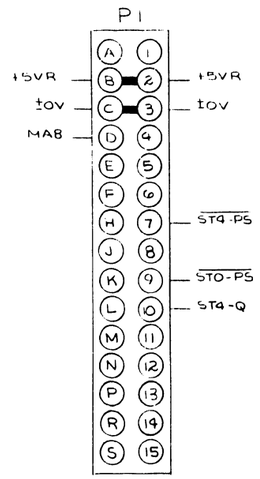
TYPE	I.C.LOC.	SPARES
74LS00	L85	1
	L112	1
74LS02	L75	1
	L83	3
74LS04	L8	3
	L34	2
	L77	3
	L100	2
	L110	1
7406	L1	3
	L2	2

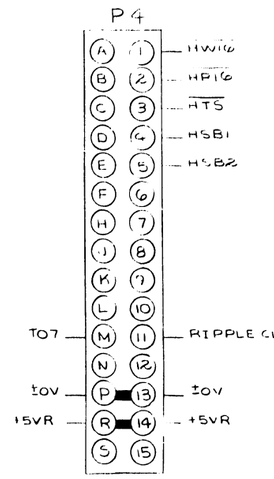
TYPE	I.C.LOC	SPARES
74LS08	L60	3
	L67	1
74LS27	L26	1
74LS32	L25	2
	L81	2
74LS51	L99	1
74LS74	L98	1
74LS86	L52	2

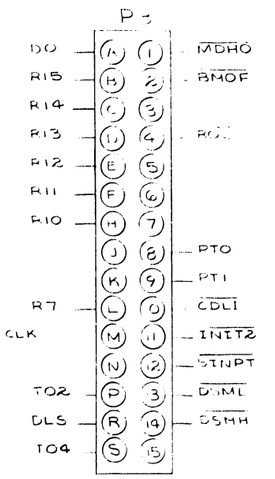
MNEMONICS	COOR'D
$\overline{BMOF}$	3B11
$\overline{BOT}$	1G4
$\overline{BSY}$	4F11
BXTAL	4B11
$\overline{CDLI}$	1B11
CMD CLK	1B11
$\overline{CMD0}$-$\overline{CMD2}$	1C1
$\overline{CMD3}$,$\overline{CMD4}$	1B1
$\overline{COR}$	1G9
$\overline{DAK}$	3E1
$\overline{DATA-P}$	2A4
$\overline{DATA-0}$	2G1
$\overline{DATA1}$,$\overline{DATA-2}$	2F1
$\overline{DATA-3}$-$\overline{DATA-5}$	2E1
$\overline{DATA-6}$,$\overline{DATA-7}$	2D1
$\overline{DDS0}$,$\overline{DDS1}$	1G7
$\overline{DLS}$	4G1
$\overline{DPE}$	1G10
$\overline{DREQ}$	3G11
$\overline{DSMH}$	4A4
$\overline{DSML}$	4A4
$\overline{DS0}$,$\overline{DS1}$	1E1
D0-D2	4F1
D3-D5	4E1
D6-D9	4D1
D10-D12	4C1
D13-D15	4B1
$\overline{EOT}$	1G5
$\overline{ERM}$	1G7
$\overline{ERR}$	1G9
$\overline{ERROR0}$-$\overline{ERROR7}$	.G3
$\overline{ESC0}$	1D1
$\overline{ESC1}$	1E1
$\overline{FMK}$	1G10
$\overline{FPT}$	1G4
$\overline{HRIG}$	3A4
$\overline{HSB1}$	1G6
$\overline{HSB2}$	1G7
$\overline{HTS}$	3B11
$\overline{HWIG}$	3B1
$\overline{IBEN}$	2C11
$\overline{IDB}$	1G9
$\overline{INIT2}$	3B11
$\overline{LBY}$	3E1
MA8	4D11
$\overline{MDH0}$, $\overline{MDH1}$	2B11
$\overline{MDH2}$, $\overline{MDH3}$	2C11
$\overline{MDH4}$-$\overline{MDH7}$	2D11
$\overline{MDL0}$-$\overline{MDL3}$	2E11
$\overline{MDL4}$-$\overline{MDL6}$	2F11

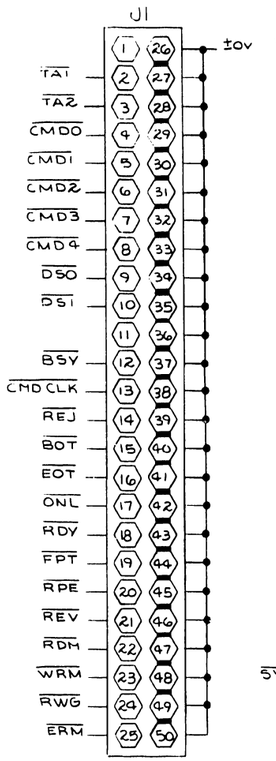
MNEMONICS	COOR'D
$\overline{MDL7}$	2G11
$\overline{ONL}$	1G3
$\overline{OVR}$	1G10
PTO,PTI	1D11
$\overline{RDM}$	1G8
$\overline{RDY}$	1G4
$\overline{REJ}$	1G9
$\overline{REV}$	1G8
RIPPLE CLK	4A8
$\overline{RNR}$	1G4
$\overline{ROS}$	1A6
$\overline{RPE}$	1G9
$\overline{RWG}$	1G4
R7,R10,R11,R14, R15	1C11
R12,R13	1B11
$\overline{SINPT}$	3A9
$\overline{STO-PS}$	4A7
$\overline{ST4-PS}$	4A7
ST4-Q	4C11
$\overline{SYS\ RST}$	1A4
$\overline{TA1}$,$\overline{TA2}$	1F1
T02,T04,T07	1B11
T06	4E11
$\overline{WRN}$	1G8

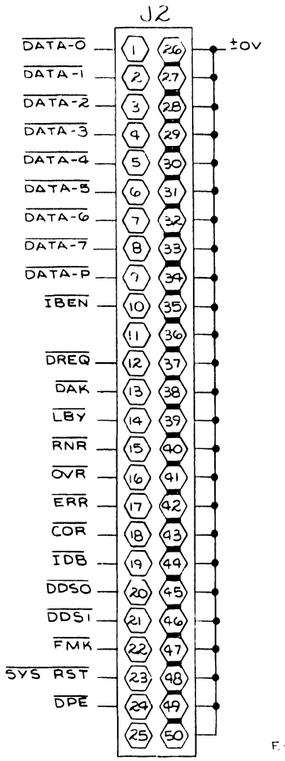


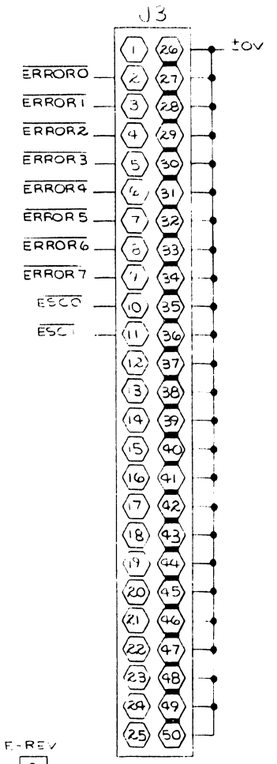












F-REV 2

NO	REVISION	BY	DATE
0	ORIGINATED PER DWR# E12-12 APP'D: [illegible]	D.S.	7/9/81
1	REVISED PER ECOS 20237, 20312 APP'D: [illegible]	D.S.	9 30 81
2/1	REVISED PER ECO# 21099 APP'D [illegible]	JEP	12.18.81
3/2	REVISED PER ECO# 21891 APP'D [illegible]	JEP	2.18.81
4/2	REVISED PER ECO'S 22116 & 22213 APP'D: [illegible]	PGD	2-20-82

	BY	DATE	APPROVED BY	DATE
DWN	S.D.B.	7/7/81	E ENGR	7/7/81
CHK	[illegible]	30.vi.81	M ENGR	
			MFG ENGR	

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

MATERIAL

FINISH

MODEL NO VS80/100

SEE ENGRG SPECIFICATIONS No.

TOL EX AS NOTED

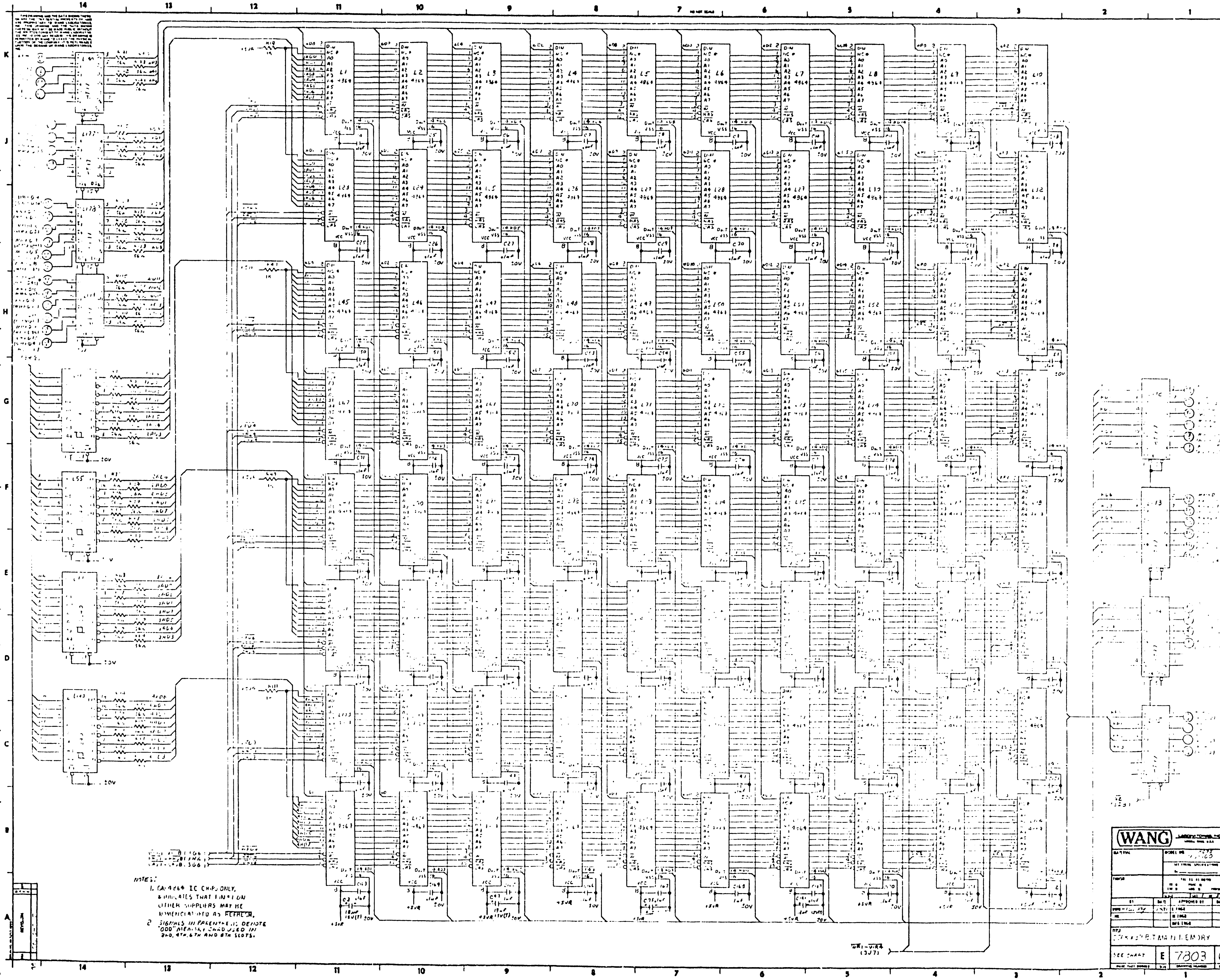
TITLE 1600/6250 BPI GCR MAG TAPE ADPT

WANG PART NUMBER	SIZE	DRAWING NUMBER	REV
210-7800	D	7800	4

SCALE: SHT 1 OF 1

BRUNING 40-5253 48997

U6



L1 4364
L2 4364
L3 4364
L4 4364
L5 4364
L6 4364
L7 4364
L8 4364
L23 4364
L24 4364
L26 4364
L27 4364
L28 4364
L29 4364
L30 4364
L45 4364
L46 4364
L47 4364
L48 4364
L50 4364
L51 4364
L52 4364
L55
L67
L70
L71
L74
L177
L178
NOTES:
1. CA 4264 IC CHIPS ONLY. & INDICATES THAT PIN ON OTHER SUPPLIERS MAY BE NOMENCLATURED AS REFRESH.
2. SIGNALS IN PARENTHESIS DENOTE "ODD" MEMORY CARD USED IN 2ND, 4TH, 6TH AND 8TH SLOTS.
WR1 - WR4 (3J7)
WANG LABORATORIES, INC.
32K x 8 BIT MAIN MEMORY
SEE CHART
E
7803
6

WANG LABORATORIES, INC.

SIZE D | DRAWING NO. 7803 | REV. VS-100

MEMORY SYSTEM OPERATIONS

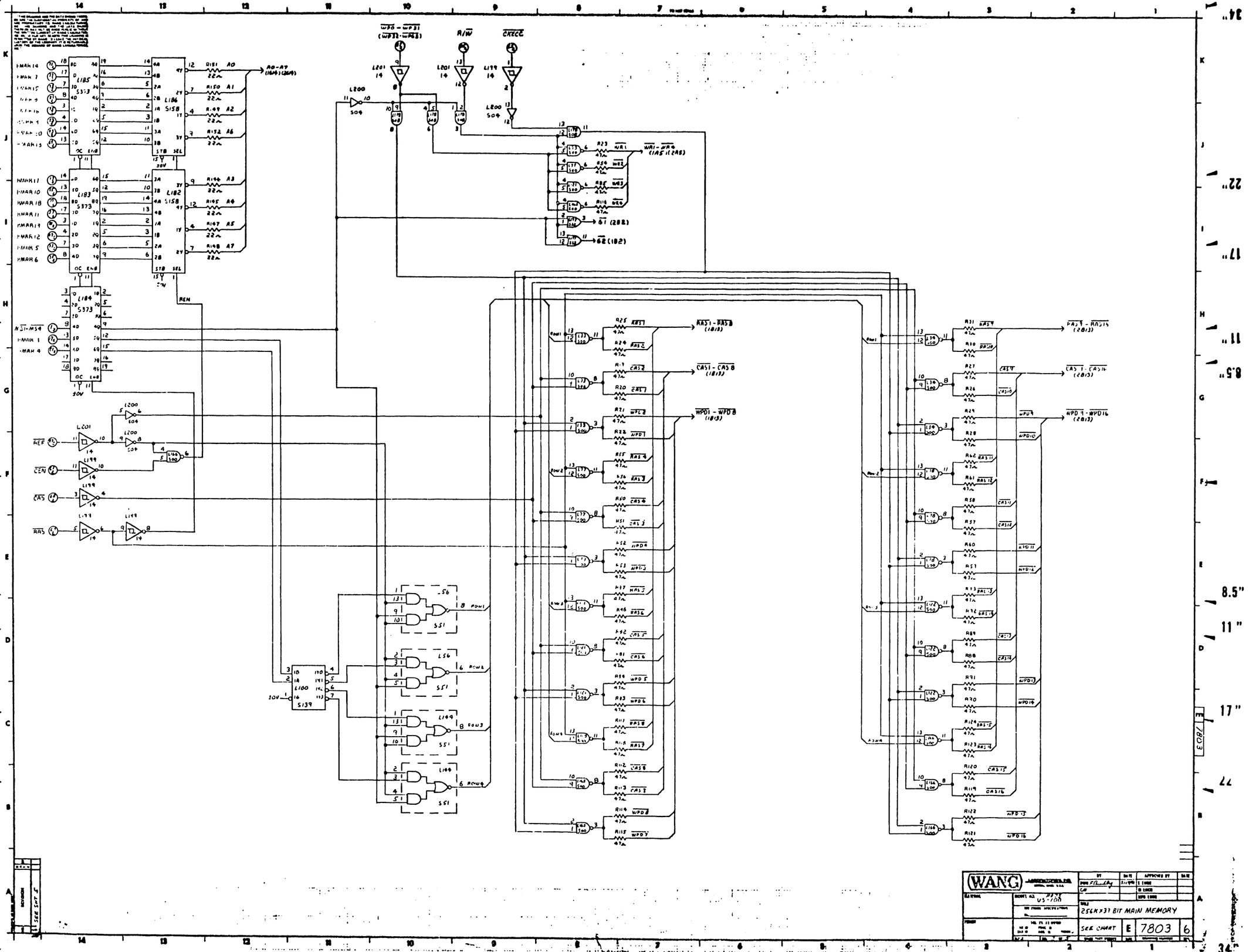
TITLE: 256K x 39 BIT MAIN MEMORY

SEE CHART | E | 7803 | 6

DRAWN BY ELL | DATE 1-1-80 | APPROVED BY | DATE

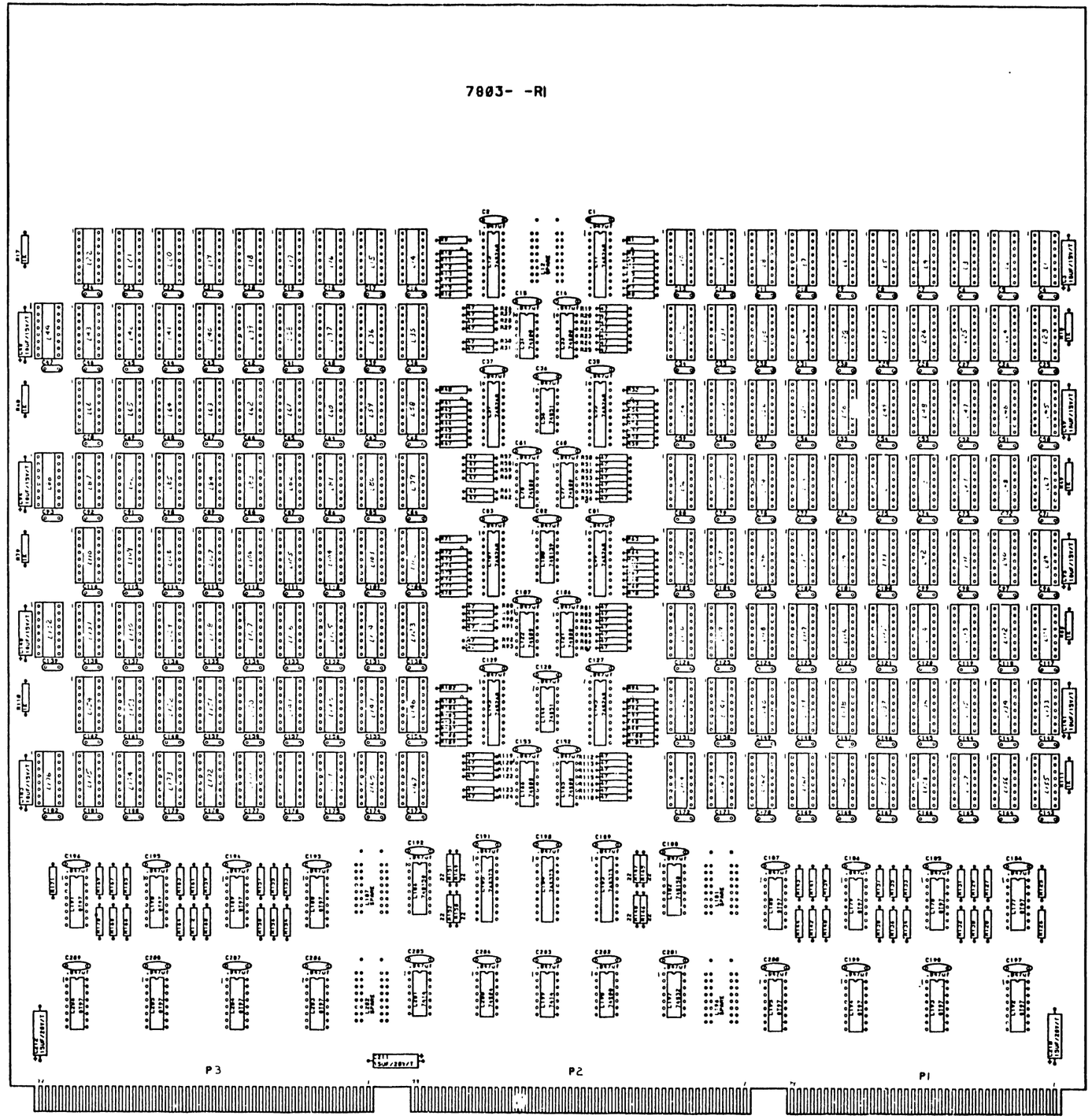
SCALE: NONE

V2


WP0 – WP31 (WP31 – WP0)
R/W
CKECC
L200
S04
L201
L199
L185 S373
L186 S158
L183 S373
L182 S158
L184 S373
REN
REF
CEN
CAS
RAS
L100 S139
S51
S6
RAS1 – RAS8 (18B)
CAS1 – CAS8 (18B)
WPD1 – WPD8 (18B)
WR1 – WR8 (18A5 & 28A5)
WE1 – WE8 (28A5)
RAS9 – RAS16 (28B)
CAS9 – CAS16 (28B)
WPD9 – WPD16 (28B)
ROW1
ROW2
ROW3
ROW4
WANG
SIZE
SCALE
2SEK X 37 BIT MAIN MEMORY
SEE CHART
E
7803
6

V3

7803- -R1



652 FRONT FACEPLATE 1 PER
-500-2204 40 A3/A PAN HD PHIL SCREW-5 PER

WANG LABORATORIES, INC.		BY	DATE	APPROVED BY	DATE
MATERIAL	MODEL NO. VS-100	DRAWN			
	NC TOOL SPECIFICATIONS No.	ENG		A (1984)	
FINISH	TOL EX XX DECIMAL XX ± .XXX ANG ± XX°			B (1985)	
				DPS (1986)	
		TITLE 256K X 39 BIT MAIN MEMORY			
		SIZE E	SEE CHART	DRAWING NUMBER 7803	REV
		SCALE FULL	SHEET 1 OF 1		

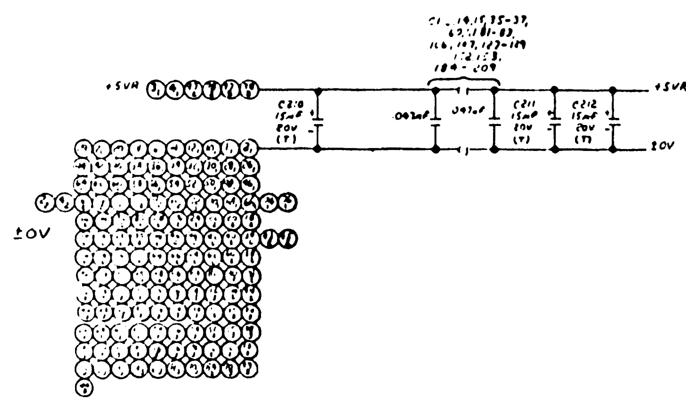
REVISION

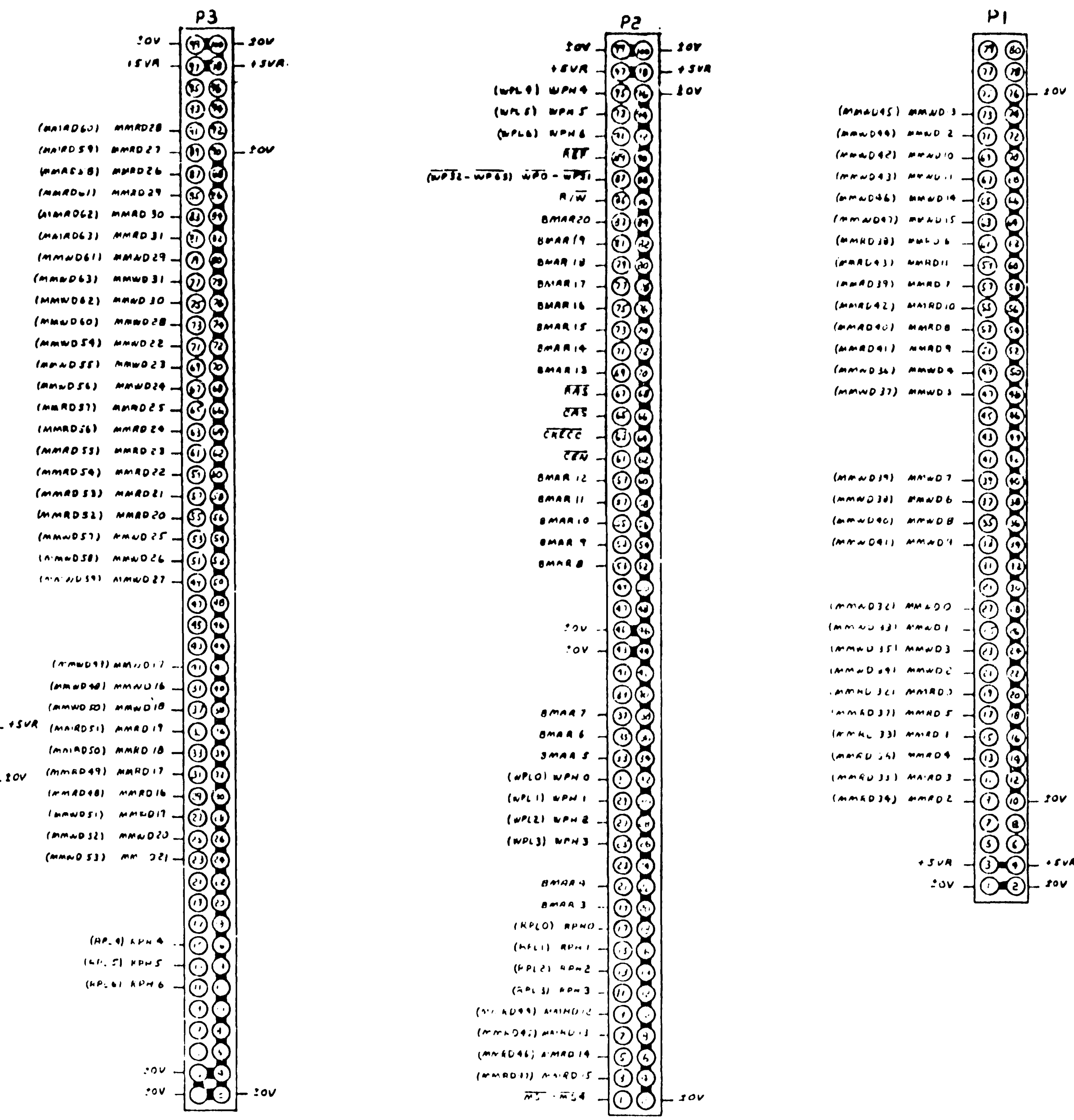
V4

IC LOCATION	TYPE	WL PART NO
L1-13, 14-32, 35-54, 59-76, 77-78, 102-120, 123-142, 146-164, 167-176	4164	SEE CHART
L11-13, 55-57, 97, 99, 45	74S240	376-0334
L2, 131, 47, 176, 202	SPARE	
L33, 34, 77, 78, 121, 122, 165, 166	74S00	376-0228
L[illegible], 144	74S51	376-0184
L99	74S139	376-0333
L177, 180, 98-195, 203-206	8T97	376-0189
L182, 186	74S158	376-0301
L183, 184, 95	74S373	376-0306
L197	74S32	376-0295
L178	74S08	376-0200
L179, 201	7414	376-0137
L200	74S04	376-0197
L1-10, 4-32, 35-54, 58-76, 79-78, 102, 120, 123, 142, 146-164, 167-176	16PIN SKT	376-10 2

MNEMONIC	COORD
BMAR1	3H14
BMAR5 - BMAR20	3H14
BMAR4	3G14
CAS	3F14
CEN	3F14
CRECC	3K9
MS1 - MS4	3H14
MMWD0 - MMWD15	1J14
MMWD16 - MMWD31	2J14
MMWD32 - MMWD47	1J14
MMWD48 - MMWD63	2J14
MMRD0 - MMRD15	1G1
MMRD16 - MMRD31	2G1
MMRD32 - MMRD47	1G1
MMRD48 - MMRD63	2G1
RAS	3E14
REF	3F4
R/W	3K9
RPH0 - RPH3	1C1
RPH4 - RPH6	2C1
RPL0 - RPL3	1C1
RPL4 - RPL6	2C1
WP0 - WP31	3K10
WP32 - WP63	3K10
WPH0 - WPH3	1K14
WPH4 - WPH6	2K14
WPL0 - WPL3	1K14
WPL4 - WPL6	2K14

TYPE	IC LOCATION	SPARES
74S00	L33	1
	L79	1
	L122	1
74S04	L200	2
7414	L179	[illegible]
	L201	3
74S32	L197	2
74S139	L100	1





REF DESIG	TYPE	WL PART NO.
R1-16, 32-47, 63-78, 94-109, 125-140, 155-171	56Ω 1/4W 5%	330-1057
R17, 18, 48, 49, 79, 80, 110, 111	1K 1/4W 5%	330-3011
R19-31, 50-62, 81-93, 112-124	47Ω 1/4W 5%	330-1048
R135-152	12Ω 1/4W 5%	330-1023
C1-4, 15, 35-37, 62, 61, 81, 83, ... 152, 153, 184-209	.047μF 50V	300-1966
C3, 48, 47, 74, ... 143	15μF 15V(T)	300-4018
C4-..., 38-47, 50-57, 62, 80, ... 152	.1μF 50V	300-1930
C210-212	15μF 20V(T)	300-4022

210 = 209 + 377 OR 378																	
210	209	L1-10	L14-21	L24-32	L35-44	L45-54	L58-66	L67-76	L79-88	L89-98	L102-110	L111-120	L123-132	L133-142	L146-154	L155-164	L167-176
7803-1A	7803-1	377-0415	377-0415	377-0415	377-0415												
7803-2A	7803-1	377-0415	377-0415	377-0415	377-0415	377-0415	377-0415	377-0415	377-0415								
7803-3A	7803-1	377-0415	377-0415	377-0415	377-0415	377-0415	377-0415	377-0415	377-0415	377-0415	377-0415	377-0415	377-0415				
7803-4A	7803-1	377-0415	377-0415	377-0415	377-0415	377-0415	377-0415	377-0415	377-0415	377-0415	377-0415	377-0415	377-0415	377-0415	377-0415	377-0415	377-0415

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

E REV
0

WANG LABORATORIES, INC.

VS-100

256K x 37 BIT MAIN MEMORY

SEE CHART | E | 7803 | 6

V5

DO NOT SCALE

-5VADR -5VAIN -5VA -5VA

-16VUR +16VUR +12 VB +12 VBIN +12VA +12VAIN ONPB 16VAC1 16VAC2

+24VUR +24VADR +12 VBDR

EN+5VB EN+5VA

LED COM

JP2

BK1 (2G8) BK2 (2B10) BK3 (2E6)

LM339 LM304 LM555 NE5534 LM723

SEE SHEET 4

BY	DATE	APPROVED BY	DATE
DWN T.G. Quill	9/9/87	E ENGR	
CHK		M ENGR	
		MFG ENGR	

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

MATERIAL

MODEL NO VS-100 SEE ENGRG SPECIFICATIONS No.

TITLE POWER SUPPLY

FINISH

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

SCALE SHT 1 OF 4

210-7812 | D | 7812 | 5

WANG PART NUMBER | SIZE | DRAWING NUMBER | REV

W1

DO NOT SCALE

OFF PB (4₂)

NC SW2 NO C ±0V

BK1 (IC7) R45 1K R67 10K

D23 IN4148 +16VUR

R78 47K

LED1 ±0V MV5024

R81 560Ω

+5VA (5₂)

+5VA (5₄)

R74 10K

L14 LM339 (11, 10, 13)

R75 1K

D21 IN4004

R80 1K

±0V

LED2 ±0V MV5024

R82 560Ω

+5VB (3₂)

+5VB (6₂)

R77 10K

+16VUR

L14 LM339 (4, 3, 5, 12, 2)

R76 1K

±0V

D20 IN4004

R79 1K

±0V

C18 5.6UF 35V (T)

±0V

L14 LM339 (9, 8, 14)

D19 IN4148

BK3 (2D4)

D15 IN4148

±0V (1₂)

±0V (3₂)

±0V (5₂)

±0V (7₂)

+16VUR

L15 LM339 (5, 4, 12)

BK2 (IC5)

±0V

L15 LM339 (6, 7, 1)

INIT-A (4₂)

+5VA R62 4.7K

(2₁) "ON" LED DR

(4₁) "OFF" LED DR

16VAC₂ (2₆) -16VUR (15₆) 16VAC₁ (1₆) -16VUR (8₆) +16VUR (7₆) +16VUR (16₆) 6VAC₂ (16₂) 6VAC₁ (4₂)

D34 A15A

D33 A15A

F1 3AG.S.B. 250V

C22 100UF 50V (E) ±0V

D36 IN4004

D35 IN4004

-16VUR

R86 470Ω 1W 10%

C26 15UF 20V (T) ±0V

R91 470Ω 1/2W

C21 450UF 12V (E)

+16VUR

+24VUR

-1.4V

R37 330Ω 1W 10%

+3V

D9 IN4372A ZEN

±0V

D27 IN4004

D26 IN4004

±0V

R72 3.3K

Q7 TIL-111

D28 IN4148

+16VUR

±0V

+5VA

R56 1K

(7₂) 50/60 HZ -OUT

Q6 2N3014

R73 3.3K

±0V

+16VUR

R64 10K

R63 2.2K

L11 LM339 (7, 3, 1, 6, 12)

±0V

+16VUR R84 15Ω 11W R112 15Ω 11W

R85 15Ω 11W R113 15Ω 11W

D12 IN4148

R58 3.3K

Q8 2N6282

R57 4.7K

±0V

R61 30.1K 1%

+16VUR

R59 2.2K

+5VA

R39 1K

(8₂) INIT

(13₂) INIT

±0V R60 18.2K 1%

L11 LM339 (9, 14, 8)

D13 IN4148

R41 1K

Q3 2N3725

R40 1K

±0V

REV	BY	DATE
	SEE SHEET 4	

DRAWING 40-5253 48997

	BY	DATE	APPROVED BY	DATE
DWN	[illegible]	3/9/81	E ENGR	
CHK			M ENGR	
			MFG ENGR	

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

MATERIAL

FINISH

MODEL NO. VS-100

SEE ENGRG SPECIFICATIONS

No.

TOL EX AS NOTED

XX ± FRAC ±

XXX ± ANG ± FINISH √

SCALE | SHT 2 OF 4

TITLE POWER SUPPLY

210-7812 | D | 7812

WANG PART NUMBER | SIZE | DRAWING NUMBER | REV

7812

W2

DO NOT SCALE

+12VA
+12VB
-5VA
-5VB

7812- -R2

REVISION	BY	DATE
SEE SHEET 4		

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

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

MATERIAL

MODEL NO VS400
SEE ENGRG SPECIFICATIONS
No.

TITLE POWER SUPPLY

FINISH

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

SCALE SHT 3 OF 7

210-7812 | D | 7812 | 5
WANG PART NUMBER | SIZE | DRAWING NUMBER | REV

W3

DO NOT SCALE

COMPONENT	TYPE	W.L. PART NO.
R1,9,27,28,59,63,71	2.2K 1/4W 5%	330-3023
R2,35	33K 1/4W 5%	330-4034
R3,4,12,36	100K 1/4W 5%	330-5011
R5,10,44,64,67,74,77,93,99	10K 1/4W 5%	330-4011
R6,18	2.7K 1/4W 5%	330-3028
R7,14,52,83,95	1.8K 1/4W 5%	330-3019
R8,15,26,29	1K POT	336-1014
R11,22	150Ω 1/4W 5%	330-2016
R16,31,47A,78	47K 1/4W 5%	330-4048
R17,43,47,69,87,88	127K 1/8W 1%	333-0091
R18,25	470Ω 1/4W 5%	330-2048
R19,24	27Ω 1/4W 5%	330-1028
R20	1.5K 1/4W 5%	330-3016
R21	100Ω 1/4W 5%	330-2011
R23,34	2.37K 1/8W 1%	333-0093
R30,50	390Ω 1W 10%	332-2039
R32,33,39-41,45,48,49,56,75,76,79,80	1K 1/4W 5%	330-3011
R37	330Ω 1W 10%	332-2033
R38,51,53,65	15K 1/4W 5%	330-4016
R46,68	178K 1/8W 1%	333-0066
R54,55,81,82	560Ω 1/4W 5%	330-2057
R57,62,66,70,92,96	4.7K 1/4W 5%	330-3048
R58,72,73,89,90	3.3K 1/4W 5%	330-3034
R60	18.2K 1/8W 1%	333-0108
R61	30.1K 1/8W 1%	333-0063
R84,85,112,113	15Ω 1W	334-0002
R86	470Ω 1W 10%	332-2047
R91	470Ω 1/2W 10%	331-2047
R94,100	470K 1/4W 5%	330-5048
R97	1.1K 1/8W 1%	333-0118
R98	330K 1/4W 5%	330-5034
R101	12K 1/4W 5%	330-4013
R102	56Ω 1W 10%	332-1056
R103,104	.075Ω 3W 3%	334-0035
R105,108	909Ω 1/8W 1%	333-0059
R106,107	.006Ω 3W 5%	334-0031
R109	2K 1/8W 1%	333-0111
R110	.020Ω 3W 3%	334-0032
R111	120K 1/4W 5%	330-5013
C1,4,5,7,8,10,16,17,22,26,28-30	15 UF 20V(T)	300-4022
C2,3	.0056UF 500V	300-1915
C6,12,19,20	.22 UF	300-1902
C9,11,14	.001UF 500V	300-1906
C13,15,18,23	5.6UF 35V(T)	300-4017
C21	450UF 12V(E)	300-3043
C22	100UF 50V(E)	300-3052
C24	.01UF 25V	300-1903
C25	1.2UF 35V(T)	300-4013
C27	.015 UF	300-1928

COMPONENT	TYPE	W.L. PART NO.
D1,11	GER	380-0000R
D2-7,10,12-17,19,23-25,28-32	IN4148	380-1014
D8,15A	IN749A ZEN	380-2042
D9	IN4372A ZEN	380-2129
D18,20-22,26,27,35,36	IN4004	380-4000
D33,34	AISA	380-3008
Q1,2,4	2N2906A	375-1017
Q3	2N3725	375-1027
Q5,10	2N4234	375-1024
Q6,9	2N3014	375-0017
Q7	TIL-111	375-2109
Q8	2N6282	375-1046
LED1,2,4-7	MV5024	370-0026
F1	3A.S.B. 250V	360-1031
SW1,2	SPDT PUSH	325-0041
J1,6	6 POS HEADER	654-1186
J2,7	8 POS HEADER	654-1190
J3,4,5	2 POS HEADER	654-1198
J8	16 PIN SOCKET	376-9005

I.C. LOCATION	TYPE	W.L. PART NO.
L1,2,6,7	SPARE	
L3,8,11-16	LM339	376-0240
L4,5	LM723	376-0066
L9,10	LM304	376-0134
L17	555	376-0126

TYPE	I.C. LOCATION	SPARE
LM339	L3	1
	L8	1
	L11	2
	L13	1
	L14	1
	L15	2
	L16	1

MNEMONICS	COOR'D
EN+5VA	1B1
EN+5VB	1B2
$\overline{\text{INIT}}$	2B1
$\overline{\text{INIT-A}}$	2B11
LED COM	1D1
OFF LED DR	2A6
OFFPB	2G7
ON LED DR	2A9
ONPB	1D11
±0V	2C11
-5VA	1G7
+5VA	2D11
-5VADR	1G9
-5VAIN	1G8
-5VB	1G2
+5VB	2F11
50/60 HZ-OUT	2D1
6 VAC$_1$	2G1
6 VAC$_2$	2G2
-8 VUR	1G2
+12 VB	1F11
+12 VA	1A11
+12 VAIN	1A11
+12 VBDR	1A4
+12 VBIN	1E11
16 VAC$_1$	2G4
16 VAC$_2$	2G5
-16 VUR	2G5
+16 VUR	2G3
-16 VUR	2G3
+24 VADR	1A7

J1
- ±0V — 1, 2 — ON LED DR
- ±0V — 3, 4 — OFF LED DR
- ±0V — 5, 6 — EN+5VA

J6
- 16 VAC$_1$ — 1, 2 — 16 VAC$_2$
- +12 VBDR — 3, 4 — 6 VAC$_1$
- -8 VUR — 5, 6 — 6 VAC$_2$

J2
- EN+5VB — 1, 2 — ONPB
- +5VB — 3, 4 — OFFPB
- +5VA — 5, 6 — -5VB
- 50/60 HZ-OUT — 7, 8 — -16VUR

J7
- -5 VADR — 1, 2 — +16 VUR
- +24 VADR — 3, 4
- 5, 6 — $\overline{\text{INIT-A}}$
- LED COM — 7, 8 — $\overline{\text{INIT}}$

J3
- +12 VBIN — 1
- +12 VB — 2

J8
- +12 VA — 1, 16 — +16 VUR
- +12 VB — 2, 15 — -16 VUR
- -5 VA — 3, 14 — -8 VUR
- -5 VB — 4, 13 — $\overline{\text{INIT}}$
- +5 VA — 5, 12
- +5 VB — 6, 11
- ±0V — 7, 10
- 8, 9

J4
- +12 VA — 1
- +12 VAIN — 2

J5
- -5 VAIN — 1
- -5 VA — 2

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

E-REV 0

NO	REVISION	BY	DATE
0	ORIGINATED PER DWG # 211-32 APP'D RAE 4-81	KJC	5/4/81
1	REVISED PER ECO# 19210 APP'D RAE 4-81	RAE	5-26-81
2	REVISED PER ECO# 19610 APP'D RAE 11-81	JSK	7-9-81
3	REVISED PER ECO# 21137 APP'D 3-22-1982	CMP	12/7/81
4	REVISED PER ECO# 21376 APP'D [illegible]	SHS	3/1/82
5	[illegible]	[illegible]	5/11/82

	BY	DATE	APPROVED BY	DATE
DWN	[illegible]	5/4/81	E ENGR	5/4/81
CHK	[illegible]	6-4-81	M ENGR	
			MFG ENGR	

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

MATERIAL —

FINISH —

MODEL NO. VS-100 — SEE ENGRG SPECIFICATIONS — No. —

TOLERANCES AS NOTED: XX ± FRAC ±, XXX ± ANG ±, FINISH √

SCALE NL — SHT 4 OF 4

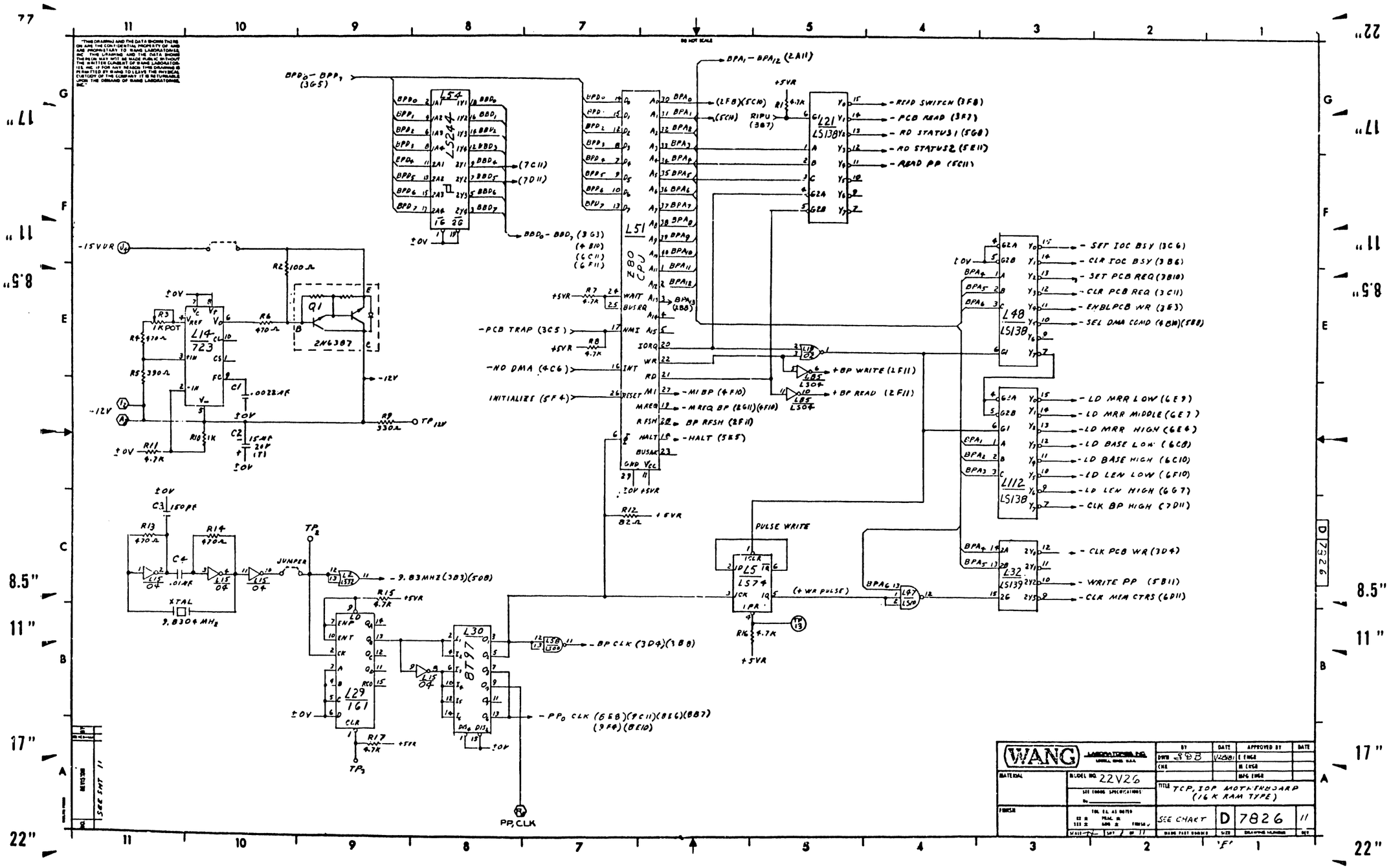
TITLE: POWER SUPPLY

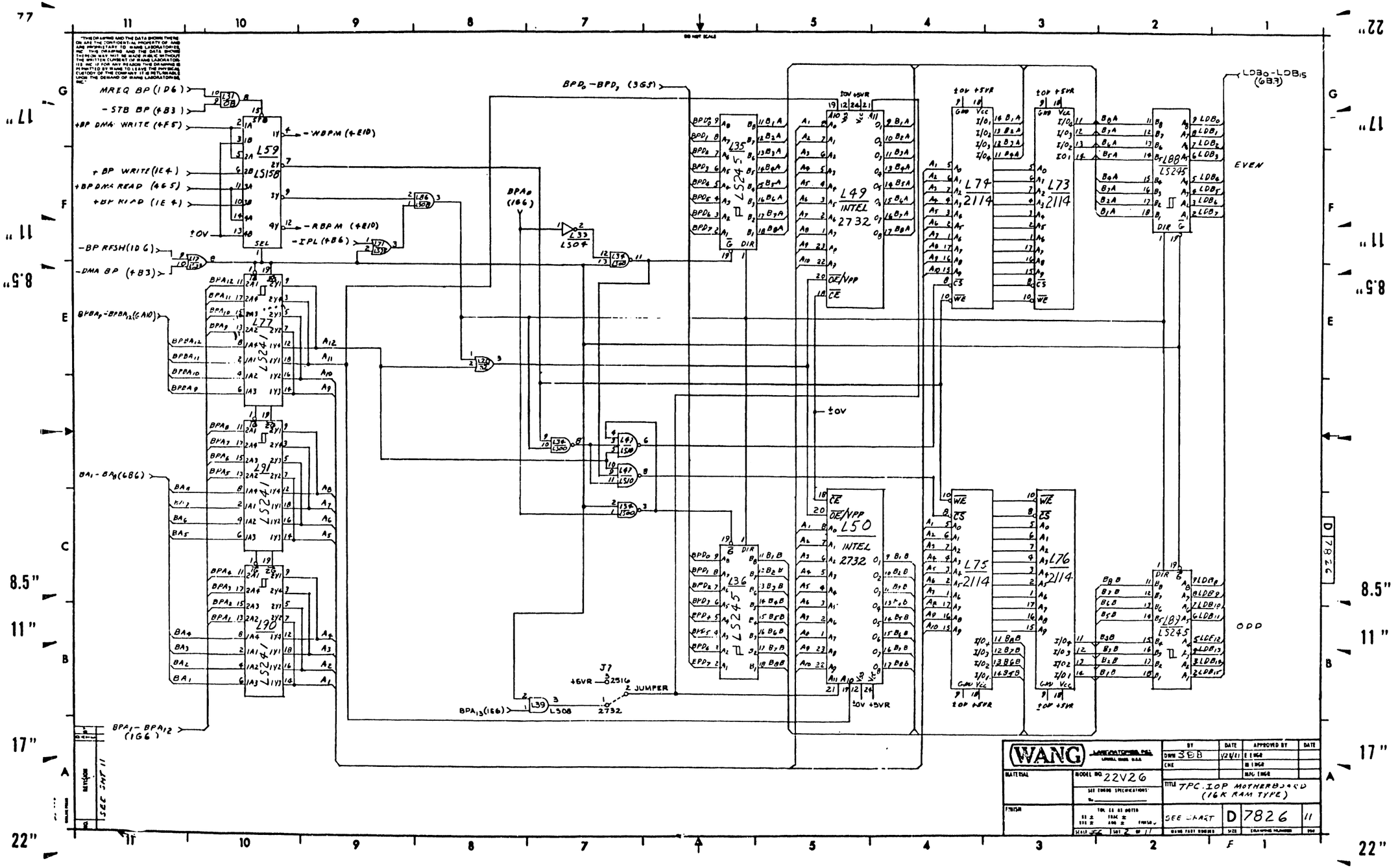
210-7812 — WANG PART NUMBER | D — SIZE | 7812 — DRAWING NUMBER | 5 — REV

D 2812

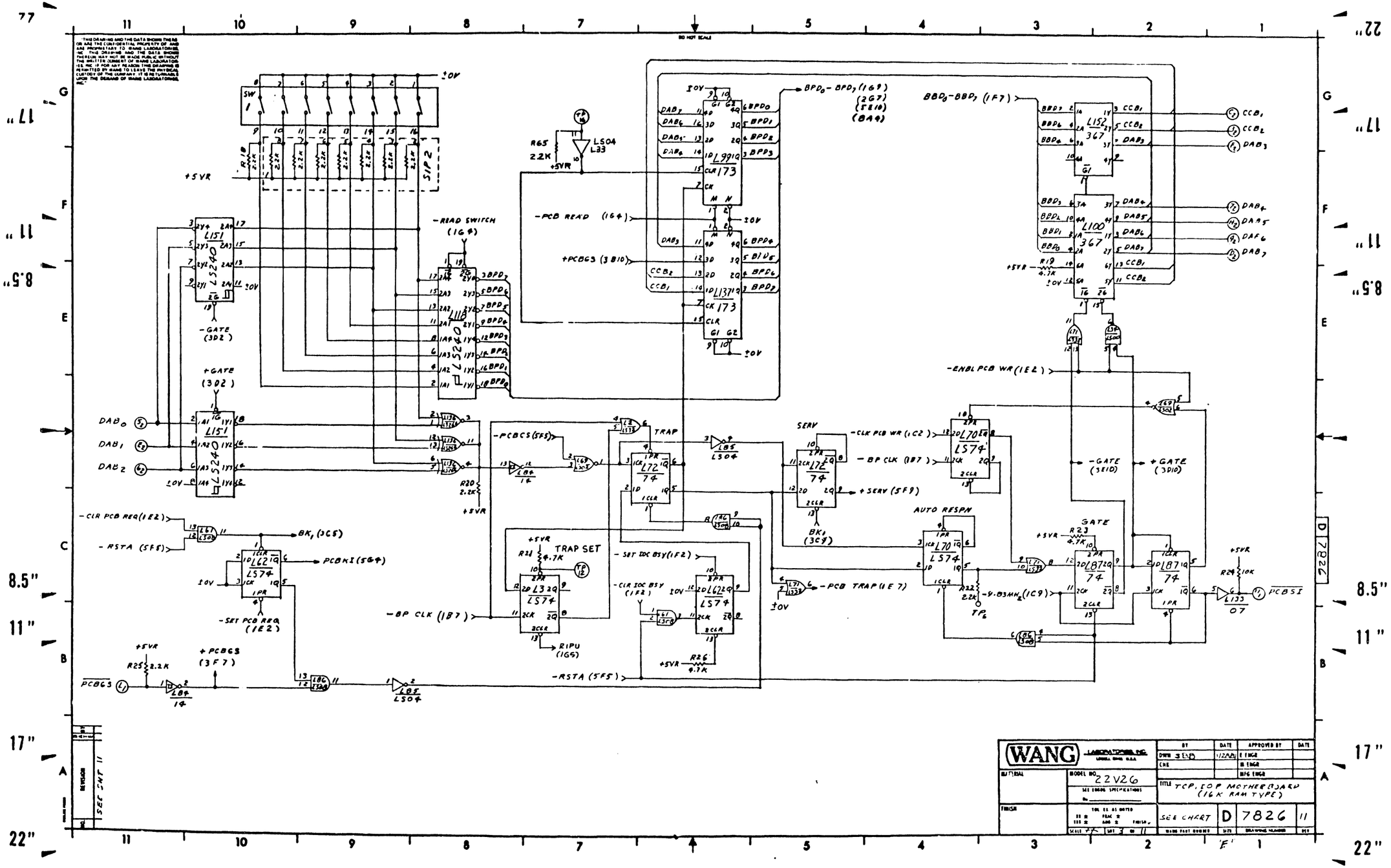
BRUNING 40-4243-1 48982

W4

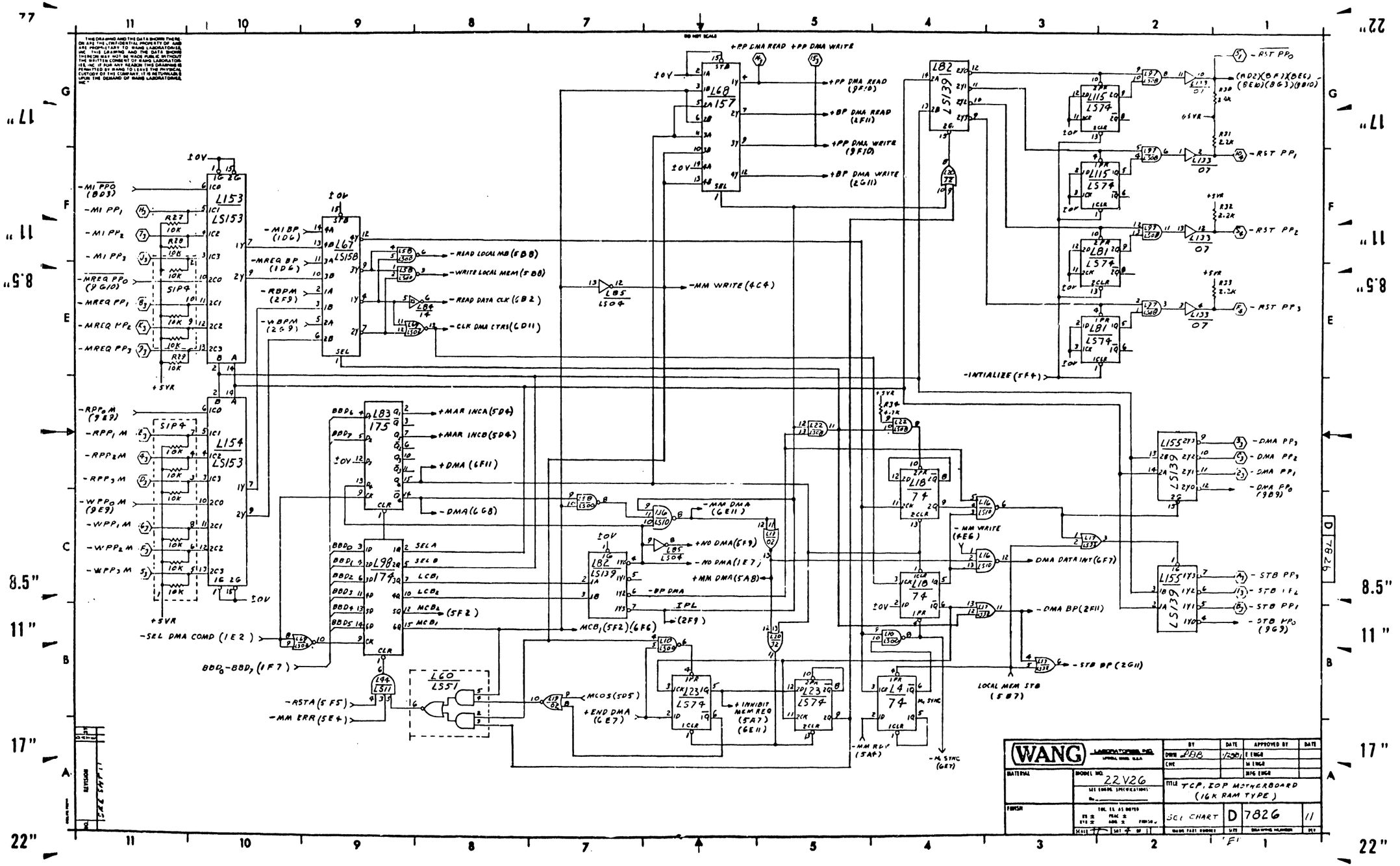



MREQ BP (1D6)
-STB BP (4B3)
+BP DMA WRITE (4F5)
+BP WRITE (1E4)
+BP DMA READ (4G5)
+BP READ (1E4)
+5V
-BP RFSH (1D6)
-DMA BP (4B3)
-WBPM (4E10)
-RBPM (4E10)
-IPL (4B6)
BPA0 (1B6)
BPD0 - BPD7 (3G5)
BPA0 - BPA12 (GA10)
BA1 - BA8 (6B6)
BPA1 - BPA12 (1G6)
LDB0 - LDB15 (6B3)
EVEN
ODD
+5V
J7
JUMPER
BPA13 (1E6)
SEE SHT 11
L59
L77
L91
L90
L35
L36
L50
L49
INTEL 2732
L74
L73
L75
L76
2114
L188
L245
WANG
MATERIAL
MODEL NO 22V26
TITLE TPC.IOP MOTHERBOARD (16K RAM TYPE)
SEE CHART
D 7826
11

X2


+5V
SW 1
SIP 2
-READ SWITCH (16 F)
L151
L5240
-GATE (3D2)
+GATE (3D2)
DAB0
DAB1
DAB2
-PCB READ (16 F)
+PCBG3 (3 B10)
L9910
L137
L173
BPD0 - BPD7 (16 F) (2G7) (FE10) (BA9)
BBD0 - BBD7 (1F7)
L152 367
L100 367
-ENBL PCB WR (1E2)
-CLK PCB WR (1C2)
-BP CLK (1B7)
SERV
+SERV (5F9)
BK1 (3C9)
L72 74
L574
L70
AUTO RESPN
-9.83MHz (1C9)
-PCB TRAP (1E7)
TRAP
TRAP SET
R21 4.7K
-SET IOC BSY (1F2)
-CLR IOC BSY (1F2)
-SET PCB REQ (1E2)
-CLR PCB REQ (1E2)
-RSTA (5F5)
BK1 (3C5)
PCBK1 (5G4)
RIPU (1G5)
GATE
R23 4.7K
R22 2.2K
R24 10K
PCBSI
+PCBG3 (3F7)
PCBG3
WANG LABORATORIES, INC.
MODEL NO. 22V26
TCP, IOP MOTHERBOARD (16K RAM TYPE)
SEE CHART
D 7826
11
SEE SHT 11

X3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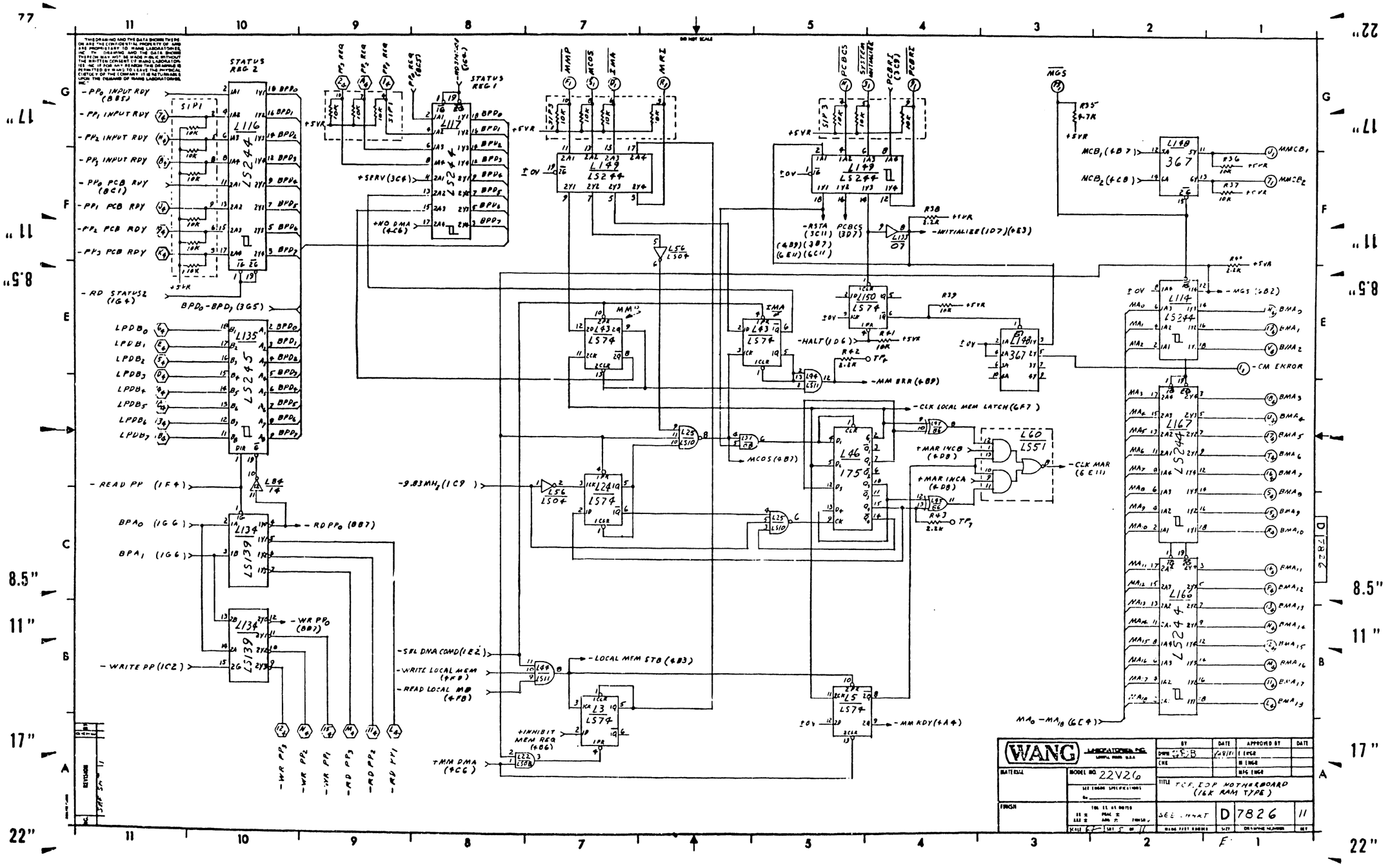
DO NOT SCALE
+PP DMA READ
+PP DMA WRITE
+5V
L153 LS153
L154 LS153
SIP 4
10K
R27
R28
R29
-MI PP0 (BD3)
-MI PP1
-MI PP2
-MI PP3
-MREQ PP0 (9G10)
-MREQ PP1
-MREQ PP2
-MREQ PP3
-RPP0 M (9B9)
-RPP1 M
-RPP2 M
-RPP3 M
-WPP0 M (9E9)
-WPP1 M
-WPP2 M
-WPP3 M
L68 LS157
L67 LS158
-MI BP (1D6)
-MREQ BP (1D6)
-RBPM (2F9)
-WBPM (2G9)
+PP DMA READ (3F10)
+BP DMA READ (4F11)
+PP DMA WRITE (3F10)
+BP DMA WRITE (2G11)
-READ LOCAL MB (5B8)
-WRITE LOCAL MEM (5B8)
-READ DATA CLK (6B2)
-CLK DMA CTRS (6D11)
L85 LS04
-MM WRITE (4C4)
L82 LS139
L115 LS74
L81 LS74
-RST PP0
-RST PP1
-RST PP2
-RST PP3
(MD2X(BR1)X(BE6)(BE6)(BG3)(9B10)
+5VR
R30 2.4K
R31 2.2K
R32 2.2K
R33 2.2K
-INTIALIZE (5F4)
L83 LS175
BBD0
BBD1
BBD2
BBD3
BBD4
BBD5
BBD6
BBD7
+MAR INCA (5D4)
+MAR INCB (5D4)
+DMA (4F11)
-DMA (4G8)
L98 LS174
SEL A
SEL B
LCB1
LCB2
MCB2 (5F2)
MCB1
-SEL DMA COMP (1E2)
BBD0-BBD7 (1F7)
L60 LS51
-RSTA (5F5)
-MM ERR (5E4)
MCLOS (5D5)
+END DMA (4E7)
+INHIBIT MEM REQ (5A7) (6E11)
-MM DMA (6E11)
+NO DMA (5F9)
+NO DMA (1E7)
+MM DMA (5A8)
-BP DMA
IPL
(2F9)
L82 LS139
L22 LS08
L18 74
-MM WRITE (4E6)
DMA DATA INT (6F7)
-DMA BP (2F11)
-STB BP (2G11)
LOCAL MEM STB (5B7)
L155 LS139
-DMA PP3
-DMA PP2
-DMA PP1
-DMA PP0 (9B9)
-STB PP3
-STB PP2
-STB PP1
-STB PP0 (9G9)
-MM RDY (5A6)
-M SYNC (6E7)
WANG LABORATORIES, INC.
MATERIAL
FINISH
MODEL NO. 22V26
SEE ENGR. SPECIFICATIONS
TITLE TCP, IOP MOTHERBOARD (16K RAM TYPE)
SCI CHART D 7826 11
DWN PBB 1/20/81
APPROVED BY
M ENGR
MFG ENGR
REVISIONS
SEE SHEET 11

X4


STATUS REG 2
STATUS REG 1
- PP0 INPUT RDY (8B5)
- PP1 INPUT RDY
- PP2 INPUT RDY
- PP3 INPUT RDY
- PP0 PCB RDY (8C1)
- PP1 PCB RDY
- PP2 PCB RDY
- PP3 PCB RDY
- RD STATUS2 (1G4)
BPD0 - BPD7 (3G5)
LPDB0
LPDB1
LPDB2
LPDB3
LPDB4
LPDB5
LPDB6
LPDB7
- READ PP (1F4)
BPA0 (1G6)
BPA1 (1G6)
- RDPP0 (8B7)
- WR PP0 (8B7)
- WRITE PP (1C2)
- WR PP3
- WR PP2
- WR PP1
- RD PP3
- RD PP2
- RD PP1
-9.83MHz (1C9)
+SERV (3C4)
+NO DMA (4C6)
-SEL DMA COMD (1E2)
-WRITE LOCAL MEM (4F8)
-READ LOCAL MEM (4F8)
-LOCAL MEM STB (4B3)
+INHIBIT MEM REQ (4B6)
+MM DMA (4C6)
-MM ERR (4B9)
-HALT (1D6)
-CLK LOCAL MEM LATCH (6F7)
MCOS (4B7)
+MAR INCB (4D8)
+MAR INCA (4D8)
-CLK MAR (6E11)
-INITIALIZE (1D7) (6E3)
-RSTA (3C11) (3D7) (4B9) (3B7) (6E4) (6C11)
MCB1 (4B7)
MCB2 (4C8)
-MGS (6B2)
MA0 - MA18 (6C4)
-CM ERROR
-MM RDY (4A4)
MMAP
MMCOS
MMA
MMRI
PCBCS
SYSTEM INITIALIZE
PCBRS (3C5)
PCBRE
MGS
WANG LABORATORIES, INC.
MODEL NO. 22V26
TITLE TCP, EDP MOTHERBOARD (16K RAM TYPE)
D 7826
11

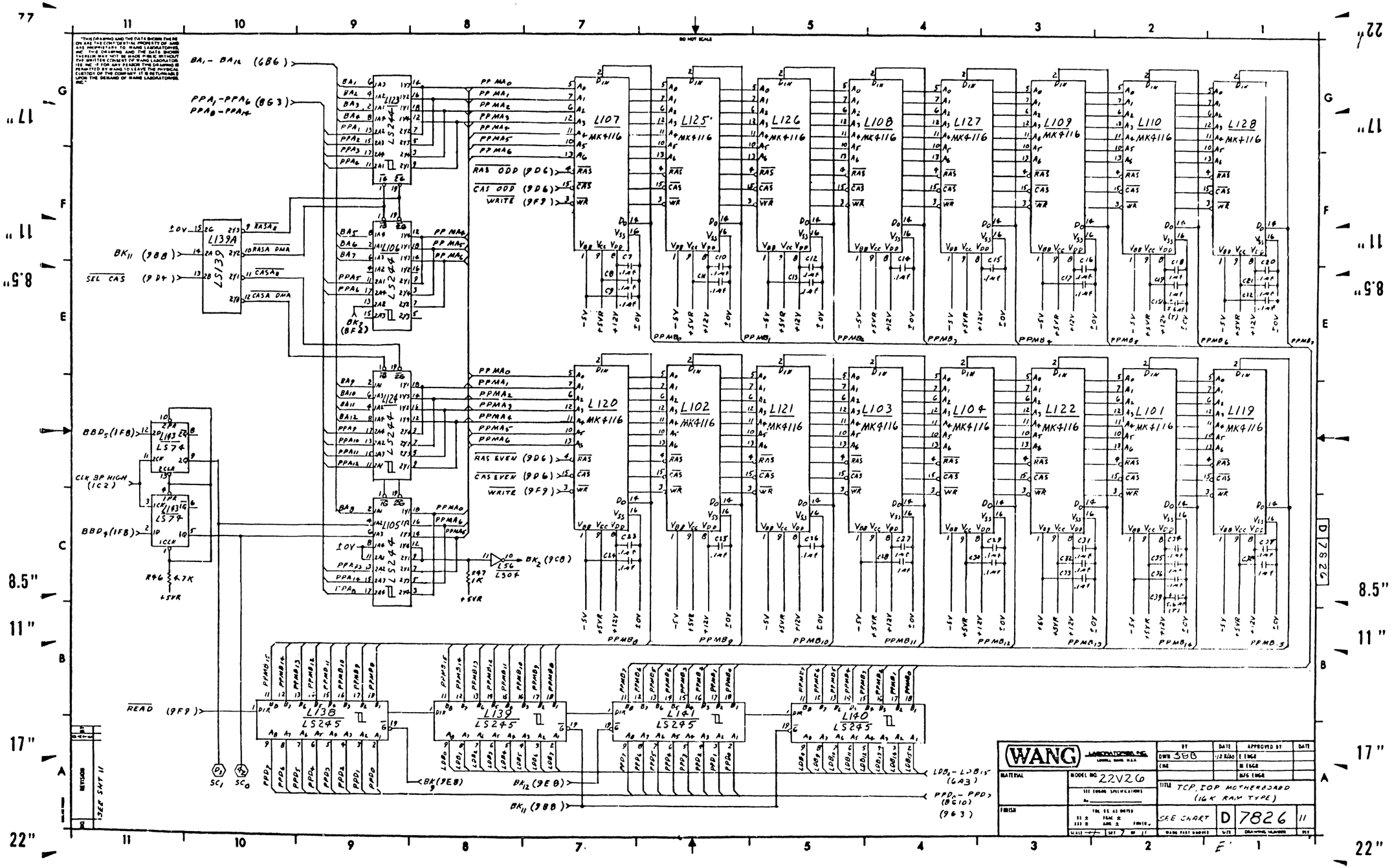
X5

DO NOT SCALE

- DMA (4CB)
- LD LEX HIGH (1D2)
- LD LEX LOW (1D2)
- BBD0 – BBD7 (1F7)
- + EMA (4CR)
- MBC1 (4B7)
- CLK LOCAL MEM LATCH (5D6)
- DMA DATA INT (4C3)
- MM0 MM1 MM2 MM3 MM4 MM5 MM6 MM7 MM8 MM9 MM10 MM11 MM12 MM13 MM14 MM15
- L159 LS244
- L160 LS244
- L158 LS374
- L161 LS374
- RA4 2.2K TP10
- RA5 2.2K TP11
- L164 LS161
- L166 LS161
- L165 LS161
- + END DMA (4B7)
- -M SYNC (4A1)
- L24 74LS74
- RA6 2.2K +5VR
- -RSTA (5F5)
- + INHIBIT MEM REQ (4B6)
- -MM DMA (4C6)
- -CLK MAR (5D3)
- -CLK MEM CTRS (1C2)
- -CLK DATA CTRS (4E3)
- -LD MAR LOW (1D2)
- -LD MAR MIDDLE (1D2)
- -LD MAR HIGH (1D2)
- RA3 10A
- CB 220 PF
- CPE 220PF 50V
- +5V
- L144 LS169
- L145 LS169
- L146 LS169
- L147 LS169
- L113 LS169
- MA0 – MA18 (5A2)
- -RSTA (5F5)
- -LD BASE HIGH (1D2)
- -LD BASE LOW (1D2)
- BBD0 – BBD7 (1F7)
- L132 161
- L131 161
- L130 161
- L129 161
- JUMPER
- TP8
- BPBA9 – BPBA12 (2E11)
- BA12 BA11 BA10 BA9 BA8 BA7 BA6 BA5 BA4 BA3 BA2 BA1
- BA1 – BA12 (7G10)
- BA1 – BA8 (2D11)
- LDB0 – LDB15 (2G1)(7A4)
- L162 LS244
- L163 LS374
- L157 LS244
- L156 LS374
- -M S5 (5E1)
- -READ DATA CLK (4E8)
- BMDL7 BMDL6 BMDL5 BMDL4 BMDL3 BMDL2 BMDL1 BMDL0
- BMDH7 BMDH6 BMDH5 BMDH4 BMDH3 BMDH2 BMDH1 BMDH0
- SEE SHT 11

WANG LABORATORIES, INC. LOWELL, MASS. U.S.A.		BY	DATE	APPROVED BY	DATE
MATERIAL	MODEL NO 22V26	DWN SSB	7/19/71	E ENGR	
	SEE ENGR SPECIFICATIONS	CHK		M ENGR	
FINISH	No.			MFG ENGR	
	TOL EX AS NOTED .X ± .XX ± ANG ± FRACT ±	TITLE TCP, IOP MOTHERBOARD (16K RAM TYPE)			
		SIZE D	CODE IDENT NO. 78826	DRAWING NUMBER D 78826	REV 11
		SCALE	WEIGHT	SHEET 1 OF 1	

X6


BA1 - BA16 (6B6)
PPA1 - PPA6 (8G3)
BK11 (9B8)
SEL CAS (9D4)
BBD9 (1F8)
CLK BP HIGH (1C2)
READ (9F9)
RAS ODD (9D6)
CAS ODD (9D6)
WRITE (9F9)
RAS EVEN (9D6)
CAS EVEN (9D6)
WRITE (9F9)
BK2 (9C8)
BK9 (9E8)
BK12 (9E8)
BK11 (9B8)
LDD0 - LDD15 (6A3)
PPD0 - PPD7 (8G10) (9G3)
SEE SHT 11
L107
L125
L126
L108
L127
L109
L110
L128
L120
L102
L121
L103
L104
L122
L101
L119
L139A LS139
L123 LS244
L124 LS244
L106 LS244
L97 LS244
L138 LS245
L139 LS245
L141 LS245
L140 LS245
LS74
LS04
MK4116
WANG LABORATORIES, INC.
MODEL NO. 22V26
TITLE TCP, IOP MOTHERBOARD (16K RAM TYPE)
SEE CHART
D 7826 11

MODEM CONN

SEE SHT 11

REVISION

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

BY	DATE	APPROVED BY	DATE
DWN	12/8/81	E ENGR	
CHK		M ENGR	
		MFG ENGR	

MATERIAL — MODEL NO 22V26 — SEE ENGR SPECIFICATIONS No.

FINISH — TOL EX AS NOTED .X ± .XX ± ANG ± FRACT ±

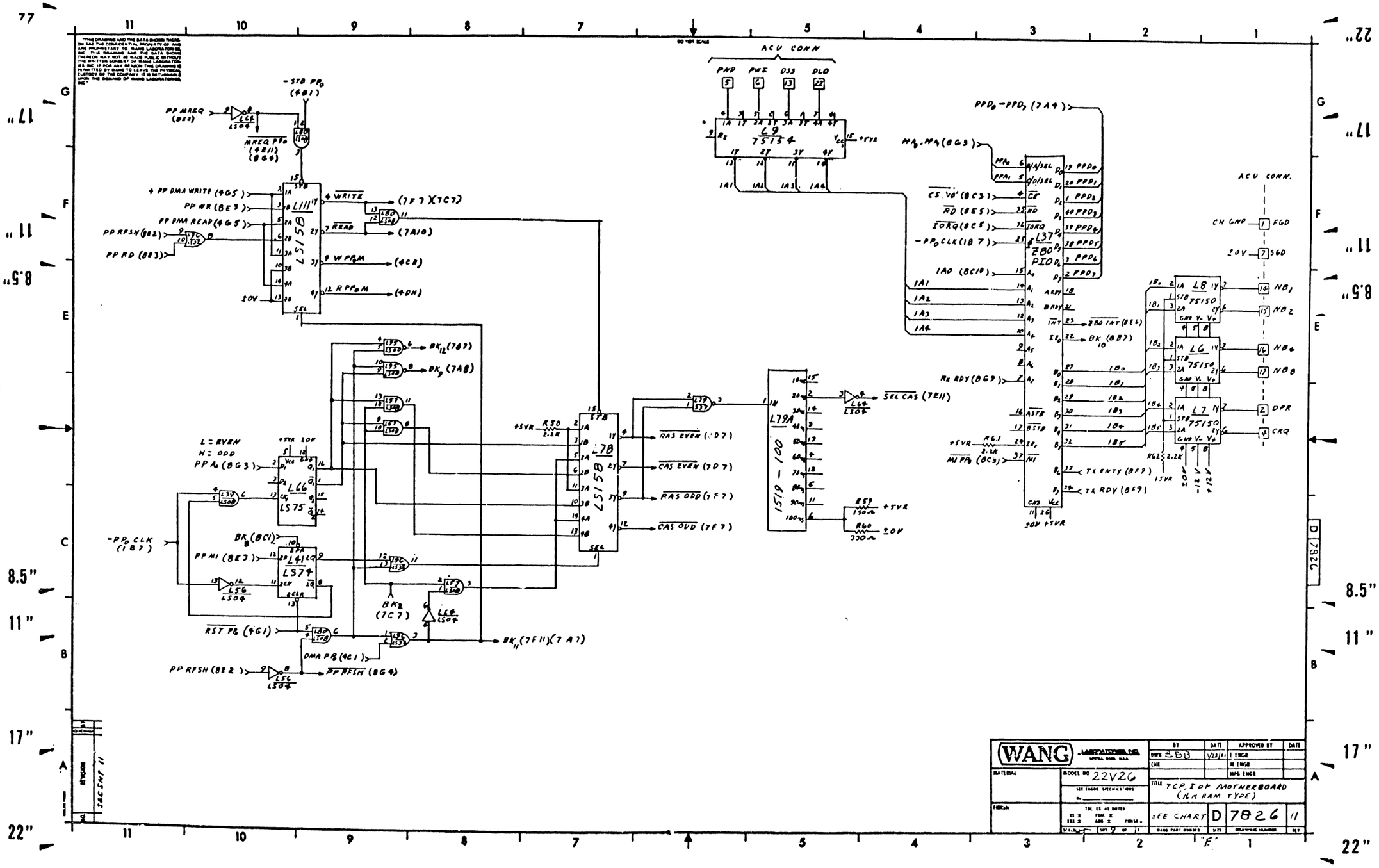
TITLE TCP, IOP MOTHERBOARD (16K RAM TYPE)

SCALE — SHT 11 OF 11 — SEE CHART — D 7826 — 11

USING FIRST ASSEMBLY — NEXT — DRAWING NUMBER — REV

D 7826

X8



WANG LABORATORIES, INC. LOWELL, MASS. U.S.A.		BY	DATE	APPROVED BY	DATE
		DWN JDB	1/23/81	E ENGR	
		CHK		M ENGR	
MATERIAL	MODEL NO 22V26			MFG ENGR	
FINISH	SEE ENGRG SPECIFICATIONS No.	TOL EX AS NOTED .XX ± .01 .XXX ± .005 FRACS ± ANGS ±		TITLE TCP, IOP MOTHERBOARD (16K RAM TYPE)	
		SIZE D	SEE CHART	D 7826	11
		DO NOT SCALE DRAWING	SHT 9 OF 11	DRAWING NUMBER	REV

209 = 207 + 377 OR 378							
209	210	236	L49	L50	L51, 52	L53	L78-76
7826	7824-9	377-0342	377-0342	378-6000-BC	378-6001-BC	377-0343	377-0345
7826	7826-8	377-0342	378-6041	378-6041	377-0344	377-0343	377-0344
7826	7826-C	377-0342	378-9017	378-9018	377-0344	377-0343	377-0345

209	210	236	L49	L50	L51, 52	L53	L78-76
7826	7824-9	377-0342	377-0342	378-6000-BC	378-6001-BC	377-0343	377-0345
7826	7826-8	377-0342	378-6041	378-6041	377-0344	377-0343	377-0345
7826	7826-C	377-0342	378-9017	378-9018	377-0344	377-0343	377-0345

WANG LABORATORIES, INC.	BY	DATE	APPROVED BY / DATE
	DWN JDB	7/29/81	E ENGR
	CHK		M ENGR
			MFG ENGR
MATERIAL	MODEL NO. 22V26		
FINISH	TITLE TCP, IOP MOTHERBOARD (16K RAM TYPE)		
	SIZE D	DRAWING NO. 7826	REV 11
	SCALE	SHT 10 OF 11	

DO NOT SCALE

J4

PP_2 REQ	A/1	PP_1 REQ
$LPDB_7$	B/2	PP_3 REQ
$LPDB_5$	C/3	$LPDB_6$
$LPDB_3$	D/4	$LPDB_4$
$LPDB_1$	E/5	$LPDB_2$
-RST PP_2	F/6	$LPDB_0$
$-PP_2$ INPUT RDY	N/1	$-PP_1$ INPUT RDY
$-PP_2$ PCB RDY	J/8	$-PP_3$ INPUT RDY
$-PP_2$ PCB RDY	K/9	$-PP_3$ PCB RDY
- RD PP_1	L/10	-RST PP_3
- RD PP_2	M/11	- RD PP_3
- WR PP_2	N/12	- WR PP_3
+5V	P/13	+5V
+5V	A/14	+5V
-RST PP_2	S/17	- WR PP_1

J3

- STB PP_1	A/1	- STB PP_2
- STB PP_1	B/2	- DMA PP_1
-DMA PP_2	C/3	- DMA PP_3
- RPP$_2$ M	D/4	- RPP$_3$ M
- RPP$_1$ M	E/5	- WPP$_3$ M
- WPP$_2$ M	F/6	- WPP$_1$ M
- MI PP_1	M/7	- MI PP_2
- MI PP_3	K/8	- MREQ PP_1
MREQ PP_2	K/9	- MREQ PP_3
+12VR	L/10	+12VR
+12VR	M/11	+12VR
+5V	N/12	+5V
+5V	P/13	+5V
- PP_2 CLK	R/14	+ PP DMA READ
	S/15	+ PP DMA WRITE

J2

-12V	A/1	-12V
	B/2	
-5VR	C/3	-5VR
SC_1	D/4	SC_0
	E/5	
	F/6	
	H/7	
LDB_8	J/8	LDB_{11}
LDB_9	K/9	LDB_{10}
LDB_{14}	L/10	LDB_{15}
LDB_{12}	M/11	LDB_{13}
LDB_{13}	N/12	LDB_{14}
LDB_{10}	P/13	LDB_{12}
LDB_{11}	R/14	LDB_{15}
LDB_9	S/15	LDB_8

J1

BA_{11}	A/1	BA_{12}
+5VR	B/2	+5VR
+5V	C/3	+5V
BA_{10}	D/4	BA_9
	E/5	- RST PP_0
BA_8	J/8	BA_7
BA_6	K/9	BA_5
	L/10	
	M/11	
	N/12	
BA_3	P/13	BA_4
BA_1	R/14	BA_2

J5

+5V	1/16	
4/0 "04"	2/17	
$\overline{PPDB_0}$	3/18	$\overline{PPDB_7}$
	4/19	$\overline{PPDB_6}$
	5/20	$\overline{PPDB_5}$
	6/21	$\overline{PPDB_4}$
	7/22	$\overline{PPDB_3}$
	8/23	$\overline{PPDB_2}$
	9/24	$\overline{PPDB_1}$

MODEM CONN

AA	1	
BA	2	
BB	3	DB
CA	4	
CB	5	DD
CC	6	
AB	7	SCA
CF	8	CD
	9	
SCA	10	
SCF	11	

ACU CONN.

FGD	1	
DPR	2	NB1
ACR	3	NB2
CRQ	4	NB4
PWD	5	NB8
PWI	6	
SGD	7	
	8	DLO
	9	
DSS	10	
	11	

J7

1	GND
2	CENTER
3	+5VR

CONN. 4

BMDL$_1$	A/1	BMDL$_0$
BMDL$_3$	H/2	BMDL$_2$
BMDL$_5$	C/3	BMDL$_4$
BMDL$_7$	D/4	BMDL$_6$
↕ 0V	E/5	0V
↕ 0V	F/6	↕ 0V
-15VUR	H/7	
	J/8	
	K/9	
	L/10	
BMA$_{10}$	M/11	
BMA$_{16}$	N/12	BMA$_{17}$
BMA$_{14}$	V/13	BMA$_{15}$
BMA$_{12}$	P/14	BMA$_{13}$
BMA$_{10}$	R/15	BMA$_{11}$
BMA$_8$	S/16	BMA$_9$
BMA$_6$	T/17	BMA$_7$
BMA$_4$	U/18	BMA$_5$
BMA$_2$	V/19	BMA$_3$
BMA$_0$	W/20	BMA$_1$
- 5VR	X/21	- 5VR
+ 5VR	Y/22	+ 5VR
↕ 0V	Z/23	↕ 0V

CONN. 3

MM$_{14}$	H/1	MM$_7$ ↕0V
MM$_{14}$	J/2	MM$_8$ +5VR
MM$_{13}$	K/3	MM$_5$ CCB$_1$
MM$_{12}$	L/4	MM$_6$ DAB$_7$
MM$_{11}$	M/5	MM$_3$ DAB$_1$
MM$_{10}$	N/6	MM$_2$ DAB$_3$
MM$_9$	P/7	MM$_1$ DAB$_5$
MM$_8$	R/8	MM$_0$ +12V
	S/9	
	T/10	
	U/11	
	V/12	
BMDH$_1$	W/13	BMDH$_0$
BMDH$_3$	X/14	BMDH$_2$
BMDH$_5$	Y/15	BMDH$_4$
BMDH$_7$	Z/16	BMDH$_6$

CONN. 2

	A/1	↕0V
	B/2	+5VR
	C/3	CCB$_2$
	D/4	DAB$_4$
	E/5	DAB$_0$
	F/6	DAB$_2$
	N/7	DAB$_4$
	J/8	+12V

CONN. 1

	A/1	-CM ERROR
	B/2	SYSTEM INITIALIZE
	C/3	
	D/4	
$\overline{IMA}$	E/5	$\overline{MCOS}$
$\overline{MMP}$	F/6	
MMCB$_1$	H/7	$\overline{MMCB_2}$
	J/8	
$\overline{PCBCS}$	K/9	$\overline{PCBR_1}$
	L/10	
$\overline{PCBCS}$	M/11	$\overline{PCBSI}$
	N/12	
MRI	P/13	$\overline{MGS}$
↕0V	S/17	↕0V

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

LOCATION	W. L. PART NO.	I.C. TYPE
L1, 162		SPARE
L2,17, 42, 71, 96	376-0211	74LS32
L3,5, 23, 29, 40, 41, 43, 62, 70, 81, 115, 163, 150	376-0155	74LS74
L4, 18, 72, 87	376-0006	74 74
L6, 7, 8, 12, 13	376-3076	75150P
L9, 27, 28	376-0023	75154
L10, 34, 58, 99, 135	376-0207	74LS00
L68	376-0082	74157
L 14	376-0066	723
L 15	376-0010	7404
L16, 25, 47	376-0209	74LS10
L19	376-0016	7402
L 20	376-0093	7432
L21, 48, 63, 112	376-0294	74LS138
L22, 39, 57, 61, 80, 86, 97	376-0153	74LS08
L22A, 33, 56, 69, 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, 135	376-0226	74LS139
L35, 36, 88, 89, 135, 138, 139, 164	376-0285	74LS245
L37, 52	SEE CHART	280-PIO
L38	SEE CHART	8251A
L44	376-0225	74LS11
L45	376-0036	7486
L46, 83	376-0119	74175
L49, 50	SEE CHART	2732
L51, 92	SEE CHART	280-CPU
L53	SEE CHART	280-CTC
L54, 105, 106, 118, 116, 118, 123, 129, 103, 157, 158, 166, 165, 164, 167	376-0298	74LS244
L79-76	376-9014	18 PIN SOCKET

COMPONENT	W. L. PART NO	TYPE
R1, 7, 8, 11, 15, 16, 17, 19, 21, 23, 26, 39, 36, 40	330-3068	6.7A ¼W 5%
R2	330-2011	100Ω ¼W 5%
R3	336-1014	1K POT
R4, 6, 13, 14	330-2048	470Ω ¼W 5%
R5	330-2043	390Ω ¼W 5%
R9, 60	330-2034	330Ω ¼W 5%
R10, 97	330-3011	1K ¼W 5%
R12, 51	330-3083	82Ω ¼W 5%
R18, 20, 22, 27, 30-35, 38, 42-47, 49, 52, 53, 57, 58, 61, 62, 50, 64, 65, 66, 67	330-3023	2.2K ¼W 5%
R24, 28, 37, 41, 54, 55, 59, 64, 98	330-4011	10K ¼W 5%
R59, 55	331-2012	120Ω .2W 10%
R95	330-1061	68Ω ¼W 5%
R99	330-2013	150Ω ¼W 5%
R63	330-1011	10Ω ¼W 5%
SIP#1, 3, 4	333-0807	10K SIP RES
SIP2	333-0806	2.2K SIP RES
SW 1	325-1503	8 BANK ROCKER SW
J5	376-9025	16 PIN DIP HEADER
C1	300-1009	.0022 CERAMIC
C2, 88-91	300-8312	15 pf 200V (T)
C3	300-1150	150 PF 500VCER
C4-143	300-1903	.01-.1 µF CER
C6, 98	300-1220	220PF 500V CER
C72-78	300-1930	.1 µF 50V CER
C39, 151	300-4017	5-45 pf SPLIT
C71-86, 93-142, 169-1995	300-1960	.047µF 50V CER
C87	300-3039	47 µF 20V TI
Q1	333-1052	2N4391
Q2	333-1018	MPS6518
Q3	333-1012	MPS6512
J1-4	350-0009	30 PIN CONN
ACU CONN, MODEM CONN.	350-1097	25 PIN CONN
J37, 51, 56, 52	376-9011	60 PIN SOCKET
L38, 53	376-9015	28 PIN SOCKET
L49, 50	376-9003	24 PIN SOCKET
L101-108, 107-110, 119-122, 125-128	376-9002	16 PIN SOCKET
U1	654-0104	3 PIN LADDER
XTAL	321-0030	9.8304 MHz
-12V TP	654-1192	SIDE TERM

MNEMONIC	COORDINATE
- RD PP_1	5 A9
- RD PP_2	5 A9
- RD PP_3	5 A9
PPP, M	4 D11
HPP$_2$ M	4 D11
HPP$_3$ M	5 D11
- INT PP_1	4 G1
- INT PP_2	4 F1
- RST PP_2	4 F1
- RST PP_3	4 C1
SC_0 1	7 A10
SCA	8 A9
SCF	8 E11
SGD	9 F1
- STB PP_1	4 C1
- STB PP_2	4 C1
- STB PP_3	4 C1
SYSTEM INITIALIZE	5 G4
- WPP$_1$ M	4 C11
- WPP$_2$ M	4 C11
- WPP$_3$ M	4 C11
- WR PP_1	5 A9
- WR PP_2	5 A9
- WR PP_3	5 A9

LOCATION	I C TYPE	SPARE
L94	74LS30	1
L95	74LS00	2
L65	74LS02	2
L15	7404	2
L33	74LS04	3
L57	74LS08	1
L67	74LS08	2
L2	74LS32	2
L42	74LS32	1
L96	74LS38	1
L79	74S37	3
L9	74 74	1
L130	74LS74	1
L44	74LS75	1
L45	7486	2
L32	74LS139	1
L137A	74LS139	1
L114	74LS244	1
L136	74LS244	1
L152	74367	2

MNEMONIC	COORDINATE
AA	B A11
AB	B B11
ACR	B D11
BA	B A9
BA$_1$ - BA$_{11}$	C A8
BB	B D11
BMA$_{00}$ - BMA$_{15}$	3 D11
BMDH$_0$ - BMDH$_7$	3 C1
BMDL$_0$ - BMDL$_7$	3 D1
CA	B A8
CB	B E11
CC	B E11
CCD$_{1,2}$	3 C1
CD	B A8
- CM ERROR	5 B1
CP	B E11
CRQ	9 D1
DAB$_0$ - DAB$_7$	3 D11
DAB$_0$ - DAB$_7$	3 F1
DB	B D11
DD	B D11
DLO	3 G5
DMA PP$_1$	4 D1
DMA PP$_2$	4 D1
- DMA TP$_3$	4 D1
DPR	2 B1
DSS	9 G4
FGD	9 F1
IMA	5 G7
INT PP$_2$	B D1
LDB$_8$ - LDB$_{15}$	6 A8
LDB$_0$ - LDB$_7$	5 D11
MA$_{00}$ - MA$_{15}$	1 G3
MCOS	5 G3
MMCB$_1$	5 F1
MMCB$_2$	5 F1
MMP	5 E7
MM$_0$ - MM$_{15}$	6 F5
MMCB1	5 F1
MMP	5 E7
MRE	5 G6
MRI	5 E7
MWPB RDY	4 F11
NB1	9 F11
NB2	9 E11
NB4	9 E11
NB8	9 E11
PCBR1	5 F11
PCBSI	5 F11
PPB RDY	5 G11
PPI RDY	5 G11
PWD	2 G6
PWI	2 G6
RPB RDY	5 F11
SGD	9 F1
WMA$_{00}$ - WMA$_{15}$	6 F5
WMCB1	5 F1
WMP	5 E7
WPB RDY	5 F11
WR PP_1	5 E7

J6

SCF	CA	CD	CCA	CC	CB	DD	DA	DB	DA

NOTE: ALL RES. ARE ¼W 5% UNLESS OTHERWISE SPECIFIED.

E-REV 1

LOADING CHART ON PAGE 10.

REVISION	BY	DATE	APPROVED BY	DATE
9 ORIGINATED FOR INSTR. ED359	SEB	1/24/81		
10 REVISED PER ECO#17949 APPD: [illegible]				
11 REVISED PER ECO#18705 APPD: [illegible]				
12 REVISED PER ECO#18764 & 18912 APPD: [illegible]				
13 REVISED PER ECO# 2033 APPD: [illegible]				
14 REVISED PER ECO# 2380 APPD: [illegible]				
15 REVISED PER ECO# 2712 APPD: [illegible]				
16 REVISED PER ECO# 2720 APPD: [illegible]				
17 REVISED PER ECO# 2793 APPD: [illegible]				
18 REVISED PER ECO# 2112 APPD: [illegible]				
19 REVISED PER ECO# 3165 APPD: [illegible]				

(WANG) LABORATORIES, INC.

MATERIAL	MODEL NO 22V26	BY SEB	DATE 1/24/81
FINISH	TOL EX AS NOTED .X ± .XX ± .XXX ± ANG ±	TITLE TCP, IOP MOTHERBOARD (16K RAM TYPE)	
		SIZE D	SEE CHART 7826 REV 11

BY	DATE	APPROVED BY	DATE											
DWG RELEASE														
ENG														
MFG ENGR														

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

MATERIAL

FINISH

MODEL NO. VS-100

SEE ENGR. SPECIFICATIONS No.

TOL EX AX DECIMALS

SCALE | SHT | OF

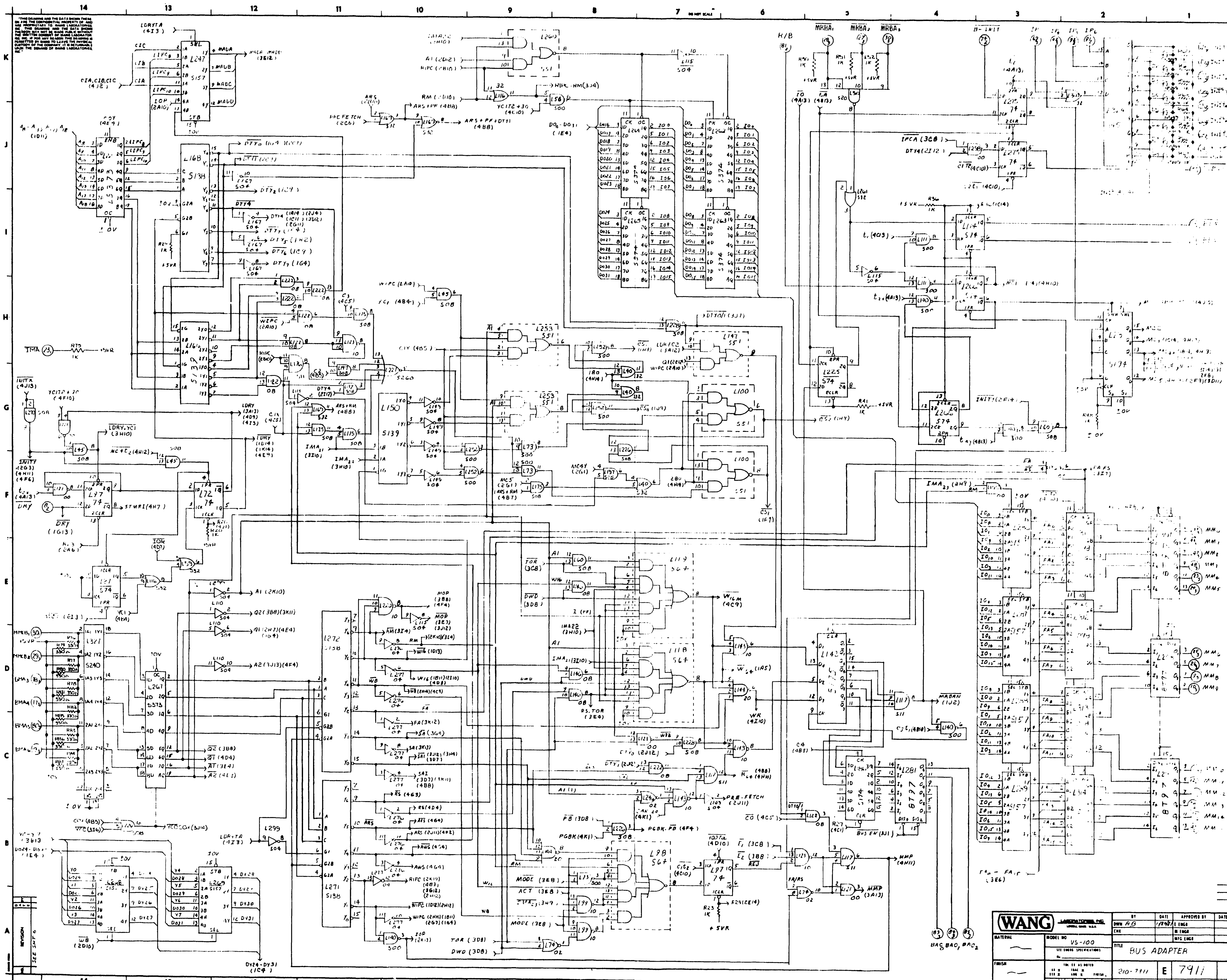
TITLE: DATA ADAPTER

SIZE E

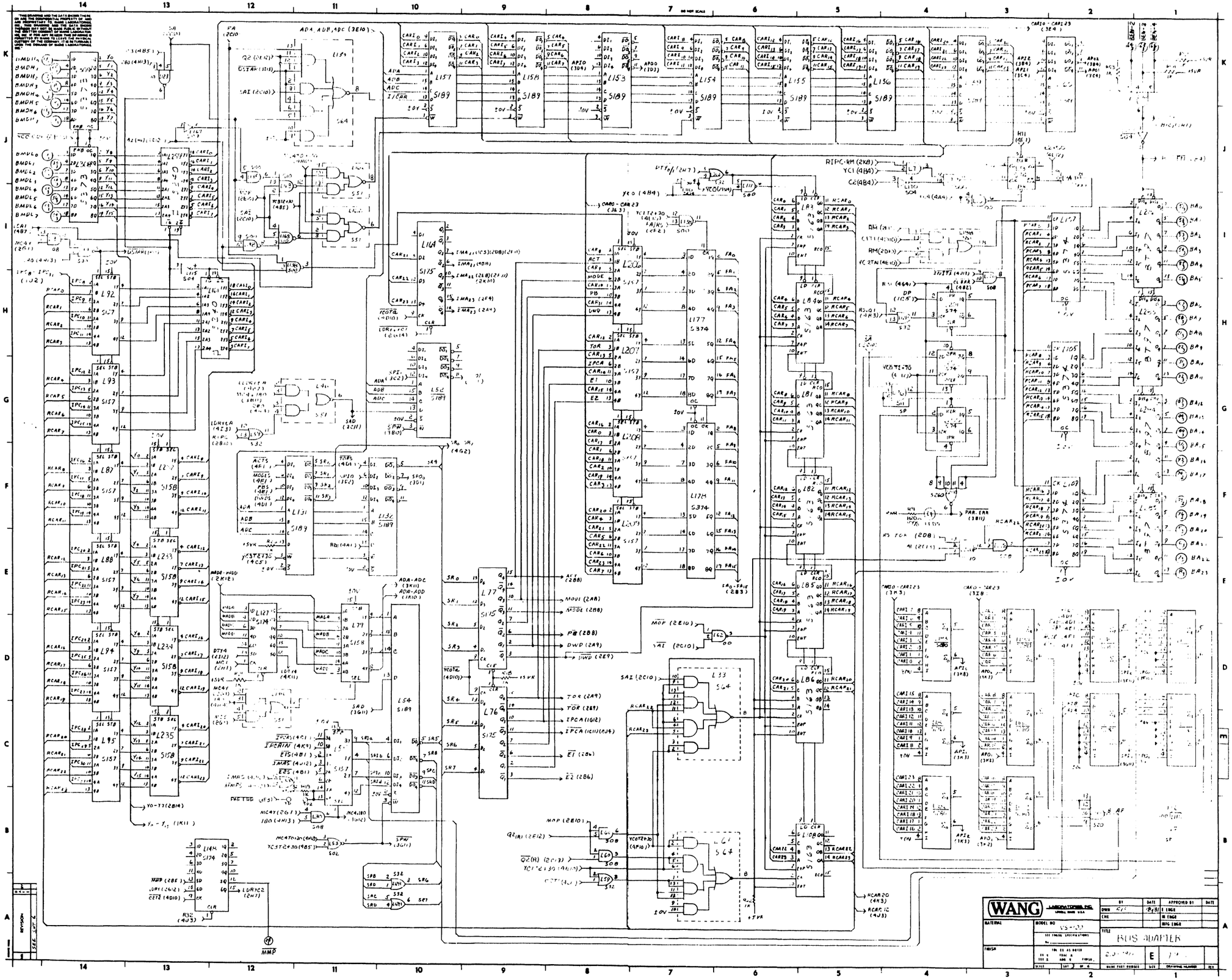
DRAWING NUMBER

DWG. FIRST ORDER | REV

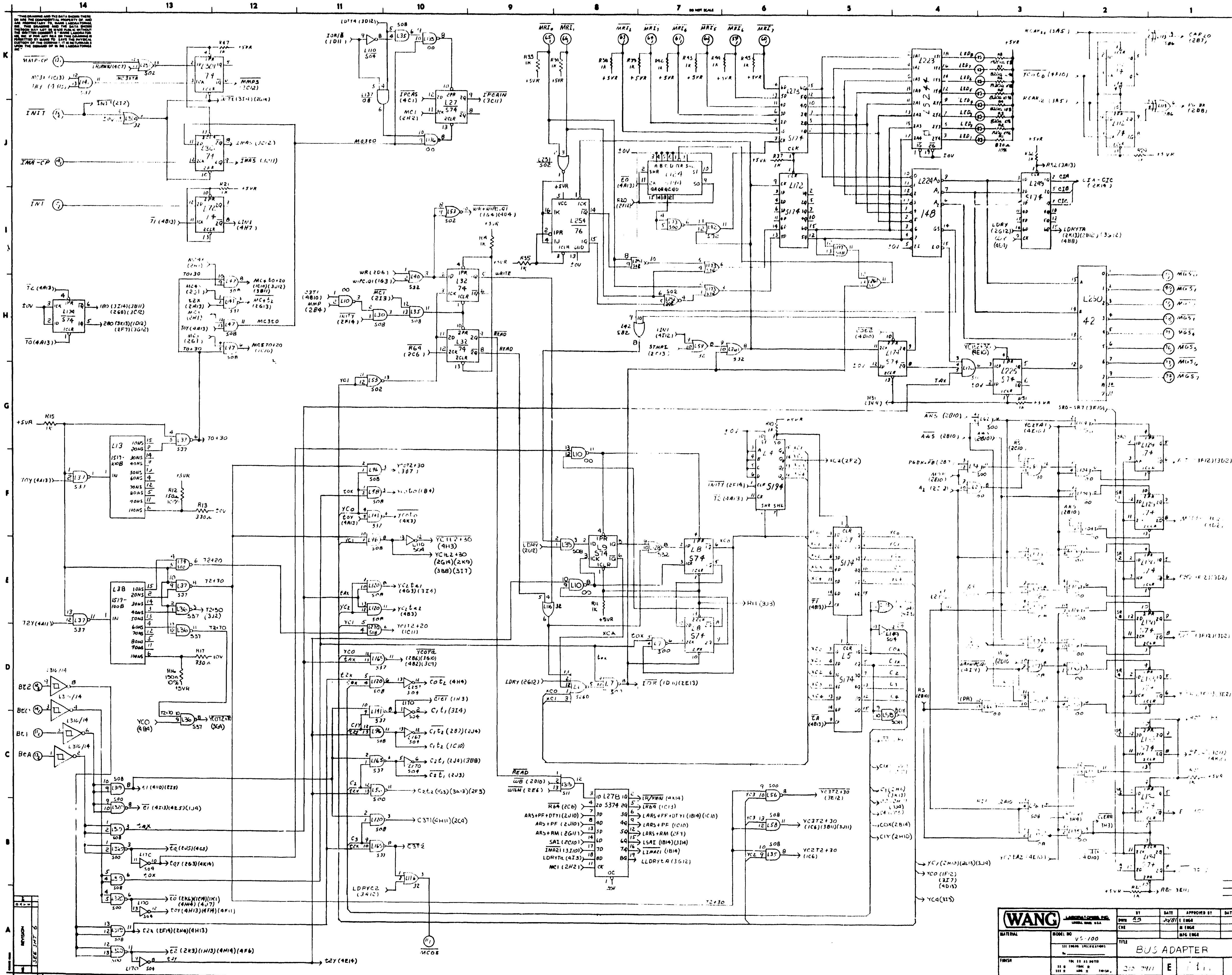
Y1


WANG LABORATORIES, INC. LOWELL, MASS. U.S.A.
MODEL NO VS-100
TITLE BUS ADAPTER
DWN AB
210-7411
E
7911
SHT 2 OF 6
DO NOT SCALE
"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."
REVISION
SEE SHT 6

Y2


ADA, ADB, ADC (3E10)
CARE0 - CARE23 (3E9)
CARO - CAR23 (3J3)
CARO - CAR23 (3K3)
CARO - CAR23 (3I3)
BUS ADAPTER
WANG LABORATORIES, INC.
LOWELL, MASS. U.S.A.
DWN
CHK
APPROVED BY
MATERIAL
FINISH
MODEL NO
VS-100
TITLE
SIZE
E
DRAWING NUMBER
REVISION
SEE SHT. K
DO NOT SCALE

Y3



Y4

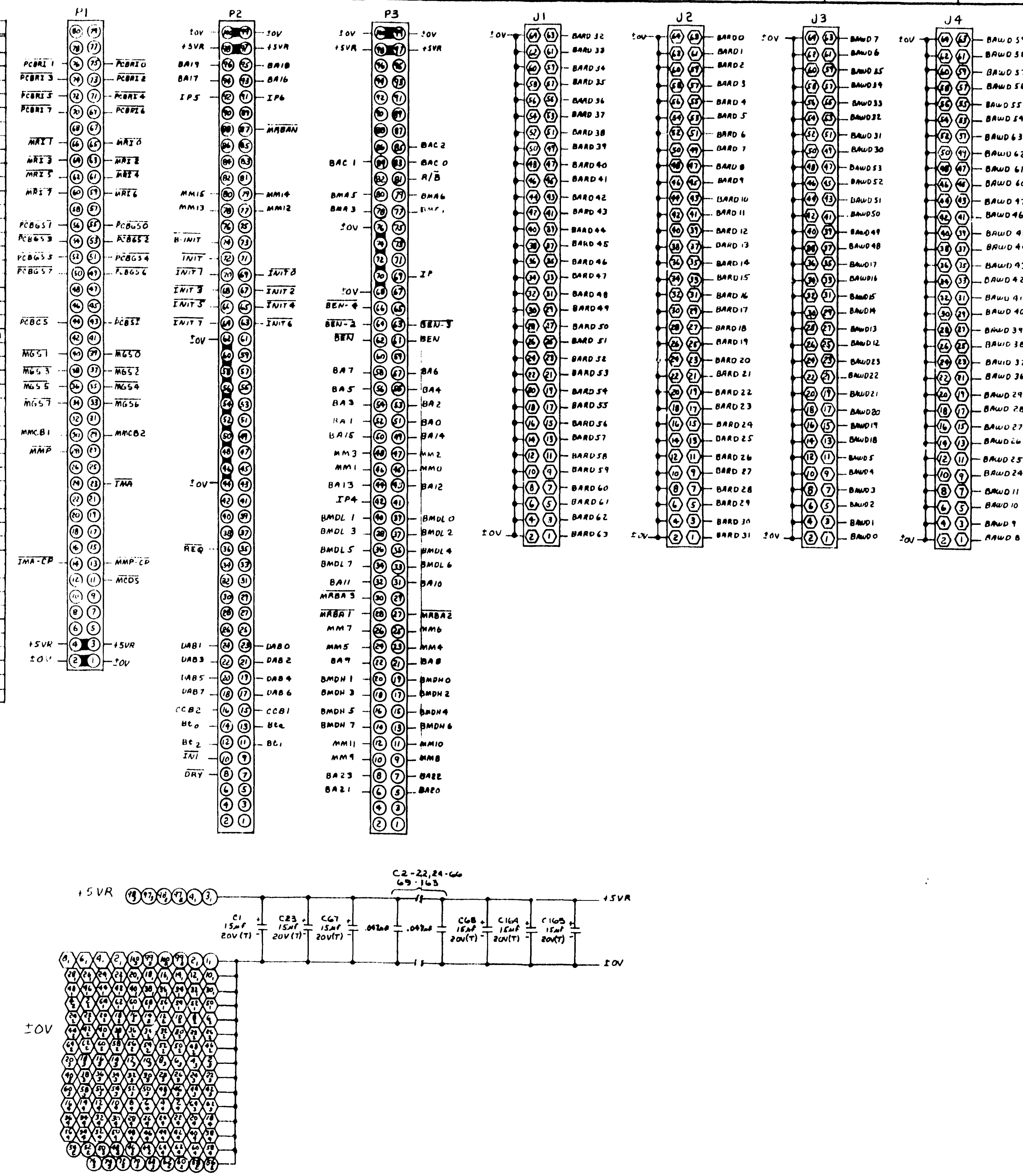
Y5

IC LOCATION	TYPE	WL PART NO
L1,2,3,?,?, 48-50,71,72, 78,?,?, ?,?,?, 326	SPARE	
L4,124,291	74S174	376-022?
L5,2,11,67, 148,?,186, 249,213	74S174	376-0297
L?,?,?	74S260	376-0206
L7,?,?,13,?, ?,?,?,326	74S??	376-0228
L?,?,?,?,?, ?,?,?,174	74S74	376-0207
L4,62,104,?, 121,?,?, 296,298	7400	376-0002
L10,12,?,?, ?,?,308,309	74S373	376-0306
L?,38	IS 9-?00B	376-8002
L28,?,?,?,?, ?,84,187,192 ?,?,183, ?,191,196	74S280	376-0246
L30,35,45,?,?, ?,?,?, ?,226,228, ?	74S08	376-0200
L3,?,2,?, ?,?,215, ?	[illegible]	[illegible]
L33,?,?,?, ?,139,248	74S64	376-0201
L36,37,141,?5	74S??	376-0276
L39,149,223	74LS244	376-0288
L40,42,?,?,124, 169,173,?	74S32	376-0205
L46,?,?,197, 162,198,253, ?	74S51	376-0184
L52,54,131,132, 153,159,?, 210-217,218, 219,?,?, 244,245	74S193	376-0349
L53 251	74S02	376-0179
L55,87, 88,?,?,?, ?,?,?, ?	74S??	376-0217
L57,122,137, 145,222	7408	376-0081
L63,70,19, ?,235	74S?8	396-C301
L?,?	7402	396-0016
L76,?,?,42, ?,321,322	74S?15	396-0210
L80,79,?, 143,?	7410	376-0003
L81-86,108	74S163	376-0235
L??	74LS374	376-0286
L?0,71 221	74LS373	396-0310
L101,102,125, 151,?,?, 229,230,?, ?,?,?, ?,?, 309,305, 307,?,318	8T??	376-0183
L103,?,107, 109,126,152, 177,178,205, ?,?,?, ?,?,?, ?	74S374	376-0305
L?,?,?, ?,?, ?	74S?4	396-0?97
L?3	74S86	396-0?71
L?76,?	7432	396-0093
L?,?,296,305	74S??	396-??
L149	7420	396-0004
L?,?	74S139	376-0333
L?,?,259,327	74S240	396-0334
L?6?	74S10	396-0238
L?,?,?, ?	74S138	396-0278
L?,310	74S20	396-0230
L?	74?48	396-0171
L?,32?	7442	396-0008
L?	7476	396-0007
L? 27	7404	376-0010
L?	74?4	376-0078
L293,294	74LS257	396-0204
L295	7430	396-0031
L?,?	74??	376-0138
L316	7414	376-0139
L324	74145	396-0069

COMPONENT	TYPE	WL PART NO
R1-8,9	820Ω 1/4W 10%	330-2082
R10,11,14,15, 19-29 31-45, ?	1K 1/4W 5%	330-3010
R12,16	150Ω 1/4W 10%	330-2015
R13,17,30,?	330Ω 1/4W 5%	330-2034
R46	180Ω 1/4W 10%	330-2018
C1,23,67,68, 164,165	15µF 20V (T)	300-4022
C2-22,24-66, 69-163	.047µF 50V	300-1966
LED1-9	MV5024 RED	370-3026
J1-4	64 PIN CONN	350-0061
D1-8	1N5819	380-4019

TYPE	I.C LOCATION	SPARES
7400	L91	2
	L135	2
	L136	2
7402	L74	2
	L246	1
74S04	L257	2
	L299	2
74S08	L58	1
74S10	L80	1
	L90	1
74S10	L163	1
74S??	L315	1
74??	L316	1
74S??	L310	1
74S32	L300	1
74S37	L36	1
	L165	1
74S74	L200	1
74??	L254	1
74S86	L113	2
74S139	L150	1
74S240	L6?	1
	L202	1
	L227	1
74??	L260	1

MNEMONICS	COORD.
BAC0 BAC 2	2A4
BA0 - BA23	3I1
BAWD0 - BAWD63	1K14
BARD0 - BARD31	1I1
BARD32 - BARD63	1A11
BEN	2I1
$\overline{BEN}$	2I1
$\overline{BEN\text{-}2}$ - $\overline{BEN\text{-}4}$	3K1
BMA3 - BMA6	2C14
BMDH0 - BMDH7	3K14
BMDL0 - BMDL7	3J14
BC0 - BC2	4C14
BCA	4C14
$\overline{B\text{-}INIT}$	2K3
CCB1	1A12
CCB2	1A12
$\overline{DRY}$	2F14
DAB0 - DAB7	1A13
IP	2K3
IP4 - IP6	2K2
$\overline{IMA}$	2H14
$\overline{IMA\text{-}CP}$	4J14
$\overline{INI}$	4I14
$\overline{INIT}$	4J14
$\overline{INIT0}$ - $\overline{INIT7}$	2K1
$\overline{MCDS}$	4A10
$\overline{MGS0}$ - $\overline{MGS7}$	4H1
MMCB1	2D14
MMCB2	2D14
$\overline{MMP}$	3A12
$\overline{MMP\text{-}CP}$	4K14
MM0 - MM15	2F1
$\overline{MRI0}$ - $\overline{MRI7}$	4K9
$\overline{MRBAN}$	1J1
$\overline{MRBA1}$ - $\overline{MRBA3}$	2K5
PCBCS	2J1
$\overline{PCBSI}$	1K12
PCBGS0 - PCBGS7	1I1
$\overline{PCBRI0}$ - $\overline{PCBRI7}$	1K4
$\overline{REQ}$	1J1
R/$\overline{B}$	2K6



E REV

0

REVISION				
E	ORIGINATED PER DWR # E1030 APP'D	ECO 15 LPS	REVISED PER ECO # 20407 APP'D	REVISED PER ECO # 22164 APP'D

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

BY	DATE	APPROVED BY	DATE
DWN	11/2?/81	E ENGR	
CHK		M ENGR	
		MFG ENGR	

MATERIAL

MODEL NO VS-100

SEE ENGRG SPECIFICATIONS No.

TITLE BUS ADAPTER

FINISH

TOL IF AS NOTED

210-7?? | E | 7911

WANG PART NUMBER | SIZE | DRAWING NUMBER | REV

SCALE | SHT 6 OF 6

Y6

NOTES

1. ALL RESISTOR VALUES IN OHMS.
2. ALL CAPACITOR VALUES IN MICROFARADS UNLESS OTHERWISE INDICATED.
3. ALL RESISTORS 1/4W 5% UNLESS OTHERWISE INDICATED.
4. SIGNAL'S IN PARENTHESIS ( ) DENOTES "ODD" MEMORY CARD USED IN 2ND, 4TH, 6TH, AND 8TH SLOTS.

MNEMONICS	COORD.
BMAR0	2A10
BMAR1	2A10
BMAR2	2I8
BMAR3	2I8
BMAR4	2I8
BMAR5	2C7
BMAR6	2C7
BMAR7-BMAR9	2H7
BMAR10-BMAR12	2C7
BMAR13-BMAR16	2H7
BMAR17-BMAR19	2F7
BPARE0	2H7
CAS	2J11
CE4	2J11
CPEEE	2G11
MMD0-MMD5	2A1
MMD6-MMD11	2J1
MMD12-MMD15	2I1
MMD16-MMD19	2G1
MMD20-MMD25	2A1
MMD26-MMD31	2E1
MMD32-MMD37	2A1
MMD38-MMD43	2J1
MMD44-MMD47	2I1
MMD48-MMD51	2G1
MMD52-MMD57	2E1
MMD58-MMD63	2C1
MMD0-MMD3	2K14
MMD4-MMD9	2J14
MMD10-MMD15	2I14
MMD16-MMD21	2G14
MMD22-MMD27	2E14
MMD28-MMD33	2C14
MMD34-MMD39	2A14
MMD40-MMD45	2J14
MMD46-MMD51	2G14
MMD52-MMD57	2E14
MMD58-MMD63	2C14
MS	2J7
RIS	2I11
RIT	2H11
MMD0-MMD3	2K14
MMD4-MMD9	2J14
MMD10-MMD15	2I14
MMD16-MMD21	2G14
MMD22-MMD27	2E14
MMD28-MMD33	2C14

8

SPARES

C2-37, 40-52, 55-67, 73-85, 88-100, 104-116, 119-131, 135-147, 150-162, 168-180, 183-195, 199-211, 214-226, 229-241, 244-256, 261-273, 276-288, 292-304, 307-319, 323-335, 338-350, 356-367

C54, 86, 87, 117, 118, 148, 149, 181, 182, 212, 213, 242, 243, 274, 275, 305, 306, 336, 337, 369, 370, 373

C39, 68-72, 101-103, 132-134, 163-167, 196-198, 227, 228, 257-260, 289-291, 320-322, 351-355, 371, 372, 375-376

+5VR

7400 L42	7400 L218	7414 L373	
7400 L45	7400 L222	7414 L376	
7400 L130	7400 L310	7432 L370	
7400 L133	7408 L372	7432 L370	

R511 47	R517 47	R533 47	R548 47	R563 47
R511 47	R527 47	R543 47	R549 47	R566 47
R513 47	R527 47	R543 47	R549 47	R567 47
R516 47	R529 47	R543 47	R561 47	R567 47
R517 47	R532 47	R545 47	R561 47	R576 56

E REV D N

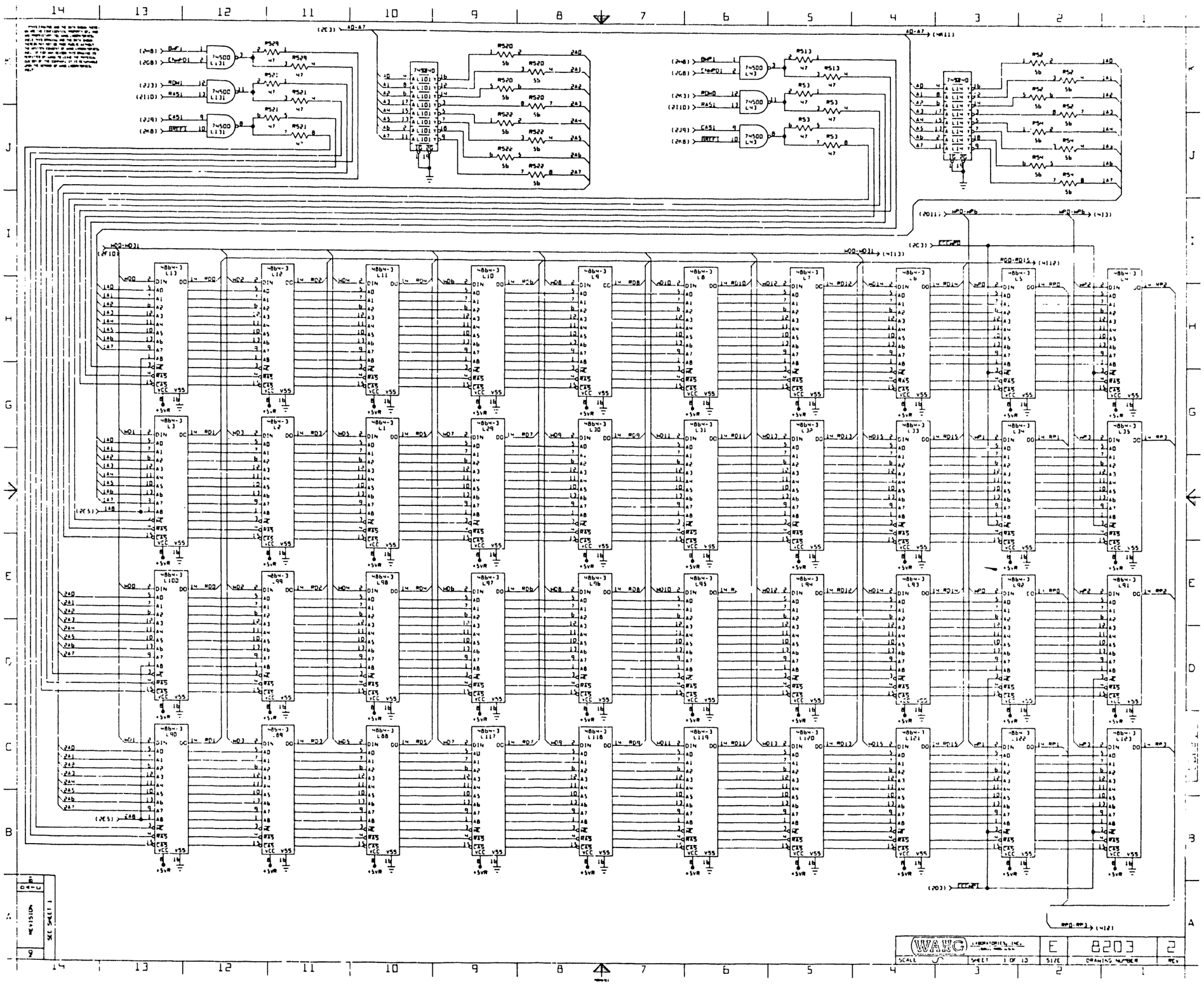
NO.	REVISION	P.G.D.	KTH	AB
9	ORIGINATED PER DWR NO. C1063 APPR:	1-12-83	1-19-84	7-3-84
A	REVISED PER ECO NO. 24767 CHK:			
B	REVISED PER ECO NO. 24718 CHK:			

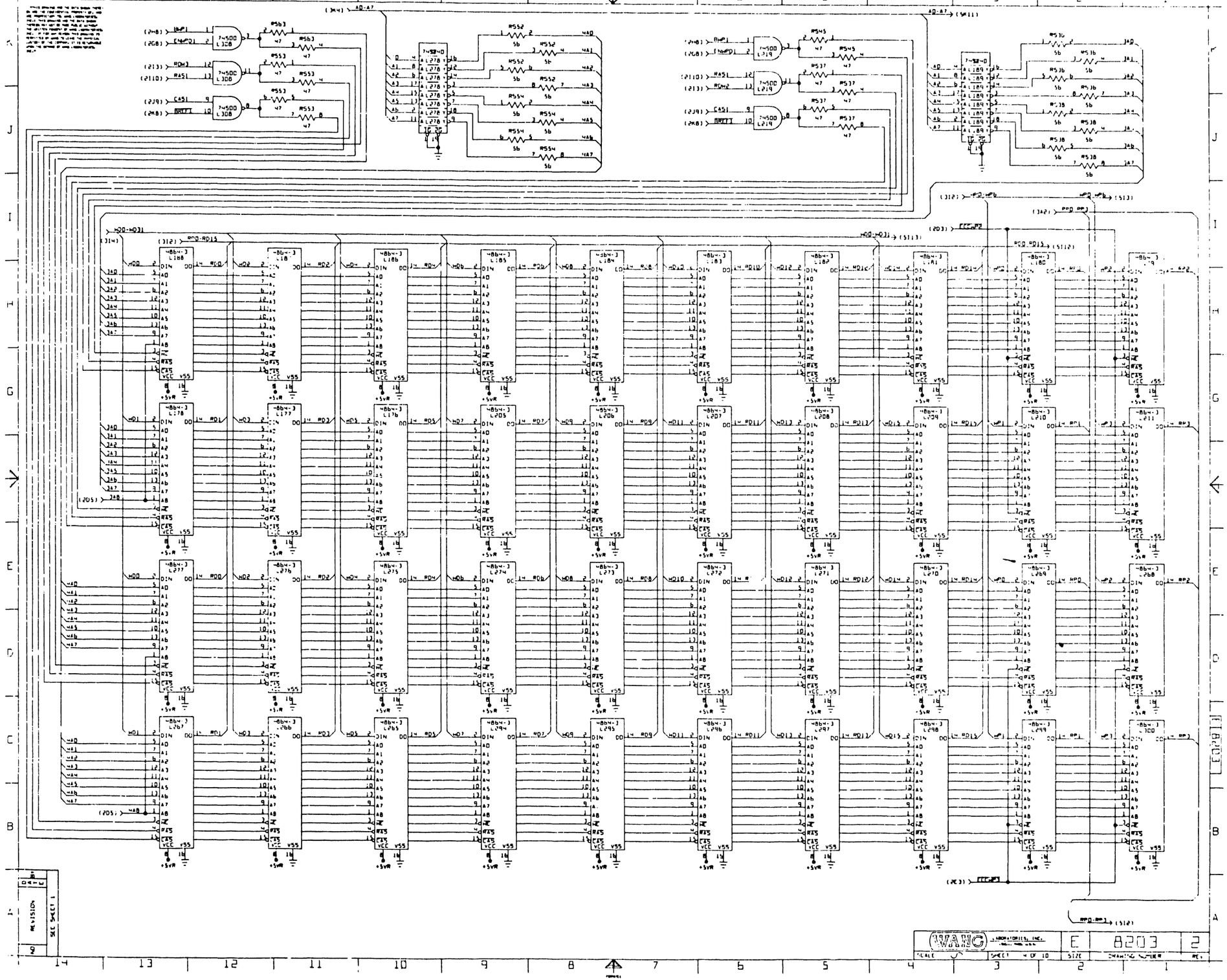
WANG LABORATORIES, INC.

SCHEMATIC DIAGRAM			
TITLE 2MEG MAIN MEM M/L			
DWN PGD	CHK	ENG	DIR
SIZE E	DRAWING NUMBER 8203		REV 2
SCALE	SHEET 1 OF 10		

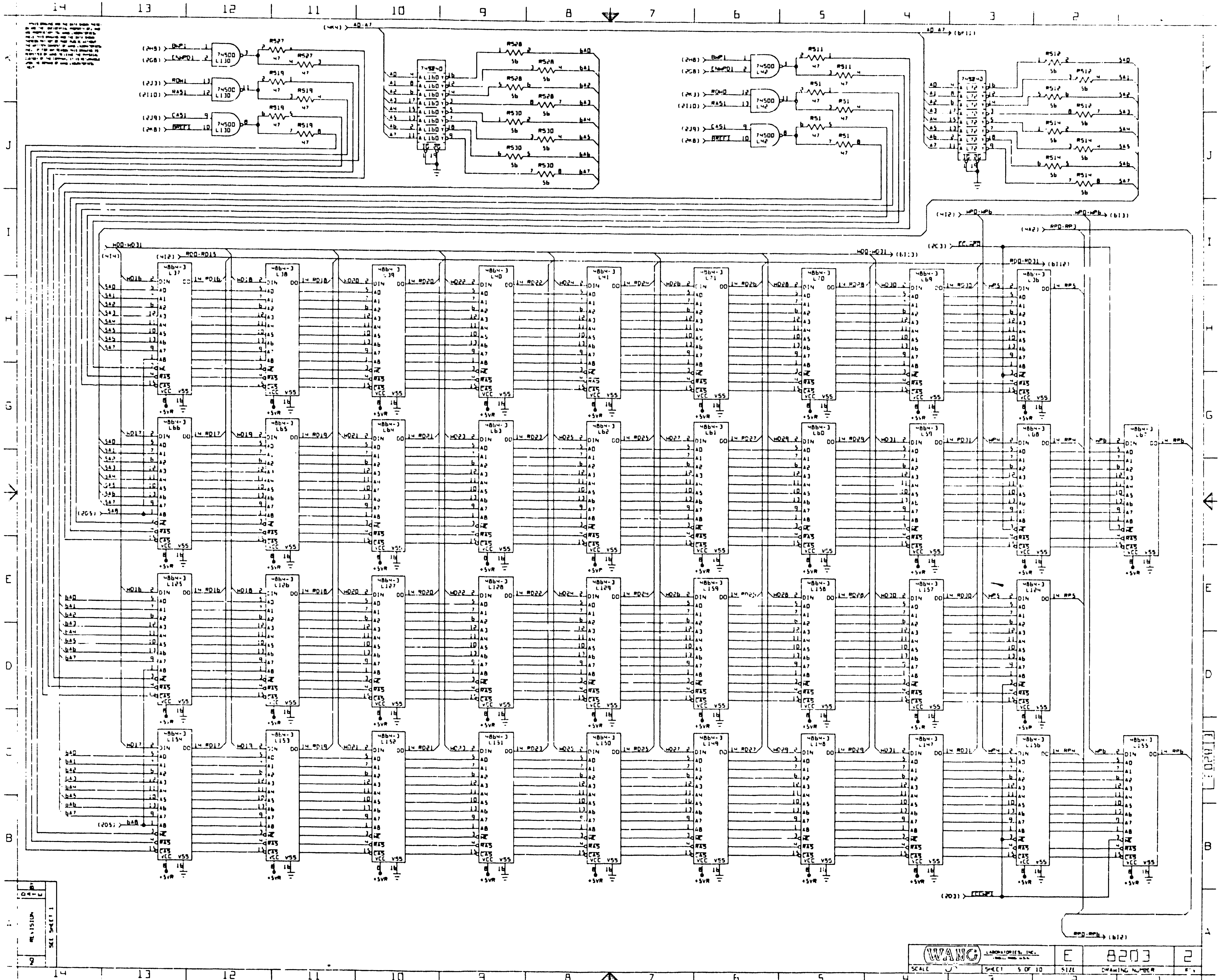
MODEL M0062A V5-85/90/100 | WANG PART NUMBER 210 8203

L1028

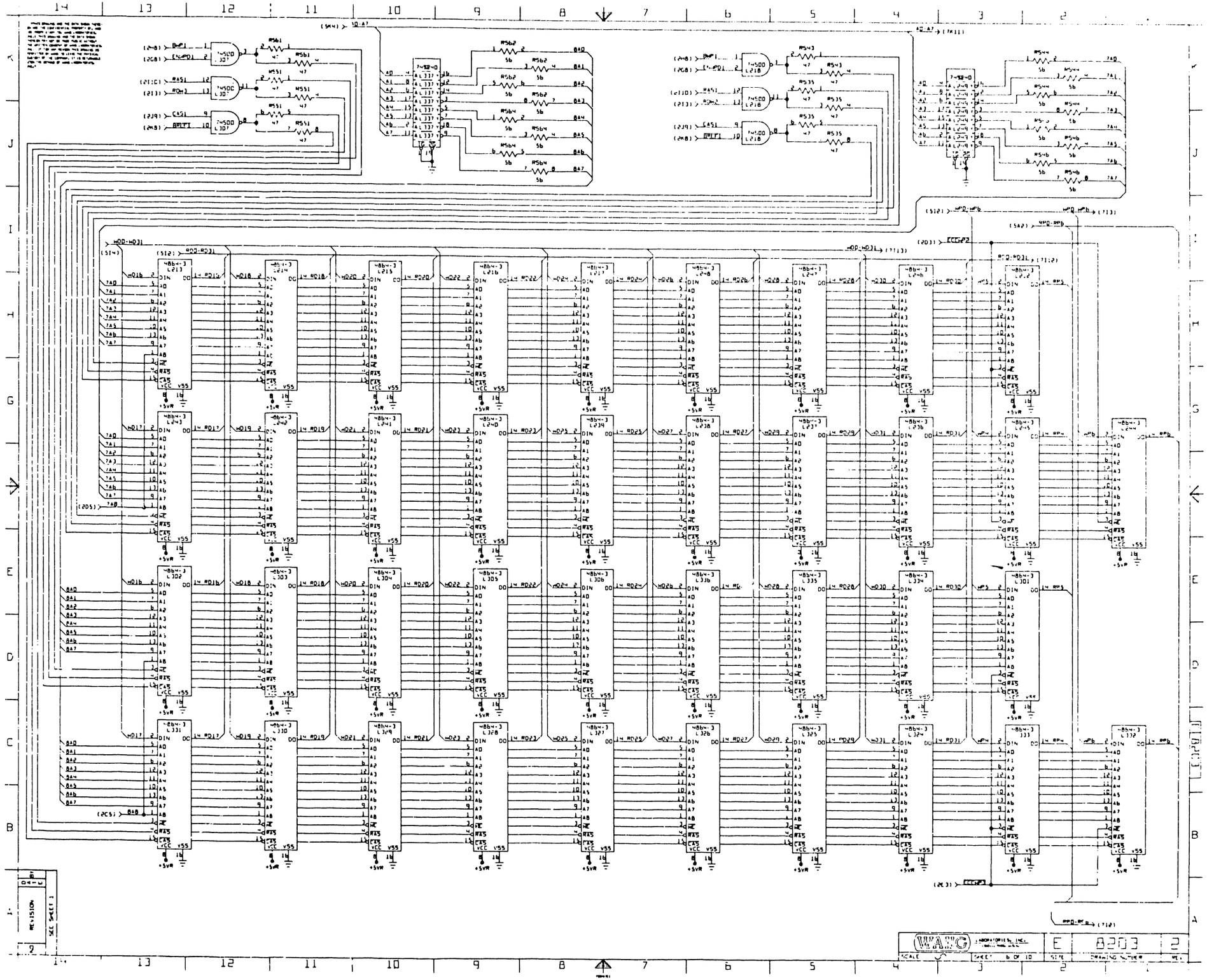

74500
74S40
4864-3
RS29
RS21
RS20
RS22
RS13
RS3
RS2
RS4
+5VR
WANG
E
8203
2
SCALE
SHEET 1 OF 13
SIZE
DRAWING NUMBER
REV
REVISION
SEE SHEET 1

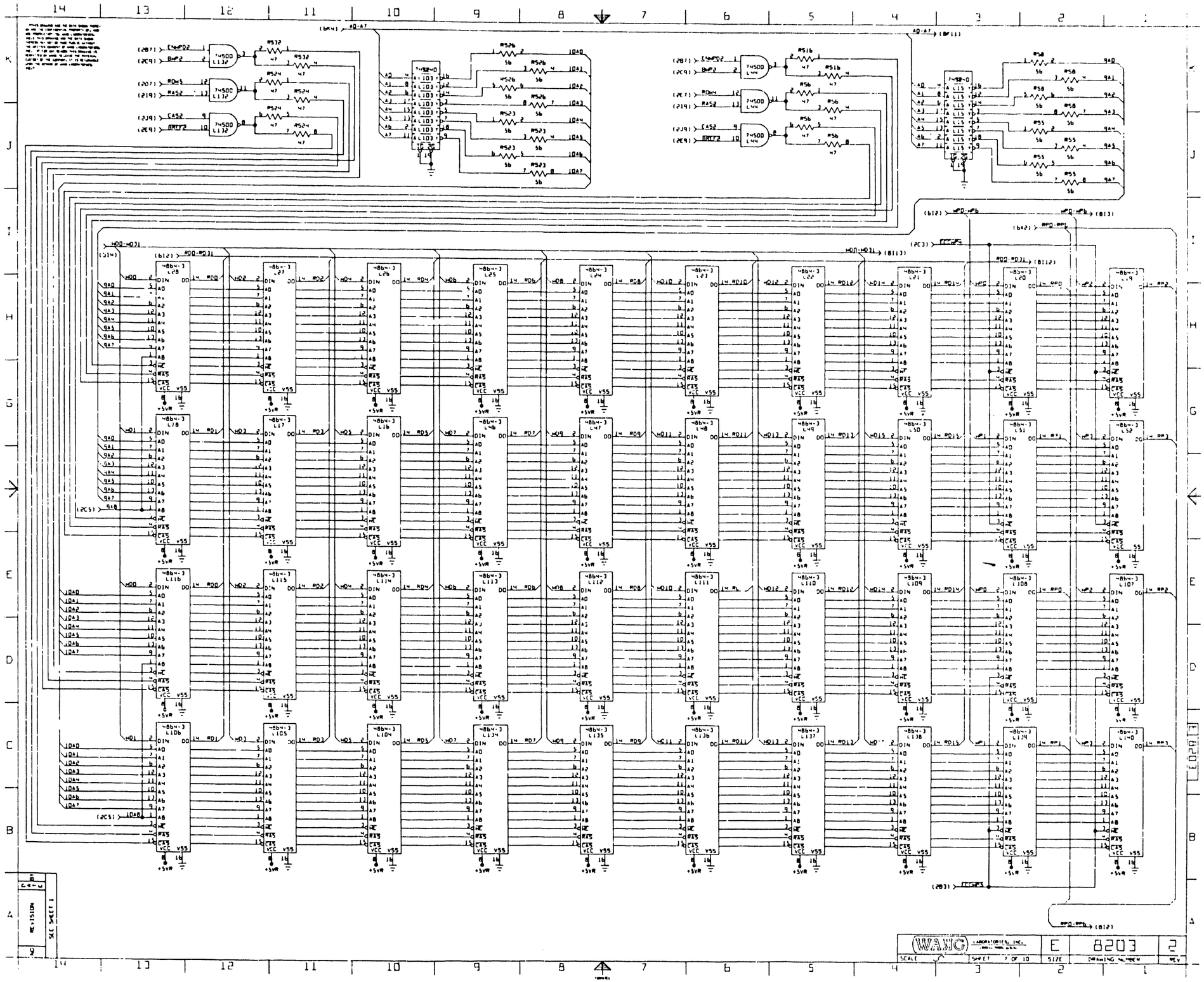


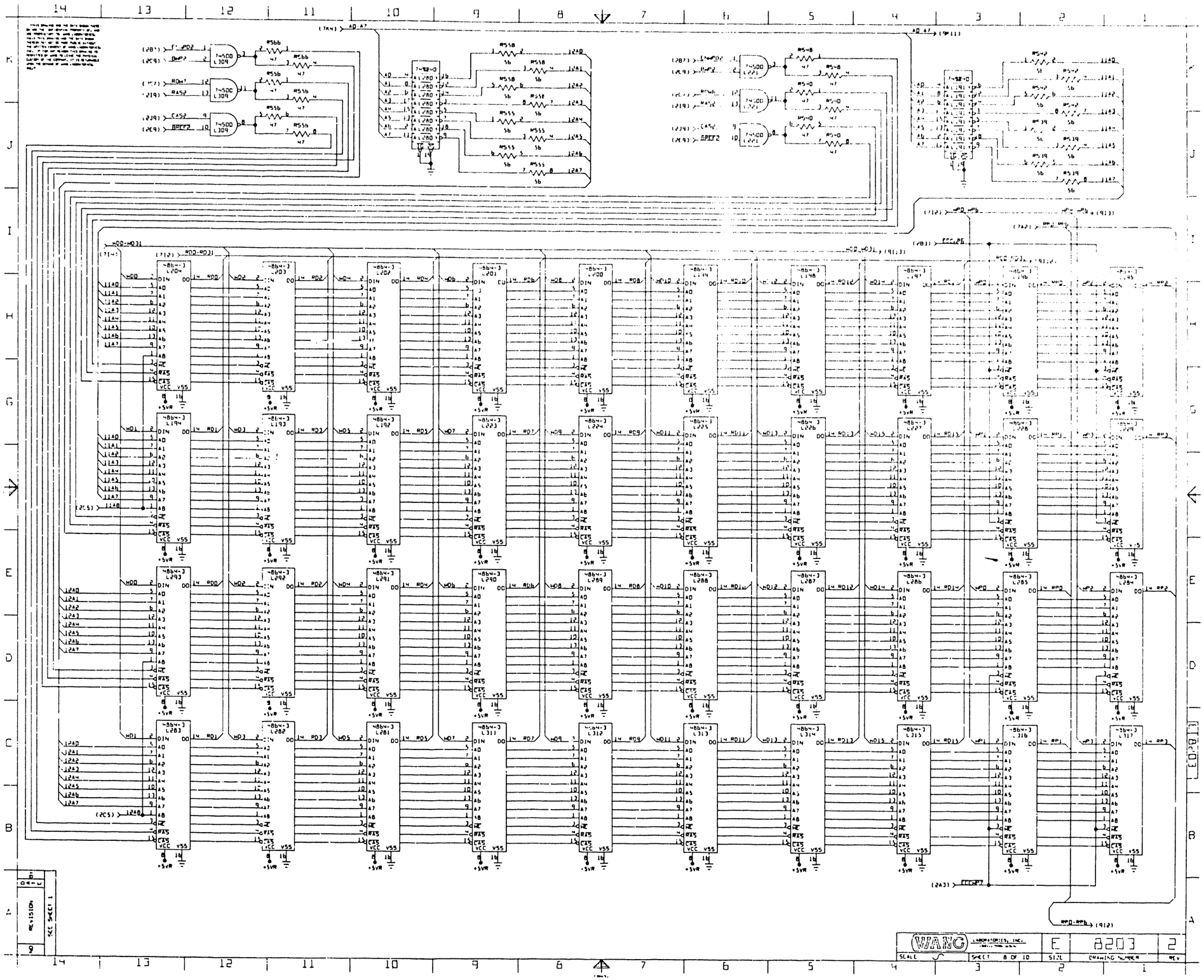
Z4


74S00
L130
L42
74S240
L160
L72
R527
R519
R528
R530
R511
R51
R512
R514
A0-A7
SA0
SA1
SA2
SA3
SA4
SA5
SA6
SA7
SA8
6A0
6A1
6A2
6A3
6A4
6A5
6A6
6A7
6A8
WD0-WD31
RD0-RD15
RD0-RD31
WP0-WP6
RP0-RP3
RP0-RP6
4864-3
DIN
DO
WE
RAS
CAS
VCC
VSS
+5VR
WANG LABORATORIES, INC.
SCALE
SHEET 5 OF 10
SIZE
E
DRAWING NUMBER
8203
2
REVISION
SEE SHEET 1

Z5


WANG
SCALE
SHEET 6 OF 10
SIZE
E
8203
2
REVISION
SEE SHEET 1
WD0-WD31
74500
74S62-0
74S64-3
+5VR


WANG LABORATORIES, INC.
E
8203
2
SHEET 1 OF 10
SIZE
DRAWING NUMBER
REV
REVISION
SEE SHEET 1
74S00
74S32
74S04
74S52
RMF2
RAS2
CAS2
RMW
RAS
CAS
RD0-RD15
WD0-WD15
AD0-A7
+5VR
VSS
VCC
DIN
DO
WE
RAS
CAS
A0
A1
A2
A3
A4
A5
A6
A7
A8


WANG LABORATORIES, INC.
E
8203
2
SCALE
SHEET 8 OF 10
SIZE
DRAWING NUMBER
REV
REVISION
SEE SHEET 1
~8bit-3
L204
L203
L202
L201
L200
L199
L198
L197
L196
L195
L194
L193
L192
L223
L224
L225
L226
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L311
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L316
L317
L318
7400
L309
L221
7432
L280
RN56
RN58
RN55
RN54
RN53
RN52
RN51
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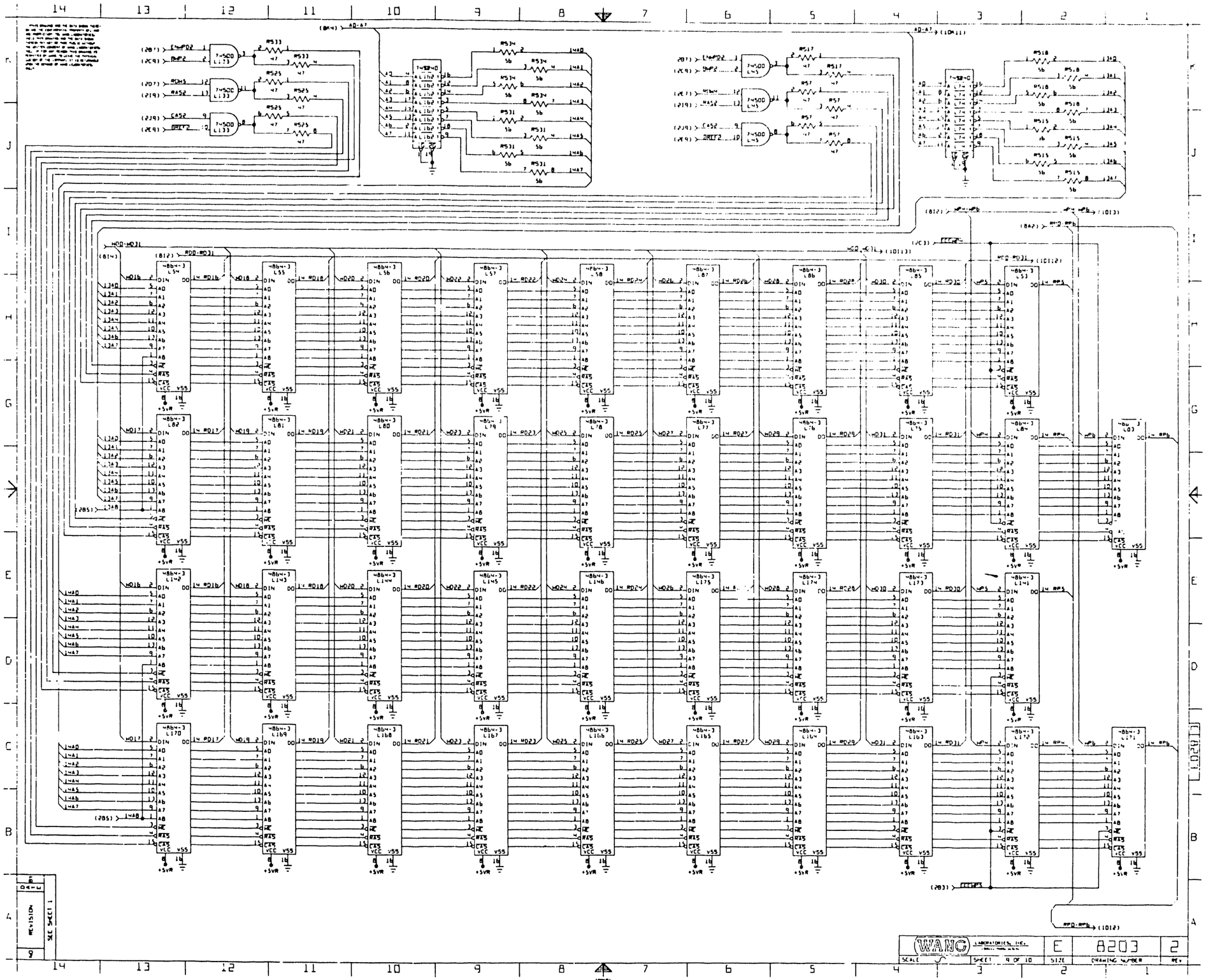
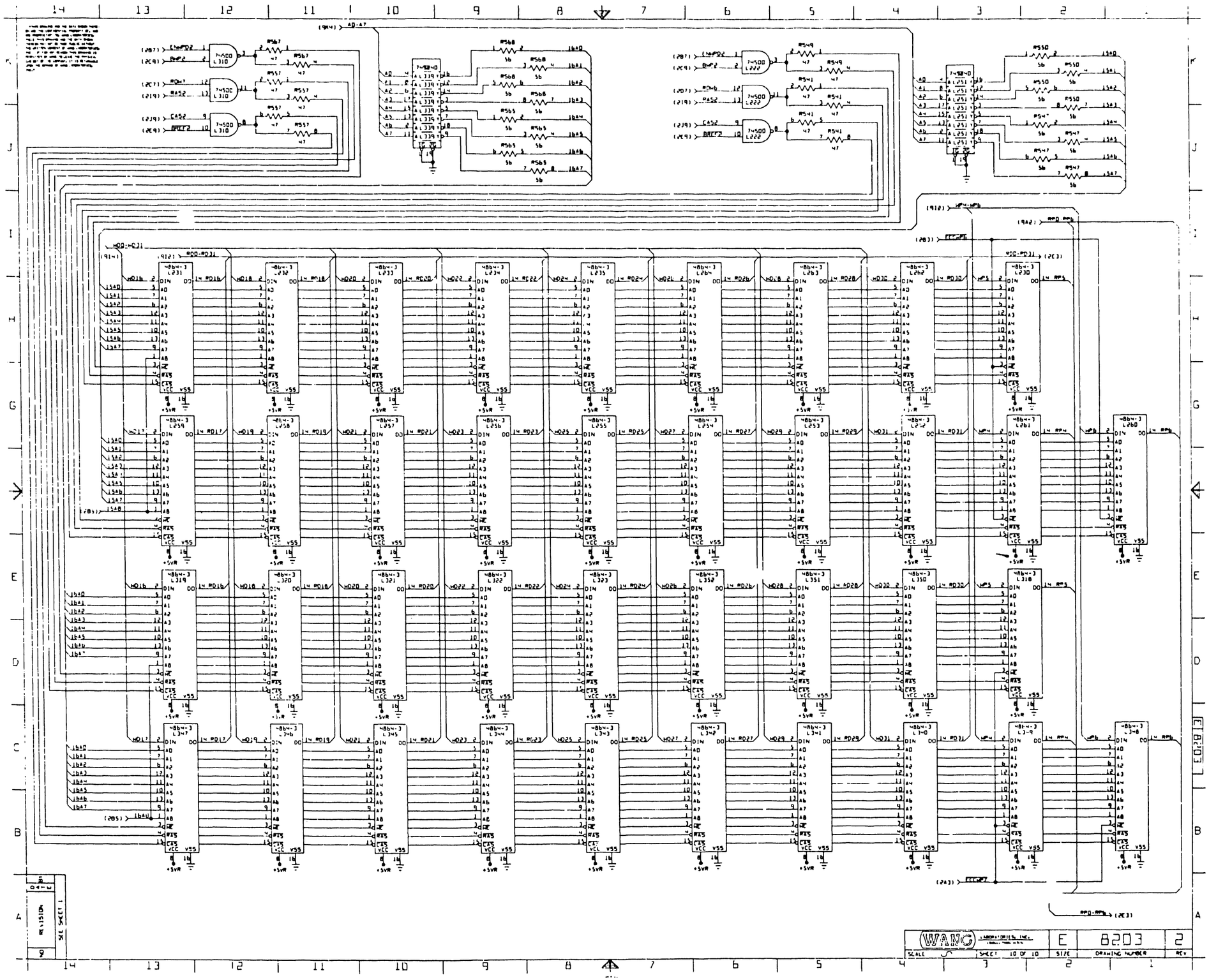
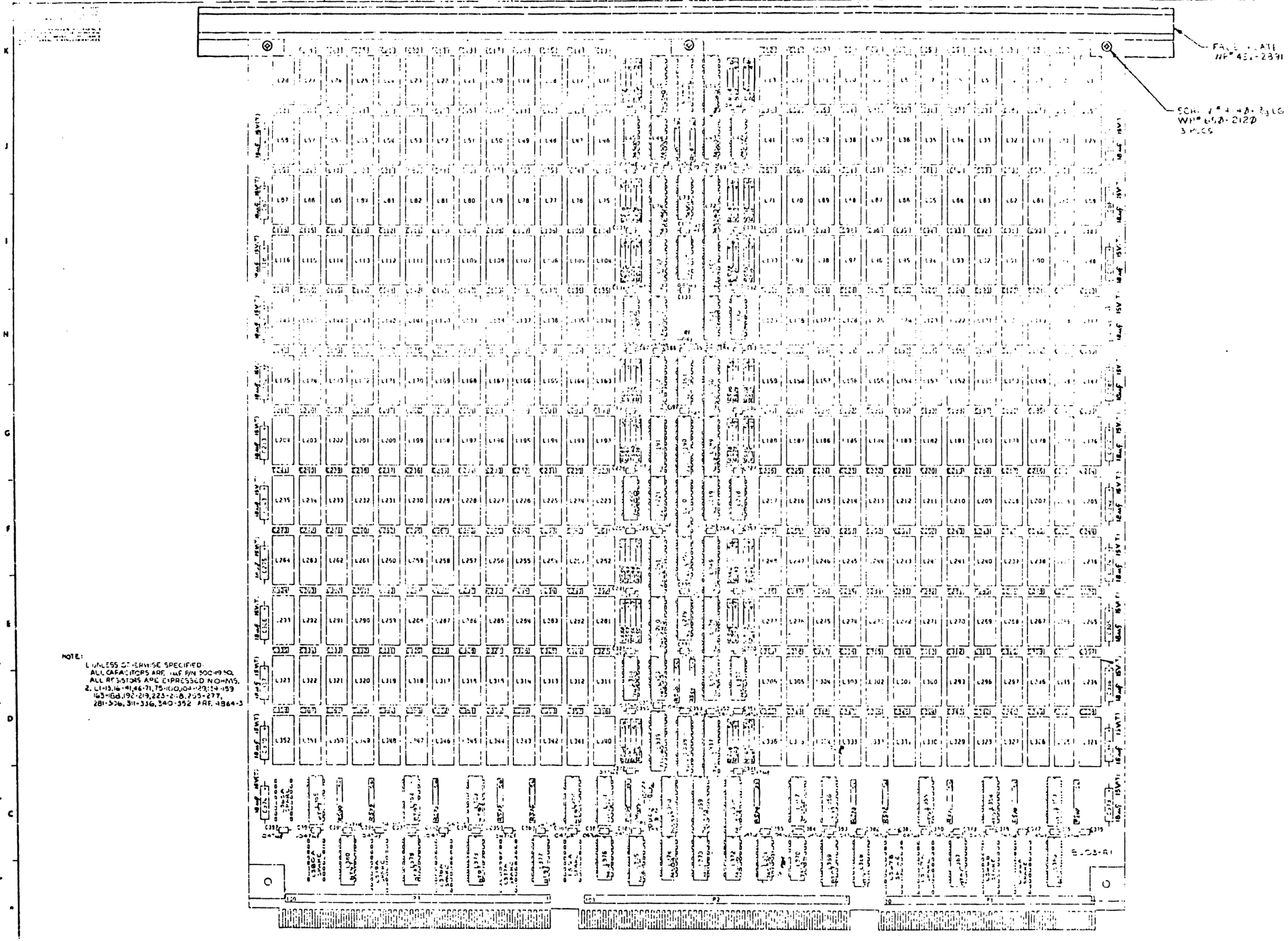
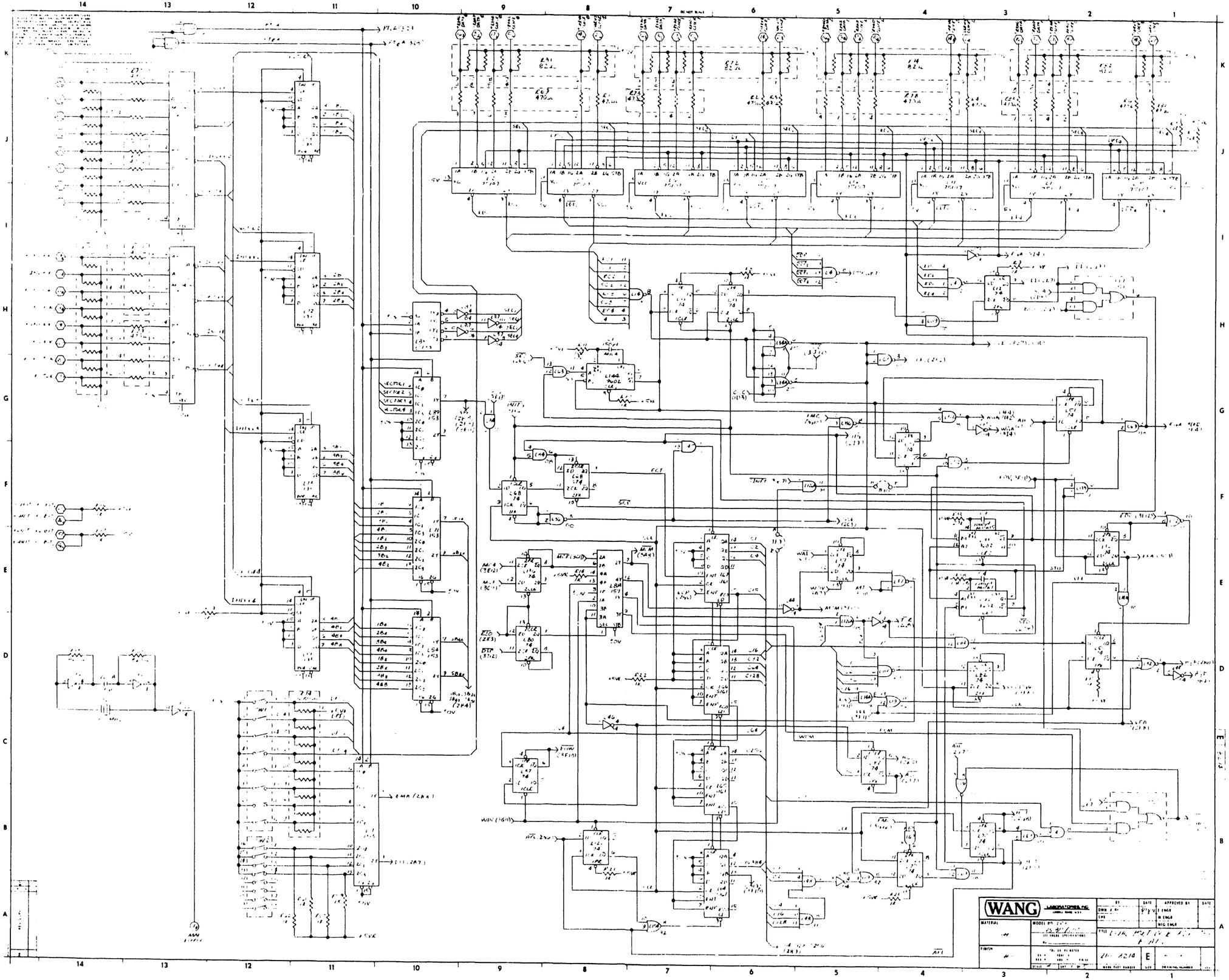
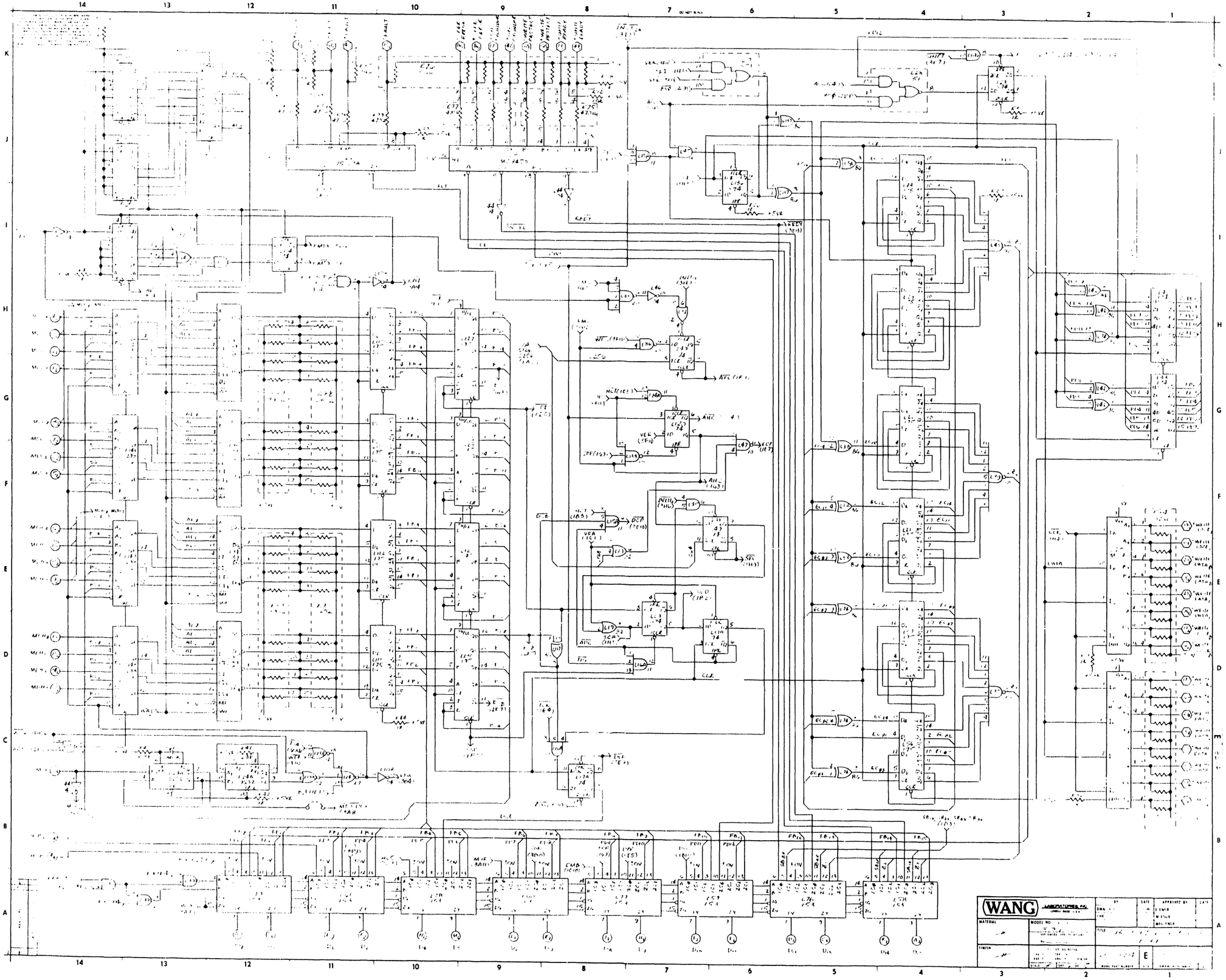
RN17
RN16
RN15
RN14
RN13
RN12
RN11
RN10
RN9
RN8
RN7
RN6
RN5
RN4
RN3
RN2
RN1
5b
47
+5VR
vcc
vss
RAS
CAS
WE
DIN
DO
AD
AD-A7
MD0-MD31
MD0-MD15
MD16-MD31
RAS2
CAS2
RFCLPE
RFCLPE2
RFCLPE7
MPD-MPB


WANG LABORATORIES, INC.
E
8203
2
SCALE
SHEET 9 OF 10
SIZE
DRAWING NUMBER
REV
REVISION
SEE SHEET 1
MD0-MD31
4864-3
7400
7404
7408
7432

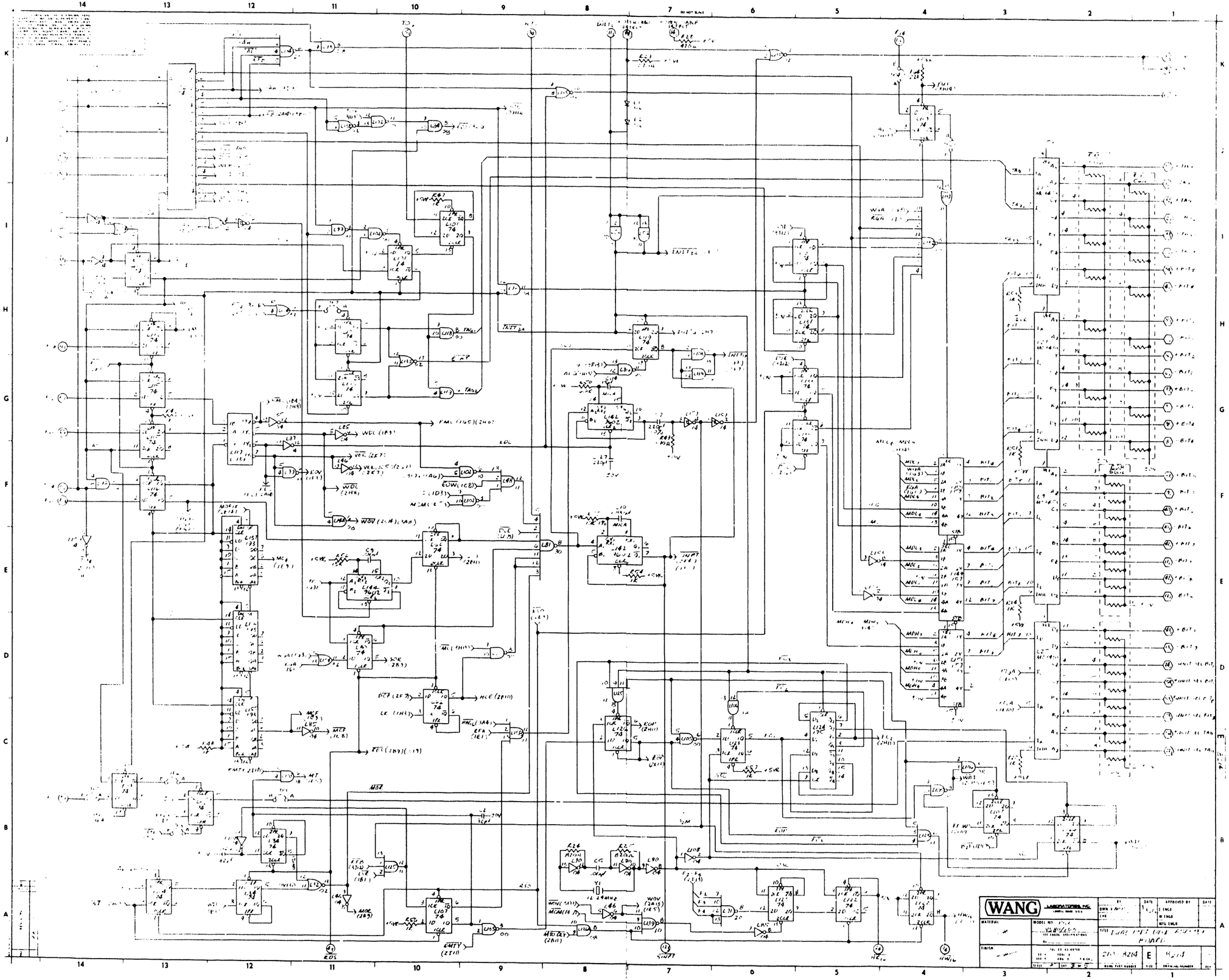

WANG
E
8203
2
SHEET 10 OF 10
SIZE
DRAWING NUMBER
REV
REVISION
SIZE SHEET 1

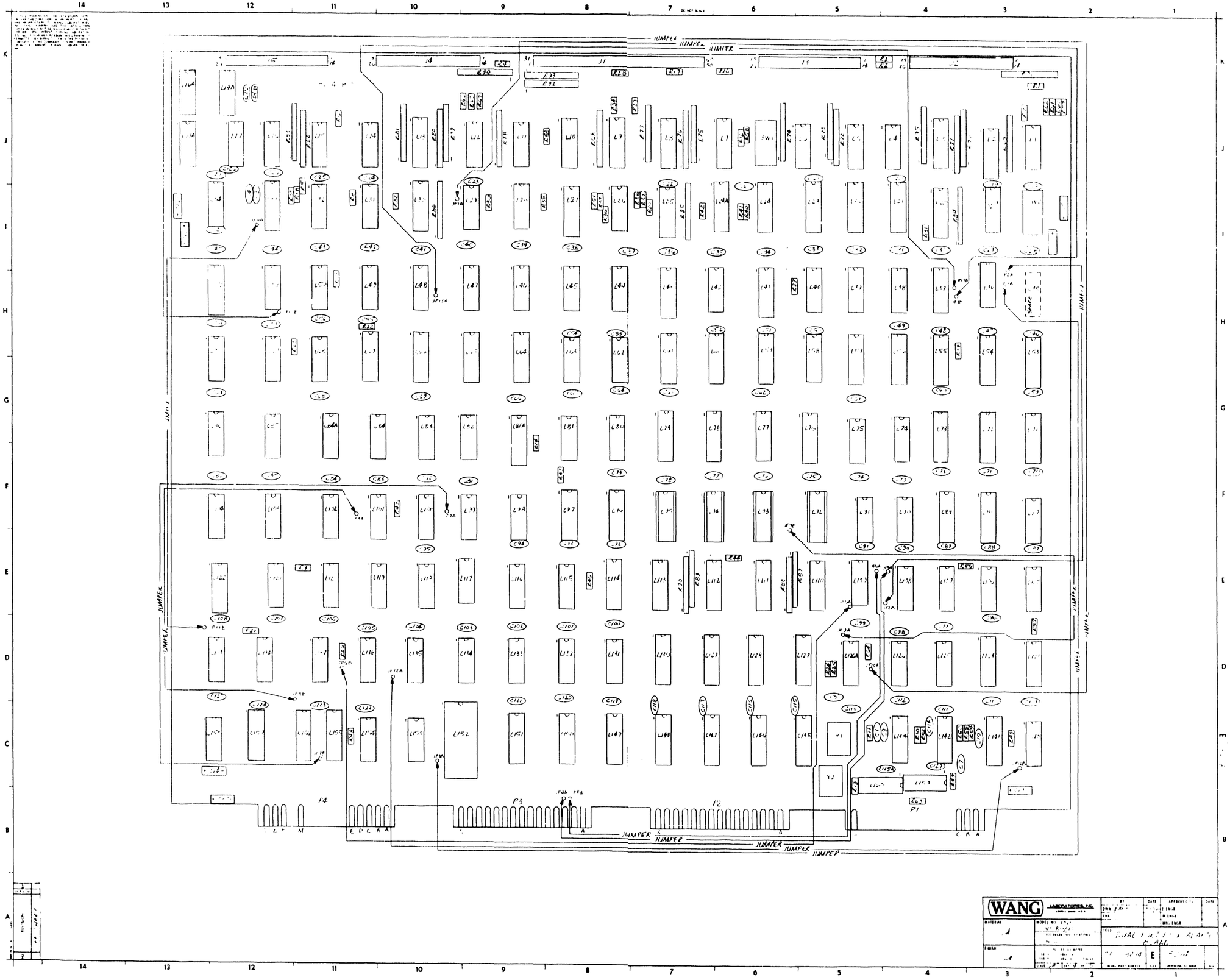

FACE PLATE
WP# 454-2391
SCH. 1" x 4" x .3 LG
WP# 650-2120
3 REQ'S
NOTE:
1. UNLESS OTHERWISE SPECIFIED
ALL CAPACITORS ARE MIL P/N 300-19 NO.
ALL RESISTORS ARE EXPRESSED IN OHMS.
2. L1-15,16-41,46-71,75-100,104-129,134-159
163-188,192-219,223-248,253-277,
281-306, 311-336, 340-352 ARE 4864-3
WANG
ASSEMBLY
210-8206
REV
8206


WANG LABORATORIES, INC.
LOWELL, MASS. U.S.A.
MATERIAL
FINISH
DRWN
CHK
APPROVED BY
DATE
SCALE
DRAWING NUMBER
SIZE
E



AA2


WANG LABORATORIES, INC.
LOWELL, MASS. U.S.A.
MODEL NO.
TITLE
SIZE
DRAWING NUMBER
E
DO NOT SCALE


JUMPER
JUMPER
JUMPER
J4
J1
J2
J3
P4
P3
P2
P1
JUMPER
JUMPER
JUMPER
JUMPER
JUMPER
JUMPER
JUMPER
JUMPER
JUMPER
WANG LABORATORIES, INC.
MATERIAL
FINISH
MODEL NO.
TITLE
DRAWN
CHK'D
APPROVED
DATE
SIZE
E

AA4

DO NOT SCALE

M24 BAC	M25 BAC	M26 BAC	CP	BA
0	0	0	NOOP	NOOP
0	0	1	MULTIPLY	IPCB
0	1	0	W8	W8
0	1	1	W32	?
1	0	0	R8	——
1	0	1		R32
1	1	0	R32	W32
1	1	1		——

WANG LABORATORIES, INC. LOWELL MASS.

BY	DATE	APPROVED BY	DATE

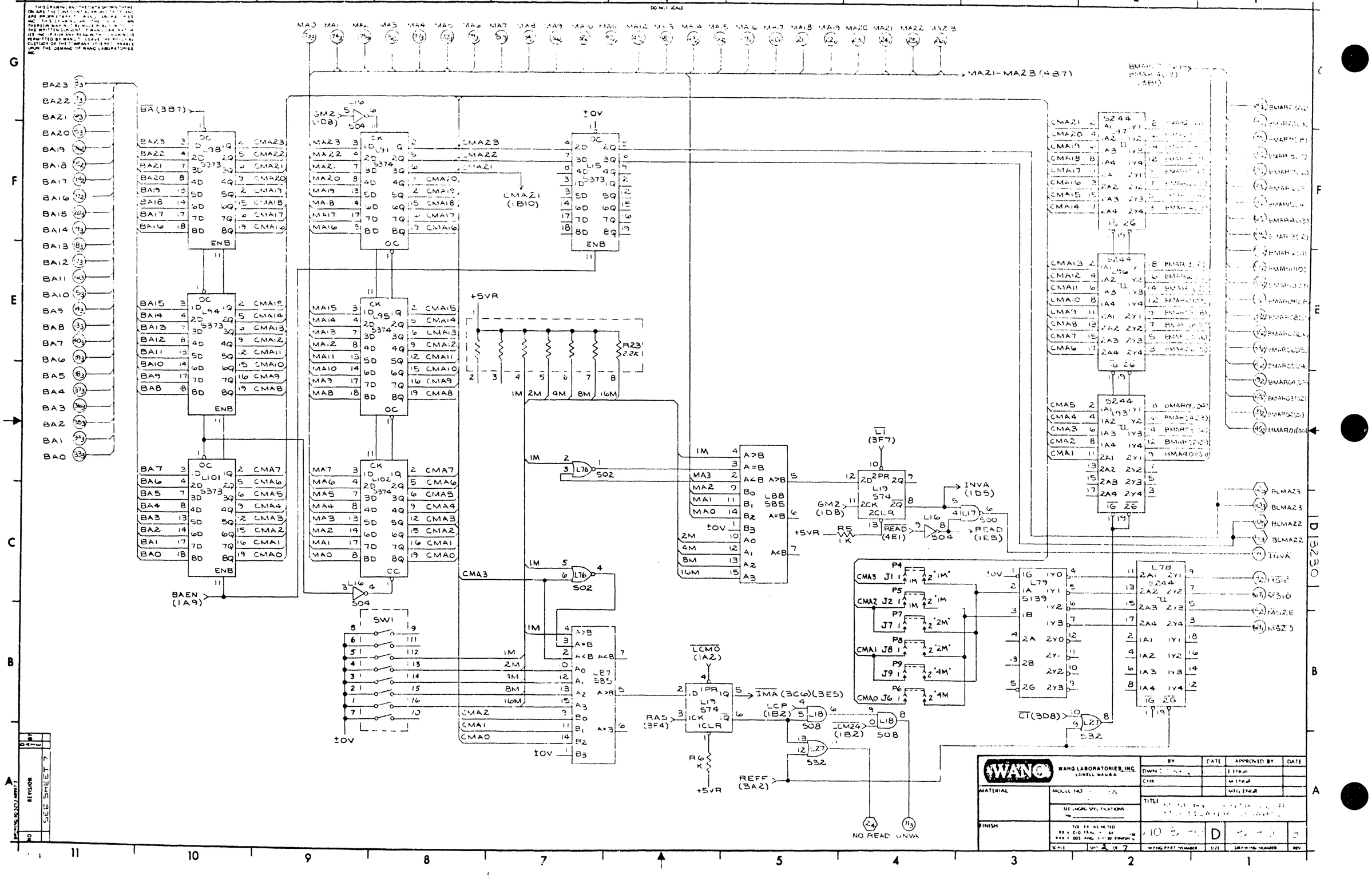
MATERIAL — MODEL NO. — MFG. SPECIFICATIONS — FINISH

TITLE

D — DRAWING NUMBER — REV

WANG PART NUMBER

BB1


MA0 MA1 MA2 MA3 MA4 MA5 MA6 MA7 MA8 MA9 MA10 MA11 MA12 MA13 MA14 MA15 MA16 MA17 MA18 MA19 MA20 MA21 MA22 MA23
MA21-MA23 (4B7)
BA23 BA22 BA21 BA20 BA19 BA18 BA17 BA16 BA15 BA14 BA13 BA12 BA11 BA10 BA9 BA8 BA7 BA6 BA5 BA4 BA3 BA2 BA1 BA0
BA (3B7)
BAEN (1A9)
GM2 (1D8)
CMA21 (1B10)
+5VR
+0V
R23 2.2K
1M 2M 4M 8M 16M
SW1
RA5 (3F4)
LCM0 (1A2)
IMA (3C6)(3E5)
LCP (1B2)
CM24 (1B2)
REFF (3A2)
LI (3F7)
INVA (1D5)
GM2 (1D8)
READ (4E1)
READ (1E5)
CT (3D8)
NO READ
INVA
BLMA23
BLMA22
INVA
MS1F
MS1D
MS2E
MS2D
SEE SHEET 7
WANG LABORATORIES, INC. LOWELL MASS.
MATERIAL
FINISH
SCALE
WANG PART NUMBER
SIZE
DRAWING NUMBER
REV
D
DO NOT SCALE

BB2

DO NOT SCALE

PARITY (2A)

+5VR R19 1K

CSB (5B) L39A S37

CLKCM (2E) L39A S37

+5VR R25 1K

+5VR R15 1K L38 S37

+5VR R18 1K

BK9(3D1)

MRBA (2A) L35 S04

+5VR R28 1K

VS-I/O (B7) L35 S04

MRBA (4B3)

L3 S51

L52 S74 (LA, LO (1C5), LO (4B2))

L51 S74 (L1, L1 (1F4) (2D4))

L50 S74 (MA (1A11) (1E9) (3C9), M0 (1A6) (3C11), M1 (1B4), M2 (1D9))

L14 S74

L37 S74

L49 S74

L37 S74

L36 S74 (CP (1A6) (1E4))

L62 S64

MO (3F7)

MISS (1E3)

BK2 (1F7)

COR (1E9)

MA (3F8)

L39 S00

L37 S74 (R/BF (1E9))

L30 S02 (R/BS (1A11))

L24 S08

L23 S32

L24 S08

L25 S11

RUN/STEP (A1) L23 S32

GTT (A2)

L16 S04

L35 S04

L35 S04

L35 S04

L35 S04

L35 S04

L46 S08 (R/W (3G1), RMW (1C6))

C4

L33 S153

L63 S08 (IPC (1E5), IPCB (1C7))

L32 S74

L48 S74

L47 S74

L9 S10

L48 S74

L47 S74

REFF (3A1) MOP (1A5) L39 S00

L46 S08

BK3 (1B6)

R/W (3E8)

RAS (2B6)

R17 1K +5VR

RMW (1C6)

L90A BT98 DIS4 DIS2

CAS, CEN, RAS, WB, WP, CI

L26 S74

L25 S11 (CLR WRITE)

R8 1K

WECR (1G6) IMA (2B5)

M1 (1A11) (3A6) (4C3)

BK1 (1E5)

R11 1K

R10 1K

L27 S32

L31 S00

BK6 (4B4)

LC (1A6)

BK9 (3F11)

MA (3D9)

L14 S74

L44 S04

IMA-CP, DRY1, R/B, REFF

L21 L5393 IQD IQC IQB IQA ICLR

L20 LS244 (BMAR(0:3), BMAR(8:11) (2G2))

L28 S74

L29 S74

L28 S74

L29 S74

L30 S02

L30 S02

R9 1K +5VR

MA (3D9)

REFF (1E9) (2A5)

REFF (3G5) (3B8)

R26 12K

C96 .01UF C97 .001UF

L89 TRIG 555 RESET VCC CNT DIS THR OUT GND

R27 1K

M1 (3E6) L27 S32

CP (1D6)

CP BKA

BBA

RUN/STEP (A1)

GTT (A2)

SEE SHEET 7

REVISION

NO

WANG LABORATORIES, INC. LOWELL MASS.	BY	DATE	APPROVED BY	DATE
	DWN [illegible]		E ENGR	
	CHK		M ENGR	
			MFG ENGR	
MATERIAL	MODEL NO [illegible]			
	SEE ENGR SPECIFICATIONS NO.		TITLE MEMORY CONTROLLER MULTILAYER BOARD	
FINISH	TOLERANCES AS NOTED FRAC ± 1/64 DEC ± .005 ANG ± 1° N/F		2110-B/EC	D
SCALE	SHT 3 OF 7		WANG PART NUMBER	SIZE

DRAWING NUMBER 8883 REV B

BB3

DO NOT SCALE

PAGE 0 (42) MIF (42) MOF (42)

MMON (1F)

CCM22 (1D10) CCM28 (1D10) CCM26 (1E0) CCM25 (1E10) CCM24 (1E) CCM23 (1D10)

DIRD31 DIRD30 DIRD29 DIRD28 DIRD27 DIRD26 DIRD25 DIRD24 → MM31 MM30 MM29 MM28 MM27 MM26 MM25 MM24

DIRD23 DIRD22 DIRD21 DIRD20 DIRD19 DIRD 8 DIRD17 DIRD16 → MM23 MM22 MM21 MM20 MM 9 MM 8 MM17 MM16

PAGE 1 (43)

DIRD15 DIRD14 DIRD13 DIRD12 DIRD11 DIRD10 DIRD9 DIRD8 → MM15 MM14 MM13 MM12 MM11 MM10 MM9 MM8

PAGE 2 (33)

DIRD7 DIRD6 DIRD5 DIRD4 DIRD3 DIRD2 DIRD1 DIRD0 → MM7 MM6 MM5 MM4 MM3 MM2 MM1 MM0

MISS EXT (1C1) C2 (3D8) C3(3D8) RSTCP (29) +5VR R16 1K R21 1K R20 1K

MA21-MA23 (2B3) MA21 MA22 MA23 CCM29 (1D10) CCM24 (1E9)

MISS (1E3) MRBA (3E10) LO (3F8) BK6 (3D3) CLMISS (1D3) GT2•MISS (1D9) MT (3E6) CDRY (1F3)

READ (2C4) MSOR MDIR MD2R MD3R MD4R RBIT RBYT MMRD STCP

MIE M2E MMO MM1 MM2 MM3 MM4 MM5 MM6 MM7 MM8 MM9 MM10 MM11 MM12 MM13 MM14 MM15 MM16 MM17 MM18 MM19 MM20 MM21 MM22 MM23 MM24 MM25 MM26 MM27 MM28 MM29 MM30 MM31 NO RIPPLE (23)

REVISION	BY	DATE	APPROVED BY	DATE
NO	DWN		ENGR	
SEE SHEET 5	CHK		ENGR	
			MFG ENGR	

WANG WANG LABORATORIES, INC. LOWELL MASS.

MATERIAL — MODEL NO 1 TITLE

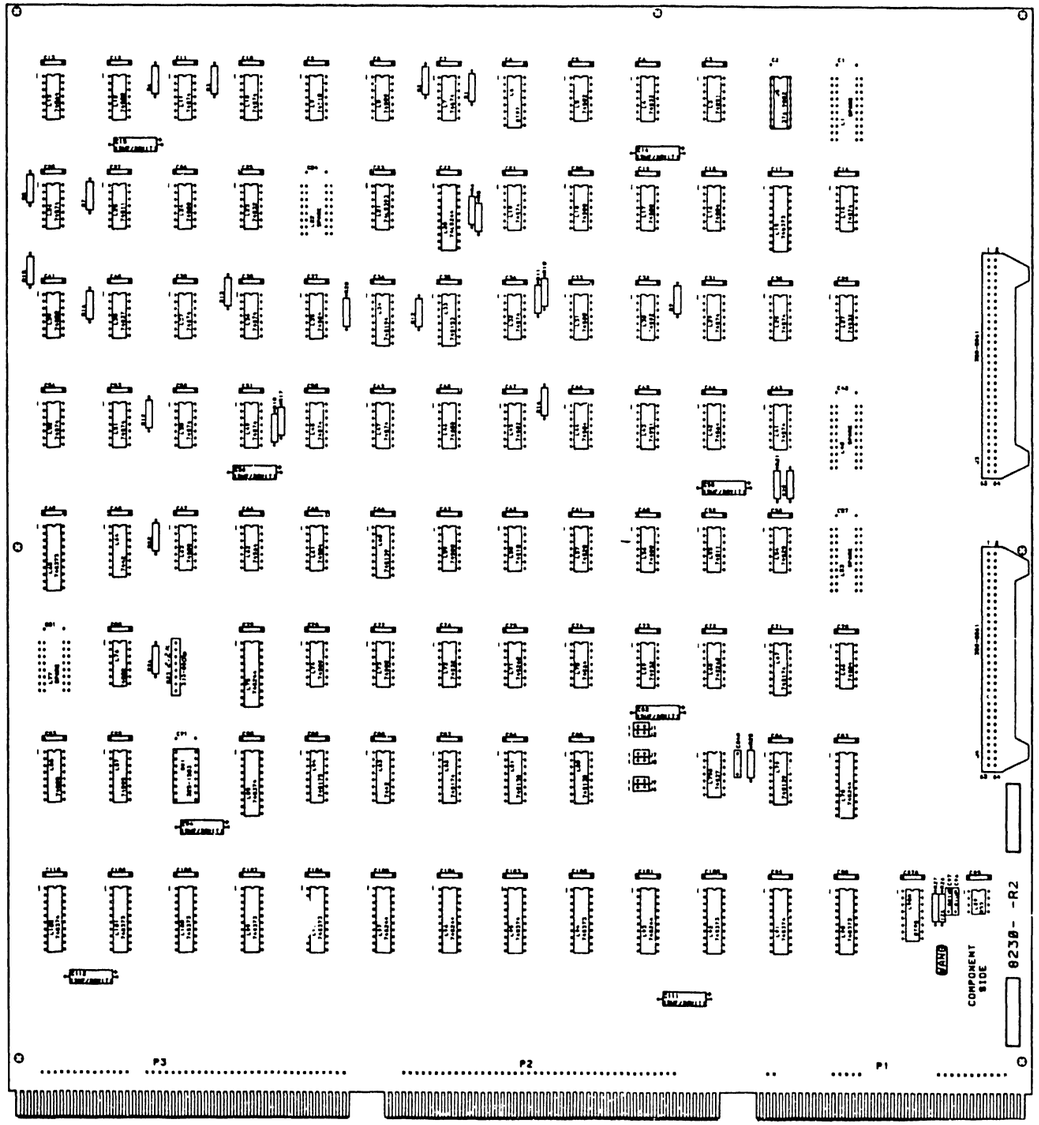
SEE ENGG SPECIFICATIONS No.

FINISH — TOL XX AS NOTED .XX ± .010 FRAC ± 1/64 .XXX ± .005 ANG ± 1/2° REMOVE ALL BURRS

SCALE — SHT 4 OF 7 — WANG PART NUMBER — SIZE D — DRAWING NUMBER — REV

BB4

DO NOT SCALE



WANG LABORATORIES, INC. LOWELL, MASS. U.S.A.		BY	DATE	APPROVED BY	DATE
		DWN K THOMPSON	1-8-82	E ENGR	
		CHK		M ENGR	
MATERIAL	MODEL NO 7105A VS-95			MFG ENGR	
	SEE ENGRG SPECIFICATIONS No.	TITLE	MEMORY CONTROLLER MULTILAYER BOARD		
FINISH	TOL EX AS NOTED .XX ± .XXX ± FRAC ± ANG ± FINISH √	210-8230	D	8230	3
	SCALE SHT 1 OF 7	WANG PART NUMBER	SIZE	DRAWING NUMBER	REV

NO	REVISION	BY	DATE

SEE SHEET 7

D 8230

BB5

DO NOT SCALE

J3

		1 2	PARITY
		3 4	±0V
BCMA22	5	6	
±0V	7	8	
	9	10	BCMA23
	11	12	±0V
	13	14	±0V
	15	16	
	17	18	±0V
	19	20	
	21	22	
	23	24	
	25	26	
	27	28	
	29	30	
CAWD4	31	32	
CAWD6	33	34	
	35	36	±0V
DIRD0	37	38	DIRD1
DIRD2	39	40	DIRD3
DIRD4	41	42	DIRD5
CAWD0	43	44	CAWD1
CAWD2	45	46	CAWD3
	47	48	
	49	50	
CAWD8	51	52	CAWD9
CAWD10	53	54	CAWD11
DIRD6	55	56	DIRD7
DIRD8	57	58	DIRD9
DIRD10	59	60	DIRD11
	61	62	
	63	64	

J4

		1 2	NO READ
CAWD12	3	4	CAWD13
CAWD14	5	6	CAWD15
	7	8	
	9	10	
DIRD12	11	12	DIRD13
DIRD14	13	14	DIRD15
DIRD16	15	16	DIRD17
CAWD16	17	18	CAWD17
CAWD18	19	20	CAWD19
	21	22	
	23	24	
CAWD20	25	26	CAWD21
CAWD22	27	28	CAWD23
	29	30	
	31	32	
DIRD18	33	34	DIRD19
DIRD20	35	36	DIRD21
DIRD22	37	38	DIRD23
CAWD24	39	40	CAWD25
CAWD26	41	42	CAWD27
	43	44	
	45	46	
CAWD28	47	48	CAWD29
CAWD30	49	50	CAWD31
	51	52	
	53	54	
DIRD24	55	56	DIRD25
DIRD26	57	58	DIRD27
DIRD28	59	60	DIRD29
DIRD30	61	62	DIRD31
	63	64	RBYT

J5

±0V	1	16	
	2	15	
	3	14	
	4	13	
	5	12	BCMA23
	6	11	
	7	10	BCMA22
	8	9	

P1

±0V	1	2	±0V
+5VR	3	4	+5VR
	5	6	M2E
	7	8	
	9	10	
MMRD	11	12	CM24
CM22	13	14	CM23
MA16	15	16	MA17
MA18	17	18	MA19
MA20	19	20	MA21
MA22	21	22	MA23
	23	24	±0V
RSTCP	25	26	
STCP	27	28	
	29	30	
	31	32	
	33	34	
	35	36	
	37	38	
	39	40	
	41	42	
	43	44	
	45	46	
MM28	47	48	MM29
MM30	49	50	MM31
	51	52	INVA
	53	54	CM29
MD2R	55	56	MD3R
	57	58	±0V
	59	60	
	61	62	
	63	64	
	65	66	
	67	68	
	69	70	
	71	72	
MS10	73	74	
MS20	75	76	
±0V	77	78	
±0V	79	80	
MM24	81	82	MM25
MM26	83	84	MM27
+5VR	85	86	+5VR

P2

INIT	1	2	±0V
MS1E	3	4	
MS2E	5	6	
±0V	7	8	
	9	10	
MM20	11	12	MM21
MM22	13	14	MM23
	15	16	
BMAR4(03)	17	18	
BMAR5(04)	19	20	
BMAR3(02)	21	22	CM26
	23	24	
M1E	25	26	
MM16	27	28	MM17
MM18	29	30	MM19
BMAR6(05)	31	32	MA8
BMAR7(06)	33	34	MA9
BMAR8(07)	35	36	MA10
BMAR9(08)	37	38	MA11
GT1	39	40	
CLKCM	41	42	
BMAR10(00)	43	44	
MA12	45	46	MA13
MA14	47	48	MA15
BMAP01(08)	49	50	RBYT
BMAR11(10)	51	52	
BMAR12(11)	53	54	COB
BMAR13(12)	55	56	GT2
CEN	57	58	
CKECC	59	60	MD4R
CAS	61	62	CM02
RAS	63	64	CM3
BMAR14(13)	65	66	CM4
BMAR15(14)	67	68	CM5
BMAR16(15)	69	70	BINIT
BMAR17(16)	71	72	MM12
BMAR18(17)	73	74	MM13
BMAR19(18)	75	76	MM14
BMAR20(19)	77	78	MM15
BMAR21(20)	79	80	MCP
R/W	81	82	CP
WP	83	84	WP
	85	86	MTF
	87	88	
BA16	89	90	BA17
BA18	91	92	BA19
+5VR	93	94	+5VR
±0V	95	96	±0V

P3

		1 2	NORTPCE
PAGE 2	3	4	PAGE
BA20	5	6	BA21
BA22	7	8	BA23
MM8	9	10	MM9
MM10	11	12	MM11
BA8	13	14	BA9
BA10	15	16	BA11
BA12	17	18	BA13
BA14	19	20	BA15
MSOR	21	22	MSTR
MM4	23	24	MM5
MM6	25	26	MM7
	27	28	TIMSAT
	29	30	
MI55	31	32	
BA0	33	34	BA1
BA2	35	36	BA3
BA4	37	38	BA5
BA6	39	40	BA7
	41	42	
MM0	43	44	MM1
MM2	45	46	MM3
	47	48	CRY1
	49	50	
±0V	51	52	FACE0
	53	54	CM25
	55	56	IMA CF
	57	58	CM6
	59	60	±0V
	61	62	±0V
	63	64	
	65	66	CI
UNVA	67	68	BBA
MA0	69	70	MA1
MA2	71	72	MA3
MA4	73	74	MA5
MA6	75	76	MA7
R/B	77	78	REF
BAC0	79	80	BAC1
BAC2	81	82	
VS-110	83	84	
RJ	85	86	
RUN/STEP	87	88	
	89	90	
+5VR	91	92	+5VR
+5VR	93	94	+5VR
±0V	95	96	±0V

SEE SHEET 7

WANG PART NO	DRAWING NO	DESCRIPTION
WANG LABORATORIES, INC. LOWELL MASS.		
MATERIAL	MODEL NO [illegible]	
	SEE ENGRG SPECIFICATIONS No.	
FINISH	TOL ER AS NOTED XX ± .010 FRAC ± 1/64 .XXX ± .005 ANG ± 30 FINISH	

	BY	DATE	APPROVED BY	DATE
DWN	[illegible]		ENGR	
CHK			M ENGR	
			MFG ENGR	

TITLE [illegible] MOTHER BOARD

SCALE	SHT 6 OF 7	WANG PART NUMBER	SIZE	DRAWING NUMBER	REV
		[illegible]	D	[illegible]	E

BB6

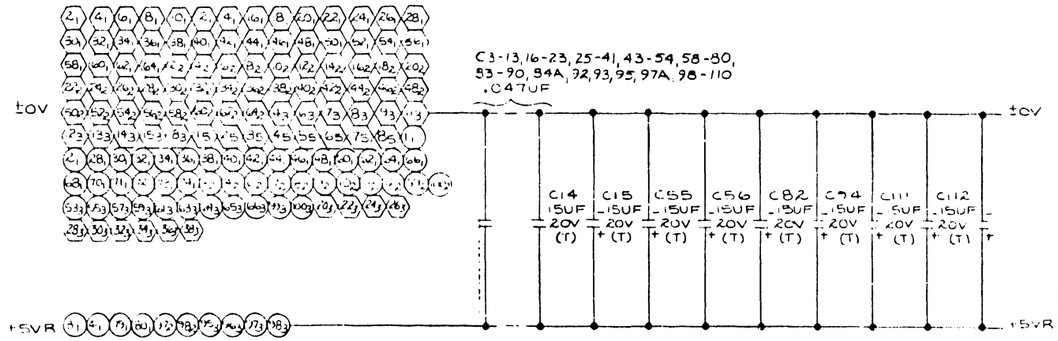
LOCATION	TYPE	WANG PART NO.
U15,45	74S378	396-0306
U38	74LS	396-0334
U42,47,51,52	74S42	396-0210
U5,20,45,75	74S32	396-0199
U6	8797	396-0184
U7,9,13,26, 28,29,32,36, 39,41,51,52,64	74S74	396-0202
U1,22,43,53,77	SPARES	
U3,21,31,59	74S00	396-0228
U58	74S10	396-0238
U40,42,70	74S04	396-0201
U10,35,44,61,66	74S00	396-0197
U8,24,46, 63,74	74S08	396-0200
U20	74LS244	396-0268
U21	74LS393	396-0307
U22A	8T98	396-0185
U22,55	74S11	396-0237
U33	74S153	396-0215
U34	74S194	396-0221
U38,72A	74S37	396-0296
U54,57	74S20	396-0230
U60,79	74S139	396-0333
U64,68	7442	396-0208
U67,82	74S174	396-0247
U68,71	74S260	396-0206
U75,78,93,96, 97	74S244	396-0338
U87,93	74S85	396-0259
U80,81	74S38	396-0298
U84	74S175	396-0270
U85,90,95,102	74S374	396-0305
U89	555	396-0126

LOCATION	TYPE	WANG PART NO.
R1-22, 25,27,28	[illegible]	[illegible]
R23	SIP 8	[illegible]
R24	2K 5% 1/4W	478-2408
C1,4,17,19,21	SPARES	
C3-13, 16-23, 25-41, 43-54, 58-80, 83-90, 94A, 92, 93, 95, 97A, 98-110	.047UF 50V	300-1966
C14, 15, 55, 56, 82, 94, 111, 112	15UF 20V (T)	300-0022
C96	.01UF 25V	300-1973
C97	.00 UF 500V	300-1906
J1,2,6,7,8,9	2PIN HEADER	350-0203
J14	[illegible]	350-0201
J5	6 PIN SOCKET	376-0002
	SPARES	350-0205
SW1	SLT SPDT	325-1003
	RAIL	[illegible]
	SPACERS	350-0220

MNEMONICS	LOCATED
BA0-BA23	2D1
BAC0-BAC2	1B1
BAWD0-BAWD31	4A11
BBA	3A7
BCMA22	2C1
BCMA23	2C1
BMAP,20,21-EMAP,20,21	2D1
CM22	1D11
$\overline{C1}$	3E1
$\overline{CAS}$	3F1
CAWD0-CAWD31	4B1
$\overline{CEN}$	3F1
CHECC	1G1
CLKCM	3F1
$\overline{CMOZ}$	1F11
CMB-CM6	1F11
CM23	1D1
CM24-CM26	1F11
$\overline{COB}$	3G11
CP	3A7
CM29	3E
DPDO-DPD31	4E10
DRY1	3C1
$\overline{GT1}$	3A11
$\overline{GT2}$	3E
$\overline{IMA-CP}$	1J1
$\overline{INIT}$	1G5
$\overline{INVA}$	2C1

MNEMONICS	LOCATED
ME	4A8
MAE	4A8
MF	4G4
MFE	4G4
MA0-MA23	2G9
MCR-MCAR	4D1
MESS	1D1
MMC-MM31	4A7
MWRD	4C1
MPBAI	3E1
MSIE	2C1
MSO	2C1
MSZE	2C1
MSZO	2B1
NO READ	2A4
NO RIPPLE	4A4
PAGE 0	4G5
PAGE 1	4D11
PAGE 2	4C11
PARITY	3G5
RAS	3F1
R/B	3C1
RBYT	4C1
REF	3C1
RSTCP	4B11
RUN/STEP	3A11
R/W	3G1
STCP	4B1
UNVA	2A4
WP	3E1

IC TYPE	LOC.	SPARES
74S02	L76	2
	L5	2
74S08	L24	1
74S10	L9	1
74S11	L25	1
74S20	L54	1
74S32	L4	1
	L69	1
	L72	2
74S244	L78	1
74S260	L68	1
	L71	1
74S00	L12	1
	L17	3
	L39	1
74S37	L38	1
	L79A	2



NOTES:
1. ALL RESISTORS ARE 1/4 WATT 5%
UNLESS OTHERWISE SPECIFIED.
2. SIGNAL NAMES IN PARENTHESES DENOTE SIGNALS FOR VS-110 USAGE.

E-REV
0

REVISION	BY	DATE	APPROVED BY	DATE
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]

WANG PART NO | DRAWING NO | DESCRIPTION

WANG LABORATORIES, INC. LOWELL, MASS.

DWN [illegible] | CHK [illegible] | M ENGR | MFG ENGR

MATERIAL | MODEL NO [illegible] | SEE ENGRG SPECIFICATIONS No. [illegible]

TITLE [illegible] CONTROLLER SMT BOARD

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

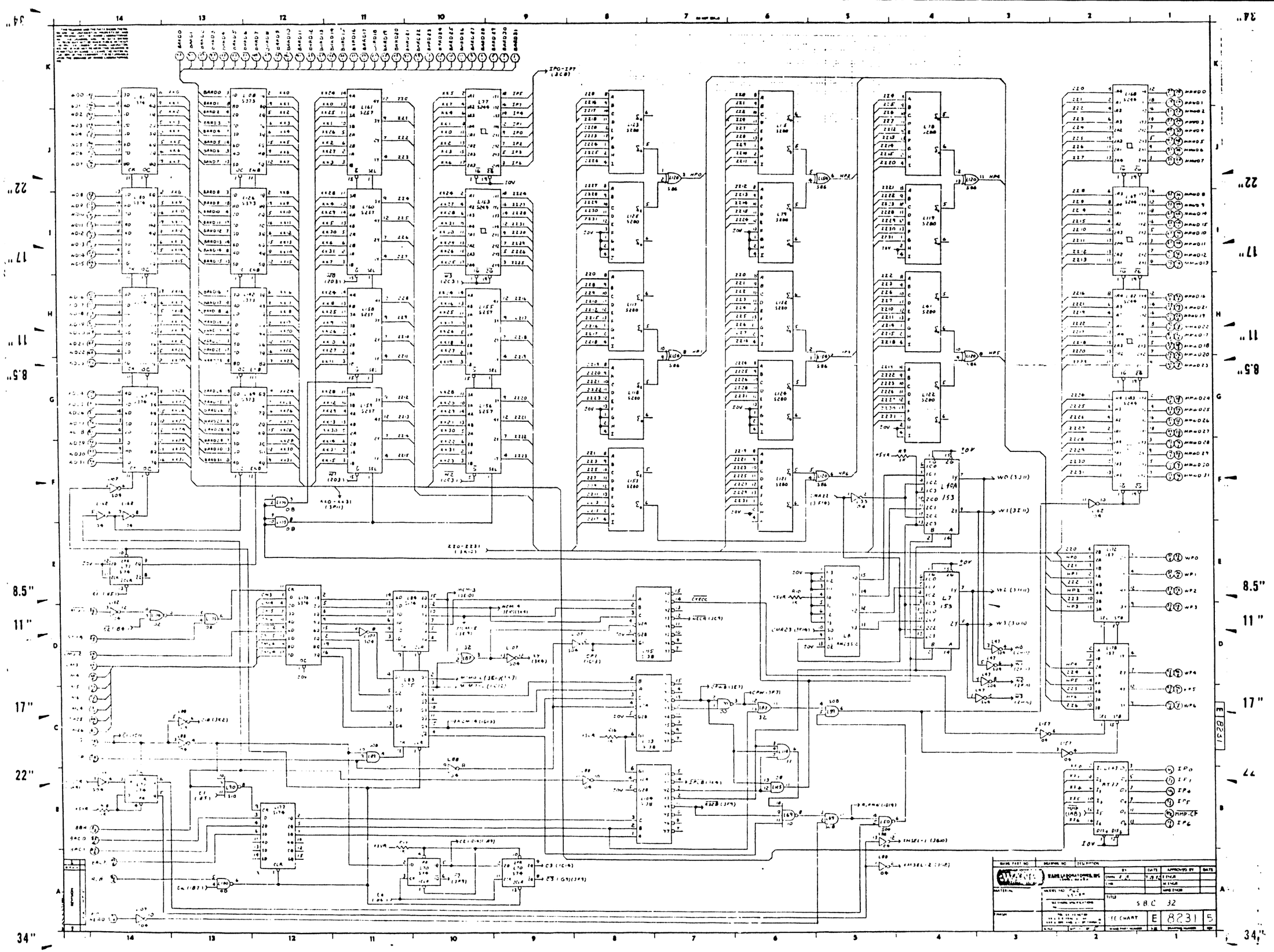
SCALE | SHT 7 OF 7 | WANG PART NUMBER [illegible] | SIZE D | DRAWING NUMBER [illegible] | REV [illegible]

BB7

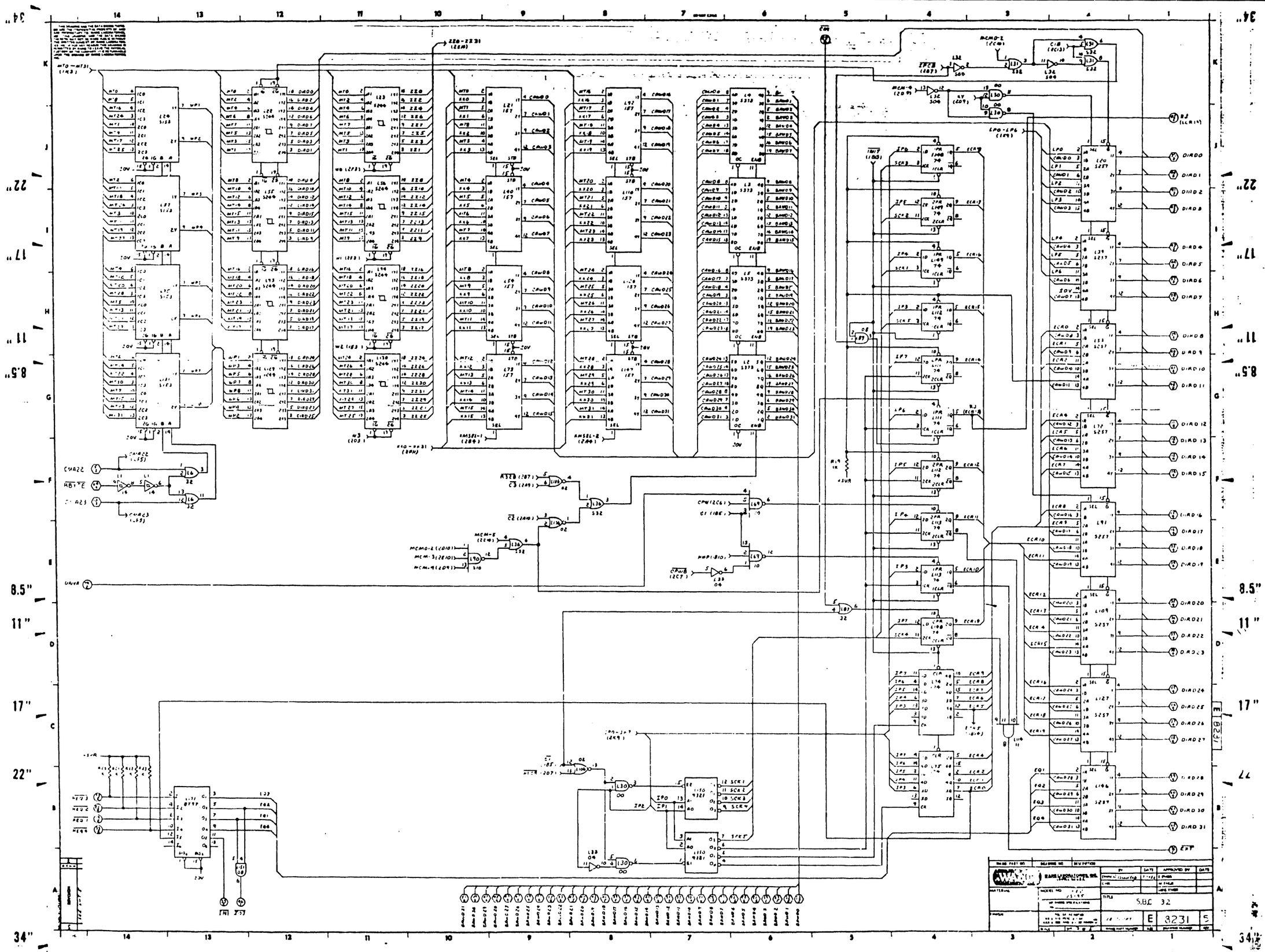
SBC 32

E 8231 5

CC1


SBC 32
E 8231 5
TEST CHART
IPO-IPF (2C01)
XA0-XA31 (3M11)
XX0-XX31 (3K10)
WA0 (3J11)
WA1 (3I11)
WA2 (3H11)
WA3 (3G11)
WA4 (3F11)
WA5 (3E11)
WA6 (3D11)
WA7 (3C11)
WA8 (3B11)
WA9 (3A11)
WA10 (3A10)
WA11 (3B10)
WA12 (3C10)
WA13 (3D10)
WA14 (3E10)
WA15 (3F10)
WA16 (3G10)
WA17 (3H10)
WA18 (3I10)
WA19 (3J10)
WA20 (3J9)
WA21 (3I9)
WA22 (3H9)
WA23 (3G9)
WA24 (3F9)
WA25 (3E9)
WA26 (3D9)
WA27 (3C9)
WA28 (3B9)
WA29 (3A9)
WA30 (3A8)
WA31 (3B8)
WD0 (3J11)
WD1 (3I11)
WD2 (3H11)
WD3 (3G11)
WD4 (3F11)
WD5 (3E11)
WD6 (3D11)
WD7 (3C11)
WD8 (3B11)
WD9 (3A11)
WD10 (3A10)
WD11 (3B10)
WD12 (3C10)
WD13 (3D10)
WD14 (3E10)
WD15 (3F10)
WD16 (3G10)
WD17 (3H10)
WD18 (3I10)
WD19 (3J10)
WD20 (3J9)
WD21 (3I9)
WD22 (3H9)
WD23 (3G9)
WD24 (3F9)
WD25 (3E9)
WD26 (3D9)
WD27 (3C9)
WD28 (3B9)
WD29 (3A9)
WD30 (3A8)
WD31 (3B8)
WPO
WP1
WP2
WP3
WP4
WP5
WP6
IPO
IP1
IP4
IP5
MMP-CF
IP6
+5VR
10V
5V
SBC 32
E 8231 5
TEST CHART

CC2


SBE 32
E 3231 5
CC3

8231- R3

COMPONENT SIDE

P3

P2

P1

WANG

S.B.C

E 8231 5

CC4

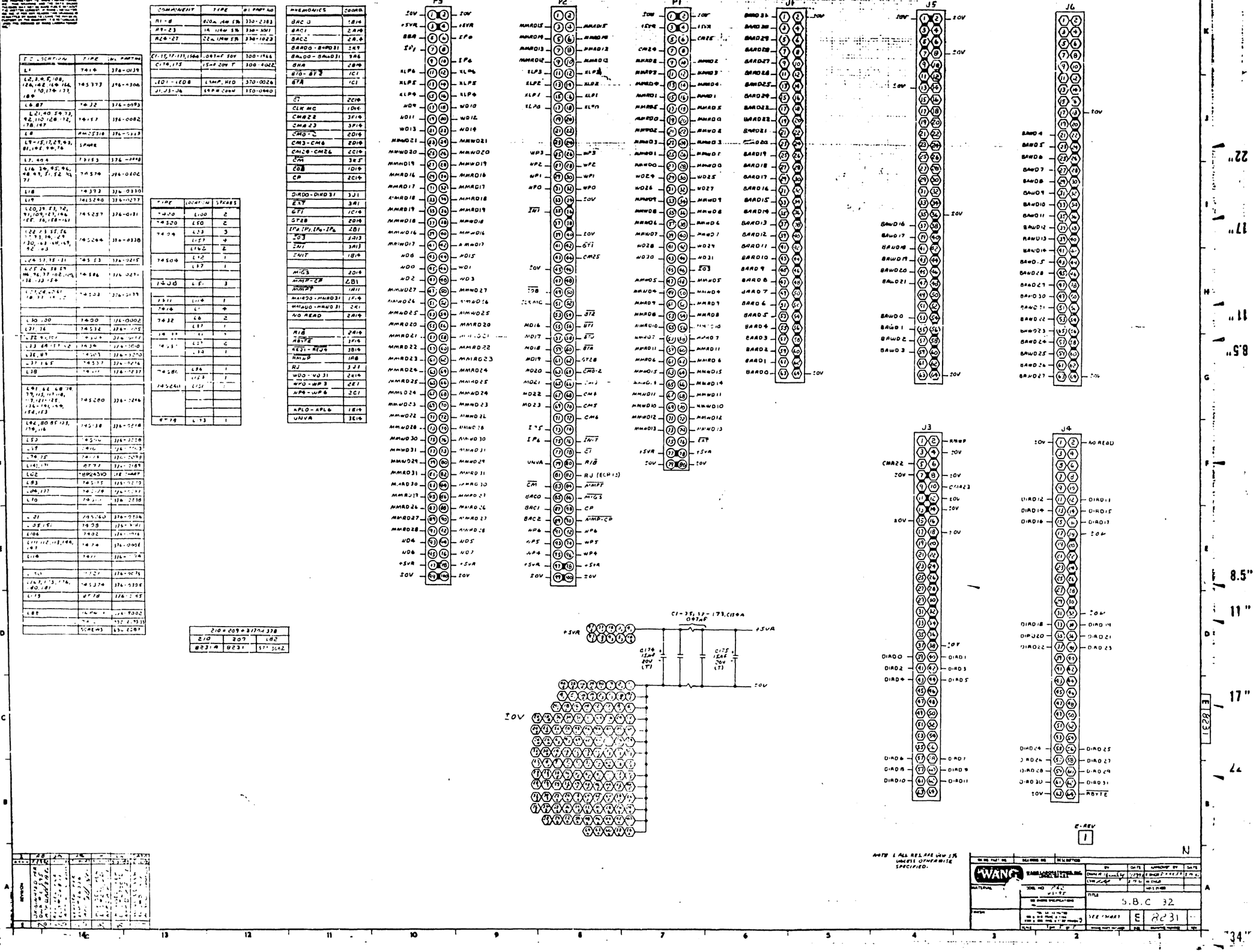
IC DESIGNATION	TYPE	WL PART NO
L1	7414	376-0139
L2,3,4,5,108, 124,142,160,164, 170,174,177, 189	745373	376-0306
L6,87	7432	376-0093
L21,40,59,73, 92,110,128,172, 178,197	74157	376-0082
L8	AM2551B	376-0269
L9-15,17,29,91, 81,195,96,76	SPARE	
L7,69,4	74153	376-0098
L16,39,45,96, 48,49,51,52,53, 71	74574	376-0402
L18	74373	376-0330
L19	74LS290	376-0277
L20,38,53,72, 93,109,127,196, 166,36,158-161	745257	376-0131
L22,23,55,56, 57,58,76,29, 130,63,64,69, 82,83	745244	376-0338
L24,37,75-31	745 53	376-0215
L25,26,58,59, 60,74,77,102,103, 132,133,154	74S86	376-0271
L27,28,61, 78,79,104,105	74S32	376-0179
L30,100	7400	376-0002
L31,34	74S32	376-0125
L32,90,107	7404	376-0111
L33,68,135,42	74S74	376-0210
L35,89	74S03	376-0220
L37,165	74S37	376-0216
L38	74	376-0237
L41,66,67,70, 99,113,114,118, 119,121,125, 126,190,192, 194,123	745280	376-0246
L42,80,85,133, 134,116	745138	376-0218
L52	74S10	376-0228
L54	74	376-0063
L74,75	74 74	376-0079
L141,31	AM93	376-0189
L62	MB24SIO	SEE CHART
L63	745112	376-0213
L64,122	74	376-0141
L70	74	376-0238
L 91	745160	376-0256
L 95,97	74S8	376-0141
L104	7402	376-0106
L117,112,113,148, 181	74 74	376-0305
L118	7411	376-0
L 120	7427	376-0075
L147,153,176, 80,181	745374	376-0330
L173	AM78	376-0145
L182	74 74	376-9302
	74	332-1933
	SCREWS	634-2087

COMPONENT	TYPE	P/L PART NO
R1-8	820Ω, 1/4W 5%	330-2383
R9-23	1K, 1/4W 5%	330-1001
R24-27	22Ω, 1/4W 5%	330-1023
C1-15,17-171,1564	.047mF 50V	300-1966
C176,175	15+8 20V T	300-4022
LED1 - LED8	LAMP, NEO	370-0026
J1,J3-J6	64PIN CONN	550-0940

TYPE	LOCATION	SPARES
74S30	L100	2
74S20	L50	2
7409	L33	3
	L151	4
	L162	2
74S04	L12	1
	L87	1
74S08	L5	3
7411	L114	1
7414	L7	4
7432	L6	2
	L37	1
74	L1	1
74S1	L29	2
	L13	1
74S86	L96	1
	L123	1
74S244	L121	1
8T14	L73	1

MNEMONICS	BOARD
BAC 0	1B14
BAC1	2A4
BAC2	2B,4
BARDO - BARD31	3A9
BAL00 - BAL031	3A6
BHA	2B4
BTO - BT3	1C1
BTA	1C1
CT	2C14
CLK MC	1D14
CMA22	3F14
CMA23	3F14
CMO - C	2D14
CM3 - CM6	2D14
CM16 - CM26	2C14
CM	3B5
CO	1D14
CP	2C14
DIRDO - DIRD31	3J1
EXT	3A1
GT1	1C14
GT28	2D14
IP0, IP1, IP6 - IP6	2B1
INT	3A13
INIT	3A13
INIT	1B14
MIGS	2D14
MMAP - CP	2B1
MMAP	1B11
MAIRDO - MMWD31	1F14
MMWDO - MMWD 31	2C1
NO READ	2B14
RIO	2B14
RBYTE	3F14
REQ1 - REQ4	3B14
RMWP	1A8
RJ	3J1
WDO - WD 31	2A14
WPO - WP 3	2E1
WP4 - WP6	2C1
XPLO - XPL6	1B14
UNVA	3E14

210 + 209 + 3170H 378		
210	209	L82
8231A	8231	371 3042

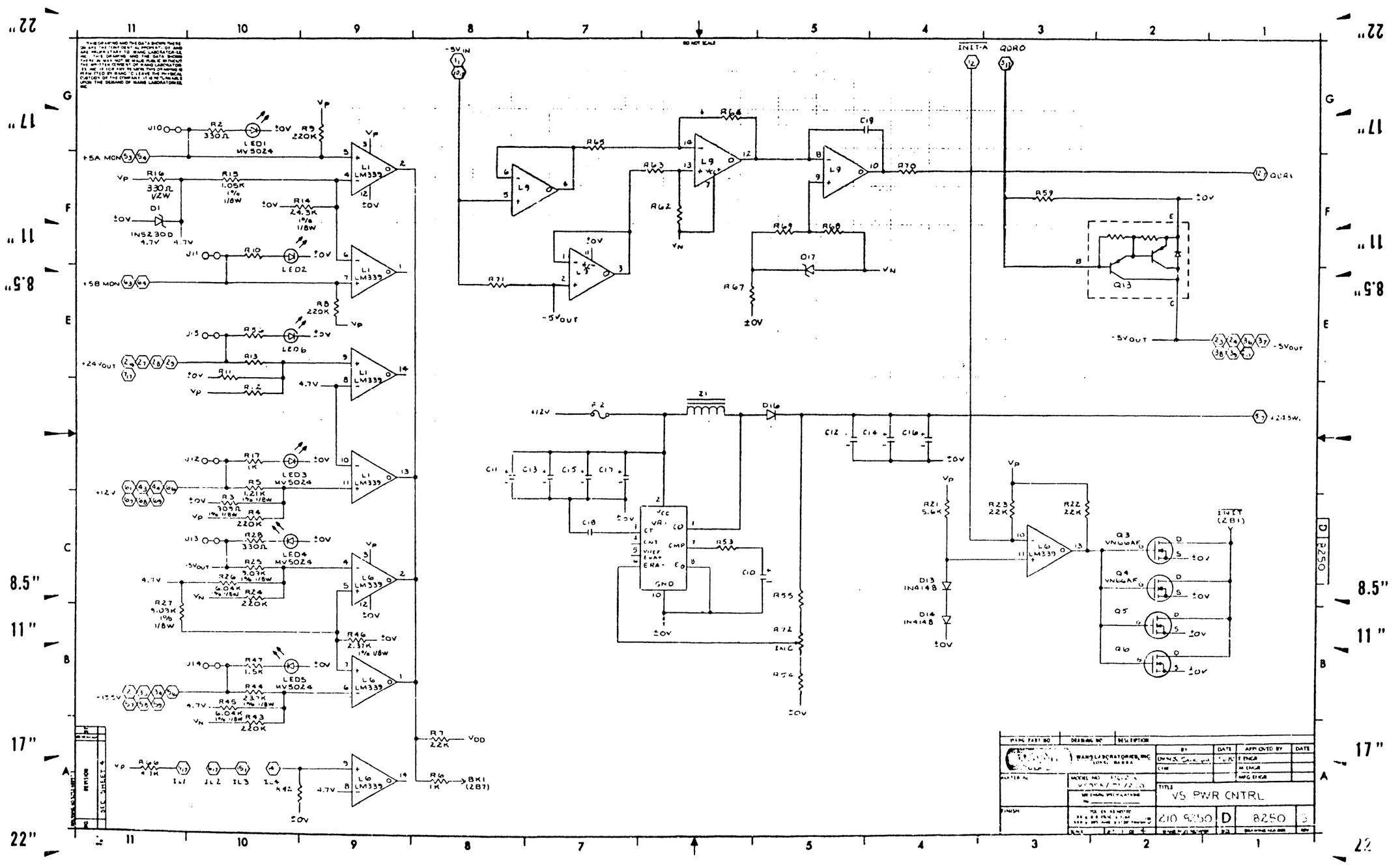


NOTE 1 ALL RES ARE 1/4W 5% UNLESS OTHERWISE SPECIFIED.

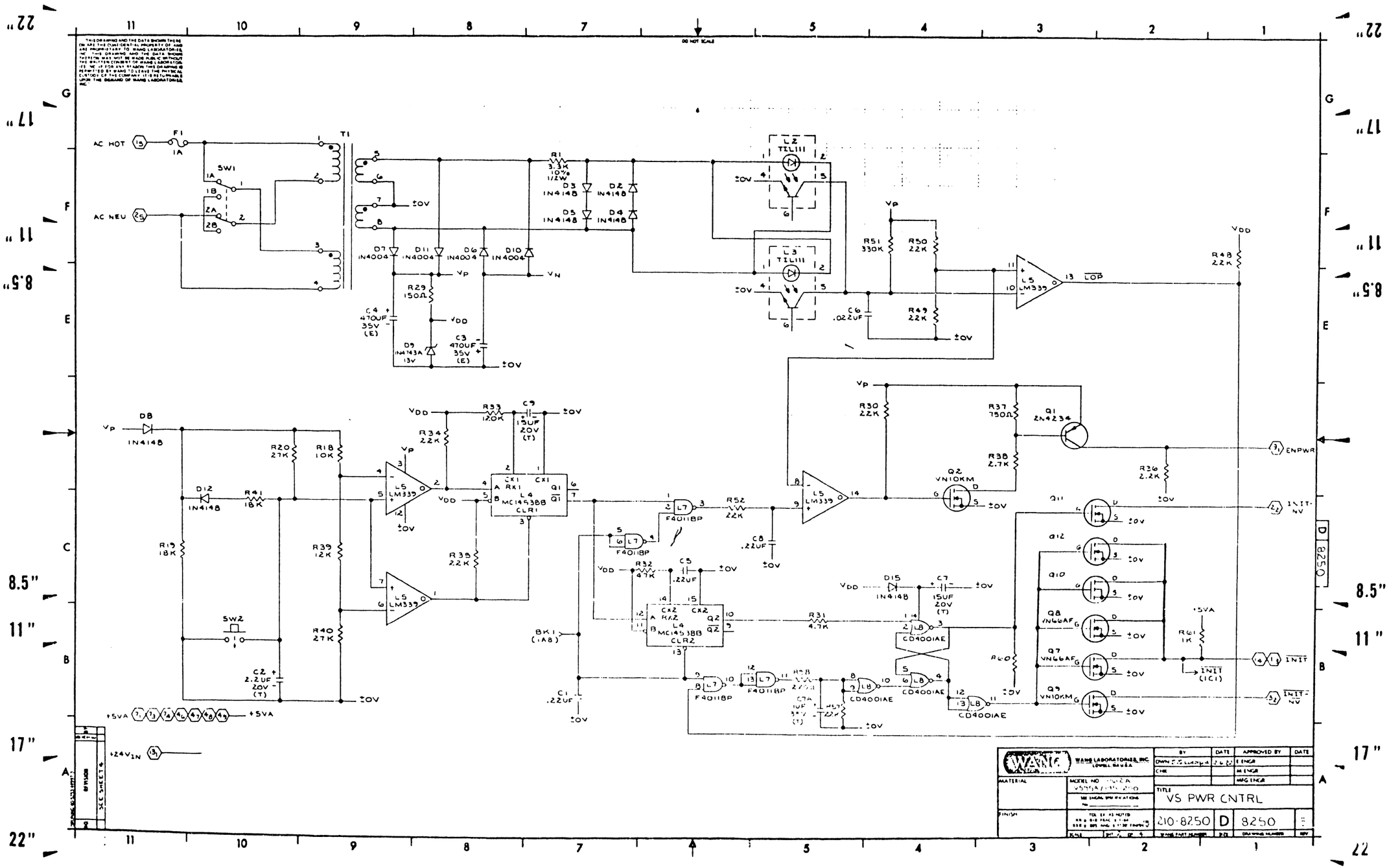
E-REV 1

WANG	BY	DATE	APPROVED BY	DATE
MATERIAL	DRAWN			
	TITLE	S.B.C 32		
	SEE CHART	SIZE E	DWG NO 8231	REV

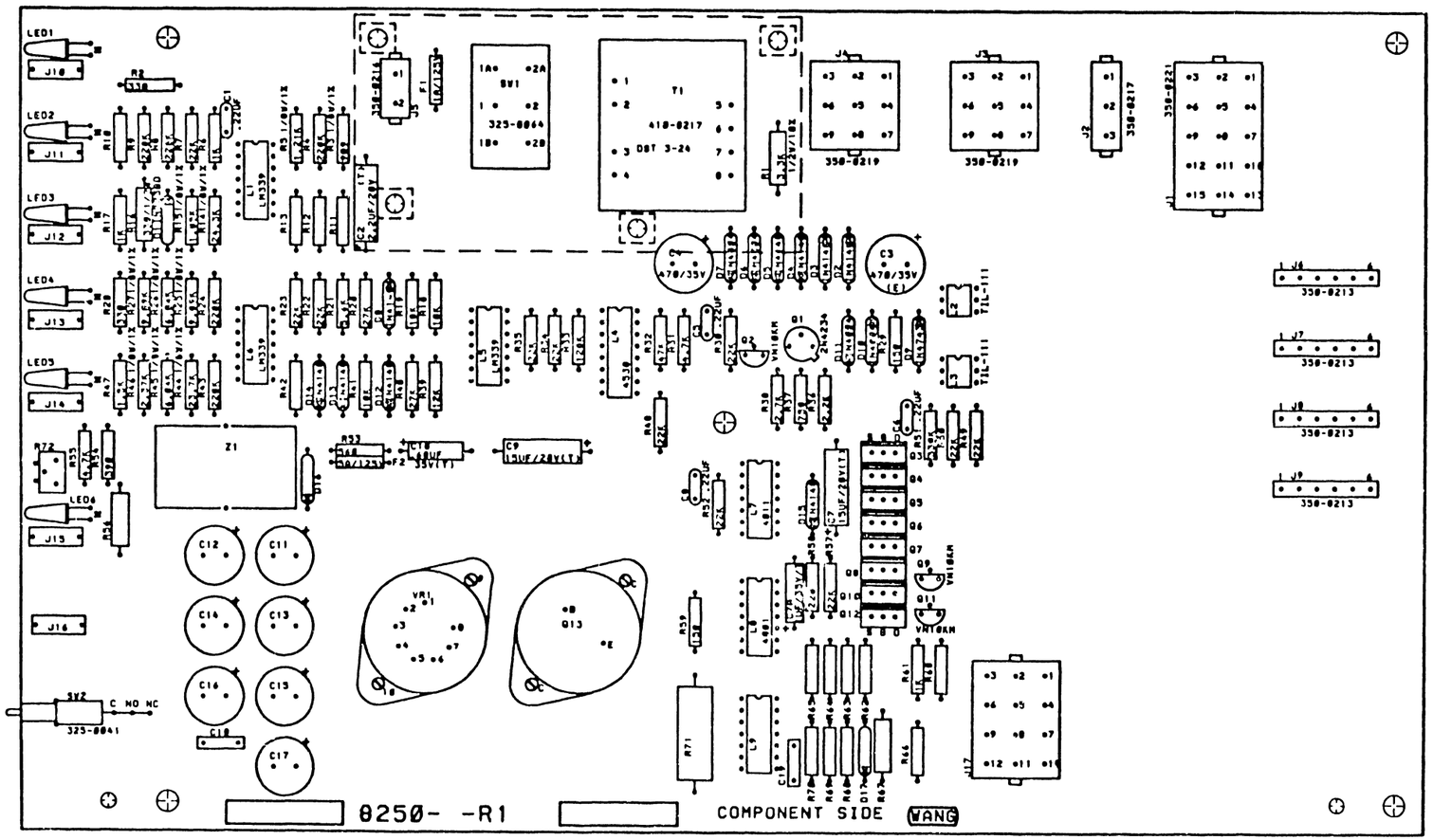
CC5


-5V IN
INIT-A
QDRO
+5A MON
+5B MON
+24VOUT
+12V
-15V
VP
VN
±0V
4.7V
LED1 MV5024
LED2
LED3 MV5024
LED4 MV5024
LED5 MV5024
LED6
IN5230D 4.7V
-5VOUT
+12.5SW.
QDR1
-5VOUT
VDD
BK1 (Z87)
INIT (Z81)
Q13
Q3 VNG6AF
Q4 VNG6AF
Q5
Q6
D13 IN4148
D14 IN4148
D17
D16
Z1
F2
VS PWR CNTRL
210 8250 D 8250

DD1


AC HOT
AC NEU
F1
1A
SW1
T1
±0V
R1
3.3K
10%
1/2W
D3 IN4148
D2 IN4148
D5 IN4148
D4 IN4148
D7 IN4004
D11 IN4004
D6 IN4004
D10 IN4004
VP
VN
R29
150Ω
C4
470UF
35V
(E)
VDD
D9
IN4743A
13V
C3
470UF
35V
(E)
L2
TIL111
L3
TIL111
R51
330K
R50
22K
R49
22K
C6
.022UF
L5
LM339
LOP
R48
22K
D8
IN4148
R20
27K
R18
10K
D12
IN4148
R41
18K
R19
18K
R39
12K
R40
27K
SW2
C2
2.2UF
20V
(T)
+5VA
+24VIN
R33
120K
C9
15UF
20V
(T)
R34
22K
R35
22K
L4
MC14538B
CLR1
CX1
RX1
Q1
Q1
L7
F4011BP
R52
22K
C8
.22UF
R30
22K
R37
750Ω
Q1
2N4234
R38
2.7K
Q2
VN10KM
ENPWR
R36
2.2K
INIT-NV
Q11
Q12
Q10
Q8
VN66AF
Q7
VN66AF
Q9
VN10KM
R61
1K
INIT
INIT (1C1)
BK1 (1A8)
C1
.22UF
R32
47K
C5
.22UF
CX2
RX2
Q2
Q2
L4
MC14538B
CLR2
R31
4.7K
D15
IN4148
C7
15UF
20V
(T)
L8
CD4001AE
R60
R58
22K
C7A
10UF
35V
(T)
R57
22K
SEE SHEET 4
WANG LABORATORIES, INC.
LOWELL, MASS.
MATERIAL
FINISH
MODEL NO
SEE ENGR SPECIFICATIONS
TOL EX AS NOTED
TITLE
VS PWR CNTRL
210-8250
D
8250
BY
DATE
APPROVED BY
DRWN
CHK
E ENGR
M ENGR
MFG ENGR
WANG PART NUMBER
DRAWING NUMBER
REV
SIZE
THIS DRAWING AND THE DATA SHOWN THEREON ARE THE CONFIDENTIAL PROPERTY OF WANG LABORATORIES, INC. THIS DRAWING AND THE DATA SHOWN THEREON MAY NOT BE MADE PUBLIC WITHOUT THE WRITTEN CONSENT OF WANG LABORATORIES, INC. IF FOR ANY REASON THIS DRAWING IS REQUESTED TO LEAVE THE PHYSICAL CUSTODY OF THE COMPANY IT IS RETURNABLE UPON THE DEMAND OF WANG LABORATORIES, INC.
DO NOT SCALE
22"
17"
11"
8.5"

DD2



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

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

MATERIAL — MODEL NO. VS PWR CNTRL

FINISH

TITLE VS PWR CNTRL

SIZE D — DRAWING NUMBER 8250 — REV 15

DD3

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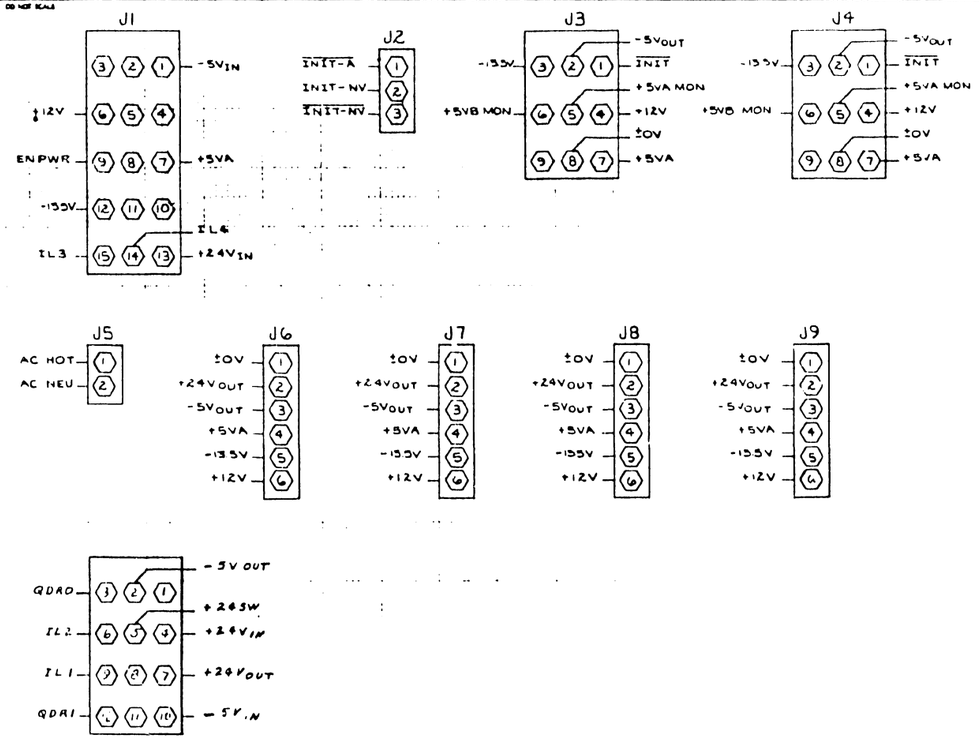
DO NOT SCALE

COMPONENT	TYPE	W.L. PART NO.
R1	3.3K 10% 1/2W	331-3033
R2, 28	330Ω 5% 1/4W	330-2034
R3	909Ω 1% 1/8W	333-0055
R4,8,9, 29,43	220K 5% 1/4W	330-5023
R5	1.21K 1% 1/8W	333-0106
R6,17,61	1K 5% 1/4W	330-3011
R7,22,23,30,39, 45, 48-60,62	2K 5% 1/4W	330-4023
R10,27	3.09K 1% 1/8W	333-0061
R11	24.3K 1% 1/8W	333-0135
R12	1.05K 1% 1/8W	333-0127
R16	330Ω 5% 1/2W	331-2034
R18	10K 5% 1/4W	330-4011
R19,24	18K 5% 1/4W	330-4019
R20,42	47K 5% 1/4W	330-4028
R21	5.6K 5% 1/4W	330-3057
R26,41	6.04K 1% 1/8W	333-0094
R28	150Ω 5% 1/4W	330-2016
R31, 55,63	4.7K 5% 1/4W	330-3048
R32	47K 5% 1/4W	330-4048
R33	120K 5% 1/4W	330-5013
R36	2.2K 5% 1/4W	330-3023
R37	750Ω 5% 1/4W	330-2076
R38	2.7K 5% 1/4W	330-3028
R39	12K 5% 1/4W	330-4013
R44	23.7K 1% 1/8W	333-0121
R46	2.37K 1% 1/8W	333-0093
R47	1.5K 5% 1/4W	330-3016
R51	330K 5% 1/4W	330-5034
R53	220Ω 5% 1/4W	330-2023
R54	390Ω 5% 1/4W	330-2040

COMPONENT	TYPE	W.L. PART NO.
C1,5,8	.22UF 100V	300-1926
C2	2.2UF 20V(T)	300-4014
C3,4	470UF 35V (E)	300-3322
C6	.022UF 100V	300-1927
C7,9	15UF 20V (T)	300-4022
C7A	1UF 35V (T)	300-4000
D1	1N5230D 4.7V	380-2147
D2-5,8,12-15	1N4148	380-1014
D6,7,10,11	1N4004	380-4000
D9	1N4743A 13V	380-2113
Q1	2N4234	378-1024
Q2,9,11	VN10KM	378-1115
Q3,4,7,8	VN66AF	378-1125
LED1,3,4,5	MV5024	370-0026
F1	1 AMP PICO	360-1154
SW1	220/115 VAC SLIDE SW	325-0064
SW2	SPDT P.B.	325-0041
T1	XFMR 115/230V	410-0217
J1	15 PIN CONN.	350-0221
J2	3 PIN CONN.	350-0217
J3,4	9 PIN CONN.	350-0219
J5	2 PIN CONN.	350-0216
J6-9	6 PIN CONN.	350-0213
J10,12,13,14	TEST POINTS	605-0013
J16	TEST POINTS	605-0018

I.C. LOCATION	TYPE	W.L. PART NO.
L1,5,6	LM335	376-0240
L2,3	TIL111	375-2109
L4	MC1455BB	376-0459
L7	F401BP	376-0375
L8	CD4001AE	376-0367

MNEMONICS	COOR'D
AC HOT	ZG11
AC NEU	ZF11
ENPWR	ZD1
IL1	IA11
IL2	IA10
IL3	IA10
IL4	IA10
INIT	ZB1
INIT-A	IG4
INIT-NV	ZB1
INIT-NV	ZC1
QDRI	IF1
QDRO	IG3
-5V$_{IN}$	IG8
-5V$_{OUT}$	IE1
-15.5V	IB11
+5VA	ZB11
+5A MON	IF11
+5B MON	IE11
+12V	IC11
+24SW	ID1
+24V$_{IN}$	ZA11
+24V$_{OUT}$	IE11



±0V ⑧⑧⑭⑰⑱⑦ —o—o J16

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

REV	DESCRIPTION	BY	DATE
	ORIGINATED ECR		
	ECO # 1180 ADDED 83C L68		
	NOT USED		
	ECO # 1180 ADDED 83C L68		
	REVISED PER ECO # 1180 ADDED 83C L68		
	ADDED 74LS04 ECO # 2949 ADDED 82C L68		
	REVISED PER ECO # 2949 ADDED 82C L68		

E-REV
O
N

WANG PART NO	DRAWING NO	DESCRIPTION

WANG LABORATORIES, INC. LOWELL, MASS.

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

MATERIAL: MODEL NO. 2200A/2200 SYSTEMS SPECIFICATIONS

FINISH

TOL ON ALL NOTED: XX ± .010, XXX ± .005, ANG ± 1°30', FRACTIONS ± 1/32

TITLE: VS PWR CNTRL

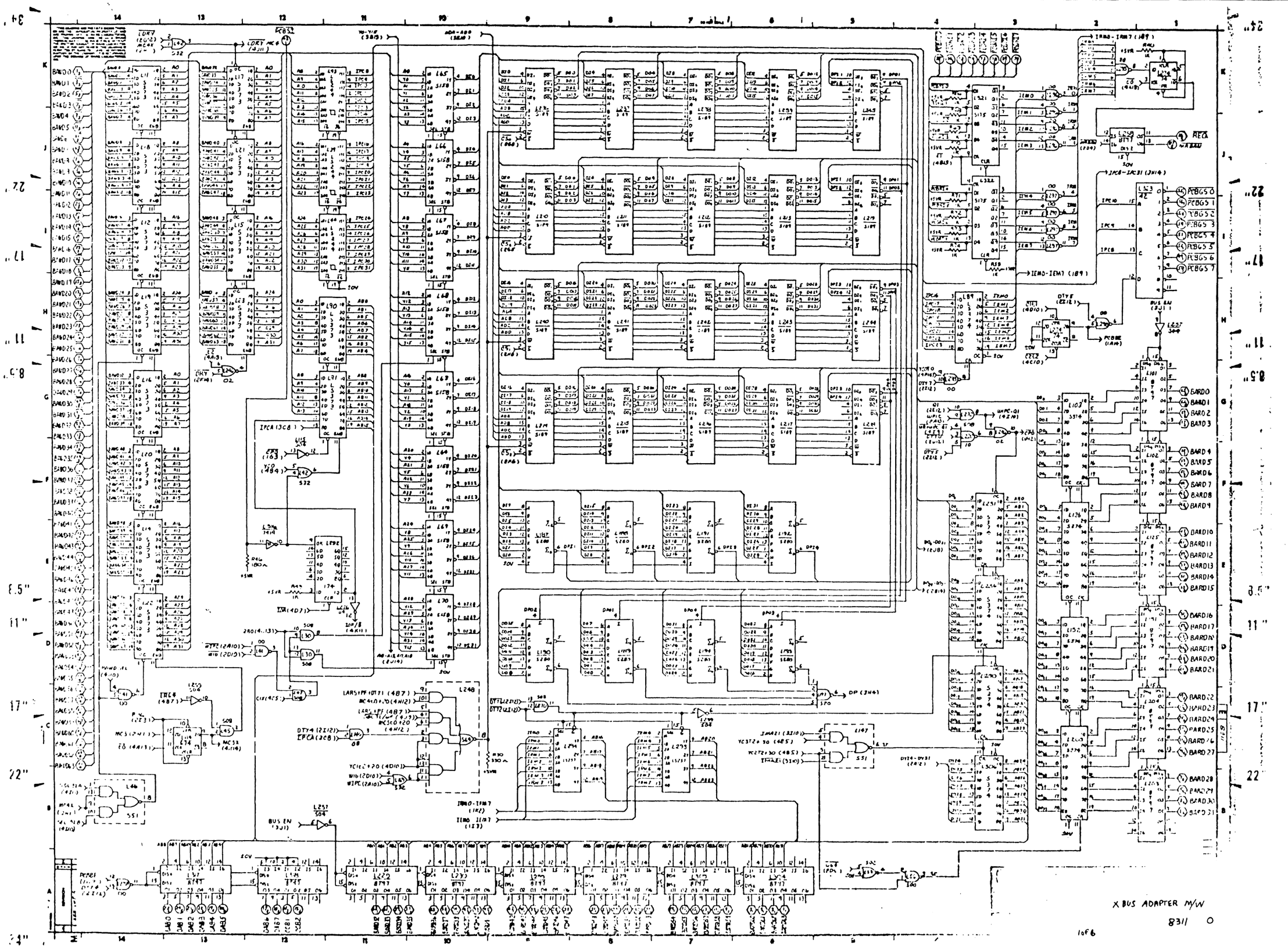
SIZE	DRAWING NUMBER	REV
D	8250	3

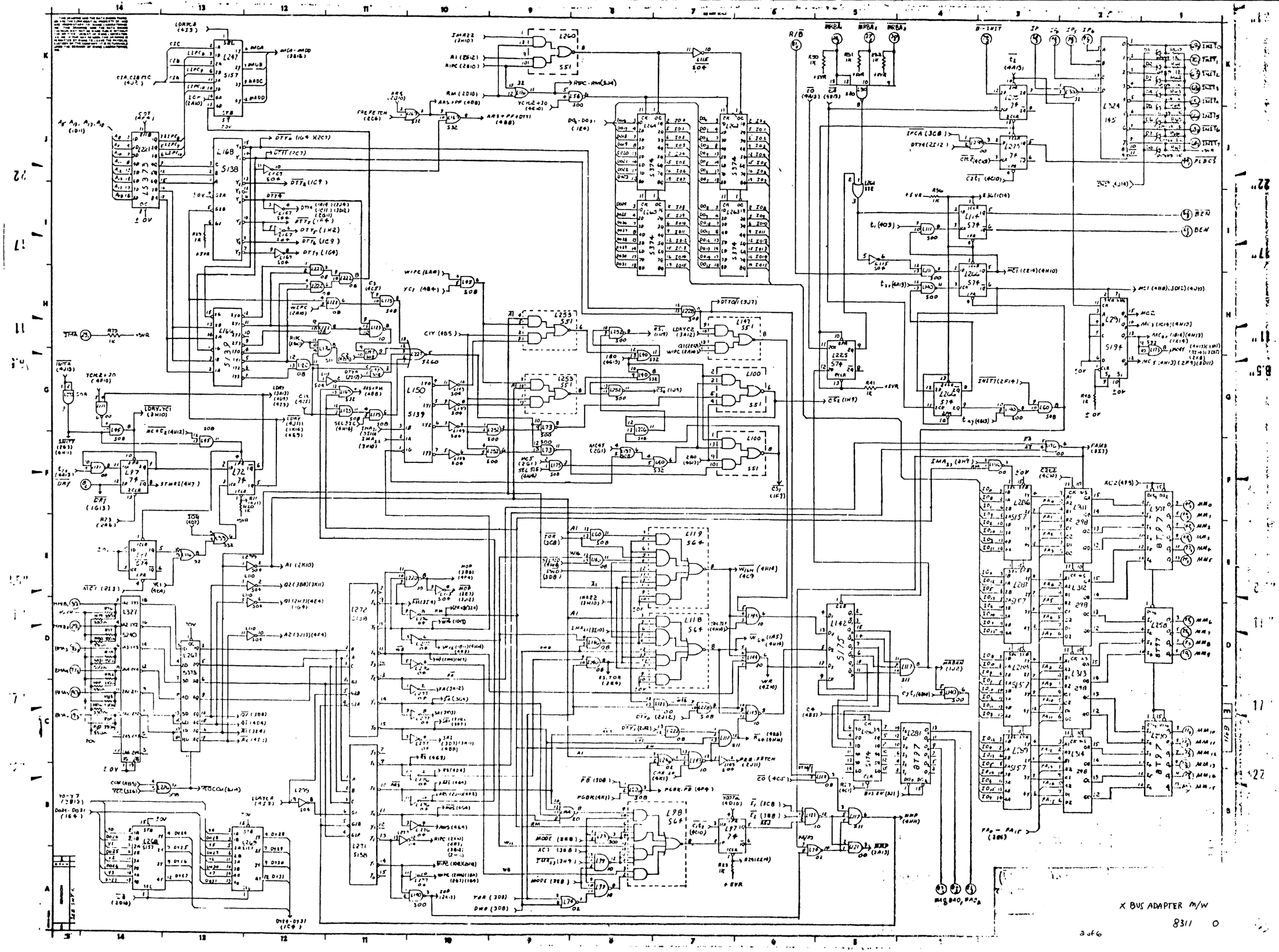
210 8250

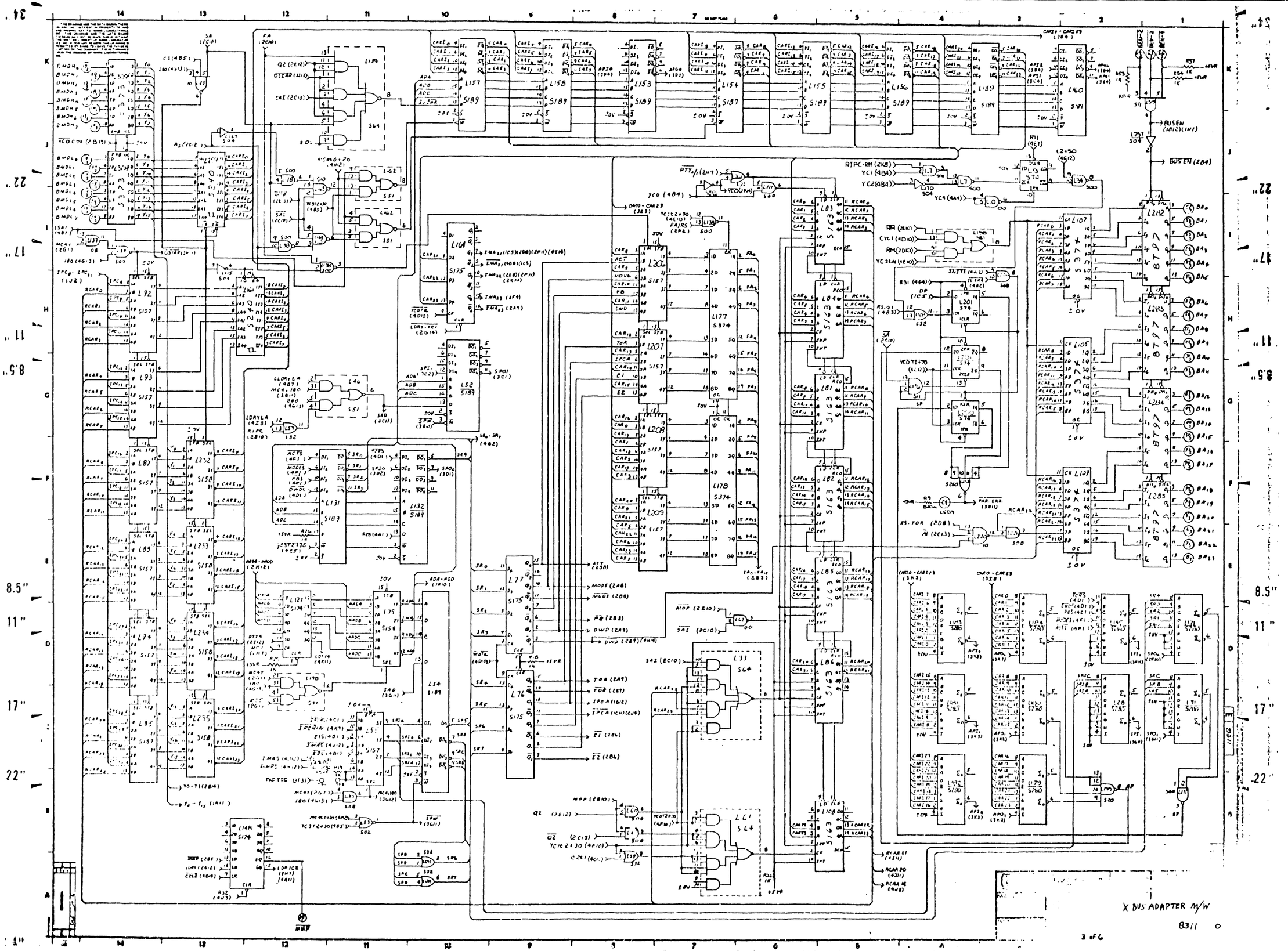
SHT 4 OF 4

D 8250

DD4


X BUS ADAPTER M/W
8311 O
1 of 6
EE1


X BUS ADAPTER M/W
8311 0
EE2


X BUS ADAPTER M/W
8311 o
3 of 6
EE3

XBUS ADAPTER A/W

8311 O

4 of 6

EE4

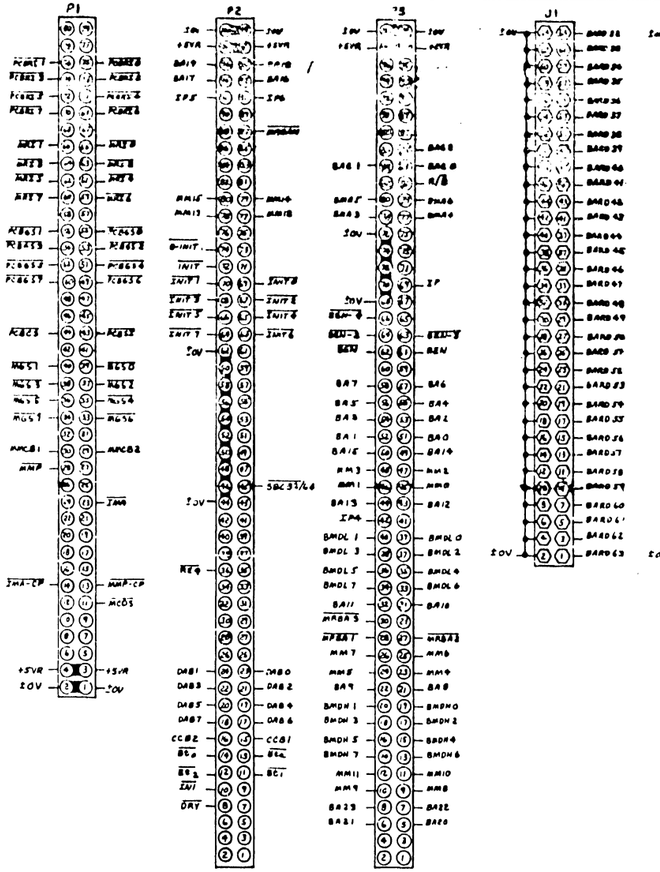
P3
P2
P1
WANG
X BUS ADAPTER M/W
210-B311
E
B311
0

IC LOCATION	TYPE	WL PART NO.
L1,2,3,24,26, 48-54, 75, 78-80, 300, 303, 325, 326	SN88	
L4,124,229,	7453/9	396-0221
L5,29,127, 190,142,184, 249,233	7453174	396-0247
L6,202,227	7453260	396-0206
L7,34,96,136,111, 158,140,252,320	74500	396-0268
L8,9,21,141,159, 190,138,194,176, 200,69,215,266	74574	396-0702
L10,11,66,109,110, 111,136,139,196, 296-298	7400	396-0002
L11,12,19-23, 247,308,309	7453373	396-0306
L13,38	1519-1008	396-8002
L14,31,109,171, 179,189,197,142, 193, 180-185, 188-191,194	7453280	396-0246
L15,35,64,97, 98,99,102,179, 191,220,228, 230,319	74508	396-0200
L16,32,72,92, 112,234,275, 301	7474	396-0006
L17,61,98,118, 119,189,248	74 64	396-0201
L18,33,141,140	74537	396-0296
L19,149,223	7453244	396-0288
L20,45,59,138, 149,175,261	74532	396-0205
L26,120,147, 148,158,244, 260	74351	396-0186
L27,54,134,32, 153-159,160, 210-217,218, 219,236-243, 244,245	7453189	396-0389
L28,241	74502	396-0199
L29,81,98,118, 195,201,209, 247,268, 269,276-285	7453157	396-0217
L30,122,137 196,222	7408	396-0081
L31-10,19, 252-255	7453158	396-0301
L34,246	7402	396-0016
L36,77,142, 168,321,322	7453175	396-0310
L40,79,123, 193,220	7410	396-0003
L41-46,108	7453163	396-0235
L49	7453376	396-0286
L50,91,221	7453373	396-0310
L51,102,125, 151,203,204, 229,230,235, 238,239,288 289,290, 304,305, 307,317,318	8797	396-0189
L103,109,137, 109,126,152 177,178,209, 231,256,262 266,278,280, 326	7453376	396-6305
L110,115,118, 192,210,251, 253	74309	396-0197
L113	74386	396-0271
L116,300	7432	396-0093
L117,176,315	74511	396-0237
L120	7420	396-0004
L130,166	7453139	396-0333
L131,259,327	7453260	396-0339
L133	74510	396-0238
L168,271, 272	7453138	396-0298
L199,310	74520	396-0230
L224	74188	396-0171
L250,323	7442	396-0008
L254	7476	396-0007
L274-277	1104	396-0310
L292	74176	396-0098
L293,294	7415257	396-0269
L295	7430	396-0031
L311-314	74175	396-0158
L316	7419	396-0152
L326	74195	396-0269

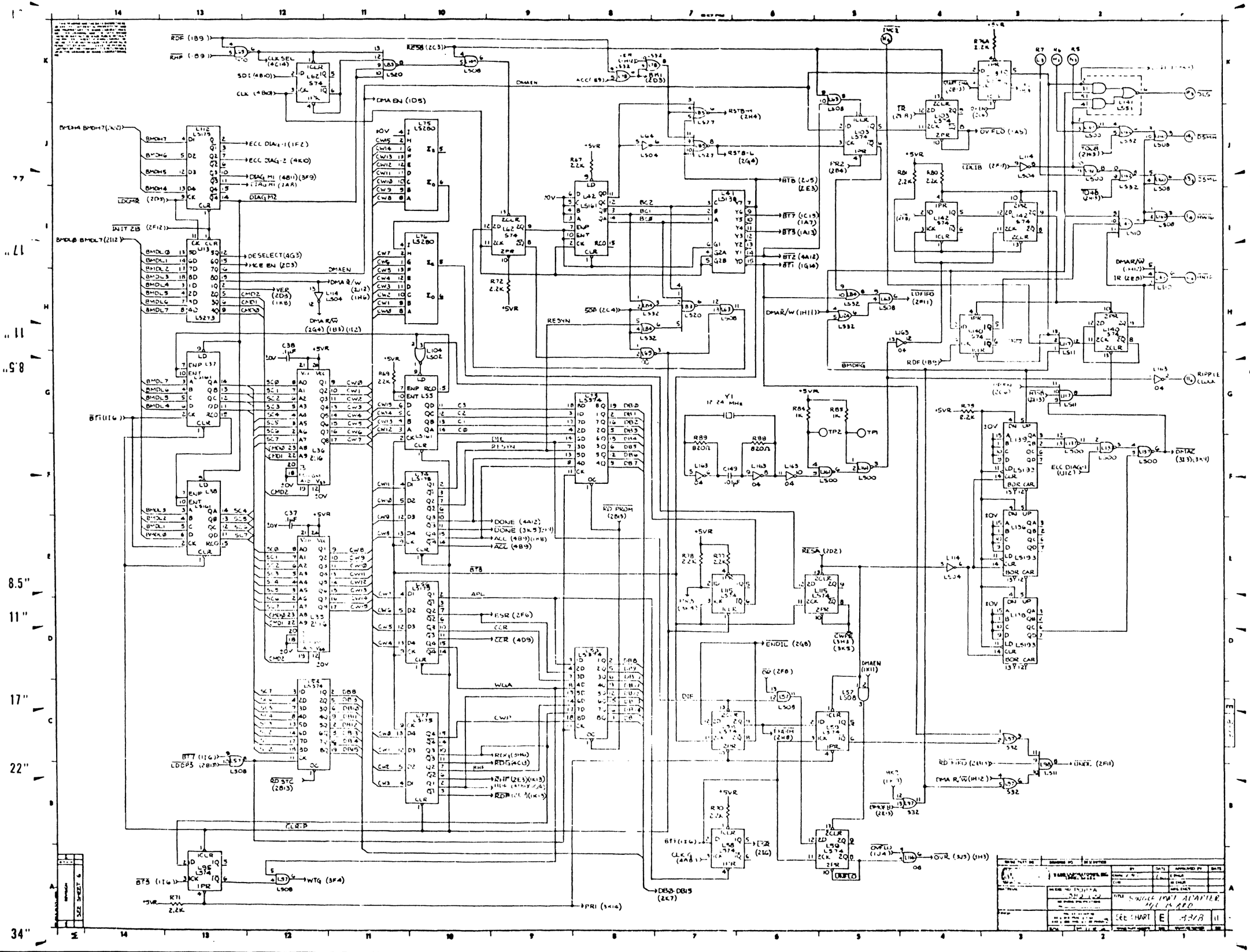
COMPONENT	TYPE	WL PART NO.
R1-8,9	820Ω ¼W 5%	330-8089
R10,11,14,15, 16-19, 21-26, 31-35, 41-52, 160-75	1K ¼W 5%	330-8010
R12,16	150Ω ¼W 5%	330-8016
R13,17,30,36-39	270Ω ¼W 5%	330-7038
R46	180Ω ½W 5%	330-2047
C1-23,27,28, 40,80	15uf 20V (T)	300-4028
C2,22,24-26 69-163	.047uf 50V	300-1966
LED1-9	CM4-2W6	370-0051
J1-8	64 PIN CONN	350-0440
D1-8	1N5819	380-9019

TYPE	IC LOCATION	SPARES
7400	L91	2
	L195	2
	L196	2
7402	L74	2
	L246	1
74S04	L257	2
	L299	2
74S08	L58	1
7410	L80	1
	L99	1
74S10	L163	1
74S11	L325	1
74H	L316	1
74S20	L312	1
7432	L300	1
74S37	L36	1
	L165	1
74S74	L200	1
7476	L254	1
74S86	L113	2
74S260	L6	1
	L202	1
	L227	1
74S51	L260	1

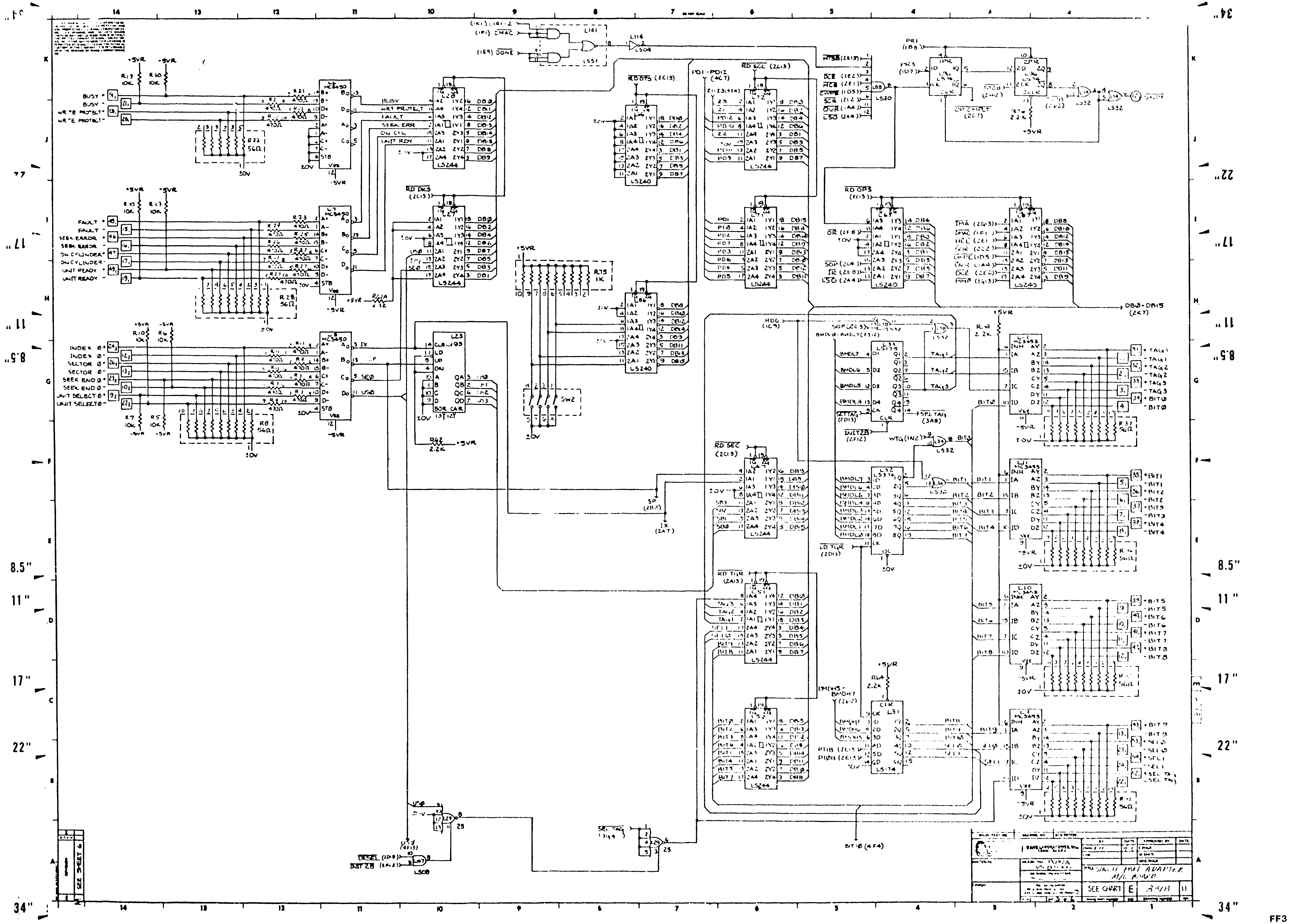
SIGNAL NAME	CONN'S
BA00 - BA15	BA0
BA0 - BA23	BA1
BAM00 - BAM15	IC10
BA00 - BA07 H	IA7
BA08 - BA00 H	IA9
BEN	BZ1
BEN	BZ1
BMM7 - BMM0	BM1
BMB3 - BMB0	BCM
BMDH0 - BMDH7	BM6
BMDL0 - BMDL7	BJ9
BCO - BC7	BC10
BCH	BC16
B - INIT	BM3
CCB1	IA12
CCB2	IA12
DAO	BM6
DAB0 - DAB 7	IA13
IP	BM3
IP4 - IP6	BM8
IPM	BM19
IPM-CP	4A19
IVI	4A19
IVM	4A19
IVM3 - IVM7	2A1
MCB8	4A18
MB30 - MB39	4A1
MMCB1	2A19
MMCB2	2A19
MMP	3A12
MMP-CP	4A18
MM0 - MM15	2D1
MA20 - MA23	4A7
MRBSW	1J1
MRBST - MRBA3	2M3
OEAB3	2J1
PCBTF	1A12
RBB10 - RBB15	1Z1
RBB10 - RBB15	1A9
REQ	1J1
R/D	2M6
SBC31/C4	4E7



8311 O


RDF (1B9)
RHF (1B9)
CLK SEL (4C14)
SDI (4B10)
CLK (4B8)
DMAEN (1D5)
DMAEN
BMDMA BMDH7(2K2)
BMDH7
BMDH6
BMDH5
BMDH4
ECC DIAG 1 (1F2)
ECC DIAG 2 (4K10)
DIAG MI (4B11)(3F9)
DIAG M1 (1AR)
DIAG M2
LDCMR (2D9)
INIT ZB (2F12)
BMDLB BMDL7(2H12)
BMDL0
BMDL1
BMDL2
BMDL3
BMDL4
BMDL5
BMDL6
BMDL7
DESELECT(4G3)
MCE EN (2C3)
DMA R/W (2J12) (1H6)
VER (2D5) (1K8)
CMD2
CMD1
CMD0
DMA R/W (2Q4) (1B3) (1E2)
BT1(1I6)
C38 .1μF
C37 .1μF
SC0
SC1
SC2
SC3
SC4
SC5
SC6
SC7
MOW 23
MDI 22
CWØ
CW1
CW2
CW3
CW4
CW5
CW6
CW7
CW8
CW9
CWA
CWB
CWC
CWD
CWE
CWF
DONE (4A12)
DONE (3K9)(2H4)
ACC (4B9)(1K8)
AZZ (4B9)
BT8
APL
ESR (2F6)
CCR
CCR (4D9)
WGA
CWP
RCK (3H6)
RDG (4C13)
RHF
RHF (2E3)(1K13)
RDF (4A13)(1K13)
CLR B
BT3 (1I6)
LDDB3 (2B13)
QD STC (2B13)
WTG (3F4)
R71 2.2K
PRI (5K16)
R69 2.2K
R72 2.2K
R67 2.2K
R256 (2C3)
RESYN
RSTB-H (2H4)
RSTB-L (2Q4)
BTB (2U5) (2E3)
BT7 (1C13) (1A7)
BT5 (1A13)
BT2 (4A12)
BT1 (1G14)
558 (2C4)
DMAR/W (1H11)
LDFIFO (2H11)
BMDEG
RDF (1B9)
Y1 12.24 MHz
R88 820Ω
R89 820Ω
C149 .01μF
R84 1K
R85 1K
TP2
TP1
R78 2.2K
RESA (2D2)
R74 2.2K
R80 2.2K
R76 2.2K
R7
R6
R5
TR (2K A)
OVFLD (1A5)
IAIB (2F11)
IDAB (2H5)
DMAR/W (1H12)
1R (2B9)
SLS
DSMH
DSML
RIPPLE CLOCK
ECC DIAG 1 (1J12)
DATAC (3J3),(3K4)
R77 2.2K
R73 2.2K
ENDIC (2Q8)
DMAEN (1K11)
DIF
CW (2F8)
RDFIFO (2H13)
DMA R/W (1H12)
UNREC (2F11)
OVFLO (1J4)
OVR (3J3) (3H3)
R79 2.2K
R18 2.2K
R17 2.2K
R10 2.2K
CLK G (4A8)
ESR (2J6)
DB0-DB15 (2K7)
RD PROM (2B5)
SIZE
SHEET 6
SEE CHART
E
SINGLE DMA ADAPTER M/C BOARD
8.5"
11"
17"
22"
34"

FF2


BUSY
WRITE PROTECT
FAULT
SEEK ERROR
ON CYLINDER
UNIT READY
INDEX Ø
SECTOR Ø
SEEK END Ø
UNIT SELECT Ø
MC3450
LS244
LS240
L23
R75 1K
SW2
RD DKS (2C13)
RD DOTS (2C13)
RD ECC (2C13)
RD OPS (2C13)
RD SEC (2C13)
RD TGR (2A13)
DBØ-DB15 (2K7)
MC3453
LS175
LS374
LS74
LS32
LS30
LS08
LS04
LS51
+TAG 1
+TAG 2
+TAG 3
+BITØ
+BIT1
+BIT2
+BIT3
+BIT4
+BIT5
+BIT6
+BIT7
+BIT8
+BIT9
+SEL Ø
+SEL 1
+SEL TAG
DESEL (1D9)
INIT2B (2F12)
BIT 10 (4 F4)
SEE SHEET 6
SINGLE PORT ADAPTER M/C BOARD
SEE CHART
E
FF3

+ SERVO CLK Ø
- SERVO CLK Ø
+ READ CLK Ø
- READ CLK Ø
+ READ DATA Ø
- READ DATA Ø
+5VR
-5VR
±0V
USØ
USØ (3A11)
R3 82Ω
R4 470Ω
R5 330Ω
R6 330Ω
R11 470Ω
R12 82Ω
R18 82Ω
R7 4.22K
R8 4.22K
R9 4.22K
R10 4.22K
R17 82Ω
RG7 2.2K
L2 75108
L5 75108
BMDL7 (2I12)
ECC DIAG-Z (1J12)
L586
L5273
L69
L70
L42
L91
L5378
PD1 - PDX2 (3K7)
PDF (1B9)
L32
CLK SEL (1K13)
WTD
L22 LS51
L22 LS51
L74 LS04
L74 LS04
CBAC M1 (1J12)
BMDH7 (2K12)
CLR ECC (2D13)
RESB (2C3)
L1 74
ECCLR
DONE (1E9)
BTZ (1I6)
ACC (1E3)
ZZ (1E9)
CLK-G (3A7) (2H4)
RZ 2.2K
RJ 2.2K
ICLR
PRE
SDI (2H6) (1K12)
CLK (1K12)
BMDLØ-BMDL7 (2I12)
L50 LS378
LD ERR (2B13)
RESB (2C3)
L48
L49
L50
EOUT 19 Z1
EOUT 19 Z2
EOUT 19 Z3
Z1-Z3 (3J6)
EIN 25LS2521
DESELECT (1I16)
BIT10 (3A5)
L4 MC3453
-5VR
R51 56Ω
+5VR
R52 2.2K
+WRITE DATA Ø
-WRITE DATA Ø
+WRITE CLK Ø
-WRITE CLK Ø
+SEL Z
-SEL Z
+SEL 3
-SEL 3
+BIT 10
-BIT 10
SEE SHEET 6
SEE CHART
E
13.3.18
11
FF4

WANG

8318 SMALL FLAT ADAPTER P/C BOARD

E 8318 11

FF5

IC LOCATION	TYPE	W.L. PART NO.
[illegible]	74S74	376-0202
L25	7508	376-0089
L3.	MC3450	376-0275
L4.	MC3453	376-0274
[illegible]	74LS32	376-0211
L22,141	74LS51	376-0213
[illegible]	[illegible]	[illegible]
L2·28 47 51 52 ... 72, 126,127, 33, 48,49,50,51,53, 154	74LS244	376-0288
L29	7425	376-0092
L30 68-70 92 ... 3	74LS273	376-0302
L31	74LS174	376-0159
L32 53 54 73 97, 109 110 132	74LS374	376-0286
L33 56 74 77 79 ... 2	74LS175	376-0160
L35 36	2716	SEE CHART
L37 38 42 55	74LS161	376-0233
L39 40 60 61 ... 79, 80 81 82, 99 100,101, 113 ,120,121,122, 52 59	SPARE	
L?7	74LS32	376-0205
L43	7403	376-0028
L48 49 50,128	25LS2521	376-0317
L57 63, 145, 147,150	74LS08	376-0153
L58 59 9. 103 115 123 144 146,158,119	74LS74	376-0155
L64,114	74LS04	376-0180
[illegible]	74LS00	376-0207
L.. 67 86 87 57	74LS240	376-0237
L75 76	74LS230	376-0242
L83 125	74LS20	376-0210
L88	74LS30	376-0249
L89 90,93 94	74LS86	376-0231
L98, 7	74LS11	376-0225
L104	74LS02	376-0208
105 106	74LS85	376-0248
L.. 129 130 131	74S225	376-0323
L41 134 35 155	74LS138	376-0294
[illegible]	74LS193	376-0220
L156	74LS367	376-0192
L163	7404	376-0015
L85	74LS27	376-0245
L143	74LS10	376-0209
[illegible]	[illegible]	[illegible]
[illegible]	[illegible]	[illegible]
L35 36	24 PIN SOCKET	376-9003

COMPONENT	TYPE	W.L. PART NO.
R12, ... 86A ...	2.2K 1/4W 5%	330-3023
[illegible]	[illegible]	[illegible]
[illegible]	[illegible]	[illegible]
[illegible]	[illegible]	[illegible]
[illegible]	[illegible]	[illegible]
[illegible]	[illegible]	[illegible]
[illegible]	[illegible]	[illegible]
[illegible]	[illegible]	[illegible]
[illegible]	[illegible]	[illegible]
[illegible]	[illegible]	[illegible]
[illegible]	[illegible]	[illegible]
[illegible]	[illegible]	[illegible]
[illegible]	[illegible]	[illegible]
[illegible]	[illegible]	[illegible]
[illegible]	[illegible]	[illegible]
[illegible]	[illegible]	[illegible]
C1- ...	.047µF, 50V	300-1866
C21 23,146,147,148	15µF 20V (T)	300-4022
C37,38	1µF 50V	300-1930
C149	.01µF, 25V	300-1803
Z	TRANS PAD	475-0009
Q1	2N2906	375-1017
Q2	UN10KM	375-1115
Y1	[illegible] MHz	321-0013
SW2	4 POS DIL	325-1504
J1	60 POS	350-0057
J2	26 POS	350-0058

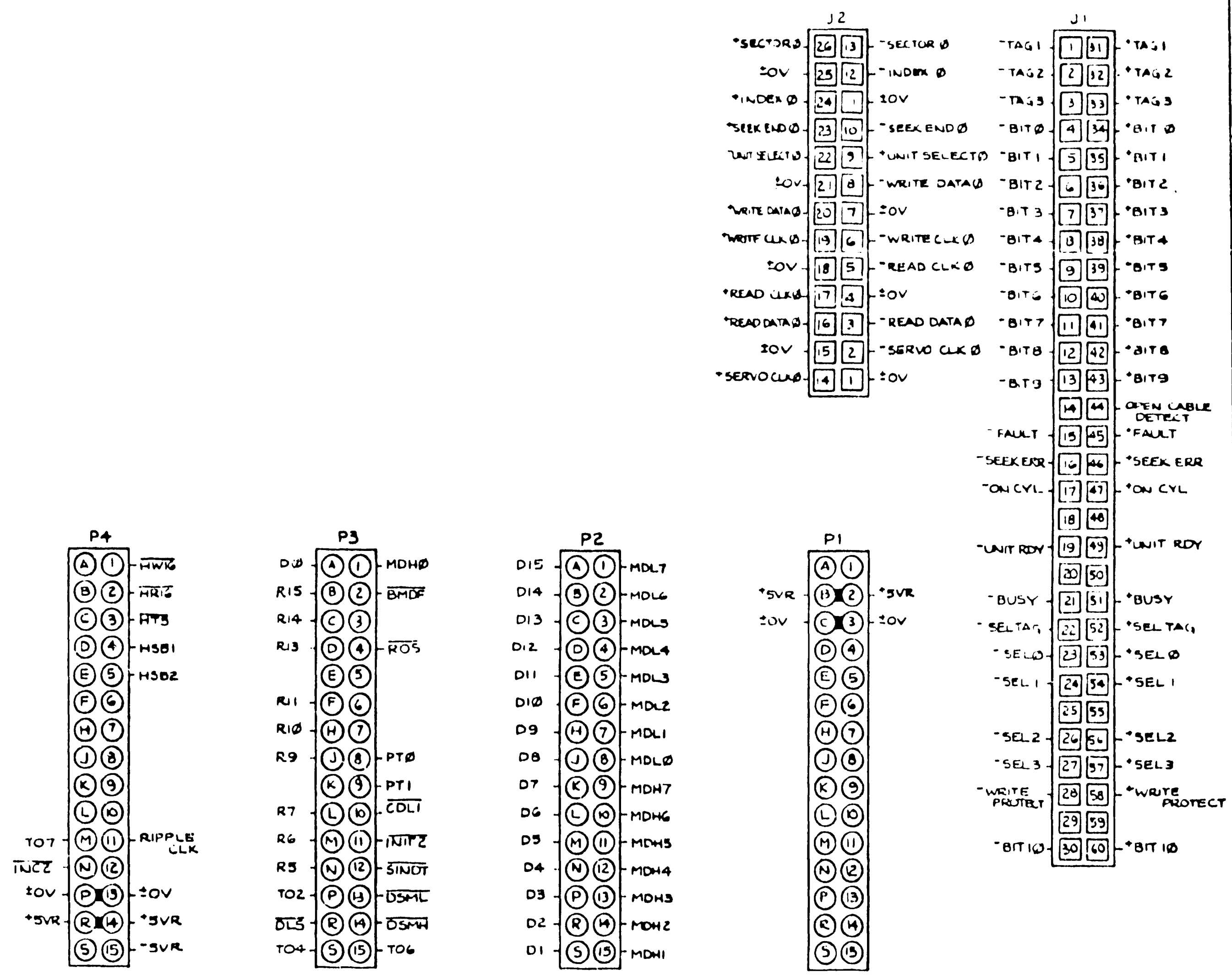
MNEMONICS	COORD
BIT0-BIT9	3G1
BIT0-BIT9	3G1
+BIT10	4F1
-BIT10	4F1
BMDF	2E14
+BUSY	3K14
-BUSY	3J14
CDLT	2F14
CLS	1K1
DSMH	1J1
DSML	1J1
D0-D15	2K1
+FAULT	3I14
-FAULT	3I14
HSB1	2G14
HSB2	2G14
HR16	1H1
HT5	2E14
HW16	1I1
INCZ	1K5
+INDEX0	3G14
-INDEX0	3G14
INITZ	2F14
MDH0-MDH7	2K14
MDL0-MDL7	2I14
+ON CYL	3I14
-ON CYL	3H14
OPEN CBL	2D1
PT0,PT1	2E14
+READ CLK0	4J14
-READ CLK0	4J14
+READ DATA0	4F14
-READ DATA0	4F14
RIPPLE CLK	1G1
R5-7	1K2
R9-11	2G14
R13-15	2D14
[illegible]	[illegible]
+SECTOR0	3G14
-SECTOR0	3G14
+SEEK END0	3G14
-SEEK END0	3G14
+SEEK ERR	3I14
-SEEK ERR	3I14
+SEL0,+SEL1	3B1
-SEL0,-SEL1	3B1
+SEL2,+SEL3	4G1
-SEL2,-SEL3	4G1

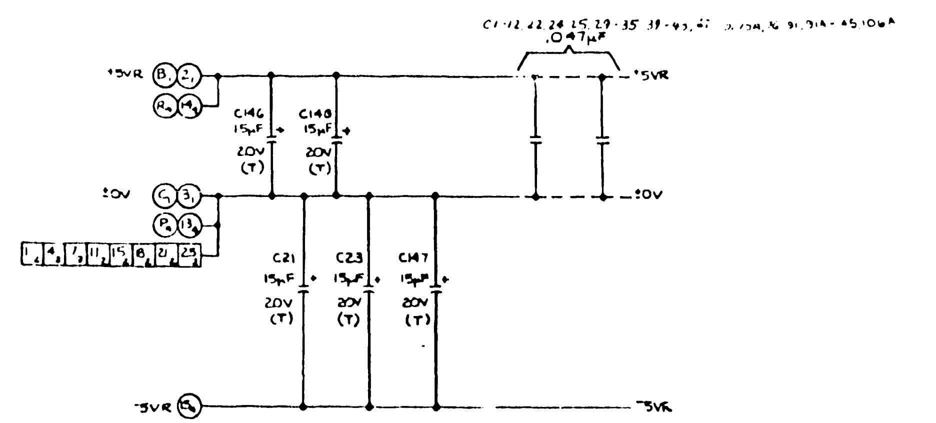
MNEMONICS	COORD
+SEL TAG	3B1
-SEL TAG	3B1
+SERVO CLK0	4K14
-SERVO CLK0	4K14
SKP	3K1
+TAG1-+TAG3	3G1
-TAG1--TAG3	3G1
TO2	2H14
TO4	2H14
TO6,TO7	2H14
+UNIT RDY	3H14
-UNIT RDY	3H14
+UNIT SEL0	3G14
-UNIT SEL0	3G14
+WRITE CLK0	4E1
-WRITE CLK0	4E1

MNEMONICS	COORD.
+WRITE DATA0	4E1
-WRITE DATA0	4E1
+WRITE PRO	3J14
-WRITE PRO	3J14

TYPE	IC LOCATION	SPARES
[illegible]	L87	1
74LS02	L104	1
[illegible]	[illegible]	2
[illegible]	[illegible]	1
74LS11	L98	2
[illegible]	L143	1
[illegible]	L21	1
[illegible]	L89	1
74LS86	L89	1
[illegible]	[illegible]	1
[illegible]	[illegible]	1
[illegible]	[illegible]	3
74LS74	[illegible]	1
[illegible]	[illegible]	1

210 + 209 + 377 OR 378			
[illegible]	[illegible]	[illegible]	L36
8318A	8319	[illegible]	[illegible]

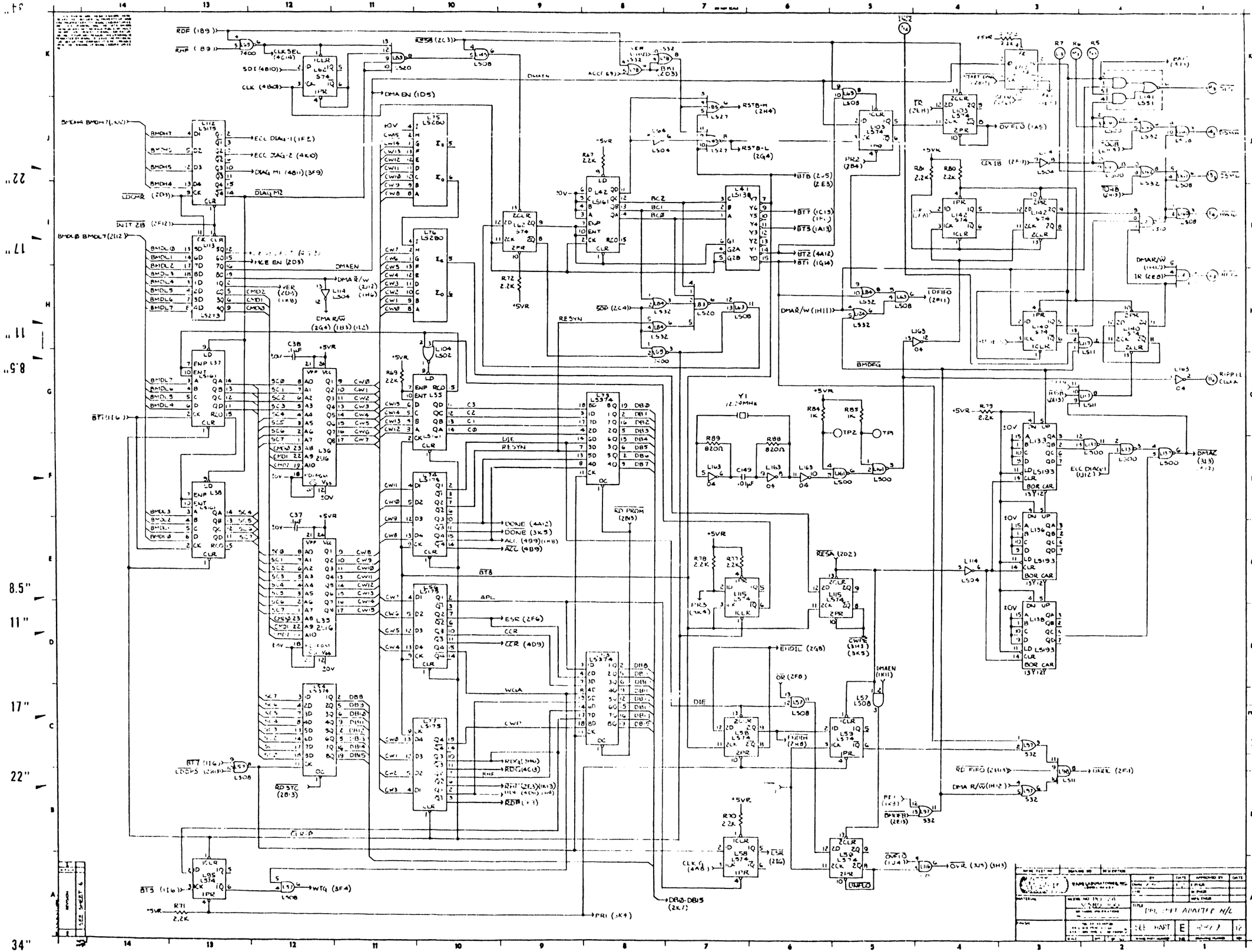




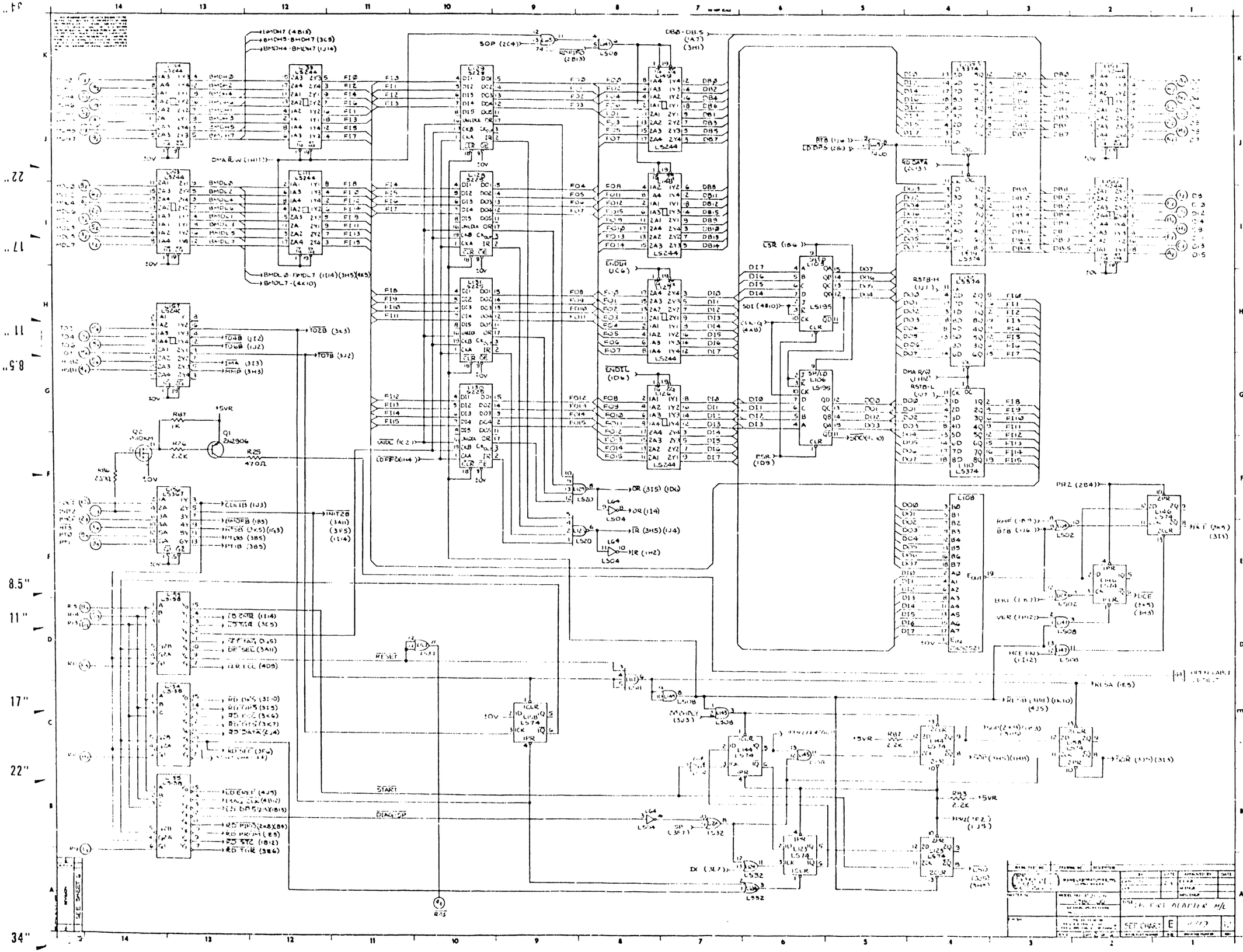
NOTES:
1. ALL RESISTORS ARE 1/4 W. 5% UNLESS OTHERWISE SPECIFIED.

WANG LABORATORIES INC.
SINGLE PORT ADAPTER M/C BOARD
SEE CHART | E | 8318 | 11

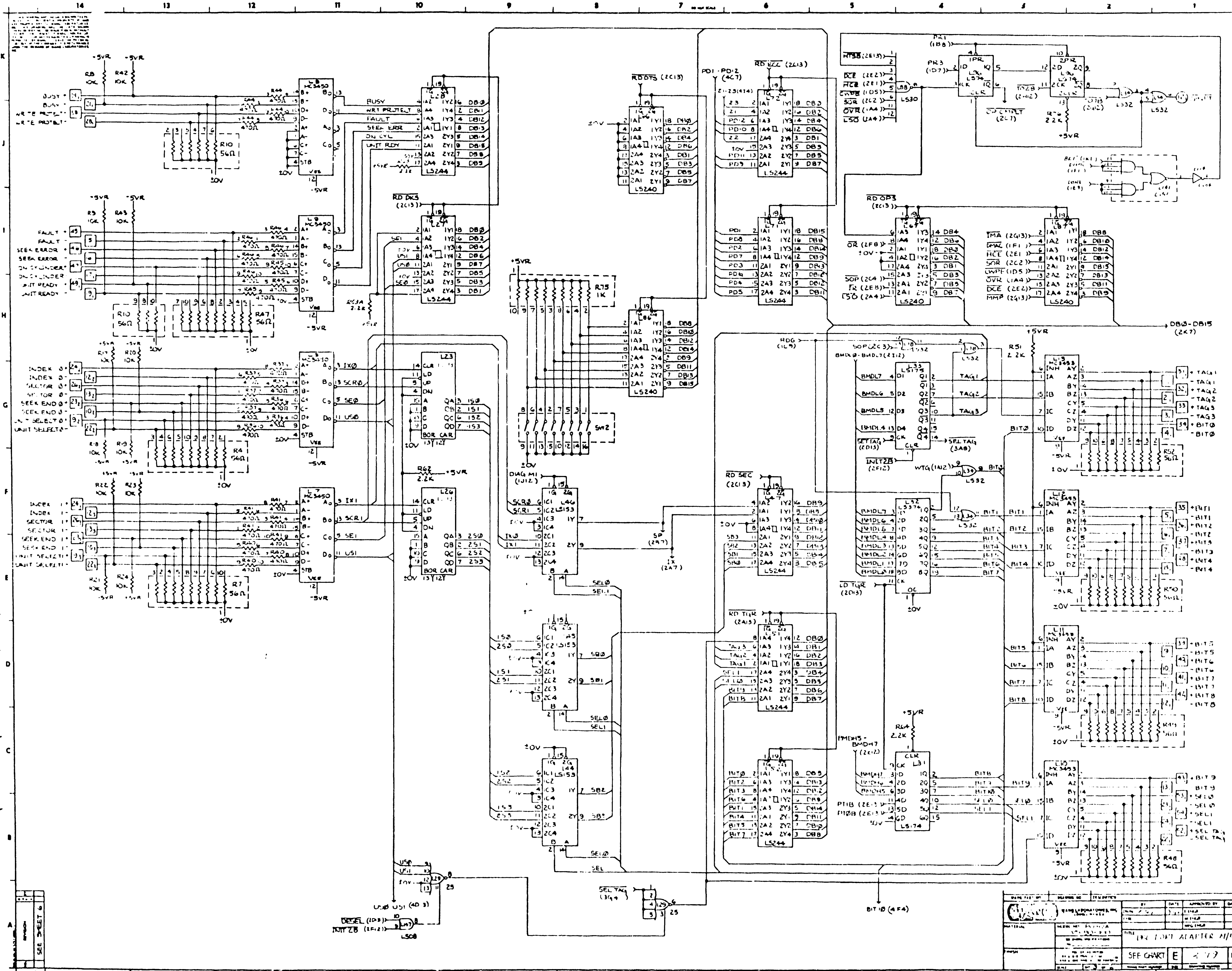
FF6


RDF (1B9)
RMF (1B9)
CLK SEL (4C14)
SDE (4B10)
CLK (4B08)
DMA EN (1D5)
DMAEN
RESB (2C3)
ACCC (2G9)
BMI (2D3)
BMDH7 BMDH7 (2H12)
BMDH6
BMDH5
BMDH4
LDCMR (2D1)
DIAGM2
ECC DIAG 1 (1F2)
ECC DIAG 2 (4K10)
DIAG MI (4B11) (3F9)
INIT ZB (2F12)
BMDL0 BMDL7 (2I12)
BMDL7
BMDL6
BMDL5
BMDL4
BMDL3
BMDL2
BMDL1
BMDL0
CE EN (2D3)
DMA R/W (2I12) (1H6)
DMA R/W (2G4) (1B3) (1I2)
CMD2
CMD1
CMD0
BT1 (1I6)
LDDPS (2A8)
SD STC (2B3)
C38 .1uF
C37 .1uF
+5V
+10V
-5V
CWØ
CW1
CW2
CW3
CW4
CW5
CW6
CW7
CW8
CW9
CW10
CW11
CW12
CW13
CW14
CW15
DONE (4A12)
DONE (3K5)
ACC (4B9) (1K8)
AZC (4B9)
BT8
APL
ESR (2F6)
CCR
CCR (4D9)
WGA
CWP
RDX (3H6)
RDG (4C8)
RMF
RFT (2E3) (1K3)
1114 (4C10) (1H8)
RDB (1K9)
PRI (1K9)
WTG (3F4)
DBØ-DB15 (2K7)
RD PROM (2B3)
BT7 (1C13) (1H1)
BT5 (1A13)
BT2 (4A12)
BT1 (1G14)
BTB (2A5) (2E3)
RSTB-M (2H4)
RSTB-L (2G4)
RESA (2D2)
OVFLD (1A5)
TR (2L4)
PR2 (2B4)
CWTB (2F4)
DMAR/W (1H11)
LDFIFO (2H11)
BMDFG
Y1 12.29MHz
R84 1K
R85 1K
TP2
TP1
R89 820Ω
R88 820Ω
C149 .01uF
R69 2.2K
R79 2.2K
R80 2.2K
R86 2.2K
R87 2.2K
R78 2.2K
R77 2.2K
R76 2.2K
R75 2.2K
R74 2.2K
R73 2.2K
R72 2.2K
R71 2.2K
R70 2.2K
FIR5 (3K4)
EMIDL (2G8)
DIE
DR (2F8)
DMAEN (1K11)
FIFOEN (2H8)
RD FIFO (2H13)
DMA R/W (1H12)
RFI (1K3)
DRREQ (2E8)
OVR (3J9) (3H5)
OVR 0 (1J4)
CLR P
ECC DIAG 1 (1J12)
DMAC (3I3)
RIPPLE CLK A
DMAR/W (1H13)
IR (2E8)
BOR CAR
LD LS193
DN UP
SEE SHEET 6
DRL DISK ADAPTER H/L
SIZE PART
E
34"
22"
17"
11"
8.5"

GG1


SOP (2C4)
DB0 - DB15 (2A7) (3H1)
BMDH7 (4B13)
BMDH5-BMDH7 (3C9)
BMDH4-BMDH7 (1J14)
DMA R/W (1H11)
BMDL0-BMDL7 (1114)(3H5)(4K5)
BMDL7-(4K10)
FI0
FI1
FI2
FI3
FI4
FI5
FI6
FI7
FI8
FI9
FI10
FI11
FI12
FI13
FI14
FI15
FO0
FO1
FO2
FO3
FO4
FO5
FO6
FO7
FO8
FO9
FO10
FO11
FO12
FO13
FO14
FO15
ENDUH (UC6)
ENDUL (1D6)
LSR (1B6)
PSR (1D9)
SDI (4B10)
CLK-G (4A11)
DMA R/W (1H12)
RSTB-L (UJ1)
RSTB-H (UJ1)
+5VR
R87 1K
R86 2.2K
R25 470Ω
R26 2.2K
R84 2.2K
Q1 2N2906
Q2 2N4064
10V
VADL (1C2)
LDFF2 (1H4)
OR (315) (1D4)
OR (114)
IR (3H5) (1J4)
IR (1H2)
INIT2B (3A11) (3F5) (1E14)
CONTB (1J3)
RMSEB (1B5)
MTSB (3K5) (1G3)
MTSB (3B5)
PTSB (3B5)
TO4B (1J2)
TO6B (1J2)
TO7B (3J2)
TO2B (3K3)
IMA (3E3)
MRP (3H3)
TO STAT (0,4,5)
DIF SEC (3A11)
CLR ECC (4D9)
RD DVS (3E0)
RD OPS (3E5)
RD ECC (3K6)
RD STS (3K7)
RD DATA (2J4)
RD SEC (3F6)
LD ESET (4J5)
CLR ECC (4D2)
RD PIP (2A8X84)
RD PROM (1E8)
RD STC (1B12)
RD TOR (3B6)
RESET
START
DIAG OP
RSS
RTB (1J6)
LD DAS (2B3)
RD DAS (2C3)
PIR2 (2B4)
RHF (1B4)
BTB (1J6)
BRE (1K7)
VER (1H12)
HCE EN (1E12)
HCE (2K5) (3H3)
RKF (2K5) (3E1)
RELSA (1E5)
RELSB (3H11) (1K10) (4J5)
DISABLE
DX (3L7)
SP (3E7)
TOR (3J5) (3E4)
RH3 2.2K
+5VR
H42 (1E2) (1J5)
SEE SHEET 5
SEE CHART
E

GG2


L8 MC3450
L9 MC3450
L3 MC3450
L7 MC3450
L28 LS244
L27 LS244
L23
L26
L46 LS153
LS153
L44 LS153
L72 LS244
L71 LS244
L86 LS240
LS240
L67 LS240
L87 LS240
L47 LS244
L51 LS244
L52 LS244
L33 LS175
L32 LS374
L31 LS174
L13 MC3453
L12 MC3453
L11 MC3453
L10 MC3453
LS30
LS32
LS08
R75 1K
SW2
BUSY
WRITE PROTECT
FAULT
SEEK ERROR
ON CYLINDER
UNIT READY
INDEX
SECTOR
SEEK END
UNIT SELECT
RD DKS (2C13)
RD DTS (2C13)
RD ECC (2C13)
RD OP3 (2C13)
RD SEC (2C13)
RD TGR (2A13)
PD1 - PD12 (4C7)
DB0 - DB15 (2K7)
DIAG M1 (1J12)
SEL TAG (3G4)
DESEL (1D13)
INIT2B (2F12)
LD TGR (2D13)
SET TAG (2D13)
WTG (1A12)
BMDL0 - BMDL7 (2I12)
BMDH5 - BMDH7 (2K12)
BIT10 (4F4)
US0 US1 (4D3)
+TAG1 -TAG1 +TAG2 -TAG2 +TAG3 -TAG3 +BIT0 -BIT0
+BIT1 -BIT1 +BIT2 -BIT2 +BIT3 -BIT3 +BIT4 -BIT4
+BIT5 -BIT5 +BIT6 -BIT6 +BIT7 -BIT7 +BIT8 -BIT8
+BIT9 -BIT9 +SEL0 -SEL0 +SEL1 -SEL1 +SEL TAG -SEL TAG
SEE SHEET 6
SEE CHART
E

GG3

+SERVO CLK Ø
-SERVO CLK Ø
+READ CLK Ø
-READ CLK Ø
+SERVO CLK 1
-SERVO CLK 1
+READ CLK 1
-READ CLK 1
+READ DATA Ø
-READ DATA Ø
+READ DATA 1
-READ DATA 1
+5VR
-5VR
±0V
U52
U51
U50
CLK SEL (1K13)
USØ US1 (3A10)
BMDLØ-BMDL7 (2E12)
BMDL7 (2E12)
ECC DIAG-2 (1J12)
PDI -PDI2 (3K7)
WTD
Z1-Z3 (3U6)
DESELECT(INIT)
BIT 1Ø(3A5)
SEL 2
-SEL 2
SEL 3
-SEL 3
BIT 1Ø
-BIT 1Ø
WRITE DATA Ø
-WRITE DATA Ø
WRITE CLKØ
-WRITE CLKØ
WRITE DATA1
-WRITE DATA1
WRITE CLK1
-WRITE CLK1
SDI (2H6) (1K12)
CLK(1K12)
ACC(1E9)
RZZ (1E9)
DONE(1E9)
STZ (1I6)
RESB(2C8)
LDEREF (2B13)
RESB (2C3)
CLK-G (1A7) (2H6)
CTR (1D9) CLR ECC (2D13)
SEP CHART
E
3317
12

8319- R4

COMPONENT SIDE

P4 P3 P2 P1

WANG

GG5

IC LOCATION	TYPE	W.L. PART NO.
[illegible]	74S74	376-0202
[illegible]	7508	376-0089
[illegible]	MC3450	376-0276
[illegible]	MC3453	376-0274
[illegible]	74LS32	376-0211
L22,141	74LS51	376-0213
[illegible]	[illegible]	[illegible]
[illegible]	[illegible]	
[illegible]	74LS244	376-[illegible]
L29	7425	376-0092
L30,68,70,92	74LS273	376-0302
L31	74LS174	376-0159
L32,53,54,73,107,109,110,52	74LS374	376-0286
L33,52,74,77,9[illegible]2	74LS75	376-0160
L35,36	2716	SEE CHART
L37,38,42,55	74LS161	376-0233
[illegible]	7432	376-0093
L43	7403	376-0028
L44,45,46	74LS153	376-0156
L48,49,50,108	[illegible]S2521	376-0317
L57,63,145,147,[illegible]	74LS08	376-0153
L58,59,95,96,103,115,118,123,144,146,158	74LS74	376-0155
L64,114	74LS04	376-0180
[illegible]	74LS00	376-0207
L66,67,86,87,157	74LS240	376-0297
[illegible]	74LS280	376-0242
L83,125	74LS20	376-0210
L88	74LS30	376-0249
L83,90,93,94	74LS86	376-0231
[illegible]	74LS11	376-0225
[illegible]	74LS02	376-0208
[illegible]	74LS85	376-0248
L128,129,130,131	74S225	376-0323
L41,134,135,155	74LS138	376-0294
L136,138,139,[illegible]	74LS193	376-0220
L156	74LS367	376-0192
L163	7404	376-0010
L85	74LS27	376-0245
[illegible]	74LS[illegible]	376-0207
[illegible]	[illegible]	[illegible]
[illegible]	7406	376-0032
L35,36	24 PIN SOCKET	376-9003

TYPE	IC LOCATION	SPARES
[illegible]	L87	1
[illegible]	[illegible]	2
74LS02	L104	1
[illegible]	[illegible]	1
74LS[illegible]	[illegible]	1
[illegible]	L78	2
74LS[illegible]	[illegible]	1
[illegible]	L21	1
[illegible]	[illegible]	1
[illegible]	[illegible]	1
[illegible]	[illegible]	1
[illegible]	[illegible]	1
[illegible]	[illegible]	1
[illegible]	[illegible]	1
[illegible]	[illegible]	1

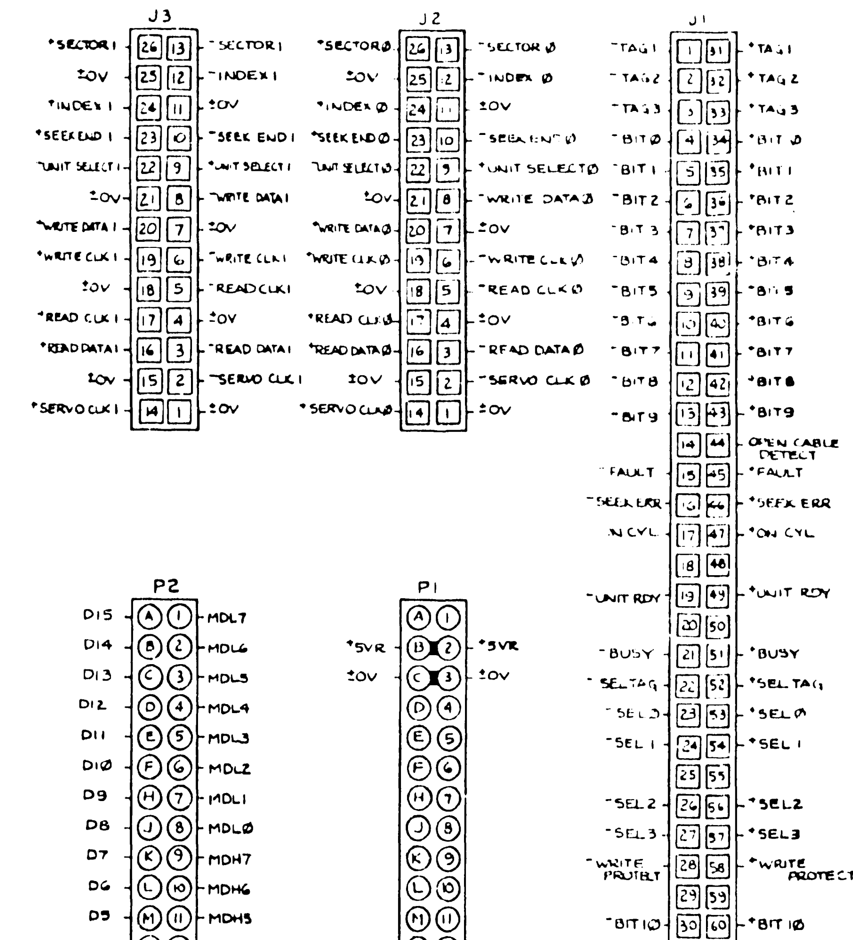
[illegible] R378			
[illegible]	[illegible]	[illegible]	[illegible]
[illegible]	[illegible]	[illegible]	376-[illegible]-R2

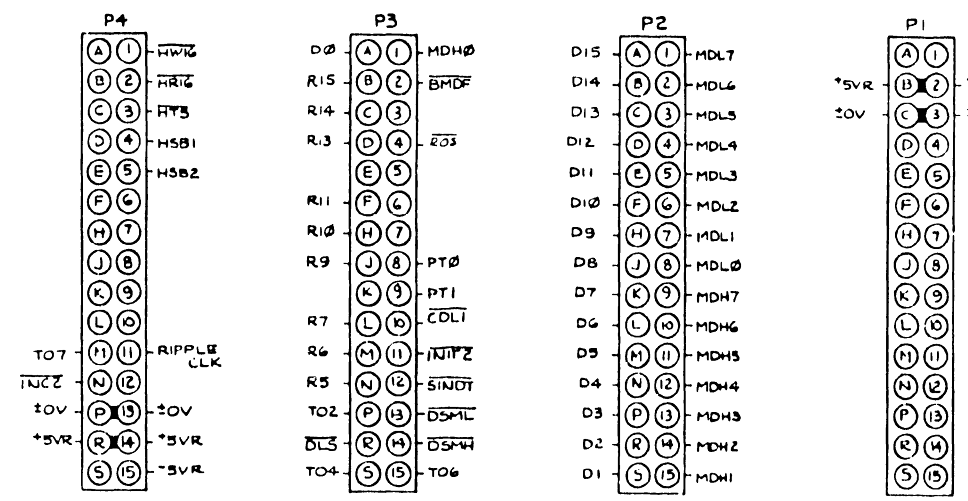
COMPONENT	TYPE	W.L. PART NO.
R1,2,[illegible]	2.2K 1/4W 5%	330-3023
R3,5,6	82Ω, SIP (9)	333-0804
R4,7,10,11,47,[illegible]	560Ω, SIP (9)	333-0802
R8,9,17,18,19,20,21,22,23,24,42,43	10K, 1/4W, 5%	330-4011
R25	470Ω, 1/4W 5%	330-2048
R35,36,37,38,39,40,41,44,45,46	470Ω, SIP (5)	333-0803
R65,66	330Ω 1/4W 5%	330-2034
R75	1K, SIP (4)	333-0837
R84,85,87	1K, 1/4W, 5%	330-3011
R86	220Ω, 1/4W 5%	330-2023
R88,89	820Ω, 1/4W, 5%	330-2083
C1-14,22,24-36,[illegible]	.047µF, 50V	300-1966
C21,23,146,47,148	15µF 20V (T)	300-4022
C37,38	1µF, 50V	300-1930
C149	[illegible]µF, 25V	300-1903
Q1	2N2906	375-017
Q2	VN10KM	375-1115
[illegible]	[illegible]	[illegible]
Y1	[illegible]MHZ	321-00[illegible]
SW2	8 POS DIP	325-1503
[illegible]	[illegible]	[illegible]
J1	60 POS	350-0057
J2,3	26 POS	350-0058
[illegible]	[illegible]	[illegible]

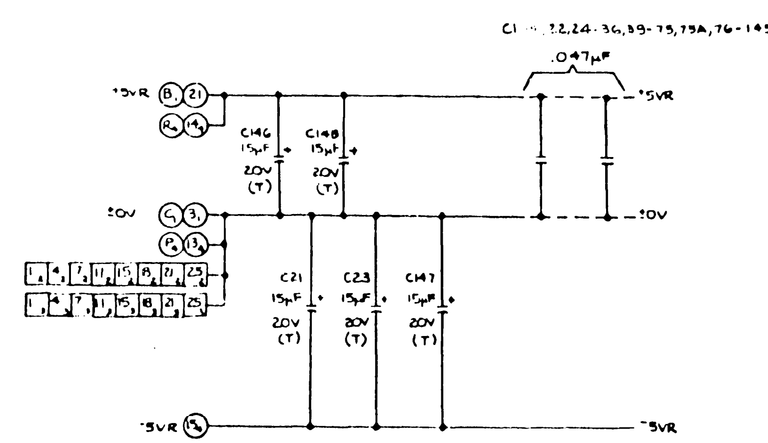
MNEMONICS	COORD.
+BITØ-+BIT9	3G1
-BITØ-BIT9	3G1
+BIT1Ø	4F1
-BIT1Ø	4F1
BMDF	2E14
+BUSY	3K14
-BUSY	3J14
CDLI	2F14
DL5	1K1
DSMH	1J1
DSML	1J1
DØ-D15	2K1
+FAULT	3I14
-FAULT	3I14
HSB1	2G14
HSB2	2G14
HRI6	1H1
HT5	2E14
HWI6	1I1
INCZ	1K5
+INDEX Ø	3G14
-INDEX Ø	3G14
+INDEX 1	3F14
-INDEX 1	3F14
INITZ	2F14
MDHØ-MDH7	2K14
MDLØ-MDL7	2I14
+ON CYL	3I14
-ON CYL	3H14
OPEN CBL	2D1
PTØ,PT1	2E14
+READ CLK Ø	4J14
-READ CLK Ø	4J14
+READ CLK 1	4I14
-READ CLK 1	4I14
+READ DATA Ø	4F14
-READ DATA Ø	4F14
+READ DATA 1	4F14
-READ DATA 1	4F14
RIPPLE CLK	1G1
R5-7	1K2
R9-11	2C14
R13-15	2D14
+SECTOR Ø	3G14
-SECTOR Ø	3G14
+SECTOR 1	3F14
-SECTOR 1	3F14
+SEEK END Ø	3G14
-SEEK END Ø	3G14
+SEEK END 1	3E14
-SEEK END 1	3E14
+SEEK ERR	3I14
-SEEK ERR	3I14
+SELØ,+SEL1	3B1
-SELØ,-SEL1	3B1
+SEL2,+SEL3	4G1
-SEL2,-SEL3	4G1

MNEMONICS	COORD
+SEL TAG	3B1
-SEL TAG	3B1
+SERVO CLK Ø	4K14
-SERVO CLK Ø	4K14
+SERVO CLK 1	4I14
-SERVO CLK 1	4I14
SINDT	3K1
+TAG1-+TAG3	3G1
-TAG1-TAG3	3G1
TO2	2H14
TO4	2H14
TO6 TO7	2H14
+UNIT RDY	3H14
-UNIT RDY	3H14
+UNIT SEL Ø	3G14
-UNIT SEL Ø	3G14
+UNIT SEL 1	3E14
-UNIT SEL 1	3E14
+WRITE CLK Ø	4E1
-WRITE CLK Ø	4E1
+WRITE CLK 1	4D1
-WRITE CLK 1	4D1

MNEMONICS	COORD.
+WRITE DATA Ø	4E1
-WRITE DATA Ø	4C1
+WRITE DATA 1	4E1
-WRITE DATA 1	4D1
+WRITE PRO	3J14
-WRITE PRO	3J14







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

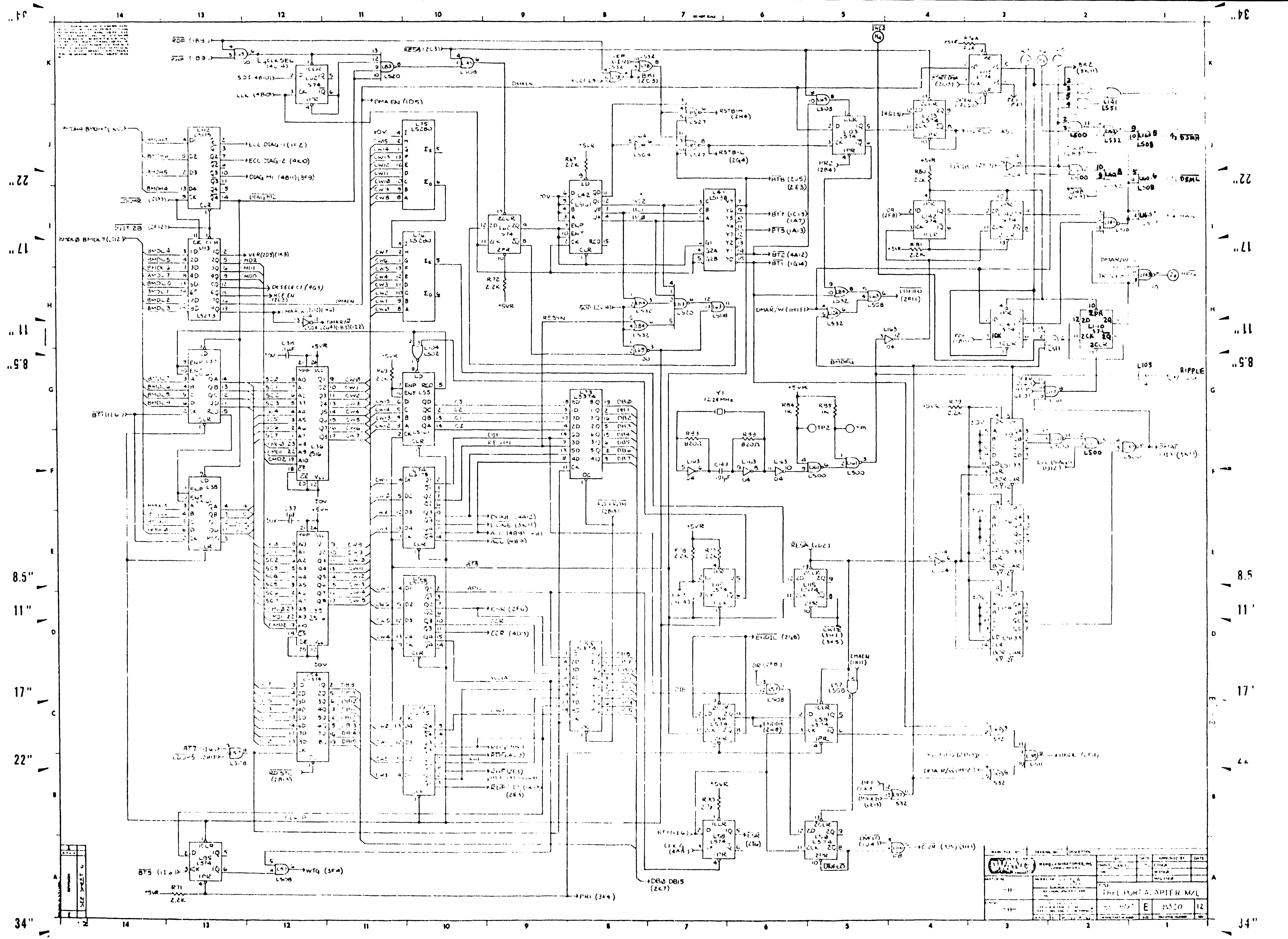
REV 6

WANG LABORATORIES, INC.

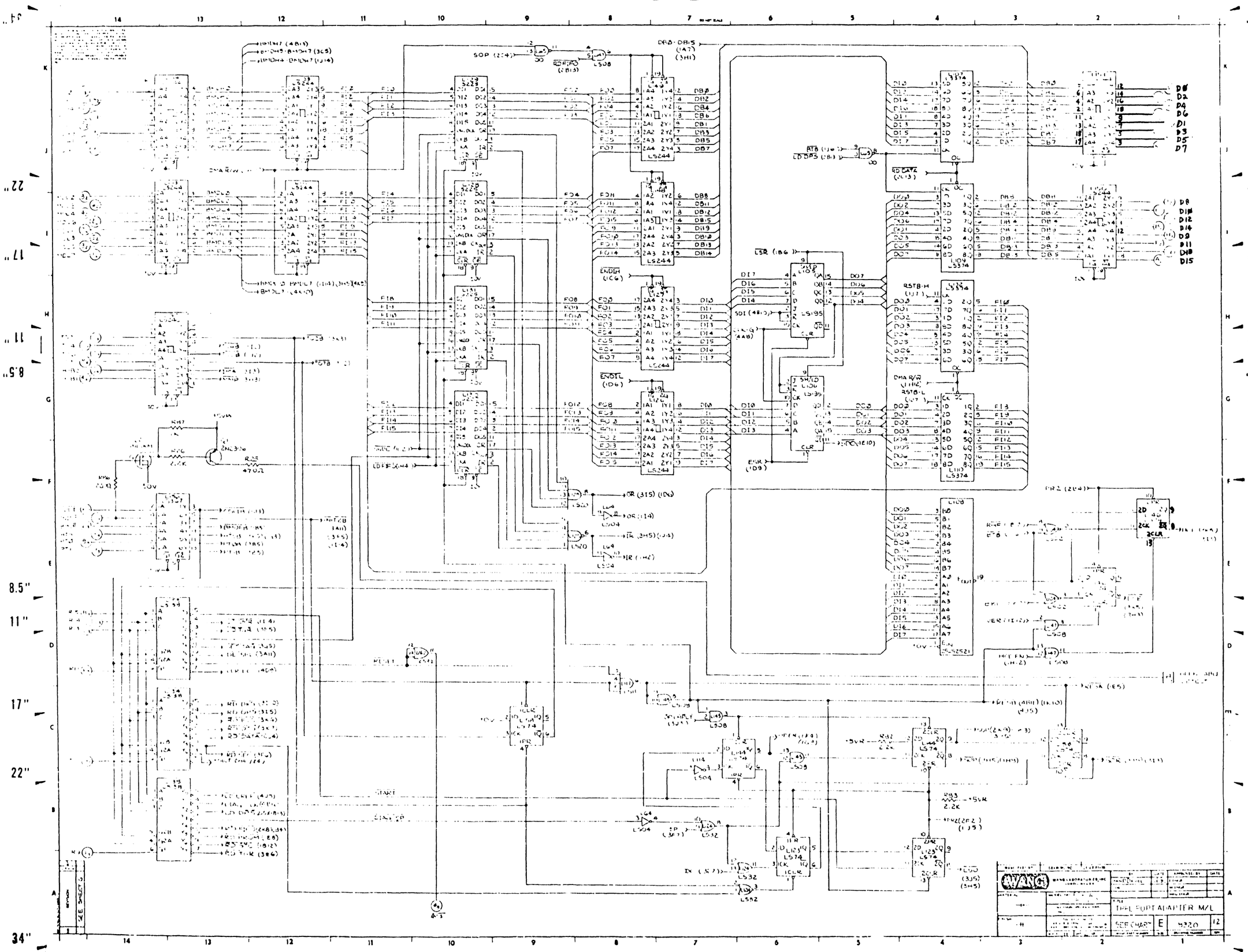
TITLE: [illegible] ADAPTER M/C

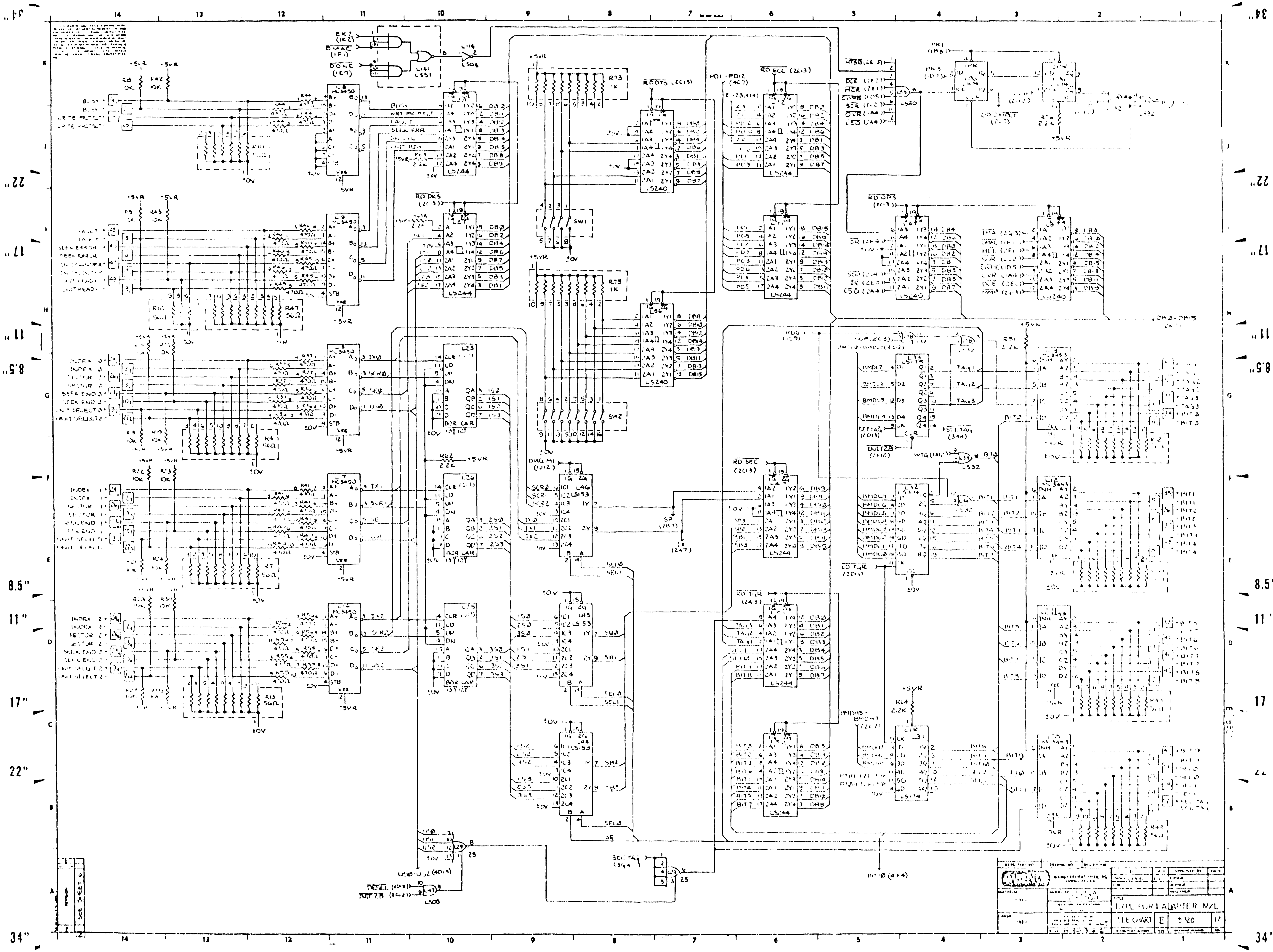
SEE CHART | E | [illegible] | 12

GG6

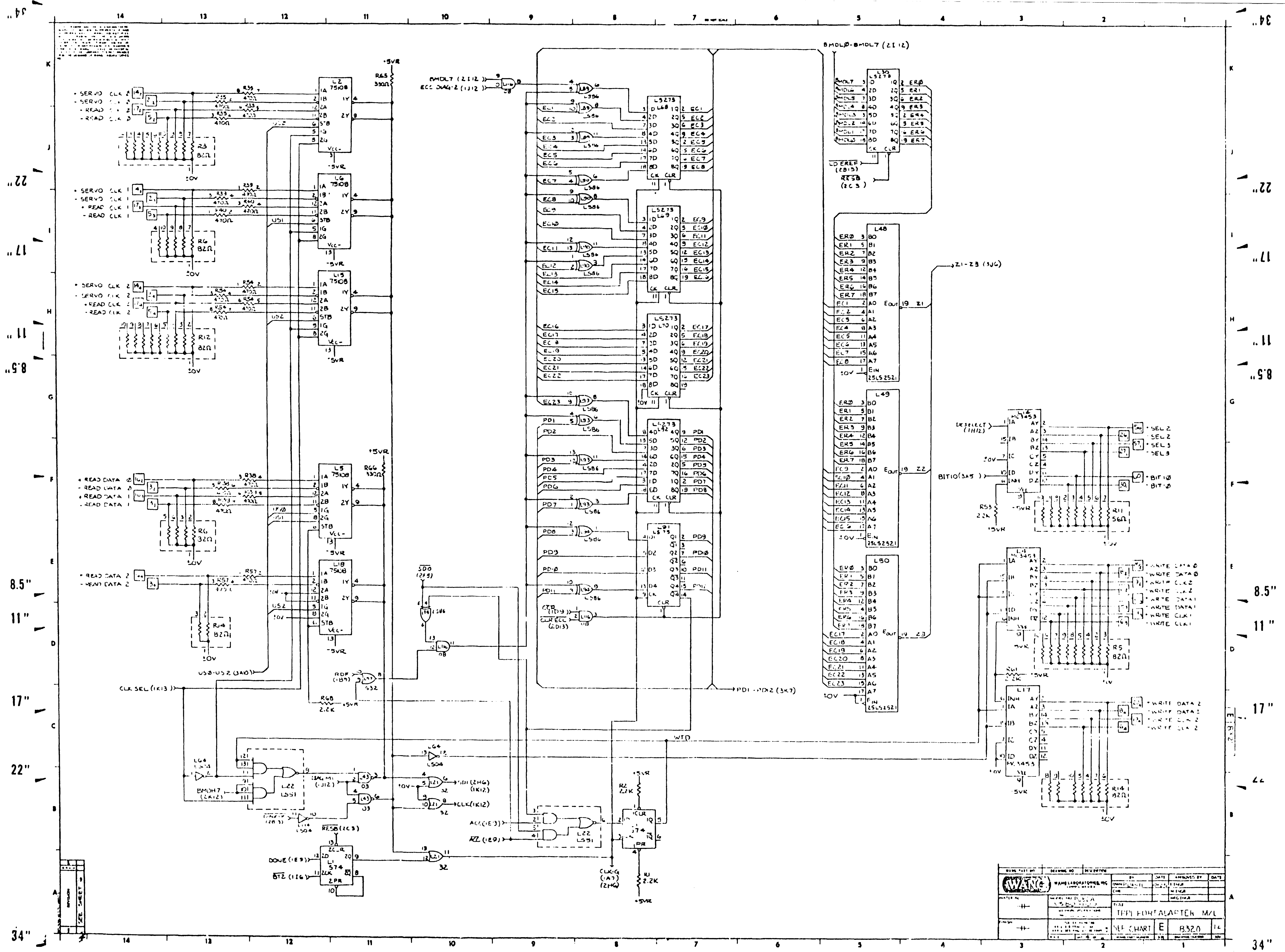


RDF (1B9)
RHP (1B9)
CLKSEL (4C4)
SDI (4B10)
CLK (4B10)
L02 S74
L83 LS20
RESA (2C3)
L45 LS08
DMAEN
DMA EN (1D5)
INC2
ECC DIAG-1 (1F2)
ECC DIAG-2 (4K10)
DIAG M1 (4B11)(3F9)
DIAG M2
L112 LS175
LDCMR (2D3)
INIT 2B (2F12)
L113 LS273
VER(2D3)(1K3)
DESELECT (4G3)
HCE EN (2E2)
DMAR/W (2G4)(1B3)(1I2)
L75 LS280
L76 LS280
L42 LS161
L62 S74
L41 LS138
RSTB-H (2H4)
RSTB-L (2G4)
BK1 (2C3)
HTB (2J5) (2E3)
BT7 (1C13) (1A7)
BT5 (1A13)
BT2 (4A12)
BT1 (1G14)
SOP (2C4)
RESYN
L03 LS74
PR2 (2B4)
START DMA (2C13)
BK2 (3K11)
L141 LS51
LS00
LS32
LS08
DSMH
DSML
L142 S74
OR (2F8)
R81 2.2K
LDFIFO (2F11)
DMAR/W (1H11)
BMDFQ
L163 04
L110 S74
LS11
L105 RIPPLE
L37 LS161
L38 LS161
BT1 (1G14)
L36 2516
L35 2516
C38 .1µF
C37 1µF
+5VR
L104 LS02
L55 LS161
R69 2.2K
R67 2.2K
R72 2.2K
L73 LS374
DB0 DB1 DB2 DB3 DB4 DB5 DB6 DB7
Y1 12.24 MHz
R83 820Ω
C143 .01µF
R84 1K
R85 1K
TP2
TP1
L161 LS00
L74 LS175
DONE (4A12)
DONE (3K11)
ACC (4B9)
ACC (4B3)
L58 LS175
APL
ENR (2F6)
CCR (4D3)
L77 LS175
RDF (2E3)
ENF Q(3)
L53 LS374
RD FROM (2B13)
DB0-DB15 (2K7)
PRI (3K4)
L54 LS374
RD STC (2B13)
LDDPS (2B13)
L96 L95 LS74
BT5 (1I6)
WTQ (3F4)
R71 2.2K
L116 LS74
L115 LS74
RESA (2D2)
CWTE (3H3) (3K5)
ENDIL (2G8)
DMAEN (1K11)
L57 LS08
L58 LS74
L59 LS74
L98 LS74
R70
ESR (2H6)
CLK G (4A8)
OVFLO (1J4)
OVR (3J5)(3H1)
DMAC
ECC DIAG (1J12)
LS193
DMA R/W (1H12)
WANG LABORATORIES, INC.
TREE PORT ADAPTER M/L
E
8520
12
HH1


DBO-DBI5 (A7) (3H1)
SOP (2C4)
RD CLR2 (2B13)
LS08
DMA R/W (1H2)
BMCLO
BMCL5
BMCL7
BMDL0
BMDL5
BMDL7
FDO
FD1
FD2
FD3
FD4
FD5
FD6
FD7
FD8
FD9
FD10
FD11
FD12
FD13
FD14
FD15
LS244
LS245
ENDOH (1C6)
ENDOL (1D6)
LS08
LS04
LS20
LS32
OR (3I5) (1D4)
OR (1I4)
IR (3H5) (1J4)
IIR (1H2)
RESET
START
CLEAR
LS29
LS74
IOR
IIR
LS00
LS08
LS32
LS04
LS374
LS138
LS139
LS195
LS08
LS00
LS04
LS32
LS74
LS244
LS245
LS374
LS138
LS139
LS195
LS08
LS00
LS04
LS32
LS74
LS244
LS245
LS374
LS138
LS139
LS195
LS08
LS00
LS04
LS32
LS74
LS244
LS245
LS374
LS138
LS139
LS195
LS08
LS00
LS04
LS32
LS74
LS244
LS245
LS374
LS138
LS139
LS195
LSR (1B6)
SDI (4B13)
ESR (1D9)
RSTB-H (1J7)
RSTB-L (1J7)
DMA R/W (1H2)
DIR2 (2D4)
+5V
2.2K
470Ω
2N3906
MTR ON (3E5)
MTR OFF (3I5)
RD DATA (3A4)
RD CLK (3A5)
RD SYNC (3A11)
RD TMR (3B6)
WR GATE (1E4)
WR DATA (3A5)
WR CLK (3A11)
WPT (1B6)
INDEX (1A11)
SEE SHEET 5
DB0
DB1
DB2
DB3
DB4
DB5
DB6
DB7
DB8
DB9
DB10
DB11
DB12
DB13
DB14
DB15
D0
D1
D2
D3
D4
D5
D6
D7
WANG
TAPE PORT ADAPTER M/L
SEE CHART
E
1320
12



HH3


BMOLØ-BMOL7 (2I12)
PD1-PD12 (3K7)
Z1-Z3 (3J6)
CLK SEL (1K13)
US0-US2 (3A10)
WTD
CLK-G (1A7) (2HG)
DESELECT (1H12)
BIT10 (3A5)
+ SERVO CLK 2
- SERVO CLK 2
+ READ CLK 2
- READ CLK 2
+ SERVO CLK 1
- SERVO CLK 1
+ READ CLK 1
- READ CLK 1
+ READ DATA Ø
- READ DATA Ø
+ READ DATA 1
- READ DATA 1
+ READ DATA 2
- READ DATA 2
+ SEL 2
- SEL 2
+ SEL 3
- SEL 3
+ BIT 1Ø
- BIT 1Ø
+ WRITE DATA Ø
- WRITE DATA Ø
+ WRITE CLK 2
- WRITE CLK 2
+ WRITE DATA 1
- WRITE DATA 1
+ WRITE CLK 1
- WRITE CLK 1
+ WRITE DATA 2
- WRITE DATA 2
+ WRITE CLK 2
- WRITE CLK 2
WANG LABORATORIES, INC.
TPPI PORT ADAPTER M/L
SEE CHART
E
8320
14

HH4

WANG					
	BOARD NO. VP320 REV			TITLE TRPL PORT ADAPTER M/L	
		SEE CHART	E	8320	12

HH5

IC LOCATION	TYPE	W.L PART NO.
[illegible] 42, 42	74S74	376-0202
[illegible]	7508	376-0089
[illegible]	[illegible]	376-0275
[illegible]	[illegible] 53	376-0274
[illegible]	74LS32	376-0211
[illegible]	74LS51	376-0213
[illegible]	7432	376-0073
[illegible] 23 [illegible] 72 [illegible] 27 33 [illegible] 59, [illegible]	74LS244	376-0288
[illegible]	74[illegible]	376-[illegible]
[illegible]	74LS273	376-0307
[illegible]	74LS174	376-0[illegible]
[illegible] 53 54 73 [illegible]	74LS374	376-0286
[illegible] 32		
[illegible] 74 [illegible]	74LS175	376-0[illegible]
[illegible] 35 36	27[illegible]	SEE CHART
[illegible]	74LS161	376-0233
[illegible] 39 40 [illegible] 82 99 100 101 102, [illegible] 120 121 122 92 53	SPARE	
[illegible]	[illegible]	376-[illegible]
L43	7403	376-0028
L44 45 46	74LS53	376-0[illegible]
[illegible] 50 105	[illegible]	376-0317
[illegible]	74LS08	376-0153
[illegible] 59 [illegible] 115 118, 123, 44 [illegible] 158	74LS74	376-0155
[illegible]	74LS04	376-0180
[illegible]	74LS00	376-0207
[illegible]	74LS240	376-0297
[illegible]	74LS290	376-0242
[illegible]	74LS20	376-0[illegible]
L48	74LS30	376-0243
L49 [illegible]	74LS[illegible]	376-0231
L94 [illegible]	74LS11	376-0225
L[illegible]	74LS02	376-02[illegible]
L[illegible]	74LS[illegible]93	376-0243
[illegible] 30 131	74S225	376-0323
L4[illegible] 34 35 155	74LS138	376-0294
[illegible]	74[illegible]	376-0002
L5[illegible]	74LS367	376-0132
L[illegible]3	7404	376-0016
[illegible]	74LS21	[illegible]
L143	74LS10	376-0209
[illegible]	7408	376-0081
L37	74S32	376-0205
[illegible] 35 36	24 PIN SOCKET	376-9003

COMPONENT	TYPE	W.L PART NO.
2, 2 26 51, 53, 61, 62, 63 64 67 68, 69 70, 71 72, 63A 76, 77 78, 79 80 81 82 83, 76A	2.2K 1/4W 5%	330-3023
R3, 5, 6 2 4	82Ω, S.IP (5)	333-0804
R4, 7, 10 11, 13 47, 48 49 50 52	56Ω, SIP (9)	333-0802
R8, 9 17, 18 19, 20, 21 22 23 24, 27 28, 29 30 42, 43	10K 1/4W, 5%	330-4011
R25	470Ω 1/4W, 5%	330-2048
R35 36 37 38 39, 40, 41 44 45 46, 54 55 56 57	470Ω, SIP (5)	333-0803
R65 66	330Ω 1/4W 5%	330-2034
R73 75	1K, SIP (9)	333-0837
R84 85 87	[illegible]K 1/4W, 5%	330-3011
R86	220Ω 1/4W 5%	330-2023
R88 89	820Ω 1/4W 5%	330-2083
C1-18 22, 24-36, 37-75, [illegible] 76-145 [illegible]A	.047μF, 50V	300-1866
C21 23 146, 147 48	15μF 20V (T)	300-4022
C37 38	[illegible]μF 50V	300-1930
C[illegible]	[illegible]μF 2[illegible]V	300-1803
Q[illegible]	2N2[illegible]	375-017
[illegible]2	[illegible]	375-1115
Q1	TRANSIPAD	375-9004
Y1	12.24 MHZ	321-0017
SW1	4 POS DIP	325-1504
SW2	8 POS DIP	325-1503
TP1, TP2	PIN	[illegible]-1112
J1	60 POS	350-0057
J2 3 4	26 POS	350-0058
[illegible]	[illegible]	[illegible]
[illegible]	[illegible]	[illegible]
(6)	[illegible]	[illegible]
(6)	[illegible]	[illegible]

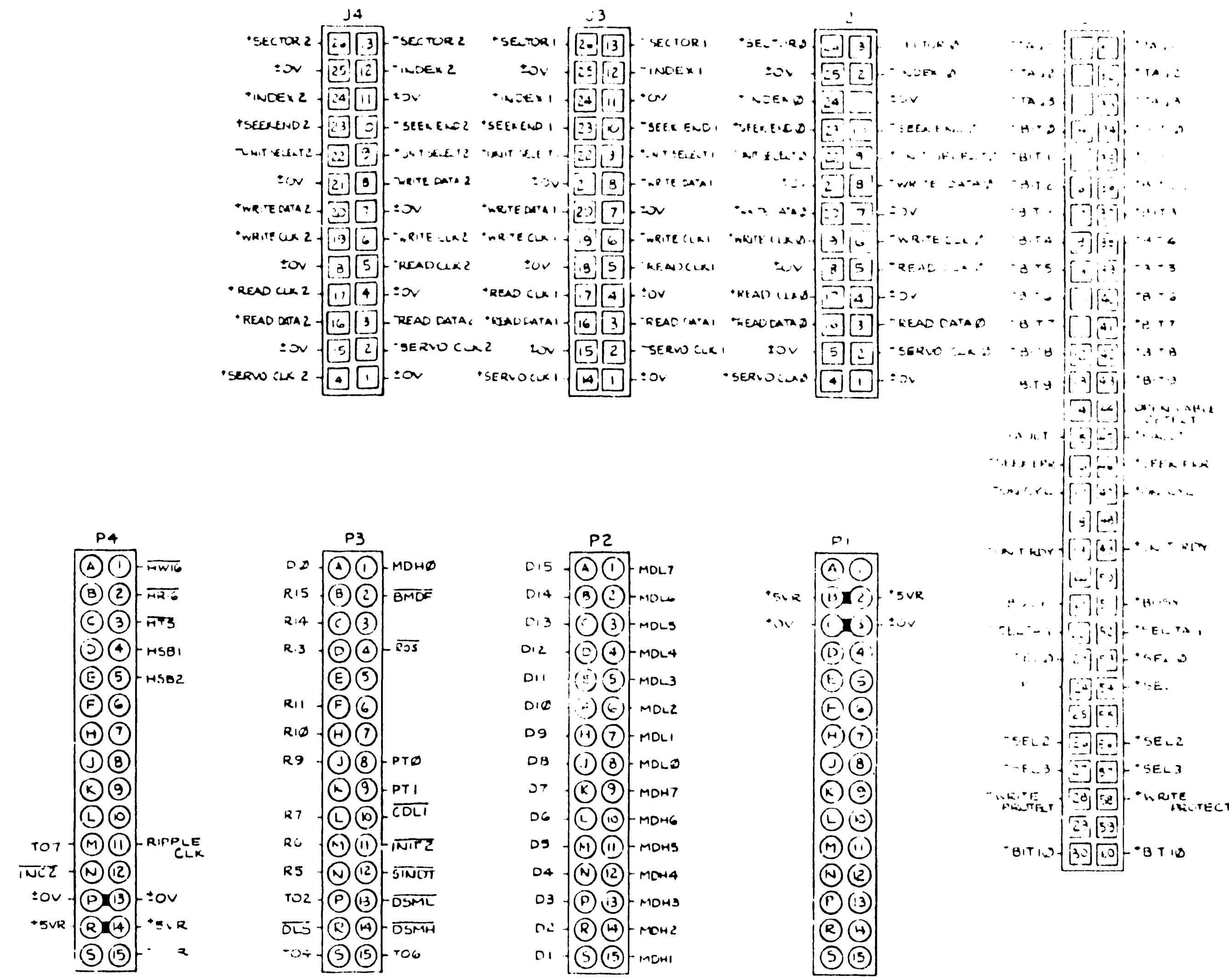
MNEMONICS	COORD.
*BIT0 *BIT9	3G1
BIT0 BIT9	3G1
*BIT10	4F1
BIT10	4F1
BMDF	2E14
*BUSY	3K14
*BUSY	3J14
CDLI	2F14
DLS	1K1
DSMH	1[illegible]
DSML	1J1
D0-D15	2K1
*FAULT	3I14
FAULT	3I14
HSB1	2G14
HSB2	2G14
HR16	1H1
HT5	2E14
HW16	1I1
INCZ	1K5
*INDEX 0	3G14
INDEX 0	3G14
*INDEX 1	3F14
INDEX 1	3F14
*INDEX 2	3D14
INDEX 2	3D14
INITZ	2F14
MDH0 MDH7	2K14
MDL0 MDL7	2I14
*ON CYL	3I14
ON CYL	3H14
OPEN CBL	2D1
PT0, PT1	2E14
*READ CLK 0	4J14
READ CLK 0	4J14
*READ CLK 1	4I14
READ CLK 1	4I14
*READ CLK 2	4H14
READ CLK 2	4H14
*READ DATA 0	4F14
READ DATA 0	4F14
*READ DATA 1	4F14
READ DATA 1	4F14
*READ DATA 2	4E14
READ DATA 2	4E14
RIPPLE CLK	1G1
R5-7	1K2
R9-11	2G14
R13-15	2G14
[illegible]5	[illegible]10
*SECTOR 0	[illegible]
SECTOR 0	[illegible]
*SECTOR 1	3[illegible]
SECTOR 1	3[illegible]
*SECTOR 2	3D14
SECTOR 2	3D14
*SEEKEND 0	3G14
SEEKEND 0	3G14
*SEEKEND 1	3E14
SEEKEND 1	3E14
*SEEKEND 2	3D14
SEEKEND 2	3D14
*SEEK ERR	3I14
SEEK ERR	3I14
*SEL0, *SEL1	3B1
SEL0, SEL1	3B1
*SEL2, *SEL3	4G1
SEL2, SEL3	4G1

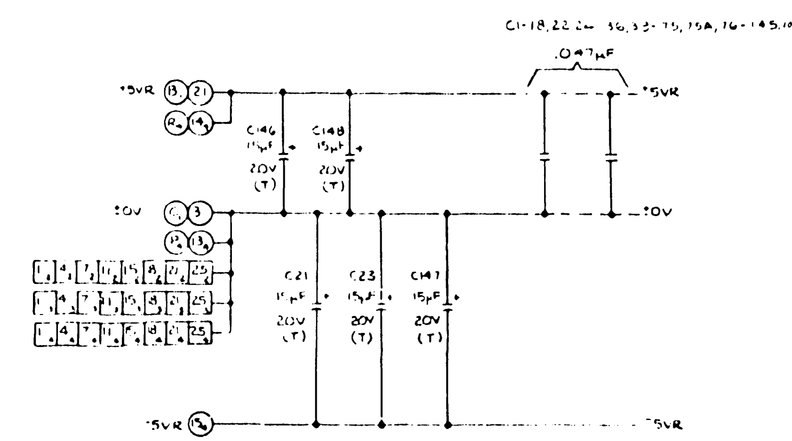
MNEMONICS	COORD
*SEL TAG	3B1
SEL TAG	3B1
*SERVO CLK 0	4K14
SERVO CLK 0	4K14
*SERVO CLK 1	4I14
SERVO CLK 1	4I14
*SERVO CLK 2	4H14
SERVO CLK 2	4H14
5VR	3K1
*TAG1 *TAG3	3G1
TAG1 TAG3	3G1
TO2	2H14
TO4	2H14
TO6, TO7	2H14
*UNIT RDY	3H14
UNIT RDY	3H14
*UNIT SEL 0	3G14
UNIT SEL 0	3G14
*UNIT SEL 1	3E14
UNIT SEL 1	3E14
*UNIT SEL 2	3D14
UNIT SEL 2	3D14
*WRITE CLK 0	4E1
WRITE CLK 0	4E1
*WRITE CLK 1	4D1
WRITE CLK 1	4D1
*WRITE CLK 2	4C1

MNEMONICS	COORD
*WRITE CLK 2	4C1
*WRITE DATA 0	4C1
WRITE DATA 0	4E1
*WRITE DATA 1	4E1
WRITE DATA 1	4D1
*WRITE DATA 2	4C1
WRITE DATA 2	4C1
*WRITE PRO	3J14
WRITE PRO	3J14

TYPE	IC LOCATION	SPARES
74[illegible]	L37	1
74LS02	L104	1
7404	L103	1
74LS04	L63	1
74LS11	L99	2
74LS27	L[illegible]	1
7432	L21	1
74LS[illegible]	L84	1
	L[illegible]	1
74LS86	L89	1
[illegible]03	L[illegible]	2
74LS10	L143	1
74LS08	L160	1
74LS86	L79	1
74LS74	L75	1
	L[illegible]	1

2 [illegible] 239 + 377 OR 378			
[illegible]	[illegible]	L35	L36
8300 A	8300	[illegible] 5143-[illegible]	[illegible]-5144-R[illegible]





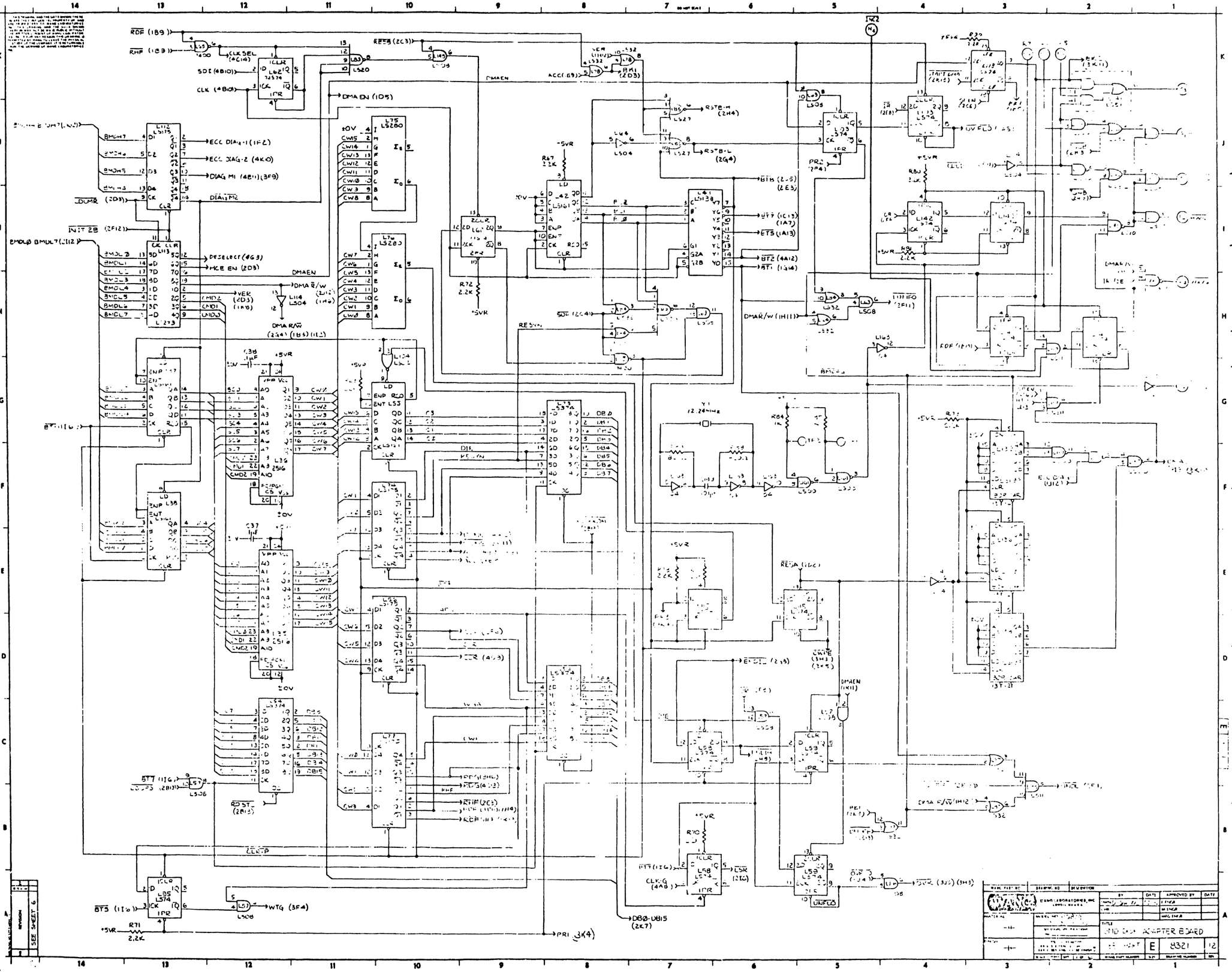
NOTES:
1. ALL RESISTORS ARE 1/4 W 5% UNLESS OTHERWISE SPECIFIED

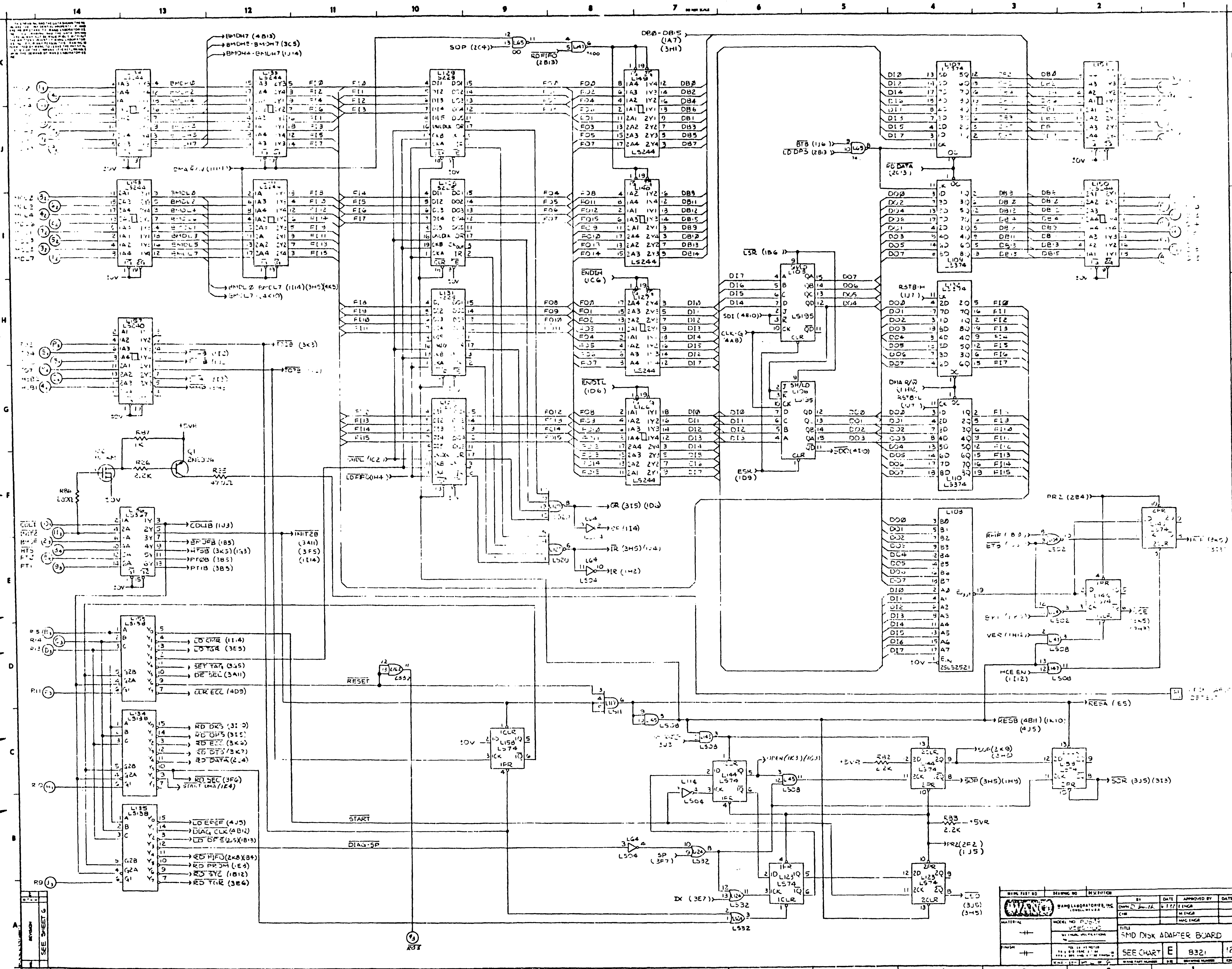
REV 6

[illegible] PORT ADAPTER M/L

TIE CHART | E | 8300 | 12

HH6


RDF (1B9)
RMF (1B9)
CLK SEL (4C14)
SDE (4B10)
CLK (4B10)
DMA EN (1D5)
DMAEN
RESYN (2C3)
ACC (1G9)
BMI (2D3)
BMDL7 (L112)
BMDL0 BMDL7 (L112)
INIT 2B (2F12)
DIAGM2
DESELECT (4G3)
MCE EN (2D3)
DMA R/W (2J2) (1H6)
DMA R/W (2J4) (1B6) (1L2)
VER (2D3) (1H6)
CMD2
CMD1
CMD3
+5VR
+5V
+10V
-10V
R67 2.2K
R72 2.2K
R71 2.2K
R10
R64
R80
R84
R74
C37 1MF
C38 1MF
Y1 12.288MHz
SDE (2C4)
RESYN
DMAR/W (1H11)
BTS (1H6)
ETS (1A13)
BT2 (4A12)
AT1 (1A14)
BTS (1H6)
RDST (2B13)
WTG (3F4)
PRI (3K4)
DB0-DB15 (2K7)
CLK:G (4A8)
CSR (2K6)
RDF (1B9)
RMF (1B9)
DMAEN (1K11)
DMA R/W (1H12)
PRI (1A1)
EVEN (3J12)
ODD (3J12)
OVFLO (2E5)
INIT ERR (2K15)
PRE (2B8)
PRE (2G6)
PRE (2H4)
PRE (2H3)
PRE (2H2)
PRE (2H1)
R3TB-M (2H4)
R3TB-L (2G4)
BTB (2-5) (2E3)
DMAEN (1K11)
DMA R/W (1H12)
DMAR/W (1K12)
DMAEN (1K12)
RESA (1C6)
EVEN (2J3)
ODD (3J3)
WTG (3J3) (3H3)
SEE SHEET 6
REVISION
MAIN PART NO.
DESCRIPTION
DATE
APPROVED BY
DRAWN
TRACED
CHECKED
ENGR
MFG ENGR
MAGNETICS
TITLE
MID DISK ADAPTER BOARD
SIZE
E
8321
REV
SHEET
12
JJ1



WANG LABORATORIES, INC.
SMD DISK ADAPTER BOARD
SEE CHART
E
8321
12
REVISION
SEE SHEET 6

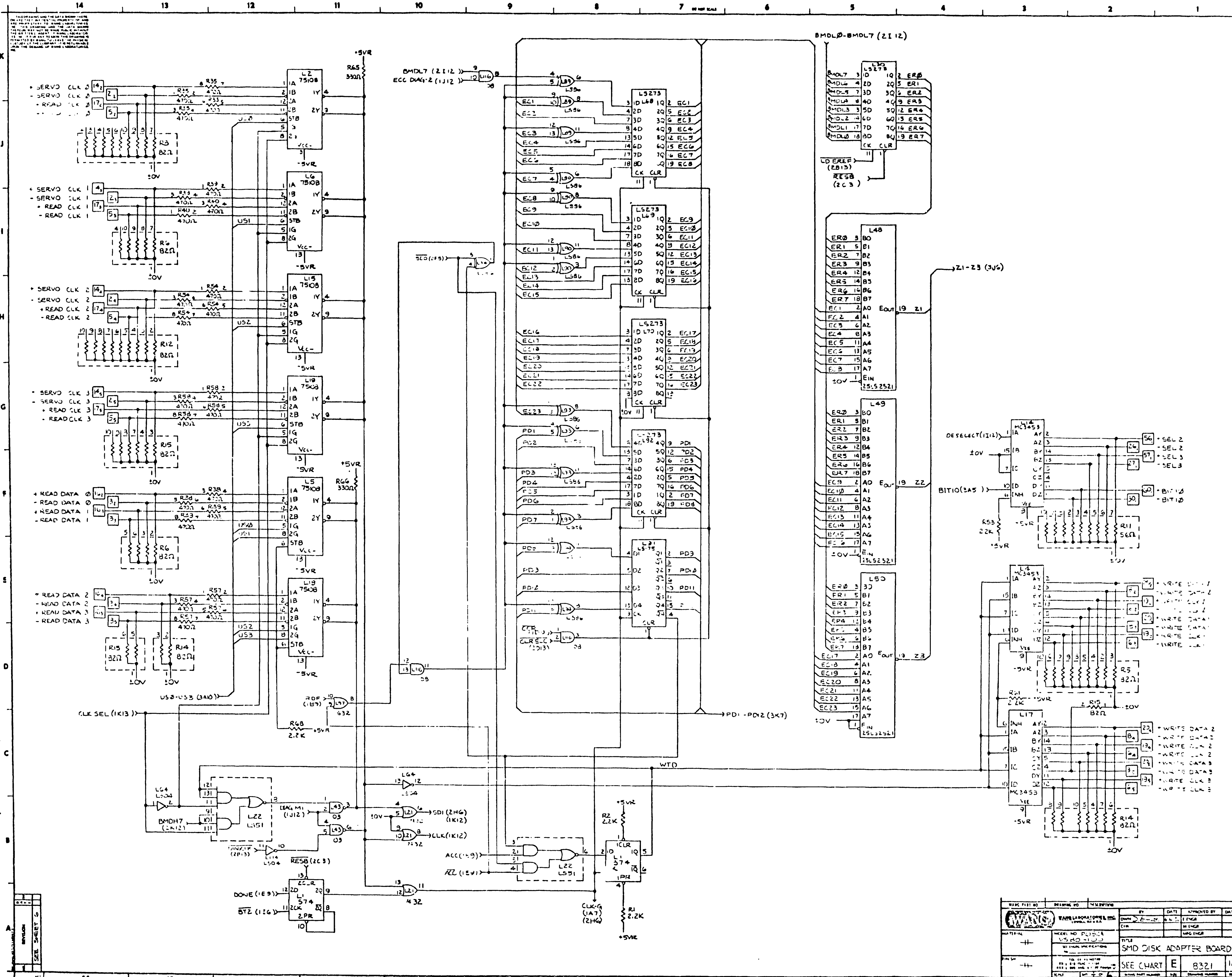
JJ2

SAID DISK ADAPTER BOARD

WANG LABORATORIES, INC.

SEE SHEET 6

JJ3


BMDLØ-BMDL7 (2I12)
BMDL7 (2I12)
ECC DIAG-2 (1J12)
+ SERVO CLK Ø
- SERVO CLK Ø
+ SERVO CLK 1
- SERVO CLK 1
+ READ CLK 1
- READ CLK 1
+ SERVO CLK 2
- SERVO CLK 2
+ READ CLK 2
- READ CLK 2
+ SERVO CLK 3
- SERVO CLK 3
+ READ CLK 3
- READ CLK 3
+ READ DATA Ø
- READ DATA Ø
+ READ DATA 1
- READ DATA 1
+ READ DATA 2
- READ DATA 2
+ READ DATA 3
- READ DATA 3
75108
LS273
25LS2521
MC3453
Z1-Z3 (3J6)
LD EREF (2B13)
RESB (2C3)
DESELECT(1I12)
BITIO(3A5)
+ SEL 2
- SEL 2
+ SEL 3
- SEL 3
+ WRITE DATA 2
- WRITE DATA 2
+ WRITE CLK 2
- WRITE CLK 2
+ WRITE DATA 3
- WRITE DATA 3
+ WRITE CLK 3
- WRITE CLK 3
US0-US3 (3A10)
CLK SEL (1K13)
RDF (1B9)
BMDH7 (2K12)
DIAG M1 (1J12)
SDI (2H6) (1K12)
CLK (1K12)
ACC (1E9)
DONE (1E9)
BTZ (1E6)
CLK-G (1A7) (2H6)
PD1-PD12 (3K7)
WTD
+5VR
-5VR
±0V
WANG LABORATORIES, INC.
SMD DISK ADAPTER BOARD
SEE CHART
E
8321
12

JJ4

J5 J4 J1 J3 J2

8321- -R5

P4 P3 P2 P1

S → A

SEE SHEET 6

WANG

SMD DISK ADAPTER BOARD

SEE CHART | E | 8321 | 12

JJ5

IC LOCATION	TYPE	WL PART NO
[illegible]	7438	376-0202
[illegible]	7404	376-0089
[illegible]	MC 7450	376-0275
[illegible]	MC8838	376-0274
[illegible]	MC832	376-0211
[illegible]	74LS51	376-0213
[illegible]	[illegible]	376-[illegible]
[illegible]	74LS244	376-0289
[illegible]	[illegible]	376-0332
L30 L34 [illegible]	74LS273	376-0332
L31	74LS174	376-0153
L32 L33 L34 L35 L37, L39 L40 L42 L44	74LS374	376-0280
[illegible]	74LS175	376-0130
L36,38	2716	SEE CHART
[illegible]	74LS241	376-0233
L39 L40 L41 L43, L45 L46 L48 L49 L50 L51, L52, L53	SPARE	
L43	7433	376-0013
L44 L45 L46	74LS133	376-0028
L47 L48 L49	74LS153	376-0156
L47 L48 L49 L50 L51	74LS321	376-0317
[illegible]	74LS08	376-0158
L52 L53 L54 L55 L56 L57 L58 L59 L60 L61 L62 L63 L64 L65 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 L100 L101 L102 L103 L104 L105 L106 L107 L108 L109 L110 L111 L112 L113 L114 L115 L116 L117 L118 L119 L120 L121 L122 L123, L124 L125 L126 L127 L128 L129 L130 L131 L132 L133	74LS374	376-0155
[illegible]	74LS04	376-0180
[illegible]	74LS20	376-0207
[illegible]	74LS240	376-0297
[illegible]	74LS241	376-0242
[illegible]	74LS240	376-0240
[illegible]	74LS243	376-0243
[illegible]	74LS32	376-0231
[illegible]	[illegible]	376-0325
[illegible]	74LS132	376-0209
[illegible]	74LS138	376-0349
[illegible]	74LS[illegible]	376-0323
[illegible]	74LS139	376-0298
[illegible]	74LS133	376-0220
[illegible]	74LS03	376-0132
L153	7424	376-0010
[illegible]	74LS27	376-[illegible]
L193	74LS10	376-0199
[illegible]	7404	376-[illegible]
L195	7400	376-0202
L196	[illegible]	376-3003

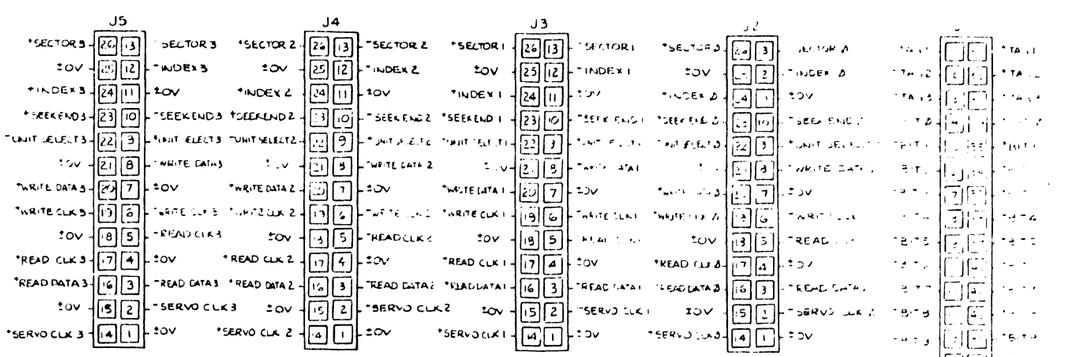
COMPONENT	TYPE	W.L. PART NO.
R1,2,26,51,53,61,62, 63,64,67,68,69,70, 71,72, 76,77,78, 79,80 & 82,83,90	2.2K, ¼W 5%	330-3023
R3,5,6, 14,15	82Ω, SIP (5)	333-0804
R4,7,10,11,13,16,47, 48,49,50 52	5K Ω, SIP (13)	333-0802
R8,9,17,18,19,20, 21,22,23,24,27,28, 29,30,31,32,33,34, 42,43	10K, ¼W, 5%	330-4011
R25	470Ω, ¼W, 5%	330-2048
R35,36,37,38,39, 40,41,44,45,46,54 55,56,57,58,59,60	470Ω, SIP (5)	333-0803
R65 66	330Ω, ¼W, 5%	330-2034
R73,75	1K, SIP (9)	333-0837
R84 85 87	1K, ¼W, 5%	330-3011
R86	220Ω, ¼W 5%	330-2023
R88,89	820Ω, ¼W, 5%	330-2083
[illegible]	.047μF, 50V	300-1866
[illegible]	15μF 20V,(T)	300-4022
C37,38	1μF 50V	300-1930
C49	.01μF, 25V	300-1303
[illegible]	24121806	376-0017
[illegible]	VARIONT	376-[illegible]
[illegible]	TRANSPAD	376-0004
VR	12.24 MHz	321-0319
SW1,2	10 POS DIP	325-1503
J1	60 POS	350-0357
J2,3,4,5	26 POS	350-0056
[illegible]	PIN	454-[illegible]
[illegible]	PAGE PLATE	454-0015-92
[illegible]	5 MHz XTAL	420-[illegible]
[illegible]	[illegible]	[illegible]

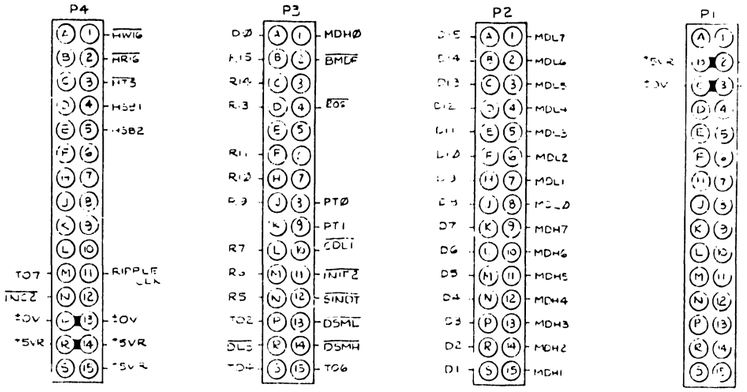
TYPE	LOCATION	SPARES
[illegible]	[illegible]	[illegible]
[illegible]	L103	1
74LS244	L38	1
74LS241	L39	2
74LS245	[illegible]	1
74S20	L121	1
[illegible]	L194	1
[illegible]	L192	1
[illegible]	[illegible]	[illegible]
74LS86	L88	1
7404	L43	2
74LS175	L149	1
74LS08	L140	1
74LS74	L178	1
	L125	1

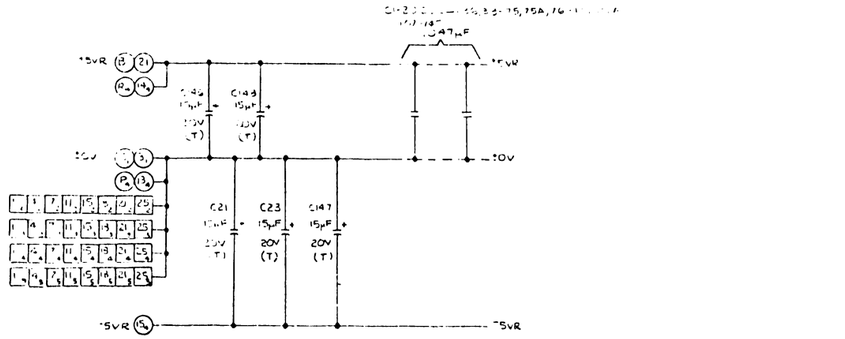
2.5 3.2 3.8 4.5 5.8 OR 377			
210	10A	L35	L16
8321A	332	[illegible]	[illegible]

MNEMONICS	COORD.
[illegible]	3G1
[illegible]	3G1
*BIT10	4F1
BIT10	4F1
BMDF	2E14
*BUSY	3K14
BUSY	3J14
[illegible]	
CDLT	2F14
[illegible]	
DLS	1K1
DSMH	1J1
DSML	1J1
D0-D15	2K1
[illegible]	
*FAULT	3E14
FAULT	3E14
[illegible]	
HSB1	3G14
HSB2	2G14
HRIG	1H1
HTS	2E14
HWIG	1E1
[illegible]	
INIT2	1K5
[illegible]	3G14
[illegible]	3J14
*INDEX1	3F14
INDEX1	3F14
*INDEX2	3D14
INDEX2	3D14
*INDEX3	3C14
INDEX3	3C14
INIT2	2P14
[illegible]	
MFM PULSE	2K14
MFM CLK	2E14
*ON CYL	3E14
ON CYL	3H14
OFFSET	2D1
PTØ,PT1	2E14
[illegible]	
*READ CLK Ø	4J14
READ CLK Ø	4J14
*READ CLK 1	4J14
READ CLK 1	4J14
*READ CLK 2	4H14
READ CLK 2	4H14
*READ CLK 3	4H14
READ CLK 3	4H14
*READ DATA	4E14
READ DATA	4E14
*READ DATA 1	4E14
READ DATA 1	4E14
*READ DATA 2	4E14
READ DATA 2	4E14
*READ DATA 3	4E14
READ DATA 3	4E14
*READ CLK	4E14
READ CLK	4E14
R	1K1
RD 11	2 14
R13-15	[illegible]
[illegible]	[illegible]
RESTORE	3 [illegible]
[illegible]	[illegible]
SECTOR 0	3E14
SECTOR 0	3E14
SECTOR 1	3E14
SECTOR 1	3E14
SECTOR 2	3D14
SECTOR 2	3D14
SECTOR 3	3H14
SECTOR 3	3H14
SEEK END 0	3J14
SEEK END 0	3J14
SEEK END 1	3E14
SEEK END 1	3E14
SEEK END 2	3D14
SEEK END 2	3D14
SEEK END 3	3H14
SEEK END 3	3H14
SERVO CLK	3J14
SERVO CLK	3J14
SEL 1	3B1
SEL 1	3B1
[illegible]	4C14
[illegible]	4C14
SERVO CLK 1	4J14
SERVO CLK 1	4J14
[illegible]	4H14
[illegible]	4H14
SERVO CLK 3	4J14
SERVO CLK 3	4J14
SERVO CLK	4C14
SERVO CLK	4C14
SYNC	3A1
[illegible]	[illegible]
[illegible]	3J1
[illegible]	3J1
T02	2H14
T04	2H14
T06,T07	2H14
[illegible]	[illegible]
UNIT SEL 0	3H14
UNIT SEL 0	3H14
[illegible]	[illegible]
UNIT SEL 1	3E14
UNIT SEL 1	3E14
UNIT SEL 2	3D14
UNIT SEL 2	3D14
UNIT SEL 3	3B14
UNIT SEL 3	3B14
[illegible]	[illegible]
WRITE CLK 0	4E1
WRITE CLK 0	4E1
WRITE CLK 1	4D1
WRITE CLK 1	4D1
WRITE CLK 2	4C1

MNEMONICS	COORD.
[illegible]	[illegible]
[illegible]	4C1
[illegible]	4C1
[illegible]	4C1
[illegible]	4E1
[illegible]	4E1
[illegible]	4E1
[illegible]	4C1
[illegible]	4C1
[illegible]	4C1
[illegible]	4C1
[illegible]	4C1
WRITE DATA 3	4C1
WRITE DATA 3	4C1
WRITE GATE	3J14
WRITE PRO	3J14







NOTES:
1. ALL RESISTORS ARE 1.4 W 5% UNLESS OTHERWISE SPECIFIED.

REV	DESCRIPTION	BY	DATE	APPROVED BY	DATE
A	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
B	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
C	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
D	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
E	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
F	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
G	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
H	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
J	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
K	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]

WANG LABORATORIES, INC. LOWELL, MASS.

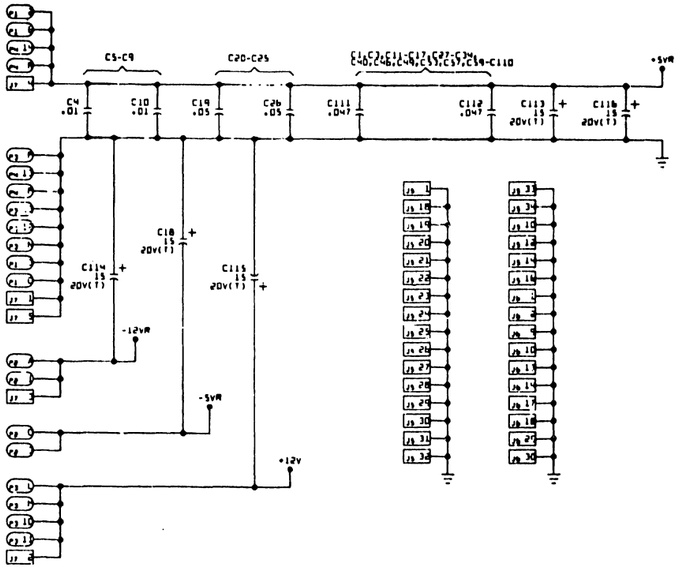
TITLE: CMD. DISK ADAPTER BOARD

SEE CHART | E | 8321 | 12

JJ6

NOTES

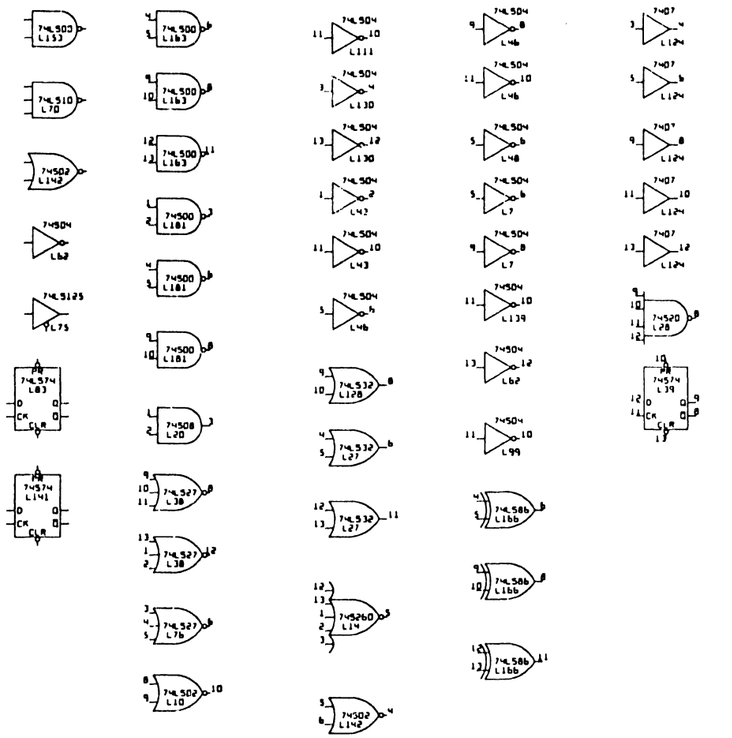
1. ALL RESISTOR VALUES IN OHMS.
2. ALL CAPACITOR VALUES IN MICROFARADS UNLESS OTHERWISE INDICATED.
3. ALL RESISTORS 1/4W 5% UNLESS OTHERWISE INDICATED.



MNEMONIC	LOCATION
*PROMRD	SK9
*PROMWRITE	SK8
IA	BB11
IB	BB11
2A	BA11
2B	BA11
3A	BC11
3B	BC11
4A	BC11
4B	BC11
BA1	SH14
BA2	SH14
BA3	SH14
BA4	SH14
BA5	SH14
BA6	SH14
BA7	SH14
BA8	2A8
BA9	SG14
BA10	SG14
CMD	BJ1
CMD	BJ1
CH1	BJ1
CH1	BJ1
CH2	B11
CH3	B11
CTS	BA7
CTS	BA7
DCD	EA7
DCD	BA8
DMAPT	SK7
FRST	JJ3
LDD0	SD3
LDD1	SD2
LDD2	SD3
LDD3	SD2
LDD4	SD3
LDD5	SD2
LDD6	SC3

MNEMONIC	LOCATION
LDD7	SC2
LDD8	SD3
LDD9	SD2
LDD10	SD3
LDD11	SC2
LDD12	SC3
LDD13	SC2
LDD14	SC3
LDD15	SC2
LPDD0	XC14
LPDD1	XC14
LPDD2	XC14
LPDD3	XC14
LPDD4	XC14
LPDD5	XC14
LPDD6	XC14
LPDD7	XC14
M(RR)	SH1
MRQ(RR)	SG1
PBIPRDBODY	BJ1
PBIWRD	JD2
PBTINPUTRDY	JD2
RDRF	XB14
RDY1H	SH1
RST	BJ1
RST	BJ1
RTS	BH1
RTS	BH1
RxD	BA8
RxD	BA8
TxD1	BH1
TxD1	BH1
TxD0	BA7
WRITH	SH1
XRDY	XC14
CH3	BH1
CH3	BH1
CH4	BH1
CH4	BH1

SPARES



E REV
4 N

210	209	L183	L162	L53-61	L53,77	L121,113	L112,114	L81
8369A	8369	378-9021-R3	DO NOT LOAD	377-0417	377-0411	377-0403	377-0371	377-0368

210-209 + 377 OR 378

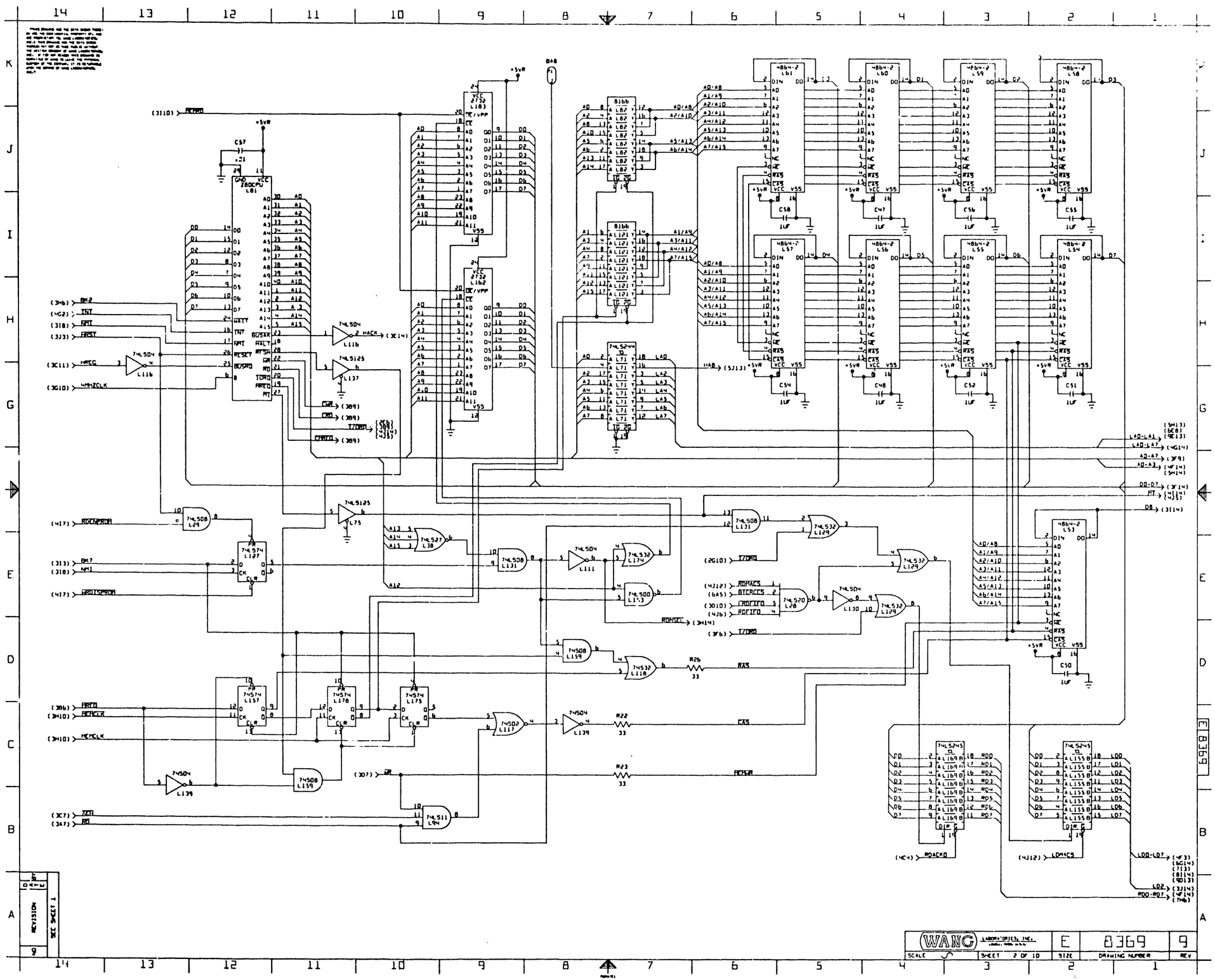
REV	REVISION	PDD	BN	JSM	PGD	OSS	BN	BN	PGD	KTM	KTM
			11-27-82	10-15-82	12-8-82	3/16/83	5-20-83	6-27-83	9-25-83	1-24-84	03-29-84
0	INITIAL RELEASE										
1				ORIGINATED PER DWR NO. 2490B APPR: G.S. PER 8.0000HY							
2					ORIGINATED PER DWR NO. 2562 APPR: G.S.						
3						ORIGINATED PER DWR NO. 2660B APPR: ALL					
4							ORIGINATED PER DWR NO. 2681H APPR: 27804				
5								ORIGINATED PER DWR NO. 2620B APPR:			
6									REVISED PER ECO NO. 28632 APPR:		
7										REVISED PER ECO NO. 30767 CHKD:	
8											REVISED PER ECO NO. 31780 CHKD:
9											

WANG LABORATORIES, INC.

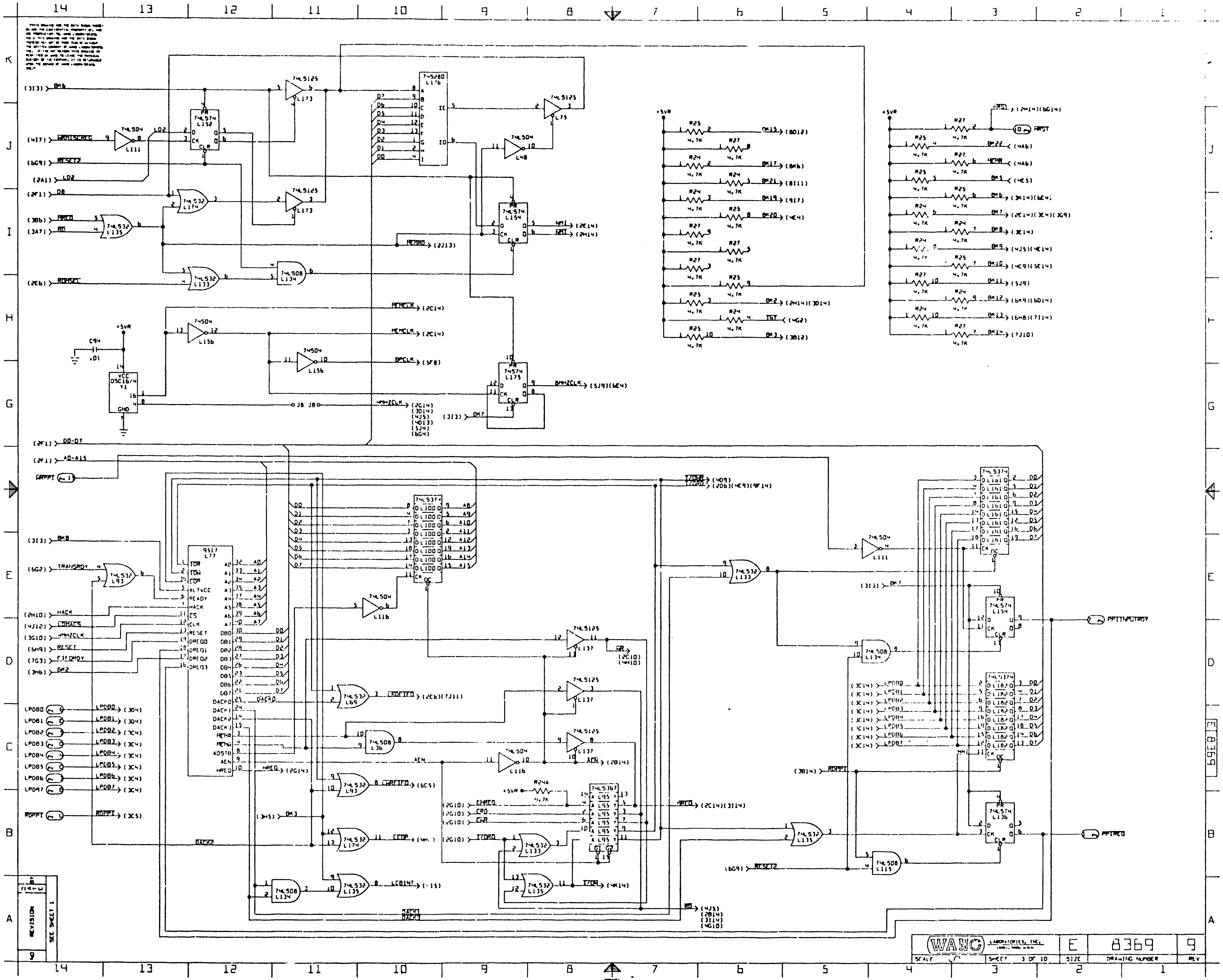
SCHEMATIC DIAGRAM	
TITLE	928W LINK
MODEL NUMBER	V5/80/100
WANG PART NUMBER	SEE CHART
DWN BN / CHK / ENG RL / DIR	
SIZE	E
DRAWING NUMBER	8369
REV	9
SCALE	
SHEET	1 OF 10

E 8369

KK1



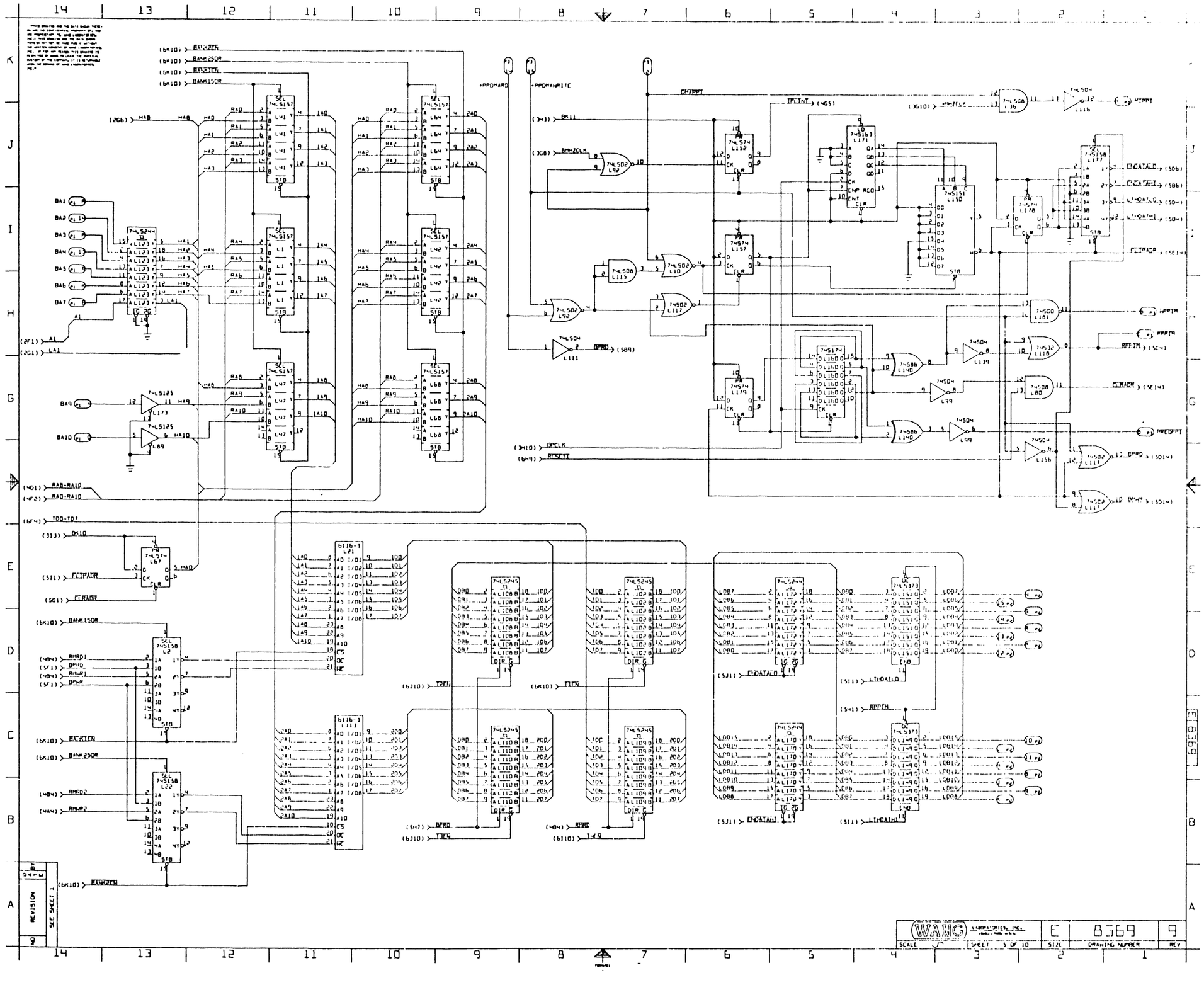
WANG LABORATORIES, INC.		E	8369	9
SCALE	SHEET 2 OF 10	SIZE	DRAWING NUMBER	REV



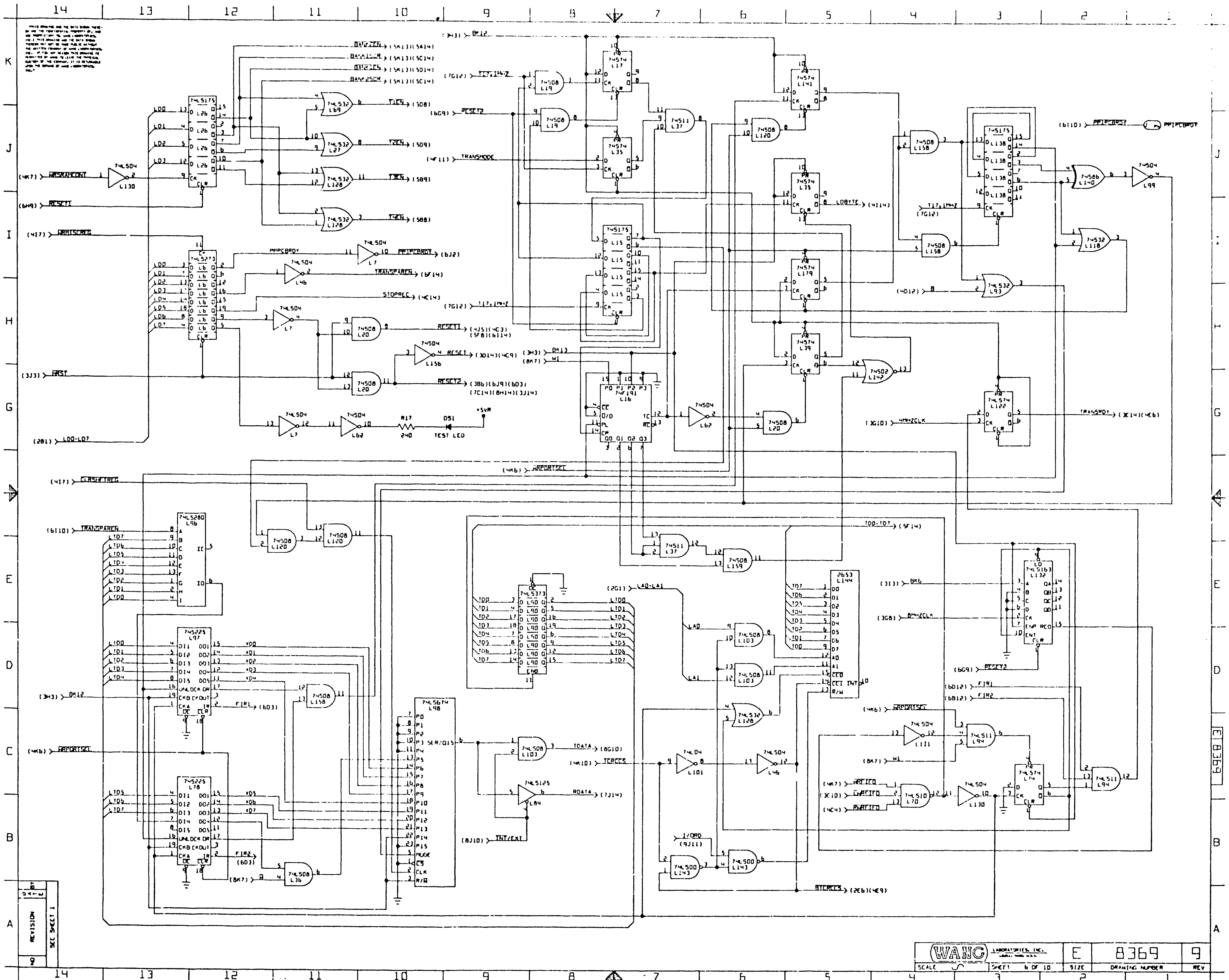
WANG LABORATORIES, INC.
E
8369
9
SCALE
SHEET 3 OF 10
SIZE
DRAWING NUMBER
REV
REVISION
SEE SHEET 1
74LS125 L173
74LS74 L152
74LS04 L111
74LS32 L174
74LS32 L135
74LS32 L133
74LS08 L134
74S280 L176
74LS125 L75
74LS04 L48
74LS74 L154
74S04 L156
74S74 L175
OSC16/4 Y1
C94 .01
+5VR
9517 L77
74LS374 L100
74LS374 L161
74LS374 L182
74LS32 L93
74LS32 L69
74LS08 L36
74LS04 L116
74LS125 L137
74LS367 L95
74LS74 L136
74LS08 L115
R24A 4.7K
MEMRD (2J13)
MEMCLK (2C14)
BPCLK (5F8)
8MHZCLK (5J9)(6E4)
4MHZCLK (2G14) (3D14) (4J5) (4D13) (5J4) (6G4)
NMI (2E14)
RST (2H14) (6G14)
RRST
BK2 (2H14)(3D14)
INT (4G2)
BK3 (3B12)
BK15 (8D12)
BK17 (8K6)
BK21 (8I11)
BK19 (9I7)
BK20 (4E4)
BK22 (4A6)
BK5 (4E5)
BK6 (3K14)(6E4)
BK7 (2E14)(3E4)(3G9)
BK8 (3E14)
BK9 (4J5)(4E14)
BK10 (4C9)(5E14)
BK11 (5J9)
BK12 (6K9)(6D14)
BK13 (6H8)(7I14)
BK14 (7J10)
D0-D7
A0-A15
HACK
RESET
FIFORDY
TRANSRDY
PPTINPUTRDY
PPTREQ
RDPPT
HREQ (2G14)
HRED (2C14)(3I14)
RD (4J5) (2B14) (3I14) (4G10)
AEN (2B14)
DACK0
DACK2
DACK3
LPDB0
LPDB1
LPDB2
LPDB3
LPDB4
LPDB5
LPDB6
LPDB7

KK3

KK4

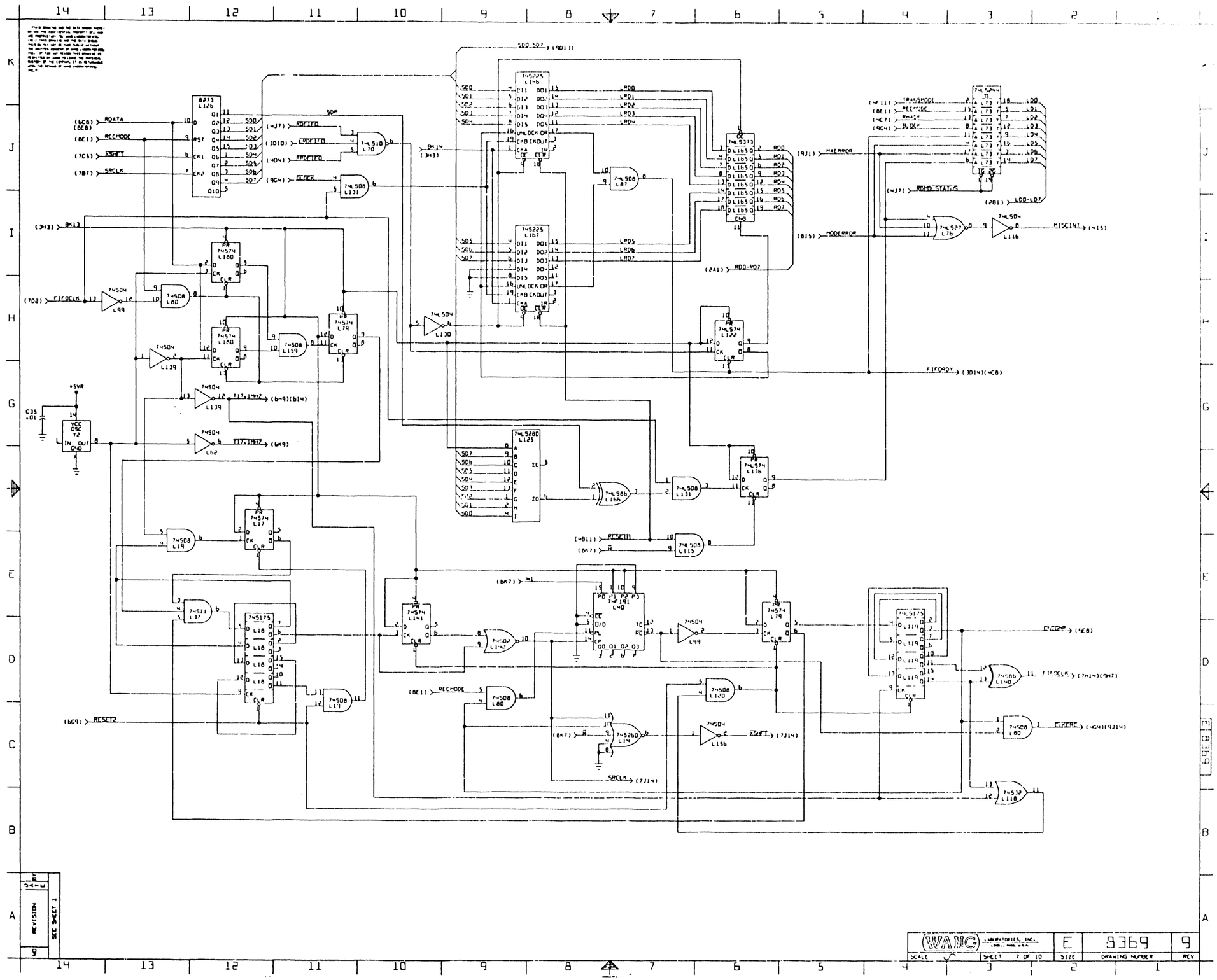

BANK2CN
BANK2SR
BANK1CN
BANK1SR
MA0
MA1
MA2
MA3
MA4
MA5
MA6
MA7
MA8
MA9
MA10
BA1
BA2
BA3
BA4
BA5
BA6
BA7
BA9
BA10
RA0-RA10
TD0-TD7
BK10
FCTPADR
FCTRADR
RMRD1
DPWD
RMWR1
DPWR
RMRD2
RMWR2
+PPDMAREAD
+PPDMAWRITE
CHAPPT
IPCINT
BPRO
DPCLK
RESETT
T2CH
T1CH
DPRD
T1CH
RPRD
T1CH
PDATA00
PDATA01
PDATA02
PDATA03
PDATA04
PDATA05
PDATA06
PDATA07
LDATA00
LDATA01
LDATA02
LDATA03
LDATA04
LDATA05
LDATA06
LDATA07
RPPTH
LPPTH
RPPTM
RPETM
CHARM
PRCPPT
BPRO
BPWR
REVISION
SEE SHEET 1
WANG LABORATORIES, INC.
SCALE
SHEET 5 OF 10
E
8369
SIZE
DRAWING NUMBER
9
REV

KK5



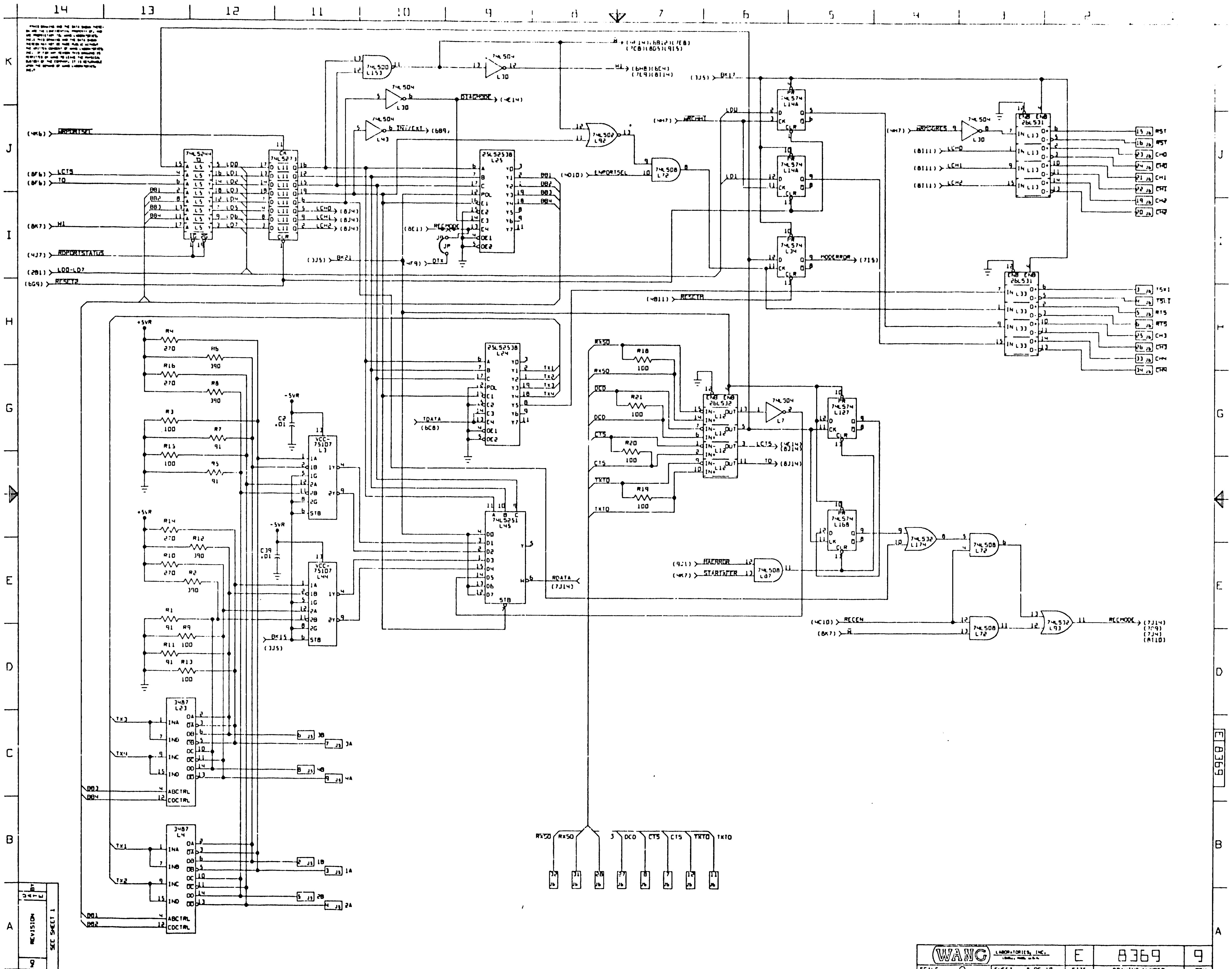
BANK0EN (5K13)(5A14)
BANK1SCR (5K13)(5C14)
BANK2EN (5K13)(5D14)
BANK2SCR (5K13)(5C14)
(4K7) HRSRAMCONT
74LS04 L130
74LS175 L26
LD0
LD1
LD2
LD3
(6H9) RESET1
74LS32 L69
T1EN (5D8)
74LS32 L27
T2EN (5D9)
74LS32 L128
T3EN (5B9)
T4EN (5B8)
(4I7) HRHISCREG
74LS273 L6
LD0-LD7
PPPCBRDY
74LS04 L7
PPIPCBRDY (6J2)
74LS04 L46
TRANSPAREN (6F14)
STOPREC (4C14)
74S08 L20
RESET1 (4J5)(4C3)(5F8)(6I14)
(3J3) HRST
74S04 L156
RESET (3D14)(4C9)
RESET2 (3B6)(6J9)(6D3)(7C14)(8H14)(3J14)
74S04 L62
R17 240
DS1 TEST LED
+5VR
(2B1) LD0-LD7
(3H3) BK12
(7G12) T17,1MHZ
74S08 L19
74S74 L17
(6G9) RESET2
74S74 L35
(4F11) TRANSMODE
74S11 L37
74S175 L15
(3H3) BK13
(8K7) H1
74F191 L16
TEST LED
74S74 L141
74S08 L120
74S74 L35
LOBYTE (4I14)
74S74 L179
74S74 L39
74S02 L142
74S08 L158
74S175 L138
(6I10) PPIPCBRDY
PPIPCBRDY
74S86 L140
74S04 L99
74S32 L118
74LS32 L93
(4D12) B
74LS74 L122
(3G10) 4MHZCLK
TRANSRDY (3E14)(4E6)
(4K6) HRPORTSEL
(4I7) CLRSHFTREG
(6I10) TRANSPAREN
74LS280 L96
74S225 L97
74S225 L78
FIR1 (6D3)
FIR2 (6D3)
74LS08 L36
(8K7) B
74LS674 L98
74LS08 L103
TDATA (8G10)
74LS125 L84
RDATA (7J14)
(8J10) INT/EXT
74LS373 L90
TD0-TD7 (5F14)
(2G1) LA0-LA1
74LS08 L103
74LS32 L128
74LS04 L101
(4K10) TERCES
74LS04 L46
1/ORD (9J11)
74LS00 L143
BTERCES (2E6)(4E9)
2653 L144
(3I3) BK6
(3G8) 8MHZCLK
74LS163 L132
(6G9) RESET2
(6D12) FIR1
(6B12) FIR2
74LS04 L111
74LS11 L94
74LS10 L70
(4K7) HRFIFO
(3C10) CHRFIFO
(4C4) RHRFIFO
74LS04 L130
74LS74 L74
REVISION
SEE SHEET 1
WANG LABORATORIES, INC.
SCALE
SHEET 6 OF 10
SIZE E
DRAWING NUMBER 8369
REV 9

KK6



WANG LABORATORIES, INC.	E	9369	9
SCALE	SHEET 7 OF 10	SIZE	DRAWING NUMBER	REV

KK7



74LS244
74LS273
74LS00
74LS04
74LS02
74LS08
74LS74
74LS32
25LS2538
74LS251
26LS31
26LS32
75107
3487
LCTS
TQ
RDPORTSTATUS
LD0-LD7
RESET2
DIAGMODE
INT/EXT
ENPORTSEL
RECMODE
MODERROR
RESETA
RDATA
TDATA
HAERROR
STARTXFER
RECEN
RXSD
DCD
CTS
TXTO
TXIO
RST
CH0
CH1
CH2
CH3
CH4
TSXT
RTS
+5VR
-5VR
ABCTRL
CDCTRL
REVISION
SEE SHEET 1
WANG LABORATORIES, INC.
E
8369
9
SCALE
SHEET 8 OF 10
SIZE
DRAWING NUMBER
REV

KK8

(7C2) > CLKCMC

(4J10) > MCMCES

(3F6) > T/ORD

(2G1) > L40-L41

(4H7) > RMHARFG

(7K8) > SD0-SD7

(2B1) > LD0-LD7

(7D2) > FJTOCLK

(4H7) > MPBLOCKEN

(4H6) > RMPORTSEL

(3J5) > RM19

(4B11) > PESETM

(8A7) > R

(4H7) > RCHARFG

(4H7) > RCOAPEG

EOP 19

(7J4) > BLOCK

(7J11) > BLOCK

(7D2) > ENCOPP

WANG		E	8369	9
SCALE	SHEET 9 OF 10	SIZE	DRAWING NUMBER	REV

REVISION	BY
9	

SEE SHEET 1

ITEM	REFERENCE DESIGNATOR	DESCRIPTION	(WANG) PART NO	QTY
1	L1,41-42,47,64,68,147	74LS157	376-0216	7
2	L2,22,177	74S158	376-0301	3
3	L3,44	7507	376-0146	2
4	L4,23	MC3487	376-0577	2
5	L5,73,172,71,123, 104,110	74LS244	376-0621	7
6	L6,11	74LS273	376-0302	2
7	L7,30-33,48,46, 111,146,130,138	74LS04	376-0180	9
8	L8	74LS139	376-0226	1
9	L9	74S139	376-0333	1
10	L10,92	74LS02	376-0208	2
11	L12	28L532	376-0471	1
12	L13,31	28L531	376-0470	2
13	L14	74S260	376-0206	1
14	L15,138,18,119	74S175	376-0270	4
15	L16,40	74F191	376-0581	2
16	L17,35,36,141,15,175, 178,1-3,180,9	74S74	376-0202	10
17	L19,20,80,159,120,158	74S08	376-0200	6
18	L21,113	MM6116P-3	377-0403	2
19	L24,25	LS2538	376-0569	2
20	L26,88	74LS175	376-0160	2
21	L27,64,93,128,129 131,135,174	74LS32	376-0211	8
22	L28	74LS20	376-0210	1
23	L29,34,72,87,103, 1-5,139-141	74LS08	376-0153	8
24	L31	74LS191	376-0445	1
25	L39,3-51,52,67,74, 83,144,122,127,136 L62,134,168	74LS74	376-0155	14
26	L37	7411	376-0237	1
27	L38,76	74LS27	376-0245	2
28	L45	74LS251	376-0222	1
29	L49,136,50	74LS155	376-0159	3
30	L53-61	MM4864-2	377-0417	9
31	L62,99,139	7404	376-0197	3
32	L63,77	95174-4	377-0411	2
33	L65,129,102,110, 109,1-8,155,169	74LS245	376-0285	8
34	L66,12,161,182, 1-3,151,160	74LS374	376-0286	7
35	L75,84-87,137,173	74LS125	376-0486	5
36	L81	Z80ACPU	377-0368	1
37	L82,121	8166	376-0553	2
38	L85,144	2653	377-0441	2
39	L78,97,146,167	74S225	376-0323	4
40	L86	LS2521	376-0317	1
41	L90,151,165,149	74LS373	376-0310	4
42	L94	74LS11	376-0225	1
43	L95	74LS367	376-0192	1
44	L96,125	74LS280	376-0242	2
45	L70	74LS10	376-0209	1
46	L91	74S138	376-0298	1
47	L98	74LS674	376-0580	1
48	L101,164	74L04	376-0161	2
49	L112,114	Z80ACTC	377-0371	2
50	L117,142	74S02	376-0199	2
51	L118	74S32	376-0205	1
52	L124	7407	376-0056	1
53	L126	8273	376-0350	1
54	L132	74LS163	376-0574	1
55	L140	74S86	376-0271	1
56	L153,143,163	74LS00	376-0207	3
57	L150	74S151	376-0336	1
58	L160	74S174	376-0247	1
59	L162,183	2732A-2	377-0452	2
60	L166	74LS86	376-0231	1
61	L171	74S163	376-0235	1
62	L176	74S280	376-0246	1
63	L181	74S00	376-0228	1

ITEM	REF DESIGNATOR	DESCRIPTION	WANG PART NO	QTY
64	Y1	4MHZ XTAL	321-1004	1
65	Y2	17.1MHZ XTAL	321-1006	1
66	L53-61	16 PIN SKT	376-4002	9
67	L63,77,81	40 PIN SKT	376-9011	3
68	L21,113,162,183	24 PIN SKT	376-9003	4
69	DS1	RED LED	370-0075	1
70	J5,J6	34 PIN CONN	358-0429	2
71	J7	9B DEC SPIN	350-0234	1
72	J8	2 PIN MOR	350-0203	1
73	L112,114	28 PIN SKT	376-9815	2
74	R24,25,27	4.7K SIP	333-9812	3
75	R24A	4.7K 1/4W 5%	330-3048	1
76	R1,5,7,1	910OHM 1/4W 5%	330-1092	4
77	R2,6,8,12	3900HM 1/4W 5%	330-2040	4
78	R3,9,13,15,19,16, 20,21	100OHM 1/4W 5%	330-2011	8
79	R4,10,14,16	270OHM 1/4W 5%	330-2028	4
80	R17	2400HM 1/4W 5%	330-2025	1
81	R22,23,26	330HM 1/4W 5%	330-1034	3
82	C18,113,114,115,116	15UF 20V TANT	300-4022	5
83	C19-26	.05UF 16V	300-1930	8
84	C2-10,35,36, 37,39,84	.01UF 25V	300-1903	19
85	C47,48,50-56,58	1UF (MF) 50V	300-1931	9
86	C1,3,29,11-17,37,27, 28,33,34,40-45,49,38, 57,59,6053,59,61-75 80-32,77-93,95-112	.047UF 50V	300-1966	81
87				
88				
89	Y1,Y2	SKT 14 PIN	376-9077	2
90		4-40X3/8 SCREWS	650-2122	4
91		FACEPLATE	452-2835	1
92		PREM NUT	652-0073	4

REV	DESCRIPTION	DATE	APPD
9			

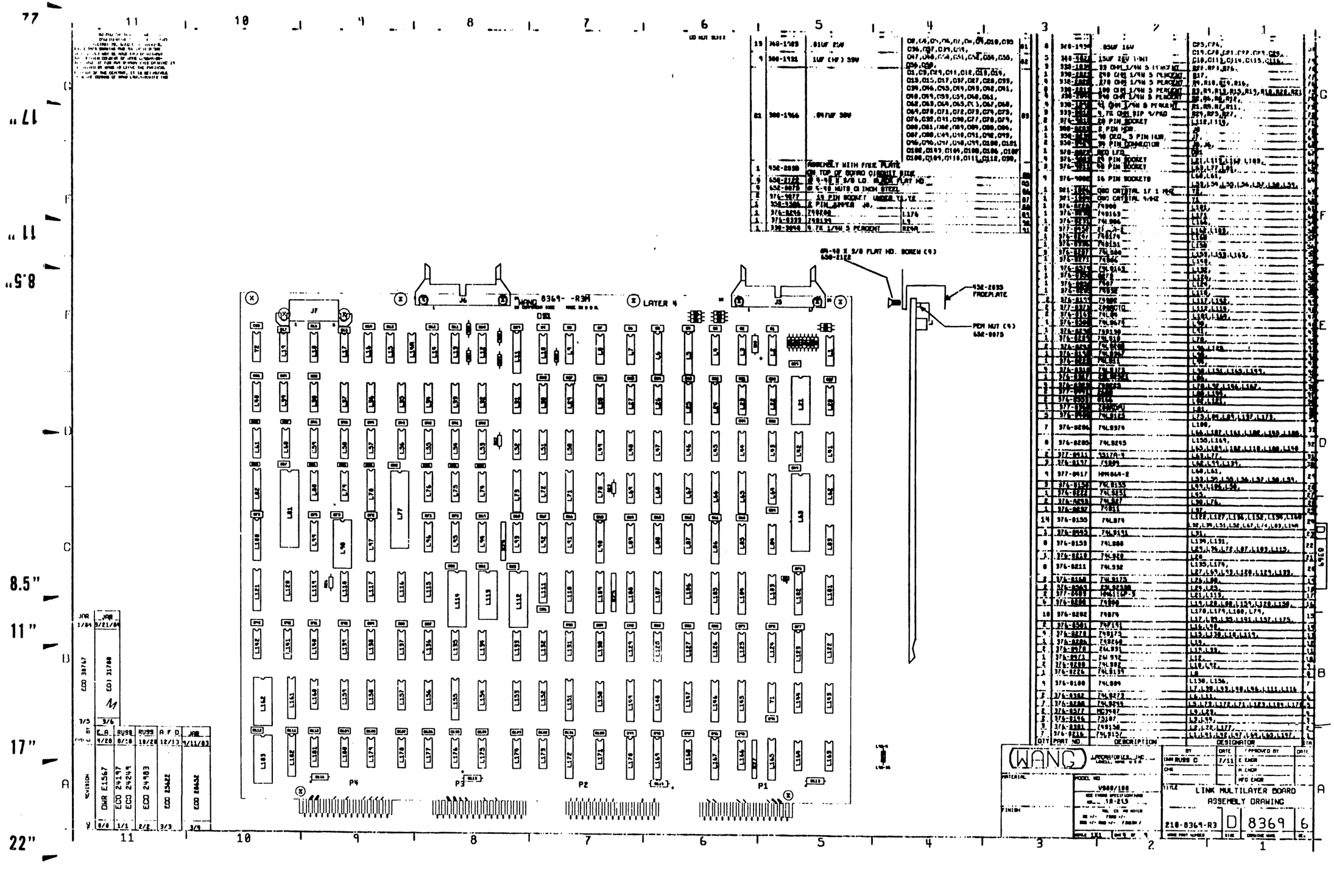
SEE SHEET 1

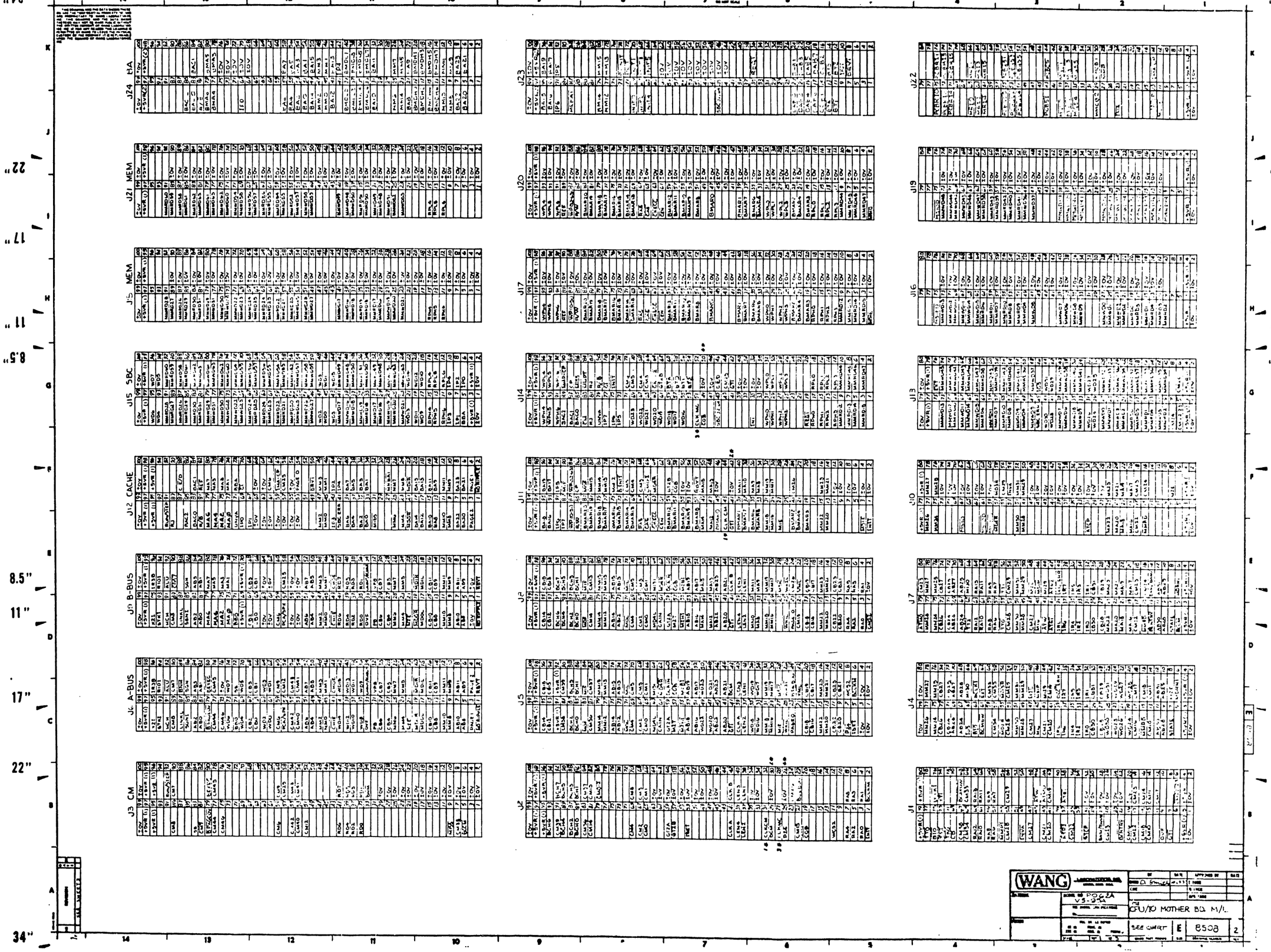
WANG LABORATORIES, INC.

SCALE	SHEET 10 OF 10	SIZE	DRAWING NUMBER	REV
S		E	8369	9

8369

KK10


J7
J6
J5
LAYER 4
P4
P3
P2
P1
68-90 X 3/8 FLAT HD. SCREW (4)
630-2122
430-2035
FACEPLATE
PEM NUT (4)
630-0075
WANG
LINK MULTILAYER BOARD
ASSEMBLY DRAWING
218-8369-R3
D
8369
6


J24 I/A
J21 MEM
J15 SBC
J12 CACHE
J5 MEM
J9 B-BUS
J6 A-BUS
J3 CM
J23
J20
J17
J14
J11
J8
J2
J5
J1
J22
J19
J16
J13
J10
J7
J4
WANG
CPU/IO MOTHER BD M/L
SEE SHEET
8508

IOP0 J28

Z	±0V	22	±0V
Y	+5VR(2)	21	+5VR(2)
X	-5VR	20	-5VR
W		19	
V		18	BMA3
U	BMA4	17	BMA5
T	BMA6	16	
S		15	
R		14	
P		13	
N		12	
M		11	
L		10	
K		9	
J	-13VUR	8	-13VUR
H		7	
F	±0V	6	±0V
E	±0V	5	±0V
D	BMDL7	4	BMDL6
C	BMDL5	3	BMDL4
B	BMDL3	2	BMDL2
A	BMDL1	1	BMDL0

IOP1 J32

Z	±0V	22	±0V
Y	+5VR(2)	21	+5VR(2)
X	-5VR	20	-5VR
W		19	
V		18	BMA3
U	BMA4	17	BMA5
T	BMA6	16	
S		15	
R		14	
P		13	
N		12	
M		11	
L		10	
K		9	
J	-13VUR	8	-13VUR
H		7	
F	±0V	6	±0V
E	±0V	5	±0V
D	BMDL7	4	BMDL6
C	BMDL5	3	BMDL4
B	BMDL3	2	BMDL2
A	BMDL1	1	BMDL0

IOP2 J36

Z	±0V	22	±0V
Y	+5VR(2)	21	+5VR(2)
X	-5VR	20	-5VR
W		19	
V		18	BMA3
U	BMA4	17	BMA5
T	BMA6	16	
S		15	
R		14	
P		13	
N		12	
M		11	
L		10	
K		9	
J	-13VUR	8	-13VUR
H		7	
F	±0V	6	±0V
E	±0V	5	±0V
D	BMDL7	4	BMDL6
C	BMDL5	3	BMDL4
B	BMDL3	2	BMDL2
A	BMDL1	1	BMDL0

IOP3 J40

Z	±0V	22	±0V
Y	+5VR(2)	21	+5VR(2)
X	-5VR	20	-5VR
W		19	
V		18	BMA3
U	BMA4	17	BMA5
T	BMA6	16	
S		15	
R		14	
P		13	
N		12	
M		11	
L		10	
K		9	
J	-13VUR	8	-13VUR
H		7	
F	±0V	6	±0V
E	±0V	5	±0V
D	BMDL7	4	BMDL6
C	BMDL5	3	BMDL4
B	BMDL3	2	BMDL2
A	BMDL1	1	BMDL0

IOP4 J44

Z	±0V	22	±0V
Y	+5VR(2)	21	+5VR(2)
X	-5VR	20	-5VR
W		19	
V		18	BMA3
U	BMA4	17	BMA5
T	BMA6	16	
S		15	
R		14	
P		13	
N		12	
M		11	
L		10	
K		9	
J	-13VUR	8	-13VUR
H		7	
F	±0V	6	±0V
E	±0V	5	±0V
D	BMDL7	4	BMDL6
C	BMDL5	3	BMDL4
B	BMDL3	2	BMDL2
A	BMDL1	1	BMDL0

IOP5 J48

Z	±0V	22	±0V
Y	+5VR(2)	21	+5VR(2)
X	-5VR	20	-5VR
W		19	
V		18	BMA3
U	BMA4	17	BMA5
T	BMA6	16	
S		15	
R		14	
P		13	
N		12	
M		11	
L		10	
K		9	
J	-13VUR	8	-13VUR
H		7	
F	±0V	6	±0V
E	±0V	5	±0V
D	BMDL7	4	BMDL6
C	BMDL5	3	BMDL4
B	BMDL3	2	BMDL2
A	BMDL1	1	BMDL0

J27

Z	BMDH2	22	BMDH3
Y	BMDH4	21	BMDH5
X	BMDH6	20	BMDH7
W	BMDH1	19	BMDH0
V		18	
U		17	
T		16	
S		15	
R	MM8	14	MM0
P	MM9	13	MM1
N	MM10	12	MM2
M	MM11	11	MM3
L	MM12	10	MM4
K	MM13	9	MM5
J	MM14	8	MM6
H	MM15	7	MM7
F		6	
E		5	
D		4	
C		3	
B		2	
A		1	

J31

Z	BMDH2	22	BMDH3
Y	BMDH4	21	BMDH5
X	BMDH6	20	BMDH7
W	BMDH1	19	BMDH0
V		18	
U		17	
T		16	
S		15	
R	MM8	14	MM0
P	MM9	13	MM1
N	MM10	12	MM2
M	MM11	11	MM3
L	MM12	10	MM4
K	MM13	9	MM5
J	MM14	8	MM6
H	MM15	7	MM7
F		6	
E		5	
D		4	
C		3	
B		2	
A		1	

J35

Z	BMDH2	22	BMDH3
Y	BMDH4	21	BMDH5
X	BMDH6	20	BMDH7
W	BMDH1	19	BMDH0
V		18	
U		17	
T		16	
S		15	
R	MM8	14	MM0
P	MM9	13	MM1
N	MM10	12	MM2
M	MM11	11	MM3
L	MM12	10	MM4
K	MM13	9	MM5
J	MM14	8	MM6
H	MM15	7	MM7
F		6	
E		5	
D		4	
C		3	
B		2	
A		1	

J39

Z	BMDH2	22	BMDH3
Y	BMDH4	21	BMDH5
X	BMDH6	20	BMDH7
W	BMDH1	19	BMDH0
V		18	
U		17	
T		16	
S		15	
R	MM8	14	MM0
P	MM9	13	MM1
N	MM10	12	MM2
M	MM11	11	MM3
L	MM12	10	MM4
K	MM13	9	MM5
J	MM14	8	MM6
H	MM15	7	MM7
F		6	
E		5	
D		4	
C		3	
B		2	
A		1	

J43

Z	BMDH2	22	BMDH3
Y	BMDH4	21	BMDH5
X	BMDH6	20	BMDH7
W	BMDH1	19	BMDH0
V		18	
U		17	
T		16	
S		15	
R	MM8	14	MM0
P	MM9	13	MM1
N	MM10	12	MM2
M	MM11	11	MM3
L	MM12	10	MM4
K	MM13	9	MM5
J	MM14	8	MM6
H	MM15	7	MM7
F		6	
E		5	
D		4	
C		3	
B		2	
A		1	

J47

Z	BMDH2	22	BMDH3
Y	BMDH4	21	BMDH5
X	BMDH6	20	BMDH7
W	BMDH1	19	BMDH0
V		18	
U		17	
T		16	
S		15	
R	MM8	14	MM0
P	MM9	13	MM1
N	MM10	12	MM2
M	MM11	11	MM3
L	MM12	10	MM4
K	MM13	9	MM5
J	MM14	8	MM6
H	MM15	7	MM7
F		6	
E		5	
D		4	
C		3	
B		2	
A		1	

J26

S		15	
R		14	
P		13	
N		12	
M		11	
L		10	
K		9	
J	+12VR	8	+12VR
H	DAB5	7	DAB4
F	DAB3	6	DAB2
E	DAB1	5	DAB0
D	DAB7	4	DAB6
C	CCB1	3	CCB2
B	+5VR(2)	2	+5VR(2)
A	±0V	1	±0V

J30

S		15	
R		14	
P		13	
N		12	
M		11	
L		10	
K		9	
J	+12VR	8	+12VR
H	DAB5	7	DAB4
F	DAB3	6	DAB2
E	DAB1	5	DAB0
D	DAB7	4	DAB6
C	CCB1	3	CCB2
B	+5VR(2)	2	+5VR(2)
A	±0V	1	±0V

J34

S		15	
R		14	
P		13	
N		12	
M		11	
L		10	
K		9	
J	+12VR	8	+12VR
H	DAB5	7	DAB4
F	DAB3	6	DAB2
E	DAB1	5	DAB0
D	DAB7	4	DAB6
C	CCB1	3	CCB2
B	+5VR(2)	2	+5VR(2)
A	±0V	1	±0V

J38

S		15	
R		14	
P		13	
N		12	
M		11	
L		10	
K		9	
J	+12VR	8	+12VR
H	DAB5	7	DAB4
F	DAB3	6	DAB2
E	DAB1	5	DAB0
D	DAB7	4	DAB6
C	CCB1	3	CCB2
B	+5VR(2)	2	+5VR(2)
A	±0V	1	±0V

J42

S		15	
R		14	
P		13	
N		12	
M		11	
L		10	
K		9	
J	+12VR	8	+12VR
H	DAB5	7	DAB4
F	DAB3	6	DAB2
E	DAB1	5	DAB0
D	DAB7	4	DAB6
C	CCB1	3	CCB2
B	+5VR(2)	2	+5VR(2)
A	±0V	1	±0V

J46

S		15	
R		14	
P		13	
N		12	
M		11	
L		10	
K		9	
J	+12VR	8	+12VR
H	DAB5	7	DAB4
F	DAB3	6	DAB2
E	DAB1	5	DAB0
D	DAB7	4	DAB6
C	CCB1	3	CCB2
B	+5VR(2)	2	+5VR(2)
A	±0V	1	±0V

J50

1	INIT
2	-5VR
3	-15VUR
4	+12VR

J49

26	±0V	25	±0V
24	+5VR(2)	23	+5VR(2)
22	INIT	21	LD
20	CM	19	FRO
18	CMERR1	17	CMERR0
16	CMERR3	15	CMERR2
14	CMERR5	13	CMERR4
12		11	
10		9	
8		7	
6		5	
4		3	
2	±0V	1	±0V

J25

S	±0V	15	±0V
R	MR2 0	14	±0V
P	±0V	13	MG5D
N	PCBC5	12	±0V
M	±0V	11	PCB5I
L	PCB5S	10	±0V
K	±0V	9	PCBMI0
J	MMCB1	8	±0V
H	±0V	7	MMCB2
F	MMP	6	±0V
E	±0V	5	MCO5
D	IMA	4	±0V
C	±0V	3	INIT0
B	IOPCLK	2	±0V
A	±0V	1	CMERR0

J29

S	±0V	15	±0V
R	MR2 1	14	±0V
P	±0V	13	MG5I
N	PCBC5	12	±0V
M	±0V	11	PCB5I
L	PCB5S	10	±0V
K	±0V	9	PCBMI1
J	MMCB1	8	±0V
H	±0V	7	MMCB2
F	MMP	6	±0V
E	±0V	5	MCO5
D	IMA	4	±0V
C	±0V	3	INIT1
B	IOPCLK	2	±0V
A	±0V	1	CMERR1

J33

S	±0V	15	±0V
R	MR2 2	14	±0V
P	±0V	13	MG5I
N	PCBC5	12	±0V
M	±0V	11	PCB5I
L	PCB5S	10	±0V
K	±0V	9	PCBMI2
J	MMCB1	8	±0V
H	±0V	7	MMCB2
F	MMP	6	±0V
E	±0V	5	MCO5
D	IMA	4	±0V
C	±0V	3	INIT2
B	IOPCLK	2	±0V
A	±0V	1	CMERR2

J37

S	±0V	15	±0V
R	MR2 3	14	±0V
P	±0V	13	MG5I
N	PCBC5	12	±0V
M	±0V	11	PCB5I
L	PCB5S	10	±0V
K	±0V	9	PCBMI3
J	MMCB1	8	±0V
H	±0V	7	MMCB2
F	MMP	6	±0V
E	±0V	5	MCO5
D	IMA	4	±0V
C	±0V	3	INIT3
B	IOPCLK	2	±0V
A	±0V	1	CMERR3

J41

S	±0V	15	±0V
R	MR2 4	14	±0V
P	±0V	13	MG5I
N	PCBC5	12	±0V
M	±0V	11	PCB5I
L	PCB5S	10	±0V
K	±0V	9	PCBMI4
J	MMCB1	8	±0V
H	±0V	7	MMCB2
F	MMP	6	±0V
E	±0V	5	MCO5
D	IMA	4	±0V
C	±0V	3	INIT4
B	IOPCLK	2	±0V
A	±0V	1	CMERR4

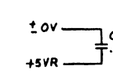
J45

S	±0V	15	±0V
R	MR2 5	14	±0V
P	±0V	13	MG5I
N	PCBC5	12	±0V
M	±0V	11	PCB5I
L	PCB5S	10	±0V
K	±0V	9	PCBMI5
J	MMCB1	8	±0V
H	±0V	7	MMCB2
F	MMP	6	±0V
E	±0V	5	MCO5
D	IMA	4	±0V
C	±0V	3	INIT5
B	IOPCLK	2	±0V
A	±0V	1	CMERR5

COMPONENT	TYPE	W.L PART NO.
R1,2	820Ω 1/4W 5%	330-2083
C1	.01uF 25V	300-1903
C2	.047uF 50V	300-1966
Y1	6.667 MHZ	321-0021
J1,4,7,10,13,16,19,22	80 PIN CONN.	350-0533
J2,3,5,6,8,9,11,12,14,15,17,18,20,21,23,24	100 PIN CONN.	350-0534
J25,26,29,30,33,34,37,38,41,42,45,46	30 PIN CONN	350-0011
J27,31,35,39,43,47	44 PIN CONN	350-0019
J28,32,36,40,44,48	64 PIN CONN.	350-0021
J49	26 PIN CONN.	350-0095
J50	4 PIN CONN.	350-0215

I.C. LOCATION	TYPE	W.L PART NO.
L1	7404	SEE CHART
L1	SKT 14 PIN	376-9001

TYPE	LOCATION	SPARES
7404	L1	3



210-209+377 OR 378		
210	209	L1
8508-A	8508	396-0010

WANG

DRWN D. [illegible]	10/5	APPROVED BY	DATE
CHK			
ENGR POGA VS-OSA			

TITLE: CPU/IO MOTHER BD M/L

SEE CHART | E | 8508 | 2

8508 E 3

LL2

8508 R1

NOTES: 1. ALL RESISTORS ARE 1/4 W., 5% UNLESS OTHERWISE SPECIFIED.
2. SIGNALS 1* & 2* MAY BE RUN AS A TWISTED PAIR (SOLDER SIDE).
SIGNALS 3* & 4* MAY BE RUN AS A TWISTED PAIR (SOLDER SIDE).

E-REV
1

REVISION	BY	DATE	APPROVED BY	DATE
ORIGINATED FOR CAD/CAM	DAVE D. SMITH	10-7-82		
APPD'D FOR FAB	CHE	11-18-82		
REVISED PER ECO # 15841 APPROVED				
REVISED PER ECO # 21350 APPR:				

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

MODEL NO. PO62A VS-95A

TITLE CPU/IO MOTHER BD M/L

SHEET CHART | E | 8508 | 2

LL3

DO NOT SCALE

+5VR
R11 10K
R1 820Ω IOP0 LED1 D1 SILICON
R2 820Ω IOP1 LED2 D2 SILICON
R3 820Ω IOP2 LED3 D3 SILICON
R4 820Ω IOP3 LED4 D4 SILICON
R5 820Ω IOP4 LED5 D5 SILICON
R6 820Ω IOP5 LED6 D6 SILICON
R7 820Ω CM ERR LED7 D7 SILICON
R8 820Ω CP HALT LED8 D8 SILICON
R9 820Ω READY LED9 D9 SILICON
R10 820Ω POWER LED10 ±0V

$\overline{CMERR-0}$ (17₁)
$\overline{CMERR-1}$ (5₁)
$\overline{CMERR-2}$ (5₁)
$\overline{CMERR-3}$ (16₁)
$\overline{CMERR-4}$ (13₁)
$\overline{CMERR-5}$ (14₁)
CMPE (10₂ 7₂)
HALT (11₂ 9₁)
LDOK (12₂ 5₂)

Q1 2N5189
R12 330Ω
±0V

$\overline{INIT}$ (22₁) $\overline{INITA}$ (13)
JP1

SP12 CM BOOT
SP3 INIT-IALIZE
SP6 LOAD
SP3 CONTROL MODE
NC / NO / C
CP.DA SP11
CP.DB SP10
SP8
SP7
SP5
SP4
SP2
SP1
INITA
INITB
SYLDA
SYLDB
CTRLA
CTRLB

+5VR
R13 1K
R14 1K
R15 1K
R16 1K
R17 1K
R18 1K
R19 1K
R20 1K
R21 1K
R22 1K
R23 1K
R24 1K
R25 1K
R26 1K
R27 1K
R28 1K
C8 .001UF ±0V
C7 .001UF ±0V
C6 .001UF ±0V
C5 .001UF ±0V
C4 .001UF ±0V
C3 .001UF ±0V
C2 .001UF ±0V
C1 .001UF ±0V
D10 SILICON
D11 SILICON

L1 L2 7438 7439

(14₂ 3₂) $\overline{CPLD}$
(9₁ 13₂ 4₂) $\overline{TRΦ}$
(21₁) $\overline{LD}$
(20₁) $\overline{CM}$

8513-R0

JP1 D1 D2
J1 2 1 24 25
LED10 LED9 LED8 LED7
C9 C10 L1 L2 C4 C8 C7 C3 C6 C1 C2 C5
2 J3 3
R1 D1 R2 C2 R3 D3 R4 D4 R5 D5 R6 C6 R11 R12 R13 R14 R15 R16 R17 R18 R19 R20 R21 R22 R23 R24 R25 R26 R27 R28 C11 C9 C10 C8 C7 D10 D11 C5 C4 C3 C2 C1 R9 R8 R7 R10
LED1 LED2 LED3 LED4 LED5 LED6
J2 Q1 R12 R11

J3
$\overline{INITA}$ ① ② ③

J2
$\overline{CPLD}$ (3)(4) $\overline{CPLD}$
$\overline{TRΦ}$ (4)(5) $\overline{TRΦ}$
$\overline{LDOK}$ (5)(12) $\overline{LDOK}$
$\overline{HALT}$ (6)(11) $\overline{HALT}$
CMPE (7)(10) CMPE

J1
$\overline{CMERR-4}$ (3)(4) $\overline{CMERR-5}$
$\overline{CMERR-2}$ (5)(6) $\overline{CMERR-3}$
$\overline{CMERR-0}$ (7)(8) $\overline{CMERR-1}$
$\overline{TRΦ}$ (9)(22) $\overline{CM}$
$\overline{LD}$ (21)(22) $\overline{INIT}$
+5VR (23)(24) +5VR
±0V (25)(26) ±0V

+5VR (23)(24) — C9 .047UF 50V — C10 .047UF 50V — (25)(26) ±0V

COMPONENT	TYPE	WL PART NO
R1-10	820Ω 1/4W 5%	330-2083
R11	10K 1/4W 5%	330-4011
R12	330Ω 1/4W 5%	330-2054
R13-28	1K 1/4W 5%	330-3011
C1-8	.001UF 500V	300-1906
C9,10	.047UF 50V	300-1966
D1-11	SILICON	380-1001
LED1-10	LAMP,RED-CM1264	370-0031
Q1	2N5189	375-1021
J1	CONN 26 PIN	350-0058
J2	SKT, 16 PIN	376-3024
J3	CONN 3 PIN	350-0223

LOCATION	TYPE	WL PART NO
L1,2	7438	376-0128

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

REVISION	ORIGINATED PER ECO 1409 APP: DJM/MWH	DATE
E		
D	0\0	4/7/78

E-REV 0

WANG PART NO	DRAWING NO	DESCRIPTION

WANG LABORATORIES, INC. LOWELL, MASS.

	BY	DATE	APPROVED BY	DATE
DWN	[illegible] DESIGN	3/1/78	ENGR J. GURU	3/13/78
CHK	[illegible]	3/14/78	M ENGR	
			MFG ENGR	

MATERIAL — MODEL NO FU822A VS-92A — ME ENGR SPECIFICATIONS

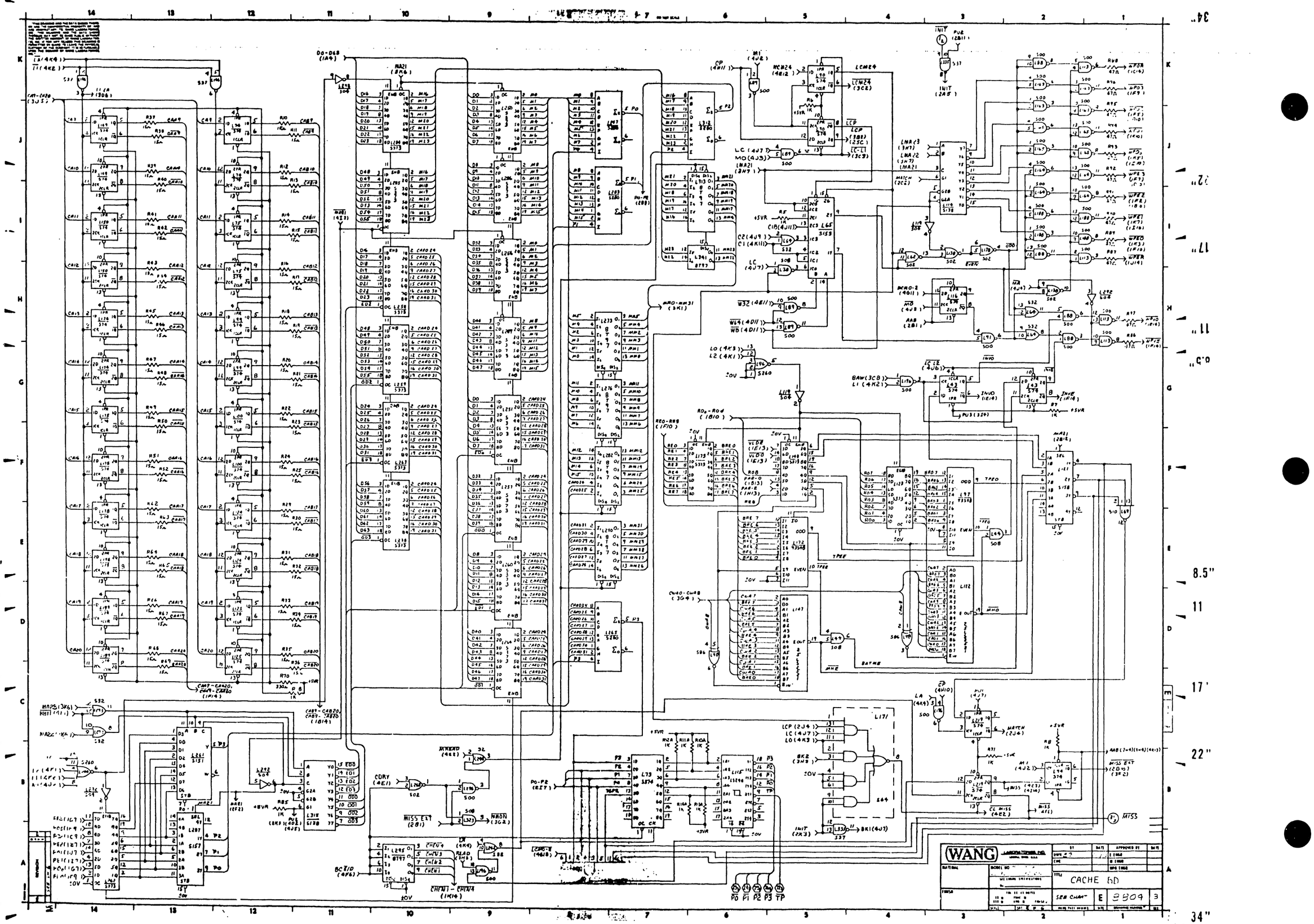
FINISH — TOL EX AS NOTED

SCALE — WT — SHT 1 OF 1

TITLE: FRONT PANEL BD

2/0-8513 | D | 8513 | 0
WANG PART NUMBER | REV | DRAWING NUMBER | REV

NN1


CACHE BD
WANG
SIZE E
DRAWING NUMBER 33509
REV 3
SEE CHART
CAR0 - CAR31 (1M16)
CAR0 - CAR31 (1M14)
CHN0 - CHN4 (1K14)
MISS
MISS EXT (2D5) (3F2)
MISS (4C3) (4J4)
CL MISS (4E2)
MISS (4F1)
MATCH (2J6)
MATCH (2C2)
INVO
TRVE (1E14)
TPEO
TPEE
TPRE
TPRO
ODD
EVEN
LCP (2J6)
LC (4J7)
LO (4K3)
BK2 (3H3)
BK1 (4J7)
INIT (2A5)
INIT (2H11)
CP (4H11)
MI (4J2)
LA (4A9)
LA (4H10)
LCME4
LCM24 (3C2)
LCP (3B2) (2SC)
LC-L (3C3)
LMA23 (3H7)
LMA22 (3H7)
LMA21 (3H7)
LMA21 (2B12)
LC (4J7)
MO (4J3)
C2 (4J9)
C1 (4K11)
W32 (4E11)
W49 (4D11)
W8 (4D11)
BAW (3C8)
L1 (4M21)
AAB (2B1)
BCM0-2 (4G11)
MO (4J3)
RO0 - RO4 (1B10)
REQ-RR9 (1F10)
PO-P2 (2E7)
P0 P1 P2 P3 PP
CHAN0 - CHAN4 (1K14)
BC7I0 (4P6)
CARD0 - CARD31 (3G9)
CA0T - CA30 (3J5)
CA0T - CA30 (1M14)
DO-D48 (1A9)
PO-P3 (2B9)
WRE0 (1K14)
WRE1 (1K14)
WRE2 (1F14)
WRE3 (1F14)
WRE4 (1J14)
WRE5 (1J14)
WRE6 (1J14)
WRE7 (1J14)
WRE8 (1J14)
WPE0 (1K14)
WPE1 (1K14)
WPE2 (1F14)
WPE3 (1F14)
WPE4 (1J14)
WPE5 (1J14)
WPE6 (1J14)
WPE7 (1J14)
WPE8 (1J14)
MA0-MA31 (3K1)
MA25 (3K6)
MA22 (4A1)
MA21 (4A1)
WRE1 (4F3)
WRE0 (4F3)
WMEM0 (3C2)
WMEM1 (3C2)
WMEM2 (3C2)
WMEM3 (3C2)
WMEM4 (3C2)
WMEM5 (3C2)
WMEM6 (3C2)
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WMEM28 (3C2)
WMEM29 (3C2)
WMEM30 (3C2)
WMEM31 (3C2)
WMEM32 (4E2)
CDRY (4E1)
MISS EXT (2B1)
WMEM (3C2)
READ (1J9)
DR (4K9)
L2260-8 (4G8)
BAR1 (4F2)
BAR0 (4F2)
+5VR
+5V
30V
MATCH (2C2)
BATME
TPRE
TPEE
TPEO
TPRO
ODD
EVEN
INVO
TRVE
MISS
WRE0
WRE1
WRE2
WRE3
WRE4
WRE5
WRE6
WRE7
WRE8
WPE0
WPE1
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MA0-MA31
MA25
MA22
MA21
WRE1
WRE0
WMEM0
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WMEM32
CDRY
MISS EXT
WMEM
READ
DR
BAR1
BAR0
L2260-8
BC7I0
CHAN0 - CHAN4
CARD0 - CARD31
CA0T - CA30
DO-D48
PO-P3
WRE0
WRE1
WRE2
WRE3
WRE4
WRE5
WRE6
WRE7
WRE8
WPE0
WPE1
WPE2
WPE3
WPE4
WPE5
WPE6
WPE7
WPE8

NN2

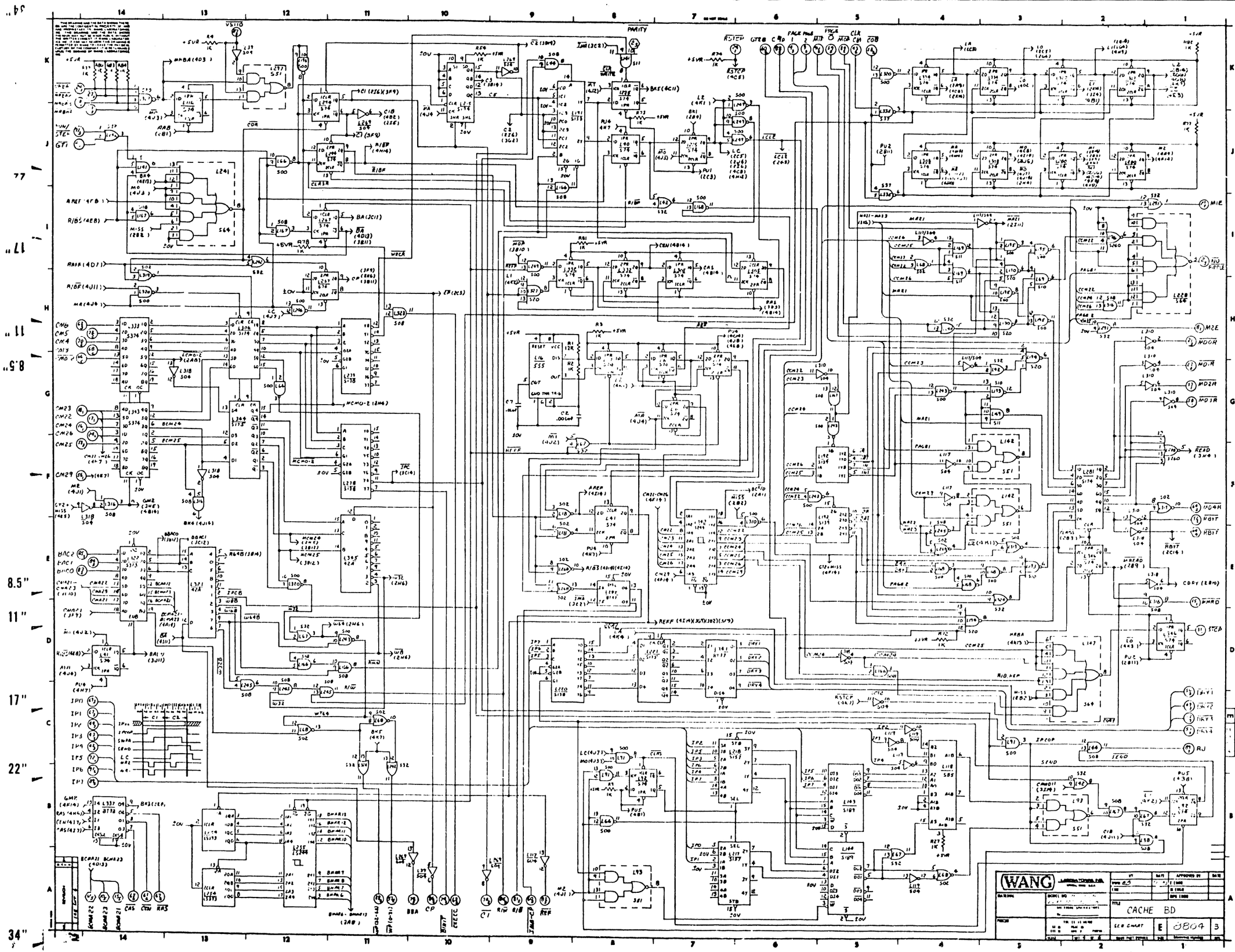
BOARD	JUMPERS
1M FULL MEM	1
2M MEM MOD	2
4M MEM MOD	3

WANG LABORATORIES, INC.

CACHE

SRB CHART

2504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CACHE BD
SCH CHART
E
0804
3
PARITY
RSTCP
GTG
CMD
PAGE FAULT
MIE
MDOR
MD1R
MD2R
MD3R
READ
MD4R
RDBYT
RBYT
STCA
CDRY
RMRD
RJ
IPCOP
SEND
IECHO
PUS (4C8)
PU2 (2B11)
PU1 (2C3)
PU0 (4H7)
PU4 (4H3)
PU6 (4C8)
PU8 (4B6)
PU9 (4B8)
BA (3C11)
BAL (3J11)
BAR (4B11)
BAS (4B11)
CAS (4B16)
CEN (4B16)
WE (2M6)
WE4 (2M6)
WE32 (2M6)
WE64 (2M6)
WECA
WECB
WECC
WECD
WEEC
WEFF
WEFR
WEMA
WEMB
WEMC
WEMD
WEMR
WEMW
WEPA
WEPB
WEPC
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WEZW
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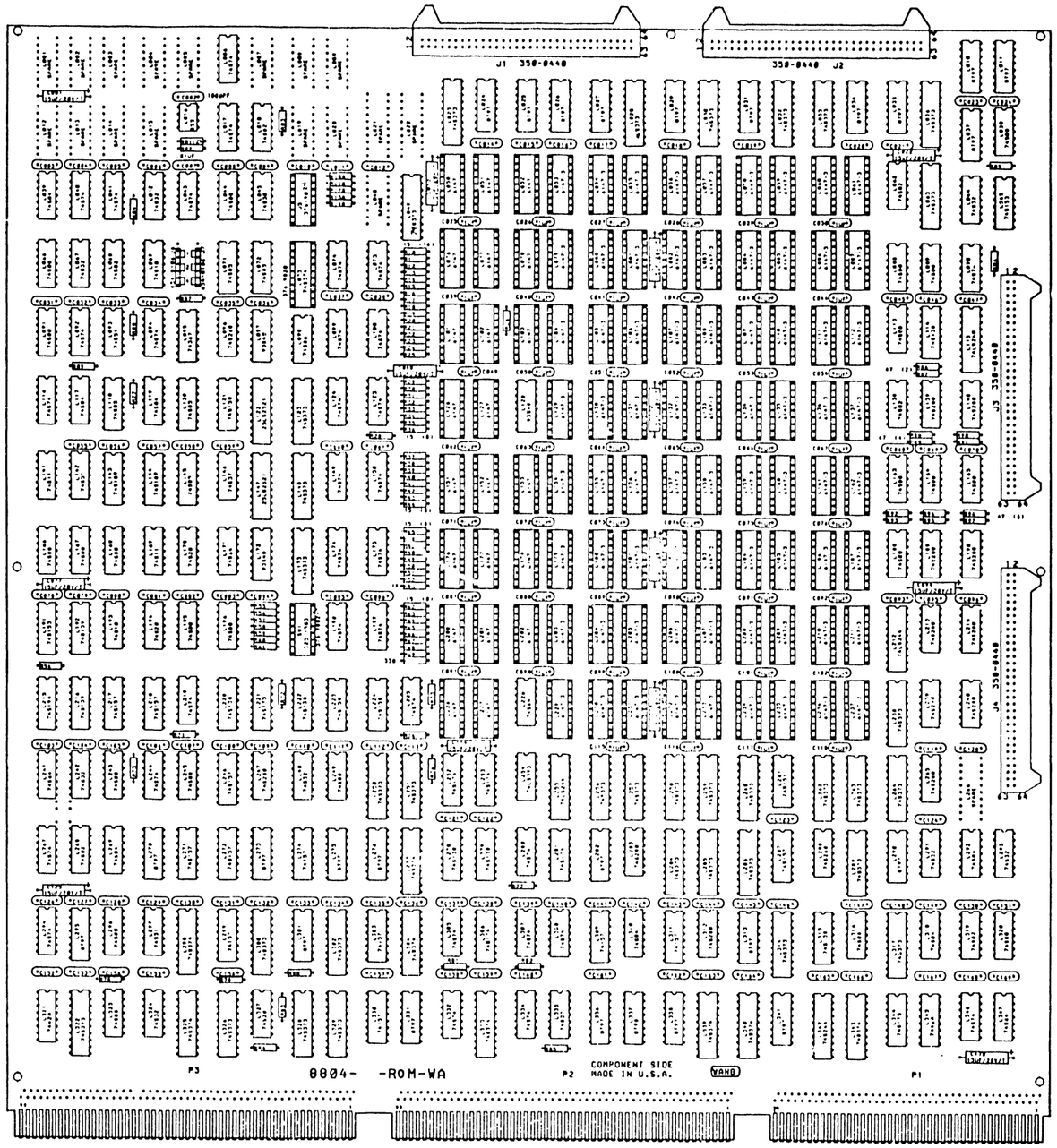
WEZY
WEZZ

NN4



WANG					
MATERIAL	MODEL NO. VC				
FINISH		TITLE	CACHE 4D		
		SIZE	CHART E	8804	3

NN5

TYPE	IC LOCATION	SPARES
74S00	L46	1
	L38	1
74S02	L18	2
	L319	1
74S04	L39	3
74S08	L38	2
	L146	1
74S10	L69	1
74S32	L42	1
	L248	1
	L291	1
	L298	1
74S37	L146	2
74S74		
	L40	1
74S86	L98	2
74S139	L216	1
8798	L337	1

COMPONENT	TYPE	WL PART NO
L1-5, 7 thru 10, 12, 13, 42, 98, 246	SPARE	
L6, 17, 20, 21, 43, 79, 92, 96, 98, 99, 108, 116, 120, 126, 163, 170, 174, 178, 179, 193, 198, 202, 209, 267, 284, 296, 302, 307, 308, 333, 339, 344	74S74	396-0202
L10, 11, 29-27, 29, 31, 34, 35, 37, 230, 273, 275, 276, 284, 290, 295, 301, 313, 331, 336, 339, 391	8T97	396-0189
L16	555	396-0126
L19, 22, 28, 138, 268, 317	74S02	396-0199
L23, 28, 30, 32, 33, 38, 49, 103, 105, 108, 173, 210, 250, 251, 255, 260, 262, 264, 266, 286-286, 289, 300, 303, 315, 327, 328, 329, 336, 338, 339	74S373	396-0306
L39, 44, 46, 167, 245, 314, 343	74S08	396-0200
L47, 177, 179, 243, 292, 312, 318	74S04	396-0197
L48	74S30	396-0198
L49-52, 76-78, 171-183, 218, 221-225, 236, 238, 200-202, 226, 227	6167	SEE CHART
L53-61, 79-82, 109-118, 129-137, 158-162, 187-192, 203-211, 239-247, 311, 329-332	6167-3	SEE CHART
L64, 66, 67, 202, 291, 293, 334, 336	74S32	396-0205
L65-71	74S113	396-0215
L66, 88, 89, 91, 118, 162-165, 168, 169, 175, 176, 292, 297, 298, 330	74S00	396-0128
L69, 173	74S10	396-0230
L72 thru 78, 140, 145	74S85	396-0259
L81, 102, 297	74S51	396-0160
L85	74S47	396-0176
L86, 288	74S250	396-0206
L87, 89, 92	93S48	396-0348
L88	74S86	396-0211
L94, 223, 278, 279, 282	74S138	396 0298
L115	74S240	396-0217
L121, 222, 224	74S158	396-0331
L122, 167	25S525321	396 0112
L139, 169, 189, 193, 214, 219, 239, 249, 283, 287, 293	74S280	396 0096
L141, 169	74S11	396-0237
L143, 144	74S189	396-0349
L146, 335	74S37	396-0296
L150, 196, 327	74S40	396 0210
L151, 229, 241, 247	74S64	396 0191
L152, 176	74S136	396-0133
L154, 155	74S148	396-0284
L157	74S194	396-0221
L271, 274, 276, 277, 280	74S157	396 0217
L158, 159	74S133	396-0220
L182, 232-241, 244	74S174	396 0242
L201	74S393	396 0197
L261	74S251	396 0216
L268, 269, 270, 271, 320	74S51	396 0082
L272, 306, 309, 315, 322, 323, 340, 343, 344	74S374	396-0305
L282, 285	7992A	396-0008
L337	M778	396-0185
L342	74S260	396-0338
L93	10 MHz Sock CT	396-0016

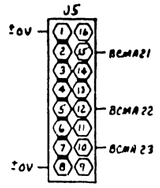
COMPONENT	TYPE	WL PART NO
R2-9 (4K, 14A, 26, 27, 28, 53-61, 77-85)	1K 1/4W 5%	330-3011
R10-25, 29-52, 62-69	150Ω 1/4W 5%	330-1016
R70	330Ω 1/4W 5%	330-8034
R86-97	470Ω 1/4W 5%	330-1068
R1	12K 1/4W 5%	330-4013
C1-3, 22-48, 71, 93, 114, 115, 170-174	15uF 20V (T)	300-4082
C2	.2 1uF, 25V	300-1908
C3-6, 8-12, 14-21, 23, 24, 31-38, 65-69, 75-81, 88-92, 97-106, 108-113, 119-129, 136-143	.047 50V	300-1966
C7	.01uF 25V	300-1909
C25-30, 39-44, 49-59, 62-64, 71-76, 87-92, 97-106, 115-118	.1uF 50V	300-1930
OPT'L 1	FALE PLATE	450 2892
OPT 3	SCREW	650 2120
SW1	SET, DIP	376-9002
SW1	SPST BPDS	325-1503
J1-J4	40 PIN CONN	350-0440
J6	*ST, WAN	376-9068
	2 POS SHUNT	350-6506
J4, J7	6 POS HDR	650-0106

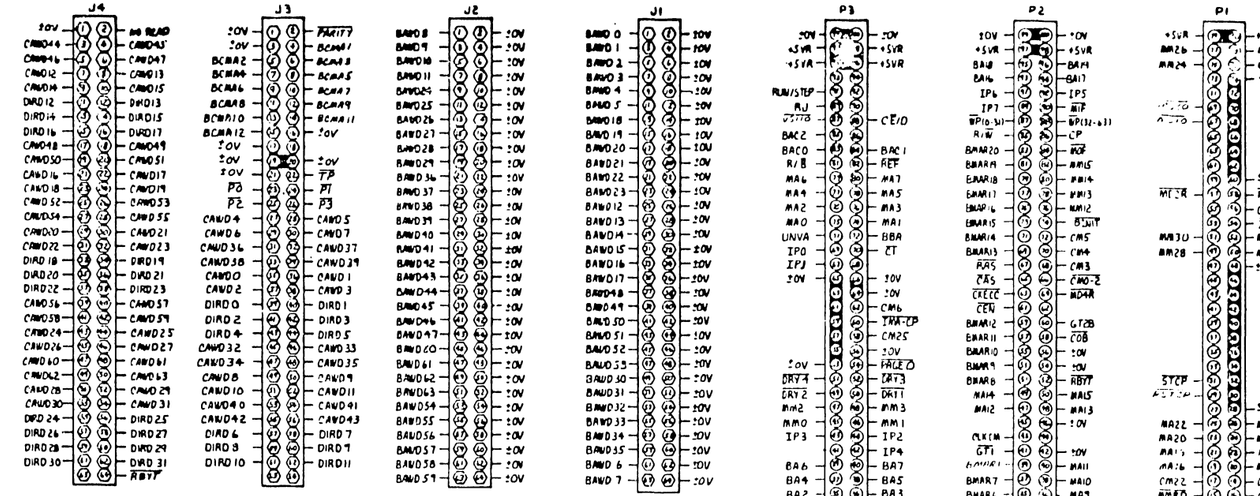
MNEMONICS	COORD.
BAD 16/23	1H7
BACO-BA2	4B19
BBA	4A10
BINIT	4A10
BMWE, BMRD	3A11
BMWD-BMD31	2A6
BMWD-BMD63	4A16
CM25	4A15
CMWD-CMD63	3U4
CPAD	4A18
CPUD	4A6
CP	3A10
CPUCP	4A10
CPUCM	4A5
CPUR	4A5
CPU-C	4B16
CPU-CMD	4A16
CPU-CMD	4G16
CPUCP	4A16
DPDN-DPD31	3K3
DPU-DP3	4C1
GTI	4A14
GTZB	4A6
IMR CP	6A9
IRIR	3K1
IWD	1K3
IP0-IP7	4C14

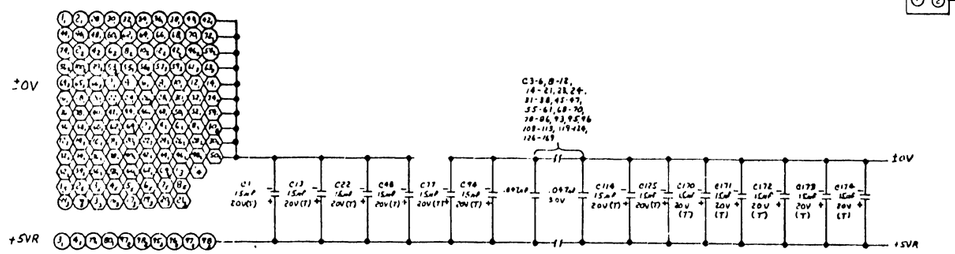
MNEMONICS	COORD.
MA-MA3	3H0
MSSb-MSTB	4G1
MSSB	4F1
MSI	3B1
MSR	4K2
MSTB	4K2
MWD-MD31	3E1
MWBAT-MBBA9	4K16
MSI-MSR	3A3
NO HEAD	3B1
NO RIPPLE	4E1
P0-P3	2A6
PAGE 0	4K5
PAGE 1	4K6
PAGE 2	4K6
PARITY	4C8
PFI	4A16
PRST	1A1
RER	4A9
RIW	4A9
RJ	1A7
RUN/STEP	4J16
RJ	4C1
CSTEP	4K7
STEP	4D1
TP	2A8
UNVA	3B1
VSTEP	4C13
WP(0-31)	4A11
WP(32-63)	4A11
WIE	4E1
WSE	4H1

MNEMONICS	COORD.
POWER	1A7
SYNCH 2	3A7
SYNCEC1	3A7
SYNCEC2	3A8
XTAL	3A8
XTAL 20	3A7

210	209	L58-61, 79-82, 109-118, 129-137, 158-162, 187-192, 203-211, 239-247	L50-52, 76-78, 101-103, 126-128, 200-202, 226, 227
8809-A	8809	377-0413	377-0418







C3-6, 8-12, 14-21, 23, 24-31-38, 65-69, 75-81, 88-92, 97-106, 108-113, 119-129, 136-143

E REV

REVISION	A/D	CAGE	DWG NO	A/M
ORIGINATED PER ECO 3-0001 AND ECO 3-0002	3/1/83	53711	1334-0804	
RELEASED PER ECO 3-0060 AND ECO 3-0061	5/16/83	53711	1334-0804	
REVISED PER ECO 3-0080 AND ECO 3-0081	6/20/83	53711	1334-0804	

WANG LABORATORIES, INC. — LOWELL, MASS.

DRWN R.D	5/13/83	APPROVED BY	DATE
CHK'D			
ENGR			

MODEL NO. 2200 VP-10/20/25/200

TITLE: CACHE BD

SIZE: E | DWG NO: 5804 | REV: 3

SEE CHART

NN6

POWER DIST. BOX

FILTER BOX

FILTER
RE-0283 30C
30 AMP

FILTER
CORCOM 80IS
6 AMP

LINE CORD
(TRAILING PHONES)

6 COND PLUG
(HUBBELL #2711
OR EQUIV.)

TYPE 30
18/8
CABLE

25A BKR

6GA JACKETED
POWER CORD
(90" NOM)

WANG POWER SUPPLY

T1
MMC-8150-1
(60HZ)
MMC 8151-1
(50HZ)

FAN
115VAC

HEAT SINK

Q3 2N6282
Q1 2N6547
Q2 2N6285

D3 IN1183A
D4 IN1183A
D1 IN1202A
D2 IN1202A

WANG POWER SUPPLY
CONN

TO FANS
(2PI3)

7612
(WILL BE 7812)

J10

IOP
MOTHER BOARD

IOP
MOTHER BOARD

+5VB SWITCH REG

+5VA SWITCH REG

FAN

FAN

WANG POWER SUPPLY
TO CHASSIS GND

7610

WANG POWER SUPPLY

Q3 HEAT SINK Q2 Q1 D4 D3 D2 D1

7612

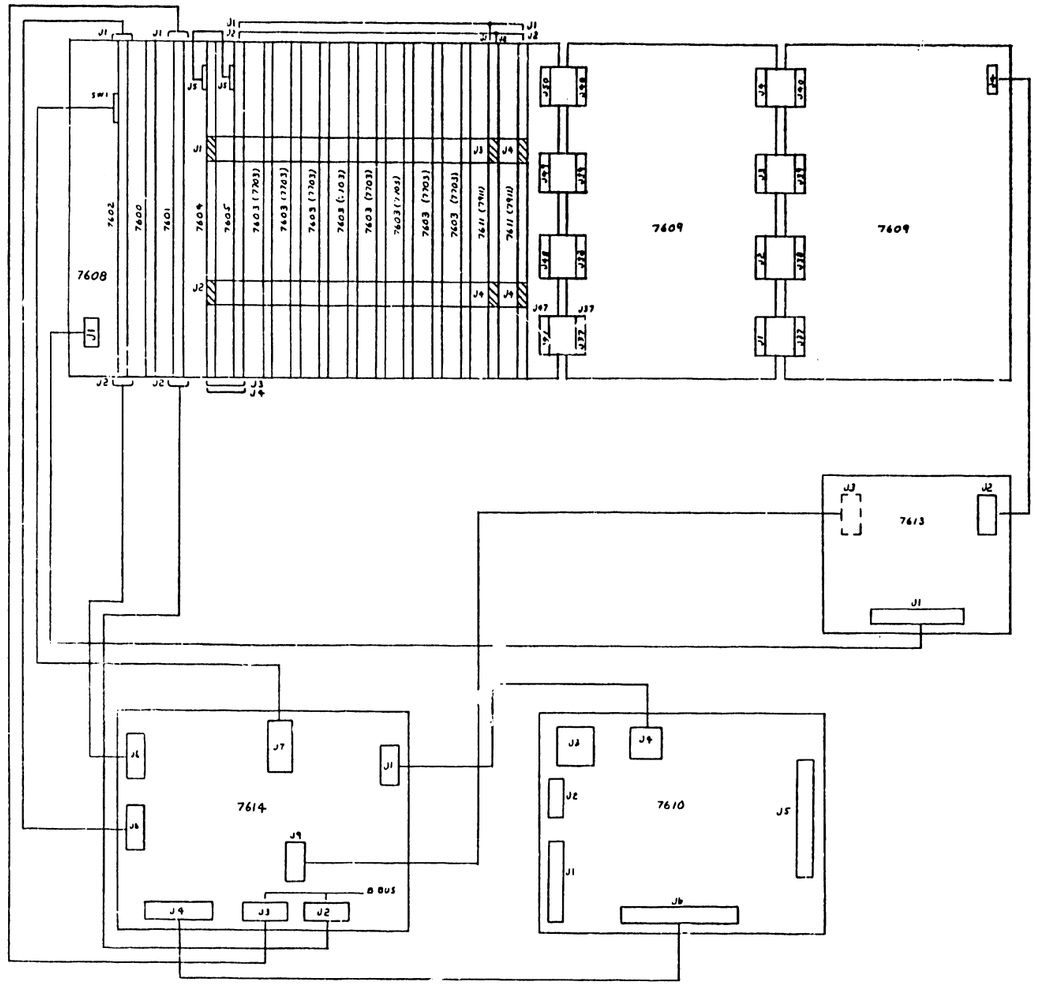
WANG LABORATORIES INC.

VS-100

INTERCONNECTION DIAGRAM

7608-909 E 7608-900 O

PP1

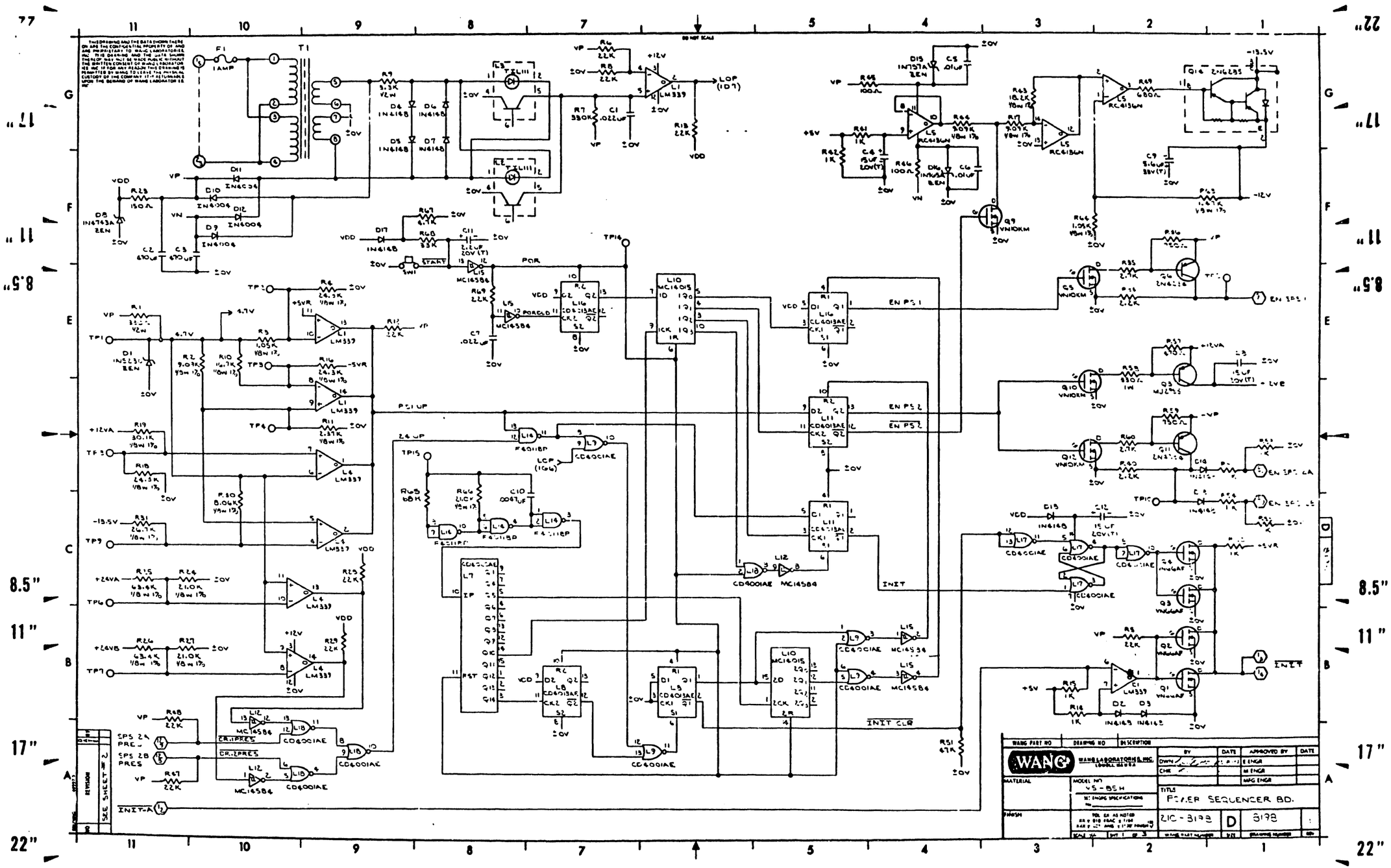


VS-100

INTERCONNECTING DIAGRAM

7608-900 E 7608-900 O

PP2

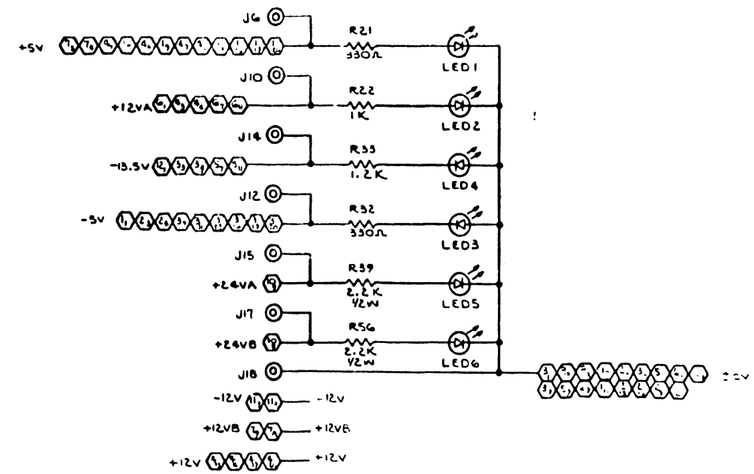

THE DRAWING AND THE DATA SHOWN THEREON ARE THE CONFIDENTIAL PROPERTY OF AND ARE PROPRIETARY TO WANG LABORATORIES, INC. THIS DRAWING AND THE DATA SHOWN THEREON MAY NOT BE MADE PUBLIC WITHOUT THE WRITTEN CONSENT OF WANG LABORATORIES INC. IT FOR ANY REASON THIS DRAWING IS PERMITTED BY WANG TO LEAVE THE PHYSICAL CUSTODY OF THE COMPANY IT IS TO BE RETURNED UPON THE DEMAND OF WANG LABORATORIES INC.
DO NOT SCALE
F1 1AMP
T1
LOP (107)
PSI UP
Z4 UP
POR
START
SW1
INIT
INIT CLR
EN PS 1
EN PS 2
EN SPS 2A
EN SPS 2B
INIT-A
WANG
WANG LABORATORIES, INC. LOWELL, MASS.
MODEL NO VS-85H
TITLE POWER SEQUENCER BD.
2IC-3198
D
3198
DRAWN
CHK
APPROVED
MATERIAL
FINISH
SHEET 1 OF 3
REVISION
SEE SHEET 2

QQ1

TYPE	I.C. LOC	SPARE
MC14584	L12	3
	L15	2
RC4136N	L5	1

		POWER		
VENDER NO	WANG NO	SOURCE	PWR	GND
LM339	376-0240	VP	3	12
CD4001AE	376-0367	VDD (W)	14(W)	7(W)
F4011BP	376-0375	VDD	14	7
CD4013AE	376-0431	VDD	14	7
MC14015	376-0537	VDD		
MC14584	376-0508	VDD	14	7
CD4023AE	376-0397	VDD	14	7
CD4020AE	376-0369	VDD		
TIL111	375-2109	NONE		*
RC4136N	376-0625	*	*	*

* SHOWN IN SCHEMATIC



NOTES:
1) ALL RES. ARE ¼W, 5% UNLESS OTHERWISE SPECIFIED.

E REV 1

REVISIONS							
LTR	DESCRIPTION	DATE	BY	CHK	ENGR	DATE	APPROVED
A	ORIGINATED PER DWR # 2244 APPD.	9/10/74					
B	REVISED PER DCR-R 00179 APPD	1/7/77					
C	REVISED PER ECO # 33547 APPD	1/1/77					

WANG PART NO	DRAWING NO	DESCRIPTION

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

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

MATERIAL — MODEL NO VS-85H — SEE ENGRG SPECIFICATIONS

FINISH — TOL ±X AS NOTED ±.XX ± .010 FRAC ± 1/64 ±.XXX ± .005 ANG ± 1° 30' FRACT 1/2

TITLE: POWER SEQUENCER BD.

WANG PART NUMBER: 210-8198 | REV: D | DRAWING NUMBER: 8198 | REV: 1

SCALE: FULL | SHT 2 OF 2

QQ2

(FINAL PARTS LIST)

BOARD NO. & TITLE: C8198 POWER SEQUENCER BOARD
ASSEMBLY LEVEL & TITLE: 210 8198
PARTS LIST REVISION (P): 0
ARTWORK REVISION (R): 01
ASSEMBLY REVISION (A): 01
SCHEMATIC REVISION (S): 01
DWG OR MOST RECENT ECO: 333470

CREATED: 07/26/84 10:08
LAST MODIFIED: 09/26/84 09:23 BY: NS
EDITING REVISION: 2

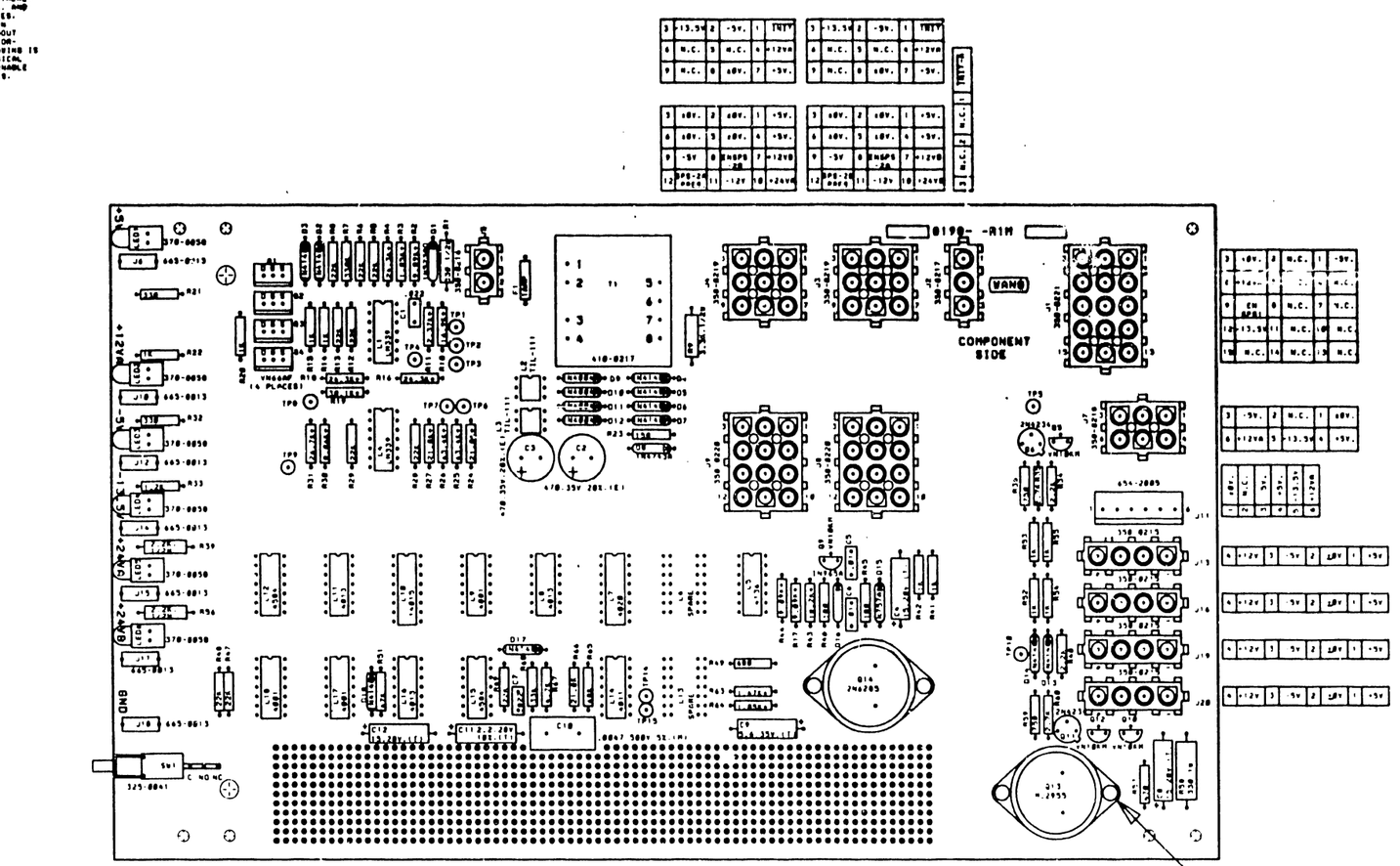
REF. DES.	WANG PART NO.	VALUE/TYPE	DESCRIPTION	DRAWING NO.	QTY.
C5 - C6	300-1903-	.01U	CAP CERAMIC DISC +80% -20% 25V Z5F		2
C1	300-1937-	.022U	CAP CERAMIC MONO RAD 10% 100V X7R		2
C7					
C2 - C3	300-3322-	470U	CAP AL EL RADIAL 20 % 35V		2
C11	300-4016-	2.2U	CAP TANT AXIAL 10% 20V		1
C9	300-4017-	6.6U	CAP TANT AXIAL 10% 35V		1
C4	300-4022-	15U	CAP TANT AXIAL 10% 20V		3
C8					
C12					
C10	300-5013-	.0047U	CAP MICA DIPPED 5% 300V		1
SW1	325-0041-	SWITCH	MOMENTARY PUSH 90 DEG SPDT		1
R46 - R46	330-2011-	100.000	RES FIXED METAL FILM 1/4W 5% 200PPM		2
R23	330-2016-	150.000	RES FIXED METAL FILM 1/4W 5% 200PPM		1
R21	330-2034-	330.000	RES FIXED METAL FILM 1/4W 5% 200PPM		2
R32					
R57	330-2048-	470.000	RES FIXED METAL FILM 1/4W 5% 200PPM		1
R49	330-2069-	680.000	RES FIXED METAL FILM 1/4W 5% 200PPM		1
R34	330-2076-	750.000	RES FIXED METAL FILM 1/4W 5% 200PPM		2
R59					
R14 - R15	330-3011-	1K	RES FIXED METAL FILM 1/4W 5% 200PPM		10
R20					
R22					
R41 - R42					
R52 - R58					
R33	330-3013-	1.2K	RES FIXED METAL FILM 1/4W 5% 200PPM		1
R24	330-3023-	2.2K	RES FIXED METAL FILM 1/4W 5% 200PPM		2
R48					
R35	330-3028-	2.7K	RES FIXED METAL FILM 1/4W 5% 200PPM		2
R60					
R47	330-3048-	4.7K	RES FIXED METAL FILM 1/4W 5% 200PPM		1
R5 - R6	330-4023-	22K	RES FIXED METAL FILM 1/4W 5% 200PPM		10
R8					
R12 - R13					
R28 - R29					
R47 - R48					
R69					
R68	330-4034-	33K	RES FIXED METAL FILM 1/4W 200PPM		1

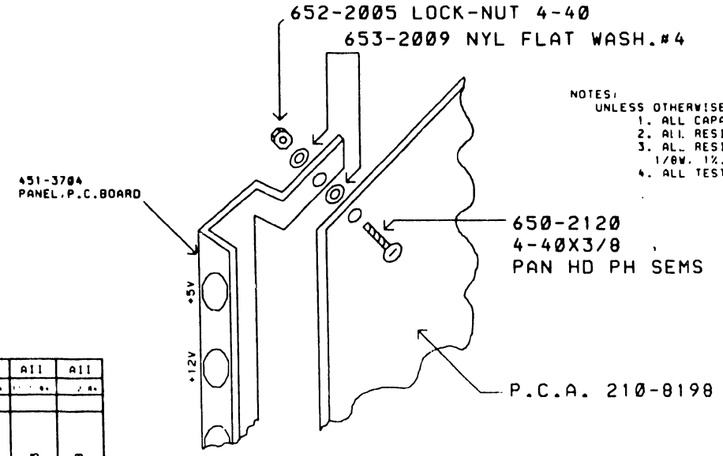
REF. DES.	WANG PART NO.	VALUE/TYPE	DESCRIPTION	DRAWING NO.	QTY.
R51	330-4048-	47K	RES FIXED METAL FILM 1/4W 5% 200PPM		1
R65	330-4069-	68K	RES FIXED METAL FILM 1/4W 5% 200PPM		1
R7	330-5034-	330K	RES FIXED METAL FILM 1/4W 5% 200PPM		1
R1	331-2034-	330.000	RES FIXED 1/2W 5%		1
R39	331-3023-	2.2K	RES FIXED 1/2W 5%		2
R66					
R9	331-3034-	3.3K	RES FIXED 1/2W 5%		1
R58	332-2014-	330.000	RES FIXED 1W 5%		1
R2	333-0061-	9.09K	RES FIXED METAL FILM 1/8W 1% TC: 0 RN55		3
R17					
R44					
R19	333-0063-	30.1K	RES FIXED METAL FILM 1/8W 1% TC: 0 RN55		1
R26 - R26	333-0079-	63.4K	RES FIXED METAL FILM 1/8W 1% TC: 0 RN55		2
R11	333-0093-	2.37K	RES FIXED METAL FILM 1/8W 100PPM RN55		1
R10	333-0097-	16.9K	RES FIXED METAL FILM 1/8W 1% TC: 0 RN55		1
R31	333-0098-	26.7K	RES FIXED METAL FILM 1/8W 1% TC: 0 RN55		1
R43	333-0108-	10.2K	RES FIXED METAL FILM 1/8W 1% TC: 0 RN55		1
R30	333-0113-	8.06K	RES FIXED METAL FILM 1/8W 1% TC: 0 RN55		1
R24	333-0114-	21.0K	RES FIXED METAL FILM 1/8W 1% TC: 0 RN55		3
R27					
R46					
R63	333-0120-	1.47K	RES FIXED METAL FILM 1/8W 1% TC: 0 RN55		1
R3	333-0127-	1.05K	RES FIXED METAL FILM 1/8W 1% TC: 0 RN55		2
R64					
R4	333-0138-	24.3K	RES FIXED METAL FILM 1/8W 1% TC: 0 RN55		3
R16					
R18					
J11	350-0213-	6 CONT	HEADER .156 90 DEG W/LK RAMP		1
J13	350-0215-	4 CONT	HEADER PIN 4 POS UNIVERSAL RED		4
J16					
J19 - J20					
J6	350-0216-	2 CONT	CONN PC HEADER UNIVERSAL RED		1
J2	350-0217-	3 CONT	CONN PC HEADER UNIVERSAL RED		1
J7	350-0218-	6 CONT	CONN PC HEADER UNIVERSAL RED		1
J3 - J4	350-0219-	9 CONT	CONN PC HEADER UNIVERSAL RED		2
J8 - J9	350-0220-	12 CONT	CONN PC HEADER UNIVERSAL RED		2
J1	350-0221-	15 CONT	CONN PC HEADER UNIVERSAL RED		1
F1	360-1154-	1 AMP	FUSE SUBMINIATURE AXIAL LEAD 125V NORMAL SLOW		1
LED1 - LED6	370-0058-	LED	LED RED RIGHT ANGLE DIFFUSED RED 3MCD 13/4		6
Q6	375-1024-	2N4234	TSTR PNP TO-39 1W 40V 250MA		2
Q11					
Q12	375-1038-	MJ2955	TSTR PNP TO-3 115W 60V 15A		1
Q14	375-1047-	2N6285	TSTR PNP TO-3 160W 60V 20A		1
Q5	375-1115-	VN10KM	FET N-CH TO-237 1W 60V .5A		4
Q9 - Q10					
Q13					
Q1 - Q4	375-1125-	VN66AF	FET N-CH TO-202AA 15W 60V 2A		4
L2 - L3	375-2109-	TIL-111	TSTR OPTO-COUPLER DIP		2
L1	376-0240-	LM339	IC QUAD COMPARATOR 14 PIN DIP		2
L4					

REF. DES.	WANG PART NO.	VALUE/TYPE	DESCRIPTION	DRAWING NO.	QTY.
L9	376-0367-	4001	CMOS IC QUAD 2-INPUT NOR GATE		3
L17 - L18					
L7	376-0369-	4020	CMOS IC 14-STAGE RIPPLE-CARRY BINARY COUNTER/DIVI		1
L14	376-0375-	4011	CMOS IC QUAD 2-INPUT NAND GATE		1
L8	376-0425-	4136	IC QUAD HIGH-PREFORMANCE OP AMP		1
L6	376-0431-	4013	CMOS IC DUAL D-TYPE FLIP-FLOP		3
L11					
L16					
L12	376-0508-	4584	CMOS IC HEX SCHMITT TRIGGER		2
L15					
L10	376-0537-	14015	CMOS IC DUAL 4-BIT STATIC SHIFT REGISTER		1
D2 - D7	380-1014-	1N4148	DIO SIG 75V 500MA DO35		10
D13 - D14					
D17 - D18					
D15	380-2091-	1N757A	DIO ZENER 9.1V 400MW 5% DO7		1
D8	380-2113-	1N4743A	DIO ZENER 13V 1W 5% DO41		1
D16	380-2116-	1N965A	DIO ZENER 15V 400MW 10% DO7		1
D1	380-2147-	1N5230D	DIO ZENER 4.7V 500MW 1% DO-7		1
D9 - D12	380-4008-	1N4004	DIO RECT 400V 1A DO41		4
T1	410-0217-	LINEAR	XFMR POWER 115/230V 50/60HZ IEC-380		1
P1	510-8198-		PCB		1
P2 - P5	650-3172-	SCREW	SCREW PH MD 6-32 X 1/2		4
P14 - P17	652-3000-	NUT	NUT, HEX 6-32		4
P6 - P9	653-3008-	WASHER	WASHER FLAT #6		4
P10 - P13	653-3008-	WASHER	WASHER LOCK #6		4
TP1 - TP10	654-1192-	TERMINAL	TERMINAL SINGLE NECK POINT CRIMP		12
TP14 - TP15					
J5	665-0813-	2 PIN	JACK, 2 PIN		7
J10					
J12					
J14 - J15					
J17 - J18					

*** END-OF-REPORT ***

		BY	DATE	APPROVED BY	DATE
WANG	WANG LABORATORIES, INC. LOWELL, MA U.S.A.	DWN		E ENGR	
		CHK		M ENGR	
MATERIAL	MODEL NO.			MFG ENGR	
	WANG SPECIFICATIONS No.	TITLE: POWER SEQUENCER BD.			
FINISH	REM. EX AS NOTED .XX ± .040 FRAC ± 1/64 .XXX ± .005 ANG ± 1°30'	210-8198	C	8198	1
	SCALE	SHT 3 OF 3	WANG PART NUMBER	SIZE	DRAWING NUMBER REV





NOTES:
UNLESS OTHERWISE SPECIFIED
1. ALL CAPACITORS ARE EXPRESSED IN MICROFARADS.
2. ALL RESISTORS ARE 1/4W, 5% EXPRESSED IN OHMS.
3. ALL RESISTORS WHICH HAVE A "*" IN THE VALUE ARE 1/8W, 1%.
4. ALL TEST POINTS (TP1-TP10,TP14,TP15) ARE WPN 654-1192.

NO.	REVISION	CHECKER	DATE	BY
A \ A	DWR#E2244			MRM
B \ B	OCR-R00179 OCR#00446	JDL		JAG
- \ -	ECO#333470			BMH
- \ 2	ECO#34003			AII
- \ 3	ECO#34048			AII

WANG

BY	DATE	APPROVED BY	DATE
DWN MRM		E ENGR	
CHK		M ENGR	
E C CONTROL		MFG ENGR	

MATERIAL

MODEL NO. VS-85H

SEE ENGR'G SPECIFICATIONS NO. 10-203

FINISH

TITLE POWER SEQUENCER BD. ASSEMBLY DRAWING

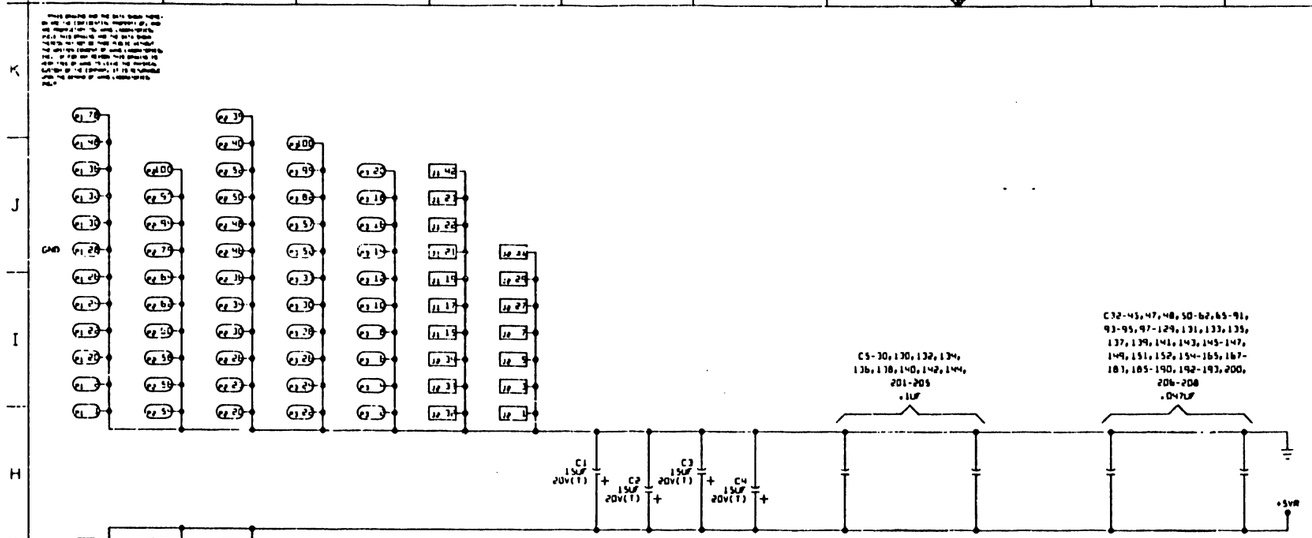
210-8198-R1 | C | 8198 | 3

WANG PART NUMBER | SIZE | DRAWING NUMBER | REV

SCALE 1/1 | SHEET 4 OF 7

N

QQ4



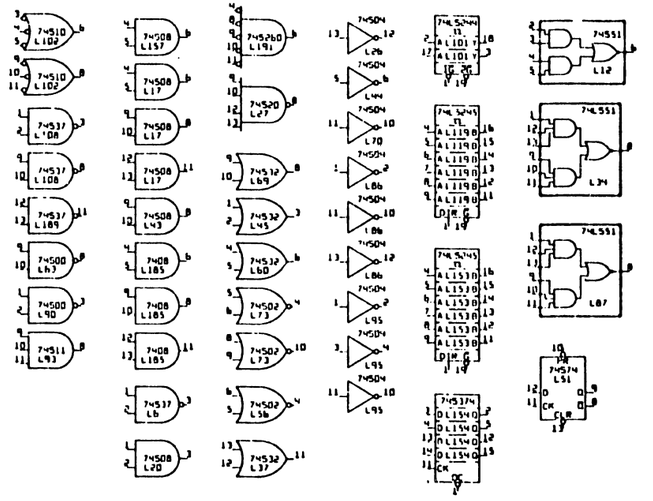
NOTES

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

MNEUMONIC	COORD
ATMD	3J14
ATM1	3J14
ATM2	3J14
ATU	3J14
BCCR	2B14
BCM0-BCM7	4F14
BCCR1	3F14
BCCRA	3G14
BCM	2B14
BCMPW	3F14
BOOTMG	3G14
BENTRY	3J14
BEYBC	3G14
BMM/DMTA	3H1
BRM	3H1
BPAGEOV	3G14
BYO	3F14
CLKA	2H1
CLKB	2H1
CLKEM	2H1
CLKMC	2H1
CLWCNT	5C14
CMPF	2K1
CMO-CM46	7E1
CM0-7	5C1
CM22+23	7G1
CM22	7G1
CM23	7G1
CM7	5C1
COB	2J1
CCCM	2B14
CTI	2D1
CT2	2D1
CT2B	2E1
FAULT	2A10
HALTENB	2C14

MNEUMONIC	COORD
INVR	3J14
ED	3J14
ELD+INTY	5E14
LLEN2	2J1
LLICO-LLIC13	5J1
LLMO0-LLMO7	5D1
MBV	2B14
MISS	2D13
MMPT	3E14
NOPARITY	7A10
OVF	3H14
P2R	5E1
RA0-RA13	4C14
RDO-RD7	5B1
RUN/STEP	2D14
R/W	3B14
STEP	2B14
SR/RAM	7A6
TCM0-TCM47	7K14
TCMP0	7K11
TCMP1	7K11
TFF	2D14
TPTS	5H14
TWAP0	3G14
TT4	2E1
TT0	2F1
TT1	3G14
TT2	2F1
TTO	3G14
TTT	3G14
TT2	3J14
WCS2	5H1
WP	5G14
16DMS/ 20DMS	2K6

SPARES



E REV 0 N

REV	REVISION	BY	DATE
0	ORIGINATED PER DWR NO. E1858 APPR!	JSW	3/28/83
1	REVISED PER ECO NO. 28830 APPR!	JSW	4/22/83
2	REVISED PER ECO NO. 29410 APPR!	JSW	7/20/83
3	REVISED PER ECO NO. 30149 APPR!	JSW	1-4-84
4	REVISED PER ECO NO. 32160 CHKR!	AAM	4-23-84
5	REVISED PER ECO NO. 32620 CHKR!	PGD	6-8-84

WANG LABORATORIES, INC.

SCHEMATIC DIAGRAM

TITLE: CONTROL MEMORY

MODEL NUMBER: P62V5-110

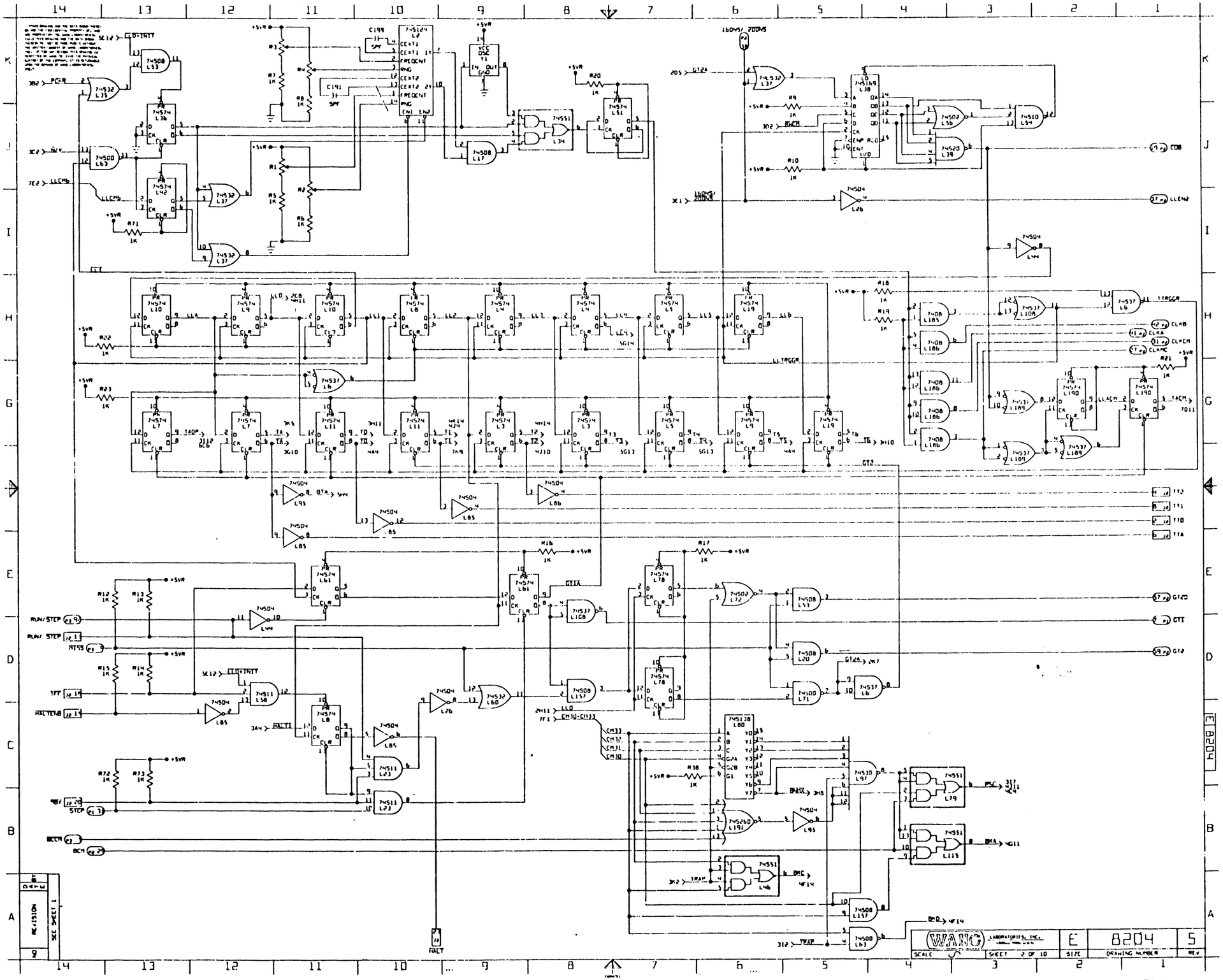
WANG PART NUMBER: 210-8204

DWN JSW | CHK | ENG JS | DIR

SCALE | SHEET 1 OF 10 | SIZE E | DRAWING NUMBER 8204 | REV 5

8204 2

RR1


74574 L2
74574 L10
74574 L9
74574 L4
74574 L8
74574 L19
74574 L7
74574 L11
74574 L3
74574 L5
74574 L9
74574 L61
74574 L78
74574 L8
74574 L42
74574 L36
74574 L51
74574 L190
74574 L191
74500 L63
74500 L20
74500 L71
74500 L157
74500 L63
74502 L56
74502 L72
74504 L44
74504 L26
74504 L95
74504 L85
74504 L86
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74504 L44
74504 L95
74504 L97
74508 L33
74508 L17
74508 L186
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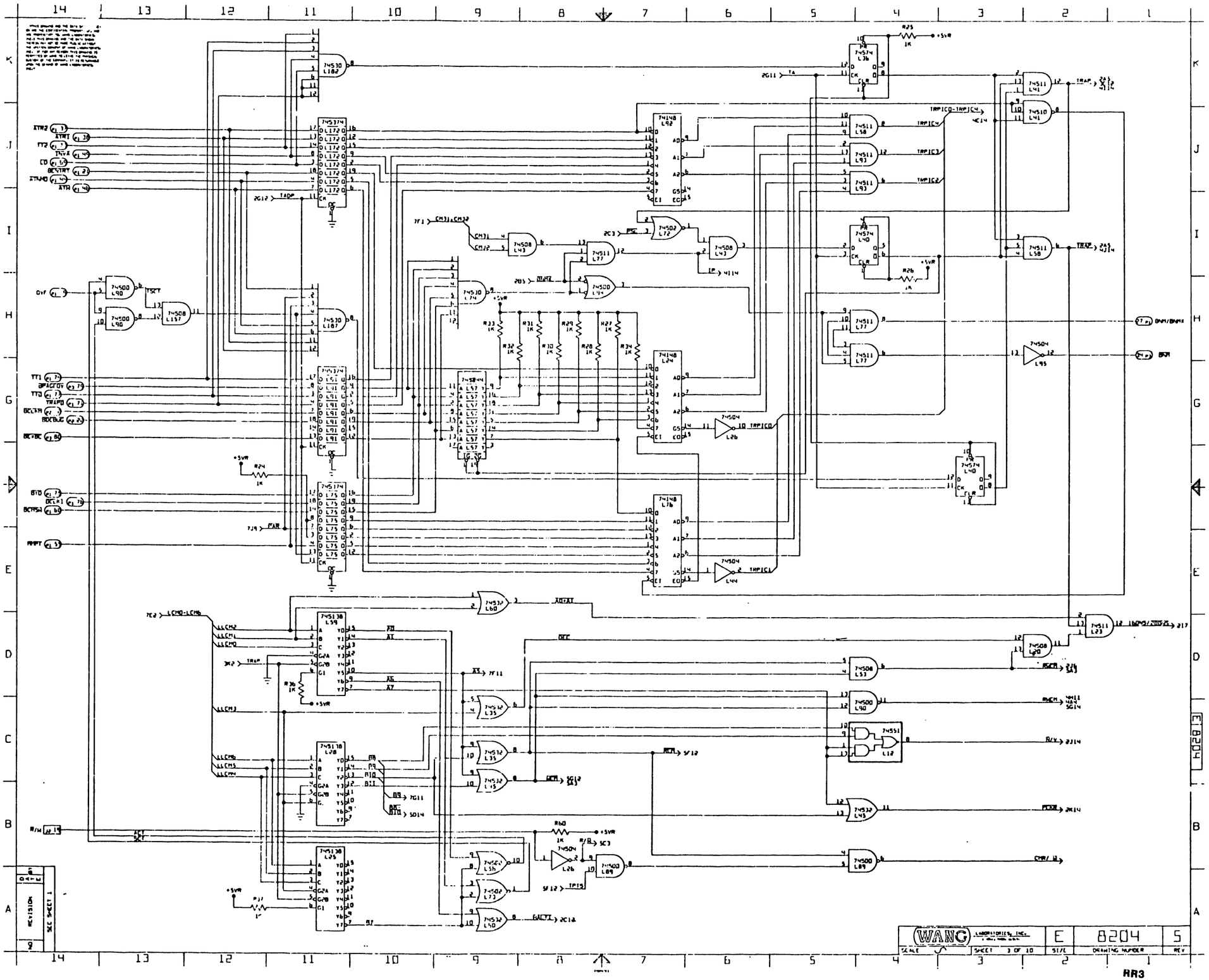
74508 L157
74510 L54
74511 L58
74511 L23
74511 L23
74520 L39
74532 L37
74532 L37
74532 L37
74532 L60
74537 L6
74537 L108
74537 L189
74537 L189
74537 L184
74537 L6
74537 L168
74537 L6
74551 L34
74551 L79
74551 L115
74551 L46
74560 L191
74938 L80
74932 L35
74169 L38
74S124 L2
VCC OSC Y1
R1 1K
R2 1K
R3 1K
R4 1K
R5 1K
R6 1K
R7 1K
R8 1K
R9 1K
R10 1K
R11 1K
R12 1K
R13 1K
R14 1K
R15 1K
R16 1K
R17 1K
R18 1K
R19 1K
R20 1K
R21 1K
R22 1K
R23 1K
R71 1K
R72 1K
R73 1K
C191 5PF
C199 5PF
+5VR
SC12 > CLOCKINIT
302 > PCER
XC2 > RUN
7E2 > LLCMD
205 > G12A
302 > RHCM
XC1 > 16MHZ/20MHZ
RUN/STEP
RUN/ STEP
RTSS
TFF
ARITEMB
STEP
BCEN
BCM
3K2 > TRAP
312 > TRAP
3K4 > FAULT
2H11 > LLD
7F1 > CM30-CM33
LLD > PCB
LL1 TRGGR
LL2
LL3
LL4
LL5
LL6
SG14
SG13
SG10
TA > TA
TB > TB
TC > TC
TD > TD
T1 > T1
T2 > T2
T3 > T3
T4 > T4
T5 > T5
T6 > T6
TADP > TADP
CM33
CM32
CM31
CM30
CLKA
CLKB
CLKCM
CLKMC
TRGGR
TACM > TACM
LLACM
BMSC > BMSC
BMA > MG11
BMB > MG14
BMC > MG14
FAULT
G12A > G12A
G12 > G12
GTT
GTA > GTA
GTB
LLEN2 > LLEN2
TDB > TDB
TT2
TT1
TT0
TTA
SHEET 1
REVISION
DATE
WANG LABORATORIES, INC.
SCALE
SHEET 2 OF 10
SIZE E
DRAWING NUMBER 8204
REV 5
RR2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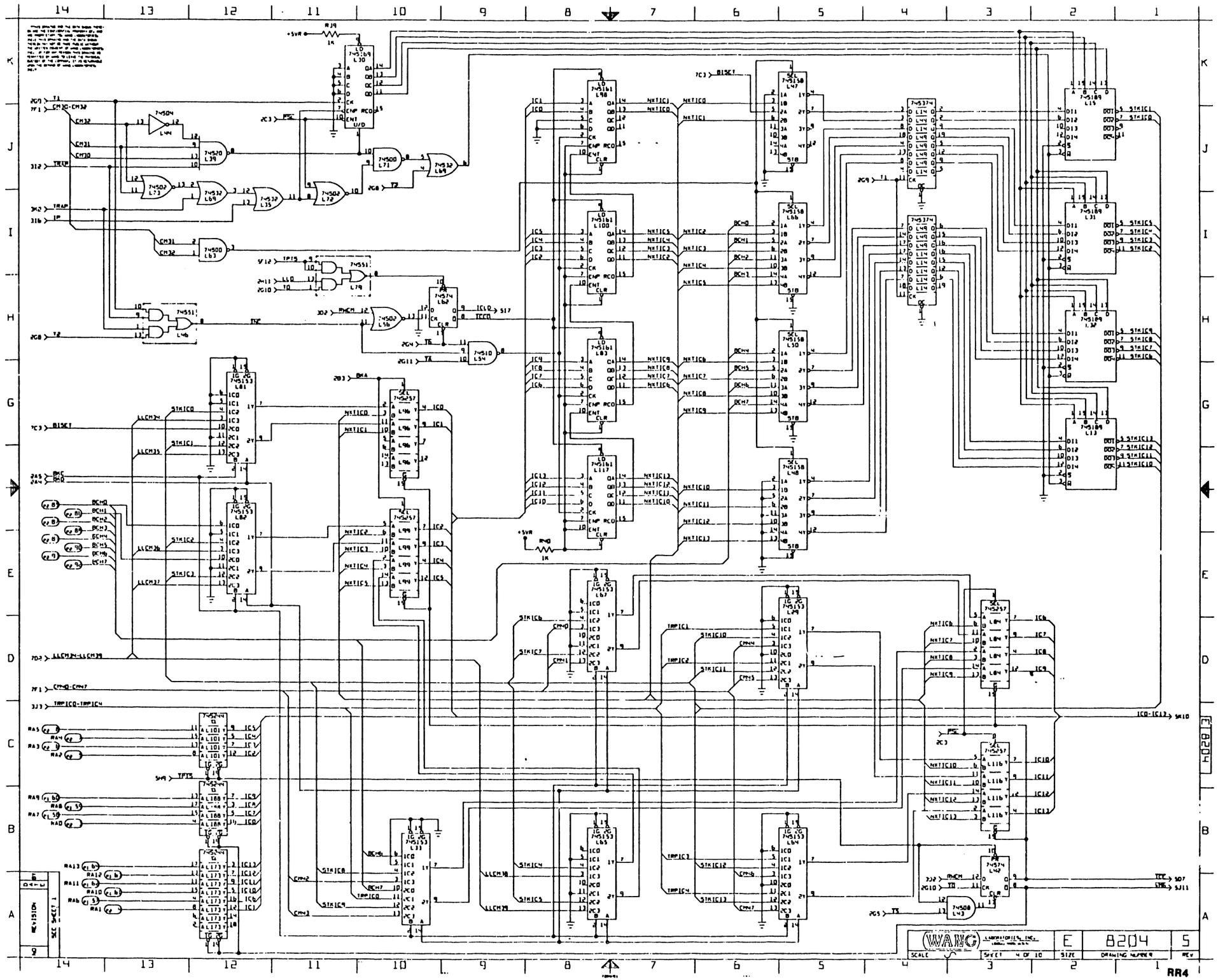
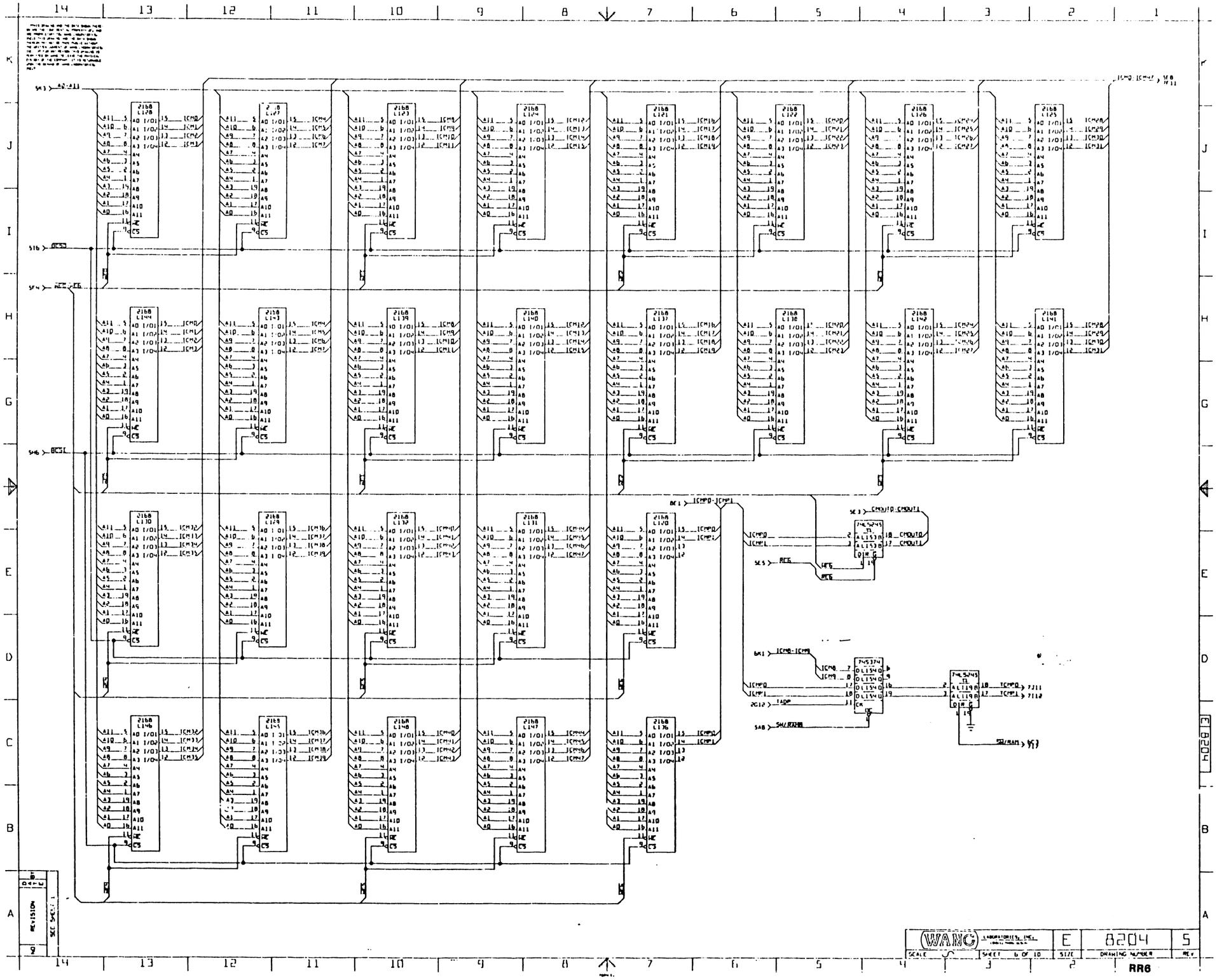
74S374 L172
74S374 L187
74S374 L175
74S374 L191
74S138 L39
74S138 L28
74S138 L25
74S00 L40
74S00 L96
74S08 L157
74S08 L43
74S02 L72
74S11 L77
74S00 L85
74S30 L74
74S32 L60
74S32 L35
74S32 L15
74S32 L45
74S32 L23
74S08 L53
74S08 L90
74S00 L40
74S51 L12
74S00 L89
74S04 L95
74S04 L26
74S04 L44
74S11 L41
74S10 L41
74S11 L58
74S11 L93
74S11 L40
74S74 L36
74S74 L40
74S74 L10
74S148 L92
74S148 L24
74S148 L76
74S244 L57
R25 1K
R26 1K
R24 1K
R33 1K
R32 1K
R31 1K
R30 1K
R29 1K
R28 1K
R34 1K
R36 1K
R37 1K
R60 1K
+5VR
TRAP
TRPIC4
TRPIC3
TRPIC2
TRPIC1
TRPIC0
BMR/BMW
BMR
RSCR
MSCR
R/W
MCSR
CMR/W
XMTRT
RSCR
MSCR
R/W
MCSR
CMR/W
WANG LABORATORIES, INC.
E
8204
5
SCALE
SHEET 3 OF 10
SIZE
DRAWING NUMBER
REV
RR3


REVISION
SEE SHEET 1
WANG LABORATORIES, INC.
SCALE
SHEET 4 OF 10
SIZE E
8204
DRAWING NUMBER
REV 5
RR4

RR5


14 13 12 11 10 9 8 7 6 5 4 3 2 1
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REVISION
SEE SHEET 1
WANG LABORATORIES, INC.
SCALE
SHEET 6 OF 10
SIZE E
DRAWING NUMBER 8204
REV 5
RR6

INSTR	CM S0	CM S1	CM S2	CM S3	IS	CM	CH	STR	TRP
BCC	0	0	0	0	x	x			x
BU	0	0	0	1		x			x
SB	0	0	1	0		x			x
SS	0	0	1	1	x	x			x
xx	0	1	0	0				x	
xx	0	1	0	1				x	
BNM	0	1	1	0			x		x
BNMX	0	1	1	1			x		x
+DT	1	0	0	0	x	x			x
+BF	1	0	0	1	x	x			x
+SBT	1	0	1	0	x	x			x
+SBF	1	0	1	1	x	x			x
SRT	1	1	0	0	x			x	x
SRF	1	1	0	1	x			x	x
BNMT	1	1	1	0	x		x		x
BNMF	1	1	1	1	x		x		x

* LOW 8 BITS OF CM
HIGH 8 BITS OF IC+1

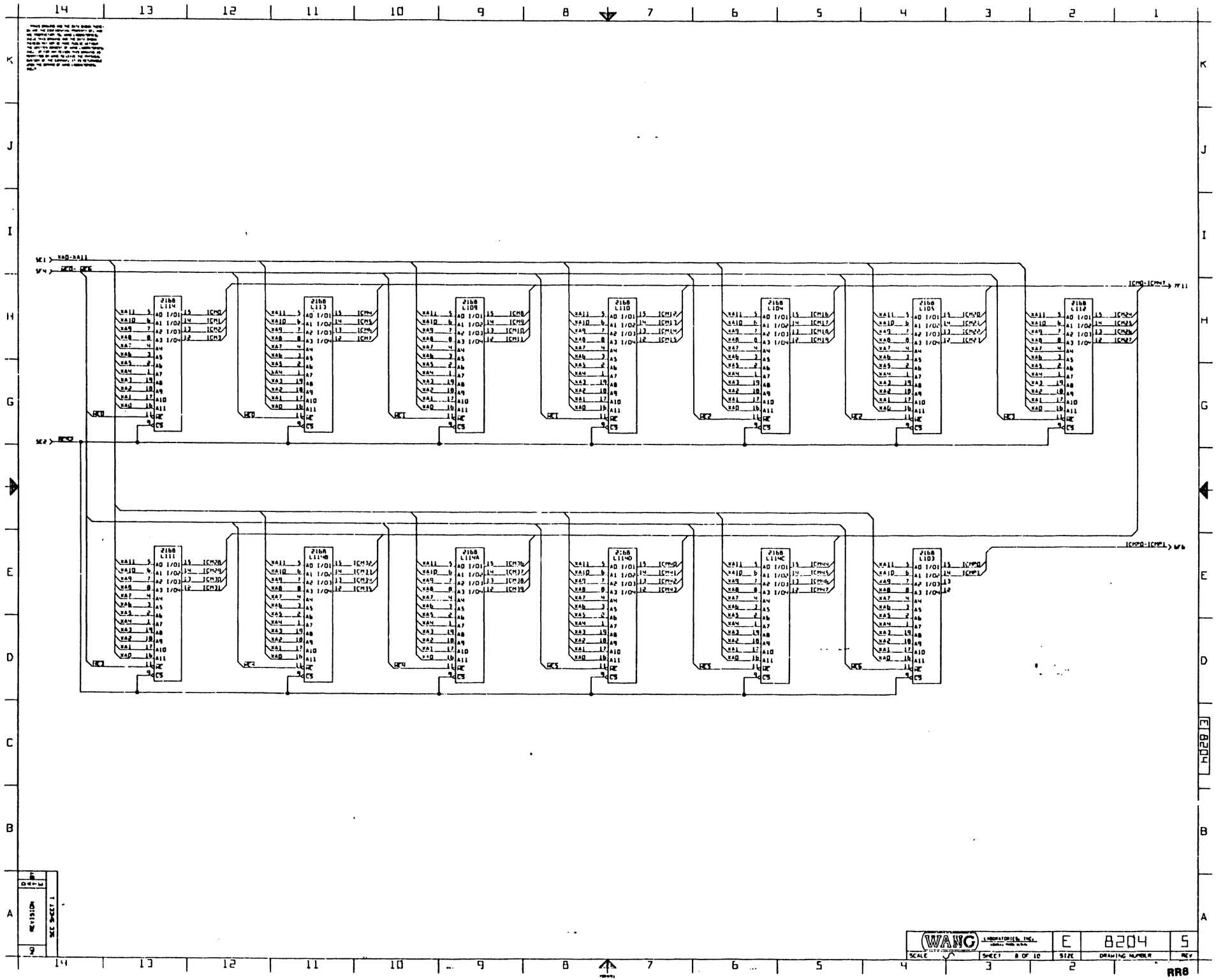
CM S1	CM S2	A	B	CHAN.
0	0	1	1	CM
0	1	1	1	CM
1	0	0	1	STACK
1	1	0	0	CM
x	x	1	0	TRAP

STACK READY

REVISION	NO	DATE	BY												
SEE SHEET 1															

WANG LABORATORIES, INC. | SCALE | SHEET 7 OF 10 | E | 8204 | 5 | SIZE | DRAWING NUMBER | REV

RR7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L114A
L114D
L114C
L103
SEE SHEET 1
REVISION
WANG
SCALE
SHEET 8 OF 10
SIZE
E
8204
DRAWING NUMBER
5
REV
RR8

WANG LABORATORIES, INC.

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

(FINAL BILL-OF-MATERIALS)

BOARD NO. & TITLE: C8204 CONTROL MEMORY — CREATED: 04/05/84 13:09
ASSEMBLY LEVEL & TITLE: 209 8204 — LAST MODIFIED: 08/15/84 13:36 BY: LAB
ARTWORK REVISION (B): 04 — EDITING REVISION: 4
ASSEMBLY REVISION (A): 08
SCHEMATIC REVISION (S): 05
DWG OR HOST RECENT ECO: 320220

* REF. DES.	* WANG PART NO.	* VALUE/TYPE *	DESCRIPTION	* DRAWING NO. *	QTY. *
C191	300-1908-	5PF	CAP CERAMIC MONO RADIAL 50V +/-0.5PF NPO		2
C199					
C5 - C30	300-1938-	.1U	CAP CERAMIC MONO RAD +80% -20% 50V Z5U		50
C130					
C132					
C134					
C136					
C138					
C140					
C142					
C144					
C201 - C205					
C32 - C46	300-1966-	.047U	CAP CERAMIC MONO AXIAL +80 -20% 50V Z5U		181
C47 - C48					
C50 - C62					
C65 - C91					
C93 - C96					
C97 - C129					
C131					
C133					
C135					
C137					
C139					
C141					
C143					
C145 - C147					
C149					
C151 - C152					
C154 - C165					
C167 - C183					
C185 - C190					
C192 - C198					
C200					
C206 - C208					
C1 - C4	300-4022-	15U	CAP TANT AXIAL 10% 20V		4
SW1	328-1501-	SWITCH	SLIDE SPST 8 POS		1
R42 - R49	330-1023-	22.00	RES FIXED METAL FILM 1/4W 5% 200PPM		31
R74 - R86					

BOARD NO. & TITLE: C8204 CONTROL MEMORY — SCHEMATIC REVISION (S): 05 — SHEET OF — PAGE 2

* REF. DES.	* WANG PART NO.	* VALUE/TYPE *	DESCRIPTION	* DRAWING NO. *	QTY. *
R5 - R8	330-2048-	470.000	RES FIXED METAL FILM 1/4W 5% 200PPM		4
R9 - R10	330-3011-	1K	RES FIXED METAL FILM 1/4W 5% 200PPM		46
R18 - R36					
R36 - R41					
R60 - R73					
R87					
R1 - R4	330-1014-	1K	RES TRIMMER .375" SQUARE SIDE ADJ 10% 1 TURN		4
J1 - J3	350-0401-	60 CONT	CONN PC HEADER DUAL ROW .100 R/A W/LOCK/EJECT		3
L185 - L186	376-0001-	7408	IC QUAD 2-INPUT AND GATE		2
L84	376-0151-	745257	IC QUAD DATA SELECT OR/MULTIPLEXERS		4
L96					
L99					
L110					
L20	376-0171-	74148	IC 8-LINE-TO-3-LINE OCTAL PRIORITY ENCODER		3
L76					
L92					
L12	376-0184-	74S51	IC DUAL 2 WIDE 2-INPUT AND-OR-INVERT GATES		6
L34					
L46					
L79					
L87					
L115					
L26	376-0197-	74S04	IC HEX INVERTER		6
L44					
L70					
L85 - L86					
L96					
L74	376-0198-	74S30	IC 8-INPUT NAND GATE		4
L97					
L102					
L107					
L86	376-0199-	74S02	IC QUAD 2-INPUT POSITIVE-NOR GATES		3
L72 - L73					
L17	376-0200-	74S08	IC QUAD 2 INPUT POSITIVE AND GATES		6
L20					
L43					
L53					
L167					
L3 - L5	376-0202-	74S74	IC DUAL D-TYPE POS EDGE TRIGRD F/F W/PRESET/C		19
L7 - L11					
L19					
L36					
L40					
L42					
L81					
L61 - L62					
L78					
L174					
L183					
L190					

BOARD NO. & TITLE: C8204 CONTROL MEMORY — SCHEMATIC REVISION (S): 05 — SHEET OF — PAGE 3

* REF. DES.	* WANG PART NO.	* VALUE/TYPE *	DESCRIPTION	* DRAWING NO. *	QTY. *
L35	376-0205-	74S32	IC QUAD 2-INPUT OR GATE		8
L37					
L45					
L60					
L69					
L191	376-0206-	74S260	IC DUAL 5-INPUT EXPANDER		1
L29	376-0215-	74S153	IC DUAL 4-INPUT MULTIPLEXER		7
L33					
L64 - L65					
L67					
L81 - L82					
L63	376-0220-	74S00	IC QUAD 2-INPUT NAND GATE		6
L71					
L88 - L90					
L90					
L27	376-0230-	74S20	IC DUAL 4-INPUT POSITIVE NAND GATE		2
L39					
L23	376-0237-	74S11	IC TRIPLE 3-INPUT AND GATE		4
L58					
L77					
L95					
L61	376-0238-	74S10	IC TRIPLE 3-INPUT NAND GATE		3
L54					
L102					
L163	376-0271-	74S86	IC QUAD 2 IN EXCLUSIVE OR GATE		1
L2	376-0273-	74S124	IC DUAL VOLTAGE CONTROLLED OSC (VCO)		1
L55	376-0278-	74S161	IC SYN 4-BIT BINARY COUNTER W/DIRECT CLEAR		8
L83					
L98					
L100					
L117					
L119	376-0288-	74LS245	IC OCTAL BUS TRANSCEIVER TRI-STATE OUTPUTS		16
L182 - L183					
L155					
L160 - L162					
L165					
L167					
L169 - L170					
L175					
L178					
L180 - L181					
L193					
L133	376-0206-	74LS374	IC OCTAL D-TYPE FLIP-FLOP TRI-STATE		3
L149					
L101	376-0268-	74LS244	IC OCTAL BUFFER/LINE DRIVER W/TRI STATE		3
L118					
L192					
L6	376-0296-	74S37	IC QUAD 2-INPUT NAND BUFFER		3
L108					
L189					

BOARD NO. & TITLE: C8204 CONTROL MEMORY — SCHEMATIC REVISION (S): 05 — SHEET OF — PAGE 4

* REF. DES.	* WANG PART NO.	* VALUE/TYPE *	DESCRIPTION	* DRAWING NO. *	QTY. *
L25	376-0298-	74S138	IC 3-LINE TO 8-LINE DECODER/MULTIPLEXER		6
L28					
L59					
L80					
L104 - L107					
L47 - L48	376-0301-	74S158	IC QUAD 2 TO 1-LINE DATA SELECTOR/MUX INVERT		4
L50					
L66					
L14	376-0305-	74S374	IC OCTAL D-TYPE EDGE-TRIG F/F TRI-STATE		12
L49					
L75					
L91					
L154					
L156					
L159					
L168					
L172					
L176 - L177					
L184					
L14E	376-0346-	74S373	IC OCTAL D-TYPE LATCH TRI-STATE OUTPUTS		4
L132A					
L134					
L158					
L30	376-0331-	74S169	IC 4-BIT UP/DOWN SYNCHRONOUS BINARY COUNTER		2
L38					
L148A	376-0333-	74S139	IC 2 TO 4-LINE DECODER/MULTIPLEXER		1
L57	376-0338-	74S244	IC OCTAL BUFFER/LINE DRIVER/RECEIVER TRI-STATE		8
L150					
L173					
L179					
L188					
L151	376-0348-	93S48	IC 12-INPUT ODD/EVEN PARITY CHECKER/GENERATOR		4
L164					
L166					
L194					
L13	376-0349-	74S189	IC 16X4-BI- STATIC RAM TRI-STATE OUTPUTS		4
L18					
L31 - L32					
Y1	376-9001-	SKT 14	IC SOCKET P'4 DIL PC MOUNT		1
L103 - L105	376-9020-	SKT 20	IC SOCKET ;0 PIN DIL PC MOUNT		39
L109 - L114					
L116A					
L116B					
L116C					
L116D					
L120 - L122					
L126 - L148					
01	810-8204-	PCB			1

		BY	DATE	APPROVED BY	DATE
WANG LABORATORIES INC. LOWELL MA U.S.A.		Dwn		E ENGR	
		CHK		M ENGR	
				MFG ENGR	
MATERIAL	MODEL NO.	TITLE: CONTROL MEMORY			
	WLI ENGRG SPECIFICATION No.				
FINISH	TOL EF AS NOTED XX ± .010 FRAC ± 1/64 XXX ± .005 ANG ± 1° 30' FINISH	210-8204	C	8204	S
	SCALE	SHT 2 OF 10	WANG PART NUMBER	SIZE	DRAWING NUMBER	REV

RR9

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

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

	376-0131-	74S257	IC QUAD DATA SELECT OR/MULTIPLEXERS	4
	376-0197-	74S04	IC HEX INVERTER	6
	376-0198-	74S30	IC 8-INPUT NAND GATE	4
	376-0199-	74S02	IC QUAD 2-INPUT POSITIVE-NOR GATES	3
	376-0200-	74S08	IC QUAD 2 INPUT POSITIVE AND GATES	5
	376-0202-	74S74	IC DUAL D-TYPE POS EDGE TRIGRD F/F W/PRESET/C	19
	376-0205-	74S32	IC QUAD 2 INPUT OR GATE	5
	376-0228-	74S20	IC QUAD 2-INPUT NAND GATE	6
	376-0230-	74S20	IC DUAL 4-INPUT POSITIVE NAND GATE	2
	376-0237-	74S11	IC TRIPLE 3-INPUT AND GATE	4
	376-0238-	74S10	IC TRIPLE 3-INPUT NAND GATE	3
	376-0271-	74S86	IC QUAD 2 IN EXCLUSIVE OR GATE	1
	376-0298-	74S138	IC 3-LINE TO 8-LINE DECODER/MULTIPLEXER	6
	376-0301-	74S158	IC QUAD 2 TO 1-LINE DATA SELECTOR/MUX INVERT	4
	376-0305-	74S374	IC OCTAL D-TYPE EDGE-TRIG F/F TRI-STATE	12
	376-0306-	74S373	IC OCTAL D-TYPE LATCH TRI-STATE OUTPUTS	4
	376-0331-	74S169	IC 4-BIT UP/DOWN SYNCHRONOUS BINARY COUNTER	2
	376-0333-	74S139	IC 2 TO 4-LINE DECODER/MULTIPLEXER	1
	376-0338-	74S244	IC OCTAL BUFFER/LINE DRIVER/RECEIVER TRI-STATE	5
	376-0348-	93S48	IC 12-INPUT ODD/EVEN PARITY CHECKER/GENERATOR	4
	376-0349-	74S189	IC 16X4-BIT STATIC RAM TRI-STATE OUTPUTS	4

*** END-OF-REPORT ***

WANG LABORATORIES, INC.

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

(FINAL BILL-OF-MATERIALS)

BOARD NO. & TITLE: C8204 CONTROL MEMORY
ASSEMBLY LEVEL & TITLE: 213 8204-A
ARTWORK REVISION (R): 04
ASSEMBLY REVISION (A): 05
SCHEMATIC REVISION (S): 05
DWR OR MOST RECENT ECO: 32827D

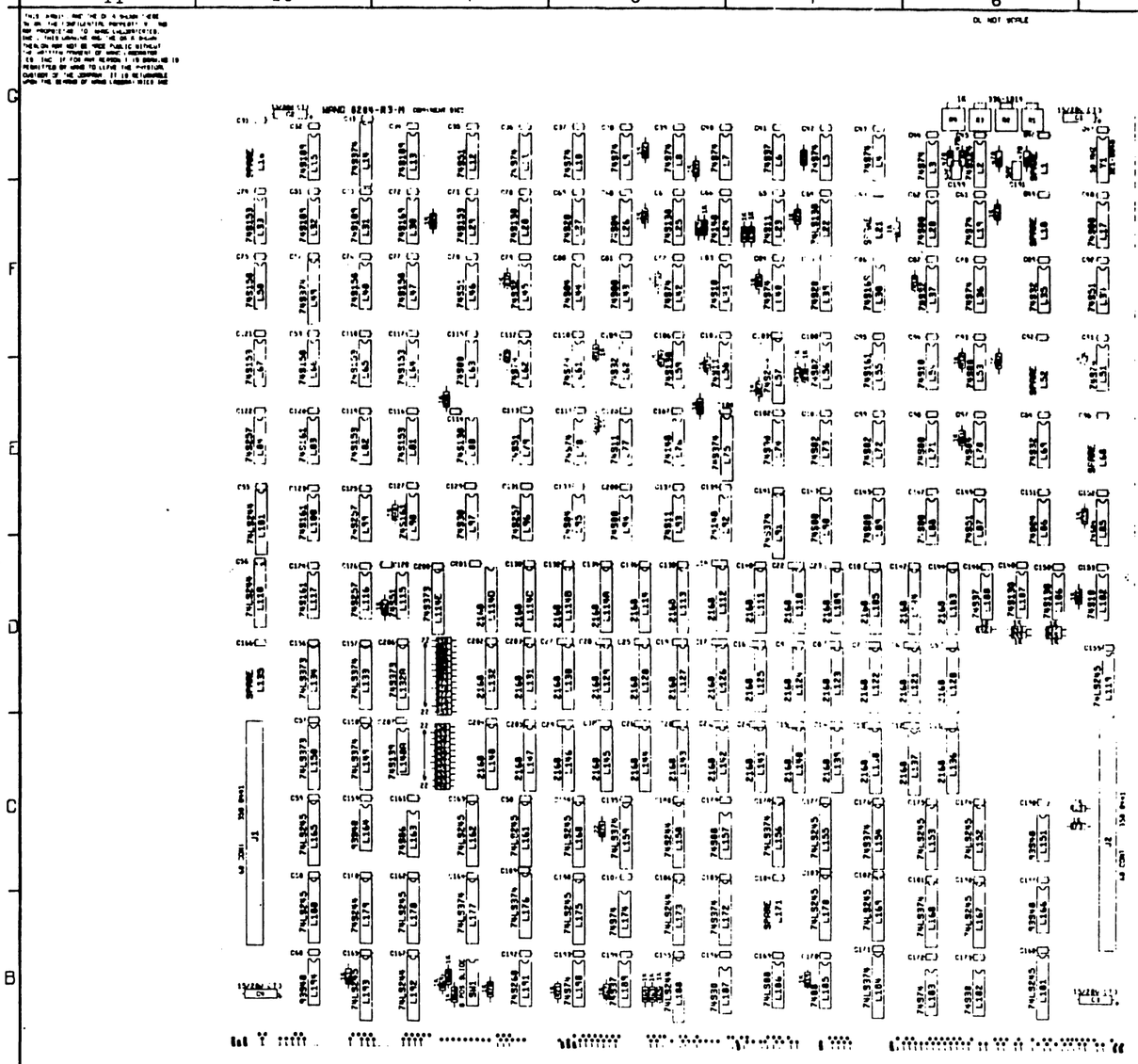
CREATED: 06/08/84 10:09
LAST MODIFIED: 08/15/84 13:36 BY: LAB
EDITING REVISION: 4

* REF. DES.	* WANG PART NO.	* VALUE/TYPE *	DESCRIPTION	* DRAWING NO. *	QTY. *
P1	209-8204-		PCA		1
Y1	321-1019-	50.0000	CLOCK OSCILLATOR 50.0 MHZ +-.01% TTL		1
L103 - L105	377-0476-	8168	IC 4K X4 NMOS SRAM 55NS		39
L109 - L114					
L114A					
L114B					
L114C					
L114D					
L128 - L132					
L136 - L148					

*** END-OF-REPORT ***

WANG LABORATORIES, INC. LOWELL, MA U.S.A.		BY	DATE	APPROVED BY	DATE
		DWN		E ENGR	
		CHK		M ENGR	
				MFG ENGR	
MATERIAL	MODEL NO	TITLE CONTROL MEMORY			
	WE ENGRG SPECIFICATIONS No				
FINISH	TOL EX AS NOTED XXX = .010 FRAC = 1/64 XXX = .005 ANG. = 1° 32 FINISH √	210-8204	C	8204	S
	SCALE SHT 10 OF 10	WANG PART NUMBER	S/T	DRAWING NUMBER	REV

RR10



BY	DATE	APPROVED
CHK J. ROGERS	12/83	E ENGR
DR		M ENGR
		MFG MGR

MATERIAL	MODEL NO	TITLE
	PHOD6F V9-110	ASSEMBLY DRAWING CONTROL MEMORY
FINISH	SEE ENGR SPECIFICATIONS NO 18-213	210-8204-R3 D 8204 3

WANG LABORATORIES, INC

REVISION	BY	DATE	APPROVED
--	DWR	8/23/83	11/03
A	DWR E1434	11/03/83	7/18/83
B	ECO 26863 D	7/18/83	12/4/83
C	ECO 28457 D	12/4/83	
D	ECO 30149 D		

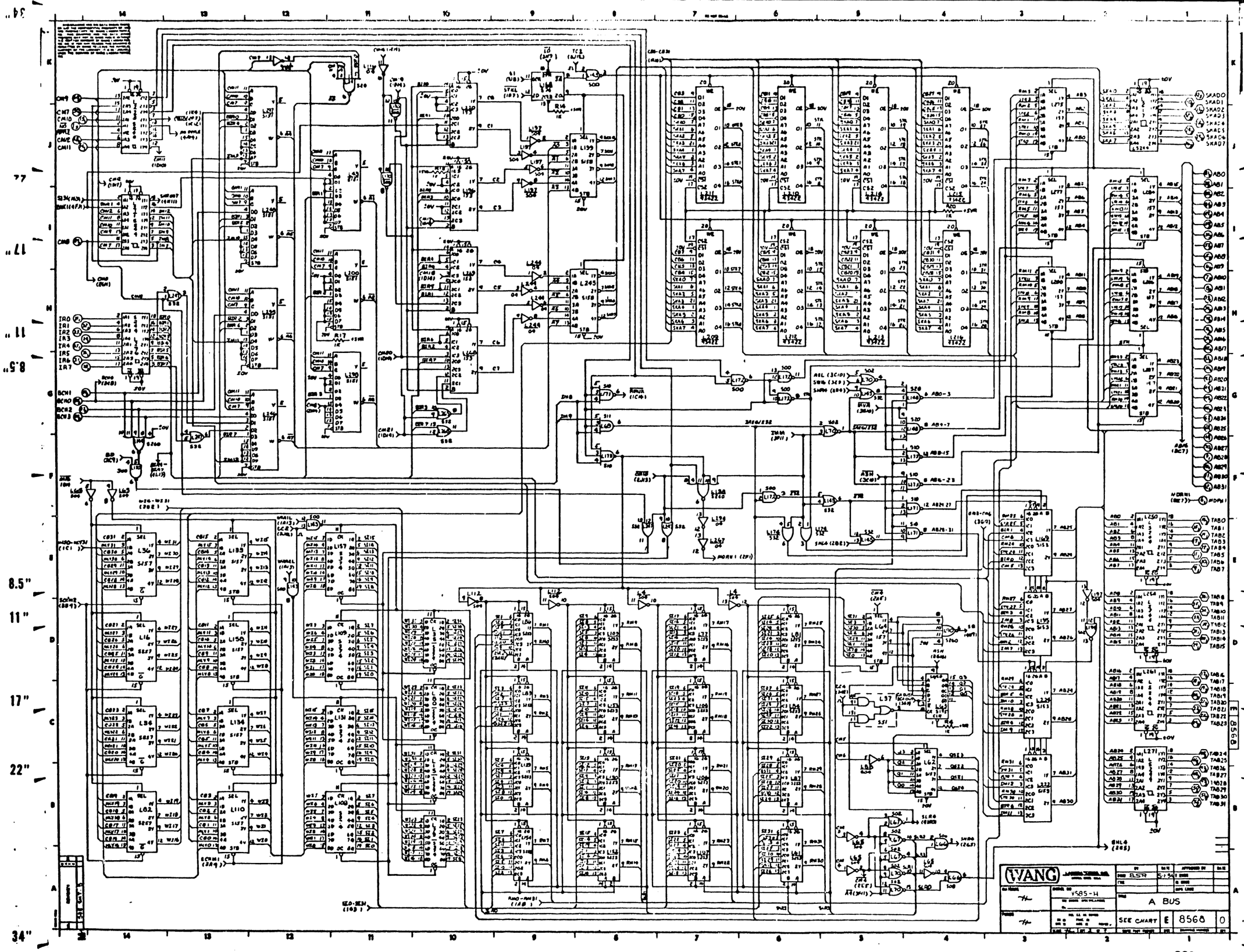
NOTES: UNLESS OTHERWISE SPECIFIED

1. ALL CAPS ARE .047 CER CAPS WPN# 300-1466 EXPRESSED IN MICROFARADS
   C3-C30,C130,C192,C139,C136,C138,C140,C142,C144,C201-C205
   ARE .1UF 50V (+80 -20) WPN# 300-1930
2. ALL RESISTORS ARE 1/4W 5 PERCENT EXPRESSED IN OHMS
3. L103-L105,L109-L114,L114A-L114D,L128-L132
   L134-L148 LORD 28 PIN SOCKETS WPN# 376-1028
4. Y1 LORD 14 PIN SOCKET WPN# 376-1001

RR11

WANG			
	YSAS-H	A BUS	
	SEE CHART	E 8568	0

SS1


WANG
VS85-H
A BUS
SEE CHART
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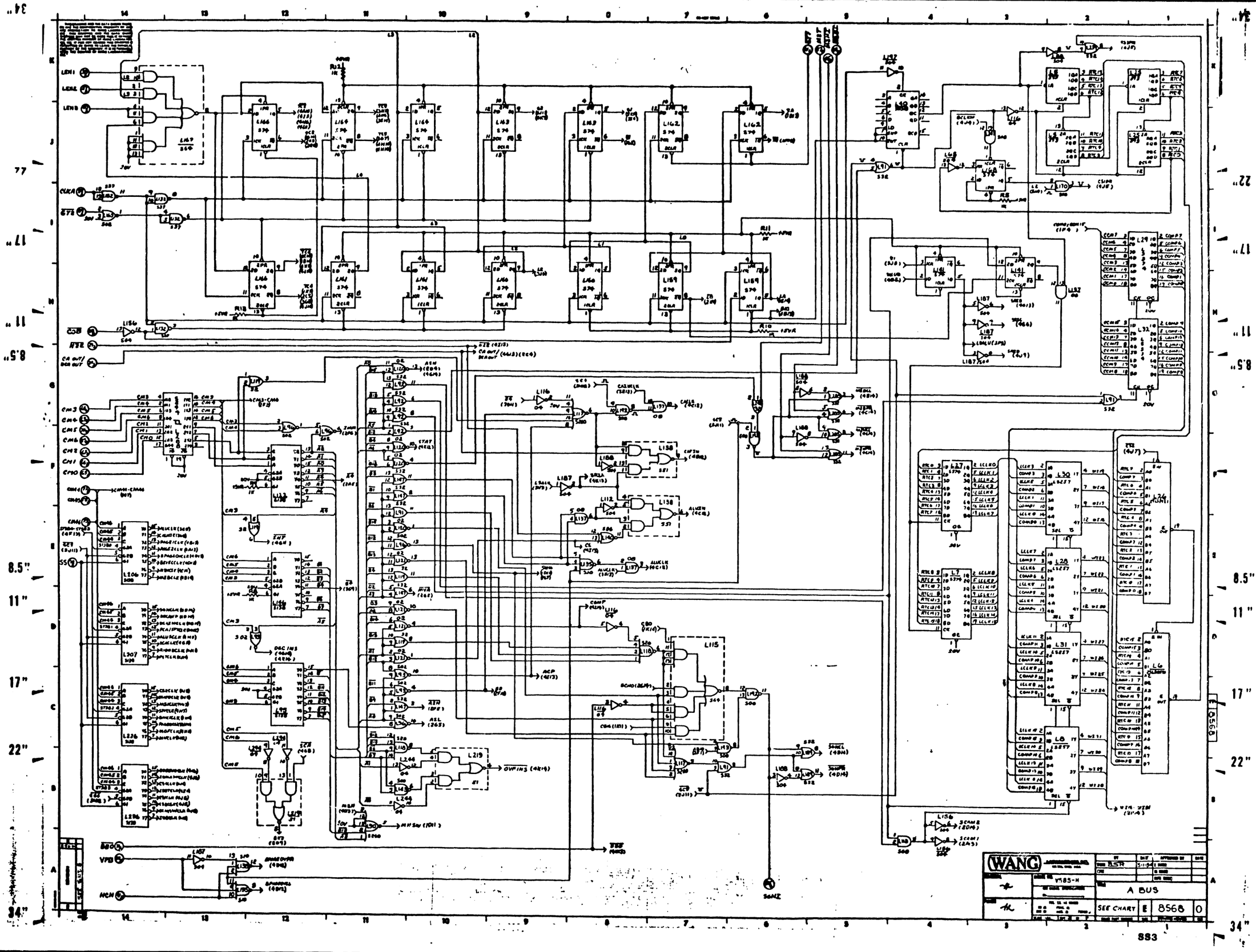
SS2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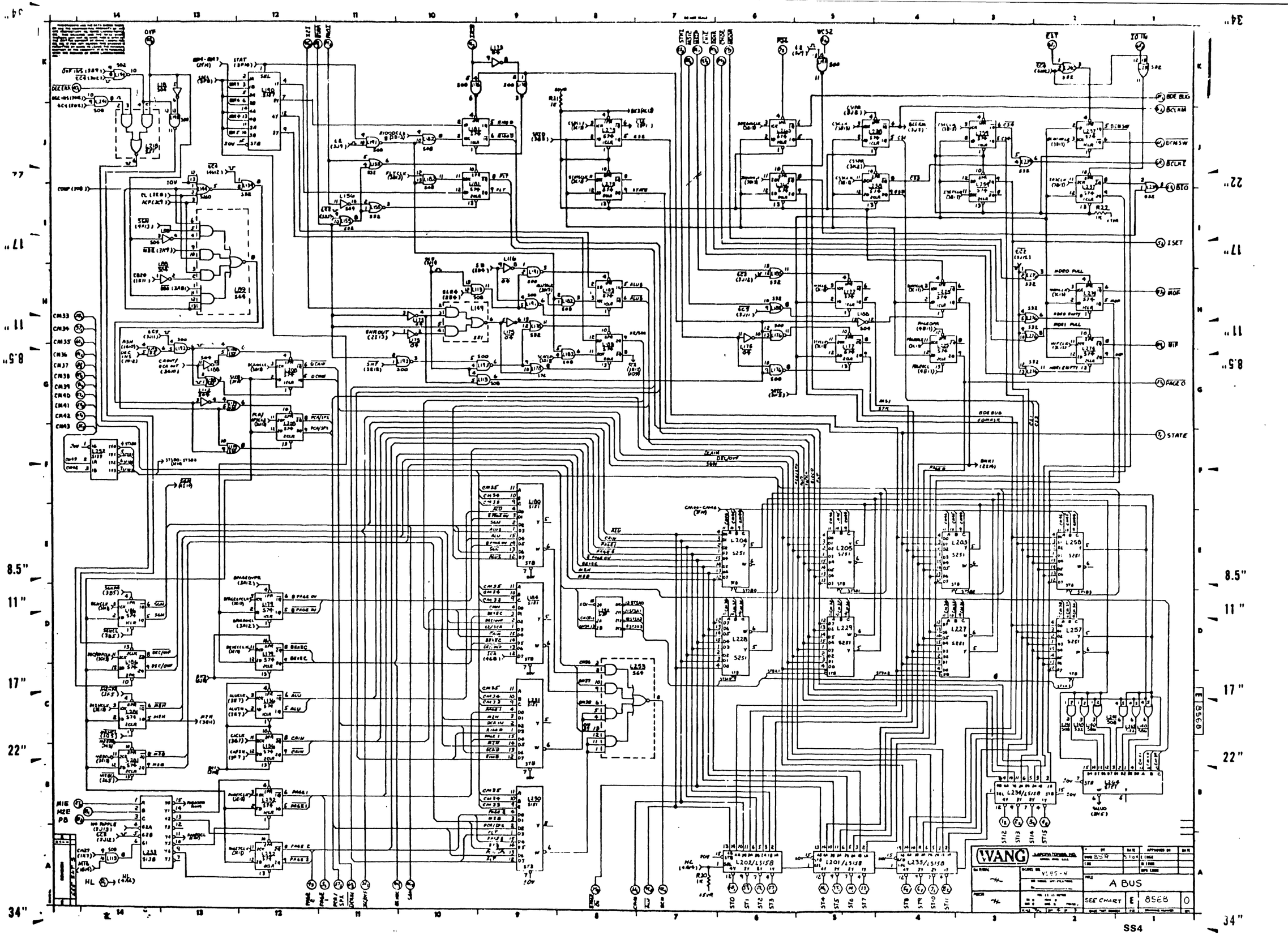
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CR43
MIE
MEE
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HL
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ST15
SS4

ABD-ABSH	8J1
BUS	6B7
BBS	3A16
BCMD-BCA3	8B16
BCTRB	9A1
BCMISR	9J1
BCLK2	9J1
BCM	9A7
BDE BUS	9A1
BESTE	9A10
BIO	9J1
BMSK	4A11
BYPASS OV	9A8
CMM	9A8
CA OUT / DCA OUT	3B16
CBD-CB31	1B16
CBIB	4B7
CBDE	9B6
CBLK A	1B16
CBS	3B16
CM7	2J16
CM8	7B16
CM9	1B16
CM10-CM14	2J16
CM5-CM6	3B16
CM15-CM21	1D16
CM27	1A7
CM28	1A6
CM29	1B16
CM33-CM43	4A16
CM44-CM46	5B16
DCAIN	4A11
DDCERR	4A11
DDCJOUT	4A11
EAT	4B2
EPI	3B5
EP2	3B16
HCM	3B16
HL	4A4
IBIN	4A1
IBAL	1B1
IBD-IB7	2A16
IBSB	4A10

ESET	9J1
GIME L	1B1
GEN1-IOM3	3B16
HDR	4A3
HDCA	4B6
HORN1	2B1
HSN, HSL	1A6
HOLL	1A6
HTIMER	1B9
HSYNC-HSYNC	1B1
IHB	9B6
INTP	4A1
IMOP	4A1
IMEE	4B19
IMSYN, IBSYN	1B16
IMSY	3B5
INTPRE	3B5
INTBSE	3B5
INL	1B6
IMOL	1B1
IMIL	1B1
IMIL	1B1
IMIS-IMSI	1B16
IOMB	1B16
IOM2 - IOM31	1J16
IOSC	4A7
IRTIP	4B3
IRQ WIRE	2J16
IRE	3B16
OVF	9J16
PAGE 0	9B1
PAGE1	9A11
PAGE 2	9A8
PB	4B6
PCA/SPE	4A11
PPA	4B6
RIOI	4A11
RBTP	1B16
SB	3B16
SKADO-SKAD7	8J1
SGNE	3A6
STATE	4B1
STM1	4B7
STO-ST15	4A6
TAB0-TAB31	8B1
TNL	1B1
VPB	5A9
WDO-WD31	1C1
WRIL WIRE	4A6
WCS2	4B3
X2E	4A12
3AN	4A10

IC TYPE	LOCATION	SPARES
74S02	L168	1
	L167	1
74S04	L34	5
	L88	2
	L136	1
7404	L175	1
74S08	L46	1
74S11	L49	2
74S20	L24	1
74S32	L119	1
	L139	1
	L176	2
	L178	2
	L204	2
	L240	3
74S51	L149	1
	L210	1
74LS244	L200	1

CONN 1

30V	1	2	30V
MM27	3	4	MM26
MM25	5	6	MM24
CB27	7	8	CB26
CB25	9	10	CB24
AB27	11	12	AB26
AB25	13	14	AB24
MM30	15	16	Y5TB
DCLK1	17	18	BTO
BTP	19	20	BCMSB
CM35	21	22	
CM33	23	24	CM34
MD3A	25	26	MD2A
CM29	27	28	CM28
MM31	29	30	MM30
MM29	31	32	MM28
MZL	33	34	CM27
MSIP	35	36	MM6
MM29	37	38	CM21
CM19	39	40	CM20
DECERR	41	42	IRL
IR7	43	44	IR6
IR5	45	46	IR4
IR3	47	48	IR2
IR1	49	50	IR0
CB31	51	52	CB30
CB29	53	54	CB28
WD31	55	56	WD30
WD29	57	58	WD28
WD27	59	60	WD26
WD25	61	62	WD24
CM17	63	64	CM16
CM18	65	66	MMAD
CM11	67	68	CM10
AB31	69	70	AB30
AB29	71	72	AB28
MZE	73	74	STATE
MORN1	75	76	
+5VR	77	78	+5VR
±0V	79	80	±0V

CONN 2

30V	1	2	30V
+5VR	3	4	+5VR
CBM	5	6	CB49
CB13	7	8	CB42
+5VR	9	10	+5VR
CM37	11	12	CM38
BCM3	13	14	BCM2
BCM1	15	16	BCM0
MTIP	17	18	MDR
CM35	19	20	CM36
MM45	21	22	MM44
MM43	23	24	MM42
AB15	25	26	AB14
AB13	27	28	AB12
MIL	29	30	MDL
CM5	31	32	CM4
CM3	33	34	CM2
CM1	35	36	CM0
MM31	37	38	MD4L
MDMR	39	40	CAIN
DCMU	41	42	GTZ
COB	43	44	MCT
MZRI	45	46	MDMI
AB19	47	48	AB18
AB17	49	50	AB16
WD23	51	52	WD22
WD21	53	54	WD20
AB23	55	56	AB22
AB21	57	58	AB20
BCM	59	60	GTT
LEN3	61	62	CLKA
LEN1	63	64	LEN2
WD19	65	66	WD18
WD17	67	68	WD16
MM19	69	70	MM18
MM17	71	72	MM16
ASIC	73	74	MIE
WR2L	75	76	WRIL
BDE BUS	77	78	PAGE C
VML	79	80	
CB19	81	82	CB18
CB17	83	84	CB16
MM23	85	86	MM22
MM21	87	88	MM20
CB23	89	90	CB22
CB21	91	92	CB20
WCS2	93	94	P24
BCLKM	95	96	ISET
30V	97	98	30V
±0V	99	100	±0V

CONN 3

30V	1	2	30V
+5VR	3	4	+5VR
IAIB	5	6	XEE
MMR	7	8	SPMI
ALU	9	10	HCM
CM7	11	12	CMB
BSW	13	14	LINK L
SGW	15	16	SGNI
AB3	17	18	AB2
AB1	19	20	AB0
DCLKE	21	22	B PAGE ON
CM45	23	24	CM44
	25	26	CM46
WD7	27	28	WD6
SS	29	30	BBO
WD5	31	32	WD4
CB3	33	34	CB2
CB1	35	36	CB0
WD3	37	38	WD2
WD1	39	40	WDO
CM9	41	42	CM6
CM12	43	44	PCA/SPE
MM43	45	46	CM42
CM41	47	48	CM40
AB7	49	50	AB6
AB5	51	52	AB4
MM3	53	54	MM2
MM1	55	56	MMO
CMRE	57	58	CMIE
WD15	59	60	WD14
WD13	61	62	WD12
WD11	63	64	WD10
WD9	65	66	WD8
CA OUT/DCA OUT	67	68	OVF
VPB	69	70	PB
CB7	71	72	CB6
CB5	73	74	CB4
MM7	75	76	MM6
MM5	77	78	MM4
DEC/OVF	79	80	BIE
MDMR	81	82	MDMR
MDIL	83	84	MDOL
CB11	85	86	CB10
CB9	87	88	CB8
MM11	89	90	MM10
MM9	91	92	MM8
AB11	93	94	AB10
AB9	95	96	AB8
PAGE 2	97	98	PAGE 1
MBYT	99	100	NO RIPPLE

J1

ST0	1	2	ST1
ST2	3	4	ST3
ST4	5	6	ST5
ST6	7	8	ST7
	9	10	ML
	11	12	
	13	14	
	15	16	
	17	18	
	19	20	
	21	22	
	23	24	
	25	26	
MD4T8	27	28	MD4T9
MD4T10	29	30	MD4T11
MD4T12	31	32	MD4T13
MD4T14	33	34	MD4T15
TAB8	35	36	TAB9
TAB10	37	38	TAB11
TAB12	39	40	TAB13
TAB14	41	42	TAB15
	43	44	
	45	46	
30V	47	48	30V
30V	49	50	30V
	51	52	
	53	54	
	55	56	
	57	58	
	59	60	
TAB0	61	62	TAB1
TAB2	63	64	TAB3
TAB4	65	66	TAB5
TAB6	67	68	TAB7
MD4T0	69	70	MD4T1
MD4T2	71	72	MD4T3
MD4T4	73	74	MD4T5
MD4T6	75	76	MD4T7

J2

ST12	1	2	ST13
ST14	3	4	ST15
ST8	5	6	ST9
ST10	7	8	ST11
SKAD0	9	10	SKAD1
SKAD2	11	12	SKAD3
SKAD4	13	14	SKAD5
SKAD6	15	16	SKAD7
TAB16	17	18	TAB17
TAB18	19	20	TAB19
TAB20	21	22	TAB21
TAB22	23	24	TAB23
	25	26	
	27	28	
	29	30	
30V	31	32	30V
+0V	33	34	+0V
	35	36	
MD4T16	37	38	MD4T17
MD4T18	39	40	MD4T19
MD4T20	41	42	MD4T21
MD4T22	43	44	MD4T23
TAB24	45	46	TAB25
TAB26	47	48	TAB27
TAB28	49	50	TAB29
TAB30	51	52	TAB31
MD4T24	53	54	MD4T25
MD4T26	55	56	MD4T27
MD4T28	57	58	MD4T29
MD4T30	59	60	MD4T31

210 = 209 + 877 OR 376			
210	209	L11-14	L209-216
8568-A	8568	877-0336	377-0361

C1-20, 22-46, 48-91, 94-107, 109-142, 144-146, 148-156, 158-168

+5VR

±0V

C21 15uF 20V TANT
C47 15uF 20V TANT
C92 15uF 20V TANT
C93 15uF 20V TANT
C108 15uF 20V TANT
C143 15uF 20V TANT
C147 15uF 20V TANT
.047uF
.047uF
C157 15uF 20V TANT
C169 15uF 20V TANT

ORIGINATED PER ECO # 22350 DATED 5/16/84

E-REV 0

WANG		DT	DATE	APPROVED BY	DATE
		DRN BSM	5-1-84		
		CHK			
	DRAWING NO VS85-H	TITLE A BUS			
		SEE CHART	E	8568	0

SS5

WANG LABORATORIES, INC.

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

(FINAL BILL-OF-MATERIALS)

BOARD NO. & TITLE: C8568 "A BUS" BOARD (ASI) CREATED: 05/02/84 14:21
ASSEMBLY: 209 LAST MODIFIED: 05/08/84 08:38 BY: LAB
ARTWORK REVISION (B): 00 EDITING REVISION: 1
ASSEMBLY REVISION (A): 00
SCHEMATIC REVISION (S): 00
DWG OR MOST RECENT ECO: E2350

* REF. DES.	* WANG PART NO.	* VALUE/TYPE *	DESCRIPTION	* DRAWING NO. *	QTY. *
C1 - C20	300-1966-	.047U	CAP CERAMIC MONO AXIAL +80 -20% 50V ZSU		160
C22 - C46					
C48 - C91					
C94 - C107					
C109 - C142					
C144 - C146					
C148 - C156					
C158 - C168					
C21	300-4022-	15U	CAP TANT AXIAL 10% 20V		9
C47					
C92 - C93					
C108					
C143					
C147					
C157					
C169					
R10 - R11	330-2036-	330.000	RES FIXED METAL FILM 1/4W 5% 200PPM		3
R21					
R2	330-3011-	1K	RES FIXED METAL FILM 1/4W 5% 200PPM		14
R4 - R6					
R6 - R9					
R12 - R16					
R17					
R19 - R20					
R22					
J1 - J2	350-0057-	60 CONT	CONN PC HEADER DUAL ROW .100 R/A W/LOCK/EJECT		2
L242	376-0002-	7400	IC QUAD 2-INPUT NAND GATE		1
L266	376-0008-	7442	IC 1-OF-10 DECODER		2
L291					
L116	376-0010-	7404	IC HEX INVERTER		8
L175					
L244					
L267					
L294					
L219	376-0012-	7451	IC DUAL 2-WIDE 2-INPUT AND-OR-INVERT GATE		1
L120 - L121	376-0016-	7402	IC QUAD 2-INPUT NOR GATE		2
L196	376-0048-	74153	IC DUAL 4-INPUT MULTIPLEXER		4
L220					

BOARD NO. & TITLE: C8568 "A BUS" BOARD (ASI) SCHEMATIC REVISION (S): 00 SHEET OF PAGE 2

* REF. DES.	* WANG PART NO.	* VALUE/TYPE *	DESCRIPTION	* DRAWING NO. *	QTY. *
L268 - L269					
L137	376-0001-	7408	IC QUAD 2-INPUT AND GATE		1
L33	376-0002-	74157	IC QUAD 2-INPUT MULTIPLEXER		11
L40					
L66					
L75					
L78					
L275					
L277					
L280					
L284					
L286 - L287					
L119	376-0003-	7432	IC QUAD 2-INPUT POSITIVE OR GATE		2
L243					
L16	376-0131-	74S257	IC QUAD DATA SELECT OR/MULTIPLEXERS		4
L34					
L36					
L82					
L37 - L38	376-0184-	74S51	IC DUAL 2 WIDE 2-INPUT AND-OR-INVERT GATES		5
L138					
L169					
L218					
L4	376-0197-	74S04	IC HEX INVERTER		10
L10					
L39					
L65					
L68					
L112					
L164					
L187 - L189					
L197					
L67	376-0199-	74S02	IC QUAD 2-INPUT POSITIVE-NOR GATES		6
L70					
L93					
L96					
L165					
L194					
L66	376-0200-	74S08	IC QUAD 2 INPUT POSITIVE AND GATES		4
L113					
L182					
L261					
L69	376-0201-	74S64	IC 4-2-3-2 INPUT AND/OR/INVERT GATE		4
L115					
L167					
L253					
L136	376-0202-	74S74	IC DUAL D-TYPE POS EDGE TRIGRD F/F W/PRESET/C		25
L141					
L159 - L164					
L166					
L168					

BOARD NO. & TITLE: C8568 "A BUS" BOARD (ASI) SCHEMATIC REVISION (S): 00 SHEET OF PAGE 3

* REF. DES.	* WANG PART NO.	* VALUE/TYPE *	DESCRIPTION	* DRAWING NO. *	QTY. *
L177					
L179					
L181					
L183					
L186					
L208					
L225					
L232					
L237 - L238					
L259 - L260					
L273 - L274					
L281					
L8	376-0204-	74LS257A	IC QUAD 2-LINE TO 1-LINE DATA SEL/MUX		4
L28					
L30 - L31					
L91 - L92	376-0205-	74S32	IC QUAD 2-INPUT OR GATE		16
L139					
L145					
L147					
L155					
L174					
L178					
L185					
L189					
L239 - L240					
L247					
L265					
L276					
L285					
L90	376-0206-	74S260	IC DUAL 5-INPUT EXPANDER		4
L117					
L144					
L198					
L21	376-0215-	74S153	IC DUAL 4-INPUT MULTIPLEXER		4
L169					
L195					
L222					
L2 - L3	376-0217-	74S157	IC QUAD 2 TO 1 LINE DATA SEL/MUL		16
L62					
L110					
L133 - L136					
L158					
L190					
L278 - L279					
L282 - L283					
L289 - L290					
L292 - L293					
L143	376-0228-	74S00	IC QUAD 2-INPUT NAND GATE		7
L170					
L172					

BOARD NO. & TITLE: C8568 "A BUS" BOARD (ASI) SCHEMATIC REVISION (S): 00 SHEET OF PAGE 4

* REF. DES.	* WANG PART NO.	* VALUE/TYPE *	DESCRIPTION	* DRAWING NO. *	QTY. *
L176					
L191 - L193					
L24	376-0230-	74S20	IC DUAL 4-INPUT POSITIVE NAND GATE		3
L118					
L148					
L69	376-0237-	74S11	IC TRIPLE 3-INPUT AND GATE		1
L135	376-0238-	74S10	IC TRIPLE 3-INPUT NAND GATE		3
L171					
L173					
L140	376-0271-	74S86	IC QUAD 2 IN EXCLUSIVE OR GATE		1
L48	376-0281-	93S10	IC SYNCHRONOUS BCD DECADE COUNTER M/S		1
L29	376-0286-	74LS374	IC OCTAL D-TYPE FLIP-FLOP TRI-STATE		2
L32					
L217	376-0288-	74LS244	IC OCTAL BUFFER/LINE DRIVER W/TRI STATE		9
L249 - L250					
L254					
L256					
L261					
L263					
L271 - L272					
L201 - L202	376-0293-	74LS158	IC QUAD 2-INPUT MULTIPLEXER		4
L234 - L235					
L132	376-0296-	74S32	IC QUAD 2-INPUT NAND BUFFER		1
L95	376-0298-	74S138	IC 3-LINE TO 8-LINE DECODER/MULTIPLEXER		8
L122					
L146					
L206 - L207					
L226					
L233					
L236					
L1	376-0301-	74S158	IC QUAD 2 TO 1-LINE DATA SELECTOR/MUX INVERT		3
L199					
L245					
L7	376-0305-	74S374	IC OCTAL D-TYPE EDGE-TRIG F/F TRI-STATE		30
L15					
L27					
L35					
L45 - L46					
L50 - L53					
L74					
L79 - L80					
L97 - L98					
L108 - L109					
L123 - L127					
L131					
L187					
L251					
L255					
L262					
L270					

WANG LABORATORIES, INC. LOWELL, MA U.S.A.		BY	DATE	APPROVED BY	DATE
		DWN		E ENGR	
		CHK		M ENGR	
MATERIAL	MODEL NO.			MFG ENGR	
	SEE ENGRG SPECIFICATIONS No.	TITLE: A BUS BOARD (ASI)			
FINISH	TOL EX AS NOTED .XX ± .010 FRAC ± 1/64 .XXX ± .005 ANG ± 1°30' FINISH 125	SEE CHART	C	8568	0
	SCALE SHT 6 OF 7	WANG PART NUMBER	SIZE	DRAWING NUMBER	REV

SS6

BOARD NO. & TITLE: C8568 "A BUS" BOARD (ASI) SCHEMATIC REVISION (S): 00 SHEET 6 OF 7 PAGE 6

* REF. DES.	* WANG PART NO.	* VALUE/TYPE *	DESCRIPTION	* DRAWING NO. *	QTY. *
L19	376-0306-	74S373	IC OCTAL D-TYPE LATCH TRI-STATE OUTPUTS		1
L6	376-0317-	28LS2521	IC 8-BIT COMPARATOR		2
L26					
L203 - L205	376-0329-	74S251	IC 8-INPUT MULTIPLEXER		8
L227 - L229					
L257 - L258					
L5	376-0330-	74393	IC DUAL 4-BIT BINARY COUNTER		2
L28					
L23	376-0332-	74LS283	IC 4-BIT BINARY FULL ADDER		1
L202	376-0333-	74S139	IC 2 TO 4-LINE DECODER/MULTIPLEXER		1
L223	376-0334-	74S240	IC OCTAL BUFFER/LINE DRIVER		1
L9 - L10	376-0335-	74S283	IC 4-BIT BINARY FULL ADDER		10
L55 - L60					
L66					
L111					
L42	376-0336-	74S181	IC 1-OF-8 DATA SEL/MUX		13
L180					
L184					
L200					
L224					
L230 - L231					
L246					
L248					
L264					
L295					
L297 - L298					
L61	376-0337-	74S257	IC DUAL DATA SELECTOR/MULTIPLEXER TRI-STATE		16
L77					
L81					
L83 - L84					
L86 - L87					
L103 - L104					
L106 - L107					
L129 - L130					
L182 - L184					
L64	376-0338-	74S244	IC OCTAL BUFFER/LINE DRIVER/RECEIVER TRI-STATE		7
L76					
L101					
L105					
L221					
L268					
L296					
L17	376-0339-	28S10	IC 4-BIT SHIFTER TRI-STATE OUTPUTS		9
L72 - L73					
L99 - L100					
L102					
L128					
L150 - L151					
L63	376-0427-	74S195	IC 4-BIT PARRALLEL ACCESS SHIFT REGISTER		1
02 - 09	376-9010-	SKT 22	IC SOCKET 22 PIN DIL PC MOUNT		8

BOARD NO. & TITLE: C8568 "A BUS" BOARD (ASI) SCHEMATIC REVISION (S): 00 SHEET OF PAGE 7

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

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

	376-0131-	74S257	IC QUAD DATA SELECT OR/MULTIPLEXERS 4
	376-0184-	74S51	IC DUAL 2 WIDE 2-INPUT AND-OR-INVERT GATES 5
	376-0197-	74S04	IC HEX INVERTER 10
	376-0199-	74S02	IC QUAD 2-INPUT POSITIVE-NOR GATES 6
	376-0200-	74S08	IC QUAD 2 INPUT POSITIVE AND GATES 4
	376-0201-	74S64	IC 4-2-3-2 INPUT AND/OR/INVERT GATE 4
	376-0202-	74S74	IC DUAL D-TYPE POS EDGE TRIGRD F/F W/PRESET/C 28
	376-0205-	74S32	IC QUAD 2-INPUT OR GATE 16
	376-0206-	74S260	IC DUAL 5-INPUT EXPANDER 4
	376-0215-	74S153	IC DUAL 4-INPUT MULTIPLEXER 4
	376-0217-	74S157	IC QUAD 2 TO 1 LINE DATA SEL/MUL 16
	376-0228-	74S00	IC QUAD 2-INPUT NAND GATE 7
	376-0230-	74S20	IC DUAL 4-INPUT POSITIVE NAND GATE 3
	376-0237-	74S11	IC TRIPLE 3-INPUT AND GATE 1
	376-0238-	74S10	IC TRIPLE 3-INPUT NAND GATE 3
	376-0271-	74S86	IC QUAD 2 IN EXCLUSIVE OR GATE 1
	376-0281-	93S10	IC SYNCHRONOUS BCD DECADE COUNTER M/S 1
	376-0298-	74S138	IC 3-LINE TO 8-LINE D.CODER/MULTIPLEXER 8
	376-0305-	74S374	IC OCTAL D-TYPE EDGE-TRIG F/F TRI-STATE 10
	376-0306-	74S373	IC OCTAL D-TYPE LATCH TRI-STATE OUTPUTS 1
	376-0329-	74S251	IC 8-INPUT MULTIPLEXER 8
	376-0330-	74393	IC DUAL 4-BIT BINARY COUNTER 2
	376-0333-	74S139	IC 2 TO 4-LINE DECODER/MULTIPLEXER 1
	376-0334-	74S240	IC OCTAL BUFFER/LINE DRIVER 1
	376-0335-	74S283	IC 4-BIT BINARY FULL ADDER 10
	376-0336-	74S151	IC 1-OF-8 DATA SEL/MUX 13
	376-0337-	74S253	IC DUAL DATA SELECTOR/MULTIPLEXER TRI-STATE 16
	376-0338-	74S244	IC OCTAL BUFFER/LINE DRIVER/RECEIVER TRI-STATE 7
	376-0339-	28S10	IC 4-BIT SHIFTER TRI-STATE OUTPUTS 9
	376-0427-	74S195	IC 4-BIT PARRALLEL ACCESS SHIFT REGISTER 1

*** END-OF-REPORT ***

BOARD NO. & TITLE: C8568 "A BUS" BOARD (ASI) SCHEMATIC REVISION (S): 00 SHEET OF PAGE 6

* REF. DES.	* WANG PART NO.	* VALUE/TYPE *	DESCRIPTION	* DRAWING NO. *	QTY. *
010 - 013	376-9011-	SKT 40	SOCKET 40 PIN DIL PC MOUNT		4
01	810-0568-		PCB		1
TP1 - TP31	604-3022-	TEST PTS	TEST POINTS		31

WANG LABORATORIES, INC.

>>>>> E L E C T R I C A L P A R T S L I S T <<<<< SHEET OF PAGE 1

(FINAL BILL-OF-MATERIALS)

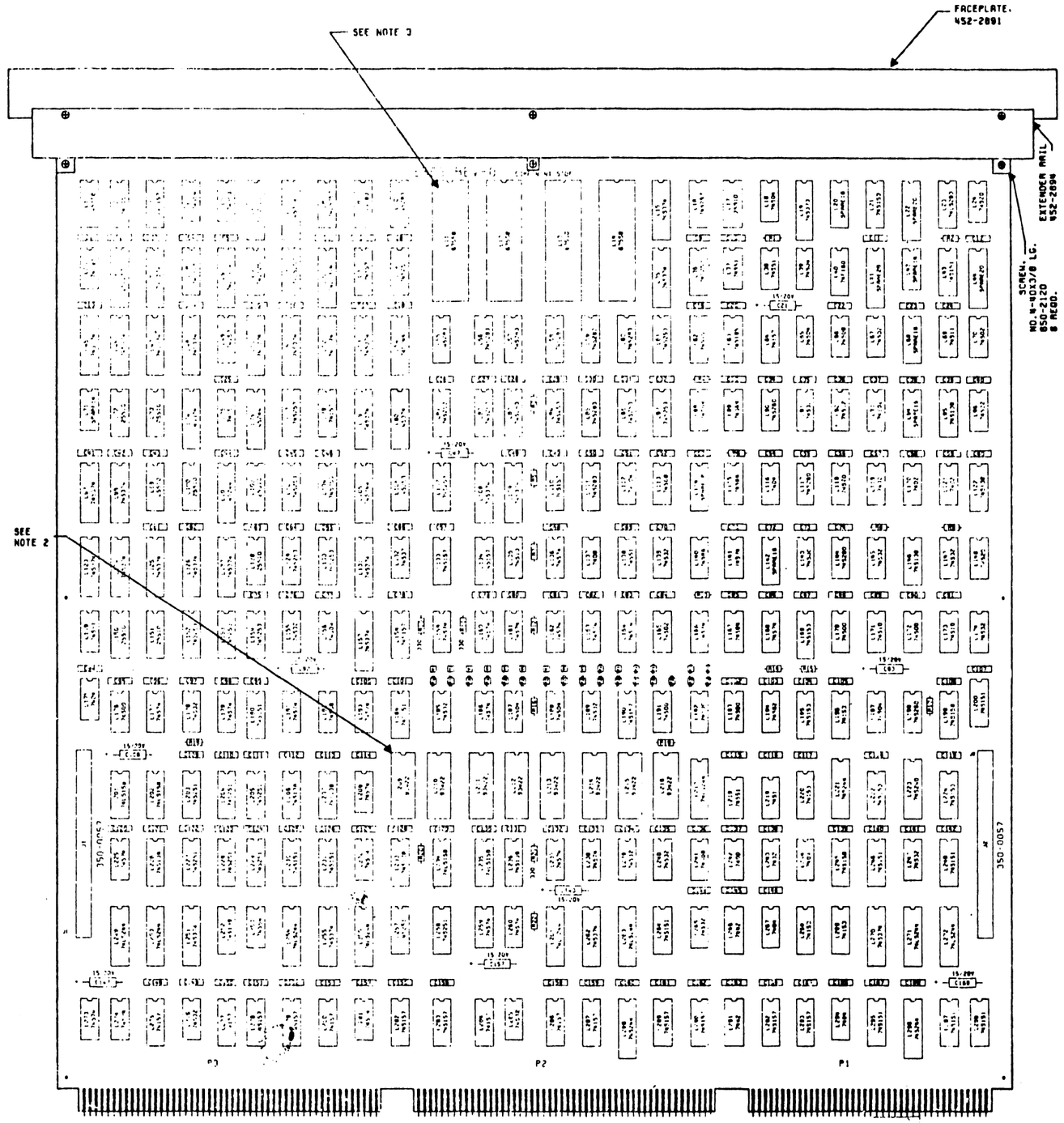
BOARD NO. & TITLE: C8568 "A BUS" BOARD (ASI)
ASSEMBLY: 210-A
ARTWORK REVISION (R): 00
ASSEMBLY REVISION (A): 00
SCHEMATIC REVISION (S): 00
DWR OR MOST RECENT ECO: E2350

CREATED: 05/02/84 14:21
LAST MODIFIED: 05/08/84 08:38 BY: LAB
EDITING REVISION: 1

* REF. DES.	* WANG PART NO.	* VALUE/TYPE *	DESCRIPTION	* DRAWING NO. *	QTY. *
01	209-0568-		PCA		1
L11 - L14	377-0358-	67558	IC 8 X 8 MULTIPLIER		4
L209 - L216	377-0361-	93422	IC 256 X 4 BIPOLAR RAM 45NS 22 PIN		8

*** END-OF-REPORT ***

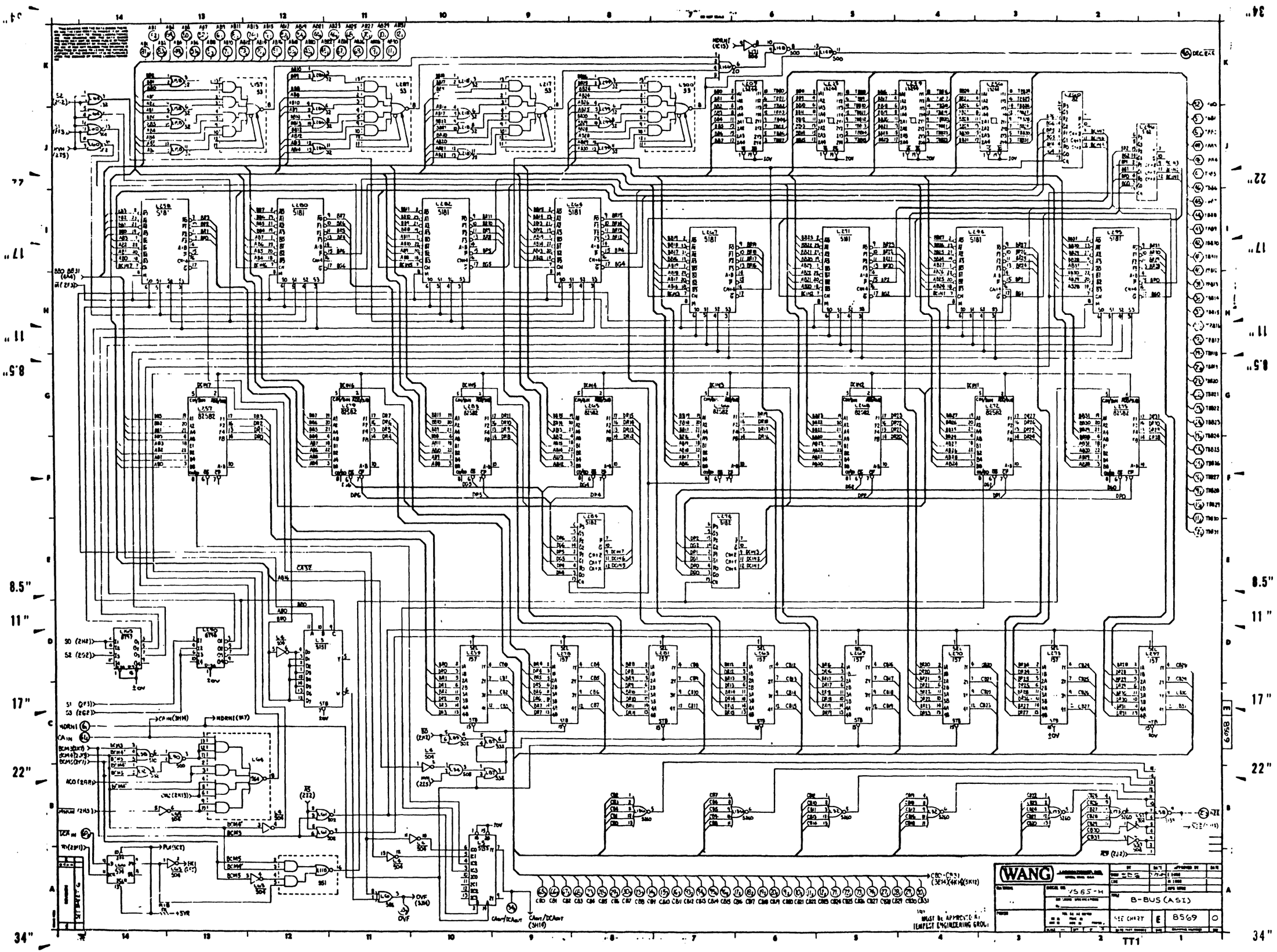
WANG LABORATORIES, INC. LOWELL, MA U.S.A.		BY	DATE	APPROVED BY	DATE
		DWN		E ENGR	
		CHK		M ENGR	
MATERIAL	MODEL NO.			MFG ENGR	
	SEE ENGRG SPECIFICATIONS No.	TITLE: A BUS BOARD (ASI)			
FINISH	TOL EX AS NOTED .XX ± .010 FRAC ± 1/64 .XXX ± .005 ANG ± 1°30'	SEE CHART	C	8568	0
	SCALE SHT 7 OF 7	WANG PART NUMBER	SIZE	DRAWING NUMBER	REV



WANG LABS A BUS FINELINE
ASI 5744 08 WD 11/15/84
ASSEMBLY PLOT

M REV.1 PER ECO NO. 33313 10 SEP 84

NOTES: 1. UNLESS OTHERWISE SPECIFIED:
ALL CAPACITORS ARE .047, 300-1988, EXPRESSED IN MICROFARADS.
ALL RESISTORS ARE 1K, 1/4W, 5%, EXPRESSED IN OHMS.
ALL TEST POINTS(TP1-TP31) ARE 654-2022.
2. LOAD 22 PIN SKT(378-9010) IN LOCATIONS L208-L218.
3. LOAD 40 PIN SKT(378-9011) IN LOCATIONS L11-L14.


WANG
B-BUS(ASI)
8569
SEE CHART
MUST BE APPROVED BY
TEMPEST ENGINEERING GROUP

ANY ECO ON THIS DRAWING MUST BE APPROVED BY TEMPEST ENGINEERING GROUP.

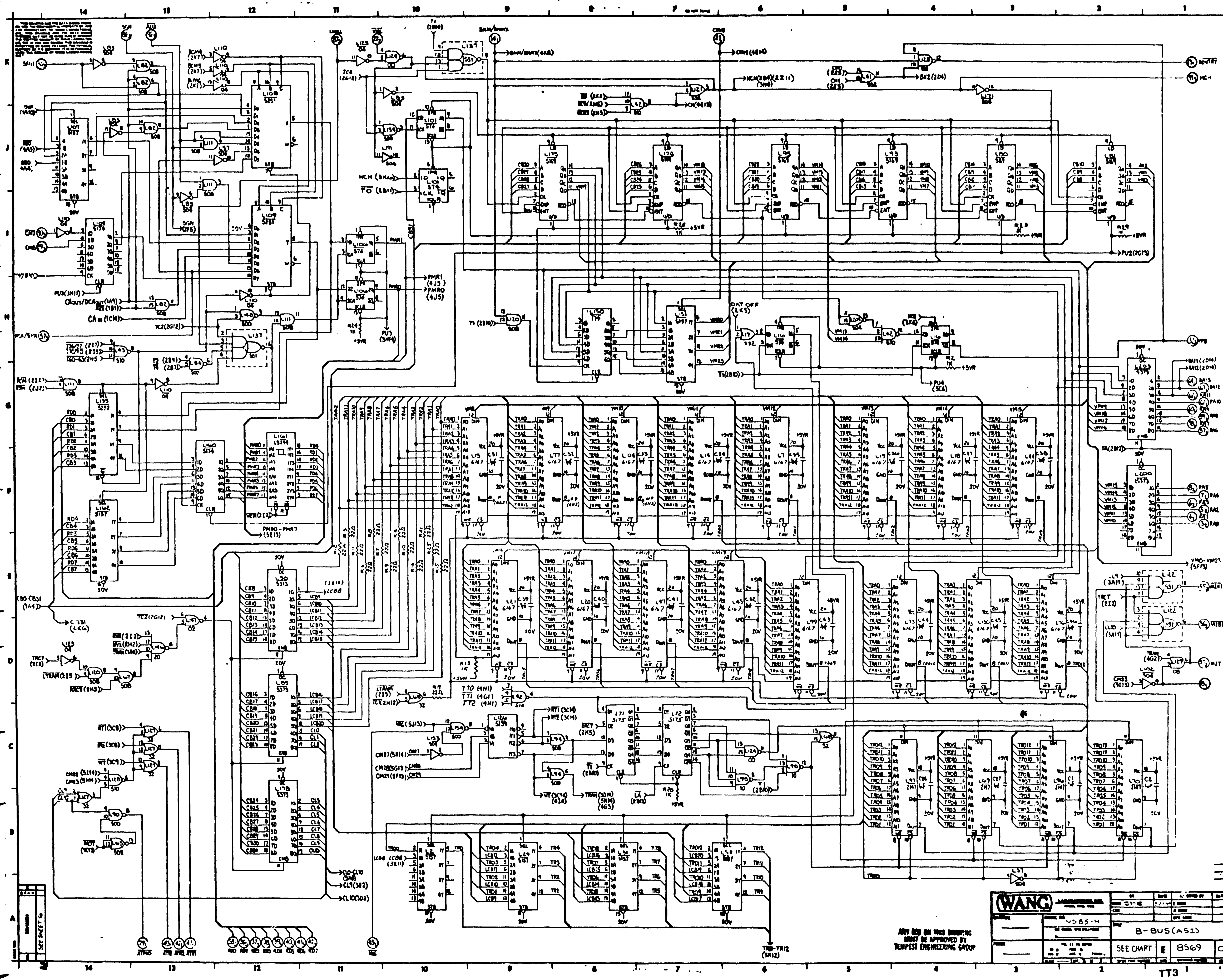
WANG

VS85-H

B-BUS (ASI)

SEE CHART | E | 8569 | 0

TT2


WANG
V585-H
B-BUS(ASI)
SEE CHART
E
8569
0
ANY ECO ON THIS DRAWING MUST BE APPROVED BY TEMPEST ENGINEERING GROUP
TT3

CH0	CH1	CH2	STANDARD	NON-STANDARD
0	0	0	WR1	CH
0	0	1	WR2	MD#06
0	1	0	IR	
0	1	1	MAR	
1	0	0	MD#4	MD#6
1	0	1	WAR	LOW/HOLD
1	1	0	ZERO	SAVERS
1	1	1		

B	A	
0	0	WR1-WR2-IR
0	1	CH
1	0	MD4
1	1	MD

ANY ECO ON THIS DRAWING MUST BE APPROVED BY TEMPEST ENGINEERING GROUP

WANG

DRAWN BY	DATE	APPROVED BY	DATE
CHKD 7/15/75		A	
CAE		B	
		C	
DRAWING NO. VS85-H		TITLE B-BUS(ASI)	
SEE CHART	E	9569	0

TT4

ANY ECO ON THIS DRAWING MUST BE APPROVED BY TEMPEST ENGINEERING GROUP

CM22	CM23	
0	0	MARO
0	1	MAR1
1	0	MAR2
1	1	MAR3

CM24	CM25	CM26	MARD
0	0	1	CM+1
0	1	0	M

CM27	CM28	CM29	MCP
0	0	0	RTRAM
0	0	1	RTRAM
0	1	0	NTRAM
0	1	1	+1
1	0	0	-1
1	0	1	M
1	1	0	+4
1	1	1	-4

CM15	CM14	CM13	STANDARD	MD45
0	0	0	MD0	CM
0	0	1	MD1	MD45
0	1	0	MD2	MD4
0	1	1	MD3	LOWERWORD SAVEREG
1	0	0	MD4	
1	0	1	MD5	
1	1	0	MD6	
1	1	1	MD7	

B	A	
0	0	MAR
0	1	MARD
1	0	MAR1
1	1	MAR2

WANG	BY	DATE	APPROVED BY	DATE
	CHK			
			B-BUS (ASI)	
	SEE CHART	E	8569	0

TT5

TYPE	I.C. LOC.	SPARE
7400	L1E6	1
74S00	L8B	2
74S02	L4C	2
	L8B	1
74S04	L8B	1
	L13B	2
	L10E	1
	L5F	1
74S08	L16B	1
	L3B	1
7432	L6B	1
74S32	L8F	1
74S37	L11F	3
74S51	L20B	1
74S74		
	L18B	1
74S86	L6	2
74S99	L12E	1
	L25D	1
79S00	L17F	1
79S70	L10F	1

MNEMONICS	COORDS.
ABO-AB31	1K14
ALU	3K13
ATN25	5A13
ATN11	5A13
ATN12	3A13
ATW	5A13
BCHO-BCH7	2C1
BANK/BNMX	3K9
BENTRY	3K1
BHO	6A6
BZDM	4J1
CAIN	1C14
CAOUT/DCAOUT	1A9
CBO-CB31	1A9
CLKB	2B14
CMO-CM6	2K14
CM8	3E14
CM13	3F14
CM14	5E14
CM15	3K7
CM12	5E14
CM13	5H14
CM24-CM26	5J14
CM27	5K14
CM28	5G14
CM29	5F14
CM7	3J14
CM22	5D14
CDB	2C14
CNCB	2B1
CNTR	2B1
CMES	5C14
DEC ERR	1K1
DCAIN	1B14
GT2A	2B14
GT1	2B14
HOH	3K1
IRL	4K7
IRO-IR7	4K8
IRSB	2E1
LEN1-LEN4	2G14
LINKL	3K11
MBO	5K1
MIF	5K2
MIR	5C14
MIS	5J14
MET	3D1
MTC	5A11
MI29-MI31	5F1
MMO-MM31	4K14
MDIL	2E14
MDOL	2E14
MAO-MA25	5A10
MD4L	4G14
MDOH	2E14
MDIH	2E14
MDR	4G14
MMRD	4J14
MSIC	5A14
MSTP	5A14
MTBI	3D1
MTAT	3E1
MDRNI	1C14
NO RIPPLE	5J14
NXM	1B1
OVF	1A11
PAGE0	2J14
PB	5D1
PCA/SPR	3H14
RAO-RA5	3F1
RSVT	4E14
RDO-RD7	5A12
R10I	2D1
RA6-RA13	5G1
SGN	3K13
SGNI	3K10
STATE	4K5
STKI	2F1
TBBO-TBB31	1J1
TCHO-TCH15	2A7
TMAO-TMA13	5A7
TMBO-TMB7	5A13
TTO	4H1
TT1	4G1
TT2	4H1
TWC	3K11
VPB	3H1
WRTL	4G16
WRTE	4F16
XBI	2B1

210 = 209 + 377 OR 378			
210	209	4,7,19,15,18-21,94,95,97,73,76,77,99,109-130	L69,70,96,97
8569A	8569	377-0448	377-0412

ANY ECO OR THIS DRAWING MUST BE APPROVED BY "ENGINEERING CHIEF"

E-REV O

WANG LABORATORIES, INC. — COMPUTER SYSTEMS DIVISION

BY	DATE	APPROVED BY	DATE
CWS	7/7/81	CLAMP	7/7/81
CWS	7/7/81		

DRAWN BY VS 85-H

B-BUS (ASI)

SEE CHART | E | 8569 | O

TT6

WANG LABORATORIES, INC.

»»»» ELECTRICAL PARTS LIST «««« Sheet 8 of 8 PAGE 1

(FINAL BILL-OF-MATERIALS)

BOARD NO. & TITLE: C8569 "B BUS" (ASI) CREATED: 04/09/84 09:32
ASSEMBLY: 200 LAST MODIFIED: 04/10/84 17:06 BY: LAB
ARTWORK REVISION (B): 00 EXISTING REVISION: 1.0
ASSEMBLY REVISION (A): 00
SCHEMATIC REVISION (S): 00
BOM GO POST INCENT ECO: E2345

* REF. DES.	* WANG PART NO.	* VALUE/TYPE *	DESCRIPTION	* DRAWING NO. *	QTY. *
C22 - C23	300-1930-	.1U	CAP CERAMIC MONO RAD +80% -20% 50V Z5U		18
C31 - C46					
C1 - C19	300-1966-	.047U	CAP CERAMIC MONO AXIAL +80 -20% 50V Z5U		140
C20 - C30					
C47 - C141					
C143 - C144					
C146 - C147					
C149 - C165					
C20 - C21	300-4028-	15U	CAP TANT AXIAL 10% 20V		8
C24 - C28					
C142					
C145					
C148					
C166					
R3 - R6	330-1023-	22.000	RES FIXED METAL FILM 1/4W 5% 200PPM		14
R8 - R12					
R18 - R16					
R19					
R21					
R25					
R27	330-2028-	270.000	RES FIXED METAL FILM 1/4W 5% 200PPM		1
R14	330-2069-	680.000	RES FIXED METAL FILM 1/4W 5% 200PPM		1
R1 - R2	330-3011-	1K	RES FIXED METAL FILM 1/4W 5% 200PPM		15
R5					
R13					
R17 - R18					
R20					
R22 - R24					
R26					
R28 - R31					
J1 - J2	350-0057-	60 CONT	CONN PC HEADER DUAL ROW .100 R/A W/LOCK/EJECT		2
CR1	370-0076-	LED	LED RED DIFFUSED RED 1MCD TYP		1
L124	376-0002-	7400	IC QUAD 2-INPUT NAND GATE		1
L98	376-0003-	7410	IC TRIP 3-INPUT NAND GATE		1
L145	376-0004-	7420	IC DUAL 4-INPUT NAND GATE		1
L118	376-0010-	7404	IC HEX INVERTER		2
L123					
L147	376-0016-	7402	IC QUAD 2-INPUT NOR GATE		1

BOARD NO. & TITLE: C8569 "B BUS" (ASI) SCHEMATIC REVISION (S): 00 SHEET OF PAGE 2

* REF. DES.	* WANG PART NO.	* VALUE/TYPE *	DESCRIPTION	* DRAWING NO. *	QTY. *
L107	376-0007-	7403	IC EXPANDABLE 4-WIDE AND-OR-INVERT GATE		4
L217					
L207					
L300					
L120	376-0001-	7408	IC QUAD 2-INPUT AND GATE		1
L350	376-0002-	74157	IC QUAD 2-INPUT MULTIPLEXER		8
L345					
L300 - L370					
L373					
L376					
L381					
L397					
L40	376-0003-	7432	IC QUAD 2-INPUT POSITIVE OR GATE		7
L127					
L158					
L307					
L318					
L396					
L399					
L150	376-0090-	74174	IC HEX D FLIP-FLOP		1
L138	376-0131-	745287	IC QUAD DATA SELECT OR/MULTIPLEXERS		1
L110	376-0184-	74S51	IC DUAL 2 WIDE 2-INPUT AND-OR-INVERT GATES		7
L122					
L137 - L136					
L102					
L197					
L390					
L390	376-0186-	8T90	IC HEX INVERTER 16 PIN DIP		1
L168	376-0189-	8T97	IC HEX BUFFER 16 PIN DIP		1
L6	376-0197-	74S04	IC HEX INVERTER		9
L87					
L68					
L83					
L102					
L134					
L103					
L171					
L347					
L33 - L36	376-0198-	74S30	IC 8-INPUT NAND GATE		2
L46	376-0199-	74S02	IC QUAD 2-INPUT POSITIVE-NOR GATES		6
L60 - L61					
L63					
L89					
L385					
L34	376-0200-	74S08	IC QUAD 2 INPUT POSITIVE AND GATES		7
L67					
L82					
L94					
L111					
L120					

BOARD NO. & TITLE: C8569 "B BUS" (ASI) SCHEMATIC REVISION (S): 00 SHEET OF PAGE 3

* REF. DES.	* WANG PART NO.	* VALUE/TYPE *	DESCRIPTION	* DRAWING NO. *	QTY. *
L163					
L64	376-0201-	74S64	IC 4-2-3-2 INPUT AND/OR/INVERT GATE		5
L103					
L155					
L172					
L206					
L16	376-0202-	74S74	IC DUAL D-TYPE POS EDGE TRIGRD F/F W/PRESET/C		16
L48					
L66					
L76					
L101					
L106					
L139 - L144					
L167 - L170					
L9	376-0205-	74S32	IC QUAD 2-INPUT OR GATE		15
L12					
L17					
L37					
L39 - L41					
L62					
L87					
L119					
L121					
L125					
L149					
L164					
L196					
L32	376-0206-	74S260	IC DUAL 5-INPUT EXPANDER		4
L126					
L173					
L216					
L8	376-0215-	74S153	IC DUAL 4-INPUT MULTIPLEXER		26
L88					
L100					
L115					
L181					
L184 - L186					
L189					
L192 - L193					
L201 - L202					
L211					
L215					
L219 - L221					
L229 - L231					
L238 - L239					
L243					
L248					
L255					
L2	376-0217-	74S157	IC QUAD 2 TO 1 LINE DATA SEL/MUL		27
L27 - L29					

BOARD NO. & TITLE: C8569 "B BUS" (ASI) SCHEMATIC REVISION (S): 00 SHEET OF PAGE 4

* REF. DES.	* WANG PART NO.	* VALUE/TYPE *	DESCRIPTION	* DRAWING NO. *	QTY. *
L31					
L33					
L56					
L59					
L79					
L86					
L107					
L133					
L161					
L159					
L162					
L177					
L179					
L222					
L226					
L251					
L261 - L262					
L286					
L289					
L292 - L293					
L296					
L84	376-0228-	74S00	IC QUAD 2-INPUT NAND GATE		4
L90					
L140					
L154					
L91	376-0230-	74S20	IC DUAL 4-INPUT POSITIVE NAND GATE		1
L257	376-0234-	82S62	IC BCD ARITHMETIC UNIT		8
L265 - L266					
L268					
L272					
L275					
L279					
L283					
L30	376-0238-	74S10	IC TRIPLE 3-INPUT NAND GATE		8
L42 - L43					
L116					
L120					
L105	376-0247-	74S174	IC HEX D-TYPE FLIP-FLOP		2
L160					
L258	376-0258-	74S181	IC 4-BIT ARITHMETIC LOGIC UNIT		8
L264					
L267					
L271					
L280					
L282					
L294 - L296					
L71 - L72	376-0270-	74S175	IC QUAD D-TYPE FLIP-FLOP		2
L6	376-0271-	74S86	IC QUAD 2 IN EXCLUSIVE OR GATE		1
L88	376-0276-	74S133	IC 13-INPUT NAND GATE		1
L161	376-0288-	74LS244	IC OCTAL BUFFER/LINE DRIVER W/TRI STATE		12

WANG LABORATORIES, INC. LOWELL, MA U.S.A.		BY	DATE	APPROVED BY	DATE
		DWN		E ENGR	
		CHK		M ENGR	
MATERIAL	MODEL NO.			MFG ENGR	
	SEE ENGRG SPECIFICATIONS No.	TITLE B-BUS			
FINISH	TOL EX AS NOTED .XX ± .010 FRAC ± 1/64 .XXX ± .005 ANG ± 1°30'	SEE CHART	D	8569	0
	SCALE	SHT 7 OF 8	WANG PART NUMBER	SIZE	DRAWING NUMBER	REV

TT7

* REF. DES.	* WANG PART NO.	* VALUE/TYPE *	DESCRIPTION	* DRAWING NO. *	QTY. *
L183					
L200					
L220					
L232 - L235					
L240					
L256					
L276 - L277					
L145	376-0296-	74S37	IC QUAD 2-INPUT NAND BUFFER		1
L6	376-0293-	74S138	IC 3-LINE TO 8-LINE DECODER/MULTIPLEXER		5
L10 - L11					
L13					
L92					
L99	376-0306-	74S374	IC OCTAL D-TYPE EDGE-TRIG F/F TRI-STATE		28
L83 - L86					
L75					
L131 - L132					
L156					
L187 - L188					
L190 - L195					
L212 - L214					
L226 - L227					
L236 - L237					
L248 - L252					
L264 - L266					
L282 - L284					
L59	376-0304-	74F373	IC OCTAL D-TYPE LATCH TRI-STATE OUTPUTS		7
L65					
L178					
L203					
L210					
L291					
L301					
L300	376-0310-	74LS373	IC OCTAL D-TYPE LATCH TRI-STATE OUTPUTS		1
L106 - L109	376-0329-	74S251	IC 8-INPUT MULTIPLEXER		2
L80 - L81	376-0331-	74S169	IC 4-BIT UP/DOWN SYNCHRONOUS BINARY COUNTER		19
L93					
L95					
L112 - L114					
L166					
L176 - L176					
L180					
L182					
L190 - L191					
L196 - L199					
L223 - L224					
L126	376-0333-	74S139	IC 2 TO 4-LINE DECODER/MULTIPLEXER		2
L258					
L3	376-0336-	74S151	IC 1-OF-8 DATA SEL/MUX		1
L117	376-0338-	74S244	IC OCTAL BUFFER/LINE DRIVER/RECEIVER TRI-STATE		3
L204					

* REF. DES.	* WANG PART NO.	* VALUE/TYPE *	DESCRIPTION	* DRAWING NO. *	QTY. *
L208					
L260	376-0469-	74S182	IC LOOK-AHEAD CARRY GENERATOR		4
L274					
L284					
L296					
U2 - U21	376-0016-	SKT 16	IC SOCKET 16 PIN DIL PC MOUNT		20
U1	510-0529-		PCB		1

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

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

	376-0131-	74S287	IC QUAD DATA SELECT OR/MULTIPLEXERS 1
	376-0184-	74S51	IC DUAL 2 WIDE 2-INPUT AND-OR-INVERT GATES 7
	376-0185-	8T98	IC HEX INVERTER 16 PIN DIP 1
	376-0189-	8T97	IC HEX BUFFER 16 PIN DIP 1
	376-0197-	74S04	IC HEX INVERTER 9
	376-0198-	74S10	IC 3-INPUT NAND GATE 2
	376-0199-	74S02	IC QUAD 2-INPUT POSITIVE-NOR GATES 6
	376-0208-	74S08	IC QUAD 2 INPUT POSITIVE AND GATES 7
	376-0201-	74S64	IC 4-2-3-2 INPUT AND/OR/INVERT GATE 8
	376-0202-	74S74	IC DUAL D-TYPE POS EDGE TRIGRD F/F W/PRESET/C 16
	376-0205-	74S32	IC QUAD 2-INPUT OR GATE 18
	376-0206-	74S260	IC DUAL 5-INPUT EXPANDER 4
	376-0215-	74S153	IC DUAL 4-INPUT MULTIPLEXER 26
	376-0217-	74S157	IC QUAD 2 TO 1 LINE DATA SEL/MUL 27
	376-0228-	74S08	IC QUAD 2-INPUT NAND GATE 4
	376-0230-	74S20	IC DUAL 4-INPUT POSITIVE NAND GATE 1
	376-0234-	82S82	IC BCD ARITHMETIC UNIT 8
	376-0238-	74S10	IC TRIPLE 3-INPUT NAND GATE 6
	376-0247-	74S174	IC HEX D-TYPE FLIP-FLOP 2
	376-0258-	74S181	IC 4-BIT ARITHMETIC LOGIC UNIT 8
	376-0270-	74S175	IC QUAD D-TYPE FLIP-FLOP 2
	376-0271-	74S86	IC QUAD 2 IN EXCLUSIVE OR GATE 1
	376-0276-	74S133	IC 13-INPUT NAND GATE 1
	376-0290-	74S138	IC 3-LINE TO 8-LINE DECODER/MULTIPLEXER 8
	376-0305-	74S374	IC OCTAL D-TYPE EDGE-TRIG F/F TRI-STATE 28
	376-0306-	74S373	IC OCTAL D-TYPE LATCH TRI STATE OUTPUTS 7
	376-0329-	74S251	IC 8-INPUT MULTIPLEXER 2
	376-0331-	74S169	IC 4-BIT UP/DOWN SYNCHRONOUS BINARY COUNTER 19
	376-0333-	74S139	IC 2 TO 4-LINE DECODER/MULTIPLEXER 2
	376-0336-	74S151	IC 1-OF-8 DATA SEL/MUX 1
	376-0338-	74S244	IC OCTAL BUFFER/LINE DRIVER/RECEIVER TRI-STATE 3
	376-0469-	74S182	IC LOOK-AHEAD CARRY GENERATOR 4

*** END-OF-REPORT ***

WANG LABORATORIES, INC.

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

(FINAL BILL-OF-MATERIALS)

BOARD NO. & TITLE: C8569 "B BUS" (ASI) CREATED: 04/09/84 09:02
ASSEMBLY: 210-A LAST MODIFIED: 04/10/84 11:08 BY: LAB
ARTWORK REVISION (R): 00 EDITING REVISION: 1
ASSEMBLY REVISION (A): 00
SCHEMATIC REVISION (S): 00
GWR OR MOST RECENT ECO: E2343

* REF. DES.	* WANG PART NO.	* VALUE/TYPE *	DESCRIPTION	* DRAWING NO. *	QTY. *
U1	209-0529-		PCA		1
L59 - L70	377-0412-	6147	IC 4K X 1 SRAM 70N 18 PIN		4
L96 - L97					
L7	377-0448-	6167	IC 16KX1 CMOS SRAM 70NS		16
L14 - L15					
L18 - L21					
L44 - L45					
L67					
L73					
L76 - L77					
L99					
L104					
L130					

*** END-OF-REPORT ***

WANG LABORATORIES, INC. LOWELL, MA U.S.A.		BY	DATE	APPROVED BY	DATE
		DWN		E ENGR	
		CHK		M ENGR	
MATERIAL	MODEL NO			MFG ENGR	
	SEE ENGRG SPECIFICATIONS No	TITLE B-BUS			
FINISH	TOL UX AS NOTED .XX ± .010 FRAC ± 1/64 .XXX ± .005 ANG ± 1°30'	SEE CHART	D	8569	C
	SCALE SHT 8 OF 8	WANG PART NUMBER	SIZE	DRAWING NUMBER	REV

TT8

WANG LABS B-BUS
ASI 5722 07 23 12/02/83
ASSEMBLY PLOT

8.5"
11"
17"

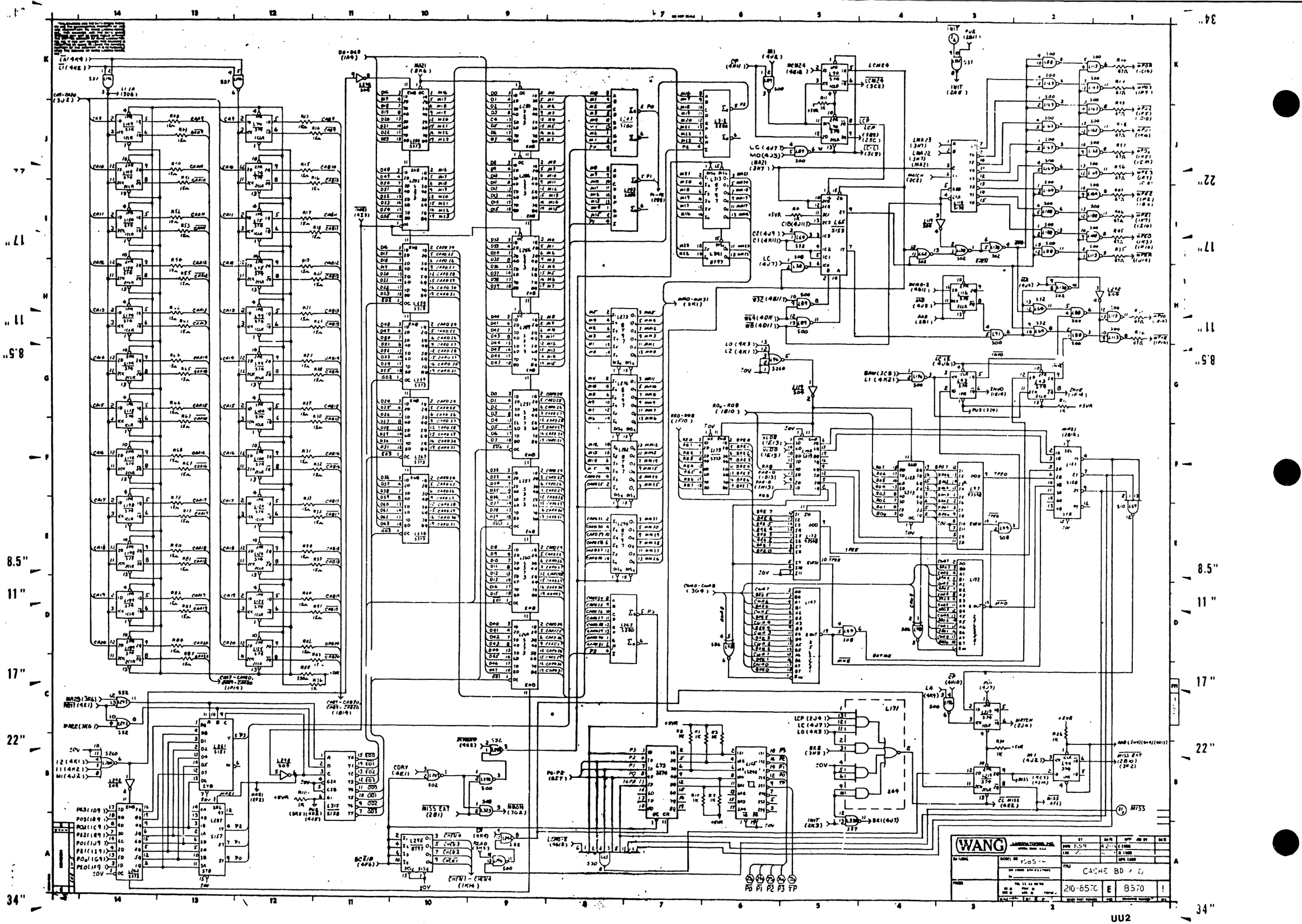
WANG

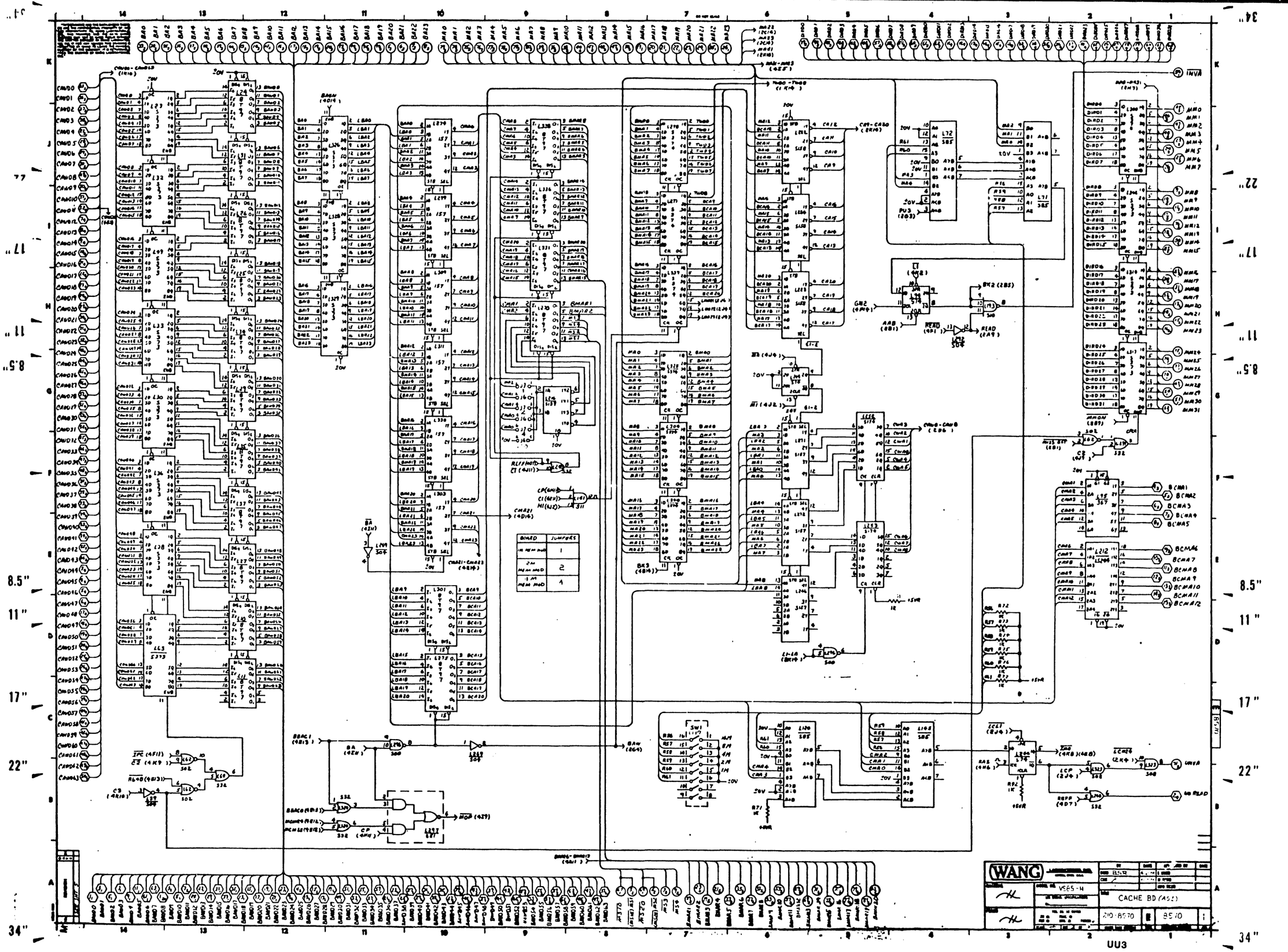
VS85-H

CACHE BD A

210-8570 E 8570 1

UU1


WANG
CACHE BD
210-6570
E
8570
UU2


WANG
VS65-H
CACHE BD (A51)
210-8670
8570
UU3
BA0
BA1
BA2
BA3
BA4
BA5
BA6
BA7
BA8
BA9
BA10
BA11
BA12
BA13
BA14
BA15
BA16
BA17
BA18
BA19
BA20
BA21
BA22
BA23
CMA0
CMA1
CMA2
CMA3
CMA4
CMA5
CMA6
CMA7
CMA8
CMA9
CMA10
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CMA27
CMA28
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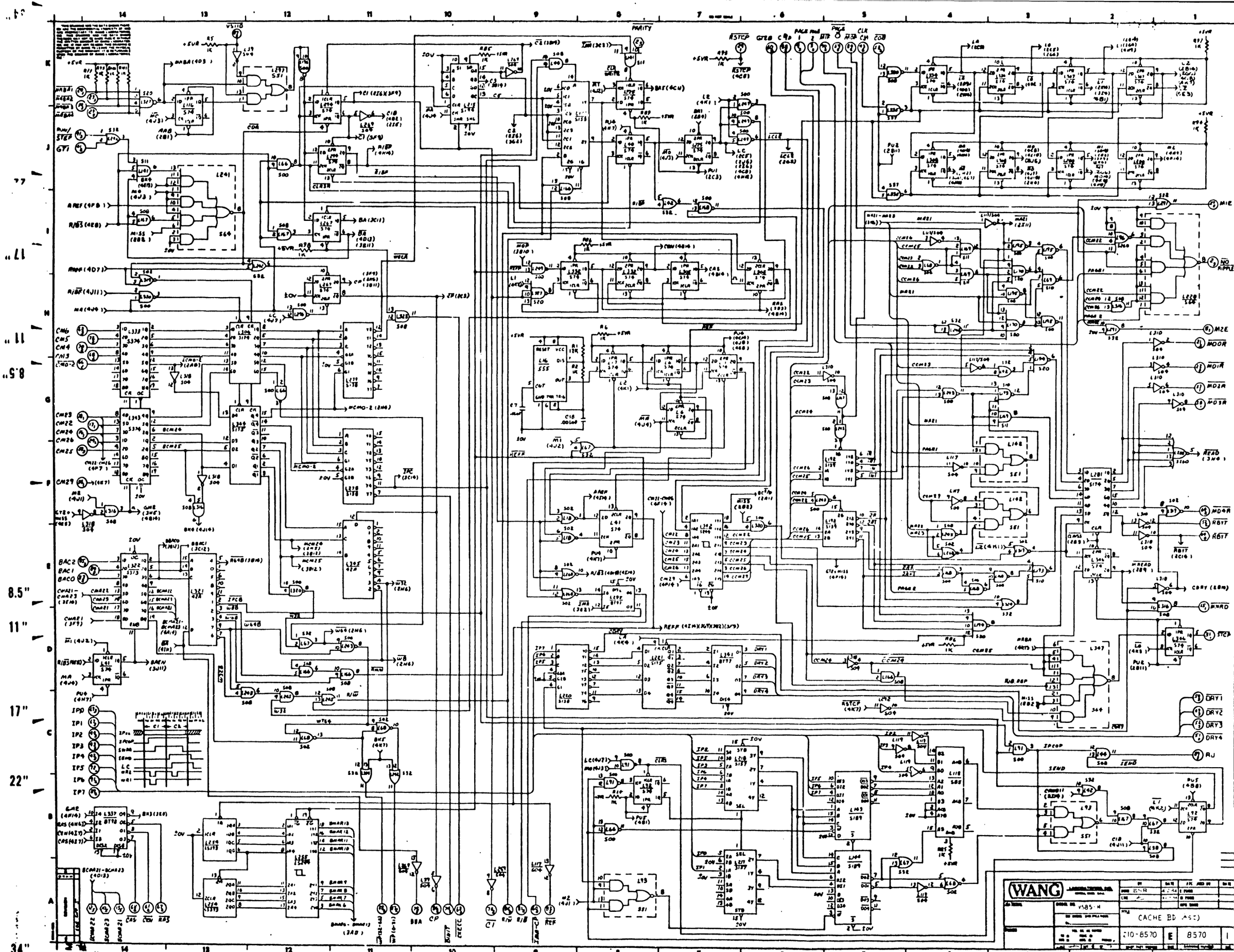
CMA30
CMA31
CMA32
CMA33
CMA34
CMA35
CMA36
CMA37
CMA38
CMA39
CMA40
CMA41
CMA42
CMA43
BCMA0
BCMA1
BCMA2
BCMA3
BCMA4
BCMA5
BCMA6
BCMA7
BCMA8
BCMA9
BCMA10
BCMA11
BCMA12
BOARD
JUMPERS
1K MEM MOD
1
2M MEM MOD
2
4M MEM MOD
4
+5VR
+10V
+20V
-10V
-20V


PARITY
RSTCP
RSTEP
GTE0
C00
PAGE Pad 1
PAGE Pad 2
MTP
MSR
CLR CH
EOB
+5VR
MIE
NO RIPPLE
MZE
MDOR
MDIR
MDSR
RBIT
CORY (BBm)
MWRD
STCP
DRV1
DRV2
DRV3
DRV4
RU
READ (3M9)
SEND
WANG
CACHE BD ASSY
210-8570
E
8570
UU4

TYPE	LOCATION	SYMBOL
74S109	L46	1
74S08	L38	1
	L18	2
	L319	1
74S04	L39	3
74S00	L28	2
	L46	1
74S10	L49	1
74S32	L42	1
	L298	1
	L271	1
	L298	1
74S37	L46	2
74S74	L48	1
74S04	L48	2
74S138	L316	1
8T98	L337	1

J5 (4W)

+5V	1 2	
	3 4	BCMA21
	5 6	
	7 8	BCMA22
	9 10	
	11 12	BCMA23
	13 14	
+5V	15 16	

J4

+5V	1 2	MS READ
CAWD44	3 4	CAWD45
CAWD46	5 6	CAWD47
CAWD12	7 8	CAWD13
CAWD14	9 10	CAWD15
DARD12	11 12	DIRD13
DIRD14	13 14	DIRD15
DIRD16	15 16	DIRD17
CAWD48	17 18	CAWD49
CAWD50	19 20	CAWD51
CAWD16	21 22	CAWD17
CAWD18	23 24	CAWD19
CAWD52	25 26	CAWD53
CAWD54	27 28	CAWD55
CAWD20	29 30	CAWD21
CAWD22	31 32	CAWD23
DARD18	33 34	DIRD19
DIRD20	35 36	DIRD21
DIRD22	37 38	DIRD23
CAWD56	39 40	CAWD57
CAWD58	41 42	CAWD59
CAWD24	43 44	CAWD25
CAWD26	45 46	CAWD27
CAWD60	47 48	CAWD61
CAWD62	49 50	CAWD63
CAWD28	51 52	CAWD29
CAWD30	53 54	CAWD31
DIRD24	55 56	DIRD25
DIRD26	57 58	DIRD27
DIRD28	59 60	DIRD29
DIRD30	61 62	DIRD31
	63 64	$\overline{RBYP}$

J3

+5V	1 2	$\overline{PARITY}$
+5V	3 4	BCMA1
BCMA2	5 6	BCMA3
BCMA4	7 8	BCMA5
BCMA6	9 10	BCMA7
BCMA8	11 12	BCMA9
BCMA10	13 14	BCMA11
BCMA12	15 16	+5V
+5V	17 18	+5V
+5V	19 20	+5V
$\overline{P0}$	21 22	$\overline{P1}$
$\overline{P2}$	23 24	$\overline{P3}$
CAWD4	25 26	CAWD5
CAWD6	27 28	CAWD7
CAWD36	29 30	CAWD37
CAWD38	31 32	CAWD39
CAWD0	33 34	CAWD1
CAWD2	35 36	CAWD3
DIRD0	37 38	DIRD1
DIRD2	39 40	DIRD3
DIRD4	41 42	DIRD5
CAWD32	43 44	CAWD33
CAWD34	45 46	CAWD35
CAWD8	47 48	CAWD9
CAWD10	49 50	CAWD11
CAWD40	51 52	CAWD41
CAWD42	53 54	CAWD43
DIRD6	55 56	DIRD7
DIRD8	57 58	DIRD9
DIRD10	59 60	DIRD11

J2

BAWD8	1 2	+5V
BAWD9	3 4	+5V
BAWD10	5 6	+5V
BAWD11	7 8	+5V
BAWD24	9 10	+5V
BAWD25	11 12	+5V
BAWD26	13 14	+5V
BAWD27	15 16	+5V
BAWD28	17 18	+5V
BAWD29	19 20	+5V
BAWD30	21 22	+5V
BAWD31	23 24	+5V
BAWD32	25 26	+5V
BAWD33	27 28	+5V
BAWD34	29 30	+5V
BAWD35	31 32	+5V
BAWD36	33 34	+5V
BAWD37	35 36	+5V
BAWD38	37 38	+5V
BAWD39	39 40	+5V
BAWD40	41 42	+5V
BAWD41	43 44	+5V
BAWD42	45 46	+5V
BAWD43	47 48	+5V
BAWD44	49 50	+5V
BAWD45	51 52	+5V
BAWD46	53 54	+5V
BAWD47	55 56	+5V
BAWD60	57 58	+5V
BAWD61	59 60	+5V
BAWD62	61 62	+5V
BAWD63	63 64	+5V
BAWD54	65 66	+5V
BAWD55	67 68	+5V
BAWD56	69 70	+5V
BAWD57	71 72	+5V
BAWD58	73 74	+5V
BAWD59	75 76	+5V

J1

BAWD 0	1 2	+5V
BAWD 1	3 4	+5V
BAWD 2	5 6	+5V
BAWD 3	7 8	+5V
BAWD 4	9 10	+5V
BAWD 5	11 12	+5V
BAWD18	13 14	+5V
BAWD19	15 16	+5V
BAWD20	17 18	+5V
BAWD21	19 20	+5V
BAWD22	21 22	+5V
BAWD23	23 24	+5V
BAWD12	25 26	+5V
BAWD13	27 28	+5V
BAWD14	29 30	+5V
BAWD15	31 32	+5V
BAWD16	33 34	+5V
BAWD17	35 36	+5V
BAWD48	37 38	+5V
BAWD49	39 40	+5V
BAWD50	41 42	+5V
BAWD51	43 44	+5V
BAWD52	45 46	+5V
BAWD53	47 48	+5V
BAWD30	49 50	+5V
BAWD31	51 52	+5V
BAWD32	53 54	+5V
BAWD33	55 56	+5V
BAWD34	57 58	+5V
BAWD35	59 60	+5V
BAWD 6	61 62	+5V
BAWD 7	63 64	+5V

P3

+5V	1 2	+5V
+5V	3 4	+5V
+5V	5 6	+5V
RUN/STEP	7 8	
RU	9 10	
VSTTO	11 12	CE/O
BAC2	13 14	
BACO	15 16	BAC1
R/B	17 18	REF
BA6	19 20	BA7
BA4	21 22	BA5
BA2	23 24	BA3
BA0	25 26	BA1
UNVA	27 28	BBA
IP0	29 30	CT
IP1	31 32	
+5V	33 34	+5V
	35 36	+5V
	37 38	CBA
	39 40	$\overline{IPA-P}$
	41 42	CM25
+5V	43 44	+5V
DRV4	45 46	PAGE 0
DRV2	47 48	DRV3
BA2	49 50	DRV1
BA0	51 52	BA3
IP3	53 54	BA1
	55 56	IP2
	57 58	IP4
BA6	59 60	BA7
BA4	61 62	BA5
BA2	63 64	BA3
BA0	65 66	BA1
BUSS	67 68	
$\overline{BABA4}$	69 70	$\overline{BBA3}$
$\overline{BABA2}$	71 72	$\overline{BBA1}$
BA6	73 74	BA7
BA4	75 76	BA5
$\overline{BOOR}$	77 78	$\overline{MDTR}$
BA14	79 80	BA15
BA12	81 82	BA13
BA10	83 84	BA11
BA8	85 86	BA9
BAA0	87 88	BAA1
BA18	89 90	BA19
BA22	91 92	BA23
BA20	93 94	BA21
PAGE 2	95 96	PAGE 1
	97 98	NO RIPPLE

P2

+5V	1 2	+5V
+5V	3 4	+5V
BA8	5 6	BA9
BA6	7 8	BA7
IP4	9 10	IP5
IP7	11 12	$\overline{BIR}$
$\overline{WP(16-31)}$	13 14	$\overline{WP(32-47)}$
RIW	15 16	CP
BAA20	17 18	$\overline{BOF}$
BAA19	19 20	BA15
BAA18	21 22	BA14
BAA17	23 24	BA13
BAA16	25 26	BA12
BAA15	27 28	BBWT
$\overline{RAS}$	29 30	CM5
$\overline{CAS}$	31 32	CM4
CKE1E	33 34	CM3
CEN	35 36	PWO-2
BAA12	37 38	$\overline{BSWR}$
BAA11	39 40	GTCB
BAA10	41 42	COB
BAA9	43 44	+5V
BAA8	45 46	$\overline{RBYP}$
BAA4	47 48	BA15
BAA2	49 50	BA13
	51 52	+5V
CLKCM	53 54	
CT1	55 56	+5V
BAAA1	57 58	BA11
BAA7	59 60	BA10
BAA6	61 62	BA9
BAA5	63 64	BA8
BA18	65 66	BA19
BA16	67 68	BA17
BAE	69 70	
BAAA2	71 72	CM26
BAA4	73 74	
BAA3	75 76	
	77 78	BA23
BA22	79 80	BA21
BA24	81 82	+5V
$\overline{BA}$	83 84	
$\overline{BA}$	85 86	
(MSIE) $\overline{BA}$	87 88	
$\overline{BA}$	89 90	
IAWT	91 92	+5V

P1

+5VR	1 2	+5VR
BA26	3 4	BA27
BA24	5 6	BA25
	7 8	+5V
$\overline{MSZO}$	9 10	
$\overline{MSTO}$	11 12	
	13 14	+5V
$\overline{MDIR}$	15 16	CM29
	17 18	$\overline{PWR}$
BA30	19 20	BA31
BA28	21 22	BA29
	23 24	+5V
$\overline{STCP}$	25 26	
$\overline{MSTCP}$	27 28	
	29 30	+5V
BA22	31 32	BA23
BA20	33 34	BA21
BA18	35 36	BA19
BA16	37 38	BA17
CM22	39 40	CM23
$\overline{BARD}$	41 42	CM24
	43 44	
	45 46	BA25
	47 48	
+5VR	49 50	+5VR
10V	51 52	+5V

C1-6, 8-12, 14-21, 23-28, 35-40, 47-53, 58-69, 81-89, 96-98, 106-116, 120-130, 132-173

DNEMONICS	CODED
BA0-BA23	3H2
BAA0-BAA6	4B10
BBA	4B10
$\overline{BWIT}$	4A10
BAA00-BAA06	3A11
BAA13-BAA20	3B6
BAA21-BAA26	3B1
BAA27-BAA31	4B10
$\overline{BR1}$	4B10
CM00-CM06	3B10
$\overline{CEO}$	4B10
$\overline{CEW}$	4A6
$\overline{CT}$	4B10
$\overline{BWIRE}$	4B10
CP	4B10
CLKCM	4A5
$\overline{BOF}$	4A5
PWO-2	4D10
CM3-CM6	4M19
CM22-CM26	4E10
BARD9	4H10
BA00-BA31	3H2
BR1-BR5	4C1
$\overline{ZVT}$	4J10
GTCB	4K6
$\overline{BA2-23}$	4A9
$\overline{MDTR}$	3R1
$\overline{BWIP}$	4K3
IP0-IP7	4C10

DNEMONICS	CODED
BA0-BA23	3H2
BA0-BA23	4G1
$\overline{BSTB}$	4D1
BA13	3B1
$\overline{BTB}$	4K5
$\overline{BWB}$	4K5
$\overline{BPB}$	4D1
BA0 BA 31	3B1
BABA1-BABA4	4B10
BR1-BR5	3A9
NO READ	3B1
NO RIPPLE	4B1
P0-P3	3A6
PAGE 0	4K6
PAGE 1	4K6
PAGE 2	4K6
PARITY	4K8
$\overline{BR3}$	4A10
$\overline{RBYP}$	4D1
$\overline{RIB}$	4A9
$\overline{BIB}$	4B9
$\overline{BIB}$	4B9
RUN/STEP	4J10
RU	4C1
$\overline{MSTCP}$	4K7
$\overline{TYCP}$	4D1
TP	3A8
UNVA	3B1
VSTTO	4K3
WP(0-31)	4A11
WP(32-63)	4A11
RIE	4E1
RSE	4D1

DNEMONICS	CODED
BARR1	3A7
BWARE	3A7
(MSIE) $\overline{BR1}$	3A7
(MSIE) $\overline{BR2}$	3A8
$\overline{MSTO}$	3A8
$\overline{MSZO}$	3A7

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

REV

DRAWN BY	DATE	APPROVED BY	DATE
CHK			
ENG			
MFG			

WANG LABORATORIES, INC.

DES. NO.	VS65-H
DES. DESCRIPTION	CACHE BD (ASY)
DWG. NO.	210-8570
REV.	E
SHEET NO.	8570
SHEET	1

8570

UU5

(FINAL PARTS LIST)

BOARD NO. & TITLE: C8570 CACHE (ASI) CREATED: 04/09/84 15:07
ASSEMBLY LEVEL & TITLE: 200 8570 LAST MODIFIED: 09/13/84 16:10 BY: LAB
PARTS LIST REVISION (P): 1 EDITING REVISION: 8
ARTWORK REVISION (R): 00
ASSEMBLY REVISION (A): 01
SCHEMATIC REVISION (S): 01
DWR OR MOST RECENT ECO: 329100

* REF. DES.	* WANG PART NO.	* VALUE/TYPE *	DESCRIPTION	* DRAWING NO. *	QTY. *
C7	300-1903-	.01U	CAP CERAMIC DISC +80% -20% 25V Z5F		1
C68	300-1904-	.001MF	CAP CERAMIC DISC 10% 500V X5F		1
C27 - C29	300-1930-	.1U	CAP CERAMIC MONO RAD +80% -20% 50V Z5U		46
C31 - C33					
C41 - C46					
C51 - C53					
C55 - C57					
C64 - C71					
C73 - C75					
C77 - C79					
C90 - C93					
C99 - C101					
C103 - C108					
C120 - C123					
C1 - C6	300-1964-	.047U	CAP CERAMIC MONO AXIAL +80 -20% 50V Z5U		113
C8 - C12					
C14 - C21					
C23 - C26					
C35 - C40					
C47 - C49					
C59 - C63					
C81 - C89					
C94 - C98					
C106 - C118					
C124 - C130					
C132 - C173					
C13	300-4022-	15U	CAP TANT AXIAL 10% 20V		13
C22					
C30					
C34					
C50					
C54					
C72					
C76					
C80					
C102					
C119					

* REF. DES.	* WANG PART NO.	* VALUE/TYPE *	DESCRIPTION	* DRAWING NO. *	QTY. *
C131					
C176					
L197	328-1503-	SWITCH	SLIDE SPST 8 POS		1
R13 - R22	330-1016-	15.000	RES FIXED METAL FILM 1/4W 5% 200PPM		48
R27 - R33					
R37 - R43					
R48 - R55					
R62 - R69					
R78 - R84					
R87					
R34 - R35	330-1048-	47.000	RES FIXED METAL FILM 1/4W 5% 200PPM		12
R44 - R47					
R56 - R61					
R88	330-2034-	330.000	RES FIXED METAL FILM 1/4W 5% 200PPM		1
R2 - R12	330-3011-	1K	RES FIXED METAL FILM 1/4W 5% 200PPM		48
R23 - R26					
R36					
R70 - R77					
R85 - R86					
R89 - R102					
R1	330-4013-	12K	RES FIXED METAL FILM 1/4W 5% 200PPM		1
J1 - J4	350-0440-	64 CONT	CONN PC HEADER DUAL ROW .100 R/A W/LOCK/EJECT		4
P4 - P5	350-4506-	2 CONT	CONN SHUNT .100 CTR		2
L321	376-0008-	7442	IC 1-OF-10 DECODER		2
L346					
L374	376-0082-	74157	IC QUAD 2-INPUT MULTIPLEXER		6
L299					
L303					
L309					
L311					
L330					
L16	376-0126-	555	IC TIMER 8 PIN DIP		1
L95	376-0176-	74367	IC HEX BUFFER TRI-STATE		1
L93	376-0184-	74S51	IC DUAL 2 WIDE 2-INPUT AND-OR-INVERT GATES		3
L142					
L297					
L337	376-0185-	8T98	IC HEX INVERTER 16 PIN DIP		1
L10 - L11	376-0189-	8T97	IC HEX BUFFER 16 PIN DIP		24
L24 - L27					
L29					
L31					
L34 - L35					
L37					
L270					
L273					
L375 - L376					
L282					
L290					
L295					
L301					

* REF. DES.	* WANG PART NO.	* VALUE/TYPE *	DESCRIPTION	* DRAWING NO. *	QTY. *
L313					
L331					
L336					
L338					
L341					
L39	376-0197-	74S04	IC HEX INVERTER		7
L117					
L119					
L269					
L292					
L310					
L318					
L45	376-0198-	74S30	IC 8-INPUT NAND GATE		1
L18	376-0199-	74S02	IC QUAD 2-INPUT POSITIVE-NOR GATES		6
L62					
L68					
L138					
L268					
L319					
L38	376-0200-	74S08	IC QUAD 2 INPUT POSITIVE AND GATES		7
L44					
L166 - L167					
L265					
L316					
L323					
L171	376-0201-	74S64	IC 4-2-3-2 INPUT AND/OR/INVERT GATE		4
L238					
L241					
L347					
L6	376-0202-	74S74	IC DUAL D-TYPE POS EDGE TRIGRD F/F W/PRESET/C		33
L17					
L40 - L41					
L43					
L74 - L75					
L90					
L92					
L96					
L99 - L100					
L116					
L124 - L125					
L149 - L150					
L174 - L175					
L198 - L199					
L219					
L226					
L264					
L267					
L280					
L294					
L305					

* REF. DES.	* WANG PART NO.	* VALUE/TYPE *	DESCRIPTION	* DRAWING NO. *	QTY. *
L307 - L308					
L332					
L334					
L346					
L42	376-0205-	74S32	IC QUAD 2-INPUT OR GATE		8
L64					
L67					
L242					
L248					
L291					
L293					
L324					
L96	376-0206-	74S260	IC DUAL 5-INPUT EXPANDER		2
L208					
L65	376-0215-	74S153	IC DUAL 4-INPUT MULTIPLEXER		2
L191					
L217 - L218	376-0217-	74S157	IC QUAD 2 TO 1 LINE DATA SEL/MUL		6
L246					
L271 - L272					
L287					
L215	376-0221-	74S194	IC 4 BIT SHIFT REGISTER		1
L66	376-0228-	74S08	IC QUAD 2-INPUT NAND GATE		16
L88 - L89					
L91					
L113					
L163 - L165					
L168					
L188					
L195 - L196					
L243					
L249					
L296					
L320					
L178	376-0230-	74S20	IC DUAL 4-INPUT POSITIVE NAND GATE		3
L194					
L327					
L141	376-0237-	74S11	IC TRIPLE 3-INPUT AND GATE		2
L169					
L69	376-0238-	74S10	IC TRIPLE 3-INPUT NAND GATE		2
L193					
L139 - L140	376-0246-	74S280	IC 9-BIT PARITY GENERATOR/CHECKER		12
L189 - L190					
L213 - L214					
L239 - L240					
L267					
L265					
L283					
L312					
L252 - L253	376-0247-	74S174	IC HEX D-TYPE FLIP-FLOP		4
L281					

		BY	DATE	APPROVED BY	DATE
WANG	WANG LABORATORIES, INC. LOWELL, MA U.S.A.	DWN		E ENGR	
		CHK		M ENGR	
				MFG ENGR	
MATERIAL	MODEL NO	TITLE CACHE BD (ASI)			
	986 ENGRG SPECIFICATIONS No.				
FINISH	TOL ±.X AS NOTED ±.XX ± .010 FRAC ± 1/64 ±.XXX ± .005 ANG ± 1° 30' FINISH √	210-8570	C	8570	1
	SCALE SHT 1 OF 7	WANG PART NUMBER	SIZE	DRAWING NUMBER	REV

UU6

BOARD NO. & TITLE: C8570 CACHE (ASI) SCHEMATIC REVISION (S): 01 SHEET 7 OF 7 PAGE 5

* REF. DES.	* WANG PART NO.	* VALUE/TYPE *	DESCRIPTION	* DRAWING NO. *	QTY. *
L306					
L71 - L72	376-0289-	74S85	IC 4-BIT MAGNITUDE COMPARATOR		8
L118					
L120					
L145					
L221	376-0270-	74S175	IC QUAD D-TYPE FLIP-FLOP		2
L144					
L98	376-0271-	74S86	IC QUAD 2 IN EXCLUSIVE OR GATE		1
L212	376-0288-	74LS244	IC OCTAL BUFFER/LINE DRIVER W/T3I STATE		2
L258					
L146	376-0296-	74S37	IC QUAD 2-INPUT NAND BUFFER		2
L338					
L115	376-0297-	74LS240	IC OCTAL BUFFER/LINE DRIVER/LINE RECEIVER		1
L114	376-0298-	74S138	IC 3-LINE TO 8-LINE DECODER/MULTIPLEXER		6
L220					
L278 - L279					
L319					
L121	376-0301-	74S158	IC QUAD 2 TO 1-LINE DATA SELECTOR/MUX INVERT		4
L222 - L224					
L75	376-0305-	74S374	IC OCTAL D-TYPE EDGE-TRIG F/F TRI-STATE		9
L277					
L290					
L304					
L328					
L333					
L339 - L340					
L343					
L23	376-0306-	74S373	IC OCTAL D-TYPE LATCH TRI-STATE OUTPUTS		34
L28					
L30					
L32 - L33					
L36					
L49					
L63					
L123					
L148					
L173					
L238					
L250 - L251					
L256 - L260					
L262 - L264					
L284 - L286					
L289					
L300					
L302					
L314					
L317					
L322					
L326					
L328 - L329					

BOARD NO. & TITLE: C8570 CACHE (ASI) SCHEMATIC REVISION (S): 01 SHEET OF PAGE 6

* REF. DES.	* WANG PART NO.	* VALUE/TYPE *	DESCRIPTION	* DRAWING NO. *	QTY. *
L254	376-0307-	74LS393	IC DUAL 4-BIT BINARY COUNTER		1
L122	376-0317-	28LS2521	IC 8-BIT COMPARATOR		2
L147					
L192	376-0333-	74S139	IC 2 TO 4-LINE DECODER/MULTIPLEXER		2
L216					
L261	376-0336-	74S151	IC 1-OF-8 DATA SEL/MUX		1
L342	376-0338-	74S244	IC OCTAL BUFFER/LINE DRIVER/RECEIVER TRI-STATE		1
L97	376-0348-	93S48	IC 12-INPUT ODD/EVEN PARITY CHECKER/GENERATOR		3
L128					
L172					
L143 - L144	376-0349-	74S189	IC 16X4-BIT STATIC RAM TRI-STATE OUTPUTS		2
L46	376-9002-T	SKT 16	IC SOCKET 16 PIN DIL PC MOUNT LOW PROFILE		1
L68 - L81	376-9014-	SKT 18	IC SOCKET 18 PIN DIL PC MOUNT		94
L76 - L87					
L101 - L112					
L126 - L127					
L129 - L137					
L151 - L162					
L176 - L187					
L200 - L211					
L226 - L227					
L229 - L237					
02	462-2892-	RAIL	EXTENDER RAIL		1
01	810-8570-		PCB		1
03 - 05	650-2120-	SCREW	SCREW, 04-40 X 3/8 LG.		3
06 - 07	654-0106-	6 CONT	CONN PC HEADER SINGLE ROW .100 (FOR L70)		2
TP1 - TP6	654-3022-	TERMINAL	CONTACT MALE PCMNT .050 DIA GOLD LOOSE		6

BOARD NO. & TITLE: C8570 CACHE (ASI) SCHEMATIC REVISION (S): 01 SHEET OF PAGE 7

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

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

350-0448-	64 CONT	CONN PC HEADER DUAL ROW .100 R/A W/LOCK/EJECT	4
376-0185-	8T98	IC HEX INVERTER 16 PIN DIP	1
376-0189-	8T97	IC HEX BUFFER 16 PIN DIP	24
376-0197-	74S04	IC HEX INVERTER	7
376-0198-	74S30	IC 8-INPUT NAND GATE	1
376-0199-	74S02	IC QUAD 2-INPUT POSITIVE-NOR GATES	6
376-0200-	74S08	IC QUAD 2 INPUT POSITIVE AND GATES	7
376-0201-	74S64	IC 4-2-3-2 INPUT AND/OR/INVERT GATE	4
376-0202-	74S74	IC DUAL D-TYPE POS EDGE TRIGRD F/F W/PRESET/C	33
376-0205-	74S32	IC QUAD 2-INPUT OR GATE	8
376-0217-	74S157	IC QUAD 2 TO 1 LINE DATA SEL/MUL	6
376-0221-	74S194	IC 4 BIT SHIFT REGISTER	1
376-0228-	74S00	IC QUAD 2-INPUT NAND GATE	16
376-0230-	74S20	IC DUAL 4-INPUT POSITIVE NAND GATE	3
376-0237-	74S11	IC TRIPLE 3-INPUT AND GATE	2
376-0238-	74S10	IC TRIPLE 3-INPUT NAND GATE	2
376-0246-	74S280	IC 9-BIT PARITY GENERATOR/CHECKER	12
376-0247-	74S174	IC HEX D-TYPE FLIP-FLOP	4
376-0270-	74S175	IC QUAD D-TYPE FLIP-FLOP	2
376-0271-	74S86	IC QUAD 2 IN EXCLUSIVE OR GATE	1
376-0298-	74S138	IC 1-LINE TO 8-LINE DECODER/MULTIPLEXER	5
376-0301-	74S158	IC QUAD 2 TO 1-LINE DATA SELECTOR/MUX INVERT	4
376-0305-	74S374	IC OCTAL D-TYPE EDGE-TRIG F/F TRI-STATE	9
376-0306-	74S373	IC OCTAL D-TYPE LATCH TRI-STATE OUTPUTS	34
376-0333-	74S139	IC 2 TO 4-LINE DECODER/MULTIPLEXER	2
376-0336-	74S151	IC 1-OF-8 DATA SEL/MUX	1
376-0338-	74S244	IC OCTAL BUFFER/LINE DRIVER/RECEIVER TRI-STATE	1
376-0348-	93S48	IC 12-INPUT ODD/EVEN PARITY CHECKER/GENERATOR	3
376-0349-	74S189	IC 16X4-BIT STATIC RAM TRI-STATE OUTPUTS	2
376-9002-T	SKT 16	IC SOCKET 16 PIN DIL PC MOUNT LOW PROFILE	1

*** END-OF-REPORT ***

WANG LABORATORIES, INC. RUN DATE: 09/13/84 16:24

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

(FINAL PARTS LIST)

BOARD NO. & TITLE: CA570 CACHE (ASI) CREATED: 04/09/84 15:07
ASSEMBLY LEVEL & TITLE: 210-A 8570 LAST MODIFIED: 09/13/84 16:18 BY: LAB
PARTS LIST REVISION (P): 1 EDITING REVISION: 0
ARTWORK REVISION (R): 00
ASSEMBLY REVISION (A): 01
SCHEMATIC REVISION (S): 01
DWR OR MOST RECENT ECO: 329300

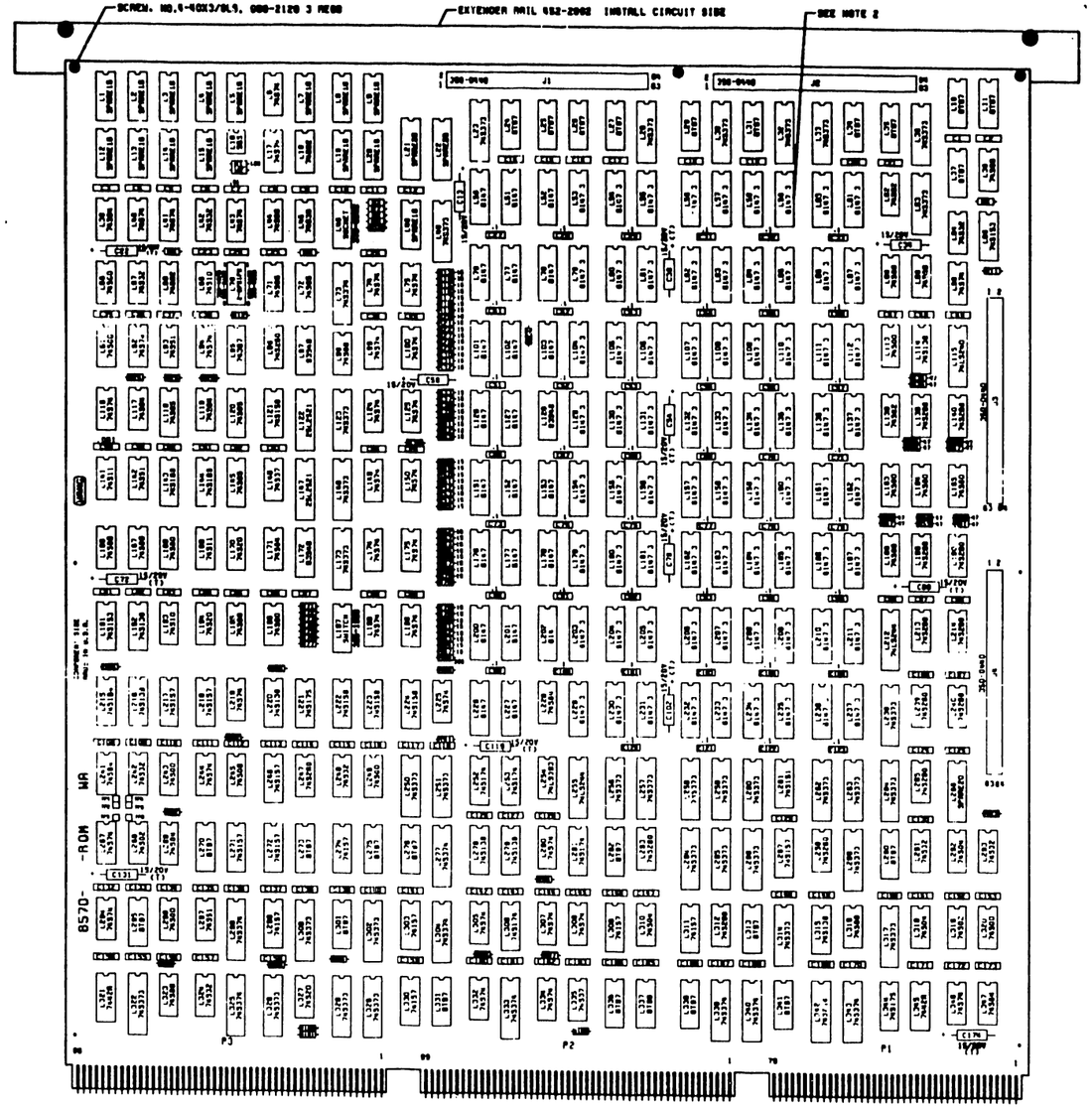
* REF. DES.	* WANG PART NO.	* VALUE/TYPE *	DESCRIPTION	* DRAWING NO. *	QTY. *
01	209-8570-		PCA		1
L50 - L52	377-0412-	6147	IC 4K X 1 SRAM 70N 18 PIN		22
L76 - L78					
L101 - L103					
L126 - L127					
L151 - L153					
L176 - L178					
L200 - L202					
L226 - L227					
L53 - L61	377-0413-	6147-3	IC 4K X 1 SRAM 55NS 18 PIN		72
L79 - L87					
L104 - L112					
L129 - L137					
L154 - L162					
L179 - L187					
L203 - L211					
L229 - L237					

*** END-OF-REPORT ***

			BY	DATE	APPROVED BY	DATE
WANG	WANG LABORATORIES, INC. LOWELL, MA U.S.A.		DWN		E ENGR	
			CHK		M ENGR	
MATERIAL	MODEL NO				MFG ENGR	
	SEE ENGRG SPECIFICATIONS No.		TITLE CACHE BD (ASI)			
FINISH	TOL EX AS NOTED .XX ± .010 FRAC ± 1/64 .XXX ± .005 ANG ± 1° 30' FINISH √		210-8570	C	8570	1
	SCALE	SHT 7 OF 7	WANG PART NUMBER	R/D	DRAWING NUMBER	REV

UU7

DO NOT SCALE



WANG LABS CACHE FINELINE 8570
ASI 5723
ASSEMBLY PLOT

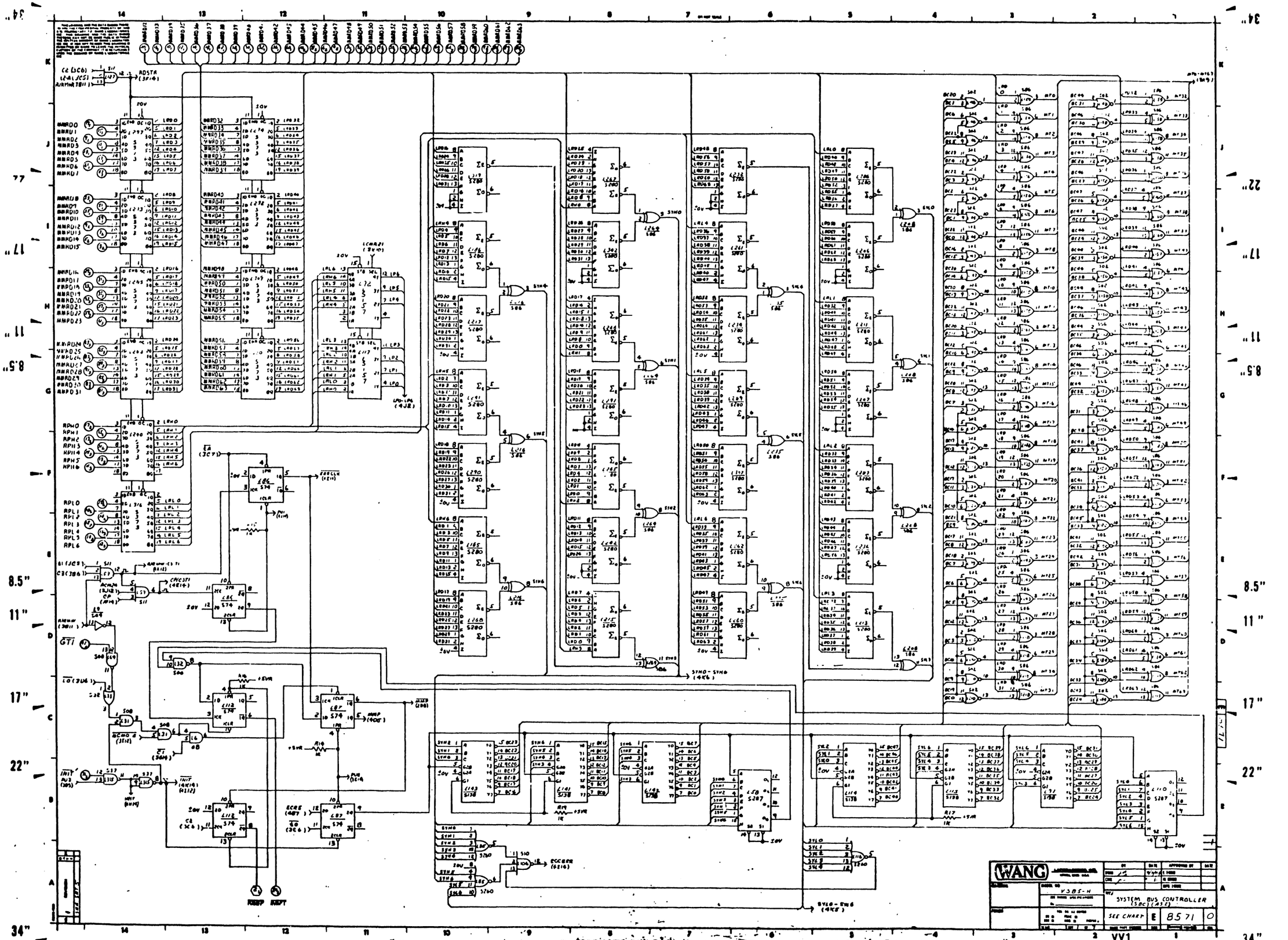
REV. 1 PER ECO NO.32930 135EPM

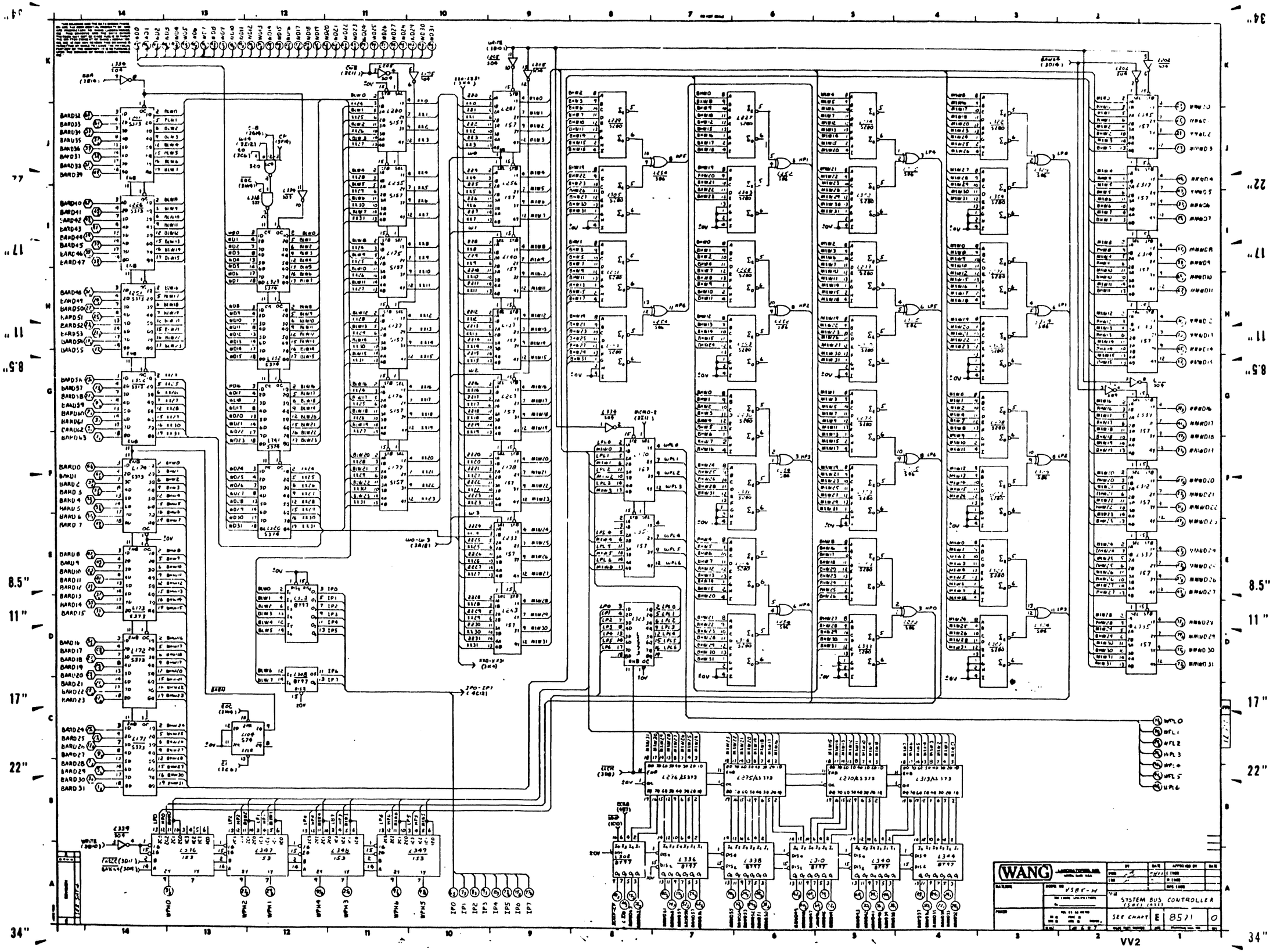
NOTES- 1. UNLESS OTHERWISE SPECIFIED.
ALL CAPS ARE .047.300-1968.EXPRESSED IN MICROFARADS.
ALL RESISTORS ARE 1K.1/4W.5 PERCENT. EXPRESSED IN OHMS.

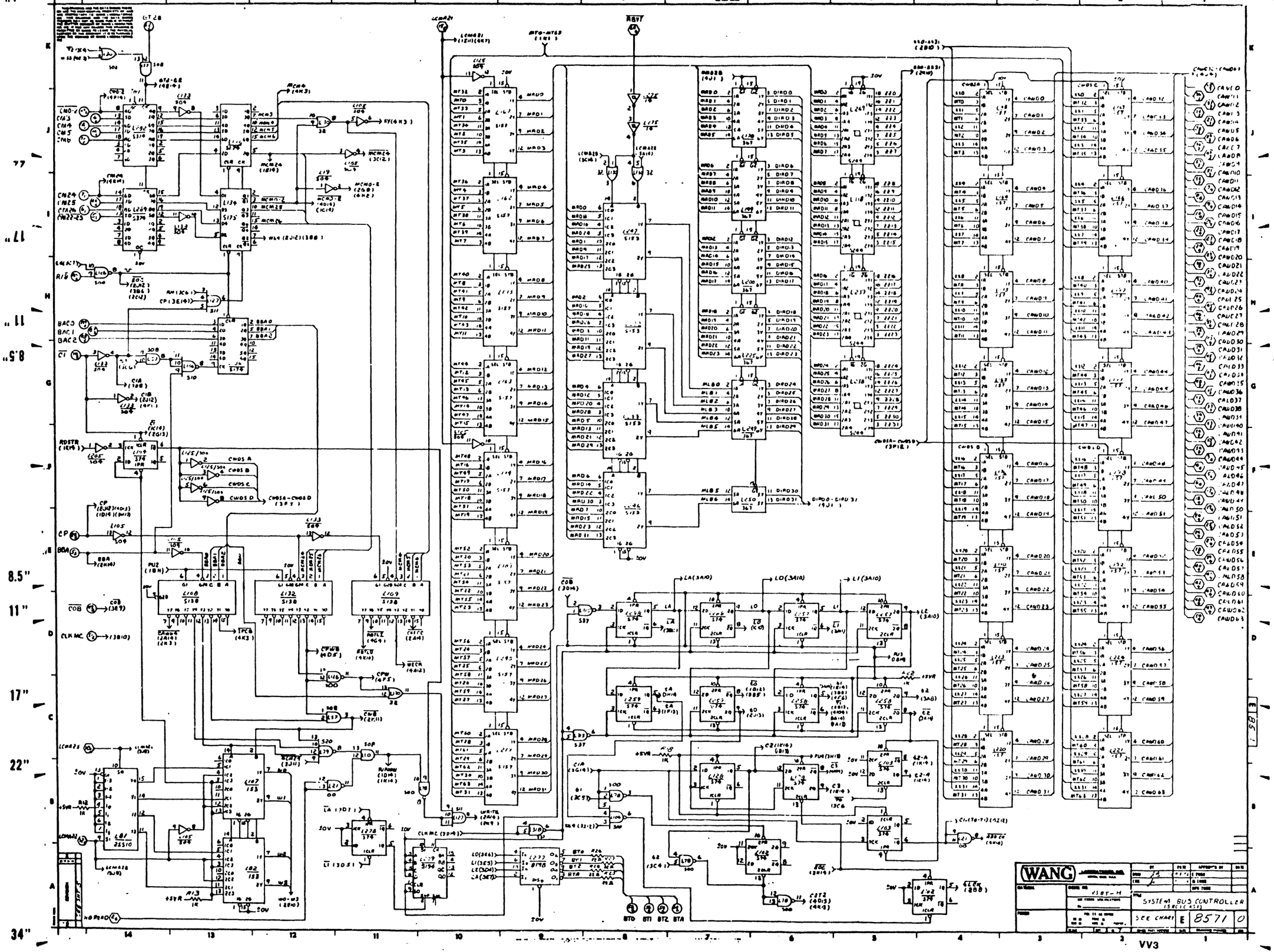
2. LOAD 18 PIN SKT (378-9016) IN LOCATIONS L50-61.78-87.
101-112.128.127.129-137.151-182.178-187.200-211.228.227.
229-237.

WANG LABORATORIES INC. LOWELL MASS. U.S.A.		BY	DATE	APPROVED BY	DATE
MATERIAL	MODEL NO VS85-H SEE ENGRG SPECIFICATIONS	DWN		E ENGR	
		CHK		M ENGR	
				MFG ENGR	
FINISH	TOLERANCES AS NOTED .XX ± FRAC ± .XXX ± ANG ± FINISH	TITLE	ASSEMBLY, CACHE BOARD		
	SCALE 1/1 SHT 1 OF	WANG PART NUMBER	210-3570	SIZE D	DRAWING NUMBER 3570

UU8


WANG
V385-H
SYSTEM BUS CONTROLLER (SBC) (43/2)
SEE CHART
E 8571 0
VV1


WANG
SYSTEM BUS CONTROLLER
SEE CHART
E 8571 0
VV2


WANG
VV3
SYSTEM BUS CONTROLLER
SCALE 4/1
SEE CHART
E 8571 0

WANG LABORATORIES, INC.

DRAWN BY		DATE	APPROVED BY
CHK'D			
ENG			
MFG			
PROJ			

VSBC-N

SYSTEM BUS CONTROLLER (SBC) (ASE)

SEE CHART | E | 8571 | 0

VV4

CONN 1
CONN 2
CONN 3
J1
J2
J3
J4
J5
NO READ
RBYT
LCMA 21
LCMA 22
LCMA 23
+5VR
+5V
+5VR
+5V
NOTE: 1. ALL RES ARE 1/8W 5% UNLESS OTHERWISE SPECIFIED
E REV
WANG
VS85M
SYSTEM BUS CONTROLLER (SBC) (A32)
SEE CHART
E
8571
0
VV5

(FINAL BILL OF-MATERIALS)

BOARD NO. & TITLE: C8571 SYSTEM BUS CNTRL (SBC)(ASI) CREATED: 04/10/84 08:25
ASSEMBLY: 209 LAST MODIFIED: 04/19/84 12:18 BY: LAB
ARTWORK REVISION (B): 00 EDITING REVISION: 2
ASSEMBLY REVISION (A): 00
SCHEMATIC REVISION (S): 00
OWN OR MOST RECENT ECO: E2351

* REF. DES.	* WANG PART NO.	* VALUE/TYPE *	DESCRIPTION	* DRAWING NO. *	QTY. *
C2 - C16	300-1966-	.047U	CAP CERAMIC MONO AXIAL +80 -20% 50V Z5U		248
C18 - C117					
C119 - C137					
C139 - C202					
C204 - C232					
C234 - C251					
C1	300-4022-	10U	CAP TANT AXIAL 10% 20V		6
C17					
C118					
C138					
C203					
C233					
R25 - R28	330-1023-	32.000	RES FIXED METAL FILM 1/4W 5% 200PPM		4
R1 - R8	330-2083-	820.000	RES FIXED METAL FILM 1/4W 5% 200PPM		8
R9 - R24	330-3011-	1K	RES FIXED METAL FILM 1/4W 5% 200PPM		16
J1 - J4	350-0448-	64 CONT	CONN PC HEADER DUAL ROW .100 R/A W/LOCK/EJECT		4
CR1 - CR8	370-0075-	LED	LED RED DIFFUSED RED JMCO TYP		8
L21	376-0002-	7400	IC QUAD 2-INPUT NAND GATE		1
L61	376-0004-	7420	IC DUAL 4-INPUT NAND GATE		1
L8	376-0006-	7474	IC DUAL D-TYPE POSITIVE EDGE-TRIG FLIP-FLOP		8
L34					
L62 - L63					
L68					
L82	376-0048-	74153	IC DUAL 4-INPUT MULTIPLEXER		6
L107					
L346 - L349					
L40	376-0053-	74193	IC UP/DOWN BINARY COUNTER		2
L48					
L6	376-0081-	7408	IC QUAD 2-INPUT AND GATE		1
L23	376-0082-	74157	IC QUAD 2-INPUT MULTIPLEXER		42
L46					
L72 - L73					
L97 - L98					
L121 - L122					
L139 - L140					
L164 - L166					
L168 - L169					
L178					

* REF. DES.	* WANG PART NO.	* VALUE/TYPE *	DESCRIPTION	* DRAWING NO. *	QTY. *
L190 - L192					
L196 - L198					
L209					
L220 - L221					
L223 - L224					
L233					
L236					
L263					
L281					
L312					
L314					
L317					
L336					
L337					
L339					
L343					
L345					
L350 - L351					
L130	376-0093-	7432	IC QUAD 2-INPUT POSITIVE OR GATE		1
L35	376-0096-	9321	IC DUAL 1 OF 4 DECODER		1
L36	376-0098-	74174	IC HEX D FLIP-FLOP		2
L90					
L47 - L48	376-0131-	745287	IC QUAD DATA SELECT OR/MULTIPLEXERS		8
L74 - L75					
L99 - L100					
L123 - L124					
L275	376-0139-	7414	IC HEX SCHMITT TRIGGER INVERTER		1
L170	376-0176-	74367	IC HEX BUFFER TRI-STATE		6
L199 - L200					
L225					
L249 - L250					
L93	376-0184-	74S51	IC QUAD 2 WIDE 2-INPUT AND-OR-INVERT GATES		1
L277	376-0185-	8T98	IC HEX INVERTER 16 PIN DIP		1
L248	376-0189-	8T97	IC HEX BUFFER 16 PIN DIP		8
L308					
L310					
L328					
L336					
L338					
L340					
L344					
L9	376-0197-	74S04	IC HEX INVERTER		16
L19 - L20					
L60					
L105					
L125					
L133					
L202					
L205					
L334					

* REF. DES.	* WANG PART NO.	* VALUE/TYPE *	DESCRIPTION	* DRAWING NO. *	QTY. *
L30	376-0199-	74S02	IC QUAD 2-INPUT POSITIVE-NOR GATES		17
L144 - L153					
L179 - L182					
L184					
L210					
L7	376-0200-	74S08	IC QUAD 2 INPUT POSITIVE AND GATES		4
L10					
L31					
L67					
L86 - L87	376-0202-	74S74	IC DUAL D-TYPE POS EDGE TRIGRD F/F W/PRESET/C		13
L102 - L104					
L112 - L113					
L128					
L257 - L259					
L278					
L288					
L6	376-0205-	74S32	IC QUAD 2-INPUT OR GATE		3
L18					
L33					
L65	376-0206-	74S260	IC DUAL 5-INPUT EXPANDER		2
L116					
L222	376-0215-	74S153	IC DUAL 4-INPUT MULTIPLEXER		4
L244					
L246 - L247					
L92	376-0216-	74LS157	IC QUAD 2-INPUT MULTIPLEXER		2
L117					
L137	376-0217-	74S157	IC QUAD 2 TO 1 LINE DATA SEL/MUL		14
L162 - L163					
L167					
L175 - L177					
L189					
L193 - L194					
L219					
L248					
L255					
L280					
L279	376-0221-	74S194	IC 4 BIT SHIFT REGISTER		1
L32	376-0228-	74S00	IC QUAD 2-INPUT NAND GATE		4
L64					
L78					
L126					
L24	376-0230-	74S20	IC DUAL 4-INPUT POSITIVE NAND GATE		2
L79					
L89	376-0237-	74S11	IC TRIPLE 3-INPUT AND GATE		2
L127					
L09	376-0238-	74S10	IC TRIPLE 3-INPUT NAND GATE		2
L106					
L185 - L186	376-0246-	74S280	IC 9-BIT PARITY GENERATOR/CHECKER		84
L203 - L204					
L206 - L207					

* REF. DES.	* WANG PART NO.	* VALUE/TYPE *	DESCRIPTION	* DRAWING NO. *	QTY. *
L211					
L213					
L216					
L217					
L227 - L232					
L234					
L236					
L241 - L242					
L253					
L260 - L262					
L265 - L268					
L271 - L274					
L286 - L287					
L289 - L291					
L298 - L300					
L303 - L307					
L319					
L321 - L322					
L326 - L327					
L331					
L333					
L342					
L352 - L354					
L136	376-0247-	74S174	IC HEX D-TYPE FLIP-FLOP		2
L138					
L134	376-0270-	74S175	IC QUAD D-TYPE FLIP-FLOP		1
L154 - L161	376-0271-	74S86	IC QUAD 2 IN EXCLUSIVE OR GATE		24
L183					
L187 - L188					
L208					
L212					
L214					
L216					
L218					
L235					
L237					
L243					
L252					
L254					
L264					
L324 - L325					
L41 - L42	376-0284-	74LS374	IC OCTAL D-TYPE FLIP-FLOP TRI-STATE		5
L49					
L76					
L101					
L315	376-0296-	74S37	IC QUAD 2-INPUT NAND BUFFER		2
L318					
L83	376-0297-	74LS240	IC OCTAL BUFFER/LINE DRIVER/LINE RECEIVER		1
L91	376-0298-	74S138	IC 3-LINE TO 8-LINE DECODER/MULTIPLEXER		9
L108 - L109					

WANG LABORATORIES, INC. LOWELL, MA U.S.A.		BY	DATE	APPROVED BY	DATE
		DWN		E ENGR	
		CHK		M ENGR	
MATERIAL	MODEL NO.			MFG ENGR	
	SEE ENGRG SPECIFICATIONS No.	TITLE: SYSTEM BUS CONTROLLER (SBC) (ASI)			
FINISH	TOL IN AS NOTED .XX ± .010 FRAC ± 1/64 125 .XXX ± .005 ANG ± 1°30' FINISH √	SEE CHART	D	8571	0
	SCALE	SHT 6 OF 7	WANG PART NUMBER	SIZE	DRAWING NUMBER	REV

VV6

BOARD NO. & TITLE: C8571 SYSTEM BUS CNTRL (SBC)(ASI) SCHEMATIC REVISION (S): 00 SHEET 7 OF 7 PAGE 8

* REF. DES.	* WANG PART NO.	* VALUE/TYPE *	DESCRIPTION	* DRAWING NO. *	QTY. *
L110 - L115					
L132					
L141 - L143					
L282	376-0388-	74S374	IC OCTAL D-TYPE EDGE-TRIG F/F TRI STATE		6
L284					
L320					
L323					
L332					
L341					
L171 - L174	376-0306-	74S373	IC OCTAL D-TYPE LATCH TRI-STATE OUTPUTS		10
L201					
L226					
L248					
L281					
L283					
L285					
L292 - L294					
L297					
L302					
L309					
L316					
L330					
L270	376-0310-	74LS373	IC OCTAL D-TYPE LATCH TRI-STATE OUTPUTS		6
L295 - L296					
L313					
L325					
L62	376-0330-	74393	IC DUAL 4-BIT BINARY COUNTER		1
L110	376-0338-	74S244	IC OCTAL BUFFER/LINE DRIVER/RECEIVER TRI-STATE		4
L236 - L239					
L269					
J8	376-9002-	SKT 16	IC SOCKET 16 PIN DIL PC MOUNT		1
02 - 09	376-9010-	SKT 22	IC SOCKET 22 PIN DIL PC MOUNT		8
01	810-8571-		PCB		1

WANG LABORATORIES, INC.

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

(FINAL BILL-OF-MATERIALS)

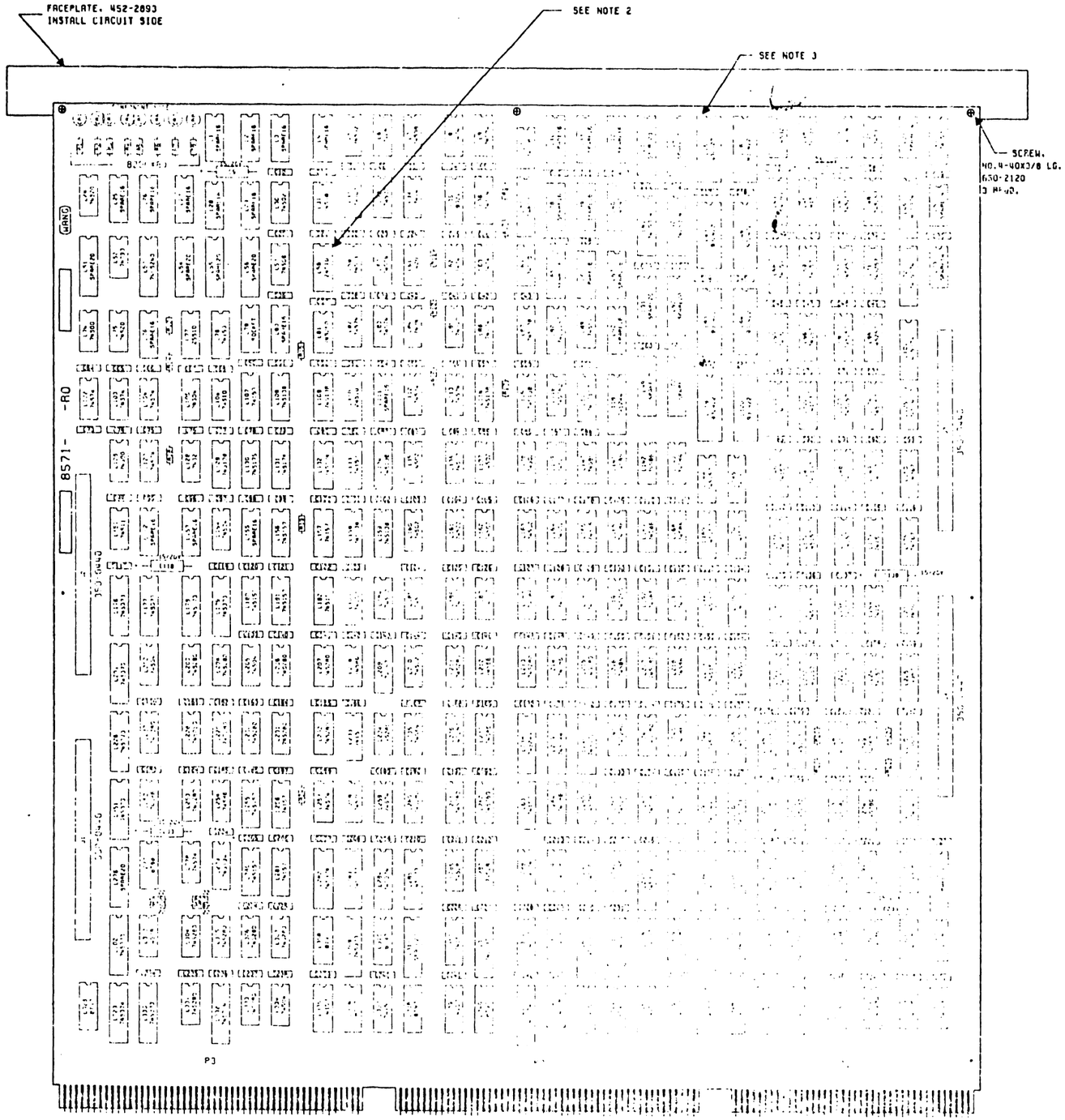
BOARD NO. & TITLE: C8571 SYSTEM BUS CNTRL (SBC)(ASI) CREATED: 04/10/84 08:25
ASSEMBLY: 210-A LAST MODIFIED: 04/19/84 12:18 BY: LAB
ARTWORK REVISION (R): 00 EDITING REVISION: 2
ASSEMBLY REVISION (A): 00
SCHEMATIC REVISION (S): 00
DWR ON MOST RECENT ECO: E2351

* REF. DES.	* WANG PART NO.	* VALUE/TYPE *	DESCRIPTION	* DRAWING NO. *	QTY. *
01	209-8571-		PCA		1
L16 - L17	377-0384-	93L422	IC 256 X 4 BIPOLAR RAM 60NS L PWR 22 PIN		8
L43 - L44					
L70 - L71					
L119 - L120					
L68	377-3063-	82S129	64-DTA PTR/CHR VFU /PROG. 74LS287		1

*** END-OF-REPORT ***

WANG LABORATORIES, INC. LOWELL, MA U.S.A.		BY	DATE	APPROVED BY	DATE
		DWN		E ENGR	
		CHK		M ENGR	
MATERIAL	MODEL NO.			MFG ENGR	
	SEE ENGRG SPECIFICATIONS No.	TITLE SYSTEM BUS CONTROLLER (SBC) (ASI)			
FINISH	TOL EX AS NOTED .XX ± .010 FRAC ± 1/64 125 .XXX ± .005 ANG ± 1°30' FINISH √	SEE CHART	D	8571	0
	SCALE SHT 7 OF 7	WANG PART NUMBER	SIZE	DRAWING NUMBER	REV

VV7



WANG LABS 8571 SYSTEM BUS CONTROL
ASI 5724 09 10 11/15/84
ASSEMBLY PLOT

REV.1 PER ECO NO. 32949 7 SEP 84

NOTES: 1. UNLESS OTHERWISE SPECIFIED:
ALL CAPACITORS ARE [illegible] IN MICROFARADS.
ALL RESISTORS ARE 1/4W, 5%, EXCEPT AS NOTED IN OHMS.
ALL [illegible]
2. LOAD 16 PIN [illegible]
3. LOAD 22 PIN [illegible]

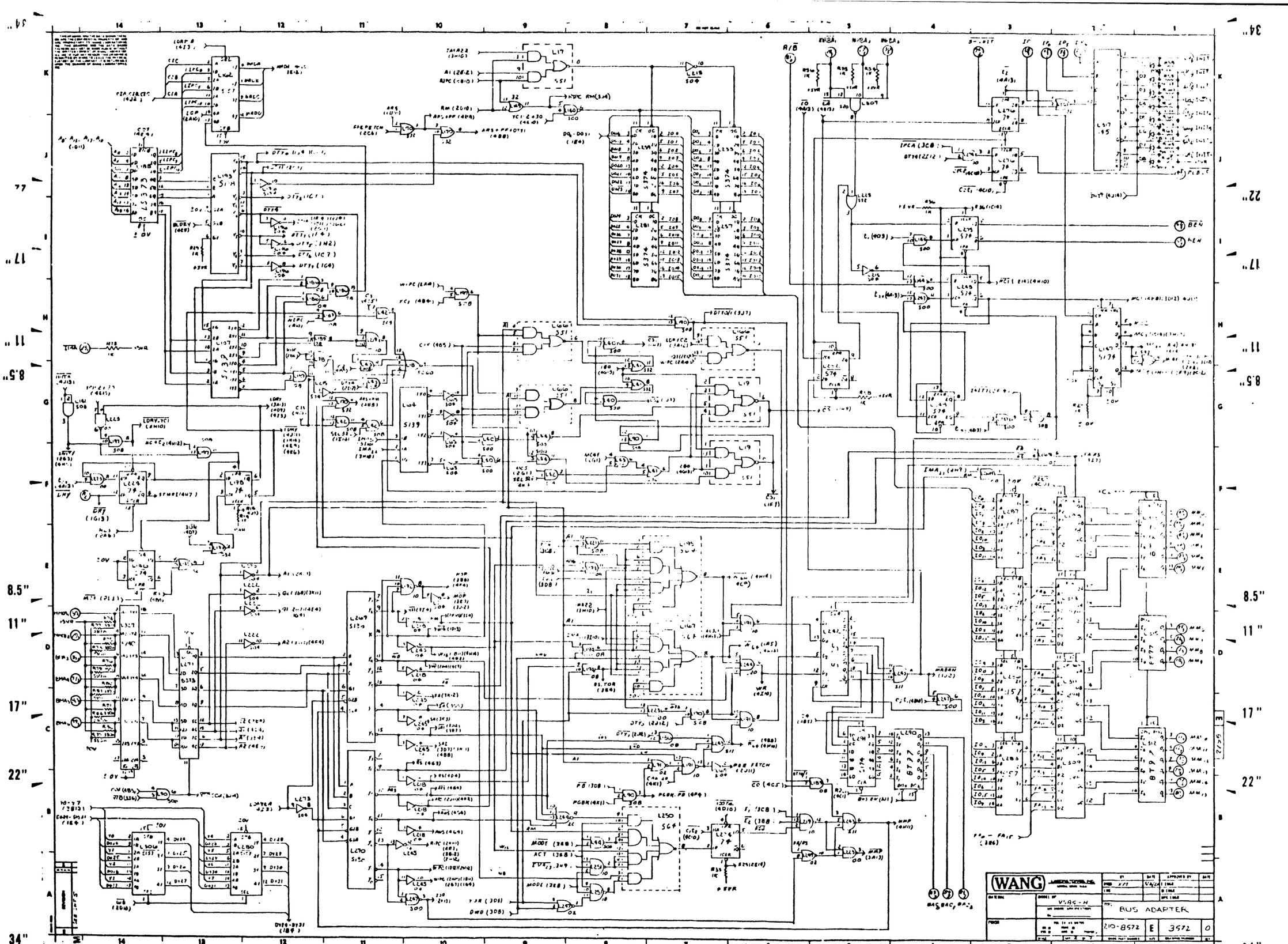
WANG

VSBC-H

BUS ADAPTER (ASI)

210-8572 E 0572 0

WW1


WANG
VS4C-M
BUS ADAPTER
210-8572
E
3572
0
WW2

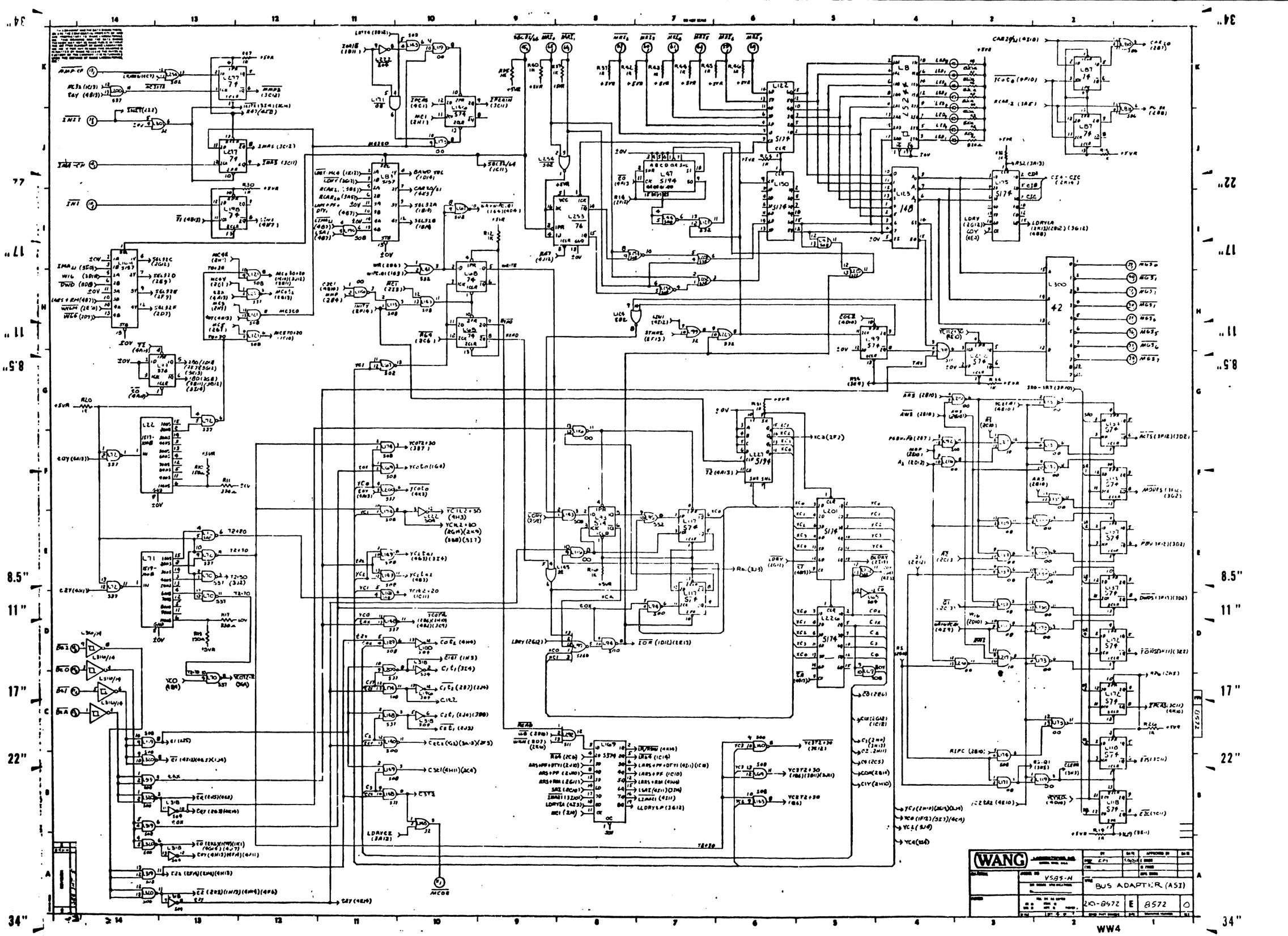
WANG

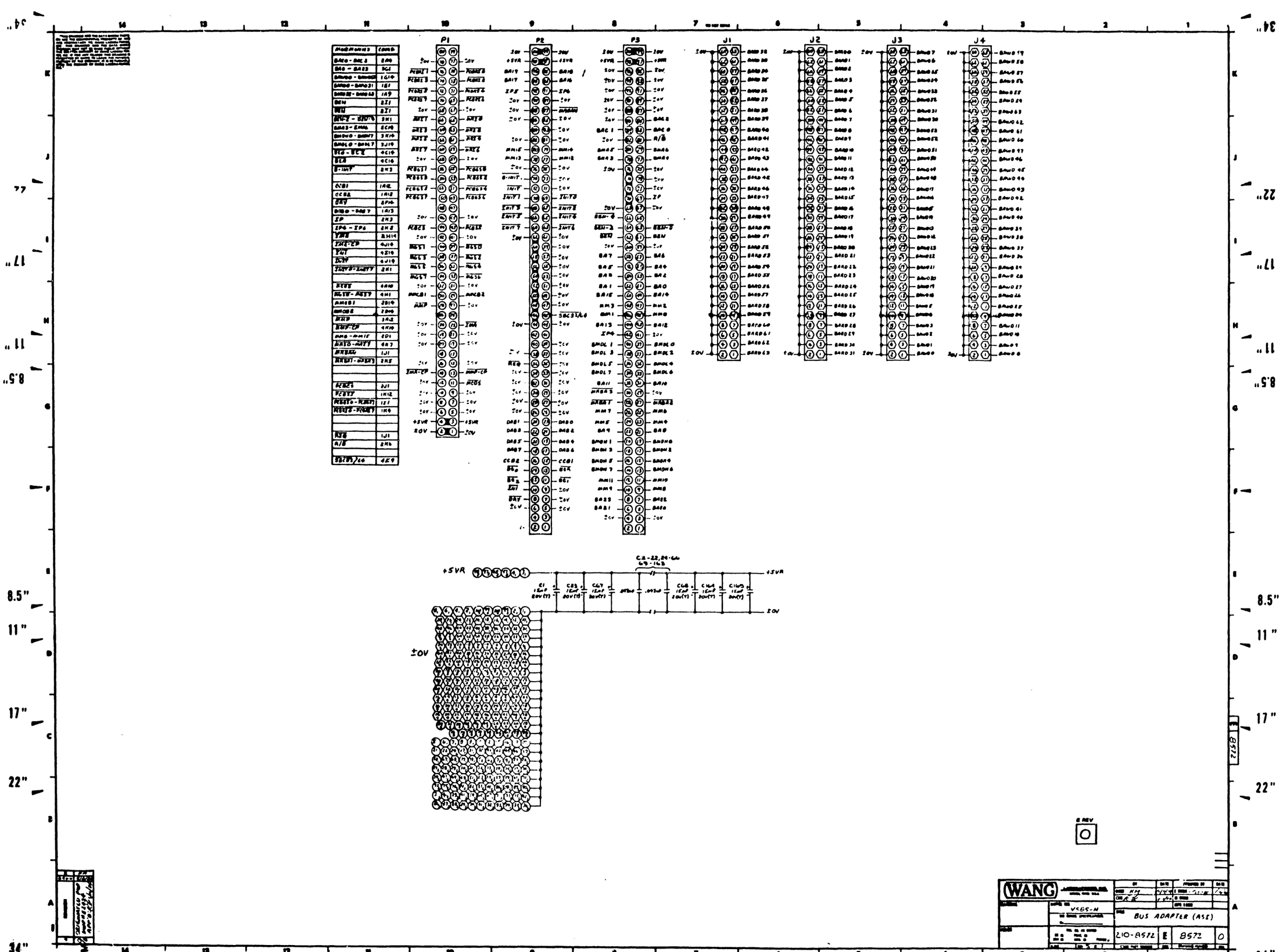
VS85-H

BUS ADAPTER (ASI)

710-8572 | E | 8572 | 0

WW3


WANG
VS85-H
BUS ADAPTER (ASI)
2KI-8472
E
8572
0
WW4


P1
P2
P3
J1
J2
J3
J4
+5VR
±0V
C1 - 22,89-66
69-163
E REV
WANG
VS65-M
BUS ADAPTER (ASI)
210-8572
E
8572
0
WW5

WANG LABORATORIES, INC.

>>>>> ELECTRICAL PARTS LIST <<<<< SHEET 6 OF 7 PAGE 1

(FINAL BILL-OF-MATERIALS)

BOARD NO. & TITLE: C8572 BUS ADAPTER (ASI) CREATED: 05/09/84 09:49
ASSEMBLY: 210 LAST MODIFIED: 05/16/84 08:18 BY: LAB
ARTWORK REVISION (A): 00 EDITING REVISION: 1
ASSEMBLY REVISION (A): 00
SCHEMATIC REVISION (S): 00
DWR OR MOST RECENT ECO: E2424

* REF. DES.	* WANG PART NO.	* VALUE/TYPE *	DESCRIPTION	* DRAWING NO. *	QTY. *
C2 - C22	300-1966-	.047U	CAP CERAMIC MONO AXIAL +80 -20% 50V Z5U		189
C24 - C64					
C69 - C163					
C1	300-4022-	15U	CAP TANT AXIAL 10% 20V		6
C23					
C67 - C68					
C164 - C165					
R10	330-2016-	150.000	RES FIXED METAL FILM 1/4W 5% 200PPM		3
R13					
R20					
R52	330-2019-	180.000	RES FIXED METAL FILM 1/4W 5% 200PPM		1
R11	330-2036-	330.000	RES FIXED METAL FILM 1/4W 5% 200PPM		18
R17					
R27					
R74 - R85					
R1 - R9	330-2083-	820.000	RES FIXED METAL FILM 1/4W 5% 200PPM		9
R12	330-3011-	1K	RES FIXED METAL FILM 1/4W 5% 200PPM		57
R14 - R16					
R18 - R19					
R21 - R26					
R28 - R51					
R53 - R73					
LED1 - LED9	370-0076-	LED	LED RED DIFFUSED RED 3MCD TYP		9
L63	376-0002-	7400	IC QUAD 2-INPUT NAND GATE		12
L116					
L119					
L135					
L138					
L173					
L216					
L223					
L268					
L276					
L296					
L322					
L191 - L192	376-0003-	7410	IC TRIP 3-INPUT NAND GATE		8
L217					
L219					

BOARD NO. & TITLE: C8572 BUS ADAPTER (ASI) SCHEMATIC REVISION (S): 00 SHEET OF PAGE 2

* REF. DES.	* WANG PART NO.	* VALUE/TYPE *	DESCRIPTION	* DRAWING NO. *	QTY. *
L281					
L244	376-0004-	7420	IC DUAL 4-INPUT NAND GATE		1
L68	376-0006-	7474	IC DUAL D-TYPE POSITIVE EDGE-TRIG FLIP-FLOP		4
L198					
L224					
L299					
L253	376-0007-	7476	IC DUAL J-K FLIP-FLOP W/PRESET AND CLEAR		1
L87	376-0008-	7442	IC 1-OF-10 DECODE		5
L276 - L277					
L300					
L314					
L218	376-0010-	7404	IC HEX INVERTER		2
L248					
L91	376-0016-	7402	IC QUAD 2-INPUT NOR GATE		2
L269					
L298	376-0031-	7430	IC 8-INPUT NAND GATE		1
L317	376-0069-	74145	IC 1-OF-10 DECODER/DRIVER		1
L139	376-0081-	7408	IC QUAD 2-INPUT AND GATE		5
L171					
L186					
L189					
L194					
L145	376-0093-	7432	IC QUAD 2-INPUT POSITIVE OR GATE		2
L301					
L278	376-0098-	74174	IC HEX D FLIP-FLOP		1
L268	376-0138-	74298	IC QUAD 2-INPUT MULTIPLEXER W/STORAGE		4
L309					
L311					
L314					
L315	376-0139-	7414	IC HEX SCHMITT TRIGGER INVERTER		1
L123	376-0171-	74148	IC 8-LINE-TO-3-LINE OCTAL PRIORITY ENCODER		1
L17	376-0184-	74S51	IC DUAL 2 WIDE 2-INPUT AND-OR-INVERT GATES		7
L19					
L66					
L96					
L114					
L164					
L166					
L125	376-0189-	8T97	IC HEX BUFFER 16 PIN DIP		20
L153					
L161					
L183					
L177 - L178					
L203					
L229 - L230					
L255 - L256					
L279					
L282					
L285					
L290					

BOARD NO. & TITLE: C8572 BUS ADAPTER (ASI) SCHEMATIC REVISION (S): 00 SHEET OF PAGE 3

* REF. DES.	* WANG PART NO.	* VALUE/TYPE *	DESCRIPTION	* DRAWING NO. *	QTY. *
L306					
L308					
L313 - L315					
L65	376-0197-	74S04	IC HEX INVERTER		7
L100					
L196					
L215					
L222					
L273					
L310					
L67	376-0199-	74S02	IC QUAD 2-INPUT POSITIVE-NOR GATES		2
L264					
L42 - L43	376-0200-	74S08	IC QUAD 2 INPUT POSITIVE AND GATES		14
L69					
L90					
L115					
L121					
L141					
L143					
L149					
L174					
L190					
L197					
L221					
L319					
L142	376-0201-	74S64	IC 4-2-3-2 INPUT AND/OR/INVERT GATE		7
L163					
L167					
L176					
L195					
L246					
L250					
L73 - L76	376-0202-	74S74	IC DUAL D-TYPE POS EDGE TRIGRD F/F W/PRESET/C		13
L93					
L99					
L117 - L118					
L134					
L137					
L146					
L172					
L240					
L252					
L275					
L295	376-0204-	74LS257A	IC QUAD 2-LINE TO 1-LINE DATA SEL/MUX		2
L297					
L41	376-0208-	74S32	IC QUAD 2-INPUT OR GATE		7
L96					
L126					
L170					

BOARD NO. & TITLE: C8572 BUS ADAPTER (ASI) SCHEMATIC REVISION (S): 00 SHEET OF PAGE 4

* REF. DES.	* WANG PART NO.	* VALUE/TYPE *	DESCRIPTION	* DRAWING NO. *	QTY. *
L199					
L202					
L228					
L18	376-0206-	74S260	IC DUAL 5-INPUT EXPANDER		3
L21					
L97					
L76	376-0217-	74S157	IC QUAD 2 TO 1 LINE DATA SEL/MUX		20
L79					
L83					
L85					
L89					
L120					
L129 - L130					
L162					
L168					
L213					
L240					
L262					
L266					
L280					
L283 - L284					
L286 - L287					
L306					
L47	376-0221-	74S194	IC 4 BIT SHIFT REGISTER		3
L147					
L227					
L48	376-0228-	74S00	IC QUAD 2-INPUT NAND GATE		9
L44					
L92					
L94					
L140					
L144					
L241					
L247					
L320					
L59	376-0230-	74S20	IC DUAL 4-INPUT POSITIVE NAND GATE		2
L307					
L86	376-0235-	74S163	IC SYNCHRONOUS 4-BIT BINARY COUNTER		7
L184					
L199					
L128					
L131					
L236					
L237					
L98	376-0237-	74S11	IC TRIPLE 3-INPUT AND GATE		3
L263					
L292					
L267	376-0238-	74S10	IC TRIPLE 3-INPUT NAND GATE		1
L10	376-0246-	74S280	IC 9-BIT PARITY GENERATOR/CHECKER		10
L31					

WANG LABORATORIES, INC. LOWELL, MA U.S.A.		BY	DATE	APPROVED BY	DATE
		DWN		E ENGR	
		CHK		M ENGR	
MATERIAL	MODEL NO.			MFG ENGR	
	SEE ENGRG SPECIFICATIONS No.	TITLE BUS ADAPTER			
FINISH	TOL EX AS NOTED .XX ± .010 FRAC ± 1/64 .XXX ± .005 ANG ± 1°30' FINISH √	210-8572	C	8572	0
	SCALE SHT 6 OF 7	WANG PART NUMBER	SIZE	DRAWING NUMBER	REV

WW6

REF. DES.	WANG PART NO.	VALUE/TYPE	DESCRIPTION	DRAWING NO.	QTY.
L30					
L36					
L46					
L63					
L64					
L81					
L103					
L106					
L111 - L112					
L155 - L156					
L180					
L210					
L235					
L264					
L122	376-0267-	74S174	IC HEX D-TYPE FLIP-FLOP		6
L150					
L161					
L175					
L207					
L226					
L228					
L291					
L136	376-0270-	74S175	IC QUAD D-TYPE FLIP-FLOP		6
L168					
L220					
L242					
L321					
L323					
L66	376-0271-	74S86	IC QUAD 2 IN EXCLUSIVE OR GATE		1
L272	376-0286-	74LS374	IC OCTAL D-TYPE FLIP-FLOP TRI-STATE		1
L8	376-0288-	74LS244	IC OCTAL BUFFER/LINE DRIVER W/TRI STATE		4
L82					
L84					
L214					
L70	376-0296-	74S37	IC QUAD 2-INPUT NAND BUFFER		4
L72					
L148					
L200					
L193	376-0298-	74S138	IC 3-LINE TO 8-LINE DECODER/MULTIPLEXER		3
L269 - L270					
L32	376-0301-	74S158	IC QUAD 2 TO 1-LINE DATA SELECTOR/MUX INVERT		13
L57 - L58					
L60					
L107 - L108					
L159 - L160					
L183					
L211 - L212					
L263					
L265					
L132	376-0305-	74S374	IC OCTAL D-TYPE EDGE-TRIG F/F TRI-STATE		16

REF. DES.	WANG PART NO.	VALUE/TYPE	DESCRIPTION	DRAWING NO.	QTY.
L182					
L184					
L169					
L179					
L204					
L206					
L231 - L233					
L257 - L261					
L281					
L299					
L308					
L11 - L16	376-0306-	74S373	IC OCTAL D-TYPE LATCH TRI-STATE OUTPUTS		16
L36 - L39					
L61 - L62					
L108					
L271					
L310					
L184	376-0310-	74LS373	IC OCTAL D-TYPE LATCH TRI-STATE OUTPUTS		3
L188					
L234					
L44	376-0333-	74S139	IC 2 TO 4-LINE DECODER/MULTIPLEXER		2
L187					
L86	376-0334-	74S240	IC OCTAL BUFFER/LINE DRIVER		3
L77					
L327					
L4 - L7	376-0349-	74S189	IC 16X4-BIT STATIC RAM TRI-STATE OUTPUTS		32
L9					
L10					
L27 - L29					
L31					
L33					
L38					
L46					
L63					
L65					
L80					
L101 - L102					
L110					
L113					
L126 - L127					
L157 - L158					
L181 - L182					
L205					
L207 - L209					
L238 - L239					
L22	376-0002-	DEL LINE	IC DELAY LINE 100NS 1000HM 10 TAP		2
L71					
D1 - D8	380-1001-	30V.100A	DIO SIG 30V 100MA DO35		8
L293 - L294	396-0189-	8197	IC HEX BUFFER BURNED		2
01	810-8572-		PCB		1

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

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

376-0184-	74S51	IC DUAL 2 WIDE 2-INPUT AND-OR-INVERT GATES	7
376-0189-	8T97	IC HEX BUFFER 16 PIN DIP	20
376-0197-	74S04	IC HEX INVERTER	7
376-0199-	74S02	IC QUAD 2-INPUT POSITIVE-NOR GATES	2
376-0200-	74S08	IC QUAD 2 INPUT POSITIVE AND GATES	14
376-0201-	74S64	IC 4-2-3-2 INPUT AND/OR/INVERY GATE	7
376-0202-	74S74	IC DUAL D-TYPE POS EDGE TRIGRD F/F W/PRESET/C	13
376-0205-	74S32	IC QUAD 2-INPUT OR GATE	7
376-0206-	74S260	IC DUAL 5-INPUT EXPANDLR	5
376-0217-	74S157	IC QUAD 2 TO 1 LINE DATA SEL/MUL	20
376-0221-	74S194	IC 4 BIT SHIFT REGISTER	3
376-0228-	74S00	IC QUAD 2-INPUT NAND GATE	9
376-0230-	74S20	IC DUAL 4-INPUT POSITIVE NAND GATE	2
376-0235-	74S163	IC SYNCHRONOUS 4-BIT BINARY COUNTER	7
376-0237-	74S11	IC TRIPLE 3-INPUT AND GATE	3
376-0238-	74S10	IC TRIPLE 3-INPUT NAND GATE	1
376-0246-	74S280	IC 9-BIT PARITY GENERATOR/CHECKER	18
376-0247-	74S174	IC HEX D-TYPE FLIP-FLOP	8
376-0270-	74S175	IC QUAD D-TYPE FLIP-FLOP	6
376-0271-	74S86	IC QUAD 2 IN EXCLUSIVE OR GATE	1
376-0298-	74S138	IC 3-LINE TO 8-LINE DECODER/MULTIPLEXER	5
376-0305-	74S374	IC OCTAL D-TYPE EDGE-TRIG F/F TRI-STATE	18
376-0306-	74S373	IC OCTAL D-TYPE LATCH TRI-STATE OUTPUTS	18
376-0333-	74S139	IC 2 TO 4-LINE DECODER/MULTIPLEXER	2
376-0334-	74S240	IC OCTAL BUFFER/LINE DRIVER	3
376-0349-	74S189	IC 16X4-BIT STATIC RAM TRI-STATE OUTPUTS	32
396-0189-	8T97	IC HEX BUFFER BURNED	2

*** END-OF-REPORT ***

		BY	DATE	APPROVED BY	DATE
WANG LABORATORIES, INC. LOWELL, MA U.S.A.		DWN		E ENGR	
		CHK		M ENGR	
				MFG ENGR	
MATERIAL	MODEL NO.	TITLE: BUS ADAPTER			
	SEE ENGRG SPECIFICATIONS No.				
FINISH	TOL EXC AS NOTED .XX ± .010 FRAC ± 1/64 .XXX ± .005 ANG ± 1°30' 125	210-8572	C	8572	0
	SCALE SHT 7 OF 7	WANG PART NUMBER	SIZE	DRAWING NUMBER	REV

WW7

DO NOT SCALE

SCREW, NO.6-40X3/8LG. 850-2120 3 REQD

EXTENDER RAIL 452-2982 INSTALL CIRCUIT SIDE

NOTES- 1. UNLESS OTHERWISE SPECIFIED-
ALL CAPACITORS ARE IN MFD. 200-1508, EXPRESSED IN MICROFARADS.
ALL RESISTORS ARE 1/4W, 5 PERCENT. EXPRESSED IN OHMS.
ALL LEDS ARE 300-0004.
ALL DIODES ARE 300-0010.
ALL TEST POINTS ARE 602-2022.

WANG 1989 BUS ADAPTER FINELINE 8572
ASI 5284 38 11 11/28/84
ASSEMBLY PLOT
REV. 1 PER ECO NO. 33478 12SEP84

REVISION	BY	DATE	APPROVED	DATE

WANG LABORATORIES, INC.

DWN		E ENGR	
CHK		M ENGR	
MATERIAL		M G ENGR	
FINISH		TITLE: ASSEMBLY, BUS ADAPTER	
		SIZE: D	8572
		SCALE:	SHT 1

WW8

D 8572

MNEMONICS	COORD.
ACK	9K14
BA01-BA11	5F14
BUSY	9A14
CTS1-CTS2	8D8
CTS3	8J8
CTS4	8J8
CTS5-CTS6	8D14
CTS7	8J14
CTS8	8J14
DATA1-DATA8	9H14
DAV	9B14
DD8	9J14
DD0-DD15	6C9
DMAPPI	5D14
DSB	9J14
DSR1-DSR2	8C8
DSR3-DSR4	8J8
DSR5-DSR6	8C14
DSR7-DSR8	8J14
DSTIN	9B1
DSTOUT	9A1
DTR1-DTR2	8D1
DTR3-DTR4	8J1
DTR5-DTR6	8D8
DTR7-DTR8	8J8
EXTXC1	9J14
EXTXC2	9K14
EXTXC3	9J11
EXTXC4	9K11
EXTXC5	9J9
EXTXC6	9K9
EXTXC7	9J6
EXTXC8	9K6
EXRXC1	9J14
EXRXC2	9J14
EXRXC3	9J11
EXRXC4	9J11
EXRXC5	9J9
EXRXC6	9J9
EXRXC7	9J6
EXRXC8	9J6
FAULT	9F14
LDB0-LDB15	5K9
LPDB000-LPDB007	6J14
MIPPI	5A9
MRECPPI	5A9
MSB0-MSB1	9J14
PE	9G14
+PPDMARD	5J14
+PPDMAWRITE	5J14
PPIINPUTRDY	6A9
PPIPCBRDY	6K1
PWRON	9F7

MNEMONICS	COORD.
RDPPI	6D14
RESET	9B1
RMPTM	5A8
RSTPPI	2F14
RTS1	8C1
RTS2	8D1
RTS3	8J1
RTS4	8H1
RTS5	8C8
RTS6	8D8
RTS7	8J8
RTS8	8H8
RXD1	8C8
RXD2	8D8
RXD3 RXD4	8J8
RXD5	8C14
RXD6	8D14
RXD7-RXD8	8J14
SHANT	9F14
SLCT	9F14
TXD1	8D1
TXD2	8C1
TXD3-TXD4	8J1
TXD5	8C8
TXD6	8D8
TXD7-TXD8	8J8
USO-US1	9C1
WMPTM	5A9
WMPPI	6H14

NOTES

1. ALL RESISTOR VALUES IN OHMS.
2. ALL CAPACITOR VALUES IN MICROFARADS UNLESS OTHERWISE INDICATED.
3. ALL RESISTORS 1/4W 5% UNLESS OTHERWISE INDICATED.
4. PARTS LIST SHOWN ON SHEETS 10 AND 11.

+5VR

C2-10,12,14,16-20,23-26, 33-36,38-46,57-59,61,64-67, 77,79-85,87-92,94-101,103-108, 110,112-115,117,119-134,136-173, 177-180

.047 .047 .1 .1 C1 C27 C181 C174 C182 C175

RN4 630 RN2 630

C13,14,21,22,47-55 60,62,63,68-73,78, 86,102,111,116,118

GND +12V -12V

C183 15 20V(T) C176 15 20V(T)

SPARES

74LS00 L169 74LS08 L183 74LS32 L101 74LS04 L60 74LS04 L184 74LS74 L121

74LS00 L169 74LS08 L147 74LS32 L99 74LS04 L60 74LS04 L184 74LS74 L124

74LS03 L76 74LS08 L103 74LS32 L99 74LS04 L11 74LS04 L184 74LS74 L102

74LS00 L76 74LS08 L103 74LS32 L139 74LS04 L11 74LS04 L184

74LS00 L308 74LS08 L159 74LS32 L139 74S06 L31 74LS04 L184

74LS00 L161 74LS08 L159 74LS32 L139 74S50 L54 74LS04 L180

74LS00 L161 74LS10 L132 74LS32 L100 74S50 L54 74LS04 L180

74LS00 L57 74LS10 L132 74LS32 L82 74S50 L54 74LS04 L23

74LS02 L69 74LS11 L123 74LS32 L163 74LS04 L23

74LS02 L129 74LS11 L210 74LS32 L163 74LS04 L23

74LS02 L64 74LS11 L210 74LS32 L161 74LS04 L23

74LS02 L207 74LS11 L129 74LS32 L218 74LS04 L201

74LS02 L207 74LS86 L216

74LS02 L207 74LS86 L216

74LS38 L175

74LS38 L175

J1

DATA1	1	2	±0V
DATA2	3	4	
DATA3	5	6	
DATA4	7	8	
DATA5	9	10	
DATA6	11	12	SHANT
DATA7	13	14	USO
DATA8	15	16	US1
DSTBTN	17	18	DSTBOUT
ACK	19	20	PWRON
BUSY	21	22	DAV
PE	23	24	SLCT
FAULT	25	26	RESET

J2

TXD1	1	2	±0V
DTR1	3	4	
	5	6	
DSR1	7	8	
RXD1	9	10	
	11	12	
RTS1	13	14	
EXTXC1	15	16	
CTS1	17	18	
EXRXC1	19	20	
TXD2	21	22	
DTR2	23	24	
	25	26	
DSR2	27	28	
RXD2	29	30	+5VR
	31	32	
RTS2	33	34	+12V
EXTXC2	35	36	
CTS2	37	38	-12V
EXRXC2	39	40	

J3

TXD3	1	2	±0V
DTR3	3	4	
	5	6	
DSR3	7	8	
RXD3	9	10	
	11	12	
RTS3	13	14	
EXTXC3	15	16	
CTS3	17	18	
EXRXC3	19	20	
TXD4	21	22	
DTR4	23	24	
	25	26	
DSR4	27	28	
RXD4	29	30	+5VR
	31	32	
RTS4	33	34	+12V
EXTXC4	35	36	
CTS4	37	38	-12V
EXRXC4	39	40	

J4

TXD5	1	2	±0V
DTR5	3	4	
	5	6	
DSR5	7	8	
RXD5	9	10	
	11	12	
RTS5	13	14	
EXTXC5	15	16	
CTS5	17	18	
EXRXC5	19	20	
TXD6	21	22	
DTR6	23	24	
	25	26	
DSR6	27	28	
RXD6	29	30	+5VR
	31	32	
RTS6	33	34	+12V
EXTXC6	35	36	
CTS6	37	38	-12V
EXRXC6	39	40	

J5

TXD7	1	2	±0V
DTR7	3	4	
	5	6	
DSR7	7	8	
RXD7	9	10	
	11	12	
RTS7	13	14	
EXTXC7	15	16	
CTS7	17	18	
EXRXC7	19	20	
TXD8	21	22	
DTR8	23	24	
	25	26	
DSR8	27	28	
RXD8	29	30	+5VR
	31	32	
RTS8	33	34	+12V
EXTXC8	35	36	
CTS8	37	38	-12V
EXRXC8	39	40	

P1

	1	A	BA11
+5VR	2	B	+5VR
±0V	3	C	±0V
BA09	4	D	BA10
	5	E	
	6	F	
	7	H	
BA07	8	J	BA08
BA05	9	K	BA06
	10	L	
	11	M	
	12	N	
BA04	13	P	BA03
BA02	14	R	BA01
	15	S	

P2

-12V	1	A	-12V
	2	B	
	3	C	
	4	D	
	5	E	
	6	F	
	7	H	LDB12
LDB11	8	J	LDB10
LDB9	9	K	LDB8
LDB15	10	L	LDB14
LDB13	11	M	LDB10
LDB7	12	N	LDB7
LDB6	13	P	LDB1
LDB4	14	R	LDB3
LDB6	15	S	LDB5

P3

	1	A	
DMAPPI	2	B	
	3	C	
	4	D	
	5	E	RMPTM
RMPTM	6	F	
	7	H	MIPPI
MRECPPI	8	J	
	9	K	
	10	L	
+12V	11	M	+12V
	12	N	
±0V	13	P	±0V
	14	R	
+PPDMARD	15	S	
+PPDMAWRITE	16	T	

P4

PPIREQ	1	A	
	2	B	LPDB007
LPDB006	3	C	LPDB005
LPDB004	4	D	LPDB003
LPDB002	5	E	LPDB001
LPDB000	6	F	
PPIINPUTRDY	7	H	
	8	J	PPIPCBRDY
	9	K	
	10	L	
RSTPPI	11	M	RDPPI
	12	N	
±0V	13	P	±0V
+5VR	14	R	+5VR
WMPPI	15	S	

E REV D N

WANG LABORATORIES, INC.		SCHEMATIC DIAGRAM	
MODEL NUMBER VS 100	WANG PART NUMBER 210-8168	TITLE ASYNC DEVICE CONTROLLER M/L	
		DWN JSH CHK ENG QC DIR	
SCALE	SHEET 1 OF 11	SIZE E	DRAWING NUMBER 8168A REV D

MICROPROCESSOR

CLOCK GENERATOR

8086 DATA BUFFER

8086 ADDRESS LATCH

ADDRESS DECODING

HARD RESET

DYNAMIC RAM ADDRESS MUX

REFRESH ROW COUNTER

DYN RAM ADDRESS DRIVER

DYN RAM CONTROL DRIVERS

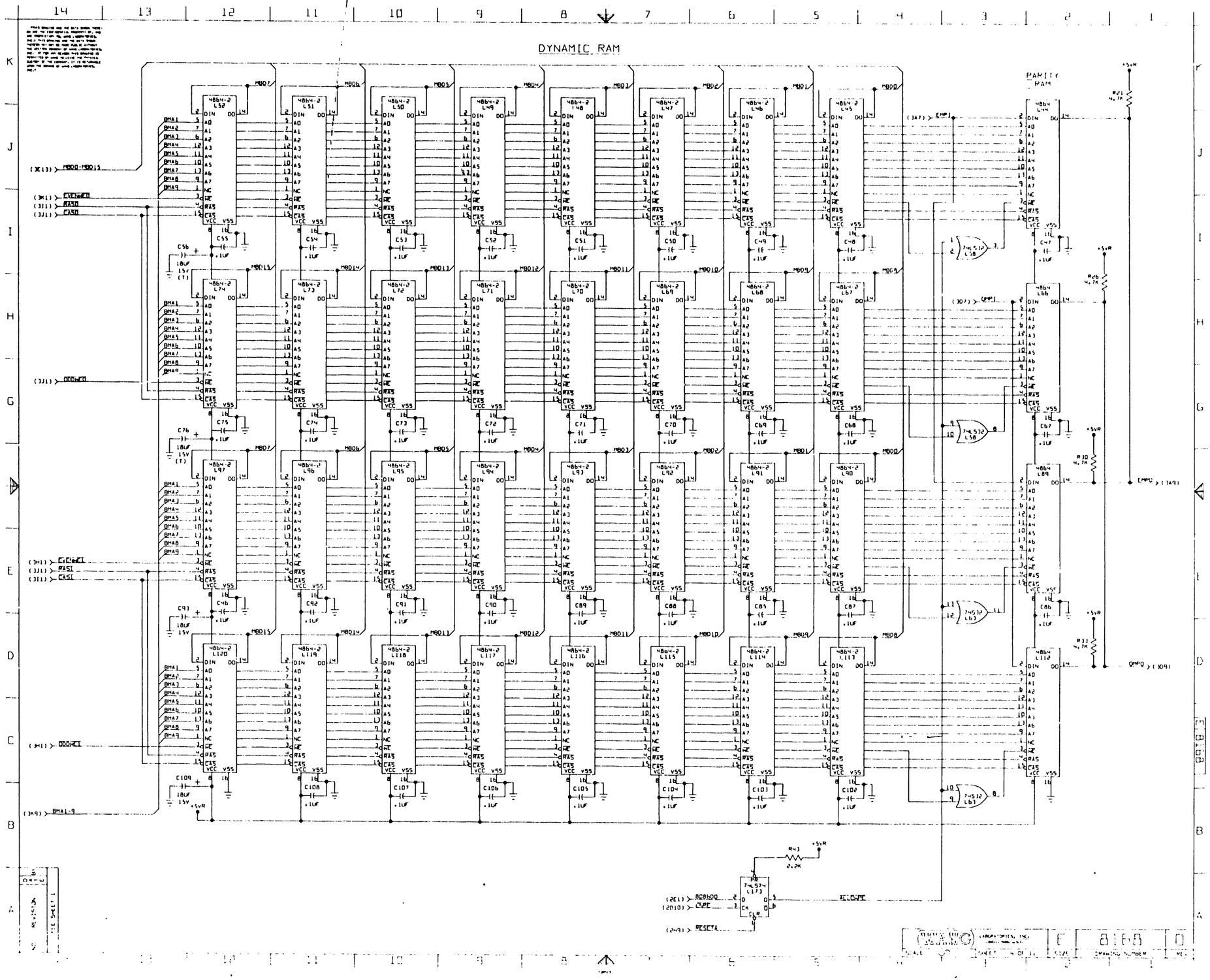
DYN RAM DATA LATCH (8086 READS)

DYN RAM DATA BUF (8086 WRITE)

DYN RAM PARITY GENERATOR

DYNAMIC RAM TIMING

DYNAMIC RAM


14
13
12
11
10
9
8
7
6
5
4
3
2
1
K
J
I
H
G
F
E
D
C
B
A
PARITY RAM
4864-2
DIN
DO
WE
RAS
CAS
VCC
VSS
74LS32
74LS74
+5VR
MB00-MB15
EVEN&RCI
RAS0
CAS0
ODD&RCI
RAS1
CAS1
BMA1-9
EMP0
EMP1
RESET&
RESET#
MEMWE#

DMA INTERFACE CONTROL

DMA RAM CONTROL

CPU/DMA ARBITRATION

DMA RAM ADDRESS MUX

SRAM-8086 DATA BUFFER

DMA RAM (2KW, STATIC)

MESSAGE DMA CONTROLLER

MESSAGE INTERRUPTS

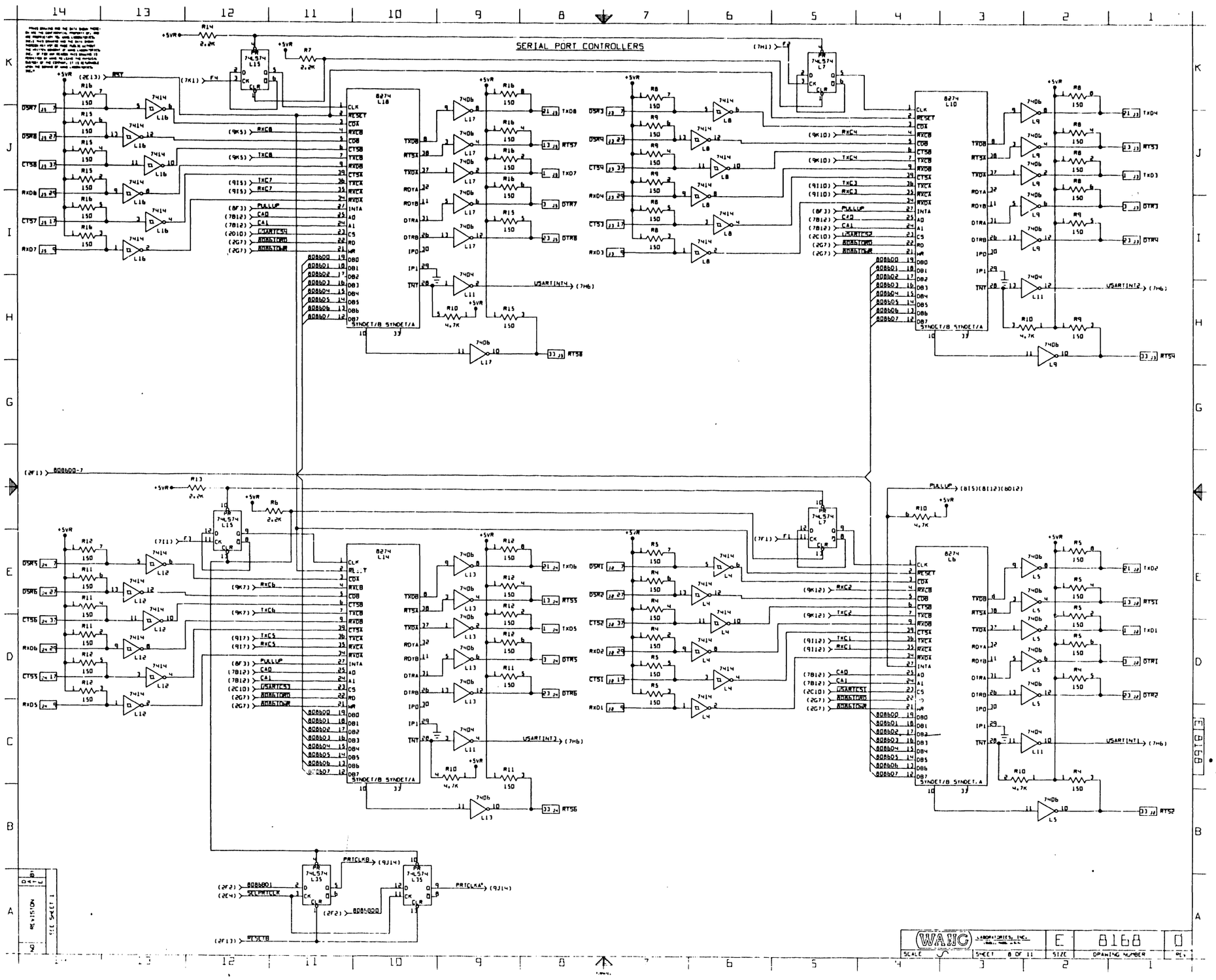
PROGRAMMABLE TIMER

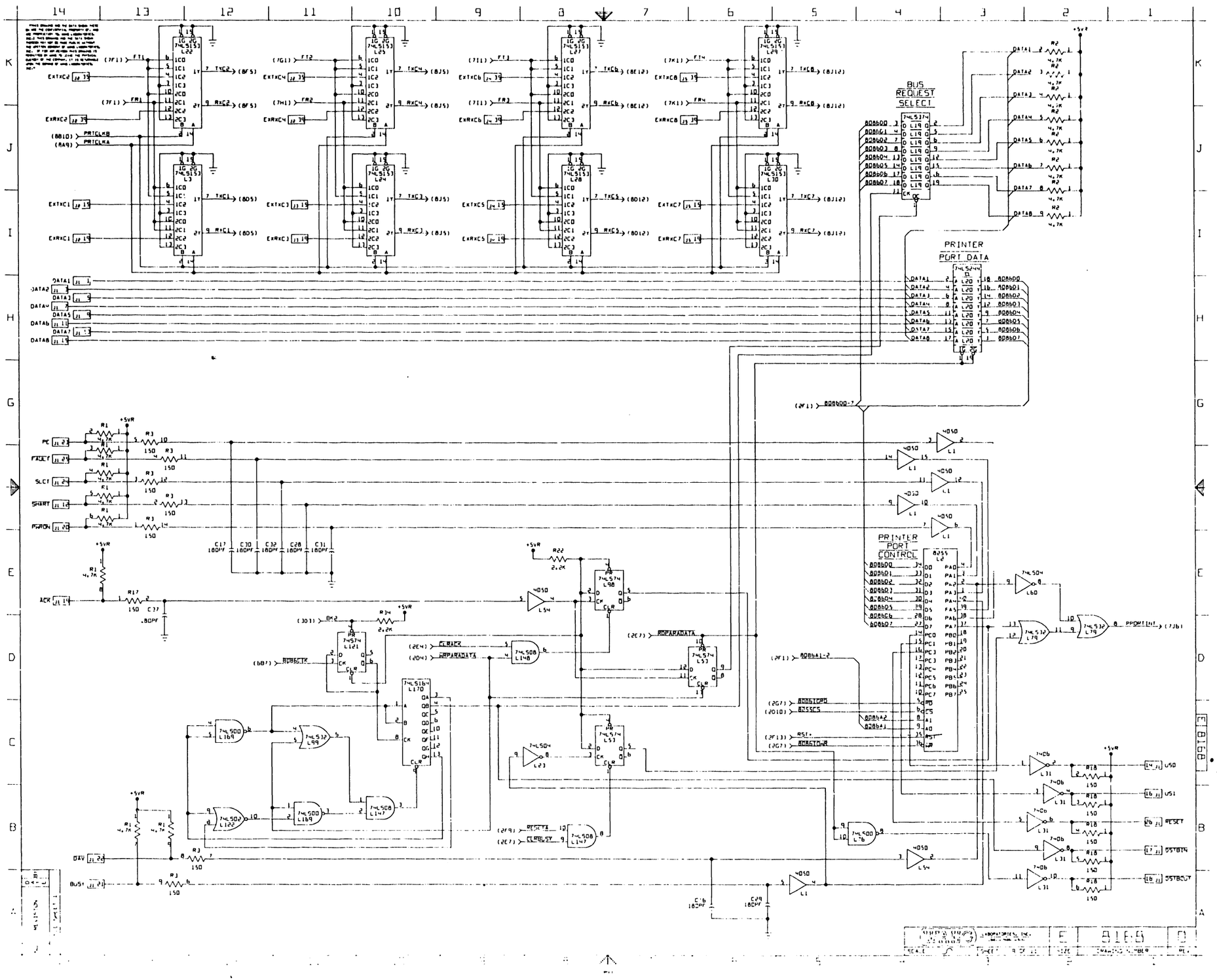
PROGRAMMBLE INTERRUPT CONTROLLER

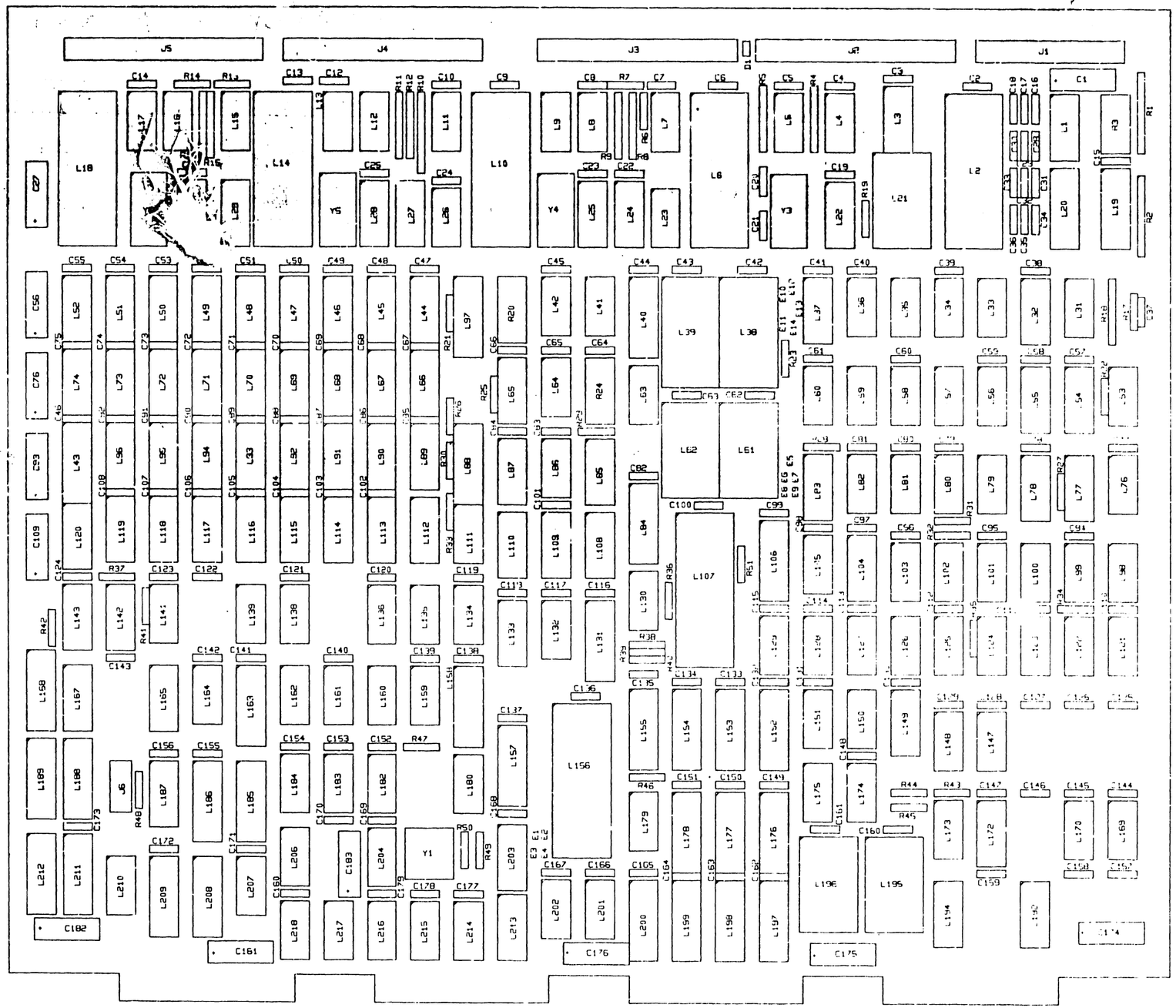
BAUD RATE GENERATORS

EPROM (4KW)

EPROM ADDRESS BUFFER


SERIAL PORT CONTROLLERS
8274
74LS74
7414
7406
+5VR
RESET
CLK
CDA
RXCB
CDB
CTSB
TXCB
RXDB
CTSA
TXCA
RXCA
RXDA
INTA
A0
A1
CS
RD
WR
DB0
DB1
DB2
DB3
DB4
DB5
DB6
DB7
TXDB
RTSA
TXDA
RDYA
RDYB
DTRA
DTRB
IPO
IP1
TNT
SYNDET/B SYNDET/A
SYNDET/B SYNDET.A
USARTINT4
USARTINT2
USARTINT1
USARTINT3
PULLUP
CAD
CA1
USARTCS4
USARTCS2
USARTCS1
USARTCS3
AMASTORD
AMASTORR
SELPRTCLK
PRTCLKB
PRTCLKA
RESETB
TXD8
TXD4
TXD7
TXD3
TXD6
TXD2
TXD5
TXD1
DTR8
DTR4
DTR7
DTR3
DTR6
DTR2
DTR5
DTR1
RTS8
RTS4
RTS7
RTS3
RTS6
RTS2
RTS5
RTS1
WANG LABORATORIES, INC.
SCALE
SHEET 8 OF 11
SIZE E
DRAWING NUMBER 8168
REV D


BUS REQUEST SELECT
PRINTER PORT DATA
PRINTER PORT CONTROL
8255
+5VR
4050
74LS374
74LS244
74LS574
74LS153
74LS504
74LS32
74LS08
74LS00
74LS02
74LS164
74LS04
74LS06
PRINTINT
RESET
DSTBIN
DSTBOUT
BUSI
DAV
ACK
PE
FAULT
SLCT
SMART
PERROR


J5
J4
J3
J2
J1
L18
L14
L10
L39
L38
L62
L61
L107
L156
L196
L195
Y1

DO NOT SCALE

BA3	3	R37 68Ω	2	BA3	CB8	23		5	CB8	DD6	48		17	DD6	CF6	18		8	CF6	DD8	33		17	DD8	±0V	2		19	±0V
CF3	4		8	CF3	-12V	24	-12V			CD5	46		20	CD5	CC6	64		6	CC6	DB8	34		15	DB8	±0V	9		20	±0V
CA3	5		4	CA3	CD7	25		20	CD7	DB2	49		15	DB2	CE6	65		22	CE6	DATA1	10		2	DATA1	±0V	6		21	±0V
CE3	6		22	CE3	BB8	26		3	BB8	CA5	44		15	CA5	CB6	66		5	CB6	DATA2	30		3	DATA2	±0V	8		22	±0V
DB4	7		15	DB4	CF7	27		8	CF7	CD6	47		20	CD6	CD1	67		20	CD1	DATA3	5		4	DATA3	±0V	10		23	±0V
CC3	8		6	CC3	DB7	28		15	DB7	CA6	48		4	CA6	CF2	68		8	CF2	DATA4	7		5	DATA4		±0V		24	±0V
DD4	9		17	DD4	CE7	29		22	CE7	CF5	49		8	CF5	CF1	69		8	CF1	DATA5	9		6	DATA5		±0V		25	±0V
CB3	10		5	CB3	-12V	30	-12V			BA6	50	R5 68Ω	2	BA6	CB2	70		5	CB2	DATA6	11		7	DATA6		±0V		26	±0V
BB4	11		3	BB4	CC7	31		6	CC7	CE5	51		22	CE5	CE1	71		22	CE1	DATA7	13		8	DATA7		±0V		27	±0V
BA4	12	R32 68Ω	2	BA4	BA7	32	R26 68Ω	2	BA7	DD2	52		17	DD2	CC2	72		6	CC2	DATA8	15		9	DATA8	±0V	1		4	±0V
DB3	13		15	DB3	CB7	33		5	CB7	CC5	53		65	CC5	CC1	73		6	CC1	DSTBIN	17		1	DSTBIN	USR0	19		18	USR0
CF4	14		8	CF4	CD4	34		20	CD4	BB3	54		3	BB3	CE2	74		22	CE2	ACK	19		10	ACK	POWERON	22		17	POWER ON
CD3	15		20	CD3	CA7	35		4	CA7	CB5	55		55	CB5	CB1	75		5	CB1	BUSY	21		11	BUSY	SMART	12		16	SMART
CE4	16		22	CE4	CA4	36		4	CA4	DD3	56		17	DD3	CD2	76		20	CD2	PE	23		12	PE	DSTBOUT	18		24	DSTBOUT
CF8	17		8	CF8	DD7	37		17	DD7	DB5	57		155	DB5	DB1	77		15	DB1	SLCT	24		13	SLCT	USR1	14		26	USR1
CC4	18		6	CC4	CD8	38		20	CD8	BB5	58		35	BB5	BB1	78		3	BB1	FAULT	25		30	FAULT	DAV	27		29	DAV
CE8	19		22	CE8	BB7	39		3	BB7	BB6	59		36	BB6	BB2	79		32	BB2										
CB4	20		5	CB4	CA8	40		4	CA8	DD5	60		175	DD5	DD1	80		17	DD1										
CC8	21		6	CC8	DB6	41		15	DB6	CA2	61		4	CA2	CA1	81		4	CA1										

WANG PART NO.	DRAWING NO.	DESCRIPTION
WANG	WANG LABORATORIES, INC. LOWELL, MA. U.S.A.	
MATERIAL	MODEL NO. VS-15, 45, 100	
FINISH		

	BY	DATE	APPROVED BY	DATE
DWN	P.G. Daniel	7-12-82	E ENGR	
CHK			M ENGR	
			MFG ENGR	

TITLE: ASYNC DEVICE CONTROLLER CONNECTOR BOARD

210-8323	D	8323	6
WANG PART NUMBER	SIZE	DRAWING NUMBER	REV

REVISION NO. — SEE SHEET 2

YY1

DO NOT SCALE

J9

SMART	18 36	USR1
	17 35	DAV
	16 34	DSTBOUT
POWER ON	15 33	
USRØ	14 32	FAULT
SLCT	13 31	RESET
PE	12 30	
BUSY	11 29	
ACK	10 28	
DATA8	9 27	±0V
DATA7	8 26	
DATA6	7 25	
DATA5	6 24	
DATA4	5 23	
DATA3	4 22	
DATA2	3 21	
DATA1	2 20	
DSTB IN	1 19	±0V

J10

DATA1	1 2	±0V
DATA2	3 4	
DATA3	5 6	
DATA4	7 8	±0V
DATA5	9 10	±0V
DATA6	11 12	SMART
DATA7	13 14	USRØ
DATA8	15 16	USR1
DSTBIN	17 18	DSTBOUT
ACK	19 20	POWER ON
BUSY	21 22	DAV
PE	23 24	SLCT
FAULT	25 26	RESET

J2

	13 25	
	12 24	
	11 23	
	10 22	CE2
	9 21	
CF2	8 20	CD2
AB2	7 19	
CC2	6 18	
CB2	5 17	DD2
CA2	4 16	
BB2	3 15	DB2
BA2	2 14	
	1	

J4

	13 25	
	12 24	
	11 23	
	10 22	CE4
	9 21	
CF4	8 20	CD4
AB4	7 19	
CC4	6 18	
CB4	5 17	DD4
CA4	4 16	
BB4	3 15	DB4
BA4	2 14	
	1	

J6

	13 25	
	12 24	
	11 23	
	10 22	CE6
	9 21	
CF6	8 20	CD6
AB6	7 19	
CC6	6 18	
CB6	5 17	DD6
CA6	4 16	
BB6	3 15	DB6
BA6	2 14	
	1	

J8

	13 25	
	12 24	
	11 23	
	10 22	CE8
	9 21	
CF8	8 20	CD8
AB8	7 19	
CC8	6 18	
CB8	5 17	DD8
CA8	4 16	
BB8	3 15	DB8
BA8	2 14	
	1	

J1

	13 25	
	12 24	
	11 23	
	10 22	CE1
	9 21	
CF1	8 20	CD1
AB1	7 19	
CC1	6 18	
CB1	5 17	DD1
CA1	4 16	
BB1	3 15	DB1
BA1	2 14	
	1	

J3

	13 25	
	12 24	
	11 23	
	10 22	CE3
	9 21	
CF3	8 20	CD3
AB3	7 19	
CC3	6 18	
CB3	5 17	DD3
CA3	4 16	
BB3	3 15	DB3
BA3	2 14	
	1	

J5

	13 25	
	12 24	
	11 23	
	10 22	CE5
	9 21	
CF5	8 20	CD5
AB5	7 19	
CC5	6 18	
CB5	5 17	DD5
CA5	4 16	
BB5	3 15	DB5
BA5	2 14	
	1	

J7

	13 25	
	12 24	
	11 23	
	10 22	CE7
	9 21	
CF7	8 20	CD7
AB7	7 19	
CC7	6 18	
CB7	5 17	DD7
CA7	4 16	
BB7	3 15	DB7
BA7	2 14	
	1	

P1

±0V	84 83	±0V
DB8	82 81	DD8
BA1	80 79	CA1
DD1	78 77	BB2
BB1	76 75	DB1
CD2	74 73	CB1
CE2	72 71	CC1
CC2	70 69	CE1
CB2	68 67	CF1
CF2	66 65	CD1
CB6	64 63	CE6
CC6	62 61	CF6
BA2	60 59	CA2
DD5	58 57	BB6
BB5	56 55	DB5
DD3	54 53	CB5
BB3	52 51	CC5
DD2	50 49	CE5
BA6	48 47	CF5
CA6	46 45	CD6
CA5	44 43	DB2
CD5	42 41	DD6
BA5	40 39	DB6
CA8	38 37	BB7
CD8	36 35	DD7
CA4	34 33	CA7
CD4	32 31	CB7
BA7	30 29	CC7
-12V	28 27	CE7
DB7	26 25	CF7
BB8	24 23	CD7
-12V	22 21	CB8
BA8	20 19	CC8
CB4	18 17	CE8
CC4	16 15	CF8
CE4	14 13	CD3
CF4	12 11	DB3
BA4	10 9	BB4
CB3	8 7	DD4
CC3	6 5	DB4
CE3	4 3	CA3
CF3	2 1	BA3
±0V		±0V

MNEMONIC	COORD.
BA1	1G4
BA2	1G6
BA3	1G11
BA4	1D11
BA5	1G8
BA6	1E8
BA7	1D9
BA8	1G9
ACK	1C4
BB1	1B6
BB2	1B6
BB3	1C8
BB4	1D11
BB5	1B8
BB6	1B8
BB7	1B9
BB8	1F9
BUSY	1C4
CA1	1A6
CA2	1A8
CA3	1F11
CA4	1C9
CA5	1F8
CA6	1E8
CA7	1C9
CA8	1A9
CB1	1C6
CB2	1E6
CB3	1E11
CB4	1A11
CB5	1C8
CB6	1F6
CB7	1D9
CB8	1G9

MNEMONIC	COORD.
CC1	1D6
CC2	1D6
CC3	1E11
CC4	1B11
CC5	1D8
CC6	1G6
CC7	1D9
CC8	1A11
CD1	1F6
CD2	1C6
CD3	1G11
CD4	1C9
CD5	1G8
CD6	1F8
CD7	1F9
CD8	1B9
CE1	1D6
CE2	1C6
CE3	1F11
CE4	1C11
CE5	1D8
CE6	1F6
CE7	1E9
CE8	1B11
CF1	1E6
CF2	1E6
CF3	1G11
CF4	1C11
CF5	1E8
CF6	1G6
CF7	1F9
CF8	1B11

MNEMONIC	COORD.
DB1	1B6
DB2	1F8
DB3	1D11
DB4	1F11
DB5	1B8
DB6	1A9
DB7	1E9
DB8	1G4
DD1	1A6
DD2	1D8
DD3	1C8
DD4	1E11
DD5	1A8
DD6	1G8
DD7	1B9
DD8	1G4
DATA1 - DATA8	1F4
DAV	1B3
DSTBIN	1D4
DSTBOUT	1C3
FAULT	1B4
PE	1C4
POWER ON	1C3
RESET	1G3
SLCT	1B4
SMART	1C3
USRØ	1D3
USR1	1B3

EIA DESIGNATION	DESCRIPTION
AB	SIGNAL GND
BA	TRANSMIT DATA
BB	RECEIVE DATA
CA	REQUEST TO SEND (RTS)
CB	CLEAR TO SEND (CTS)
CC	DATA SET READY (DSR)
CD	DATA TERMINAL READY (DTR)
CE	RING INDICATOR (RI)
CF	DATA CARRIER DETECT (DCD)
DB	EXTERNAL TRANSMIT CLOCK
DD	EXTERNAL RECEIVE CLOCK

NOTE: ALL RES ARE V4W 5% UNLESS OTHERWISE SPECIFIED.

E.REV 1

REVISION			
NO	DESCRIPTION	DATE	APPROVED
A	ECO 4223	7/15/82	

WANG PART NO.	DRAWING NO.	DESCRIPTION

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

	BY	DATE	APPROVED BY	DATE
DWN	[illegible]	7/12/82	E ENGR D CHEN	7/15/82
CHK	[illegible]	7/15/82	M ENGR	
			MFG ENGR	

MATERIAL — MODEL NO VP-15, 25, 100 — SEE PARTS SPECIFICATIONS NO. ———

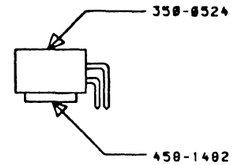
FINISH — UNLESS OTHERWISE NOTED: FRACT ± 1/64, DEC ± .010, ANG ± 1° 30' — SCALE — SHT — OF —

TITLE ASYNC DEVICE CONTROLLER CONNECTOR BOARD

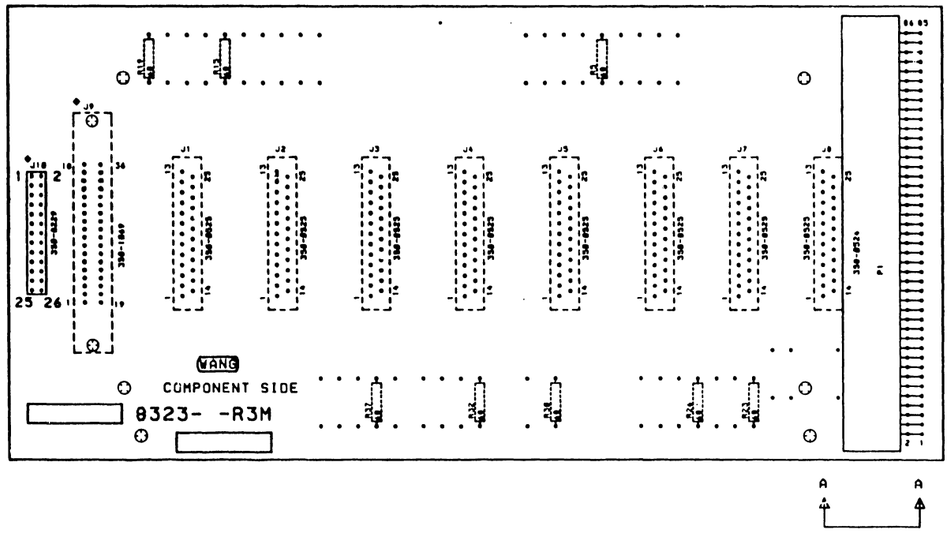
WANG PART NUMBER	SIZE	DRAWING NUMBER	REV
210-8323	D	8323	6

4223

YY2



DETAIL A-A



NOTES: 1.UNLESS OTHERWISE SPECIFIED:
ALL RESISTORS ARE 1/4W.5% EXPRESSED IN OHMS.
2.ALL COMPONENTS OTHER THAN P1 AND J18 ARE MOUNTED ON CIRCUIT SIDE OF BOARD.
* DO NOT LOAD J9 OR J18 FOR 218-0323-1

WANG LABORATORIES INC. LOWELL, MASS. U.S.A.		BY	DATE	APPROVED BY	DATE
		DWN G.TYNES	4/8/82	E ENGR	
		CHK		M ENGR	
		E C CONTROL		MFG ENGR	
MATERIAL	MODEL NO. VS15/25/100	TITLE ASYNC DEVICE CONTROLLER CONNECTOR BD. ASSEMBLY DRAWING			
	SEE ENGR'G SPECIFICATIONS NO. 10-203				
FINISH	TOL. EX. AS NOTED .XX+/-.010 FRAC.+/-1/64 .XXX+/-.005 ANG +/- 1 30'	218-0323-R3	C	8323	7
	SCALE 1/1 SHT 1 OF 1	DWG PART NUMBER	SIZE	DRAWING NUMBER	REV

N

YY3

DO NOT SCALE

BA1 (42) BA2 (42)

ASVR

R7 2.2K

±5V -12V +12V

L6 75150 — L5 75150 — L12 75150 — L40 75150 — L33 75150 — L39 75150

R2 120Ω 1/2W Q2 MPS6518 Q1 MPS6512 R1 120Ω 1/2W +12V

R3 120Ω 1/2W +12V Q3 MPS6512 Q4 MPS6518 R4 120Ω 1/2W -12V

$\overline{T_xD1}$ (11) RT31 (13) DTR1 (31) $\overline{T_xD2}$ (21) RT32 (33) DTR2 (23) $\overline{T_xD3}$ (12) RT33 (32) DTR3 (32) $\overline{T_xD4}$ (21) RT34 (33) DTR4 (23)

Q15 MPS6512 R17 120Ω 1/2W +12V; Q16 MPS6518 R18 120Ω 1/2W -12V; T3

Q13 MPS6512 R15 120Ω 1/2W +12V; Q14 MPS6518 R16 120Ω 1/2W -12V; T4

+5VR R10 2.2K

CD4 (34) CA4 (36) BA4 (12) CD3 (15) CA3 (51) BA5 (3) CD2 (74) CA2 (71) CD1 (67) CA1 (81)

DTR8 (24) RT34 (33) $\overline{T_xD6}$ (14) DTR7 (34) RT37 (14) $\overline{T_xD7}$ (4) DTR6 (23) RT36 (33) $\overline{T_xD6}$ (15) DTR5 (33) RT35 (15) $\overline{T_xD5}$ (18)

+12V R8 120Ω 1/2W

±5V -12V +12V

L16 — L17 75150 — L18 75150 — L11 75150 — L28 — L24 75150 — L34 75150 — L23 75150

Q7 MPS6512 T5 Q8 MPS6518 R9 120Ω 1/2W -12V (41) BA5 (44) CA5

Q5 MPS6512 T6 R5 120Ω 1/2W +12V Q6 MPS6518 R6 120Ω 1/2W -12V (44) CD5 (50) BA6 (43) CA6

Q9 MPS6512 T7 R11 120Ω 1/2W +12V Q10 MPS6510 R12 120Ω 1/2W -12V (47) CD6 (52) BA7 (35) CA7

Q11 MPS6512 T8 R13 120Ω 1/2W +12V Q12 MPS6518 R14 120Ω 1/2W -12V (25) CD7 (22) BA8 (40) CA8 (38) CD8

WANG PART NO.	DRAWING NO	DESCRIPTION
WANG	WANG LABORATORIES, INC. LOWELL, MA U.S.A.	
MATERIAL	MODEL NO VS15/25/100	TITLE ASYNC DEVICE CONTROLLER TRANSCIEVER BD.
FINISH	210-8324	D 8324 4

BY	DATE	APPROVED BY	DATE
DWN P.G. DANIEL	6/4/82	E ENGR	
CHK		M ENGR	
		MFG ENGR	

NO.	REVISION	DATE	BY
	SEE SHEET 3		

ZZ1

DO NOT SCALE

WANG PART NO	DRAWING NO	DESCRIPTION

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

	BY	DATE	APPROVED BY	DATE
DWN	R DANIEL	4/14/81	E ENGR	
CHK			M ENGR	
			MFG ENGR	

MATERIAL — MODEL NO VS15/25/100 — SEE ENGRG SPECIFICATIONS No.

FINISH — TOL: ON ALL NOTED: XX ± 0.10 FRAC ± 1/64, XXX ± 0.005 ANG ± 1°30' FRACT

TITLE: ASYNC. DEVICE CONTROLLER TRANSCEIVER BD.

210-8324 | D | 8324 | 4

SCALE | WANG PART NUMBER | SIZE | DRAWING NUMBER | REV

D 8324

REVISION — NO. — SEE SHEET 3

ZZ2

DO NOT SCALE

I.C. LOCATION	TYPE	WL. PART NO.
L1, 2, 7, 8, 13, 14, 19, 20, 25, 26, 29, 30, 35, 36	75154	376-0077
L3, 4, 9, 15, 21, 22, 27, 31, 37, 38	7406	376-0055
L5, 6, 11, 12, 17, 18, 23, 24, 33, 34, 39, 40	75150	376-0076
L10, 16, 28, 32	7414	376-0139

I.C. TYPE	LOCATION	SPARES
7406	L15	1
	L21	2
	L27	1

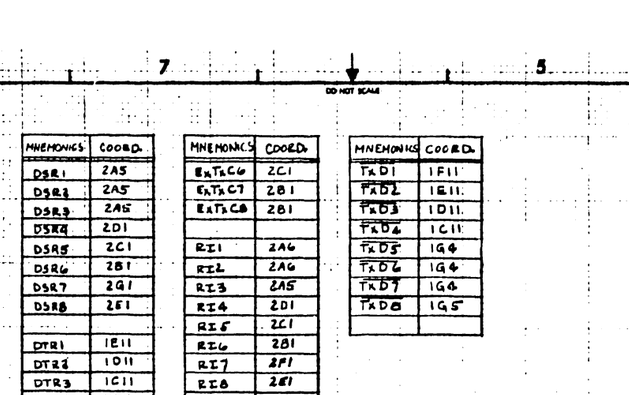
MNEMONICS	COORD.
BA1	1G8
BA2	1G6
BA3	1A7
BA4	1A7
BA5	1F1
BA6	1E1
BA7	1D1
BA8	1C1
BB1	2F11
BB2	2E11
BB3	2D11
BB4	2B11
BB5	2G9
BB6	2G9
BB7	2G10
BB8	2G10
CA1	1A6
CA2	1A6
CA3	1A7
CA4	1A8
CA5	1F1
CA6	1E1
CA7	1D1
CA8	1B1
CB1	2G11
CB2	2E11
CB3	2G11
CB4	2G5
CB5	2G5
CB6	2G5
CB7	2G2
CB8	2G1
CC1	2G11
CC2	2E11
CC3	2G11
CC4	2G6
CC5	2G6
CC6	2G5
CC7	2G2
CC8	2G2
CD1	1A6
CD2	1A6
CD3	1A7
CD4	A8
CD5	1E1
CD6	1D1
CD7	1C1
CD8	1B1

MNEMONICS	COORD.
CE1	2F11
CE2	2E11
CE3	2C11
CE4	2G7
CE5	2G6
CE6	2G6
CE7	2G8
CE8	2G3
CF1	2F11
CF2	2D11
CF3	2B11
CF4	2G7
CF5	2G8
CF6	2G6
CF7	2G3
CF8	2G3
CT51	2A4
CT52	2A4
CT53	2A4
CT54	2E1
CT55	2D1
CT56	2B1
CT57	2G1
CT58	2F1
DB1	2E11
DB2	2D11
DB3	2B11
DB4	2A11
DB5	2G8
DB6	2G8
DB7	2G9
DB8	2G7
DCD1	2A7
DCD2	2A7
DCD3	2A6
DCD4	2D1
DCD5	2C1
DCD6	2B1
DCD7	2F1
DCD8	2E1
DD1	2F11
DD2	2D11
DD3	2C11
DD4	2B11
DD5	2G4
DD6	2G4
DD7	2G4
DD8	2G8

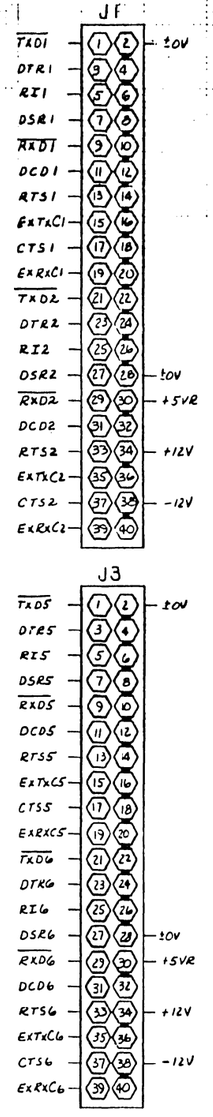
MNEMONICS	COORD.
DSR1	2A5
DSR2	2A5
DSR3	2A6
DSR4	2D1
DSR5	2C1
DSR6	2B1
DSR7	2G1
DSR8	2E1
DTR1	1E11
DTR2	1D11
DTR3	1C11
DTR4	1B11
DTR5	1G4
DTR6	1G4
DTR7	1G5
DTR8	1G5
EXRXC1	2A8
EXRXC2	2A9
EXRXC3	2A9
EXRXC4	2A9
EXRXC5	2D1
EXRXC6	2C1
EXRXC7	2C1
EXRXC8	2B1
EXTXC1	2A10
EXTXC2	2A10
EXTXC3	2A10
EXTXC4	2A11
EXTXC5	2D1

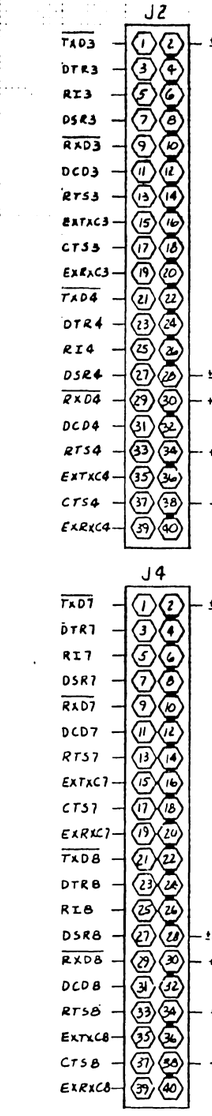
MNEMONICS	COORD.
EXTXC6	2C1
EXTXC7	2B1
EXTXC8	2B1
RI1	2A6
RI2	2A6
RI3	2A5
RI4	2D1
RI5	2C1
RI6	2B1
RI7	2F1
RI8	2E1
RTS1	1F11
RTS2	1E11
RTS3	1D11
RTS4	1B11
RTS5	1G4
RTS6	1G4
RTS7	1G4
RTS8	1G5
RXD1	2A8
RXD2	2A8
RXD3	2A7
RXD4	2A8
RXD5	2D1
RXD6	2D1
RXD7	2C1
RXD8	2B1

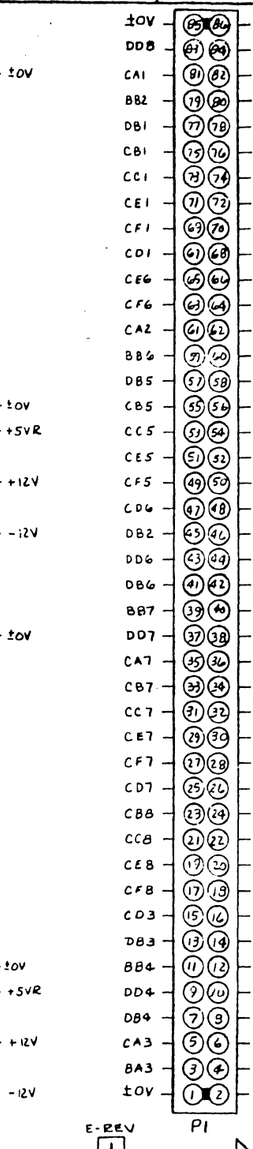
MNEMONICS	COORD.
TXD1	1F11
TXD2	1E11
TXD3	1D11
TXD4	1C11
TXD5	1G4
TXD6	1G4
TXD7	1G4
TXD8	1G5



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







E-REV 1

WANG PART NO	DRAWING NO.	DESCRIPTION

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

	BY	DATE	APPROVED BY	DATE
DWN	P.G. DANIEL	6 10 81	ENGR T. CHEN	6/23/81
CHK			M ENGR	
			MFG ENGR	

MATERIAL

MODEL NO VS15/25/100

SEE ENGRG SPECIFICATIONS NO.

FINISH

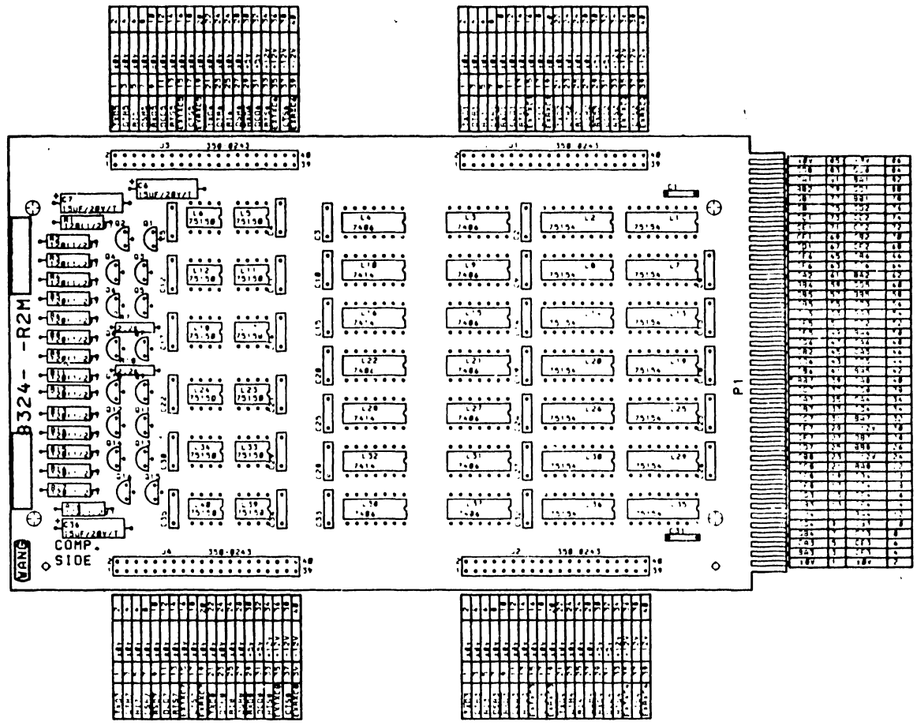
TOL ON ALL NOTED XX ± .010 FRAC ± 1/64 XXX ± .005 ANG ± 1°-30' PHASE ±

SCALE NOT A SCALE

TITLE ASYNC DEVICE CONTROLLER TRANSCEIVER BD.

WANG PART NUMBER 210-8324 | REV D | DRAWING NUMBER 8324 | REV 4

ZZ3



NOTES: 1. UNLESS OTHERWISE SPECIFIED:
ALL RESISTORS ARE 1/4W,5%,EXPRESSED IN OHMS.
ALL CAPACITORS ARE .047UF,P/N 300-1966
Q1,3,5,7,9,11,13,15 ARE MPS6512.
Q2,4,6,8,10,12,14,16 ARE MPS6518.

WANG LABORATORIES, INC. LOWELL, MASS., U.S.A.		BY	DATE	APPROVED BY	DATE
		DWN G.TYNES	5-24-82	E ENGR	
		CHK		M ENGR	
MATERIAL	MODEL NO. PH001F VS15/25/100	E C CONTROL		MFG ENGR	
	SEE ENGRG SPECIFICATIONS NO. 10-203	TITLE ASYNC DEVICE CONTROLLER TRANSCEIVER BD. ASSEMBLY DRAWING			
FINISH	TOL. EX. AS NOTED .XXX= .010 AND .XX= 1 DEG .XXX= .005 AND .X= 1 DEG	210-8324-R2	C	8324	3
	SCALE 1/1 WT: 1 OF 1	WANG PART NUMBER	SIZE	DRAWING NUMBER	REV

ZZ4

WANG LABORATORIES, INC

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

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END