WANG

6100

VS-85/90/100 Computer Systems
Schematics Manual

COMPANY PROPRIETARY STATEMENT

This document is the property of Wang Laboratories, Inc. All information contained herein is considered Company Proprietary, and its use is restricted solely to assisting you in servicing Wang products. Neither this document nor its contents may be disclosed, copied, revealed, or used in whole or in part for any other purpose without the prior written permission of Wang Laboratories, Inc. This document must be returned upon request of Wang Laboratories, Inc.

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.

© Copyright WANG Labs., Inc. 1985

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.

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

PRINTED IN U.S.A.

COMPANY PROPRIETARY STATEMENT

This document is the property of Wang Laboratories, Inc. All information contained herein is considered Company Proprietary, and its use is restricted solely to assisting you in servicing Wang products. Neither this document nor its contents may be disclosed, copied, revealed, or used in whole or in part for any other purpose without the prior written permission of Wang Laboratories, Inc. This document must be returned upon request of Wang Laboratories, Inc.

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.

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

COMPANY CONFIDENTIAL

PRINTED IN U.S.A.
741-1462-2

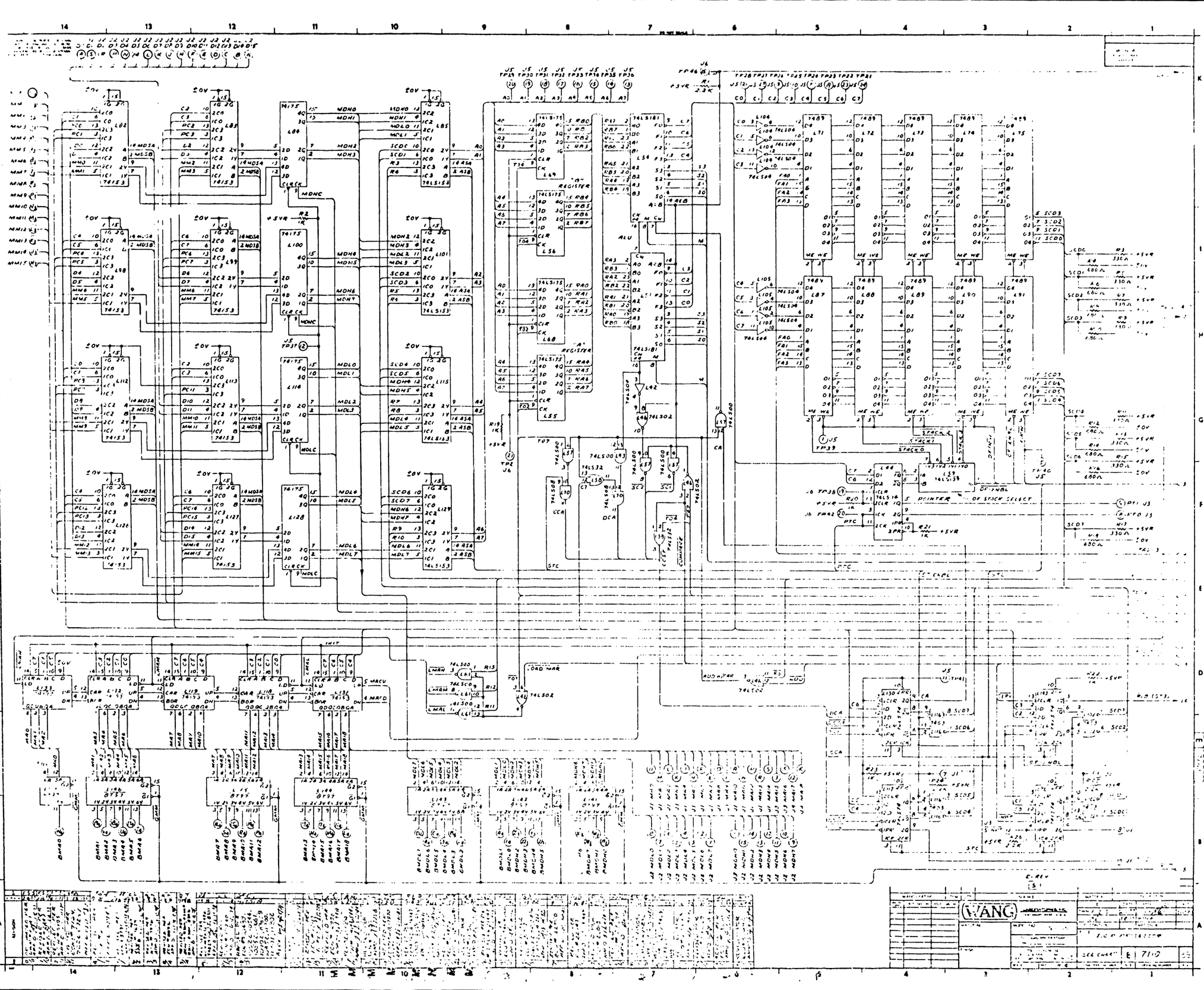
COMPANY PROPRIETARY STATEMENT

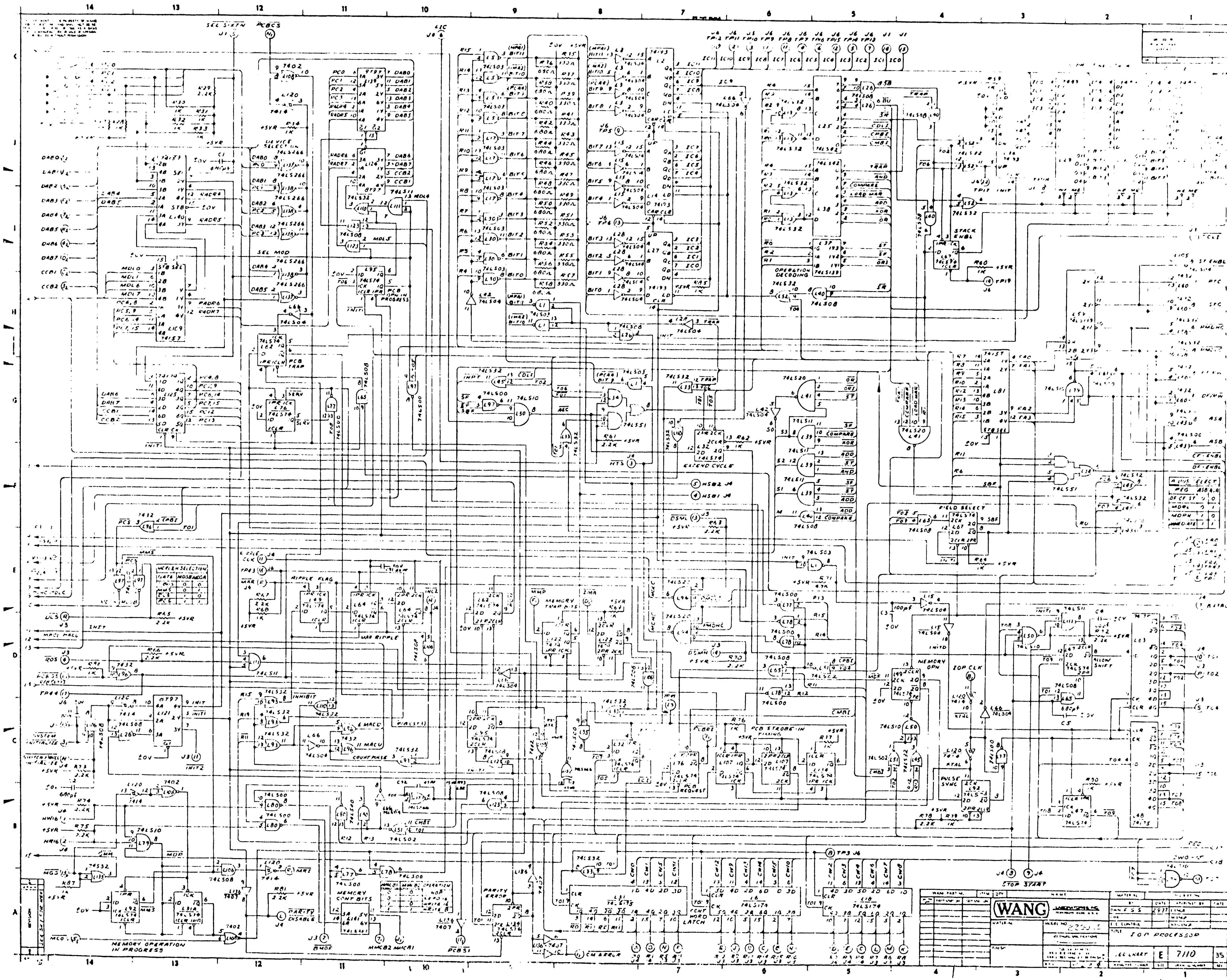
This document is the property of Wang Laboratories, Inc. All information contained herein is considered Company Proprietary, and its use is restricted solely to assisting you in servicing Wang products. Neither this document nor its contents may be disclosed, copied, revealed, or used in whole or in part for any other purpose without the prior written permission of Wang Laboratories, Inc. This document must be returned upon request of Wang Laboratories, Inc.

© Copyright 1985, Wang Laboratories, Inc.

TABLE OF CONTENTS

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


WANG



A2

VARIATION CHART

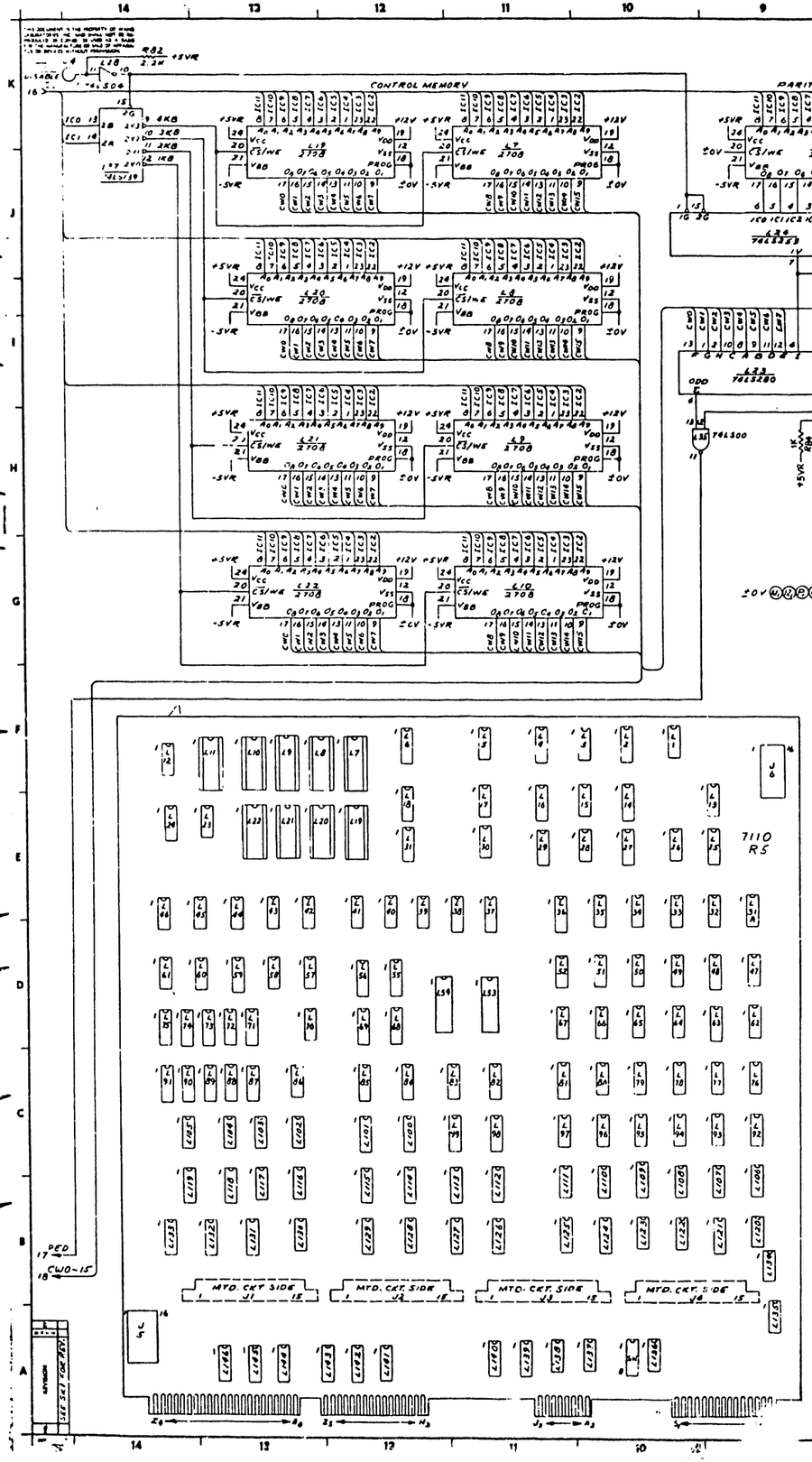
210 = 203 + 377 OR 378

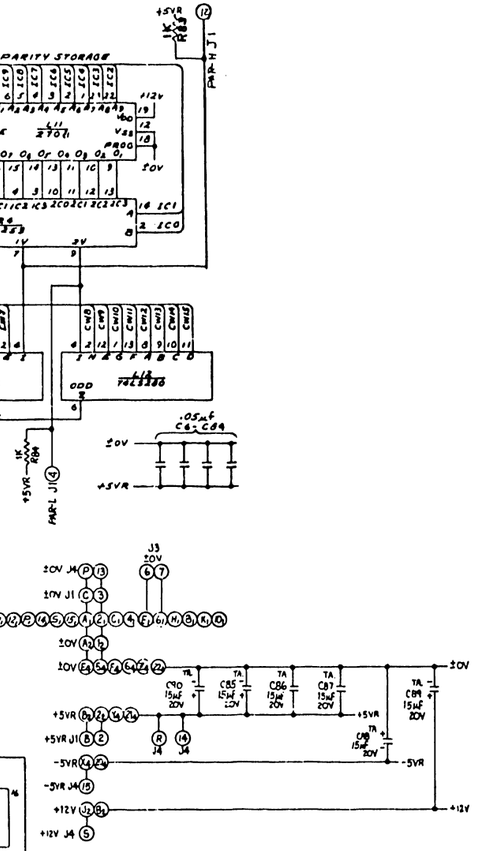
MODEL	209	210	L7	L8	L9	L10	L11	L19	L20	L21	L22	L23	L24
2200VS PTR	7110	7110A		378-2113-R3	378-2111-R3	378-2109-R3	378-2116-R3		378-2112-R3	378-2110-R3	378-2108-R3	376-0219	376-0219
2200VS FLOPPY DISK	7110	7110B				378-2119	378-2117				378-2115	376-0219	376-0219
2200VS DISK	7110	7110C			378-2121-R3	378-2119-R3	378-2122-R3			378-2120-R3	378-2118-R3	376-0219	376-0219
2200VS TAPE MAG GR 5	7110	7110D				378-2172	378-2173				378-2171	376-0219	376-0219
2200VS I/O PORT	7110	7110E		378-3046-R5	378-2261-R5	378-2269-R5	378-2262-R5		378-3045-R5	378-2260-R5	376-2258-R5	376-0219	376-0219
2200VS SERIAL I/O	7110	7110F			378-2291	378-2289	378-2292			378-2290	378-2288	376-0219	376-0219
2200VS TAPE MAG	7110	7110G			378-2512-R2	378-2510-R2	378-2513-R2			378-2511-R2	378-2509-R2		376-0219
2200VS TEST MISC CASES	7110	7110H				378-2319	378-2320				378-2318	376-0219	376-0219
2200VS DISK 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			378-2332	378-2330	378-2333			378-2331	378-2329	376-0219	376-0219
2200VS STAND ALONE MS	7110	7110M			378-2337	378-2335	378-2338			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	378-2334	376-0219	376-0219
2200VS STAND ALONE DIAG.	7110	7110R		378-2550	378-2568	378-2566	378-2551		378-2569	378-2567	378-2565	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 I/O PORT	7110	7110U		378-2586-R3	378-2584-R3	378-2585-R3	378-3037-R3		378-2587-R3	378-2585-R3	378-2583-R3	376-0219	376-0219
22V18 DISK IOP	7110	7110V			378-3043	378-3041	378-3044			378-3042	378-3040	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	7110Z	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-100	7110	7110AD			378-3142	378-3140	378-3143			378-3141	378-3139	376-0219	376-0219
VS100 22V27 I/O PORT	7110	7110AF	378-3160	378-3158	378-3156	378-3154	378-3161	378-3159	378-3157	378-3155	378-3153	376-0219	376-0219
22V18-1/0100	7110	7110AG		378-3124	378-3122	378-3120	378-3125		378-3123	378-3121	378-3119	376-0219	376-0219
22V18-2/0100	7110	7110AH			378-3127-R1	378-3127-R1	378-3132-R1			378-3128-R1	378-3126-R1	376-0219	376-0219
22V18-1/0200	7110	7110AJ			378-3177-R2	378-3175-R2	378-3178-R2			378-3176-R2	378-3174-R2		
22V18-2/0200	7110	7110AK			378-3112-R1	378-3110-R1	378-3113-R1		378-3111-R1	378-3109-R1	378-3107-R1		
22V18/0150	7110	7110AL			375-3135	375-3133	375-3136			375-3132	375-3130		

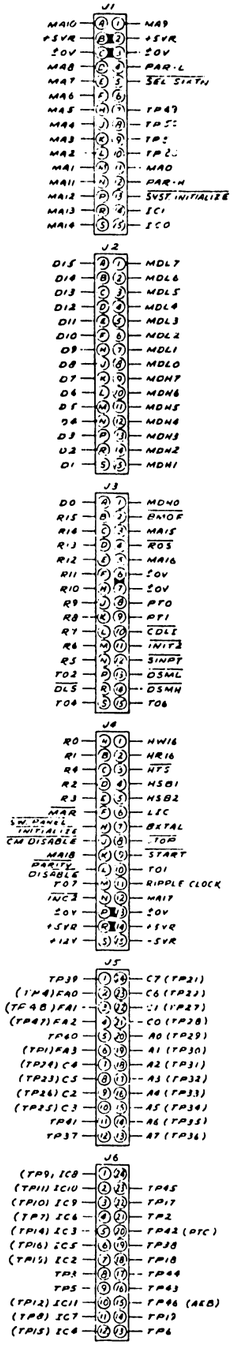
THIS DRAWING AND THE DATA SHOWN THEREON ARE PROPRIETARY TO WANG LABORATORIES, INC. AND SHALL NOT BE REPRODUCED OR USED IN WHOLE OR IN PART AS THE BASIS FOR MANUFACTURE OR SALE OF ITEMS WITHOUT WRITTEN PERMISSION. IN THE EVENT OF PUBLICATION, THE FOLLOWING NOTICE SHALL APPLY: "PUBLISHED BY WANG LABORATORIES, INC. 1973. ALL RIGHTS RESERVED UNDER THE COPYRIGHT LAWS OF THE UNITED STATES."

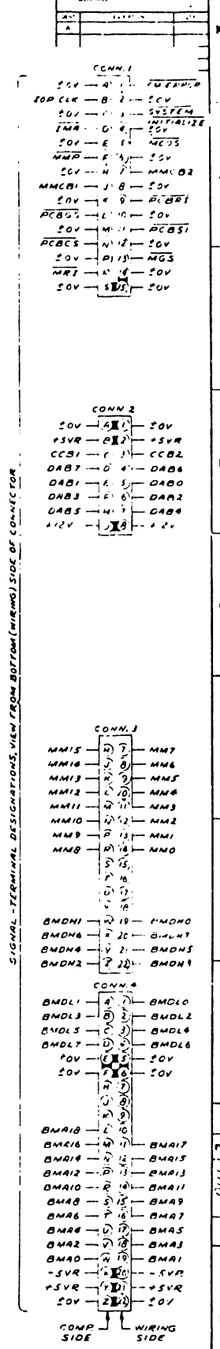
WANG LABORATORIES, INC.	BY	DATE	APPROVED BY	DATE	
MATERIAL	WORK ORDER NO. 220015	DWG P.C. CARDS	11/17/72	E ENGR	
	MFG ENGR SPECIFICATIONS	CHK		M ENGR	
FINISH				MFG ENGR	
	TOL XX ±0.030 .XXX ±0.010 ANGS ±0.5°	TITLE I.O.P. PROCESSOR			
		SEE CHART	E	7110	36
		SIZE	DWG PART NUMBER		DRAWING NUMBER

A3









I.C. LOCATION	TYPE	W.L. NO	TERM. FOR ±0V	TERM FOR VCC +5VR
L1,5,17,30	74LS03	376-0224	7	14
L2,16,27,118,119,131-133,36	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
L6,18	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
L34,32,44,83,89,62,64 67,76,86, 92,95,103,107,111,130,136	74LS74	376-0155	7	14
L36	74LS51	376-0213	7	14
L35,43,57,61,77,78,80,97	74LS00	376-0207	7	14
L37,59	74LS139	376-0224	8	16
L39,41	74LS11	376-0225	7	14
L42,99	74LS20	3.4-0210	7	14
L46,51	74LS02	376-0208	7	14
L48,63,84,100,114,128	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	376-0014	7	14
L120	7414	376-0139	7	14
L121,124,139,141-146	8797	374-0169	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	74532	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
74532	L135	3
8T97	L121	2
7407	L136	1

COMPONENT	W.L. NO.
R1,14-26,29,61,63,65-67,70,72-75,78, 81,82,94	330-3023
R2,19-23,27,28,30-38,58,59,60,62, 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
R4,6,8,10,12,14,16,18,36,38,40,42, 44,46,48,50,52,54,56,58	330-2069
R71	330-3068
R98,99,91	330-2023
R90	330-1811
C1,2,5	300-1680
C3,4	300-1170
C6-84	300-1900
C85-90	300-4472
C91,C93	300-4468
SW.1	325-1503
J5,6	376-4C16
J11-4 CONN.	350-0029
L7-11,19-22,	376-9003
C92	300-4471
A93	330-3049

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

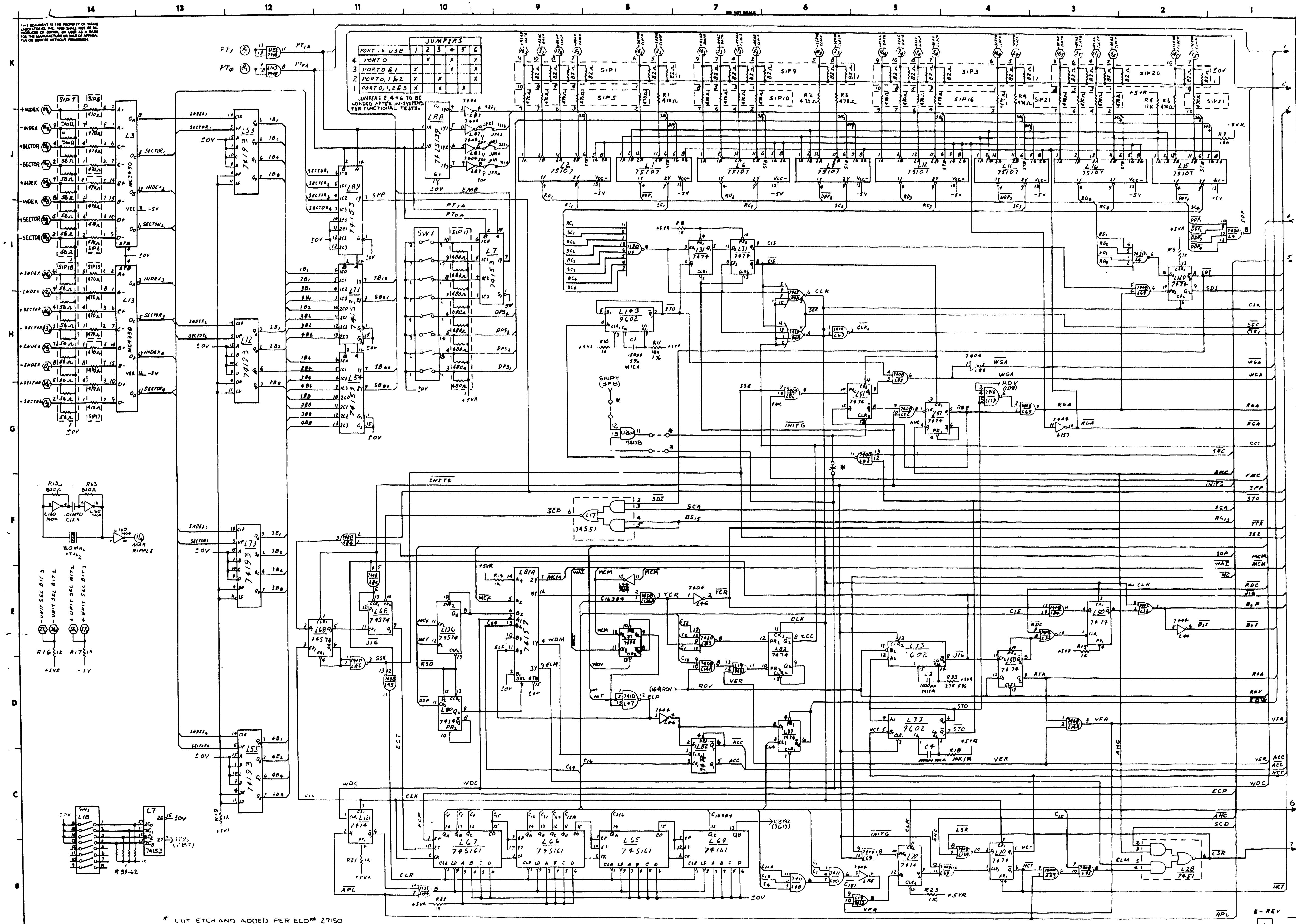
QTY	NAME	MATERIAL	DESCRIPTION

WANG LABORATORIES, INC.

	BY	DATE	APPROVED BY	DATE
DWN	F.S.S.	2-9-71	ENGR	
CHK			MFG ENGR	
E.C. CONTROL			MFG ENGR	

MODEL NO. 2200VS
TITLE I.O.P. PROCESSOR
SEE CHART | E | 7110 | 35

THIS DOCUMENT IS THE PROPERTY OF WANG LABORATORIES, INC. AND SHALL NOT BE REPRODUCED OR COPIED, OR USED AS A BASIS FOR THE MANUFACTURE OR SALE OF APPARATUS OR DEVICES WITHOUT PERMISSION.



* CUT ETCH AND ADDED PER ECO# 27150

E-REV 11

WANG PART NO	ITEM	QTY	NAME
WANG LABORATORIES, INC.			

MODEL NO 2200VS

TITLE: LARGE DISK DEVICE ADAPTER

210-7114 | E | 7114 | 25

SHEET 1 OF 4

B1

THIS DOCUMENT IS THE PROPERTY OF WANG LABORATORIES, INC. AND SHALL NOT BE REPRODUCED OR COPIED, OR USED AS A BASIS FOR THE MANUFACTURE OR SALE OF APPARATUS OR DEVICES WITHOUT PERMISSION.

DO NOT SCALE

SEE SHT 1

PINS 8 & [illegible] HANDY WIRED THAN ETCH / [illegible] AND ABOVE. THE [illegible] HAS THEM WELDED

WANG PART NO.	ITEM	QTY	NAME
PART USED ON	ASY USED ON		

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

MATERIAL

MODEL NO. 2200VS

SEE ENGR SPECIFICATIONS No.

FINISH

TOL EX AS NOTED
XX ± .010 FRAC ± 1/32
XXX ± .005 ANG ± 1° 30' FINISH √

SCALE

MATERIAL	DESCRIPTION
BY	DATE / APPROVED BY / DATE
DWN PS	7/5/71 / E ENGR
CHK	M ENGR
E C CONTROL	MFG ENGR

TITLE
LARGE DISK
DEVICE ADAPTER

210-7114 | E | 7114 | 25

WANG PART NUMBER | SIZE | DRAWING NUMBER | REV

7114

B2

THIS DOCUMENT IS THE PROPERTY OF WANG LABORATORIES, INC. AND SHALL NOT BE REPRODUCED OR COPIED, OR USED AS A BASIS FOR THE MANUFACTURE OR SALE OF APPARATUS OR DEVICES WITHOUT PERMISSION.

DO NOT SCALE

HOLE LEGEND

DRILLED OR PUNCHED HOLE TOLERANCES	HOLE DIA	TOL
	.125 thru .213	±.003
	.216 thru .386	±.004
	.39 thru .586	±.005

SYMBOL	DESCRIPTION	QTY
A		

* ADDED PER ECO# 27150

WANG PART NO	ITEM	QTY	NAME	MATERIAL	DESCRIPTION
FIRST USED ON	ASSY USED ON		WANG LABORATORIES, INC.		BY / DATE / APPROVED BY / DATE
			MATERIAL	MODEL NO 2200VS	DWN / ENGR
				SEE ENGRG SPECIFICATIONS	CHK / M ENGR
			FINISH	TOL EX AS NOTED .XX ± .010 FRAC ± 1/64 .XXX ± .005 ANG ± 1/2 DEG	E.C. CONTROL / MFG ENGR
				SCALE — SHT 2 OF 2	TITLE LARGE DISK DEVICE ADAPTER
					210-7112 / E 7114 / 25
					WANG PART NUMBER / SIZE / DRAWING NUMBER / REV

REVISION

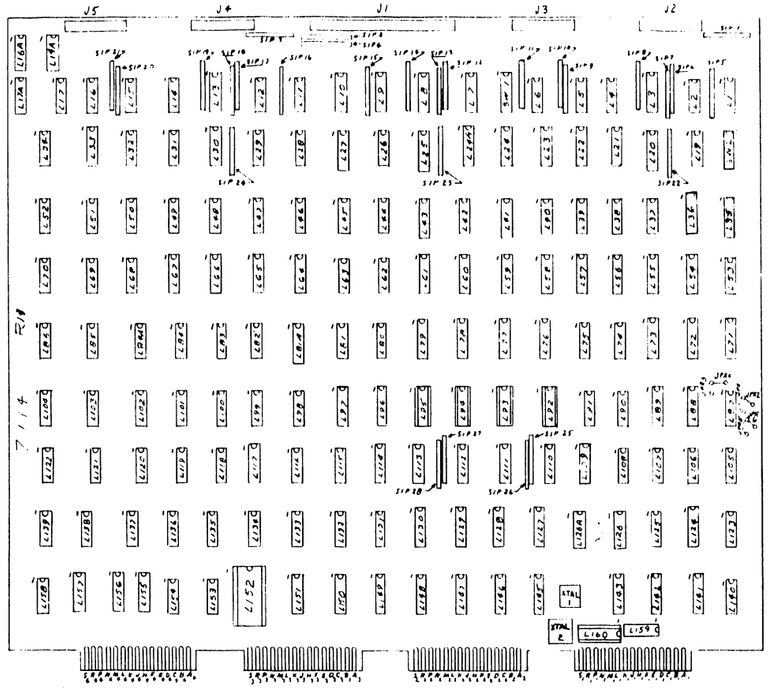
SEE SHT 1

B3

THIS DOCUMENT IS THE PROPERTY OF WANG LABORATORIES, INC. AND SHALL NOT BE TO BE REPRODUCED OR COPIED OR USED AS A BASIS FOR THE MANUFACTURE OR SALE OF APPARATUS OR DEVICES WITHOUT PERMISSION

DO NOT SCALE

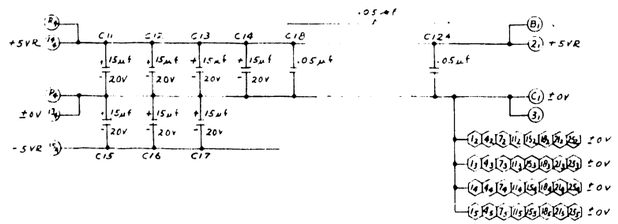
COMPONENT LAYOUT



I.C. TYPE	LOCATION	SPARE
	L64	
7438	L97	1
	L90	3
	L109	1
7414	L159	4
7400	L126A	1
7411	L126A	1
7420	L91	1
	L114	1
7427	L140	1
7474	L21	1
7410	L41	1
7402	L137	1
74LS139	L48	1
	L117	1
7404	L60	5

I.C. TYPE + LOCATION	WL PART NO	PIN NO 5.0V	PIN NO 12V
L1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14, 15, 16, 17, 18, 19, 20, 21, 22, 23, 24, 25, 26	376-0146	7	14
L31, 81, 83	376-0275	8	16
L46, 93, 94, 96	376-0004	7	14
L2, 54, 58-60, 91, 94-97, 99, 100, 102, 104, 105, 107, 108, 111, 112, 114, 115, 118, 119, 120, 122, 123, 125, 127, 128, 130, 131, 133, 134, 135, 138, 139, 141, 142, 143, 144, 145, 146, 147, 148, 149, 150, 151, 152, 153, 154, 155, 157, 158, 160	376-0048	8	16
L9, 10, 20, 25, 27, 30	376-0124	8	16
L18, 34, 40, 75, 81, 132	376-0031	7	14
L68, 85, 92, 98, 99, 101, 103, 106, 116, 126A	376-0081	7	14
L124, 44, 123, 158	376-0184	7	14
L17	376-0186	7	14
L11A, 31, 36, 49, 50, 51, 62, 70, 80, 82, 100, 101, 104, 107, 115, 116, 119-123, 126, 131, 133, 37	376-0006	7	14
L19, 154	376-0093	7	14
L21-29, 56, 57, 110-113, 124	376-0119	8	16
L28A, 33, 102, 143	376-0098	8	16
L38	376-0012	7	14
L39, 68, 136	376-0202	7	14
L52, 137, 138	376-0146	7	14
L35, 104	SPARE	8	
L38, 42, 74, 137	376-0036	7	14
L41, 43	376-0098	8	16
L44, 64, 85, 87, 90, 108, 133, 160	376-0810	7	14
L61, 139	376-0003	7	14
L53, 55, 72, 73, 75, 119, 121, 157	376-0058-1	8	16
L63, 86, 99, 103, 105	376-0002	7	14
L64	376-0094	8	16
L45, 66, 67	376-0178	8	16
L81A, 96, 149, 156, 151	376-0082	8	16
L89A	376-0042	7	14
L88, 117	376-0224	8	16
L95, - 95	376-0113	8	16
L121, - 130	376-0097	8	16
L140	376-0128	7	14
L145 - 149	376-0138	8	16
L159	376-0139	7	14
- 92	376-0090	12	24
L155, 156	376-0220	8	16
L92-95 SOCKET 16PIN	376-9005		
L144 NOT USED			

COMPONENT	WL PART NO
C1-4, 6, 28, 33, 34, 38, 39	330-2040
C5	330-4013
+A, +N 16-19, 19-23, 24, 27, 34, 37-32, 37-43-48, 51, 54, 57, 59	330-3011
R11 R18, 58	333-0090
R24, 25, 15, 63	330-2083
R29	330-2025
R80, 81, 50	330-3069
R49	330-2060
R58, 12	330-4011
R33	330-4028
R52	330-4016
SIP1, 3, 8, 20, 22, 24	333-0804
SIP2, 4, 9, 13, 14, 18, 23	333-0802
SIP5, 6, 8, 10, 13, 15, 16, 17, 21	333-0803
SIP11, 26-8	333-0805
SIP25, 27	333-0801
J1	340-5019
C7, 126	300-1088
C9	300-1534
C5, 125	300-1503
C7, 127	300-1220
C8, 6	300-5020
C6, 3, 10	300-5006
C11-17	300-4022
C18-124	300-1900
SW1, 2	325-1503
J1 60 PIN SOCKET CONN.	350-0457
J2, 3, 4, 5 26 PIN SOCKET CONN	350-0458
P1, 2	380-1001
XTAL 1	321-0019
XTAL 2	321-0009



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

J1

+5V	1	+ SERVO CLOCK
- SERVO CLOCK	2	0V
- READ DATA	3	+ READ DATA
0V	4	+ READ CLOCK
- READ CLOCK	5	0V
- WRITE CLOCK	6	+ WRITE CLOCK
0V	7	+ WRITE DATA
- WRITE DATA	8	0V
	9	
	10	
0V	11	+ INDEX
- INDEX	12	0V
- SECTOR	13	+ SECTOR

J5

+5V	1	+ SERVO CLOCK
- SERVO CLOCK	2	0V
- READ DATA	3	+ READ DATA
0V	4	+ READ CLOCK
- READ CLOCK	5	0V
- WRITE CLOCK	6	+ WRITE CLOCK
0V	7	+ WRITE DATA
- WRITE DATA	8	0V
	9	
	10	
0V	11	+ INDEX
- INDEX	12	0V
- SECTOR	13	+ SECTOR

J1

+5V	1	+5V
- TAK1	2	+ TAK1
- TAK2	3	+ TAK2
- TAK3	4	+ TAK3
+5V	5	+5V
+5V	6	+5V
+5V	7	+5V
+5V	8	+5V
+5V	9	+5V
+5V	10	+5V
+5V	11	+5V
+5V	12	+5V
- SDEA CABLE SEL'D	13	+ SDEA CABLE SEL'D
- FAULT	14	+ FAULT
- SEEK ERROR	15	+ SEEK ERROR
- 80 CYLINDER	16	+ 80 CYLINDER
	17	
- UNIT READY	18	+ UNIT READY
	19	
	20	
	21	
- UNIT SEL TAG	22	+ UNIT SEL TAG
- UNIT SEL BIT 0	23	+ UNIT SEL BIT 0
- UNIT SEL BIT 1	24	+ UNIT SEL BIT 1
	25	
- UNIT SEL BIT 2	26	+ UNIT SEL BIT 2
- UNIT SEL BIT 3	27	+ UNIT SEL BIT 3
- WRITE PROTECT	28	+ WRITE PROTECT
	29	
	30	

J2

0V	1	+ SERVO CLOCK
- SERVO CLOCK	2	0V
- READ DATA	3	+ READ DATA
0V	4	+ READ CLOCK
- READ CLOCK	5	0V
- WRITE CLOCK	6	+ WRITE CLOCK
0V	7	+ WRITE DATA
- WRITE DATA	8	0V
	9	
	10	
0V	11	+ INDEX
- INDEX	12	0V
- SECTOR	13	+ SECTOR

J3

0V	1	+ SERVO CLOCK
- SERVO CLOCK	2	0V
- READ DATA	3	+ READ DATA
0V	4	+ READ CLOCK
- READ CLOCK	5	0V
- WRITE CLOCK	6	+ WRITE CLOCK
0V	7	+ WRITE DATA
- WRITE DATA	8	0V
	9	
	10	
0V	11	+ INDEX
- INDEX	12	0V
- SECTOR	13	+ SECTOR

SIGNAL - TERMINAL ASSIGNATIONS; VIEW FROM BOTTOM (WIRING SIDE OF CONNECTOR)

CONN 1

D0	A 1	MFM0
D1	B 2	MFM1
D2	C 3	MFM2
D3	D 4	MFM3
D4	E 5	MFM4
D5	F 6	MFM5
D6	H 7	MFM6
D7	J 8	MFM7
D8	K 9	MFM8
D9	L 10	MFM9
D10	M 11	MFM10
D11	N 12	MFM11
D12	P 13	MFM12
D13	R 14	MFM13
D14	S 15	MFM14
D15	T 16	MFM15

CONN 3

D0	A 1	MFM0
	B 2	MSF
	C 3	
R1A	D 4	RD1
R1Z	E 5	
P1A	F 6	
P1Z	H 7	
R0	J 8	PTO
R1	K 9	PT1
R2	L 10	CCLK
R3	M 11	INITL
R4	N 12	SWPT
T0A	P 13	CSML
DLS	R 14	DSMN
T00	S 15	T00

CONN 4

	A 1	HW0
	B 2	HR1
	C 3	HT5
	D 4	HSB
	E 5	HSBL
	F 6	
	H 7	
	J 8	
	K 9	
	L 10	
	M 11	
	N 12	
	P 13	MAR RIPPLE
	R 14	
	S 15	
5.0V	T 16	5.0V
+5V0	U 17	+5V0
+12V	V 18	-5V

CONN 1 CONN 3 CONN 4

MEAT LEGEND	
DRILLING OF PLATED-THRU HOLES TOLERANCES	HOLE SIZE TOL .XX ±.005 .XXX ±.003 .XXXX ±.001

IDENT	DESCRIPTION	QTY
A		

REVISION			

WANG PART NO	ITEM	QTY	NAME	MATERIAL	DESCRIPTION
DWG FIRST USED ON	ASSY USED ON		WANG LABORATORIES, INC. TEWKSBURY, MASS. U.S.A.	BY	DATE / APPROVED BY / DATE
				DWN	J. ENGE
				CHK	M. ENGE
			MATERIAL	MODEL NO.	E.C. CONTROL / MFG ENGR
				ENGINEERING SPECIFICATIONS	TITLE CARD EDGE CONNECTOR ADAPTER
			FINISH	TOL. ON ALL NOTED XX ± .010 FRAC ± 1/64 .XXX ± .005 ANG. ± 1/2 DEGREE	210-7114 / E / 7114 / 25
				SCALE: FULL SHT. 1 OF 1	WANG PART NUMBER / SIZE / DRAWING NUMBER / REV.

B4

"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

R8 (K3) R11 (F3) R12 (E3) R13 (B3) R14 (C3) R15 (B3) TO2 (P3) CDLI (10) R9 (J3) R10 (H3)

L107 174 — +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)

TO7 (M4) · L110 132 · TO7 (1A6) · 74LS00 · SINPT (12) · STOPS (9) · INIT2 (H3)

L194 LS74 · 2PR 2CLR · R84 4.7K · +5V · L96 LS08 · DL OP RST (3E1)

L111 32 · PARITY ERR (3B1)

L109 14 · R1 4.7K · +5VR · - RST (+F11) · LOCAL BUF INC

+RB11 (1G8) · L94 LS74 · L111 LS32 · L96 LS08

TO6 (H3) · L109 14 · L95 LS74 · +5V

+LOCAL OP (1E8) · L82 74S08 · TO2 + TO6 (3F3)

TO2 (1F10) · L109 14

TO4 (S3) · L109 14 · R85 4.7K · L43 LS74 · 1PR 1CLR

- SET BUF ADDR (1G6) · R/W DF (1E7) · +5VR · L79 LS11 · L111 LS32 · L112 LS32 · - CLK ADDR BUF (2B9)

LOCAL OP

L91 LS139 — (2D10)(+D11) · - GIVE BUF ADDR · (1B10) · - SET BUF ADDR (1H3) · - SEL DEVICE (1B7)

L92 LS32 · L96 LS08 · (2E10) · L78 LS08 · -LOCAL BUF INC (2E10)

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

DATA LINK

L106 LS139 — - RD DEV 1 BYTE (3E11) · - RD DEV 256 BYTE (3E11) · - WR DEV 256 BYTE (3E11)

L106 LS139 — - GIVE STATUS (1G7)(3F11) · - RESTART (3G11)

-MDH STB ENB (3G2) · L81 LS32 · + GIVE STATUS (2E11)

-WR BUF (1F6) · -WR DF (1F6) · - SEL DEVICE (1G6) · L42 LS32 · L62 LS32 · L82 LS32 · - BUF WR (2E10) · - DF WR (2F3) · - WR DEV REG (+G11)

74S04 L112 · TO7 (1D11) · L81 LS32 · L80 LS08 · L105 LS08 · DSML (13) · DSMH (H3) · DLS (R3)

BK2 (1G7)

MDL0 (5) MDL1 (7) MDL2 (4) MDL3 (2) MDH0 (1) MDH1 (3) MDH2 (6) MDH3 (8)

HR2 (1E4) · L77 LS11 · -GIVE STATUS (1D5) · -LD MDL (3F8) · -LD MDH (3F8) · L78 LS08

L77 LS11 · L78 LS08 · W/R DF (1B9)(2D4)

MDH0 MDH1 MDH2 MDH3 MDH4 MDH5 MDH6 MDH7 — L88 LS244 — LH0 LH1 LH2 LH3 LH4 LH5 LH6 LH7

ENB

+RB11 – +RB15 (1G8) · BK1 (1F9) · L81 LS32

KL 4.7K · +5V · +RB11 +RB12 +RB13 +RB14 +RB15 · CND RES · LH3 – LH7 (2E5)(1C)

-LD CMD (3G8) · -LD MDL (3F8) · L78 LS08 · SEL EVEN (2E9) · L42 LS32

LL3 – LL7 (2A7)

L103 LS373 — MDL0 MDL1 MDL2 MDL3 MDL4 MDL5 MDL6 MDL7 · LL0 LL1 LL2 LL3 LL4 LL5 LL6 LL7

L104 LS244 — E2 D6 E2 D7 E2 D12 E2 D11 E2 D10 E2 D9 E2 D8 E2 D5

WANG LABORATORIES, INC. LOWELL, MASS. U.S.A.		BY	DATE	APPROVED BY	DATE
	DWN			E ENGR	
	CHK			M ENGR	
MATERIAL	MODEL NO. 22003V2			MFG ENGR	
	SEE ENGRG SPECIFICATIONS No.	TITLE 16 PORT ADAPTER MODEL A			
FINISH	TOLERANCES AS NOTED .XX ± FRAC ± .XXX ± ANG ± FINISH	10-7-76	D	7216	10
	SCALE 1/1 SHT 1 OF 6	WANG PART NUMBER	SIZE	DRAWING NUMBER	REV

"E" SIZE DWG

NO.	REVISION	ZONE
A	SEE SHT 6	

9127

C1

"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

+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)

-CLK BUF CTR (3E7)

-CLK ADDR BUF (1A7)

-LD MDL (3F8)

-LD ADDR BUF (1A8)

LL_0 -LL_1 (1C1)

-PROM (4G10)

-R/W DF (1E4)

-RD DF (1E6)

DA_0 -DA_3 (4C10)

LH_0 -LH_7 (1E1)

-DF WR (1B7)

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 SEE ENGRG SPECIFICATIONS No.	TITLE 16 PORT ADAPTER MODEL A			
FINISH	TOL EX AS NOTED XX ± FRAC ± XXX ± ANG ± FINISH	210-7216	D	7216	10
	SCALE	SHT 2 OF 6	WANG PART NUMBER	SIZE	DRAWING NUMBER

NO.	REVISION	DATE
A	SHT 6	3E5

C2

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

DO NOT SCALE

- RESTART (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)
- TX (2D10) (1D2)
+ TX (4C9) (4C6)
- RCV (9E2)
- CLK BUF CTR (2C9)
(13.44) LINE TURN AROUND
TIME OUT (30.45)
LAST BYTE
BK3 (3B4)
BK4 (3B3)
BK6 (3B1)
BK3 (3D9)
BK4 (3E6)
BK2 (3D5)
DATA LINK RESET
- MDH STR END (1D6)
- DL OP RST (1C9)
START BIT
- SERL DATA OUT (4E10) (4E6)
- DL WRITE (2E10)
- PARITY ERR (1C10)
- DA CMD (1F10)
- DATA LINK (1E8)
SAMPLE CLOCK
17.1 MHz
LH0 - LH7 (1E1)
+5VR
±0V

REVISION	DATE	BY
SEE SHT 2		

WANG LABORATORIES, INC. LOWELL, MASS. U.S.A.	BY	DATE	APPROVED BY	DATE
	DWN	12/6/72	E ENGR	
	CHK		M ENGR	
			MFG ENGR	
MATERIAL	MODEL NO. 2200VS SEE ENGRG SPECIFICATIONS No.	TITLE 16 PORT ADAPTER MODEL A		
FINISH	TOL ER AS NOTED XX ± FRAC ± XXX ± ANG ± FINISH √	210-7216	D	7216	10
	SCALE — SHT 3 OF 6	WANG PART NUMBER	SIZE	DRAWING NUMBER	REV

7216

C3

"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

$LH_3 - LH_7$ (1E1)

$LL_3 - LL_7$ (1C1)

-WR DEV REG (1B7)

-RST (1C10)

-GIVE BUF ADDR (1G6)

+PROM (2D5)

-PROM (2B7)

BK_6 (+F7)

SERL DATA OUT (3E2)

$DA_0 - DA_3$ (2A7)(+B6)(+B3)

+TX (3D10)

COMPONENTS NOT LOADED ON THE 8 PORT VERSION

BK_6 (4F10)

$DA_0 - DA_3$ (4C10)

-SERL DATA OUT (3E2)

-RCV (3EB)

+SERIAL DATA IN (3D10)

BK_5 (4F6)

BNC_8 BNC_9 BNC_{10} BNC_{11} BNC_{12} BNC_{13} BNC_{14} BNC_{15}

TNC_8 TNC_9 TNC_{10} TNC_{11} TNC_{12} TNC_{13} TNC_{14} TNC_{15}

BNC_0 BNC_1 BNC_2 BNC_3 BNC_4 BNC_5 BNC_6 BNC_7

TNC_0 TNC_1 TNC_2 TNC_3 TNC_4 TNC_5 TNC_6 TNC_7

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

REVISION DATE BY NO. SEE SHT. 1

D L216

C4

"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

J1 J2

7216 R6

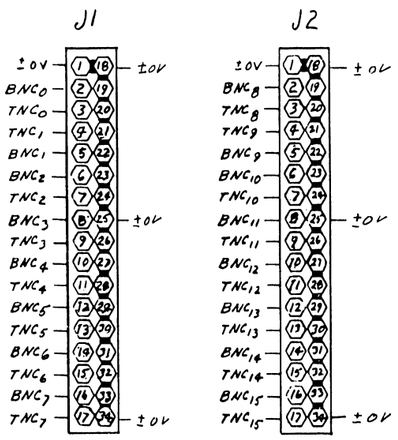
REVISION	BY	DATE
SEE SHT 6		

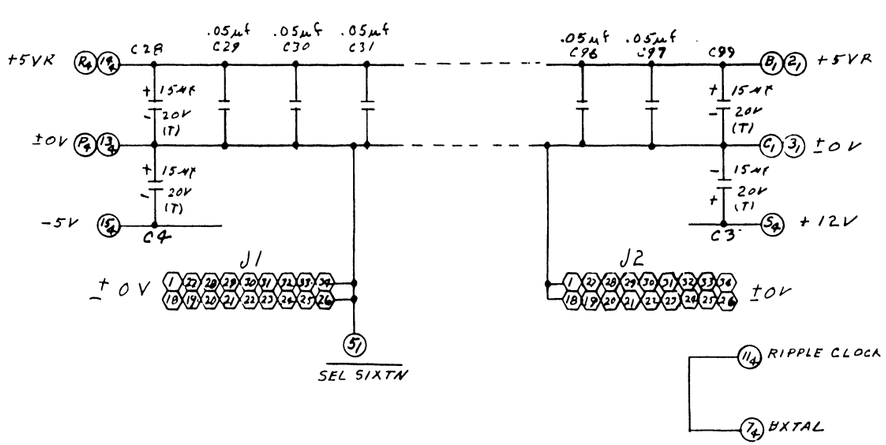
WANG LABORATORIES, INC. LOWELL, MASS. U.S.A.	BY	DATE	APPROVED BY	DATE
	DWN	12/4/72	E ENGR	
	CHK		M ENGR	
			MFG ENGR	

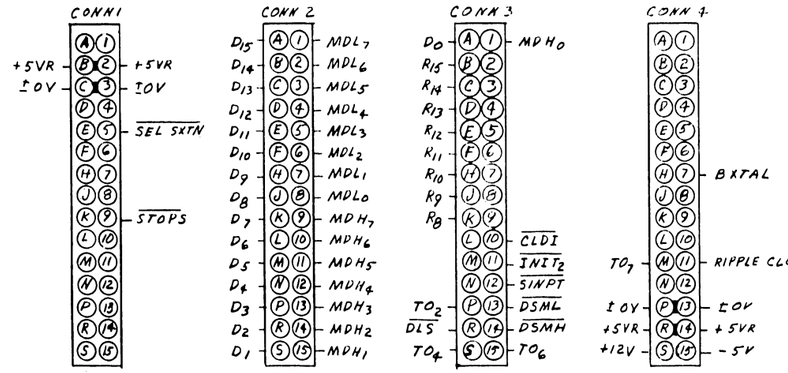
MATERIAL	MODEL NO. 2200VS SEE ENGRG SPECIFICATIONS No.	TITLE 16 PORT ADAPTER MODEL A
FINISH	TOL EX AS NOTED XX ± FRAC ± XXX ± ANG. ± FINISH √	210-7216 / D / 7216 / 10
	SCALE 1/1 SHT 5 OF 6	WANG PART NUMBER / SIZE / DRAWING NUMBER / REV

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

DO NOT SCALE







LOCATION	W.L. PART No	TYPE	NOT LOADED FORBPORT VERSION
L1,2,5,6,7,22		SPARE	
L3,4	376-0214	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	2117-3	
L59	SEE CHART	2716	
L60,61,62,81,92,111	376-0211	74LS32	
L82	376-0200	7408	
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	7411	
L86,87,101,102	SEE CHART	2101-A2	
L88,103	376-0310	74LS373	
L98	376-0213	74LS51	
L100	376-0285	74LS245	
L107	376-0098	7417	
L108	376-0119	74175	
L109	376-0139	7414	
L110	376-0266	74132	
L83,97	376-0202	7404	
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
R19,21-26,28,52,59,61-66	330-2011	100Ω 1/4W 5%	R52,59,61-66
R35,37-42,44,48,73,75,82	330-2028	270Ω 1/4W 5%	R48,75,77-82
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	.05μf CER	C20-23,30,37-43,50-58,68
C15,16	300-5006	1000PF5% MICA	
C17	300-5016	33PF500V MICA	
C18,98	300-1150	150PF500V CER	
C19	300-1903	.01μf25V CER	
C3,4,28,99	300-4022	15μf20V(T)	
XTAL	321-0018	17.1MHz	
J1,2	350-0429	CONN. 34 PIN	
L55-58,71-74	376-9014	18PIN SOCKET	
L86,87,101,102	376-9007	22PIN SOCKET	
L59	376-9003	24PIN 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	1G11
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	378-4142-R1	377-0308
7216-B	7216	377-0378	378-4031	377-0308

E-REV
5

NO.	REVISION	BY	DATE	APPROVED
0/0	ORG. PER DWR E 591 APP: 2.11.74		12-9-78	
1/1	REVISED PER ECN# 1060, 10890 APP'D: 3.11.74	BTF	3-15-79	
2/2	REVISED PER ECN# 11107 APP'D: 3.11.74		5-18-79	
3/3	REVISED PER ECN# 11233 APP: 3.11.74		5-18-79	
4/3	REVISED PER ECN# 12816 APP'D: 3.11.1043-79		10-9-79	
5/3	REVISED PER ECN# 12999 APP'D: 3.11.1217		11-6-79	
6/3	REVISED PER ECN# 14332 APP'D: 3.11.2401-80		2-20-80	
7/3	REVISED PER ECN = 13270 APP'D: 3.11.1760		4-5-80	
8/3	REVISED PER ECN#10892 & APP'D: 91.1422-81	FSS	6-22-81	
9/4	REVISED PER ECO = 19783 APP'D: 91.1422-81	JEP	7-9-81	
10/5	REVISED PER ECN# 2.322 APP'D	A.B	5.27.82	

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 7.88	5/29/79	M ENGR
MATERIAL	MODEL NO. 2200VS		MFG ENGR
	SEE ENGRG SPECIFICATIONS No.		TITLE 16 PORT ADAPTER MODEL A
FINISH	TOL EX AS NOTED: X ± FRAC ±; XXX ± ANG ±; FINISH √	210-7216	D 72.16 10
	SCALE FULL SHT 6 OF 6	WANG PART NUMBER	SIZE DRAWING NUMBER REV

C6

"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

MDL0 MDL1 MDL2 MDL3 MDL4 MDL5 MDL6 MDL7

9 TRK (5D8)

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

LS02 LS14 LS174 LS374

FO0 FO1 FO2 FO3 FO4 FO5 FO6 FO7

NRZI1 (4D9)
NRZI2 (4E9)
L26 LS157
MDH0 MDH1 MDH2 MDH3 MDH4 MDH5 MDH6 MDH7

L30 LS174 CLR
L45 LS367

L46 LS173

RDP (11) R57 220Ω R58 330Ω +5VR ±0V

L32 LS04

ROS (4C6)
L51 LS279
L59 LS367

RSTR (14) R59 220Ω R60 330Ω ±0V
L68 08
L67 LS32
L50 LS32
CRC=0
BRSTR (4A6) (1G6) (2G7)
CCG (5E9)
L51 LS279

R1 1K +5VR
R2 1K +5VR

RD0 RD1 RD2 RD3 RD4 RD5 RD6 RD7
Σ EVEN L29 LS280 Σ ODD
ODD PAR (4D1)
L31 LS86
L28 08
CCG (5E9)
BRSTR (1810)
RCS (4C6)
L52 LS74 PRE/W (3A5)
READ AFTER WRITE PARITY CHECK

9TRK (5D8)
L5 74LS14
L39 74LS08
FI0 FI1

DDC (4F1)
SCCLK (2D4)
L36 LS32

L28 LS157
L27 LS157
L114 LS157
FIFO INPUT MULTIPLEX
FI0 FI1 FI2 FI3 FI4 FI5 FI6 FI7
MDL0 - MDL7 (3G10)
MDH7
L33 LS51
RD TP (4B2)
L32 LS04
FIP

L70 74LS74
NRZ (2E3)
FOP
L85 74S471

MR (2E9)
NRZ (2E2)
L54 S225
L61 LS04
PL (2G4)
L55 S225
OR (2B11) (2C8) (2F3)

FOP
DDC (4F1)
P GEN (3C8)
ODD PAR (4D1)
L32 LS04
L22 LS86
L33 LS51
WDP
PE (4F1)

MDH0 MDH1 MDH2 MDH3 MDH4 MDH5 MDH6 MDH7
L1 06
WDP
WRT
EAS
TMR 2
MDH0 - MDH3 (3C4)
MDH0 - MDH3 MDH4 - MDH7 (4G4) (3C7)

WANG LABORATORIES, INC. LOWELL, MASS U.S.A.	BY	DATE	APPROVED BY	DATE
	DWN	10/24/79	E ENGR	
	CHK		M ENGR	
			MFG ENGR	
MATERIAL	MODEL NO.	TITLE MAG TAPE ADAPTER PE/NRZI		
	SEE ENGRG SPECIFICATIONS No.			
FINISH	TOL EX AS NOTED XX ± FRAC ± XXX ± ANG ± FINISH	210-7217	D	7217 10
	SCALE FT SAT OF 2	WANG PART NUMBER	SIZE	DRAWING NUMBER REV

NO.	REVISION	DATE
	SEE SHT 7	

D1

"THIS DRAWING AND THE DATA SHOWN THERE ON 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

NOTE: * ADDED PER ECO NO. 20023.

WANG LABORATORIES, INC. LOWELL, MASS. U.S.A.	BY	DATE	APPROVED BY	DATE
	DWN JB	10/24/72	E ENGR	
	CHK		M ENGR	
MATERIAL	MODEL NO.		MFG ENGR	
	SEE ENGRG SPECIFICATIONS No.	TITLE	MAG TAPE ADAPTER PE/NRZI	
FINISH	TOL EX AS NOTED XX ± FRAC ± XXX ± ANG ± FINISH	210-7217	D 7217	10
	SCALE 1/1 SHT 2 OF 2	WANG PART NUMBER	SIZE DRAWING NUMBER	REV

NO	REVISION	DATE
	SEE SHT 1	

D2

"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

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)

CORRECT (4F5)

WRT TP (4C1)

L58 LS280

P GEN (1D3)

L40 74LS04

TO4 (3B4)

L35 LS74

TO2 (4G6)

R23 1K +5VR

NRZI (4D9)

NRZI2 (4E9)

SFT CRC (4D9)

PD (2G3)

ROS (4C6)

ODD PAR (4D1)

DDC (4F1)

NRZ (2E2)

L75 LS157, L74 LS157

MDH7 (1B2)

BD0 - BDP (5B11)

TP6 +5VR, R21 1K

L13 MCB502

L12 MCB500

L11 MCB501

MATCH → LRC MATCH (5B4)

NREI2 (4E9)

WENB

LD TIE (4E9)

CRC MATCH (5C4)

RESET

VRC

9TRK (5D8)

L74 LS74

PAR (5D4)

PAR (5D2)

PE/W (1G5)

WRT TP (4C1)

MDH0 - MDH7 (1B1)

L81 LS161

INR

BC (2F3)

L80 LS161

L101 LS161

L100 LS161

L86 LS193

WRT TP (4C1)

EPR MATCH (5D4)

TO4 (3BB)

LD BY CT (4D9)

WSTR (2G3)

L93 04

TO4

BC2 (2F11)

BOR CAR

INCR (2F5)

SUB CLK (2C6)

P0 - P15 (5B11)

R24 2K +5VR

	BY	DATE	APPROVED BY	DATE
	DWN	4/28/78	E ENGR	
	CHK		M ENGR	
			MFG ENGR	

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

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

FINISH | TOL EX AS NOTED XX ± FRAC ± XXX ± ANG ± FINISH | SCALE | SHT 3 OF 7

210-7217 | D | 7211 | 10

WANG PART NUMBER | SIZE | DRAWING NUMBER | REV

NO.	REVISION	BY	DATE
	SEE SHT 7		

D3

"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

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

R_{15} R_{14} R_6 R_{12} R_{11} R_{10} R_9 R_8 R_7 R_{13} R_5 INIT$_L$ DBY PT$_0$ PT$_1$

TMC (4G7) RESET (4C7)(4C2)(4B6) DIS (4E1)

RD BY CT (2D2)(5B11)
RD TP ST (2D2)(5A11)
NRZI 2 (1E11)(2E3)(3B7)(3E6)
RD OP ST (2D2)(5A4)
ERROR CNTL (4E3)
LD TIE (3G8)
NRZI$_1$ (1E11)(2E3)(3C8)
LD BY CT (3B4)(3B10)
SFT CRC (3C7)
PAR SEL

L121 LS138 L122 LS138 L94 LS74 L107 123 L110 LS74 L111 LS74 L96 LS32 L109 08 L123 LS00 L124 38 L125 7404 L84 74LS00 L99 74LS08 L17 14 L14 06

TO$_7$ TO$_2$ CDLI TO$_6$ TO$_2$ (3B9) TO$_6$ (2D1) TMC (4F11) TMC (2B10) R26 1K +5VR

L110 LS74 L111 LS74 L69 LS74 L94 LS74 L107 123

SET (2D10) RESET (4F10) BK1 (5F7) SINPT (2B10) ROS (1C11)(1G5)(2C11)(2E10)(3B6) C6 .001μF R28 6.8K R27 1K R31 1K

BASTR (1B10) FEN GO TAD$_1$ TAD$_0$ SINPT

CORRECT (3E11) BK7 (5B7) DIS (4E1)

R36/10K R35/680K C70 33μF 15V Q1 2N2222A L53 9602

MDH$_0$ - MDH$_3$, (1B2) MDH$_6$, MDH$_7$

ERROR CNTL (4E9)

MDH$_7$ MDH$_0$ MDH$_1$ MDH$_2$ MDH$_3$ MDH$_7$ MDH$_7$ MDH$_6$

L111 LS74 L75 LS74 L95 LS74 L123 LS00 L112 LS74 L97 LS74 L125 7404 L77 06

DIN (1D3)(1FB)(2D11)(5C4)
DIN (1D3)(2D5)(3AB)(5C4)
DIS (4F10)
DIS (2B3)(4B4)
KDS (2G6)
WDS (2D2)(2G3)
ODD PAR (1D3)(1G7)(3A9)
PAR
WRT TP (2D9)(2C11)(3B3)
WRT TP (3B7)(3D11)(2D7)
RD TP (2C7)(2G10)
RD TP (1B7)(2D11)(2E2)(2G6)

R27 1K R30 1K +5VR

	BY	DATE	APPROVED BY	DATE
DWN		4/24/78	E ENGR	
CHK			M ENGR	
			MFG ENGR	

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

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

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

TITLE: MAG TAPE ADAPTER HF/NRZI

SCALE — SHT 4 OF 7

210-7117 | D | 7217 | 10

WANG PART NUMBER | SIZE | DRAWING NUMBER | REV

NO.	REVISION	DATE	BY
7	ENG REL		

D4

"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

HER (4I) CER (5I) FMR (6I) FBY (1I) ONL (8I) RDY (7I) RWD (9I) LDP (11I) EOT (12I)

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 L11 14 L2 14

BK1 (4B11) (4C7)

ID (3I) R79 220Ω R80 330Ω L17 14 → CCG (1B11)(1G6)(2G7)

L76 LS00

L74 LS74 2 PR 1 PR → BK3 (5D2) BK4 (5D2) BK5 (5C2)

R32 1K +5VR

7TK/9TK (9I) R33 220Ω R39 330Ω L4 14 → 9TRK (1G10)(3C5)(1F6)

XR051 (2C10)

NRZ/PE (13I) R81 220Ω R82 330Ω L2 14

FPT (10I) R83 220Ω R84 330Ω L2 14

BDP BD7 BD6 DDC (4F1)

L107 L105 L103 L119 L105 L106 LS157 LS153

BC5 BC4 BC3 BC2 BC1 BC0 BD5 BD4 BD3 BD2 BD1 BD0

PAR (3B5) EPR MATCH (3D4) DDC (4F1) NRZ (2E2) L18 LS08 SRC MATCH (3D5) DDY (4C10) LRC MATCH (3F5)

L120 LS157 IL (2C9) OVRN (2G1)

BK3 (5E9) BK4 (5E8) BK5 (5E7) PAR (3B5)

BC0–BC15 (3B1) BD0–BDP (3G5) RD BY CT (4F9) NRZ (2E2) RD TP ST (4F9)

L78 LS08 L104 L118 L102 L116 LS153

BK7 (4B5) L93 04 RD OP ST (4E9)

D8 D9 D10 D11 D12 D13 D14 D15

REVISION	BY	DATE	APPROVED BY	DATE
SEE SHT 7	DWN	11/27/74	E ENGR	
	CHK		M ENGR	
			MFG ENGR	

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

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

FINISH — TOL ER AS NOTED XX ± FRAC ± XXX ± ANG ± FINISH — SCALE — SHT 5 OF 7

TITLE MAG TAPE ADAPTER PE/MRZI

2200-7217 | D | 7217 | 10

WANG PART NUMBER | SIZE | DRAWING NUMBER | REV

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

DO NOT SCALE

J1 J2

7217
R6

REVISION	BY	DATE
SEE SHT 7		

	BY	DATE	APPROVED BY	DATE
DWN	GS	11/4/77	E ENGR	
CHK			M ENGR	
			MFG ENGR	

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

MATERIAL

MODEL NO.
SEE ENGRG SPECIFICATIONS
No.

FINISH

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

SCALE FF SHT 6 OF 7

TITLE: MAG TAPE ADAPTER PE/NRZI

WANG PART NUMBER	SIZE	DRAWING NUMBER	REV
210-7217A	D	7217	10

E PKG

D6

"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

IC. LOCATION	W.L. PART NO	IC. TYPE
L1,3,14,17	376-0055	7406
L2,4,15,17	376-0139	7414
L53	376-0109	9602
L32,40,41,61	376-0180	74LS04
L6-9,16,23,25,37,38,73, 113,127		SPARE
L10,21,36,50,61,81,83,96,108	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, 71,73,94,95,97,110-112, 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		1
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

J1

FBY	1	26	+5V
DBY	2	27	
ID	3	28	
HER	4	29	
CER	5	30	
FMK	6	31	
RDY	7	32	
ONL	8	33	
RWD	9	34	
FPT	10	35	
LDP	11	36	
EOT	12	37	
NRZ/PE	13	38	+5V
DEN	14	39	
WSTR	15	40	
RSTR	16	41	
RDP	17	42	
RD0	18	43	
RD1	19	44	
RD2	20	45	
RD3	21	46	
RD4	22	47	
RD5	23	48	
RD6	24	49	
RD7	25	50	+5V

J2

	1	26	+5V
TAD0	2	27	
GO	3	28	
REV	4	29	
WAT	5	30	
WFM	6	31	
EDIT	7	32	
ERS	8	33	
7TK/9TK	9	34	
THR2	10	35	
PAR	11	36	
FEN	12	37	
REWIND	13	38	+5V
OFFLINE	14	39	
LWD	15	40	
WDP	16	41	
WD0	17	42	
WD1	18	43	
WD2	19	44	
WD3	20	45	
WD4	21	46	
WD5	22	47	
WD6	23	48	
WD7	24	49	
TAD1	25	50	+5V

COMPONENT	W.L NO.	TYPE
R1,2,5-7,9,10,13-24 26,27,29-32	330-3010	1K, 1/4W, 10%
R3,8,11,12,25	330-3068	6.8K, 1/4W, 10%
R4,36	330-4010	10K, 1/4W, 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, 1/4W, 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, 1/4W, 10%
Q1	375-1005	2N2222A
J1,2	350-1027	57-40500
C73,74	300-1180	180 PF 500V CER

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

CONN 1

	A	1	
+5VR	B	2	+5VR
+5V	C	3	+5V
MARB	D	4	
	F	5	
	E	6	
	H	7	ST4-PS
	J	8	
	K	9	
	L	10	ST4-Q
	M	11	
	N	12	
	P	13	
	R	14	
	S	15	

CONN 2

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

CONN 3

D0	A	1	MDH0
R15	B	2	
R14	C	3	
R13	D	4	
R12	E	5	
R11	F	6	
R10	H	7	
R9	J	8	PT0
R8	K	9	PT1
R7	L	10	CDLI
R6	M	11	INIT2
R5	N	12	SINPT
TO2	P	13	DMSL
DLS	R	14	DMSH
TO4	S	15	TO6

CONN 7

	A	1	HW16
	B	2	HR16
	C	3	
	D	4	HSB1
	E	5	HSB2
	F	6	
	H	7	RIPPLE CLOCK
	J	8	
	K	9	
	L	10	
TO7	M	11	B XTAL
INC2	N	12	
+5V	P	13	+5V
+5V	R	14	+5V
	S	7	

COMP SIDE — WIRING SIDE

MNEMONIC	COORDINATE
B XTAL	2A5
CDLI	4G6
CER	5G9
D0 - D7	5E1
DR - D15	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
HR16	2B1
HSB1-HSB2	5G2
HW16	2B1
ID	5E11
INC2	2A6
INIT2	4C11
LDP	5G5
LWD	2F1
MARB	2F11
MDH0 - MDH7	1D11
MDL0 - MDL7	1G9
NRZ/PE	5D11
OFFLINE	4G10
ONL	5G7

MNEMONIC	COORDINATE
PT0	4H11
PT1	4E11
PAR	1C1
R5 - R15	4F11
RD0 - RD7	1F11
RDP	1D11
RD1	5J6
REWIND	4J10
REV	1D1
RIPPLE CLOCK	2A5
RSTR	1B11
RWD	5G5
SINPT	4A5
ST4-PS	2G8
ST4-Q	2F11
TAD0	4A8
TAD1	4A9
THR2	1B1
TO2	4G6
TO4	3A4
TO6	4G5
TO7	4G7
WD0 - WD7	1F1
WDP	1D1
WFM	1C1
WRT	1C1
WSTR	2G3
7TK/9TK	5D11

E-REV 6

BY	CO	SD	SD	CW	AD	AB	AB	AB	EP	FSS	T.K.
DATE	10-27-78	5-9-79	5-13-79	7-2-79	10-4-79	10-4-79	10-4-79	10-4-79	7-23-80	8-1-81	8-7-81
REVISION	ORG PER E 549 DWR: APP'D:	REV PER ECN#S 9450 + 10067 APP'D:	REV PER ECN'S 10443 APP'D:	REVISED PER ECNS 10357, 11037, APP'D:	REVISED PER ECN# 11934 APP'D:	REVISED PER ECN# 12173 APP'D:	REVISED PER ECN# 12210 APP'D:	REVISED PER ECN# 12376 APP'D:	REVISED PER ECN #4861 APP'D:	REVISED PER ECO#4364 APP'D:	REVISED PER ECO#20933 APP'D:
NO.	0	1/0	2/1	3/1	4/2	5/2	6/3	7/4	8/4	9/5	10/6

	BY	DATE	APPROVED BY	DATE
	DWN	12-27-78	E ENGR E SMITH	12-79
	CHK 5.2.8	12-79	M ENGR	
			MFG ENGR	

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

MATERIAL

MODEL NO.

SEE ENGRG SPECIFICATIONS No.

FINISH

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

SCALE — SHT 7 OF 7

TITLE MAG TAPE ADAPTER PE/NRZI

210-7217A | D | 7217 | 10

WANG PART NUMBER | SIZE | DRAWING NUMBER | REV

D7

"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

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

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

BA_1 (R1) BA_2 (14) BA_3 (P1) BA_4 (13) BA_5 (9) BA_6 (K) BA_7 (B) BA_8 (J) BA_9 (4) BA_{10} (D) BA_{11} (A) BA_{12} (11)

L106A LS139 — 1 OV, BK_{10} (3B9), BK_9 (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_1 PP_1MA_2 PP_1MA_3 PP_1MA_4 PP_1MA_5 PP_1MA_6

L72 LS244 — BA_5 BA_6 BA_7 PP_1A_5 PP_1A_6 → PP_1MA_4 PP_1MA_5 PP_1MA_6 (BK_2 2F2)

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_1 PP_1MA_2 PP_1MA_3 PP_1MA_4 PP_1MA_5 PP_1MA_6

L73 LS244 — BAB, PP_1A_{13}, PP_1A_{14}, PP_1A_{15} → PP_1MA_0 PP_1MA_6 PP_1MA_5; 1 OV; BK_1 (3C7) via L106 LS04; R 1K to +5VR

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

L89 MK4116 — PP_1MA_0 PP_1MA_1 PP_1MA_2 PP_1MA_3 PP_1MA_4 PP_1MA_5 PP_1MA_6; $\overline{RAS}$ ODD (3C5); $\overline{CAS}$ ODD (3C5); $\overline{WRITE}$ (3F8); V_{BB} V_{CC} V_{DD} V_{SS}; C1 .1MF; → $PPMB_0$

L68 MK4116 — C2 .1MF, C3 .1MF; → $PPMB_1$

L88 MK4116 — C4 .1MF, C5 .1MF, C6 .1MF; → $PPMB_2$

L69 MK4116 — C7 .1MF, C8 .1MF; → $PPMB_3$

L90 MK4116 — C9 .1MF, C10 .1MF; → $PPMB_4$

L70 MK4116 — C11 .1MF; → $PPMB_5$

L71 MK4116 — C12 1MF, C13 .1MF, C14 .1MF; → $PPMB_6$

L91 MK4116 — C15 .1MF; → $PPMB_7$

L74 MK4116 — PP_1MA_0 PP_1MA_1 PP_1MA_2 PP_1MA_3 PP_1MA_4 PP_1MA_5 PP_1MA_6; $\overline{RAS}$ EVEN (3D5); $\overline{CAS}$ EVEN (3D5); $\overline{WRITE}$ (3F8); C17 .1MF, C18 .1MF; → $PPMB_8$

L94 MK4116 — C19 .1MF, C20 .1MF, C21 .1MF; → $PPMB_9$

L75 MK4116 — C22 .1MF, C23 .1MF; → $PPMB_{10}$

L95 MK4116 — C24 .1MF; → $PPMB_{11}$

L96 MK4116 — C25 .1MF, C26 .1MF; → $PPMB_{12}$

L97 MK4116 — C27 .1MF, C28 .1MF; → $PPMB_{13}$

L77 MK4116 — C29 .1MF, C30 .1MF, C31 .1MF, C33 5.6MF (T); → $PPMB_{14}$

L76 MK4116 — C32 .1MF; → $PPMB_{15}$

$\overline{READ}$ (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.

DRAWING FILES

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/22V06 — SEE ENGR SPECIFICATIONS — No.

FINISH

TOL EX. AS NOTED — EX ± 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

"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

MODEM CONN

$PP_1 D_0$-$PP_1 D_7$ (1A4)

L20 8251A

L19 75154

L18 75154

L17 LS157

L7 75150

L8 75150

L56 LS73

L57 LS74

L74 LS74

L71 LS74

L53 LS368

L31 LS138

L32 LS27

L39 LS08

L40 LS08

L30 LS08

L33 LS04

L43 LS04

L44 LS32

L29 LS04

L37 LS04

L32 LS08

L3+A LS04

Z80 CTC

Z80 PIO

Z80 CPU

L54 LS244

L55 Z80 CTC

MPSG5518

R1 1.5K 1/2W 10%

R2 10K

R3 330

R4 10 2.2K

R5 2.2K

R8 68Ω

R9 2.2K

CAP .01 MFD

BK_1 (2D5)

BK_2 (2D7)

BK_3 (2D5)

BK_4 (2C5)

BK_5 (2D7)

BK_6 (3E2)

BK_7 (2C10)

BK_{22} (1F2)

BK_{23} (2F3)

BK_{24} (3C3)

BK_3 (2B10)

BK_4 (2C11)

BK_5 (2F7)

BK_{23} (2E7)

SCA BA CD CA

	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/22VC6 SEE ENGR. SPECIFICATIONS No.

TITLE PCA 22V06 DUAL TLP DAUGHTER BOARD NC

FINISH

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

SCALE 1/1 SHT 2 OF 8

210-7927 | D | 7427 | 6

WANG PART NUMBER | SIZE | DRAWING NUMBER | REV

REVISION

NO. | DATE | BY

E2

"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

- M REQ PP1
- STB PP1
- WPP1 M
- RPP1 M
- PND PWI DSS DLO
- PP1 D0 - PP1 D7 (1A7)
- PP1 MREQ (...3)
- M REQ PP1 (2G4)
- +PP DMA WRITE (6F10)
- PP1 WR (2E3)
- +PP DMA READ (6F10)
- P1 RFSH (2E3)
- PP1 RD (2E3)
- WRITE (1F7)(1D7)
- READ (1B10)
- +PP1 CLK1 (2E8)(2B6) (2E9)(2E6) (3E3)
- +PP1 CK
- +PP2 CLK2 (5E9) (5B7)(6E4) (6D11)(5E6)
- PP1 A0 (2G3)
- PP1 M1 (2E3)
- BK24 (2C2)
- BK1 (1C7)
- BK7 (1A9)
- BK8 (1A7)
- BK9 (1E10)
- BK10 (1B7)(1E11)
- RAS EVEN (1D7)
- CAS EVEN (1D7)
- RAS ODD (1F7)
- CAS ODD (1F7)
- PP1 A0 A1 (2G3)
- IA0 (2C10)
- Rx RDY (2G8)
- CS 10, (2C3)
- RD1 (2E5)
- IORQ1 (2E5)
- PP1 CLK1 (3E10)
- -PP1 M1 (2D3)
- Z80 INT (2E6)
- BK6 (2B7)
- TX EMPTY (2F8)
- TX RDY (2F8)
- -DMA PP1
- RST PP1
- RST 1 P1
- PP1 RFSH (2F3)
- PP1 RFSH (2G9)
- +5VR
- +10V
- -12V
- CH GND
- SEE SHT 9

BY	DATE	APPROVED BY	DATE
DWN GO		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 3 OF 8

TITLE PCA 22V06 DUAL TLP DAUGHTER BOARD V.S

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

E3

"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

BA1 - BA12 (1 G10)

PP2 A1 - PP2 A6 (5 G3)
PP2 A8 - PP2 A14 (5 C3)

L82 L62 L63 LS244

PP2 MA0 PP2 MA1 PP2 MA2 PP2 MA3 PP2 MA4 PP2 MA5 PP2 MA6

RAS ODD (6 C5)
CAS ODD (6 C5)
WRITE (6 F8)

L58 L78 L59 L79 L60 L80 L61 L81
MK4116

PP2 MB0 PP2 MB1 PP2 MB2 PP2 MB3 PP2 MB4 PP2 MB5 PP2 MB6 PP2 MB7

+0V
BK (6 B9)
CE: CAS (6 D4)
L100 LS139
RAS AIMA
CAS AIMB

BK16 (5 F2)

PP2 MA0 PP2 MA1 PP2 MA2 PP2 MA3 PP2 MA4 PP2 MA5 PP2 MA6

RAS EVEN (6 D5)
CAS EVEN (6 D5)
WRITE (6 F8)

L65 L64 L84 L85 L66 L86 L67 L87
MK4116

PP2 MB8 PP2 MB9 PP2 MB10 PP2 MB11 PP2 MB12 PP2 MB13 PP2 MB14 PP2 MB15

SC1 (1 C11)
SC0 (1 C11)

L63 LS244

BK11 (6 C7)
L15A LS04
R17 1K
+5VR

READ (6 F8)

L103 L102 L99 L101 LS245

BK19 (6 E7)
BK20 (6 D7)
BK18 (6 B9)

PP2 D0 - PP2 D7 (5 G10) (6 G3)
LDB0 - LDB15 (1 A8)

TELECOMMUNICATION CONTROL FOR PP2

WANG LABORATORIES, INC. LOWELL, MASS. U.S.A.		BY	DATE	APPROVED BY	DATE
		DWN		E ENGR	
MATERIAL	MODEL NO. 2200VS/22VC6	CHK		M ENGR	
	SEE ENGRG SPECIFICATIONS No.			MFG ENGR	
FINISH	TOL EX AS NOTED .XX ± FRAC ± .XXX ± ANG ± FINISH √	TITLE PP2 22VCS DUAL TLP DAUGHTER BOARD			
	SCALE 4/1 SHT 4 OF 8	210-7427 WANG PART NUMBER	D SIZE	7427 DRAWING NUMBER	6 REV

REVISION	BY	DATE
CHANGE SIZE TO B		

E4

"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

PP_2D_0-PP_2D_7 (4A4)

J7

AB' (7) ± 0V

AA' (1) CH GND

-RST PP_2 (6B8) → L23 LS04 → RESET

PP_2 RD (5E3) → L86 LS00 → RD

PP_2 IORQ (5E3) → L86 LS00 → WR

PP_2A_0 (5G3) → C/D

$\overline{CS\ '14'_2}$ (5C3) → CE

8251A: PP_2D_0 PP_2D_1 PP_2D_2 PP_2D_3 PP_2D_4 PP_2D_5 PP_2D_6 PP_2D_7; RxRDY → 14 RX RDY → (6E3); TxRDY → 15 TX RDY → (6C2); SYNDET 16; TXE → 18 TX EMPTY → (6C2); DSR 22; CTS 17; RTS 23; RXD 3; DTR 24; TXC 9; TXD 19; RXC 25; V_{CC} 26; GND 4; +5VR; ±0V

+PP_2 CLK$_2$ (3D10) → L23 LS04 → 20 CK

CP' (8) (23) (2) CC' (6) (20) (5) CB' (5) (18) (7) → L15 75154 → $\overline{CF_2}$ (5D5); +PP_2 CLK$_2$ (3D10) → CF_2 (5D5)

BB' (3) (15) (10) DB' (15) (14) (11) DV' (17) (17) (8) ACR' (3) → L14 75154 → 1A0 (6F3)

BK_{12} (5D7) → L22 75157 (STB, SEL) → BK13 (5D5)

BK_{14} (5C5) → L23 LS04

J7 (4) (21) (12) (13) (3) (22) (9) (16) → SCA' (19) (11) BA' (2) CD' (20) (4) CA'

L49 Z80 CTC: PP_2A_0 PP_2A_1 → $\overline{CS_0}$ $\overline{CS_1}$; $\overline{RD_2}$ (5E5) → $\overline{RD}$; $\overline{IORQ}$ (5E5) → $\overline{IORQ}$; -PP_2 MI (5D3) → $\overline{MI}$; -RST PP_2 (6B8) → $\overline{RESET}$; $\overline{CS\ '18'_2}$ (5C3) → $\overline{CE}$; BK_{15} (5B5) → IE_1; $\overline{I/O\ '08'_2}$ (5C2) → L23 LS04 → CK/TR_2; $\overline{INT}$; D_0-D_7 ← PP_2D_0-PP_2D_7; IE_0; ZC/TO_0; ZC/TO_1; ZC/TO_2; CK/TR_1; CK/TR_3; GND; V_{CC}; ±0V; +5VR

L38 LS73 (2CK, 2J, 2K, 2CLR, GND, ±0V, +5VR, K21 2.2K)

L38 LS73 (1CK, 1J, 1K, 1CLR, V_{CC}, +5VR) → BK_{12} (5C11)

L23 LS04 → C69 .01μF → ±0V

MSG512 Q2 Q1 MSG518; R23 120Ω ½W 10% → -12V; R24 120Ω ½W 10% → +12V

L2 75150 (GND, V-, V_+, 2A 1A STB, 2Y 1Y); L1 75150 (GND, V-, V_+, STB 1A 2A, 1Y 2Y); R22 2.2K → +5VR

L26 Z80 PIO: PP_2D_0-PP_2D_7; PP_2A_0 PP_2A_1 → B/A SEL, C/D SEL; $\overline{RD_2}$ (5E5) → $\overline{RD}$; $\overline{IORQ}$ (5E5) → $\overline{IORQ}$; -PP_2 MI (5D3) → $\overline{MI}$; +PP_2 CLK$_2$ (3D10) → ϕ; $\overline{CS\ '12'_2}$ (5C2) → $\overline{CE}$; BK_{21} (6E2) → IE_1; A STB; B STB; INT; B_0 → BK_{13} (5B10); B_1; B_2 → $\overline{CF_2}$ (5E10); B_3 → $\overline{SCF_2}$ (5E10); B_4 → BK_{14} (5C11); B_5; B_6 → ±0V; B_7; A RDY; B RDY → BK_{15} (5F7); IE_0; A_0-A_7 → LPDB$_0$-LPDB$_7$; GND; V_{CC}; ±0V; +5VR

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

+0V +5VR; L27 LS32; -M REQ PP_2 (6F10); PP_2 RFSH (6B9); -RST PP_2 (6B8)

L74 LS74 (2CLR, 2D, 2CK, 2Q, 2PR; +5VR R20 2.2K); L74 LS74 (1CLR, 1D, 1CK, 1Q, 1PR); L15A LS04; L36A LS08; L35 LS32 → BK16 (4E9)

L47 LS05 (1A 2A 3A 4A 5A 6A → 1Y 2Y 3Y 4Y 5Y 6Y): → PP_2 RFSH (6F16, 6B11); → PP_2 MREQ (6G11); → PP_2 IORQ (5F16); → PP_2 RD (5F10, 6E10); → PP_2 WR (5F10, 6F10); → PP_2 M1 (6C11)

L21 LS08 → -PP_2 M1 (5F7) (5B7) (6D3)

L27 LS32 → I/O '08'$_2$ (5F8)

L138 LS138 (A, B, C ← PP_2A_2-PP_2A_4 (5G3); G1 ← PP_2A_1; G2A ← PP_2A_3; G2B; Y_0-Y_7): → $\overline{CS\ '10'_2}$ (6E3); → $\overline{CS\ '14'_2}$ (5F7); → $\overline{CS\ '18'_2}$ (5F7); → $\overline{CS\ '1C'_2}$ (5B7); → I/O '08'$_2$ (5F8); → I/O '0C'$_2$

L74 LS74 (2CLR, 2D, 2CK, 2Q, 2PR; -RST PP_2 (6B8); R26 2.2K → +5VR) → -PP_2 RESET (6A4)

PP_2A_0, PP_2A_1 (5G3) → RD_2 (5E5); $\overline{IORQ}$ (5E5); -PP_2 MI (5D3); +PP_2 CLK$_2$ (3D10); $\overline{CS\ '12'_2}$ (5C2); BK_{21} (6E2)

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

LPDB$_0$-LPDB$_7$ (2A4)

TELECOMMUNICATION CONTROL FOR PP_2

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. 2231V-[illegible]36

SEE ENGRG SPECIFICATIONS No.

FINISH

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

SCALE: FT SHT 5 OF 8

TITLE [illegible] DAISYMTR [illegible]

210-7427 | D | 7427 | 6

WANG PART NUMBER | SIZE | DRAWING NUMBER | REV

E5

"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

-MREQ PP_2 (K3) -STB PP_2 (L3) -WPP$_2$M (F3) -RPP$_2$M (A3)

PNV' PWI' DSS' DLO'

+5VR 15 V_{CC} L3 75154 R1 9

1A 1T 2A 2T 3A 3T 4A 4T

1Y 2Y 3Y 4Y

1A1 1A2 1A3 1A4

PP_2D_0 – PP_2D_7 (4A4)

PP_2A_0, PP_2A_1 (5G3)

L25 Z80 PIO

PP_2A_0 6 B/A SEL

PP_2A_1 5 C/D SEL

1A0 (5C10) 15 A0 — 1 PP_2D_0

1A1 14 A1 — 20 PP_2D_1

1A2 13 A2 — 2 PP_2D_2

1A3 12 A3 — 40 PP_2D_3

1A4 10 A4 — 39 PP_2D_4

7 A5 — 38 PP_2D_5

8 A6 A RDY 18 — 3 PP_2D_6

RX RDY (5G8) 7 A7 B RDY 21 — 4 PP_2D_7

$\overline{CS\ 10'_2}$ (5C3) 4 $\overline{CE}$

$\overline{RD_2}$ (5E5) 35 $\overline{RD}$

$\overline{IORQ}$ (5E5) 36 IORQ

+PP$_2$ CLK$_2$ (3D10) 25 ϕ

-PP$_2$MI (5D3) 37 $\overline{M1}$

16 $\overline{A/B}$ STB

17 $\overline{B/B}$ STB

+5VR R28 2.2K 24 $\overline{IE_I}$

23 $\overline{INT}$ → ZBO INT (5E6)

22 $\overline{IE_O}$ → BK$_{21}$ (5B7)

27 B_0 — 1B0

29 B_1 — 1B1

29 B_2 — 1B2

30 B_3 — 1B3

31 B_4 — 1B4

32 B_5 — 1B5

33 B_6 → TX EMPTY (5E8)

34 B_7 → TX RDY (5G8)

GND 11 Vcc 26

+0V +5VR

BK$_{22}$ (2L6)

L6 L7 L5 75150 STB 1 2A GND V- V+

+PP DMA WRITE (3F11)

PP$_2$ WR (5E3)

+PP DMA READ (3F11)

PP$_2$ RFSH (5E3)

PP$_2$ RD (5E3)

L50 LS158 STB 15 1A 1B 2A 2B 3A 4A 4B SEL 1

4 $\overline{WRITE}$ → (4F7) (4C7)

7 $\overline{READ}$ → (4B10)

1Y 2Y 3Y 4Y

10V

L46 LS00 → BK$_{19}$ (4A9)

L46 LS00 → BK$_{20}$ (4A7)

+5VR 5V Vcc GND

PP$_2$A$_0$ (5G3) L45 LS75 D_1 D_2 CK$_1$ Q_1 $\overline{Q_1}$ Q_2 $\overline{Q_2}$

+PP$_2$CLK$_2$ (3D10) L21 LS08

+5VR R27 2.2K

L46A LS157 STB 1A 1B 2A 2B 3A 3B 4A 4B SEL 1 1Y 2Y 3Y 4Y

L37 LS08 L32 LS08

$\overline{RAS\ EVEN}$ (4D7)

$\overline{CAS\ EVEN}$ (4D7)

$\overline{RAS\ ODD}$ (4F7)

$\overline{CAS\ ODD}$ (4F7)

L97A LS00 1519-100

L33 LS32

BK$_{11}$ (4C7)

BK$_{17}$ (5C2)

PP$_2$MI (5E3)

L36 LS74 1PR 1D 1CK 1CLR 1Q $\overline{1Q}$

L23 LS04

BK$_{18}$ (4B7) (4F10)

-DMA PP$_2$ (F3)

-RST PP$_2$ (A3)

-RST PP$_2$

(5F7) (5E5) (5D2) (5G4) (5F10)

L21 LS08

L15A LS04

PP$_2$ RFSH (5F3)

L13 LS04

PP$_2$ RFSH (5G4)

SEL CAS (4F10)

L77A LS04

R=2 150-2 +5VR

R30 330-2 10V

TELECOMMUNICATIONS CONTROL FOR PP$_2$

REVISION NO.	BY	DATE
A		
B		

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

MATERIAL	MODEL NO. 2200/15/22/50 SEE ENGRG SPECIFICATIONS No.	TITLE PP$_2$ TELECOMMUNICATIONS CONTROL LOWELL MASS.
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 6 OF 6	

E6

"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

LOADED FOR 7427-1

LOADED FOR 7427

PP1

PP2

J4 ACU1 CONN

J3 MODEM1 CONN

J8

J2 ACU2 CONN

J7

J1 MODEM2 CONN

J6

J5

7427

+5VR

±10V

-12V

+12V

-5VR

C70 C71 C72 C73 C74 C96 C91 C90 C91 C92

.05 MF

15 MF 20V (T)

47 MF 35V (T)

C94

C95

C73

REVISION	BY	DATE
CHANGE PER ECO 7427-1		

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

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

MATERIAL

MODEL NO. 2200T, 2200V.

SEE ENGRG SPECIFICATIONS No.

TITLE PCA 2200G DUAL TLP DAUGHTERBOARD NC

FINISH

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

SCALE FULL SHT 7 OF 8

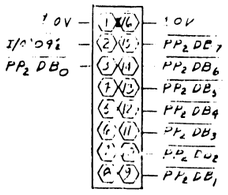
210-7427 | D | 7427 | 6

WANG PART NUMBER | SIZE | DRAWING NUMBER | REV

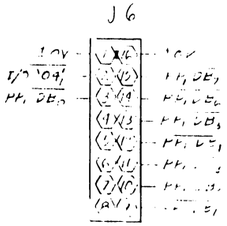
"THIS DRAWING AND THE DATA SHOWN THEREON ARE THE CONFIDENTIAL PROPERTY OF, AND ARE PROPRIETARY TO, WANG LABORATORIES, INC. THIS DRAWING AND THE DATA SHOWN THEREON MAY NOT BE MADE PUBLIC WITHOUT THE WRITTEN CONSENT OF WANG LABORATORIES, INC. IF FOR ANY REASON THIS DRAWING IS PERMITTED BY WANG TO LEAVE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

DO NOT SCALE

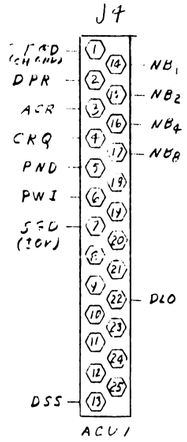
J5



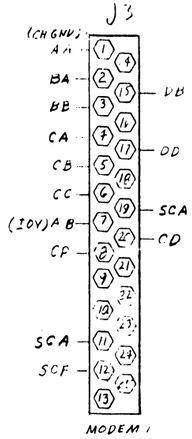
J6



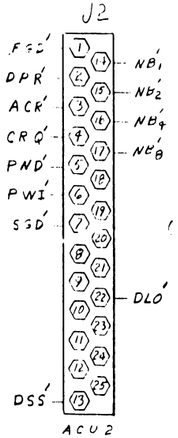
J4



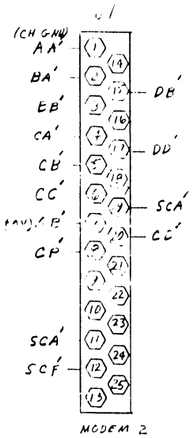
J3



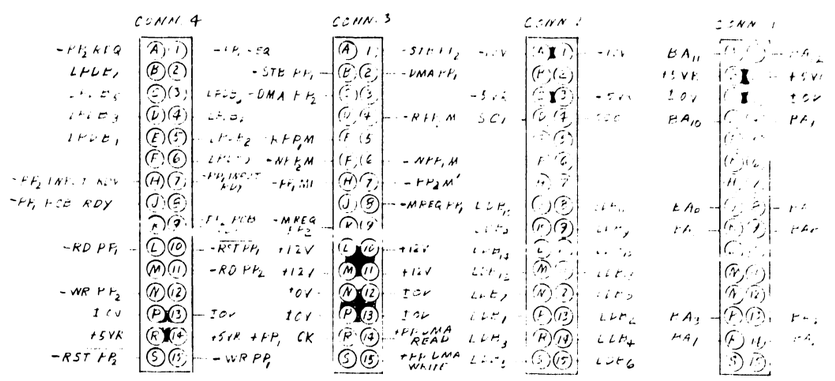
J2



J1



CONN 4 / CONN 3 / CONN 2 / CONN 1



SIGNAL NEMONIC DESIGNATION, VIEW FROM PRINTED WIRING SIDE OF BOARD

LOCATION	W.L. PART NO.	TYPE
L1, 2, 4-5, 7-11	376-0076	74S140
L3, 12, (14), 15, 16, 17	376-0077	74S154
L6, 13, 15A, 23, 33, 34, 43 (44A)	376-0180	74LS04
L14, 25	377-0352	8T97A
L19, (22)	376-0216	74LS157
L20, 30, 31A, 37, 40, 42	376-0153	74LS00
L24, 36, 41, 51	376-0155	74LS74
L27, 51	376-0294	74LS139
L35, 36, 38, 47	377-0342	Z80 PIO
L27, (35) 47	376-0211	74LS32
L28, (45)	376-0312	74LS75
L29	376-0208	74LS02
L31 56	376-0304	74LS73
L32, 46 52	376-0207	74LS00
L42A (46A, 50) 51	376-0293	74LS158
L47 53	376-0193	74LS368
L48 54	377-0344	Z80 CPU
L49 55	377-0343	Z80 CTC
L58-61, L67-70: 57, 58, 59, 60, 61, 62, 63, 64, 65, 66, 67, 68, 71, 72, 73, 74, 75, 76, 77, 78, 79, 80, 81, 82, 83, 84, 85, 86, 87, 88, 89, 90, 91, 92, 93, 94, 95, 96, 97	377-0345	MK4116
L62, 63 12, 13 (82, 83) 92, 93	376-0288	74LS244
L64 103A	376-8022	1519-100
L98 104	376-0296	74S287
L99, 101, 102, 103 105, 107, 108, 109	376-0291	74LS245
L100 106A	376-0226	74LS139
L110	376-0149	8T97

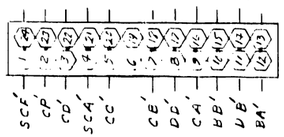
MNEMONIC	COORDINATE
+PP1 DMA READ	3 F 11
+PP1 DMA WRITE	3 E 11
-PP1 INPUT RDY	2 B 1
-PP2 INPUT RDY	5 B 1
- PP1 MI	2 D 1
- PP2 MI	5 D 1
- PP1 PCB RDY	2 C 1
- PP2 PCB RDY	5 C 1
- PP1 REQ	2 B 1
- PP2 REQ	5 B 1
PWI	3 G 5
PWI'	6 G 5
-NPP1 M	2 A 6
-NPP2 M	5 A 6
- RPP1 M	3 G 7
- RPP2 M	6 G 7
- RST PP1	3 F 11
- RST PP2	6 H 11
SCD, 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
- W PP1 M	3 G 8
- W PP2 M	6 G 8
- WR PP1	2 A 6
- WR PP2	5 A 6

MNEMONIC	COORDINATE
AA	2 E 11
-A'	C F
AB	2 E
AB'	5 E
A B	2 C 1
A B'	5 C 1
BA7 - BA12	1 F 11
BA	3 A 5
BA'	6 A 5
BB	2 E 1
BB'	5 E 1
CA	2 A 9
CA'	5 A 9
CB	2 E 1
CB'	5 E 1
CC	2 A 5
CC'	5 A 5
CD	2 E 1
CD'	5 E 1
CP	2 C 11
CP'	5 C 11
DB	3 D 1
DB'	6 D 1
DD	3 G 5
DD'	6 G 5
DLO	3 P 11
DLO'	6 P 11
- 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 10V1	2 D 1
I/O 10V2	5 D 1
LCB0 - LCB15	1 A 2
LPDB0 - LPDB7	2 A 5
- W REQ PP1	3 G 13
- M REQ PP2	6 G 13
MI	3 E 1
MI'	6 E 1
NB1	3 E 1
NB2	6 E 1
NB4	3 E 1
NB4'	6 E 1
NB8	3 E 1
NB8'	6 E 1
PWD	3 G 5
PWD'	6 G 5
+PC1 - K	3 E 11
PP1 DB0 - PP1 DB7	2 F 1
PP2 DB0 - PP2 DB7	5 F 1

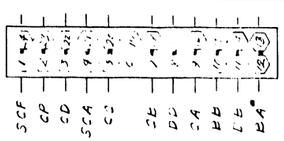
I.C. TYPE	LOCATION	SPARE
74LS02	L29	2
74LS04	L15A	1
	L99A	5
	L106	4
74LS08	L36A	2
74LS32	L44	2
74LS37	L98	3
	L109	3
74LS75	L28	1
	L95	1
74LS139	L100	1
	1106A	1
8T97	L110	1

COMPONENT	W.L. PART NO.	TYPE
R2 (TE)	330-4011	10K 1/4W 5%
R3, 4, 5, 9, 12, 13, 14, (19-22, 26, 27, 28)	330-3023	2.2K 1/4W 5%
R6, 7, (23), 24	331-2012	120Ω 1/2W 10%
R8, (25)	330-1063	68Ω 1/4W 5%
R10, (TL)	330-1083	82Ω 1/4W 5%
R15, (29)	330-2016	150Ω 1/4W 5%
R16, (30)	330-2034	330Ω 1/4W 5%
R1, 17	330-3011	1K 1/4W 5%
C1-32, 34-65	300-1930	.1MF 50V CER
C33, 66, 67	300-4017	5.6MF 35V (T)
C68, (69)	300-1903	.01MF 50V CER
C11, (71-75) 79-76, (77) BC-90 (82-83) B6, B1, (20, 26), 97	300-1900	.05MF 12V CER
C91-94	300-4022	15MF 25V (T)
C95	300-4034	47MF 20V (T)
(C1), 3	375-1012	.1MFD 5%
(C2), 4	375-1014	MFD 5%
(J1, 2) 3, 4	350-1047	25PIN CONN.
(J5), 6, (58-61, 64-66) 68-74, 76-77, (78-81) (84-87), 88-91, 94-97	376-9005	16PIN SOCKET
(L6) 20, (49) 55	376-3015	28 PIN SOCKET
(L23, 26, 32, 34, (38)) 54	376-9011	40 PIN SOCKET

J7



J8



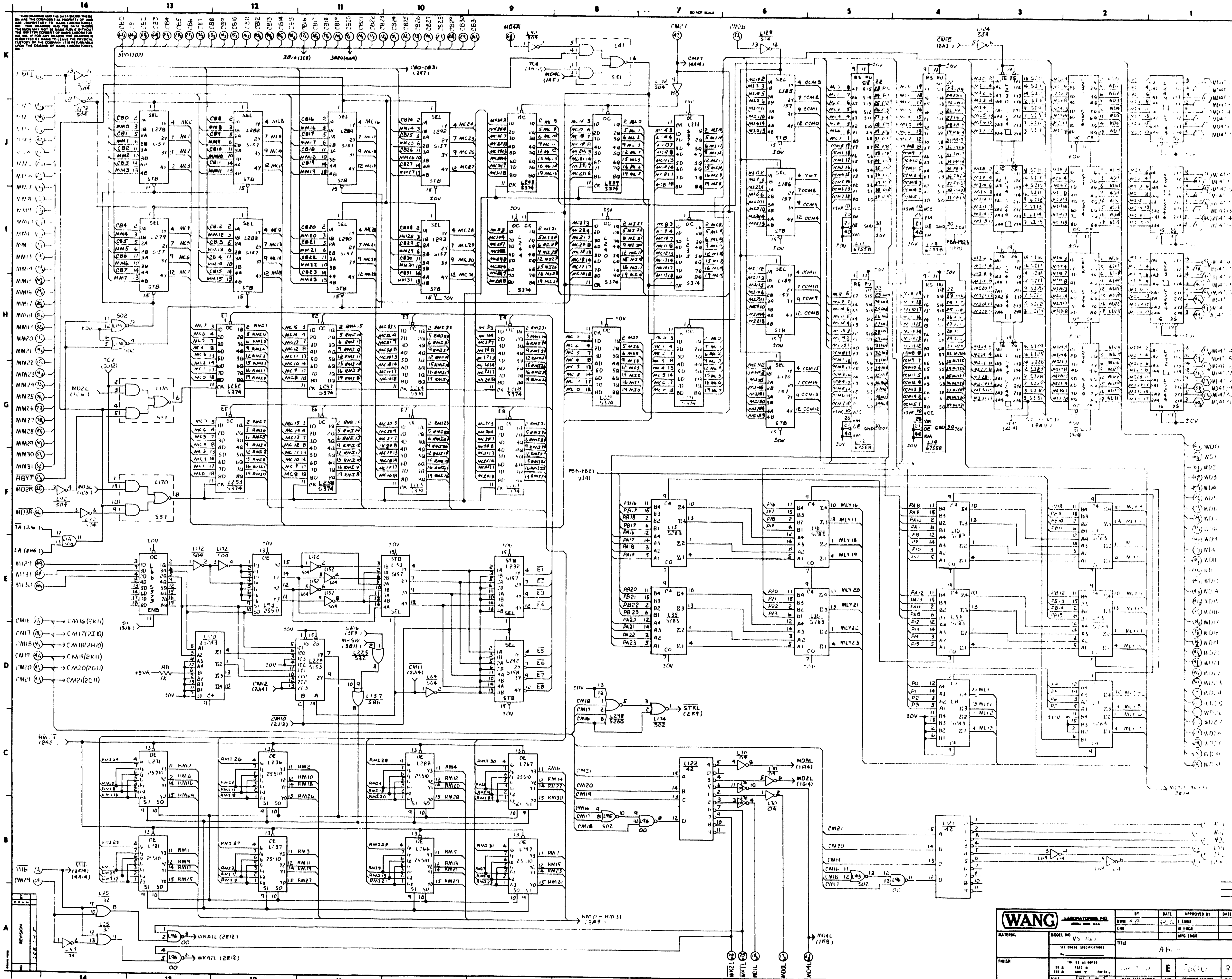
NOTE:

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

E. REV.

7427	7427-1
1	1

REVISION	BY	DATE
ECO# 5483 REVISED PER ECO# 5483 ADDED DTC/RBID		12-19
ECO# 5483 ADDED PP1 PP2		3-25-74


WANG LABORATORIES, INC.
MODEL NO VS-100
SEE ENGRG SPECIFICATIONS
TITLE
E
SHT 1 OF 3

F1

"THIS DRAWING AND THE DATA SHOWN THEREON ARE THE CONFIDENTIAL PROPERTY OF AND ARE PROPRIETARY TO WANG LABORATORIES, INC., THEY ARE NOT TO BE USED, REPRODUCED OR DISCLOSED TO OTHERS EXCEPT WITH THE WRITTEN CONSENT OF WANG LABORATORIES, INC. IF THIS ANY ACTION THIS DRAWING PERMITTED BY WANG FOLLOWS THE FULL CAUTION OF THE CONTRARY IT IS SUBJECT TO THE DISCRETION OF WANG LABORATORIES, INC."

DO NOT SCALE

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

MATERIAL	MODEL NO.	BY	DATE	APPROVED BY	DATE
	SEE ENGR. SPECIFICATIONS	DWN A. J.	5/27/71	J. ENGE	
	By	CHK		M. ENGE	
FINISH	TOL. EX. BY NOTED .XX ± .010 .XXX ± .005 ANGL. ±	TITLE		MFG. ENGR.	
	SCALE	SIZE E	DRAWING NUMBER		

F2

THIS DRAWING AND THE DATA SHOWN THEREON ARE (...) CONFIDENTIAL PROPERTY OF WANG LABORATORIES, INC. AND ARE PROPRIETARY TO WANG LABORATORIES, INC. THIS DRAWING AND/OR THE DATA SHOWN THEREON SHALL NOT BE DISCLOSED, REPRODUCED OR USED IN WHOLE OR IN PART WITHOUT THE WRITTEN CONSENT OF WANG LABORATORIES, INC. IF FOR ANY REASON THIS DRAWING IS FURNISHED BY WANG TO LEASE THE PURCHASE OF EQUIPMENT, IT SHALL NOT BE LOANED, COPIED OR USED BY THE BORROW OF WANG LABORATORIES, INC.

DO NOT SCALE

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

		BY	DATE	APPROVED BY	DATE
MATERIAL	MODEL NO VS-100	DRWN AP	7/19/79	E ENGR	
	SEE ENGRG SPECIFICATIONS No.	CHK		M ENGR	
FINISH	TOL ±1/32 .XX ±.02 .XXX ±.005 FINISH			MFG ENGR	
	SCALE			TITLE ALUS	
				2511400	E 7500 3
				DWG PART NUMBER	DATE DRAWING NUMBER REV

THIS DRAWING AND THE DATA SHOWN THEREON ARE PROPRIETARY TO WANG LABORATORIES, INC. THIS DRAWING AND THE DATA SHOWN THEREON MAY NOT BE COPIED IN WHOLE OR IN PART OR USED IN WHOLE OR IN PART FOR ANY PURPOSE WHATSOEVER WITHOUT THE PRIOR WRITTEN CONSENT OF WANG LABORATORIES, INC. IF YOU OBTAIN THIS DRAWING OR PERMITTED TO RETAIN IT, LEAVE THE PHYSICAL CUSTODY OF THE COMPANY. IT IS RETURNABLE UPON THE DEMAND OF WANG LABORATORIES, INC.

DO NOT SCALE

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

MATERIAL	MODEL NO	TITLE
	VS 100	ALU
FINISH	SEE ENGR. SPECIFICATIONS	

BY	DATE	APPROVED BY	DATE
DWN M.A.	1-14-1968		
CHK	1-14-1968		
ENG	1-14-1968		

SIZE E | DRAWING NUMBER

REVISION | SEE SHT 5

F4

"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."

IC LOCATION	TYPE	W.L PART NO.
[illegible]	[illegible]	396-0206
[illegible]	[illegible]	396-0?01
[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]	74S??	396-0082
L1??	74S??	396-0427
[illegible]	[illegible]	396-0217
[illegible]	[illegible]	396-0073
L26,42,176,177,180-181,175,178,229,?3,233-35,239,240,243,244-251,2??,?58,262,264-265,268-270	74S374	396-0305
L21,48,54,57,70,169,227	74S00	396-0228
L28,40,64,73,74,139,143,148,152,172	74S?4	396-0177
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	376-0238
L49,??,60,74,251,260,285	74S?38	396-0298
L52,200,2?4	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	396-0339
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	74S37	376-0296
L149	74S11	396-0237
L157	74S86	376-0271
L168	93S10	396-0281
L173,193	7402	376-5016
L175,177,201,207,219-?4,241	74S153	376-0337
L176,161,230,234,238,291,??	74S?44	376-0338
L179	74S240	376-0334
L206,218,242	74S158	376-0301
L209,211	3342?	SEE CHART
L228,291,294-296	74S153	376-0215
L249,250,254,256,261,263,271,272,?17	74LS249	376-0286
L130,131,133-141,138	74S151	396-0336
L11-14	40 PIN SKT	376-9011
L209-216	22 PIN SKT	376-9010

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

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°	350-0441

MNEMONIC	COORD
AB0-AB31	2J1
ALU	4A7
BBO	3A14
BCH0-BCH3	2G14
BCLKM	4K1
BCMSW	4J1
BCLKI	4J1
BCM	4A7
BDE BUG	4K1
BEXEC	4A10
BIO	4J1
BNM	4K11
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
IR3B	4K10

MNEMONIC	COORD
ISET	[illegible]
LINK L	1B1
LEN1-LEN3	3?4
MDIR	4?7
MDOR	4?6
MDRN1	2F1
MIL,MDOL	1A6
MD4L	1A6
MEAR	1K9
MD10-MM31	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	?1
MI29-MI31	1E14
MMRD	1K14
MM0-MM31	1J14
MSIC	4K7
MSIP	4K7
NO RIPPLE	2J14
NZE	3G14
OVF	4K14
PAGE 0	4B1
PAGE 1	4A11
PAGE 2	4A12
PB	4B14
PCA/SPX	4A?
P24	4K6
RIOI	4K11
RBYT	1F14
[illegible]	1E14
SKAD0-SKAD?	[illegible]
SGNI	3A6
STATE	4F1
STHI	4K7
ST0-ST15	4A6
TAB0-TAB31	2E1
VML	1B1
VPB	3A14
WD0-WD31	1C1
WK1L,WK2L	1A6
WCS2	4K5
X2I	4K12
SGN	4A10

E-FE

E	4D	4B	A0	A0
REVISION	UPDATED PER ECN	REVISED PER ECN	REVISED PER ECO	REVISED PER ECO

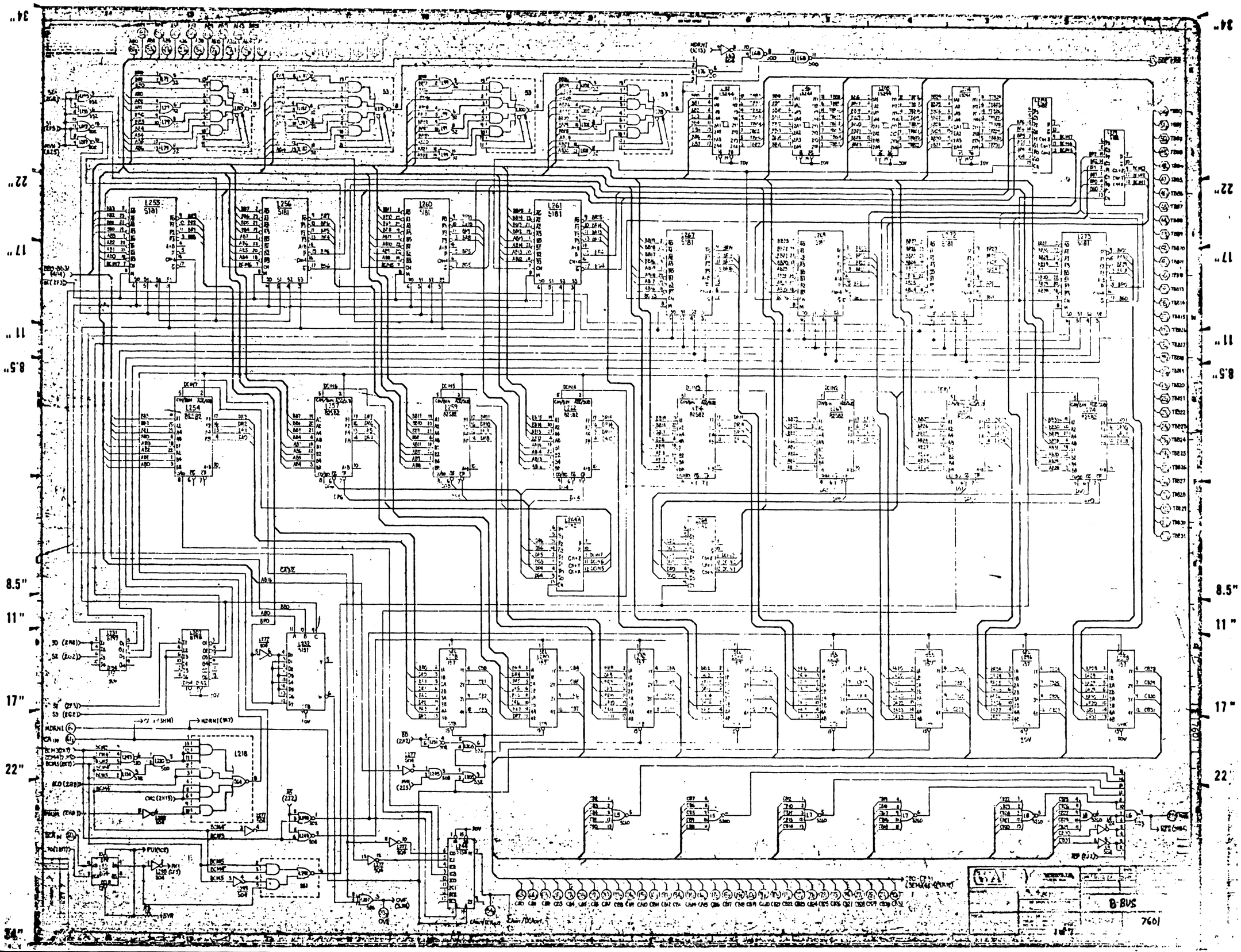
WANG LABORATORIES, INC. LOWELL MASS. U.S.A.

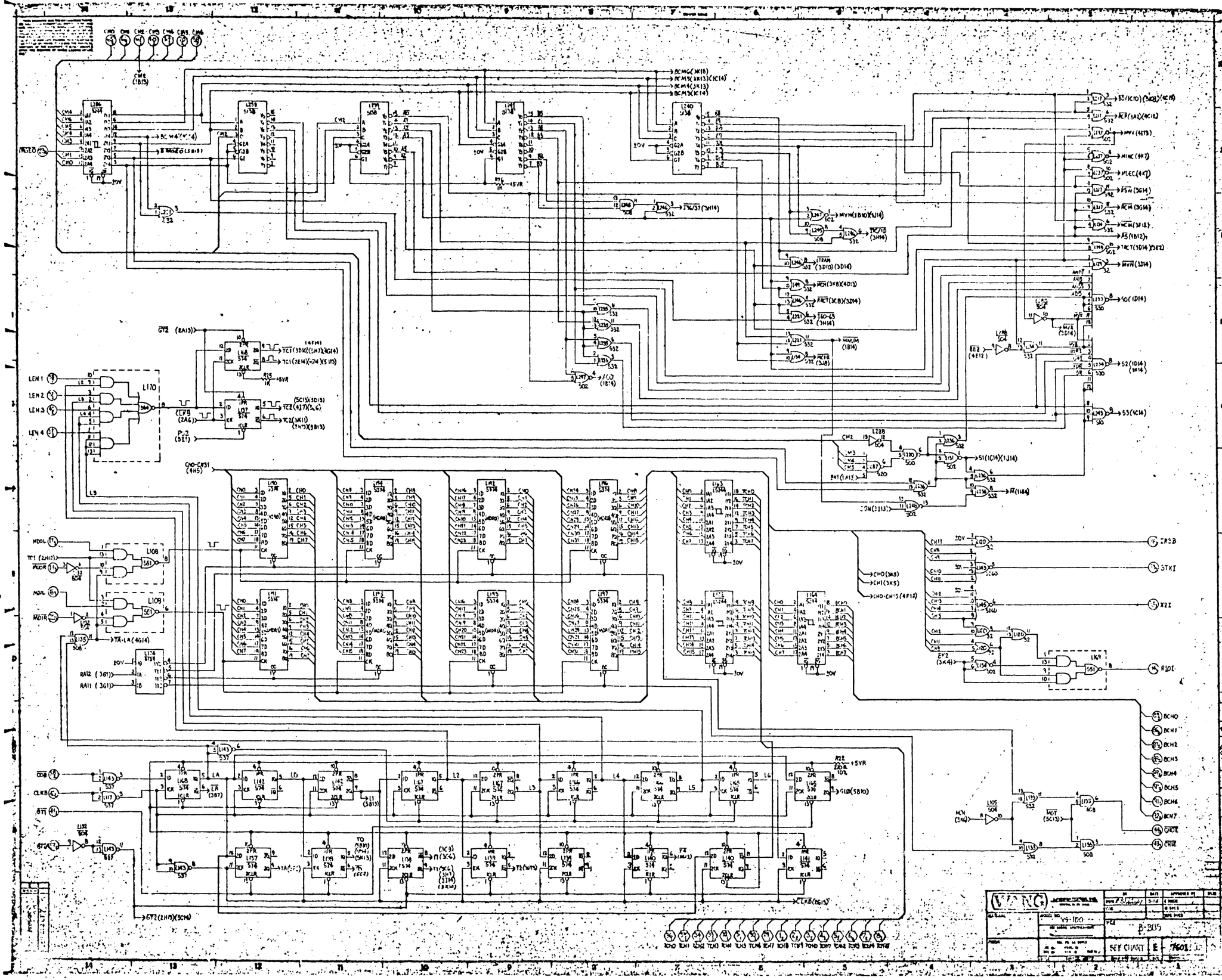
	BY	DATE	APPROVED BY	DATE
DWN			E ENGR	
CHK			M ENGR	
			MFG ENGR	

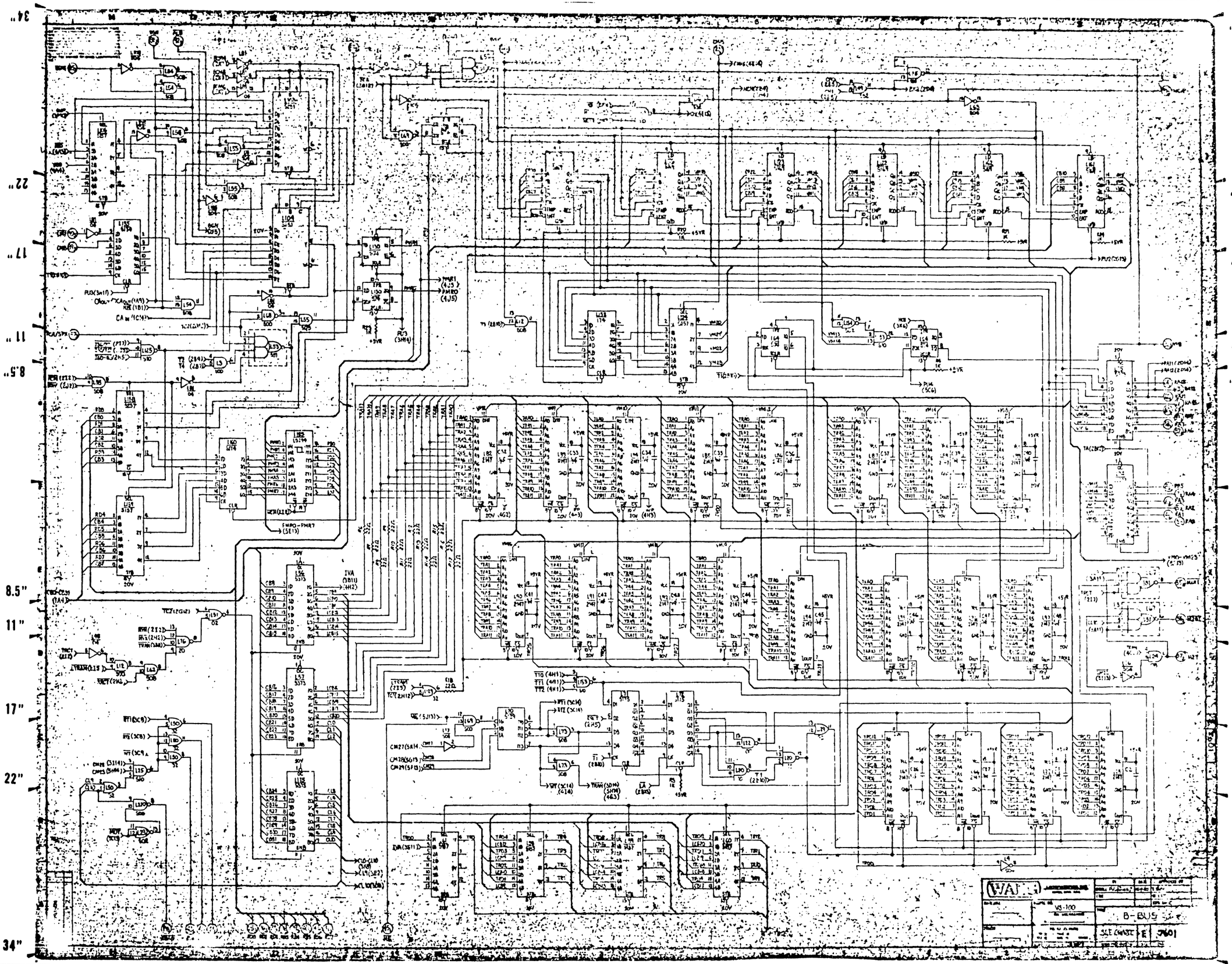
MATERIAL | MODEL NO | TITLE

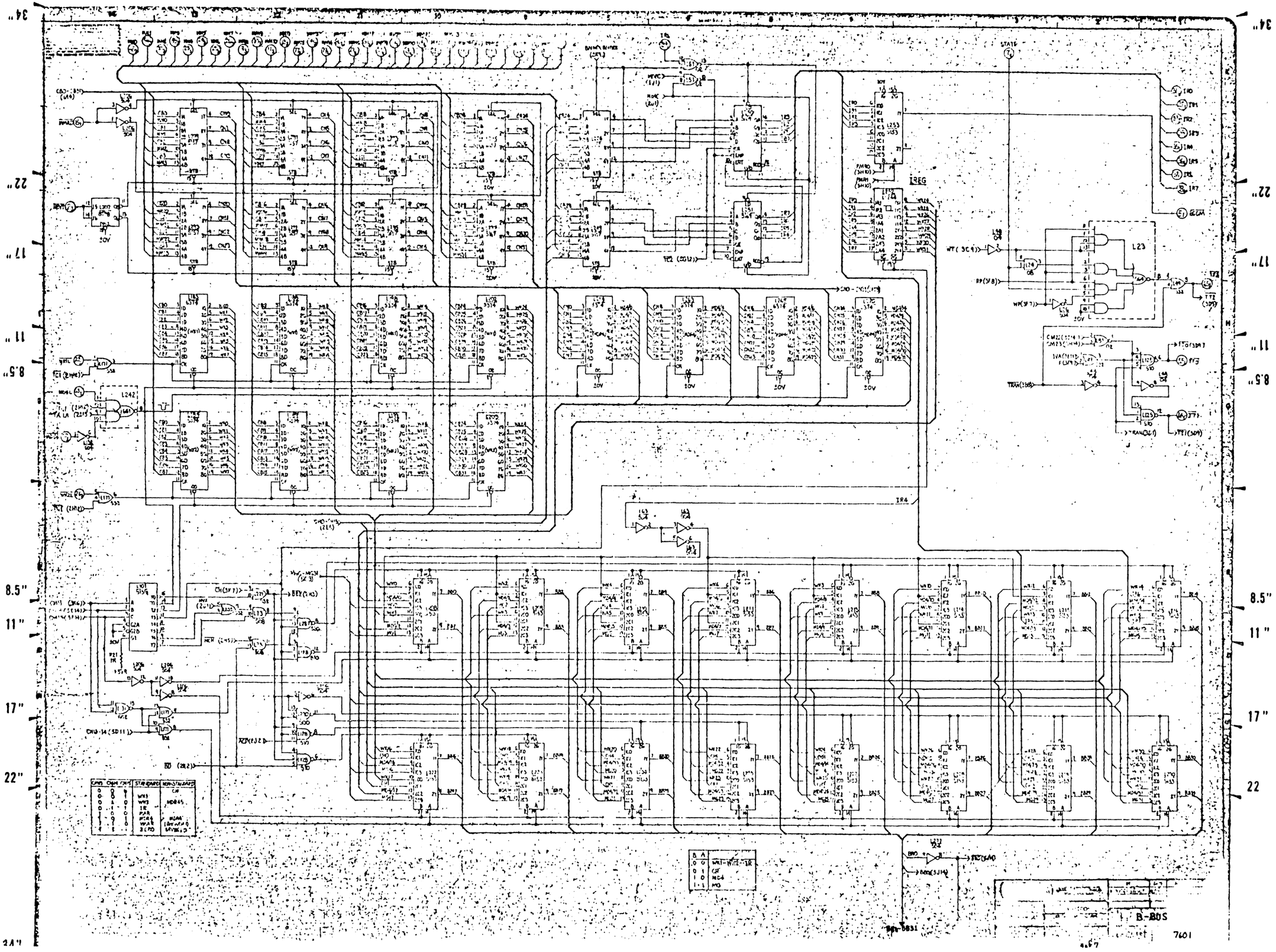
SEE ENGRG SPECIFICATIONS No

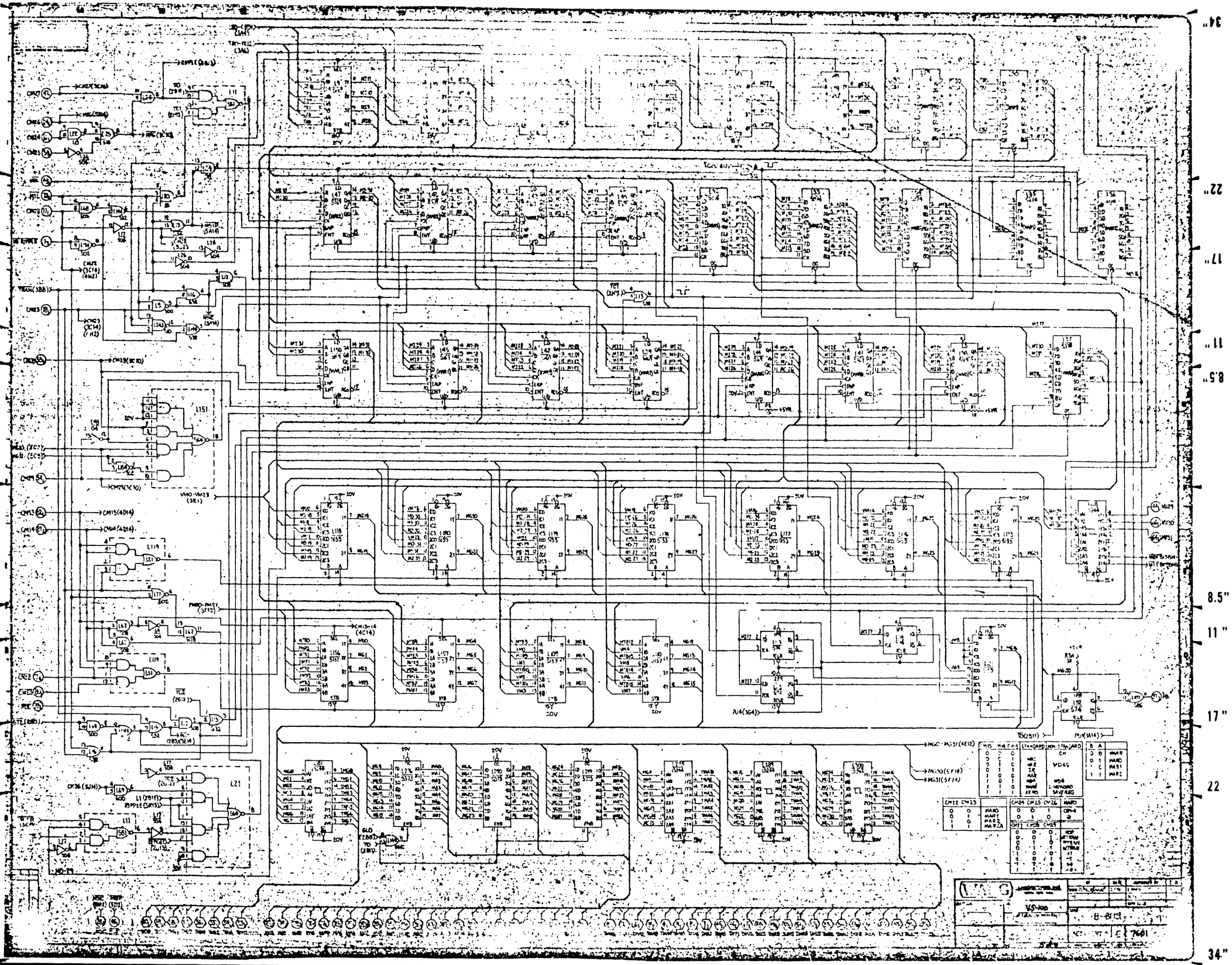
FINISH | TOL EX AS NOTED | SCALE | SHT 5 OF 5 | WANG PART NUMBER | SIZE E | DRAWING NUMBER | REV


B-BUS
7601
1 of 7
G1


CH0 CH1 CH2 CH3 CH4 CH5 CH6 CH7
CH2 (1B15)
INSERT
BCM4(3K14)
BCM5(3K15)
BCM6(3K16)
BCM7(3K17)
BCM4(3K13)
BCM5(3K14)
+5V
-15V
LEN 1
LEN 2
LEN 3
LEN 4
L170
CLKB (2A6)
P/S (5E7)
CH0-CH31 (4H5)
MODL
TF1 (2H12)
RADR
L108
L109
TA-LA (4G14)
RA12 (3G1)
RA11 (3G1)
CLKB
STT
STP
CLKB (5B13)
BCH0
BCH1
BCH2
BCH3
BCH4
BCH5
BCH6
BCH7
CH0E
CH1E
ZR2B
STKI
X2I
RIDI


B-BUS
XS-100
SIZE
E
34"
22"
17"
11"
8.5"
G3


IREG
L23
L242
B-BUS
7601


34"
22"
17"
11"
8.5"
34"
22"
17"
11"
8.5"
G5

7601-R4

NOTES
1 ALL RESISTORS ARE 1K 1/4w 10% EXCEPT AS NOTED.
2 ALL CAPACITORS ARE "DATAK" CERAMIC EXCEPT AS NOTED

SEE SHEET 7

WANG LABORATORIES, INC.	BY	DATE	APPROVED BY	DATE	
MATERIAL	MODEL NO VS-100				
		TITLE B-BUS			
FINISH		SEE CHART	E	7601	5

G6

IC LOCATION	TYPE	W.L. PART NO.
U12, 31, 119, 137, 198, 116, 136, 146-149	SPARE	
U 58, 59 LED	74HC0	396-0228
U9, 10, 26, 63, 105, 132, 206, 237-239	74S04	396-0197
U 7, 8, 192	74S240	396-0206
U6	74S133	396-0276
U3, 61, 64, 65, 78, 79-81, 106, 109, 110, 111, 116, 117, 119, 226, 249, 279, 281, 283, 285, 291, 293, 295, 297	74S157	396-0217
U11, 33, 69, 108, 141, 202	74S51	396-0194
U12, 24, 55, 82, 93, 132, 245	74S08	396-0190
U 5, 16, 41, 133, 134, 144, 171, 205, 217, 221, 235, 236, 246	74S32	396-0209
U20	7410	396-0203
U1, 23, 157, 170, 218	74S64	396-0201
U2	7400	396-0002
U36	74C8	396-0081
U28, 125, 128, 153, 245	74S10	396-0238
U21, 28, 29, 42, 82-97	8147	SEE CHART
U29, 30, 35-37, 183, 296, 198-199, 204, 205, 208, 263, 268, 270	74S374	396-0305
U38-43, 122, 135, 136, 137, 150, 161, 162, 250, 251	74S163	396-0331
U49, 81	7404	396-0010
U50, 79, 99, 101, 180, 209, 187	7432	396-0093
U51	7402	396-0016
U58, 64, 98, 103, 104, 150, 157, 158-162, 468-468,	74S74	396-0208
U70, 174	74S133	396-0335
U71, 72	74S113	396-0270
U74	74S313	396-0310
U76	7420	396-0004
U77, 151, 154, 257, 267, 268	74S08	396-0199
U78, 80, 100, 212	7453	396-0087
U84, 238-241	74S138	396-0298
U85, 104	74S251	396-0349
U87	74S86	396-0271
U91, 143	74S37	396-0296
U90, 121, 175, 176-180, 208-210, 213-216, 222-225, 227-230, 244, 253	74S153	396-0215
U95, 160	74S174	396-0247
U96	74S257	396-0151
U45, 172, 181, 182, 185, 186, 220, 224, 252, 275, 291, 300	74LS244	396-0288
U64, 127, 246	74S240	396-0356
U66, 67, 115, 276, 290, 299, 302	74S373	396-0306
U209	8T98	396-0089
U39, 219A, 264, 264A	74S188	396-0469
U231	8T97	396-0189
U253	74S151	396-0336
U255, 256	74S30	396-0198
U256, 257, 259, 262, 266, 268, 271, 274	82S86	396-0254
U258, 156, 260, 261, 269, 272, 275	74S81	396-0258
U198, 280, 281, 284, 292, 294, 296, 298	74137	396-0082
U287	74S20	396-0230
U288	74174	396-0098
U27, 28, 65, 66, 82-97	18 PIN SKT.	196-9014
U254-257, 259-262, 266-269, 271-274	24 PIN SKT.	196-9003
U150-151, 210-213, 265, 280, 290	40 PIN SKT.	196-9020

LOC NOS NOT	TYPE	W.L. PART NO.
R1, 2, 3, 58, 1-5, 9, 21, 23, 26	1K Ω, 5% 1/4W	330-3DH
R5-18	220Ω, 5% 1/4W	330-1013
R22	330Ω, 5% 1/4W	330-1022
R-25, 29-31, 49-73, 76-177, 101, 108, 131-133, 137-140, 142-145, 147, 148, 150-168	.047 MF, 50V	502-1906
C28, 2, 5, 52, 53, 38, 48	1 MF, 20V	500-1990
C28, 58, 108, 132, 136, 141, 146, 149	15 MF, 20V TANT.	500-4022
J1, J2	60 PIN, 90° HEADER	550-0441

TYPE	LOCATION	SHARES
74S00	L3	2
74S02	L17	3
	L151	1
74S04	L105	1
	L132	2
74S14	L24	1
	L4	1
74S08	L135	1
	L245	1
7432	L119	1
74S32	L205	1
74S37	L117	3
74S51	L169	1
74S74	L114	1
	L141	1
74S139	L107	2
	L70	1
	L134	1
74S00	L43	1
74S20	L98	1

NAME MNEMONICS	COORDS.
ABO - AB31	1H6
ACLO	3K16
ADRO	5A13
AIR	5A13
ATRE	5A13
ATW	5A13
BCHO - BCH7	7C11
BMW, BMWX	5A9
BNHINT	3A1
BWO	6A6
BCLR	4E1
CAIR	5C16
CAOUT/DCAOUT	1A9
CBO - CB31	1A8
CLKB	2B14
CMO - CM6	2H15
CMO	5F14
CM13	5F14
CM16	5E14
CM15	3K7
CM22	5F16
CM23	5H16
CM24 - CM26	5J14
CM27	5K16
CM28	5J14
CM29	5F16
CM7	3F16
CM22	5D16
CODE	2C16
CRCE	2B1
CRTE	2B1
CMD3	6J16
DCAIN	1K1
DCAIN	1B16
GT2A	2B14
GT1	2B14
HLH	3K1
IWL	4K7
IMO - IR7	4K1
IR3B	2E1
LEN1 - LEN4	2G16
LINKL	3K11
MOF	5K2
MIR	5K2
MOL	5C14
MIL	5J16
M2T	3F1
M2S	3A11
M2P - M2S1	7F1
MMO - MA31	6K14
MCIL	2E14
MDOL	2E14
MAO - MA23	5A11
MDAL	4G14
MDOR	2E14
MDIE	2E14
MIMB	4G14
MMBD	4J14
MMC	5A14
MSTB	5A14
MTRT	3D1
MSSC	3E1
MDENT	1C14
NO RIPPLE	5J14
NRE	1B1
OVF	1A11
PAGEO	5J14
PB	5D1
PCA/SPX	5H14
RAO - RA5	3F1
RBYF	4J14
RDO - RD7	3A12
RICI	2D1
RA6 - RA13	3G1
SGN	3K13
SGN1	3K14
STATE	4K3
STKI	2E1
TBBO - TBB31	1J1
TCHO - TCH15	2A7
TMAO - TMA23	5A7
TMA24 - TMA29	5A13
VTO	4H1
VTT	4G1
VTZ	4H1
VMI	3A11
VPB	3H1
WRIT	4G14
WRIE	4H14
XXT	2E1

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

J1

TMB0	60	59	TMB1
TMB2	58	57	TMB3
TMB4	56	55	TMB5
TMB6	54	53	TMB7
TBB0	52	51	TBB1
TBB2	50	49	TBB3
TBB4	48	47	TBB5
TBB6	46	45	TBB7
TBB8	44	43	TBB9
TBB10	42	41	TBB11
TBB12	40	39	TBB13
TBB14	38	37	TBB15
TCH0	36	35	TCH1
TCH2	34	33	TCH3
TCH4	32	31	TCH5
TCH6	30	29	TCH7
	28	27	
	26	25	
+5V	24	23	+5V
+5V	22	21	+5V
	20	19	
	18	17	
	16	15	
	14	13	
	12	11	
	10	9	
TMA0	8	7	TMA1
TMA2	6	5	TMA3
TMA4	4	3	TMA5
TMA6	2	1	TMA7

J2

TCH8	1	2	TCH9
TCH10	3	4	TCH11
TCH12	5	6	TCH13
TCH14	7	8	TCH15
TBB28	9	10	TBB29
TBB30	11	12	TBB31
TBB24	13	14	TBB25
TBB26	15	16	TBB27
TBB16	17	18	TBB17
TBB18	19	20	TBB19
TBB20	21	22	TBB21
TBB22	23	24	TBB23
	25	26	
	27	28	
	29	30	
	31	32	
±0V	33	34	±0V
±0V	35	36	±0V
	37	38	
	39	40	
	41	42	
	43	44	
	45	46	
	47	48	
TMA8	49	50	TMA9
TMA10	51	52	TMA11
TMA12	53	54	TMA13
TMA14	55	56	TMA15
TMA16	57	58	TMA17
TMA18	59	60	TMA19
TMA20	61	62	TMA21
TMA22	63	64	TMA23

P3

±0V	1	2	±0V
+5VR	3	4	+5VR
K2I	5	6	IRDB
STRT	7	8	RIDI
HOLD	9	10	ALU
CMB	11	12	CMT
LINKL	13	14	
SGNL	15	16	SGNL
AB2	17	18	AB3
AB0	19	20	AB1
MA6	21	22	MA7
MA4	23	24	MA5
MA2	25	26	MA3
MA0	27	28	MA1
BBO	29	30	
+5VR	31	32	+5VR
CB2	33	34	CB3
CB0	35	36	CB1
±0V	37	38	±0V
±0V	39	40	±0V
CM6	41	42	
PCA/SPX	43	44	CM25
±0V	45	46	±0V
±0V	47	48	±0V
AB6	49	50	AB7
AB4	51	52	AB5
MM2	53	54	MM3
MM0	55	56	MM1
CMR	57	58	CMDE
RD6	59	60	RD7
RD4	61	62	RD5
RD2	63	64	RD3
RD0	65	66	RD1
CMF	67	68	CAOUT/DCAOUT
PB	69	70	VPB
CB6	71	72	CB7
CB4	73	74	CB5
MM6	75	76	MM7
MM4	77	78	MM5
NRE	79	80	
MCLR	81	82	MCLR
MDOL	83	84	MDIL
CB10	85	86	CB11
CB8	87	88	CB9
MM10	89	90	MM11
MM8	91	92	MM9
AB10	93	94	AB11
AB8	95	96	AB9
±0V	97	98	±0V
NO RIPPLE	99	100	RBYF

P2

±0V	1	2	±0V
+5VR	3	4	+5VR
CB14	5	6	CB15
CB12	7	8	CB13
BCH6	9	10	BCH7
BCH4	11	12	BCH5
BCH2	13	14	BCH3
BCH0	15	16	BCH1
MBF	17	18	MBF
CM14	19	20	CM15
MM14	21	22	MM15
MM12	23	24	MM13
AB14	25	26	AB15
AB12	27	28	AB13
MDC	29	30	MHL
CM4	31	32	CM5
CM2	33	34	CM3
CM0	35	36	CM1
MCKL	37	38	MI31
CAIN	39	40	MDMR
GT2A	41	42	SCAIN
M2T	43	44	TOB
M2N1	45	46	M2B1
AB18	47	48	AB19
AB16	49	50	AB17
MA14	51	52	MA15
MA12	53	54	MA13
AB22	55	56	AB23
AB20	57	58	AB21
GT1	59	60	CLKB
LEN4	61	62	LEN3
LEN2	63	64	LEN1
MA10	65	66	MA11
MA8	67	68	MA9
MM8	69	70	MM9
MM6	71	72	MM7
	73	74	
	75	76	
VMIL	77	78	VMIR
PAGEO	79	80	CAIN2
CM5	81	82	VMIC
CB18	83	84	CB19
CB16	85	86	CB17
MM24	87	88	MM25
MM22	89	90	MM23
MM20	91	92	MM21
CB22	93	94	CB23
CB20	95	96	CB21
RA4	97	98	RA5
RA2	99	100	RA3
RA0	101	102	RA1
SMTE	103	104	SDV

P1

BMWS	1	2	CMRS
MMOE	3	4	MM27
MM28	5	6	MM29
CB24	7	8	CB27
CB26	9	10	CB25
AB26	11	12	AB27
AB24	13	14	AB25
TTT	15	16	MM30
RA12	17	18	RA13
RA10	19	20	RA11
RA8	21	22	RA9
RA6	23	24	RA7
TTO	25	26	TTT
CM28	27	28	CM29
MM30	29	30	MM31
MM28	31	32	MM29
CM27	33	34	MEL
MTG	35	36	MSW
ATW	37	38	MI29
ATRT	39	40	ATRE
IRL	41	42	DEC ERR
IR6	43	44	IR7
IR4	45	46	IR5
IR2	47	48	IR3
IR0	49	50	IR1
CB30	51	52	CB31
CB28	53	54	CB29
MA22	55	56	MA23
MA20	57	58	MA21
MA18	59	60	MA19
MA16	61	62	MA17
CM25	63	64	CM23
MBRD	65	66	CM24
BENTRY	67	68	BMW/BMWX
AB 30	69	70	AB31
AB 28	71	72	AB29
STATE	73	74	
BCOM	75	76	MDENI
+5VR	77	78	+5VR
±0V	79	80	±0V

+5VR

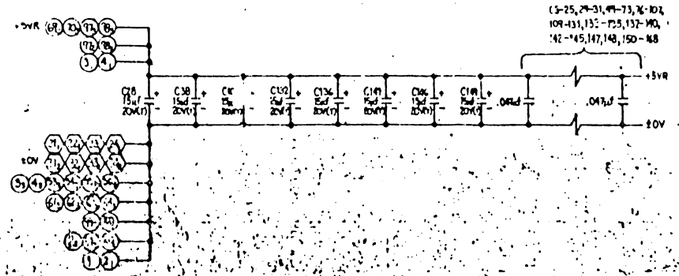
C28 15uF 20V(T) · C38 15uF 20V(T) · C8 15uF 20V(T) · C132 15uF 20V(T) · C136 15uF 20V(T) · C141 15uF 20V(T) · C146 15uF 20V(T) · C149 15uF 20V(T) · .047µF · .047µF

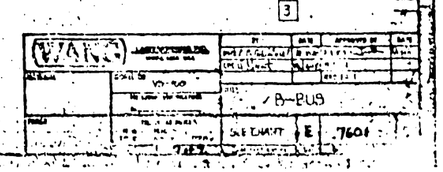
(5-25, 29-31, 49-73, 76-101, 108-131, 133-135, 137-140, 142-145, 147, 148, 150-168)

+5VR

±0V

±0V





INS	CM30	CM31	CM32	CM33				
BCC	0	0	0	0	✓	✓		✓
BU	0	0	0	1	✓	✓		✓
SB	0	0	1	0	✓	✓		✓
SS	0	0	1	1	✓	X		✓
X	0	1	0	0	✓		X	✓
X	0	1	0	1	✓		X	✓
BNM	0	1	1	0	✓	✓		✓
BNMX	0	1	1	1	✓	✓		✓
*BT	1	0	0	0	✓	✓		✓
*BR	1	0	0	1	✓	✓		✓
*.BT	1	0	1	0	✓	✓		✓
*.BR	1	0	1	1	✓	✓		✓
.BT	1	1	0	0	✓	✓		✓
SBR	1	1	0	1	✓	✓		✓
BNMT	1	1	1	0	✓	✓		✓
BNMF	1	1	1	1	✓	✓		✓

* LOW BIT OF CM, HIGH BITS OF I...

CM32	CM31	CM30	CHANNEL
0	0	1	CM
0	1	1	CM
1	0	1	STACK
1	1	0	CH
X	X	0	TRAP

WANG LABORATORIES, INC.

BY	DATE	APPROVED BY	DATE
DWN A.D			
CHK			

MATERIAL — FINISH — MODEL NO. VS-130 — SEE POWER SPECIFICATIONS — TOL. IS AS NOTED

TITLE

DWG. PART NUMBER 2201602 — SIZE B — DRAWING NUMBER 76[illegible] — SHT 1 OF 4

H1

"THIS DRAWING AND THE DATA SHOWN THEREON ARE THE CONFIDENTIAL PROPERTY OF AND ARE PROPRIETARY TO WANG LABORATORIES, INC. AND IN CONSIDERATION OF RECEIPT THEREOF, SAME MAY NOT BE MADE PUBLIC WITHOUT THE WRITTEN CONSENT OF WANG LABORATORIES, INC. AND SHALL BE RETURNED TO THE COMPANY UPON REQUEST. IT IS NOT TO BE LOANED OR DISPOSED OF IN ANY MANNER TO A PERSON OR CUSTOMER OF THE COMPANY. IT IS RETAINABLE UNDER THE DAMAGES OF WANG LABORATORIES, INC."

DO NOT SCALE

WE0-WE3 (3E10) >

R1?(-A) >

1A0-1A11 (3E13) >

1(3E12) >

2A0-2A11 (3E13) >

P(3E12) >

4A0-4A11 (3E11) >

1(3E12) >

5A0-5A11 (3E11) >

CM0-CM47 (3H10)

REVISION	BY	DATE

	BY	DATE	APPROVED BY	DATE
	DWN		T. ENGE	
	CHK		W. ENGE	
			BRIG ENGR	

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

MATERIAL

MODEL NO VS-MCC

SEE ENGR. SPECIFICATIONS

No.

FINISH

TOL. ON AS NOTED
.X ± .XX ± .XXX ± ANG. ±
SCALE SHT. OF

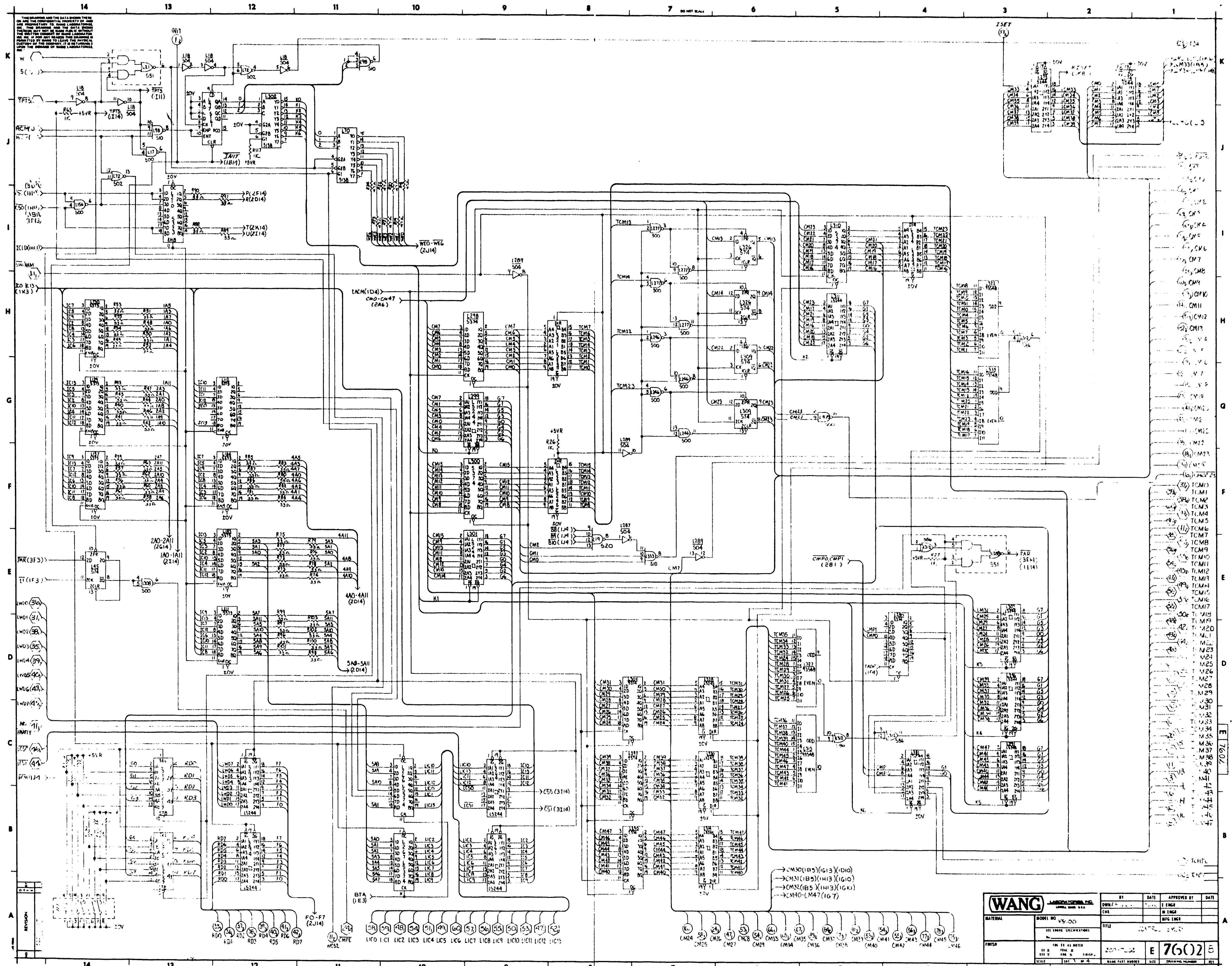
TITLE CONTROL SECTION

SIZE E

WANG PART NUMBER

DRAWING NUMBER

REV


WANG LABORATORIES, INC.
MODEL NO VS-100
TITLE CONTROL MEMORY
E 7602
SHT 3 OF 4

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.

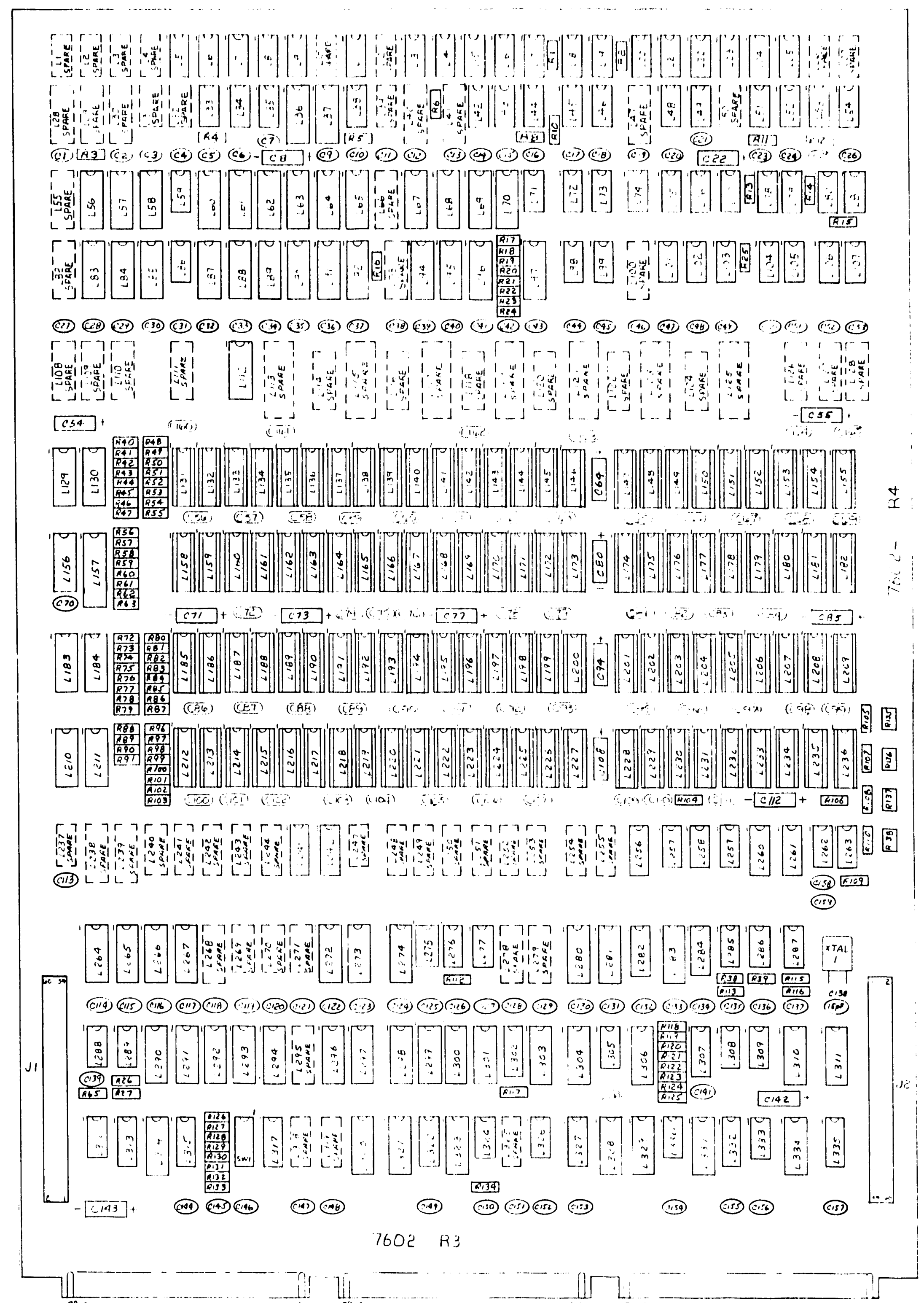
IC LOCATION	TYPE	WL PART NO
L1 4,1?,26-32, 37 41,47,50, 55,66, 82, 93,100,108-110,114,116, 119,120,122, 124,126-128, 237-24?,247-255,260-271, ?18,?79,275,?0, 318,31?,335,111, 121,1?9,115,11? [illegible]	SPARE	
L5,7,21,25, 286,288	74S51	376-0184
L6,6,54 262	74S08	376-0200
L8,305,330	74S30	376-0198
L9 18,24,59, 105,287,289	74S04	376-0197
L1?,15,20,46, 86,259	74S32	376-0205
L13,22,72	74S02	376-0179
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,?70,2?7, 298,300, 304,310,329, 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,?76, 285,309,326	74S74	376-0202
L48,98,333	74S10	376-0238
L56-58,60,97	74S161	376-0278
L61-64	74S189	376-0349
L74,257,275	74S37	376-0276
L79,324	7408	376-0081
L83 85,87	74S257	376-?131
L88-91,94 96	74S153	376-0215
L11?,129, 130,1?7,183, 184,210,211	74S373	376-030?
L1?-155,158 [illegible]	[illegible]	[illegible]
L245	74S260	[illegible]
L260 261	74S124	37?-0?73
L264 265,281, [illegible]	74LS?41	376-0288
L266,267	74S?04	376-0286
L272-274, 292,306	74S244	376-0339
L?8?	[illegible]	[illegible]
L284 3?7,332	[illegible]	376-0171
L31?	?4S86	376-0?76
L315,3?7,3?7, ?35	[illegible]	[illegible]
L319,320,3?1, [illegible]	[illegible]	376-0285
L3?5 317	[illegible]	376-02?4
[illegible]	[illegible]	[illegible]

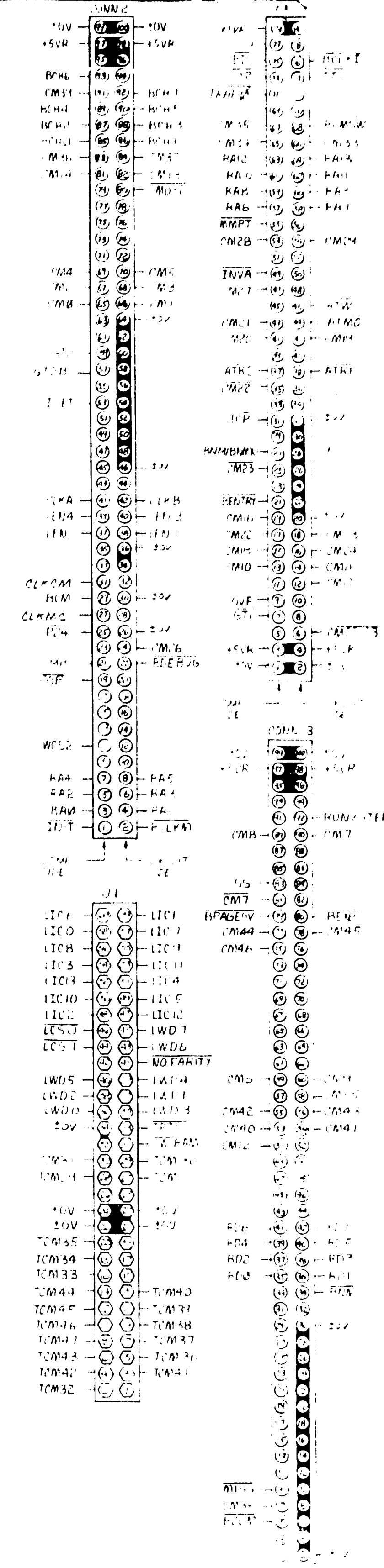
TYPE	IC LOCATION	SPARES
74S00	L17	1
	L156	2
74S02	L22	2
74S04	L287	1
	L?	4
	L24	4
	L289	1
	L59	2
74S08	L6	2
	L16	2
	L54	1
74S10	L333	1
	L98	1
74S11	L?	1
	L52	1
	L256	2
	L263	1
74S20	L23	1
74S32	L15	1
	L20	1
	L86	?
	L11	?
	L259	1
74S37	L257	3
	L275	2
74S51	L5	1
	L288	1
74S74	L45	1
	L53	1
	L285	1
74S124	L260	1
	L261	1
74S260	L245	1
7408	L79	3

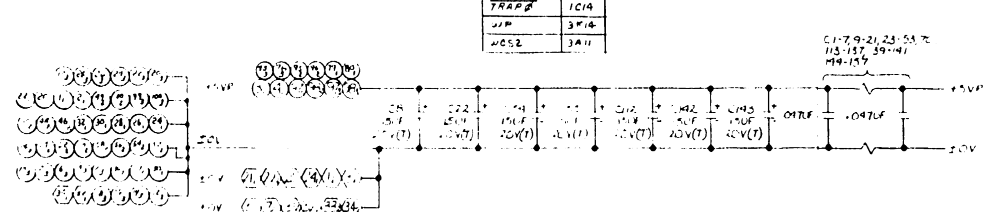
COMPONENT	TYPE	WL PART NO
R1-6,8,10-17,26, 27, 65,104, 106,109,112,113, 115-134	1K 1/4W 5%	330-3011
R18-24	47Ω 1/4W 5%	330-1045
R25	330Ω 1/4W 5%	330-2034
R40-63, 72-91,96-103	33Ω 1/4W 5%	330-1?34
R38 39 105, 107,108,110	470Ω 1/4W 5%	330-2048
R135-138	1K POT	336-1014
C1-7, 9-21, 23-53,70 113-137, 139-141, 144-157	.047µF 50V	300-1966
C8,22,54,55,64, 71,73,77,80, 85,94,106,112, 142,143	15µF 20V(TA)	300-4022
C56-63, 65-69,72, 74-76,78 79, 81-84,86-93, 95-107,109, 110,111, 160-165	.1µF 50V	300-1930
C158 159	5pF	
C138	15pF	300-1015
XTAL 1	20 MHZ	321-0045
J1,2	60 PIN CONN	350-0441
SW1	SPST 8 POS	325-1503

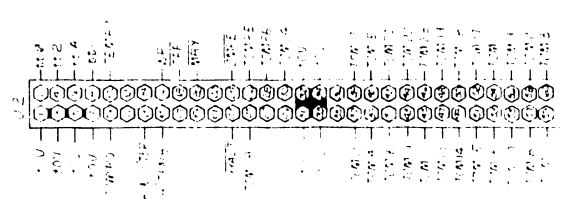
MNEMONIC	COORD.
ATMO	1D14
ATW	1D14
ATR1	1E14
ATR2	1E14
BNM/BNMX	1A8
BCKI	1F14
BCLKM	1F14
BCCM	1C14
BCMSW	1F14
BCM	1K11
BCH0-BCH7	1K13
BDE BUG	1F14
BENTRY	1F14
BEXTC	1E14
BIO	1F14
BNM	1A8
BPAGEOV	1F14
CLKCH	1A6
CLK A	1A6
CLK B	1A5
CLKMC	1A5
CMPE	3A11
CM0-2	3J1
CM7	3J1
CM22	3G1
CM23	3F1
CM22 23	?F1
CM0 CM23	3J1
CM24 CM29	3A7
CM33 CM46	3A6
COB	1A6
GT1	1C1
GT2	1B1
HALT	1A13
HLTENB	1B14
INIT	3K13
INVA	1D14
ISET	3K3
LCS0	3C14
LCS1	3C14
LD	1D14
LEN1-LEN4	1A7
LIC0-LIC13	3A10
LWD0-LWD7	3D14
MBY	1A14
MISS	1C14
MMPT	1E14
NO PARITY	3C14
OVF	1F14
R24	3K1
RA0 RA13	1D14
RD0-RD7	3A12
RUN/STEP	1B14
SS	1A4
STOP	1B14
SW/RAM1	3I14
TCMP0	3B1
TCMP1	3B1
TCM0-TCM47	3F1
TPE	1B4
TPTS	3K14
UCA	1E1
TT0 TT2	1D14
UC0-UC2	1E1
TRAPØ	1C14
UIP	3K14
WCS2	3A11

L10	209+377 OR 378		
210	209		L31-155,158-182, 185 209 212-236
7602 A	7602		377-0560









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

REVISION								BSR 32384
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	REVISED PER ECO#23507 ... APP'D DJC 4-24-84

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

MATERIAL	MODEL NO VS-??	TITLE
FINISH	TOL. EX. AS NOTED	209-7602 / E / SHT 2 OF 2

THIS DRAWING AND THE DATA CONTAINED THEREIN ARE THE CONFIDENTIAL PROPERTY OF AND ARE THE EXCLUSIVE PROPERTY OF WANG LABORATORIES, INC. THIS DRAWING AND THE DATA CONTAINED THEREIN SHALL NOT BE MADE PUBLIC OR OTHERWISE DISCLOSED TO ANY PERSON OR ENTITY WITHOUT THE PRIOR WRITTEN CONSENT OF WANG LABORATORIES, INC. IT SHALL NOT BE USED IN WHOLE OR IN PART FOR ANY PURPOSE OTHER THAN THAT FOR WHICH IT IS FURNISHED. NEITHER IT NOR THE INFORMATION CONTAINED THEREIN IS TO BE LOANED, COPIED, OR REPRODUCED IN ANY MANNER, ELECTRONIC OR OTHERWISE, WITHOUT THE PRIOR WRITTEN CONSENT OF WANG LABORATORIES, INC.

DO NOT SCALE

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

	BY	DATE	APPROVED BY	DATE
DWN AD	YEVAN EINGE			
CHK	H. EINGE			
MATERIAL			MFG ENGR	

MODEL NO VP-1011

SEE ENGRG SPECIFICATIONS No.

FINISH

TOL ES XX DECIMALS ± .X ± .XX ± .XXX ± FRACT ±

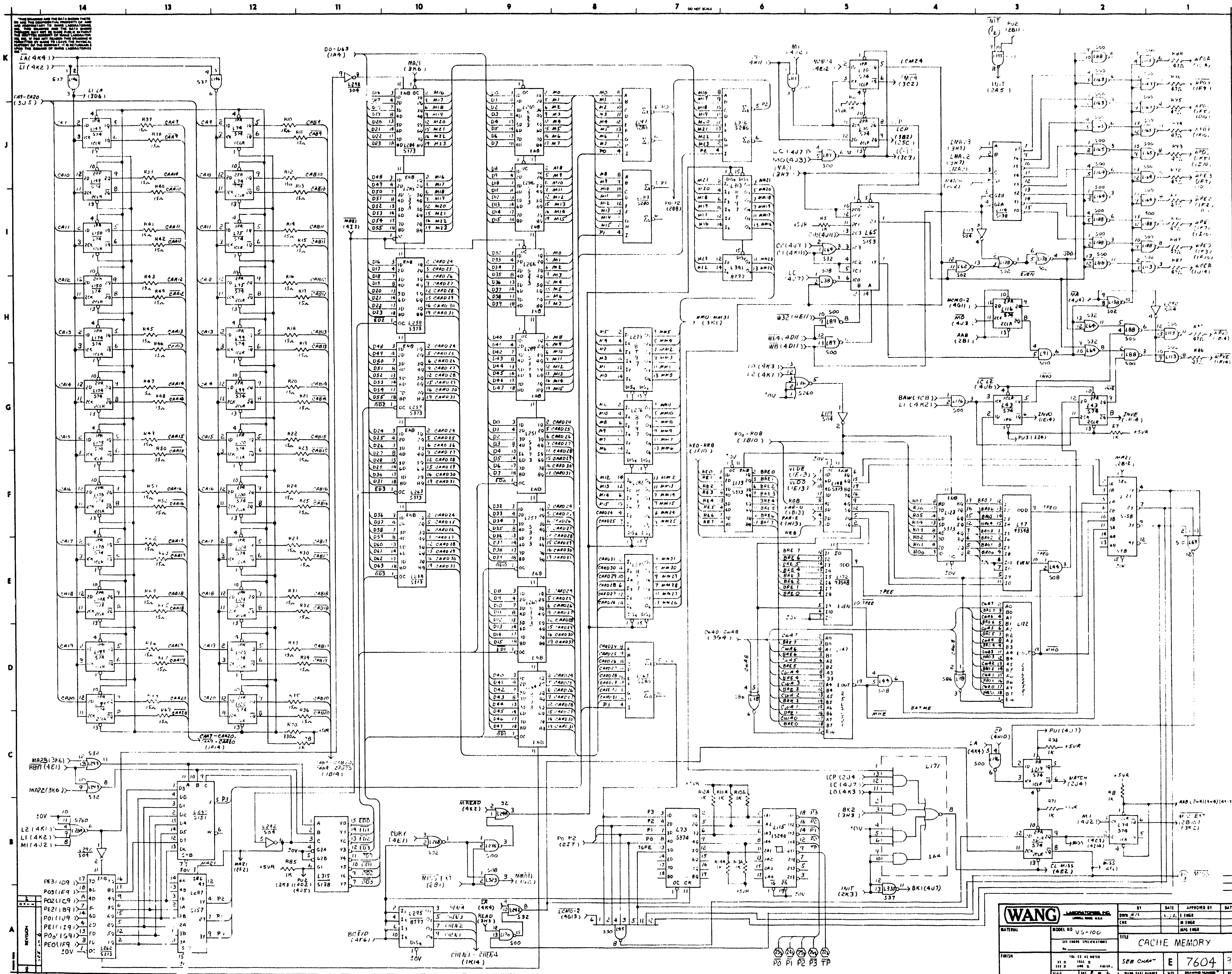
SCALE — SHT 7 OF 6

TITLE: CACHE MEMORY

SIZE E — DRAWING NUMBER 7604 — REV 1

REVISION — ECR — DATE

J1


"THIS DRAWING AND THE DATA SHOWN THEREON ARE THE CONFIDENTIAL PROPERTY OF AND ARE PROPRIETARY TO WANG LABORATORIES, INC. THIS DRAWING AND THE DATA SHOWN THEREON MAY NOT BE MADE PUBLIC WITHOUT THE WRITTEN CONSENT OF WANG LABORATORIES, INC. IF FOR ANY REASON THIS DRAWING IS PERMITTED BY WANG TO LEAVE THE PHYSICAL CUSTODY OF THE COMPANY, IT IS RETURNABLE UPON THE DEMAND OF WANG LABORATORIES INC."
DO NOT SCALE
WANG LABORATORIES, INC. LOWELL, MASS. U.S.A.
MODEL NO VS-100
TITLE CACHE MEMORY
SEE CHART
E
7604
9
SHT 2 OF 6
REVISION
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

J2

THIS DRAWING AND THE DATA SHOWN THEREON ARE THE PROPRIETARY PROPERTY OF WANG LABORATORIES, INC. AND SHALL NOT BE REPRODUCED OR USED IN WHOLE OR IN PART AS THE BASIS FOR THE MANUFACTURE OR SALE OF ITEMS WITHOUT WRITTEN PERMISSION. THE RECEIPT OR POSSESSION OF THIS DRAWING DOES NOT CONVEY ANY RIGHTS TO REPRODUCE OR USE IT FOR ANY PURPOSE, OR TO DISCLOSE ITS CONTENTS OR THE SUBJECT MATTER SHOWN THEREON, TO ANY THIRD PARTY, WITHOUT THE EXPRESS WRITTEN PERMISSION OF WANG LABORATORIES.

DO NOT SCALE

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

BY	DATE	APPROVED BY	DATE
DRAWN A.D.	1/4/80	E. LYNCH	
CHK		M. LYNCH	
		MFG LYNCH	

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

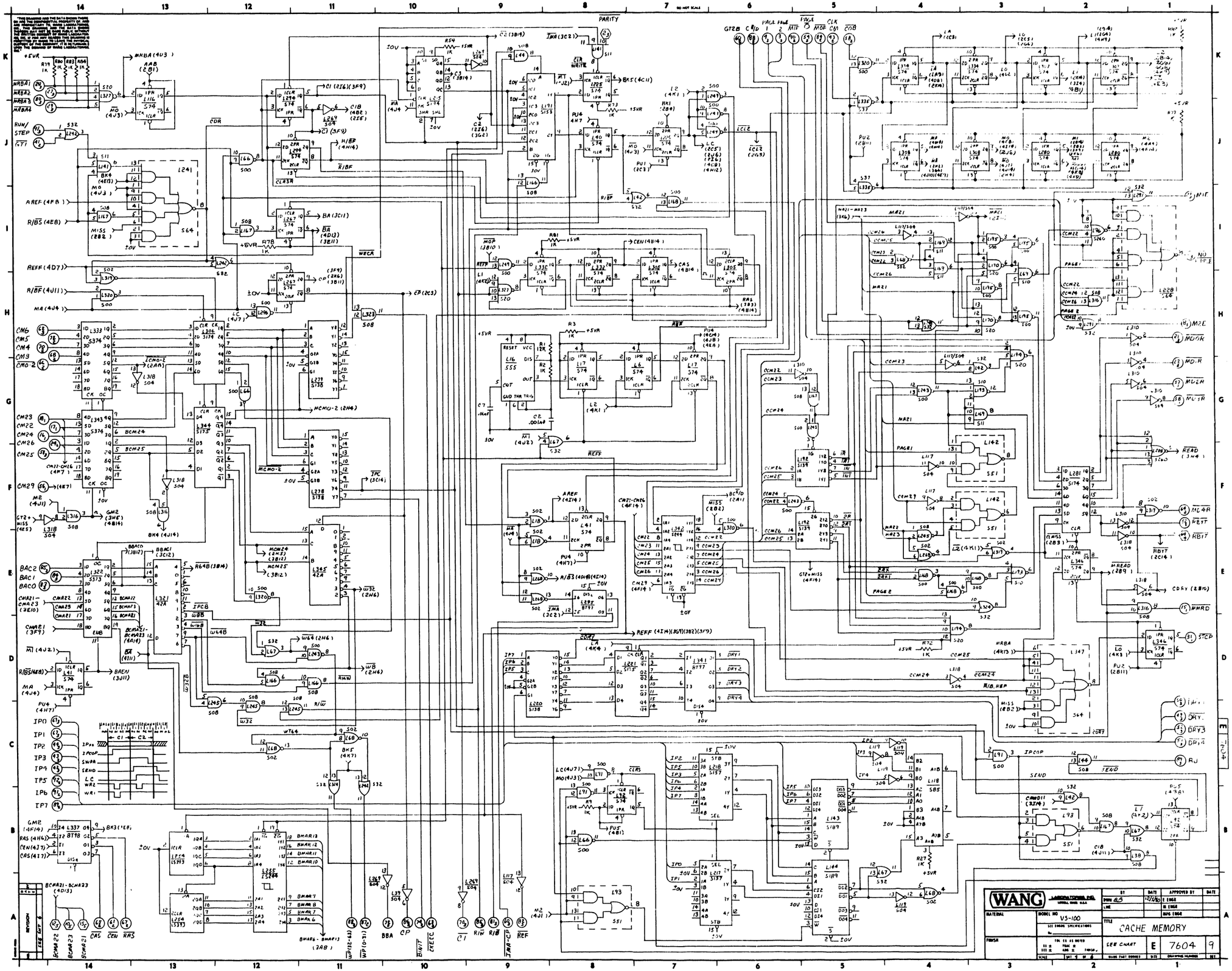
FINISH — TOL. XX ±0.02 — XXX ± — ANG. ± — FRACT. ±

TITLE: CACHE MEMORY

SIZE: E — DRAWING NUMBER: 7604 — REV: 9

SEE CHART 6 — SHEET 7 OF 16

NEXT ASSY — USED ON — APPLICATION — DO NOT SCRATCH OR MAR


PARITY
CACHE MEMORY
WANG LABORATORIES, INC.
MODEL NO VS-100
SEE CHART
E 7604 9
DRAWN
CHK
APPROVED
MATERIAL
FINISH
TITLE
SIZE
DRAWING NUMBER
REV
SEE CHART
REVISION
ECO NO.
DATE
BY
DESCRIPTION
DO NOT SCALE
THIS DRAWING AND THE DATA CONTAINED THEREIN ARE THE CONFIDENTIAL PROPERTY OF AND ARE PROPRIETARY TO WANG LABORATORIES, INC. THIS DRAWING AND THE DATA CONTAINED THEREIN ARE LOANED SUBJECT TO AGREEMENT NOT TO REPRODUCE OR COPY IN WHOLE OR IN PART AND NOT TO DISCLOSE THIS DRAWING OR PERMITTING ITS USE FOR ANY PURPOSE EXCEPT AS MAY BE AUTHORIZED IN WRITING BY WANG LABORATORIES, INC.

J4

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 PRIOR WRITTEN CONSENT OF WANG LABORATORIES, INC. IT FOR ANY REASON THIS DRAWING IS PERMITTED BY WANG TO LEAVE THE PHYSICAL CUSTODY OF THE COMPANY, IT IS TO REMAIN SUBJECT TO THE DEMAND OF WANG LABORATORIES

DO NOT SCALE

J1 — P2 CONN

J2 — P1 CONN

J3 — 350-0861

J4 — 350-0861

P3

7604-R4 COMPONENT SIDE

P2

P1

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 # 376-7014.

REVISION

SEE SHT 0

WANG LABORATORIES INC. LOWELL, MASS.		BY	DATE	APPROVED BY	DATE
MATERIAL	MODEL NO VS-100	DWN BD	2-5-80	ENGR	
	SEE ENGR. SPECIFICATIONS No.	CHK		M ENGR	
FINISH	TOL. EX AS NOTED .XX ± .YYY ± ANG. ± FINISH			MFG ENGR	
		TITLE	CACHE MEMORY		
		SIZE	E	760+	-
		DRAWING NUMBER			REV

J5

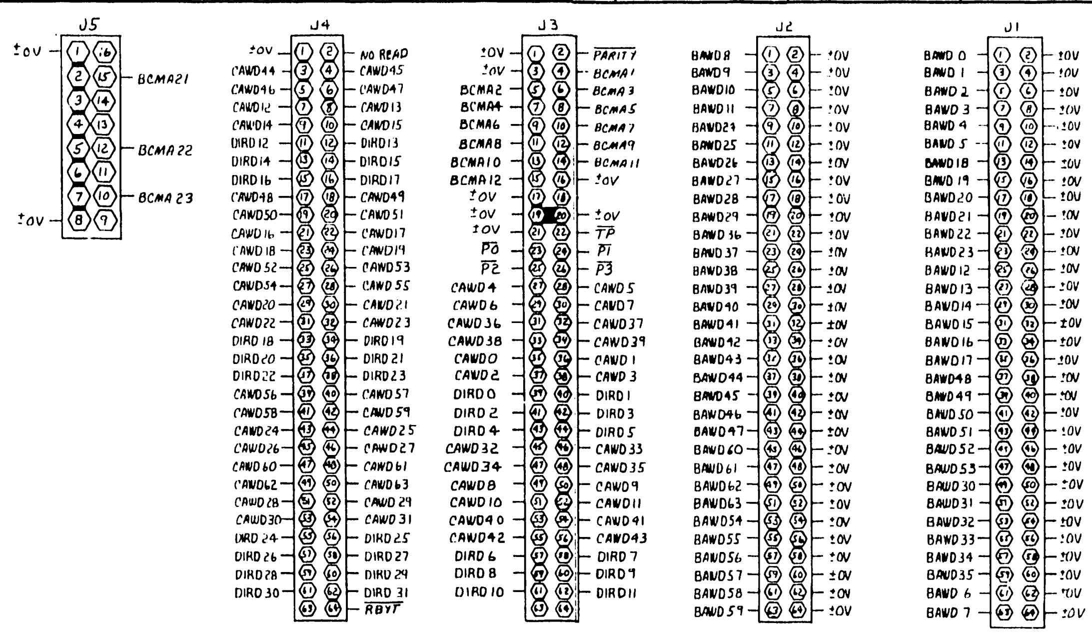
"THIS DRAWING AND THE DATA SHOWN THEREON ARE THE CONFIDENTIAL PROPERTY OF AND ARE PROPRIETARY TO WANG LABORATORIES, INC. THIS DRAWING AND THE DATA SHOWN THEREON MAY NOT BE MADE PUBLIC WITHOUT THE WRITTEN CONSENT OF WANG LABORATORIES, INC. IF FOR ANY REASON THIS DRAWING IS PERMITTED BY WANG TO LEAVE THE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

DO NOT SCALE

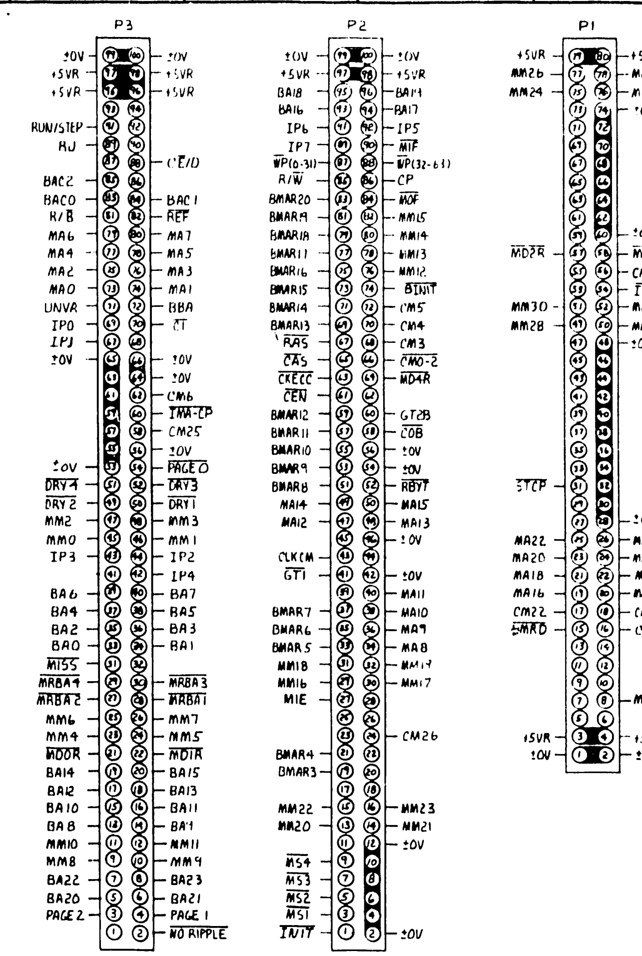
COMPONENT	TYPE	WL PART NO
L1-5,7,8,9, 12-15, 19-22, 48, 70, 266	SPARE	
L6,17,40,41, 43,74,75,90, 92,94,99,100, 116,124,125, 149,150,174, 175,198,199,219, 225,244,267, 280,294,305, 307,308,332, 334,346	74S74	396-0202
L10,11,24-27, 29,31,34,35, 37,270,273, 275,276,282, 290,295,301, 313,331,336, 338,341	8T97	396-0189
L16	555	376-0126
L18,62,68, 138,268,319	74S02	396-0199
L23,28,30,32, 33,36,49,63, 123,148,173, 238,250,251, 256-260,262-264,284-286, 289,300,302, 314,317,322, 326,328,329	74S373	396-0306
L38,44,166, 167,245,316, 323	74S08	396-0200
L39,117,119, 269,292,310, 318	74S04	396-0197
L45	74S30	396-0198
L50-52,76-78, 101-103,126,127, 151-153,176, 178,200-202, 226,227	6147	SEE CHART
L53-61,79-87, 104-112,129-137,154-162, 177-187,203-211,229-237	6147-3	SEE CHART
L42,64,67, 242,291,293, 324,248	74S32	396-0205
L65,191	74S153	396-0215
L66,88,89,91, 113,163-165, 168,188,195, 196,243,247, 296,320	74S00	396-0228
L69,193	74S10	396-0238
L71,72,118, 120,145	74S85	396-0259
L93,142,297	74S51	396-0184
L95	74367	396-0176
L96,288	74S260	396-0206
L97,128,172	93S48	396-0348
L98	74S86	396-0271
L114,220,278, 279,315	74S138	396-0298
L115	74LS240	396-0297
L121,222-224	74S158	396-0301
L122,147	25LS2521	396-0317
L139,140,189, 190,213,214, 239,240,247, 265,312,283	74S280	396-0246
L141,167	74S11	396-0237
L143,144	74S189	396-0347
L146,338	74S37	396-0296
L170,194,327	74S20	396-0230
L171,228,241, 347	74S64	396-0201
L192,216	74S139	396-0333
L212,255	74LS244	396-0288
L215	74S194	376-0221
L217,218,246, 271,272,287	74S157	396-0217
L221,344	74S175	396-0270
L252,253,281, 306	74S174	396-0297
L254	74LS393	396-0307
L261	74S151	396-0336
L274,299,303, 309,311,330	74157	396-0082
L278,304-73, 325,333,339, 340,343,277	74S374	396-0305
L321,345	7442A	396-0008
L337	8T78	396-0185
L342	74S249	396-0338
L73	20PIN SOCKET	376-9020
L50-61,76-87, 101-119,126,127, 129-137,151-162, 176-187,200-211, 226,227,229-237	18PIN SOCKET	376-9014

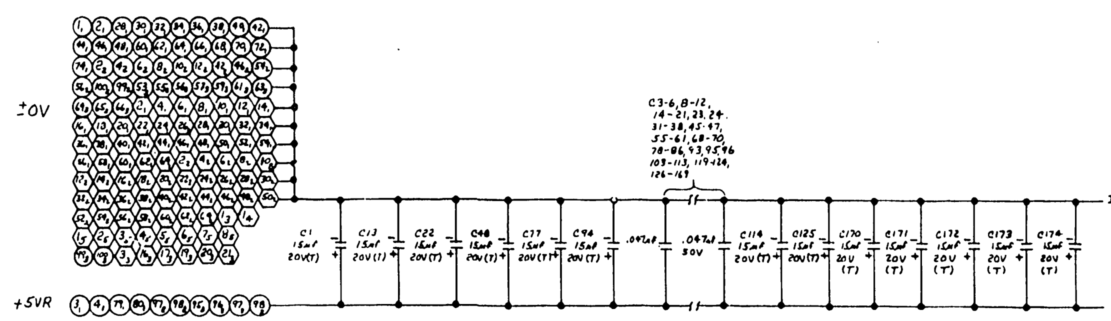
TYPE	IC LOCATION	SPARES
74S00	L66	1
	L196	1
74S02	L138	1
	L18	1
	L319	1
74S04	L39	4
74S08	L38	2
	L166	1
74S10	L69	1
74S32	L42	1
	L248	1
	L291	1
	L293	1
74S37	L146	2
74S51	L297	1
74S74	L6	1
	L40	1
74S86	L98	2
74S139	L216	1
8T98	L337	1

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%	330-2033
R86-97	47Ω 1/4W 10%	330-1047
R1	12K 1/4W 10%	330-4012
C1,13,22,48, 77,94,114,125, 170-174	15µf 20V (T)	300-4022
C2	.001µF, 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, 119-124, 126-169	.047 50V	300-1966
C7	.01µf 25V	300-1903
C25-30, 39-44, 49-54, 62-67, 71-76, 87-92, 97-102, 115-118	.1µf 50V	300-1930
SW1	SKT, 16PIN	376-9002T
SW 1	SPST 8POS	325-1503
J1-J4	64 PIN CONN	350-0061
J5	SKT, 16PIN	376-9024



210 = 209 + 377 OR 398				
210	209	L53-61,79-87, 104-112,129-137,154-162,179-187,203-211,229-237	L50-52,76-78,101-103, 126,127,151-153, 176-178,200-202,226,227	L73
7604-A	7604	377-0413	377-0412	396-0305
7604-1A	7604-1	377-0413	377-0412	396-0305
7604-B	7604			
7604-1B	7604-1			





MNEMONICS	COORD
BA0-BA23	3K12
BAC0-BAC2	4H14
BBA	4A10
BINIT	4A10
BAWD0-BAWD63	3A11
BMAR3-BMAR20	3A6
BCMA1-BCMA12	3F1
BCMA21-BCMA23	4A14
CAS	4A14
CAWD0-CAWD63	3G14
CEN	4A14
CE/D	4K6
CT	4A10
CKECC	4A10
CP	4A10
CLKCM	4K5
COB	4K5
CM0-2	4B14
CM13-CM6	4H14
CM22-CM26	4G14
CM29	4F14
DIRD0-DIRD31	3K3
DRY1-DRY4	4C1
GT1	4J14
GT2B	4K6
IMA-CP	4A9
INVA	3K1
INIT	2K3
IP0-IP7	4C14

MNEMONICS	COORD.
MA0-MA23	3K8
MD0R-MD3R	4G1
MD4R	4F1
MISS	2B1
MIF	4K5
MOF	4K5
MMRD	4E1
MM0-MM31	3I1
MRBA1-MRBA4	4K14
MS1-MS4	3A7
NO READ	3B1
NO RIPPLE	4I1
P0-P3	2A6
PAGE 0	4K5
PAGE 1	4K6
PAGE 2	4K6
PARITY	4K8
RAS	4A14
RBYT	4F1
REF	4A9
R/W	4A9
R/B	4A9
RUN/STEP	4J14
RJ	4C1
STCP	4D1
TP	2A5
UNVA	3B1
WP(0-31)	4A11
WP(32-63)	4A11
MIE	4I1
M2E	4H1

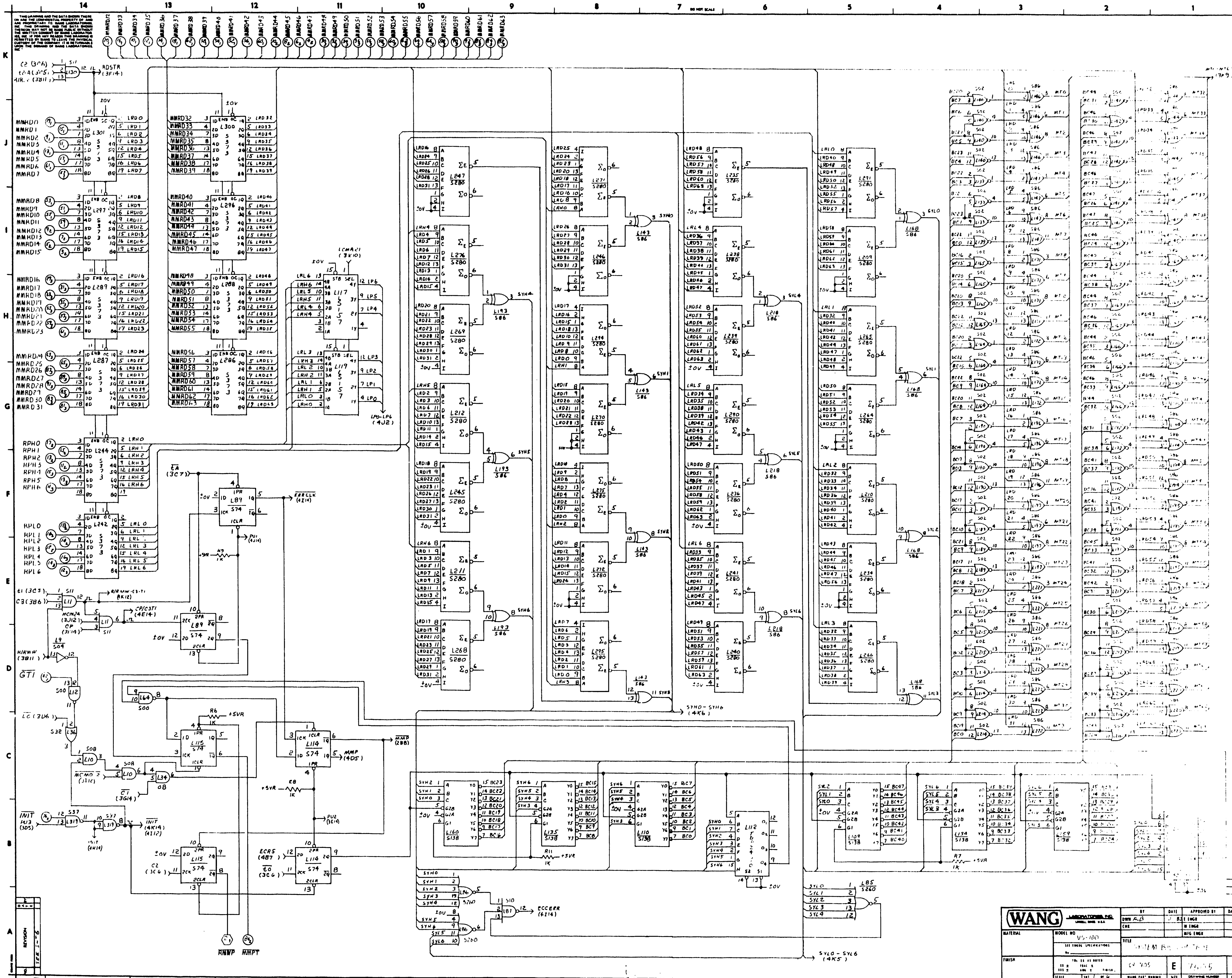
7604 E REV 2 | 7604-1 E REV 2

REVISION				
0	DESIGNATED PER DWR # E7?? APPD [illegible]	AD	[illegible]-80
1	REVISED PER ECN# 515 15735 APPD [illegible]	AD	11-?-80
2	REVISED PER ECO# 18111 APPD [illegible]	AG	3-2-81
3	REVISED PER ECO# 3[illegible] APPD [illegible]	AD	3-2-81
4	REVISED PER ECO# 19632 APPD [illegible]	CDB	6-4-81
5	REVISED PER ECO# 19962 APPD [illegible]	[illegible]	10-4-81
6	REVISED PER ECO# 21372 APPD [illegible]	[illegible]	11-30-81
7	REVISED PER ECO# 21447, 21924, 22819 APPD [illegible]	JEP	3-17-82
8	REVISED PER ECO# 23085 APPD [illegible]	RGD	5-20-82
9	REVISED PER ECO# 29345 APPD [illegible] 9/28/83	[illegible]	9-27-83

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

MODEL NO	VS-100
TITLE	CACHE MEMORY
DWN	AD 12-5-80
E ENGR	R.T.
WANG PART NUMBER	SEE CHART
SIZE	E
DRAWING NUMBER	7604
REV	9
SHT	6 OF 6

7604


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.
WANG LABORATORIES INC. LOWELL MASS. U.S.A.
MODEL NO VS-100
TITLE SYSTEM BUS CONTROL
109-7605
E
7605
SYHO - SYH6 (4K6)
SYLO - SYL6 (4K5)
ECCERR (4I14)
MTO - MT63 (3K9)
LPO-LP6 (4J2)
RDSTR (3F14)
MMP (4D5)
RMWP
MMPT
REVISION

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 PRIOR WRITTEN CONSENT OF WANG LABORATORIES, INC. IF FOR ANY REASON THIS DRAWING IS PERMITTED BY BOARD TO LEAVE THE PHYSICAL CUSTODY OF THE COMPANY, IT IS RETURNABLE UPON THE DEMAND OF WANG LABORATORIES, INC.

DO NOT SCALE

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

BY	DATE	APPROVED BY	DATE
DWN RB	10-11-80	E EDGE	
CHK		M EDGE	
		MFG EDGE	

MATERIAL — MODEL NO VS-100 — SEE ENGRG SPECIFICATIONS — No. — FINISH — TOL XX ±0.06 XXX ± .030 ANG ± 1° — SCALE — SHT 2 OF 6

TITLE: SYSTEM BUS CONTROL

DRAWING NUMBER: 729-7605 — SIZE: E — 7605 — REV: 2

WANG PART NUMBER

REVISION

K2

THIS DRAWING AND THE DATA SHOWN THEREON ARE THE CONFIDENTIAL PROPERTY OF WANG LABORATORIES, INC. WANG LABORATORIES, INC. THIS DRAWING, AND THE DATA SHOWN THEREON, IS SUBMITTED IN CONFIDENCE AND ON THE EXPRESS AGREEMENT THAT NEITHER IT NOR THE DATA SHOWN THEREON WILL BE DISCLOSED TO ANYONE OUTSIDE THE RECIPIENT'S ORGANIZATION OR USED TO LEAVE THE PHYSICAL CUSTODY OF THE RECIPIENT, IT IS RETURNABLE UPON THE TERMINATION OF WANG LABORATORIES, INC.'S

DO NOT SCALE

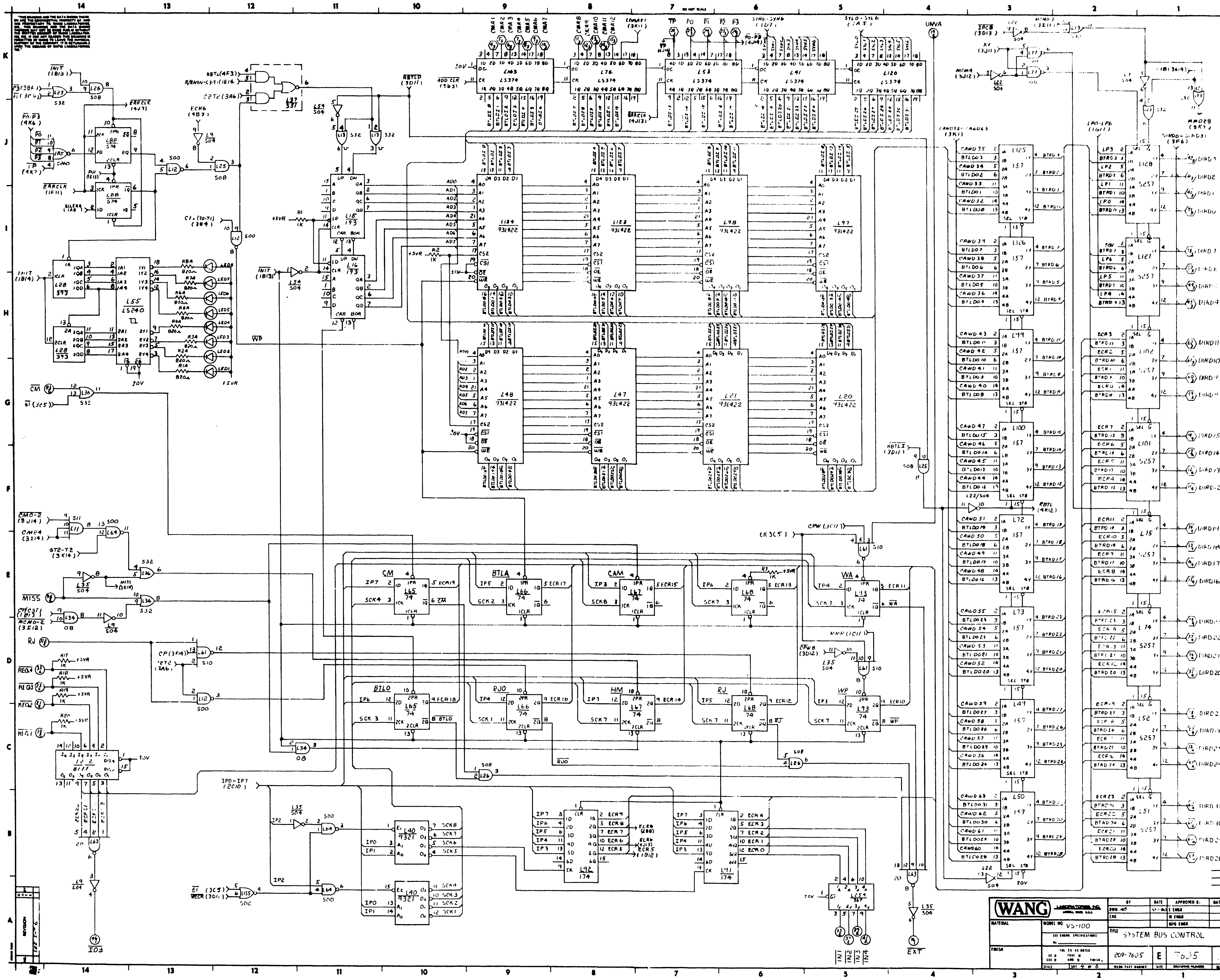
WANG LABORATORIES, INC. LOWELL, MASS. U.S.A.

MATERIAL	MODEL NO	VS-100	BY	DATE	APPROVED BY	DATE
	SEE ENGRG SPECIFICATIONS		DRN AJJ	10/80	E 1868	
FINISH			CHK		E 1868	
					MFG 1868	

TITLE: SYSTEM BUS CONTROL

DOC. 7605 | E | 7605 | -

SCALE | SHT 2 OF 6 | DRAWING NUMBER | REV


WANG LABORATORIES, INC.
MODEL NO. VS-100
SYSTEM BUS CONTROL
209-7605
E
7605
SHT 4 OF 6
L103 LS374
L76 LS374
L53 LS374
L41 LS374
L120 LS374
L124 93L422
L123 93L422
L98 93L422
L97 93L422
L48 93L422
L47 93L422
L21 93L422
L20 93L422
L16 193
L55 LS240
L28 393
L88 S74
L125 157
L126 157
L99 157
L100 157
L72 157
L73 157
L49 157
L50 157
L128 S257
L127 S257
L102 S257
L101 S257
L75 S257
L74 S257
L52 S257
L51 S257
L65 74
L66 74
L67 74
L68 74
L93 74
L40 9321
L92 174
L91 174
8T17
CM
BTLA
CAM
WA
BTLO
RJO
HM
RJ
WP
UNVA
MISS
EXT
IO3
IN1
IN2
IN3
IN4
DIRD0-DIRD31 (3F6)
CAWD32-CAWD63 (3K1)
LP0-LP6 (1G11)
IP0-IP7 (2C10)

K4

THIS DRAWING AND THE DATA SHOWN THEREON ARE THE CONFIDENTIAL PROPERTY OF WANG LABORATORIES, INC. THE INFORMATION CONTAINED HEREIN SHALL NOT BE USED, REPRODUCED OR DISCLOSED TO OTHERS WITHOUT THE WRITTEN PERMISSION OF WANG LABORATORIES, INC. NO RIGHT OR LICENSE TO USE THE DRAWING IS GRANTED OR IMPLIED BY THE FURNISHING OF THIS DRAWING. IN THE EVENT OF PUBLICATION, THE FOLLOWING NOTICE SHALL APPLY: "COPYRIGHT BY WANG LABORATORIES, INC. 1978"

CONN 1

±0V	80 79	±0V	
+5VR	78 77	+5VR	
EXT	76 75		
MMWD45	74 73	MMWD13	
MMWD44	72 71	MMWD12	
MMWD42	70 69	MMWD10	
MMWD43	68 67	MMWD11	
MMWD46	66 65	MMWD14	
MMWD47	64 63	MMWC15	
MMRD38	62 61	MMRD6	
MMRD43	60 59	MMRD11	
MMRD37	58 57	MMRD7	
MMRD42	56 55	MMRD10	
MMRD40	54 53	MMRD8	
MMRD41	52 51	MMRD9	
MMWD36	50 49	MMWD4	
MMWD37	48 47	MMWD5	
IO3	46 45		
WD31	44 43	WD30	
WD29	42 41	WD28	
MMWD39	40 39	MMWD7	
MMWD38	38 37	MMWD6	
MMWD40	36 35	MMWD8	
MMWD41	34 33	MMWD9	
WD27	32 31	WD26	
WD25	30 29	WD24	
MMWD32	28 27	MMWD0	
MMWD33	26 25	MMWD1	
MMWD35	24 23	MMWD3	
MMWD34	22 21	MMWD2	
MMRD32	20 19	MMRD0	
MMRD37	18 17	MMRD5	
MMRD33	16 15	MMRD1	
MMRD36	14 13	MMRD4	
MMRD35	12 11	MMRD3	
MMRD34	10 9	MMRD2	
	8 7	CM24	
CM26	6 5	CM22-23	
+5VR	4 3	+5VR	
±0V	2 1	±0V	

CONN 2

±0V	100 99	±0V	
+5VR	98 97	+5VR	
WPL4	96 95	WPH4	
WPL5	94 93	WPH5	
WPL6	92 91	WPH6	
MMP-CP	90 89	BAC2	
CP	88 87	BAC1	
MISS	86 85	BAC0	
MMPT	84 83	CM1	
RJ	82 81		
R/W	80 79	UNVA	
CT	78 77	IP7	
INIT	76 75	IP6	
	74 73	IP5	
CM6	72 71		
CM5	70 69	WD23	
CM4	68 67	WD22	
CM3	66 65	WD21	
CM0-2	64 63	WD20	
GT2 B	62 61	WD19	
BTA	60 59	WD18	
BTO	58 57	WD17	
BT1	56 55	WD16	
BT2	54 53		
	52 51	CLKMC	
	50 49	OB	
CEID	48 47		
CM25	46 45		
GT1	44 43		
	42 41	IN4	
±0V	40 39	IN3	
±0V	38 37	IN2	
±0V	36 35	IN1	
	34 33	REQ4	
WPL0	32 31	WPH0	
WPL1	30 29	WPH1	
WPL2	28 27	WPH2	
WPL3	26 25	WPH3	
	24 23	REQ3	
	22 21	REQ2	
	20 19	REQ1	
RPL0	18 17	RPH0	
RPL1	16 15	RPH1	
RPL2	14 13	RPH2	
RPL3	12 11	RPH3	
MMRD44	10 9	MMRDI2	
MMRD45	8 7	MMRDI3	
MMRD46	6 5	MMRDI4	
MMRD47	4 3	MMRDI5	
	2 1		

CONN 3

±0V	100 99	±0V	
+5VR	98 97	+5VR	
WD7	96 95	WD6	
WD5	94 93	WD4	
MMRD60	92 91	MMRD28	
MMRD59	90 89	MMRD27	
MMRD58	88 87	MMRD26	
MMRD61	86 85	MMRD29	
MMRD62	84 83	MMRD30	
MMRD63	82 81	MMRD31	
MMWD61	80 79	MMWD29	
MMWD63	78 77	MMWD31	
MMWD62	76 75	MMWD30	
MMWD60	74 73	MMWD28	
MMWD54	72 71	MMWD22	
MMWD55	70 69	MMWD23	
MMWD56	68 67	MMWD24	
MMRD57	66 65	MMRD25	
MMRD56	64 63	MMRD24	
MMRD55	62 61	MMRD23	
MMRD54	60 59	MMRD22	
MMRD53	58 57	MMRD21	
MMRD52	56 55	MMRD20	
MMWD57	54 53	MMWD25	
MMWD58	52 51	MMWD26	
MMWD59	50 49	MMWD27	
WD3	48 47	WD2	
WD1	46 45	WD0	
WD15	44 43	WD8	
MMWD49	42 41	MMWDI7	
MMWD48	40 39	MMWDI6	
MMWD50	38 37	MMWDI8	
MMRD51	36 35	MMRDI9	
MMRD50	34 33	MMRDI8	
MMRD49	32 31	MMRDI7	
MMRD48	30 29	MMRDI6	
MMWD51	28 27	MMWDI9	
MMWD52	26 25	MMWD20	
MMWD53	24 23	MMWD21	
WD14	22 21	WDI3	
WD12	20 19	WDI1	
WD10	18 17	WD9	
RPL4	16 15	RPH4	
RPL5	14 13	RPH5	
RPL6	12 11	RPH6	
IP4	10 9	IP3	
IP2	8 7	IP1	
IP0	6 5	BBA	
+5VR	4 3	+5VR	
±0V	2 1	±0V	

J1

BARD32	43 44	
BARD33	41 42	
BARD34	39 40	
BARD35	37 38	
BARD36	35 36	
BARD37	33 34	
BARD38	31 32	
BARD39	29 30	
BARD40	27 28	
BARD41	25 26	
BARD42	23 24	
BARD43	21 22	
BARD44	19 20	
BARD45	17 18	
BARD46	15 16	
BARD47	13 14	
BARD48	11 12	
BARD49	9 10	
BARD50	7 8	
BARD51	5 6	
BARD52	3 4	
BARD53	1 2	
BARD54	43 44	
BARD55	41 42	
BARD56	39 40	
BARD57	37 38	
BARD58	35 36	
BARD59	33 34	
BARD60	31 32	
BARD61	29 30	
BARD62	27 28	
BARD63	25 26	
	23 24	±0V

J2

BARD 0	43 44	
BARD 1	41 42	
BARD 2	39 40	
BARD 3	37 38	
BARD 4	35 36	
BARD 5	33 34	
BARD 6	31 32	
BARD 7	29 30	
BARD 8	27 28	
BARD 9	25 26	
BARD 10	23 24	
BARD 11	21 22	
BARD 12	19 20	
BARD 13	17 18	
BARD 14	15 16	
BARD 15	13 14	
BARD 16	11 12	
BARD 17	9 10	
BARD 18	7 8	
BARD 19	5 6	
BARD 20	3 4	
BARD 21	1 2	
BARD 22	43 44	
BARD 23	41 42	
BARD 24	39 40	
BARD 25	37 38	
BARD 26	35 36	
BARD 27	33 34	
BARD 28	31 32	
BARD 29	29 30	
BARD 30	27 28	
BARD 31	25 26	±0V

J3

±0V	1 2	RMWP
±0V	3 4	CMA1
CMA 2	5 6	CMA3
CMA 4	7 8	CMA5
CMA 6	9 10	CMA7
CMA 8	11 12	CMA9
CMA10	13 14	CMA11
CMA12	15 16	±0V
±0V	17 18	
±0V	19 20	±0V
±0V	21 22	PP
P0	23 24	P1
P2	25 26	P3
CAWD 4	27 28	CAWD 5
CAWD 6	29 30	CAWD 7
CAWD36	31 32	CAWD37
CAWD 38	33 34	CAWD 39
CAWD 0	35 36	CAWD 1
CAWD 2	37 38	CAWD 3
DIRD 0	39 40	DIRD 1
DIRD 2	41 42	DIRD 3
DIRD 4	43 44	DIRD 5
CAWD 32	45 46	CAWD 33
CAWD 34	47 48	CAWD 35
CAWD 8	49 50	CAWD 9
CAWD10	51 52	CAWD11
CAWD40	53 54	CAWD41
CAWD42	55 56	CAWD43
DIRD 6	57 58	DIRD 7
DIRD 8	59 60	DIRD 9
DIRD 10	61 62	DIRD11
±0V	63 64	

J4

±0V	1 2	NO READ
CAWD44	3 4	CAWD45
CAWD46	5 6	CAWD47
CAWD 12	7 8	CAWD13
CAWD 14	9 10	CAWD15
DIRD 12	11 12	DIRD13
DIRD14	13 14	DIRD15
DIRD 16	15 16	DIRD17
CAWD48	17 18	CAWD49
CAWD50	19 20	CAWD51
CAWD 16	21 22	CAWD17
CAWD18	23 24	CAWD19
CAWD52	25 26	CAWD53
CAWD54	27 28	CAWD55
CAWD20	29 30	CAWD21
CAWD22	31 32	CAWD23
DIRD 18	33 34	DIRD19
DIRD 20	35 36	DIRD21
DIRD 22	37 38	DIRD23
CAWD 56	39 40	CAWD 57
CAWD 58	41 42	CAWD 59
CAWD24	43 44	CAWD 25
CAWD26	45 46	CAWD 27
CAWD60	47 48	CAWD 61
CAWD62	49 50	CAWD 63
CAWD28	51 52	CAWD 29
CAWD 30	53 54	CAWD 31
DIRD 24	55 56	DIRD 25
DIRD 26	57 58	DIRD 27
DIRD 28	59 60	DIRD 29
DIRD 30	61 62	DIRD 31
±0V	63 64	RBVT

J5

LCMA 21	16 1	
	15 2	
	14 3	
LCMA 22	13 4	
	12 5	
	11 6	
LCMA23	10 7	
	9 8	±0V

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

REVISION	BY	DATE	APPROVED BY	DATE	
	DWN RD	10/80	E 1980		
	CHK		M 1980		
			MPD 1980		

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

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

FINISH — TOL EX .XX ±0.010 / FRAC ± / ANG ± 1/2° / .XXX ± .005 — DIMS IN INCHES — UNLESS OTHERWISE SPECIFIED — DRT 3 OF 6

TITLE: SYSTEM BUS CONTROL

209-7605 — SIZE E — 7605 — 6

LOCATION	TYPE	WL PART NO
C1-3,4,11-19, 21-32,48, 58,61,62, 63,64,67,71, 84,90,94,104, 106,107,112, 138,163,181, 339	SPARE	
C33,34,35,39, 108,118,132, 158,173,310	74504	376-0197
C10,125,188	74508	376-0200
C1130	74511	376-0237
C40,69,78,117	74500	376-0228
C123,36	74532	376-0205
C15,16	74193	376-0053
C20,21,41,148, 71,178,193, 194	931422	SEE CHART
C34,344	74520	376-0230
C28	74393	376-0330
C31	7408	376-0081
C37	74S51	376-0184
C40	9321	376-0096
C42,53,76,109, 120	74LS14	376-0286
C49,50,72,73, 99,100,105, 106,136,137, 149,150,152, 153,161,162,168, 175,177,178,179, 181,197,200, 202,203,204, 225,227,228, 240,245,246, 318,321,337, 34,343,345, 347,124,132	74157	376-0082
C51,52,79,75, 101,102,103,128	74S257	376-0131
C55	74LS240	376-0297
C56,88,89,104, 105,114,115,131, 241,242,263, 282,292	74S74	376-0202
C61,87	74S10	376-0238
C63	7420	376-0004
C65-68,93	7474	376-0006
C77	7400	376-0002
C79	7432	376-0093
C80	25S10	376-0339
C81,82,350 353	7415 3	376-0098
C85,86	74S260	376-0206
C91,92	74174	376-0098
C109,110,113, 116,133-135, 159,160	74S138	376-0298
C111,112	TBP24-10	317-0062
C117,119	74LS157	376-0216
C129	7414	376-0139
C139-142,155, 164-167,169 192,214-217	74502	376-0199
C143-147,168-172,193-197, 218-222,302 311,329,338	74586	376-0271
C148,151,156, 157,173,176, 189,185,198, 201,223,226, 229,264	74S157	376-0217
C154,179,204, 229,253,256	74367	376-0176
C180-183,205, 230,242,244, 255,246,289, 296,277,300, 301,304	74S373	376-0306
C206-211,231-236,238-241, 243-247,226 258,264,265, 266,268,251, 275-279,290, 291,294,295, 303,309,307 313,323,325 326,328,330, 331,335,337, 324,328	74S280	376-0246
C1113,231	74S174	376-0247
C243,305,333, 334,345324	74S374	376-0305
C248,251	74S153	376-0215
C250,312, 313,332,340, 342,144,348	8T97	376-0189
C1261	74S175	376-0270
C271-274,278, 279	74S244	376-0338
C1283	74S194	376-0221
C313,315,317, 320 SH 1	74LS373	376-0310
C317,22	74S37	376-0296
C1314,1951 1315,1321	16 PIN SKT	376-8010
C1-51	8T98	376-0185

COMPONENT	TYPE	WL PART NO.
R1-8,10-13,17-20	1K 1/4W 10%	330-3010
R1A-8A	820Ω 1/4W 10%	330-2082
R21-24	22Ω 1/4W 10%	330 1022
C128,140,145, 162,230,259	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 96"	350 0440
J5	16 PIN DIP SKT	376-9002
LED1-8	LAMP, RED	370-3024

TYPE	IC LOCATION	SPARES
74500	L107	2
74502	L155	2
74504	L9	1
	L22	1
	L35	2
	L54	4
	L108	1
	L132	1
	L158	1
	L293	2
	L310	2
7408	L34	1
74508	L10	2
	L25	1
	L26	1
	L188	1
74520	L64	1
	L346	1
74532	L13	1
	L23	1
74537	L322	2
74S51	L37	1
74574	L282	1
74586	L193	1
	L218	1
	L311	1
	L329	1
7414	L129	4
8T97	L252	1
8T98	L281	1

MNEMONICS	COORD
BACO-BAC 2	3H14
BARDO-BARD 63	2G19
BBA	3E14
BTA	3A7
BTO-BT2	3A8
C1	3G14
CAWDO-CAWD 63	3J1
C B/O	2A8
CLKMC	3D19
COB	3D14
DP	3E14
DM	4G19
CM22-23	3F19
CM24-CM26	3F14
CMO-2	3J19
CM3-CM6	3J19
CMA11-CM8A8	4K9
DIWDO-DWD31	4J1
EXT	4A9
GT1	1D14
GT28	3K19
IO3	4A14
IPO-IP7	1A10
INT	1B14
IN1-IN4	4A15
LCMA 21	3K10
LCMA 22	3B14
LCMA 23	3C14
MMPT	1A12
MMPCP	2A8
MISS	4E14
MMRDO-MMRD 31	1J14
MMRD 32-MMRD 63	1K19
MMWO-MMWD 31	2J1
MMWD 32-MMWD 63	2A4
NO READ	3A19
P0-P3	4K7
HJ	4D14
WIB	3H14
RMWP	1A12
REQ1-REQ4	4D14
RPHO-RPH6	1F14
RWLO-RPL6	1F14
RSYT	3K8
TP	4K7
UNVA	4K9
WPLO-WPL6	2C1
WPHO-WPH6	2A12
WDO-WD31	2K12

210 OR 209 OR 353 OR 398		
J0	209	L20,21,47,48,97,98,123,124
7605-A	7605	397-0384

7605-R4

REV	REVISION	ADJ	DATE	ADJ	DATE	ADJ	DATE	ADJ	DATE
0	ORIGINAL RELEASE		10/11/78						
1	ECO # 1102-0178 APPD 11/20/78		11/20/78						
2	REVISED PER ECO # 1102-0179 APPD 12/7/78		12/7/78						
3	REVISED PER ECO # 1102-0180 APPD 1/26/79		1/26/79						
4	REVISED PER ECO # 1102-0181 APPD 2/16/79		2/16/79						
5	REVISED PER ECO # 1102-0182 APPD 3/20/79		3/20/79						

WANG LABORATORIES, INC. LOWELL, MASS. U.S.A.	BY	DATE	APPROVED BY	DATE
	DWN A.B	10-4-78	ENGR E. WANG	
	CHK [illegible]	7/14/78	ENGR	
MATERIAL	MODEL NO VS-100		MFG ENGR	
	SEE ENGRG SPECIFICATIONS No.	TITLE	SYSTEM EJS CONTROL	
FINISH	UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES TOLERANCES ARE ± FRACTIONS ± DECIMALS ± ANGLES ± FINISH	399-7605	E	7505
SCALE	SHT 6 OF 6	WANG PART NUMBER	SIZE	DRAWING NUMBER

* THIS DRAWING AND THE DATA SHOWN THEREON ARE PROPRIETARY TO WANG LABORATORIES, INC. THIS DRAWING AND THE DATA SHOWN THEREON MAY NOT BE REPRODUCED IN WHOLE OR IN PART WITHOUT THE WRITTEN PERMISSION OF WANG LABORATORIES, INC. IT IS FOR AUTHORIZED USE ONLY AND IS PERMITTED BY WANG TO LEAVE THE PHYSICAL CUSTODY OF THE COMPANY IT IS FURNISHED UPON THE DEMAND OF WANG LABORATORIES INC.

U5 MEM

U22 MEM

U19 MEM

U16 SBC

U13 CACHE

U10 DB-BUS

U7 A-BUS

U4 CPM

U24

U21

U18

U15

U12

U9

U6

U3

U23

U20

U17

U14

U11

U8

U5

U2

L1

THIS DRAWING AND THE DATA SHOWN THEREON ARE THE CONFIDENTIAL PROPERTY OF WANG LABORATORIES, INC. AND ARE NOT TO BE USED BY OR THE DATA SHOWN THEREON MAY NOT BE MADE PUBLIC WITHOUT THE WRITTEN CONSENT OF WANG LABORATORIES, INC. THIS DRAWING IS LOANED SUBJECT TO RECALL AND PERMITTED BY WANG TO LEAVE THE PHYSICAL CUSTODY OF THE COMPANY ITS RETURNABLE UPON THE DEMAND OF WANG LABORATORIES INC.

DO NOT SCALE

REVISION	BY	DATE	APPROVED BY	DATE

WANG LABORATORIES INC. LOWELL, MASS. U.S.A.	BY	DATE	APPROVED BY	DATE
	DWN		ELEC ENGR	
	CHK		M ENGR	
			MFG ENGR	
MATERIAL	MODEL NO VS-100		TITLE	
FINISH	SEE SHEET SPECIFICATIONS No.			
	TOL UNLESS NOTED .XX ± .XXX ± .XXXX ± FRACTIONS ±			
	SCALE NONE SHT 2 OF 3	WANG PART NUMBER	SIZE E	DRAWING NUMBER

L2

THIS DRAWING AND THE DATA SHOWN THEREON ARE THE CONFIDENTIAL PROPERTY OF WANG LABORATORIES, INC. AND ARE NOT TO BE USED FOR ANY PURPOSE OTHER THAN THAT FOR WHICH THEY ARE LOANED. NEITHER THIS DRAWING NOR THE DATA SHOWN THEREON MAY NOT BE MADE PUBLIC WITHOUT THE PRIOR PERMISSION OF WANG LABORATORIES, INC. THE PROPERTY RIGHTS IN THIS DRAWING ARE PROTECTED BY WANG TO LEAVE THE PHYSICAL PLANTS OF THE COMPANY. IT IS RETURNABLE UPON THE DEMAND OF WANG LABORATORIES INC.

DO NOT SCALE

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

REVISION	BY	DATE	APPROVED BY	DATE
ECN 7352				
ECN 7353				
ECN 7354				
ECN 7355				
ECN 7356				
ECN 7357				
ECN 7358				
ECN 7359				
ECN 7360				
ECN 7361				
ECN 7362				

COMPONENT	TYPE	PART NO
J1	26 PIN CONN	262
J2,5,8,11,14,17,20,23,26,29,32,35,38,41,44,47,48,49,50	100 PIN CONN	
J3,6,9,12,15,18,21,24,27,30,31,33,34,36,37,39,40,42,43,45,46	100 PIN CONN	
J47-50	60 PIN CONN	

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

MATERIAL | MODEL NO V5 100 | SEE MODEL SPECIFICATION | FINISH | TOL UNLESS NOTED .XX ± .XXX ± ANG ± FINISH | SCALE NONE | SHT 3 OF 3

TITLE CPU MOTHER BOARD

21C 7608 | E | 7608 | -

MODEL PART NUMBER | DRAWING NUMBER | REV

HOLE LEGEND & TOLERANCES

HOLE DIA.	SIZE/REF	SIZE/REF

L3

THIS DRAWING AND THE DATA WITHIN THESE ARE THE CONFIDENTIAL PROPERTY OF WANG AND IMPORTANT TO WANG LABORATORIES. THEY ARE LOANED SUBJECT TO THE RETURN THEREOF AND THE PURPOSE FOR WHICH MADE, AND WITH THE WRITTEN CONSENT OF WANG LABORATORIES, INC. IF FOR ANY REASON THIS DRAWING IS REVISED OR WHEN IT CEASES TO BE NEEDED FOR THE PURPOSE FOR WHICH LOANED, IT SHALL BE RETURNED TO WANG LABORATORIES, INC.

J40 J36 J32 J28 J24 J20 J16 J12 J8 J4

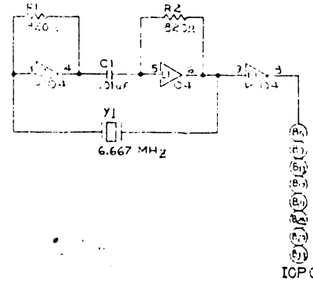
J39 J35 J31 J27 J23 J19 J15 J11 J7 J3

J38 J34 J30 J26 J22 J18 J14 J10 J6 J2

J37 J33 J29 J25 J21 J17 J13 J9 J5 J1

COMPONENT	TYPE	W.L.PART NO.
R1,2	820A RN 5E	330-2083
C1	.01uF 100V	300-1918
C2	.047uF 12V	300-1962
J	PIN SOCKET	37[illegible]
Y1	6.667 MHZ	32-[illegible]
J1-4, J7-40	50 PIN CONN	350-0431
J5, J6, J13, J14, J17, J18, J21, J22, J25, J26, 29, 30, 33, 34	80 PIN CONN	350-0011
J7, J11, J15, J19, J23, J27, J31, J35	44 PIN CONN	350-0[illegible]33
J8-12, J16, J20, J24, J28, J32, J36	44 PIN CONN	350-0321

EC LOCATION	TYPE	W.L. PART NO.
L1	7404	370-0510



WANG					
	MODEL NO. VS-100			TITLE	I/O MOTHER BOARD
				210-7609	E 7609 C

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

±10V

J24 J23 J22 J21

J28 J27 J26 J25

7609-R3

J32 J31 J30 J29

+5VR

±10V

J36 J35 J34 J33

J40 J39 J38 J37

E-REV L

WANG	MODEL NO. VS-100	TITLE I/O MOTHER BOARD	
		210-7609	E 7609 3

M2

"THIS DRAWING AND THE DATA SHOWN THERE ON 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

11 10 9 8 7 6 5 4 3 2 1

G F E D C B A

+5VR R2 5K R6 4.7K C2 .00224f MICA +5VR R1 5K R5 3.3K C1 .00224f MICA

L6 9602 L14 LS74 L13 LS04 L7 LS00 L18 9602 L8 LS10 L22 LS74 L17 9401 L23 LS161 L5 LS244 L11 LS240 L26 LS240 L2 LS244 L12 LS174 L10 2708 L9 Z80 CPU L21 8T98 L15 LS155 L19 38 L16 LS04

TP1 TP2 TP3

R3 2.2K R4 150Ω R7 2.2K R9 150Ω R10 12K R11 12K R12 2.2K R13 150Ω R14 150Ω R15 1K R16 33Ω 5% R17 2.2K R18 82Ω R19 330Ω R20 330Ω R21 2.2K R22 2.2K R23 2.2K R24 2.7K 5% R25 2.2K

C3 1.2f 35V (T) C4 3.3f 15V (T) C5 82pf C6 .01f C10 50uf 50V (T)

D1 SIL XTAL1 2.4576MHZ

READ DATA (30₁) INDEX (8₁) TRACKØ (26₁) 60 (15) CPLD (33₆)

ERR (IF2) BYTE (IF2) BYTE (IE2) INØ INØ1 WP

SYNC (IDS) SYNC (IG7) AI5 RFSH MREQ IORQ BUSAK HALT BUSRQ WAIT INT RESET NMI

ZDØ ZD1 ZD2 ZD3 ZD4 ZD5 ZD6 ZD7 ZAØ ZA1 ZA2 ZA3 ZA4 ZA5 ZA6 ZA7 ZA8 ZA9 ZA10 ZA11 ZA12 ZA13

LWDØ LWD1 LWD2 LWD3 LWD4 LWD5 LWD6 LWD7

LIC13 LIC12 LIC11 LIC10 LIC9 LIC8 LIC7 LIC6 LIC5 LIC4 LIC3 LIC2 LIC1 LICØ LCS1 LCSØ

STEP DIRECTION MOTOR ON INIT

LDDK HER TPTS DBY WPT WP

+5VR +10V +12V -5VR

REVISION	BY	DATE	APPROVED BY	DATE
NO SEE SHEET 2	DWN EK	10-19-80	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 1 OF 2

TITLE MINI DISK CONTROLLER

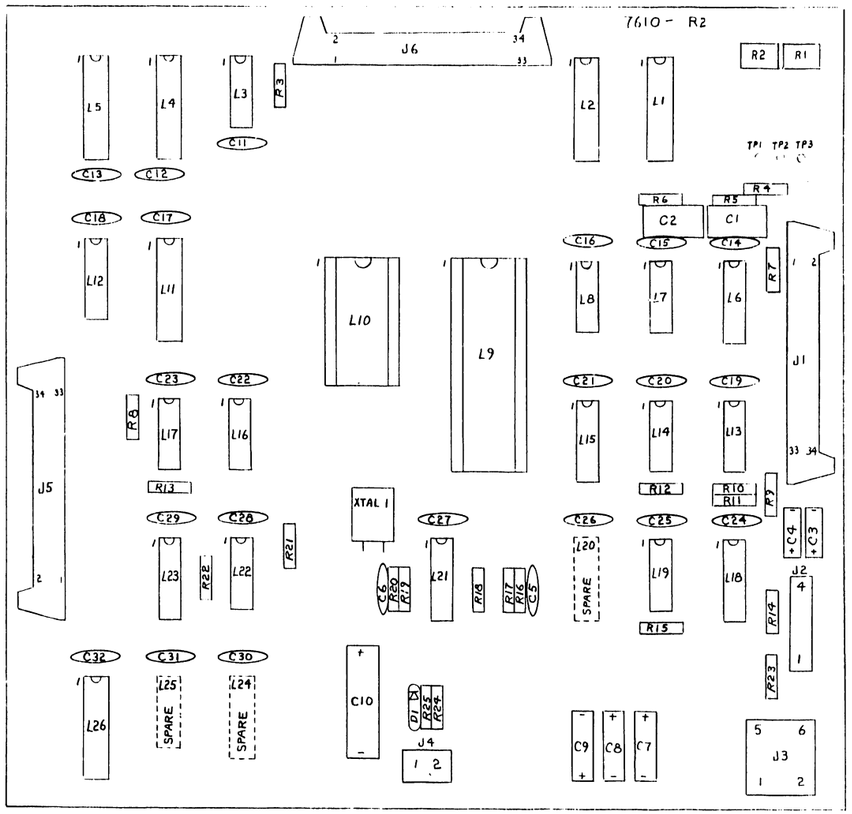
209-7610	D	7610	6
WANG PART NUMBER	SIZE	DRAWING NUMBER	REV

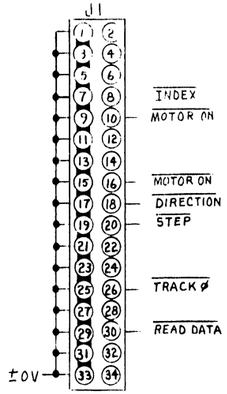
7610

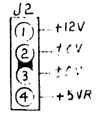
N1

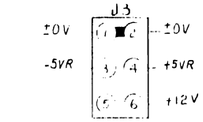
"THIS DRAWING AND THE DATA SHOWN THEREON ARE THE CONFIDENTIAL PROPERTY OF, AND ARE PROPRIETARY TO, WANG LABORATORIES, INC. THIS DRAWING AND THE DATA SHOWN THEREON MAY NOT BE MADE PUBLIC WITHOUT THE WRITTEN CONSENT OF WANG LABORATORIES, INC. IF FOR ANY REASON THIS DRAWING IS PERMITTED BY WANG TO LEAVE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

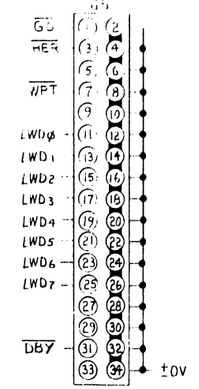
DO NOT SCALE

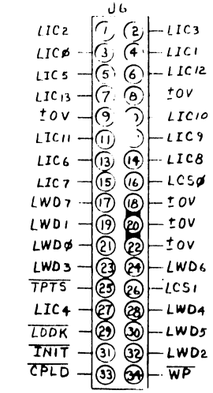








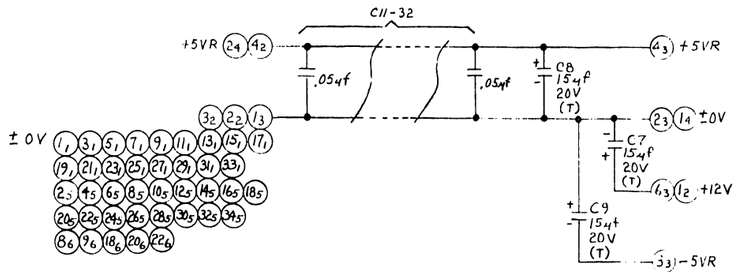




MNEMONIC	BOARD
CPLD	IC11
DBY	IA4
DIRECTION	IB1
GO	IC11
HER	IA4
INDEX	IE11
INIT	IB1
LCSØ	IC1
LCS1	IC1
LDDK	IA4
LICØ-LIC13	IC1
LWDØ-LWD7	IF1
MOTOR ON	IB1
READ DATA	IF11
STEP	IB1
TPTS	IA4
TRACK Ø	ID11
WP	IA3
WPT	IA4

IC LOCATION	TYPE	WL PART NO.
L1,2,5	74S244	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

NO.	REVISION	BY	DATE	APPROVED
0	ORIGINATED PER CWR # E780 APP'D: [illegible]	AK	10-16-80	
1	REVISED PER ECN # 1987 APP'D: [illegible]	AK	10-31-80	
2	REVISED PER ECO # 1435 APP'D: [illegible]	TK	12-31-80	
3	REVISED PER ECO # 1785 APP'D: [illegible]	AK	2-13-81	
4	REVISED PER ECO # 2033 APP'D: [illegible]	FSS	6-4-81	
5	REVISED PER ECO # 20532 APP'D: [illegible]	PGD	10-26-81	
6	REVISED PER ECO # 2505 & 2976 APP'D: [illegible]	EM	5/2/83	

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 —H	MODEL NO. VS-100	TITLE MINI DISK CONTROLLER	
FINISH —H	TOL EX AS NOTED XX ± FRAC ± XXX ± ANG ± FINISH √	209-7610	D 7610 6
	SCALE —H SHT 2 OF 2	WANG PART NUMBER	SIZE DRAWING NUMBER REV

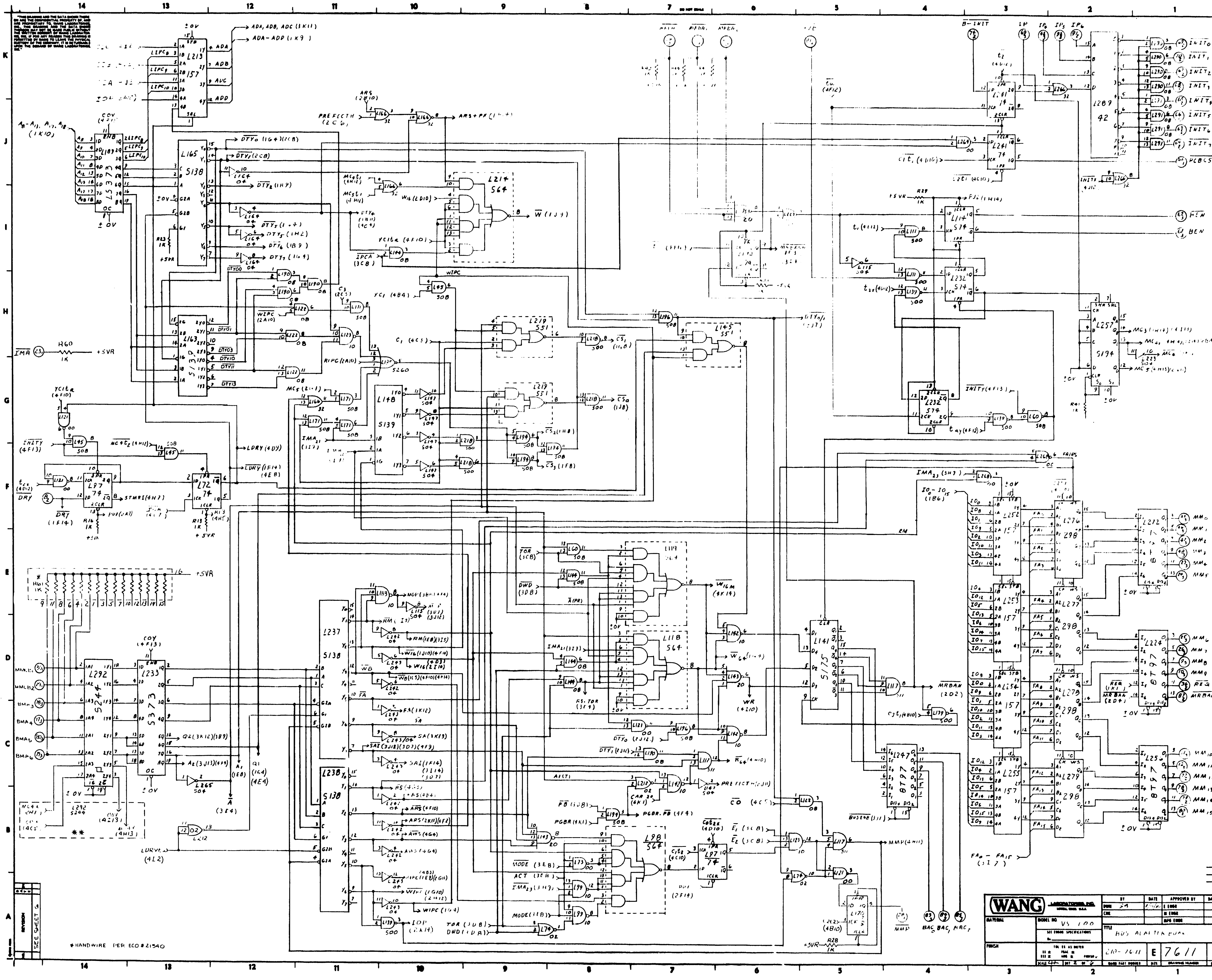
D 7610

THIS DRAWING AND THE DATA SHOWN THEREON ARE THE CONFIDENTIAL PROPERTY OF AND ARE PROPRIETARY TO WANG LABORATORIES INC. BY ACCEPTANCE OF THIS DRAWING YOU AGREE THAT THIS DESIGN MAY NOT BE USED OR DISCLOSED TO OTHERS WITHOUT THE PRIOR WRITTEN CONSENT OF WANG LABORATORIES INC. USE OF FOR ANY REASON THIS DRAWING IS PERMITTED BY WANG TO LEASE THE PHYSICAL EMBODIMENT OF THIS DESIGN UNDER THE TERMS AND CONDITIONS OF WANG LABORATORIES INC.

DO NOT SCALE

WANG LABORATORIES, INC. LOWELL, MASS. U.S.A.		BY	DATE	APPROVED BY DATE
MATERIAL	MODEL NO VS-100	DWN		E ENGR
	SEE ENGR SPECIFICATIONS No.	CHK		M ENGR
FINISH	TOL EX AS NOTED .XX ± .03 .XXX ± .010 ANG ± 1° FINISH			MFG ENGR
SCALE NONE	SHT 1 OF 6	TITLE BUS ADAPTER BOARD		
		210-7611	E	7611
		WANG PART NUMBER	SIZE	DRAWING NUMBER REV

P1



L213 157
L189 LS373
L165 S138
L163 S139
L214 S64
L219 S51
L145 S51
L148 S139
L97 74
L72 74
L292 S244
L233 S373
L237 S138
L238 S138
L119 S64
L118 S64
L98 S64
L141 S175
L247 8T97
L241 74
L289 42
L114 S74
L232 S74
L257 S194
L252 157
L253 157
L254 157
L255 157
L276 298
L277 298
L278 298
L279 298
L272
L224 8T97
L256 8T97
ADA, ADB, ADC (3K11)
ADA-ADD (1K9)
ARS+PF
W (1J9)
DTY0 (1G4)(2C8)
DTY1 (2C8)
DTY2 (1H9)
LDRY (4D9)
LDRY (1F14) (4E8)
STMRI (4H7)
IMA
+5VR
CS1 (1G8)
CS0 (1J8)
CS2 (1H8)
CS3 (1F8)
W16M (4K14)
W64 (1H4)
WR (4I10)
R64 (4H10)
PREFECTH (2J11)
PGBR.PB (4F4)
MMP (4H11)
MRBAN (2D2)
BUSENB (3J1)
INIT0
INIT1
INIT2
INIT3
INIT4
INIT5
INIT6
INIT7
PCBCS
HEN
BEN
MC3
MC5
FAIRS
MM0
MM1
MM2
MM3
MM4
MM5
MM6
MM7
MM8
MM9
REQ
MRBAN
MM10
MM11
MM12
MM13
MM14
MM15
BAC0
BAC1
BAC2
FA0 - FA15 (3I7)
IO0 - IO15 (1B6)
MMLB1
MMLB2
BMA3
BMA4
BMA5
BMA6
* HANDWIRE PER ECO # 21540
REVISION
SEE SHEET 1
WANG LABORATORIES, INC.
MODEL NO. VS 100
BUS ADAPTER BOARD
210-7611
E
7611

THIS DRAWING AND THE DATA SHOWN THEREON ARE THE CONFIDENTIAL PROPERTY OF AND ARE RESPECTFULLY TO WANG LABORATORIES, INC. THIS DRAWING AND THE DATA SHOWN THEREON ARE NOT TO BE REPRODUCED IN WHOLE OR IN PART, OR USED FOR MANUFACTURING PURPOSES, OR DISCLOSED TO OTHERS WITHOUT THE WRITTEN CONSENT OF WANG LABORATORIES, INC. IF FOR ANY REASON THIS DRAWING IS REQUESTED BY WANG TO LEAVE THE PREMISES, CUSTODY OF THE DRAWING IS TO BE RETURNED UPON THE DEMAND OF WANG LABORATORIES, INC.

DO NOT SCALE

WANG LABORATORIES, INC.

	BY	DATE	APPROVED BY	DATE
ENGR	JP	7/1/77	E EVANS	
CHK			M YUNG	
			DPM LYNCH	

CUSTOMER

MODEL NO. VS-100

SEE SERIES SPECIFICATIONS

TITLE BUS ARBITER & CLOCK

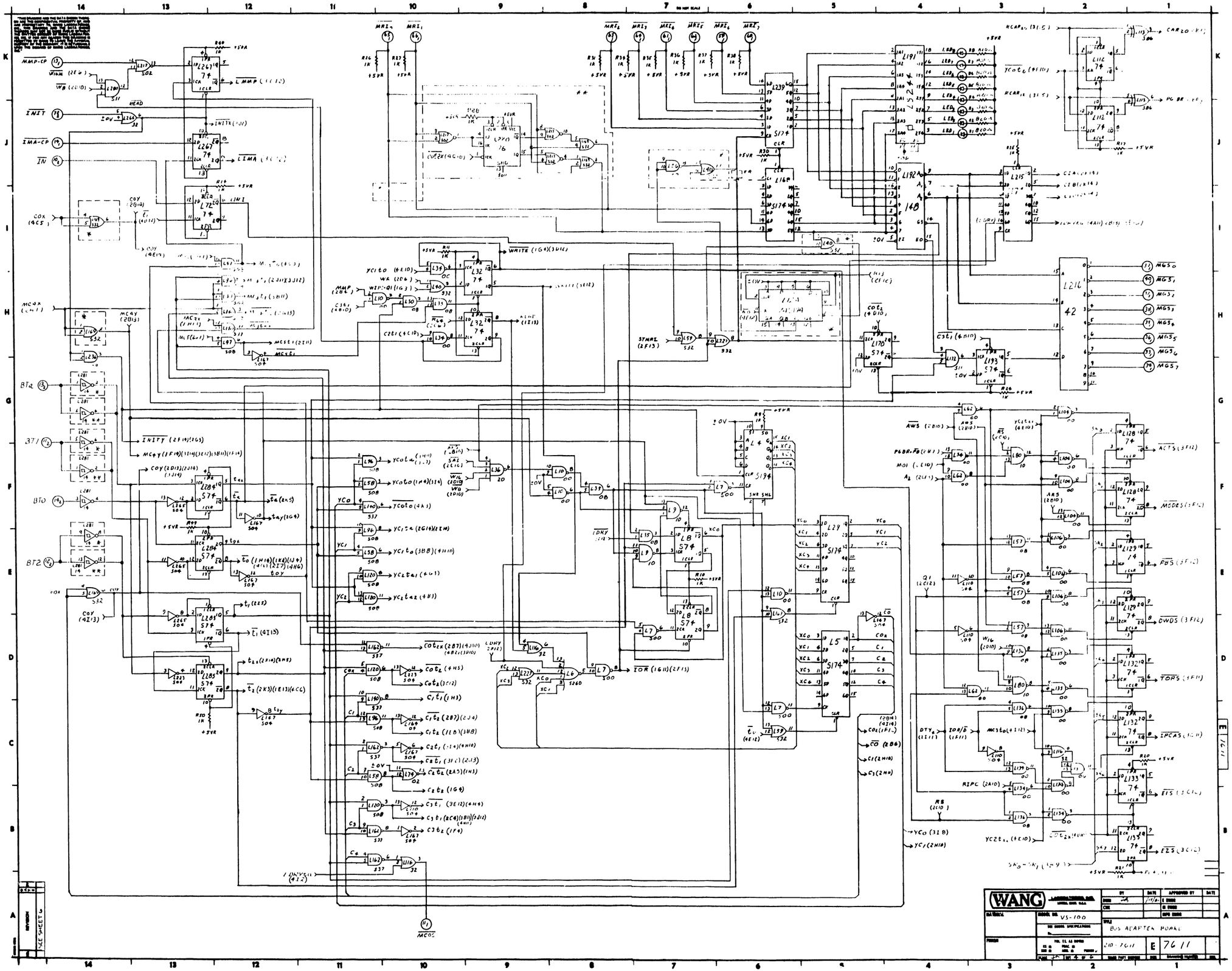
SIZE 210-7611 | E | 7611

SCALE — | WEIGHT — | SHEET 1 OF 6 | DATE PART NUMBER | ISSUE | ENGINEERING NUMBER | REV

REVISION

SEE SHEET 6

P3


WANG
VS-100
BUS ADAPTER BOARD
SEE SHEET 6
REVISION

"THIS DRAWING AND THE DATA SHOWN THEREON ARE THE CONFIDENTIAL PROPERTY OF WANG LABORATORIES, INC. AND ARE LOANED SUBJECT TO THE RETURN THEREOF ON DEMAND. NEITHER THIS DRAWING NOR ANY DATA SHOWN THEREON MAY BE USED OR DISCLOSED WITHOUT THE WRITTEN CONSENT OF WANG LABORATORIES, INC. OR FOR ANY REASON THAN DRAWING AS MAY BE AGREED UPON BY AND BETWEEN THE CUSTODY OF THE DRAWING IT IS RETURNABLE UPON THE DEMAND OF WANG LABORATORIES, INC."

DO NOT SCALE

J2

J1

7611 R3

P3 P2 P1

REVISION	DATE	APPROVED

SEE SHEET

WANG LABORATORIES, INC. LOWELL, MASS. U.S.A.	BY	DATE	APPROVED BY	DATE
	DRN		E ENGR	
MATERIAL	CHK		M ENGR	
MODEL NO			MFG ENGR	
SEE TRACE SPECIFICATIONS	TITLE			
FINISH	UNLESS OTHERWISE NOTED DEC. 2 FRAC. ± ANG. ± FINISH	2110-7611	E	
	SCALE	WANG PART NUMBER	SIZE	DRAWING NUMBER

* THIS DRAWING AND THE DATA SHOWN THEREON ARE THE CONFIDENTIAL PROPERTY OF WANG LABORATORIES, INC. AND ARE PROPRIETARY TO WANG LABORATORIES, INC. NEITHER THIS DRAWING NOR ANY DATA THEREON MAY BE MADE PUBLIC WITHOUT THE WRITTEN CONSENT OF WANG LABORATORIES, INC. OR FOR ANY REASON THIS DRAWING AS WELL AS ALL COPIES THEREOF ARE TO BE RETURNED UPON THE DEMAND OF WANG LABORATORIES, INC.

DO NOT SCALE

P3 P2 P1

I.C. LOCATION	W.L. PART NO	TYPE
[illegible]		SHAKE
[illegible]	396-0021	74S74
[illegible]	396-0247	74S174
[illegible]	18-0206	74S240
[illegible]	396-0218	74S300
[illegible]	396-0020	74S74
[illegible]	396-0003	7410
[illegible]	396-0002	7400
[illegible]	396-0206	74S373
[illegible]	396-0081	7408
[illegible]	396-0006	7474
[illegible]	396-0601	74S64
[illegible]	396-0004	7420
[illegible]	396-0288	74LS286
[illegible]	396-0093	7432
[illegible]	396-0200	74S08
[illegible]	396-0184	74S37
[illegible]	396-0016	7402
[illegible]	396-0349	74S189
[illegible]		
[illegible]	396-0205	74S32
[illegible]	396-0293	74LS158
[illegible]	396-0119	74175
[illegible]	396-0082	74157
[illegible]	396-0235	74S163
[illegible]	396-0286	74LS374
[illegible]	396-0310	74LS373
[illegible]	396-0187	8T97
[illegible]	396-0197	74S51
[illegible]	396-0111	7438
[illegible]	396-0010	7404
[illegible]	396-0237	7425
[illegible]	396-0270	74S175
[illegible]	396-0296	74S37
[illegible]	396-0333	74S133
[illegible]	396-0197	74LS240
[illegible]	396-0298	74S138
[illegible]	396-0171	7414B
[illegible]	396-0008	7414A
[illegible]	396-0177	74SO2
[illegible]		7412
[illegible]	396-0079	74171
[illegible]	396-0204	74LS257
[illegible]	396-0031	7430
[illegible]	396-0239	7450
[illegible]	396-0135	74278
[illegible]	396-0336	74S24
[illegible]	396-0007	7471
[illegible]	396-0211	74111
[illegible]	TABLE	
[illegible]	11AL	

COMPONENT	W.L. PART NO	TYPE
P1-8	330-2082	820Ω 75W ±5%
RP-2840-60	330-3010	1K 9R 1W ±2%
P39	330-2018	180A 1/4W ±5%
R01	333-0815	1K DIP
[illegible]	180-6022	15pF 20V TANT
C2-13,23-98,61-123	300-1966	.047uF 50V
[illegible]		
[illegible]		
[illegible]		
J1-4	350-5440	64 PINS .156

MOUNTED OVER L292

I.C. TYPE	LOC	SPARES
7400	L41	1
	L56	1
	L73	3
	L97	1
	L264	1
	L148	2
7402	L53	2
7408	L30	3
	L35	1
	L78	1
	L136	1
74S08	L47	1
	L58	1
	L194	1
7410	L9	1
	L60	1
	L119	1
	L123	1
7451	L172	2
7400	L36	1
	L115	1
7432	L42	2
	L116	1
74S32	L40	1
7414	L281	1
7451	L90	1
	L149	1
	L226	1
74S86	L113	1
74139	L198	1
745260	L6	1
	L195	1
74S09	L265	1

SIGNALS	PIN
$BA_C - BA_{21}$	[illegible]
$BA_{22} - BA_{23}$	L24
$BAWL_0 - BAWL_3$	L21
$BAWL_{22} - BAWL_{23}$	L26
$MM_0 - BAWL_{21}$	L27
$MM_{10} - BAWL_{20}$	L25
BEN	L22
$\overline{BEN}$	L23
$\overline{BEN-1} - \overline{BEN-4}$	L33
$IMA_1 - BIMA_0$	L29
$BMCM_0 - BMCM_3$	L31
$MMCL_0 - BMCL_3$	L30
$\overline{B-INIT}$	L35
$BC_1 - BC_2$	L34
[illegible]	L36
CCB_1	L40
$DAB_1 - DAB_7$	L41
$\overline{DBY}$	L39
$\overline{IN}$	L44
$\overline{IMA}$	L43
$\overline{IMA-CP}$	L45
$\overline{INIT}$	L46
$\overline{INIT_1} - \overline{INIT_7}$	L48
FF	L49
$IP_0 - IP_6$	L50
$MM_{10} - MM_{15}$	L51
$\overline{MCO}$	L52
$\overline{MGS_0} - \overline{MGS_7}$	L54
$MM_0 - MM_9$	L101
$MMCB_1 - MMCB_3$	L102
MMP	L96
$\overline{MRBA_2} - \overline{MRBA_3}$	L97
$\overline{MRBAN}$	L95
$\overline{MRI_0} - \overline{MRI_7}$	L91
$\overline{MRI_8} - \overline{MRI_{15}}$	L92
$\overline{MRP} - CP$	L94
$\overline{PCBHS_1}$	L61
$\overline{PCBHS_2}$	L62
$\overline{PCBGS_0} - \overline{PCBGS_7}$	L63
$\overline{PCBNI_0} - \overline{PCBNI_7}$	L64
$R/\overline{W}$	L87
$\overline{RES}$	L81

REVISION	BY	DATE	APPROVED BY	DATE
REVISED PER ECO#3540-REV APPROVED 8-7-78				
REVISED PER ECO#3540-REV APPROVED 8-7-78				
REVISED PER ECO#3540-REV APPROVED 8-7-78				
REVISED PER ECO#3540-REV APPROVED 8-7-78				
REVISED PER ECO#3540-REV APPROVED 8-7-78				
REVISED PER ECO#3540-REV APPROVED 8-7-78				
REVISED PER ECO#3540-REV APPROVED 8-7-78				

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

		BY	DATE	APPROVED BY	DATE
MATERIAL	MODEL NO 15-100	DWN			
	SEE ENGR. SPECIFICATIONS No.	CHK			
FINISH	TOL. EX. AS NOTED .XX ± .XXX ± ANGLES ±	TITLE BUS ADAPTER BOARD			
	SCALE: NONE SHT 6 OF 6	200-7611	E	7	
		NEXT ASSY USED	SIZE	DRAWING NUMBER	REV

P6

"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

NOTE 1. UNLESS SPECIFIED ARE ALTERNATE MANUFACTURERS FOR AMPLIFICK

BY	DATE	APPROVED BY	DATE
DWN AB	4/1	E ENGR	
CHK		M ENGR	
		MFG ENGR	

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

MATERIAL

MODEL NO. VS-120

SEE ENGRG SPECIFICATIONS

No.

FINISH

TOL: FR AS NOTED

TITLE POWER SUPPLY BOARD

210-7612 | D | 7612

WANG PART NUMBER | SIZE | DRAWING NUMBER | REV

SCALE 1/2 | SHT 1 OF 2

Q1

"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. IT FOR ANY REASON THIS DRAWING IS PERMITTED BY WANG TO LEAVE THE PHYSICAL CONTROL OF THE COMPANY IT IS TO BE RETURNED UPON THE DEMAND OF WANG LABORATORIES, INC."

DO NOT SCALE

OFFPB
NC
SW2
NO
±5V
BK3 (1C8)
R42 1K
R57 10K
D21 IN4148
+16VUR
R69 47K
R67 1K
LED1 MV5024
R73 560Ω
R72 1K
+5VA
LED2 MV5024
R74 560Ω
R71 1K
+5VB
LM339
R68 1K
D16 IN4148
BK5 (1D4)
BK4 (1D4)
C17 5.6mF 35V (T)
L16
L15
L14
L13
L12
L11
±0V
16VAC2
16VAC1
-16VUR
D26 A15A
D25 A15A
F1 2.5A 3AB 250V
C25 15mF 20V(T)
R87 470Ω 1W
-1.4 V
D24 IN4004
* D45 IN4004
+16VUR
6VAC2
6VAC1
D30 IN4004
D29 IN4004
C21 (NOT INSTALLED) 50V(T)
C20 4500mF 12V(C)
+28VUR
R37 350Ω 1W
+3V
D10 IN4372A ZEN
R116 15K
BK6 (1F11)
D33 IN4148
R111 100K
C29 1.2mF 35V (T)
BK7 (1D11)
R113 20K
BK8 (1D10)
R114 27K
D42 IN4148
D41 IN4148
2.7K
C26 15mF 20V(T)
* R119 10K
* R120 2.2K
* D47 IN4148
* D46 IN4148
* R122 1K 1/4W
* R123 2.2K
* D48 IN4148
* R124 1K 1/4W
* R125 1K
* R126 1K
* Q11 2N3725
* R127 1K
INIT A
INIT
"ON" LED DR
"OFF" LED DR

WANG LABORATORIES, INC. LOWELL, MASS. U.S.A.		BY	DATE	APPROVED BY	DATE
		DWN FJ	3/82	E ENGR	
		CHK		M ENGR	
				MFG ENGR	
MATERIAL	MODEL NO. VS-100	TITLE POWER SUPPLY BOARD			
	SEE ENGRG SPECIFICATIONS: No.				
FINISH	TOL ±X AS NOTED ±XX ± FRAC ± ±XXX ± ANG ± FINISH √	219-7612	D	7612	3
	SCALE NONE SHT 3 OF 4	WANG PART NUMBER	SIZE	DRAWING NUMBER	REV

Q2

"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

+12VA
+12VB
-5VA
-5VB
LED1
LED2
LED4
LED5
LED6
LED7
JMPR1
JMPR2
JMPR3
SPARE
7612-R1

WANG LABORATORIES, INC. LOWELL, MASS. U.S.A.		BY	DATE	APPROVED BY	DATE
MATERIAL	MODEL NO. VS-100	DWN		E ENGR	
	SEE ENGR. SPECIFICATIONS No.	CHK		M ENGR	
FINISH	TOL. F.R. AS NOTED FRAC. ± DEC. ± ANG. ± FINISH √	SCALE —	SHT 1 OF 2	MFG ENGR	
		TITLE POWER SUPPLY BOARD			
		210-7612	D	7612	5
		WANG PART NUMBER	SIZE	DRAWING NUMBER	REV

REVISION
NO
SEE SHEET 4

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

DO NOT SCALE

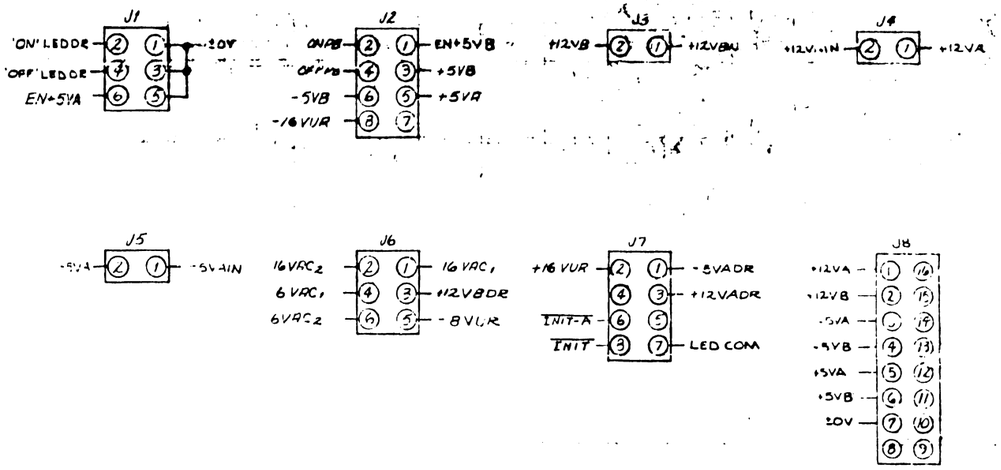
I.C. LOCATION	TYPE	WANG PART NO.
L1,2,6,7,11	SPARE	
L3,8,13-17	LM339	376-0240
L4,5	728	376-0066
L9,10	LM304	376-0124
L19	555	376-0126

COMPONENT	TYPE	WANG PART NO.
R63	68K ¼W 10%	330-4068
R13	20K ¼W 10%	330-4020
R120,123,127,130,81,89	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
R6,9,50,76,92	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%	330-3015
R20,31,46,69	47K ¼W 10%	330-4047
R18,40,44,59,83,84	127K ¼W 1%	333-0091
R19,108	470Ω ¼W 10%	330-2047
R22,29	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?-?356
R32,33,42,46,61,67,69,71,72,77,105,106,107	1K ¼W 10%	330-3010
R37	330Ω 1W 10%	330-4033
R38,45,51,53,60	15K ¼W 10%	330-4015
R39,58	178K ¼W 1%	333-0106
R42,52,73,74	562Ω ¼W 1%	333-0256
R47	31.6K ¼W 1%	333-0163
R48	8.2K ¼W 1%	333-0138
R49,110	4.7K ¼W 10%	330-4047
R62,114	2?K ¼W 5%	330-4027
R31,37	470K ¼W 5%	330-5047
R35,36,115	3.3K ¼W 10%	330-3033
R97	470Ω ¼W 10%	332-2047
R98	1.1K ¼W 1%	333-0113
R99	332K ¼W 1%	330-5033
R104	12K ¼W 10%	330-4012
R99,55	1.07K 1/8W 1%	334-0035
R,118	47Ω ¼W 10%	332-1047
R,56	200Ω 3W 5%	334-0032
R,32,103	1.00K 1/8W 1%	334-0031
R101,104	383Ω ¼W 1%	333-0059
R,35	2K ¼W 1W	333-0111
R,97	120K ¼W 5%	330-5012
R,10	56Ω ¼W 10%	332-1056

COMPONENT	TYPE	WANG PART NO.
C14,7,15,25,26,39,31,32,33	15μF 20V (T)	300-4022
C2,3	.0056μF 500V	300-1915
C8,9,12	.001μF 500V	300-1906
C11,13,17,22	5.6μF 35V (T)	320-4017
C20	450μF 12V (E)	300-3043
C21	100μF 50V (E)	300-3052
C23	.01μF 25V	300-1903
C,14,24,29	1.2μF 35V (T)	320-4013
C27	.015μF	300-1928
C5,C,16,19	.22μF	300-1902
D1,13	SER	340-3000
CR-8,11,2,4,6,16,23,27,28,32,34,44,46,47,49	IN4148	340-1014
D9,15	IN4731A 4.3V	380-2136
D2,4,29,33,17,19,45	IN4004	340-4000
D25,26	6154	340-3029
D10	IN4372A	380-2129
Q5	TIL111	375-2109
Q1-3	2N2906A	375-1017
Q4	2N4234	375-1024
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	654-1193
J8	SKT,16 PIN	376-9005
SW1,2	SPDT MINI	345-0041
F1	.6A 250V	340-0006
Q11	2N3725	375-1027

MNEMONIC	COORD.
EN+5VA	101
ON/LED	1F11
OFF	2G8
±0V	1D11
+5VAIN	1G8
+5VA	2F11
-5VA	1G8
-5VADR	1G10
+5VB	2F11
-5VB	1G2
INIT	2B1
INIT-A	2B11
6VAC1	2G3
6VAC2	2G1
-8VUR	1G3
+12VA	1A7
+12VADR	1A8
+12VAIN	1A8
+12VB	1A9
+12VBDR	1A5
+12VBAU	1A9
16VAC1	2G6
16VAC2	2G6
+16VUR	1G6
-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	5/15/81	E ENGR	11/6/81
	CHK	10/29/81	M ENGR	
			MFG ENGR	

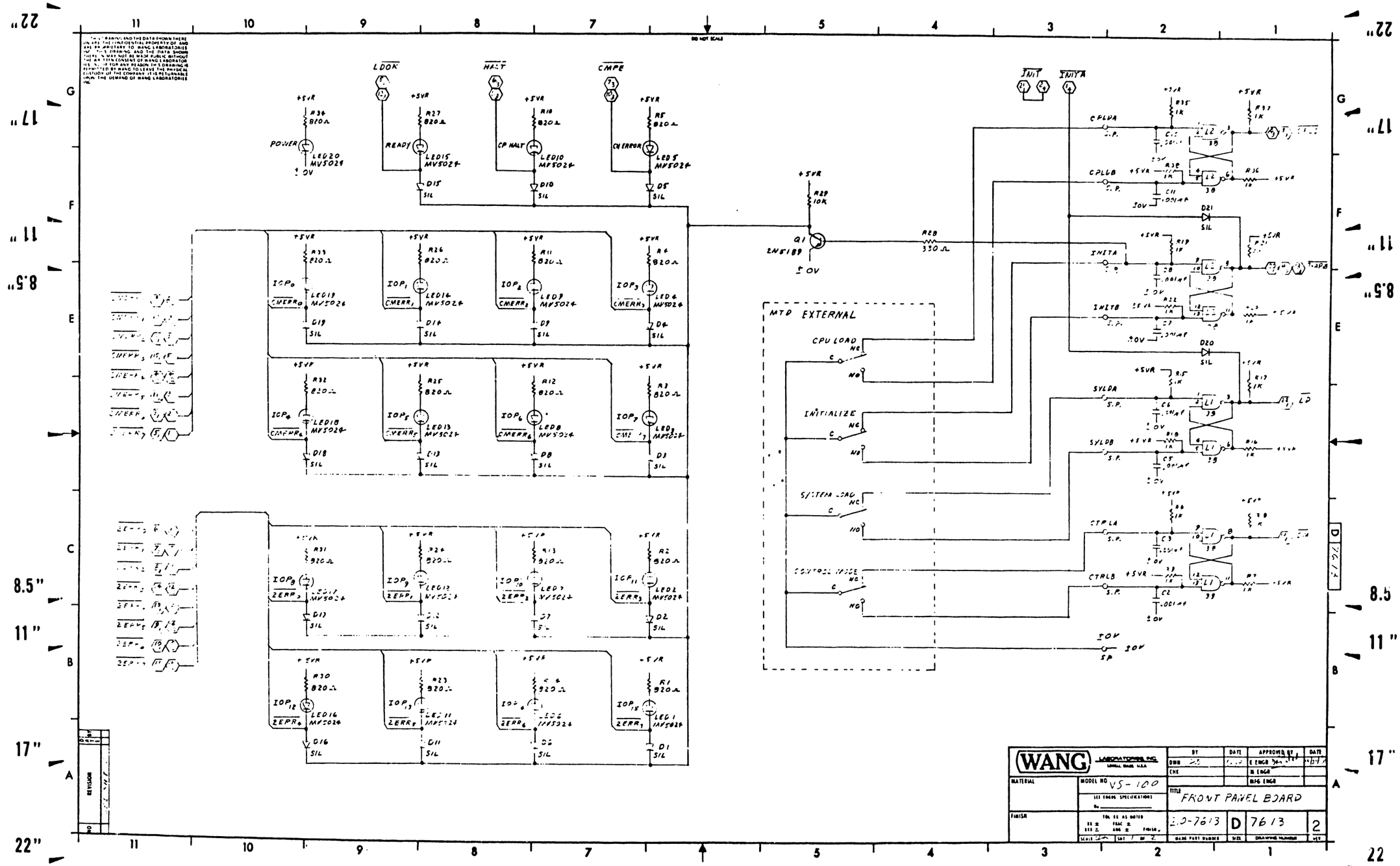
WANG LABORATORIES, INC. LOWELL, MASS. U.S.A.

MATERIAL | MODEL NO. VS-100 (SEE LOGIC SPECIFICATIONS) | TITLE POWER SUPPLY BOARD

FINISH | TOL. OF AS NOTED .XX ± .XXX ± FRAC. ± ANG. ± FINISH √ | SCALE 4/1 | 1ST ∠ OF ∠

210-7612 | D | 7612 | WANG PART NUMBER | SIZE | DRAWING NUMBER | REV

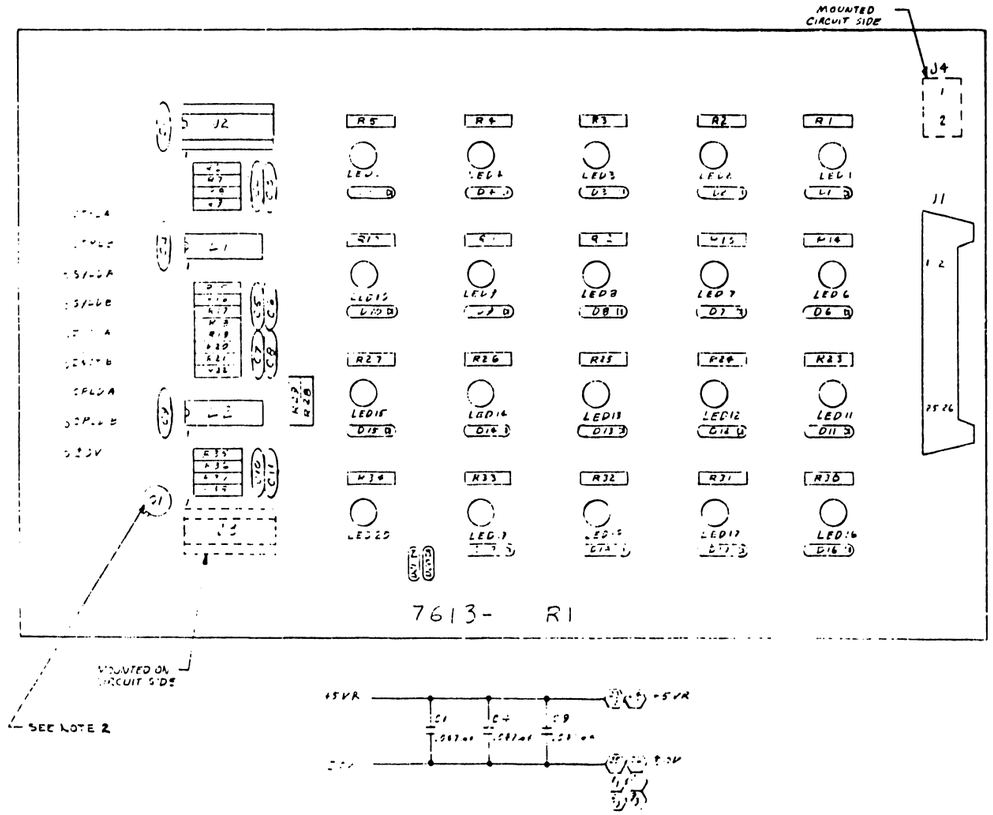
Q4

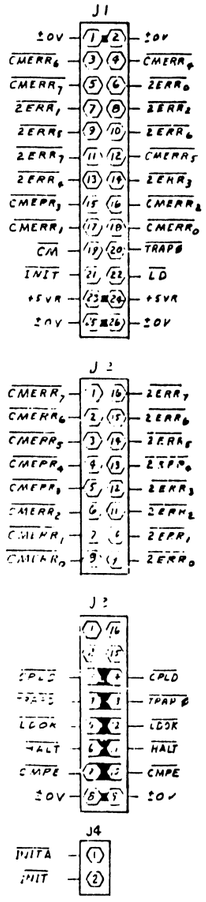

LDOK
HALT
CMPE
INIT
INITA
+5VR
POWER
LED20 MV5024
READY
LED15 MV5024
CP HALT
LED10 MV5024
CP ERROR
LED5 MV5024
D15 SIL
D10 SIL
D5 SIL
Q1 2N5189
R29 10K
R28 330Ω
MTD EXTERNAL
CPU LOAD
INITIALIZE
SYSTEM LOAD
CONTROL INSIDE
NC
NO
C
10V
SP
CPLDA
CPLDB
INITA
INITB
SYLDA
SYLDB
CTRLA
CTRLB
S.P.
D21 SIL
D20 SIL
D19 SIL
D18 SIL
D17 SIL
D16 SIL
D14 SIL
D13 SIL
D12 SIL
D11 SIL
D9 SIL
D8 SIL
D7 SIL
D6 SIL
D4 SIL
D3 SIL
D2 SIL
D1 SIL
IOP0
IOP1
IOP2
IOP3
IOP4
IOP5
IOP6
IOP7
IOP8
IOP9
IOP10
IOP11
IOP12
IOP13
IOP14
IOP15
CMERR0
CMERR1
CMERR2
CMERR3
CMERR4
CMERR5
CMERR6
CMERR7
IOERR0
IOERR1
IOERR2
IOERR3
IOERR4
IOERR5
IOERR6
IOERR7
LD
DO NOT SCALE
WANG LABORATORIES, INC.
MATERIAL
MODEL NO VS-100
SEE ENGRG SPECIFICATIONS
FINISH
TOL EE AS NOTED
SCALE SHT 1 OF 2
BY
DWN
CHK
APPROVED BY
E ENGR
M ENGR
MFG ENGR
DATE
TITLE
FRONT PANEL BOARD
20-7613
D
7613
2
SIZE
DRAWING NUMBER
REV
REVISION
NO

R1

THE DRAWING AND THE DATA SHOWN THEREON ARE THE CONFIDENTIAL PROPERTY OF AND ARE PROPRIETARY TO WANG LABORATORIES, INC. BY THIS LEGEND AND THE DATA SHOWN THEREON NEITHER THIS DRAWING NOR ANY DATA SHALL BE USED, REPRODUCED OR DISCLOSED IN WHOLE OR IN PART WITHOUT THE WRITTEN CONSENT OF WANG LABORATORIES. IT IS AGREED THAT ACCEPTANCE OF THIS DRAWING OR ANY DATA SHOWN THEREON CONSTITUTES AGREEMENT THAT NEITHER THIS DRAWING NOR ANY DATA SHOWN THEREON WILL BE USED, REPRODUCED OR DISCLOSED BY THE RECIPIENT OR BY ANYONE TO WHOM IT IS DISCLOSED BY THE RECIPIENT EXCEPT AS EXPRESSLY PERMITTED IN WRITING BY WANG LABORATORIES. ALL COPIES OF THIS DRAWING AND ANY DATA SHOWN THEREON SHALL BE RETURNED TO WANG LABORATORIES UPON THE DEMAND OF WANG LABORATORIES.

DO NOT SCALE





I.C. LOC	WL PART NO.	TYPE
L1,2	336-0128	7438

SIGNALS	PIN ASSIGNMENT
CM	1 C1
CMERR0-CMERR7	1 E11
CMPE	1 G1
CPLD	1 G1
HALT	1 G2
INITA	33
INIT	1 G3
LD	1 H1
LOOK	1 G1
TRAP0	1F1
ZERR0-ZERR7	1 C11

COMPONENT	WL PART NO.	TYPE
R1-5, 10-16, 23-27, 32-34	330-1083	910Ω 1/4W 5%
R6-9, 17-22, 35-38	330-3311	1K 1/4W 5%
R29	330-2034	330Ω 1/4W 5%
R28	330-4011	2K 1/4W 5%
C1, 4, 9	330-1117	.047μf
C2, 3, 5-8, 10-11	330-1126	.01μf
Q1	375-1021	2N5191
U1	375-3501	TRANSIPAD
LED1-LED20	370-0004	RED
C-21	330-1117	.047μf
J1	350-0058	36PIN EDGE
J2, 3	376-1024	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

REVISION	BY	DATE	APPROVED
REVISED PER ECO#73911			
REVISED PER ECO#73907			

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

MATERIAL	MODEL NO VS-100	DWN	DATE	E ENGR	DATE
	SEE DRAWING SPECIFICATIONS No.	CHK		M ENGR	
				MFG ENGR	
FINISH	UNLESS OTHERWISE SPECIFIED ±1 ±.1 ±.01 FINISH	TITLE FRONT PANEL BOARD			
	SCALE	SHT 2 OF 2	210-7613	D	7613 2
	MANUFACTURING NUMBER	SIZE	DRAWING NUMBER		REV

R2

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

SW18 — SW 6 … SW 13 — ±0V

MD4T0 … MD4T31 — +5VR — L16 … L7 — TIL 311

tt1

LIC0 … LIC13

L4 … L1 — TIL 311

L8 … L5 — 85

SW0 … SW17 — R4 470Ω — ±0V

+5VR — R8 1K

NO PARITY, SW/RAM, TPTS, TPTS, LCS0, LCS0, LCS1, LCS1, LWD0, LWD0, LWD1, LWD1, LWD2, LWD2, LWD3, LWD3, LWR4, LWR4, LWR5, LWR5, LWR6, LWR6, LWR7, LWR7, HLTENE, CMPE, CMPE, HALT, HALT, LOOK, LOOK, INIT, INIT, CPLD, CPLD

+5VR — R2 1K — STEP — SW3 — ±0V — R3 1K

R7 4.7K — C15 120pF — L17 74 — L21 9602 — L17 74

L19 20 — L20 74 — MEY

RUN/STEP SW2 — ±0V — RUN/STEP

ENABLE — +5VR — R5 22K — C17 100 pF — +5VR

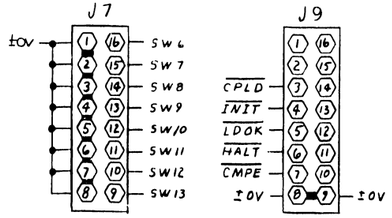
WANG LABORATORIES, INC. LOWELL MASS U.S.A.		BY	DATE	APPROVED BY	DATE
MATERIAL	MODEL NO VS-100	DWN J-B	7/18/80	E ENGR	
	SEE ENGRG SPECIFICATIONS No.	CHK		M ENGR	
FINISH	TOL EE AS NOTED .XX ± FRAC ± .XXX ± ANG ± FINISH	TITLE MAINTENANCE PANEL		MFG ENGR	
	SCALE	210-7614	D	7614	2
	SHT 1 OF 2	WANG PART NUMBER	SIZE	DRAWING NUMBER	REV

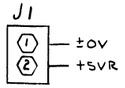
NO	REVISION	BY	DATE
	SEE SHT 2		

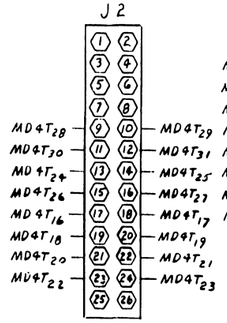
BRUNING 40-5253 A 4359

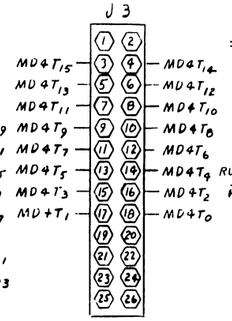
"THIS DRAWING AND THE DATA SHOWN THEREON ARE THE CONFIDENTIAL PROPERTY OF AND ARE PROPRIETARY TO WANG LABORATORIES, INC. THIS DRAWING AND THE DATA SHOWN THEREON MAY NOT BE MADE PUBLIC WITHOUT THE WRITTEN CONSENT OF WANG LABORATORIES, INC. IF FOR ANY REASON THIS DRAWING IS PERMITTED BY WANG TO LEAVE THE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

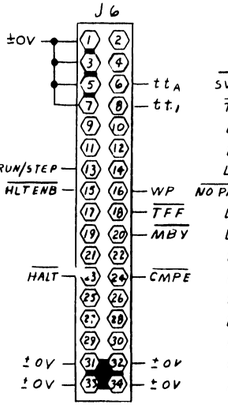
DO NOT SCALE

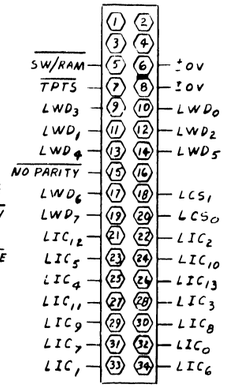


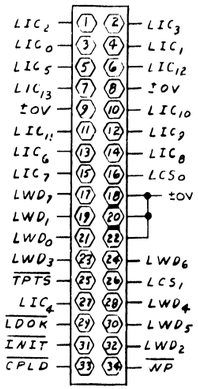




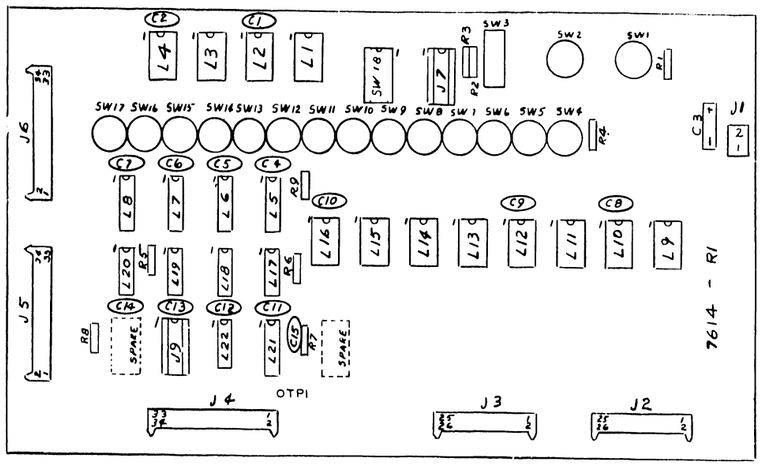








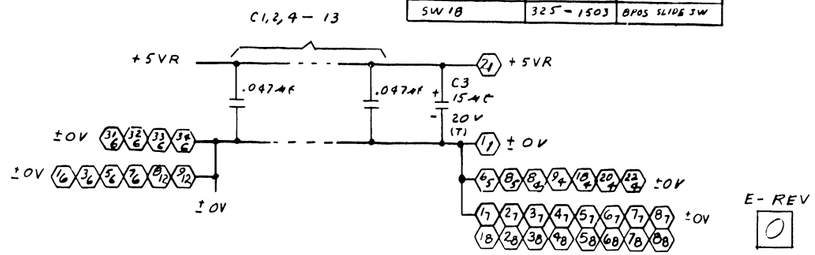
MNEMOMICS	COORDINATE
CMPE	1 A 5
CPLD	1 A 4
HALT	1 A 5
HLT ENB	1 A 5
INIT	1 A 4
LCS_0	1 A 8
LCS_1	1 A 7
LDOK	1 A 4
$LIC_0 - LIC_{13}$	1 E 11
$LWD_0 - LWD_7$	1 A 7
MBY	1 C 1
$MD4T_0 - MD4T_{31}$	1 G 10
NO PARITY	1 A 8
RUN/STEP	1 B 1
$SW_6 - SW_{13}$	1 G 11
SW/RAM	1 A 8
TFF	1 D 1
TPTS	1 A 8
ttA	1 G 1
tt1	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	TIL 311
L5-8	376-0087	7485
L17, 20	376-0006	7474
L18	376-0093	7432
L19	376-0004	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 1/4W 10%
R4	330-2047	470 Ω 1/4W 10%
R5	330-1033	33 Ω 1/4W 10%
R7	330-3047	4.7K 1/4W 10%
C1, 2, 4-13	300-1962	.047μF 50V
C3	300-4022	15μF 20V (T)
C14, 15	300-1120	120pF
J4, 5, 6	350-0429	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	8POS SLIDE SW



E-REV 0

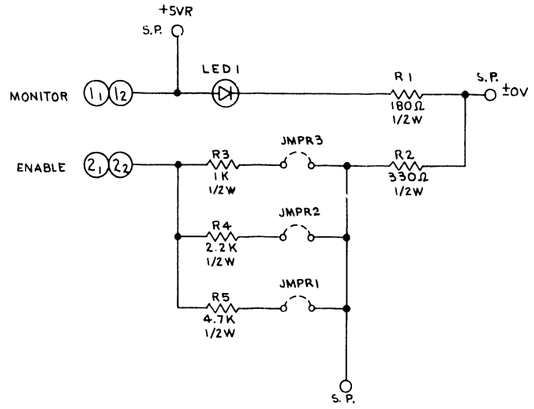
NO.	REVISION	BY	DATE
0	ORG PER DWR=EPP1 APP: D.Shimmin	RBB	9-18-80
1	REVISED PER ECO#1670 APPD: Shimmin	RBB	11-4-80
2	REVISED PER ECO#17355 APP: D.S.	JAB	3-12-81

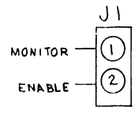
WANG LABORATORIES, INC. LOWELL, MASS. U.S.A.	BY	DATE	APPROVED BY / DATE
	DWN JAB	9-18-80	E ENGR / 11/17/81
	CHK	11-20-80	M ENGR
			MFG ENGR
MATERIAL	MODEL NO. VS-100	TITLE MAINTENANCE PANEL	
	SEE ENGRG SPECIFICATIONS No.		
FINISH	TOL EX AS NOTED .XX ± FRAC ± .XXX ± ANG ± FINISH √	210-7614	D 7614 2
	SCALE 4/1 SHT 2 OF 2	WANG PART NUMBER	SIZE DRAWING NUMBER REV

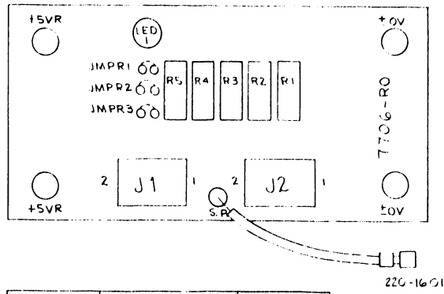
BRUNING 40-3253 47559

"THIS DRAWING AND THE DATA SHOWN THERE ON 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 THIS COMPANY, IT IS RETURNABLE UPON THE DEMAND OF WANG LABORATORIES, INC."

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 DWR # ECO # 22 APP'D: MP 4/4/80	REB	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	REB	10/22/80	E ENGR	
CHK	[illegible]	11-12-80	M ENGR	
			MFG ENGR	

MATERIAL —

FINISH —

MODEL NO. VS 100
SEE ENGRG SPECIFICATIONS
No.

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

TITLE SWITCHING REGULATOR INTERFACE

SCALE — SHT 1 OF 1

210-7706 | D | 7706 | /

WANG PART NUMBER | SIZE | DRAWING NUMBER | REV

T1

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

FMR DPE OVR REJ ERR RPE COR IDB

WRM RDM REV

ERM DDSO DDSI

HSB2 HSB1

EOT PNG PNR PDT BOT PDT ONL

DMA CMP (4C8)

PER(2D7)

IC(2B6)

BUSY (4F10)

SB0-SB15 (4B5)

L22 LS240 TTL

L39 LS240 TTL

L40 LS244 TTL

L21 LS240 TTL

L23 LS240 TTL

L91 LS374

L107 LS374

L109 LS244

L92 LS139

L73 LS76

L108 LS154

L110 LS04

L58 LS276

L57 LS175

L56 LS175

L55 LS175

L77 LS04

L74 LS08

L75 LS02

L42 LS00

L76 LS74

L93 LS32

L94 LS02

L1 06

L2 06

L6 06

L3 06

L5 LED2 MV5024 "TA1"

L4 LED1 MV5024 "TA2"

NOT LOADED

R108 2.2K

R109 2.2K

R4 10K

R98 2.2K

R87 180Ω

R88 390Ω

R101 2.2K

R85 10K

R86 10K

R110 2.2K

MDH5-MDH7 (2B11)

MDLO-MDL7 (2E11)

BK14 (4F4)

BK11 (4F7)

BK10 (3D7)

BK8 (1A9)

BK1 (4D6)

SEL CNTR (4G5)

EN D-BUS (1B7)

TO4B (4E5)

TO7B (3D3) (4G7)

TO2B (3A5) (4C11)

DO-D15 (4F1)

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)

RES CNTR (2F10)

INIT2B (3B10)

RES (2A8) (2G7)

START INH (3D7)

EV PAR (2B2)

LP BACK (2D9) (3E11)

SYS RST

ROS

RESCM (3B9)

DMA INH (4C6)(3B9)

WTCM (3B6)(3F10)

WTCM (2G5)(3D5)(4C11)

RDCM (3D7)(3F10)

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

CMD0

CMD1

CMD2

CMD3

CMD4

CMD0-CMD4 (4B6)

CMD CLR

TA1, TA2 (4D7)

TA1

TA2

DS0

DS1

DS0, DS1 (4D7)

ESC1

ESC0

ESC0, ESC1 (4C7)

PT0

PT1

MDL6

MDL7

+5VR

±0V

WANG LABORATORIES, INC. LOWELL, MASS. U.S.A.	BY	DATE	APPROVED BY	DATE
	DWN S.D.B.	7/9/78	E ENGR	
	CHK		M ENGR	
			MFG ENGR	

MATERIAL

FINISH

MODEL NO VS 80/100

SEE ENGRG SPECIFICATIONS

TITLE 1600/6250 BPI GCR MAG TAPE ADPT

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

SCALE — SHT 1 OF 6

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

NO	REVISION	DATE	BY
	SEE SHEET 6		

BRUNING 40-5253 4897

U1

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

WTCM (1D2)

MDL7 (12) MDL6 (22) MDL5 (32) MDL4 (42)

LD CNTR (1B7)

RESCNTR (1C5)

DN UP LD CLR CAR BOR — L87 LS193 — BC15 BC14 BC13 BC12

MDL3 (52) MDL2 (62) MDL1 (72) MDL0 (82)

MDL0-MDL7 (1D3)

DN UP LD CLR CAR BOR — L88 LS193 — BC11 BC10 BC9 BC8

MDH7 (92) MDH6 (102) MDH5 (112) MDH4 (122)

DN UP LD CLR CAR BOR — L89 LS193 — BC7 BC6 BC5 BC4

IBEN (102)

MDH3 (132) MDH2 (142) MDH1 (52) MDH0 (13)

DN UP LD CLR CAR BOR — L90 LS193 — BC3 BC2 BC1 BC0

MDH5-MDH7 (1E3)

BC0-BC15 (4F3)

MDR SEL (3C6)

SEL 1A 1B 2A 2B 3A 3B 4A 4B 1Y 2Y 3Y 4Y G

MDH0 MDL0 MDH1 MDL1 MDH2 MDL2 MDH3 MDL3 — DI0 DI1 DI2 DI3

MDH4 MDL4 MDH5 MDL5 MDH6 MDL6 MDH7 MDL7 — DI4 DI5 DI6 DI7

RES (1B4)

CLR CK_A CK_B UNLD CK DI1 DI2 DI3 DI4 DI5 IR CK_OUT OR OE DO1 DO2 DO3 DO4 DO5

BK5 (4F3)

L51 LS00 → IR (3C11)

L53 LS174 → DO4 DO5 DO6 DO7

L51 LS00 → OR (3E9)

±0V

DO0 DO1 DO2 DO3 DO4 DO5 DO6 DO7

DO0-DO7 (4F3)

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

WT CLK (3F3)

CLK PER (1A7) L102 LS08

L68 LS74 PR CLR CK D Q → PER (1G6)

L35 LS74 → BK6 (3D8)

L37 75452 — R96 2.2K +5VR

L36 LS374 — 1D 2D 3D 4D 5D 6D 7D 8D CK OC — 1Q 2Q 3Q 4Q 5Q 6Q 7Q 8Q

L34 LS04

L9 75452 — L5 75452 — L18 75452 — L19 75452

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

(12) DATA-0 (22) DATA-1 (32) DATA-2 (42) DATA-3 (52) DATA-4 (62) DATA-5 (72) DATA-6 (82) DATA-7

DATA-0 DATA-1 DATA-2 DATA-3 DATA-4 DATA-5 DATA-6 DATA-7 — 1A4 1A3 1A2 1A1 2A4 2A3 2A2 2A1 1Y4 1Y3 1Y2 1Y1 2Y4 2Y3 2Y2 2Y1 1G 2G — L17 LS540

L54 LS574 — 5D 6D 7D 8D CK OC — 5Q 6Q 7Q 8Q

DI0 DI1 DI2 DI3 DI4 DI5 DI6 DI7 — L70 LS280 — D C B A E F H G I — Σ_E Σ_O

L79 LS74 → BCT (4C9)

BCT (3C9)

BK9 (3C6)

L112 LS00 → BK16 (3D11)

L80 LS73 → BK17 (3E8) → IC (1G6)

L61 LS02 L62 LS20

LDWI (3C7) LDW2 (3C7) LD FIFO (1A7) 1 DR (3E4)

L77 LS04 → DREQE (3F9)

L60 74LS08

L52 LS86 — EV PAR (1A5)

R94 2.2K +5VR — BK12 (3F8)

L80 LS73 → BK13 (3A6)

R33 180Ω R34 390Ω

DATA-P (92)

R35 180Ω R36 390Ω R111 2.2K R112 2.2K R113 2.2K

RES (1B4)

BY	DATE	APPROVED BY	DATE
DWN S.P.B.	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 No.

TITLE 1600/6250 BPI GCR MAG TAPE ADPT

FINISH

TOLERANCE AS NOTED .XX ± FRAC ± .XXX ± ANG ± FINISH

SCALE — SHT 2 OF 6

210-7800 | D | 7800 | 4

WANG PART NUMBER | SIZE | DRAWING NUMBER | REV

7800

DATE BY REVISION NO

SEE SHEET 6

BRUNING 40-3253-48997

U2

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

+5VR
R51 180Ω
DREQ (2Z)
R52 390Ω
±0V
L20 LS14
RDCM(1D2)
WTCM (1D2)
L24 LS155
DREQE (2A10)
L42 LS00
L25 LS32
BK12 (2B3)
LD R LATCH (1A7)
XTALI (4A7)
R91 2.2K
R92 2.2K
L26 LS27
L43 LS74
UNLD W (4F4)
WT CLK (2D7)
L27 LS32
L45 LS08
L44 LS74
R99 2.2K
L43 LS74
RD+LP (2D8)
RD+LP
L8 LS04
L7 LS153
L6 06
OR (2E6)
L34 LS04
BK5 (4F3)
L32 LS74
BK17 (2B6)
L61 LS02
L28 LS74
BK7 (3B2)
L46 LS74
LDR (2A11)
R100 2.2K
L96 LS74
DAK
LBY
LP BACK (1A5)
L42 LS00
BK16 (2B5)
L96 LS11
RDCM (1C2)
XTAL2 (4A7)
R95 2.2K
OUTRDY (4C9)
L48 LS08
T07B (1B10)
L101 LS74
R123 2.2K
(4C8) DMACMP
BK4 (4C8)
BK2 (4C9)
BK6 (2C7)
+5VR
R114 2.2K
WTCM (1D2)
BK3 (4C9)
L82 LS74
L83 LS02
LD FIFO2 (1B7)
L98 LS74
L102 LS08
R122 2.2K
R93 2.2K
L31 LS74
BK10 (1B3)
START INH (1B5)
L60 LS08
RDCM (1D2)
L42 LS00
RDFIFO2 (1B7)
L96 LS11
BK9 (2B6)
L78 LS74
MDR SEL (2G8)
L50 LS02
BCT (2B7)
L49 LS08
IR (2E6)
L34 LS04
L32 LS74
IN RDY (4D6)
L31 LS74
L65 LS175
LDWI (2B11)
LDW2 (2B11)
L67 LS08
L86 LS175
UNLDR1 (4E4)
UNLDR2 (4E5)
L66 LS74
L93 LS32
L102 LS08
L81 LS32
BK8 (4D8)
BK1 (3E6)
RES CM (1B2)
DMA INH (1D2)
L96 LS11
HTS (3A)
INIT2 (1B)
BMOF (2B)
L109 LS244
INIT2B (1A9)(1B5)
BK11 (4F7)
2G
±0V
L93 LS32
WT+RD(4C9)
PGBK(4D9)
L32 LS86
L51 LS00
STNPT (2C)
WT CM(1D2)
BK13 (2A5)
L49 LS08
102B (1B8)
L78 LS74
DLS EN (4G5)
SELFIFO (4F4)
HR16 (2A)
HWI6 (4A)

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 No.

FINISH

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

TITLE 1600/6250 BPI GCR MAG TAPE ADPT

SCALE — SHT 3 OF 6 | 210-7800 WANG PART NUMBER | D SIZE | 7800 DRAWING NUMBER | 4 REV

D 7800

REVISION | SEE SHEET 9 | NO

BRUNING 40-525-48997

U3

"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

11 10 9 8 7 6 5 4 3 2 1

G F E D C B A

+5VR R89 180Ω R90 390Ω ±0V

BSY (12₁) L20 LS14 L20 LS14 BUSY (IC4)(1F5)

+5VR R118 2.2K R119 2.2K

L95 LS74 (1CK 1PR 1Q 1D 1CLR 1Q)

TO7B (1B10) L95 LS74 (2PR 2Q 2CK 2D 2CLR 2Q) L62 LS20 → BK11 (IC4) (3A11)

+5VR R117 2.2K

L1 OC6 R3 180Ω "BUSY" LED3 MV5024 +5VR

TO6 (15₃)

+5VR R115 2.2K R116 2.2K MA8 (D1) L100 LS04 L84 LS74 L85 LS00 → PGBK (3A11)

BK15 (3B1) L99 LS51

BK2 (3D1) L100 LS04 +5VR R107 2.2K

TO2B (1B8) L84 LS74 → DLSINH (4G5)

ST4-Q (10₁) L100 LS04 L67 LS08

BK3 (3D4) L68 LS74 → DMA CMP (1F8) (3D2)

RDCM (IC2) WTCM (1D2) L85 LS00 → WT+RD (3A11)

BCT(2B8) OUT RDY (3D7) L85 LS00 L100 LS04 → BK4 (3D3)

R120 820Ω 5% R121 820Ω 5% L113 LS04 C85 120pF L113 LS04

BXTAL (7₄) Y1 10MHZ L113 LS04 L112 LS00 L112 LS00 L113 LS04 → XTAL1 (3G7)

+5VR R125 2.2K +5VR R126 2.2K TP1 TP2 L113 LS04 → XTAL2 (3D9)

(11₄) RIPPLE CLK

(9₁) ST0-P5 (7₁) ST4-P5

DL-INH (4C9) ±0V L111 LS153 (1G 2G 1C0 1C1 1C2 1C3 2C0 2C1 2C2 2C3 1Y 2Y)

+5VR R124 2.2K DLGEN (3A4) SEL CNTR (1C10) ±0V (3A4) SELFIFO

L110 LS04 → (K3) DL5

RSB (1B7) EN D-BUS (1B7) L110 LS04

BC0-BC15 (2B9) DO0-DO7 (2D6) L27 LS32 → BK5 (2F7) L26 LS27

UNLD W(3G4) BK14 (1E3) ±0V L94 LS153 (1G 2G 1C0 1C1 1C2 1C3 2C0 2C1 2C2 2C3 1Y 2Y)

UNLDR1 (3C2) ±0V UNLDR2 (3C3) TO4B (1B10)

L110 LS04 L110 LS04

DO-D15 (1E7)

L106 LS257 (SEL G 1A 1B 2A 2B 3A 3B 4A 4B 1Y 2Y 3Y 4Y)

BC0 DO0 BC1 DO1 BC2 DO2 BC3 DO3 → (A3) D0 (L3) D1 (K3) D2 (L3) D3

L105 LS257

BC4 DO4 BC5 DO5 BC6 DO6 BC7 DO7 → (N2) D4 (M2) D5 (L2) D6 (K2) D7

L104 LS257

BC8 DO0 BC9 DO1 BC10 DO2 BC11 DO3 → (J2) D8 (H2) D9 (F2) D10 (E2) D11

L103 LS257

BC12 DO4 BC13 DO5 BC14 DO6 BC15 DO7 → (D2) D12 (C2) D13 (B2) D14 (A2) D15

IN RDY (3C9) TAI, TA2 (1F1) DSO, DSI (1E1) ESCO, ESCI (1D1) TAI DSO ESCI ESCO DSI TA2

L15 LS240 (1G 2G 1A0 1A1 1A2 1A3 2A0 2A1 2A2 2A3 1Y0 1Y1 1Y2 1Y3 2Y0 2Y1 2Y2 2Y3)

SB0 SB2 SB4 SB6 SB7 SB5 SB3 SB1

DMA INH (1D2) CMD0-CMD4 (1B1) CMD1 CMD3 CMD4 CMD2 CMD0

L16 LS240 (1G 2G 1A0 1A1 1A2 1A3 2A0 2A1 2A2 2A3 1Y0 1Y1 1Y2 1Y3 2Y0 2Y1 2Y2 2Y3)

SB8 SB10 SB12 SB14 SB15 SB13 SB11 SB9 → SB0-SB15 (1F10)

L110 LS04 L110 LS04 → (L3) DSMH (L3) DSML

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. VS 80/100 SEE ENGRG SPECIFICATIONS No.	TITLE 1600/6250 BPI GCR MAG TAPE ADPT		
FINISH —	TOL ER AS NOTED XX ± FRAC ± XXX ± ANG ± FINISH	210-7800 WANG PART NUMBER	D SIZE	7800 DRAWING NUMBER	4 REV
	SCALE — SHT 9 OF 6			

D 8007

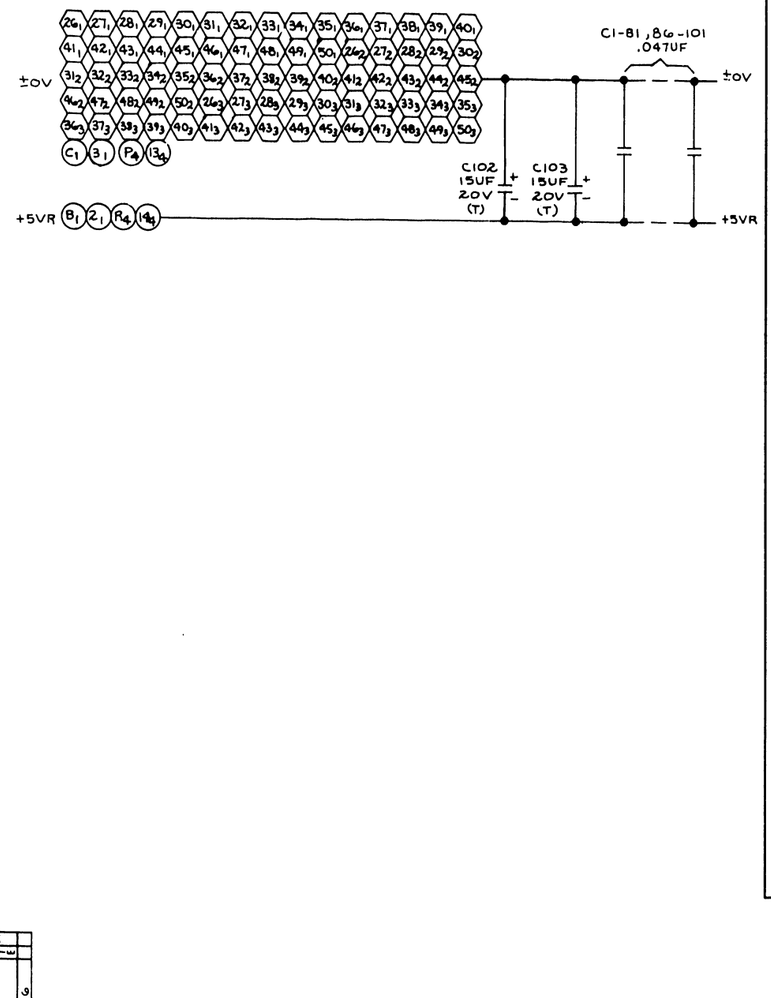
DATE REVISION NO — SEE SHEET 6

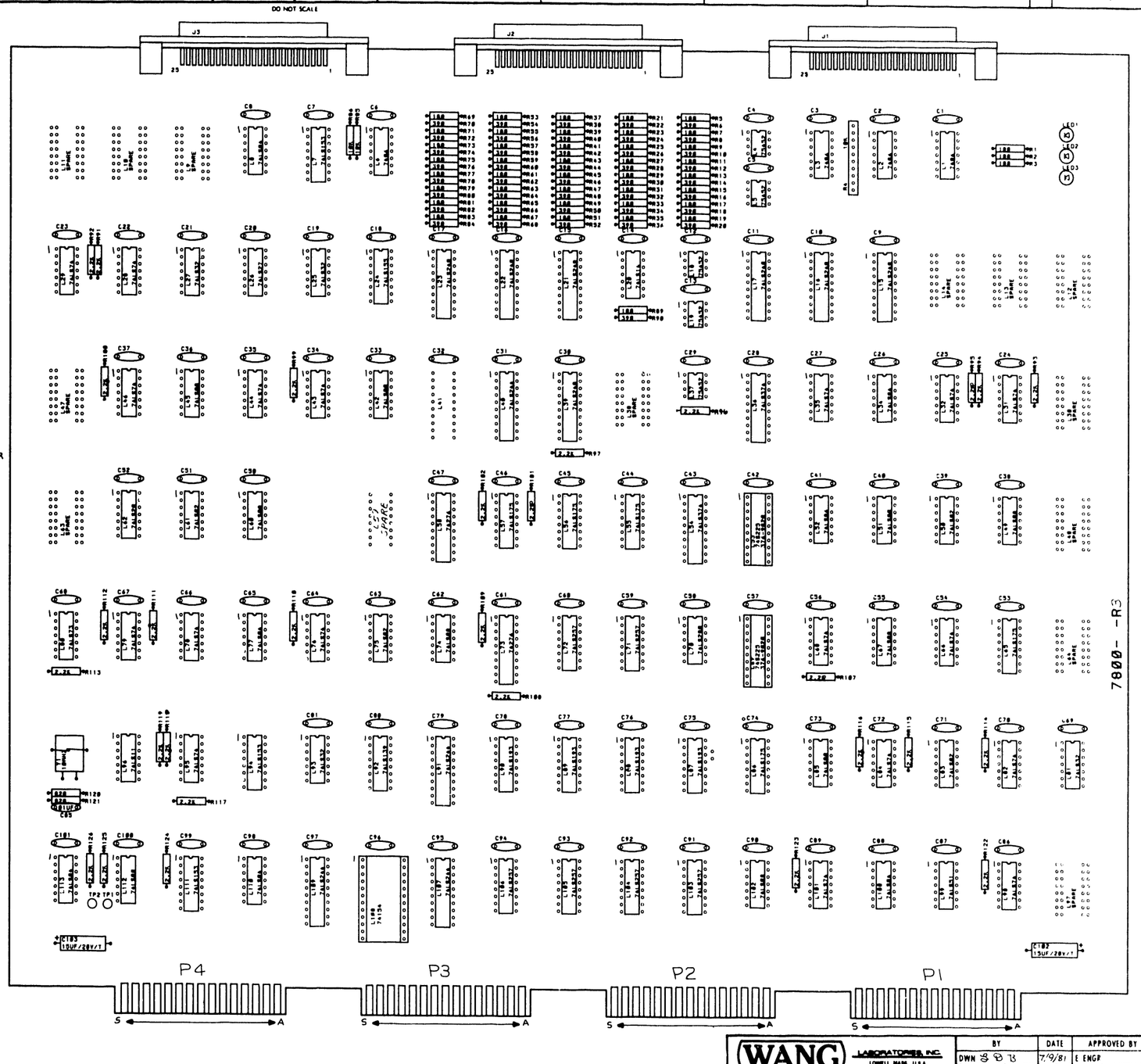
BRUNING 40-5253-48997

U4

"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





NO	REVISION	BY	DATE
	SEE SHEET 6		

DIGILIVE PRESS

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

	BY	DATE	APPROVED BY	DATE
	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	WANG PART NUMBER	SIZE	DRAWING NUMBER	REV
		210-7800	D	7800	4

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

DO NOT SCALE

I.C. LOCATION	TYPE	W.L. 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

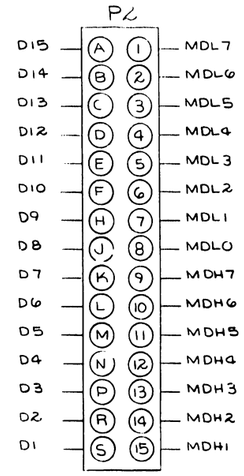
COMPONENTS	TYPE	W.L.PART NO.
R1-3,5,7,9,11,13,15,17,19, 21,23,25,27,29,31,33,35, 37,39,41,43,45,47,49,51, 53,55,57,59,61,63,65, 67,69,71,73,75,77,79, 81,83,89	180 Ω 1/4W 10%	330-2018
R4	10K	333-0809
R6,8,10,12,14,16,18,20, 22,24,26,28,30,32,34, 36,38,40,42,44,46,48, 50,52,54,56,58,60,62, 64,66,68,70,72,74,76, 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

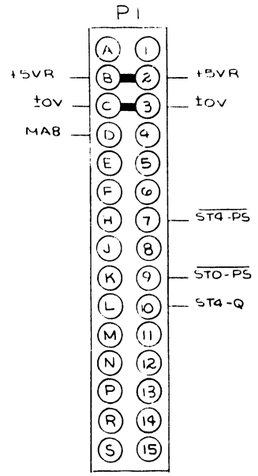
TYPE	I.C.LOC.	SPARES
74LS00	L85	1
	L112	1
74LS02	L75	1
	L83	3
74LS04	L8	3
	L34	2
	L77	3
	L100	2
	L110	1
7406	L1	3
	L2	2

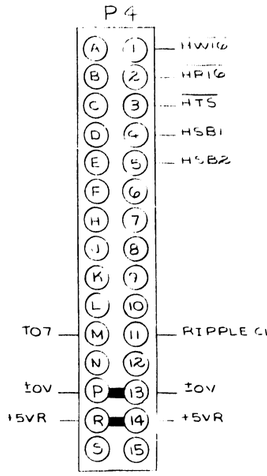
TYPE	I.C.LOC	SPARES
74LS08	L60	3
	L67	1
74LS27	L26	1
74LS32	L25	2
	L81	2
74LS51	L99	1
74LS74	L98	1
74LS86	L52	2

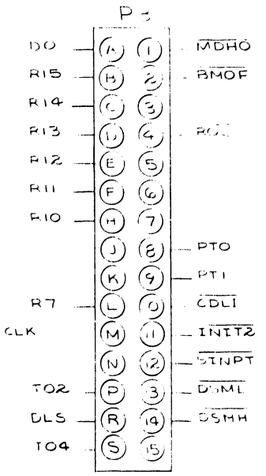
MNEMONICS	COOR'D
$\overline{BMOF}$	3B11
$\overline{BOT}$	1G4
$\overline{BSY}$	4F11
BXTAL	4B11
$\overline{CDLI}$	1B11
CMD CLK	1B11
$\overline{CMD0}$-$\overline{CMD2}$	1C1
$\overline{CMD3}$,$\overline{CMD4}$	1B1
$\overline{COR}$	1G9
$\overline{DAK}$	3E1
$\overline{DATA-P}$	2A4
$\overline{DATA-0}$	2G1
$\overline{DATA-1}$,$\overline{DATA-2}$	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
$\overline{ERROR0}$-$\overline{ERROR7}$	1G3
$\overline{ESC0}$	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

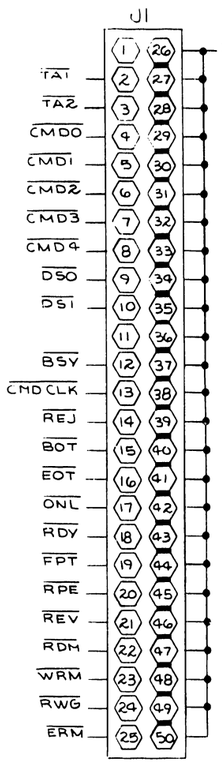
MNEMONICS	COOR'D
$\overline{MDL7}$	2G11
$\overline{ONL}$	1G3
$\overline{OVR}$	1G10
PTO,PTI	1D11
$\overline{RDM}$	1G8
$\overline{RDY}$	1G4
$\overline{REJ}$	1G9
$\overline{REV}$	1G8
RIPPLE CLK	4A8
$\overline{RNR}$	1G4
$\overline{ROS}$	1A6
$\overline{RPE}$	1G9
$\overline{RWG}$	1G4
R7,R10,R11,R14, R15	1C11
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

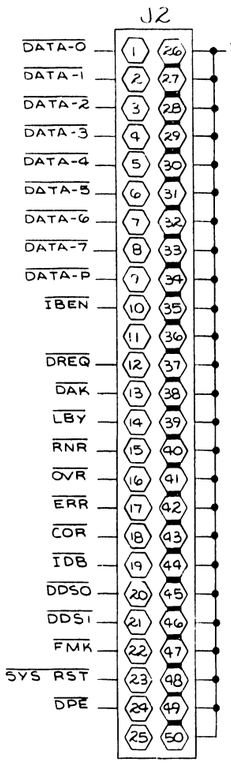


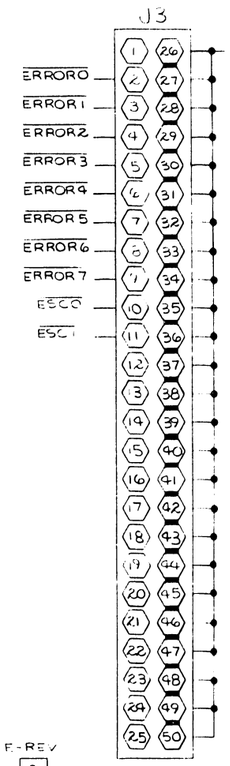












E-REV 2

NO	REVISION	BY	DATE
0	ORIGINATED PER DWR#E12-2 APP'D: [illegible]	MS	7/9/81
1	REVISED PER ECO'S 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

BRUNING 40-5253 48997

WANG LABORATORIES, INC. LOWELL, MASS. U.S.A.	BY	DATE	APPROVED BY	DATE
	DWN S.P.B.	7/7/81	E ENGR Z. Rud.	7/30/81
	CHK [illegible]	30.vi.81	M ENGR	
			MFG ENGR	
MATERIAL	MODEL NO VS80/100		TITLE 1600/6250 BPI GCR MAG TAPE ADPT	
	SEE ENGRG SPECIFICATIONS No.			
FINISH	TOL EX AS NOTED .XX ± FRAC ± .XXX ± ANG ± FINISH			
	SCALE:	SHT 1 OF 1	210-7800 WANG PART NUMBER	D SIZE 7800 DRAWING NUMBER 4 REV

U6

NOTES:
1. CA4464 IC CHIP ONLY. ANY DUPLICATES THAT FUNCTION OTHER SUPPLIERS MAY BE NOMENCLATURED AS EQUIVALENT.
2. SIGNALS IN PARENTHESIS DENOTE "ODD" MEMORY BOARD USED IN 2ND, 4TH, 6TH AND 8TH SLOTS.

WR1-WR4 (3U7)

WANG

SEE CHART | E | 7803 | 6

34" 22" 17" 11" 8.5"

WANG LABORATORIES, INC.

SIZE B | DWG NO 7803 | REV 6

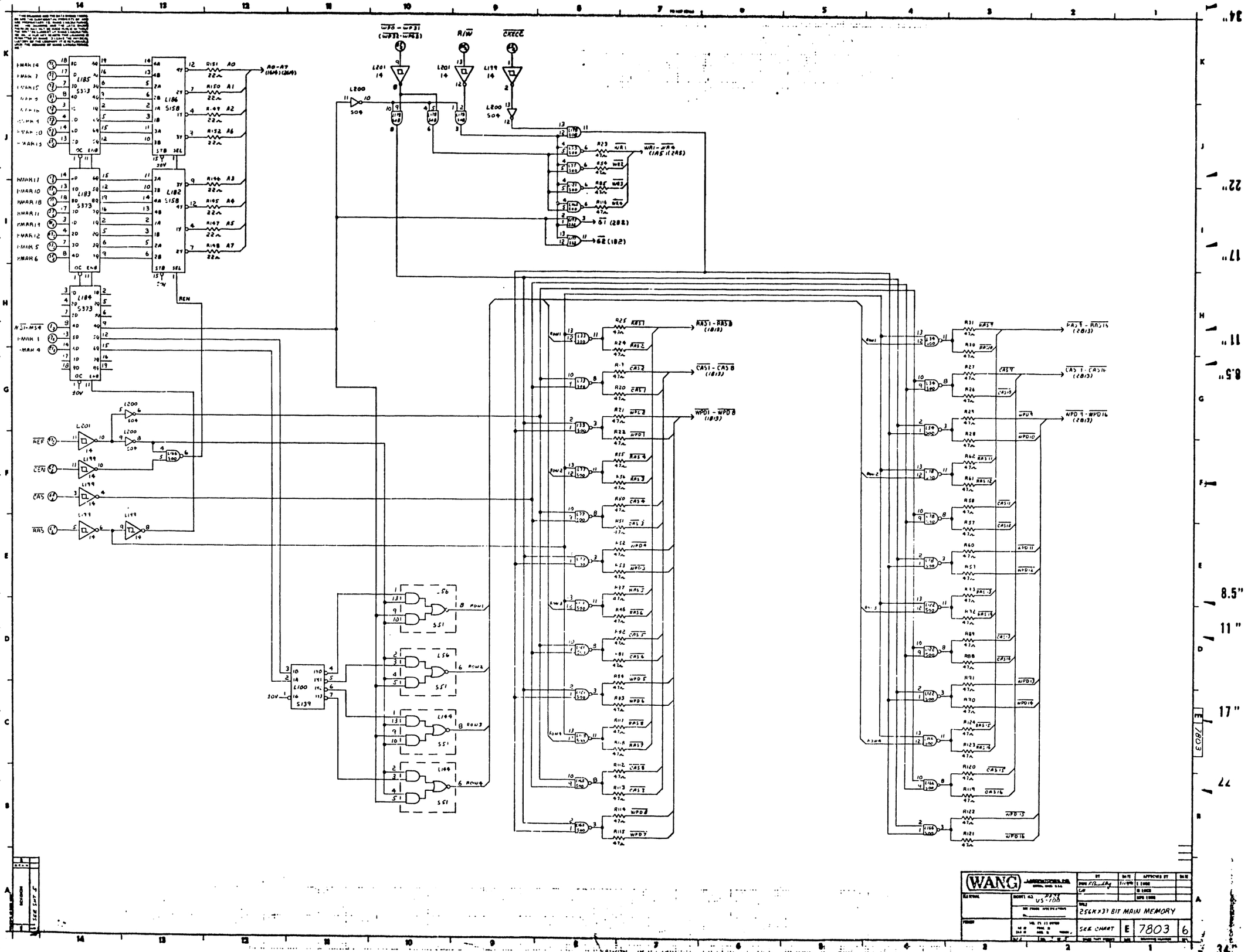
VS-100

256K x 39 BIT MAIN MEMORY

SEE CHART | E | 7803 | 6

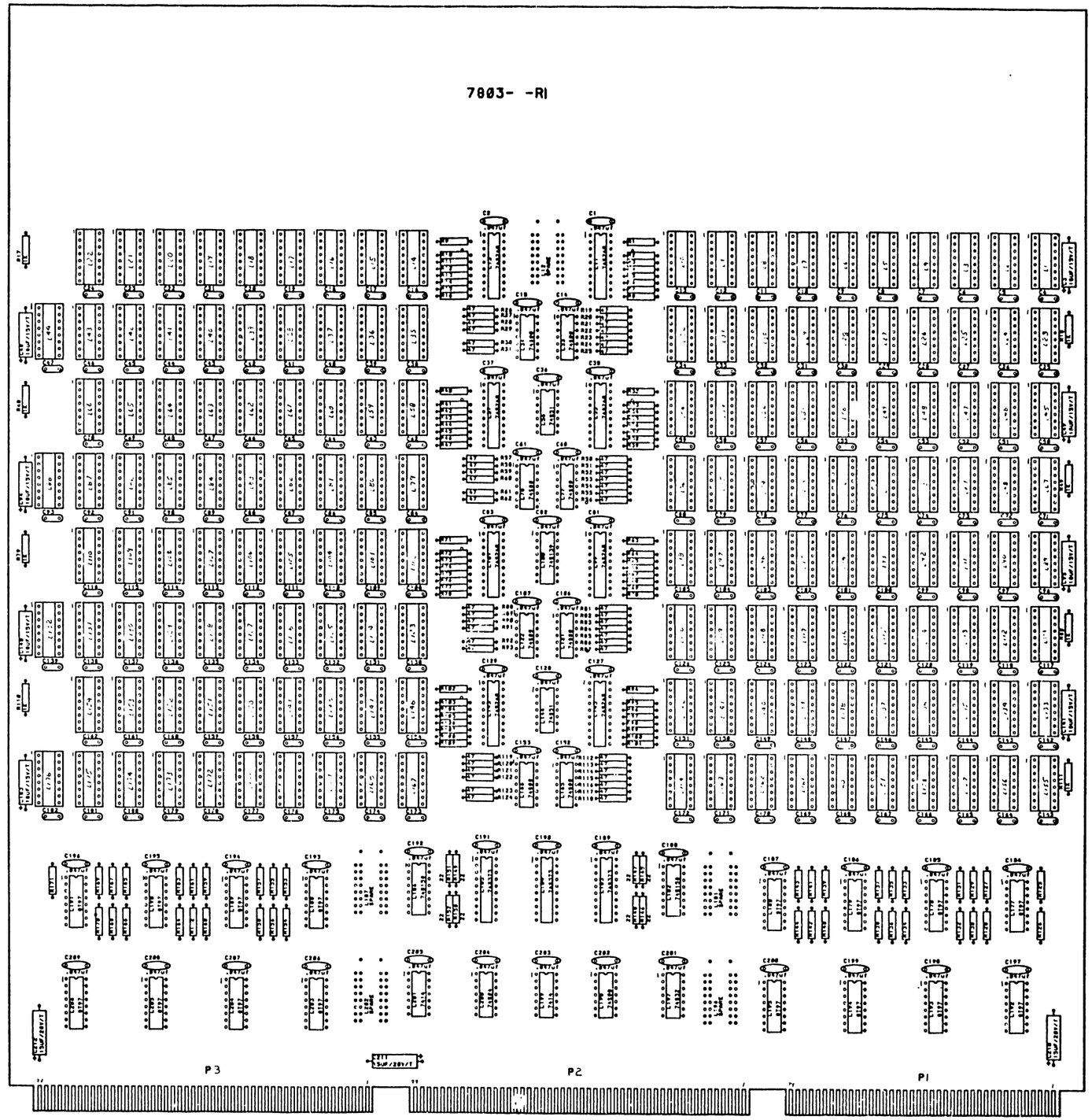
E 7803

44


WANG
256K X 37 BIT MAIN MEMORY
SEE CHART
E
7803
6
SEE SHT 5
REN
REF
CEN
CAS
RAS
L185
L183
L184
L186
L182
L187
5373
5379
5158
L200
L201
L199
S04
S00
S51
S56
S139
RAS1 - RAS8 (1B13)
CAS1 - CAS8 (1B13)
WPD1 - WPD8 (1B13)
RAS9 - RAS16 (2B13)
CAS9 - CAS16 (2B13)
WPD9 - WPD16 (2B13)
WR1 - WR8 (1A5 (1C2A5)
6T (2B8)
6Z (1B2)

V3

7803- -R1



452 FRONT FACEPLATE 1 PER
150-2204-40A3/A PAN HD TYPE SCREW 5 PER

WANG LABORATORIES, INC.	BY	DATE	APPROVED BY	DATE
MODEL NO. VS-100	TITLE 256Kx39 BIT MAIN MEMORY			
SIZE	SEE CHART	E	7803	

MNEMONIC	COORD
BMAR1	3H16
BMAR5 - BMAR 20	3H19
BMAR4	3G19
CAS	3F16
REN	3F16
WRITE	3K9
MST - MST	3H19
MMD0 - MMD 5	1J16
MMD16 - MMD 31	2J16
MMD 32 - MMD 47	1J19
MMD48 - MMD63	2J16
MMD0 - MMD15	1G1
MMD16 - MMD31	2G1
MMD 32 - MMD 47	1G1
MMD 48 - MMD 63	2G1
RAS	3E19
REF	3F6
R/W	3K9
RPM3 - RPM3	1C1
RPM4 - RPM6	2C1
RPL0 - RPL3	1C1
RPL4 - RPL6	2C1
WP0 - WP31	3H10
WP32 - WP63	3H10
WPM0 - WPM3	1K16
WPM4 - WPM6	2K16
WPL0 - WPL3	1K19
WPL4 - WPL6	2K19

IC LOCATION	TYPE	ML PART NO
L1-3, 4-36, 37-39, 59-76, 77-98, 102-120, 123-132, 133-149, 164-176	4504	SEE CHART
L11-18, 55-57, 91-101, 45, 46	74S240	396-0334
L2-10, 21-47, 110-102	SPARE	
L33-34, 77-78, 101-102, 165-166	74S40	396-0228
L76, 164	74S51	396-0184
L100	74S134	396-0333
L177, 180, 88-195, 203-206	8797	396-0189
L192, 186	74S-58	396-0301
L183, 184, 35	74S373	396-0306
L197	74S32	396-0255
L178	74-08	396 0220
L179, 201	7414	396 0139
L200	74S04	396-0149
L1-10, 11-20, 38-58, 58-76, 77-98, 102-120, 123-132, 133-149, 150-167, 176	16 PIN SKT	376-10 2

PART	LOCATION	SHARES
74.00	L33	1
	L79	1
	L102	1
74S.04	L200	2
7414	L111	3
	L201	
74S32	L117	2
74S133	L100	1

PART NUMBER	TYPE	ML PART NO.
R1-16, 33-43, 63-78, 98-109, 125-144, 153-171	56Ω 1/4W 5%	330-1657
R17-28, 44-47, 73, 80-101, 111	1K 1/4W 5%	330-3011
R29-32, 60-62, 81-83, 112-114	470Ω 1/4W 5%	330-1968
R151-152	120Ω 1/4W 5%	330-1023
C1-19, 35-39, 42, 181-183, 185, 187, 189-192, 194-202, 204-209	.047uF 50V	300-1766
C210-212, 40-41, 43, 79-80, 110, 193	15uF 15V(T)	300-4618
C40-41, 43, 79-80, 110, 193, 203-206, 208-209, 210-212, 214-215, 217-218, 220-221, 223-224, 226-227, 229-230, 232	.1uF 50V	300-1330
C213-216	10uF 25V(T)	300-4642

210	209	L1-10	L16-21	L22-32	L33-46	L47-58	L59-76	L77-88	L89-98	L102-110	L111-120	L123-132	L133-142	L146-156	L165-166	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				
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

210 = 209 + 377 OR 378

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

E REV

MODEL		SIZE	DWG NO
		E	7803
TITLE	256K x 37 BIT MAIN MEMORY		
SEE CHART			

"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 -5VAIN -5VA -5VA

-16VUR +12 VB +12 VBIN +16 VUR ONPB 16VAC1 16VAC2 +24VUR -1.4V +12VA +12VA +12VAIN +24 VADR +12 VBDR EN+5VB EN+5VA LED COM

LM339 LM304 555 723 IN4148 IN749A ZEN IN4004 MV5024 2N2906A 2N3014 2N4234 GER

BY	DATE	APPROVED BY	DATE
DWN J.C. Quilty	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

TITLE POWER SUPPLY

SCALE SHT 1 OF 4

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

NO	REVISION	BY	DATE
	SEE SHEET 4		

DRUNING 40-5253 48997

W1

"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

OFF PB (4₂)

NC SW2 NO C ±0V

BK1 (IC7) R45 1K R67 10K

LED1 ±0V MV5024

R81 560Ω

+5VA (5₂) +5VA (5₆)

R74 10K

U14 LM339 (11, 10, 13)

R75 1K

D21 IN4004 R80 1K ±0V

D23 IN4148 +16VUR

R78 47K

U14 LM339 (9, 8, 14)

D19 IN4148 BK3 (2D4)

D15 IN4148

LED2 ±0V MV5024

R82 560Ω

+5VB (3₂) +5VB (6₂)

+16VUR

U14 LM339 (4, 5, 12, GND)

R77 10K R76 1K ±0V

D20 IN4004 R79 1K ±0V

C18 5.6UF 35V (T) ±0V

±0V (1₂) ±0V (3₂) ±0V (5₂) ±0V (7₂)

BK2 (IC5)

+16VUR

U15 LM339 (5, 4, 12, GND)

±0V

U15 LM339 (6, 7, 1)

INIT-A (4₂)

+5VA R62 4.7K

(21) "ON" LED DR

(4₁) "OFF" LED DR

16VAC2 (2₀) -16VUR (5₈) 16VAC1 (1₄) -16VUR (8₂)

D34 A15A D33 A15A

F1 3A.S.B. 250V

C22 100UF 50V (E) ±0V

+16VUR (7₂) +16VUR (14₂) 6VAC2 (14₆) 6VAC1 (4₆)

D36 IN4004 D35 IN4004

C21 450UF 12V (E)

+16VUR +24VUR

C26 15UF 20V (T) ±0V

R86 470Ω 1W 10%

R91 470Ω 1/2W

-1.4V

D27 IN4004 D26 IN4004 ±0V

R37 330Ω 1W 10% +3V

D9 IN4372A ZEN ±0V

D28 IN4148

Q7 TIL-111

R72 3.3K +16VUR ±0V

+5VA R56 1K

(7₂) 50/60 HZ -OUT

Q16 2N3014

R73 3.3K ±0V

+16VUR R64 10K R63 2.2K

U11 LM339 (7, 6, 12, GND)

±0V

D12 IN4148

R58 3.3K Q8 2N6282

R57 4.7K ±0V

+16VUR R84 15Ω 11W R112 15Ω 11W R85 15Ω 11W R113 15Ω 11W

R61 30.1K 1%

+16VUR R59 2.2K

±0V R60 18.2K 1%

U11 LM339 (9, 8, 14)

D13 IN4148

R41 1K Q3 2N3725

R40 1K ±0V

+5VA R39 1K

(3₂) INIT (13₂) INIT

D 7812

WANG LABORATORIES, INC. LOWELL, MASS. U.S.A.		BY	DATE	APPROVED BY	DATE
MATERIAL		DWN L.D.Gray	3/9/87	E ENGR	
		CHK		M ENGR	
MODEL NO. VS-100				MFG ENGR	
SEE ENGRG SPECIFICATIONS No.		TITLE POWER SUPPLY			
FINISH	TOL EX AS NOTED .XX ± FRAC ± .XXX ± ANG ± FINISH √	210-7812	D	7812	
	SCALE	SHT 2 OF 4	WANG PART NUMBER	SIZE	DRAWING NUMBER	REV

NO.	REVISION	BY	DATE
	SEE SHEET 4		

BRUNING 40-5253 4/89/7

W2

"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

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

LED1 LED2 LED4 LED5 LED6 LED7

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 4

210-7812 | D | 7812 | 5

WANG PART NUMBER | SIZE | DRAWING NUMBER | REV

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

DO NOT SCALE

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
R6,13	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%	333-00666
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%	333-00663
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
C1,4,5,7,8,10,16,17,22,28-30	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	.015UF	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	A15A	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	376-00666
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 +16VUR
+12 VB 2 15 -16VUR
-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 # 5132 APP'D RKE 4-81	KJC	5/4/81
1	REVISED PER ECO # 1820 APP'D RKE 4-81	RKE	5-26-81
1/A	REVISED PER ECO # 1960 APP'D RKE 11/81	SK	7-9-81
2	REVISED PER ECO # 21377 APP'D 1-12-82	DMP	1/27/82
3	REVISED PER ECO # 21376 + 21378 APP'D DMP 3-18-82	SK	3/18/82
4	REVISED PER ECO # 21379 APP'D 5-13-82	SK	5/13/82

	BY	DATE	APPROVED BY	DATE
DWN	G. Cook	5/4/81	E ENGR	4/81
CHK		6-4-81	M ENGR	
			MFG ENGR	

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

MATERIAL —
MODEL NO VS-100 SEE ENGRG SPECIFICATIONS No. ——
FINISH —
TOL EE 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 7812

E-REV 0

BRUNING 40-5253 48997

W4

"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 PERMITTED BY WANG TO LEAVE THE PHYSICAL CUSTODY OF THE COMPANY IT IS RETURNABLE UPON THE DEMAND OF WANG LABORATORIES, INC."

DO NOT SCALE

BPD0 – BPP7 (3G5)

BPA1 – BPA12 (2A11)

+5VR

-15VUR

+5V

-12V

-12V

TP12

TP2

TP3

TP13

PP0 CLK

PULSE WRITE

L54 LS244

L51 Z80 CPU

L14 723

L21 LS138

L48 LS138

L112 LS138

L32 LS139

L30 8797

L29 161

Q1 2N6387

R1 4.7K
R2 100Ω
R3 1K POT
R4 470Ω
R5 390Ω
R6 470Ω
R7 4.7K
R8 4.7K
R9 330Ω
R10 1K
R11 4.7K
R12 82Ω
R13 470Ω
R14 470Ω
R15 4.7K
R16 4.7K
R17 4.7K

C1 .0022MF
C2 15MF 20V (T)
C3 150PF
C4 .01MF
XTAL 9.8304 MHz

(2F8)(5C10) BPA0
(5C10) BPA1
RIPU (3B7)
BPA2
BPA3
BPA4
BPA5
BPA6
BPA7
BPA8
BPA9
BPA10
BPA11
BPA12 (2B8)

(7C11) BBD4
(7D11) BBD5
BBD6
BBD7
BBD0 – BBD3 (3G3) (4B10) (6C11) (6F11)

-PCB TRAP (3C5)
-NO DMA (4C6)
INITIALIZE (5F4)
WAIT
BUSRQ
NMI
IORQ
WR
RD
INT
RESET
M1
MREQ
RFSH
HALT
BUSAK

-M1 BP (4F10)
-MREQ BP (2G11)(6F10)
BP RFSH (2F11)
-HALT (5E5)
+BP WRITE (2F11)
+BP READ (2F11)

-READ SWITCH (3F8)
-PCB READ (3B7)
-RD STATUS1 (5G8)
-RD STATUS2 (5E11)
-READ PP (5C11)

-SET IOC BSY (3C6)
-CLR IOC BSY (3B6)
-SET PCB REQ (3B10)
-CLR PCB REQ (3C11)
-ENBLPCB WR (3E3)
-SEL DMA COMD (4B10)(5B8)

-LD MRR LOW (6E9)
-LD MRR MIDDLE (6E7)
-LD MRR HIGH (6E4)
-LD BASE LOW (6C8)
-LD BASE HIGH (6C10)
-LD LEN LOW (6F10)
-LD LEN HIGH (6G7)
-CLK BP HIGH (7D11)

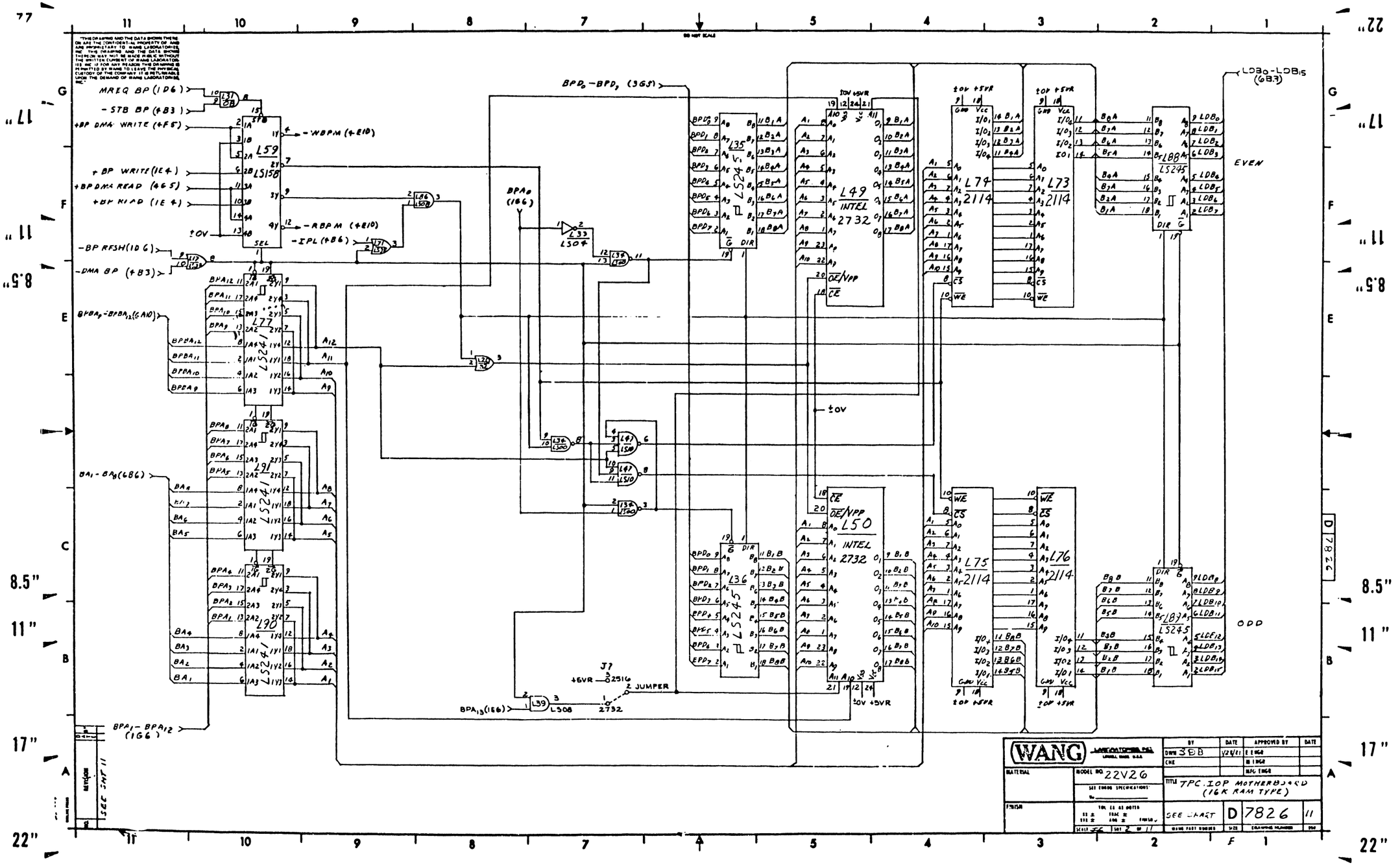
-CLK PCB WR (3D4)
-WRITE PP (5B11)
-CLK MEM CTRS (6D11)

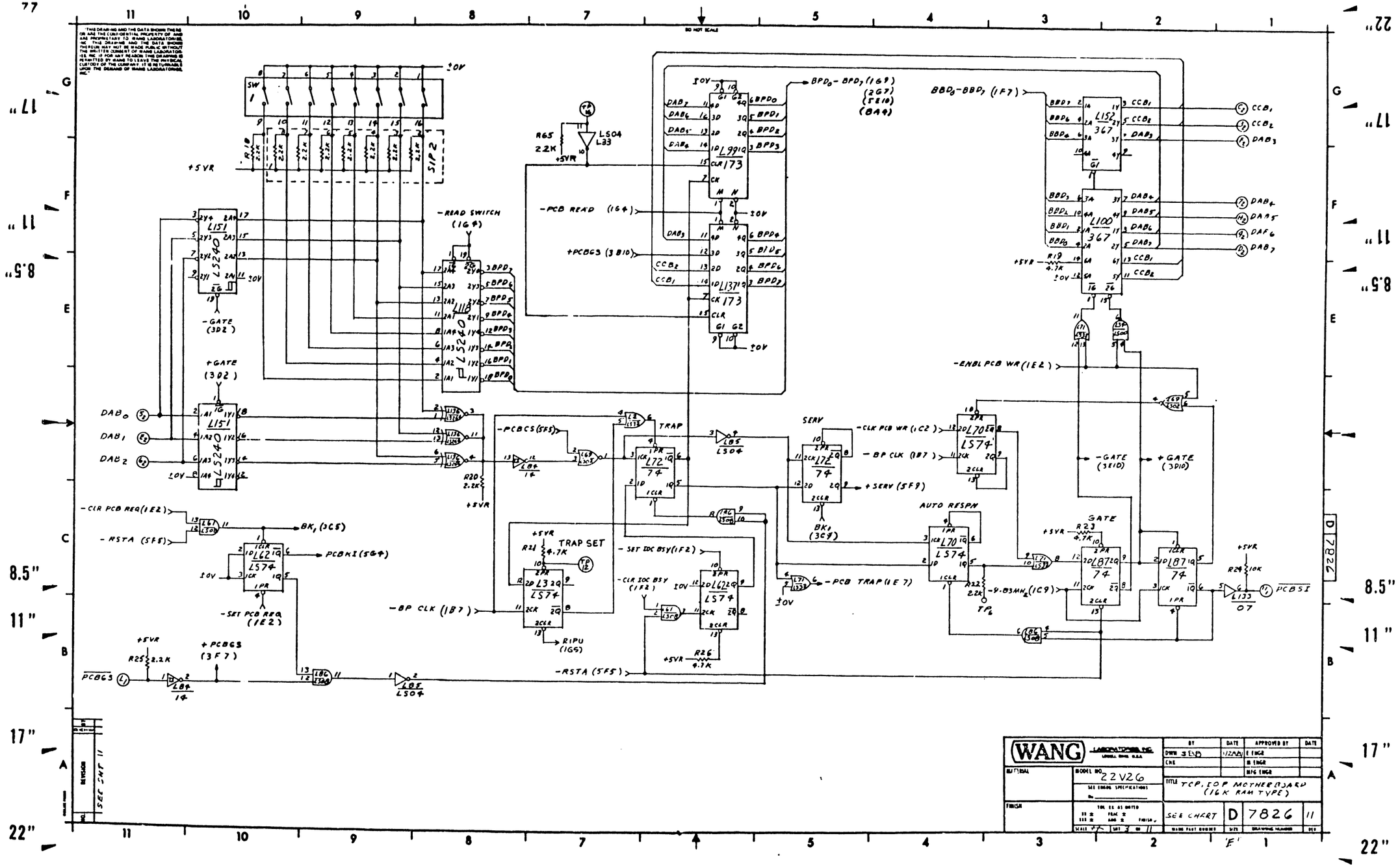
-9.83MHZ (3B3)(5C8)
+WR PULSE)
-BP CLK (3D4)(1B8)
-PP0 CLK (6E8)(9C11)(8E6)(8B7) (9F4)(8E10)

SEE SHT 11

WANG LABORATORIES, INC. LOWELL, MASS. U.S.A.		BY	DATE	APPROVED BY	DATE
		DWN SBB	1/28/81	E ENGR	
		CHK		M ENGR	
				MFG ENGR	
MATERIAL	MODEL NO. 22V26	TITLE TCP, TOP MOTHERBOARD (16K RAM TYPE)			
	SEE TIMING SPECIFICATIONS				
FINISH	TOL EX. AS NOTED	SIZE D	DRAWING NUMBER 7826	REV 11	
	SHT 1 OF 11	SEE CHART			

X1


MREQ BP (1D6)
-STB BP (+B3)
+BP DMA WRITE (+F5)
+BP WRITE (1E4)
+BP DMA READ (6G5)
+BP READ (1E4)
-BP RFSH (1D6)
-DMA BP (+B3)
-WBPM (+E10)
-RBPM (+E10)
-IPL (+B6)
+5V
BPA0 (1B6)
BPD0-BPD15 (3G5)
LDB0-LDB15 (6B3)
EVEN
ODD
BPA12-BPA1 (1G6)
BA1-BA8 (6B6)
BPA13 (1B6)
J7
+5VR
JUMPER
2732
L59
L77
L78
L79
L80
L35
L36
L49
L50
L74
L75
L76
L33
L34
L37
L38
L39
L86
L87
L88
LS158
LS241
LS245
LS257
LS258
2114
WANG
MODEL NO 22V26
TPC.IOP MOTHERBOARD (16K RAM TYPE)
SEE CHART
D 7826
11
11 JAN 1982


THIS DRAWING AND THE DATA SHOWN THEREON ARE THE CONFIDENTIAL PROPERTY OF WANG LABORATORIES, INC. THIS DRAWING AND THE DATA SHOWN THEREON ARE NOT TO BE USED IN WHOLE OR IN PART FOR ANY PURPOSE EXCEPT UNDER CONTRACT WITH WANG LABORATORIES, INC. IF FOR ANY REASON THIS DRAWING IS NOT USED AS INTENDED IT SHALL BE RETURNED UPON THE DEMAND OF WANG LABORATORIES, INC.
DO NOT SCALE
+5V
SW 1
R18 2.2K
SIP 2
+5VR
-READ SWITCH (1G4)
LS240 LS151
-GATE (3D2)
+GATE (3D2)
DAB0 (5)
DAB1 (6)
DAB2 (4)
-CLR PCB REQ (1E2)
-RSTA (5F5)
BK, (3C5)
PCBK1 (5G4)
-SET PCB REQ (1E2)
+PCBGS (3F7)
PCBGS (4)
LS04 LS74 LS00
R25 2.2K
-PCB READ (16 4)
R65 22K
LS04 LS33
LS99 LS173
LS137 LS173
BPD0 - BPD7 (16 9) (2G7) (5E10) (8A9)
+PCBG3 (3 B10)
BBD0 - BBD7 (1F7)
LS152 367 LS100 367
CCB1 (7)
CCB2 (3)
DAB3 (4)
DAB4 (2)
DAB5 (H2)
DAB6 (F2)
DAB7 (D2)
R19 4.7K
-ENBL PCB WR (1E2)
LS74 LS32 LS08
-GATE (3E10)
+GATE (3D10)
-PCBCS (5F5)
TRAP
LS85 LS04
LS72 74
SERV
-CLK PCB WR (1C2)
-BP CLK (1B7)
LS72 74
+SERV (5F9)
BK1 (3C9)
-PCB TRAP (1E7)
AUTO RESPN
LS70 LS74
R22 2.2K
-9.83MHz (1C9)
TP6
GATE
R23 4.7K
LS87 74
R24 10K
LS33 07
PCBS1
TRAP SET
R21 4.7K
TP5
LS32 LS74
RIPU (1G5)
-SET IOC BSY (1F2)
-CLR IOC BSY (1F2)
R26 4.7K
-BP CLK (1B7)
-RSTA (5F5)
SEE SHT 11
WANG LABORATORIES, INC.
MODEL NO 22V26
SEE DRAWING SPECIFICATIONS
TITLE TCP, EOP MOTHERBOARD (16K RAM TYPE)
SEE CHART
D 7826 11
DRAWING NUMBER

X3

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 FURNISHED BY WANG TO ANY THE PHYSICAL CUSTODY OF THIS COMPANY, IT IS RETURNABLE UPON THE DEMAND OF WANG LABORATORIES, INC.

DO NOT SCALE

+PP DMA READ +PP DMA WRITE

+5V

L68 157

+PP DMA READ (9F10)

+BP DMA READ (2F11)

+PP DMA WRITE (9F10)

+BP DMA WRITE (2G11)

L82 LS139

L115 LS74

L133 07

- RST PP0

(MD2X(BR)X(BEC)-(BE10)(BG3)(9B10)

- RST PP1

- RST PP2

- RST PP3

-INTIALIZE (5F4)

-MI PP0 (8D3)

-MI PP1

-MI PP2

-MI PP3

-MREQ PP0 (9G10)

-MREQ PP1

-MREQ PP2

-MREQ PP3

L153 LS153

R27 10K

R28 10K

R29 10K

R39 10K

SIP4

+5VR

-MI BP (1D6)

-MREQ BP (1D6)

-RBPM (2F9)

-WBPM (2G9)

L67 LS158

-READ LOCAL MB (5B8)

-WRITE LOCAL MEM (5B8)

-READ DATA CLK (GB2)

-CLK DMA CTRS (GD11)

L84 14

L85 LS04

-MM WRITE (4C4)

-RPP0 M (9B9)

-RPP1 M

-RPP2 M

-RPP3 M

-WPP0 M (9E9)

-WPP1 M

-WPP2 M

-WPP3 M

L154 LS153

L83 175

BBD0

BBD1

BBD2

BBD3

BBD4

BBD5

BBD6

BBD7

+MAR INCA (5D4)

+MAR INCB (5D4)

+DMA (6F11)

-DMA (6G8)

L98 LS74

L79 LS74

SEL A

SEL B

LCB1

LCB2

MCB2 (5F2)

MCB1 (5F2) (6F6)

-SEL DMA COMP (1E2)

BBD0-BBD7 (1F7)

L60 LS51

-RSTA (5F5)

-MM ERR (5E4)

MCOS (5D5)

+END DMA (6E7)

+INHIBIT MEM REQ (5A7) (6E11)

-MM DMA (6E11)

+NO DMA (6F9)

-NO DMA (1E7)

+MM DMA (5A8)

-BP DMA

IPL

(2F9)

L22 LS08

+5VR

R34 4.7K

L18 74

L16 LS10

-MM WRITE (4E6)

DMA DATAINT (6F7)

-DMA BP (2E11)

-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. LOWELL, MASS. U.S.A.		BY	DATE	APPROVED BY	DATE
MATERIAL	MODEL NO. 22V26	DWN JPB	1/20/81	E ENGR	
	SEE ENGR. SPECIFICATIONS	CHK		M ENGR	
FINISH	TOL. EX. AS NOTED			MFG ENGR	
	FX ± FRAC ± DEC ± ANG ±	TITLE TCP, IOP MOTHERBOARD (16K RAM TYPE)			
	SCALE SHT 1 OF 1	SCI CHART D 7826			11

X4

THIS DRAWING AND THE DATA SHOWN THEREON ARE THE CONFIDENTIAL PROPERTY OF AND ARE PROPRIETARY TO WANG LABORATORIES, INC. THE UNDERSIGNED, AND THE DATA SHOWN THEREON, SHALL NOT BE REPRODUCED IN WHOLE OR IN PART 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

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)
- WRITE PP (1C2)

BPA0 (1G6)
BPA1 (1G6)

- RD PP0 (8B7)
- WR PP0 (8B7)
- WR PP1
- WR PP2
- RD PP3
- RD PP2
- RD PP1

+SERV (3C4)
+NO DMA (4C6)

-9.83 MHz (1C9)

- SEL DMA COMD (1E2)
- WRITE LOCAL MEM (4F8)
- READ LOCAL MEM (4F8)
- LOCAL MEM STB (4B3)
+INHIBIT MEM REQ (4B6)
+MM DMA (4C6)

MMP
MCOS
EMA
MRI

-MM ERR (4B9)
MCOS (9B7)
-HALT (1D6)

PCBCS
SYSTEM INITIALIZE
PCBRF (3C8)
PCBRE

-RSTA (3C11) (4B9) (3B7) (6E4) (6C11)
PCBCS (3D7)
-INITIALIZE (10.7) (6E3)

MGS
MCB1 (4B7)
MCB2 (4C8)
-MGS (6B2)
-CM ERROR

-CLK LOCAL MEM LATCH (6F7)
+MAR INCB (4D8)
+MAR INCA (4D8)
-CLK MAR (6E11)

MA0 - MA18 (6C4)

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

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

MATERIAL — MODEL NO. 22V26 — SEE ENGR SPECIFICATIONS

FINISH — TOL EX DECIMALS ± — FRACT ± — ANG ± — FINISH √

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

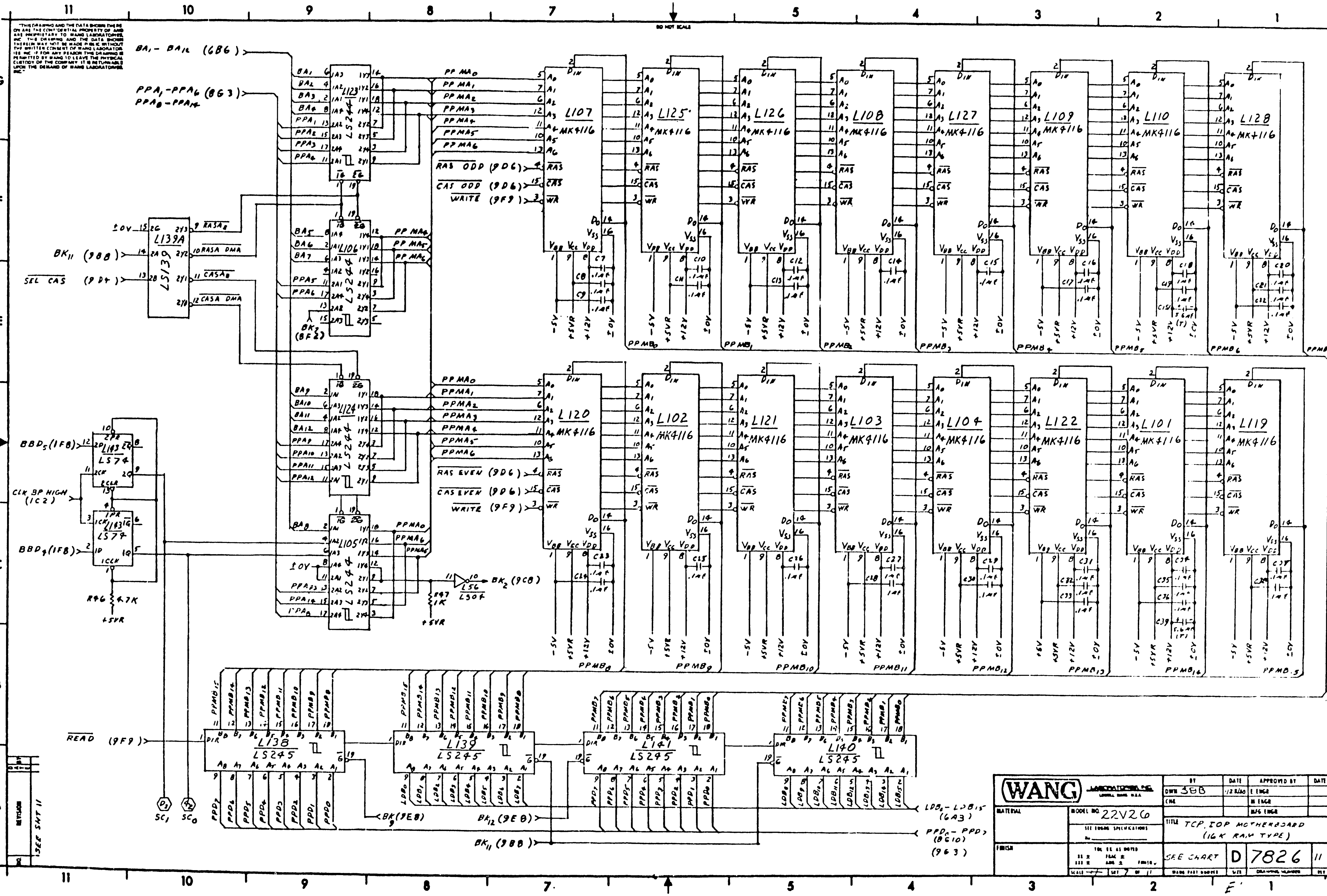
SEE SHEET — D 7826 — 11

THIS DRAWING AND THE DATA SHOWN THEREON ARE THE CONFIDENTIAL PROPERTY OF WANG LABORATORIES, INC. THEY ARE LOANED AND THE DATA SHOWN THEREON IS DISCLOSED SUBJECT TO THE AGREEMENT THAT NO COPIES OR OTHER REPRODUCTIONS THEREOF WILL BE MADE BY WANG LABORATORIES, INC. IF 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

- DMA (+CB)
- LD LEN HIGH (1D2)
- LD LEN LOW (1D2)
- BBD0 - BBD7 (1F7)
+ CMA (+CP)
- RSTA (5F5)
+ INHIBIT MEM REQ (+B6)
- MM DMA (+CC)
- CLK MAR (5D3)
- CLK MEM CTRS (1C2)
- CLK DATA CTRS (4EB)
MBG (4B7)
- CLK LOCAL MEM LATCH (5D4)
- DMA DATA INT (+C3)
+ END DMA (4B7)
- M SYNC (AA1)
+5VR
- LD MAR LOW (1D2)
- LD MAR MIDDLE (1D2)
- LD MAR HIGH (1D2)
CG 220 PF
CPE 220PF 50V
+0V
- LD BASE HIGH (1D2)
- LD BASE LOW (1D2)
- M SS (5E1)
- READ DATA CLK (+EB)
BPBA0 - BPBA12 (2E11)
BA1 - BA12 (7G10)
BA1 - BA8 (2D11)
MA0 - MA18 (5A2)
LDB0 - LDB15 (2G1) (7A6)
SEE SHT 11

		BY	DATE	APPROVED BY	DATE
WANG LABORATORIES, INC. LOWELL, MASS. U.S.A.		DWN		E ENGR	
MATERIAL	MODEL NO. 22V26	CHK		M ENGR	
	SEE ENGRG SPECIFICATIONS			MFG ENGR	
FINISH	UNLESS OTHERWISE SPECIFIED ± .XX ± .XXX ANG ±	TITLE	TCP, IOP MOTHERBOARD (16K RAM TYPE)		
	SCALE: NONE SHT 1 OF 11	SIZE	SEE CHART	D 7826	11
	NEXT ASSY	USED ON			


"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
BA1 - BA12 (6B6)
PPA1 - PPA6 (8G3)
PPA8 - PPA14
L123 LS244
L106 LS244
L124 LS244
L105 LS244
L139A LS139
BK11 (9B8)
SEL CAS (9D4)
RASA8
RASA DMA
CASA8
CASA DMA
BK2 (8F2)
L143 LS74
BBD5 (1F8)
BBD4 (1F8)
CLK BP HIGH (1C2)
R46 4.7K
+5VR
R47 1K
L56 LS04
BK2 (9C8)
PPMA0 - PPMA6
RAS ODD (9D6)
CAS ODD (9D6)
WRITE (9F9)
RAS EVEN (9D6)
CAS EVEN (9D6)
L107 MK4116
L125 MK4116
L126 MK4116
L108 MK4116
L127 MK4116
L109 MK4116
L110 MK4116
L128 MK4116
L120 MK4116
L102 MK4116
L121 MK4116
L103 MK4116
L104 MK4116
L122 MK4116
L101 MK4116
L119 MK4116
-5V +5VR +12V ±0V
.1μF
5.6μF (T)
PPMB0 - PPMB15
READ (9F9)
L138 LS245
L139 LS245
L141 LS245
L140 LS245
SC1 SC0
BK9 (9E8)
BK12 (9E8)
BK11 (9B8)
LDB0 - LDB15 (6A3)
PPD0 - PPD7 (8G10) (9G3)
D 7826
WANG LABORATORIES, INC. LOWELL, MASS. U.S.A.
MODEL NO. 22V26
DWN SBB 1/28/80
TITLE TCP, IOP MOTHERBOARD (16K RAM TYPE)
SEE CHART
D 7826 11
SEE SHT 11

X7

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. IT IS FOR USE REALIZING THAT DRAWINGS OR PERMITTED BY WANG TO LEAVE THE PHYSICAL CUSTODY OF THE COMPANY IT IS RETURNABLE UPON THE DEMAND OF WANG LABORATORIES, INC.

DO NOT SCALE

MODEM CONN

SEE SHT 11

REVISION

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

	BY	DATE	APPROVED BY	DATE
DWN				
CHK				

MATERIAL

MODEL NO 22V26

SEE ENGRG SPECIFICATIONS No.

FINISH

TOL EX AS NOTED .XX ± .XXX ± ANG ± FRACT ±

TITLE TCP, IOP MOTHERBOARD (16K RAM TYPE)

SIZE D | DRAWING NUMBER 7826 | REV 11

SCALE — | SHT # OF 11

NEXT ASSY | USED

"F"

"THIS DRAWING AND THE DATA SHOWN THEREON ARE THE CONFIDENTIAL PROPRIETARY OF WANG LABORATORIES, INC. PREPARED FOR 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

ACU CONN

PWD 5 · PWC 6 · DSS 13 · DLO 22

L9 75134 · V_{CC} 16 +5VR

PPD_0 - PPD_7 (7A9)

MA_0, MA_1 (8G3)

L37 Z80 PIO

$\overline{CS\ 'Y0'}$ (8C3) · $\overline{RD}$ (8E5) · $\overline{IORQ}$ (8C5) · $-PP_0$ CLK (1B7) · IA0 (8C10) · IA1 · IA2 · IA3 · IA4

$\overline{Z80\ INT}$ (8E4) · BK (8B7) · RX RDY (8G9) · $\overline{ASTB}$ · $\overline{BSTB}$ · +5VR RG1 2.2K · $\overline{MI\ PP_0}$ (8C3)

TX ENTY (8F9) · TX RDY (8F9)

L8 75150 · L6 75150 · L7 75150 · RG2 2.2K · +5VR · +20V · -12V · +12V

ACU CONN.

CH GND 1 FGD · +20V 7 SGD · NB1 14 · NB2 17 · NB4 14 · NB8 17 · DPR 2 · CRQ 4

+ PP DMA WRITE (4G5) · PP WR (8E3) · PP DMA READ (4G5) · PP RFSH (8B2) · PP RD (8E3)

L111 LS158 L57

4 WRITE → (7F7 X7C7) · 7 $\overline{READ}$ → (7A10) · 9 WPPM → (4C8) · 12 RPPM → (4D11) · +20V

$\overline{SEL\ CAS}$ (7E11)

L79A 1519-100

+5VR R50 2.2K

L78 LS158 L57

$\overline{RAS\ EVEN}$ (7D7) · $\overline{CAS\ EVEN}$ (7D7) · $\overline{RAS\ ODD}$ (7F7) · $\overline{CAS\ ODD}$ (7F7)

R59 150Ω · R60 330Ω · +5VR · +20V

L = EVEN
H = ODD
PPA_0 (8G3)

L66 LS75

$-PP_0$ CLK (1B7)

BK_B (8C1) · PPMI (8E3) · L41 LS74

$\overline{RST\ P_0}$ (9G1) · DMA P_0 (4C1) · PP RFSH (8E2) · $\overline{PP\ RFSH}$ (8G4)

BK_8 (7C7) · BK_{11} (7F11)(7A7) · BK_{12} (7B7) · BK_9 (7A8)

SEE SHT 11

WANG LABORATORIES, INC. LOWELL, MASS. U.S.A.		BY	DATE	APPROVED BY	DATE
		DWN SDB	1/23/81	E ENGR	
		CHK		M ENGR	
				MFG ENGR	
MATERIAL	MODEL NO 22V26	TITLE TCP, IOP MOTHERBOARD (16K RAM TYPE)			
FINISH	TOL EX AS NOTED	SEE CHART	D	7826	11

209	210	1.37	2.53	7826-R1	377-0342	377-0352	378-6041
7826	7826-R1	2.38	2.49	7826-R1	377-0342	377-0352	378-6041
7826	7826	2.38	2.49	7826	377-0344	377-0354	378-6041
7826	7826	2.38	2.49	7826	377-0343	377-0353	377-0365
7826	7826	2.38	2.49	7826	377-0344	377-0354	377-0365
7826	7826	2.38	2.49	7826	377-0342	377-0352	378-6041
7826	7826	2.38	2.49	7826	377-0342	377-0352	378-6041

210 = 209 + 377 OR 378

THIS DRAWING AND THE DATA SHOWN THEREON ARE THE CONFIDENTIAL PROPERTY OF AND ARE PROPRIETARY TO WANG LABORATORIES, INC. THE DRAWING AND THE DATA SHOWN THEREIN MAY NOT BE MADE PUBLIC WITHOUT THE WRITTEN CONSENT OF WANG LABORATORIES INC. IF FOR ANY REASON THE 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

	BY	DATE	APPROVED BY	DATE
DWG	355	1/31/81	E ENGR	
CHK			M ENGR	
			MFG ENGR	

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

MATERIAL — MODEL NO. 22V26 — SEE ENGR SPECIFICATIONS

FINISH — TOL. ON ALL UNITED FRACT. DEC. ANG. FINISH

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

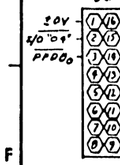
SIZE D | 7826 | REV 11

SCALE — SHT 10 OF 11

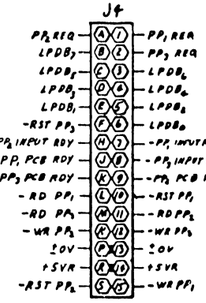
"THIS DRAWING AND THE DATA SHOWN THEREON ARE THE CONFIDENTIAL PROPERTY OF WANG LABORATORIES, INC. THIS DRAWING AND THE DATA SHOWN THEREON MAY NOT BE MADE PUBLIC WITHOUT THE WRITTEN CONSENT OF WANG LABORATORIES, INC. IT IS FOR USE ONLY WHEN THIS DRAWING IS PERMITTED BY WANG TO LEAVE THE PHYSICAL CUSTODY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

DO NOT SCALE

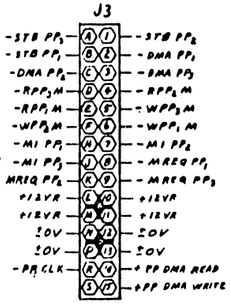
J5



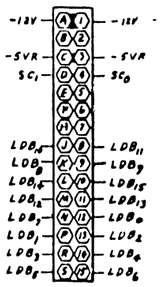
J4



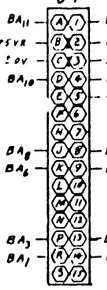
J3



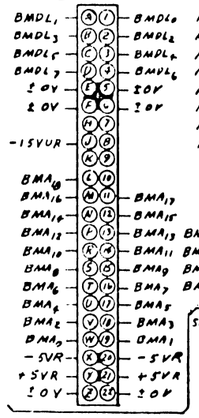
J2



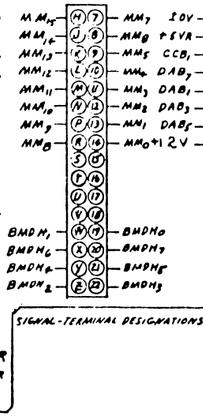
J1



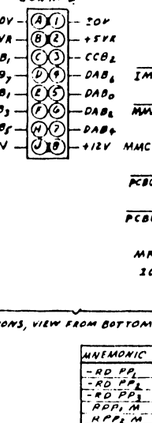
CONN. 4



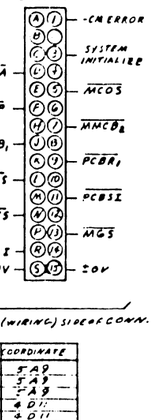
CONN. 3



CONN. 2



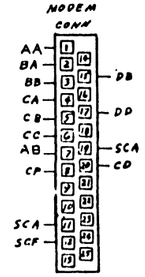
CONN. 1



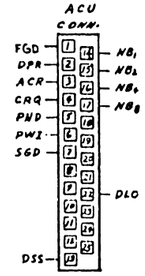
SIGNAL-TERMINAL DESIGNATIONS, VIEW FROM BOTTOM (WIRING) SIDE OF CONN.

MNEMONIC	COORDINATE
AA	B E11
AB	B F11
ACR	B D11
BA	B A9
BA0 - BA11	G A8
BB	B D11
BMA0 - BMA16	G D1
BMDL0 - BMDL7	G C1
BMM0 - BMM15	G D1
CA	B A8
CB	B F11
CC	B E11
CCDEL2	J G1
CD	B A9
-CM ERROR	S B1
CP	B E11
CRQ	J D1
DA0 - DA7	J D11
DAB0 - DAB7	J F1
DB	B D11
DD	B D11
DLO	J G3
DMA PP1	4 D1
DMA PP2	4 D1
DMA PP3	4 D1
DPR	J B1
DSS	J G4
F1.0	J F1
IMA	5 G7
I/O REQ	B D1
LDB0 - LDB15	G A5
LPDB0 - LPDB7	J D11
SC0, 1	7 A10
SCA	B A9
SCB	B E11
SGD	9 F1
-STB PP1	4 C1
-STB PP2	4 C1
-STB PP3	4 C1
SYSTEM INITIALIRE	5 G4
-WPP1 M	4 C11
-WPP2 M	4 C11
-WPP3 M	4 C11
-WR PP1	5 A9
-WR PP2	5 A9
-WR PP3	5 A9
XD0 - 8	9 E1
XMEMCS	5 E5
XMMP	J B11
XMSYN	5 G4
XMWTC	J C1
XPLOCK	8 B1
XPP	8 G6
XPP DMA READ	4 G5
XPP DMA WRITE	4 G5
XPP IOP REQ	5 G11
XPP PCB REQ	5 G9
XPP PCB RDY	5 F11
XPP PCB RST	5 G11
XPP REQ	5 F9
XPP RPCB REV	5 F11
XPP RPCB RDY	5 F11
XPP REQ	5 E9
XPP WPCB REV	5 F11
XPWR	4 G7

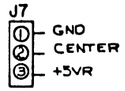
MODEM CONN



ACU CONN.



J7



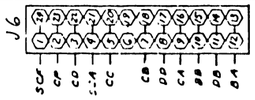
LOCATION	W. L. PART NO.	I.C. TYPE
L1, L62		SPARE
L2, 17, 42, 71, 96	376-0211	74LS32
L3, 5, 23, 29, 40, 41, 42, 62, 70, 81, 115, 163, 150	376-0155	74LS74
L4, 18, 72, 87	376-0006	7474
L6, 7, 8, 12, 13	376-3076	75150P
L9, 27, 28	376-0023	75154
L10, 34, 58, 98, 135	376-0207	74LS00
L6B	376-0082	74157
L 14	376-0066	723
L 15	376-0010	7404
L16, 25, 97	376-0209	74LS10
L19	376-0016	7402
L 20	376-0003	7432
L21, 48, 63, 112	376-0298	74LS138
L22, 39, 52, 61, 80, 86, 97	376-0153	74LS08
L22A, 31, 56, 64, 85	376-0180	74LS04
L26, 68	376-0218	74LS157
L29, 129.-132	376-0094	7416
L30	376-0189	8T97
L31	376-0081	7408
L32, 82, 134, 139A, 135	376-0226	74LS139
L35, 36, 88, 89, 135, 138, 139, 141, 144	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, 113, 123, 127, 149, 157, 158, 160, 161, 166, 167	376-0238	74LS244
L79-76	376-9014	18 PIN SOCKET

LOCATION	W. L. PART NO.	I.C. TYPE
L55	376-0304	74LS73
L59, 67, 78, 111	376-0293	74LS158
L60	376-0213	74LS51
L65, 69	376-0208	74LS02
L66	376-0312	74LS75
L73, 74, 75, 76	SEE CHART	2114
L77, 90, 91	376-0288	74LS241
L79	376-0296	74LS37
L79A	376-0002	1519-100
L80	376-0139	7414
L93	376-0193	74LS368
L98	376-0098	7417
L99, 137	376-0183	74173
L100, 138, 152	376-0176	7437
L101-104, 107-110, 119-122, 125-128	SEE CHART	MK6116P
L113, 169-163	376-0318	74LS158
L118, 151	376-0297	74LS 90
L133	376-0056	74[illegible]
L136	376-0198	74LL266
L153, 154	376-0156	74LS153
L156, 158, 161, 163	376-0286	74[illegible]374
L164, 165, 118	376-0233	74 3161

LOADING CHART ON PAGE 10.

COMPONENT	W. L. PART NO	TYPE
R1, 7, 8, 11, 15, 16, 17, 19, 21, 23, 26, 39, 136, 140	330-3008	4.7A ¼W 5%
R2	330-2011	100A ¼W 5%
R3	336-1014	1K POT
R4, 6, 13, 14	330-2048	470 Ω ¼W 5%
R5	330-2040	330 Ω ¼W 5%
R9, 60	330-2034	330 Ω ½W 5%
R10, 97	330-3011	1K ¼W 5%
R12, 51	330-3083	82 Ω ¼W 5%
R18, 20, 22, 25, 30-35, 38, 42-46, 49, 52, 53, 57, 58, 61, 62, 50, 64, 65, 66, 40	330-3023	2.2K ¼W 5%
R24, 27, 28, 29, 36, 37, 59, 67, 98	330-9011	10K ¼W 5%
R 54, 55	331-2012	120A 2W 10%
R56	330-1063	68 Ω ¼W 5%
R58	330-2013	130A ¼W 5%
R63	330-1011	10A ¼W 5%
SIP1, 3, 4	333-0002	10K SIP RES
SIP2	333-0806	2.2K SIP RES
SW 1	325-1503	8 BANK ROCKER SW
U5	376-9024	16 PIN DIP SOCKET
C1	300-1908	.0022 MFD CER
C2, 88-91	300-8312	15 PF 200 V (T)
C3	300-1150	150 PF SOLDER
C4, 163	300-1903	.01 MF 50V CER
C6, 92	300-1220	220 PF 500V CER
C7-38	300-1930	.1 MF 50V CER
C39, 151	300-4017	5.6 MF 35 V (T)
C41-86, 93-102, 164-150	300-1966	.047 UF 50V CER
C87	300-4036	47 MF 50V (T)
Q1	323-1012	2N6 3MJ
Q2	323-1014	MPS6518
Q3	323-1012	MPS6512
U1-4	350-0009	30 PIN CONN
ACU CONN, MODEM CONN.	350-1047	25 PIN CONN
U2, 51, 52, 82	376-9011	40 PIN SOCKET
C39, 150	376-9015	28 PIN SOCKET
L89, 90	376-9003	28 PIN SOCKET
L101-104, 107-110, 119-122, 125-128	376-9002	16 PIN SOCKET
J7	6054-0104	3 PIN HEADER
XTAL	321-0030	9.8304 MHz
-12V TP	654-1192	SIDE TERM

J6



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

LOCATION	I.C. TYPE	SPARE
L94	74LS30	1
L95	74LS00	2
L85	74LS02	3
L15	7404	4
L33	74LS04	5
L87	74LS08	1
L61	74LS08	2
L2	74LS32	3
L82	74LS32	4
L96	74LS38	1
L79	74S37	3
L9	7428	4
L150	74LS74	1
L66	74LS75	1
L85	7486	2
L32	74LS33	1
L1374	74LS139	1
L114	74LS244	4
L136	74LS266	1
L152	74367	2

MNEMONIC	COORDINATE
-RD PP1	5 A9
-RD PP2	5 A9
-RD PP3	5 A9
PPP1 M	4 D11
PPP2 M	4 D11
PPP3 M	5 D11
-RST PP0	4 G1
-MI PP1	4 F1
-RST PP1	4 F1
-RST PP2	4 E1
SC0, 1	7 A10
SCA	B A9
SCF	B E11
SGD	9 F1
-STB PP1	4 C1
-STB PP2	4 C1
-STB PP3	4 C1
SYSTEM INITIALIRE	5 G4
-WPP1 M	4 C11
-WPP2 M	4 C11
-WPP3 M	4 C11
-WR PP1	5 A9
-WR PP2	5 A9
-WR PP3	5 A9

REVISION	BY	DATE	APPROVED BY	DATE
D	ORIGINATED FOR INFO ECO 59	12-6-81		
E	REVISED PER ECO #17949 ADDED [illegible]	2-11-82		
F	REVISED PER ECO #18705 APPD: [illegible]	4/27/82		
G	REVISED PER ECO #18932 APPD: [illegible]	8-9-82		
H	REVISED PER ECO #7893 APPD: [illegible]	7-21-82		
J	REVISED PER ECO # 22,399 APPD: [illegible]	10-11-82		
K	REVISED PER ECO # 22,559 APPD: [illegible]	11-5-82		
L	REVISED PER ECO # 22,559 APPD: [illegible]	12-2-82		
M	REVISED PER ECO #23587, 23622, 23623, 23624 APPD: [illegible]	5-4-83		
N	REVISED PER ECO # 24,111 APPD: [illegible]	5/11/83		

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

MATERIAL	MODEL NO 22V26	BY DWN S.S.B.	DATE 11/24/81	APPROVED BY CHK [illegible]	DATE 5/6/83
	SEE ENGR SPECIFICATIONS No.			B ENGR	
FINISH	TOL UNLESS NOTED .XX ± .XXX ± ANG ±			BIG ENGR	
	SCALE ---	SHT 1 OF 11	TITLE TCP, IOP MOTHERBOARD (16K RAM TYPE)		
	SEE CHART	D	7826	11	
	WANG PART NUMBER	SIZE	DRAWING NUMBER	REV	

E-REV 1

X11

THIS DRAWING AND THE DATA PROVIDED THEREON ARE THE CONFIDENTIAL PROPERTY OF AND ARE THE EXCLUSIVE COPYRIGHT OF WANG LABORATORIES, INC. THIS DRAWING AND THE DATA CONTAINED THEREON WILL NOT BE USED, PUBLISHED OR REPRODUCED IN WHOLE OR IN PART, NOR DISCLOSED TO ANY THIRD PARTY, WITHOUT THE PRIOR WRITTEN CONSENT OF WANG LABORATORIES, INC. ANY REPRODUCTION OF THIS DRAWING PERMITTED BY WANG TO LESSEE THE PHYSICAL CUSTODIAN OF THE COMPANY IT IS RETURNABLE UPON THE DEMAND OF WANG LABORATORIES, INC.

WANG LABORATORIES, INC.

MATERIAL	MODEL NO	BY	DATE	APPROVED BY	DATE
	VS-100	DRWN		E ENGR	
	SEE ENGR SPECIFICATIONS	CHK		M ENGR	
FINISH				MFG ENGR	
	TOL EX. AS NOTED: XX ± FRAC ± .XXX ± ANG ±	TITLE: PWR ADAPTER			
SCALE	SHT OF	DWG PART NUMBER	SIZE	DRAWING HIERARCHY	REV
			E		

Y1

THIS DRAWING AND THE DATA SHOWN THEREON ARE THE CONFIDENTIAL PROPERTY OF AND ARE PROPRIETARY TO WANG LABORATORIES, INC. THEY ARE LOANED SUBJECT TO THE AGREEMENT THAT NO COPIES SHALL BE MADE AND THAT THE SECRETIVE CONSENT OF WANG LABORATORIES, INC. IS OBTAINED. IF FOR ANY REASON THIS DRAWING IS REQUESTED BY WANG TO LEAVE THE PREMISES, IT SHALL BE RETURNED AT ONCE. ALL RIGHTS UNDER THE STATUTES OF WANG LABORATORIES, INC.

DO NOT SCALE

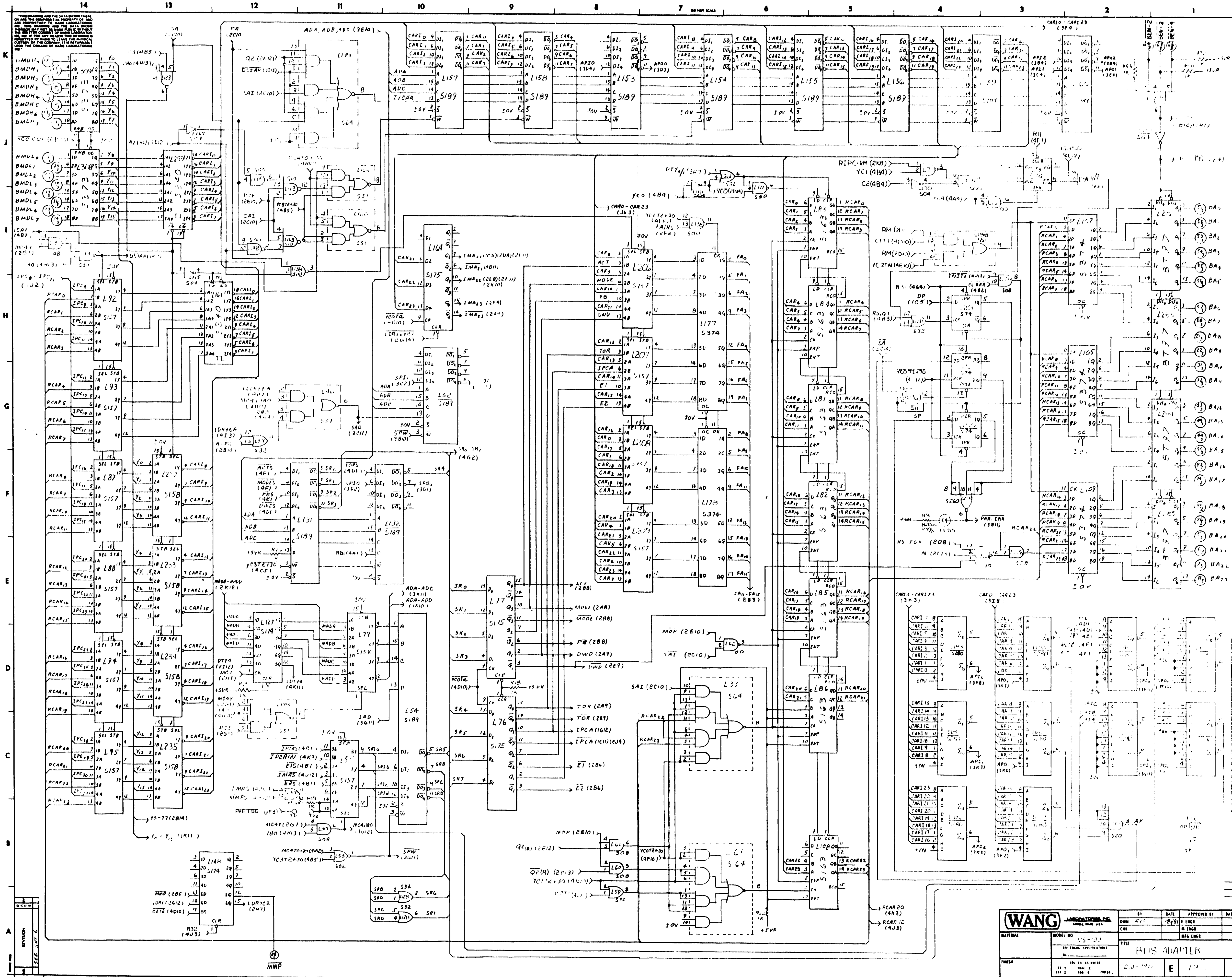
WANG LABORATORIES, INC. LOWELL, MASS. U.S.A.

	BY	DATE	APPROVED BY	DATE
	DWN AB	1/28/74	E ENGR	
	CHK		M ENGR	
MATERIAL	MODEL NO VS-100		MFG ENGR	
	SEE ENGRG SPECIFICATIONS		TITLE BUS ADAPTER	
FINISH	TOL EX AS NOTED			
	SCALE 3/4	SHT 2 OF 6	210-7911	E 7911

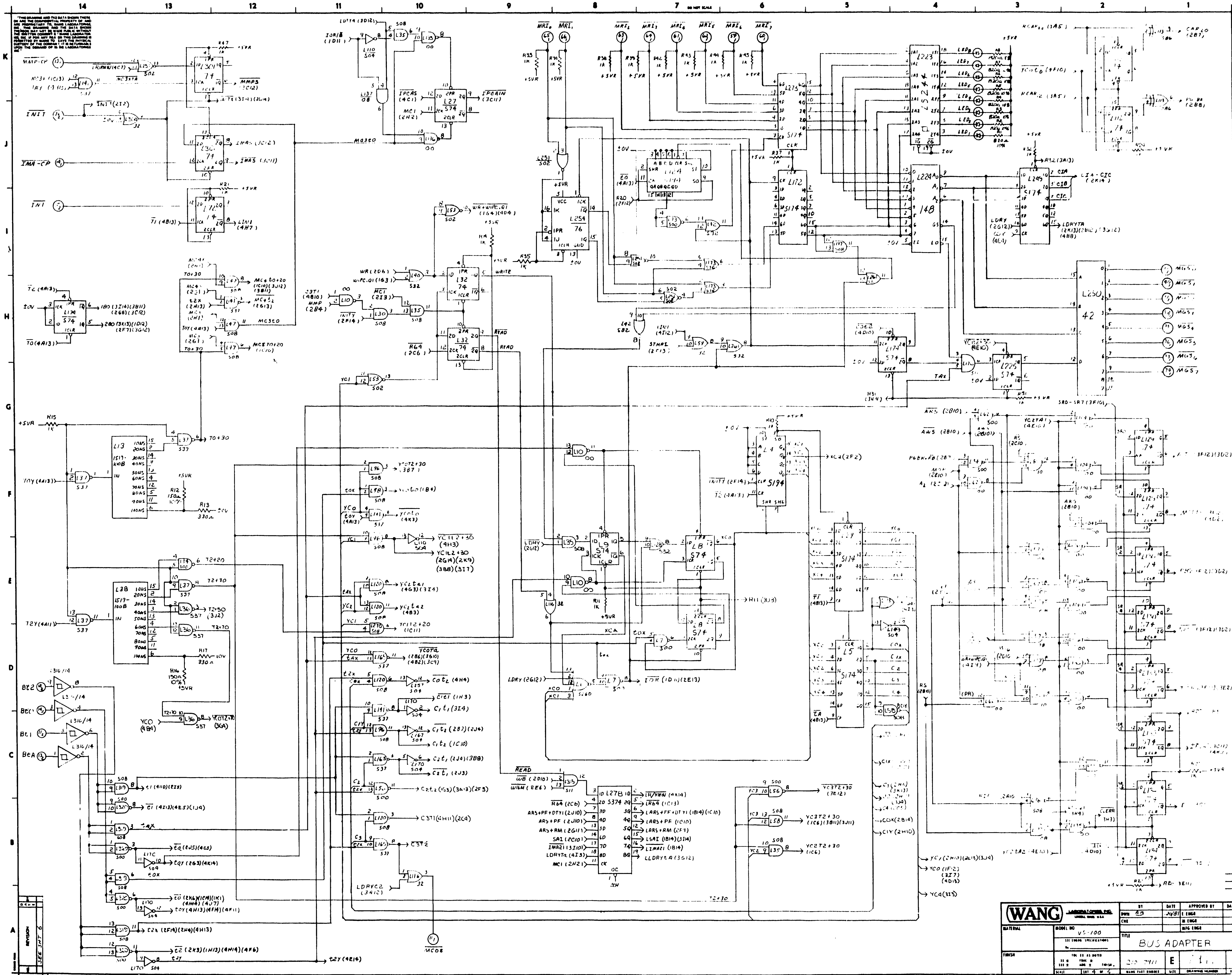
MACRO PART NUMBER — SIZE — DRAWING NUMBER — REV

REVISION — SEE SHT 6

Y2


WANG LABORATORIES INC.
BUS ADAPTER
VS-100
E
L157 5189
L158 5189
L153 5189
L154 5189
L155 5189
L156 5189
L92 S157
L93 S157
L87 S157
L88 S157
L94 S157
L95 S157
L233 S158
L234 S158
L235 S158
L206 S157
L207 S157
L208 S157
L209 S157
L177 S374
L178 S374
L77 S175
L76 S175
L54 S189
L131 S189
L132 S189
L52 S189
L114 S175
L127 S174
L148 S174
L79 S158
L33 S64
L61 S64
L83
L84
L81
L82
L85
L86
L108
L107
L105
RCAR20 (4K3)
RCAR12 (4J3)
PAR. ERR (3B11)
ACT (2B8)
MOVE (2A8)
MODE (2B8)
PB (2B8)
DWD (2A9)
DWD (2E9)
TOR (2A9)
TOR (2B9)
IPCA (1G12)
IPCA (1C11)(2J4)
E1 (2B6)
E2 (2B6)
FA0 - FA15 (2B3)
MMP
Y0-Y7 (2B14)
Y8 - Y15 (1K11)
LDRYC2 (2H7)
SPW (3G11)
SAD (3G11)
BA0
BA1
BA2
BA3
BA4
BA5
BA6
BA7
BA8
BA9
BA10
BA11
BA12
BA13
BA14
BA15
BA16
BA17
BA18
BA19
BA20
BA21
BA22
BA23

Y3


WANG LABORATORIES, INC.
MATERIAL
MODEL NO VS-100
FINISH
BY
DATE
APPROVED BY
DWN
CHK
E ENGR
M ENGR
MFG ENGR
TITLE
BUS ADAPTER
E
SHT 4 OF 6
WANG PART NUMBER
SIZE
DRAWING NUMBER
REVISION
SEE SHT 6
MMP-CP
INIT
IMA-CP
INI
L13
L38
L223
L224
L249
L250
L254
L278
L5
L8
L9
MRI0
MRI1
MRI2
MRI3
MRI4
MRI5
MRI6
MRI7
MGS0
MGS1
MGS3
MGS4
MGS5
MGS6
MGS7
LED0
LED1
LED2
LED3
LED4
LED5
LED6
LED7
LED8
WRITE
READ
MCO8
LDRY (2G12)
LDRYTA
CIA-CIC
T0+30
T2+20
T2+30
T2+50
T2+70
YC0
YC1
YC2
YC3
YC4
+5VR
BT2
BT0
BT1
BTA

Y4

WANG LABORATORIES, INC.

MATERIAL	MODEL NO.		
FINISH			E

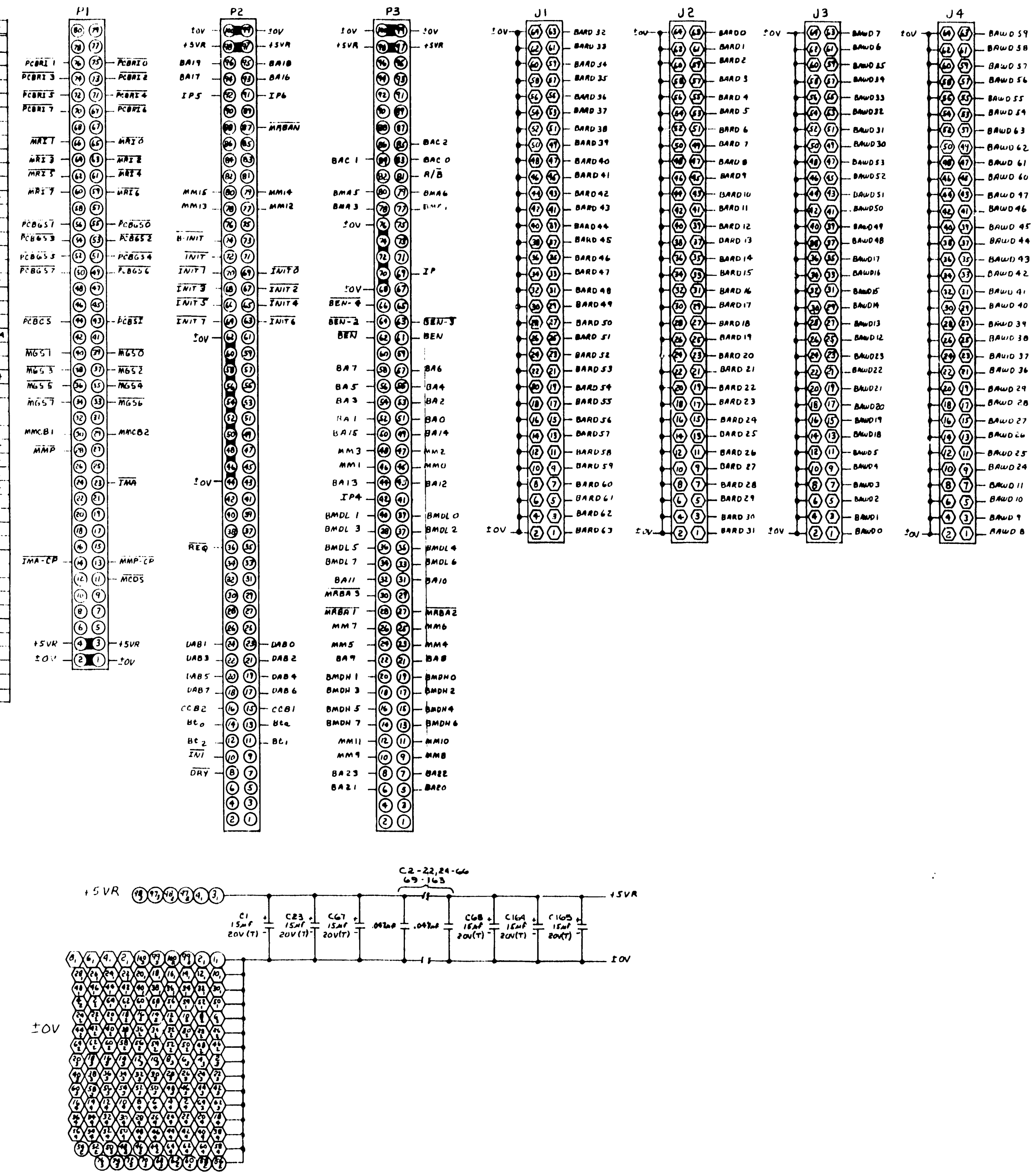
"THIS DRAWING AND THE DATA SHOWN THEREON ARE THE CONFIDENTIAL PROPERTY OF AND ARE PROPRIETARY TO WANG LABORATORIES, INC. THIS DRAWING AND THE DATA SHOWN THEREON MAY NOT BE MADE PUBLIC WITHOUT THE WRITTEN CONSENT OF WANG LABORATORIES, INC. IF FOR ANY REASON THIS DRAWING IS PERMITTED BY WANG TO LEAVE THE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

IC LOCATION	TYPE	WL PART NO
L2,3,[illegible] 48-50,71,75 78,[illegible] 326	SPARE	
L4,120,291	74S174	376-022[illegible]
L5,21,167, 199,[illegible],186, 249,213	74S174	376-0297
[illegible]	74S260	376-0206
L7,56,56,13,[illegible]	74S[illegible]	376-0228
[illegible]	74S74	376-0202
L24,62,104,[illegible]	7400	376-0002
L10,16,[illegible] 318,309	74S373	376-0306
[illegible] 38	[illegible]	376-[illegible]
L28,[illegible]	74S280	376-0246
L30,35,45,47, [illegible] 226,228	74S08	376-0200
L3,[illegible] 215, 35	[illegible]	[illegible]
L33,[illegible] 139,208	74S64	376-0201
L36,37,141,148	74S[illegible]	376-0276
L39,149,223	74LS244	376-0288
L40,42,[illegible],124 169,173,[illegible]	74S32	376-0205
L46,[illegible] 162,198,253, 260	74S51	376-0184
L52,54,131,132, 153,159,[illegible] 210,217,218, 219,[illegible] 244,245	74S193	376-0349
L53,251	74S02	376-0199
L55,[illegible] 88,[illegible]	74S[illegible]	376-0217
L57,122,137, 145,222	7408	376-0081
L63,70,[illegible] 232,235	74S[illegible]	396-[illegible]
[illegible]	7402	396-C016
L76,[illegible],142, [illegible]	74S[illegible]	396-0210
L80,[illegible] 143,[illegible]	7410	376-0003
L81-86,108	74S163	376-0235
[illegible]	74LS374	376-0286
L70,71,221	74LS373	376-0310
L101,102,125, 151,203,204, 229,230,[illegible], 258,279,281 [illegible] 309,305, 307,317,318	8T97	376-0183
L103,[illegible],107, 109,126,152 177,178,205, [illegible] 338	74S374	376-0305
[illegible]	74S[illegible]	396-[illegible]97
[illegible]3	74S86	396-0271
[illegible]	7432	396-0093
[illegible],305	[illegible]	396-[illegible]
L149	7420	396-0004
[illegible]	74S137	376-0333
[illegible],259,327	74S240	396-0334
[illegible]	74S10	396-0238
[illegible],231, 232	74S138	396-0278
[illegible],310	74S20	396-0230
[illegible]	74[illegible]48	396-0171
L250,32[illegible]	7442	376-0008
[illegible]	7476	376-0007
[illegible] 27	[illegible]	376-0010
[illegible]	74[illegible]4	376-0098
L293,294	74LS257	396-0204
L295	7430	376-0031
[illegible]	[illegible]	376-0138
[illegible]	7414	396-0139
L324	74195	396-0069

COMPONENT	TYPE	WL PART NO
R1-8,9	820Ω 1/4W 10%	330-2082
R10,11,14,15, 19-29,31-45, [illegible]	1K 1/4W 5%	330-3010
R12,16	150Ω 1/4W 10%	330-2015
R13,17,30,46,87	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, [illegible]	.047μf 50V	300-1966
LED1-9	MV5024 RED	[illegible]-2026
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
7410	L80	1
	L99	1
74S10	L163	1
74S11	L315	1
[illegible]	L316	1
74S20	L310	1
7432	L300	1
74S37	L36	1
	L165	1
74S74	L200	1
7486	L254	1
74S86	L113	2
74S139	L150	1
74S260	L6[illegible]	1
	L202	1
	L247	1
[illegible]	L260	1

MNEMONICS	COORD.
BAC0 BAC2	2A4
BA0 - BA23	3I1
BAWD0 - BAWD63	1K14
BARD0 - BARD31	1G1
BARD32 - BARD63	1A11
BEN	2I1
B̄ĒN̄	2I1
BEN-2 - BEN-4	3K1
BMA3 - BMA6	2C14
BMDH0 - BMDH7	3K14
BMDL0 - BMDL7	3J14
BC0 - BC2	4C14
BCA	4C14
B-INIT	2K3
CCB1	1A12
CCB2	1A12
DRY	2F14
DAB0 - DAB7	1A13
IP	2K3
IP4 - IP6	2K2
IMA	2H14
IMA-CP	4J14
INI	4I14
INIT	4J14
INIT0 - INIT7	2K1
MCDS	4A10
MGS0 - MGS7	4H1
MMCB1	2D14
MMCB2	2D14
MMP	3A12
MMP-CP	4K14
MM0 - MM15	2F1
MAI0 - MAI7	4K9
MABAN	1J1
MABA1 - MABA3	2K5
PCBCS	2J1
PCBSI	1K12
PCBGS0 - PCBGS7	1I1
PCBRI0 - PCBRI7	1K4
REQ	1J1
R/B	2K6



E REV
0

REVISION				
ORIGINATED PER DWR # E1030 APP'D [illegible]	ECO 15695	REVISED PER ECO # 20407 APP'D [illegible]	REVISED PER ECO # 22164 APP'D [illegible]	

WANG LABORATORIES, INC.	BY	DATE	APPROVED BY	DATE
MATERIAL	DWN [illegible]	1/2[illegible]/81	E ENGR [illegible]	
MODEL NO VS-100	CHK [illegible]	[illegible]	M ENGR	
FINISH	TITLE BUS ADAPTER		MFG ENGR	
SCALE / SHT 6 OF 6	WANG PART NUMBER 210-7[illegible]	SIZE E	DRAWING NUMBER 7911	REV

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	2J8
BMAR3	2J8
BMAR4	2J8
BMAR5	2F7
BMAR6	2F7
BMAR7-BMAR9	2H7
BMAR10-BMAR12	2G7
BMAR13-BMAR15	2H7
BMAR17-BMAR19	2F7
BMAR20	2H7
CAS	2J11
CAS	2J11
CAS[1]	2G11
MMD0-MMD5	2K1
MMD6-MMD11	2J1
MMD12-MMD15	2J1
MMD16-MMD19	2G1
MMD20-MMD25	2F1
MMD26-MMD31	2E1
MMD32-MMD37	2A1
MMD38-MMD43	2J1
MMD44-MMD47	2I1
MMD48-MMD51	2G1
MMD52-MMD57	2F1
MMD58-MMD63	2C1
MMD00-MMD03	2K14
MMD04-MMD09	2J14
MMD12-MMD15	2J14
MMD16-MMD21	2G14
MMD22-MMD27	2F14
MMD28-MMD33	2E14
MMD34-MMD39	2C14
MMD40-MMD45	2B14
MMD46-MMD51	2A14
MMD52-MMD57	2H14
MMD58-MMD63	2K14
MMS	2J7
MRI	2J11
MRI	2J11
MMD0-MMD3	2C14
MMD4-MMD7	2B14
MMD8-MMD11	2C14
MMD12-MMD15	2B14

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

C1 .1UF (MF)

C368 .1UF (MF)

C38 .047UF

C397 .047UF

C53 10UF 15V(T)

C374 10UF 15V(T)

+5VR

C39, 68-72, 101-103, 132-134, 163-167, 196-198, 227, 228, 257-260, 289-291, 320-322, 351-353, 371, 372, 375-396

74S00 L42, L45, L130, L133, L218, L222, L310, L378

74S08 L378

74S32 L370, L370

74S14 L373, L376

RS11 RS17 RS33 RS48 RS63
RS11 RS27 RS43 RS49 RS66
RS13 RS27 RS43 RS49 RS67
RS16 RS29 RS43 RS61 RS67
RS17 RS32 RS45 RS61 RS76

47 47 47 47 56

E REV D N

NO.	REVISION	P.G.D.	MTH	AB
04		1-12-83	1-19-84	7-3-84
9	ORIGINATED PER DWR NO. C1863 APPRV	1/0	REVISED PER ECO NO. 2976 CHGRS	2/0 REVISED PER ECO NO. 3218 CHGRS

WANG LABORATORIES, INC.

SCHEMATIC DIAGRAM

TITLE: 2MEG MAIN MEM M/L

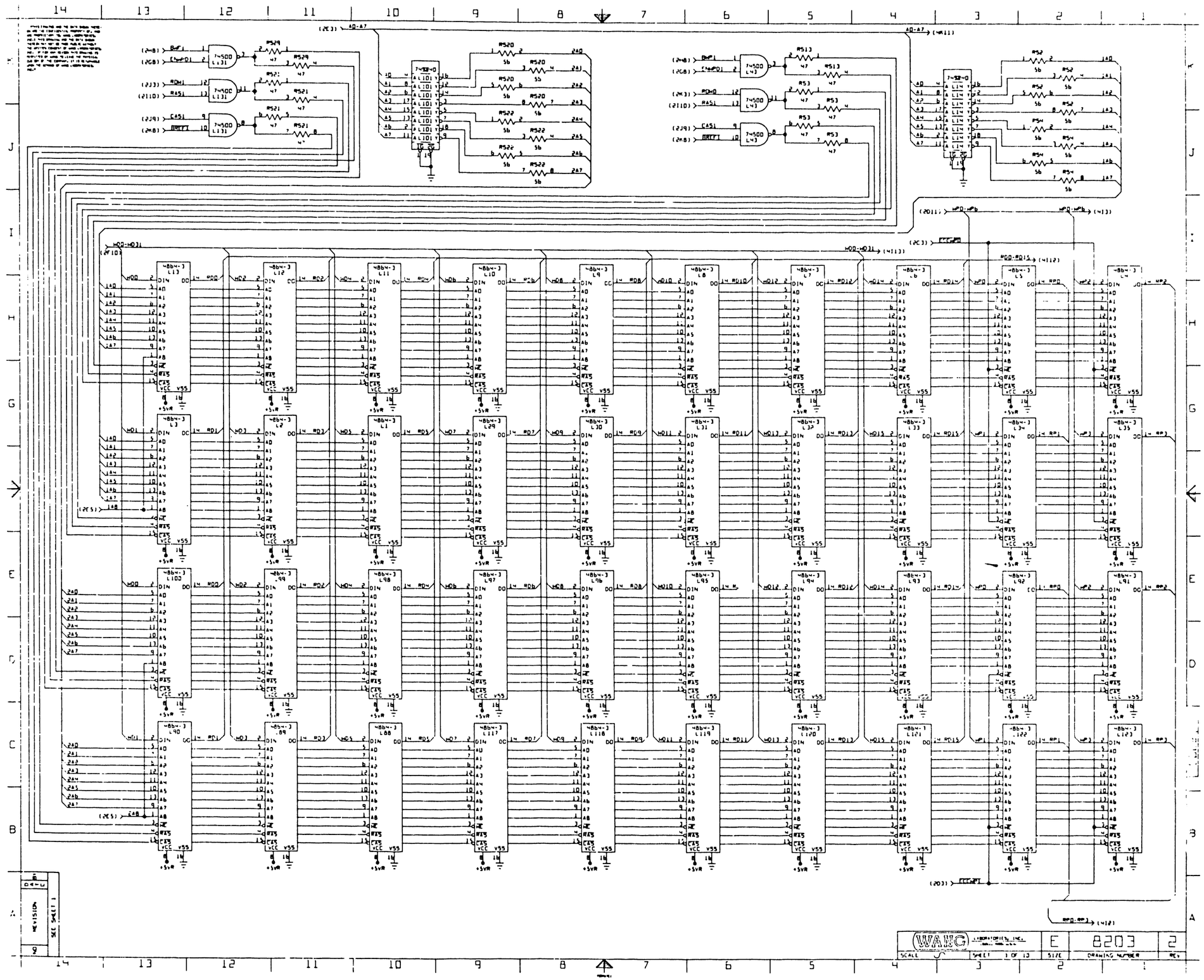
DWN PGD	CHK	ENG	DTP

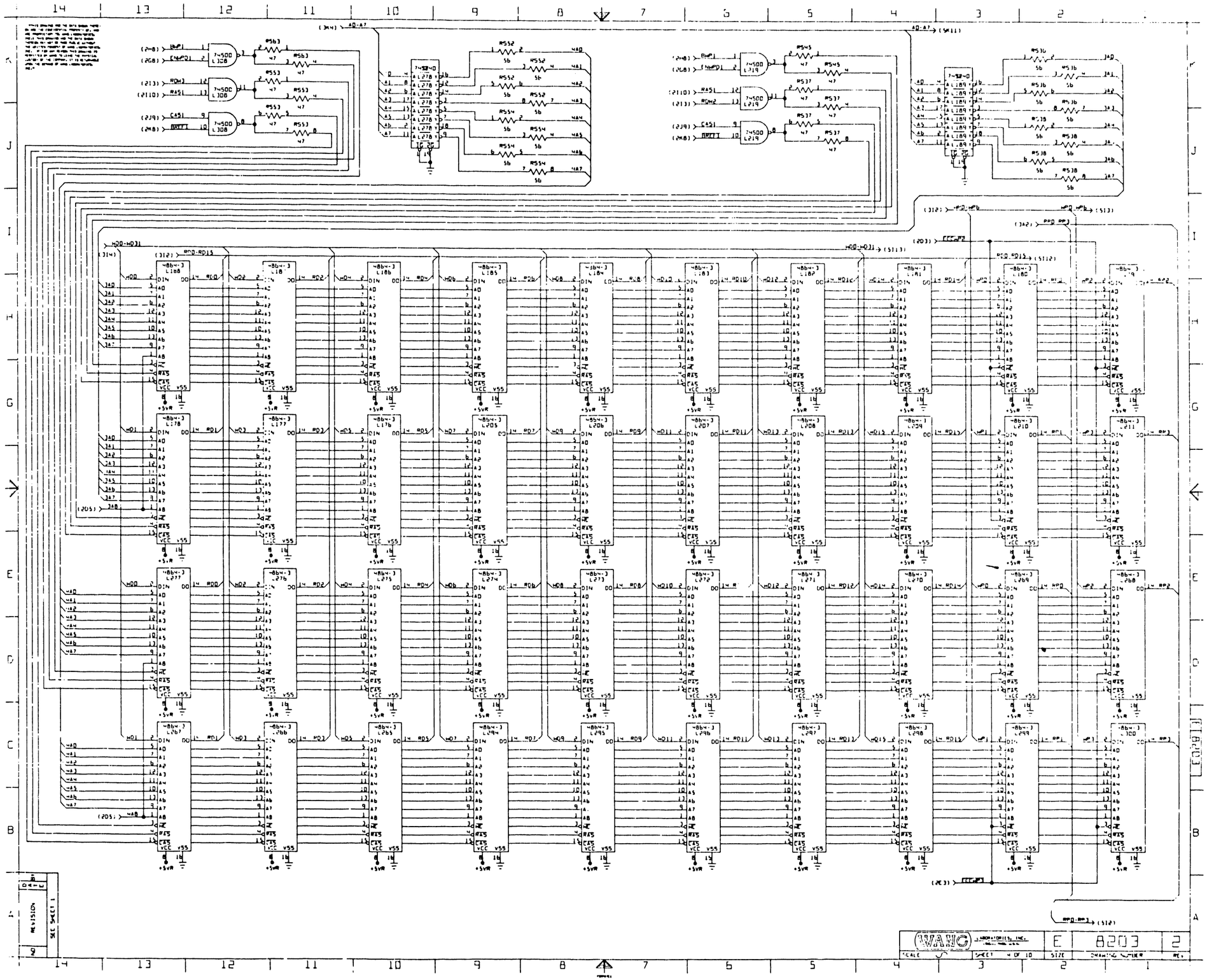
SIZE	DRAWING NUMBER	REV
E	8203	2

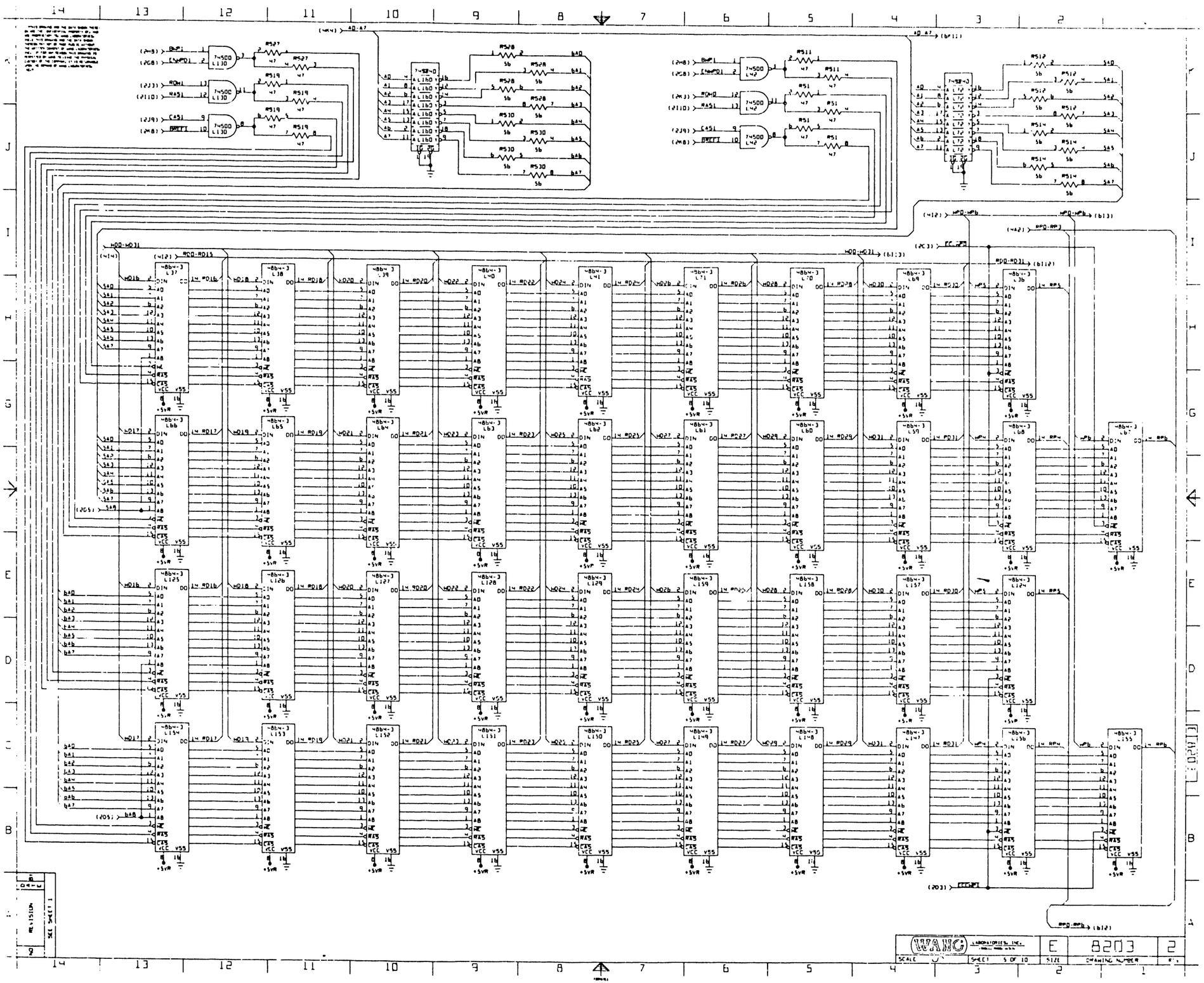
SCALE	SHEET 1 OF 10

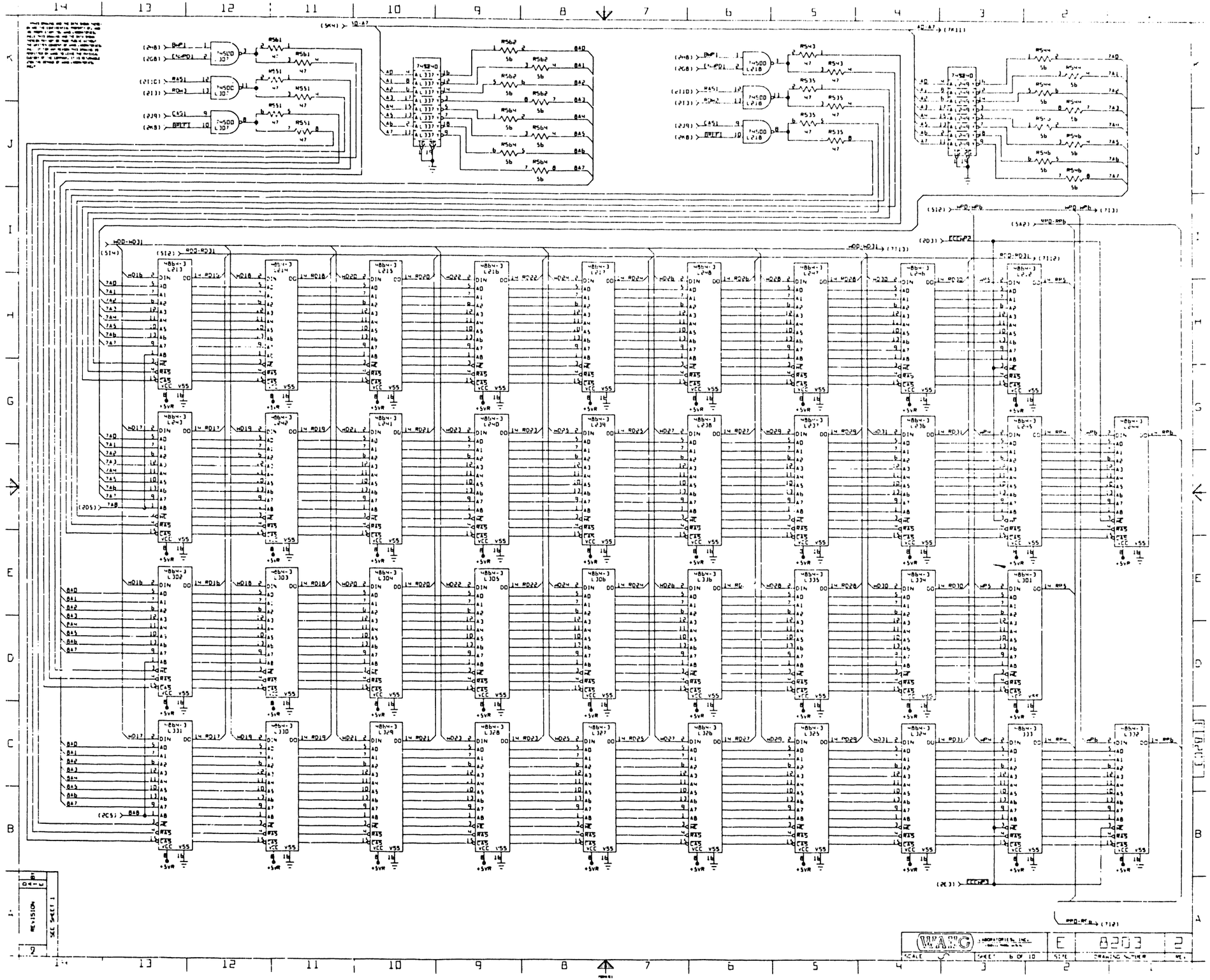
MODEL NUMBER: VS-85/90/100

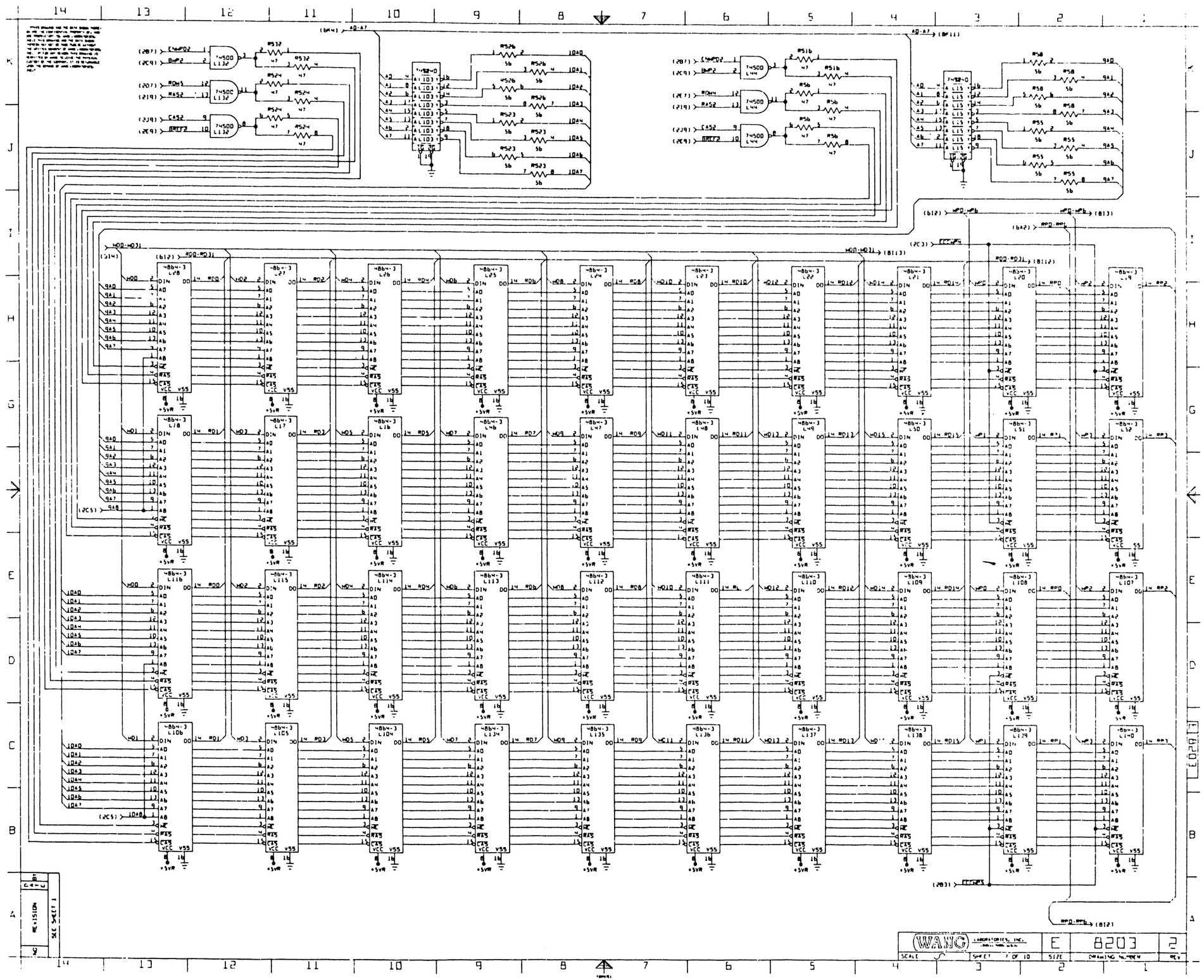
MANU PART NUMBER: 210 8203

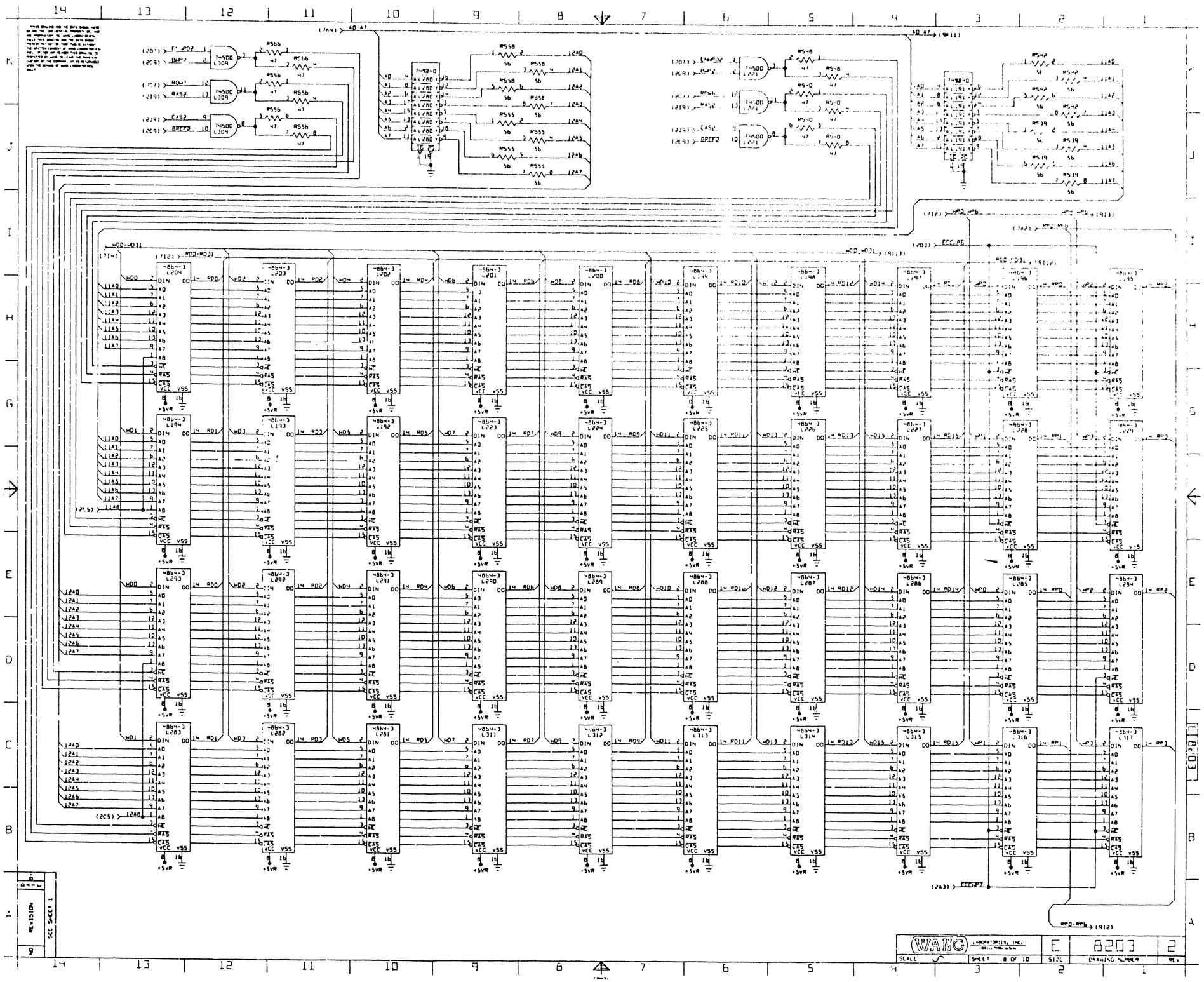

WANG
8203
SHEET 1 OF 13
SEE SHEET 1
REVISION

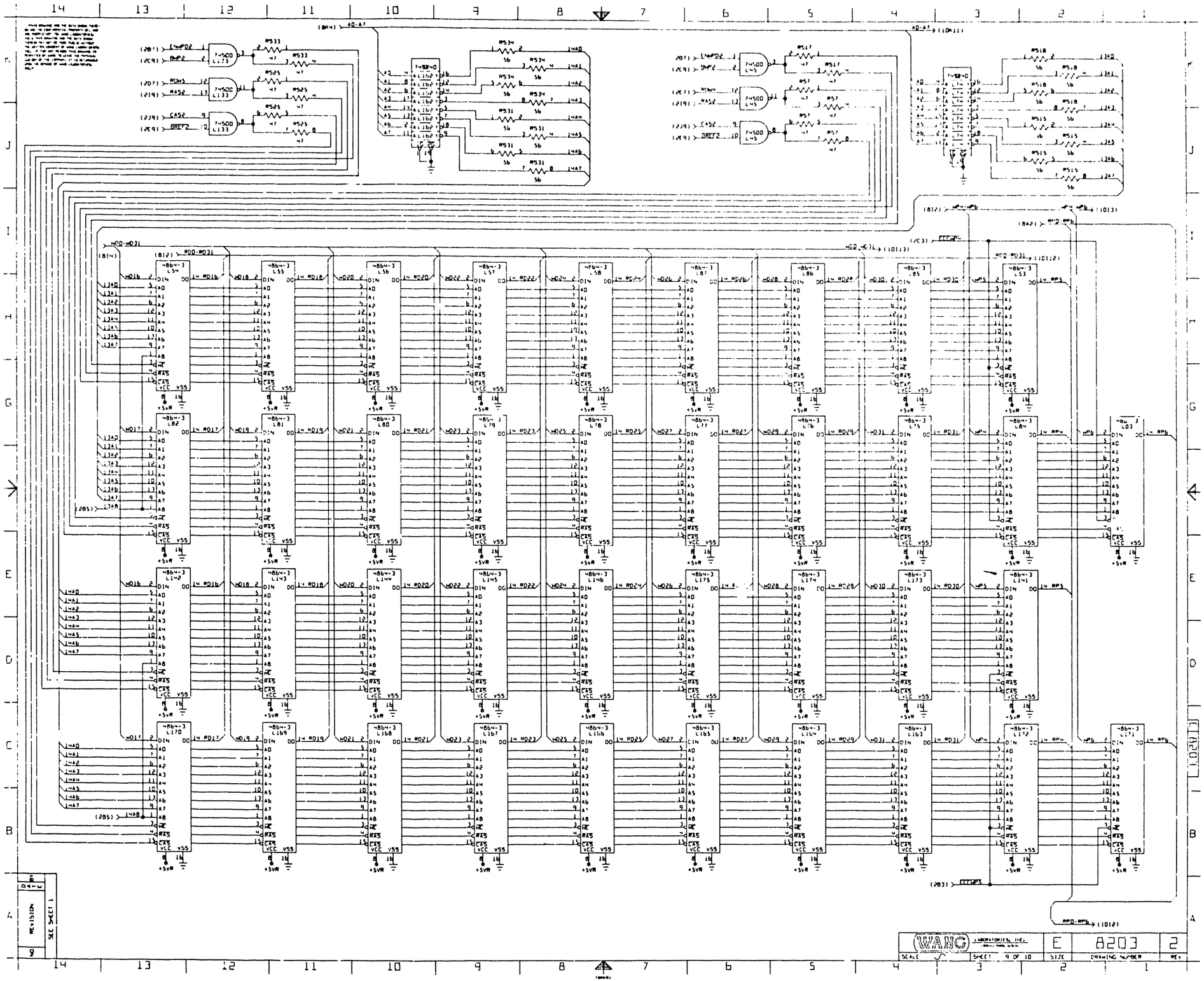

WANG LABORATORIES, INC.
E
8203
2
SHEET 4 OF 10
SEE SHEET 1
REVISION

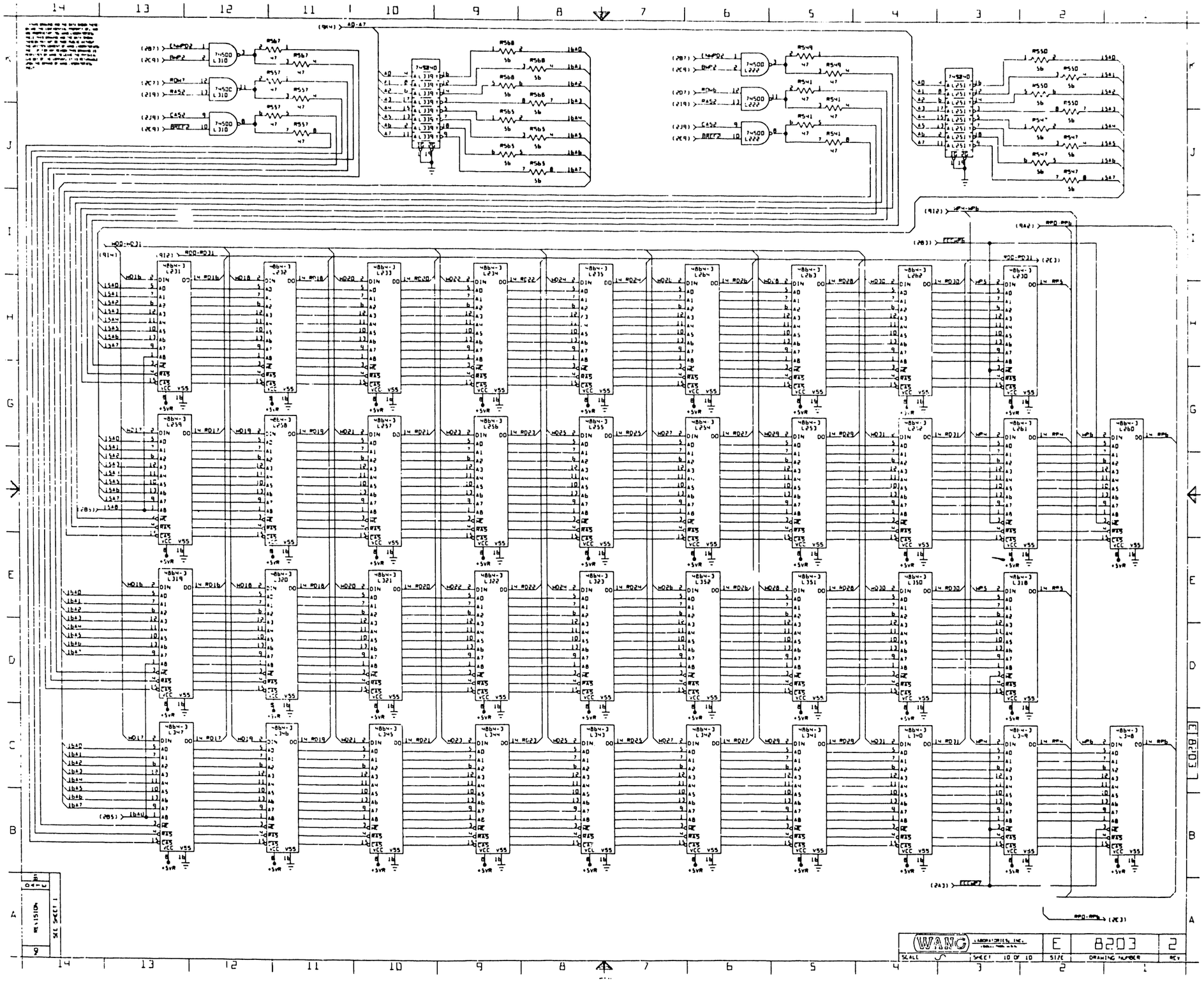

MD0-MD31
MPD-MPB
MPD-MP3
MPB-MPB
74S00
74S74
74S04
74S32
74S10
74S51
74S86
4864-3
WANG LABORATORIES, INC.
SCALE
SHEET 5 OF 10
E
8203
2
SIZE
DRAWING NUMBER
REV
REVISION
SEE SHEET 1


WANG
SCALE
SHEET 6 OF 10
SIZE E
8203
DRAWING NUMBER
REV. 2
REVISION
SEE SHEET 1
74500
74S00
74S82-0
4864-3
RS61
RS51
RS62
RS64
RS43
RS35
RS44
RS45
RS46
+5VR
VSS
VCC
RAS
CAS
WE
DIN
DO
AD
A0
A1
A2
A3
A4
A5
A6
A7
A8
HD0-HD31L
HD0-HD31
BA0
BA1
BA2
BA3
BA4
BA5
BA6
BA7
HD16
HD17
HD18
HD19
HD20
HD21
HD22
HD23
HD24
HD25
HD26
HD27
HD28
HD29
HD30
HD31
MP0
MP1
MP2
MP3
MP4
MP5
MP6
MP7
L213
L214
L215
L216
L217
L218
L219
L220
L221
L222
L223
L224
L225
L226
L227
L228
L229
L230
L231
L232
L233
L234
L235
L236
L237
L238
L239
L240
L241
L242
L301
L302
L303
L304
L305
L306
L307
L308
L309
L310
L311
L312
L313
L314
L315
L316
L317
L318
L319
L320
L321
L322
L323
L324
L325
L326
L327
L328
L329
L330
L331
L332
L333
L334
L335
L336
L337
L338
L339
L340
L341
L342


WANG LABORATORIES, INC.
E
8203
2
SCALE
SHEET 1 OF 10
SIZE
DRAWING NUMBER
REV
REVISION
SEE SHEET 1
74S00
74S32
74S24
74S52
74S51
74S58
74S55
4864-3
+5VR
AD0-AD7
AD8-AD15
RAS0
RAS1
RAS2
RAS3
CAS0
CAS1
CAS2
CAS3
RMFF2
WRITE
E0203


WANG LABORATORIES, INC.
SIZE E
8203
2
SHEET 8 OF 10
SCALE
REV
REVISION
DATE
SEE SHEET 1
AD-A7
MD0-MD15
RAS0
RAS2
CAS0
CAS2
SPEED2
RP0-RP3
+5VR
VCC
VSS
DIN
DO
WE
RAS
CAS
A0
A1
A2
A3
A4
A5
A6
A7
A8


WANG LABORATORIES, INC.
SCALE
SHEET 9 OF 10
SIZE E
DRAWING NUMBER 8203
REV 2
REVISION
SEE SHEET 1
74S00
74S04
74S32
74S240
4864-3


WANG LABORATORIES, INC.
E
8203
2
SCALE
SHEET 10 OF 10
SIZE
DRAWING NUMBER
REV
REVISION
SEE SHEET 1

NOTE:
1. UNLESS OTHERWISE SPECIFIED:
ALL CAPACITORS ARE MFR 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

FACE PLATE
WP# 451-2391

SCHEM. V# 4-4-8-3 LG
WP# 650-2128
3 PLCS

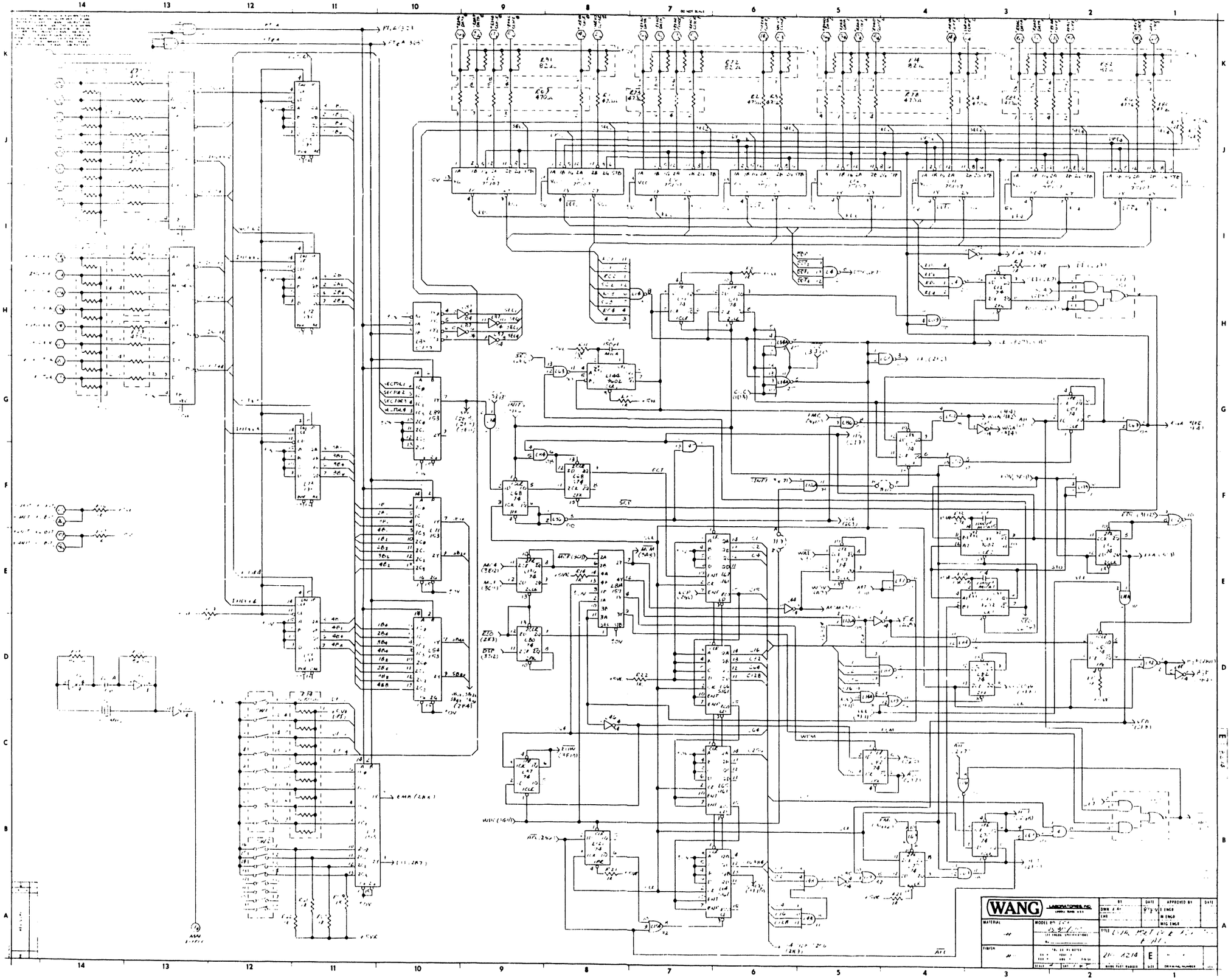
B-03-R1

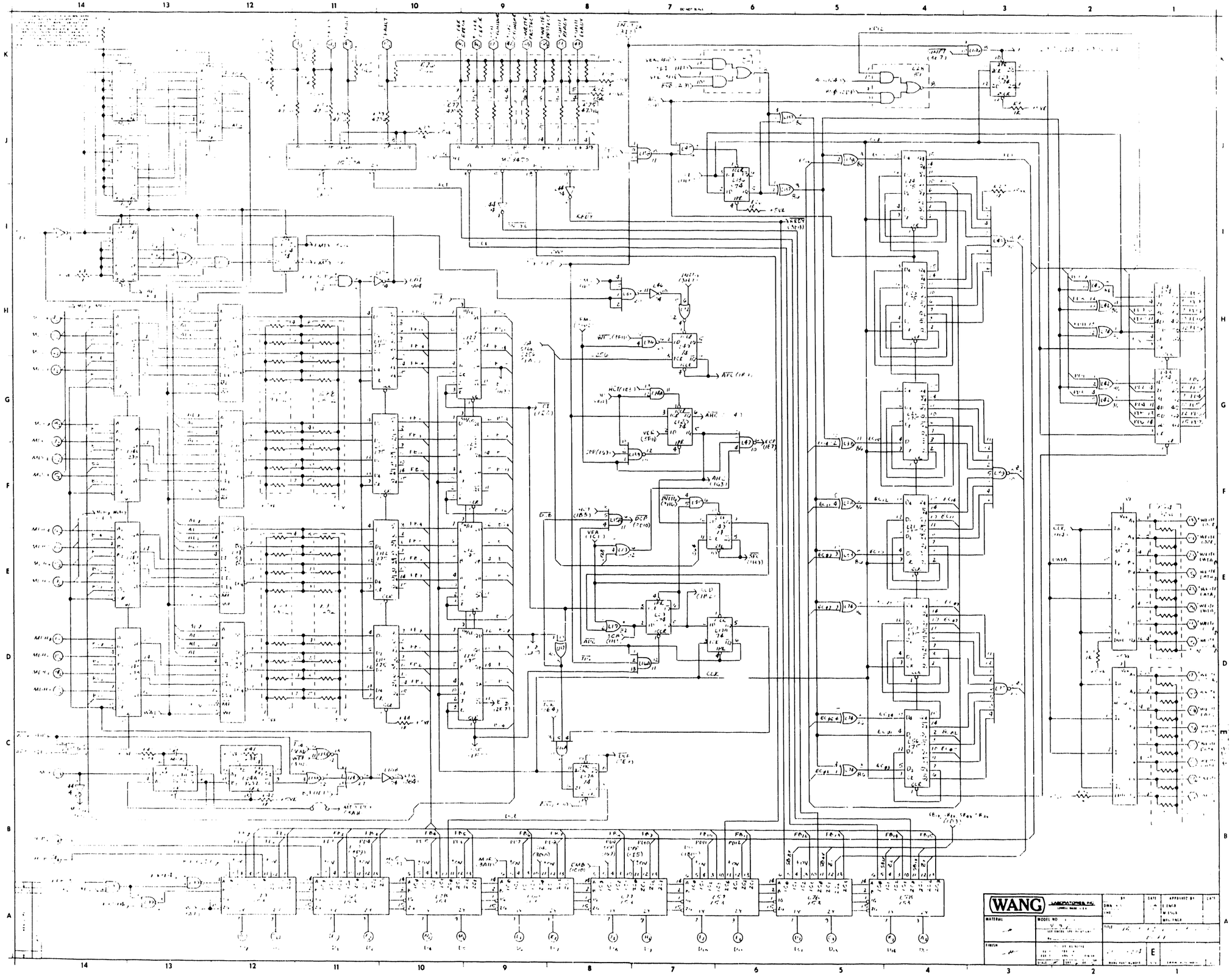
WANG

ASSEMBLY DWG G
PCB MAINFRAME

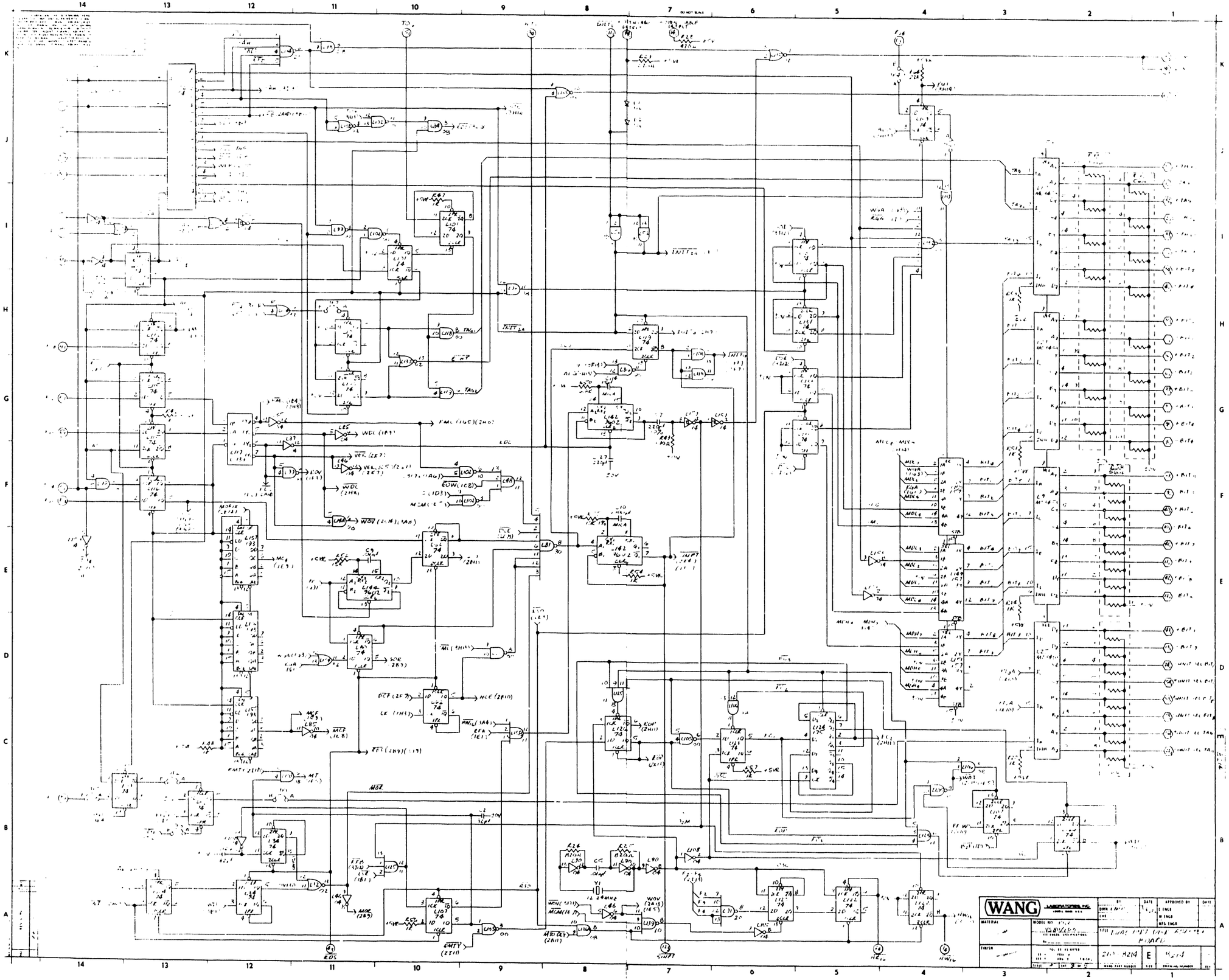
210-8305 E B305

Z11

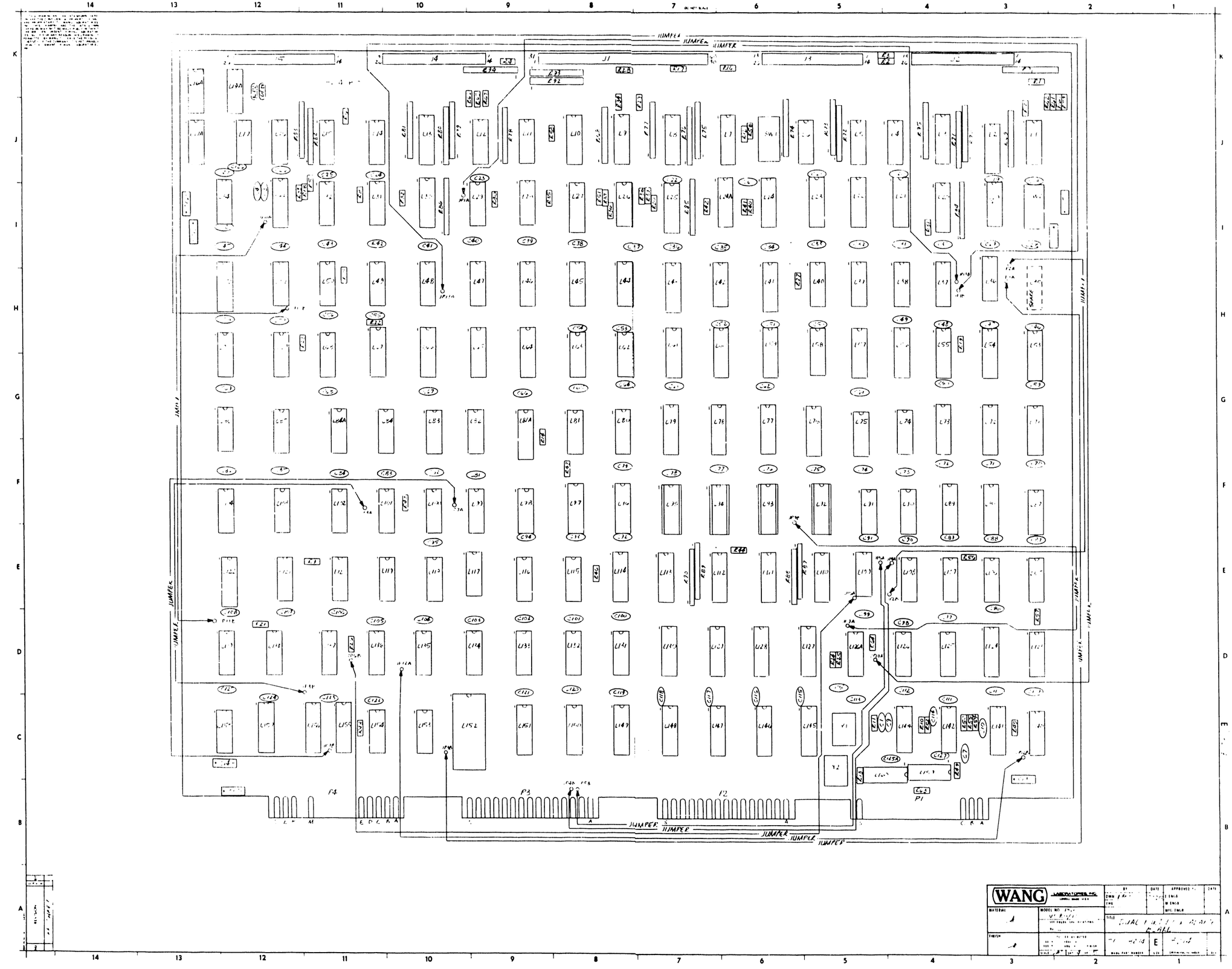

WANG LABORATORIES, INC.
MATERIAL
FINISH
DRWN
CHK
APPROVED BY
DATE
SIZE
E
AA1


WANG LABORATORIES, INC.
MATERIAL
MODEL NO.
FINISH
DRWN
CHKD
APPROVED BY
DATE
TITLE
SIZE
E
SCALE
SHEET
WRITE DATA
WRITE ENABLE
MEMORY ADDRESS
MEMORY DATA
CLOCK
RESET
HALT
PARITY
ADDRESS
DATA

AA2


WANG LABORATORIES, INC.
TITLE
MODEL NO.
APPROVED BY
DRAWN BY
DATE
SIZE
E
SCALE
DRAWING NUMBER
DO NOT SCALE

AA3


JUMPER
JUMPER
JUMPER
JUMPER
JUMPER
JUMPER
JUMPER
JUMPER
JUMPER
JUMPER
JUMPER
P4
P3
P2
P1
WANG LABORATORIES INC.
LOWELL, MASS. U.S.A.
MATERIAL
FINISH
MODEL NO.
TITLE
DWN
CHK
ENGR
MFG. ENGR
DATE
APPROVED
SIZE
E

COMPONENT	TYPE	WL PART NO.
[illegible]	[illegible]	376-[illegible]
[illegible]	MC3453	376-0277
[illegible]	7420	376-[illegible]
[illegible]	74S[illegible]	376-0048
[illegible]	MC3453	376-[illegible]
[illegible]	74[illegible]	376-0091
[illegible]	7475	376-[illegible]
[illegible]	74	376-[illegible]96
[illegible]	74[illegible]	376-[illegible]
[illegible]	7474	376-[illegible]
[illegible]	7432	376-[illegible]
[illegible]	74[illegible]	376-[illegible]
[illegible]	74[illegible]	376-[illegible]
[illegible]	74174	376-[illegible]
[illegible]	7432	376-[illegible]
[illegible]	SPARE	
[illegible]	74[illegible]	376-[illegible]
[illegible]	74174	376-[illegible]
[illegible]	7404	376-[illegible]
[illegible]	741[illegible]	376-[illegible]
[illegible]	74[illegible]	376-[illegible]
[illegible]	7400	376-[illegible]
[illegible]	74101	376-0074
[illegible]	745161	376-0274
[illegible]	74153	376-[illegible]
[illegible]	7425	376-[illegible]
[illegible]	74LS[illegible]	376-[illegible]
[illegible]	7437	376-[illegible]
[illegible]	7411	376-[illegible]
[illegible]	7427	376-[illegible]
[illegible]	74S[illegible]	376-[illegible]
[illegible]	741[illegible]	376-[illegible]
[illegible]	74LS[illegible]	376-[illegible]
[illegible]	7414	376-[illegible]
[illegible]	16 PIN SPARE	376-[illegible]

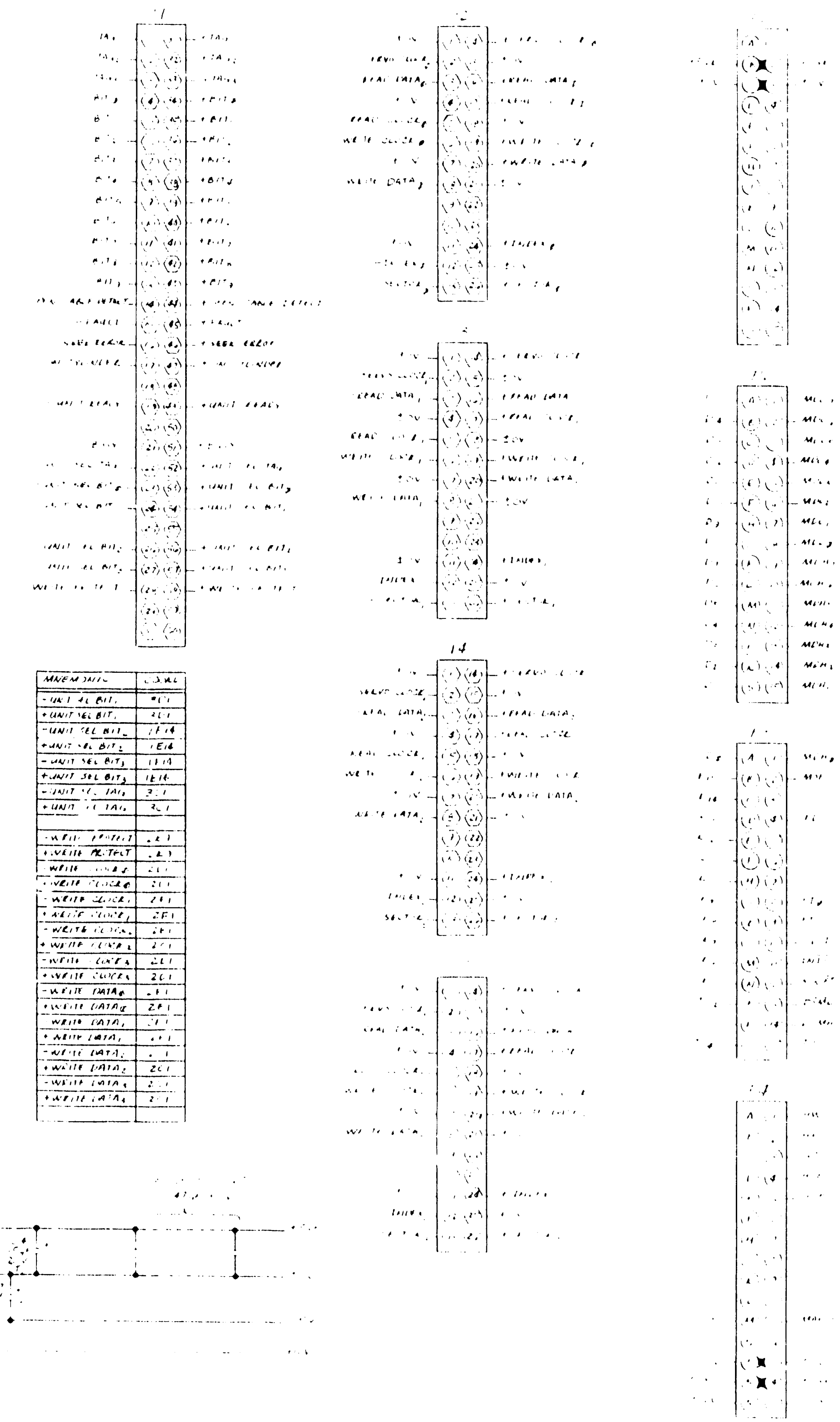
COMPONENT	TYPE	WL PART NO.
[illegible]	470Ω 1/4W 5%	3[illegible]-2[illegible]
[illegible]	[illegible] 1/4W [illegible]	330-4[illegible]
[illegible]	[illegible] 1/4W [illegible]	33[illegible]
[illegible]	[illegible] 1/4W [illegible]	33[illegible]
[illegible]	[illegible] 1/4W [illegible]	33[illegible]-4[illegible]
[illegible]	[illegible] 1/4W 5%	33[illegible]
[illegible]	[illegible] 1/4W [illegible]	330-[illegible]
[illegible]	27Ω 1/4W 5%	330-402[illegible]
[illegible]	[illegible] 1/4W 5%	330-[illegible]
[illegible]	[illegible] 1/4W [illegible]	33[illegible]
[illegible]	5Ω 1/4W 5%	330-4[illegible]
[illegible]	[illegible] 1/4W [illegible]	[illegible]
[illegible]	[illegible] 1/4W 5%	[illegible]
[illegible]	[illegible]	335-[illegible]
[illegible]	47[illegible]	[illegible]
[illegible]	[illegible]	333-[illegible]
[illegible]	[illegible]	333-[illegible]
[illegible]	[illegible]	333-C8C
[illegible]	[illegible]	300-[illegible]
[illegible]	82pF [illegible]	300-1084
[illegible]	[illegible]	300-[illegible]
[illegible]	[illegible] 25V	300-[illegible]
[illegible]	15pF [illegible]	300-[illegible]
[illegible]	20pF [illegible]	300-1220
[illegible]	[illegible]	300-1334
[illegible]	15µF 20V (T)	300-4022
[illegible]	47µF [illegible]V	300-[illegible]
[illegible]	[illegible]	[illegible]
[illegible]	[illegible]	[illegible]
[illegible]	[illegible]24 MHz	[illegible]
[illegible]	[illegible] MHz	[illegible]
[illegible]	[illegible]	[illegible]
[illegible]	[illegible]	[illegible]

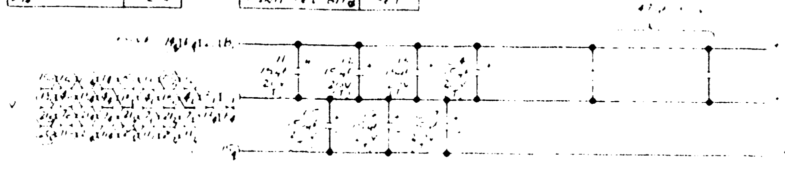
TYPE	LOCATION	SPARES
7414	[illegible]	1
	[illegible]	[illegible]
	[illegible]	[illegible]
	[illegible]	[illegible]
74[illegible]	[illegible]A	[illegible]
[illegible]	[illegible]	[illegible]
74[illegible]	[illegible]	[illegible]
7414	[illegible]	[illegible]
74[illegible]	[illegible]	[illegible]
	[illegible]	[illegible]
74[illegible]	[illegible]	[illegible]
7474	[illegible]	[illegible]
	[illegible]	[illegible]
74[illegible]	[illegible]	
	[illegible]	

MNEMONIC	COORD
[illegible]	3A[illegible]
+BIT[illegible] +BIT[illegible]	[illegible]
[illegible]	[illegible]
[illegible]	[illegible]
[illegible]	[illegible]14
[illegible]	2A[illegible]
[illegible]	3E1
[illegible]	3E[illegible]
[illegible]	3E[illegible]
-FAULT	2E1
+FAULT	2E1
[illegible]	[illegible]
H.B., H.B.	2B14
[illegible]	3E[illegible]
HW	[illegible]A4
-INDEX	1114
+INDEX	1K14
-INDEX1	1114
+INDEX1	[illegible]
-INDEX2	1H14
+INDEX2	1114
-INDEX3	[illegible]
+INDEX3	1H14
INI	[illegible]
MAX RIPPLE	1A13
MDH0 MDH7	2E14
MDL0-MDL7	2H14
MDI	[illegible]14
-ON CYLINDER	2E[illegible]
+ON CYLINDER	2E[illegible]
-OPEN CABLE DETECT	[illegible]
+OPEN CABLE DETECT	3E[illegible]
R[illegible] R[illegible]	1K14
R[illegible] R[illegible]	[illegible]14
R[illegible]	[illegible]13
R11	[illegible]13
R12 R13	[illegible]14
R14	[illegible]14

MNEMONIC	COORD
R15	2E14
RDI	3A11
-READ CLOCK0	1K7
+READ CLOCK0	1K7
-READ CLOCK1	1K7
+READ CLOCK1	1K7
-READ CLOCK2	1K[illegible]
+READ CLOCK2	1K[illegible]
-READ CLOCK3	1K2
+READ CLOCK3	1K2
-READ DATA0	1K7
+READ DATA0	1K10
-READ DATA1	1K7
+READ DATA1	1K7
-READ DATA2	1K[illegible]
+READ DATA2	1K[illegible]
-READ DATA3	1K4
+READ DATA3	1K3
RST	2114
-SECTOR0	14
+SECTOR0	1114
-SECTOR1	1114
+SECTOR1	1114
-SECTOR2	1H14
+SECTOR2	1H14
-SECTOR3	[illegible]
+SECTOR3	[illegible]
-SEEK ERROR	2E1
+SEEK ERROR	2K[illegible]
-SERVO CLOCK0	1A[illegible]
+SERVO CLOCK0	1E[illegible]
-SERVO CLOCK1	1E[illegible]
+SERVO CLOCK1	1E[illegible]
-SERVO CLOCK2	1A[illegible]
+SERVO CLOCK2	1E4
-SERVO CLOCK3	1A1
+SERVO CLOCK3	1E1
SINIT	3A[illegible]
-TAG1 -TAG3	[illegible]
+TAG1 +TAG3	3[illegible]
TO[illegible]	2114
TO[illegible]	2114
TO[illegible]	[illegible]
[illegible]	[illegible]14
-UNIT READY	2E[illegible]
+UNIT READY	2E[illegible]
-UNIT SEL BIT0	[illegible]
+UNIT SEL BIT0	[illegible]

MNEMONIC	COORD
-UNIT SEL BIT1	[illegible]
+UNIT SEL BIT1	3C1
-UNIT SEL BIT2	1F14
+UNIT SEL BIT2	1E14
-UNIT SEL BIT3	1114
+UNIT SEL BIT3	1E14
-UNIT SEL TAG	3C1
+UNIT SEL TAG	3C1
-WRITE PROTECT	2E1
+WRITE PROTECT	2E1
-WRITE CLOCK0	2C1
+WRITE CLOCK0	2C1
-WRITE CLOCK1	2F1
+WRITE CLOCK1	2F1
-WRITE CLOCK2	2E1
+WRITE CLOCK2	2C1
-WRITE CLOCK3	2C1
+WRITE CLOCK3	2C1
-WRITE DATA0	2F1
+WRITE DATA0	2F1
-WRITE DATA1	2F1
+WRITE DATA1	[illegible]
-WRITE DATA2	[illegible]
+WRITE DATA2	2C1
-WRITE DATA3	2[illegible]
+WRITE DATA3	2[illegible]





WANG LABORATORIES, INC.

E

THIS DRAWING AND THE DATA SHOWN THEREON ARE THE EXCLUSIVE 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. NO PART OF ANY MEDIUM THIS DRAWING IS REPRODUCED BY WANG, TO LEAVE THE PHYSICAL CUSTODY OF THIS DRAWING IT IS RETURNABLE UPON THE DEMAND OF WANG LABORATORIES, INC.

DO NOT SCALE

INIT (2)

+5VR

R22 1K

L63 508 → (4K7CC)

R14 1K +5VR

L38 537 ← 13, 12

NLCR (3E5)

LB1 S38 (Y0–Y7)

±0V

BK2 (3C11) ← L74 508 ← L61 504 ← 5

MCMO.2

IPC (3D7)

LB0 S138 (Y0–Y7)

LB3 42 (A, B, C, D)

MCM25

MCM24

R32 (4B11)

CP (3A8)

W8

L23 532

IPCB (3D7)

L63 508 → L74 508 → RMW (3E8) (3G2)

W16

W32

L63 508 → BK3 (3G1)

LB4 S175 (D4 D3 D2 D1 CK CLR; Q4 Q3 Q2 Q1)

COH (3C9)

REFF (3A2)

MA (3F8)

R/B (3C8)

L5 502

L73 500

CM6 (3A3)

CM5 (3A2)

CM4 (3A1)

CM3 (3A4)

CMO2 (3B4)

CM26 (3A5)

CM25 (3B3)

CM24 (3B1)

LB5 S374 (1D–8D, 1Q–8Q, CK, OC)

LB2 S174 (5D–6D, 5Q–6Q, CK, CLR)

±0V

CCM24 (4B4)

CCM24 (4F8)

L75 S244 (2A3 2Y3, 2A2 2Y2, 2A1 2Y1, 2A4 2Y4)

CCM25 (4G7)

CCM26 (4G7)

CM23 (3B1)

CM22 (3A7)

CM29 (3B6)

GT2 (3A2)

CCM23 (4G8) (4F5)

CCM22 (4G8)

CCM29 (4B6)

1A1 1Y1, 1A2 1Y2, 1A3 1Y3, 1A4 1Y4; 1G 2G

MISS (1E3)

L73 500

L61 504

L74 508

M2 (3F5)

GM2 (2C5) (2G9)

GT2 + MISS (4C3)

RJ (3A1)

CM24 BAC	CM25 BAC	CM26 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		——

BAC 2 (3A4)

BAC 1 (3A3)

BAC 0 (3A5)

L65 S373 (1D–8D, 1Q–8Q, OC, ENB)

CMA2I (2F7)

BBAC1

BBAC0

BA (3B7)

L64 42 (A, B, C, D)

+5VR

R7 1K

R/B (3C7)

MA (3F8)

M1 (3E6)

L26 S74 (2D 2PR 2Q, 2CK, 2CLR)

BAEN (2C10)

L3 S51 (A, B)

EA (3B8)

MDP (3E5)

S32

L1 (3F7)

L8 500

L7 S74 (1D 1PR 1Q, 1CK 1CLR)

SEND 10

CDRY (4C2)

L8 508 → MMON (4G9)

CP (3B6)

L16 504

DRY1 (3C6)

L7 S74 (2D 2PR 2Q, 2CK 2CLR)

BKI (3E5)

L38 537

LA (3F9)

R3 1K +5VR

L11 S74 (2D 2PR 2Q, 2CK 2CLR)

MISS (3C11) (4B4)

RE&D (2C3)

L12 500

L23 532

MISS (1D9)

MISS (3J)

DINIT (3J)

R1 1K +5VR

L13 S64 (A, B, C, D)

INVA (2D3)

LO (3G8)

C_MISS (4C3)

R4 1K +5VR

L11 S74 (1D 1PR 1Q, 1CK 1CLR)

MISBEAT (4B10)

L10 S74 (2D 2PR 2Q, 2CK 2CLR)

LCM24

M2 (2A4)

LCP (2B5)

M1 (3F6)

LC (3D4)

M0 (2F7)

LOMO (2B4)

REVISION	BY	DATE	APPROVED BY	DATE
NO				

SEE SHEET

WANG LABORATORIES, INC LOWELL MASS

MATERIAL — MODEL NO. — MILITARY SPECIFICATIONS — FINISH — TITLE

SIZE D — DRAWING NUMBER — REV B

DO NOT SCALE

BB1

THIS DRAWING AND THE DATA SHOWN THEREON ARE THE PROPRIETARY PROPERTY OF WANG LABORATORIES, INC. THIS DRAWING IS NOT TO BE REPRODUCED IN WHOLE OR IN PART, NOR ARE THE INFORMATION AND DESIGNS CONTAINED THEREIN TO BE MADE AVAILABLE TO ANY PERSON, FIRM OR CORPORATION WITHOUT THE WRITTEN CONSENT OF WANG LABORATORIES, INC. SUCH CONSENT SHALL NOT BE GIVEN EXCEPT TO THOSE PERSONS WHO HAVE A NEED THEREFOR WHICH IS DEEMED SUFFICIENT BY WANG LABORATORIES, INC. THE FOREGOING RESTRICTIONS ON REPRODUCTION, USE AND DISCLOSURE OF INFORMATION CONTAINED ON THIS DRAWING ARE IN ADDITION TO, AND NOT IN LIMITATION OF, ANY RESTRICTIONS ON REPRODUCTION, USE AND DISCLOSURE WHICH MAY BE IMPOSED BY LAW. ALL RIGHTS RESERVED. THIS DRAWING IS LOANED SUBJECT TO THE AGREEMENT AND UNDERSTANDING THAT IT WILL NOT BE REPRODUCED, COPIED OR USED IN WHOLE OR IN PART AS WELL AS NOT BE DISCLOSED OUTSIDE YOUR ORGANIZATION EXCEPT AS PERMITTED BY WANG LABORATORIES, INC. IT IS TO BE RETURNED UNDER THE CONDITIONS AND AT THE TIME SPECIFIED BY WANG LABORATORIES, INC. IT IS TO BE KEPT IN THE PHYSICAL CUSTODY OF THE COMPANY TO WHOM IT IS LOANED AND IS TO BE RETURNED UPON THE DEMAND OF WANG LABORATORIES, INC.

DO NOT SCALE

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)

SM2 (1D8)

+0V

CMA21 (1B10)

+5VR

R23 2.2K1

1M 2M 4M 8M 16M

L1 (3F7)

INVA (1D5)

GM2 (1D8)

READ (4E1)

READ (1E5)

+5VR R5 1K

BAEN (1A9)

SW1

RAS (3F4)

LCMO (1A2)

IMA (3C6)(3E5)

LCP (1B2)

CM24 (1B2)

REFF (3A2)

R6 K +5VR

NO READ

INVA

CT (3D8)

BMAR0-BMAR23

BCMA23 BCMA22 BCMA21 INVA MSYE MS1O MS2E MS2O

SEE SHEET 7

BY	DATE	APPROVED BY	DATE
DWN			
CHK			

WANG LABORATORIES, INC. LOWELL MASS.

MATERIAL — MODEL NO

FINISH — SEE ENGRG SPECIFICATIONS NO

TOLERANCES UNLESS OTHERWISE SPECIFIED

SCALE — SHT 2 OF 7 — WANG PART NUMBER — SIZE D — DRAWING NUMBER — REV

BB2

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 USED, REPRODUCED OR DISCLOSED IN WHOLE OR IN PART DIRECTLY OR INDIRECTLY TO OTHERS OUTSIDE THE RECIPIENT'S ORGANIZATION EXCEPT IN CONNECTION WITH THE SALE OF EQUIPMENT OR SERVICES FROM WANG LABORATORIES, INC. OR AS OTHERWISE AUTHORIZED IN WRITING. IF THIS DRAWING IS LOANED, IT IS SUBJECT TO IMMEDIATE RECALL FOR ANY REASON AND SHALL BE RETURNED UPON REQUEST. IT IS TO BE KEPT IN A SECURE LOCATION UNDER THE CUSTODY OF THE RECIPIENT COMPANY. IT MAY BE VIEWED ONLY BY EMPLOYEES OF THE RECIPIENT COMPANY WHO NEED TO VIEW IT IN THE PERFORMANCE OF THEIR DUTIES. IT MAY NOT BE COPIED IN WHOLE OR IN PART WITHOUT THE WRITTEN CONSENT OF WANG LABORATORIES, INC. IN ANY EVENT, IT MUST BE RETURNED UPON THE DEMAND OF WANG LABORATORIES, INC.

DO NOT SCALE

PARITY (2J3)

+5VR R19 1K

CSB (5A2) L79A 3 2 S37

CLKCM (4A2) L79A 4 5 6 S37

+5VR R25 1K

+5VR R15 1K

L38 4 5 6 S37

+5VR R18 1K

BK9 (3D1)

MRBA (2J4) L35 3 4 S04

+5VR R28 1K

V5-11.0 (B7) L35 3 12 S04

MRBA (4B3)

L52 S74 2CK 2CLR — LA — LA (1E5)

L52 S74 2CK 2CLR — LO (4B2) — LO (1C5)

L51 S74 2CK 2CLR — LI (2D4) — LI (1F4)

L51 S74 2CK 2CLR

L50 S74 2CK 2CLR — MA (1A11) (1E9) (3C9) — MO (1A6) (3C11)

L49 S74 2CK 2CLR — M1 (1B4)

L50 S74 2CK 2CLR

L49 S74 2CK 2CLR — M2 (1D9)

L14 S74 2CK 2CLR

L37 S74 2CK 2CLR

L36 S74 2CK 2CLR

L47 S74 2CK 2CLR — RMW (1C6) — BK3 (1B6) — L46 S08 — R/W (3E8)

L48 S74 2CK 2CLR — REFF (3A1) L39 S00 — MOP (1A5)

L47 S74 2CK 2CLR

L48 S74 2CK 2CLR

L49 S74 2CK 2CLR — L9 S10 — RAS (2B6)

L50 S74 2CK 2CLR

L35 S04 — +5VR R8 1K — L26 S74 2CK 2CLR — WECR (1G6) L25 S11 — IMA (2B5) — CLR WRITE

L90A BT98 — CAS (5J2) — CEN (6J2) — RAS (6J2)

WB (3J2) — WP (2J2)

C1 (10J2)

L37 S74 2CK 2CLR — L3 S51

S0 S1 SHR SHL D C B A QD QC QB QA CLR CK L34 S194 — C1 — C3 (4B11) — C2 (4B9) — (3D2) MA (3B3)

L35 S04 — C4 — ±0V — L33 S153 1G 2G 1C0 1C1 1C2 1C3 2C2 2C1 2C3 2C0 1Y 2Y — M1 (1A11)(3A6)(4C3)

L32 S74 2CK 2CLR — +5VR R11 1K — BK1 (1E5) — L32 S74 2CK 2CLR — R10 1K +5VR — L27 S32 — LC (1A6)

L31 S00 — BK9 (3F11) — MA (3D9) — L14 S74 2CK 2CLR

L31 S00 — BK6 (4B4)

L31 S00

IPC (1E5) — L63 S08 — IPCB (1C7)

C1 (2A3)

DIS2 DIS4 I6 I5 I4 L6 8T97 O6 O5 O4 — IMA (2B5) — CRY1 (1E2) — I3 I2 I1 O3 O2 O1

IMA (4J3) — CRY1 (5J3) — R/B (6J3) — REFF (8J3)

L44 S04 — L21 L5393 — L20 LS244 — BMAR(16:3) — BMAR(15:2) — BMAR(14:1) — BMAR(13:0) — BMAR(12:0) — BMAR(11:0) — BMAR(10:0) — BMAR(9:0) (2G2)

L28 S74 2CK 2CLR — L29 S74 2CK 2CLR — +5VR R9 1K — L30 S02 — MA (3D9)

L30 S02 — L39 S00 — MA (3F8) — L37 S74 2CK 2CLR — R/BF (1E9) — L30 S02 — R/B (1A11)

L62 S64 — BK2 (1F7) — MO (3F7) — MISS (1E3) — ±0V — COR (1E9)

L36 S74 2CK 2CLR — R13 1K +5VR — BA (1A6) — BA (1B8)(2G11) — REFF (3A1) — L24 S08 — L23 S32 — L35 S04

L36 S74 2CK 2CLR — CP (1A6)(1E4) — L35 S04 — CP (1D6) — L39 S00

RUN/STEP (4J3) — GTI (6J2) — L23 S32

L24 S08 — L25 S11

+5VR R26 12K — C96 .01UF — C97 .001UF — ±0V — L89 555 RESET VCC CNT DIS TRIG THR OUT GND — R27 1K ±0V

M1 (3E6) — L27 S32

REFF (1E9) (2A5) — REFF (3G5) (3F8)

CP — BBA

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

WANG LABORATORIES, INC. LOWELL MASS.

MATERIAL — MODEL NO 3A — SEE ENGRG SPECIFICATIONS No.

FINISH — TOL ER AS NOTED XX ± .010 FRAC ± 1/64 XXX ± .005 ANG ± 1/2 NO FINISH V

TITLE MEMORY CONTROLLER MULTILAYER BOARD

SCALE — SHT 3 OF 7 — WANG PART NUMBER 210-3456 — SIZE D — DRAWING NUMBER 22 83 2 — REV 2

BB3

THIS DRAWING AND SPECIFICATION, EITHER ON ARE THE CONFIDENTIAL PROPERTY OF AND ARE NOW IN USE BY WANG LABORATORIES, INC. THEIR USE IS RESTRICTED. NEITHER THIS DRAWING NOR THE INFORMATION IT DISCLOSES MAY BE USED, REPRODUCED OR DISCLOSED WITHOUT THE WRITTEN CONSENT OF WANG LABORATORIES, INC. IT IS THE PROPERTY OF WANG AND SHALL BE RETURNED TO WANG LABORATORIES, INC. IMMEDIATELY UPON WRITTEN DEMAND. PERMITTED BY PURCHASE ORDER AGREEMENT OR OTHER WRITTEN AGREEMENT WITH WANG LABORATORIES, INC. THE PHYSICAL CUSTODY OF THIS DRAWING IS SUBJECT TO THE TERMS AND CONDITIONS OF SUCH AGREEMENT AND SHALL BE RETURNED UPON THE DEMAND OF WANG LABORATORIES, INC.

DO NOT SCALE

PAGE 0 (42) · MIF (42) · MOF (42)

PAGE 1 (43) · PAGE 2 (33)

MMON (1F)

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

DIRD15 DIRD14 DIRD13 D.RD12 DIRD11 DIRD.0 DIRD9 DIRD8 → MM15 MM.4 MM13 MM12 MM11 MM10 MM9 MM8

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

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

L70 564 · L71 · L72 532 · L73 500 · L74 508 · L61 504 · L55 511 · L56 500 · L57 520 · L58 510 · L59 500 · L60 532 · L53 500 · L54 520 · L69 532 · L68 526 · L66 504 · L67 574 · L9 510 · L99 · L53 511 · L45 502 · L46 508 · L43 551 · L44 504 · L42 564 · L41 574 · L18 508 · L16 504 · L5 502 · L4 532 · L63 532

READ (2C4) · MSOR (49) · MD1R (47) · MD2R (48) · MD3R (51) · MD4R (52) · RBIT (54) · RBYT (46) · MMRD (15) · STCP (31)

CLMISS (1D3) · CDRY (1F3) · GT2+MISS (1D9) (3E6) · MISS (1E3) · MRBA (3E10) · LO (3F8) · BK6 (3D3) · MA21-MA23 (2G3) · MA21 · MA22 · MA23 · CCM29 (1D10) · CCM24 (1E9) · C3(308) · C2 (3D8) · MISS EXT (1C1) · RSTCP (29) · R16 1K · R21 1K · R20 1K · +5VR · +5V

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

REVISION	NO	BY	DATE
SEE SHEET 7			

WANG LABORATORIES, INC. LOWELL MASS.

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

MATERIAL · MODEL NO · SEE ENGRG SPECIFICATIONS · FINISH · TOL ER AS NOTED XX ± .010 FRAC ± 1/64 XXX ± .005 ANG ± 1/2 30 minutes

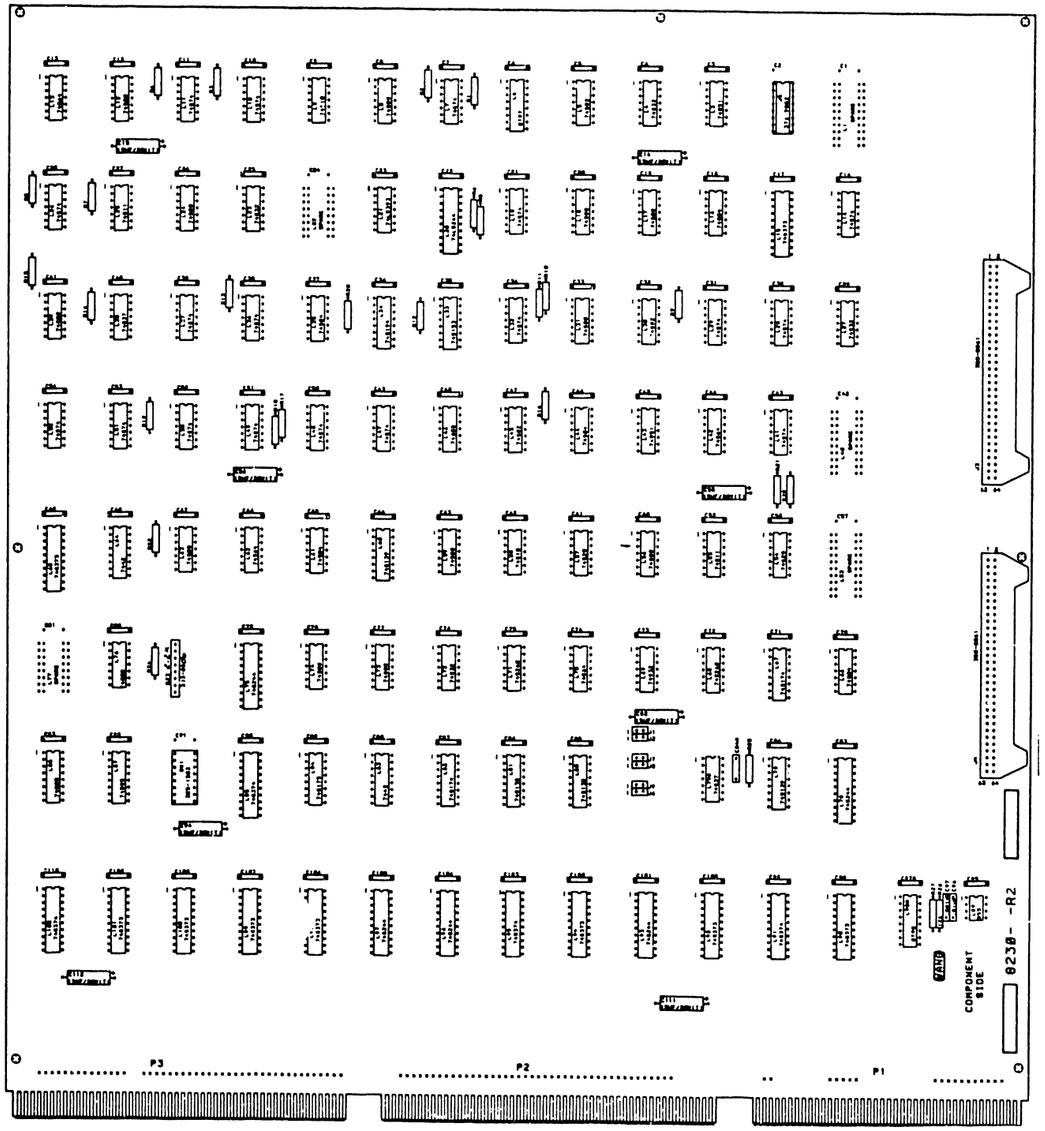
TITLE

SCALE · SHT 4 OF 7 · WANG PART NUMBER · SIZE D · DRAWING NUMBER 5220 · REV

BB4

"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



REVISION	BY	DATE	APPROVED BY	DATE
NO	DWN K THODSON	2-8-82	E ENGR	
SEE SHEET 7	CHK		M ENGR	
			MFG ENGR	

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

MATERIAL

MODEL NO P1054 VS-95

SEE ENGRG SPECIFICATIONS No. ____

FINISH

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

SCALE SHT 1 OF 7

TITLE MEMORY CONTROLLER MULTILAYER BOARD

210-8230 | D | 8230 | 3

WANG PART NUMBER | SIZE | DRAWING NUMBER | REV

D 8230

BB5

"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

J3

		1 2	PARITY
		3 4	±0V
BCMA22	5	6 7	
±0V	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	
		37 38	±0V
DIRD0	39	40	DIRD1
DIRD2	41	42	DIRD3
DIRD4	43	44	DIRD5
CAWD0	45	46	CAWD1
CAWD2	47	48	CAWD3
		49 50	
		51 52	
CAWD8	53	54	CAWD9
CAWD10	55	56	CAWD11
DIRD6	57	58	DIRD7
DIRD8	59	60	DIRD9
DIRD10	61	62	DIRD11
		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	
	6	11	
	7	10	
	8	9	BCMA23
			BCMA22

P1

±0V	1	2	±0V
+5VR	3	4	+5VR
	5	6	
	7	8	M2E
	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	
MS10	65	66	
MS20	67	68	
±0V	69	70	
±0V	71	72	
	73	74	
MM24	75	76	MM25
MM26	77	78	MM27
+5VR	79	80	+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
BMAR0(00)	31	32	MA8
BMAR1(06)	33	34	MA9
BMAR2(07)	35	36	MA10
BMAR3(08)	37	38	MA11
GTI	39	40	
CLKCM	41	42	
BMAR0(00)	43	44	
MA12	45	46	MA13
MA14	47	48	MA15
BMAR0(08)	49	50	RBYT
BMAR1(09)	51	52	
BMAR10(10)	53	54	
BMAR12(11)	55	56	COB
BMAR12(12)	57	58	GTR
CEN	59	60	
CKECC	61	62	MD4R
CAS	63	64	CM02
RAS	65	66	CM3
BMAR14(13)	67	68	CM4
BMAR15(14)	69	70	CM5
BMAR16(15)	71	72	BINIT
BMAR17(16)	73	74	MM12
BMAR18(17)	75	76	MM13
BMAR19(18)	77	78	MM14
BMAR20(19)	79	80	MM15
BMAR21(20)	81	82	MOF
R/W	83	84	CP
WP	85	86	WP
	87	88	MIF
	89	90	
BA16	91	92	BA17
BA18	93	94	BA19
+5VR	95	96	+5VR
±0V	97	98	±0V

P3

		1 2	NOXMPSE
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
MDOR	21	22	MDIR
MM4	23	24	MM5
MM6	25	26	MM7
	27	28	TRSAT
	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
±0V	49	50	FACE0
	51	52	
	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.

	BY	DATE	APPROVED BY	DATE
DWN			ENGR	
CHK			MFGR	
			MFGR	

MATERIAL — MODEL NO —

SEE ENGRG SPECIFICATIONS No.

FINISH — TOL ER AS NOTED

SCALE — SHT 6 OF 7 — WANG PART NUMBER — SIZE D — DRAWING NUMBER — REV

BB6

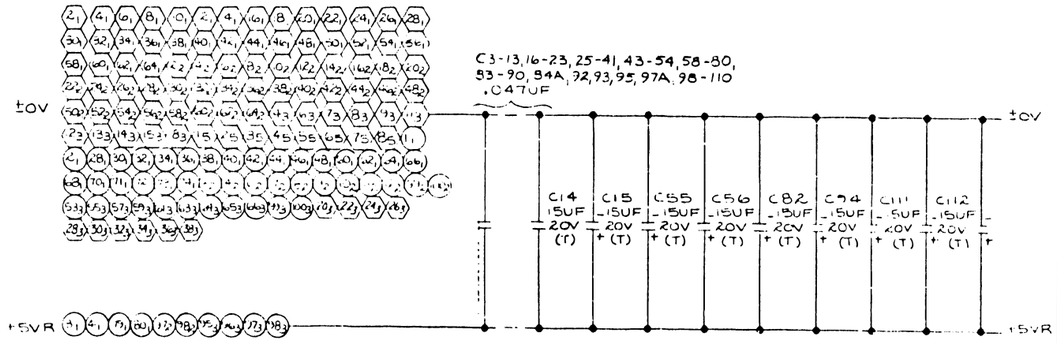
LOCATION	TYPE	ALL PART NO.
L15,45	74S378	396-0306
L16,44,46,76	74	396-0284
L18	74	396-0284
L19,20,47,48,72	74S42	396-0205
L5,30,65,76	74S	396-0199
L6	8T97	396-0189
L7,9,19,26, 28,29,32,36, 39,41,52,64	74S74	396-0202
L1,22,43,53,77	SPARES	
L8,21,31,50	74S00	396-0228
L10,58	74S10	396-0238
L11,42,62,70	74S20	396-0201
L12,33,44,61,66	74S30	396-0197
L13,24,40, 63,74	74S08	396-0200
L20	74LS244	396-0268
L21	74LS393	396-0307
L22A	8T98	396-0185
L23,35	74S11	396-0237
L33	74S153	396-0215
L34	74S194	396-0221
L38,71A	74S37	396-0296
L54,57	74S20	396-0230
L60,79	74S139	396-0333
L64,69	7442	396-0208
L67,82	74S174	396-0247
L68,75	74S260	396-0206
L75,78,93,96, 97	74S244	396-0338
L87,91	74S85	396-0259
L80,81	74S38	396-0298
L84	74S15	396-0270
L85,90,95,102	74S374	396-0305
L89	555	396-0126

LOCATION	TYPE	ALL PART NO.
R22, 25, 27, 28	[illegible]	[illegible]
R23	330 ΩSIP	327-4435
R24	2K 5% 1/4W	327-2023
C1,2,4,5,7,11,	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	50UF 20V (T)	300-4022
C96	.01UF 25V	300-1973
C97	.001 UF 500V	300-1906
J12,6,7,8,9	2PIN HEADER	350-0203
J14	14 PIN SOCKET	350-0201
J15	6 PIN SOCKET	350-0202
	SPACERS	350-0235
SW1	SLIDE SPDT	323-1013
	PANEL	331-0159
	SPACERS	350-0230

MNEMONICS	LOC'D
BAO BA23	2D1
BACO-BAC2	1B1
BAWDO-BAWD31	4A11
BBA	3A7
BCMA22	2C1
BCMA23	2C1
BMAP,20)-EMAP,22)	2D1
CM22	1D11
$\overline{CI}$	3E1
$\overline{CAS}$	3F1
CAWDO-CAWD31	4B11
$\overline{CEN}$	3F1
CKECC	1G1
CLKCM	3F1
$\overline{CMOZ}$	1F11
CMB-CM6	1F11
CM23	1D11
CM24-CM26	1F11
$\overline{COB}$	3G11
CP	3A7
CM29	3D1
DPDO-DPD31	4G10
$\overline{DRYI}$	3C1
$\overline{GT1}$	3A11
$\overline{GT2}$	3D1
$\overline{IMA-CP}$	4D1
$\overline{INIT}$	1G5
$\overline{INVA}$	2C1

MNEMONICS	LOC'D
IOE	4A8
IOWE	4A8
IOF	4G4
IOFE	4G4
MA0-MA23	2G9
MCP-MCLR	4D1
MDSS	1D1
MMIO-MMI31	4A7
MWRD	4C1
MWBAI	3E1
MWIE	2C1
MWO	2C1
MWZE	2C1
MZCO	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

LOC TYPE	LOC	SPARES
74S02	L76	2
	L5	2
74S08	L24	1
74S10	L9	1
74S11	L23	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	NO
[illegible]	[illegible]

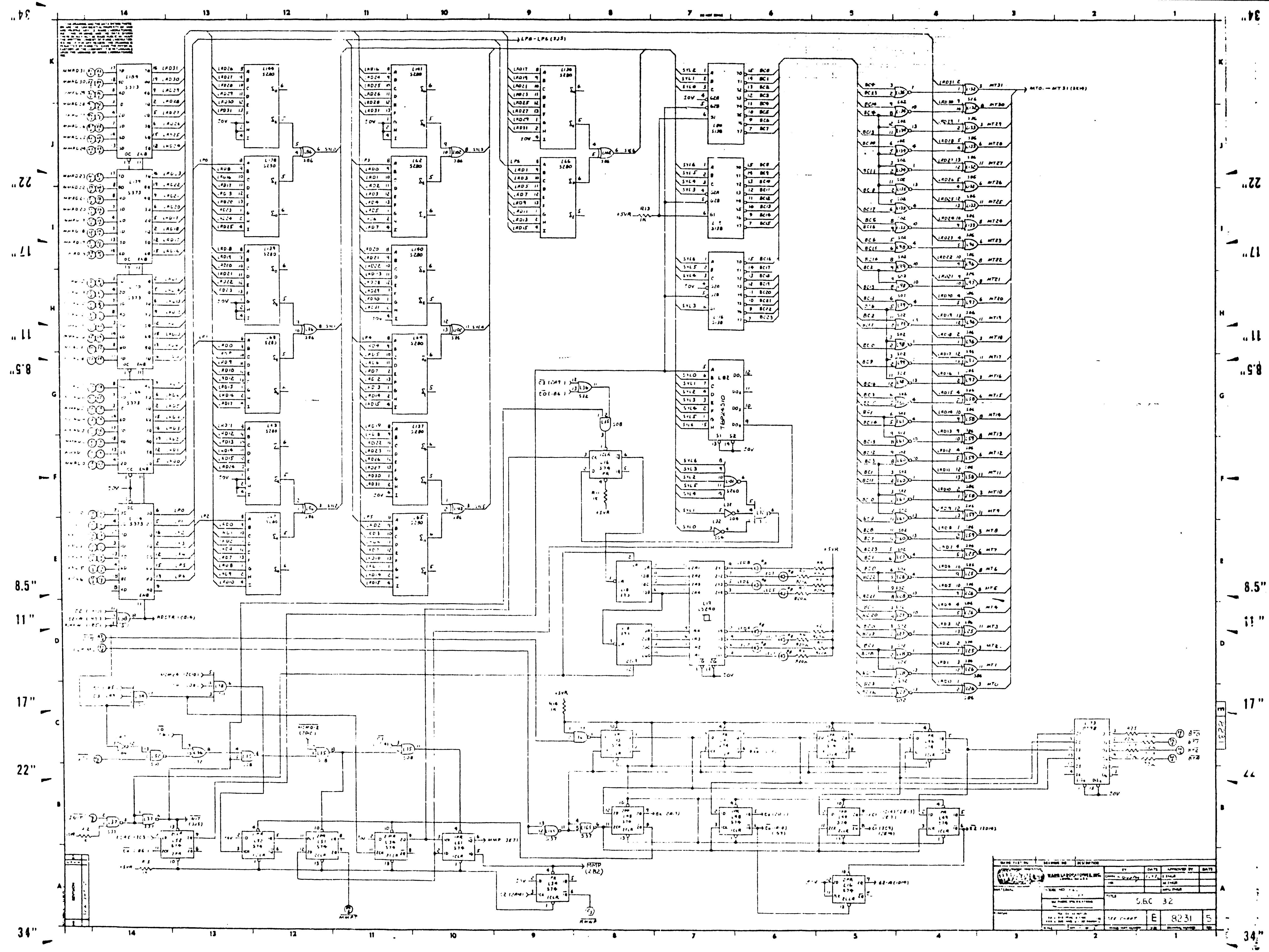
WANG PART NO	DRAWING NO	DESCRIPTION
WANG LABORATORIES, INC LOWELL, MASS.		
MATERIAL	MODEL NO [illegible]	
	SEE ENGRG SPECIFICATIONS No.	
FINISH	TOL ER AS NOTED XX ± .010 FRAC ± 1/64 XXX ± .005 ANG ± 1/30 FINISH √	
SCALE	SHT 7 OF 7	

BY	DATE	APPROVED BY	DATE
DWN [illegible]		ELNGR	
CHK		MLNGR	
		MFG ENGR	

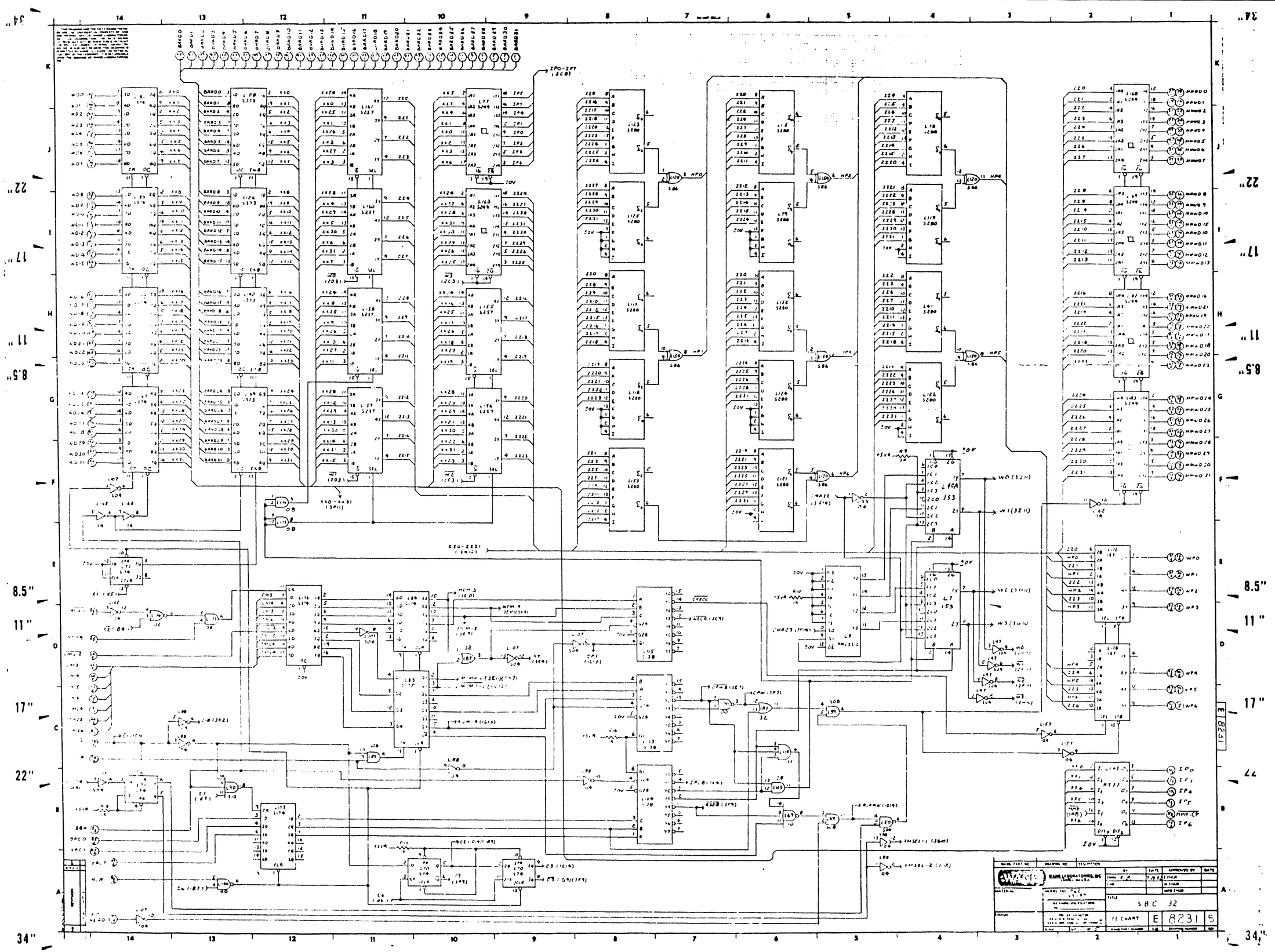
TITLE: [illegible]

WANG PART NUMBER	TYPE	DRAWING NUMBER	REV
[illegible]	D	[illegible]	5

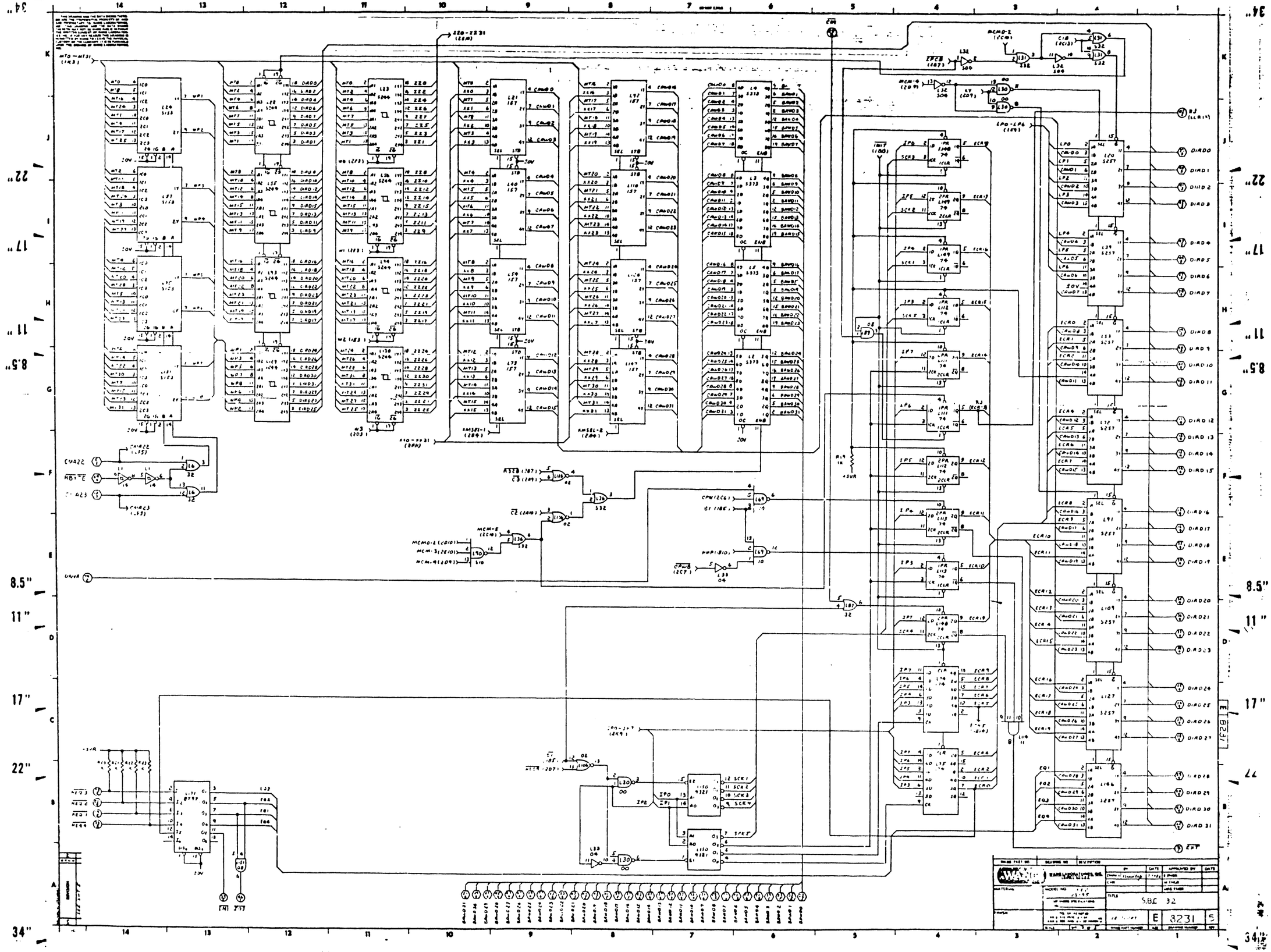
D 8230


LP0 - LP6 (3J3)
MT0 — MT31 (3E19)
ADSTR (2D14)
MMP (2B2)
RMWP
MMPT
L82
T8P24510
L19
LS240
+5VR
20V
S.B.C 32
SEE CHART
E
8231
5

CC1



CC2


MT0 – MT31 (1493)
220 – 2231 (2280)
MCMD-2 (2CD1)
MCMD-9 (2D99)
EWEB (2087)
LPO – LP6 (2B9)
IBUF (1B3)
RJ (ECR19)
DIAD0
DIAD1
DIAD2
DIAD3
DIAD4
DIAD5
DIAD6
DIAD7
DIAD8
DIAD9
DIAD10
DIAD11
DIAD12
DIAD13
DIAD14
DIAD15
DIAD16
DIAD17
DIAD18
DIAD19
DIAD20
DIAD21
DIAD22
DIAD23
DIAD24
DIAD25
DIAD26
DIAD27
DIAD28
DIAD29
DIAD30
DIAD31
EWT
CMA22 (1J5)
CMA23 (1J3)
UNVR
MCMD-2 (2CD1)
MCMD-8 (2CD8)
MCMD-9 (2D09)
MCMD-10 (2D10)
MCMD-11 (2D11)
CPW (2C6)
SBE 32
8231
E

8231- R3

COMPONENT SIDE

P3

P2

P1

WANG

S.B.C

E 8231 5

CC4

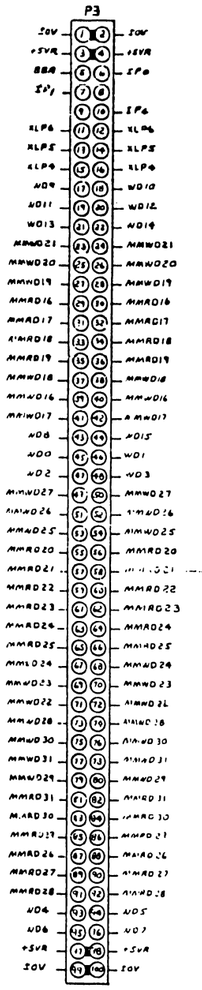
COMPONENT	TYPE	DI PART NO
R1 - 8	820Ω, 1/4W 5%	330-2383
R9-23	1K, 1/4W 5%	330-3041
R24-27	22Ω, 1/4W 5%	330-1023
C1-15, 17-131, 1366	.047mF 50V	300-1966
C176, 175	15mF 20V T	300-4022
LED1 - LED8	LAMP, RED	370-0026
J1, J3-J6	64 PIN CONN	350-0940

MNEMONICS	BOARD
BAC 0	1B16
BAC1	2A16
BAC2	2B16
BARDO - BARD31	5A9
BALDO - BALD31	5A6
BNA	2B16
BTO - BT3	1C1
BTA	1C1
CT	2C16
CLK MC	1D16
CMB22	3F16
CMB23	3F16
CMO-C	2D16
CM3 - CM6	2D16
CM26 - CM26	2C16
CM	3B5
CDB	1D19
CP	2C14
DIRDO - DIRD31	3J1
EXT	3A1
GT1	1C16
GT2B	2D16
IP0, IP1, IP2 - IP6	2B1
JO3	3A13
INIT	3A13
INIT	1B16
MIO3	2D16
MMP-CB	2B1
MMP	1A11
MAIDO - MAIRD31	1F16
MMWDO - MMWD 31	2K1
NO READ	2A16
RIB	2A16
ROYTE	3F16
RE31 - RE34	3B16
RMWP	1D8
RJ	3J1
WDO - WD 31	2K16
WP0 - WP3	2B1
WP4 - WP6	2C1
XPLO - XPL6	1B16
UNVA	3E16

TYPE	LOCATION	SPARES
74430	L100	2
74S20	L50	2
7404	L33	3
	L157	4
	L162	2
74S04	L42	1
	L87	1
74S08	L51	3
7411	L114	1
7414	L1	4
7432	L6	2
	L37	1
	L1	1
	L33	1
	L21	2
74S86	L36	1
	L159	1
74S240	L121	1

TYPE	LOCATION
7400	L30, 100
74S32	L31, 36
7404	L2, 3, 4, 7, 108, 124, 142, 149, 164, 170, 174, 177, 184
74S32	L6, 87
7412	L21, 40, 59, 73, 92, 110, 128, 132, 178, 197
74S37	L8
AM25S18	L89 - 95, 117, 129, 93, 81, 105, 99, 76
SPARE	L7, 44, 4
74S53	L16, 26, 45, 96, 48, 91, 51, 52, 53, 71
74S74	L18
74S37	L19
74S240	L20, 39, 58, 72, 91, 109, 127, 146, 157, 56, 158-161
74S257	L22, 23, 55, 56, 57, 73, 74, 75, 130, 163, 168, 169, 90, 103
74S294	L24, 37, 38, 39
74S53	L25, 36, 38, 59, 106, 76, 77, 102, 103, 138, 139, 154
74S86	L27, 60, 61, 78, 79, 80, 81
74S138	L28, 29, 30, 31, 32
74S00	L30, 100
74S32	L31, 36
74S04	L32, 33
74S38	L33, 69, 187
74S37	L34, 35
74S00	L37, 165
74S37	L38
74S260	L41, 64, 68, 78, 79, 113, 117, 118, 122, 125, 126, 135, 136, 139, 149, 158, 183
74S138	L42, 80, 85, 133, 134, 148
74S00	L53
7404	L59
74S74	L61, 131
74S38	L62
74S32	L104
74S74	L111, 112, 113, 144, 181
7404	L116
74S51	L120
74S260	L121, 181, 182, 80, 181
74S138	L123
74S00	L132
SCREWS	

210 + 209 + 31114 378		
210	209	L82
8231A	8231	371 3642



NOTE 1 ALL RESISTANCE VALUES UNLESS OTHERWISE SPECIFIED.

REVISION	DESCRIPTION	DATE	APPROVED
A	ORIGINAL RELEASE	11/7/84	

WANG LABORATORIES, INC. LOWELL, MASS.

	BY	DATE	APPROVED BY	DATE
DRAWN	[illegible]	11/7/84	[illegible]	[illegible]
CHECKED				
MATERIAL		JOB NO 7AC-V1-9F		
FINISH	NO SHARP EDGES			

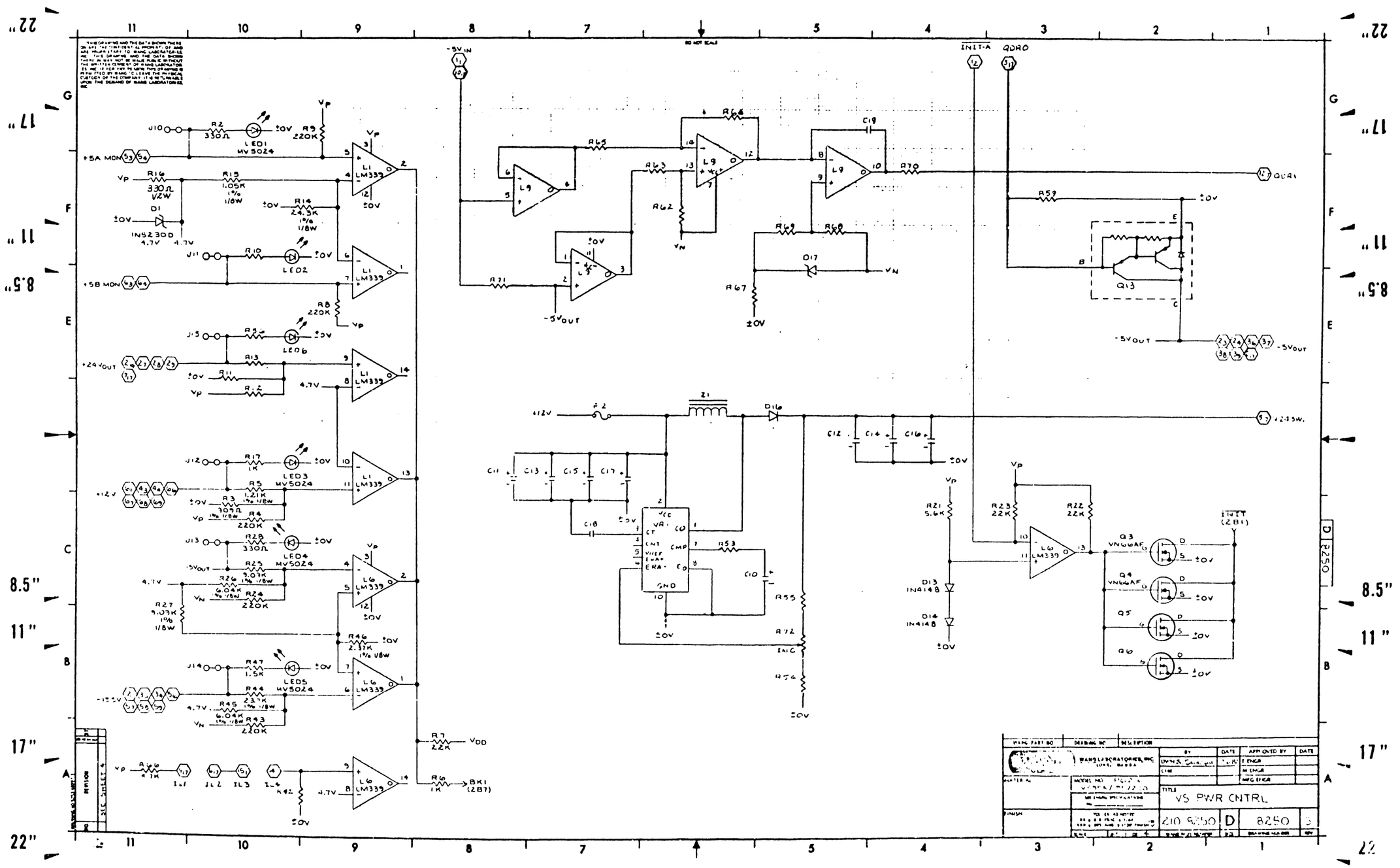
TITLE: S.B.C 32

SIZE E | DRAWING NO 8231 | REV A

SHEET 1 OF 2

E-REV 1

CC5


-5V IN
INIT-A
QDRO
+5A MON
+5B MON
+24VOUT
+12V
-15.5V
-5VOUT
VP
VN
VDD
LED1 MV5024
LED2
LED3 MV5024
LED4 MV5024
LED5 MV5024
LED6
D1 IN5230D 4.7V
D16
D17
D13 IN4148
D14 IN4148
Z1
Q13
Q3 VN0640AF
Q4 VN0640AF
Q5
Q6
L1 LM339
L6 LM339
L9
VR1
R2 330Ω
R3 309Ω 1% 1/8W
R4 220K
R5 1.21K 1% 1/8W
R8 220K
R13 1.05K 1% 1/8W
R14 24.3K 1% 1/8W
R16 330Ω 2W
R17 1K
R21 5.6K
R22 22K
R23 22K
R24 220K
R25 3.09K 1% 1/8W
R26 6.04K 1% 1/8W
R27 9.09K 1% 1/8W
R28 330Ω
R43 220K
R44 2.37K 1% 1/8W
R45 6.04K 1% 1/8W
R46 2.37K 1% 1/8W
R47 1.5K
R53
R55
R59
R62
R63
R64
R65
R66
R67
R70
R71
R72
R74
R7 22K
R6 1K
C10
C11
C12
C13
C14
C15
C16
C17
C18
C19
F2
±0V
4.7V
VDD
BK1 (Z87)
+12.5W.
-5VOUT
INIT (Z81)
VS PWR CNTRL
210 9250 D 8250 3
DO NOT SCALE

DD1

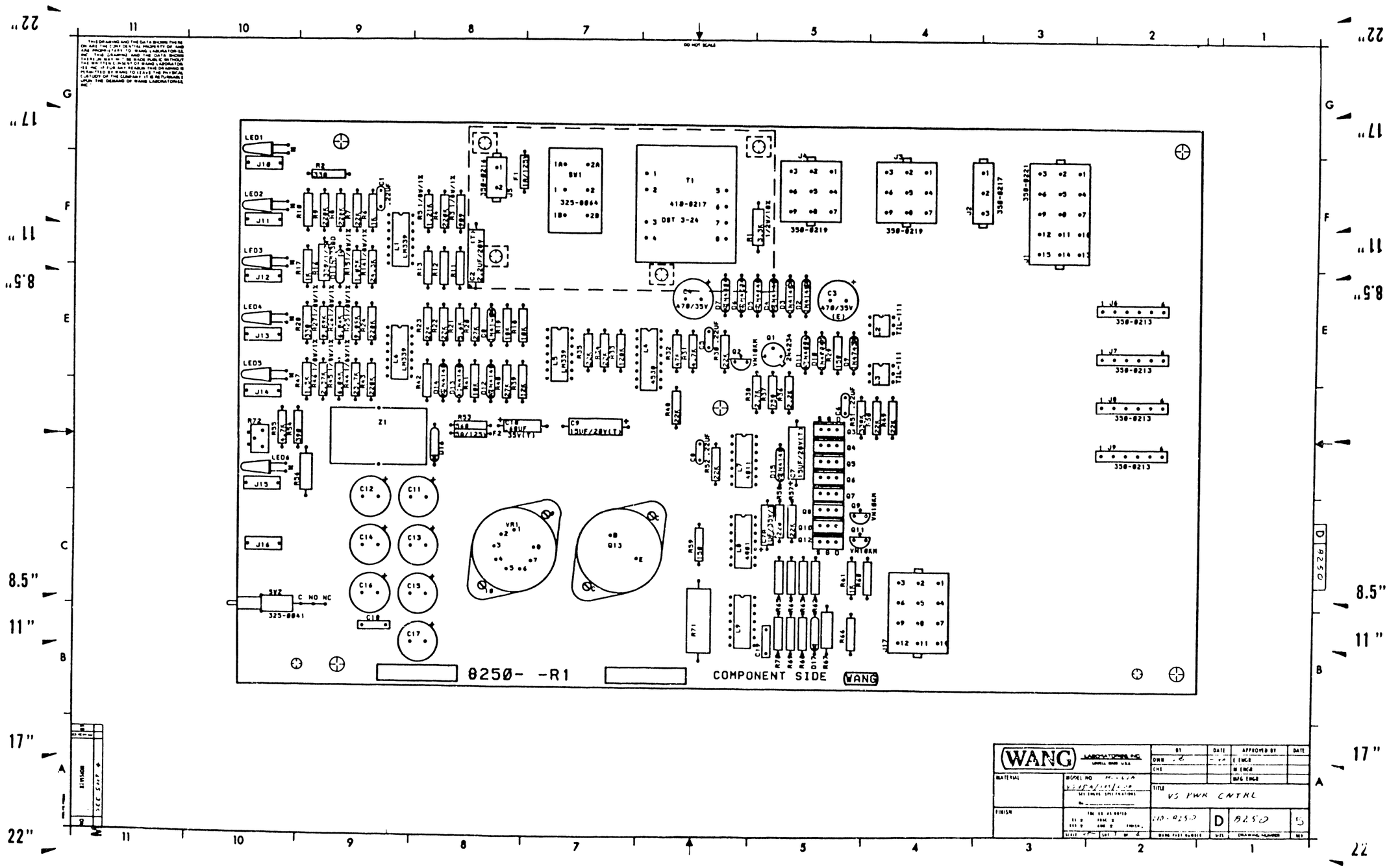
THIS DRAWING AND THE DATA SHOWN THEREON ARE THE CONFIDENTIAL PROPERTY OF WANG LABORATORIES, INC. THIS DRAWING AND THE DATA SHOWN THEREON MAY NOT BE MADE PUBLIC WITHOUT THE WRITTEN CONSENT OF WANG LABORATORIES, INC. WITHOUT SUCH CONSENT THIS DRAWING IS LOANED SUBJECT TO RETURN ON DEMAND AND IS NOT TO BE REPRODUCED BY WANG TO LEAVE THE PHYSICAL CUSTODY OF THE COMPANY TO WHICH IT IS ISSUED, UPON THE DEMAND OF WANG LABORATORIES, INC.

DO NOT SCALE

AC HOT (15) F1 1A T1
AC NEU (25) SW1 1A 1B 2A 2B
D7 IN4004 D11 IN4004 D6 IN4004 D10 IN4004
D3 IN4148 D2 IN4148 D5 IN4148 D4 IN4148
R1 3.3K 10% 1/2W
R29 150Ω
C4 470UF 35V (E)
C3 470UF 35V (E)
D9 IN4743A 13V
+10V −10V VP VN VDD
L2 TIL111 L3 TIL111
R51 330K R50 22K R49 22K
C6 .022UF
L5 LM339
R48 22K
LOP (13)
D8 IN4148
R20 27K R18 10K R19 18K R39 12K R40 27K R38 22K
D12 IN4148 R41 18K
SW2
C2 2.2UF 20V (T)
+5VA (7,13,14,46,47,48,49)
+24V IN (35)
R33 120K C9 15UF 20V (T)
R34 22K
L4 MC14538B CLR1 CLR2 CX1 RX1 CX2 RX2
F4011BP
R52 22K C8 .22UF
R32 47K C5 .22UF
R31 4.7K
BK1 (1A8) C1 .22UF
D15 IN4148 C7 15UF 20V (T)
CD4001AE
R30 22K R37 750Ω Q1 2N4234 R38 2.7K R36 2.2K
ENPWR (31)
Q2 VN10KM
INIT-NV (22)
Q11 Q12 Q10 Q8 VN66AF Q7 VN66AF Q9 VN10KM
R61 1K +5VA
INIT (4,15) INIT (IC1)
INIT-NV (32)
R60
SEE SHEET 4

WANG LABORATORIES, INC. LOWELL, MASS. U.S.A.		BY	DATE	APPROVED BY	DATE
MATERIAL	MODEL NO 2200A/2200B	DWN		E ENGR	
	SEE ENGR SPECIFICATIONS	CHK		M ENGR	
FINISH	TOL EX AS NOTED			MFG ENGR	
	SCALE	TITLE VS PWR CNTRL			
		210-8250	D	8250	
		SYSTEM PART NUMBER	REV	DRAWING NUMBER	REV

DD2


8250- -R1
COMPONENT SIDE
WANG
T1
410-0217
DBT 3-24
325-0044
350-0219
350-0217
350-0221
350-0213
325-0041
WANG
MATERIAL
FINISH
TITLE
VS PWR CNTRL
210-8250
D
8250
DRAWING NUMBER
REVISION
DO NOT SCALE

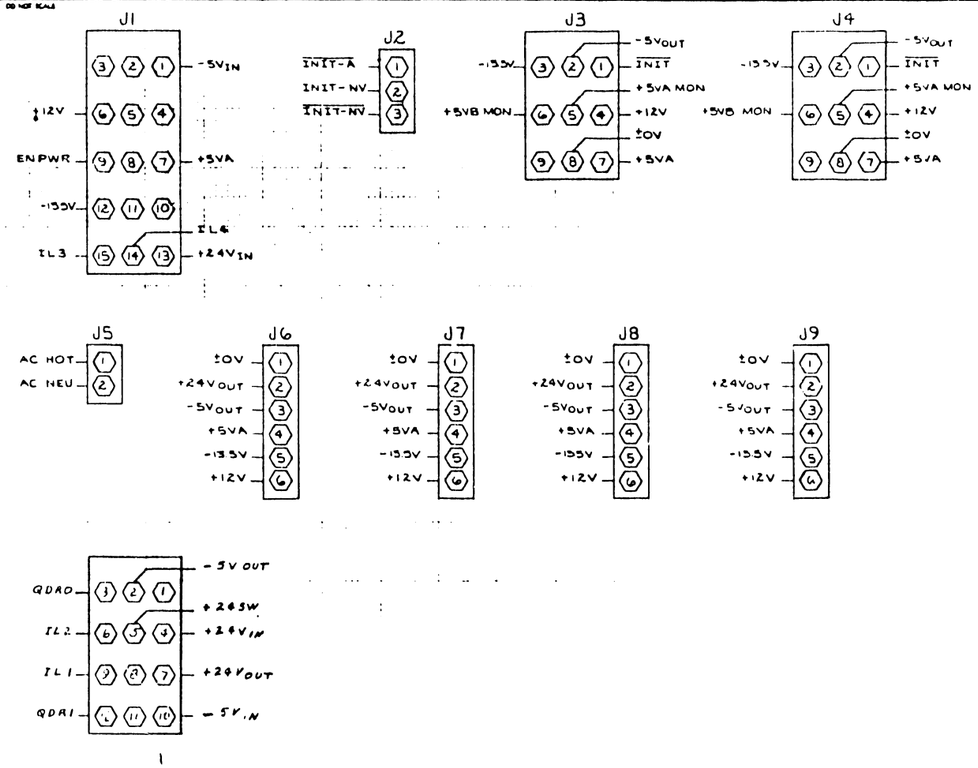
THIS DRAWING AND THE DATA SHOWN THEREON ARE THE PROPRIETARY PROPERTY OF AND ARE LOANED BY AND TO WARD LABORATORIES, INC. THIS DRAWING AND THE DATA SHOWN THEREON MAY NOT BE MADE PUBLIC WITHOUT THE WRITTEN CONSENT OF WARD LABORATORIES, INC. IT IS ONLY FOR THE PURPOSE FOR WHICH IT IS LOANED BY WARD LABORATORIES, INC. AND UPON REQUEST IT IS TO BE RETURNED TO WARD LABORATORIES, INC.

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	333-0059
R4,8,9, 24,43	220K 5% 1/4W	330-5023
R5	1.21K 1% 1/8W	333-0106
R6,17,61	1K 5% 1/4W	330-3011
R7,22,23,30,34, 45 48-50,52	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
R13	330Ω 5% 1/2W	331-2034
R 14	10K 5% 1/4W	330-4011
R15,16	18K 5% 1/4W	330-4019
R20,40	47K 5% 1/4W	330-4028
R21	5.6K 5% 1/4W	330-3057
R26,42	6.04K 1% 1/8W	333-0094
R29	150Ω 5% 1/4W	330-2016
R31, 55,60	4.7K 5% 1/4W	330-3048
R32	47K 5% 1/4W	330-4048
R33	12CK 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
R 58	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	IN5230D 4.7V	380-2147
D2-5,8,12-15	IN4148	380-1019
D6,7,10,11	IN4004	380-4000
D9	IN4743A 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	5 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	625-0013
J16	TEST POINTS	625-0056

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	COORD
AC HOT	ZG11
AC NEU	ZF11
ENPWR	ZD1
IL1	1A11
IL2	1A10
IL3	1A10
IL4	1A10
INIT	ZB1
INIT-A	1G4
INIT-NV	ZB1
INIT-NV	ZC1
QDRI	1F1
QDRO	1G3
-5V$_{IN}$	1G8
-5V$_{OUT}$	1E1
-13.5V	1B11
+5VA	ZB11
+5A MON	1F11
+5B MON	1E11
+12V	1C11
+24SW	1D1
+24V$_{IN}$	ZA11
+24V$_{OUT}$	1E11



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

REVISION	BY	DATE	APPROVED
INITIATED ECR ECO#2350 ADDED DTC, LEDS	DWN	6/7/82	
ADDED J16 VIA ECO#2446 ADDED DTC LEDS			
REVISED PER ECO#2450 ADDED J16			

E-REV O

WARD PART NO	DRAWING NO	DESCRIPTION

WARD LABORATORIES, INC. LOWELL, MASS.

	BY	DATE	APPROVED BY	DATE
DWN			ENGR	
CHK DTC		6/7/82	M ENGR	
			MFG ENGR	

MATERIAL

MODEL NO. 1972A (2054A/B/2200)

MILITARY SPECIFICATIONS

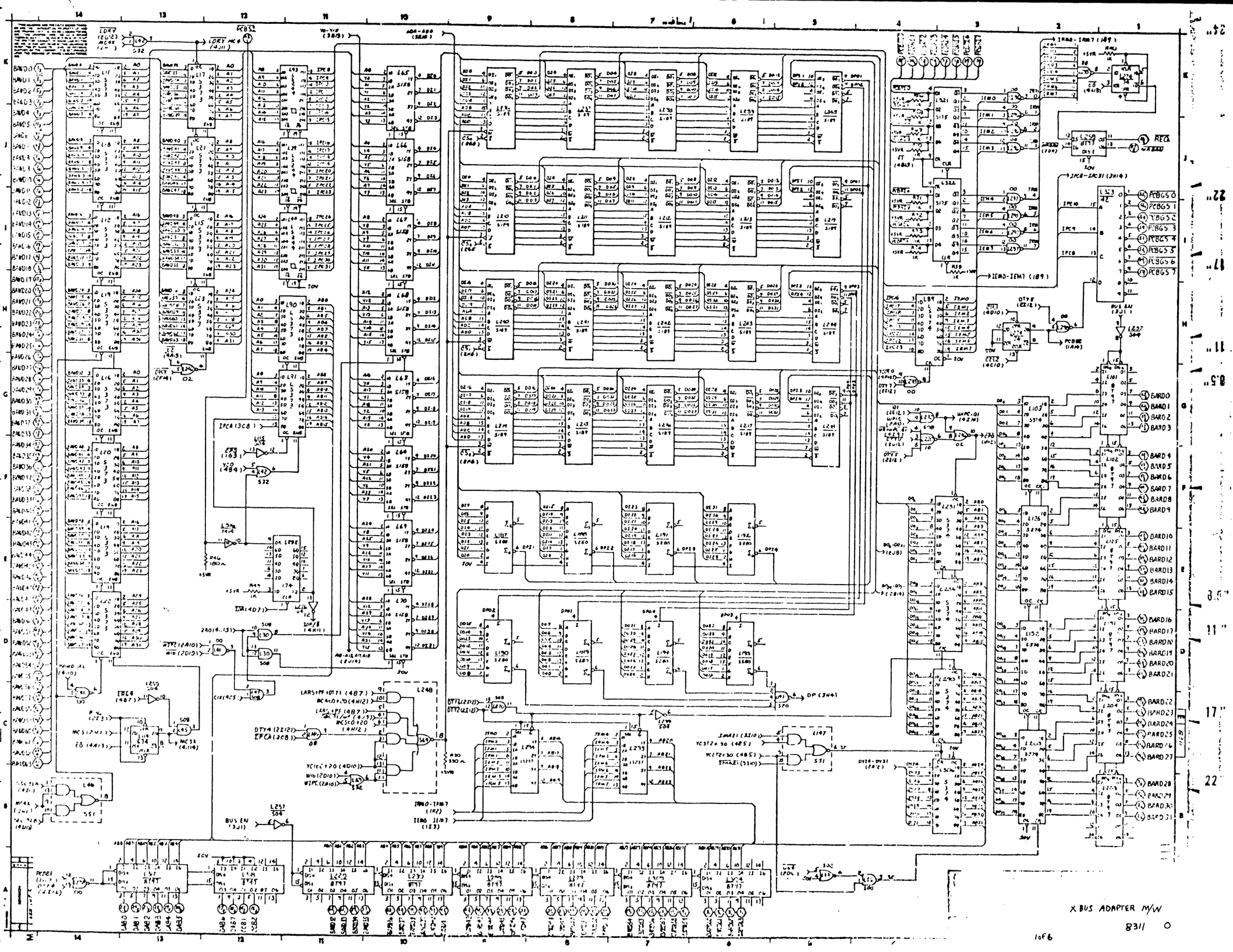
FINISH

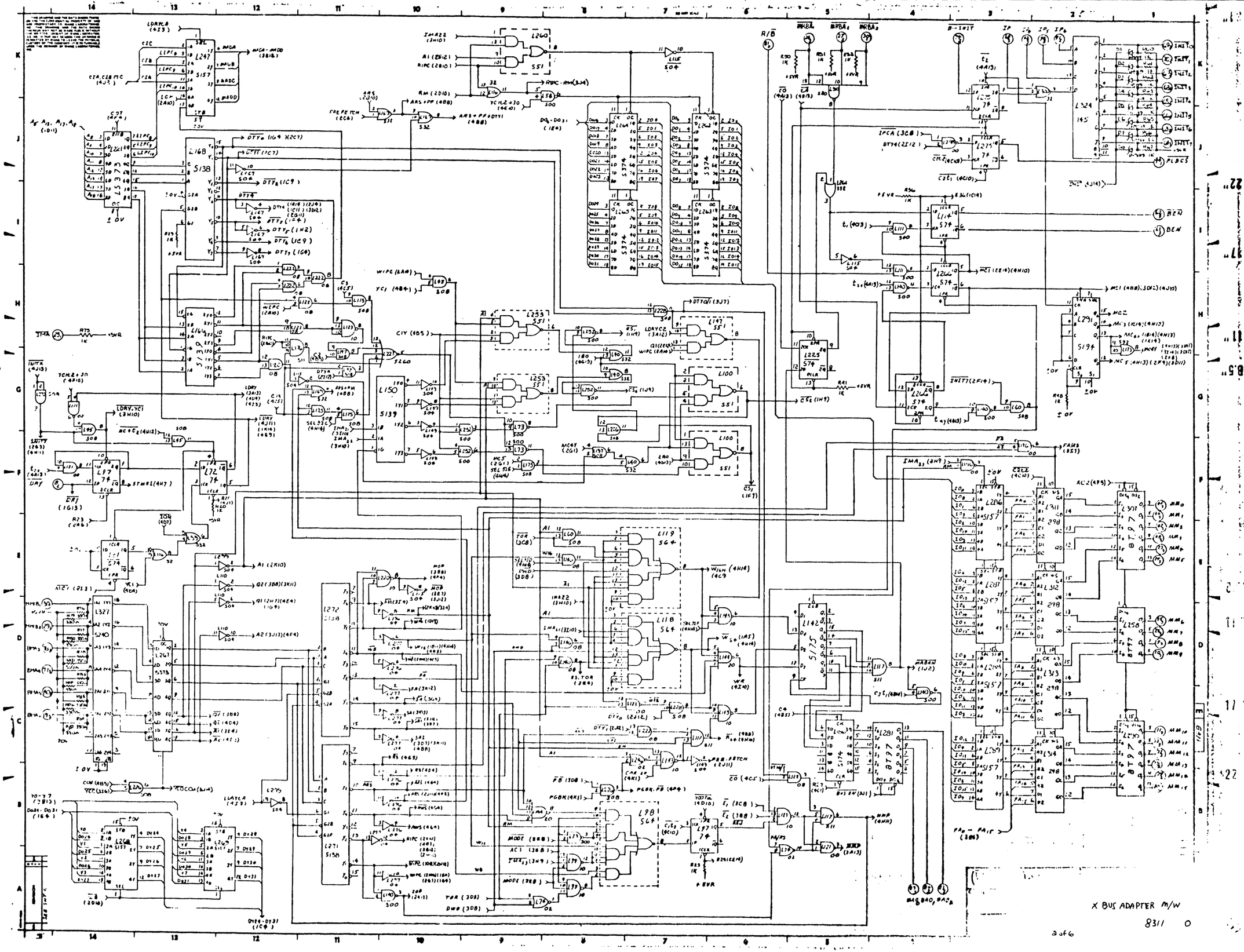
TITLE VS PWR CNTRL

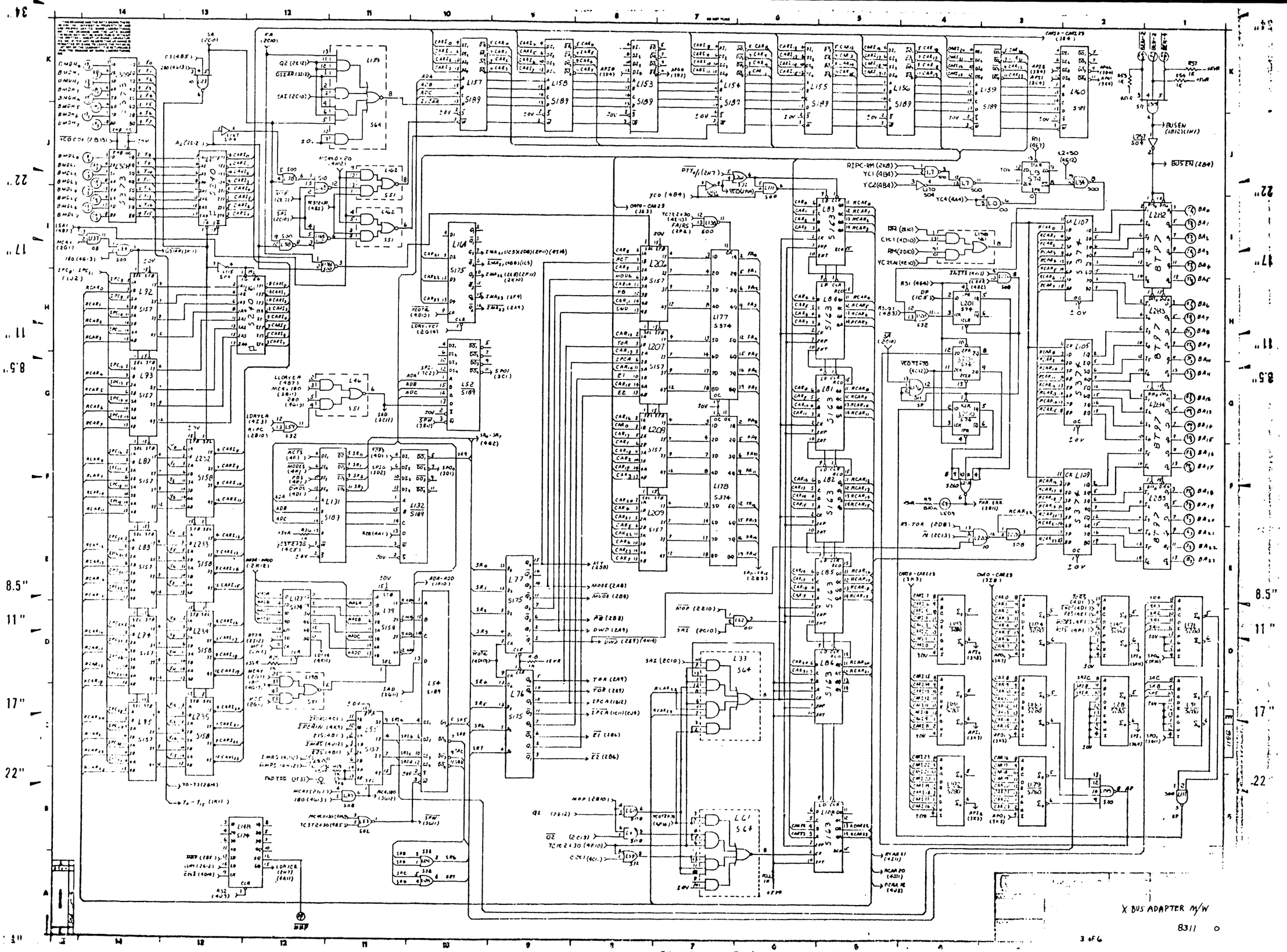
210 8250 | D | 8250

D 8250

DD4


X BUS ADAPTER M/W
8311 O
10F6
EE1


X BUS ADAPTER M/W
8311 0
3 of 6
EE2


X BUS ADAPTER M/W
8311 0
3 of 6
EE3

XBUS ADAPTER A/W

8311 O

4 of 6

EE4

WANG

X BUS ADAPTER M/W

210-B311 E B311

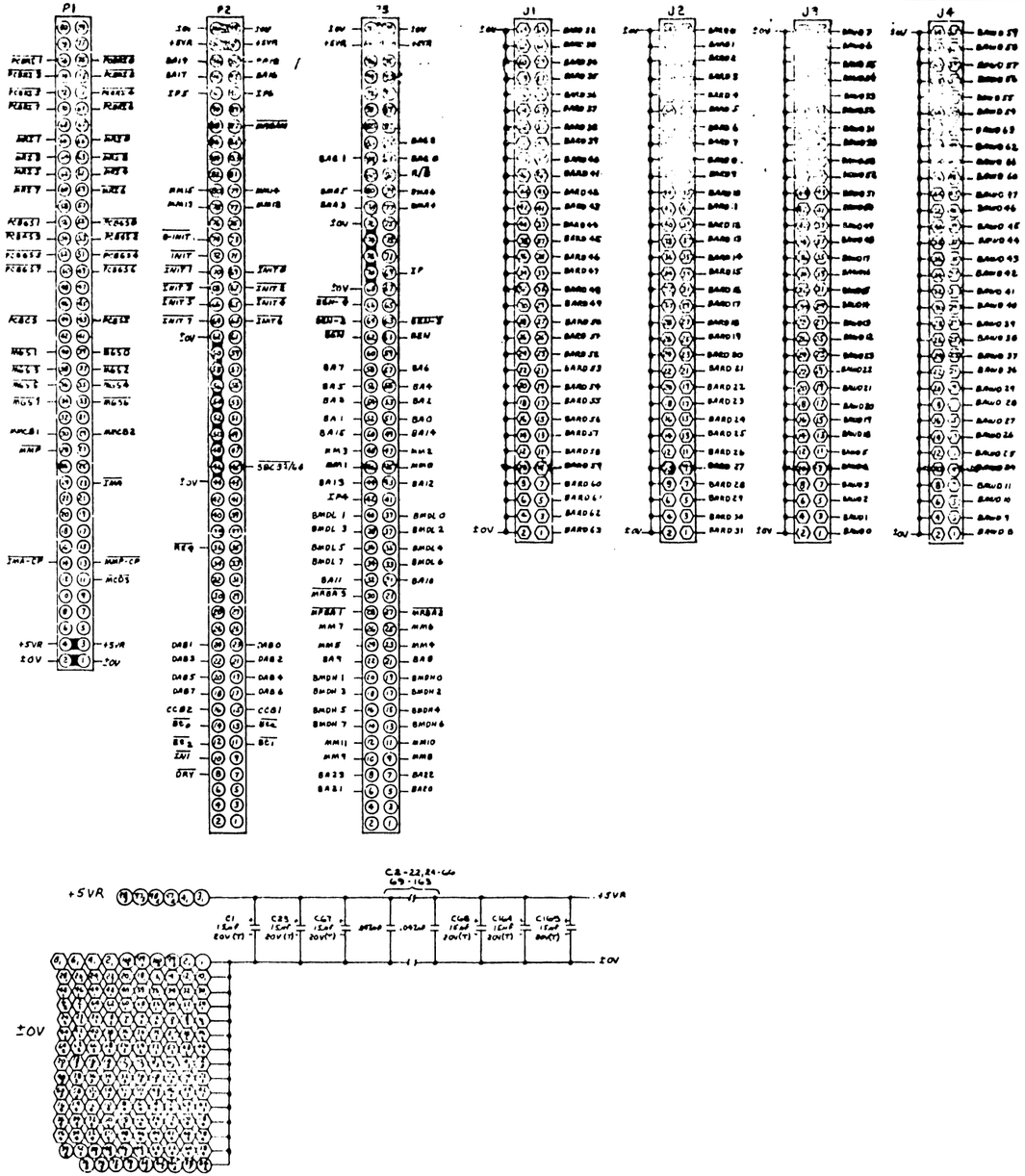
EE5

IC LOCATION	TYPE	WL PART NO.
L1,2,3,4,5,6, 48-54, 75, 78,1685, 302, 303, 325, 326	SN88	
L9, 124, 279,	74S194	396-0221
L5, 29, 127, 140, 152, 184, 249, 273	74S174	396-0297
L6, 202, 227	74S260	396-0206
L7, 34, 56, 76, 111, 158, 160, 253, 320	74S00	396-0288
L8, 77, 78, 119, 130, 158, 176, 200, 239, 245, 266	74S74	396-0702
L9, 41, 66, 108, 126, 127, 138, 139, 196, 256, 278	7400	396-0002
L10, 12, 19 - 23, 267, 308, 309	74S373	396-0306
L13, 38	1519-1008	396-8002
L28, 31, 149, 171, 179, 184, 187, 192, 193, 180-183, 188-191, 194	74S280	396-0246
L30, 35, 45, 47, 98, 99, 120, 175, 191, 224, 228, 230, 319	74S08	396-0200
L32, 72, 97, 112, 274, 275, 301	7474	396-0006
L33, 69, 98, 118, 119, 189, 268	74 69	396-0201
L34, 37, 141, 142	74S37	396-0296
L39, 144, 223	74LS244	396-0288
L40, 42, 59, 108, 109, 115, 261	74S32	396-0205
L44, 120, 147, 149, 198, 199, 260	74S51	396-0184
L52, 56, 131, 132, 153-159, 162, 210-212, 218, 219, 336-343, 344, 345	74S189	396-0399
L53, 54	74S02	396-0199
L55, 87, 98, 99, 195, 226, 229, 247, 268, 269, 296-299	74S157	396-0217
L57, 122, 137 196, 222	7408	396-0081
L63-70, 79, 252-255	74S158	396-0301
L74, 266	7402	396-0016
L76, 77, 162, 164, 321, 322	74S175	396-0310
L80, 99, 123, 193, 220	7410	396-0003
L81-86, 108	74S163	396-0235
L89	74LS374	396-0286
L90, 91, 221	74LS373	396-0310
L101, 102, 148, 151, 203, 204, 229, 230, 235, 258, 259, 289 289, 290, 304, 305, 307, 317, 318	8T97	396-0189
L103, 105, 107, 109, 124, 152, 177, 178, 209, 231, 256, 266, 290, 308, 278, 280, 316	74S374	396-0305
L110, 115, 148, 192, 230, 257, 259	74S04	396-0197
L113	74S86	396-0271
L116, 300	7432	396-0093
L117, 176, 315	74S11	396-0237
L144	7420	396-0004
L150, 1146	74S139	396-0338
L161, 259, 321	74S240	396-0339
L163	74S10	396-0238
L168, 231, 272	74S138	396-0298
L199, 310	74S20	396-0230
L224	74148	396-0171
L250, 323	7442	396-0008
L274	7476	396-0007
L276-279	1604	396-0010
L292	74176	396-0098
L293, 294	74LS257	396-0309
L295	7430	396-0031
L311-314	74S64	396-0158
L316	7412	396-0152
L326	74195	396-0069

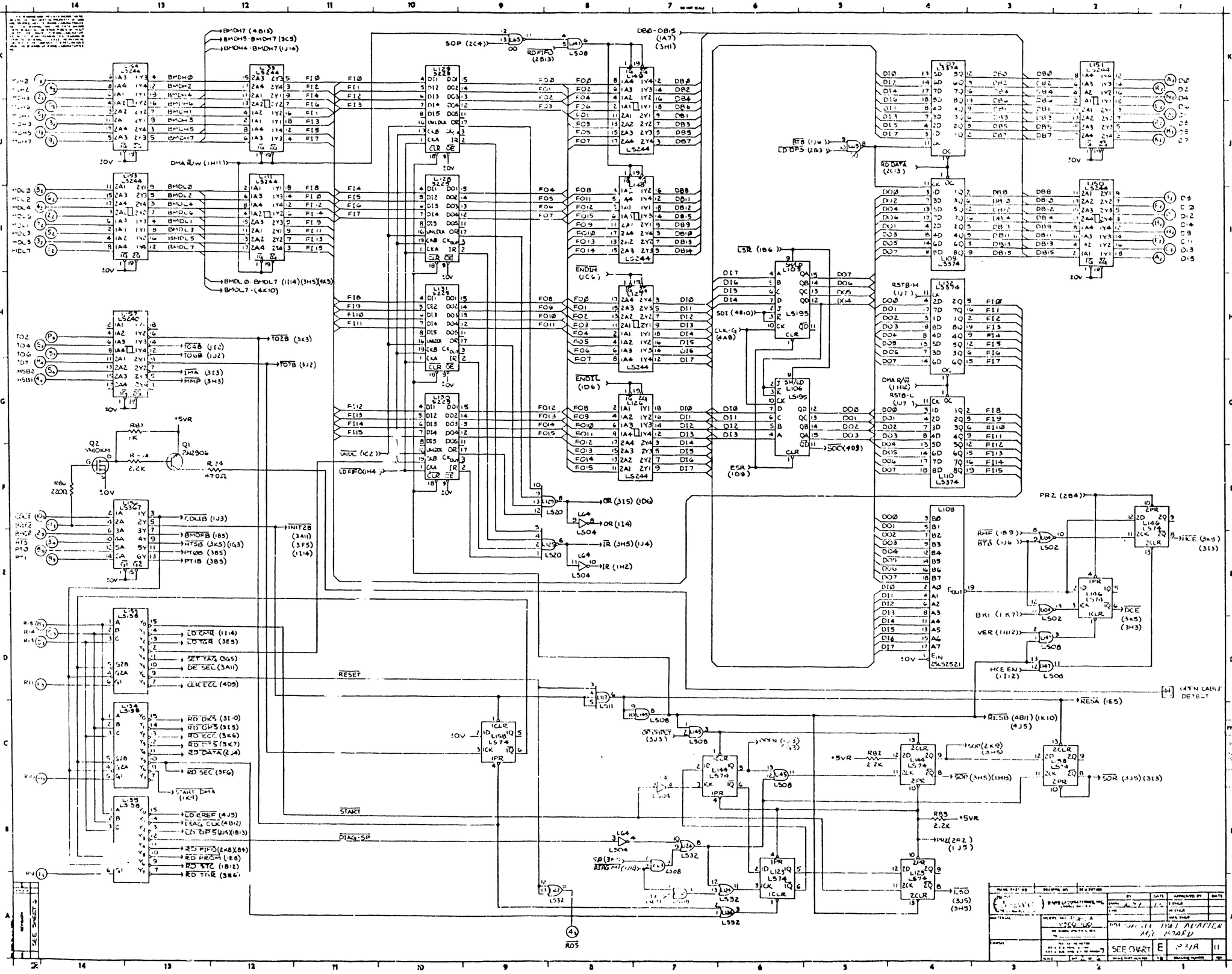
COMPONENT	TYPE	WL PART NO.
R1-8,9	620Ω ¼W ±1%	330-2089
R10,11,14,15, 48-49, 51-55, 61-63, 160-165	1K ¼W 5%	336-3010
R12,16	150Ω ¼W ±1%	330-2016
R13,17,30 & 87	270Ω ¼W 5%	330-2036
R146	180Ω ¼W 5%	330-2017
C1-3,5,7,10, 1uF, 50V	(5uF 20V (T)	300-9028
C8-22,24-66 69-163	.047uF 50V	300-1966
LED1-9	CM8-2x6	370-0031
J1-4	64 PIN CONN	350-0440
D1-8	IN5815	380-9019

TYPE	IC LOCATION	SPARES
7400	L91	2
	L135	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	L315	1
74H	L316	1
74S20	L317	1
7432	L300	1
74S37	L36	1
	L165	1
74S74	L200	1
7476	L254	1
74LS86	L113	2
7452660	L6	1
	L202	1
	L227	1
74S51	L2660	1

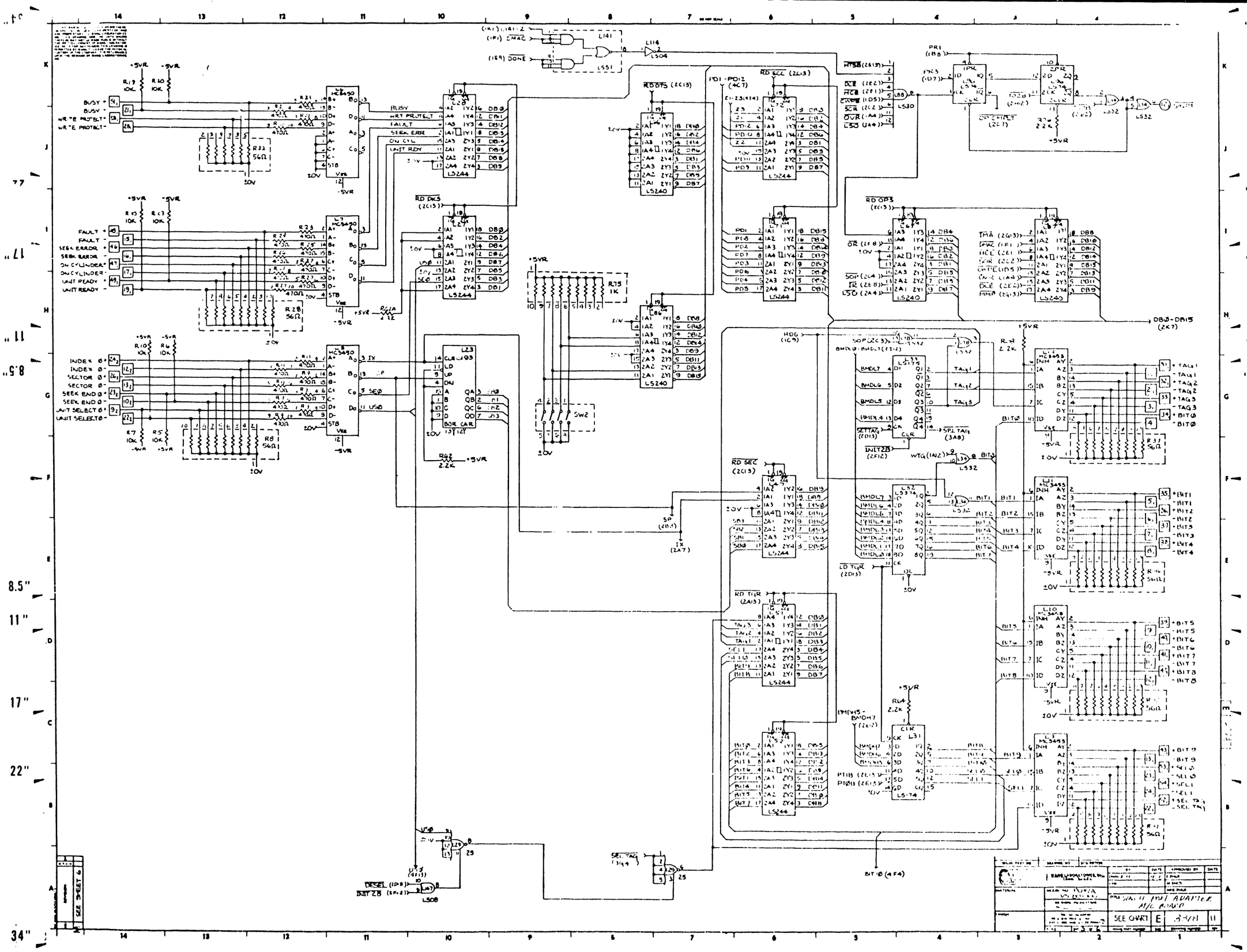
MNEMONIC	CONN
BA0 - BA3	5A4
BA4 - BA13	5A1
BAR00 - BAR07	1G19
BAR10 - BAR17	1A1
BAR20 - BAR28	1A9
BAR30 - BAR37	2J1
BEN	2J1
BHLT - BHLT	3H1
BMB3 - BMB6	4CM8
BMDH0 - BMDH7	3K16
BMDL0 - BMDL7	3J19
BSC0 - BSC2	4C19
BSR	4C16
B - INIT	2H3
CCB1	1A12
CCB2	1A12
DAY	2F16
DAB0 - DAB7	1A13
IP	2H3
IP6 - IP8	2H8
IPRT	8H14
IPRT-CP	4J19
INT	4J19
INTP	4J19
IOCP0-IOCP7	2A1
MCB1	4A18
MD30 - MD37	4A1
MMCB1	2D19
MMCB2	2D19
MMP	3A12
MMP-CP	4F19
MMR0 - MMR7	2D1
MR30 - MR37	4A7
MRSEN	1J1
MRSET - MRBA3	2H3
RCB2	2J1
RCB3	1A12
RD30 - RD37	1J1
RDB30 - RDB37	1H6
REQ	1J1
R/D	2H6
50:33/64	4E3



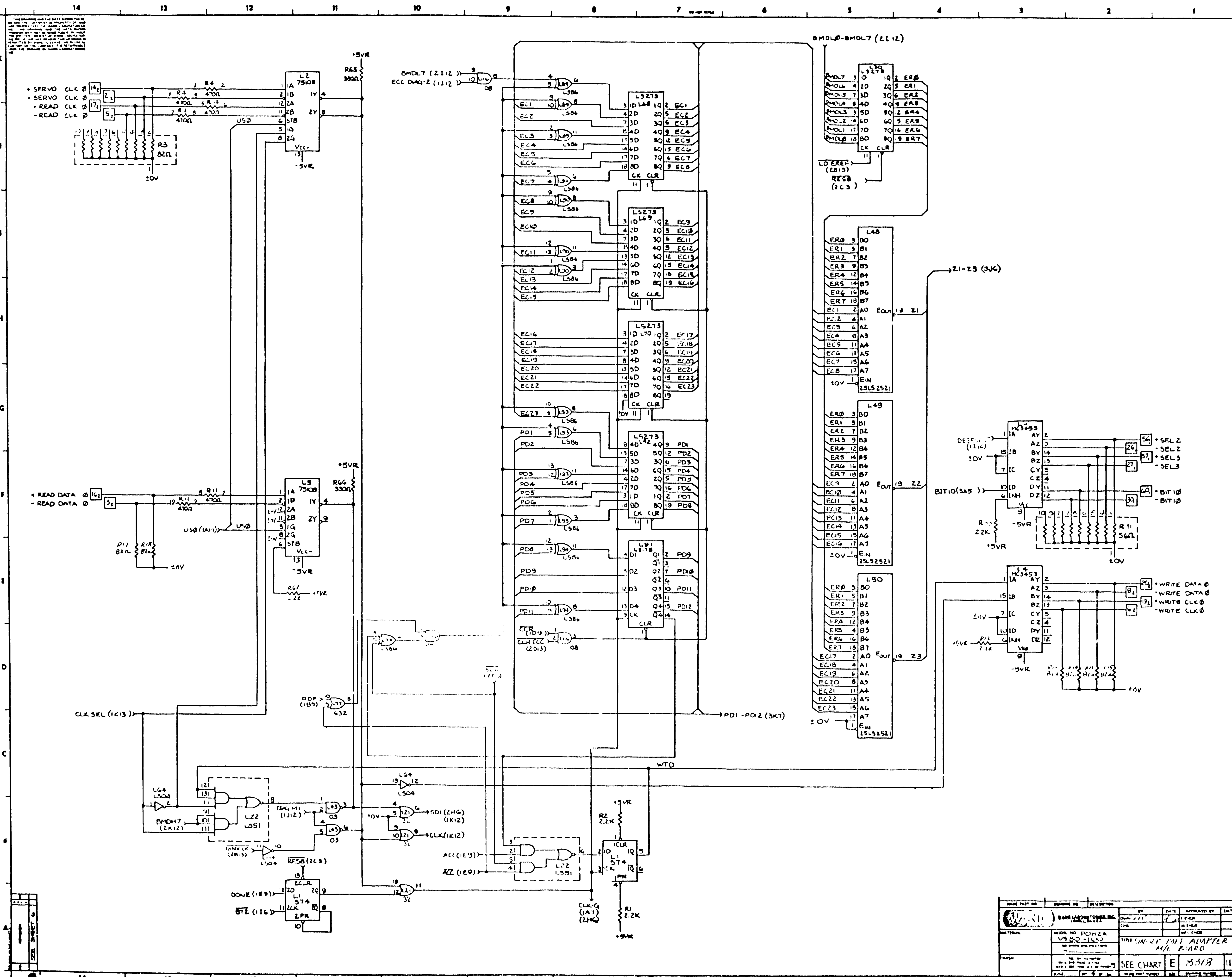
RDF (1B9)
RMP (1B9)
CLK SEL (4C14)
SDI (4B10)
CLK (4B9)
DMAEN
DMA EN (1D5)
BMDH4 BMDH7 (2K2)
BMDH7
BMDH6
BMDH5
BMDH4
ECC DIAG 1 (1F2)
ECC DIAG 2 (4K10)
DIAG MI (4B11) (3F9)
DIAG MI (2AR)
LDCMR (2D9)
DIAG M2
INIT ZB (2F12)
BMDL0 BMDL7 (2112)
BMDL0
BMDL1
BMDL2
BMDL3
BMDL4
BMDL5
BMDL6
BMDL7
DESELECT (4G3)
MCE EN (2D3)
DMAEN
DMA R/W (2112) (1H6)
VER (2D3) (1K8)
CMD2
CMD1
CMD0
DMA R/W (2Q4) (1B3) (1L2)
BT7 (1I6)
LDDP3 (2B13)
RD STC (2B13)
CLR P
BT5 (1I6)
WTG (3F4)
+5VR
10V
C38 .1μF
C37 .1μF
R71 2.2K
SC0
SC1
SC2
SC3
SC4
SC5
SC6
SC7
CMD3
CMD2
CWØ
CW1
CW2
CW3
CW4
CW5
CW6
CW7
CW8
CW9
CW10
CW11
CW12
CW13
CW14
CW15
CW16
CW17
CW18
CW19
DBØ
DB1
DB2
DB3
DB4
DB5
DB6
DB7
DB8
DB9
DB10
DB11
DB12
DB13
DB14
DB15
DB16
DB17
DB18
DB19
DONE (4A12)
DONE (3K5) (2H)
ACC (4B9) (1K8)
AZZ (4B9)
BT8
APL
ESR (2F6)
CCR
CCR (4D9)
WCLA
CWP
RDY (3H6)
RDG (4C6)
RHF
ZHF (2E5) (1K13)
RDF (1C5) (1K15)
PRI (3A14)
DBØ-DB15 (2K7)
RD PROM (2B9)
RESYN
BC2
BC1
BC0
BT7 (1C15) (1A7)
BT5 (1A13)
BT2 (4A12)
BT1 (1G14)
BT8 (2L5) (2E3)
R57 2.2K
R67 2.2K
R69 2.2K
R72 2.2K
R73 2.2K
R74 2.2K
R78 2.2K
R79 2.2K
R80 2.2K
R81 2.2K
R88 820Ω
R89 820Ω
R84 1K
R85 1K
C149 .01μF
Y1 12.24 MHz
R77 2.2K
R38 2.2K
R10 2.2K
RESA (2D2)
ENDIC (2G8)
OW (2F8)
DIF
ENDIM (2H8)
OWR (3J3) (3H3)
OVFLO
OVFLD (1A5)
ZPR
IPR
ICLR
ZCLR
FR2 (2B4)
TR (2F8)
RDI (2F8)
IRIB (2F8)
LDFIFO (2M1)
DMAR/W (1H11)
BMDEG
RDF (1B9)
RD FIFO (2H13)
DMA R/W (1H12)
UNEC (2F11)
DMAR/W (1H11)
IR (2E8)
RIPPLE (1L4)
DMAIZ (3J3) (3K4)
ECC DIAG 1 (1J12)
TP2
TP1
RSTB-H (2H4)
RSTB-L (2G4)
RSTB-M (2H4)
DSS
DSMH
DSML
DMHB
DMLB
DMHR
DMLR
DMAR/W (1H11)
IR (2E8)
RIPPLE (1L4)
DMAIZ (3J3) (3K4)
ECC DIAG 1 (1J12)
OVR (3J3) (3H3)
OWR (3J3)
ENDIC (2G8)
OVFLO
WTG (3F4)
PRI (3A14)
DBØ-DB15 (2K7)
RD PROM (2B9)
SEE CHART E
SINGLE UNIT ADAPTER MLB ASSY


DBØ-DB15 (1A7) (3H1)
SOP (2C4)
RDFIFO (2B13)
BMDH7 (4B13)
BMDH5-BMDH7 (3C3)
BMDH4-BMDH7 (1J14)
DMA R/W (1H11)
BMDLØ-BMDL7 (1I14)(3H5)(4K5)
BMDL7-(4K10)
FIØ-FI15
FOØ-FO15
DBØ-DB15
RTB (1J6)
LDDP5 (2B3)
RDDATA (2C13)
LSR (1B6)
ENDDH (UC4)
ENDDL (1D6)
SDI (4B10)
CLK-G (4A8)
ESR (1D9)
RSTB-H (1J7)
RSTB-L (1J7)
DMA R/W (1H12)
SDCK (4D9)
PRZ (2B4)
RHE (1B9)
RTB (1J6)
BKI (1K7)
VER (1H12)
HCE EN (1I12)
HCE (3K9) (3I3)
DCE (3K5) (3H3)
OPEN CABLE DETECT
RESA (1E5)
RESB (4B11) (1K10) (4J5)
SOP (2K9) (3H5)
SOR (3J5) (3I3)
SOR (3H5) (1H5)
PRZ (2B2) (1J3)
LSO (3J5) (3H5)
OR (3I5) (1D6)
OR (1I4)
IR (3H5) (1J4)
IR (1H2)
RESET
START
DIAG-SP
ROS
+5VR
2.2K
470Ω
1K
2200
Q1 2N2906
Q2 VN10KM
+10V
SEE SHEET 3
SIZE E
SEE CHART
REV 11

FF2


BUSY +
BUSY -
WRITE PROTECT +
WRITE PROTECT -
FAULT +
FAULT -
SEEK ERROR +
SEEK ERROR -
ON CYLINDER +
ON CYLINDER -
UNIT READY +
UNIT READY -
INDEX Ø +
INDEX Ø -
SECTOR Ø +
SECTOR Ø -
SEEK END Ø +
SEEK END Ø -
UNIT SELECT Ø +
UNIT SELECT Ø -
+5VR
-5VR
±0V
MC3450
MC3453
RD DS5 (2C13)
RD DS3 (2C13)
RD ECC (2C13)
RD SEC (2C13)
RD TGR (2A13)
LD TGR (2D13)
RD DS0 (2C13)
PDI - PDI2 (4C7)
DB0 - DB15 (2K7)
BUSY
WRT PROTECT
FAULT
SEEK ERR
ON CYL
UNIT RDY
USØ
SEL TAG (3H9)
DESEL (1D9)
UNIT ZØ (1F4)
BIT ID (4F4)
SEE SHEET 6
SIMPLE FMT ADAPTER A/C BOARD
SEE CHART
8.5"
11"
17"
22"
34"

FF3



+SERVO CLK Ø
-SERVO CLK Ø
+READ CLK Ø
-READ CLK Ø
L2 75108
R3 82Ω
R65 330Ω
+5VR
-5VR
±0V
BMDL7 (2I12)
ECC DIAG-2 (1J12)
LS273 L68
LS273 L69
LS273 L70
LS273 L42
L81 LS175
LS86
BMDLØ-BMDL7 (2I12)
L39 LS273
LD ERBF (2B13)
RESØ (2C3)
L48 25LS2521
L49 25LS2521
L50 25LS2521
Z1-Z3 (3J6)
PD1-PD12 (3K7)
CCR (1D9)
CLR ECC (2D13)
+READ DATA Ø
-READ DATA Ø
L5 75108
R66 330Ω
USØ (3A11)
R17 82Ω
R18 82Ω
DESEL (1I12)
BIT10 (3A5)
L4 MC3453
+SEL 2
-SEL 2
+SEL 3
-SEL 3
+BIT1Ø
-BIT1Ø
R31 56Ω
+WRITE DATA Ø
-WRITE DATA Ø
+WRITE CLK Ø
-WRITE CLK Ø
RDF (1B9)
CLK SEL (1K13)
L64 LS04
BMDH7 (2K12)
L22 LS51
DIAG M1 (1J12)
DIAG CLK (2B13)
L43 03
SD1 (2H6) (1K12)
CLK (1K12)
WTD
DONE (1E9)
BT2 (1I6)
L1 S74
ACC (1E9)
AZ (1E9)
CLK-G (JA7) (2H6)
R2 2.2K
R1 2.2K
WANG LABORATORIES, INC.
MODEL NO. PO42A
TITLE SINGLE UNIT ADAPTER M/L BOARD
SEE CHART
E
8318
11

FF4

WANG
8318-23M
P4
P3
P2
P1
WANG
8318
SERIAL PORT ADAPTER
A/L BOARD
LAB CHART
E
8318
11

FF5

I.C. 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]
L27,28,47,51,52,72,111,126,127,33,48,49,50,51,53,154	74LS244	376-0288
L29	7425	376-0092
L30,68-70,92,?3	74LS273	376-0302
L31	74LS174	376-0159
L32,53,54,73,?7,109,110,132	74LS374	376-0286
L33,56,74,77,9?,?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	74S32	376-0205
L43	7403	376-0028
L48,49,50,108	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
L?5,?6	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
L?25,126	74LS85	376-0248
L?,129,130,131	74S225	376-0323
L41,134,35,155	74LS138	376-0294
[illegible]	74LS193	376-0220
L?6	74LS367	376-0142
L143	7404	376-0015
L85	74LS27	376-0245
L?41	74LS10	376-0209
[illegible]	[illegible]	[illegible]
[illegible]	[illegible]	[illegible]
L35,36	24 PIN SOCKET	376-9003

COMPONENT	TYPE	W.L. PART NO.
R12,[illegible] 86A,?A	2.2K 1/4W 5%	350-3023
[illegible]	[illegible]	[illegible]
[illegible]	[illegible]	[illegible]
[illegible]	[illegible] 1/4W	[illegible]
[illegible]	[illegible]	[illegible]
[illegible]	[illegible] 1/4W	[illegible]
[illegible]	[illegible] 1/4W	[illegible]
[illegible]	[illegible] 1/4W	[illegible]
[illegible]	[illegible]	[illegible]
[illegible]	[illegible] 1/4W	[illegible]
[illegible]	[illegible] 1/4W	[illegible]
[illegible]	[illegible] 1/4W	[illegible]
[illegible]	[illegible]	[illegible]
[illegible]	[illegible]	[illegible]
[illegible]	[illegible]	[illegible]
[illegible]	[illegible]	[illegible]
[illegible]	[illegible] PAD	[illegible]
C1-[illegible]	.047µF, 50V	300-1966
C21,23,146,147,148	15µF 20V (T)	300-4022
C37,38	1µF 50V	300-1930
C149	.01µF, 25V	300-1603
Q	TRANS PAD	475-0009
Q1	2N2906	375-1017
Q2	[illegible]	375-1115
Y1	?2.4 MHz	321-0019
SW?	4 POS DIL	325-1504
J1	60 POS	350-0057
J2	26 POS	350-0058
[illegible]	[illegible]	[illegible]

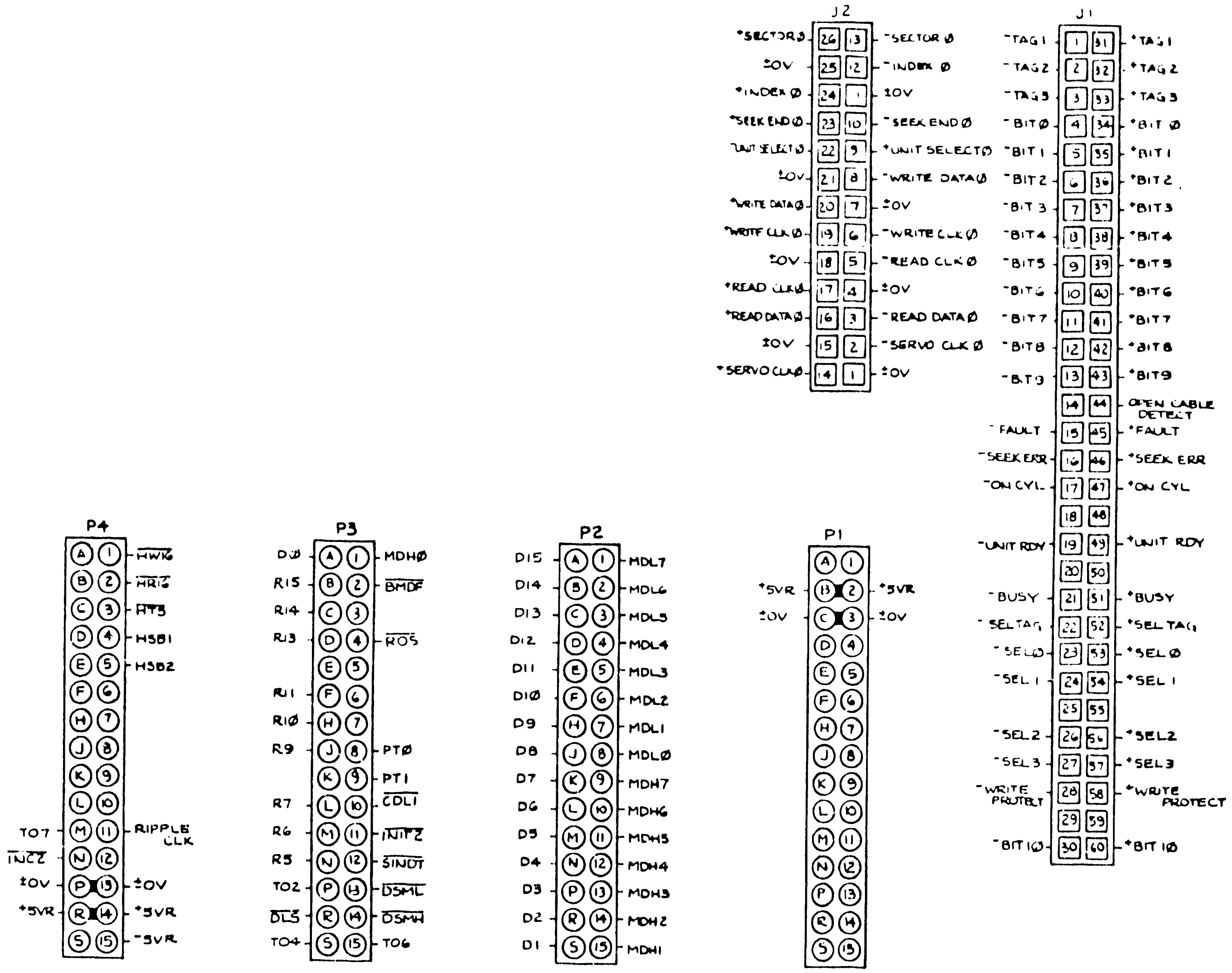
MNEMONICS	COORD
-BITØ-BIT9	3G1
+BITØ-+BIT9	3G1
+BIT1Ø	4F1
-BIT1Ø	4F1
BMDF	2E14
+BUSY	3K14
-BUSY	3J14
CDLT	2F14
CLS	1K1
DSMH	1J1
DSML	1J1
DØ-D15	2K1
+FAULT	3I14
-FAULT	3I14
HSB1	2G14
HSB2	2G14
HRI6	1H1
HT5	2E14
HWI6	1I1
INCZ	1K5
+INDEXØ	3G14
-INDEXØ	3G14
INITZ	2F14
MDHØ-MDH7	2K14
MDLØ-MDL7	2I14
+ON CYL	3I14
-ON CYL	3H14
OPEN CBL	2D1
PTØ,PT1	2E14
+READ CLKØ	4J14
-READ CLKØ	4J14
+READ DATAØ	4F14
-READ DATAØ	4F14
RIPPLE CLK	1G1
R5-7	1K2
R9-11	2G14
R13-15	2D14
[illegible]	[illegible]
+SECTORØ	3G14
-SECTORØ	3G14
+SEEK ENDØ	3G14
-SEEK ENDØ	3G14
+SEEK ERR	3I14
-SEEK ERR	3I14
+SELØ,+SEL1	3B1
-SELØ,-SEL1	3B1
+SEL2,+SEL3	4G1
-SEL2,-SEL3	4G1

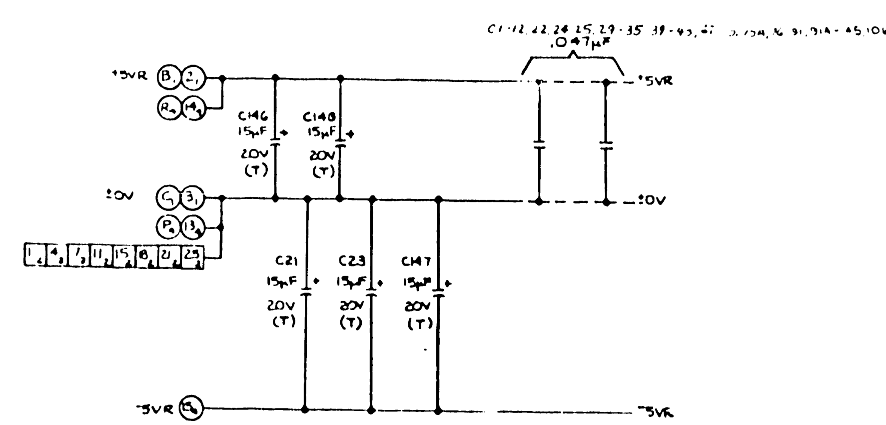
MNEMONICS	COORD
+SEL TAG	3B1
-SEL TAG	3B1
+SERVO CLKØ	4K14
-SERVO CLKØ	4K14
SINDT	3K1
+TAG1-+TAG3	3G1
-TAG1-TAG3	3G1
TO2	2H14
TO4	2H14
TO6,TO7	2H14
+UNIT RDY	3H14
-UNIT RDY	3H14
+UNIT SELØ	3G14
-UNIT SELØ	3G14
+WRITE CLKØ	4E1
-WRITE CLKØ	4E1

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

TYPE	IC LOCATION	SPARES
74LS??	L47	1
74LS02	L104	1
74??	L??	2
[illegible]	[illegible]	1
74LS11	L98	2
74LS??	L143	1
74??	L21	1
[illegible]	L89	1
74LS86	L89	1
[illegible]	[illegible]	1
74??	[illegible]	1
	[illegible]	3
74LS?74	[illegible]	1
	L?5	1

210 = 209 + 377 OR 378			
210	209	[illegible]	L36
B311A	B313	[illegible]	[illegible]





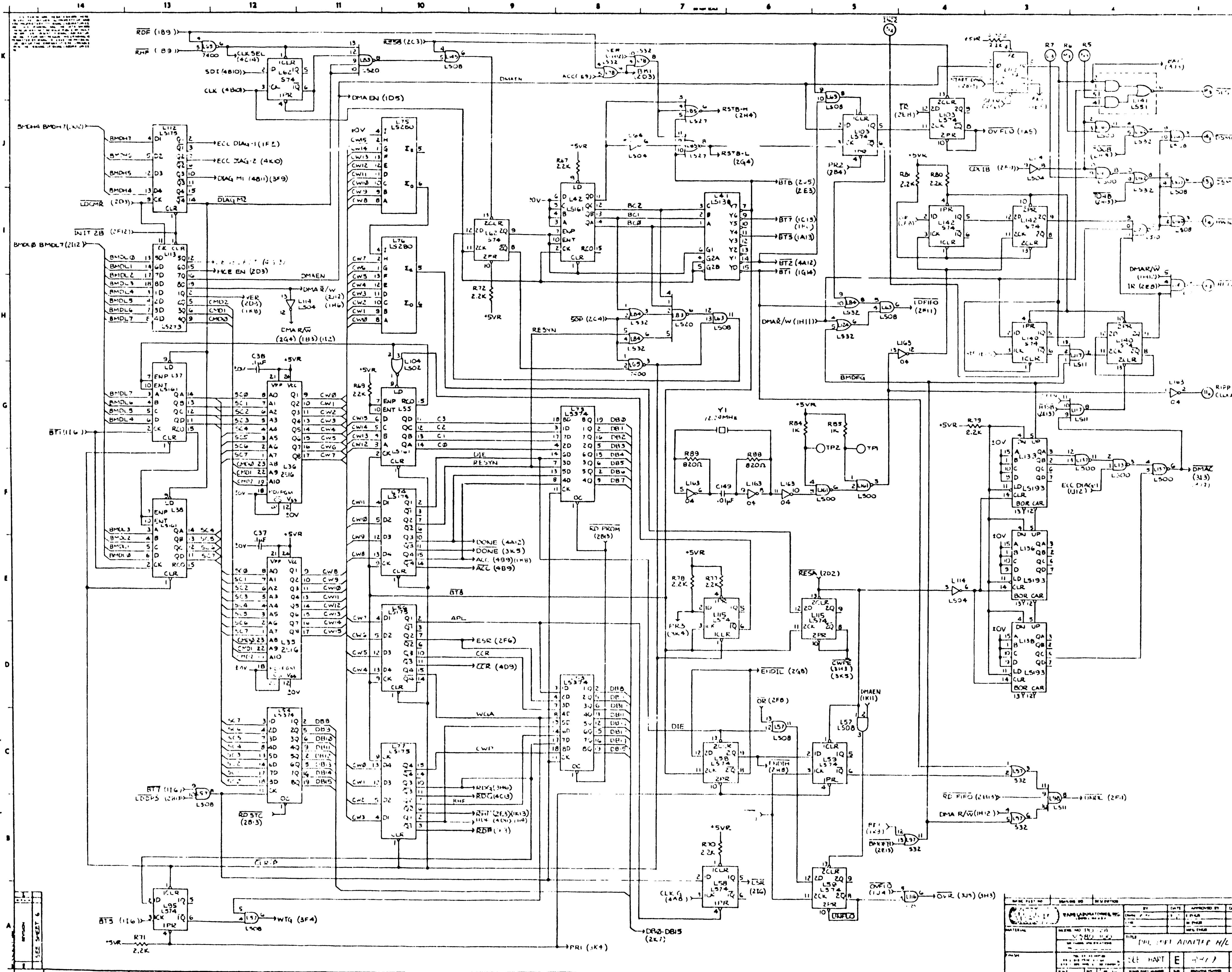
NOTES:
1. ALL RESISTORS ARE 1/4 W, 5% UNLESS OTHERWISE SPECIFIED.

WANG LABORATORIES INC.

TITLE: SINGLE PORT ADAPTER M/C BOARD

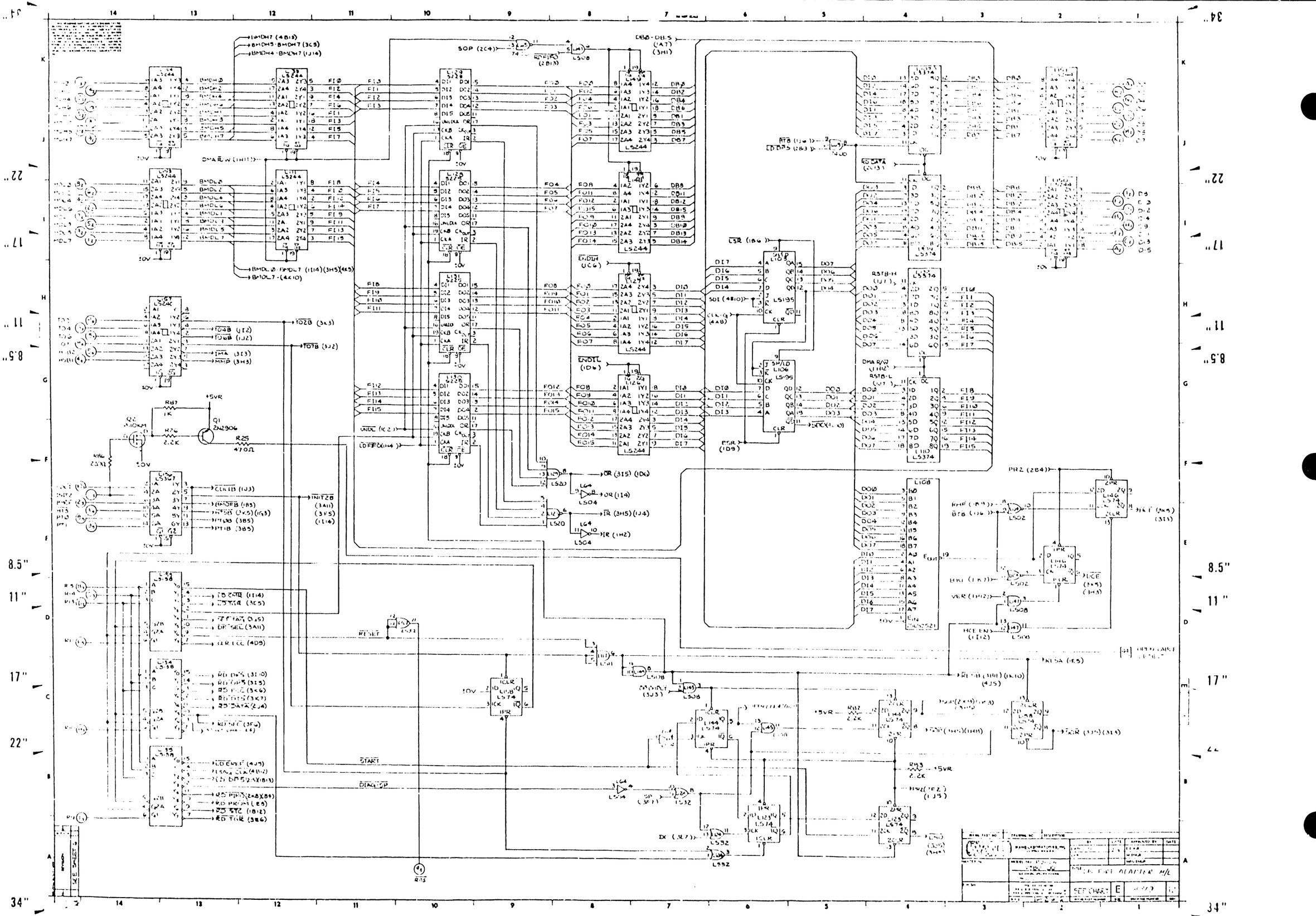
SEE CHART | E | 8378 | 11

FF6



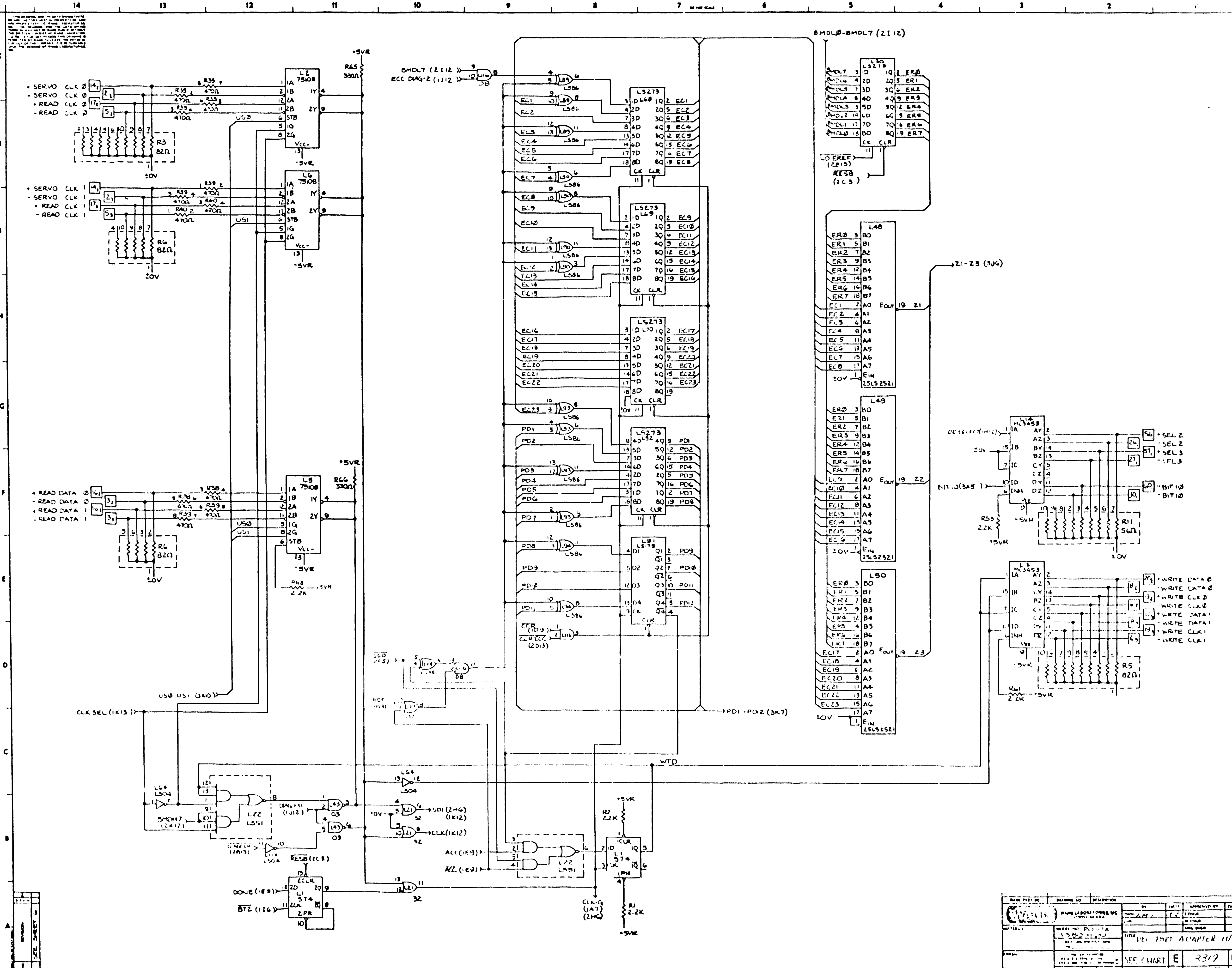
8.5"
11"
17"
22"
34"

GG1


DB0 - DB15 (A7) (3H1)
SOP (2C4)
RNEIRQ (2B13)
LS08
LS244
LS374
LS245
LS138
LS139
LS32
LS20
LS04
LS02
LS74
LS86
LS367
LS368
LS240
LS373
LS123
LS157
LS174
LS175
LS193
LS195
LS283
LS299
LS670
LS688
LS521
LS540
LS541
LS640
LS645
LS670
LS688
+5VR
RB7 1K
Q2 2N6044
Q1 2N2906
R26 2.2K
R25 470Ω
R86 220Ω
RESET
START
DIAG SP
DX (3E7)
RDS
PIR2 (2B4)
PIR
PCR
SEE SHEET 3
SEE CHART
E

GG2

BUSY +
BUSY -
WR'E PROTECT +
WR'E PROTECT -
FAULT +
FAULT -
SEEK ERROR +
SEEK ERROR -
ON CYLINDER +
ON CYLINDER -
UNIT READY +
UNIT READY -
INDEX Ø +
INDEX Ø -
SECTOR Ø +
SECTOR Ø -
SEEK END Ø +
SEEK END Ø -
UNIT SELECT Ø +
UNIT SELECT Ø -
INDEX 1 +
INDEX 1 -
SECTOR 1 +
SECTOR 1 -
SEEK END 1 +
SEEK END 1 -
UNIT SELECT 1 +
UNIT SELECT 1 -
BUSY
WRT PROTECT
FAULT
SEEK ERR
ON CYL
UNIT RDY
SCRØ
SCR1
SEL
USL
IXØ
IX1
SCRØ
SCR1
SEØ
SE1
USØ
US1
250
251
252
253
SBØ
SB1
SB2
SB*
SELØ
SEL1
SEL
DBØ-DB15 (2K7)
RD DKS (2C13)
RD OPS (2C13)
RD TGR (2A13)
RD SEC (2C13)
LD TGR (2D13)
RDG (1L9)
SOP (2C3)
BMDLØ-BMDL7 (2E12)
SELTAG (2D13)
INIT2B (2F12)
WTG (1N12)
SEL TAG (3A8)
BMDL5 - BMDL7 (2E12)
PTIØ (2E13)
PTIØB (2E13)
DIAG MI (1J12)
SP (2A7)
IX (2A7)
BIT ID (4F4)
USØ USL (4D 3)
DESEL (1D8)
INIT2B (2F12)
SEE SHEET 6
SYNCH
TAG1
TAG2
TAG3
BITØ
BIT1
BIT2
BIT3
BIT4
BIT5
BIT6
BIT7
BIT8
INT
SEL TAG
PRI (1B8)
PR2 (1D7)
PR3 (1D7)
HMSB (2E13)
DCE (2E2)
HCE (2E1)
CWPE (1D5)
SOR (2C2)
OVR (1A4)
LSO (1A4)
IPR (2H12)
2PR (2H12)
INTZB (2H12)
OD CMPLT (2C7)
BUFF (1K13)
BUFF (1E3)
DRIVE (1E3)
TMA (2G13)
SYNC (1F1)
HCE (2E1)
SOR (2C2)
CWPE (1D5)
OVR (1A4)
DCE (2E2)
HMSB (2G13)
SOP (2C4)
TR (2E8)
LSO (2A4)
RDG (1L9)
RST (1K12)
RS1 2.2K
RS2 56Ω
RS3 56Ω
RS4 2.2K
RS5 2.2K
RS6 56Ω
RS7 56Ω
RS8 56Ω
RS9 56Ω
RS10 56Ω
RS11 56Ω
RS12 56Ω
RS13 2.2K
RS14 2.2K
RS15 1K
R1 10K
R2 10K
R3 10K
R4 56Ω
R5 10K
R6 10K
R7 56Ω
R8 10K
R9 10K
R10 56Ω
R11 10K
R12 10K
R13 10K
R14 10K
R15 10K
R16 10K
R17 10K
R18 10K
R19 10K
R20 10K
R21 10K
R22 10K
R23 10K
R24 10K
RA1 4.7KΩ
RA2 4.7KΩ
RA3 4.7KΩ
RA4 4.7KΩ
RA5 4.7KΩ
RA6 4.7KΩ
RA7 56Ω
RA8 4.7KΩ
RA9 4.7KΩ
RA10 4.7KΩ
RA11 4.7KΩ
RA12 4.7KΩ
RA13 2.2K
RA14 4.7KΩ
RA15 4.7KΩ
RA16 4.7KΩ
RA17 4.7KΩ
RA18 4.7KΩ
RA19 4.7KΩ
RA20 4.7KΩ
RA21 4.7KΩ
RA22 4.7KΩ
RA23 4.7KΩ
RA24 4.7KΩ
+5VR
-5VR
±0V
SW2
DRAWING NO. 1F8-8107-A
SEE CHART
E
DC FLOPPY ADAPTER A/B
GG3



WANG LABORATORIES, INC.

DEV PORT ADAPTER

SEE CHART | E | 8312 | 12

GG4

WANG

8319- R4

COMPONENT SIDE

P4 P3 P2 P1

WANG

8.5"

11"

17"

22"

34"

GG5

IC LOCATION	TYPE	W.L. PART NO.
[illegible]	74S74	376-0202
[illegible]	7508	376-0089
[illegible]	[illegible]3450	376-0276
[illegible]	[illegible]3453	376-0274
[illegible]	74LS32	376-0211
L22,141	74LS51	376-0213
[illegible]	[illegible]	[illegible]
[illegible]	[illegible]	
[illegible]	74LS244	376-[illegible]
L24	7425	376-0092
L30,68,70,92	74LS273	376-0302
L31	74LS174	376-0159
L32,53,54,73,07,08,10,32	74LS374	376-0286
L33,5_,74,77,9_,_2	74LS175	376-0160
L35,36	2716	SEE CHART
L37,38,42,55	74LS161	376-0233
[illegible]	74_2	376-0093
L43	7403	376-0028
L44,45,46	74LS153	376-0156
L48,49,50,108	[illegible]S2521	376-0317
L57,63,145,147,1_0	74LS08	376-0153
L58,59,95,96,103,115,118,123,144,146,158	74LS74	376-0155
L64,114	74LS04	376-0180
L_7,_7	74LS00	376-0207
L66,67,86,87,157	74LS240	376-0297
L_5,76	74LS280	376-0242
L83,125	74LS20	376-0210
L88	74LS30	376-0249
L83,90,93,94	74LS86	376-0231
L98,1_7	74LS11	376-0225
L_1	74LS02	376-0208
L_	74LS85	376-0248
L28,129,130,131	74S225	376-0323
L41,134,135,155	74LS138	376-0294
L_,138,139,_	74LS193	376-0220
L_56	74LS367	376-0192
L_63	7404	376-0010
L85	74LS27	376-0245
L41	74LS_	376-0207
[illegible]	[illegible]	[illegible]
L_5	74_	376-0032
L35,36	24 PIN SOCKET	376-9003

TYPE	IC LOCATION	SPARES
74LS_	L37	1
74_	L_	2
74LS02	L104	1
[illegible]	[illegible]	1
74LS_	[illegible]	1
[illegible]	L78	2
74LS_	[illegible]	1
[illegible]	L21	1
[illegible]	[illegible]	1
[illegible]	[illegible]	1
74_	[illegible]	1
74_	[illegible]	1
[illegible]	[illegible]	1
[illegible]	[illegible]	1
[illegible]	[illegible]	1

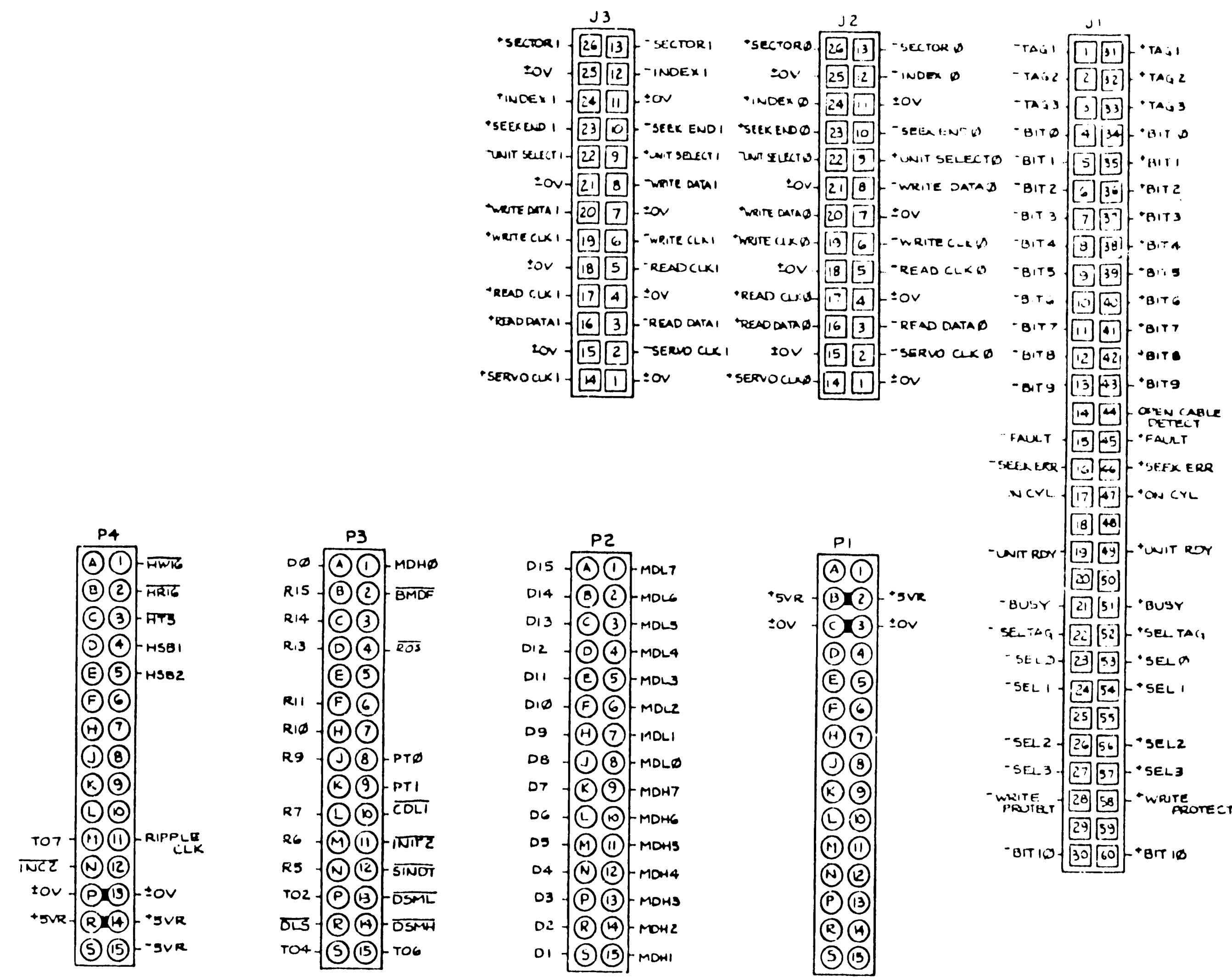
2_ 2_ 2.33 + 3_ _ R 378			
2_	20_	_55	236
8_ _A	A5_	[illegible]	376-_44-R2

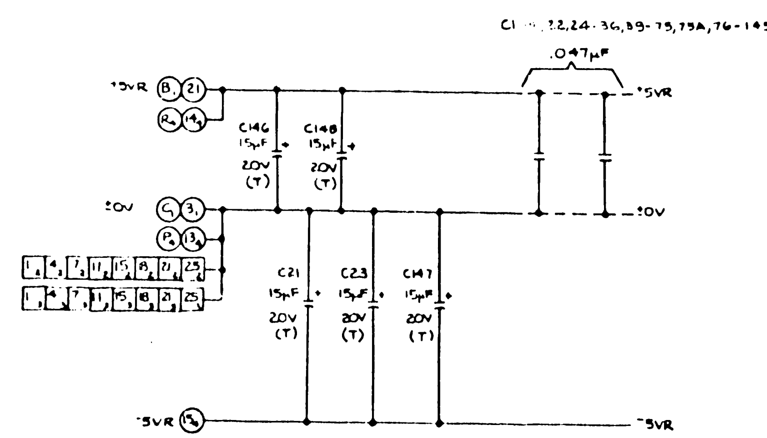
COMPONENT	TYPE	W.L. PART NO.
R_ [illegible]	2.2K 1/4W 5%	330-3023
R3,5,6	820Ω,SIP,(9)	333-0804
R4,7,10,11,_	560Ω,SIP (9)	333-0802
R8,9,17,18,19,20,21,22,23,24,42,43	10K,1/4W,5%	330-4011
R25	470Ω,1/4W,5%	330-2048
R35,36,37,38,39,40,41,44,45,46	470Ω,S.P.(5)	333-0803
R65,66	330Ω 1/4W 5%	330-2034
R75	1K, SIP (_)	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-_,22,24-36,_	.047µF,50V	300-1966
C21,23,146,147,148	15µF 20V(T)	300-4022
C37,38	1µF 50V	300-1930
C149	.01µF, 25V	300-1903
Q1	2N2906	375-017
Q2	VN10KM	375-1115
[illegible]	[illegible]	[illegible]
Y1	12.24MHZ	321-00_
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
DLS	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 CLKØ	4J14
-READ CLKØ	4J14
*READ CLK1	4I14
-READ CLK1	4I14
*READ DATAØ	4F14
-READ DATAØ	4F14
*READ DATA1	4F14
-READ DATA1	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 CLKØ	4K14
-SERVO CLKØ	4K14
*SERVO CLK1	4I14
-SERVO CLK1	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 DATAØ	4C1
*WRITE DATA1	4E1
-WRITE DATA1	4D1
*WRITE PRO	3J14
-WRITE PRO	3J14



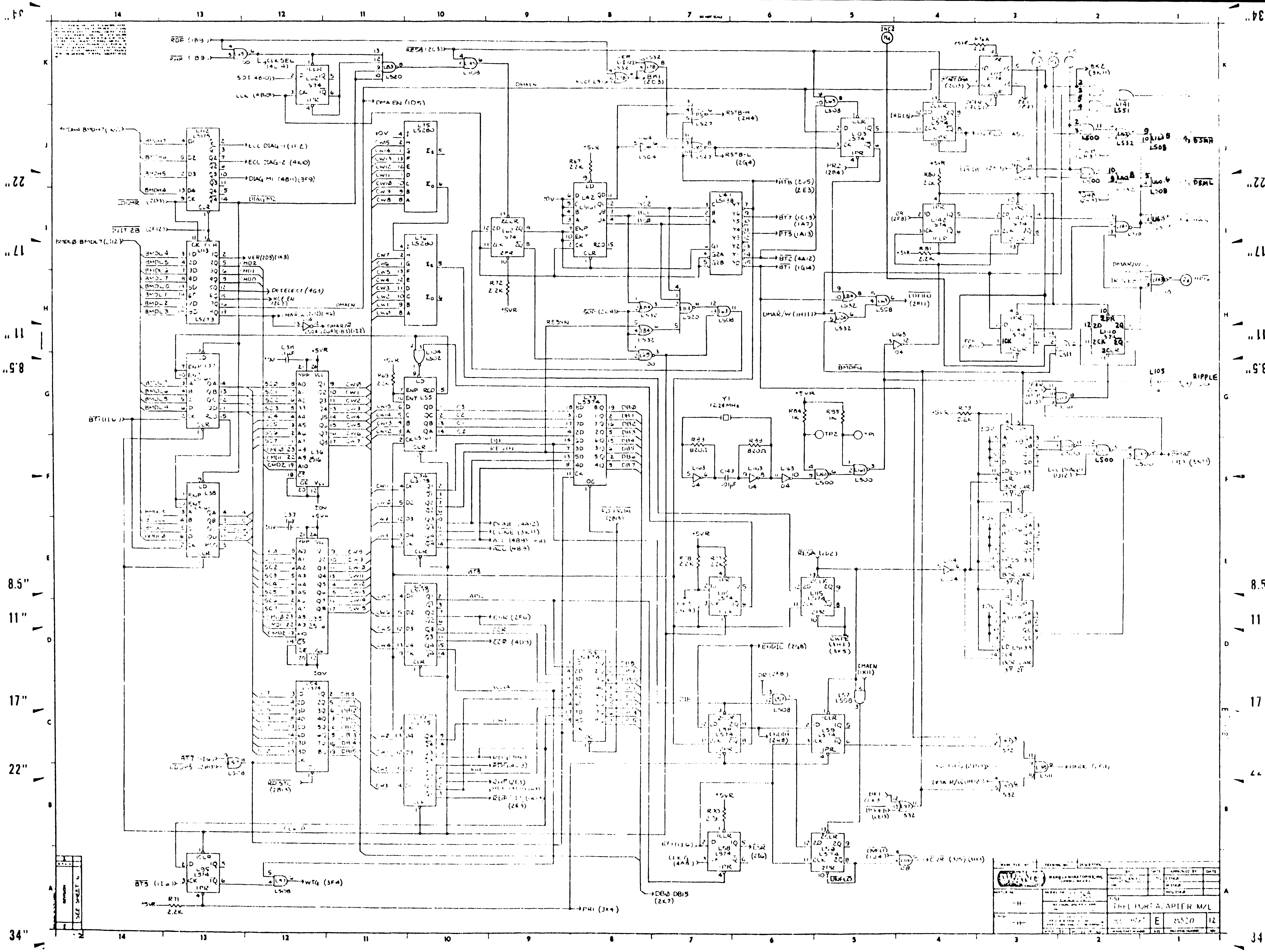


NOTES:
1. ALL RESISTORS ARE 1/4 W, 5% UNLESS OTHERWISE SPECIFIED.

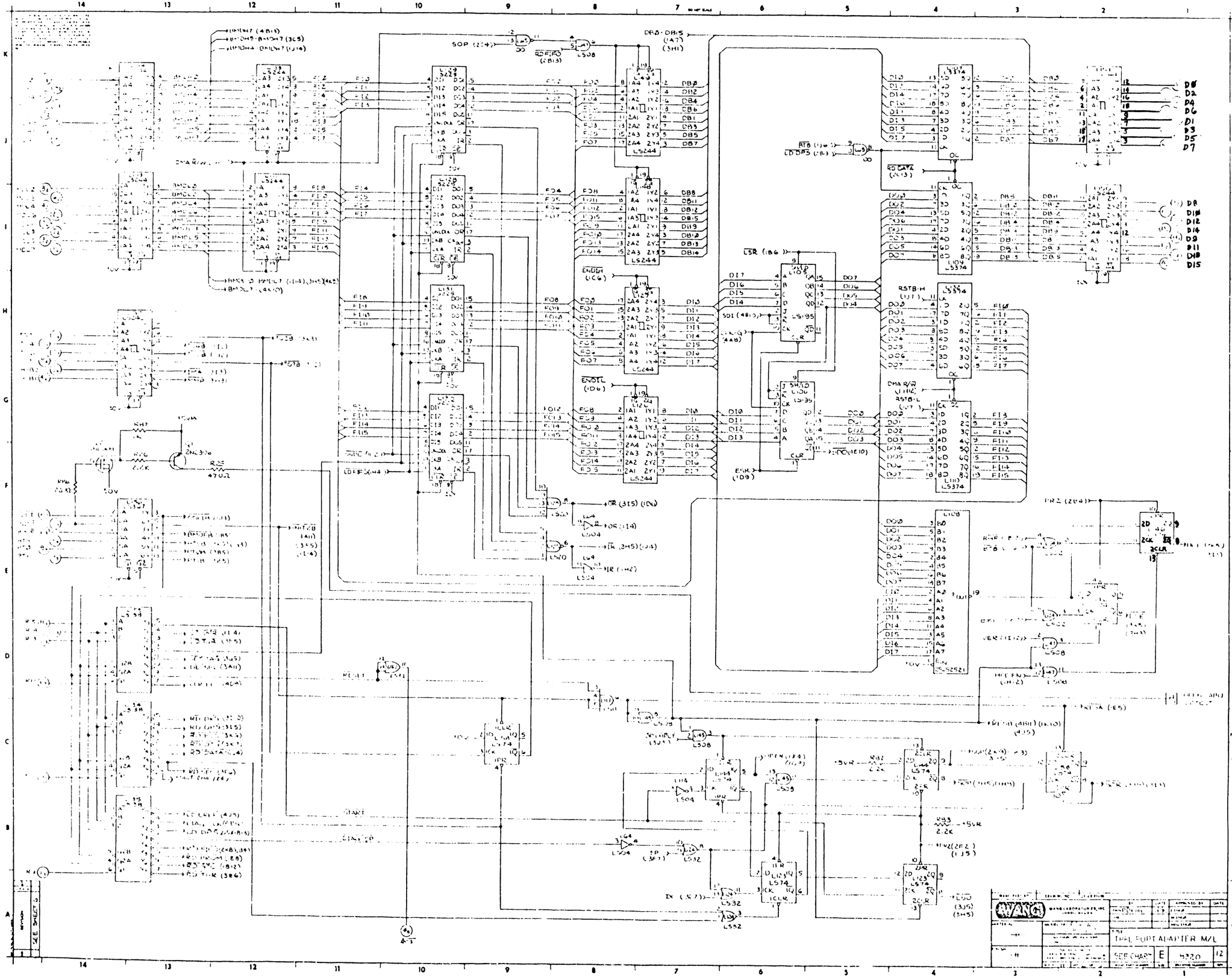
REV 6

WANG LABORATORIES, INC.	
MODEL NO. PO1_A VS BD-100	TITLE: PRT PORT ADAPTER M/L
SEE CHART	E	2217	12

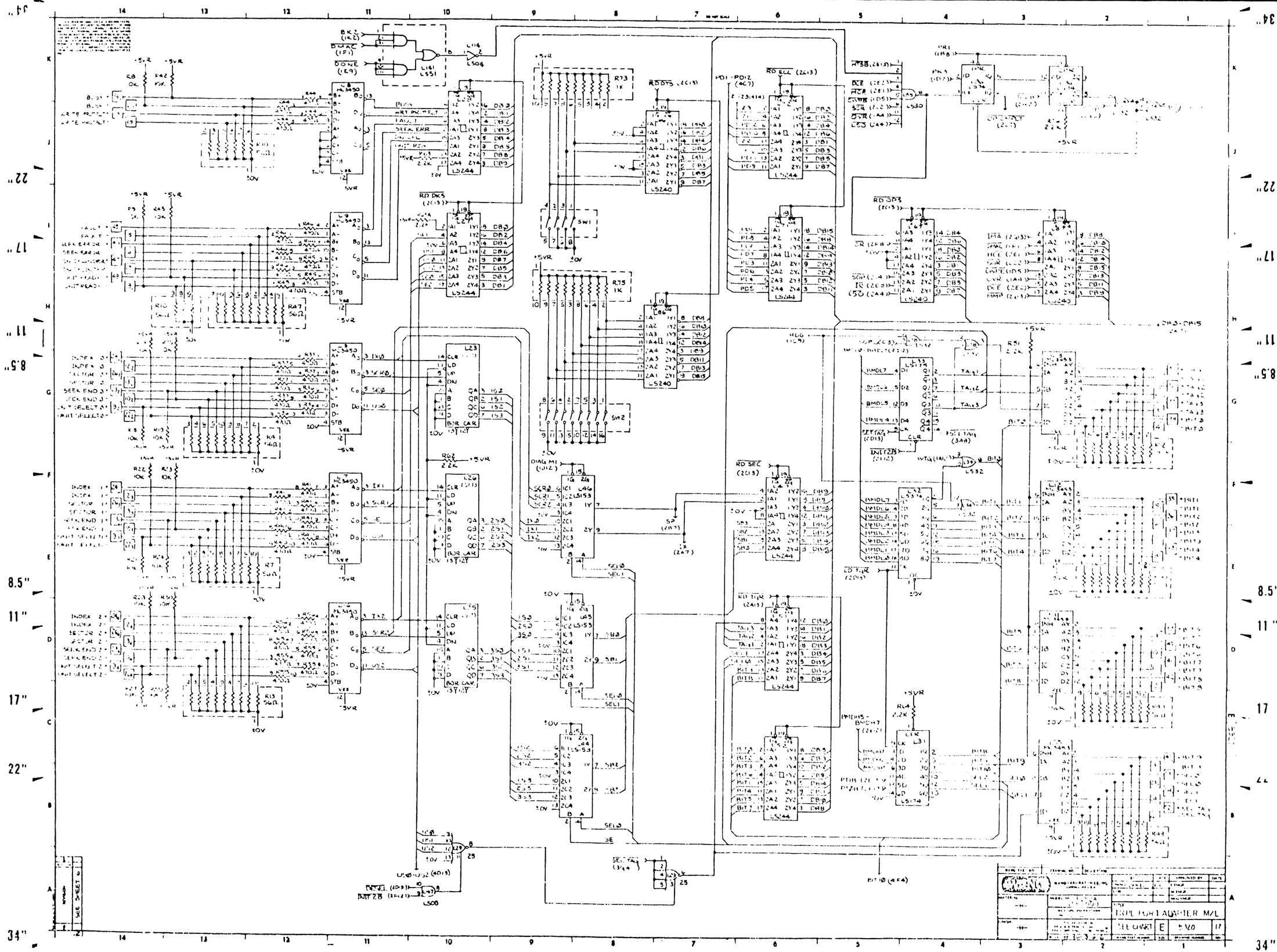
GG6

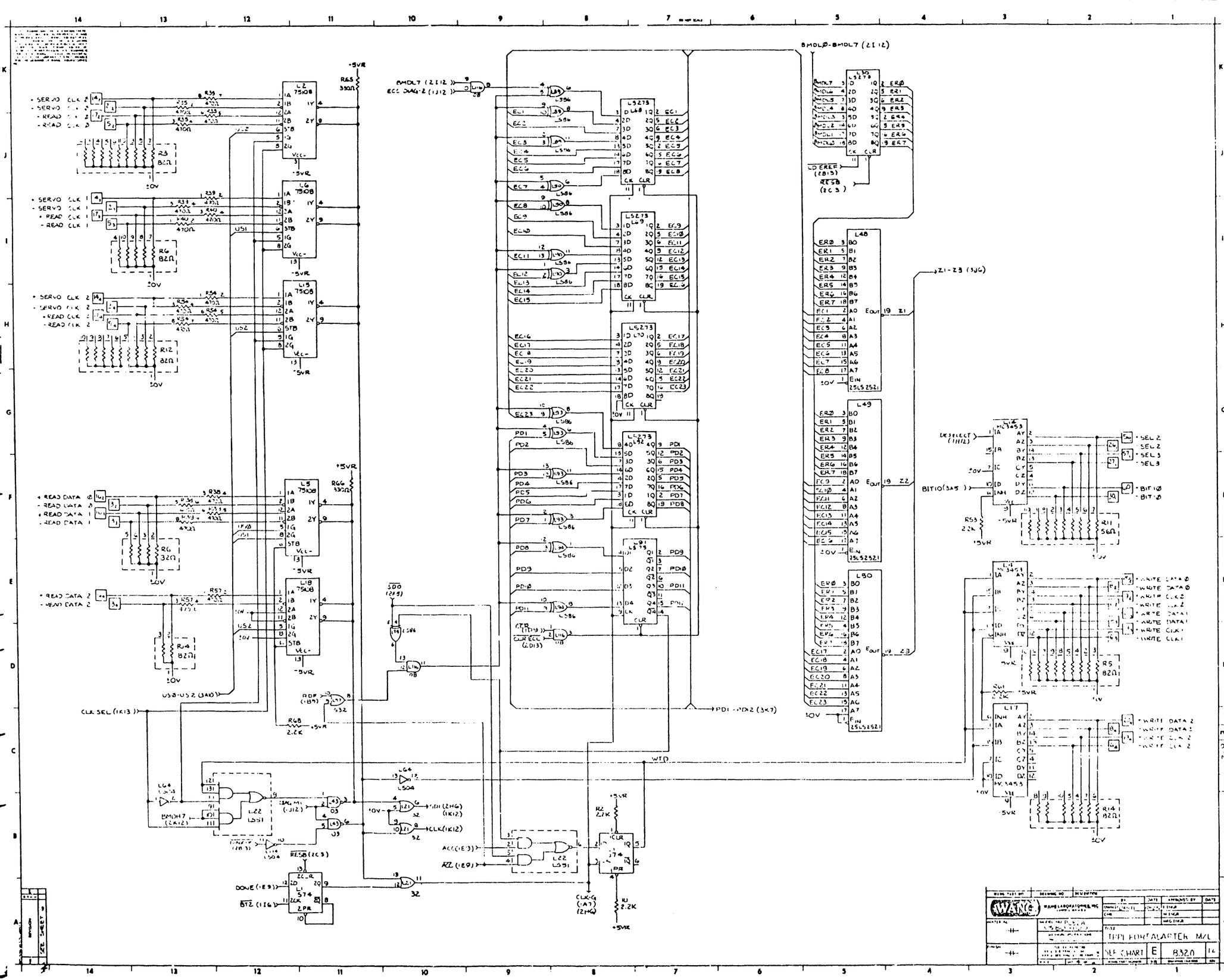

THREE PORT ADAPTER M/L
E
8520
12
WANG LABORATORIES, INC.
Y1 12.24MHz
DB0-DB15 (2K7)
PRI (3K4)
WTG (3F4)
DMA EN (1D5)
ECC DIAG-1 (1F2)
ECC DIAG-2 (4K10)
DIAG M1 (4B11)(3F9)
DESELECT (4G3)
RSTB-H (2H4)
RSTB-L (2G4)
HTB (2J5) (2E3)
BT7 (1C13) (1A7)
BT5 (1A13)
BT2 (4A12)
BT1 (1G14)
LDFIFO (2F11)
BK2 (3K11)
DSMH
DSML
RIPPLE
ENDIL (2G8)
DONE (4A12)
ACC (4B3)
ERR (2F6)
CWFE (3H3) (3K5)
DMAEN (1K11)

HH1


DB0-DB15 (1A7) (3H1)
SOP (2C4)
RD FIFO (2B13)
LS08
LS244
LS374
LS245
LS32
LS04
LS20
LS00
LS08
LS74
LS157
LS367
LS368
LS139
LS393
LS257
LS153
LS158
LS86
LS27
LS38
LS139
LS-52521
ENDH (1C6)
ENDL (1D6)
LSR (1B6)
ESR (1D9)
SDI (4B10)
DMA R/W (1H2)
RSTB-H (1J7)
RSTB-L (1J7)
RD DATA (2C13)
DR (3I5) (1D4)
OR (1I4)
IR (1H2)
IR2 (2D4)
OR2 (2E2)
PIR2 (2B4)
PIR (4B11) (1B10)
(4J5)
MCEN (1H2)
VERT(2D2)
HCEN (1H2)
OPEN (2B3) (2G3)
START
STOP
RESET
SYNCPLS (3J11)
+5VR
2.2K
DB0
DB1
DB2
DB3
DB4
DB5
DB6
DB7
D0
D2
D4
D6
D1
D3
D5
D7
DB8
DB9
DB10
DB11
DB12
DB13
DB14
DB15
D8
D10
D12
D14
D9
D11
D13
D15
SEE SHEET 6
TMS 32010 I/O PORT ADAPTER M/L
SEE CHART
E
9320
12

HH2


DISK PORT ADAPTER M/L
SEE CHART
E
5 V 20
17
SEE SHEET 6
HH3


BMDLØ-BMDL7 (2I12)
BMDL7 (2E12)
ECC DIAG 2 (1J12)
+5VR
-5VR
0V
L2 75108
L6 75108
L15 75108
L5 75108
L18 75108
L9 LS273
L10 LS273
L92 LS273
L91 LS273
L48
L49
L50
L47 LS74
L22 LS51
L32 LS74
L11 MC3453
L17 MC3453
R2 2.7K
R3 82Ω
R6 82Ω
R12 82Ω
R5 82Ω
R14 82Ω
R11 56Ω
R4 82Ω
R53 2.2K
R66 330Ω
R68 2.2K
R67 2.2K
R10 2.2K
RG 32Ω
SERVO CLK 2
SERVO CLK 1
READ CLK 2
READ CLK 1
READ DATA Ø
READ DATA 1
READ DATA 2
USØ-US2 (3A10)
CLR SEL (1K13)
WTD
PDI - PD2 (3K7)
Z1 - Z3 (3J6)
DESELECT (1111Z)
BIT IØ (3A5)
WRITE DATA Ø
WRITE DATA 1
WRITE DATA 2
WRITE CLK 2
SEL 2
SEL 3
TPI FORTALAPTER M/L
SCH CHART E 8320

HH4

WANG

TRPL PORTAPAK M/L

SEE CHART | E | 8320 | 12

HH5

LOCATION	TYPE	W.L. PART NO.
L2, 41, 42	74S74	376-0202
[illegible]	75108	376-0089
L3 [illegible]	74LS[illegible]	376-0275
[illegible]	74S[illegible]53	376-0274
[illegible]	74LS32	376-0211
L22, 141	74LS51	376-0213
L21	7432	376-0073
L27 28 [illegible] 32 [illegible] 26 27 33 [illegible] 49 50 51 55, [illegible]	74LS244	376-0288
L[illegible]	7420	376-0202
L30 [illegible]	74LS273	376-0307
L31	74LS174	376-0[illegible]
L32 53 54 73 [illegible] 92	74LS374	376-0286
L33 [illegible] 74 [illegible]	74LS175	376-0[illegible]
L35 36	27[illegible]	SEE CHART
[illegible]	74LS161	376-0233
L39 40 [illegible] 82 99 100 101 102, [illegible] 120 121 122 152 153	SPARE	
[illegible]	74LS[illegible]	376-[illegible]
L43	7403	376-0028
L44 45 46	74LS153	376-0156
L48 49 50 106	74LS[illegible]	376-0317
[illegible]	74LS08	376-0153
L[illegible] 59 [illegible] 103 115 118, 123, 144 [illegible] 158	74LS74	376-0155
L[illegible]	74LS04	376-0180
[illegible]	74LS00	376-0207
[illegible]	74LS240	376-0297
[illegible]	74LS290	376-0242
L83 [illegible]	74LS20	376-0[illegible]
L48	74LS30	376-0243
L[illegible]	74LS[illegible]	376-0231
L94 [illegible]	74LS11	376-0225
L[illegible]	74LS02	376-0[illegible]
L105 [illegible]	74LS[illegible]	376-0243
[illegible] 29 30 131	74S225	376-0323
L[illegible] 34 35 135	74LS138	376-0294
L[illegible]	7400	376-0002
L5[illegible]	74LS367	376-0132
L[illegible]3	7404	376-0016
L[illegible]	74LS27	376-0215
L143	74LS10	376-0209
L[illegible]	7408	376-0081
L97	74S32	376-0205
L35 36	24 PIN SOCKET	376-9003

TYPE	IC LOCATION	SPARES
74[illegible]	L37	1
74LS02	L104	1
7404	L103	1
74LS08	L63	1
74LS11	L99	2
74LS27	L[illegible]	1
7432	L21	1
74LS[illegible]	L84	1
	L[illegible]	1
74LS86	L89	1
740[illegible]	L[illegible]	2
74LS10	L143	1
74LS28	L160	1
74LS86	L79	1
74LS74	L75	1
	L[illegible]	1

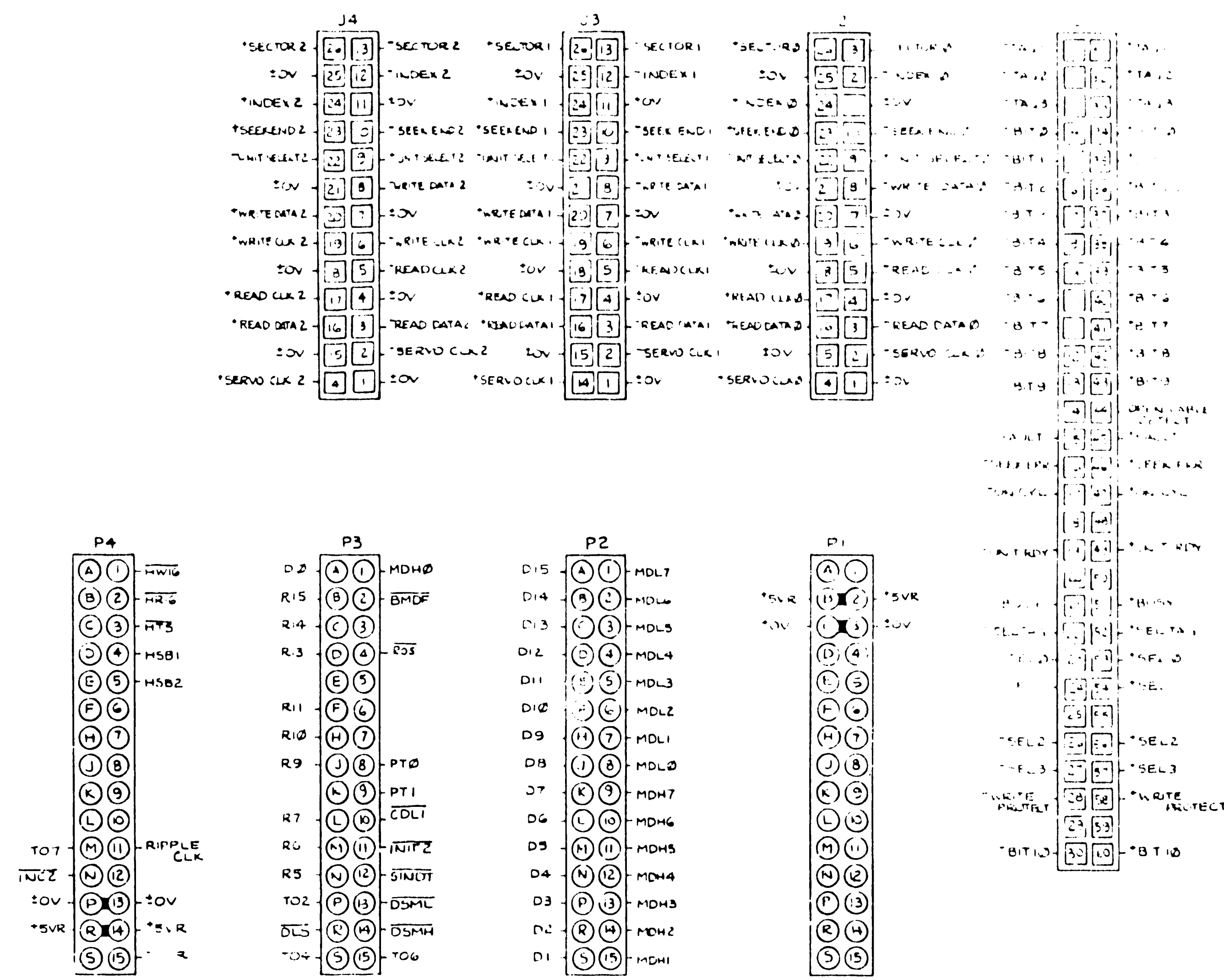
2 OF 2 [illegible] 377 OR 378			
[illegible]	[illegible]	L35	L36
8320 A	8320	[illegible]543-[illegible]	378-5144-R2

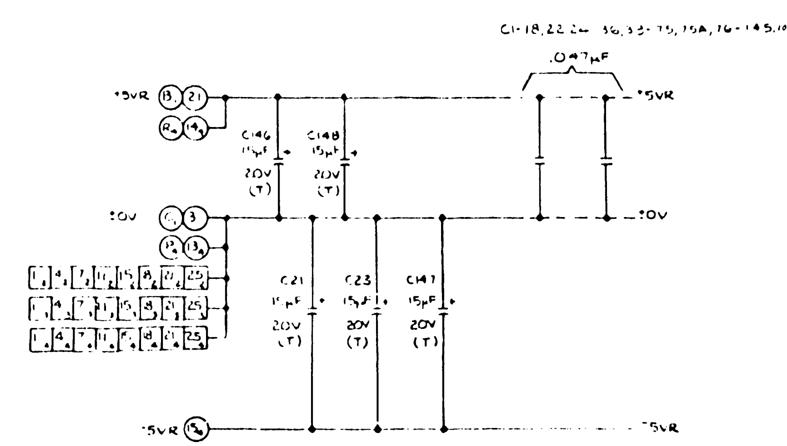
COMPONENT	TYPE	W.L. PART NO.
R1, 2, 26, 51, 53, 61, 62, 63, 64, 67, 68, 69, 70, 71, 72, 63A, 76, 77, 78, 79, 80, 81, 82, 83, 76A	2.2K 1/4W 5%	330-3023
R3, 5, 6, 2, 4	82Ω, SIP (5)	333-0804
R4, 7, 10, 11, 13, 47, 48, 49, 50, 52	56Ω, SIP (9)	333-0802
R8, 9, 17, 18, 19, 20, 21, 22, 23, 24, 27, 28, 29, 30, 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	1K 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]	.047μF, 50V	300-1866
C21, 23, 146, 147, 48	15μF 20V (T)	300-4022
C37, 38	1μF 50V	300-1930
C[illegible]	1μF 25V	300-1803
Q1	2N2[illegible]	375-0017
Q2	[illegible]	375-1115
Q1	TRANSIPAD	375-9004
Y1	12.24MHZ	321-0017
SW1	4POS DIP	325-1504
SW2	8 POS DIP	325-1503
TP1, TP2	PIN	654-1112
J1	60 POS	350-0057
J2, 3, 4	26 POS	350-0058
	[illegible]	[illegible]
[illegible]	[illegible]	[illegible]
(6)	[illegible]	[illegible]
(6)	[illegible]	[illegible]

MNEMONICS	COORD.
+BITØ-+BIT9	3G1
-BITØ-BIT9	3G1
+BITØ	4F1
-BITØ	4F1
BMDF	2E14
+BUSY	3K14
-BUSY	3J14
CDLI	2F14
DL3	1K1
DSMH	1J[illegible]
DSML	1J1
DØ-D15	2K1
+FAULT	3I14
-FAULT	3I14
HSB1	2G14
HSB2	2G14
HR16	1H1
HT5	2E14
HW16	1I1
INCZ	1K5
+INDEXØ	3G14
-INDEXØ	3G14
+INDEX1	3F14
-INDEX1	3F14
+INDEX2	3D14
-INDEX2	3D14
INIT2	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 CLK 2	4H14
-READ CLK 2	4H14
+READ DATA Ø	4F14
-READ DATA Ø	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	2D14
+5	[illegible]A10
+SECTOR Ø	3[illegible]14
-SECTOR Ø	3[illegible]14
+SECTOR 1	3H14
-SECTOR 1	3H14
+SECTOR 2	3D14
-SECTOR 2	3D14
+SEEK END Ø	3G14
-SEEK END Ø	3G14
+SEEK END 1	3E14
-SEEK END 1	3E14
+SEEK END 2	3D14
-SEEK END 2	3D14
+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
+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 Ø	3G14
-UNIT SEL Ø	3G14
+UNIT SEL 1	3E14
-UNIT SEL 1	3E14
+UNIT SEL 2	3D14
-UNIT SEL 2	3D14
+WRITE CLK Ø	4E1
-WRITE CLK Ø	4E1
+WRITE CLK 1	4D1
-WRITE CLK 1	4D1
-WRITE CLK 2	4C1

MNEMONICS	COORD
+WRITE CLK 2	4C1
+WRITE DATA Ø	4E1
-WRITE DATA Ø	4E1
+WRITE DATA 1	4E1
-WRITE DATA 1	4D1
+WRITE DATA 2	4C1
-WRITE DATA 2	4C1
+WRITE PRO	3J14
-WRITE PRO	3J14



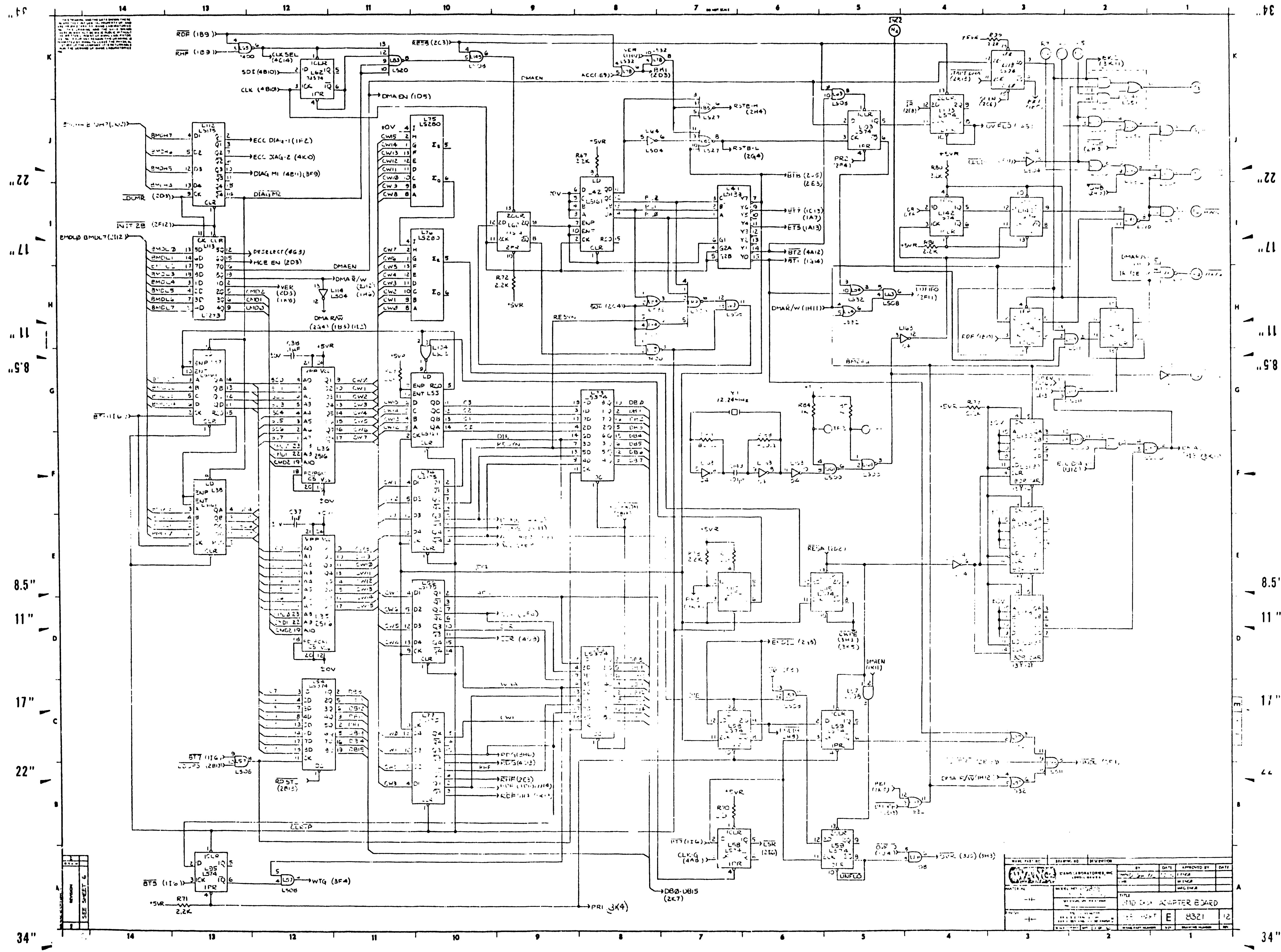


NOTES:
1. ALL RESISTORS ARE 1/4 W 5% UNLESS OTHERWISE SPECIFIED

REV
6

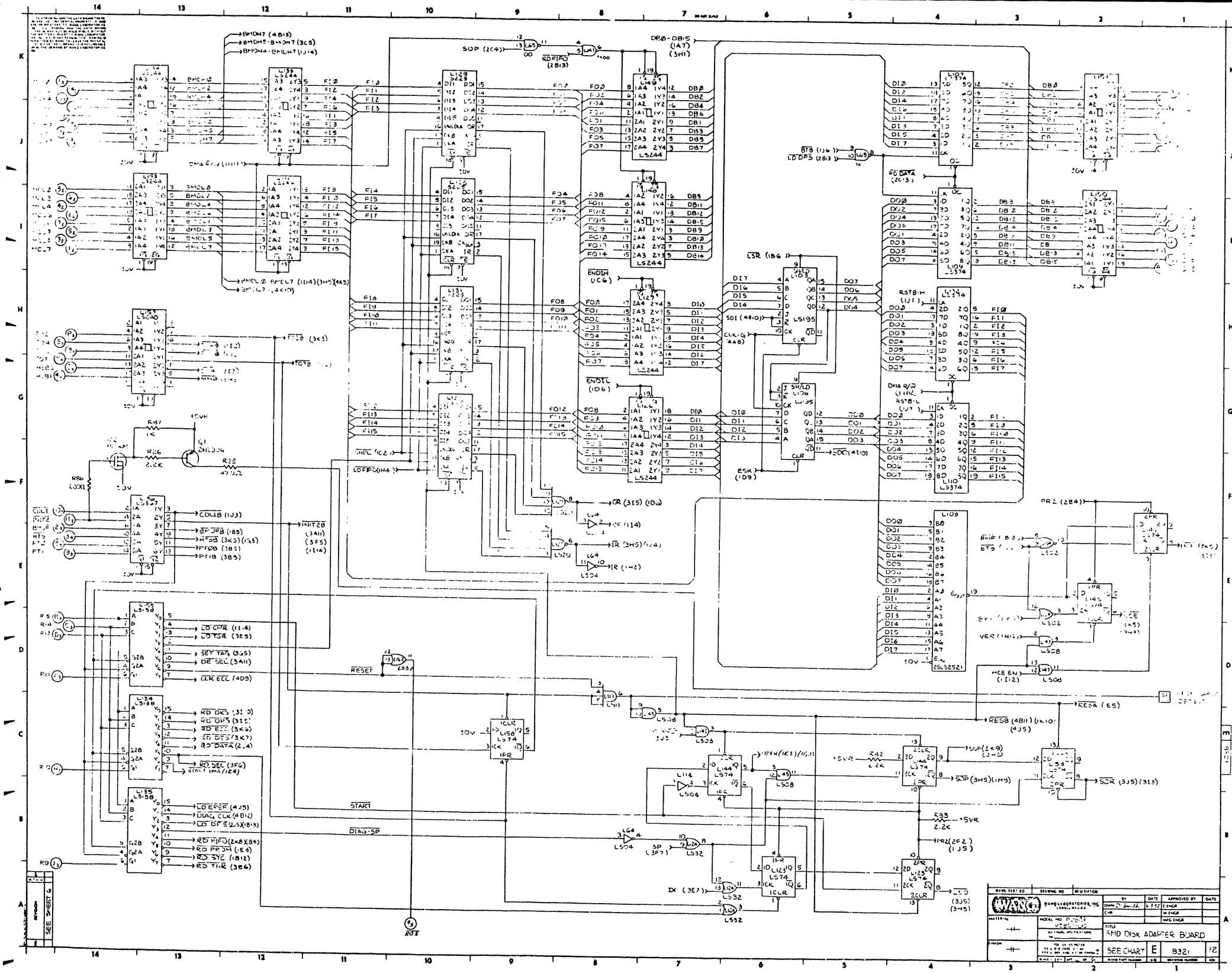
TELE FORT ADAPTER M/L
E 8320 12

HH6



RDF (1B9)
RHF (1B3)
CLK SEL (4C14)
SDI (4B10)
CLK (4B10)
L62 74S74
L83 LS20
DMA EN (1D5)
REEB (2C3)
VER (1H12)
ACC (1G9)
BK1 (2D3)
DMAEN
RSTB-H (2H4)
RSTB-L (2G4)
L112 LS175
ECC DIAG-1 (1F2)
ECC DIAG-2 (4K10)
DIAG M1 (4B11)(3F9)
DIAG M2
LDUMR (2D3)
INIT 2B (2F12)
BMOLØ BMOL7 (2I12)
L113 LS273
DESELECT (4G3)
HCE EN (2D3)
DMA R/W (2I12) (1H6)
VER (2D3) (1K8)
L114 LS04
DMA R/W (2G4) (1B3) (1L2)
L75 LS280
L76 LS280
L42 LS161
L41 LS138
BT8 (2F5) (2E3)
BT7 (1C13) (1A7)
ET5 (1A13)
BT2 (4A12)
BT1 (1G14)
R67 2.2K
R72 2.2K
+5VR
SDE (2G4)
RESYN
L63 LS08
DMAR/W (1H11)
LDFIFO (2F11)
L163
L37 LS161
L36 2516
L35 2516
L38 LS161
L53 LS161
L73 LS374
L74 LS175
L56 LS175
L77
L54 LS374
L55 LS374
L58 LS74
L59 LS74
L95 LS74
Y1 12.24MHz
R84 1K
RESA (2D2)
CWPE (3H3) (3K5)
DMAEN (1K11)
LSR (2E6)
CLK-G (4A8)
DBØ-DB15 (2K7)
PRI 3K4
UNFLO
OVF (3J5) (3H3)
BT7 (1I6)
LDUPS (2B13)
RD ST (2B13)
BT5 (1I6)
WTG (3F4)
R71 2.2K
CLR-P
R39 2.2K
L119 LS74
L103 LS74
L142 LS74
START DMA (2K12)
OVFLD (4S1)
R81 2.2K
R80 2.2K
RDF (1E10)
R77 2.2K
DMA R/W (1H12)
WANG LABORATORIES, INC.
SMD DISK ADAPTER BOARD
E
8321
12
SEE SHEET 6

JJ1


BMDH7 (4B13)
BMDH5-BMDH7 (3C5)
BMDH4-BMDH7 (1J14)
SDP (2C4)
RDFIFO (2B13)
DB0-DB15 (1A7) (3H1)
DMA R/W (1H12)
RSTB-L (1J7)
LSR (1B6)
SDI (4B10)
CLK-G (4A8)
ESK (1D9)
ENDH (1C6)
ENDL (1D6)
RESET
START
DIAG-SP
RESA (E5)
RESB (4B11) (1K10) (4J5)
SDP (2K9) (3H5)
SDR (3J5) (3I3)
SEE SHEET 6

JJ2

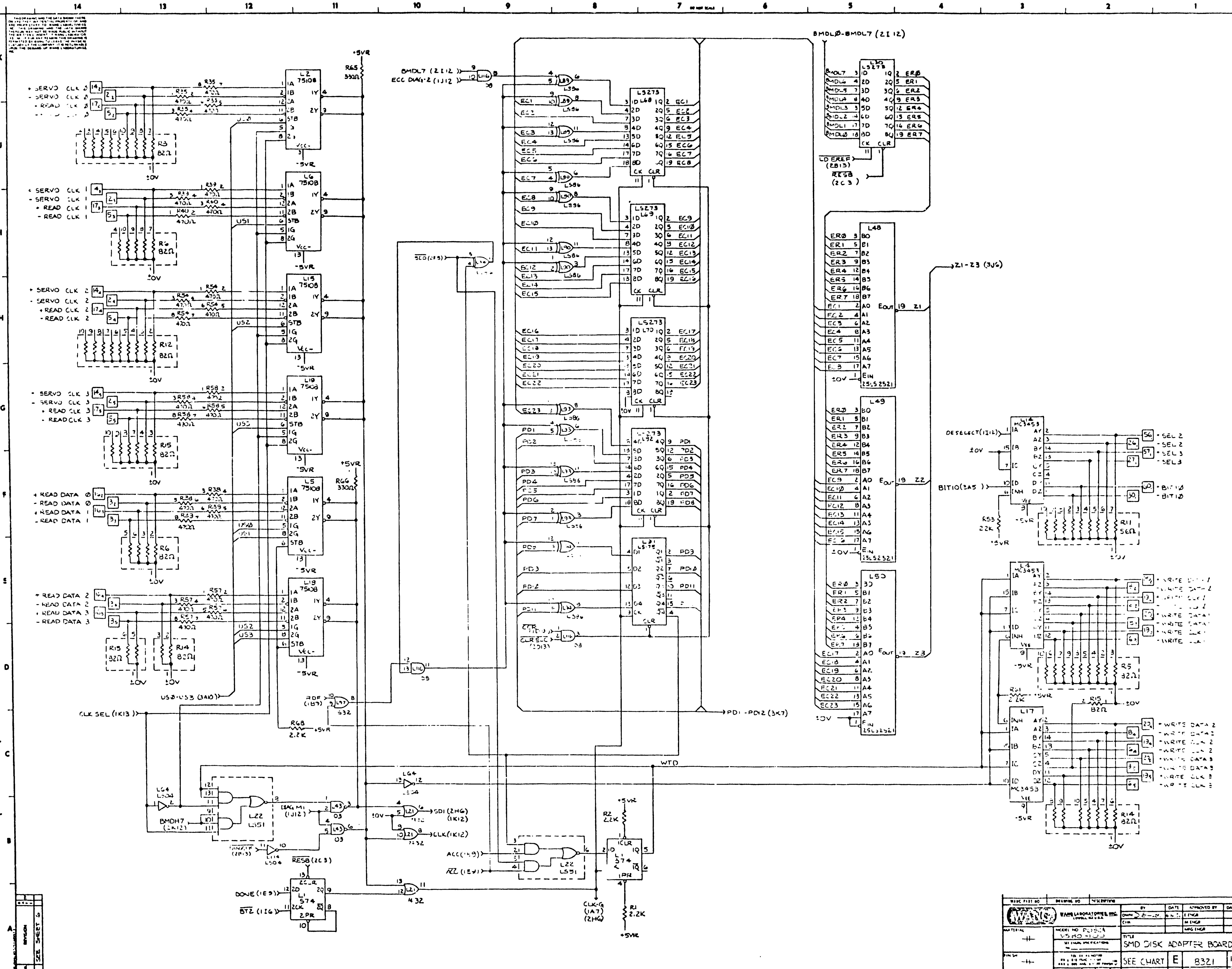
SEE SHEET 6

REVISION

SMD DISK ADAPTER BOARD

SEE SHEET | E | 8321 | 12

JJ3



+ SERVO CLK 0
- SERVO CLK 0
+ READ CLK 0
+ 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 0
- READ DATA 0
+ READ DATA 1
- READ DATA 1
+ READ DATA 2
- READ DATA 2
+ READ DATA 3
- READ DATA 3
L2 75108
L6 75108
L15 75108
L19 75108
L5 75108
R65 330Ω
R66 330Ω
+5VR
-5VR
±0V
USØ-US3 (3A10)
CLK SEL (1K13)
BMDH7 (2K12)
L22 LS51
DIAG M1 (1J12)
RESB (2C3)
DONE (1E9)
BTZ (1I6)
L1 S74
RDF (1B9)
R68 2.2K
BMDL7 (2I12)
ECC DIAG 2 (1J12)
SED (2F9)
BMDLØ-BMDL7 (2I12)
LD EREF (2B13)
RESB (2C3)
L68 LS273
L69 LS273
L70 LS273
L92 LS273
L31 LS175
L30 LS273
L48 25LS2521
L49 25LS2521
L50 25LS2521
Z1-Z3 (3J6)
PD1-PD12 (3K7)
CLR ECC (2D13)
SDI (2H6) (1K12)
CLK (1K12)
ACC (1E9)
CLK-G (1A7) (2HG)
R2 2.2K
R1 2.2K
WTD
L14 MC3453
DESELECT (1I12)
BIT10 (3A5)
R53 22K
R11 56Ω
+ SEL 2
- SEL 2
+ SEL 3
- SEL 3
+ BIT 10
- BIT 10
L4 MC3453
L17 MC3453
R5 82Ω
R14 82Ω
R15 82Ω
R21 2.2K
+ WRITE DATA 2
- WRITE DATA 2
+ WRITE CLK 2
- WRITE CLK 2
+ WRITE DATA 3
- WRITE DATA 3
+ WRITE CLK 3
- WRITE CLK 3
WANG LABORATORIES, INC. LOWELL, MA U.S.A.
MODEL NO. VS80-100
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

SEECHART E 8321 12

JJ5

IC LOCATION	TYPE	WL PART NO.
[illegible] 41, 42	74S74	376-0202
[illegible]	75108	376-0089
L37, [illegible]	MC3450	376-0275
[illegible]	MC3453	376-0274
[illegible]	74LS32	376-0211
L22, 141	74LS51	376-0213
[illegible]	[illegible]	376-0265
[illegible] 23, 47, 51 [illegible] 26, 27, 33, 43, 49, 50, 51, 59, 154	74LS244	376-0286
L29	[illegible]	376-0332
L30, 68, 70, 72, 73	74LS273	376-0302
L31	74LS174	376-0159
L32, 53, 54, 73, 107, 109, 132	74LS374	376-0286
L33, [illegible]	74LS175	376-0150
L35, 36	2716	SEE CHART
[illegible]	74LS[illegible]	376-0233
L39, [illegible] 79, 80, 81, 82, 99, 100, 101, 102, 119, 120, 121, 122, 152, 153	SPARE	
[illegible]		376-0013
L43	7403	376-0028
L44, 45, 46	74LS153	376-0156
L48, 49, 50, 103	[illegible] 2521	376-0317
[illegible]	74LS08	376-0153
L58, 98, [illegible] 103, 113, 118, 123, 144, 145, 153	74LS74	376-0155
[illegible]	[illegible]	376-0180
[illegible]	[illegible]	376-0207
[illegible]	[illegible]	376-0297
[illegible]	[illegible]	376-0242
L53	74LS20	376-0210
L64	[illegible]	376-0243
[illegible]	[illegible]	376-0231
[illegible]	[illegible]	376-0225
L84	[illegible]	376-0208
L125, [illegible]	[illegible]	376-0243
[illegible]	[illegible]	376-0323
L41, 134, 135, 155	74LS138	376-0294
[illegible]	74LS133	376-0220
L15[illegible]	74LS367	376-0132
L163	7404	376-0010
L85	74LS27	376-0245
L143	74LS10	376-0209
[illegible]	[illegible]	376-0281
L65	7400	376-0302
L35, 36	24 PIN SOCKET	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, 81, 82, 83, 90	2.2K, 1/4W 5%	330-3023
R3, 5, 6, 12, 14, 15	82Ω, SIP, (5)	333-0804
R4, 7, 10, 11, 13, 16, 47, 48, 49, 50, 52	56Ω, SIP, (3)	333-0302
R8, 9, 17, 18, 19, 20, 21, 22, 23, 24, 27, 28, 29, 30, 3[illegible], 32, 33, 34, 42, 43	10K, 1/4W, 5%	330-4011
R25	470Ω, 1/4W, 5%	330-2048
R3[illegible], 36, 37, 38, 39, 40, 41, 44, 45, 46, 54, 55, 56, 57, 58, 59, 60	470Ω, SIP, (5)	333-0803
R65, 66	330Ω 1/4W, 5%	330-2034
R73, 75	1K, SIP (9)	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
[illegible] 21, 22, 24 [illegible] 75, 75A, 76 [illegible] 136A [illegible]	.047µF, 50V	300-1966
C21, 23, 146, 147, 148	15µF 20V, (T)	300-4022
C37, 38	1µF 50V	300-1930
C149	.01µF, 25V	300-1303
Q1	2N2906	375-1017
Q2	VN10KM	37[illegible]
[illegible]	TRANSIPAD	375-3004
Y1	17.24MHZ	321-3019
SW1, 2	10 POS DIP	325-1503
J1	60 POS	350-0057
J2, 3, 4, 5	26 POS	350-0056
TP1, TP2	PIN	[illegible]-1192
	FACE PLATE	452-2035-92
3 PER	[illegible]	350-[illegible]42
4 PER	[illegible] NUT	[illegible]
1	HANDLE [illegible]	[illegible]

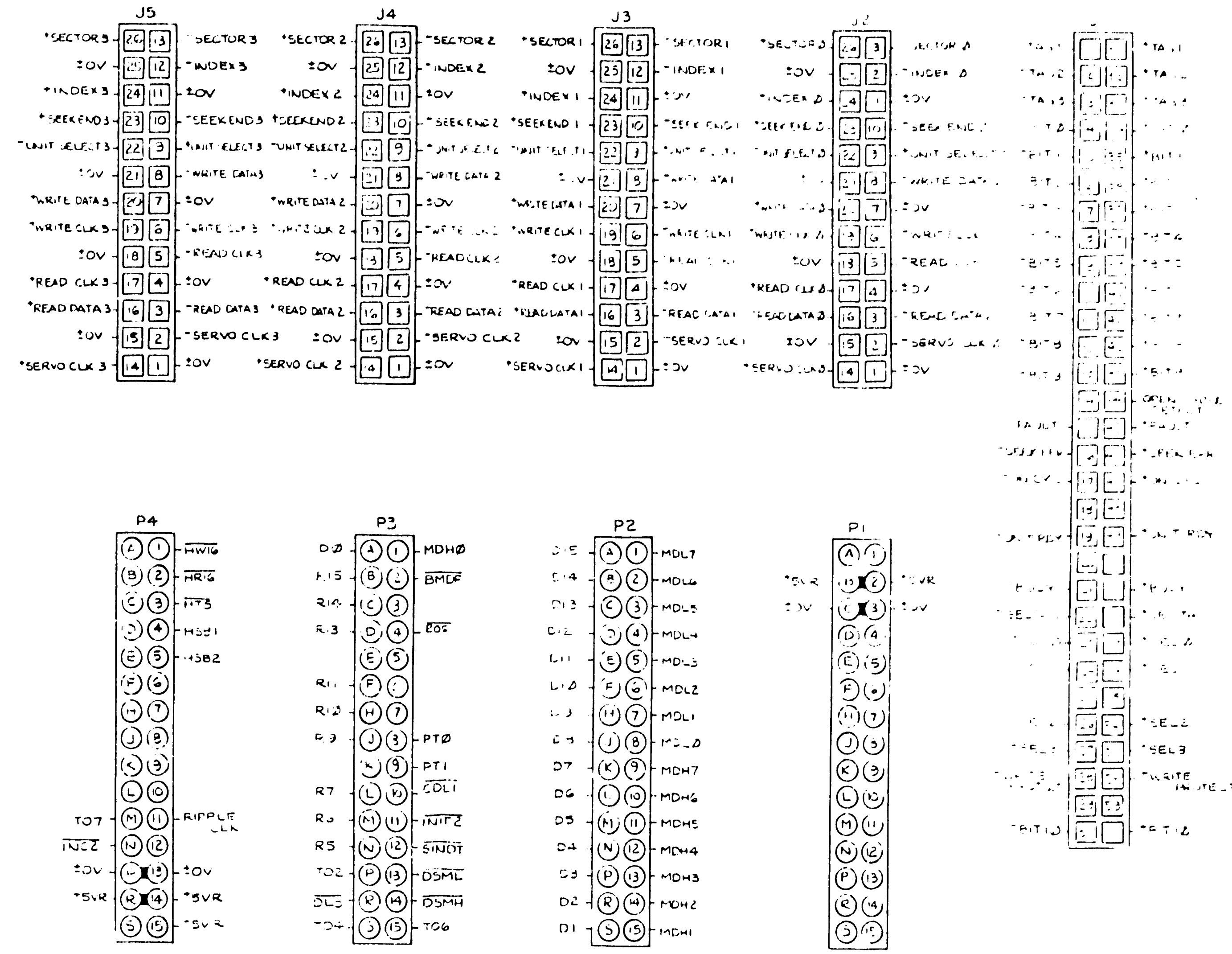
MNEMONICS	COORD.
*BITØ-*BIT9	3G1
-BITØ - -BIT9	3G1
*BIT1Ø	4F1
-BIT1Ø	4F1
BMDF	2E14
*BUSY	3K14
-BUSY	3J14
CDLT	2F14
DLS	1K1
DSMH	1J1
DSML	1J1
DØ-D15	2K1
*FAULT	3I14
-FAULT	3I14
HSB1	2G14
HSB2	2G14
HRIG	1H1
HTS	2E14
HWIG	1I1
INC2	1K5
*INDEX Ø	3G14
-INDEX Ø	3G14
*INDEX 1	3F14
-INDEX 1	3F14
*INDEX 2	3D14
-INDEX 2	3D14
*INDEX 3	3C14
-INDEX 3	3C14
INIT 2	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 CLK 2	4H14
-READ CLK 2	4H14
*READ CLK 3	4[illegible]
-READ CLK 3	4[illegible]
*READ DATA Ø	4F14
-READ DATA Ø	[illegible]
*READ DATA 1	4F14
-READ DATA 1	4F14
*READ DATA 2	4E14
-READ DATA 2	4E14
*READ DATA 3	4E14
-READ DATA 3	4E14
RIPPLE CLK	1[illegible]
R[illegible]	1[illegible]
R5-11	2[illegible]14
R13-15	2D14
[illegible]	2[illegible]
*SECTOR Ø	3[illegible]14
-SECTOR 2	3G14
*SECTOR 1	3F14
-SECTOR 1	3F14
-SECTOR 2	3D14
*SECTOR 2	3D14
*SECTOR 3	3C14
-SECTOR 3	3C14
*SEEK END Ø	3G14
-SEEK END Ø	3G14
*SEEK END 1	3E14
-SEEK END 1	3E14
*SEEK END 2	3D14
-SEEK END 2	3D14
*SEEK END 3	3B14
-SEEK END 3	3B14
*SEEK ERR	3I14
-SEEK ERR	3I14
*SELØ, *SEL1	3B1
-SELØ, -SEL1	3B1
*SEL2, *SEL3	4G1
-SEL2, -SEL3	4G1

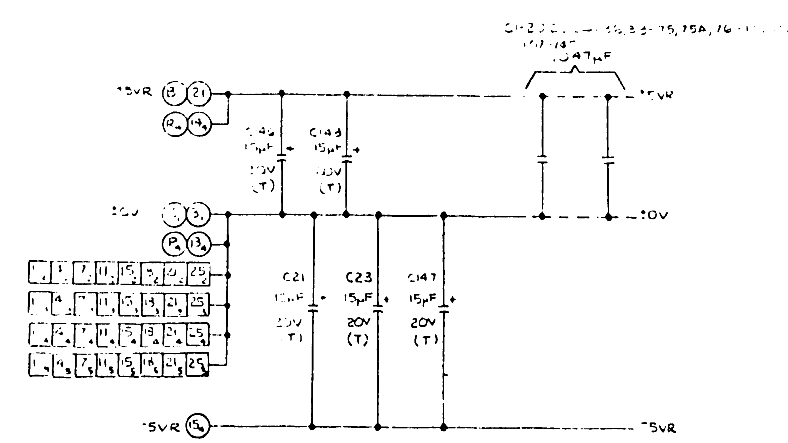
MNEMONICS	COORD.
*SEL TA [illegible]	3B1
-SEL TA [illegible]	3B1
*SERVO CLK Ø	4K14
-SERVO CLK Ø	4K14
*SERVO CLK 1	4I14
-SERVO CLK 1	4I14
*SERVO CLK 2	4H14
-SERVO CLK 2	4H14
*SERVO CLK 3	4G14
-SERVO CLK 3	4G14
SINT	3K1
*TA[illegible]	3[illegible]
-TA[illegible]	3[illegible]
TO2	2H14
TO4	2H14
TO6, TO7	2H14
*UNIT RDY	3H14
-UNIT RDY	3H14
*UNIT SEL Ø	[illegible]
-UNIT SEL Ø	[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
-WRITE CLK Ø	4E1
*WRITE CLK Ø	4E1
*WRITE CLK 1	4D1
-WRITE CLK 1	4D1
*WRITE CLK 2	4C1

MNEMONICS	COORD.
-WRITE CLK 2	4C1
*WRITE CLK 3	4C1
-WRITE CLK 3	4C1
*WRITE DATA Ø	4E1
-WRITE DATA Ø	4E1
*WRITE DATA 1	4E1
-WRITE DATA 1	[illegible]
*WRITE DATA 2	4C1
-WRITE DATA 2	4C1
*WRITE DATA 3	4C1
-WRITE DATA 3	4C1
*WRITE PRO	3J14
-WRITE PRO	3J14

TYPE	IC LOCATION	SPARES
[illegible]	L2[illegible]	1
74LS32	L104	1
7404	L163	1
74LS04	L63	1
74LS11	L38	2
74LS86	L14	1
7432	L21	1
	L84	1
74LS32	L162	1
74LS86	L89	1
7403	L43	2
74LS10	L143	1
74LS08	L160	1
74LS74	L118	1
	L35	1

2 D = 2D3 + 378 OR 377			
2D	2D3	L35	L36
8321A	832	[illegible]	[illegible]





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

E REV
6

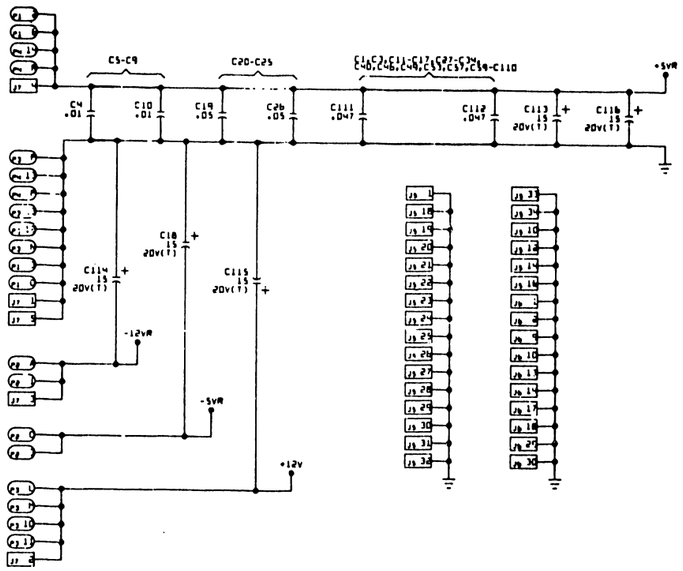
WANG LABORATORIES, INC.	
TITLE	SMD DISK ADAPTER BOARD
WANG PART NUMBER	SEE CHART
SIZE	E
DRAWING NUMBER	8321
REV	12

REVISION: REVISED PER ECO# [illegible]; REVISED PER ECO# 25[illegible]; REVISED PER ECO# 27[illegible]; REVISED PER ECO# 273[illegible]; REVISED PER ECO# [illegible]; NEW [illegible] PER ECO# 28001; REVISED PER ECO# 282360; REVISED PER ECO# 28711; REVISED PER ECO# 29084; REVISED PER ECO# 29[illegible]; REVISED PER ECO# 30996; REVISED PER ECO# 32453

JJ6

NOTES

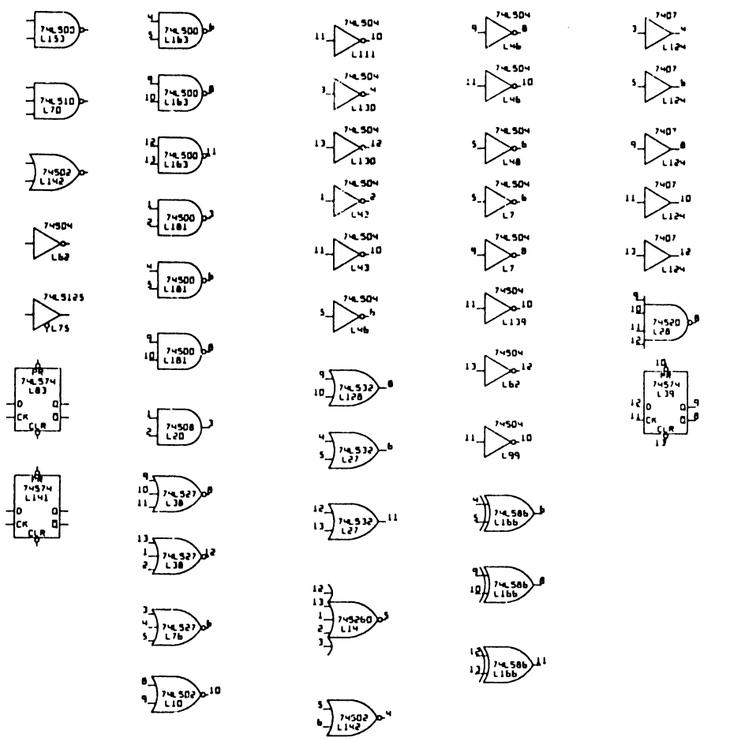
1. ALL RESISTOR VALUES IN OHMS.
2. ALL CAPACITOR VALUES IN MICROFARADS UNLESS OTHERWISE INDICATED.
3. ALL RESISTORS 1/4W 5% UNLESS OTHERWISE INDICATED.



MNEMONIC	LOCATION
+PRDYARD	SK9
+PRDYWRITE	SK8
LA	BB11
LB	BB11
2A	BA11
2B	BA11
3A	BC11
3B	BC11
4A	BC11
4B	BC11
BA1	SH14
BA2	SH14
BA3	SH14
BA4	SH14
BA5	SJ14
BA6	SH14
BA7	SH14
BA8	2A8
BA9	SG14
BA10	SG14
CH0	BJ1
CH0	BJ1
CH1	BJ1
CH1	BJ1
CH2	BJ1
CH2	BJ1
CTS	BA7
CTS	BA7
DCD	BA7
DCD	BA8
DMAPPT	SK7
FRST	JJ3
LDD0	SD3
LDD1	SD2
LDD7	SD3
LDD3	SD2
LDD4	SD3
LDD5	SD2
LDD6	SE3

MNEMONIC	LOCATION
LDD7	SC2
LDD8	SB3
LDD9	SD2
LDD10	SB3
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(PA)	SK1
MRC(PRT	SG1
PAIPCBRST	BJ1
PAIWCO	JB2
PATINPUTRDY	JD2
RDPA	JB14
RPAIM	SM1
RST	BJ1
RST	BJ1
RTS	BA1
RTS	BA1
RX5D	BAB
RX5D	BAB
TX5I	BA1
TX5I	BA1
TX5O	BA6
TX5O	BA7
WRITH	SM1
WRPT	JC14
CH3	BA1
CH3	BA1
CH4	BA1
CH4	BA1

SPARES



REVISION	BY	DATE	APPR
A	BN	7-27-82	
0	JSW	10-15-82	
1	PGD	12-8-82	
2	OSS	3/16/83	
3	BN	5-20-83	
4	BN	6-27-83	
5	PGD	9-25-83	
6	KTH	1-24-84	
7	KTH	03-29-84	

ORIGINATED PER DWG NO. 24-749 APPR'L RL.
ORIGINATED PER DWG NO. 24983 APPR'L G.S. PER E.D.OCCURR
ORIGINATED PER DWG NO. 25362 APPR'L G.S.
ORIGINATED PER DWG NO. 26805 APPR'D RL.
ORIGINATED PER DWG NO. 26814 APPR'D 27804
ORIGINATED PER DWG NO. 26826 APPR'D
REVISED PER ECO NO. 26852 APPR'D
REVISED PER ECO NO. 30767 CHKD
REVISED PER ECO NO. 31780 CHKD

210	209	L183	L162	210-209 + 377 OR 378 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

E REV 4 N

WANG LABORATORIES, INC.

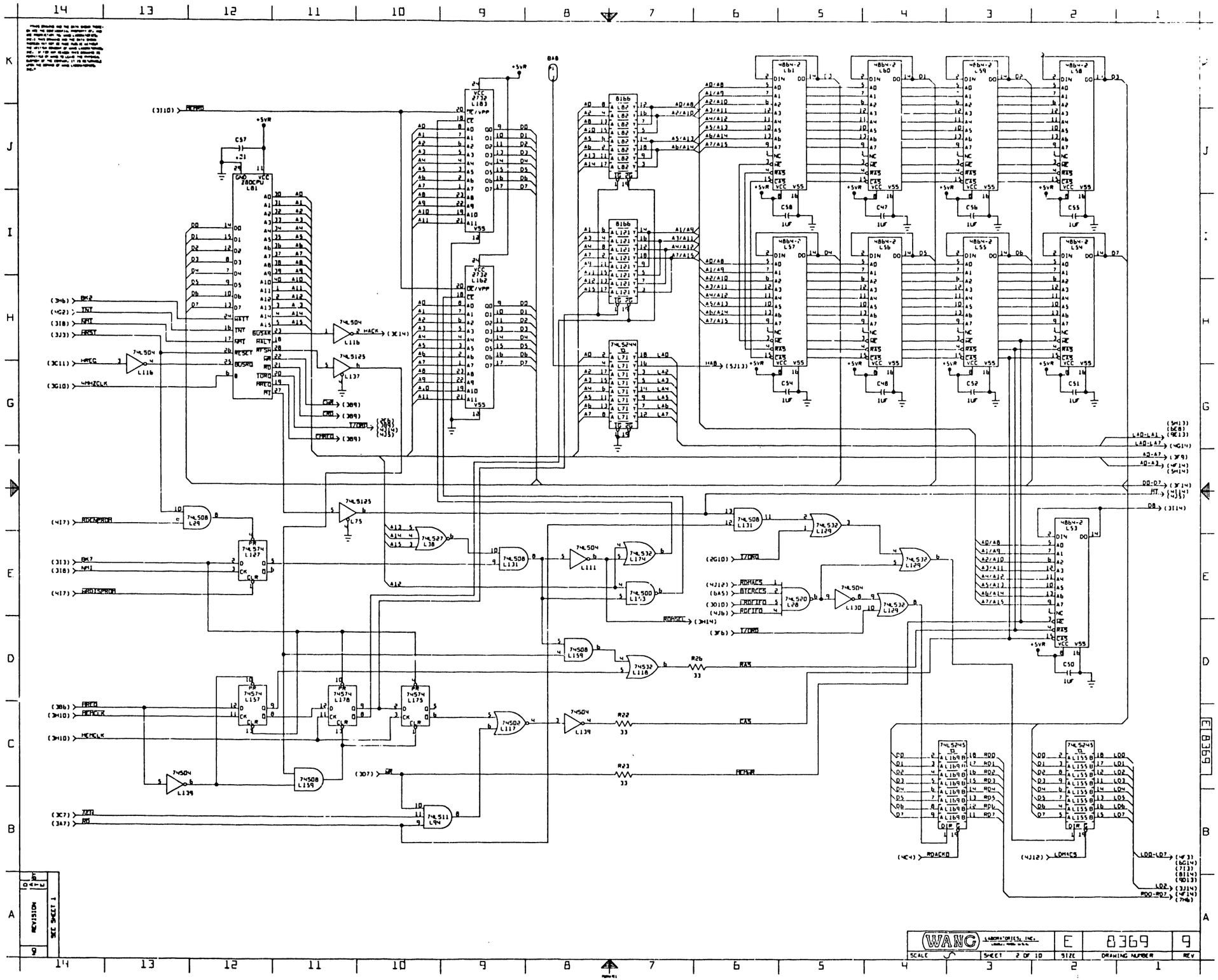
SCHEMATIC DIAGRAM

TITLE: 928W LINK

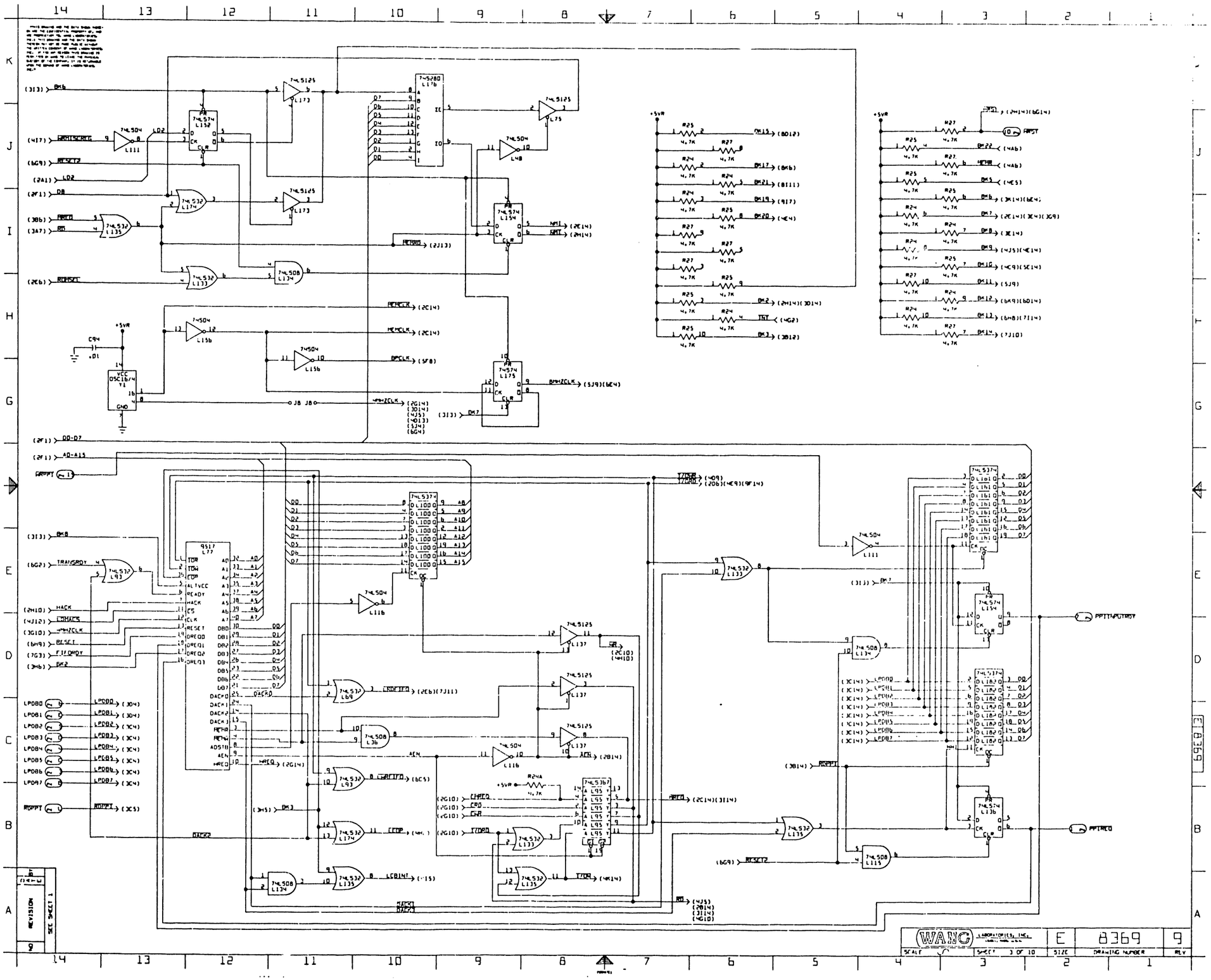
DWN	BN	CHK		ENG	RL	DIR

MODEL NUMBER: V5/80/100
WANG PART NUMBER: SEE CHART
SCALE: 1/4
SHEET 1 OF 10
SIZE: E
DRAWING NUMBER: 8369
REV: 9

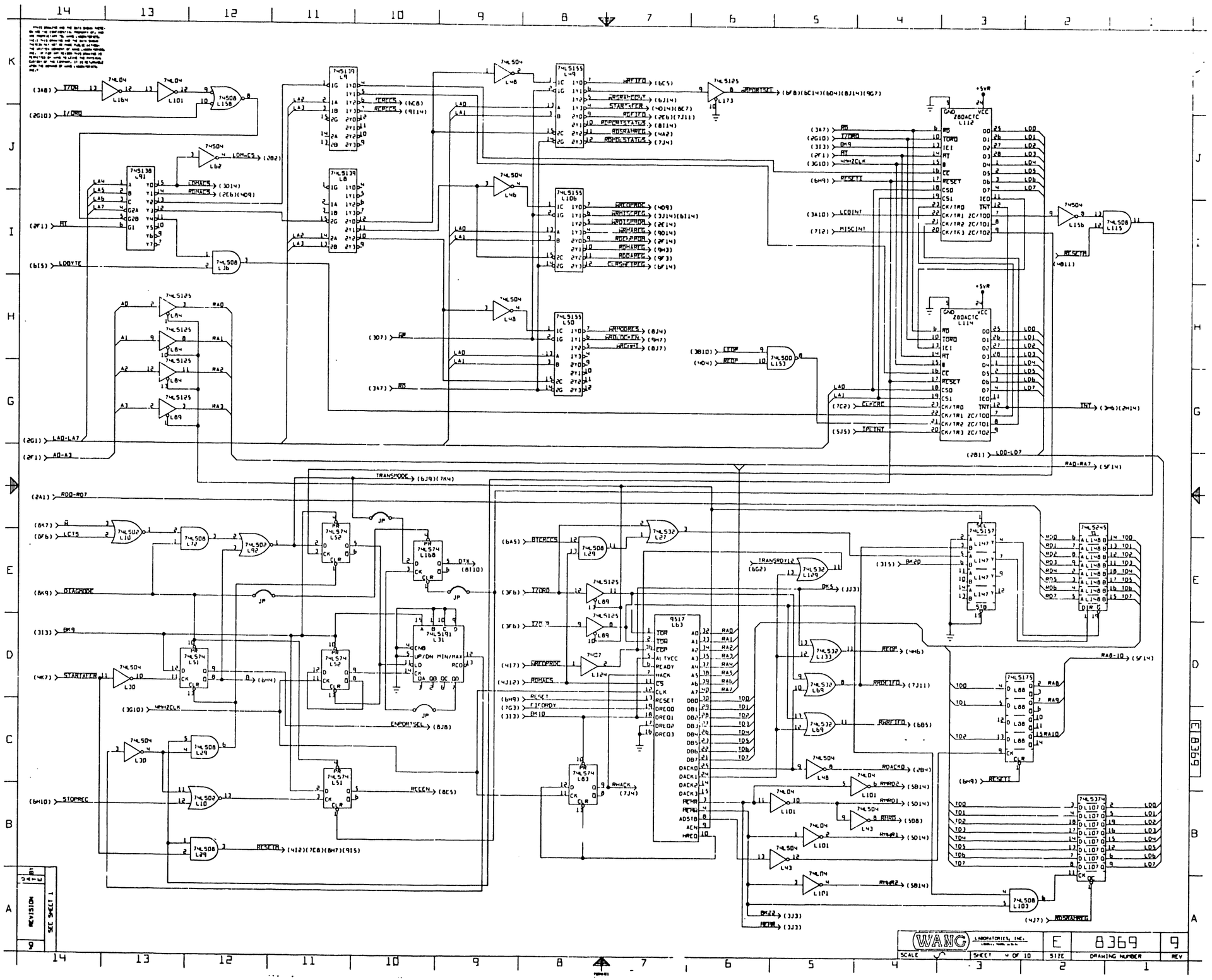
KK1


Z80CPU L81
74LS04 L116
74LS125 L137
74LS04 L116
74LS125 L75
74LS08 L29
74LS74 L127
74LS27 L38
74LS08 L131
74LS04 L111
74LS32 L174
74LS00 L173
74LS08 L159
74LS32 L118
74LS74 L157
74LS74 L178
74LS74 L175
74LS02 L117
74LS04 L139
74LS08 L159
74LS04 L139
74LS11 L94
74LS08 L131
74LS32 L129
74LS20 L28
74LS04 L130
74LS32 L129
74LS32 L129
74LS245 L169
74LS245 L155
4864-2 L61
4864-2 L60
4864-2 L59
4864-2 L58
4864-2 L57
4864-2 L56
4864-2 L55
4864-2 L54
4864-2 L53
8166 L121
8166 L121
74LS244 L71
2732 L183
2732 L182
C57
C58
C47
C56
C55
C54
C48
C52
C51
C50
R26 33
R22 33
R23 33
WANG LABORATORIES, INC.
SCALE
SHEET 2 OF 10
SIZE E
DRAWING NUMBER 8369
REV 9
REVISION
SEE SHEET 1

KK2


74LS125 L173
74LS280 L176
74LS125 L175
74LS04 L111
74LS74 L152
74LS04 L48
74LS125 L173
74LS32 L174
74LS74 L154
74LS32 L135
74LS32 L133
74LS08 L134
74LS04 L156
74LS04 L156
74LS74 L175
VCC OSC16/4 Y1 GND
74LS04 L156
+5VR
C94 .01
R25 4.7K
R27 4.7K
R24 4.7K
9517 L77
74LS374 L100
74LS32 L93
74LS08 L36
74LS125 L137
74LS04 L116
74LS32 L69
74LS32 L174
74LS08 L134
74LS32 L135
74LS32 L133
74LS367 L95
R24A 4.7K
74LS74 L138
74LS08 L115
74LS32 L135
74LS374 L101
74LS74 L154
74LS08 L134
74LS74 L138
WANG LABORATORIES, INC.
E 8369 9
SCALE SHEET 3 OF 10 SIZE DRAWING NUMBER REV
REVISION
SEE SHEET 1

KK3

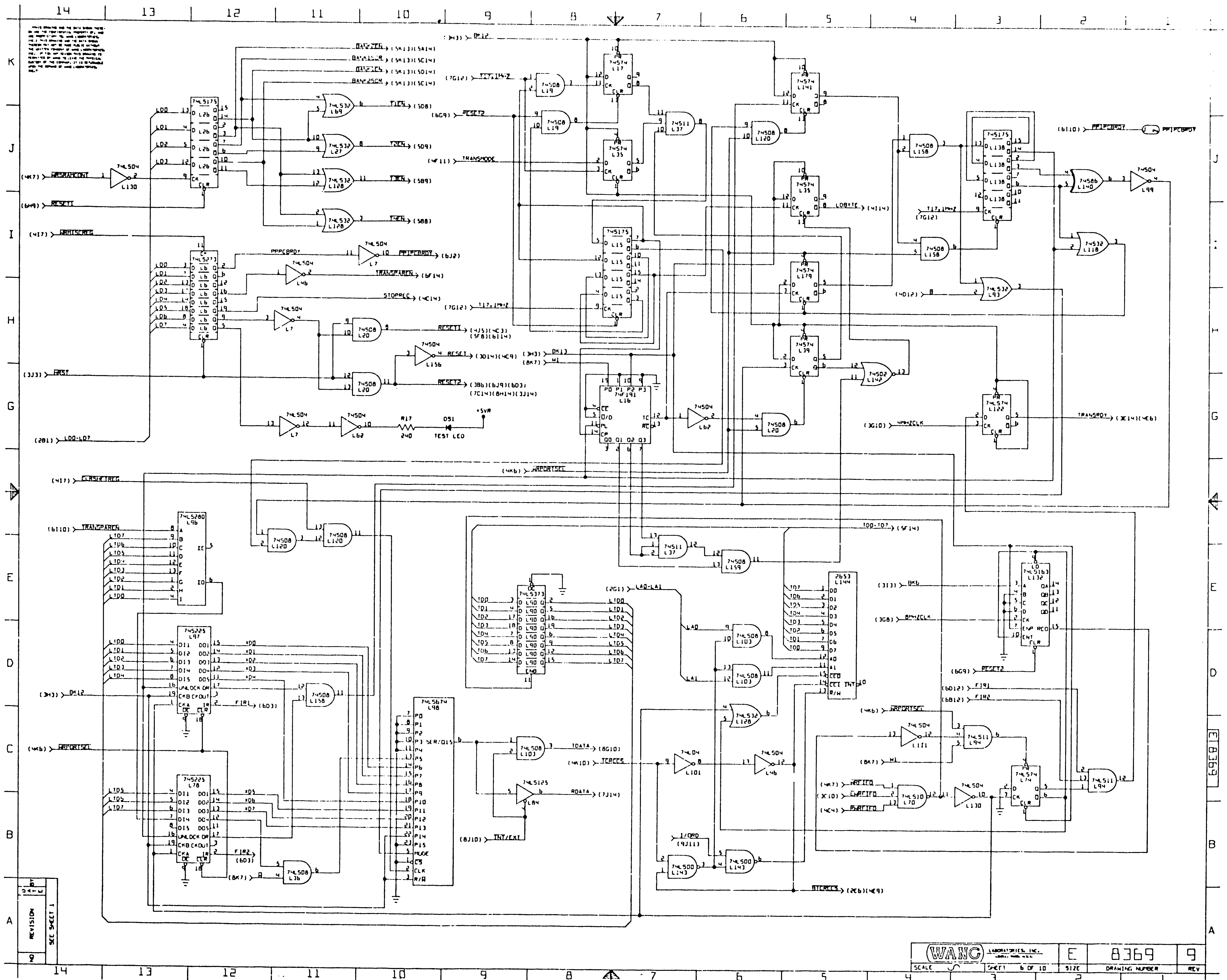

74LS04 L164
74LS04 L101
74LS08 L158
74LS04 L62
74LS08 L36
74LS08 L72
74LS02 L92
74LS02 L10
74LS08 L29
74LS04 L30
74LS08 L29
74LS02 L10
74LS08 L29
74LS04 L48
74LS04 L46
74LS04 L48
74LS08 L153
74LS08 L115
74LS08 L103
74LS32 L27
74LS32 L29
74LS32 L133
74LS32 L69
74LS32 L69
74LS32 L69
74LS04 L48
74LS04 L101
74LS04 L43
74LS04 L101
74LS04 L43
74LS04 L101
74LS139 L9
74LS139 L8
74LS155 L49
74LS155 L106
74LS155 L50
74LS125 L173
74LS125 L84
74LS125 L84
74LS125 L89
74LS125 L89
74LS125 L89
74LS125 L84
74LS574 L52
74LS574 L168
74LS574 L52
74LS574 L51
74LS574 L52
74LS574 L51
74LS574 L83
74LS138 L91
74LS191 L31
74LS157 L147
74LS245 L148
74LS373 L107
74LS175 L88
9517 L63
74C7 L124
Z80ACTC L112
Z80ACTC L114
(348) T/OR4
(2G10) T/ORQ
(6K7) R
(6F6) LC15
(6K9) DTACKRQST
(313) BK9
(4K7) STARTXFER
(6H10) STOPREC
(2G1) LA0-LA7
(2F1) A0-A3
(2A1) RD0-RD7
(2F1) MT
(6I5) LDBYTE
(307) RW
(347) RD
(3A7) RD
(2G10) T/ORQ
(3I3) BK9
(2F1) MT
(3G10) 4MHZCLK
(6H9) RESET
(3A10) LCDINT
(7I2) MISCINT
(3B10) CTCINT
(4D4) RTCINT
(5J5) TMCINT
(6A5) RTCHCS
(3F6) T2ORQ
(3F6) T2ORQ
(4H7) RRCDPROC
(4J12) RDMACS
(6H9) RESET
(7G3) FIFOHDY
(3I3) BK10
(315) BK2D
(6G2) TRANSRQ12
(2B1) LD0-LD7
(6H9) RESET
(4B11)
(7H2) CCRDRC
(3J7) RDSTATRQ
TRANSRQ00 (6J9)(7K4)
RCCEN (8E5)
RESETN (4I2)(7E8)(8H7)(9I5)
RDACK0 (2B4)
RDMAIN (7J7)
RDMAOUT (6B5)
RDSTATRQ (4J7)
RA0-RA7 (5F14)
RA0-RA10 (5F14)
REVISION
SEE SHEET 1
WANG LABORATORIES, INC.
SCALE
SHEET 4 OF 10
E 8369 9
SIZE DRAWING NUMBER REV

THESE DRAWINGS AND THE DATA BASED THEREON ARE AND THE EQUIPMENT IS PROPRIETARY OF WANG LABORATORIES, INC. AND ARE PROPERTY OF THE OWNER. ANY REPRODUCTION, USE, DISCLOSURE AND THE DATA BASED THEREON MAY NOT BE MADE PUBLIC WITHOUT THE WRITTEN CONSENT OF WANG LABORATORIES, INC. IF FOR ANY REASON THIS DRAWING IS FURNISHED TO ANY PERSON OTHER THAN AN EMPLOYEE OF THE COMPANY, IT IS TO BE RETURNED UPON THE REQUEST OF WANG LABORATORIES, INC.

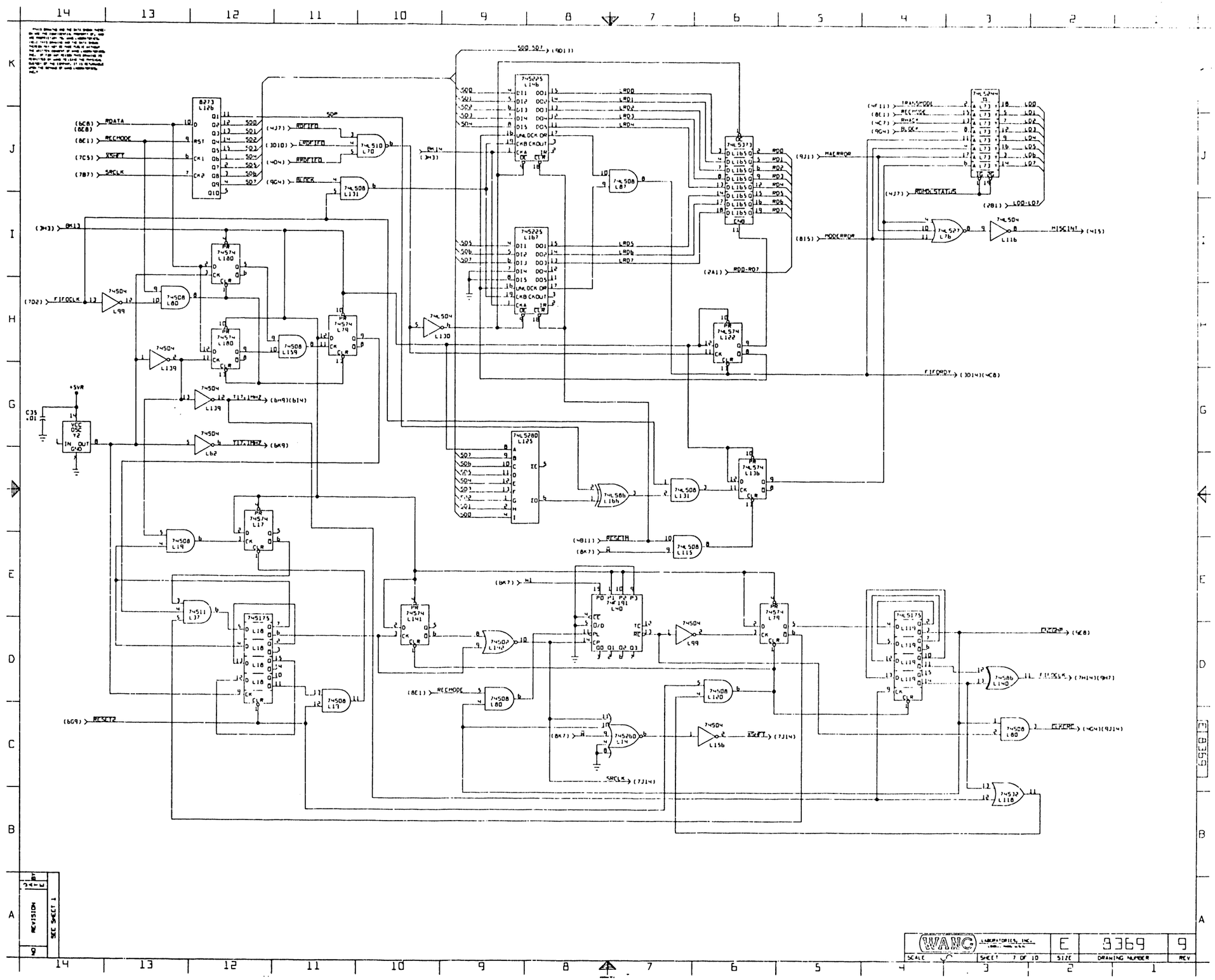
REVISION	SEE SHEET 1
9	

WANG LABORATORIES, INC.			
SCALE	SHEET 5 OF 10	E 8369	9
		SIZE DRAWING NUMBER	REV

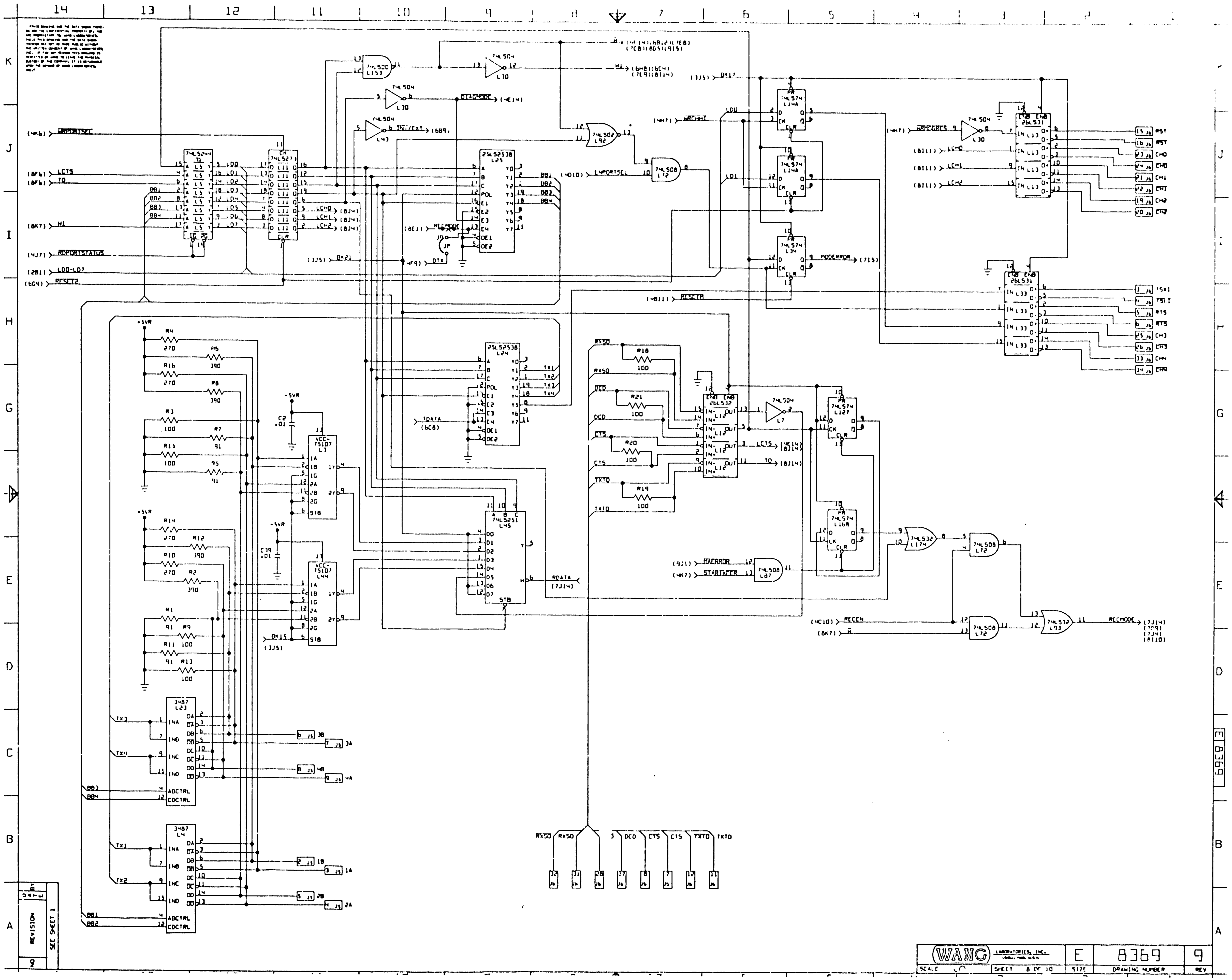
KK5


74LS175 L26
74LS32 L69
74LS32 L27
74LS32 L128
74LS04 L130
HRSRAMCONT
RESET1
HRHISCREG
74LS273 L6
PPPCBRDY
PPIPCBRDY
TRANSPAREN
STOPREC
74LS04 L7
74LS04 L46
74S08 L20
74S04 L156
RESET
RESET2
HRST
74S04 L62
R17 240
DS1 TEST LED
+5VR
LD0-LD7
T1EN
T2EN
T3EN
T4EN
BANK2EN
BANK2SCR
TRANSMODE
74S08 L19
74S74 L17
74S74 L35
74S11 L37
74S175 L15
T17.1MHZ
74F191 L16
74S74 L141
74S08 L120
LOBYTE
74S74 L179
74S74 L39
74S02 L142
74S08 L158
74S175 L138
74S86 L140
74S04 L99
74S32 L118
74LS32 L93
74LS74 L122
4MHZCLK
TRANSRDY
CLRSHFTREG
74LS280 L96
74S225 L97
74S225 L78
HRPORTSEL
FIR1
FIR2
74LS08 L36
74LS674 L98
SER/Q15
74LS08 L103
74LS125 L84
TDATA
RDATA
INT/EXT
74LS373 L90
LAO-LA1
74LS08 L103
2653 L144
TD0-TD7
74LS32 L128
74LS04 L101
TCRCES
74LS00 L143
1/ORD
BTCRCES
74LS163 L132
BK6
8MHZCLK
74LS04 L111
74LS11 L94
74LS10 L70
74LS74 L74
REVISION
SEE SHEET 1
WANG LABORATORIES, INC.
SCALE
SHEET 6 OF 10
SIZE E
DRAWING NUMBER 8369
REV 9

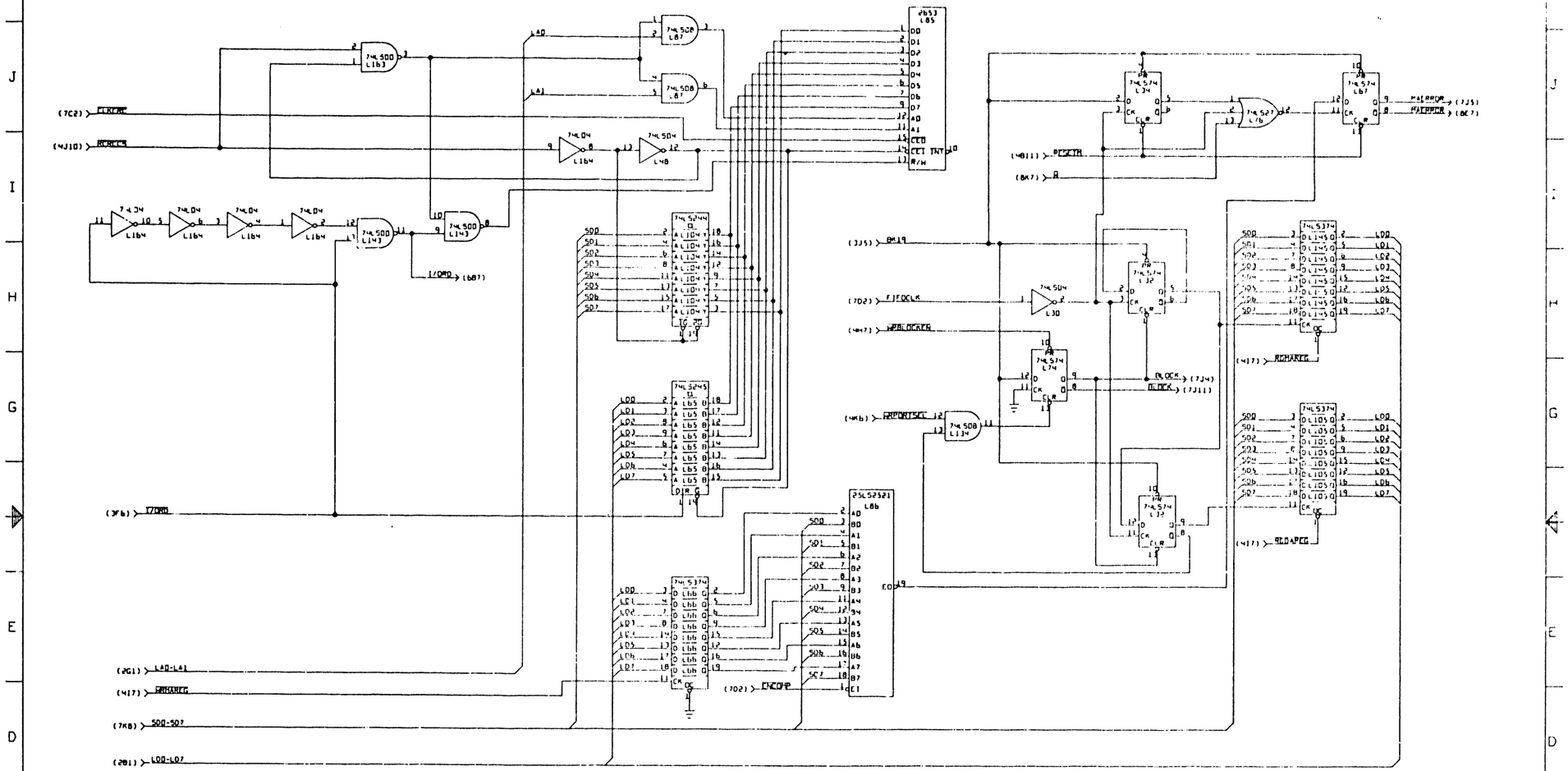
KK6


8273 L126
74S225 L146
74S225 L167
74S373 L165
74S244 L13
74S574 L120
74S574 L180
74S574 L74
74S574 L122
74S574 L136
74S574 L17
74S574 L141
74S574 L79
74S280 L125
74S175 L18
74S175 L119
74S191 L40
74S260 L14
74S86 L140
74S32 L118
74S04 L99
74S04 L130
74S04 L139
74S04 L62
74S04 L116
74S08 L80
74S08 L159
74S08 L87
74S08 L131
74S08 L19
74S08 L17
74S08 L142
74S08 L120
74S08 L115
74S11 L37
74S86 L164
74S27 L76
MDATA
MECMODE
RSHIFT
SHCLK
RMDFIFO
RMDFIFO
RMDFIFO
RCMCR
RESET
FIFOCLK
SHCLK
RESET2
RECMODE
MAERROR
MODERROR
MDMODSTATUS
MISCINT
FIFORDY
RESET
SHCLK
SDD SD7
LMDD
LMD1
LMD2
LMD3
LMD4
LMD5
LMD6
LMD7
MD0-MD7
LDD-LD7
C35 .01
+5VR
VCC OSC Y2 IN OUT GND
REVISION
SEE SHEET 1
WANG LABORATORIES, INC.
SCALE
SHEET 7 OF 10
E
SIZE
9369
DRAWING NUMBER
9
REV

KK7


74LS244
74LS273
74LS00
74LS04
74LS02
74LS08
74LS32
74LS74
74LS251
25LS2538
26LS31
26LS32
75107
3487
WRPORTSEL
LCTS
TO
BB1
BB2
BB3
BB4
H1
RDPORTSTATUS
LD0-LD7
RESET2
LCH0
LCH1
LCH2
DIAGMODE
INT/EXT
ENPORTSEL
RECMODE
DTX
BK21
BK17
BK15
WRCHNL
WRMODRES
RESETA
MODERROR
TDATA
RDATA
HAERROR
STARTXFER
RECEN
RXSO
DCD
CTS
TXTO
TX1
TX2
TX3
TX4
+5VR
-5VR
RST
CH0
CH1
CH2
CH3
CH4
RTS
TSXT
ABCTRL
CDCTRL
REVISION
SEE SHEET 1
WANG LABORATORIES, INC.
SCALE
SHEET 8 OF 10
E
SIZE
8369
DRAWING NUMBER
9
REV

THIS DRAWING AND THE DATA SHOWN HEREON ARE THE CONFIDENTIAL PROPERTY OF WANG LABORATORIES, INC. AND THE INFORMATION CONTAINED HEREIN SHALL NOT BE USED FOR ANY PURPOSE OTHER THAN THE OPERATION AND MAINTENANCE OF WANG EQUIPMENT. IN WHOLE OR PART, WITHOUT THE PRIOR WRITTEN CONSENT OF WANG LABORATORIES, INC. IT SHALL NOT BE DISCLOSED TO OTHERS FOR SALE OR TRANSFERRED BY ANY METHOD, ELECTRONIC OR MECHANICAL, INCLUDING PHOTOCOPY OR RECORDING, OR STORED IN ANY RETRIEVAL SYSTEM OF ANY NATURE, WITHOUT THE PRIOR WRITTEN PERMISSION OF WANG LABORATORIES, INC.



REVISION	BY
9	

SEE SHEET 1

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

ITEM	REFERENCE DESIGNATOR	DESCRIPTION	WANG PART NO	QTY
1	L1,42,42,47,64,68,147	74LS157	376-0216	7
2	L2,22,177	74S158	376-0301	3
3	L3,44	75107	376-0146	2
4	L4,23	MC3487	376-0577	2
5	L5,73,172,71,123, 104,170	74LS244	376-0621	7
6	L6,11	74LS273	376-0102	2
7	L7,36,43,48,46, 111,119,130,156	74S04	376-0180	9
8	L8	74LS139	376-0226	1
9	L9	74S139	376-0333	1
10	L10,92	74LS02	376-0208	2
11	L12	26LS32	376-0471	1
12	L13,33	26LS31	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	L17,38,35,141,155,175 178,179,182,19	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	L26,28	74LS175	376-0160	2
21	L27,84,93,128,129 131,135,174	74LS32	376-0211	8
22	L28	74LS20	376-0210	1
23	L29,35,78,87,103, 115,133,171	74LS08	376-0153	8
24	L31	74LS191	376-0445	1
25	L32,34,51,52,67,74, 83,144,122,127,136 152,153,168	74LS74	376-0155	14
26	L37	74S11	376-0237	1
27	L38,76	74LS27	376-0245	2
28	L45	74LS251	376-0222	1
29	L49,106,50	74LS155	376-0159	3
30	L53-61	MM4864-2	377-0417	9
31	L62,99,139	74S04	376-0197	3
32	L63,77	9517A-4	377-0411	2
33	L65,109,102,110, 129,154,155,169	74LS245	376-0285	8
34	L66,101,181,182, 183,184,188	74LS374	376-0286	7
35	L75,86,87,137,173	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	376-0248	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	74S124	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

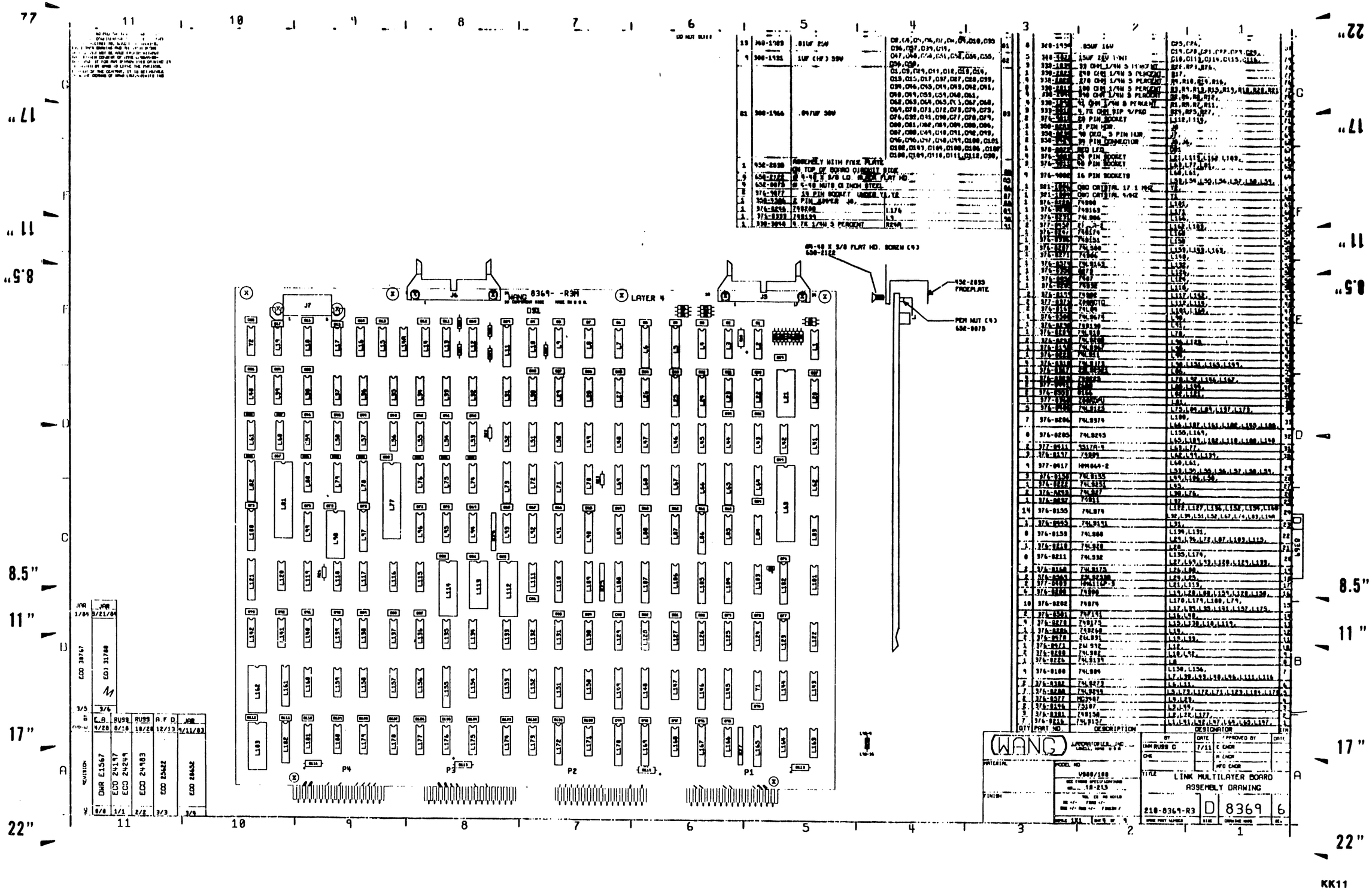
ITEM	REF DESIGNATOR	DESCRIPTION	WANG PART NO	QTY
64	Y1	4MHZ XTAL	321-1004	1
65	Y2	17.1MHZ XTAL	321-1006	1
66	LS3-61	16 PIN SKT	376-4002	9
67	L63,77,81	40 PIN SKT	376-9011	3
68	L21,113,162,183	24 PIN SKT	376-9003	4
69	DS1	RED LED	370-0075	1
70	J5,J6	34 PIN CONN	358-0428	2
71	J7	98 DEC SPIN	350-0234	1
72	J8	2 PIN HOR	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	910HM 1/4W 5%	330-1092	4
77	R2,6,8,12	3900HM 1/4W 5%	330-2040	4
78	R3,9,13,15,19,18, 20,21	1080HM 1/4W 5%	330-2011	8
79	R4,10,14,16	2700HM 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	C4,9-10,35,36, 37,39,94	.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 30-32,77-93,95-112	.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	650-0075	4

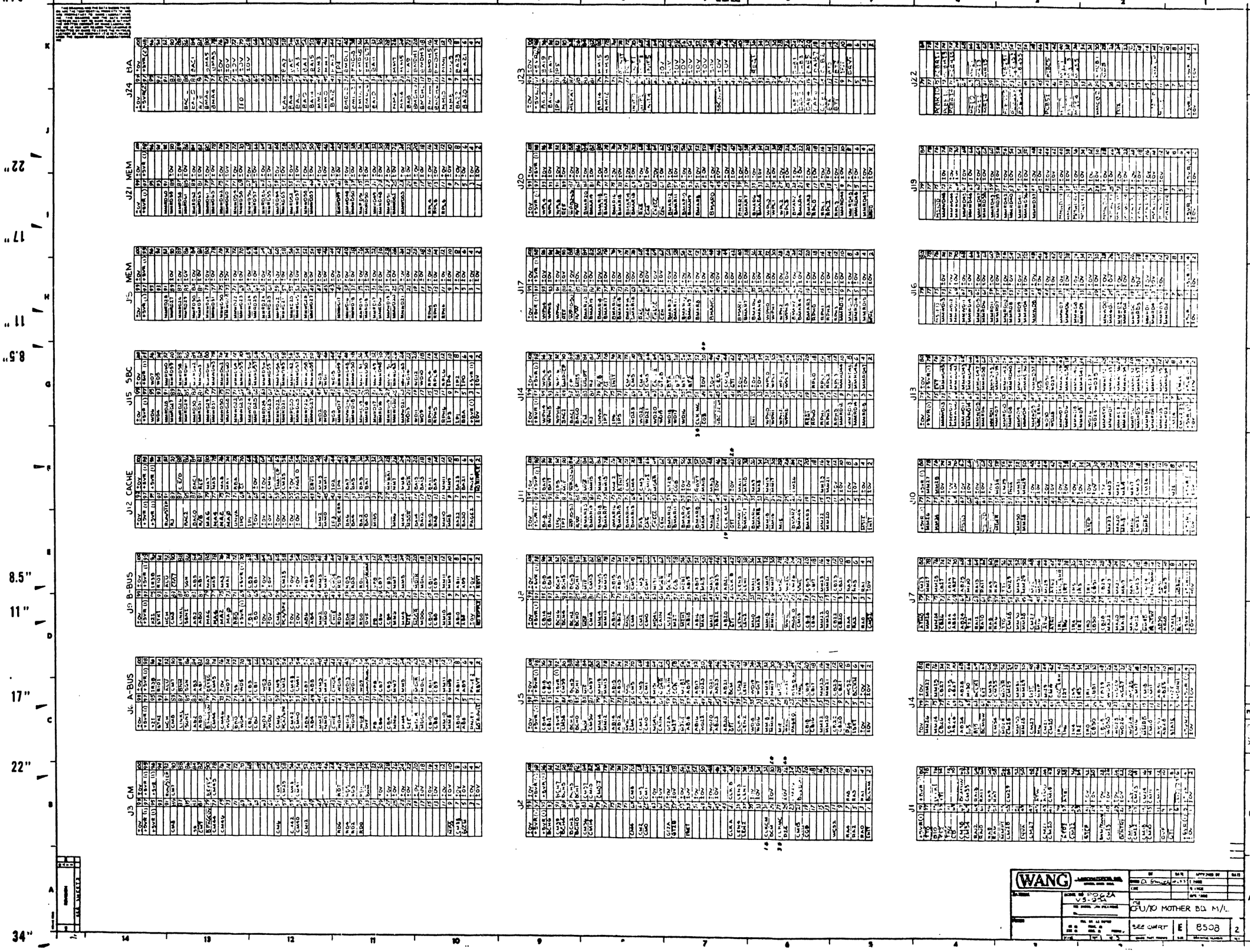
REVISION	DATE	BY
SEE SHEET 1		

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

0369 E

KK10


J7
J6
J5
J4
J3
J2
J1
P4
P3
P2
P1
LAYER 4
DWG 8369- -R3M
DSL
ECO 38767
ECO 31788
DWR E1567
ECO 24197
ECO 24249
ECO 24103
ECO 23422
ECO 28452
JAR 9/21/84
JAR 9/11/83
WANG
LINK MULTILAYER BOARD
ASSEMBLY DRAWING
218-8369-R3
8369
DESCRIPTION
DESIGNATOR
PART NO


J24 I/A
J23
J22
J21 MEM
J20
J19
J17
J16
J15 SBC
J14
J13
J12 CACHE
J11
J10
J9 B-BUS
J8
J7
J6 A-BUS
J5
J4
J3 CM
J2
J1
WANG
DWG NO 700274 V3-01
TITLE CPU/IO MOTHER BD M/L
SEE CHART
E
8508
2

IOP0 J28

Z	±OV	22	±OV
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	±OV	6	±OV
E	±OV	5	±OV
D	BMOL7	4	BMOL6
C	BMOL5	3	BMOL4
B	BMOL3	2	BMOL2
A	BMOL1	1	BMOL0

IOP1 J32

Z	±OV	22	±OV
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	±OV	6	±OV
E	±OV	5	±OV
D	BMOL7	4	BMOL6
C	BMOL5	3	BMOL4
B	BMOL3	2	BMOL2
A	BMOL1	1	BMOL0

IOP2 J36

Z	±OV	22	±OV
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	±OV	6	±OV
E	±OV	5	±OV
D	BMOL7	4	BMOL6
C	BMOL5	3	BMOL4
B	BMOL3	2	BMOL2
A	BMOL1	1	BMOL0

IOP3 J40

Z	±OV	22	±OV
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	±OV	6	±OV
E	±OV	5	±OV
D	BMOL7	4	BMOL6
C	BMOL5	3	BMOL4
B	BMOL3	2	BMOL2
A	BMOL1	1	BMOL0

IOP4 J44

Z	±OV	22	±OV
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	±OV	6	±OV
E	±OV	5	±OV
D	BMOL7	4	BMOL6
C	BMOL5	3	BMOL4
B	BMOL3	2	BMOL2
A	BMOL1	1	BMOL0

IOP5 J48

Z	±OV	22	±OV
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	±OV	6	±OV
E	±OV	5	±OV
D	BMOL7	4	BMOL6
C	BMOL5	3	BMOL4
B	BMOL3	2	BMOL2
A	BMOL1	1	BMOL0

J27

Z	BMOH2	22	BMOH3
Y	BMOH4	21	BMOH5
X	BMOH6	20	BMOH7
W	BMOH1	19	BMOH0
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	BMOH2	22	BMOH3
Y	BMOH4	21	BMOH5
X	BMOH6	20	BMOH7
W	BMOH1	19	BMOH0
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	BMOH2	22	BMOH3
Y	BMOH4	21	BMOH5
X	BMOH6	20	BMOH7
W	BMOH1	19	BMOH0
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	BMOH2	22	BMOH3
Y	BMOH4	21	BMOH5
X	BMOH6	20	BMOH7
W	BMOH1	19	BMOH0
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	BMOH2	22	BMOH3
Y	BMOH4	21	BMOH5
X	BMOH6	20	BMOH7
W	BMOH1	19	BMOH0
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	BMOH2	22	BMOH3
Y	BMOH4	21	BMOH5
X	BMOH6	20	BMOH7
W	BMOH1	19	BMOH0
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	CAB5	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	±OV	1	±OV

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	±OV	1	±OV

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	±OV	1	±OV

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	±OV	1	±OV

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	±OV	1	±OV

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	±OV	1	±OV

J50

1	INIT
2	-5VR
3	-13VUR
4	+12VR

J49

26	±OV	25	±OV
24	+5VR(2)	23	+5VR(2)
22	INIT	21	LD
20	CM	19	TR0
18	CMERR1	17	CMERR0
16	CMERR3	15	CMERR2
14	CMERR5	13	CMERR4
12		11	
10		9	
8		7	
6		5	
4		3	
2	±OV	1	±OV

J25

S	±OV	15	±OV
R	MRI0	14	±OV
P	±OV	13	MGS0
N	PCBCS	12	±OV
M	±OV	11	PCBSI
L	PCBGS0	10	±OV
K	±OV	9	PCBRI0
J	MMCB1	8	±OV
H	±OV	7	MMCB2
F	MMP	6	±OV
E	±OV	5	MCOS
D	IMA	4	±OV
C	±OV	3	INIT0
B	IOPCLK	2	±OV
A	±OV	1	CMERR0

J29

S	±OV	15	±OV
R	MRI1	14	±OV
P	±OV	13	MGS1
N	PCBCS	12	±OV
M	±OV	11	PCBSI
L	PCBGS1	10	±OV
K	±OV	9	PCBRI1
J	MMCB1	8	±OV
H	±OV	7	MMCB2
F	MMP	6	±OV
E	±OV	5	MCOS
D	IMA	4	±OV
C	±OV	3	INIT1
B	IOPCLK	2	±OV
A	±OV	1	CMERR1

J33

S	±OV	15	±OV
R	MRI2	14	±OV
P	±OV	13	MGS2
N	PCBCS	12	±OV
M	±OV	11	PCBSI
L	PCBGS2	10	±OV
K	±OV	9	PCBRI2
J	MMCB1	8	±OV
H	±OV	7	MMCB2
F	MMP	6	±OV
E	±OV	5	MCOS
D	IMA	4	±OV
C	±OV	3	INIT2
B	IOPCLK	2	±OV
A	±OV	1	CMERR2

J37

S	±OV	15	±OV
R	MRI3	14	±OV
P	±OV	13	MGS3
N	PCBCS	12	±OV
M	±OV	11	PCBSI
L	PCBGS3	10	±OV
K	±OV	9	PCBRI3
J	MMCB1	8	±OV
H	±OV	7	MMCB2
F	MMP	6	±OV
E	±OV	5	MCOS
D	IMA	4	±OV
C	±OV	3	INIT3
B	IOPCLK	2	±OV
A	±OV	1	CMERR3

J41

S	±OV	15	±OV
R	MRI4	14	±OV
P	±OV	13	MGS4
N	PCBCS	12	±OV
M	±OV	11	PCBSI
L	PCBGS4	10	±OV
K	±OV	9	PCBRI4
J	MMCB1	8	±OV
H	±OV	7	MMCB2
F	MMP	6	±OV
E	±OV	5	MCOS
D	IMA	4	±OV
C	±OV	3	INIT4
B	IOPCLK	2	±OV
A	±OV	1	CMERR4

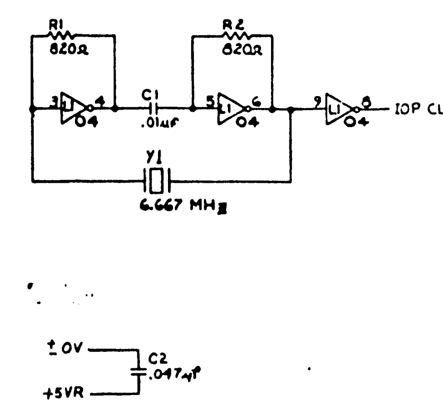
J45

S	±OV	15	±OV
R	MRI5	14	±OV
P	±OV	13	MGS5
N	PCBCS	12	±OV
M	±OV	11	PCBSI
L	PCBGS5	10	±OV
K	±OV	9	PCBRI5
J	MMCB1	8	±OV
H	±OV	7	MMCB2
F	MMP	6	±OV
E	±OV	5	MCOS
D	IMA	4	±OV
C	±OV	3	INIT5
B	IOPCLK	2	±OV
A	±OV	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	350-0039
J28,32,36,40,44,48	44 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 LABORATORIES, INC.

P0621 VS-05A

CPU/IO MOTHER BD. M/L

SEE CHART | E | 8508 | 2

8508 E

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

REV	DESCRIPTION	DATE
A	ORIGINATED PER ENG #1765 APPD.	10-14-82
1	REVISED PER ECO # 1791 APPROVED	11-4-82
2	REVISED PER ECO # 1920 APPD.	1-12-83

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

BY	DATE	APPROVED BY	DATE
DWG D. Smith	10-7-82	[illegible]	1-12-83
CHK			

BUILDING PCG2A
VS-95A
SEE LOCAL SPECIFICATIONS

TITLE CPU/IO MOTHER BD M/L

TEL. 12.43.8870
PROJ. #
MOD. #
PHASE

SCALE | SEE CHART | SIZE E | DRAWING NUMBER 8508 | REV 2

SHEET 2

LL3

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 THEREIN MAY NOT BE MADE PUBLIC WITHOUT THE WRITTEN CONSENT OF WANG LABORATORIES INC. IT IS LOANED FOR REASON THIS DRAWING IS IDENTIFIED BY WANG PART AND THE PHYSICAL CHARACTERISTICS OF THE COMPONENTS ARE AVAILABLE FROM THE DEMAND OF WANG LABORATORIES INC.

DO NOT SCALE

+5VR

R11 10K

R1 820Ω IOP0 LED1 D1 SILICON — CMERR-0 (17)
R2 820Ω IOP1 LED2 D2 SILICON — CMERR-1 (5)
R3 820Ω IOP2 LED3 D3 SILICON — CMERR-2 (15)
R4 820Ω IOP3 LED4 D4 SILICON — CMERR-3 (16)
R5 820Ω IOP4 LED5 D5 SILICON — CMERR-4 (13)
R6 820Ω IOP5 LED6 D6 SILICON — CMERR-5 (14)
R7 820Ω CM ERR LED7 D7 SILICON — CMPE (10) (7)
R8 820Ω CP HALT LED8 D8 SILICON — HALT (11) (9)
R9 820Ω READY LED9 D9 SILICON — LDOK (12) (5)
R10 820Ω POWER LED10 ±0V

Q1 2N5189
R12 330Ω
±0V

INIT (22) INITA (13)
JP1

+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 7438 (1,2,4,5,12,13,9,10)
L2 7438 (9,10,12,13,1,2,4,5)

(11) (12) (9) CPLD
(9) (13) (12) TRØ
(21) LD
(20) CM

SP12 CM BOOT
SP9 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

±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

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

8513-R0

JP1 (P1, P2)
J1 2 1 24 25
LED10 LED9 LED8 LED7
OSP7 OSP4 OSP8 OSP6 OSP5
OSP1 OSP10 OSP3 OSP12 OSP2 OSP11
C9 L1 C10 L2 C8 C4 C7 C3 C6 C1 C5 C2
R1 D1 R2 C2 R3 D3 R4 D4 R5 D5 R6 C6
LED1 LED2 LED3 LED4 LED5 LED6
J2 Q1
J3 1 2 3

J3: INITA (1,2,3)

J2 (16,15,14,13,12,11,10,9,8,7,6,5,4,3,2,1)
CPLD — CPLD
TRØ — TRØ
LDOK — LDOK
HALT — HALT
CMPE — CMPE

J1 (1,2,3,4,5,6,7,8,9,10,11,12,13,14,15,16,17,18,19,20,21,22,23,24,25,26)
CMERR-4 — CMERR-5
CMERR-2 — CMERR-3
CMERR-0 — CMERR-1
TRØ — CM
LD — INIT
+5VR — +5VR
±0V — ±0V

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

E-REV 0

REVISION	DESCRIPTION	DATE	APPROVED
0	ORIGINATED PER ECO 9	4/7/72	

WANG PART NO | DRAWING NO | DESCRIPTION

WANG LABORATORIES, INC. LOWELL, MASS.

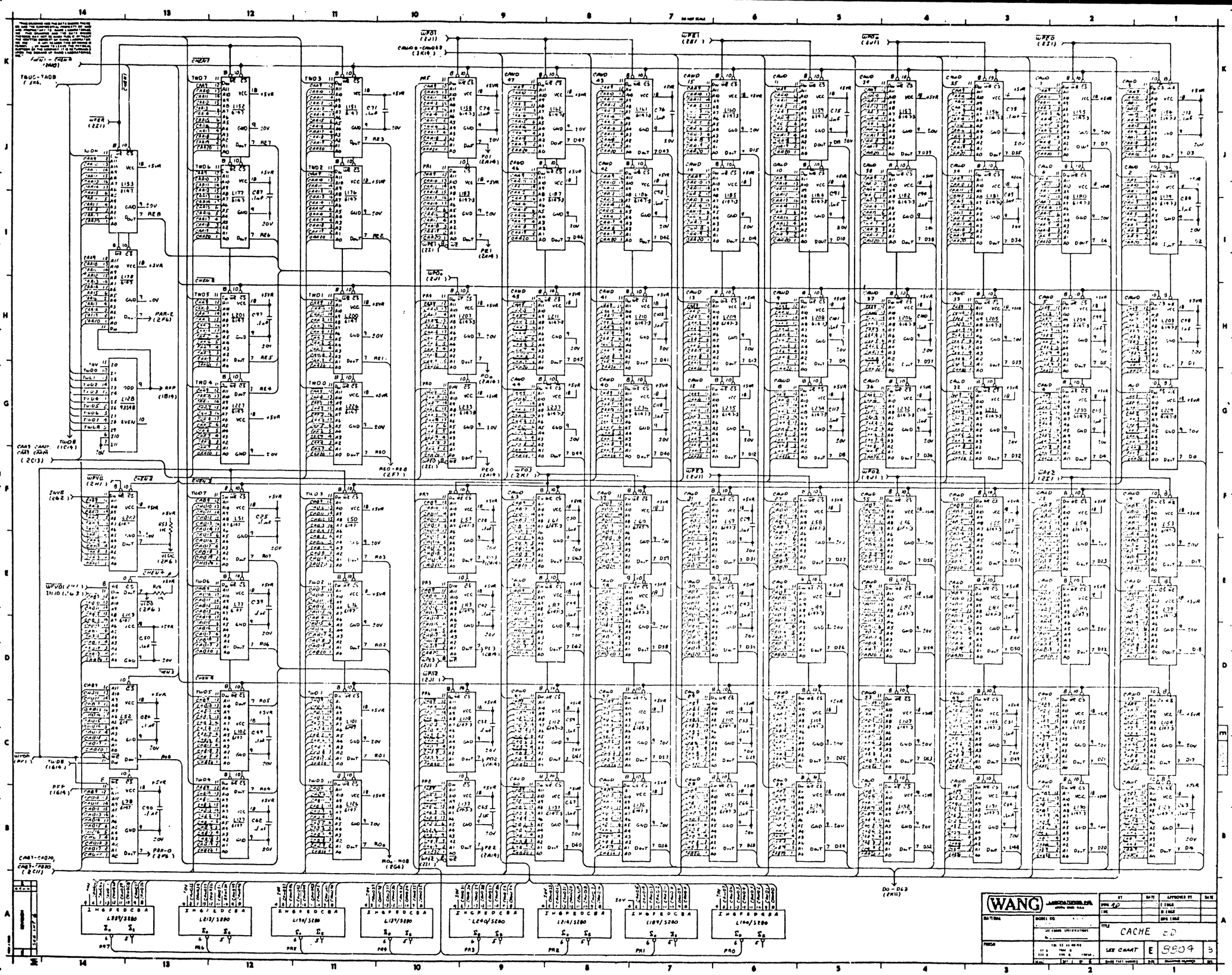
	BY	DATE	APPROVED BY	DATE
DWN	[illegible] DAVISON	3/1/72	ENGR J. GUNN	4/19/72
CHK	[illegible]	4/19/72	M ENGR	
			MFG ENGR	

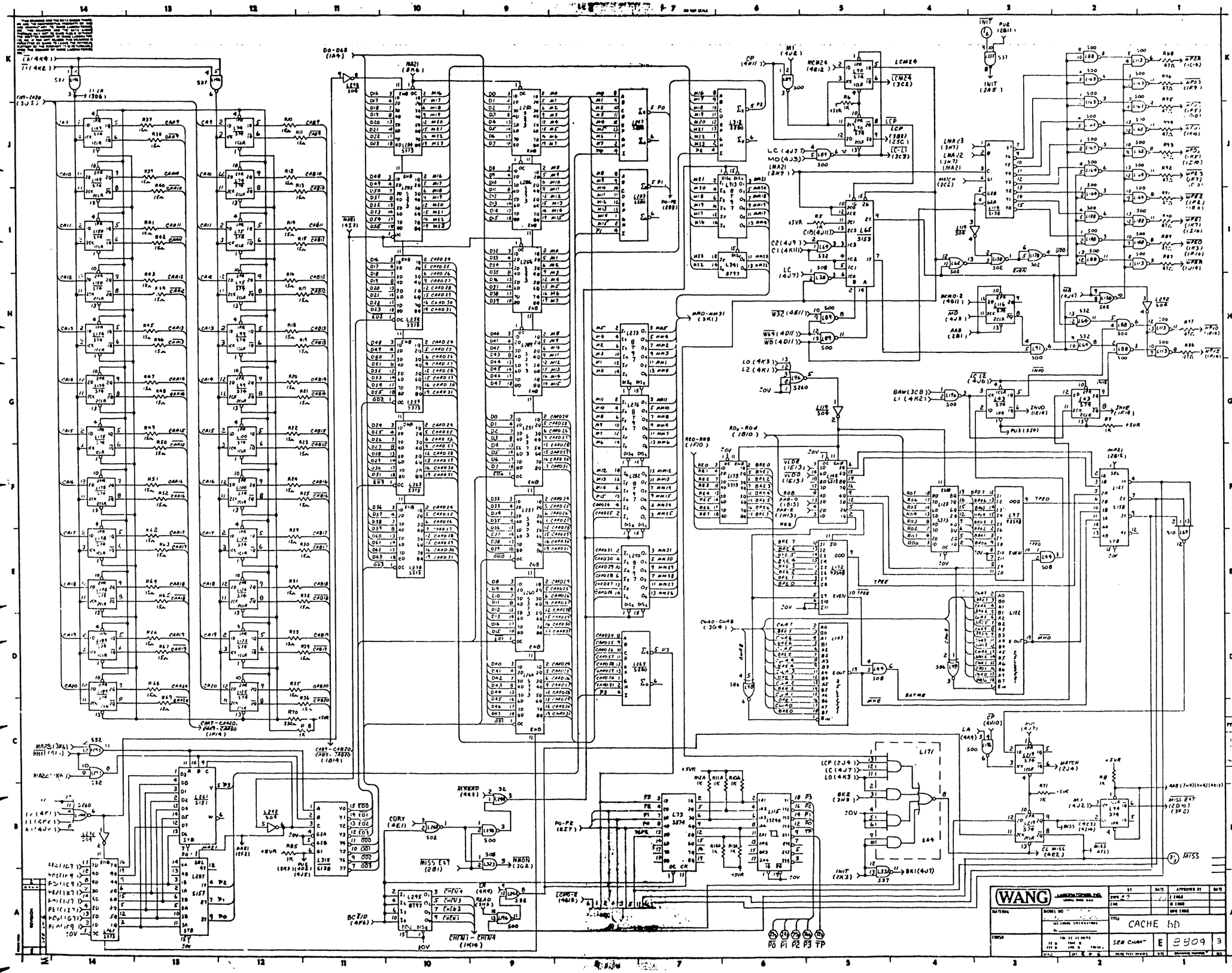
MATERIAL: MODEL NO FU622A VS-92A
ME ENGR SPECIFICATIONS
FINISH
TOL EX AS NOTED FOR 3 PLACE ± 1.14M FOR 2 PLACE ± .13M FOR 3 PLACE ± .013M FRACTIONS ± 1/32
SCALE NOT 1 OF 1

TITLE: FRONT PANEL BD

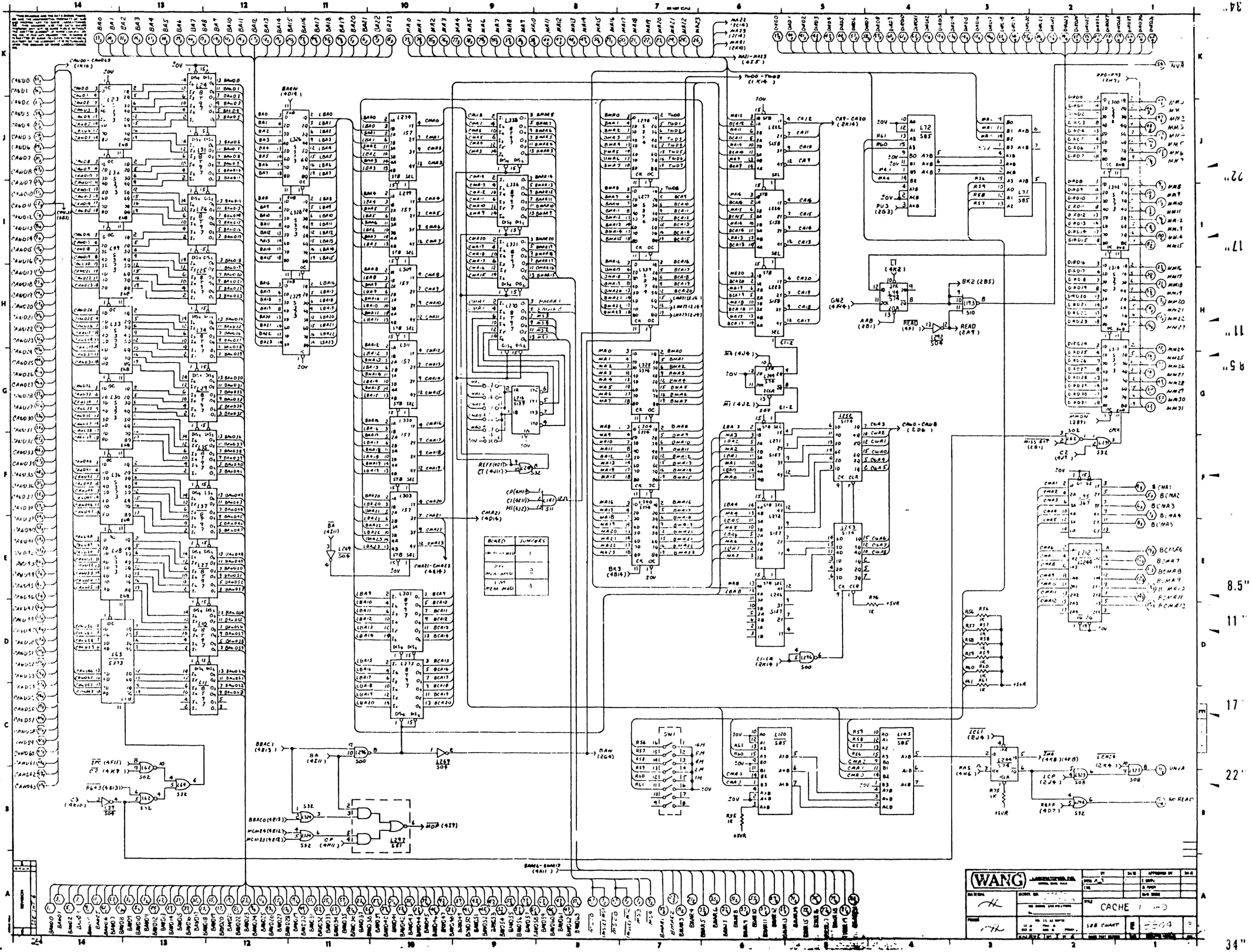
WANG PART NUMBER	REV	DRAWING NUMBER	REV
210-8513	D	8513	0

8513

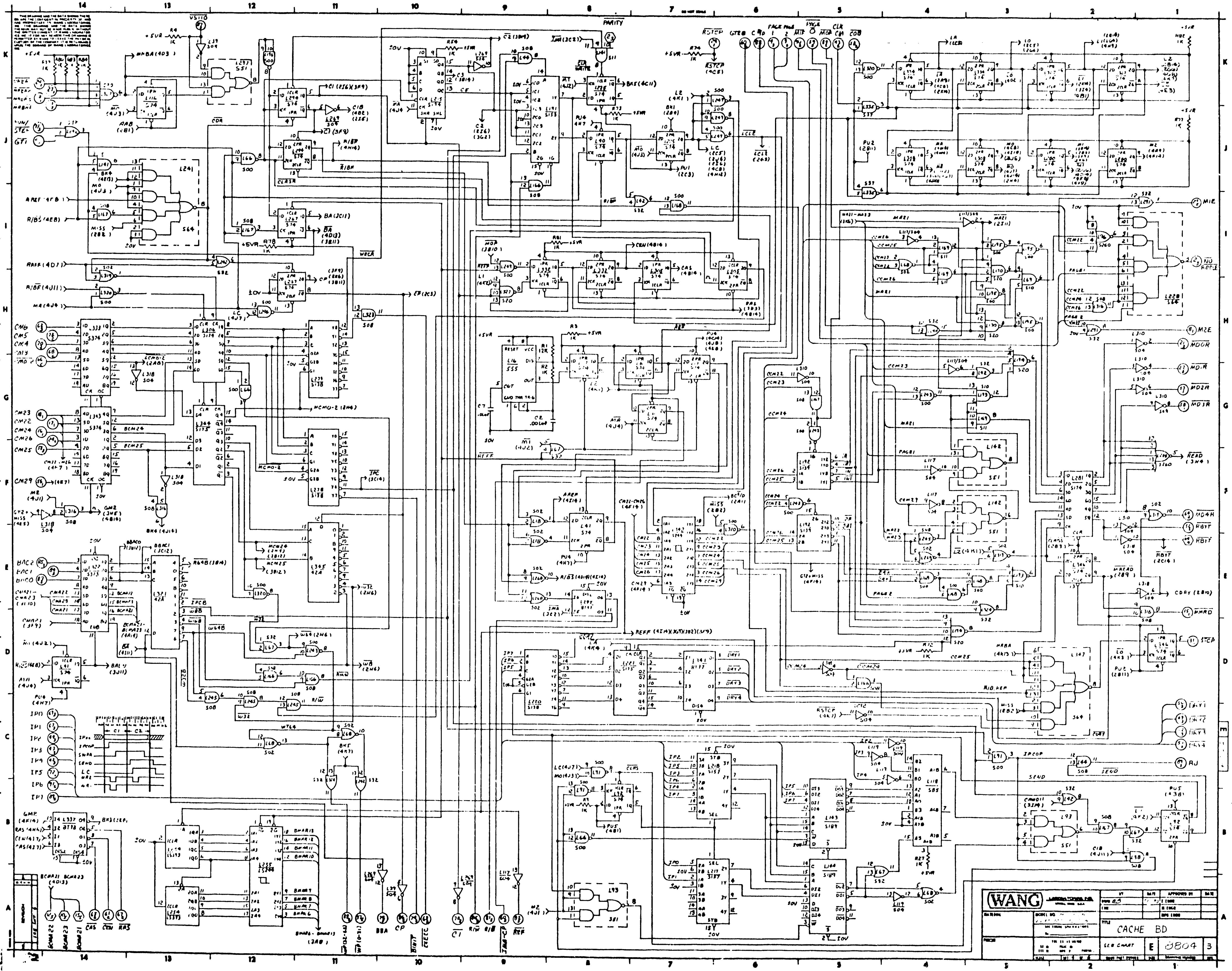

WANG
CACHE SD
SEE CHART
E
9804
3
L239/5280
L241/5280
L240/5280
L238/5280
L237/5280
L236/5280
L235/5280
L234/5280



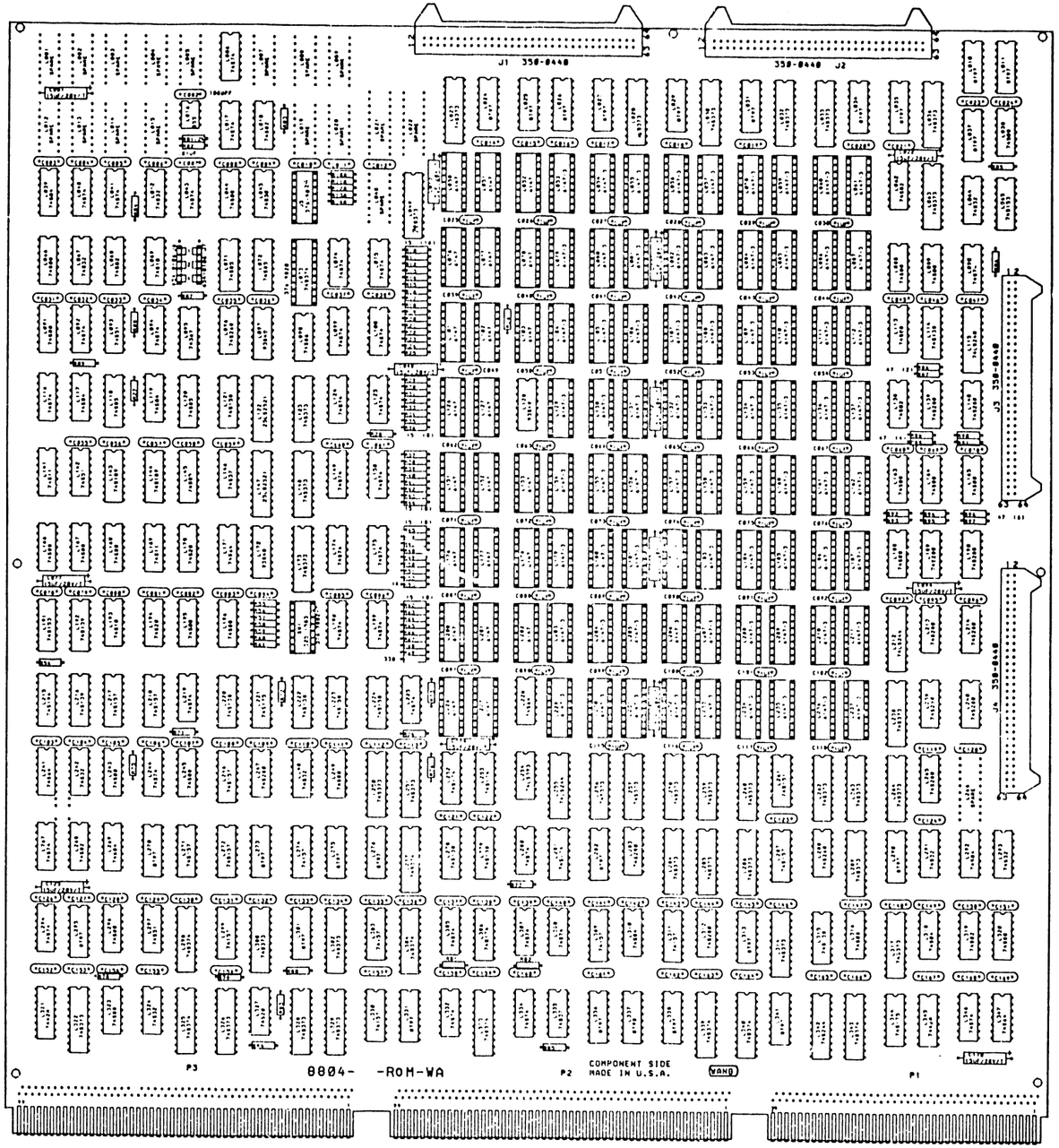
NN2


CA00 - CA03 (1K10)
CA00 - CA23 (4K10)
BARN (4D19)
BA0 BA1 BA2 BA3 BA4 BA5 BA6 BA7 BA8 BA9 BA10 BA11 BA12 BA13 BA14 BA15 BA16 BA17 BA18 BA19 BA20 BA21 BA22 BA23
MA00 MA01 MA02 MA03 MA04 MA05 MA06 MA07 MA08 MA09 MA10 MA11 MA12 MA13 MA14 MA15 MA16 MA17 MA18 MA19 MA20 MA21 MA22 MA23
MA22 (2C14)
MA23 (2C14)
MA01 (2K10)
MA21 - MA23 (4E3)
DMD00 DMD01 DMD02 DMD03 DMD04 DMD05 DMD06 DMD07 DMD08 DMD09 DMD10 DMD11 DMD12 DMD13 DMD14 DMD15 DMD16 DMD17 DMD18 DMD19 DMD20 DMD21 DMD22 DMD23
TWD0 - TWD8 (1K14)
BMA00 BMA01 BMA02 BMA03 BMA04 BMA05 BMA06 BMA07 BMA08 BMA09 BMA10 BMA11 BMA12 BMA13 BMA14 BMA15 BMA16 BMA17 BMA18 BMA19 BMA20 BMA21
BMAR0 BMAR1 BMAR2 BMAR3 BMAR4 BMAR5 BMAR6 BMAR7 BMAR8 BMAR9 BMAR10 BMAR11 BMAR12 BMAR13 BMAR14 BMAR15 BMAR16 BMAR17 BMAR18 BMAR19 BMAR20 BMAR21
BCA0 BCA1 BCA2 BCA3 BCA4 BCA5 BCA6 BCA7 BCA8 BCA9 BCA10 BCA11 BCA12 BCA13 BCA14 BCA15 BCA16 BCA17 BCA18 BCA19 BCA20
MM00 MM01 MM02 MM03 MM04 MM05 MM06 MM07 MM08 MM09 MM10 MM11 MM12 MM13 MM14 MM15 MM16 MM17 MM18 MM19 MM20 MM21 MM22 MM23 MM24 MM25 MM26 MM27 MM28 MM29 MM30 MM31
CA09 - CA20 (2K16)
CA00 - CA08 (1D06)
BOARD JUMPERS
1K 1K MEM MOD 1
2K 2K MEM MOD 2
4K 4K MEM MOD 4
CA00 - CA23 (4E14)
BBAC1 (4B13)
BBAC0 (4B13)
MCME8 (4E12)
MCME22 (4E12)
MDP (4E9)
BAMA0 - BAMA19 (4A11)
WANG
CACHE
SEB CHART

NN3


WANG
LABORATORIES, INC.
CACHE BD
E
8804
3
SCH CHART
PARITY
READ (3H4)
MIE
M2E
MDOR
MD1R
MD2R
MD3R
MD4H
RBYT
MMRD
CDRY (2B10)
STCP
RJ
SEND
IPCOP
REFF (4I14)(3G7)(3B2)(3J9)
R/W
BBA
CP
C1
REF
CAS
CEN
RAS
IP0
IP1
IP2
IP3
IP4
IP5
IP6
IP7
CM6
CM5
CM4
CM23
CM22
CM24
CM26
CM25
CM29

NN4



WANG

DWN	A 6				
CHK					
MODEL NO					
TITLE	CACHE BD				
SIZE	SCALE	E	8804		3

NN5

COMPONENT	TYPE	W.L PART NO
U1-5,7,8,10-15,17-22, 98, 266	SPARE	
U6,7,90-91, 93,94,95, 96,97,99,100, 116,120,126, 127,128,136, 137,138,139, 228,229,262, 264,266,267, 268,269,332, 333,336	74S74	376-0202
U10,11,26-27, 29,31,34,35, 37,45-52, 273,276,281, 290,292,301, 312,321,334, 338,341	8T97	376-0189
U16	355	376-0126
U18,65,68, 138,268,317	74S02	376-0199
U23,28,30,32, 33,36,99,103, 125,198,172, 230,250,251, 252,260,262, 264,289-296, 299,300,303, 315,317,322, 326,328,329	74S373	376-0306
U38,44,166, 167,245,314, 343	74S08	376-0200
U39,117,9, 243,244,310, 318	74S20	376-0197
U45	74S30	376-0198
U59-62,76-78, 101-103,124,41, 131-133,176, 178,200-202, 226,227	6167	SEE CHART
U58-61,79-82 100-102,129-131,158-162, 177-187,203-211,239-242, 244,247-252	6167-3	SEE CHART
U64,66,67, 242,291,293 316,C98	74S32	376-0205
U65-91	74LS73	376-0215
U68,88,89,90, 113-163-165 168,169,172, 174,203,247 296,320	74S00	376-0220
U69,193	74S10	376-0230
U71,72,80, 140,142	74S85	376-0259
U93,182,297	74LS51	376-0146
U95	74S47	376-0176
U96,288	74S250	376-0160A
U97,98,72	93S48	376-0346
U99	74S86	376-0271
U104,220,278, 279,328	74S138	376-0298
U105	74LS280	376-0277
U106,222,224	74S158	376-0301
U108,187	25LS2521	376-0317
U109,160/189, 191,214, 215,230,283 263,347,283	74S280	376-0246
U110,169	74S11	376-0237
U113,189	74S189	376-0349
U114,335	74S37	376-0296
U120,194,323	74S40	376-0210
U121,224,241, 247	74S64	376-0291
U122,216	74S138	376-0133
U123,215	74LS48	376-0289A
U125	74S194	376-0221
U127,214,216, 231,237,287	74S157	376-0217
U128,239	74S153	376-0230
U132,232,281, 286	74S174	376-0287
U134	74LS393	376-0317
U261	74S251	376-0316
U279,283,284 289,311,330	74S151	376-0084
U135,136,175, 215,233,237, 240,253,277	74S374	376-0305
U221,242	7442A	376-0000A
U237	M778	376-0185
U243	74S260	376-0338
U273	20PIN SOCKET	376-0020
U30,31,35-37, 39,114,125,183, 189-193,218-222, 235,187 280 311, 312,313,317	18PIN SOCKET	376-0016

TYPE	IC LOCATION	SPARES
74S00	L66	1
74S02	L138	1
	L18	2
	L319	1
74S04	L39	3
74S08	L38	2
	L146	1
74S10	L69	1
74S32	L42	1
	L298	1
	L291	1
	L293	1
74S37	L146	2
74S74	L40	1
74S86	L98	2
74S139	L216	1
8T98	L337	1

COMPONENT	TYPE	W.L PART NO
P2-3 (1,4,6,8,11,14,16,17, 20,22,24,27, 28,53-61, 71,85	1K OHM 5%	330-1011
R10-25, 27-32,44-69	15Ω 1/4W 5%	330-1016
R70	330Ω 1/4W 5%	330-2034
R86-97	47Ω 1/4W 5%	330-1048
R1	12K 1/4W 5%	330-4015
C1-3,22,48, 77,93,116,125, 170-176	15uF 20V (T)	300-4082
C2	.2 1uF, 50V	300-1908
C3-6, 8-12, 14-21,23,24, 31-38,45-47, 53-61,68-70, 78-86,93,95, 96,103-113, 119-124,126-143	.047 50V	300-1966
C7	.01uF 25V	300-1703
C25-30,39-44,49-52,54-57,71-76,87-92,97-102, 115-118	.1uF 50V	300-1930
QTY. 1	FACE PLATE	452-2892
QTY. 3	SCREW	650-2120
SW1	SET, RAM	376-9302
SW1	SPST 8POS	325-1583
J1-J4	40 PIN CONN	350-0440
J6	SKT, WIN	376-9068
	2 POS SHUNT	350-0506
J4,J7	6 POS HDR	654-0106

MNEMONICS	COORD
BAD 9X23	1K7
BACO-BA12	4B16
BBA	6A10
B-T	4A10
BANK BITS	3A11
BANK-WORD	3B6
BCMAI-BCMA12	3B1
BCMAI-BCMA12	6A16
BG	6A16
BMDI-BMD15	3J6
CE10	6A16
CE10	4K6
CK	6A10
CM2CE	6A10
CP	6A10
CSACM	4K5
CSB	4K5
CSE	4B16
CSEL-CM6	4J16
CM2E-CM16	4G16
CM29	4J16
D15M-D19M1	3K3
DB11-DB18	4C1
GTI	4J16
GT2B	4K6
INH CP	6A9
INH	2K1
INIT	2K3
IP0-IP7	4C16

MNEMONICS	COORD
MA1-MA13	3K8
MD28-MD31	4G1
MSR	4K5
MTR	4K5
MTS	4K5
MWD AM 31	3J1
MBA1-MBA16	4K16
MS1-MS4	3A3
NO HEAD	3B1
NO RIPPLE	4J1
P0-P3	4A6
PAGE 0	4K6
PAGE 1	4K6
PAGE 2	4K6
PARITY	4C8
PAS	6A16
RBST	5M1
REF	6A9
R/W	4A9
RJ	1A7
RUN/STEP	4J16
RU	4G1
SSTOP	4K7
STEP	4D1
TP	2A8
U-VA	3B1
VSYNC	4K13
WP(0-31)	4A11
WP(32-63)	4A11
M1E	4B1
M2E	4M1

MNEMONICS	SIGNAL
BANK 1	1A7
SYNC2	3A7
MS2EE1	3A7
MS1EE1	3A8
MS2D	3A8
MS2O	3A7

210	209	6167-3	6167
8864-A	8864	377-0418	377-0418

J5: ±0V, BCMA21, BCMA22, BCMA23, ±0V

J4: ±0V, NO READ, CAWD44, CAWD43, CAWD46, CAWD47, CAWD12, CAWD13, CAWD14, CAWD15, DRD12, DRD13, DIRD14, DIRD15, DIRD16, DIRD17, CAWD48, CAWD49, CAWD50, CAWD51, CAWD16, CAWD17, CAWD18, CAWD19, CAWD52, CAWD53, CAWD54, CAWD55, CAWD20, CAWD21, CAWD22, CAWD23, DIRD18, DIRD19, DIRD20, DRD21, DIRD22, DIRD23, CAWD56, CAWD57, CAWD58, CAWD59, CAWD24, CAWD25, CAWD26, CAWD27, CAWD60, CAWD61, CAWD62, CAWD63, CAWD28, CAWD29, CAWD30, CAWD31, DIRD24, DIRD25, DIRD26, DIRD27, DIRD28, DIRD29, DIRD30, DIRD31, RBST

J3: ±0V, PARITY, ±0V, BCMA1, BCMA2, BCMA3, BCMA4, BCMA5, BCMA6, BCMA7, BCMA8, BCMA9, BCMA10, BCMA11, BCMA12, ±0V, ±0V, ±0V, FP, P0, P1, P2, P3, CAWD4, CAWD5, CAWD6, CAWD7, CAWD36, CAWD37, CAWD38, CAWD39, CAWD0, CAWD1, CAWD2, CAWD3, DIRD0, DIRD1, DIRD2, DIRD3, DIRD4, DIRD5, CAWD32, CAWD33, CAWD34, CAWD35, CAWD8, CAWD9, CAWD10, CAWD11, CAWD40, CAWD41, CAWD42, CAWD43, DIRD6, DIRD7, DIRD3, DIRD9, DIRD10, DIRD11

J2: BAWD 8, BAWD 9, BAWD 10, BAWD 11, BAWD24, BAWD25, BAWD26, BAWD27, BAWD28, BAWD29, BAWD34, BAWD35, BAWD38, BAWD39, BAWD40, BAWD41, BAWD42, BAWD43, BAWD44, BAWD45, BAWD46, BAWD47, BAWD60, BAWD61, BAWD62, BAWD63, BAWD54, BAWD55, BAWD56, BAWD57, BAWD58, BAWD59 — ±0V

J1: BAWD 0, BAWD 1, BAWD 2, BAWD 3, BAWD 4, BAWD 5, BAWD 18, BAWD 19, BAWD 20, BAWD 21, BAWD 22, BAWD 23, BAWD 12, BAWD 13, BAWD 14, BAWD 15, BAWD 16, BAWD 17, BAWD 48, BAWD 49, BAWD 50, BAWD 51, BAWD 52, BAWD 53, BAWD 30, BAWD 31, BAWD 32, BAWD 33, BAWD 34, BAWD 35, BAWD 6, BAWD 7 — ±0V

P3: ±0V, +5VR, +5VR, +5VR, RUN/STEP, RU, SYSTRB, CE10, BAC2, BAC0, BAC1, R/B, REF, MA6, MA7, MA4, MA5, MA2, MA3, MA0, MA1, UNVA, BBA, IP0, ET, IP1, IP2, ±0V, ±0V, CM6, TRM-CP, ±0V, CM25, PAGE0, DRY4, DAT3, DRY2, DAT1, MM2, MM3, MM0, MM1, IP3, IP4, IP5, IP6, IP7, BA6, BA7, BA4, BA5, BA2, BA3, BA0, BA1, MRBA4, MRBA3, MRBA2, MRBA1, MM6, MM7, MM4, MM5, WDOR, MDIR, BA14, BA15, BA12, BA13, BA10, BA11, BA8, BA9, MM10, MM11, MM8, MM9, BA22, BA23, BA20, BA21, PAGE2, PAGE1, NO RIPPLE, ±0V

P2: ±0V, +5VR, +5VR, +5VR, BA0, BA1, BA4, BA5, BA2, BA3, IP6, IP5, IP7, IP4, WP(0-31), WP(32-63), R/W, CP, BMAR20, WE, BMAR8, MM15, BMAR18, MM14, BMAR17, MM13, BMAR16, MM12, BMAR15, BSHIFT, BMAR14, CM5, MM30, BMAR13, CM4, MM28, BMAR12, CM3, RAS, CM0-2, CAS, MD4R, CHECC, ±0V, CEN, CM6, BMAR11, GT2B, BMAR10, COB, ±0V, BMAR9, ±0V, BMAR8, RBST, MA9, MA8, MA5, MA4, MA2, MA3, ±0V, CLKIM, GTI, ±0V, MA11, MA10, BMAR7, MA9, BMAR6, MA8, BMAR5, MM18, MM19, MM16, MM17, M1E, BMAR4, CM26, BMAR3, MM22, MM23, MM20, MM21, ±0V, MS4, MS3, (MS1E) MS2, (MS1E) MS1, INIT, ±0V

P1: +5VR, MM26, MM27, MM24, MM25, ±0V, MD3R, MD2R, MD1R, MD0R, ±0V, MD3R, CM29, ENVA, MM31, MM28, MM29, ±0V, STEP, MA22, MA23, MA20, MA21, MA18, MA19, MA16, MA17, CM22, CM23, MRRD, CM24, M2E, +5VR, ±0V, +5VR, ±0V

±0V, +5VR

C1 15uF 20V(T), C13 15uF 20V(T), C22 15uF 20V(T), C45 15uF 20V(T), C17 15uF 20V(T), C96 15uF 20V(T), .001uF 50V, .047uF 50V, C3-6,8-12,14-21,23,24,31-38,45-47,53-61,68-70,78-86,93,95,96,103-113,119-120,126-143, C116 15uF 20V(T), C125 15uF 20V(T), C170 15uF 20V (T), C171 15uF 20V (T), C172 15uF 20V (T), C173 15uF 20V (T), C174 15uF 20V (T) — ±0V

EREV

A	ORIGINATED PER ECO#17880 AND ECO# 17881 DTD 12/6/78	MJ	12/6/78		
B	REVISED PER ECO#17880 AND ECO# 17881 DTD 12/6/78	MJ	12/6/78		
C	REVISED PER ECO#17880 AND ECO# 17881 DTD 12/6/78	MJ	12/6/78		
D	REVISED PER ECO#17880 AND ECO# 17881 DTD 12/6/78	MJ	12/6/78		

WANG — DRAWN BY: MJ 11/6/78; CHK'D BY: 11/6/78; APPROVED BY: 11/6/78

SIZE: B — TITLE: CACHE BD — SEE CHART — DWG NO: 3804 — REV: 3

NN6

POWER DIST. BOX

FILTER BOX

FILTER
RE-0283 30C
30 AMP

FILTER
CORCOM 80IS LOAD
EMMI

LINE (TOP) LOAD (BOT)

25A BRKR

BLK #12
RED #12
GRN #16
BLK #14
RED #14
GRN #18
BLK #16
RED #16
WHT #18
BLK #18
RED #18

COMM PLUG
AMP
150-2125
4 PIN

6GA JACKETED POWER CORD 400 HZ

TYPE 50
13/8
CABLE

BLK
RED
WHT
GRN

15A 150V

FRONT VIEW (TERMINAL PINHOLES)

6 COND PLUG
(HUBBELL #2711
OR EQUIV.)

ORD
ON
OFF LEDS

LED BLK
ON RED
OFF GRN

123 COMM

78 COMM

TO FANS (2813)

WANG PWR SUPPLY CONN

WANG POWER SUPPLY

RED
YEL
BLU/BLK
BLU
ORG
YEL/BLK
ORG

C2 4MF

C4 30MF
C5 20MF
C1 7300MF

15A 1B

T1
MMC-8150-1 (60HZ)
MMC-8151-1 (50HZ)

FAN 115VAC

HEAT SINK

D3 IN1183A
D4
IN1183A
D1 IN1202A
D2 IN1202A

Q3 2N6282
Q1 2N6547
Q2 2N6285

J10

+15V A
+5VB
-5VB
+5VA
-12VA
+12VB
-15V B
+5VA MON 1
+5VB MON 1
FN+5VA
FN+5VB

P10

-15V B
TPB(GRN)
-5VB
-5VA
-12V A
TPA(GRN)
+12V A 10.3A
+12VA MON BLU
+12VB
+12VB MON BLU
INIT
OFF PB
ON PB
PB COM
LED COM
ON LED
OFF LED
EN+5VB
EN+5VA
+5VA MON
+5VB MON

C3 30MF
C6 30MF
C5 20MF
20V

7612
(WILL BE 7812)

+5VB
-5VB
20V
+5VA
76-10

+12VB
INIT

+5VA MON 1
+5VB MON 1

FN+5VA
FN+5VB

+5VA SWITCH REG
+5VB SWITCH REG

FAN

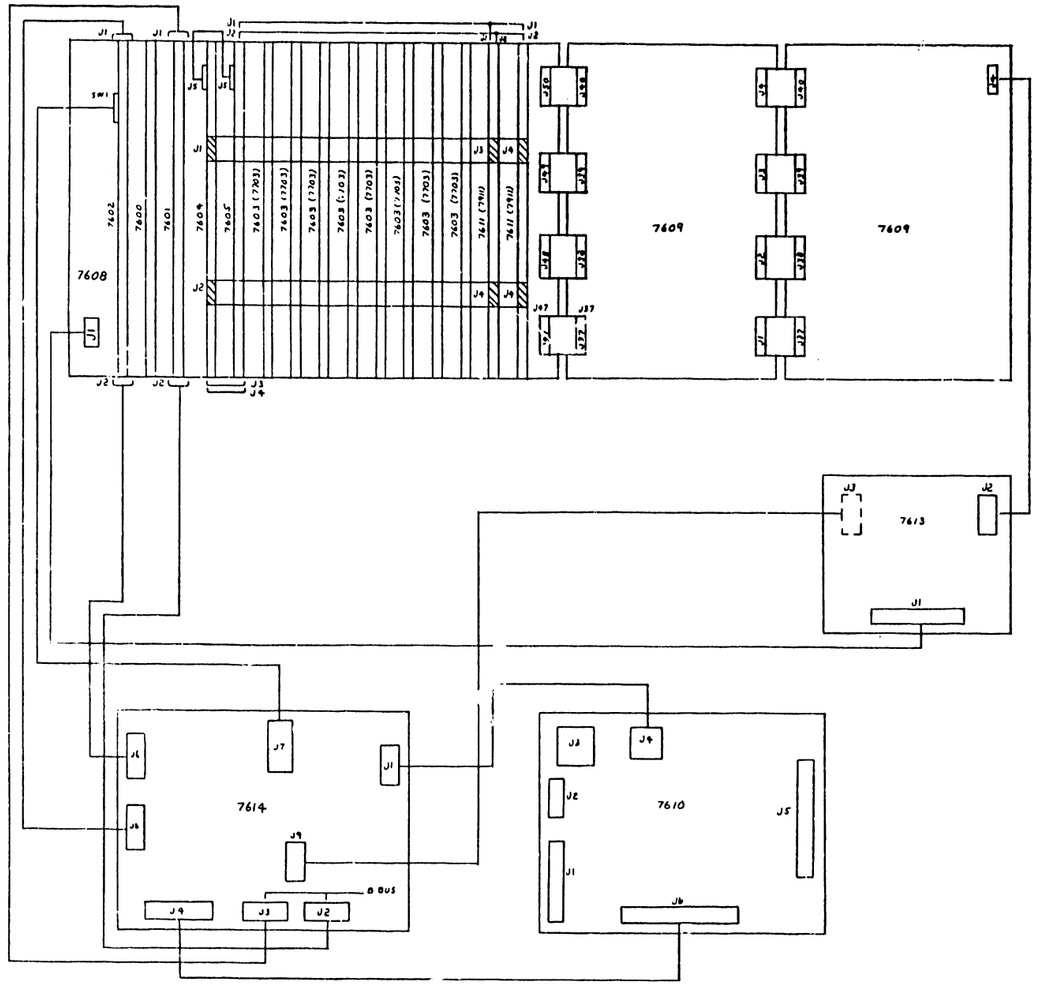
TB1
TB2
AC
PWR

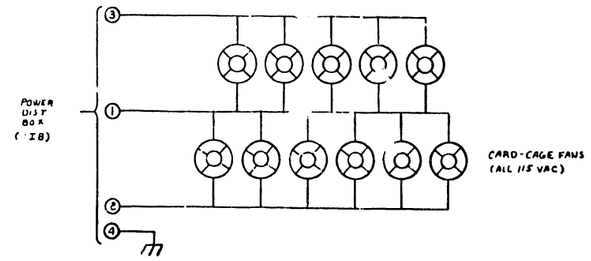
WANG POWER SUPPLY TO CHASSIS GND

WANG POWER SUPPLY

C1 C2 T1 C3 C4 C5
Q3 HEAT SINK Q2 Q1 D4 D3 D2 D1
J1-J7
COMM 10
COMM 9
COMM 8
COMM 7
COMM 1
7612

WANG LABORATORIES, INC.
VS-100
INTERCONNECTION DIAGRAM
7608-909
E
7608-900
0





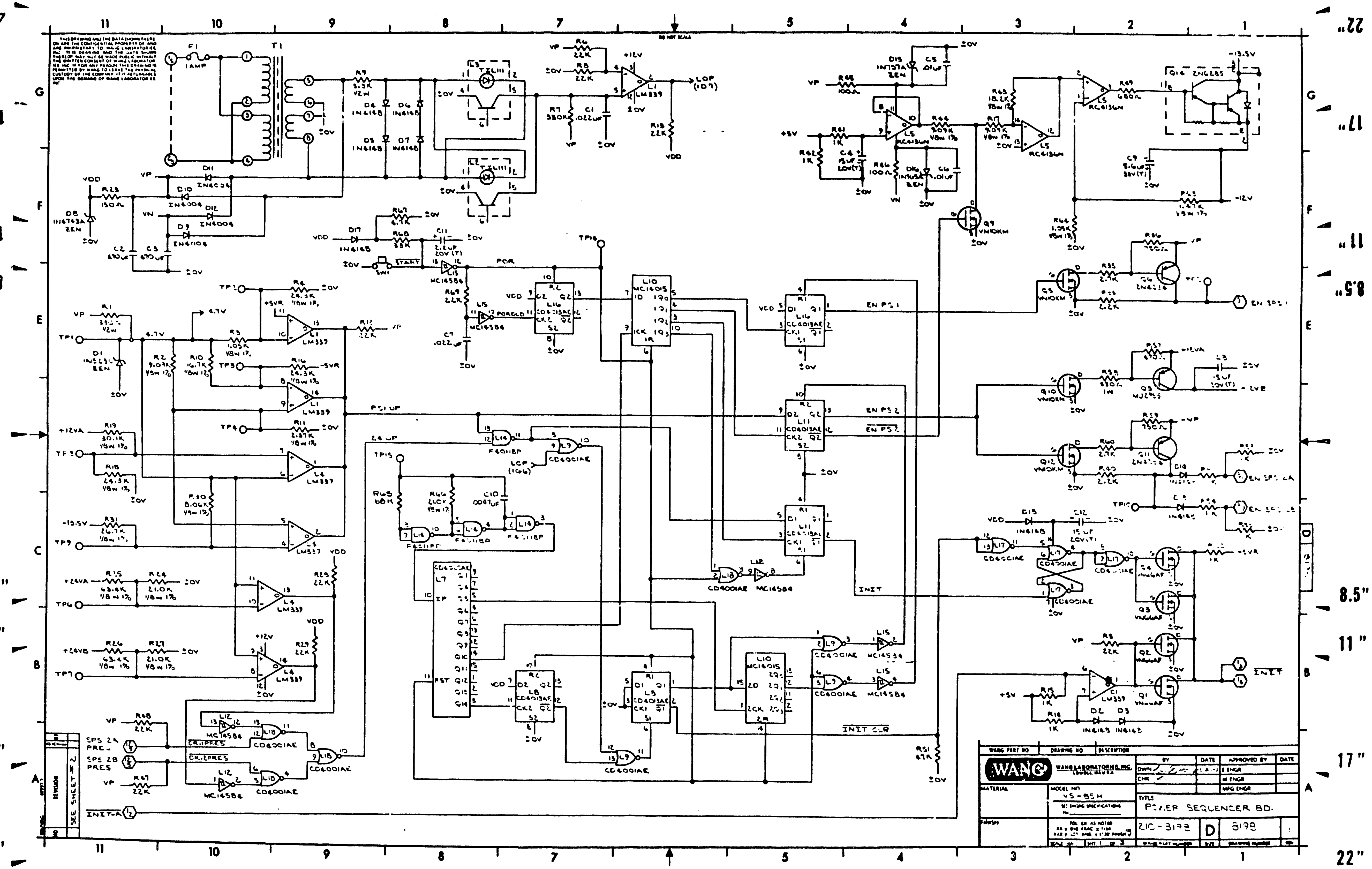
VECTOR GRAPHIC, INC.

VS-100

INTERCONNECTING DIAGRAM

7608-900 E 7608-900 O

PP2



POWER SEQUENCER BD.
WANG LABORATORIES, INC. LOWELL, MASS.
MODEL NO VS-85H
210-3178
D
3178
DO NOT SCALE
SEE SHEET # 2
F1 1 AMP
T1
LOP (1D7)
POR
PORCLD
START
SW1
PS1 UP
24 UP
LCP (1G6)
EN PS1
EN PS2
INIT
INIT CLR
INIT-A
SPS 2A PRES
SPS 2B PRES
CR.1PRES
CR.2PRES
EN SPS 1
EN SPS 2A
EN SPS 2B
LM339
RC4136N
MC14015
MC14584
CD4013AE
CD4001AE
CD4020AE
F4011BP
VN10KM
VN66AF
Q14 2N6285
-13.5V
-12V
+12V
+5V
+5VR
-5VR
+12VA
+24VA
+24VB
-15.5V
VDD
VP
VN

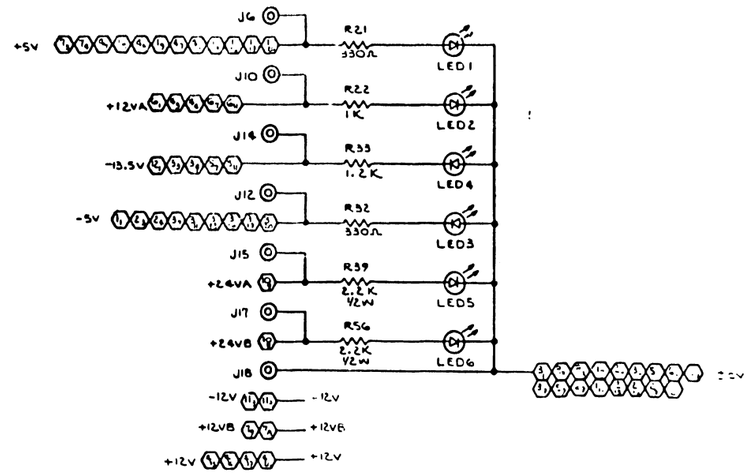
QQ1

THIS DRAWING AND THE DATA SHOWN THEREON, ARE THE CONFIDENTIAL PROPERTY OF WANG AND ARE FURNISHED TO WANG LABORATORIES, INC. THIS DRAWING AND THE DATA SHOWN THEREON MAY NOT BE USED FOR, OR DISCLOSED TO, ANY PERSON, FIRM OR CORPORATION FOR MANUFACTURE WITHOUT THE WRITTEN CONSENT OF WANG LABORATORIES, INC. IT IS TO BE RETURNED UPON REQUEST AND IN ANY EVENT UPON COMPLETION OF THE USE FOR WHICH IT WAS LOANED.

TYPE	I.C. LOC	SPARE
MC14584	L12	3
	L15	2
RC4136N	L5	1

VENDER NO	WANG NO	POWER SOURCE	POWER PWR	POWER GND
LM339	376-0240	VP	3	12
CD4001AE	376-0367	VDD (W)	14(R)	7(W)
F40118P	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	376-0425	*	*	*

* SHOWN IN SCHEMATIC



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

REVISIONS			
A	ORIGINATED PER DWR# 2244 APPD: A 11/1/79		
B	REVISED PER DCR-R 00179 APPD: A 12/1/79	1	
C	REVISED PER ECO # 33547 APPD: [illegible]	1	

E REV
1

WANG PART NO	DRAWING NO	DESCRIPTION

WANG LABORATORIES, INC. LOWELL MA USA

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

MATERIAL — MODEL NO: VS-85H — WI ENGRG SPECIFICATIONS No.

FINISH — TOL EX AS NOTED

TITLE: POWER SEQUENCER BD.

WANG PART NUMBER: 210-8198 | SIZE: D | DRAWING NUMBER: 8198 | REV: 1

SCALE: NONE | UNIT: 2 OF 8

QQ2

WANG LABORATORIES, INC. RUN DATE: 09/26/84 09:26

»»»»» ELECTRICAL PARTS LIST «««« SHEET 3 OF 3 PAGE 1

(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: 333670

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	300-1927-	.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
R40					
R35	330-3028-	2.7K	RES FIXED METAL FILM 1/4W 5% 200PPM		2
R60					
R67	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

BOARD NO. & TITLE: C8198 POWER SEQUENCER BOARD SCHEMATIC REVISION (S): 01 SHEET OF PAGE 2

* REF. DES.	* WANG PART NO.	* VALUE/TYPE *	DESCRIPTION	* DRAWING NO. *	QTY. *
R51	330-4040-	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
R56					
R9	331-3034-	3.3K	RES FIXED 1/2W 5%		1
R58	332-2034-	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-	10.1K	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-	18.2K	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
J14					
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 *LOW		1
LED1 - LED6	370-0058-	LED	LED PCB RIGHT ANGLE DIFFUSED RED 3MCD 13/4		6
Q6	375-1024-	2N4234	TSTR PNP TO-39 1W 40V 250MA		2
Q11					
Q13	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					
Q12					
Q1 - Q4	375-1125-	VN66AP	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					

BOARD NO. & TITLE: C8198 POWER SEQUENCER BOARD SCHEMATIC REVISION (S): 01 SHEET OF PAGE 3

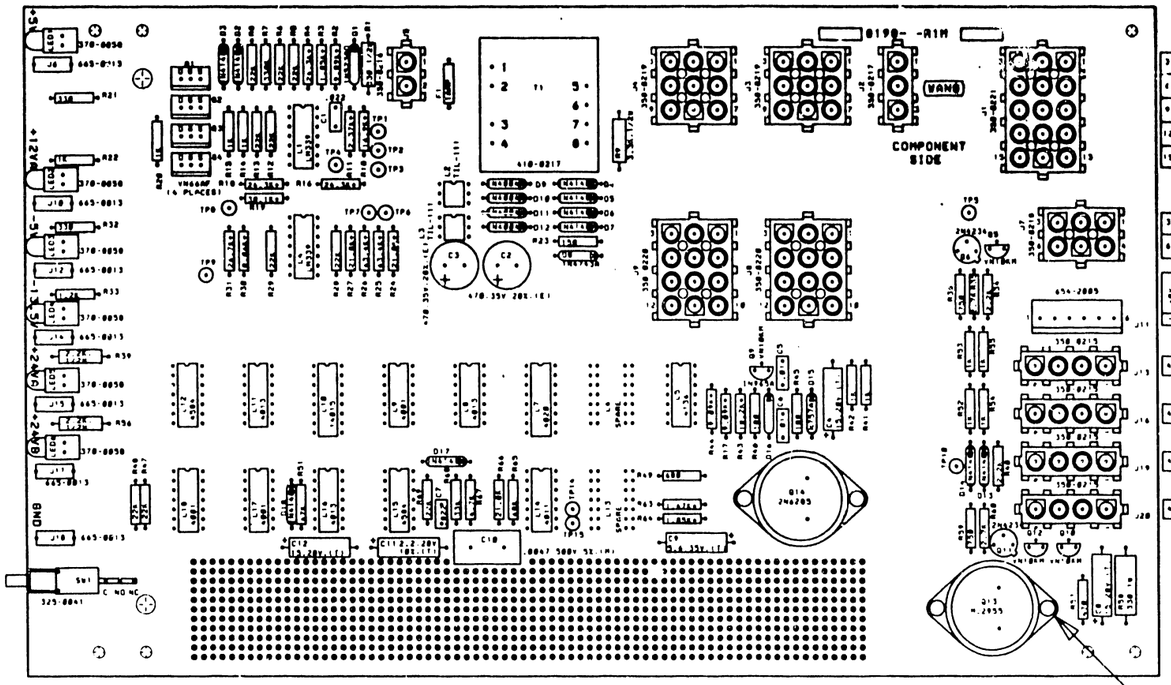
* REF. DES.	* WANG PART NO.	* VALUE/TYPE *	DESCRIPTION	* DRAWING NO. *	QTY. *
L9	376-0367-	4001	CMOS IC QUAD 2-INPUT NOR GATE		3
L17 - L18					
L7	376-0369-	4020	CMOS IC 14-STAGE RIPPLE-CARRY BINARY COUNTER/DIVI		1
L14	376-0375-	4011	CMOS IC QUAD 2-INPUT NAND GATE		1
L6	376-0425-	4136	IC QUAD HIGH-PREFORMANCE OP AMP		1
L8	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	380-1814-	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-	1N4741A	DIO ZENER 13V 1W 5% DO41		1
D16	380-2116-	1N965A	DIO ZENER 15V 400MW 10% DO7		1
D1	380-2147-	1N52300	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 - P8	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 PCMNT CBMP		12
TP14 - TP15					
J5	665-8813-	2 PIN	JACK, 2 PIN		7
J10					
J12					
J14 - J15					
J17 - J18					

*** END-OF-REPORT ***

WANG	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: POWER SEQUENCER BD.			
	SEE SHEET SPECIFICATIONS NO.				
FINISH	TOL EX AS NOTED .XX ± .040 FRAC ± 1/64 .XXX ± .005 ANG ± 1° 30' FRACTION	210-8198	C	8198	1
	SCALE	WANG PART NUMBER	SIZE	DRAWING NUMBER	REV

QQ3

"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."



652-2005 LOCK-NUT 4-40
653-2009 NYL FLAT WASH.#4

451-3704
PANEL,P.C.BOARD

650-2120
4-40X3/8
PAN HD PH SEMS

P.C.A. 210-8198

SCREW,PN HD,6-32 X 1/2", WPN 650-3172
WASH,FLAT,#6, WPN 653-3000
WASH,LOCK,#6, WPN 653-3000
NUT,HEX,6-32, WPN 652-3000
(4 PLACES)

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.

	MRM	JRG	BMH	AII	AII
CHECKER			JDL		
REVISION	DWR#E2244	DCR-R00179 DCR#00446	ECO#333470	ECO#34003	ECO#34048
NO.	A \ A	B \ B	- \ -	- \ 2	- \ 3

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

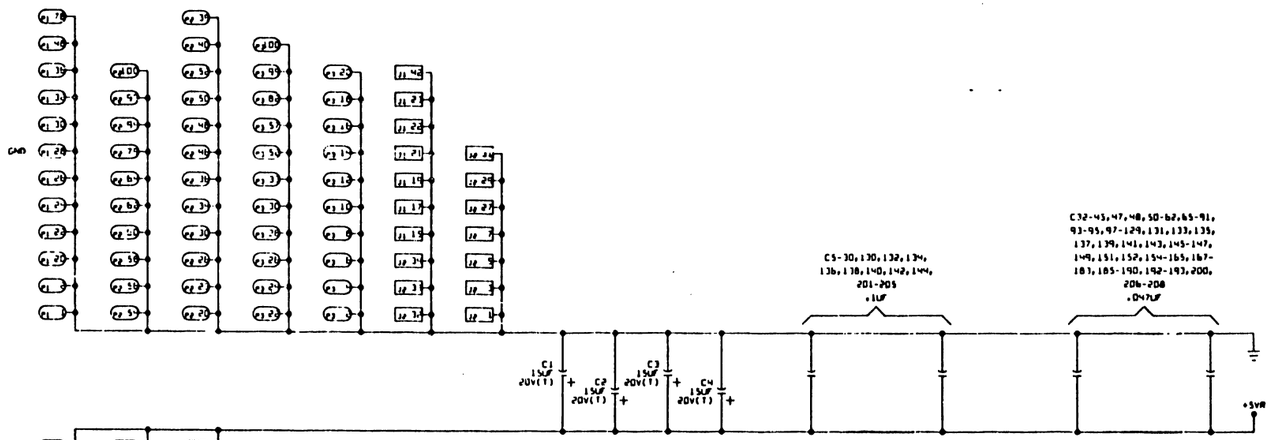
WANG PART NUMBER

N

QQ4

NOTES

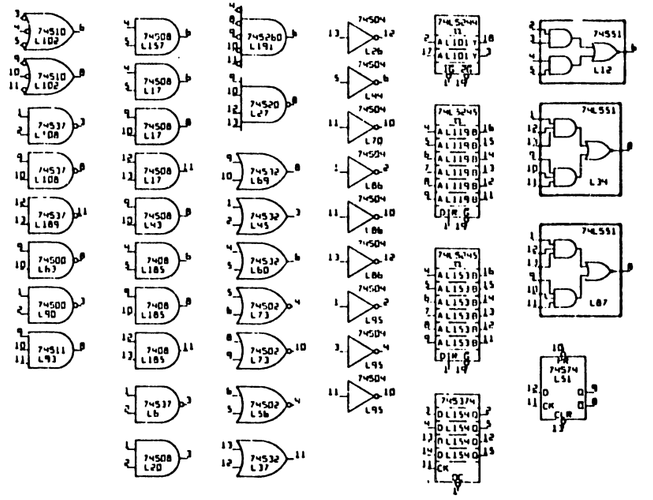
1. ALL RESISTOR VALUES IN OHMS.
2. ALL CAPACITOR VALUES IN MICROFARADS UNLESS OTHERWISE INDICATED.
3. ALL RESISTORS 1/4W 5% UNLESS OTHERWISE INDICATED.



MNEUMONIC	COORD
ATNRO	3J14
ATNR1	3J14
ATNR2	3J14
ATN	3J14
BCCM	2B14
BCM0-BCM7	4F14
BCCR1	3F14
BCCRM	3G14
BCM	2B14
BCMSW	3F14
BDEBUG	3G14
BENTRY	3J14
BEYBC	3G14
BMM/BMRX	3H1
BMM	3H1
BMACCOV	3G14
BYO	3F14
CLKA	2H1
CLKB	2H1
CLKCM	2H1
CLKMC	2H1
CLMCNT	5E14
CMPF	2K1
CM0-CM4b	7E1
CM0-7	5C1
CM22+23	7G1
CM22	7G1
CM23	7G1
CM7	5C1
COB	2J1
CCCM	2B14
GT1	2D1
GT2	2D1
GTZB	2E1
HALT	2A10
HALTENB	2C14

MNEUMONIC	COORD
INVR	3J14
IO	3J14
LLO+INTT	5E14
LLEN2	2J1
LLICO-LLIC13	5J1
LLMO0-LLMO7	5D1
MBY	2B14
MISS	2D13
MMPT	3E14
NOPARITY	7A10
OVF	3H14
P2Q	5E1
RAO-RA13	4C14
RDO-RD7	5B1
RUN/STEP	2D14
R/W	3B14
STEP	2B14
SU/RAM	7K6
TCMO-TCM7	7K14
TCMPO	7K11
TCMP1	7K11
TFF	2D14
TPTS	5H14
TWAPO	3G14
TTA	2E1
TTO	2F1
TT1	3G14
TT2	2F1
TTO	3G14
TT1	3G14
TT2	3J14
WCS2	5H1
WP	5G14
16DMS/ 20DMS	2K6

SPARES



REV	BY	REVISION
0	JSW 3/28/83	ORIGINATED PER ECO NO. 21656 APPRV
1	JSW 4/22/83	REVISED PER ECO NO. 25830 APPRV
2	JSW 7/20/83	REVISED PER ECO NO. 29457D APPRV
3	JSW 1-4-84	REVISED PER ECO NO. 33149 APPRV
4	AAM 4-23-84	REVISED PER ECO NO. 32176D CHKR
5	PGD 8-8-84	REVISED PER ECO NO. 32920 CHKR

E REV 0 N

WANG LABORATORIES, INC.

SCHEMATIC DIAGRAM

TITLE: CONTROL MEMORY

MODEL NUMBER: PB2VS-110

WANG PART NUMBER: 210-8204

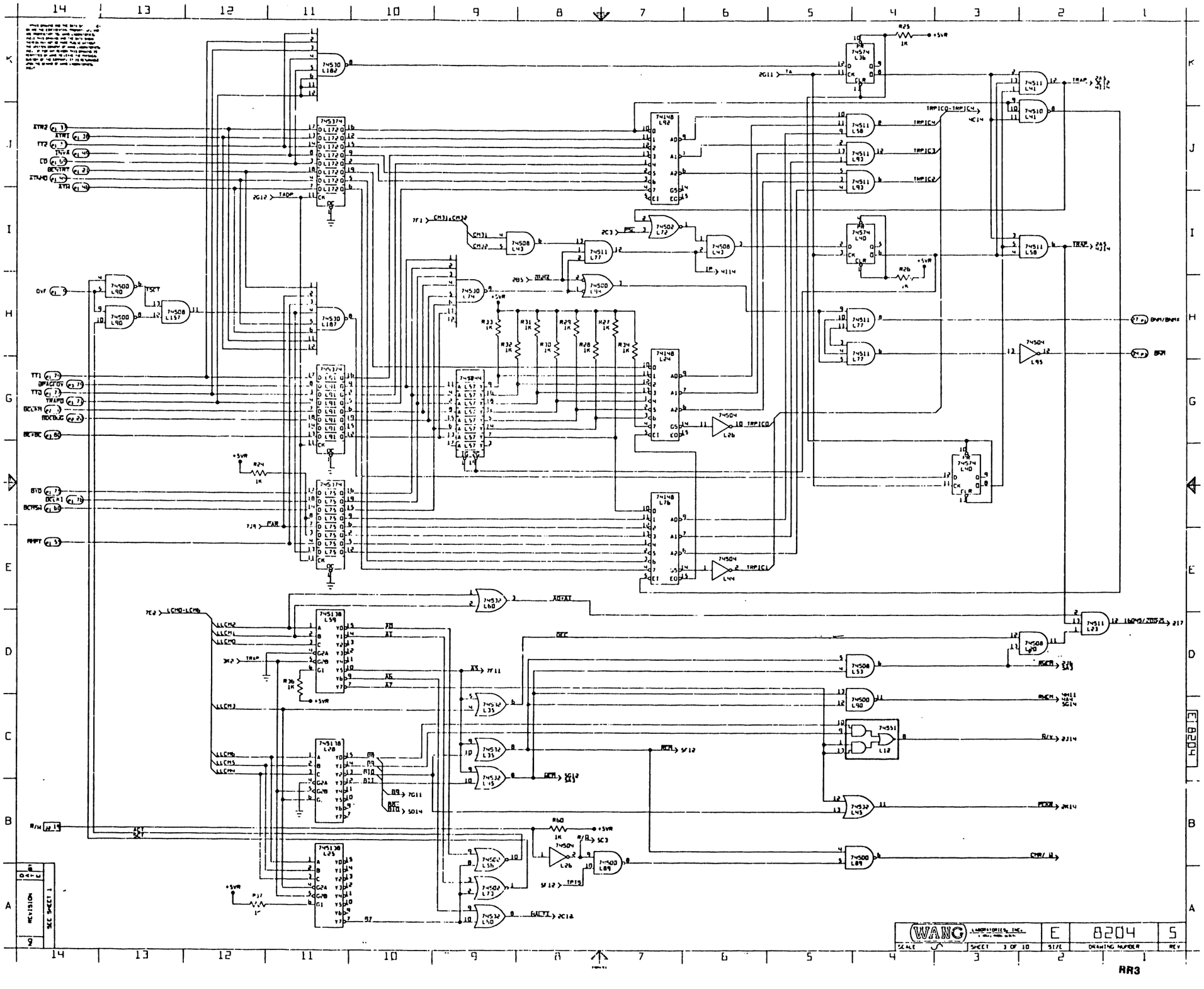
DWN JSW | CHK | ENG JS | DIR

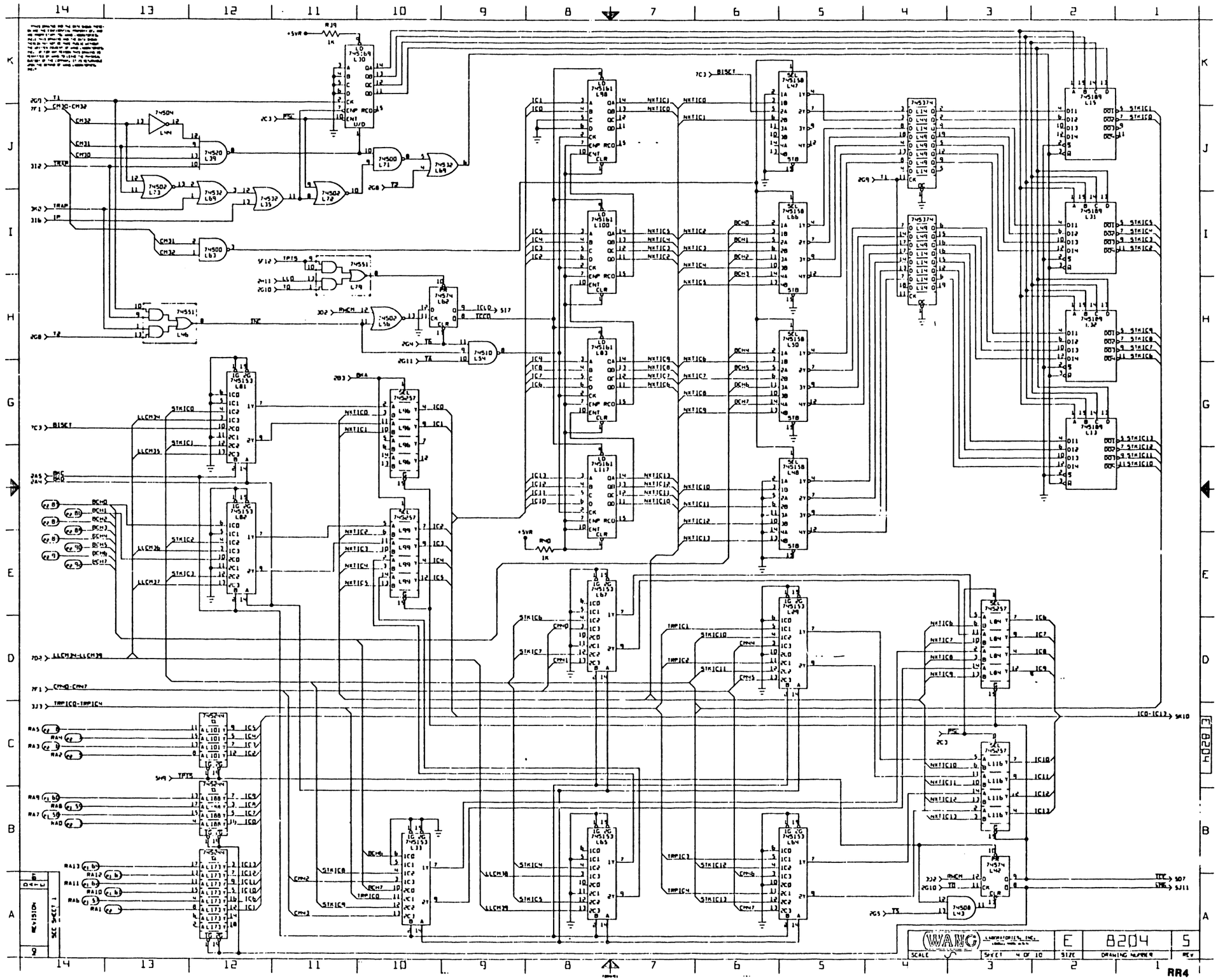
SCALE | SHEET 1 OF 10 | SIZE E | DRAWING NUMBER 8204 | REV 5

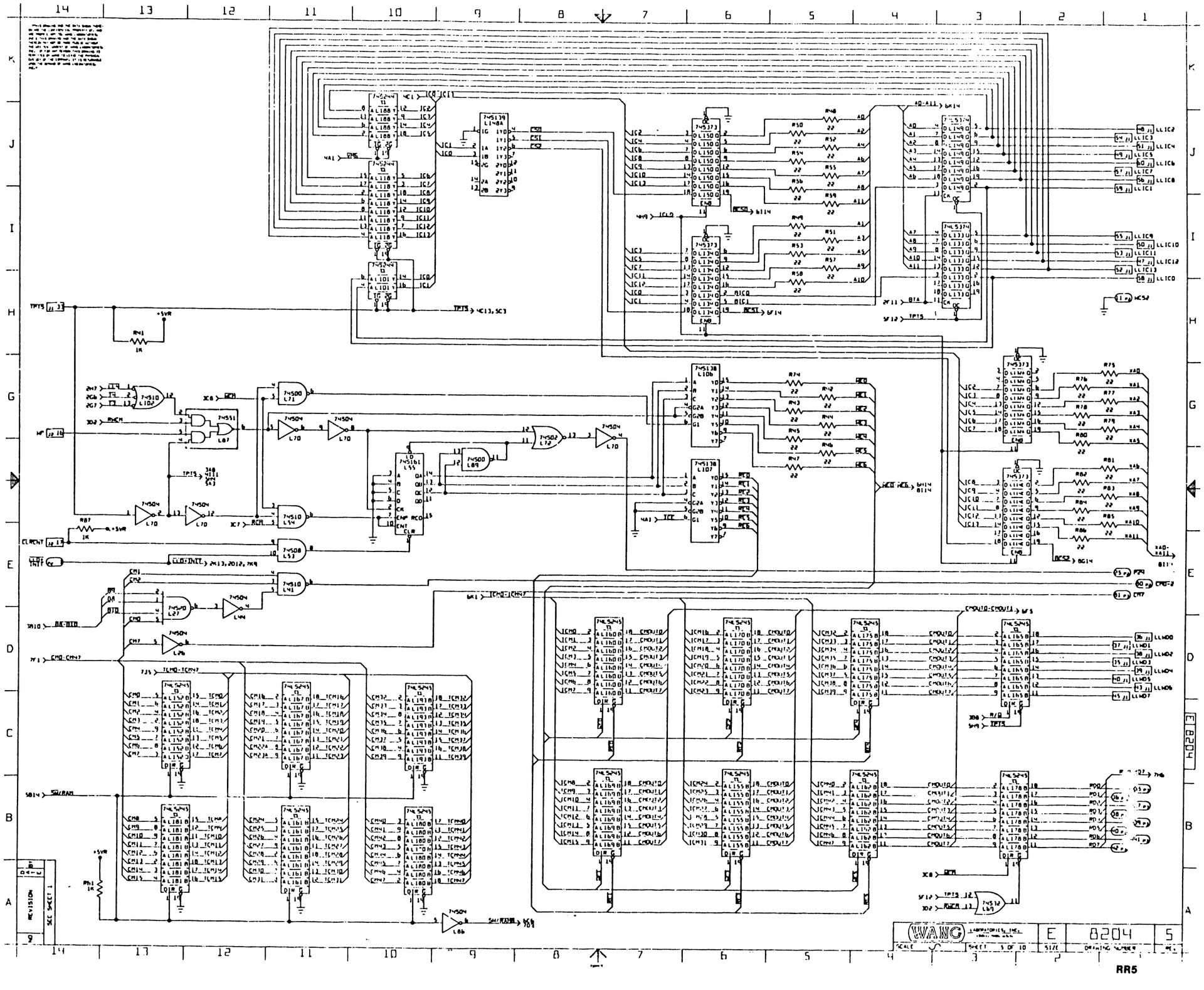
RR1

74S124 L2
74S74 L36
74S00 L63
74S32 L37
74S08 L17
74S51 L34
74S04 L44
74S169 L38
74S02 L36
74S10 L34
74S20 L39
74S04 L26
74S37 L6
74S08 L185
74S08 L186
74S08 L187
74S08 L188
74S37 L108
74S37 L109
74S37 L189
74S37 L184
74S08 L53
74S08 L20
74S00 L71
74S02 L72
74S11 L58
74S11 L23
74S38 L80
74S30 L97
74S51 L79
74S51 L115
74S260 L191
74S51 L46
74S08 L157
74S00 L63
CLOCK INIT
PCFR
RUN
LLCMD
+5VR
CDB
LLEN2
CLKA
CLKB
CLKC
CLKMC
TRIGGR
RUN/STEP
STEP
FAULT
WAIT
WANG LABORATORIES, INC.
E
8204
5
SCALE
SHEET 2 OF 10
SIZE
DRAWING NUMBER
REV
REVISION
SEE SHEET 1

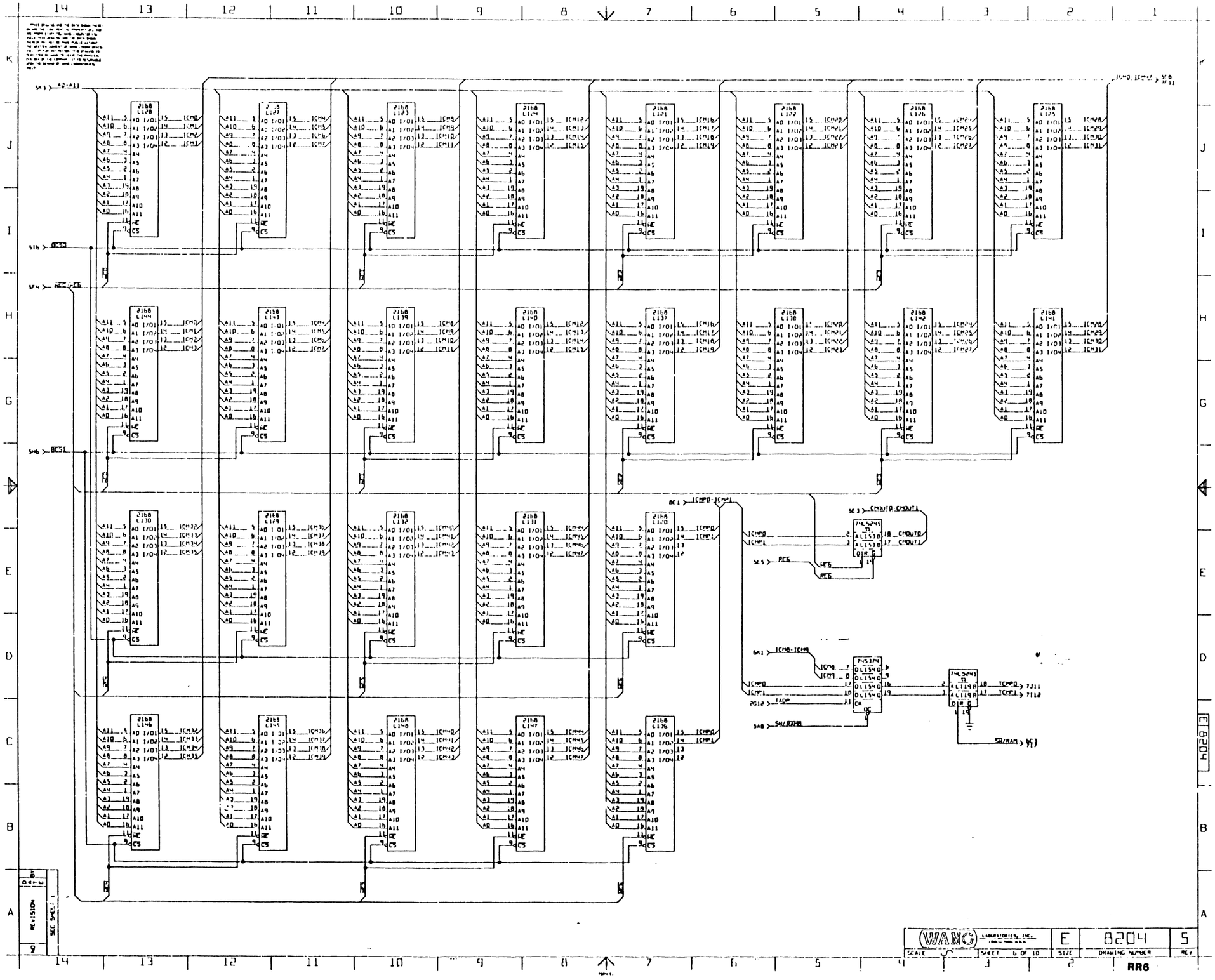
RR2


WANG LABORATORIES, INC.
E
8204
5
SCALE
SHEET 3 OF 10
SIZE
DRAWING NUMBER
REV
REVISION
SEE SHEET 1
RR3


REVISION
SCC 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
K J I H G F E D C B A
SH3 > A2:A11
SH6 > BCS0
SF4 > ACC:ACC
SH6 > BCS1
SE1 > CMOUT0:CMOUT1
SE5 > RCC
SA1 > ICM8-ICM9
SA8 > SW/RAM8
2G12 > 1ADP
SSI/RAM1 > SSI
74LS245 L1
74LS374 L1
74LS245 L2
WANG LABORATORIES, INC.
SCALE
SHEET 6 OF 10
SIZE E
DRAWING NUMBER 8204
REV. 5
RR6
REVISION
SEE SHEET 1

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

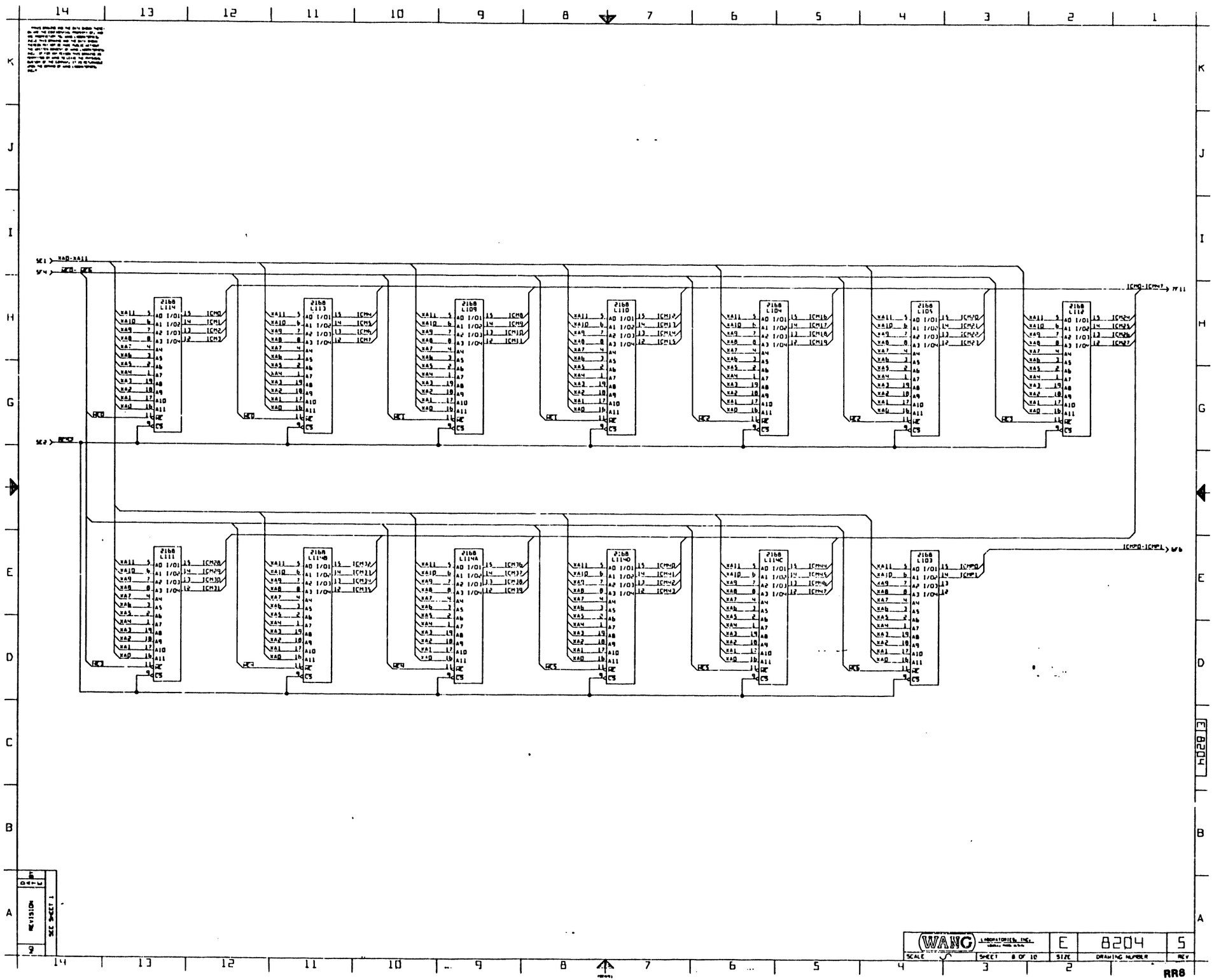
* LOW 8 BITS OF CM
HIGH 8 BITS OF IC+1

CM S1	CM S0	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

WANG LABORATORIES, INC.		E	8204	5
SCALE	SHEET 2 OF 10	SIZE	DRAWING NUMBER	REV.

RR7


14 13 12 11 10 9 8 7 6 5 4 3 2 1
K J I H G E D C B A
SEE SHEET 1
REVISION
WANG LABORATORIES, INC.
SCALE
SHEET 8 OF 10
SIZE E
8204
DRAWING NUMBER
REV 5
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 (R): 04 — EDITING REVISION: 4
ASSEMBLY REVISION (A): 05
SCHEMATIC REVISION (S): 05
DWG OR MOST 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		59
C130					
C132					
C134					
C136					
C138					
C140					
C142					
C144					
C201 - C205					
C32 - C46	300-1946-	.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	328-1503-	SWITCH	SLIDE SPST 8 POS		1
R42 - R59	330-1023-	22.000	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
R12 - R34					
R36 - R41					
R60 - R73					
R87					
R1 - R4	336-1014-	1K	RES TRIMMER .375" SQUARE SIDE ADJ 10% 1 TURN		4
J1 - J2	350-0441-	60 CONT	CONN PC HEADER DUAL ROW .100 R/A W/LOCK/EJECT		2
L185 - L186	376-0801-	7408	IC QUAD 2-INPUT AND GATE		2
L84	376-0151-	74S257	IC QUAD DATA SELECT OR/MULTIPLEXERS		4
L96					
L99					
L110					
L24	376-0171-	74148	IC 8-LINE-TO-3-LINE OCTAL PRIORITY ENCODER		1
L76					
L92					
L12	376-0184-	74S51	IC DUAL 2 WIDE 2-INPUT AND-OR-INVERT GATES		4
L54					
L66					
L79					
L87					
L115					
L26	376-0197-	74S04	IC HEX INVERTER		4
L64					
L70					
L85 - L86					
L96					
L74	376-0198-	74S30	IC 8-INPUT NAND GATE		4
L97					
L102					
L107					
L96	376-0199-	74S02	IC QUAD 2-INPUT POSITIVE-NOR GATES		1
L72 - L73					
L17	376-0200-	74S08	IC QUAD 2 INPUT POSITIVE AND GATES		1
L20					
L43					
L83					
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					
L61					
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		5
L37					
L45					
L68					
L69					
L191	376-0206-	74S260	IC DUAL 5-INPUT EXPANDER		1
L29	376-0216-	74S153	IC DUAL 4-INPUT MULTIPLEXER		7
L33					
L44 - L65					
L67					
L81 - L82					
L63	376-0228-	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					
L72					
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 - L185					
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					
L145E	376-0306-	74S373	IC OCTAL D-TYPE LATCH TRI-STATE OUTPUTS		4
L132A					
L130					
L150					
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
L158					
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-BIT 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	
MATERIAL	MODEL NO.			MFG ENGR	
	SEE ENGRG SPECIFICATIONS No.	TITLE: CONTROL MEMORY			
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 NO./TYPE	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-	74S10	IC 3-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-	74S00	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: 128220

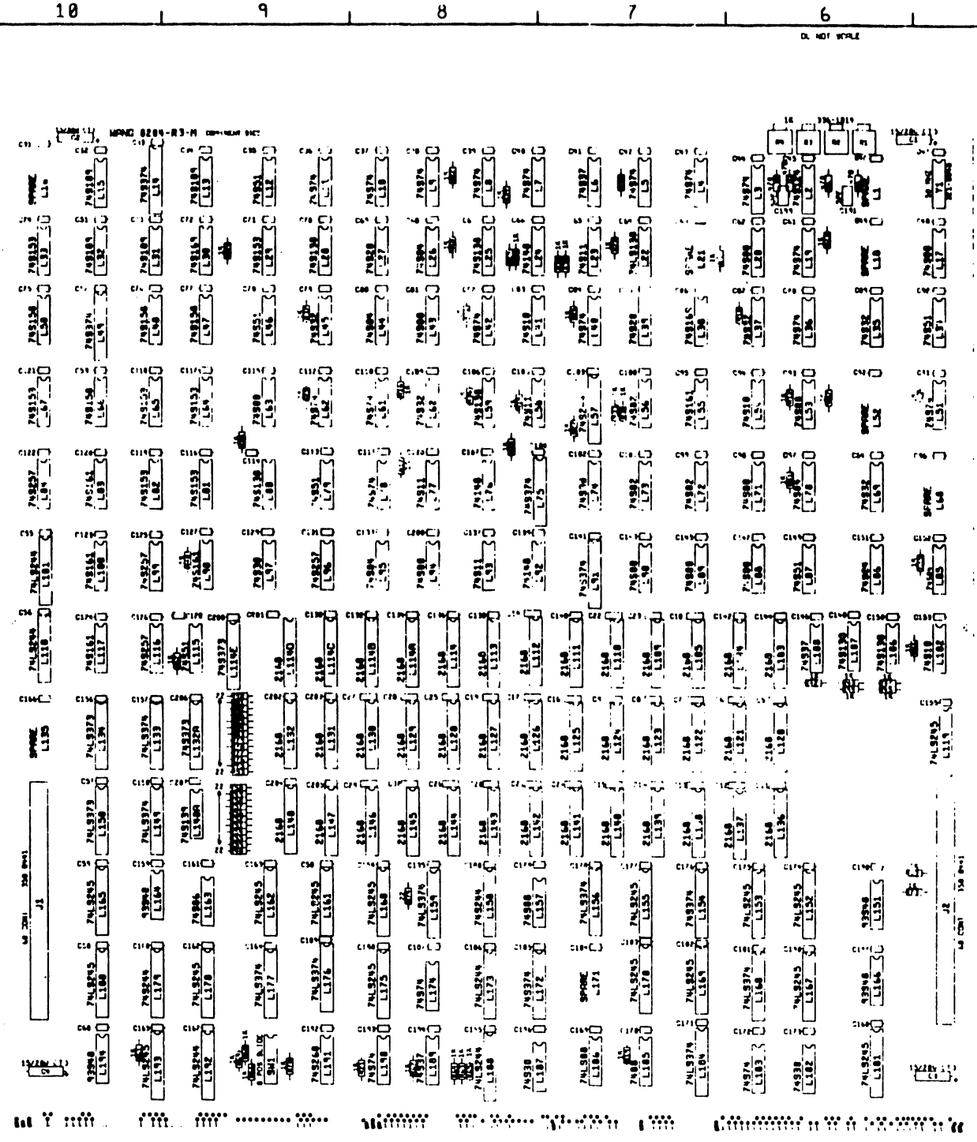
CREATED: 06/08/84 10:09
LAST MODIFIED: 08/15/84 13:36 BY: LAB
EDITING REVISION: 4

* 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			
	WI ENGRG SPECIFICATIONS No				
FINISH	TOL EX AS NOTED XX ± .010 FRAC ± 1/64 XXX ± .005 ANG ± 1° 32° FINISH √	210-8204	C	8204	S
	SCALE SHT 10 OF 10	WANG PART NUMBER	S/Z	DRAWING NUMBER	REV

RR10



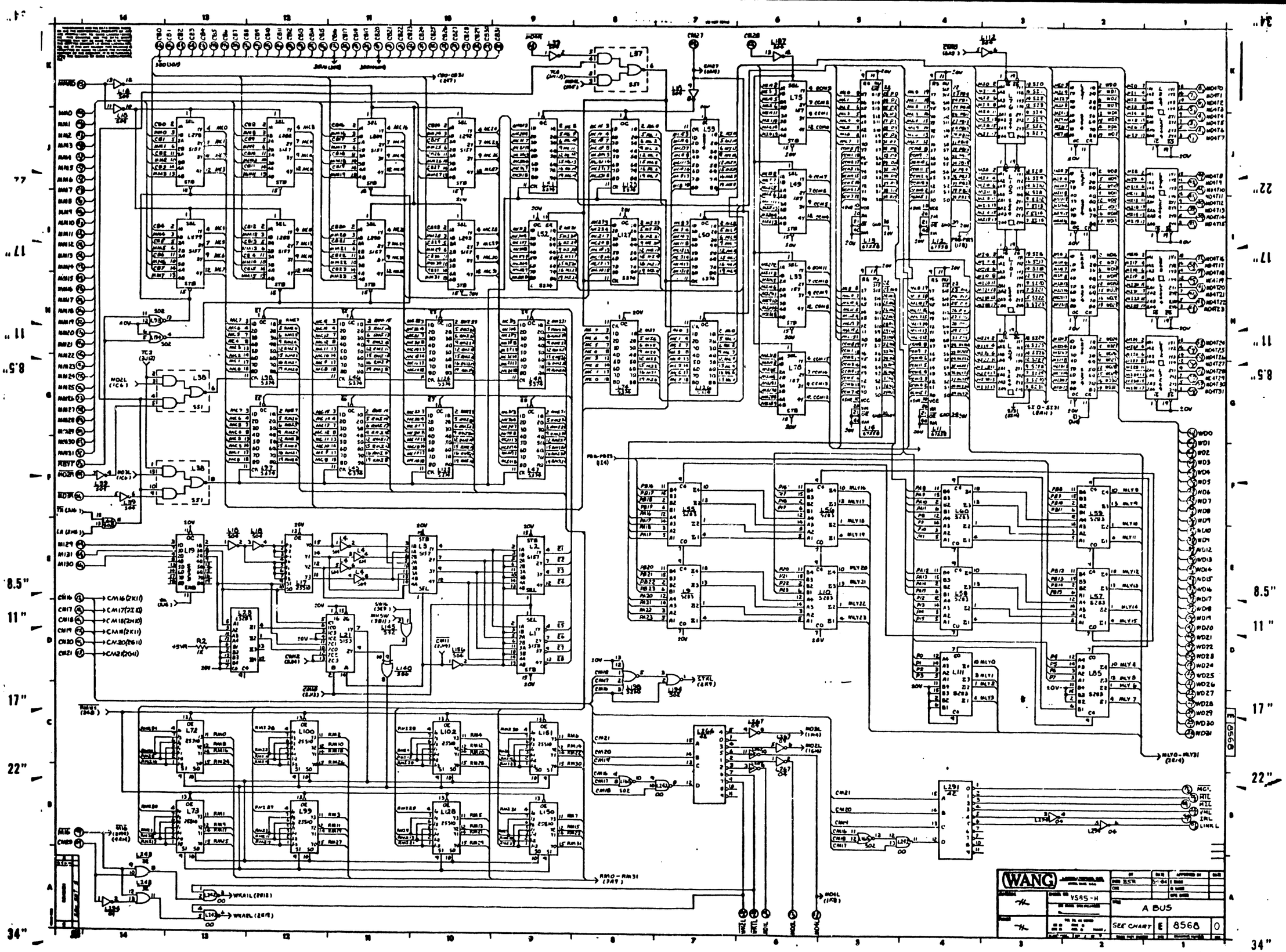
BY	D CHU	JAR	JAR
DATE	8/23/83	11/03/83	12/9/83
REVISION	DWR E1636	ECO 28463 D	ECO 28457 D
	R0/0	R1/1	R2/2	R3/3
			ECO 30149 D	

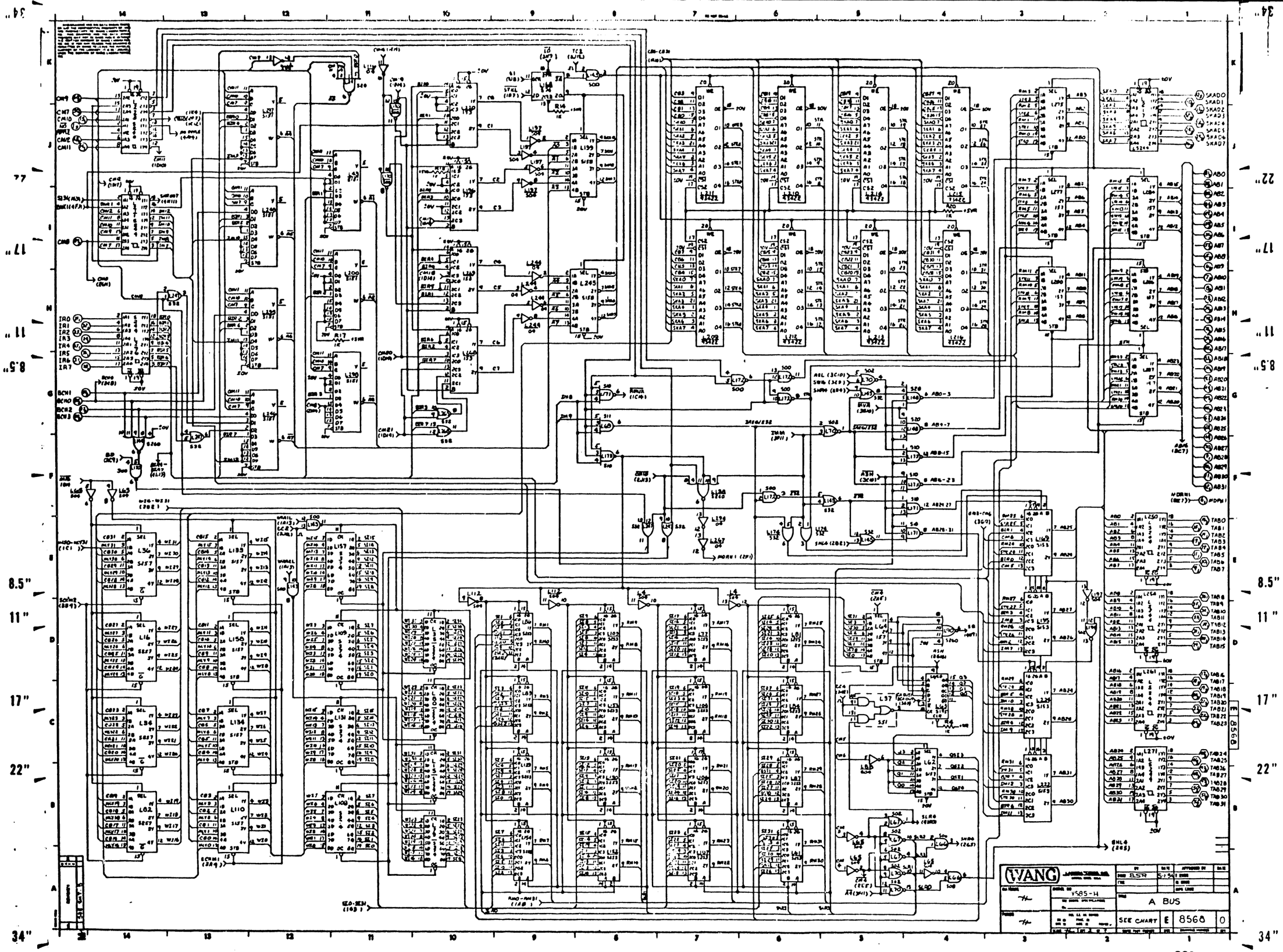
NOTES: UNLESS OTHERWISE SPECIFIED

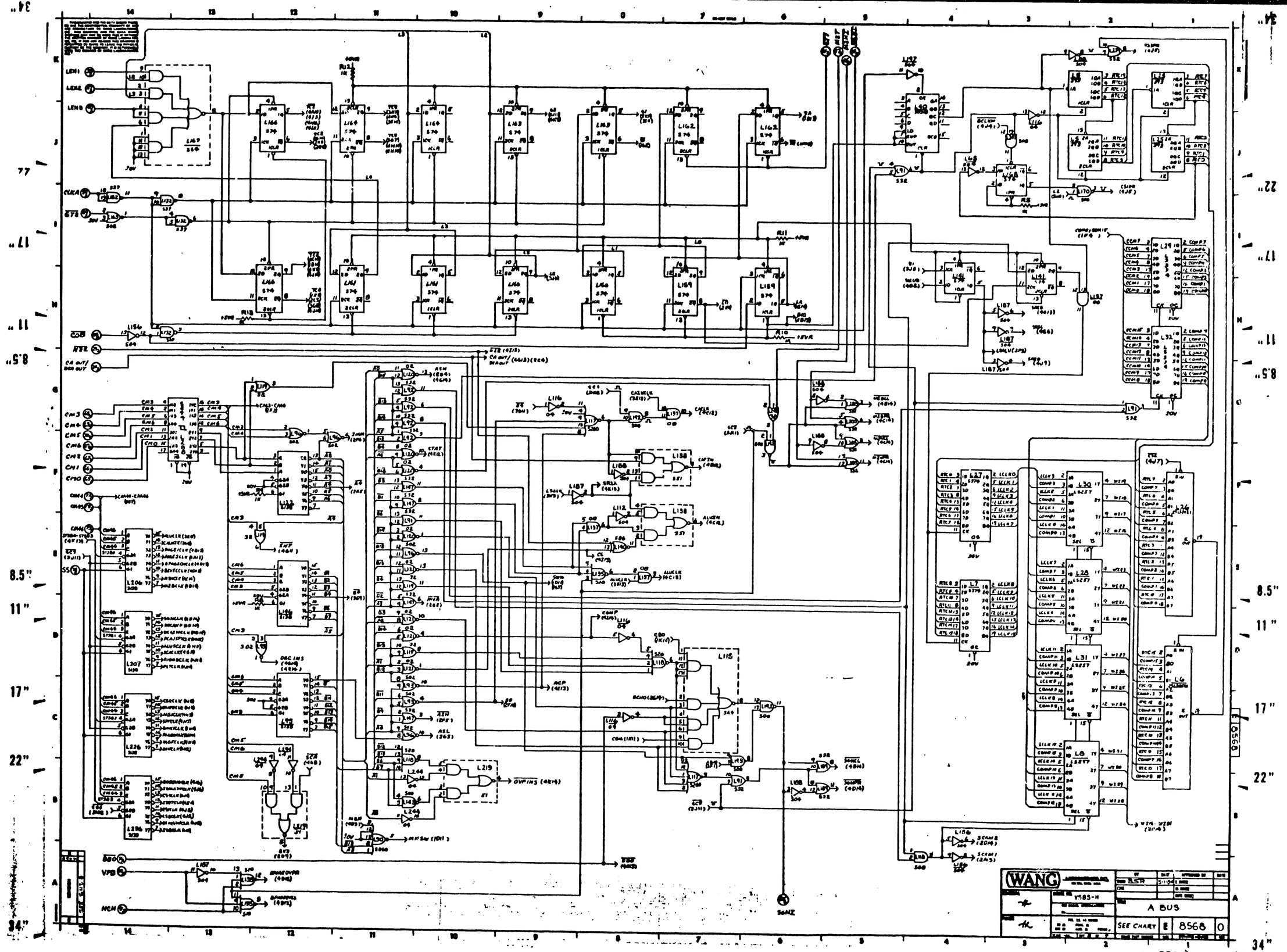
1. ALL CAPS ARE .047 CER CAPS WPN# 300-1466 EXPRESSED IN MICROFARADS
   C5-C30,C138,C192,C134,C136,C138,C140,C142,C144,C201-C205 ARE .1UF 50V (M F) WPN# 300-1438
2. ALL RESISTORS ARE 1/4W 5 PERCENT EXPRESSED IN OHMS
3. L103-L105,L109-L114,L114A-L114D,L128-L132 L136-L140 LOAD 28 PIN SOCKETS WPN# 376-9028
4. T1 LOAD 14 PIN SOCKET WPN# 376-9001

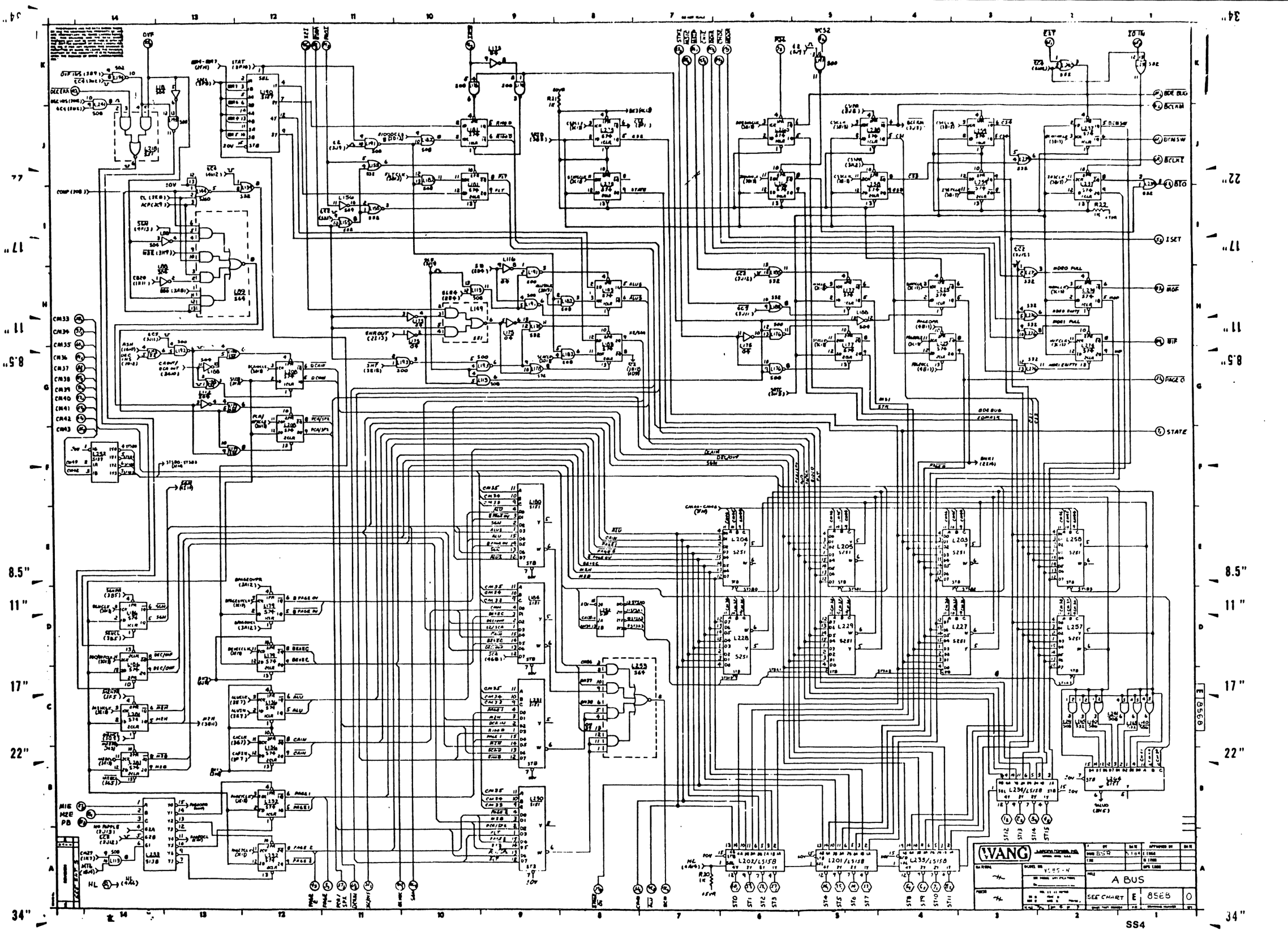
WANG LABORATORIES, INC	BY J. ROGERS	DATE 12/83	APPROVED
MATERIAL	MODEL NO PH0067 V9-110	TITLE ASSEMBLY DRAWING CONTROL MEMORY	
FINISH	SEE ENGR SPECIFICATION NO 10-213	210-8204-R3	D 8204 3
		SCALE 1:1	WANG PART NUMBER SIZE DRAWING NUMBER REV

RR11


WANG
VS9S-H
A BUS
SEE CHART
E 8568 0
SS1


WANG
A BUS
SEE CHART
E
8568
0
SS2


WANG
A BUS
SEE CHART
E 8568 0
SS3


A BUS
SEE CHART
8568
WANG
SS4

ADD-ADDR	6J1
ALU	6B7
BBS	3A6
BCMD-BCR3	8B16
BCTRB	4N1
BCMTSB	4J1
BCLK2	4J1
BCM	4A7
BDE BUS	4N1
BESTE	4A10
BTO	4J1
BUSA	4K11
BYPASS OV	4A8
CMAM	4A8
CA OUT / DCA OUT	3B16
CBO-CB31	1B16
CHIB	4B7
CHOE	4B6
CH A	1B14
CMB	3N16
CM7	2J16
CM8	2B16
CM9	2K16
CM10-CM12	2J16
CM13-CM15	2G16
CM16-CM31	1D16
CM27	1K7
CM28	1K6
CM29	1B16
CM33-CM43	4M6
CM44-CM46	3F16
DCAIN	4A11
DECERR	4A11
DEC/OVF	4A11
EA7	4B2
EP1	3B5
EP2	3J16
HCM	3A16
HL	4A4
IBIN	4A1
IAL	1B1
IAD-IA7	2M4
IRBB	4K10

ESET	4J1
LINK L	1B1
MEM1-MEM3	3K16
MDR	4K7
MDOR	4B6
MDRM1	2P1
MEM, MDOL	1A6
MDOL	1A6
MDATB	1B9
MEMO-MEM31	1K1
MHB	4B6
MIP	4M1
MOP	4M1
MEE	4B19
MEM, BSTB	1P16
MBT	3K5
MTRE	3M5
MSBE	3M5
MIL	1B19
MOL	1B1
MIC	1B1
MIL	1B1
MI19-MI31	1P16
NOPB	1B19
NMO-NM31	1J19
NDIC	4K7
NVIP	4K7
NO RIPPLE	2J15
NIE	3B19
OVF	4J19
PAGE 0	4B1
PAGE 1	4A11
PAGE 2	4A8
PB	4B6
PCA/SPE	4A4
PEA	4M6
RIOI	4M11
RESP	1P16
SB	3B16
SKADO-SKA31	6J1
SGNE	3A6
STATE	4P1
STMI	4K7
ST0-ST15	4A6
TAB0-TAB31	6B1
VNL	1B1
VPB	5A9
WDO-WD31	1C1
WRIL WRE	M6
WC52	4P5
XZE	4K12
3AN	4A10

IC TYPE	LOCATION	SPARES
74S02	L168	1
	L167	1
74S04	L34	5
	L88	2
	L136	1
	L175	1
7404		
74S08	L46	1
74S11	L49	2
74S20	L24	1
74S32	L119	1
	L139	1
	L176	2
	L178	2
	L104	2
	L240	3
74S51	L169	1
	L210	1
74LS244	L200	1

CONN 1

30V	1	2	30V
MM27	3	4	MM26
MM25	5	6	MM29
CB27	7	8	CB26
CB25	9	10	CB24
AB27	11	12	AB26
AB25	13	14	AB29
MM30	15	16	XOTB
DCMR	17	18	BTO
EET	19	20	BCMSB
CM35	21	22	
CM33	23	24	CM34
MDSR	25	26	MDZR
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
CM19	65	66	MMRD
CM11	67	68	CM10
AB31	69	70	AB30
AB29	71	72	AB28
MZE	73	74	STATE
NORM1	75	76	
+5VR	77	78	+5VR
±0V	79	80	±0V

CONN 2

30V	1	2	30V
+5VR	3	4	+5VR
CB49	5	6	CB48
CB45	7	8	CB42
+5VR	9	10	+5VR
CM37	11	12	CM38
BCM3	13	14	BCM2
BCM1	15	16	BCM0
MTIP	17	18	MOR
CM33	19	20	CM36
MM35	21	22	MM34
MM33	23	24	MM32
AB35	25	26	AB34
AB33	27	28	AB32
MIL	29	30	MOL
CM5	31	32	CM4
CM3	33	34	CM2
CM1	35	36	CM0
MM31	37	38	MD4L
MDMR	39	40	CMM
DCMM	41	42	GTZ
EOB	43	44	MET
MZRI	45	46	MTRE
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
WRZL	75	76	WRIL
BDE BUS	77	78	PAGE 0
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
WC52	93	94	PZ4
BCLKB	95	96	ISET
30V	97	98	30V
±0V	99	100	±0V

CONN 3

30V	97	98	30V
+5VR	95	96	+5VR
IABB	93	94	XXX
MMOE	91	92	SPMI
ALU	89	90	HCM
CM7	87	86	CMB
BWE	85	84	LINK L
SGNE	83	82	SGNE
AB3	81	80	AB2
AB1	79	78	AB0
BCKZE	77	76	B PAGE ON
CM45	75	74	CM44
	73	72	CM46
WD7	71	70	WD6
SS	69	68	BBO
WD5	67	66	WD4
CB3	65	64	CB2
CB1	63	62	CB0
WD3	61	60	WD2
WD1	59	58	WDO
CM9	57	56	CM6
CM12	55	54	PCA/SPE
MM43	53	52	CM42
CM41	51	50	CM40
AB7	49	48	AB6
AB5	47	46	AB4
MM3	45	44	MM2
MM1	43	42	MMO
ENBE	41	40	ENBE
WD15	39	38	WD14
WD13	37	36	WD12
WD11	35	34	WD10
WD9	33	32	WD8
CA OUT/DCA OUT	31	30	OVF
VPB	29	28	PB
CB7	27	26	CB6
CB5	25	24	CB4
MM7	23	22	MM6
MM5	21	20	MM4
DEC/OVF	19	18	BJE
MDIR	17	16	MDOR
MDIL	15	14	MDOL
CB11	13	12	CB10
CB9	11	10	CB8
MM11	9	8	MM10
MM9	7	6	MM8
AB11	5	4	AB10
AB9	3	2	AB8
PAGE 2	1	3	PAGE 1
RBYP	5	7	NO RIPPLE

J1

ST0	1	2	ST1
ST2	3	4	ST3
ST4	5	6	ST5
ST6	7	8	ST7
	9	10	ML
	11	12	
MD4T8	13	14	MD4T9
MD4T10	15	16	MD4T11
MD4T12	17	18	MD4T13
MD4T14	19	20	MD4T15
TAB8	21	22	TAB9
TAB10	23	24	TAB11
TAB12	25	26	TAB13
TAB14	27	28	TAB15
	29	30	
30V	31	32	30V
30V	33	34	30V
	35	36	
TAB0	37	38	TAB1
TAB2	39	40	TAB3
TAB4	41	42	TAB5
TAB6	43	44	TAB7
MD4T0	45	46	MD4T1
MD4T2	47	48	MD4T3
MD4T4	49	50	MD4T5
MD4T6	51	52	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	
30V	29	30	30V
+0V	31	32	+0V
	33	34	
MD4T16	35	36	MD4T17
MD4T18	37	38	MD4T19
MD4T20	39	40	MD4T21
MD4T22	41	42	MD4T23
TAB24	43	44	TAB25
TAB26	45	46	TAB27
TAB28	47	48	TAB29
TAB30	49	50	TAB31
MD4T24	51	52	MD4T25
MD4T26	53	54	MD4T27
MD4T28	55	56	MD4T29
MD4T30	57	58	MD4T31

210 = 209 + 877 OR 376			
210	209	L11-14	L209-216
8568-A	8568	377-0338	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

E-REV
0

ORIGINATED PER ECO M-22350

WANG		BY	DATE	APPROVED BY	DATE
		DRN B.STR	5-1-84		
		CHK			
	DRWG NO VS85-H	TITLE A BUS			
		SEE CHART	E	8568	0

SS5

WANG LABORATORIES, INC.

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

(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 Z5U		160
C22 - C46					
C48 - C91					
C94 - C107					
C109 - C142					
C144 - C146					
C148 - C156					
C158 - C160					
C21	300-4022-	10U	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 0% 200PPM		3
R21					
R2	330-3011-	1K	RES FIXED METAL FILM 1/4W 0% 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
L49					
L64					
L75					
L78					
L275					
L277					
L280					
L284					
L286 - L287					
L119	376-0003-	7432	IC QUAD 2-INPUT POSITIVE OR GATE		2
L243					
L16	376-0131-	745257	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					
L149					
L218					
L4	376-0197-	74S04	IC HEX INVERTER		10
L10					
L39					
L65					
L88					
L112					
L154					
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
L63					
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	376-0286-	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-	74S37	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
L18					
L27					
L35					
L45 - L48					
L50 - L53					
L74					
L79 - L80					
L97 - L98					
L108 - L109					
L123 - L127					
L131					
L157					
L251					
L255					
L262					
L270					

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: A BUS BOARD (ASI)			
	SEE ENGRG SPECIFICATIONS No.				
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. *
L10	376-0306-	74S373	IC OCTAL D-TYPE LATCH TRI-STATE OUTPUTS		1
L6	376-0317-	28LS2621	IC 8-BIT COMPARATOR		2
L86					
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					
L33	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	376-0336-	74S283	IC 4-BIT BINARY FULL ADDER		10
L55 - L60					
L65					
L111					
L43	376-0336-	74S181	IC 1-OF-8 DATA SEL/MUX		13
L188					
L194					
L200					
L224					
L230 - L231					
L246					
L248					
L264					
L296					
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					
L288					
L296					
L17	376-0339-	28S10	IC 4-BIT SHIFTER TRI-STATE OUTPUTS		9
L72 - L73					
L99 - L100					
L102					
L128					
L180 - L181					
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

*	*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	6
	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-	74S08	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
	376-0336-	74S283	IC 4-BIT BINARY FULL ADDER	10
	376-0336-	74S181	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	604-5022-	TEST PTS	TEST POINTS		31

WANG LABORATORIES, INC.

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

(FINAL BILL-OF-MATERIALS)

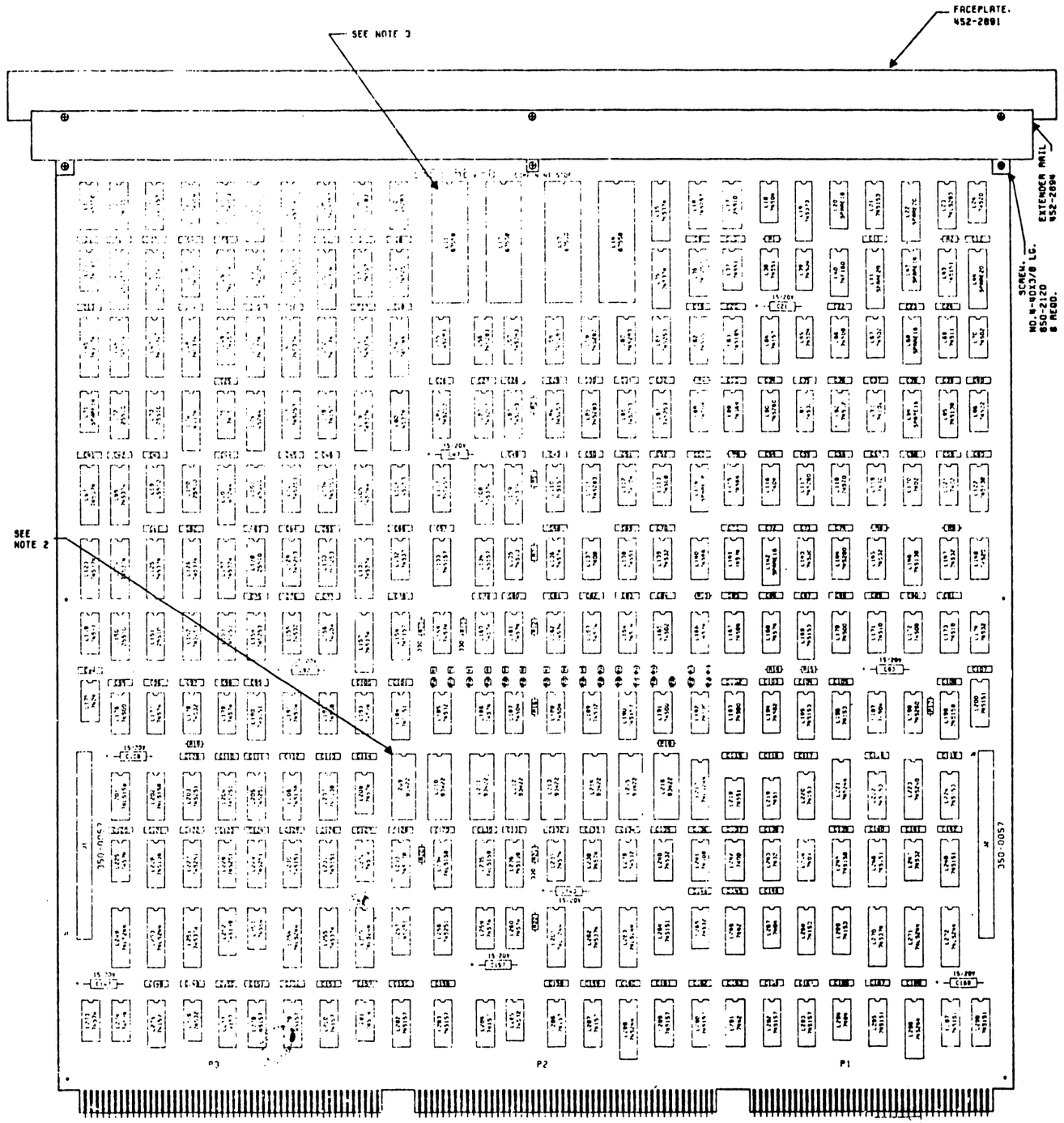
BOARD NO. & TITLE: C8568 "A BUS" BOARD (ASI)
ASSEMBLY: 210-A
ARTWORK REVISION (R): 00
ASSEMBLY REVISION (A): 00
SCHEMATIC REVISION (S): 00
DWR OR MOST RECENT ECO: E2350

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	209-8568-		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 ***

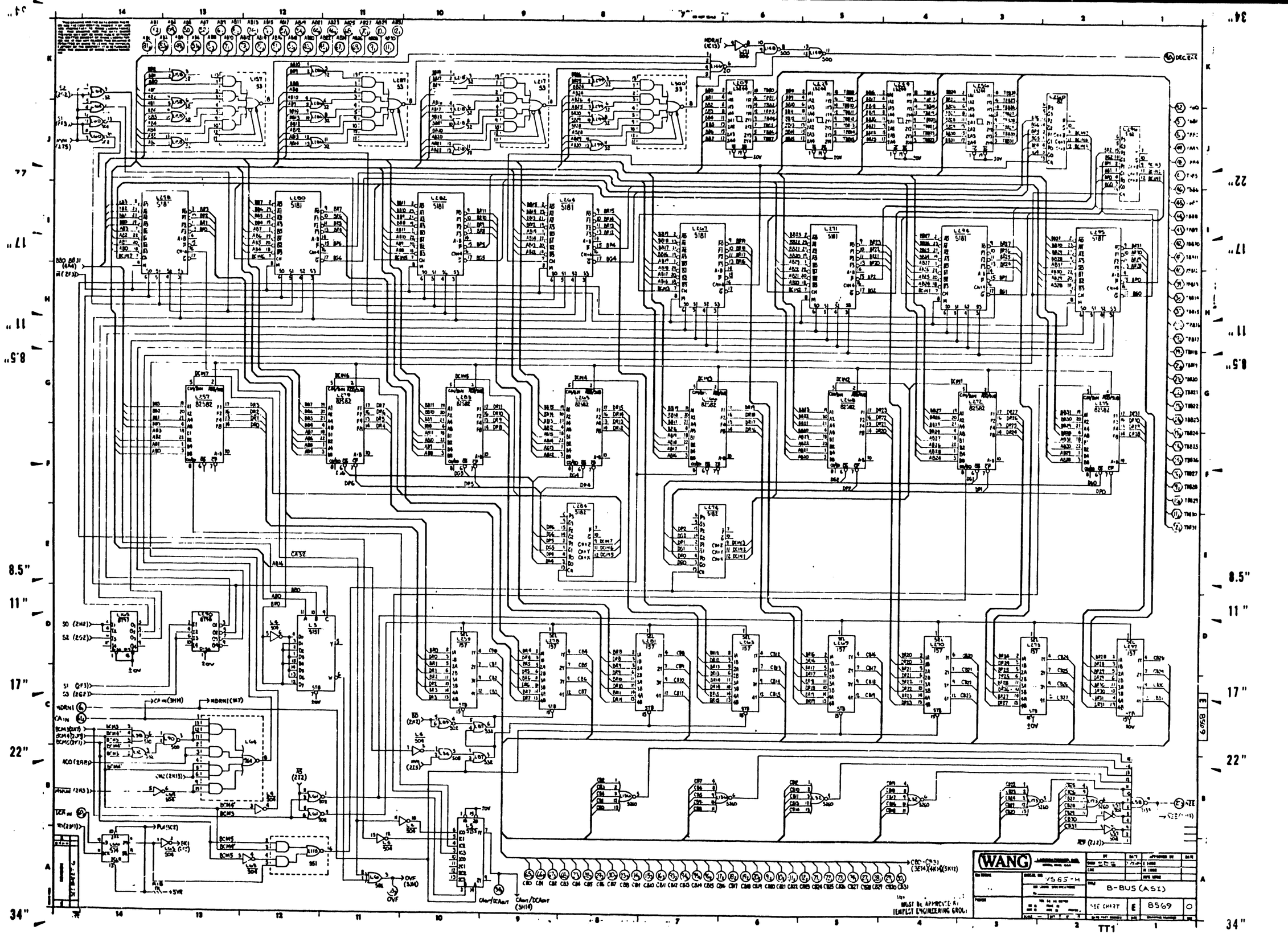
WANG LABORATORIES, INC. LOWELL, MA U.S.A.		BY	DATE	APPROVED BY	DATE
		DWN		E ENGR	
		CHK		M ENGR	
MATERIAL	MODEL NO.			MFG ENGR	
	SEE ENGRG SPECIFICATIONS No.	TITLE: A BUS BOARD (ASI)			
FINISH	TOL EX AS NOTED .XX ± .010 FRAC ± 1/64 .XXX ± .005 ANG ± 1°30' 125	SEE CHART	C	8568	0
	SCALE	SHT 7 OF 7	WANG PART NUMBER	SIZE	DRAWING NUMBER	REV



WANG LABS A BUS FINELINE
ASI 5744 08 40 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 654-3022.
2. LOAD 22 PIN SKT(376-9010) IN LOCATIONS L208-L218.
3. LOAD 40 PIN SKT(376-9011) IN LOCATIONS L11-L14.

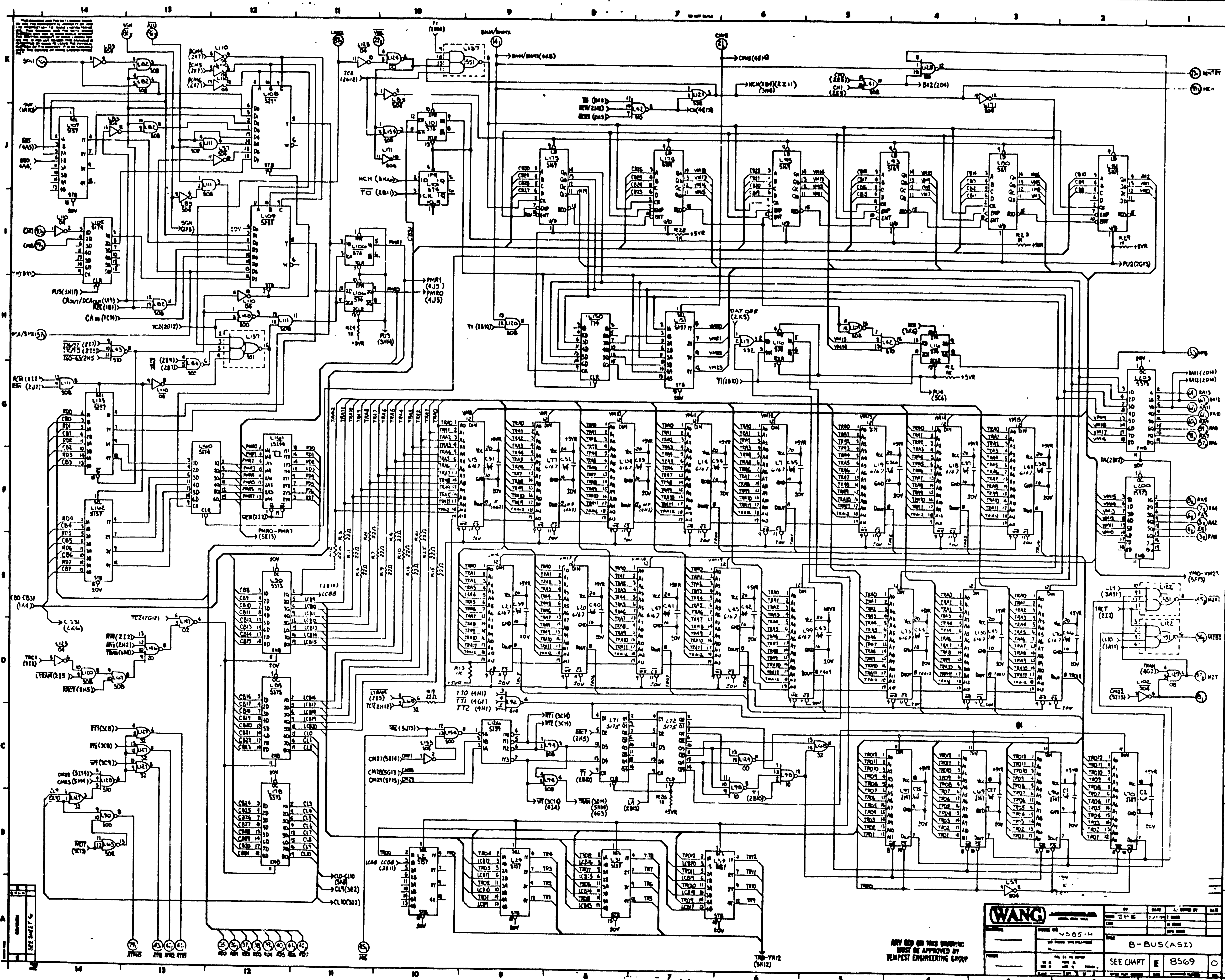

WANG
V565-M
B-BUS (ASI)
SEE CHART
E
8569
0
TT1
DEC 82
MUST BE APPROVED BY:
TEMPEST ENGINEERING GROUP

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
VS85-H
B-BUS(ASI)
SEE CHART
E
8569
0
ANY ECO ON THIS DRAWING MUST BE APPROVED BY TEMPEST ENGINEERING GROUP
TT3

CH0	CH4	CH8	STANDARD	NON-STANDARD
0	0	0		CH
0	0	1	WR1	
0	1	0	WR2	MD#6
0	1	1	IR	
1	0	0	MAR	
1	0	1	MD#4	MD#
1	1	0	WAIR	(HALFWORD SAVERED)
1	1	1	ZERO	

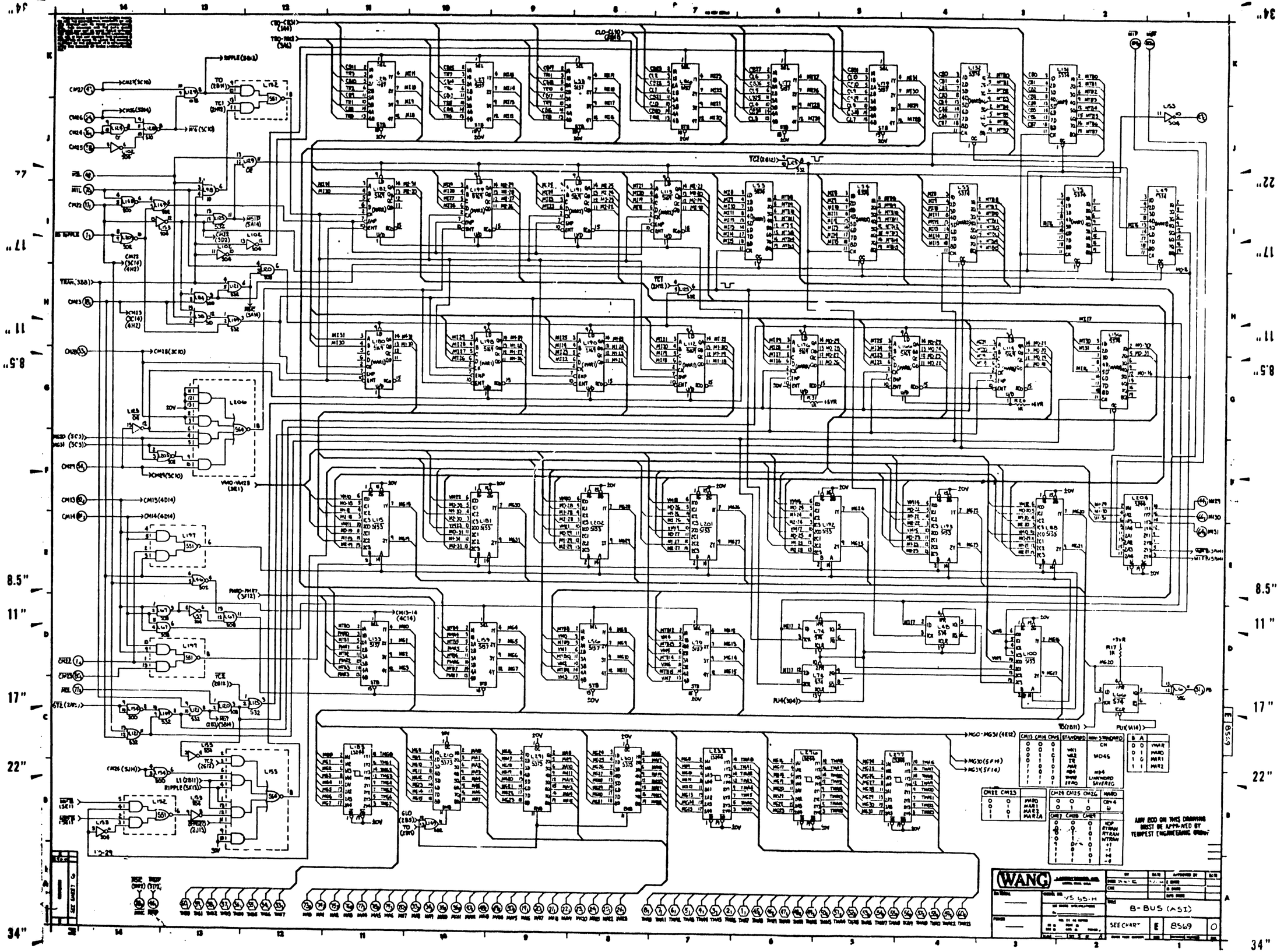
B	A	
0	0	WR1-WR2-IR
0	1	CH
1	0	MD4
1	1	MB

ANY ECO ON THIS DRAWING MUST BE APPROVED BY TEMPEST ENGINEERING GROUP

WANG

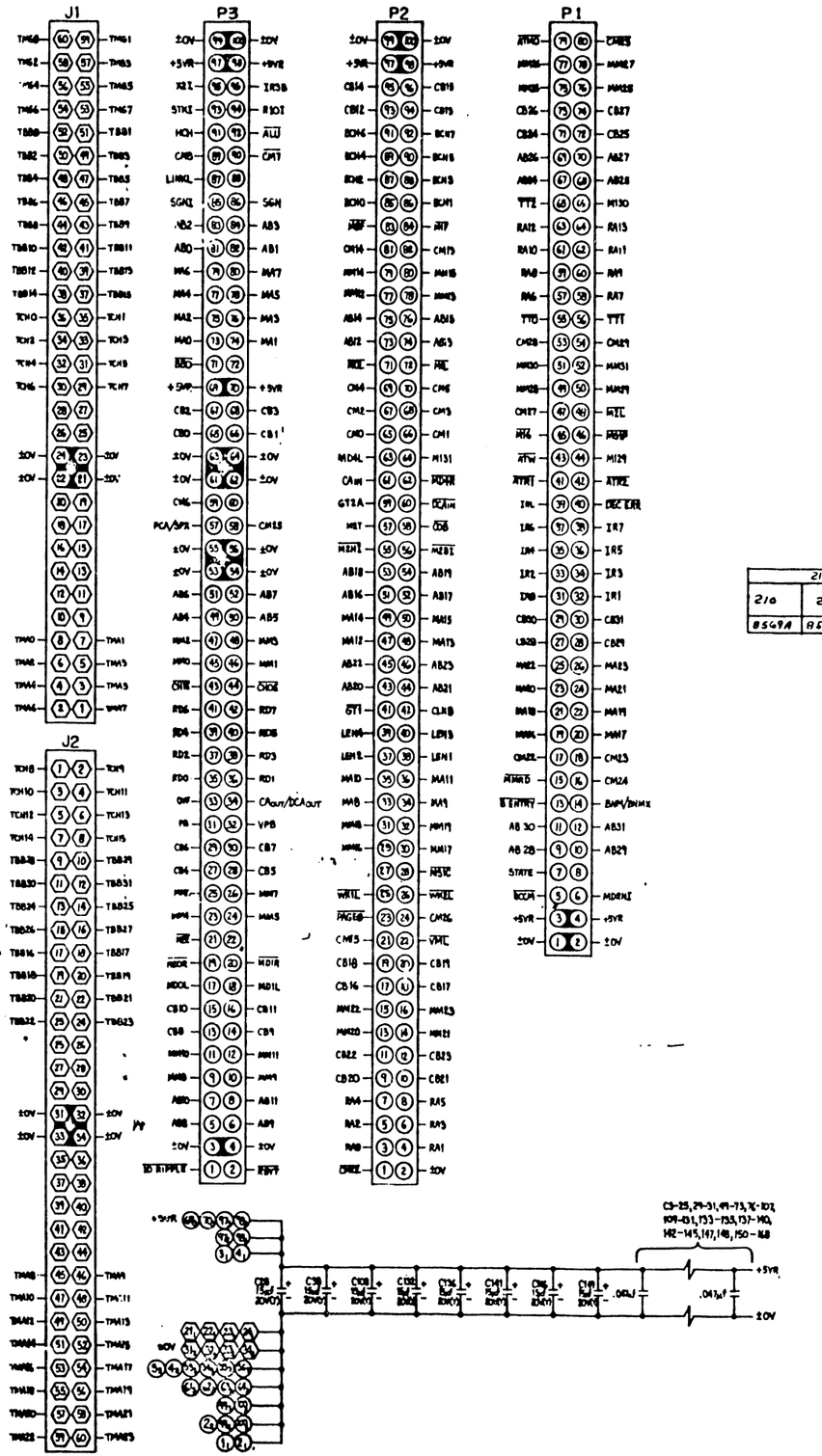
DRAWN BY	VS85-M	B-BUS(ASI)	
SEE CHART	E	9569	0

TT4


WANG
VS 55-M
8-BUS (ASI)
SEE CHART
E
8569
0
ANY ECO ON THIS DRAWING MUST BE APPROVED BY TEMPEST ENGINEERING GROUP
TT5

TYPE	I.C. LOC	SPARE
7400	L1E4	1
74S00	L8A	2
74S02	L4A	2
	L8A	1
74S04	L8B	1
	L13A	2
	L10Z	1
	L5A	1
74S08	L14B	1
	L3A	1
7432	L6B	1
74S32	L8A	1
74S37	L11A	3
74S51	L20B	1
74S74	L14B	1
74S86	L6	2
74S109	L12A	1
	L25A	1
74S00	L17A	1
74S74	L10A	1

MNEMONICS	COORD.
ABO-AB31	1K14
ALU	3K15
ATN05	3A15
ATN1	3A13
ATN2	3A13
ATW	3A13
BCHO-BCH7	2C1
BHM/BHMIX	3K9
BENTRY	3K1
BRQ	4A6
BCCM	4Z1
CAIN	1C14
CAOUT/DCAOUT	1A9
CBO-CB31	1A8
CLKB	2B14
CMO-CM6	2K14
CM8	5E14
CM13	5F14
CM16	5E14
CM15	5K7
CM22	5E14
CM23	5H14
CM24-CM26	5J14
CM27	5K14
CM28	5G14
CM29	5F14
CM7	3E14
CM23	5D14
CD8	2C14
CNOP	2B1
CNTR	2B1
CM13	5C14
DEC ERR	1K1
DCAIN	1B14
GT2A	2B14
GTY	2B14
HOH	3K1
IRL	4K7
IRO-IR7	4K1
IR3B	2E1
LEN1-LEN4	2G14
LINKL	3K11
MBP	5K1
MIF	5K2
MRK	5C14
MSL	5E14
MRL	5J14
MET	3D1
MRC	5A11
MI29-MI31	5F1
MMO-MM31	4K14
MDIL	2E14
MDOL	2E14
MAO-MA23	5A10
MD4L	4G14
MDOR	2E14
MDIR	2E14
MMIO	4G14
MMRD	4J14
MSIC	5A14
MSTP	5A14
MEBI	3D1
MRAT	3E1
MDRNI	1C14
NO RIPPLE	5J14
NXM	1B1
OVF	1A11
PAGE0	2J14
PB	5D1
PCA/SPR	3H14
RA0-RA5	3F1
RBYT	4E14
RD0-RD7	3A12
R1BI	2D1
RA6-RA15	3G1
SGN	3K13
SGN1	3K14
STATE	4K3
STK1	2E1
TBB0-TBB31	1J1
TCH0-TCH15	2A7
TMA0-TMA15	5A7
TMB0-TMB7	5A13
TTB	4H1
TTI	4G1
TTY	4H1
UNC	3K11
VPB	3H1
WRTL	4G14
WRTL	4F14
XBI	2E1



210 = 209 + 377 OR 378			
210	209	4,7,9,12,18-21,94,95, 97,73,76,77,99,100, 130	L69,70,96,97
8569A	8569	377-0448	377-0412

ANY ECO ON THIS DRAWING MUST BE APPROVED BY "ENPEN ENGINEERING GROUP"

E-REV O

WANG

BY	DATE	APPROVED BY	DATE
CWS	5-1-5		
CWS	4-8-85		

VP 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: 84/09/04 09:12
ASSEMBLY: 200 LAST MODIFIED: 84/10/04 17:06 BY: LAB
ARTWORK REVISION (A): 00 EXISTING REVISION: 1
ASSEMBLY REVISION (A): 00
SCHEMATIC REVISION (S): 00
BAR CO MOST RECENT ECO: E1343

* REF. DES.	* WANG PART NO.	* VALUE/TYPE *	DESCRIPTION	* DRAWING NO. *	QTY. *
C22 - C23	300-1930-	.1U	CAP CERAMIC MONO BAD +80% -20% 50V Z5U		18
C31 - C46					
C1 - C19	300-1966-	.047U	CAP CERAMIC MONO AXIAL +80 -20% 50V Z5U		140
C26 - C30					
C47 - C101					
C103 - C104					
C106 - C107					
C109 - C165					
C20 - C21	300-4022-	10U	CAP TANT AXIAL 10% 20V		8
C24 - C25					
C102					
C105					
C108					
R2 - R4	330-1023-	22.000	RES FIXED METAL FILM 1/4W 5% 200PPM		16
R6 - R12					
R18 - R16					
R19					
R21					
R28					
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		16
R5					
R15					
R17 - R18					
R29					
R22 - R24					
R26					
R25 - R31					
J1 - J3	350-0017-	60 CONT	CONN PC HEADER DUAL ROW .100 R/A W/LOCK/EJECT		2
CR1	370-0075-	LED	LED RED DIFFUSED RED 3MCD TYP		1
L126	376-0002-	7400	IC QUAD 2-INPUT NAND GATE		1
L98	376-0003-	7410	IC TRIP 3-INPUT NAND GATE		1
L146	376-0004-	7420	IC DUAL 4-INPUT NAND GATE		1
L110	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	376-0067-	7403	IC EXPANDABLE 4-WIDE AND-OR-INVERT GATE		6
L117					
L207					
L300					
L129	376-0001-	7408	IC QUAD 2-INPUT AND GATE		1
L209	376-0083-	74157	IC QUAD 2-INPUT MULTIPLEXER		8
L265					
L269 - L270					
L273					
L278					
L281					
L297					
L48	376-0093-	7432	IC QUAD 2-INPUT POSITIVE OR GATE		7
L127					
L158					
L207					
L218					
L286					
L299					
L150	376-0098-	74174	IC HEX D FLIP-FLOP		1
L136	376-0131-	745267	IC QUAD DATA SELECT 08/MULTIPLEXERS		1
L118	376-0184-	74581	IC DUAL 2 WIDE 2-INPUT AND-OR-INVERT GATES		7
L122					
L137 - L138					
L182					
L197					
L206					
L208	376-0185-	8T96	IC HEX INVERTER 16 PIN DIP		1
L166	376-0189-	8T97	IC HEX BUFFER 16 PIN DIP		1
L6	376-0197-	74S04	IC HEX INVERTER		9
L87					
L68					
L69					
L102					
L134					
L153					
L171					
L247					
L35 - L36	376-0198-	74S10	IC 8-INPUT NAND GATE		2
L46	376-0199-	74S02	IC QUAD 2-INPUT POSITIVE-NOR GATES		6
L60 - L61					
L63					
L89					
L205					
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		8
L103					
L155					
L172					
L296					
L16	376-0202-	74S74	IC DUAL D-TYPE POS EDGE TRIGRD F/F W/PRESET/C		16
L48					
L66					
L74					
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
L136					
L173					
L216					
L5	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					
L236 - L239					
L243					
L248					
L285					
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					
L66					
L59					
L79					
L86					
L107					
L133					
L151					
L159					
L162					
L177					
L179					
L222					
L226					
L251					
L261 - L262					
L288					
L289					
L292 - L293					
L298					
L84	376-0228-	74S00	IC QUAD 2-INPUT NAND GATE		4
L90					
L148					
L154					
L91	376-0230-	74S20	IC DUAL 4-INPUT POSITIVE NAND GATE		1
L257	376-0234-	82S62	IC BCD ARITHMETIC UNIT		8
L258 - L266					
L270					
L272					
L276					
L279					
L283					
L38	376-0238-	74S10	IC TRIPLE 3-INPUT NAND GATE		8
L42 - L43					
L116					
L128					
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
L58	376-0276-	74S133	IC 13-INPUT NAND GATE		1
L161	376-0286-	74LS244	IC OCTAL BUFFER/LINE DRIVER W/TRI STATE		12

WANG	WANG LABORATORIES, INC. LOWELL, MA U.S.A.	BY	DATE	APPROVED BY	DATE
		DWN		E ENGR	
		CHK		M ENGR	
MATERIAL	MODEL NO.			MFG ENGR	
	SEE ENGRG SPECIFICATIONS No.	TITLE B-BUS			
FINISH	TOL UN AS NOTED .XX ± .010 FRAC ± 1/64 .XXX ± .005 ANG ± 1°30' FINISH	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					
L209					
L220					
L232 - L235					
L240					
L256					
L275 - L277					
L145	376-0296-	74S37	IC QUAD 2-INPUT NAND BUFFER		1
L8	376-0293-	74S138	IC 3-LINE TO 8-LINE DECODER/MULTIPLEXER		5
L10 - L11					
L13					
L92					
L99	376-0308-	74S374	IC OCTAL D-TYPE EDGE-TRIG F/F TRI-STATE		28
L83 - L86					
L95					
L131 - L132					
L156					
L187 - L188					
L196 - L198					
L212 - L214					
L226 - L227					
L236 - L237					
L240 - L242					
L244 - L246					
L252 - L254					
L30	376-0304-	74F373	IC OCTAL D-TYPE LATCH TRI-STATE OUTPUTS		7
L85					
L178					
L203					
L210					
L291					
L301					
L200	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
L250					
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					
L360	376-0469-	74S182	IC LOOK-AHEAD CARRY GENERATOR		4
L274					
L284					
L295					
02 - 021	376-0014-	SKT 16	IC SOCKET 16 PIN DIL PC MOUNT		24
01	510-8529-		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
	376-0200-	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
	376-0220-	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
	376-0301-	74S374	IC OCTAL D-TYPE EDGE-TRIG F/F TRI-STATE 28
	376-0304-	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 (A): 00 EDITING REVISION: 1
ASSEMBLY REVISION (A): 00
SCHEMATIC REVISION (S): 00
ECO OR MOST RECENT ECO: E2343

* REF. DES.	* WANG PART NO.	* VALUE/TYPE *	DESCRIPTION	* DRAWING NO. *	QTY. *
01	209-8529-		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 - L31					
L44 - L45					
L67					
L73					
L76 - L77					
L99					
L104					
L138					

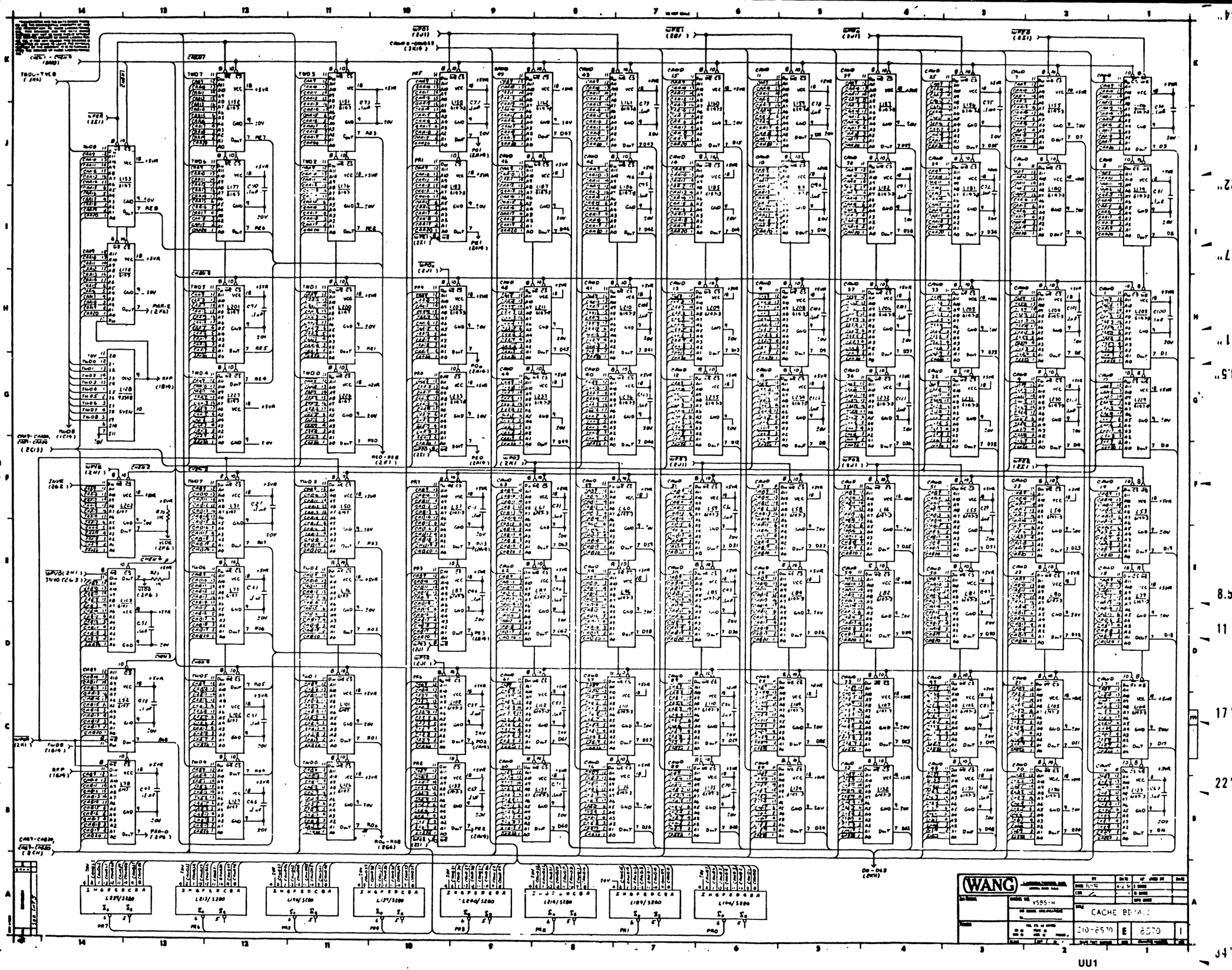
*** END-OF-REPORT ***

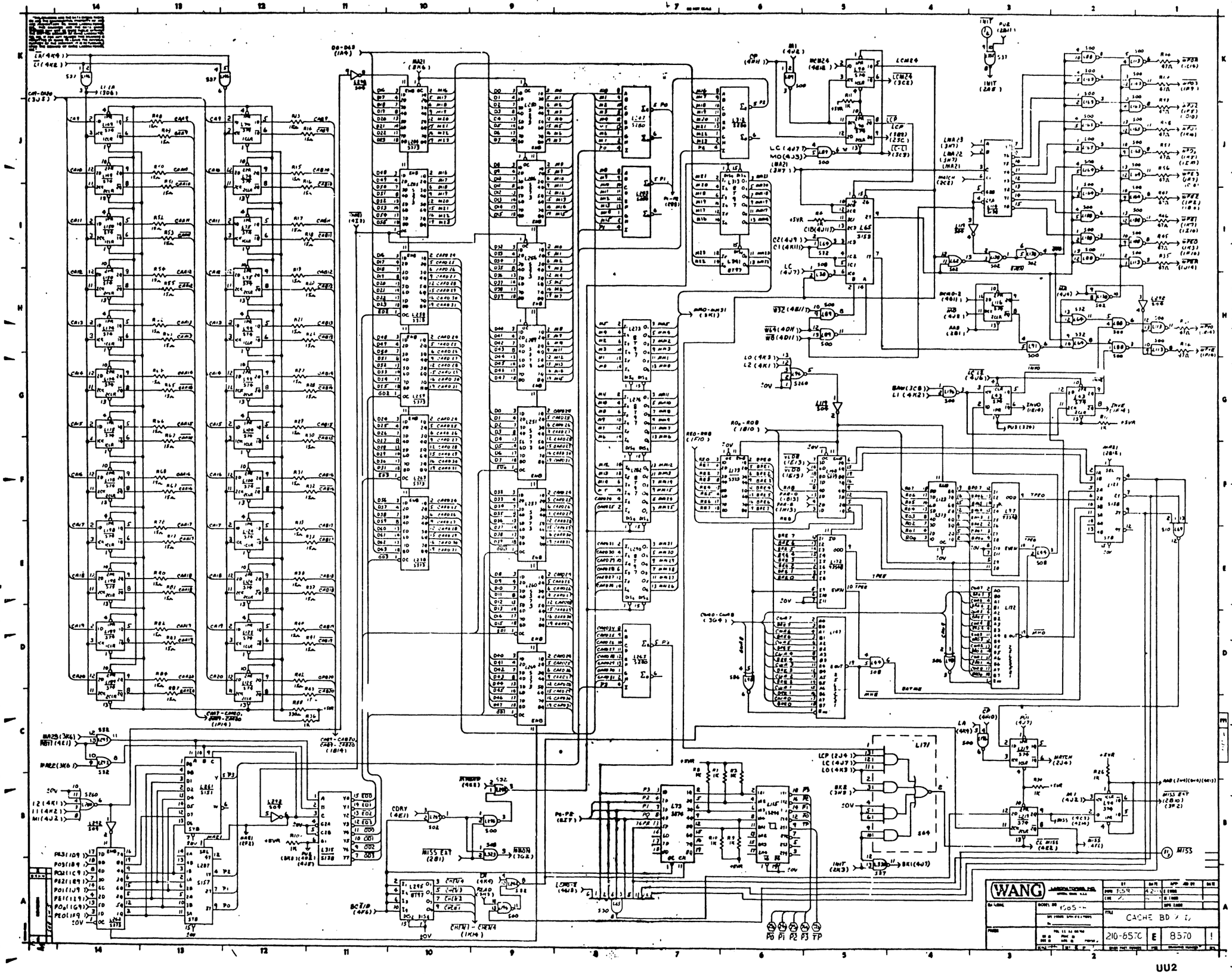
WANG LABORATORIES, INC. LOWELL, MA U.S.A.		BY	DATE	APPROVED BY	DATE
		DWN		E ENGR	
		CHK		M ENGR	
MATERIAL	MODEL NO			MFG ENGR	
	SEE ENGRG SPECIFICATIONS No.	TITLE B-BUS			
FINISH	TOL EX AS NOTED .XX ± .010 FRAC ± 1/64 .XXX ± .005 ANG ± 1°30'	SEE CHART	D	8569	C
	SCALE	SHT 8 OF 8	WANG PART NUMBER	SIZE	DRAWING NUMBER	REV

TT8

WANG LABS B-BUS
RSI 5722 07 23 12/02/83
ASSEMBLY PLOT

8.5"
11"
17"

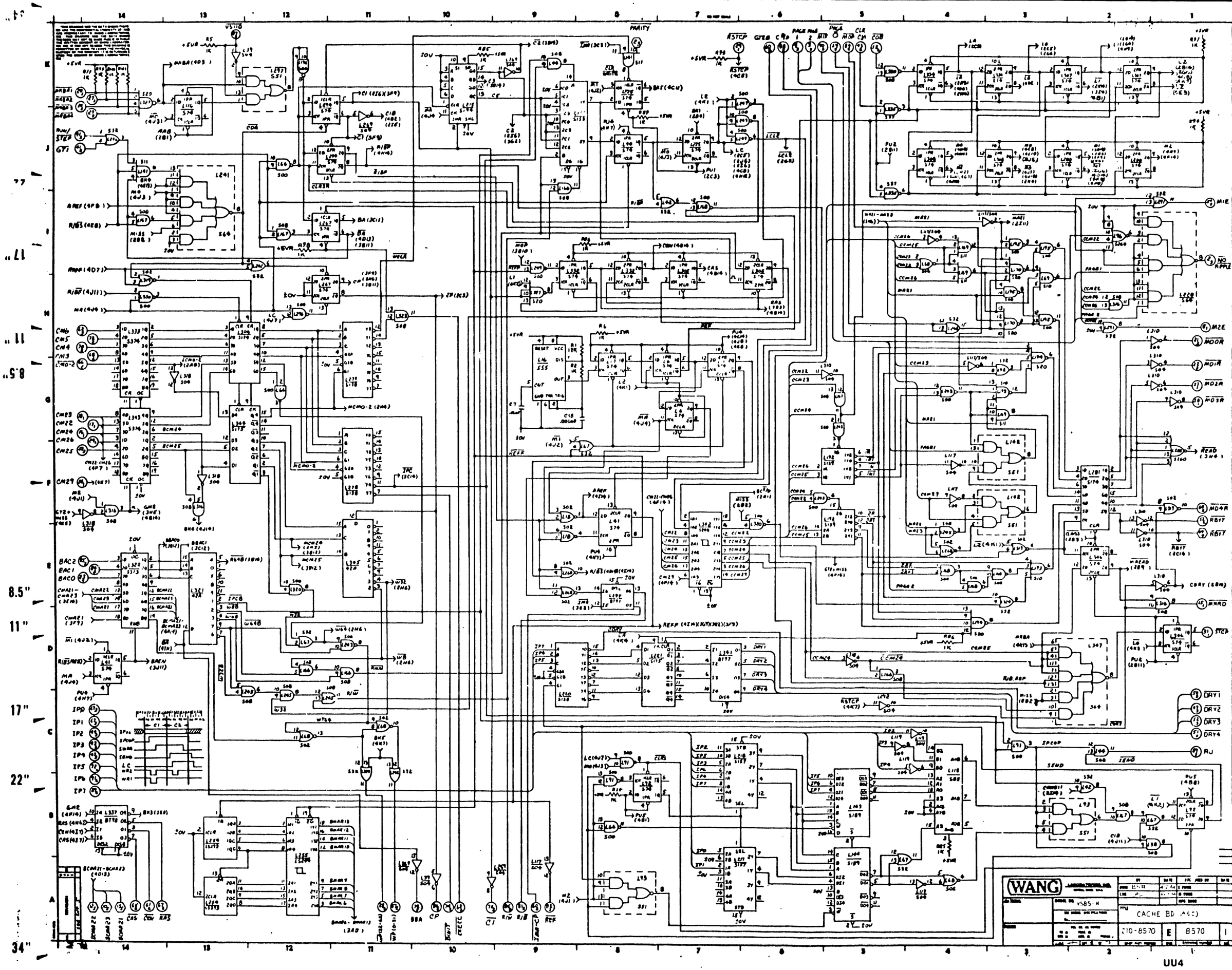

WANG
VS85-H
CACHE BOARD
210-6570
E
8570
1
UU1

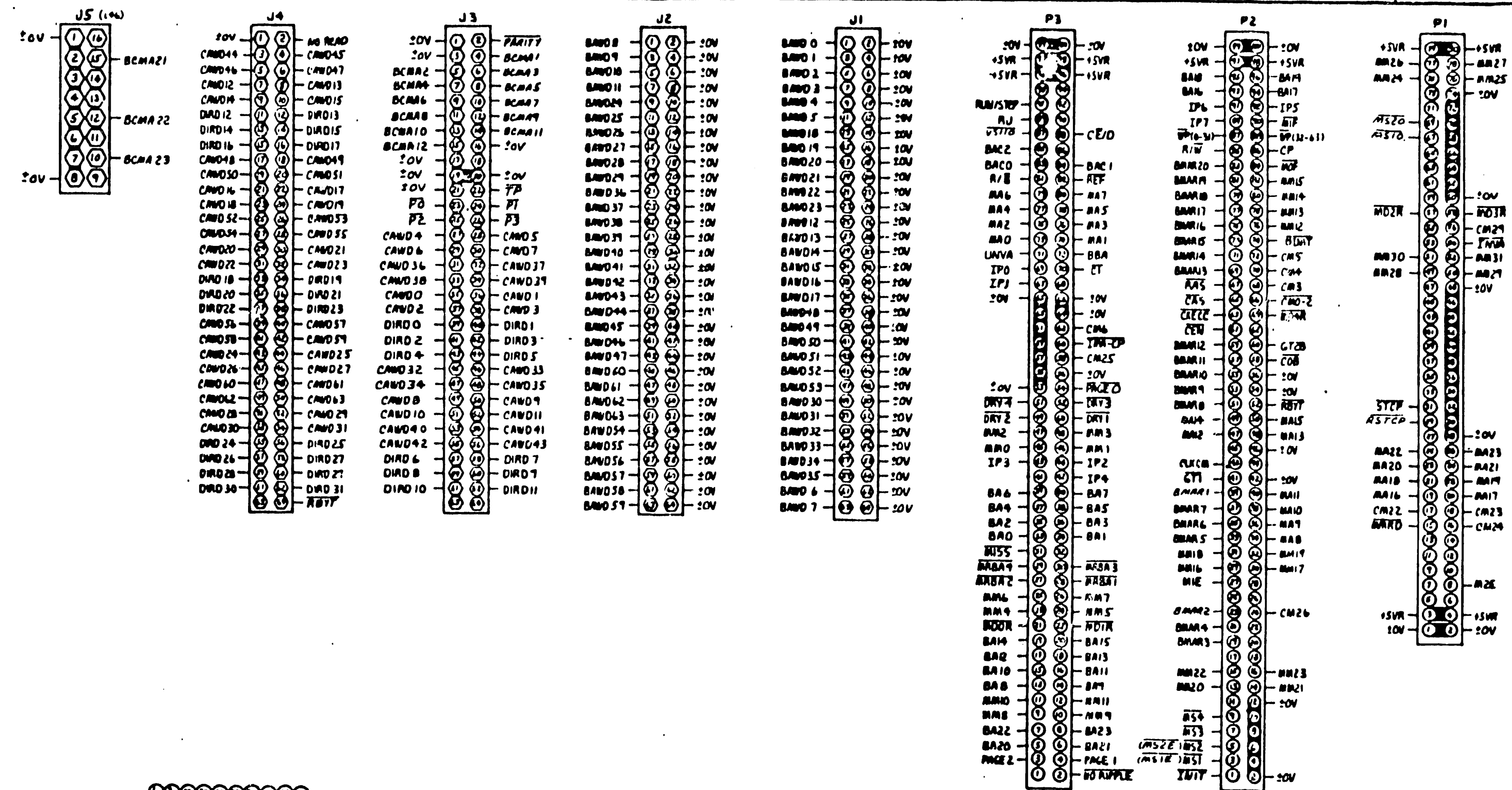

WANG
CACHE BD
210-6570
E
8570
UU2

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

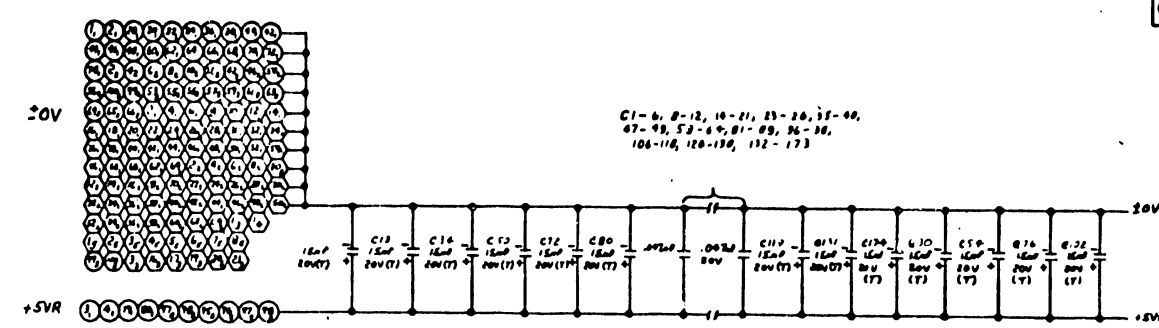
WANG				
	VS85-H	CACHE BD (A52)		
		210-8570	85/0	1

UU3


WANG
VS85-H
CACHE BD ASSY
210-8570
E
8570
PARITY
RSTCP
GTEB
PAGE FAULT
PAGE
CLR
MTP
MDR
CM
COB
MIE
NO RIPPLE
M2E
MDOR
MDIR
MDSR
READ
RBYT
CORY
RWRD
STCP
DRV1
DRV2
DRV3
DRV4
RU
SPCOP
SEND
CACHE BD ASSY
UU4



TYPE	IC LOCATION	SPARES
74S00	L66	1
74S02	L138	1
	L18	2
	L319	1
74S04	L39	3
74S08	L38	2
	L166	1
74S10	L69	1
74S32	L42	1
	L248	1
	L291	1
	L298	1
74S37	L166	2
74S74		
	L90	1
74S86	L98	2
74S139	L216	1
8T98	L337	1



MNEMONICS	COORD
BA0-BA23	3K12
BAC0-BAC2	4K14
BBA	4A10
BINIT	4A10
BAWD0-BAWD63	3A11
BMAR1-BMAR20	3A6
BCMA1-BCMA12	3F1
BMAR1-BMAR13	4A14
CAS	4A14
CAWD0-CAWD63	3C14
CEN	4A14
CE/D	4K6
CT	4A10
CHECE	4A10
CP	4A10
CLKCM	4K5
COB	4K5
CM0-2	4C14
CM3-CM6	4H14
CM22-CM26	4G14
CM29	4A14
DIRD0-DIRD31	3K8
DRY1-DRY4	4C1
GT1	4J14
GT2B	4K6
IMA-CP	4A9
INVA	3K1
[illegible]	2K3
IP0-IP7	4C14

MNEMONICS	COORD
MA0-MA23	3H6
MD0R-MD3R	4G1
[illegible]	4F1
MISS	3B1
MIP	4K5
MSP	4K5
[illegible]	4B1
MM0-MM31	3E1
MABA1-MABA4	4E14
MS1-MS4	3A7
NO READ	3B1
NO RIPPLE	4B1
P0-P3	2A6
PAGE 0	4K5
PAGE 1	4K6
PAGE 2	4K6
PARITY	4K8
RAS	4A14
RBYT	4F1
REF	4A9
R/W	4A9
R/B	4A9
RUN/STEP	4J14
RJ	4C1
RSTCP	4K7
STCP	4D1
TP	2A8
UNVA	3B1
VS110	4K13
WP(0-31)	4A11
WP(32-63)	4A11
MIE	4E1
M2E	4H1

MNEMONICS	COORD
BMAR1	3A7
BMAR2	3A7
(MS2E)	3A7
(MS1E)	3A8
MS1O	3A8
MS2O	3A7

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

E REV 0

ORIGINATED PER DWR #E2349 APP'D:

REVISED PER ECO# 32930D APP'D:

WANG LABORATORIES, INC.

VS85-H

CACHE BD (A12)

210-8570 | E | 8570 | 1

UU5

(FINAL PARTS LIST)

BOARD NO. & TITLE: C8570 CACHE (ASI)
ASSEMBLY LEVEL & TITLE: 200 8570
PARTS LIST REVISION (P): 1
ARTWORK REVISION (R): 00
ASSEMBLY REVISION (A): 01
SCHEMATIC REVISION (S): 01
DWN OR MOST RECENT ECO: 329100

CREATED: 04/09/84 15:07
LAST MODIFIED: 09/13/84 16:18 BY: LAB
EDITING REVISION: 8

* REF. DES.	* WANG PART NO.	* VALUE/TYPE *	DESCRIPTION	* DRAWING NO. *	QTY. *
C7	300-1903-	.01U	CAP CERAMIC DISC +80% -20% 25V Z5F		1
C68	300-1906-	.001MF	CAP CERAMIC DISC 10% 500V X5F		1
C27 - C29	300-1910-	.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 - C95					
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					
C96 - C98					
C106 - C110					
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	325-1503-	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		40
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					
L376	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					
L275 - L276					
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					
L248					
L316					
L323					
L171	376-0201-	74S64	IC 4-2-3-2 INPUT AND/OR/INVERT GATE		4
L238					
L241					
L307					
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					
L94					
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					
L247					
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)			
	900 ENGRG SPECIFICATIONS No.				
FINISH	TOL ±.X AS NOTED .XX ± .010 FRAC ± 1/64 .XXX ± .005 ANGS ± 1°30' FINISH √	210-8570	C	8570	1
	SCALE / SHT 7 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. *
L106					
L71 - L72	376-0289-	74S85	IC 4-BIT MAGNITUDE COMPARATOR		8
L110					
L120					
L145					
L221	376-0278-	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/T2I STATE		2
L288					
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		8
L228					
L278 - L279					
L319					
L121	376-0301-	74S158	IC QUAD 2 TO 1-LINE DATA SELECTOR/MUX INVERT		4
L222 - L224					
L73	376-0305-	74S374	IC OCTAL D-TYPE EDGE-TRIG F/F TRI-STATE		9
L277					
L298					
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		1
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
L58 - L61	376-9014-	SKT 18	IC SOCKET 18 PIN DIL PC MOUNT		94
L76 - L87					
L101 - L112					
L125 - 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, #4-40 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

* 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)

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	1
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-	74S1E7	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	8
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	1
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: C8570 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
L58 - L92	377-0412-	6147	IC 4K X 1 SRAM 70N 18 PIN		72
L76 - L78					
L101 - L103					
L126 - L127					
L151 - L153					
L176 - L178					
L200 - L202					
L226 - L227					
L93 - 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 ***

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 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	SIZE	DRAWING NUMBER	REV

UU7

"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. IT 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

SCREW, NO.6-40X3/8LG. 000-2120 3 REQD

EXTENDER RAIL 652-2968 INSTALL CIRCUIT SIDE

SEE NOTE 2

8570-ROM WR

WANG LABS CACHE FINELINE 8570
ASI 5723
ASSEMBLY PLOT

REV. 1 PER ECO NO.32930 135EP84

NOTES- 1. UNLESS OTHERWISE SPECIFIED.
ALL CAPS ARE .047.300-1068.EXPRESSED IN MICROFARADS.
ALL RESISTORS ARE 1K.1/4W.5 PERCENT. EXPRESSED IN OHMS.

2. LOAD 18 PIN SKT (378-8016) IN LOCATIONS L50-81.78-87.
101-112.128.127.128-137.151-182.178-187.200-211.228.227.
229-237.

WANG LABORATORIES INC. LOWELL MASS U.S.A.		BY	DATE	APPROVED BY	DATE
		DWN		E ENGR	
		CHK		M ENGR	
MATERIAL	MODEL NO VS85-H SEE ENGRG SPECIFICATIONS No.			MFG ENGR	
FINISH	TOLERANCES AS NOTED .XX ± FRAC ± .XXX ± ANG ± FINISH	TITLE ASSEMBLY, CACHE BOARD			
	SCALE 1/1 SHT 1 OF	210-3570 MFG PART NUMBER	D SIZE	3570 DRAWING NUMBER	REV

UU8

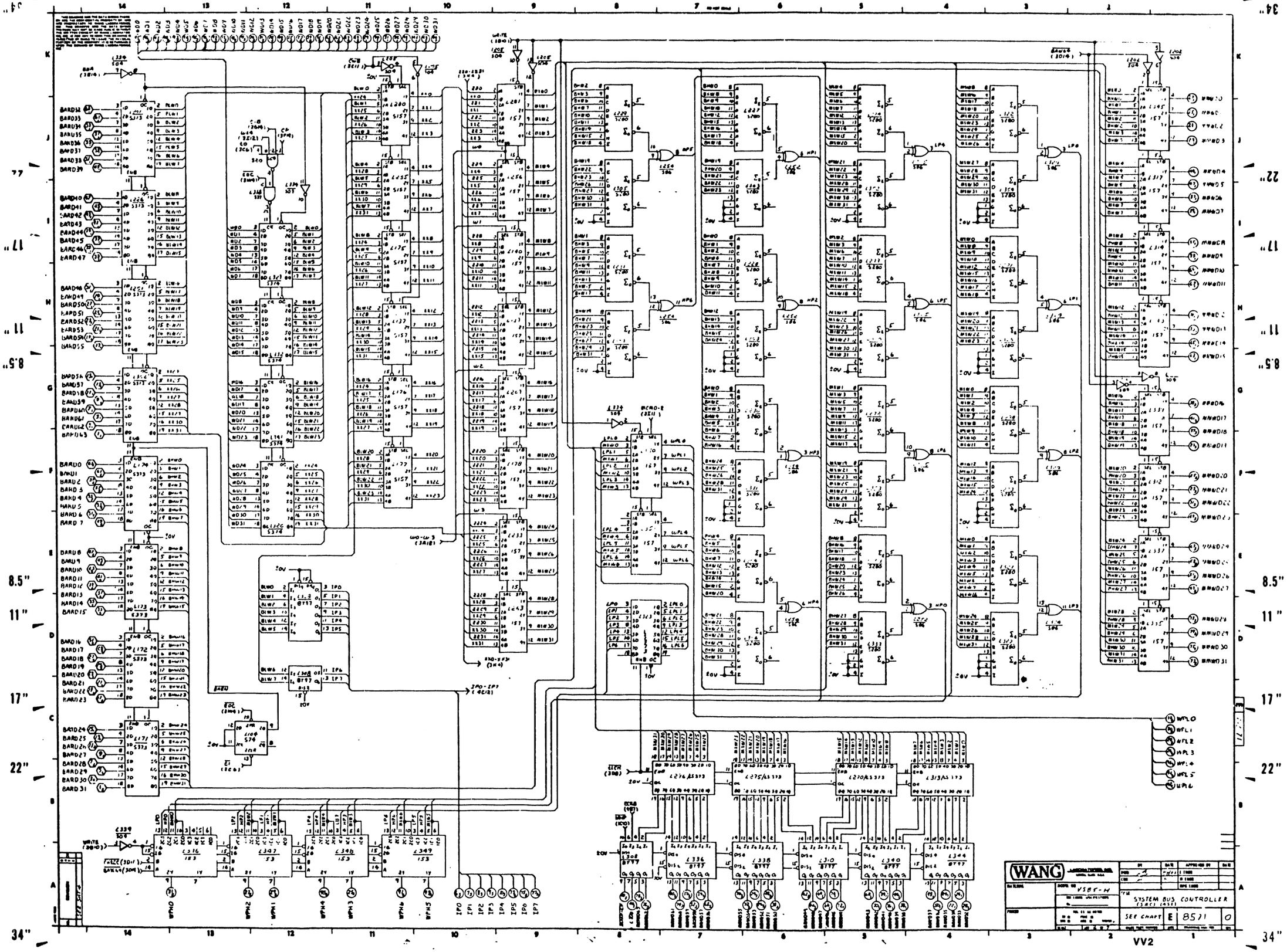
WANG

V385-H

SYSTEM BUS CONTROLLER (SDC/SC)

SEE CHART E 8571 0

VV1


WANG
VSBC-M
SYSTEM BUS CONTROLLER (SBC) (4331)
SEE CHART
E 8571 0
VV2

WANG

SYSTEM BUS CONTROLLER

VV3

SEE CHART

E 85571 0

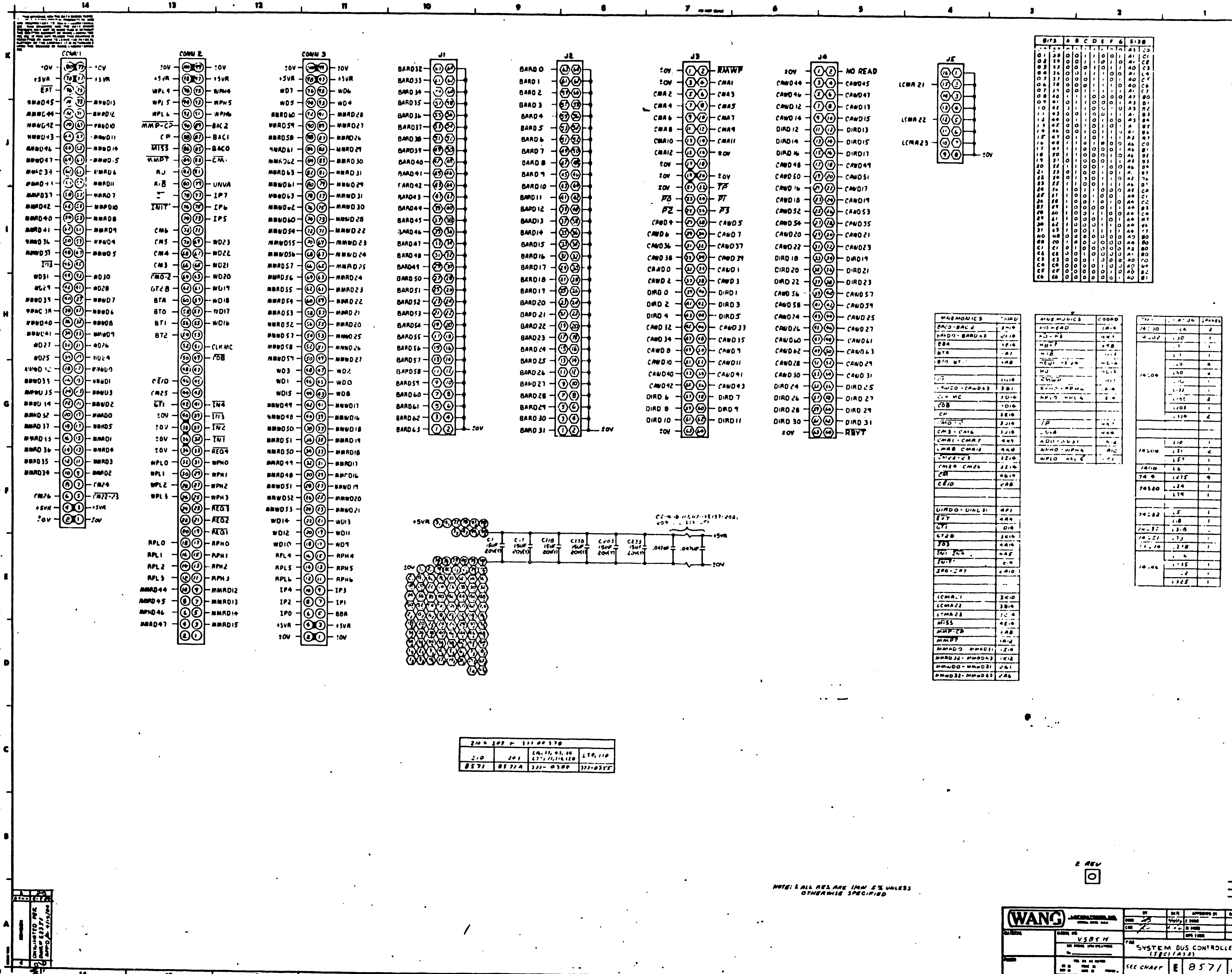
WANG LABORATORIES, INC.

SYSTEM BUS CONTROLLER (SBC) (ASE)

VSBC-M

SEE CHART | E | 8571 | 0

VV4



CONN 1
CONN 2
CONN 3
J1
J2
J3
J4
J5
+5VR
ZOV
C1 15UF 20V(T)
C17 15UF 20V(T)
C118 15UF 20V(T)
C178 15UF 20V(T)
C203 15UF 20V(T)
C233 15UF 20V(T)
.047UF
MNEMONICS
COORD
NOTE: 1. ALL RES ARE 1MW 5% UNLESS OTHERWISE SPECIFIED
E REV
0
WANG
VS85 H
SYSTEM BUS CONTROLLER
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	308-4022-	18U	CAP TANT AXIAL 10% 20V		6
C17					
C118					
C138					
C203					
C233					
R28 - R28	330-1023-	32.000	RES FIXED METAL FILM 1/4W 5% 200PPM		6
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					
L88					
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					
L198 - L198					
L209					
L220 - L221					
L223 - L224					
L233					
L236					
L263					
L281					
L312					
L314					
L317					
L338					
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 DUAL 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					
L330					
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					
L126					
L257 - L259					
L278					
L288					
L6	376-0205-	74S32	IC QUAD 2-INPUT OR GATE		3
L18					
L33					
L85	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-	74S08	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					
L89	376-0238-	74S10	IC TRIPLE 3-INPUT NAND GATE		2
L106					
L105 - L106	376-0246-	74S280	IC 9-BIT PARITY GENERATOR/CHECKER		86
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	376-0286-	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 .XXX ± .005 ANG ± 1°30' FINISH 125	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. *
L116 - L118					
L132					
L141 - L143					
L282	376-0388-	74S374	IC OCTAL D-TYPE EDGE-TRIG F/F TRI STATE		6
L284					
L320					
L329					
L332					
L361					
L171 - L174	376-0306-	74S373	IC OCTAL D-TYPE LATCH TRI-STATE OUTPUTS		10
L201					
L226					
L248					
L251					
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					
L323					
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					
J5	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
L81	376-0339-	25S10	IC 4-BIT SHIFTER TRI-STATE OUTPUTS		1

WANG LABORATORIES, INC.

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

(FINAL BILL-OF-MATERIALS)

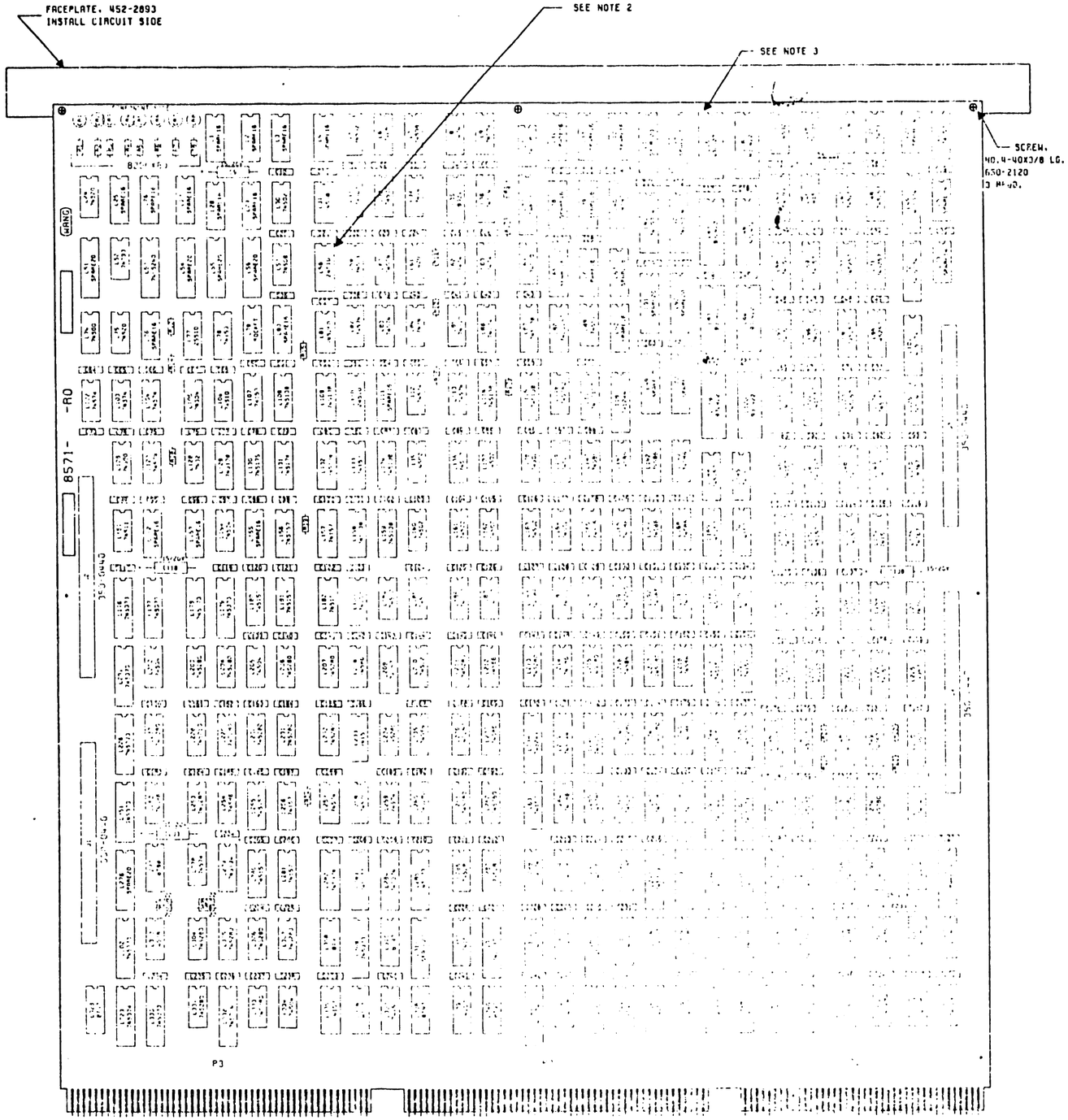
BOARD NO. & TITLE: C8571 SYSTEM BUS CNTRL (SBC)(ASI) CREATED: 04/10/84 08:25
ASSEMBLY: 210-A LAST MODIFIED: 04/19/84 12:18 BY: LAB
ARTWORK REVISION (R): 00 EDITING REVISION: 2
ASSEMBLY REVISION (A): 00
SCHEMATIC REVISION (S): 00
DWR ON MOST RECENT ECO: E2351

* 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					
L88	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 ER 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

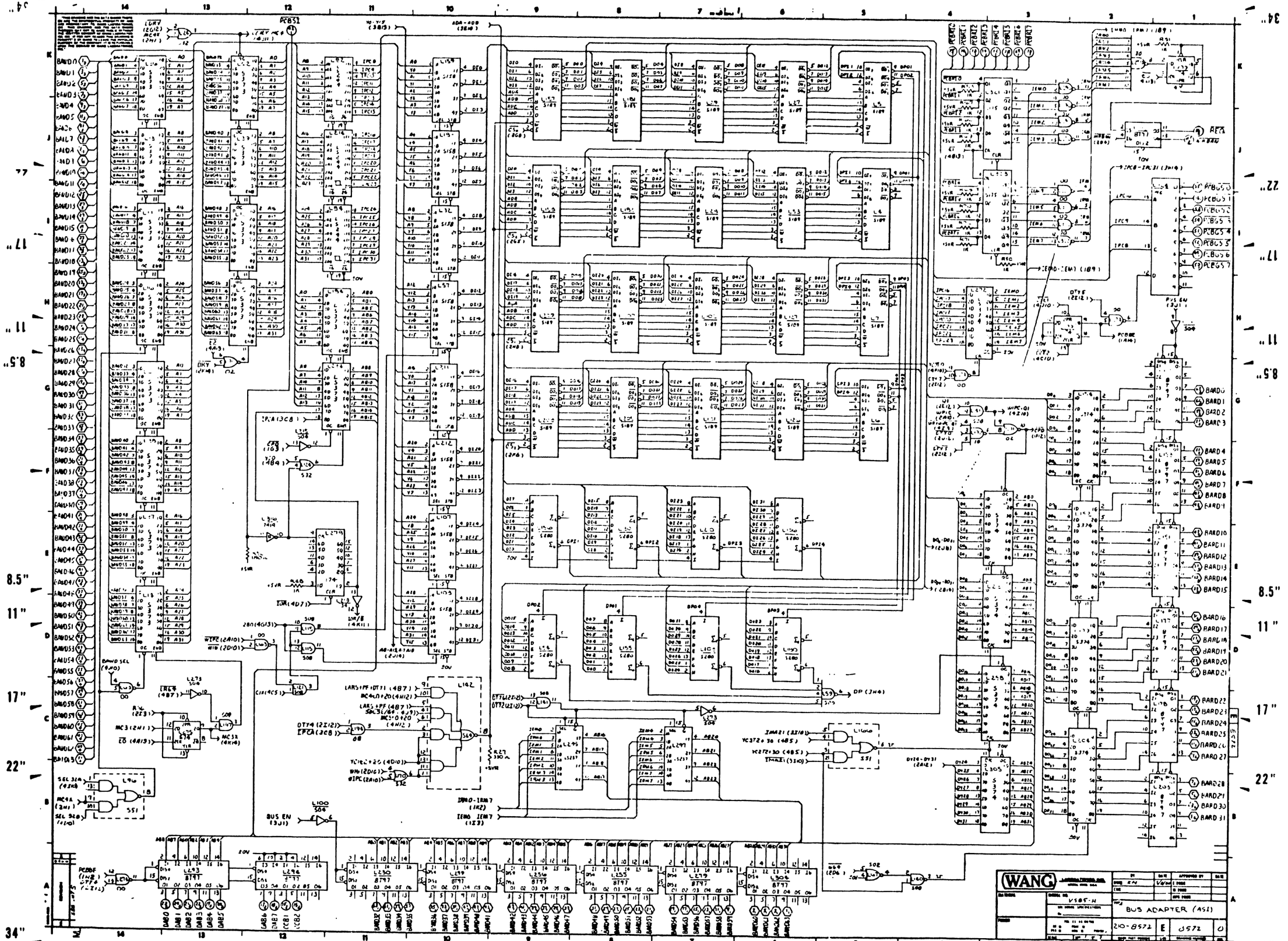
VV7



WANG LABS 8571 SYSTEM BUS CONTROL
ASI 5/24 09 10 11/15/84
ASSEMBLY PLOT

REV.1 PER ECO NO. 32949 7 SEP 84

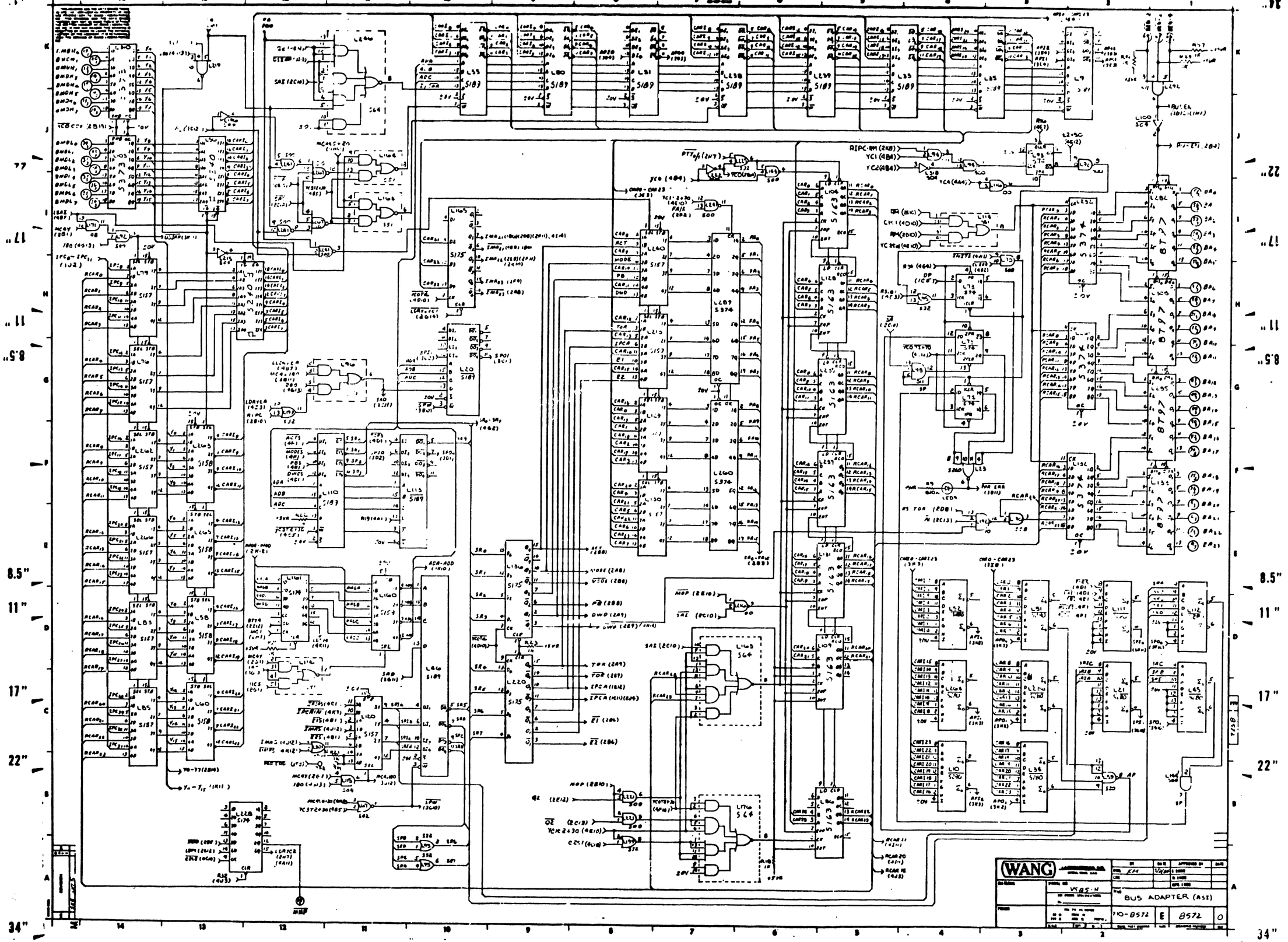
NOTES: 1. UNLESS OTHERWISE SPECIFIED:
ALL CAPACITORS ARE [illegible] IN MICROFARADS.
ALL RESISTORS ARE 1%, 1/4W, SZ. EXCEPT AS NOTED IN OHMS.
ALL TEOSCOPI-CR5/[illegible] DIP SOCKETS.
2. LOAD 16 PIN SOCKETS [illegible] 116.
3. LOAD 22 PIN SOCKETS [illegible] 119 & 120.

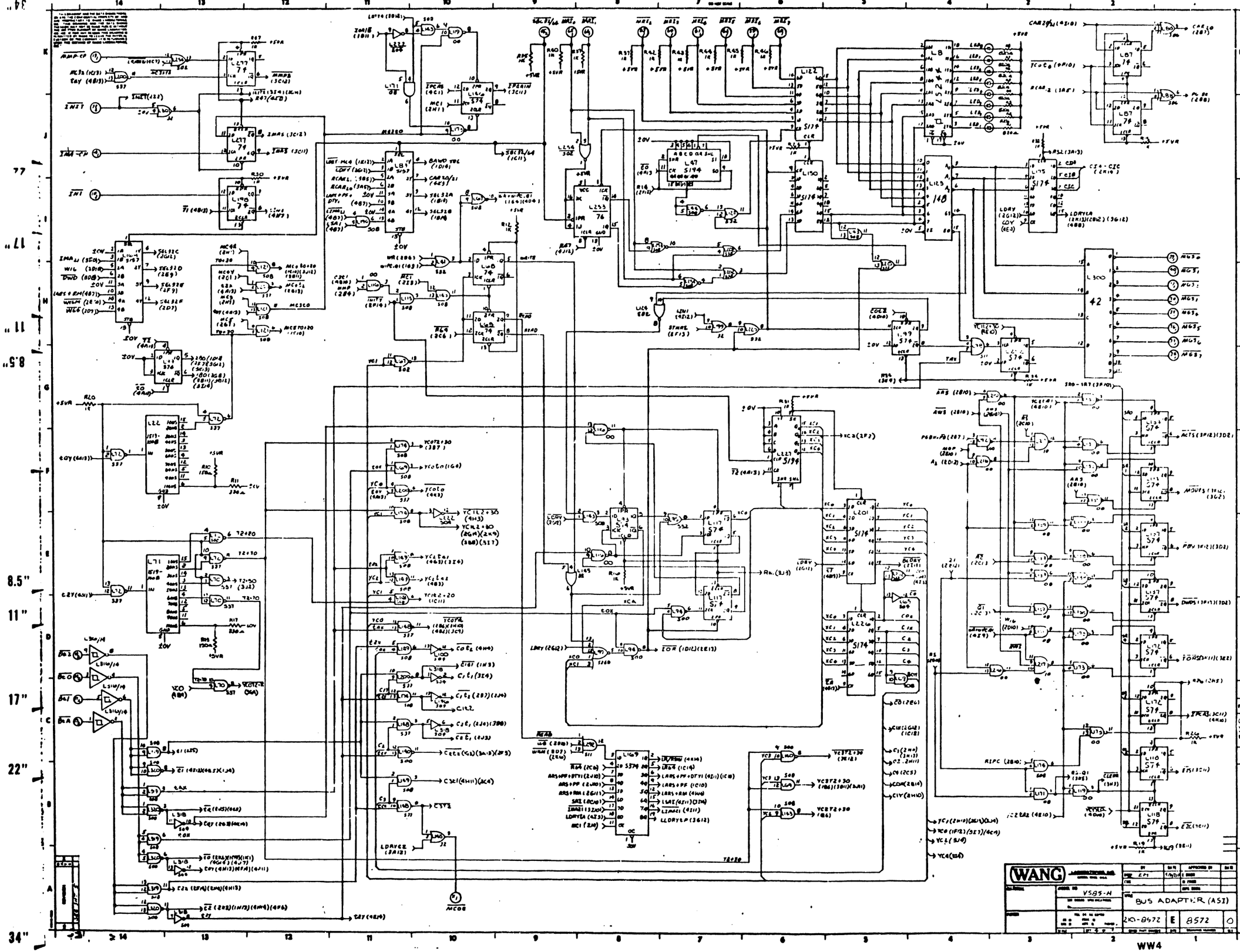

WANG
BUS ADAPTER (ASI)
210-8572
E
8572
0
WW1

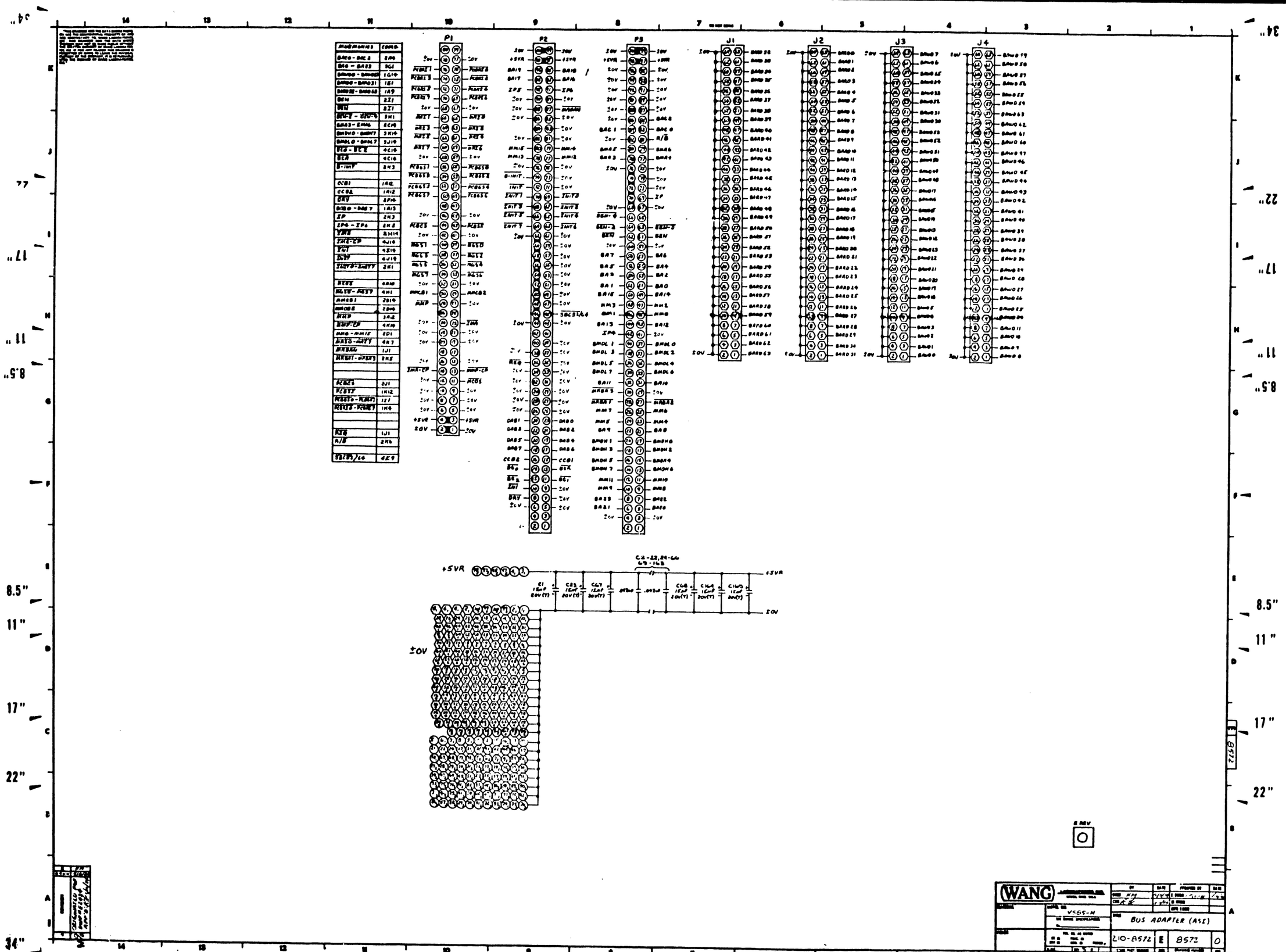
WANG

MODEL OF	VS95-M	TITLE:	BUS ADAPTER
		210-8572	E 3572 0

WW2


WANG
VP85-M
BUS ADAPTER (ASI)
710-8572
E
8572
0
WW3


WANG
VS85-H
BUS ADAPTER (ASI)
210-8572
E
8572
0
WW4


P1
P2
P3
J1
J2
J3
J4
+5VR
±0V
C1 - 22,84-66 69 - 140
C1 15uF 50V (T)
C2,3 15uF 20V (T)
C4,7 15uF 20V (T)
.047uF
.0033uF
C5,8 15uF 20V (T)
C6,9 15uF 20V (T)
C10,13 15uF 20V (T)
WANG
VS85-N
BUS ADAPTER (ASI)
210-8572
E
8572
0
E REV
WW5

WANG LABORATORIES, INC.

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

(FINAL BILL-OF-MATERIALS)

BOARD NO. & TITLE: C8572 BUS ADAPTER (ASI)
ASSEMBLY: 210
ARTWORK REVISION (B): 00
ASSEMBLY REVISION (A): 00
SCHEMATIC REVISION (S): 00
DWR OR MOST RECENT ECO: E2424

CREATED: 05/09/84 09:19
LAST MODIFIED: 05/16/84 08:18 BY: LAB
EDITING REVISION: 1

* 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
C26 - C66					
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	370-0078-	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					

* 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		8
L276 - L277					
L300					
L314					
L218	376-0010-	7404	IC HEX INVERTER		2
L248					
L91	376-0016-	7402	IC QUAD 2-INPUT NOR GATE		2
L249					
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
L133					
L161					
L183					
L177 - L178					
L203					
L229 - L230					
L255 - L256					
L279					
L282					
L285					
L290					

* REF. DES.	* WANG PART NO.	* VALUE/TYPE *	DESCRIPTION	* DRAWING NO. *	QTY. *
L306					
L308					
L315					
L60	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					
L118					
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					
L248					
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
L95					
L126					
L170					

* REF. DES.	* WANG PART NO.	* VALUE/TYPE *	DESCRIPTION	* DRAWING NO. *	QTY. *
L199					
L202					
L228					
L10	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
L104					
L109					
L128					
L131					
L235					
L237					
L98	376-0237-	74S11	IC TRIPLE 3-INPUT AND GATE		3
L243					
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 ± 1/64 125 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					
L34					
L48					
L52					
L54					
L61					
L103					
L106					
L111 - L112					
L155 - L156					
L180					
L210					
L236					
L264					
L122	376-0247-	74S174	IC HEX D-TYPE FLIP-FLOP		6
L150					
L161					
L178					
L201					
L226					
L228					
L291					
L136	376-0270-	74S175	IC QUAD D-TYPE FLIP-FLOP		6
L168					
L220					
L242					
L321					
L323					
L88	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	376-0306-	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					
L160					
L179					
L204					
L206					
L231 - L233					
L257 - L261					
L281					
L289					
L305					
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					
L64	376-0333-	74S139	IC 2 TO 4-LINE DECODER/MULTIPLEXER		2
L107					
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					
L66					
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-	8T97	IC HEX BUFFER BURNED		2
01	510-8572-		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)

376-0186-	74S51	IC DUAL 2 WIDE 2-INPUT AND-OR-INVERT GATES	7
376-0189-	8T97	IC HEX BUFFER 16 PIN DIP	28
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/INVERT GATE	7
376-0202-	74S74	IC DUAL D-TYPE POS EDGE TRIGRD F/F W/PRESET/C	13
376-0208-	74S32	IC QUAD 2-INPUT OR GATE	7
376-0206-	74S260	IC DUAL 5-INPUT EXPANDER	3
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
376-0233-	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
376-0296-	74S138	IC 3-LINE TO 8-LINE DECODER/MULTIPLEXER	3
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	16
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	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 EX AS NOTED .XX ± .010 FRAC ± 1/64 .XXX ± .005 ANG ± 1°30'	210-8572	C	8572	0
	SCALE SHT 7 OF 7	WANG PART NUMBER	SIZE	DRAWING NUMBER	REV

WW7

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

DO NOT SCALE

SCREW, NO.4-40X3/8LG. 850-2120 3 REQD

EXTENDER RAIL 452-2982 INSTALL CIRCUIT SIDE

WANG WANG 1983 BUS ADAPTER FINELINE 8572
ASI S2AN 30 11 11/28/84
ASSEMBLY PLOT
REV. 1 PER ECO NO. 33470 12SEP84

NOTES- 1. UNLESS OTHERWISE SPECIFIED-
ALL CAPACITORS ARE IN UFD, 200-150V, EXPRESSED IN MICROFARADS.
ALL RESISTORS ARE IN OHMS, 5 PERCENT, EXPRESSED IN OHMS.
ALL LEDS ARE 370-0305.
ALL DIODES ARE 385-4110.
ALL TEST POINTS ARE 66: 2022.

WW8

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

WANG LABORATORIES, INC.

MATERIAL —

FINISH —

TITLE ASSEMBLY, BUS ADAPTER

SIZE D | 8572 | REV 1

SHEET 1 OF 1

MNEMONICS	COORD.
ACR	9E14
BAD1-BA11	5F14
BUSY	9A14
CTS1-CTS2	8D8
CTS3	8J8
CTS4	8J8
CTS5-CTS6	8D14
CTS7	8J14
CTS8	8J14
DATA1-DATA8	9H14
DAV	9B14
DDIS	9J14
DDO-DDI5	5C9
DMAPPI	5D14
DSR	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	9E14
LDB0-LDB15	5K9
LPDB000-LPDB007	6J14
RTPPI	5A9
RREQPPI	5A9
MSB0-MSB1	9J14
PE	9G14
+PPDMARD	5J14
+PPDMAWRITE	5J14
PPIINPUTRDY	6A9
PPIPCBRDY	6K1
PWRON	9E7

MNEMONICS	COORD.
RQPPI	6D14
RESET	9B1
RPPIH	5A8
RSTPPI	2F14
RTS1	8C1
RTS2	8B1
RTS3	8J1
RTS4	8H1
RTS5	8C8
RTS6	8B8
RTS7	8J8
RTS8	8H8
RxD1	8C8
RxD2	8D8
RxD3 RxD4	8J8
RxD5	8C14
RxD6	8D14
RxD7-RxD8	8J14
SHINT	9F14
SLCT	9F14
TxD1	8D1
TxD2	8C1
TxD3-TxD4	8J1
TxD5	8C8
TxD6	8D8
TxD7-TxD8	8J8
USD-US1	9C1
RPPIH	5A9
RPPI	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

C2-10,12,14,18-20,23-26, 33-36,38-46,57-59,61,54-67, 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 15 20V(T)

RN4 630 H1 (PE)(5) (SLCT)(7) (FAULT)(12)

RN2 630 H2 (GND)(1,11) (SLCT)(7) (FAULT)(12)

C13,14,21,22,47-55 60,62,63,68-75,78, 86,102,111,115,118

GND

C183 15 20V(T)

C176 15 20V(T)

+12V

-12V

SPARES

74LS00 L169 L76 L76 L161 L161 L57 L308

74LS02 L59 L129 L129 L64 L207 L207 L207

74LS04 L80 L11 L11 L31 L54 L54 L54

74LS08 L103 L147 L103 L103 L159 L159 L132 L132 L123 L210 L210 L129

74LS10 L184 L184 L184 L184 L184 L180 L180 L23 L23 L23 L201

74LS32 L101 L99 L139 L139 L139 L100 L83 L161 L218 L216 L216 L175 L173

74LS74 L121 L124 L102

74LS86 L216

74LS38 L175 L173

E REV D N

WANG LABORATORIES, INC.			SCHEMATIC DIAGRAM		
			TITLE ASYNC DEVICE CONTROLLER M/L		
MODEL NUMBER VS 100	WANG PART NUMBER 210-8168		DWN JSH	CHK	ENG DC	DIR
			E	8168	D
SCALE	SHEET 1 OF 11		SIZE	DRAWING NUMBER	REV

01	R.B.P.		
04-4	11/21/84		
ML-1560 PER ECR-M-00303 CHANGE	ML-1560 PER ECR-M-00303 CHANGE		
2	1		

J1

DATA1	1	2	±0V
DATA2	3	4	
DATA3	5	6	
DATA4	7	8	
DATA5	9	10	
DATA6	11	12	SHINT
DATA7	13	14	USD
DATA8	15	16	US1
DSTBIN	17	18	DSTBOUT
ACR	19	20	PWRON
BUSY	21	22	DAV
PE	23	24	SLCT
FAULT	25	26	RESET

J2

TxD1	1	2	±0V
DTR1	3	4	
DSR1	7	8	
RxD1	9	10	
RTS1	13	14	
ExTxC1	15	16	
CTS1	17	18	
ExRxC1	19	20	
TxD2	21	22	
DTR2	23	24	
DSR2	27	28	
RxD2	29	30	+5VR
RTS2	33	34	+12V
ExTxC2	35	36	
CTS2	37	38	-12V
ExRxC2	39	40	

J3

TxD3	1	2	±0V
DTR3	3	4	
DSR3	7	8	
RxD3	9	10	
RTS3	13	14	
ExTxC3	15	16	
CTS3	17	18	
ExRxC3	19	20	
TxD4	21	22	
DTR4	23	24	
DSR4	27	28	
RxD4	29	30	+5VR
RTS4	33	34	+12V
ExTxC4	35	36	
CTS4	37	38	-12V
ExRxC4	39	40	

J4

TxD5	1	2	±0V
DTR5	3	4	
DSR5	7	8	
RxD5	9	10	
RTS5	13	14	
ExTxC5	15	16	
CTS5	17	18	
ExRxC5	19	20	
TxD6	21	22	
DTR6	23	24	
DSR6	27	28	
RxD6	29	30	+5VR
RTS6	33	34	+12V
ExTxC6	35	36	
CTS6	37	38	-12V
ExRxC6	39	40	

J5

TxD7	1	2	±0V
DTR7	3	4	
DSR7	7	8	
RxD7	9	10	
RTS7	13	14	
ExTxC7	15	16	
CTS7	17	18	
ExRxC7	19	20	
TxD8	21	22	
DTR8	23	24	
DSR8	27	28	
RxD8	29	30	+5VR
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
LDB3	12	N	LDB7
LDB4	13	P	LDB1
LDB2	14	R	LDB3
LDB6	15	S	LDB5

P3

	1	A	
DMAPPI	2	B	
	3	C	
	4	D	
	5	E	RPPIH
RPPIH	6	F	
	7	H	RTPPI
RREQPPI	8	J	
	9	K	
+12V	10	L	+12V
	11	M	
±0V	12	N	±0V
	13	P	
+PPDMARD	14	R	
+PPDMAWRITE	15	S	

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	
RSTPPI	10	L	RQPPI
	11	M	
±0V	12	N	±0V
+5VR	13	P	+5VR
RRPPI	14	R	
	15	S	

MICROPROCESSOR

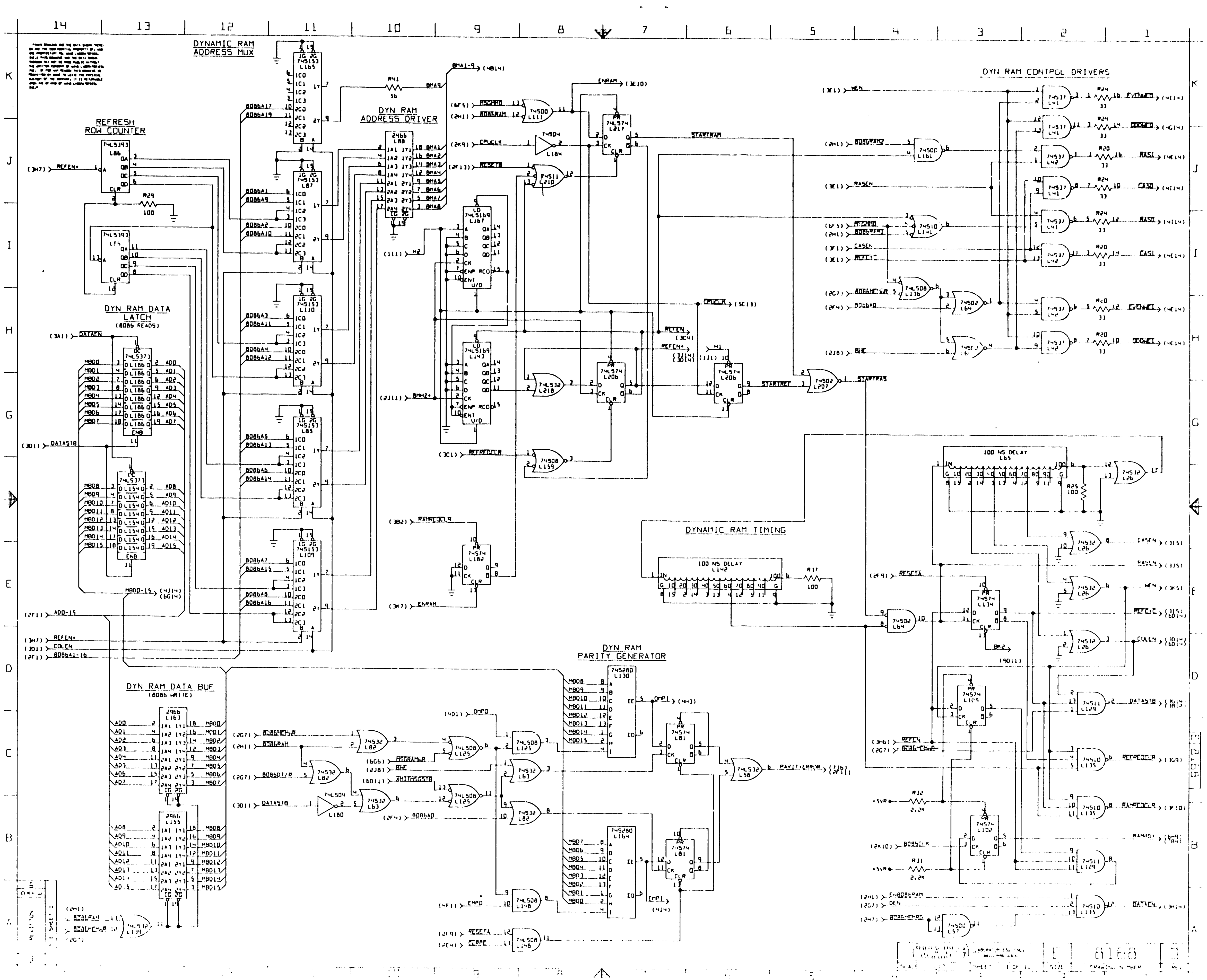
CLOCK GENERATOR

8086 DATA BUFFER

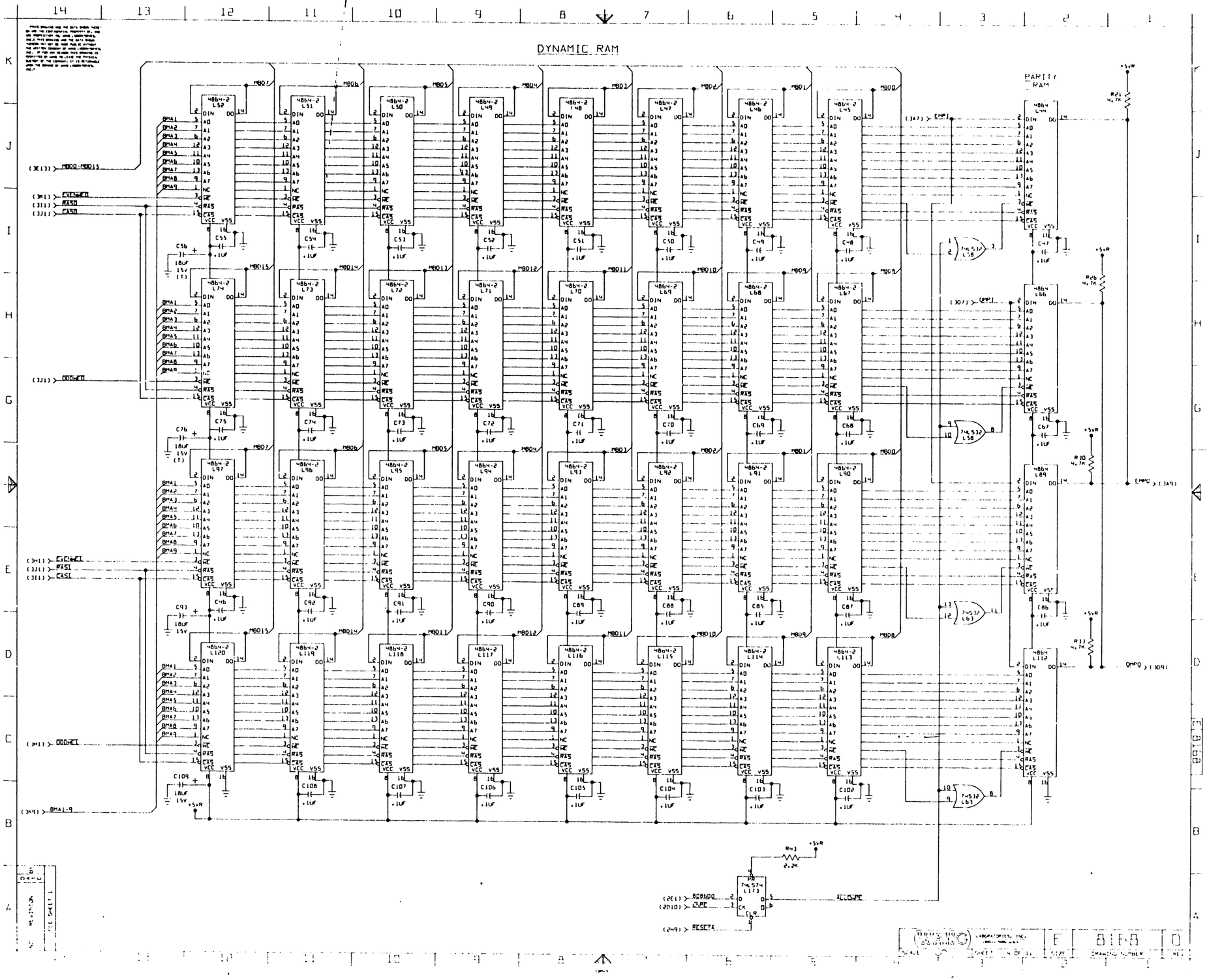
8086 ADDRESS LATCH

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)
DYNAMIC RAM TIMING
100 NS DELAY L65
100 NS DELAY L142
DYN RAM PARITY GENERATOR
DYN RAM DATA BUF (8086 WRITE)

DYNAMIC RAM


PARITY RAM
MB00-MB15
RMA1-9
CASL
RASL
CWEL
DOUTCL
RESETL
ACORDQ
CKPE
PERRL
+5VR
4864-2
74LS32
74LS74

DMA INTERFACE CONTROL

DMA RAM CONTROL

CPU/DMA ARBITRATION

DMA RAM ADDRESS MUX

SRAM- 8086 DATA BUFFER

DMA RAM (2KW, STATIC)

MESSAGE DMA CONTROLLER

XX6

MESSAGE INTERRUPTS

PROGRAMMABLE TIMER

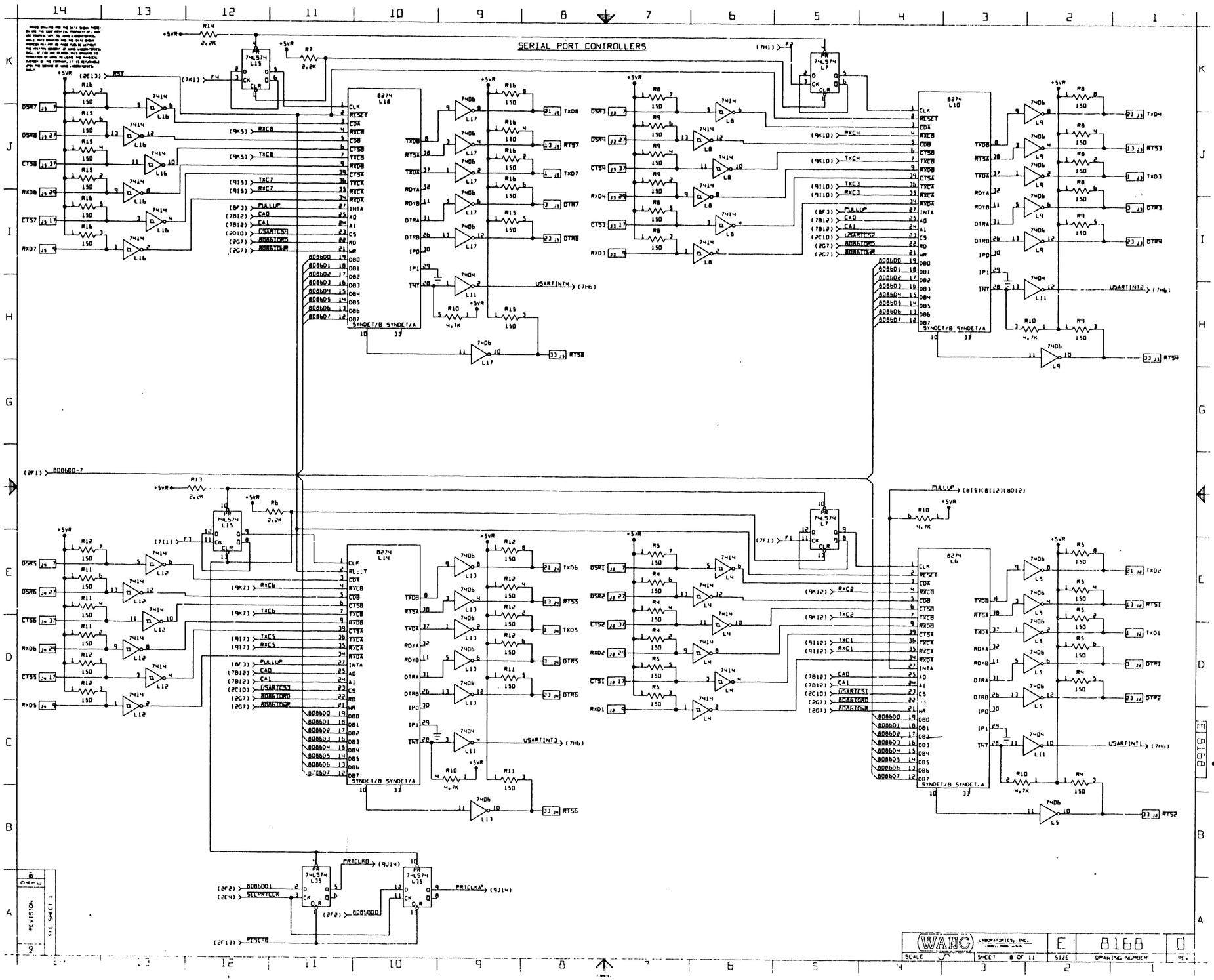
PROGRAMMBLE INTERRUPT CONTROLLER

BAUD RATE GENERATORS

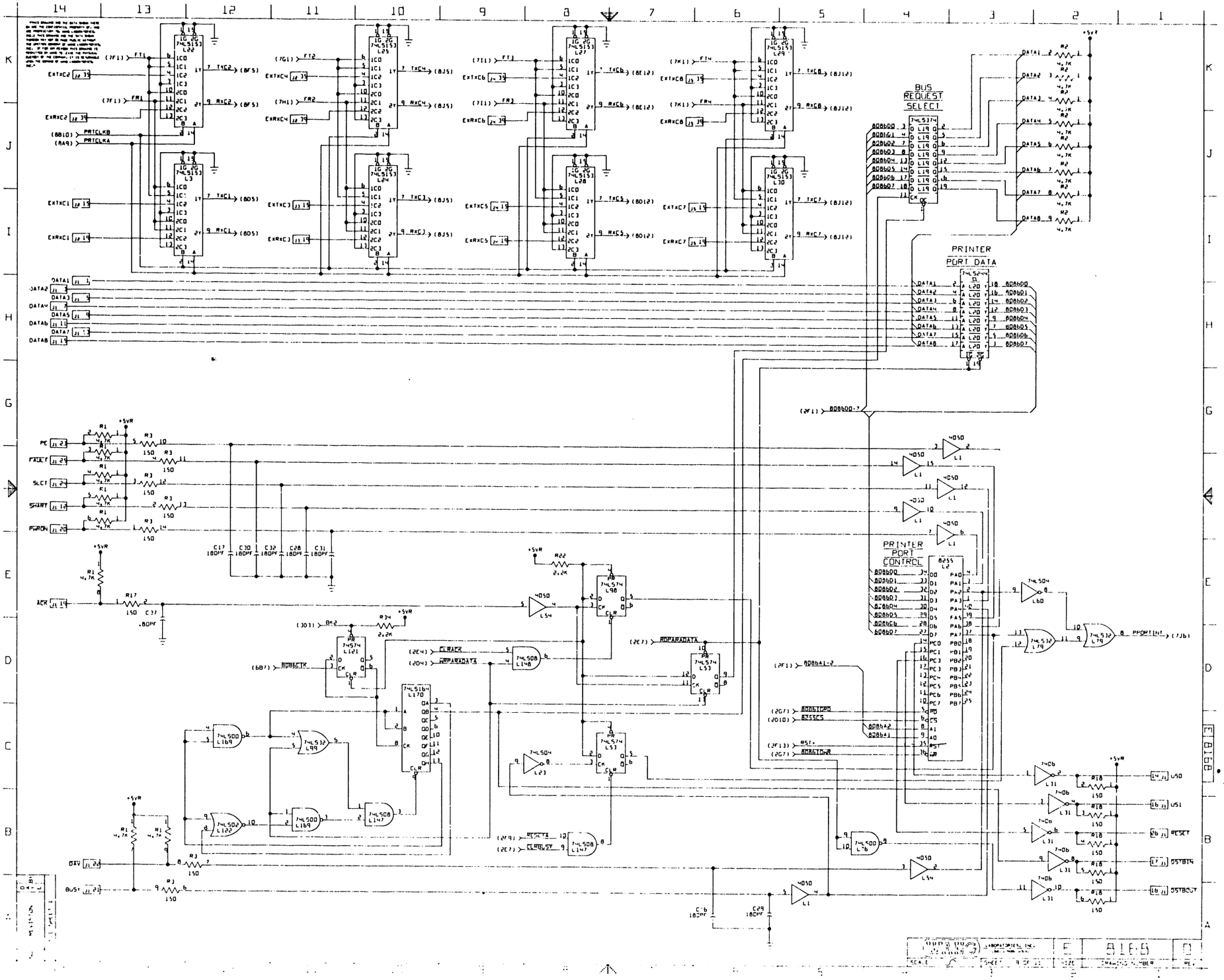
EPROM (4KW)

EPROM ADDRESS BUFFER

SERIAL PORT CONTROLLERS



WANG LABORATORIES, INC.	E	8168	0
SCALE	SHEET 8 OF 11	SIZE	DRAWING NUMBER	REV


BUS REQUEST SELECT
PRINTER PORT DATA
PRINTER PORT CONTROL
BUSRQST
PRPARADATA
CLRACK
RESETA
PRSTRBOUT
DATA1
DATA2
DATA3
DATA4
DATA5
DATA6
DATA7
DATA8
+5VR
74LS374
74LS244
8255
74LS153
74LS574
74LS504
74LS32
74LS06
74LS08
74LS00
74LS164
4050
4.7K
150
180PF
2.2K

J5
J4
J3
J2
J1
L18
L14
L10
L6
L21
L2
L107
L156
L39
L38
L62
L61
Y1
Y2
Y3
Y4
Y5
J6
8168

XX10

"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

BA3	3	R37 68Ω	2	BA3	CB8	24		5	CB8	DD6	48		17	DD6	CF6	68		8	CF6	DDB	83		17	DDB
CF3	4		8	CF3	-12V	24	-12V			CD5	44		20	CD5	CC6	69		6	CC6	DB8	84		15	DB8
CA3	5		4	CA3	CD7	25		20	CD7	DB2	45		15	DB2	CE6	65		22	CE6	DATA1	10		2	DATA1
CE3	6		22	CE3	BB8	26		3	BB8	CA5	46		19	CA5	CB6	66		5	CB6	DATA2	30		3	DATA2
DB4	7		15	DB4	CF7	27		8	CF7	CD6	47		20	CD6	CD1	67		20	CD1	DATA3	50		4	DATA3
CC3	8		6	CC3	DB7	28		15	DB7	CA6	48		4	CA6	CF2	68		8	CF2	DATA4	70		5	DATA4
DD4	9		17	DD4	CE7	29		22	CE7	CF5	49		85	CF5	CF1	69		8	CF1	DATA5	90		6	DATA5
CB3	10		5	CB3	-12V	30	-12V			BA6	50	R5 68Ω	26	BA6	CB2	70		5	CB2	DATA6	110		7	DATA6
BB4	11		3	BB4	CC7	31		6	CC7	CE5	51		225	CE5	CE1	71		22	CE1	DATA7	130		8	DATA7
BA4	12	R32 68Ω	2	BA4	BA7	32	R26 68Ω	2	BA7	DD2	52		17	DD2	CC2	72		6	CC2	DATA8	150		9	DATA8
DB3	13		15	DB3	CB7	33		5	CB7	CC5	53		65	CC5	CC1	73		6	CC1	DSTBIN	17		1	DSTBIN
CF4	14		8	CF4	CD4	34		20	CD4	BB3	54		33	BB3	CE2	74		22	CE2	ACK	19		10	ACK
CD3	15		20	CD3	CA7	35		4	CA7	CB5	55		55	CB5	CB1	75		5	CB1	BUSY	21		11	BUSY
CE4	16		22	CE4	CA4	36		4	CA4	DD3	56		17	DD3	CD2	76		20	CD2	PE	23		12	PE
CF8	17		8	CF8	DD7	37		17	DD7	DB5	57		155	DB5	DB1	77		15	DB1	SLCT	24		13	SLCT
CC4	18		64	CC4	CD8	38		20	CD8	BB5	58		35	BB5	BB1	78		3	BB1	FAULT	25		33	FAULT
CE8	19		22	CE8	BB7	39		37	BB7	BB6	59		3	BB6	BB2	79		32	BB2					
CB4	20		5	CB4	CA8	40		48	CA8	DD5	60		175	DD5	DD1	80		17	DD1					
CC8	21		68	CC8	DB6	41		15	DB6	CA2	61		42	CA2	CA1	81		4	CA1					

BA8	22	R28 68Ω	26	BA8	BA5	42	R30 68Ω	25	BA5	BA2	62	R15 68Ω	24	BA2	BA1	82	R19 68Ω	21	BA1	RESET	26		39	RESET
																				±0V	2		19	±0V
																				±0V	4		20	±0V
																				±0V	6		21	±0V
																				±0V	8		22	±0V
																				±0V	10		23	±0V
																				±0V	12		24	±0V
																				±0V	25		26	±0V
																				±0V	1		40	±0V
																				USR0	14		14	USR0
																				POWER ON	20		15	POWER ON
																				SMART	17		18	SMART
																				DSTBOUT	18		34	DSTBOUT
																				USR1	16		36	USR1
																				DAV	22		35	DAV

REVISION	BY	DATE	APPROVED BY	DATE
SEE SHEET 2				

WANG PART NO. | DRAWING NO. | DESCRIPTION

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

	BY	DATE	APPROVED BY	DATE
DWN	PG. Daniel	7-12-82	E ENGR	
CHK			M ENGR	
			MFG ENGR	

MATERIAL

MODEL NO VS-15, LS-100

FINISH

TITLE ASYNC DEVICE CONTROLLER CONNECTOR BOARD

210-8323 | D | 8323 | 6

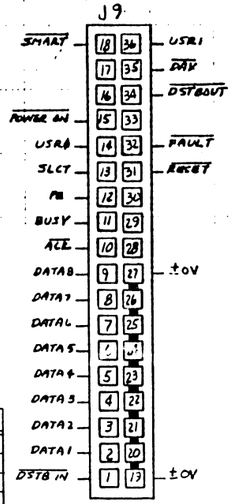
SCALE | SIZE | DRAWING NUMBER | REV

YY1

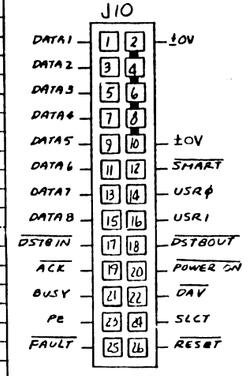
THIS DRAWING AND THE DATA SHOWN THEREON ARE THE CONFIDENTIAL PROPERTY OF, AND ARE PROPRIETARY TO, WANG LABORATORIES, INC. THIS DRAWING AND THE DATA SHOWN THEREON MAY NOT BE MADE PUBLIC WITHOUT THE WRITTEN CONSENT OF WANG LABORATORIES, INC. IF FOR ANY REASON THIS DRAWING IS PERMITTED BY WANG TO LEAVE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

DO NOT SCALE

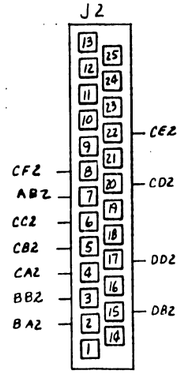
J9



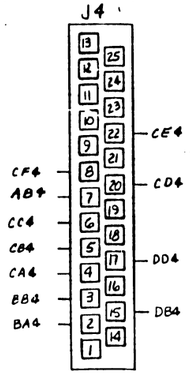
J10



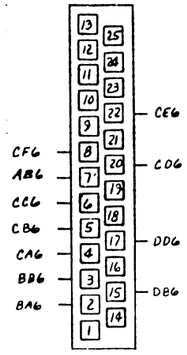
J2



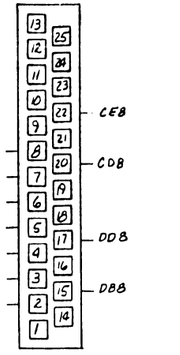
J4



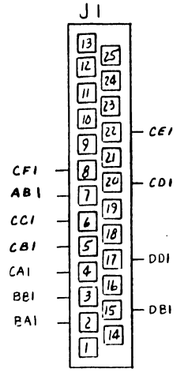
J6



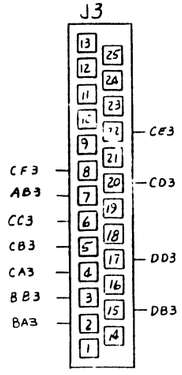
J8



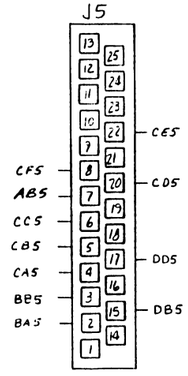
J1



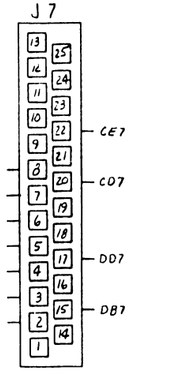
J3



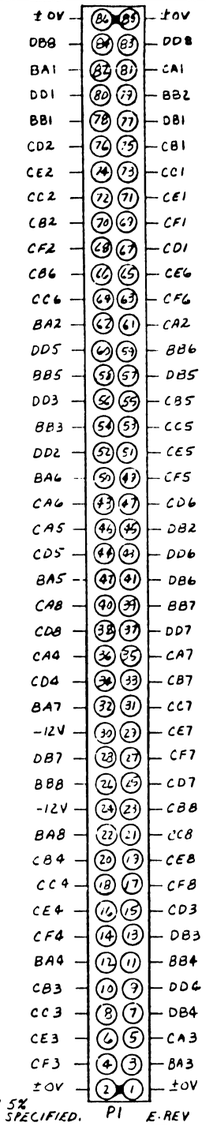
J5



J7



P1



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
USR0	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 1/4W 5% UNLESS OTHERWISE SPECIFIED.

P1 E.REV 1

REVISION	BY	DATE	APPROVED
N			

WANG PART NO | DRAWING NO | DESCRIPTION

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

	BY	DATE	APPROVED BY	DATE
DWN	P.L. Daniels	7-12-82	E ENGR D CHEN	7/15/82
CHK	[illegible]	7/15/82	M ENGR	
			MFG ENGR	

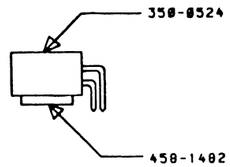
MATERIAL | MODEL NO VP-15, 25, 100 | TITLE ASYNC DEVICE CONTROLLER CONNECTOR BOARD

FINISH | 210-8323 | D | 8323 | 6

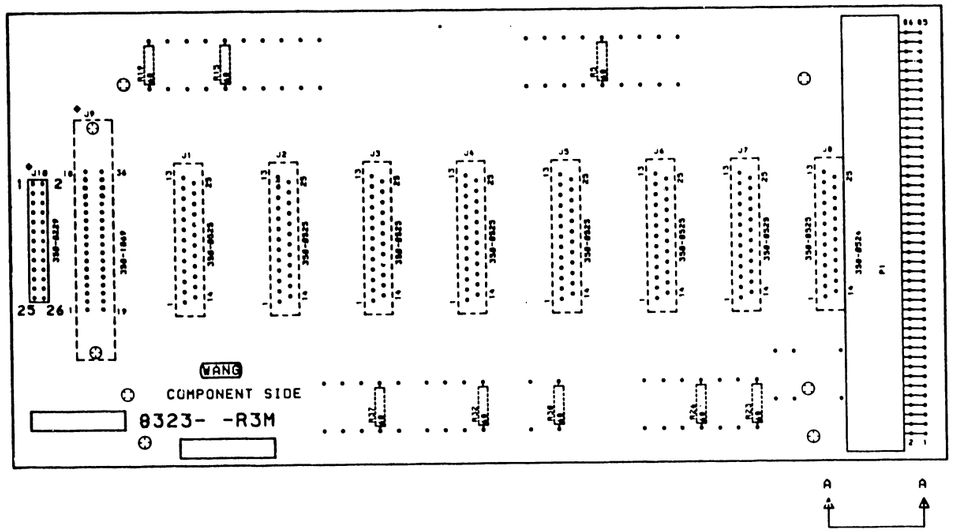
WANG PART NUMBER | SIZE | DRAWING NUMBER | REV

YY2

"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."



DETAIL A-A



NOTES: 1. UNLESS OTHERWISE SPECIFIED:
ALL RESISTORS ARE 1/4W,5% EXPRESSED IN OHMS.
2. ALL COMPONENTS OTHER THAN P1 AND J10 ARE MOUNTED ON CIRCUIT SIDE OF BOARD.
* DO NOT LOAD J9 OR J10 FOR 218-8323-1

WANG LABORATORIES INC. LOWELL, MASS. U.S.A.		BY	DATE	APPROVED BY	DATE
		DWN G.TYNES	4/8/82	E ENGR	
		CHK		M ENGR	
MATERIAL	MODEL NO. VS15/25/100	E C CONTROL		MFG ENGR	
	SEE ENGRG SPECIFICATIONS NO. 10-203	TITLE ASYNC DEVICE CONTROLLER CONNECTOR BD. ASSEMBLY DRAWING			
FINISH	TOL. EX. AS NOTED .XX+/-.010 FRAC.+/-1/64 .XXX+/-.005 ANG +/- 1 30'	218-8323-R3	C	8323	7
	SCALE 1/1 SHT 1 OF 1	WANG PART NUMBER	SIZE	DRAWING NUMBER	REV

N

YY3

THIS DRAWING AND THE DATA SHOWN THEREON ARE THE CONFIDENTIAL PROPERTY OF WANG LABORATORIES, INC. AND 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 IS FOR USE BY VENDOR 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

ASVR

RT 2.2K

BA1 (41)

BA2 (42)

+5V -12V +12V

L10 L32 L16 L28 — 74LS14 HEX INVERTER

L6 L5 L12 L40 L33 L39 L17 L18 L11 L24 L34 L23 — 75150 DUAL PERIPHERAL DRIVER

R1 120Ω 1/2W +12V
R2 120Ω 1/2W -12V
R3 120Ω 1/2W +12V
R4 120Ω 1/2W -12V
R5 120Ω 1/2W +12V
R6 120Ω 1/2W -12V
R7 120Ω 1/2W +12V
R8 120Ω 1/2W +12V
R9 120Ω 1/2W -12V
R10 2.2K ASVR
R11 120Ω 1/2W +12V
R12 120Ω 1/2W -12V
R13 120Ω 1/2W +12V
R14 120Ω 1/2W -12V
R15 120Ω 1/2W +12V
R16 120Ω 1/2W -12V
R17 120Ω 1/2W +12V
R18 120Ω 1/2W -12V

Q1 MPS6512 Q2 MPS6518 Q3 MPS6512 Q4 MPS6518
Q5 MPS6512 Q6 MPS6518 Q7 MPS6512 Q8 MPS6518
Q9 MPS6512 Q10 MPS6510 Q11 MPS6512 Q12 MPS6518
Q13 MPS6512 Q14 MPS6518 Q15 MPS6512 Q16 MPS6518
Q17 MPS6512 Q18 MPS6518 Q19 MPS6518 Q20 MPS6518

T1 T2 T3 T4 T5 T6 T7 T8

TxD1 (11) RTS1 (13) DTR1 (31) TxD2 (21) RTS2 (33) DTR2 (23) TxD3 (12) RTS3 (32) DTR3 (32) TxD4 (21) RTS4 (33) DTR4 (23)

DTR8 (24) RTS8 (35) TxD8 (22) DTR7 (34) RTS7 (24) TxD7 (6) DTR6 (33) RTS6 (22) TxD6 (23) DTR5 (35) RTS5 (13) TxD5 (13)

CD4 (34) CA4 (36) BA4 (12) CD3 (15) CA3 (51) BA3 (3) CD2 (74) CA2 (61) CD1 (67) CA1 (81)

BA5 (41) CA5 (44) CD5 (44) BA6 (50) CA6 (43) CD6 (47) BA7 (32) CA7 (35) CD7 (25) BA8 (22) CA8 (40) CD8 (38)

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	6/19/82	E ENGR	
CHK			M ENGR	
			MFG ENGR	

REVISION NO. SEE SHEET 3

ZZ1

"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., NOR, 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

CBB CB7 CB6 CB5 CB4 CC4 CC5 CC6 CB4 CB5 CB6 DD5 DD6 DD7 CFB CF7 CE7 CE6 CC7 CCB CB7 CBB

L2 L1 L7 L19 L35 L36 L13 L29 L20 L14 L25 L8 L26 L30

CB1 CC1 CE1 CF1 BB1 DD1 DB1 BB2 CB2 CC2 CE2 CF2 DD2 DB2 BB3 DD3 CB3 CC3 CE3 CF3 DB3 BB4 DD4 DB4 CB4 CC4 CE4 CF4 BB5 DD5 DB5 BB6 CB5 CC5 CE5 CF5 DD6 DB6 BB7 DD7 CB6 CC6 CE6 CF6 DB7 CBB CCB CEB CFB CB7 CC7 CE7 CF7

CTS1 DSR1 RI1 DCD1 RXD1 EXRXC1 EXTXC1 RXD2 CTS2 DSR2 RI2 DCD2 EXRXC2 EXTXC2 RXD3 EXRXC3 CTS3 DSR3 RI3 DCD3 EXTXC3 RXD4 EXRXC4 EXTXC4 CTS4 DSR4 RI4 DCD4 RXD5 EXRXC5 EXTXC5 RXD6 CTS5 DSR5 RI5 DCD5 EXRXC6 EXTXC6 RXD7 EXRXC7 CTS6 DSR6 RI6 DCD6 EXTXC7 RXD8 EXRXCB EXTXCB CTS7 DSR7 RI7 DCD7 CTSB DSRB RIB DCDB

+5VR VCC1

EXTXC4 EXTXC3 EXTXC2 EXTXC1 EXRXC4 EXRXC3 EXRXC2 EXRXC1 RXD1 RXD2 RXD3 RXD4 DCD1 DCD2 DCD3 RI1 RI2 RI3 DSR1 DSR2 DSR3 CTS1 CTS2 CTS3

WANG PART NO.	DRAWING NO	DESCRIPTION
WANG LABORATORIES, INC. LOWELL, MA U.S.A.		
MATERIAL	MODEL NO VS15/25/100	TITLE ASYNC DEVICE CONTROLLER TRANSCEIVER BD
FINISH	210-8324	D 8324 4

BY	DATE	APPROVED BY	DATE
DWN R DANIEL	6/14/82	E ENGR	
CHK		M ENGR	
		MFG ENGR	

REVISION NO. SEE SHEET 3

D 8324

ZZ2

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

DO NOT SCALE

I.C. LOCATION	TYPE	WANG PART NO.
L1,2,7,8,13,14,19,20,25,26,29,30,33,35	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	1B6
BA3	1A7
BA4	1A7
BA5	1F1
BA6	1E1
BA7	1D1
BA8	1C1
BB1	2F11
BB2	2E11
BB3	2D11
BB4	2B11
BB5	2G3
BB6	2G3
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	2C11
CB4	2G5
CB5	2G5
CB6	2G5
CB7	2G2
CB8	2G1
CC1	2G11
CC2	2E11
CC3	2C11
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

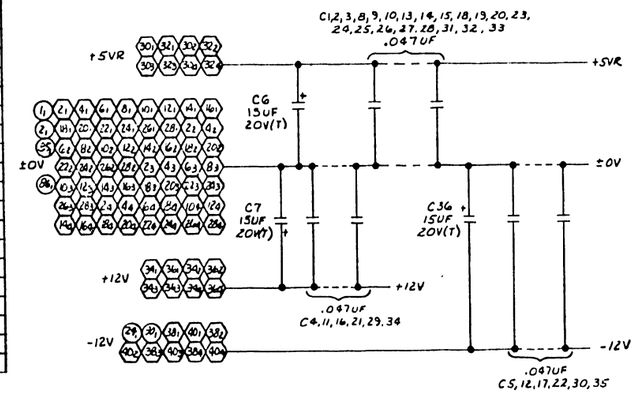
MNEMONICS	COORD.
CE1	2F11
CE2	2E11
CE3	2C11
CE4	2G7
CE5	2G6
CE6	2G6
CE7	2G8
CE8	2G3
CF1	2F11
CF2	2D11
CF3	2B11
CF4	2G7
CF5	2G8
CF6	2G5
CF7	2G3
CF8	2G3
CTS1	2A4
CTS2	2A4
CTS3	2A4
CTS4	2E1
CTS5	2D1
CTS6	2B1
CTS7	2G1
CTS8	2F1
DB1	2E11
DB2	2D11
DB3	2B11
DB4	2A11
DB5	2G8
DB6	2G8
DB7	2G9
DB8	2G7
DCD1	2A7
DCD2	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

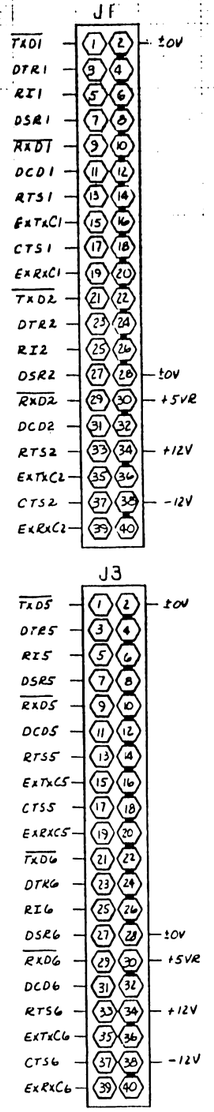
MNEMONICS	COORD.
DSR1	2A5
DSR2	2A5
DSR3	2A6
DSR4	2D1
DSR5	2C1
DSR6	2B1
DSR7	2G1
DSR8	2F1
DTR1	1E11
DTR2	1D11
DTR3	1C11
DTR4	1B11
DTR5	1G4
DTR6	1G4
DTR7	1G5
DTR8	1G5
ExRxC1	2A8
ExRxC2	2A9
ExRxC3	2A9
ExRxC4	2A9
ExRxC5	2D1
ExRxC6	2C1
ExRxC7	2C1
ExRxC8	2B1
ExTxC1	2A10
ExTxC2	2A10
ExTxC3	2A10
ExTxC4	2A11
ExTxC5	2D1

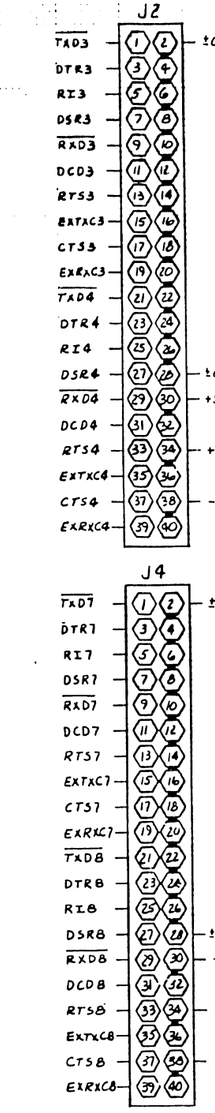
MNEMONICS	COORD.
ExTxC6	2C1
ExTxC7	2B1
ExTxC8	2B1
RI1	2A6
RI2	2A6
RI3	2A5
RI4	2D1
RI5	2C1
RI6	2B1
RI7	2F1
RI8	2E1
RTS1	1F11
RTS2	1E11
RTS3	1D11
RTS4	1B11
RTS5	1G4
RTS6	1G4
RTS7	1G4
RTS8	1G5
$\overline{RxD1}$	2A8
$\overline{RxD2}$	2A8
$\overline{RxD3}$	2A7
$\overline{RxD4}$	2A8
$\overline{RxD5}$	2D1
$\overline{RxD6}$	2D1
$\overline{RxD7}$	2C1
$\overline{RxD8}$	2B1

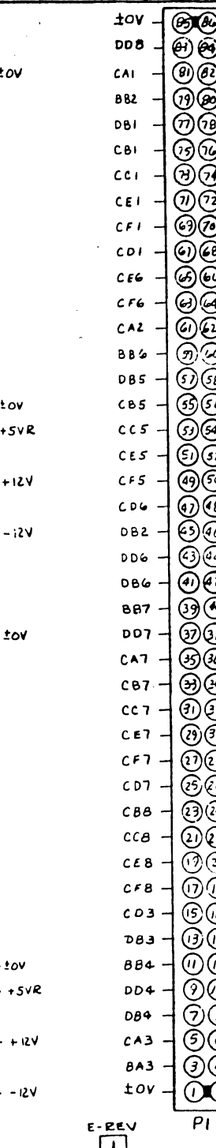
MNEMONICS	COORD.
TxD1	1F11
$\overline{TxD2}$	1E11
$\overline{TxD3}$	1D11
$\overline{TxD4}$	1C11
$\overline{TxD5}$	1G4
$\overline{TxD6}$	1G4
$\overline{TxD7}$	1G4
$\overline{TxD8}$	1G5

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









E-REV 1

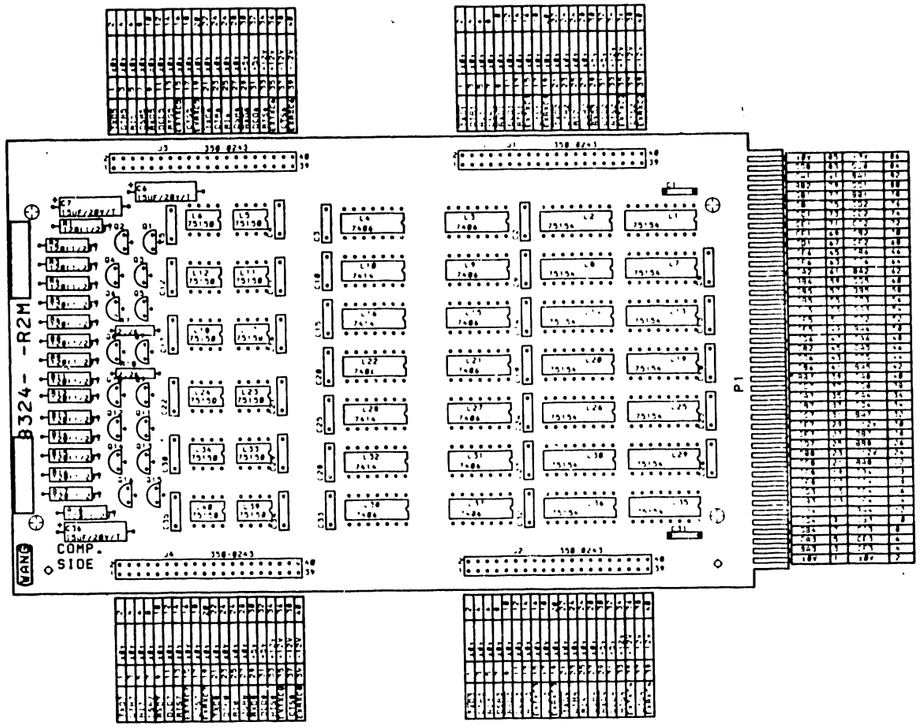
WANG PART NO	DRAWING NO.	DESCRIPTION
WANG LABORATORIES, INC. LOWELL, MA U.S.A.		
MATERIAL	MODEL NO. VS15/25/100	TITLE ASYNC DEVICE CONTROLLER TRANSCEIVER BD.
FINISH	210-8324	D 8324 4

	BY	DATE	APPROVED BY	DATE
DWN	R.G. DANIEL	6/14/82	E ENGR T. CHEN	6/23/82
CHK		6/24/82	M ENGR	
			MFG ENGR	

REVISION	BY	DATE
DO NOT SCALE DRAWING		

ZZ3

"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."



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
MATERIAL	MODEL NO. PH001F VS15/25/100	DWN G.TYNES	5.24.82	E ENGR	
	SEE ENGRG SPECIFICATIONS NO. 10-203	CHK		M ENGR	
FINISH		E C CONTROL		MFG ENGR	
	SCALE 1/1 SHT 1 OF 1	TITLE ASYNC DEVICE CONTROLLER TRANSCEIVER BD. ASSEMBLY DRAWING			
		210-8324-R2	C	8324	3
		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

PRINTED IN U.S.A.

END