

**INTELLEC® SERIES III
MICROCOMPUTER
DEVELOPMENT SYSTEM**

Manual Order Number: 121642-001 Rev. A

**schematic
drawings**

intel®



CONTENTS

INTELLEC® SERIES III MICROCOMPUTER DEVELOPMENT SYSTEM

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Multibus
Multimodule
PROMPT
Promware
RMX
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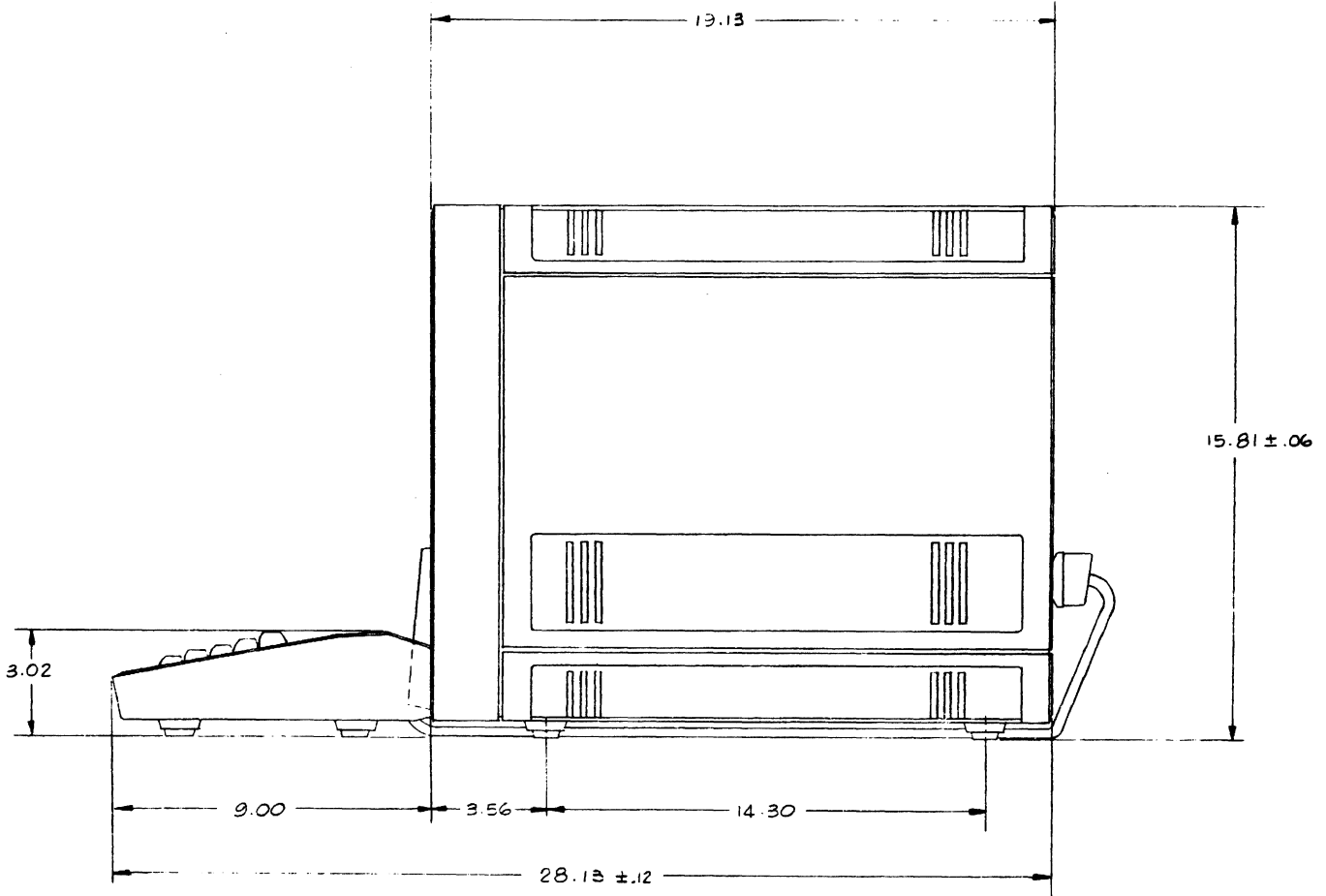
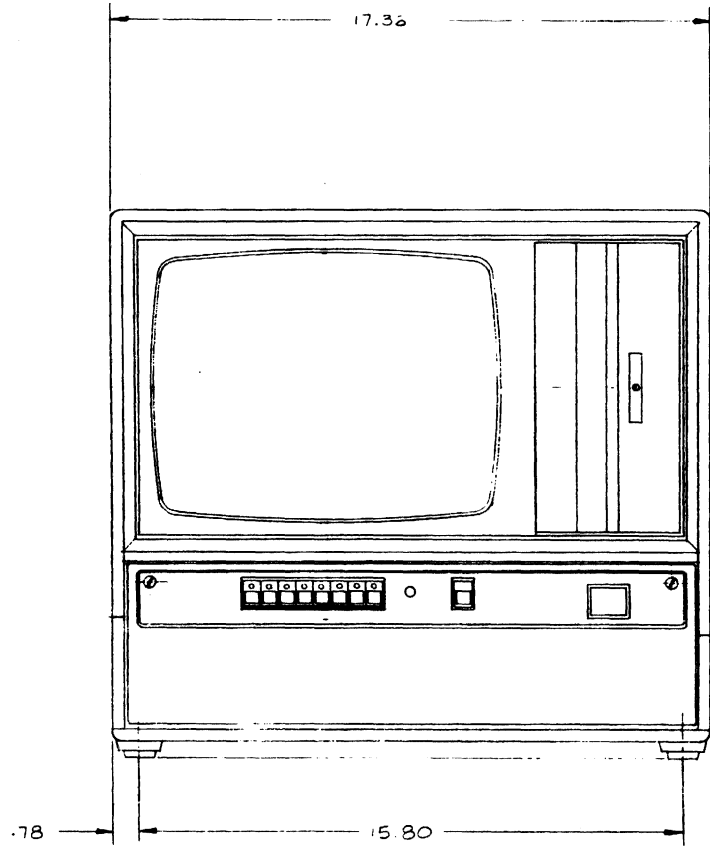
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I/O Controller Printed Wiring Assembly (1 sheet)	1002104
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Resident Processor Assembly (RPA-86) Schematic Diagram (11 sheets)	123328
iSBC 300 32k Multimodule RAM Printed Wiring Assembly (1 sheet)	1001798
iSBC 300 32k Multimodule RAM Schematic Diagram (1 sheet)	2001800
iSBC 032, 048, 064 RAM Board Printed Wiring Assembly (1 sheet)	05-0632-000 to 007
iSBC 032, 048, 064 RAM Board Schematic Diagram (6 sheets)	142704
Front Control Panel Printed Wiring Assembly (1 sheet)	1001200
Front Control Panel Schematic Diagram (1 sheet)	2001202
6-Slot Backplane Printed Wiring Assembly (2 sheets)	1002078
6-Slot Backplane Schematic Diagram (4 sheets)	2002679
Keyboard Schematic/Specification (3 sheets)	4501240
Power Supply (CRT/Floppy Disk) Schematic Diagram (4 sheets)	2001254
Power Supply Schematic Diagram (3 sheets)	2838*
Expansion Chassis System Interconnect Diagram (3 sheets)	123335
Expansion Chassis Backplane Printed Wiring Assembly (1 sheet)	1002152
Expansion Chassis Backplane Schematic Diagram (3 sheets)	2002771
Expansion Chassis Power Supply Schematic Diagram (4 sheets)	2001271

*Vendor schematic

8 7 6 5 4 3 2 1

REVISIONS			SIGNATURE AND DATE	
LTR	DESCRIPTION	DFT	CHK	ENGR
A	PRODUCTION RELEASE	E.W.	T.M.	10/6/77
- ECO 2-3151		S/S	J.P.	7/77

D
C
B
A



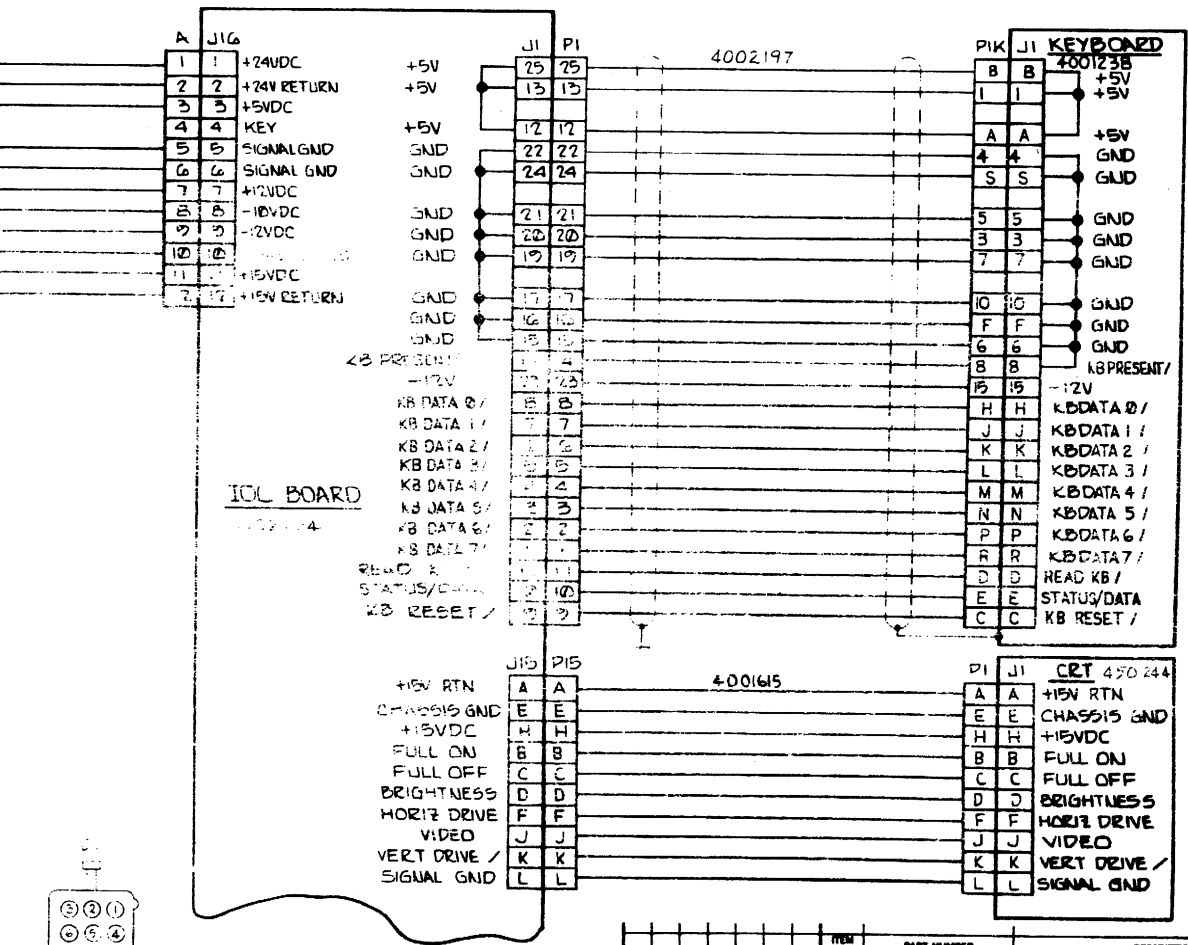
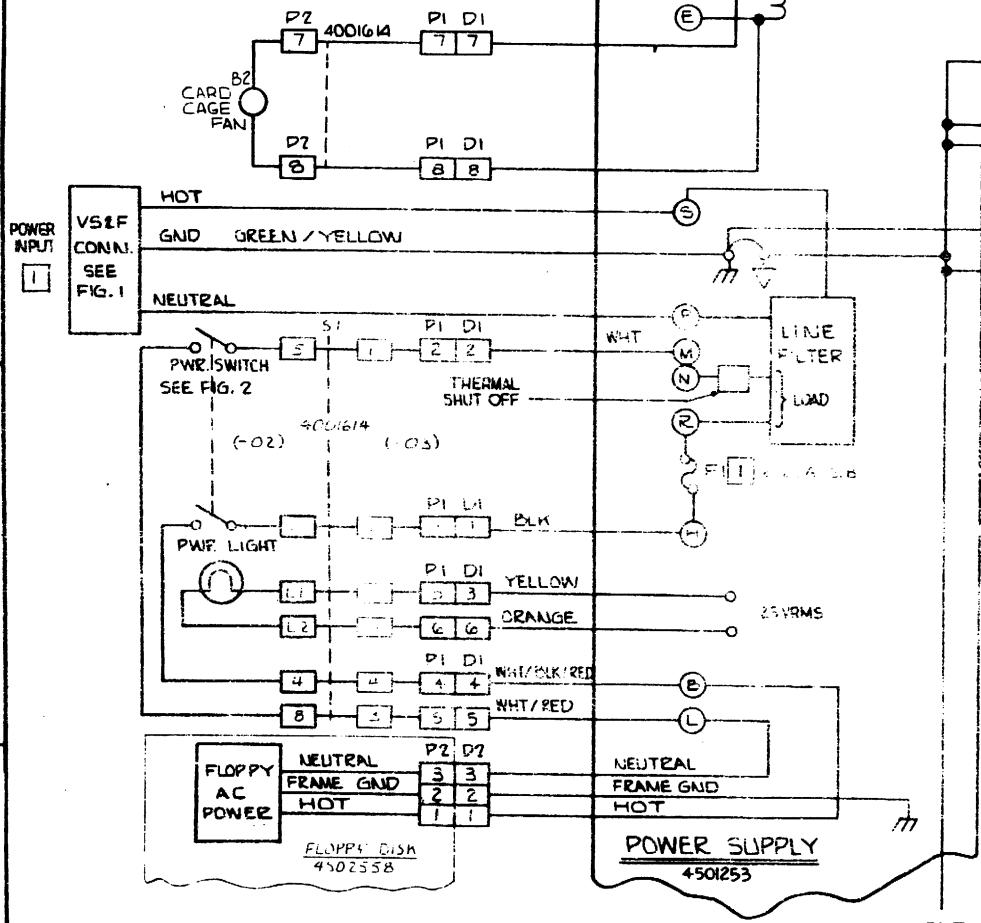
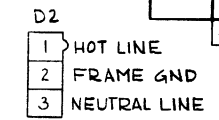
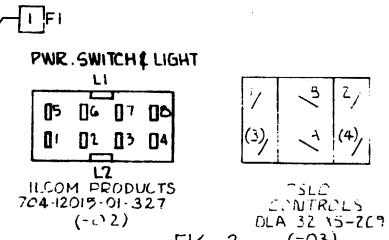
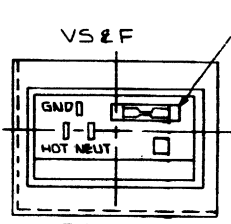
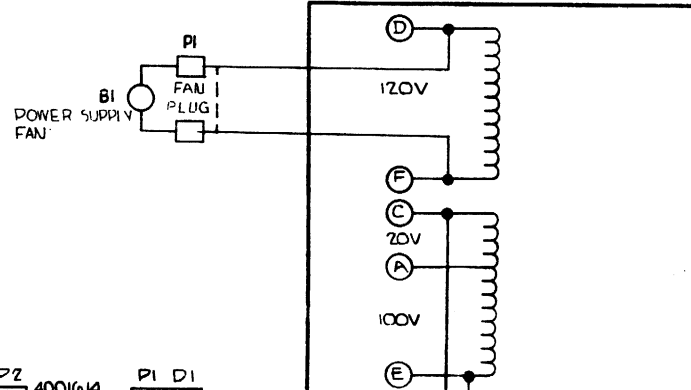
QUANTITY PER DASH NO.		ITEM NO.	PART NUMBER	DESCRIPTION
SCALE: NONE		SIGNATURE		DATE
TOL. ±	2 PLC	3 PLC	ANGLE	DRN BY E WONG
4001738	MDS-230/S1			10/6/77
4001735	MDS-220/S1			10/6/77
4001485	MDS-230			10/6/77
4001509	MDS-220			10/6/77
MATERIAL:		FINISH:		
NEXT ASSY		USED ON		

PARTS LIST		TITLE	
ITEM NO.	PART NUMBER	DESCRIPTION	DATE
INTEL		3000 BOWERS AVE.	10/6/77
		SANTA CLARA	
		CALIF. 95051	
		OUTLINE DRAWING	
		MDS-220 MDS-230	
SIZE	DEPT	DRAWING NO.	REV
D	MCD	P4301762	A
SHEET 1 OF 1		DATE 10/6/77	

8 7 6 5 4 3 2 1

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REVISIONS			
LTR	DESCRIPTION	DATE	BY
A	PILOT REL. 3054	1/27/77	...
-	LIM. PROD. REL. RW0063	1/27/77	...



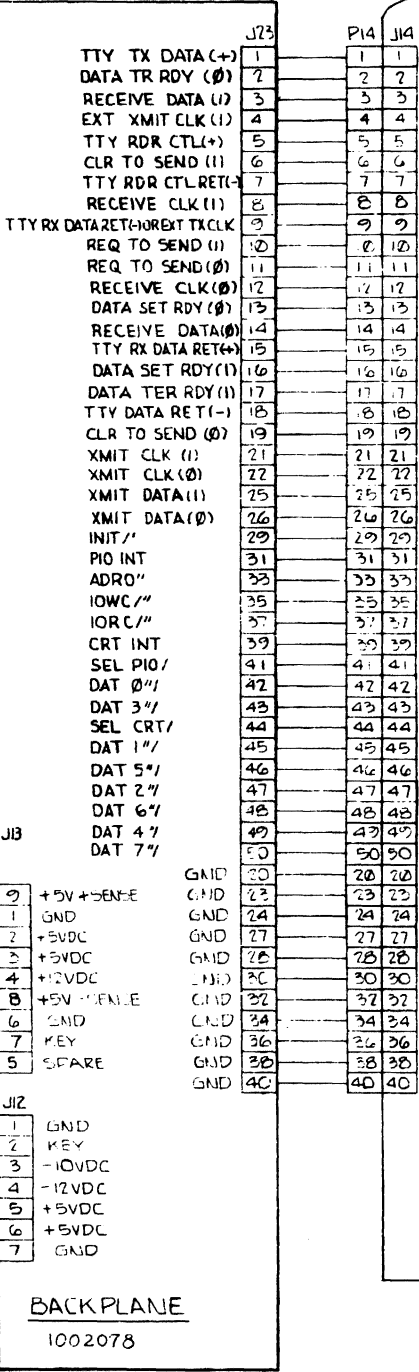
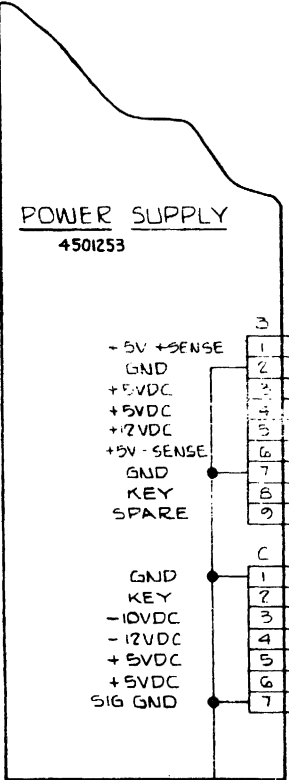
1 FUSE REQUIREMENTS.
 110V - 6.25A, SLOW BLOW
 230V - 3A, SLOW BLOW
 NOTES: UNLESS OTHERWISE SPECIFIED

FIG. 4
 SCALE: NONE
 REAR VIEW

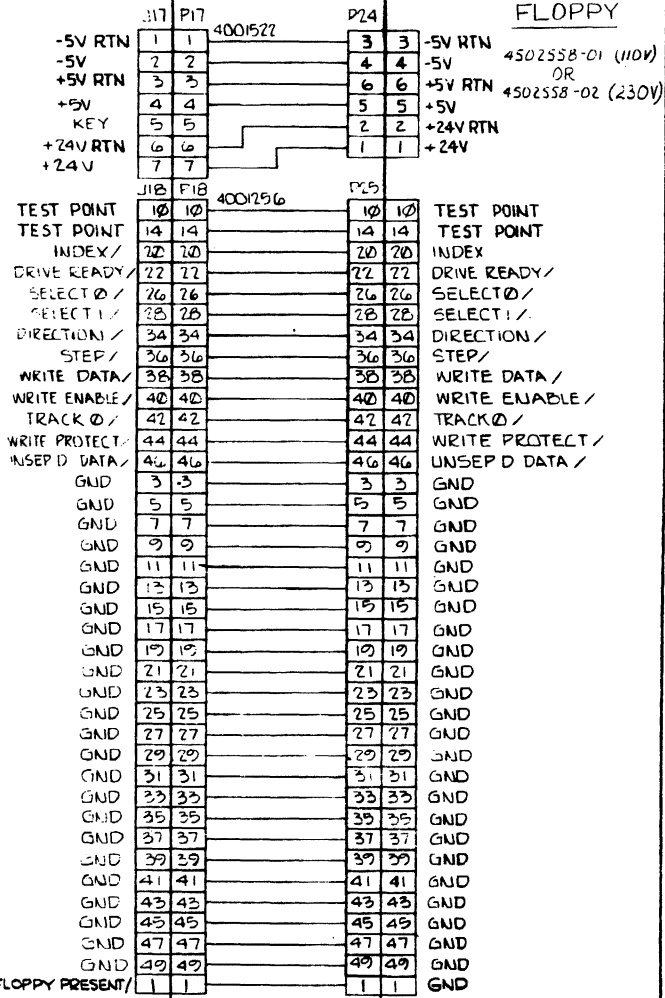
QUANTITY PER DASH NO.		ITEM NO.	PART NUMBER	DESCRIPTION
SCALE: NONE	TOL. 2 PLC 3 PLC ANGLE	SIGNATURE	DATE	 3060 BOWEN AVE. SANTA CLARA CALIF., U.S.A.
MATERIAL:	FRIBK:	CHK BY	DATE	
4002517	MDS 222	4002143	MDS-220/128	TITLE SYSTEMS INTERCONNECT MDS 220/221/222
NEXT ASSY	USED ON	AUTH'D:	DESIGNING NO.	SIZE DEPT D MDS L 2002594
		CODE	SHEET 1 of 3	

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REVISIONS				
LTR	DESCRIPTION	DFT	CHK	ENGR
:	SEE SHT 1	-	-	-



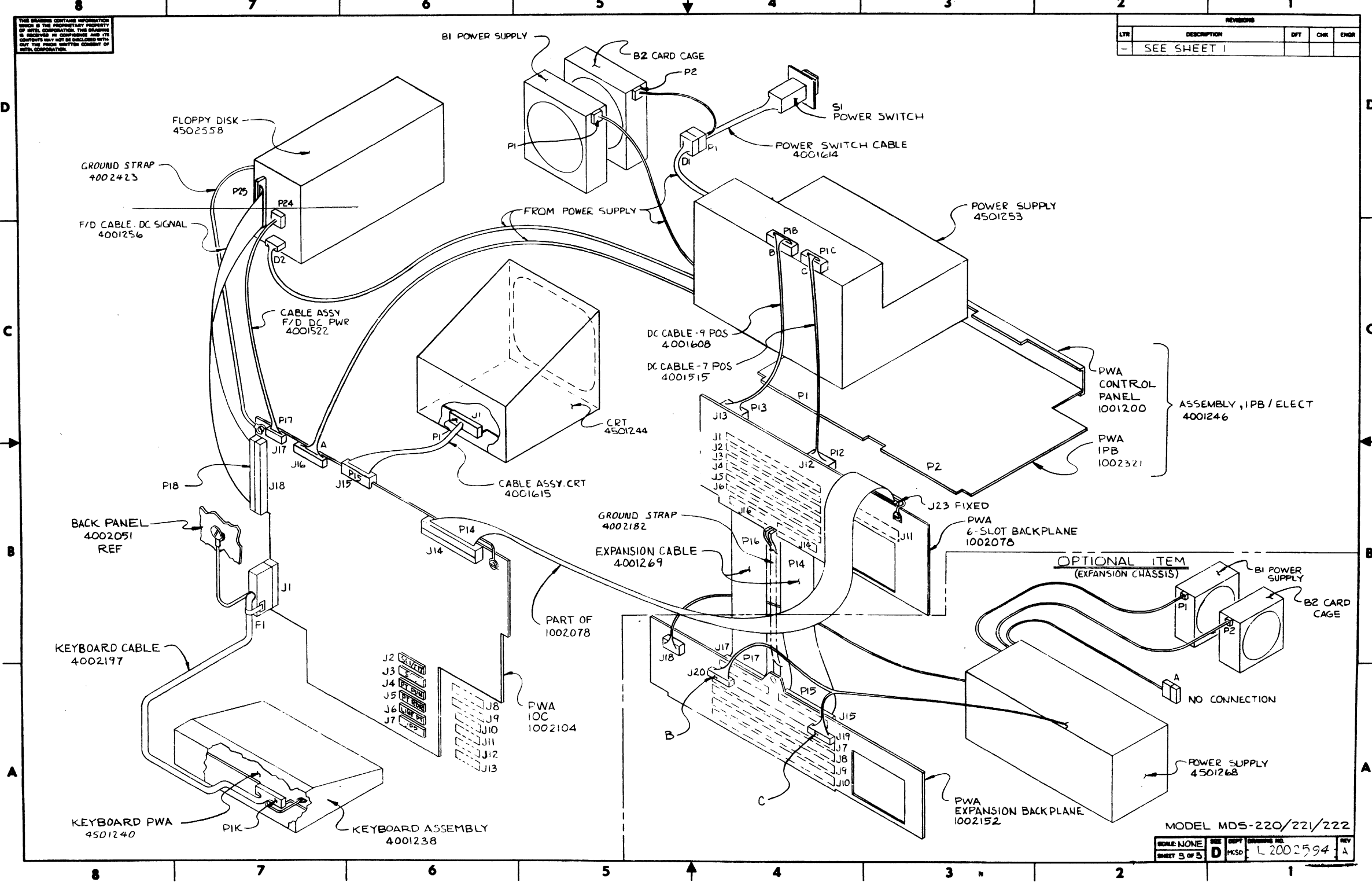
IOC BOARD
1002104



12A5 GND

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REVISIONS				
LTN	DESCRIPTION	DFT	CHK	ENGR
-	SEE SHEET 1			



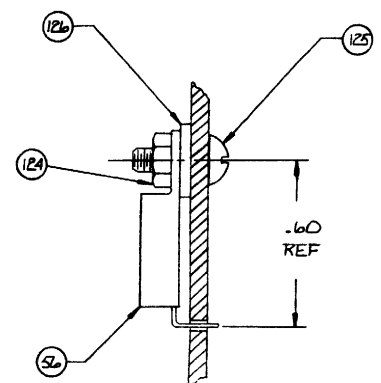
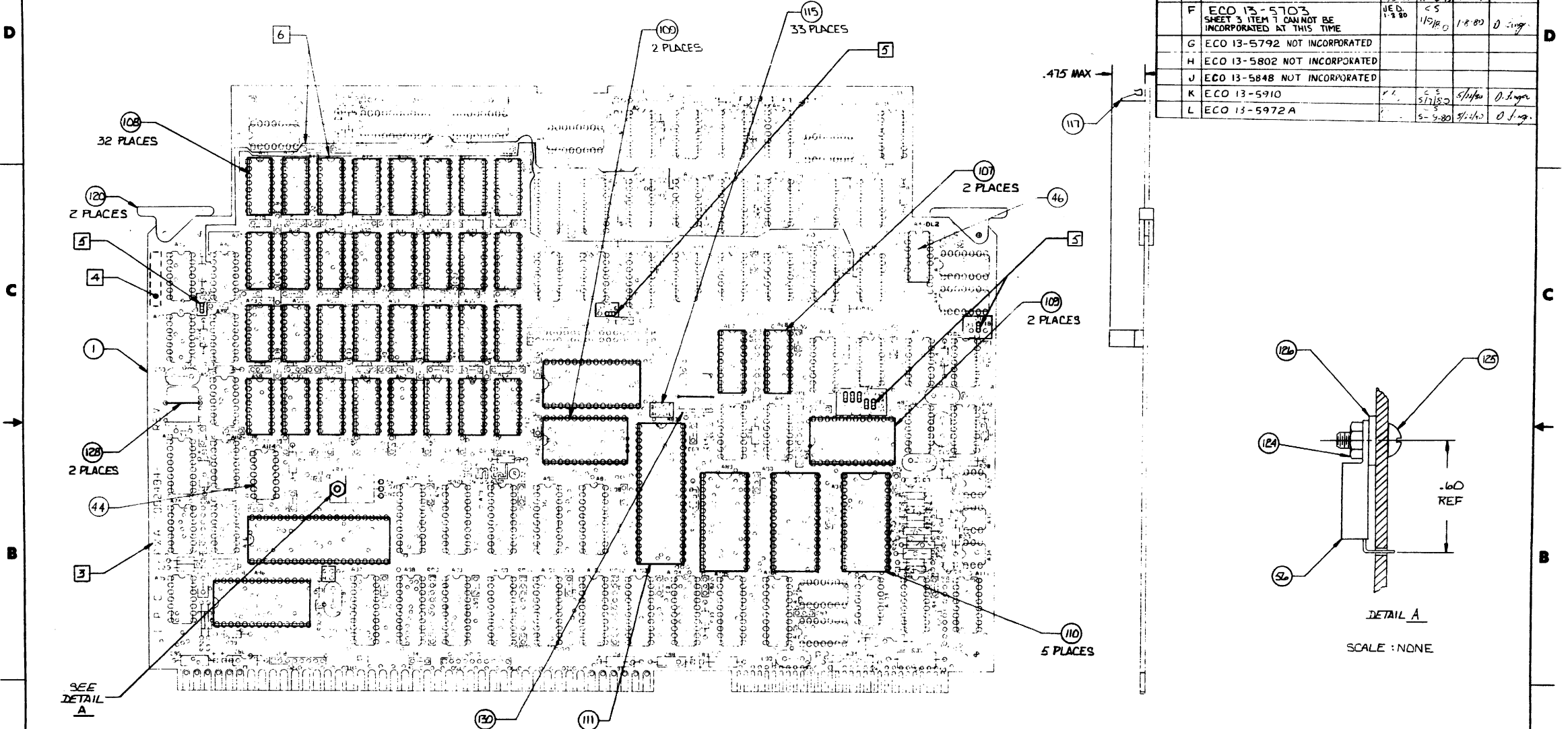
MODEL MDS-220/221/222

SCALE: NONE	REV: D	DEPT: MDS	DRAWING NO: L2002594	REV: A
SHEET 3 OF 3				

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DWG NO. E1002494 SH 1 REV L

ZONE	REV	DESCRIPTION	DFT	CHK	DATE	APPROVED
	D	PROTOTYPE				
-		PRE PILOT REL RWO092	J.E.D. 10-22-79	W.H.W. 10/24/79	10/24/79	W.H.W.
E		ECO 13-5545	W.H.W. 11-2-79	W.H.W. 11/2/79	11/9/79	W.H.W.
F		ECO 13-5703 SHEET 3 ITEM 7 CANNOT BE INCORPORATED AT THIS TIME	J.E.D. 1-3-80	W.H.W. 1/5/80	1-8-80	D. Long
G		ECO 13-5792 NOT INCORPORATED				
H		ECO 13-5802 NOT INCORPORATED				
J		ECO 13-5848 NOT INCORPORATED				
K		ECO 13-5910	J.E.D. 5-17-80	W.H.W. 5/14/80	5/14/80	D. Long
L		ECO 13-5972A	J.E.D. 5-20-80	W.H.W. 5/24/80	5/24/80	D. Long



DETAIL A
SCALE: NONE

SEE SEPARATE PARTS LIST

NOTES: UNLESS OTHERWISE SPECIFIED

1. ASSY PART NO. IS 1002494-04. ASSY, PL & WL ARE TRACKING DOCUMENTS.
2. WORKMANSHIP PER 99-0007-001.
3. MARK ASSY DASH NO. & REV LEVEL WITH CONTRASTING PERM COLOR, NON-CONDUCTIVE, .12 HIGH, APPROX WHERE SHOWN.
4. MARK VENDOR I.D. WITH CONTRASTING PERM COLOR, NON-CONDUCTIVE, .12 HIGH, APPROX WHERE SHOWN.
5. FOR SHORTING PLUG JUMPER OPTIONS SEE WIRE ROUTING LIST *WL1002494.
6. FOR JUMPER WIRE INSTALLATION SEE WIRE ROUTING LIST WL1002494

QUANTITY PER DASH NO.	ITEM NO.	PART NUMBER	DESCRIPTION
UNLESS OTHERWISE SPECIFIED:	SIGNATURE		DATE
DIMENSIONS ARE IN INCHES.	DRN BY K.E. (SS)		10-10-79
BREAK ALL SHARP EDGES.	CHK BY W.H.W.		10/24/79
DO NOT SCALE DRAWING.	ENGR APVD W.H.W.		10/24/79
TOLERANCES:	APVD		
ANGLES ± 2°	APVD		
XXX ± .03			
XXXX ± .010			
SURFACE FINISH 7			
NEXT ASSY	USED ON		

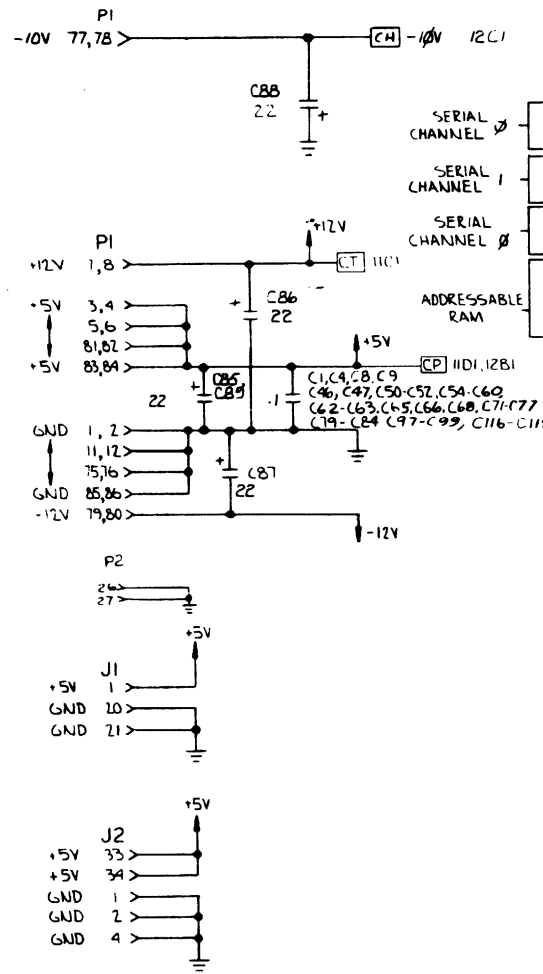
intel® 3065 BOWERS AVE. SANTA CLARA, CALIF. 95051

TITLE: PRINTED WIRING ASSEMBLY INTEGRATED PROCESSOR CARD

SIZE: D CODE: MCSD DWG. NO.: E1002494 REV: L

SCALE: NONE SHEET 1 OF 1

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USER SELECTABLE JUMPERS			
SIGNAL	SH	JUMPER	NOTE
LOC ACK/ 800ns	5	22-24	
LOC ACK/ 1.6us	5	23-24	[3]
SYNC	9	10-11, 13-14	
ASYNC	9	11-12, 14-15	[3]
SYNC	9	2-3, 5-6	
ASYNC	9	1-2, 4-5	[3]
RS232C	9	8-9	
TTY	9	7-8	[3]
32K	7	19-18	
48K	7	19-20	
64K	7	19-21	[3]
OFF BD AACK/	5	27-26	-
NO OFF BD AACK/	5	25-26	[3]

SPECIAL JUMPERS			
SIGNAL	SH	JUMPER	NOTE
CBRQ	4	C-D	
SOD/SID	4	A-E, B-F	
-5V SUPPLY	12	G-H	

- NOTES: UNLESS OTHERWISE SPECIFIED
- CAPACITANCE VALUES ARE IN MICROFARADS, +80%, -20%, 25V.
 - RESISTANCE VALUES ARE IN OHMS, 1/4 W, 5%.
 - JUMPER IS INSTALLED BY FACTORY.

DL2	
Y2	
VR1	
RP13	
R43	
Q4	
L2	
CR3	
C118	
A114	A43, A72.
LAST USED	NOT USED
REF DESIG	

PWR & GND LOCATOR CHART						
REF DESIG	DEVICE TYPE	POWER PINS			SPARE GATES	
		GND	VCC	-5/+2-12	REF DES	QTY
A0, 26, 44	74500	7	14		A44	1
A57	74500				A57	2
AB, A10, 21	74502				A21	2
A74	74503					
A90, A112	74504				A112	2
A9, A39, A96	74504					
A1, A5, A45	7406					
A38	74508					
A7	74508				A7	1
A75	74510				A25	1
A75	74520					
A113, A35	74532					
A42, A48	74532					
A71	74532					
A36, A95	74537				A95	1
A74	7438					
A22	74LS14	7	14			
A85	74LS112	8	16			
A37, A110	74LS138	8	16			
A3, A111	74LS145	8	16			
A4	74LS157	8	16			
A77, A97	74LS240	10	20			
A103, A2	74LS240	10	20			
A18, A11	74LS244	10	20			
A101, A106	74LS244	10	20			
A69	74LS112	8	16			
A19, A84	74LS259	8	16			
A79, A80, A100	74LS373	10	20			
A6, A47	74LS393	7	14			
A87, A108	75188	7		14	1	
A88, A101, A107	75189A	7	14			
A116, A117, A34, A91, A5, A55, A56	7117	16	9	1	8	
A82	7132	12	24			
A67, A68	3625A	9	18			
A83	8005A-2	20	40			
A41	74367	8	16			
A76	8202	20	40			
A96	8219	14	28			
A73	8224	8	16	9		
A90, A91	8251A	9	26			
A86	8253	12	24			
A66, A89	8259A	14	28			
A98, A99	8283	10	20			
A102, A105	8287	10	20			
A104	8304B	10	20			
A20, A23	9602	8	16			
A114	74574	7	14			
A72, A94	4133					

ZONE	REV	DESCRIPTION	QTY	CHK	DATE	APPROVED
A		PILOT RELEASE CREATED BY ECC 13-5791				

ITEM NO.	PART NUMBER	DESCRIPTION
QUANTITY PER DASH NO.		
UNLESS OTHERWISE SPECIFIED:		
1. DIMENSIONS ARE IN INCHES.		
2. BREAK ALL SHARP EDGES.		
3. DO NOT SCALE DRAWING.		
4. TOLERANCES:		
ANGLE ± 2°		
HOLE ± .005		
HOLE ± .005		
SURFACE FINISH J		

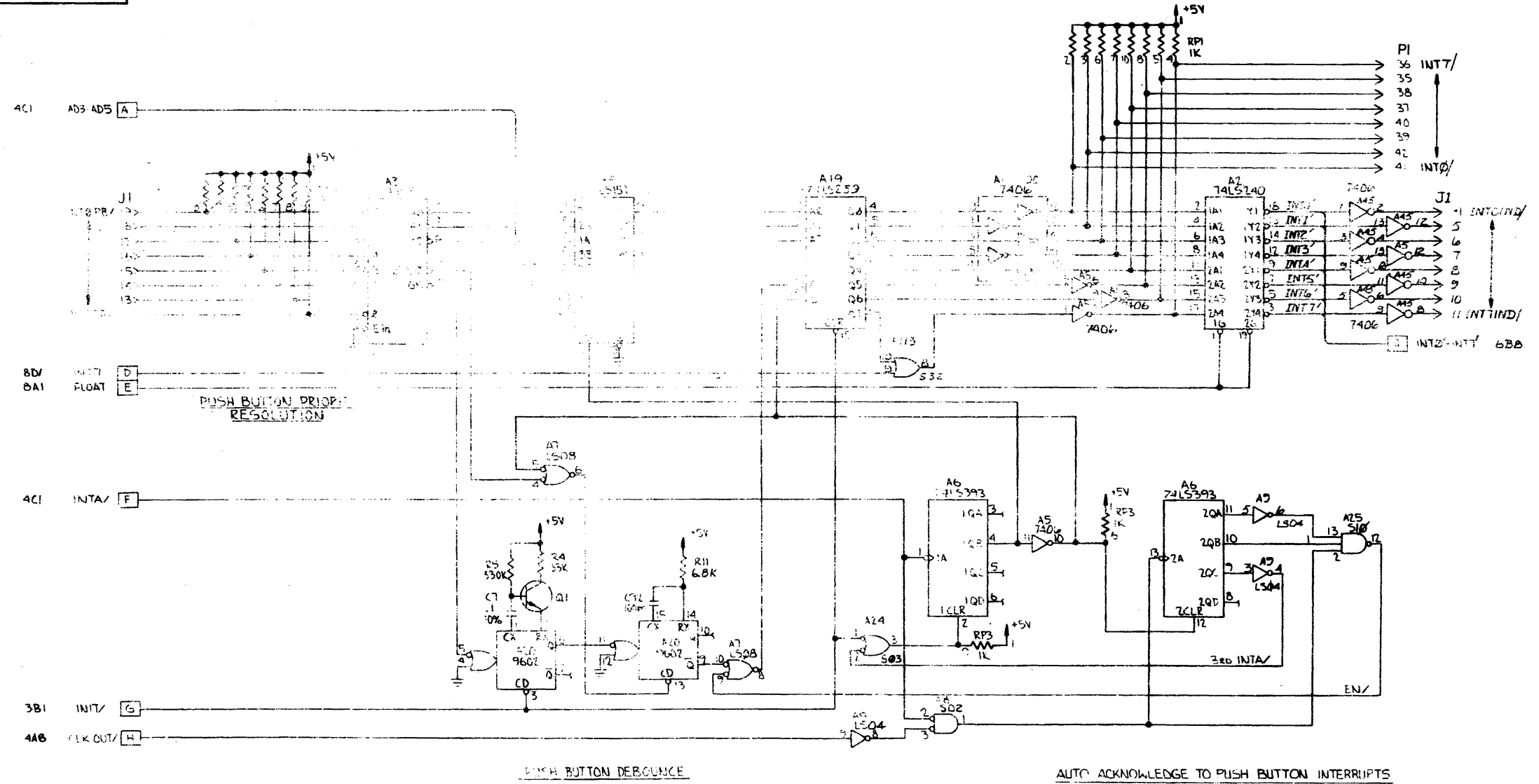
123027	MDS-227
123026	MDS-226
4002792	MDS-225
4002695	MDS-505
1001494	
NEXT ASST	USED ON

SIGNATURE	DATE	TITLE
DRN BY J. DeLeon	1-28-80	SCHEMATIC
CHK BY J. DeLeon	8/28/80	INTEGRATED PROCESSOR CARD
ENGR APVD G. Jumper	4/6/80	
APVD		

SIZE	DATE	CL. CORR.	PLS. LVL.	DEPARTMENT NO.	REV
D	13	01	E	123189	A
SCALE					SHEET 1 OF 12

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ZONE	REV	DESCRIPTION	DFT	CHK	DATE	APPROVED
-	-	SEE SWEET 1	KAT	K	1-8-79	-



PUSH BUTTON PROPR. RESOLUTION

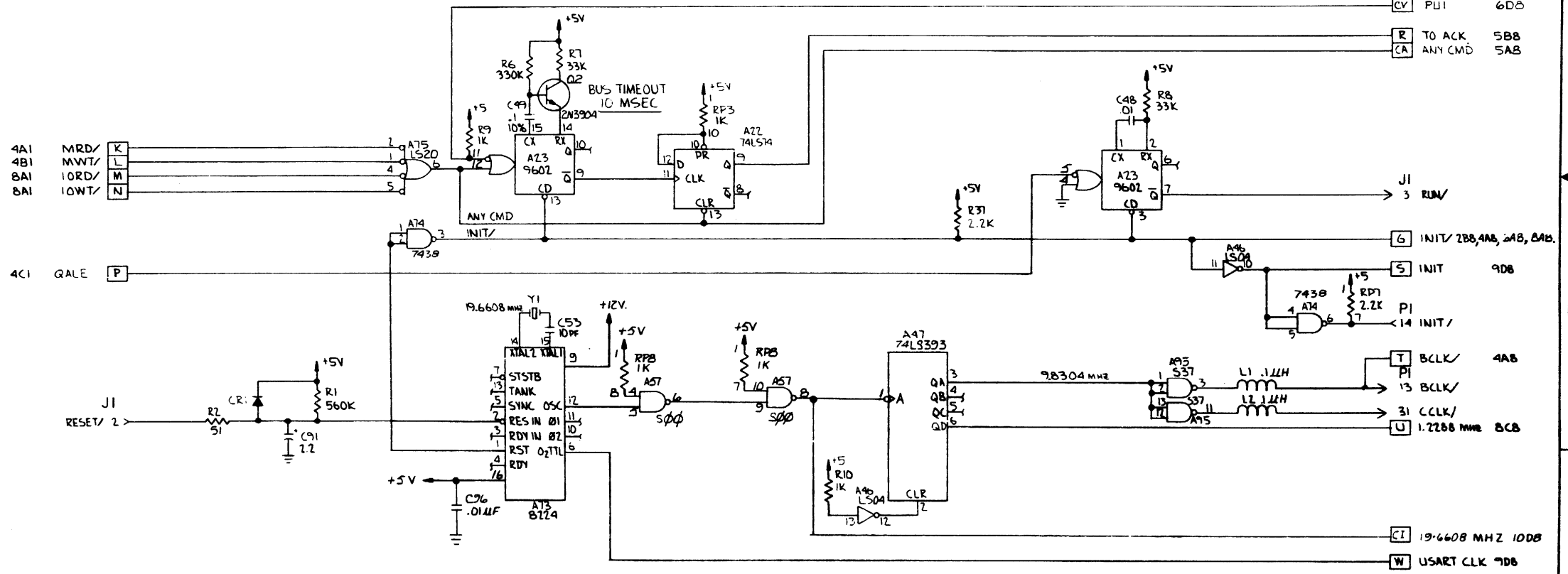
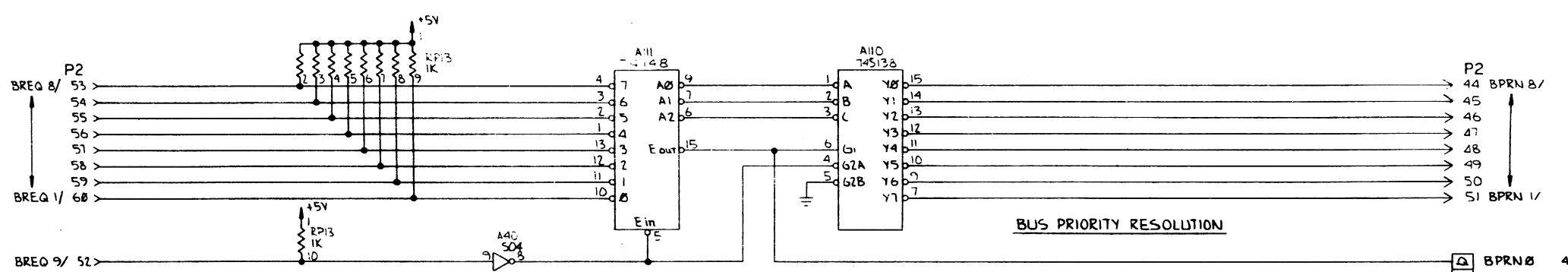
PUSH BUTTON DEBOUNCE

AUTO ACKNOWLEDGE TO PUSH BUTTON INTERRUPTS

DATE	ISSUED	SCALE	DRAWN	CHKD	APP'D	FILE NO.	DOCUMENT NO.	REV
13	01	E	K	V	W	123189	123189	A

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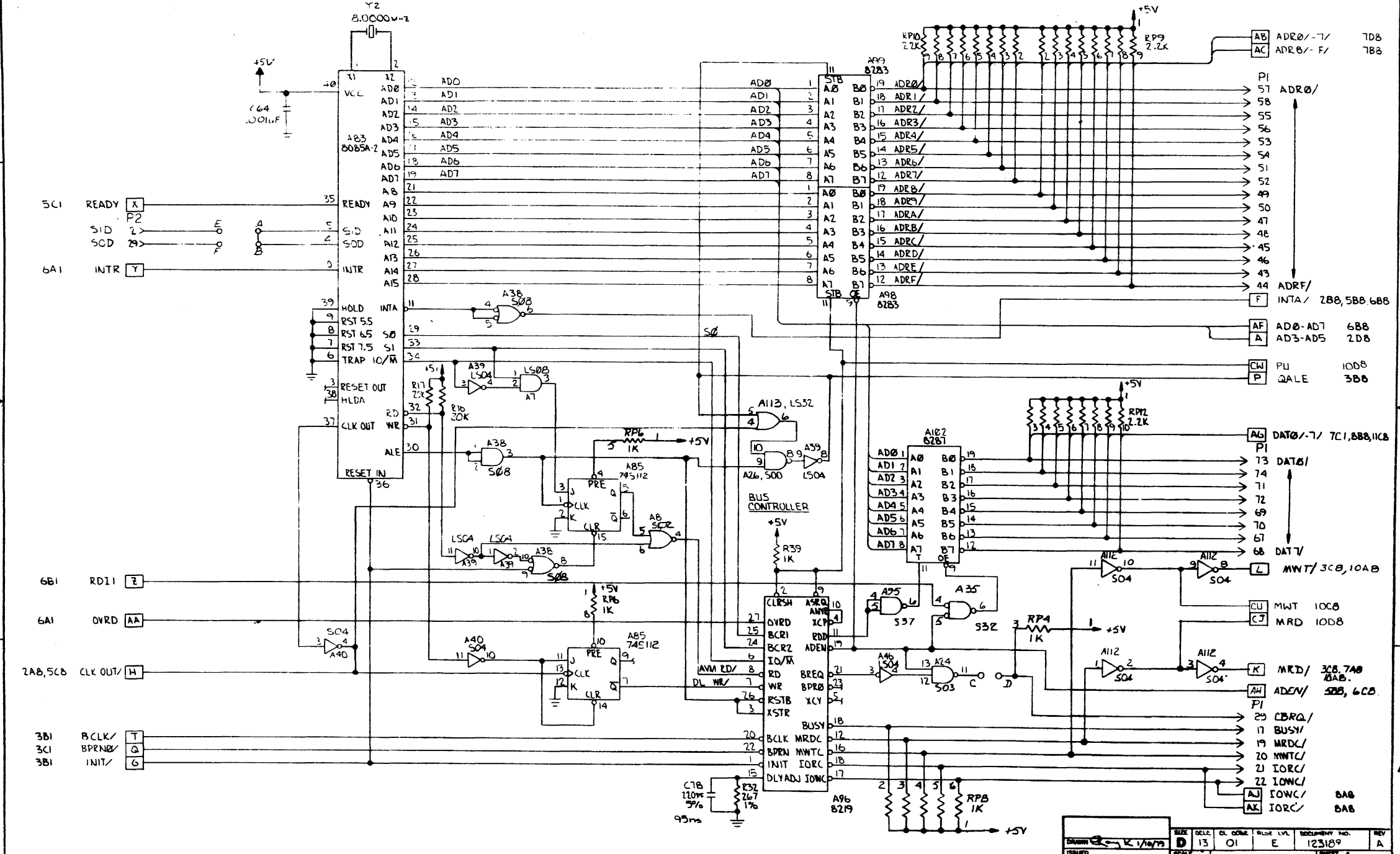
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ZONE	REV	DESCRIPTION	DFT
-	-	SEE SHEET 1	RAY K 1-10-79



DRAWN	ISSUED	SCALE	SIZE	DELT	CL CODE	PLS LVL	DESIGNER NO.	REV
RAY K 1/10/79			D	13	01	E	123189	A

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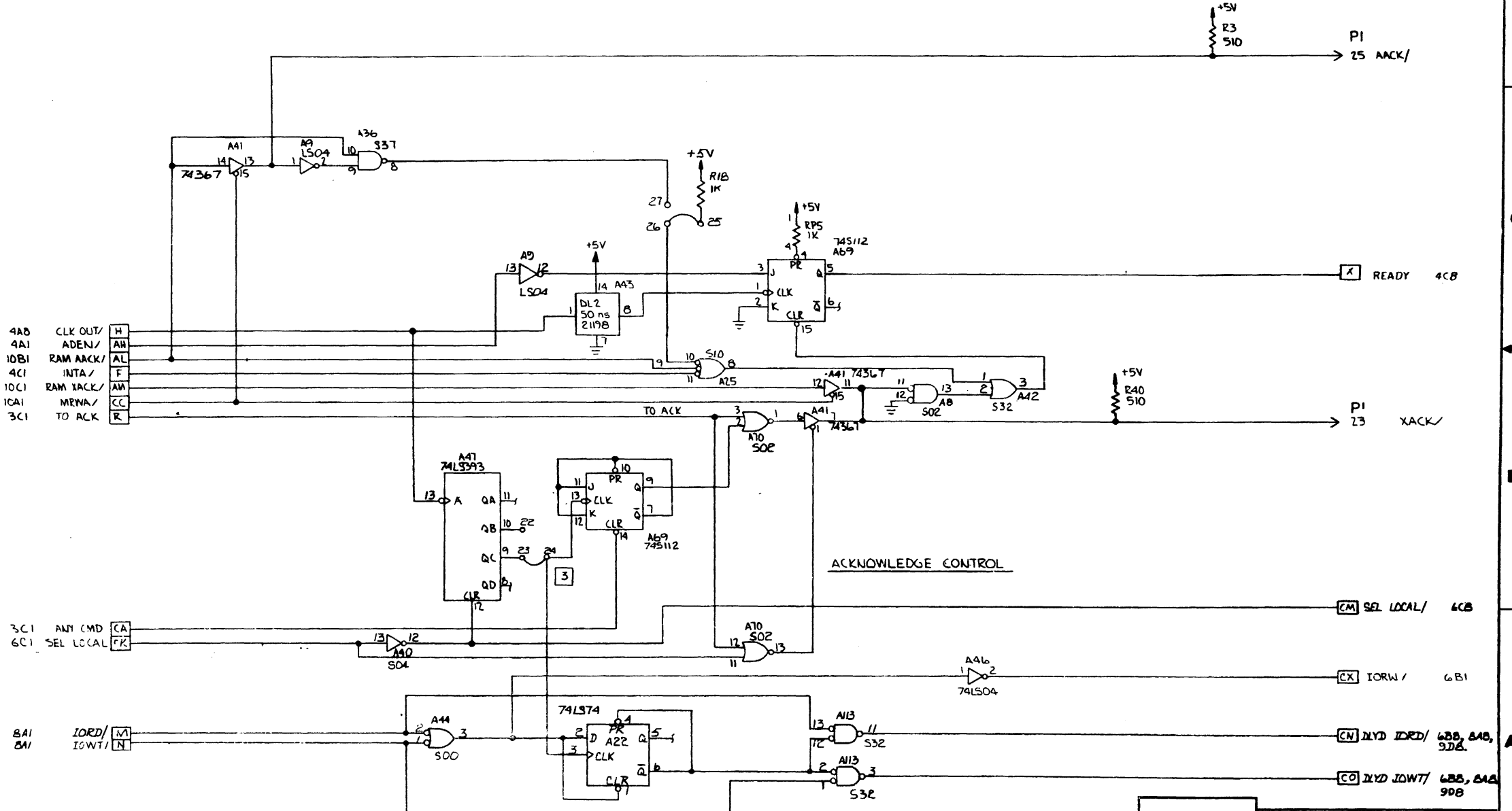
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ZONE	REV	DESCRIPTION	DFT	CHK	DATE	APPROVED
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DRAWN	DATE	SCALE	SIZE	COLL	CL CODE	PLS LVL	DOCUMENT NO.	REV
ISSUED	1/10/79		D	13	01		E 123189	A

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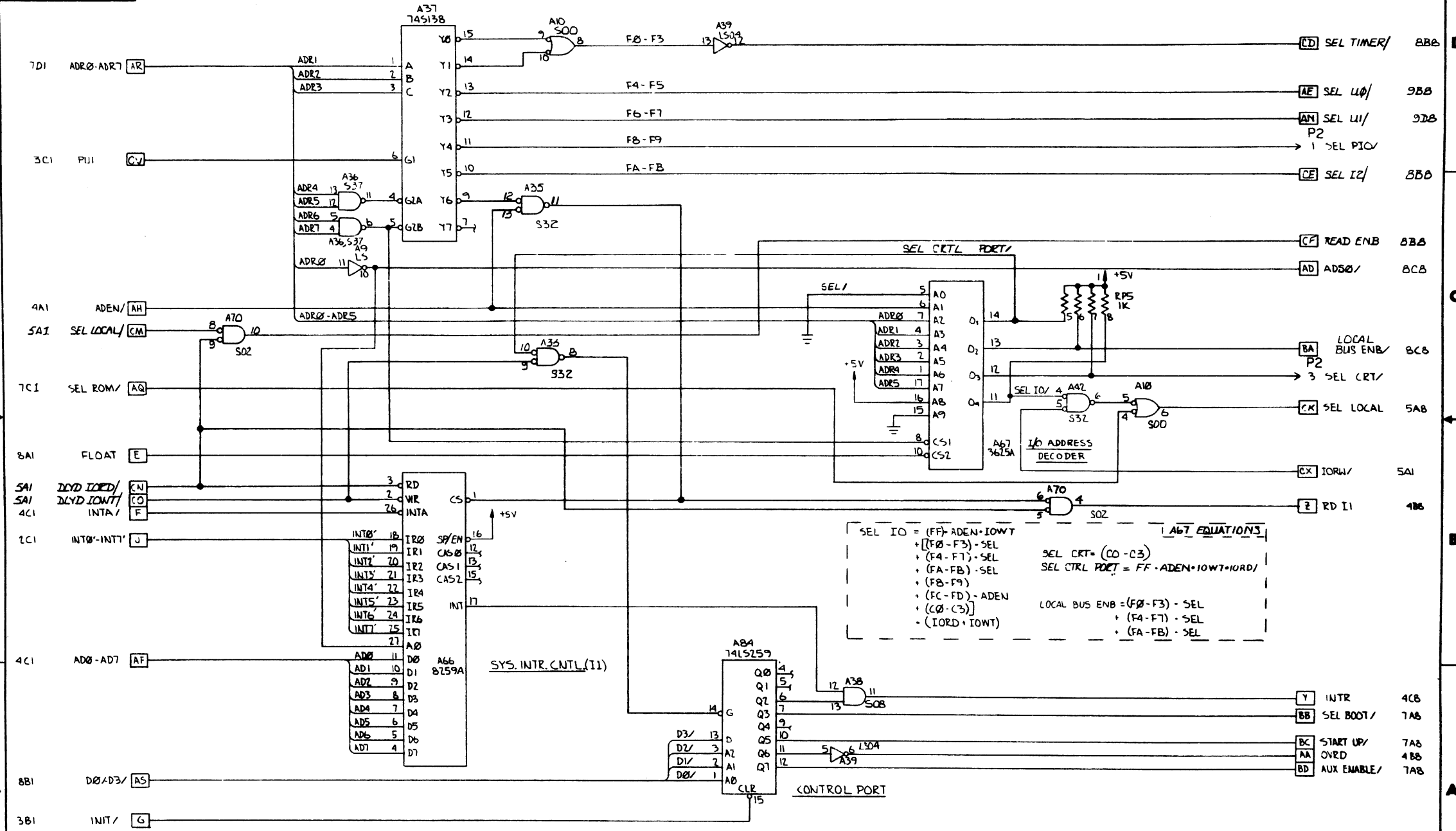
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REVISIONS			
ZONE	REV	DESCRIPTION	DFT
-	-	SEE SHEET 1	RAY K. 1-10-79
CHK	DATE	APPROVED	
-	-	-	



DATE	1/10/79	REV	A
SCALE	-	SHEET	5
ISSUED	RAY K.	DOC. NO.	123189
DATE	1/10/79	REV	A
SCALE	-	SHEET	5

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DRAWING NO. E 123189		REV. 6		REV. A			
ZONE		DESCRIPTION		DFT	CHK	DATE	APPROVED
-		SEE SHEET 1		SAT K	3-29-78	-	-



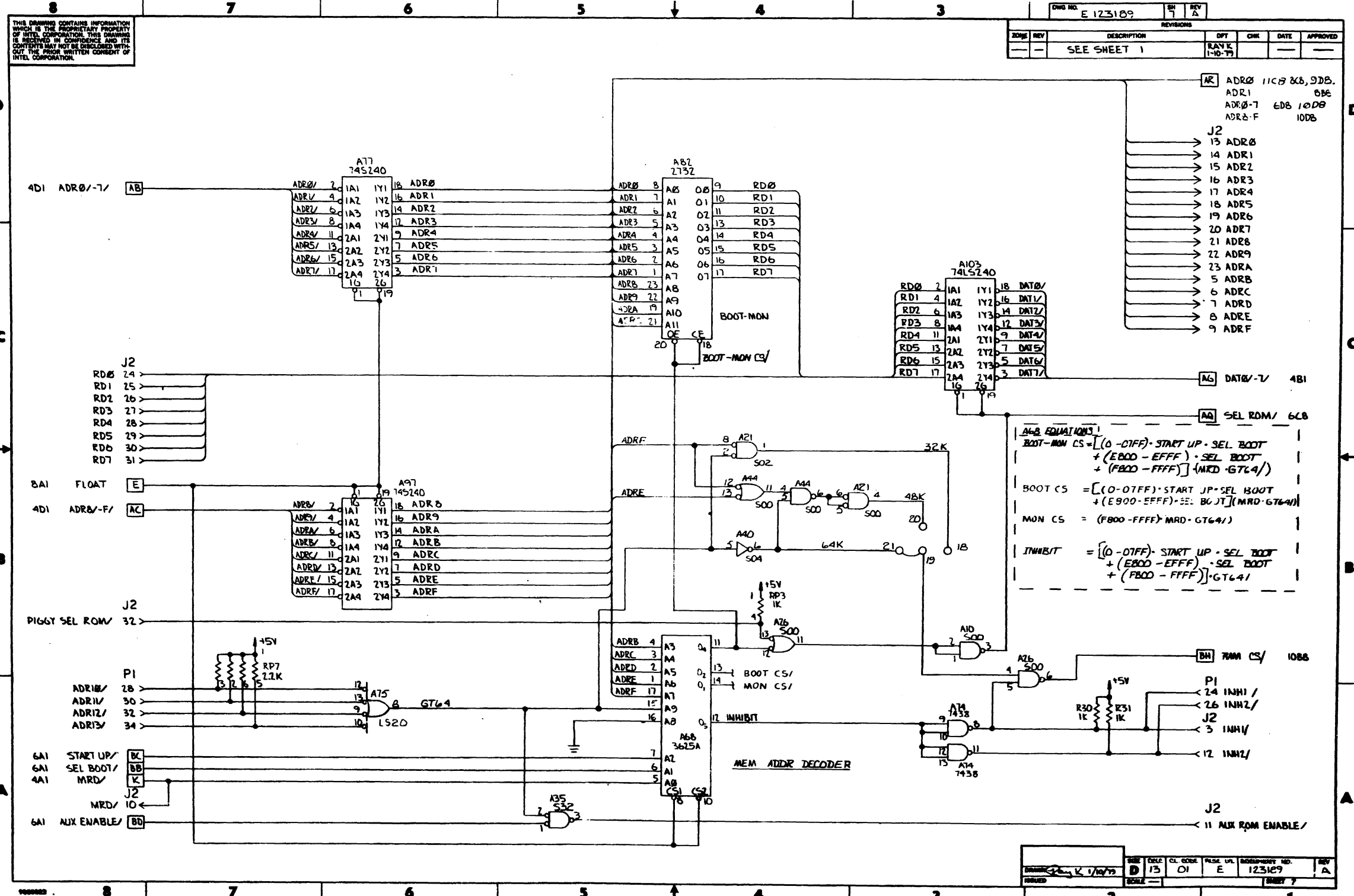
A67 EQUATIONS

$SEL\ IO = (FF - ADEN \cdot IOWT) + [(F0 - F3) \cdot SEL + (F4 - F7) \cdot SEL + (FA - FB) \cdot SEL + (FB - F9) + (FC - FD) \cdot ADEN + (C0 - C3)]$
 $SEL\ CRT = (C0 - C3)$
 $SEL\ CTRL\ PORT = FF \cdot ADEN \cdot IOWT \cdot IORD$
 $LOCAL\ BUS\ ENB = (F0 - F3) \cdot SEL + (F4 - F7) \cdot SEL + (FA - FB) \cdot SEL$

DRAWN	DATE	CL. CHG.	FLSK. LVL.	DOCUMENT NO.	REV.
SAT K	3-29-78	01	E	123189	A
ISSUED	SCALE			SHEET	6

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DRAWING NO.		REV		REVISIONS			
E 1231B9		SH	7	DATE	APPROVED		
ZONE	REV	DESCRIPTION	DFT	CHK	DATE	APPROVED	
		SEE SHEET 1	RAY K	1-10-73			



A68 EQUATIONS:

$$\text{BOOT-MON CS} = [(0-07FF) \cdot \text{START UP} \cdot \text{SEL BOOT} + (E800-EFFF) \cdot \text{SEL BOOT} + (FB00-FFFF) \cdot \text{MRD-GT64}]$$

$$\text{BOOT CS} = [(0-07FF) \cdot \text{START UP} \cdot \text{SEL BOOT} + (E900-EFFF) \cdot \text{SEL BOOT}] \cdot \text{MRD-GT64}$$

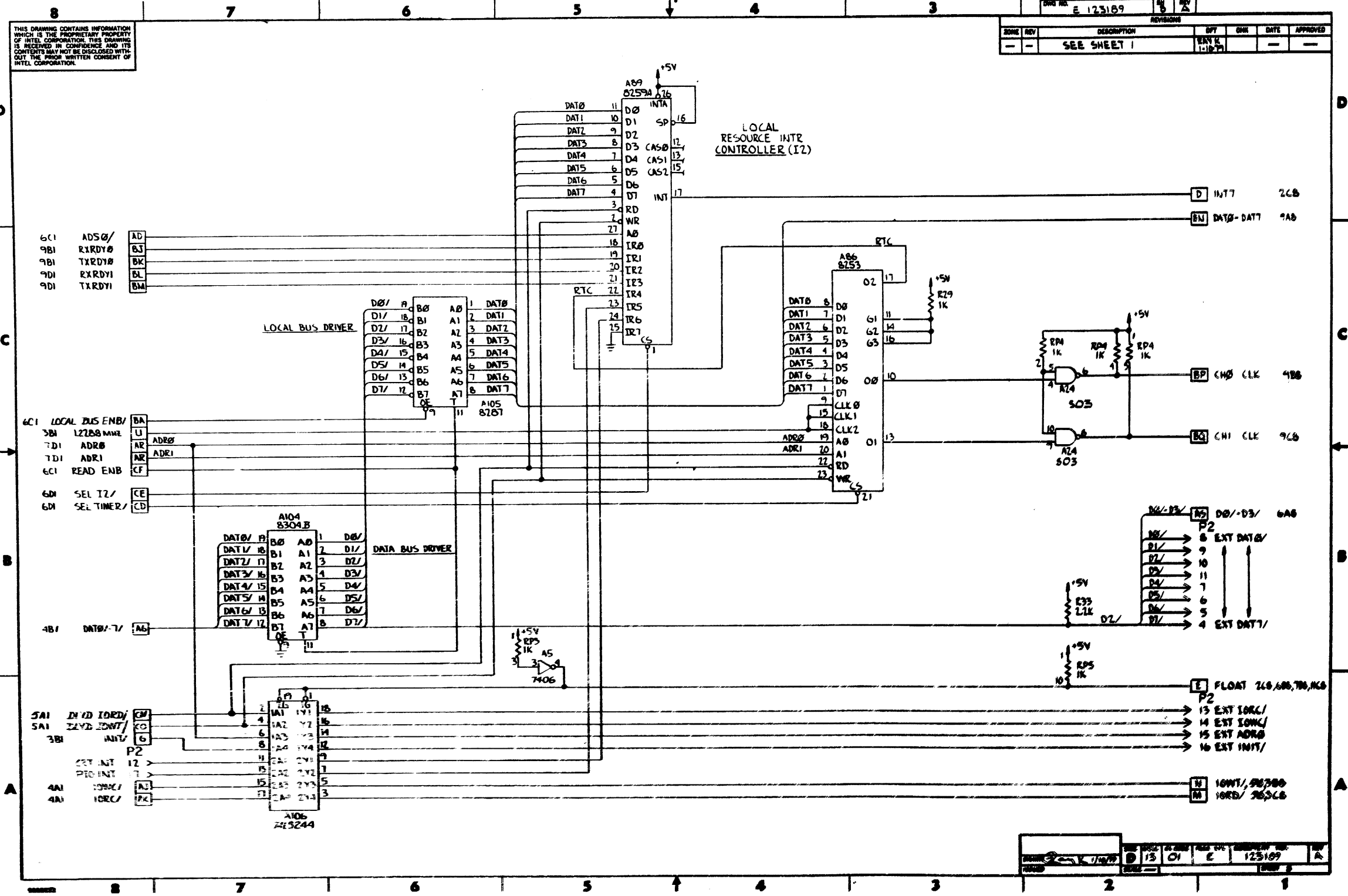
$$\text{MON CS} = (FB00-FFFF) \cdot \text{MRD-GT64}$$

$$\text{INHIBIT} = [(0-07FF) \cdot \text{START UP} \cdot \text{SEL BOOT} + (E800-EFFF) \cdot \text{SEL BOOT} + (FB00-FFFF)] \cdot \text{GT64}$$

DATE	1/10/73	SCALE	
DRIVER	RAY K	SIZE	D
DESIGNER		CL. CODE	01
APPROVED		PLS. UP.	E
		DESIGN NO.	1231B9
		REV	A
		SHEET	7

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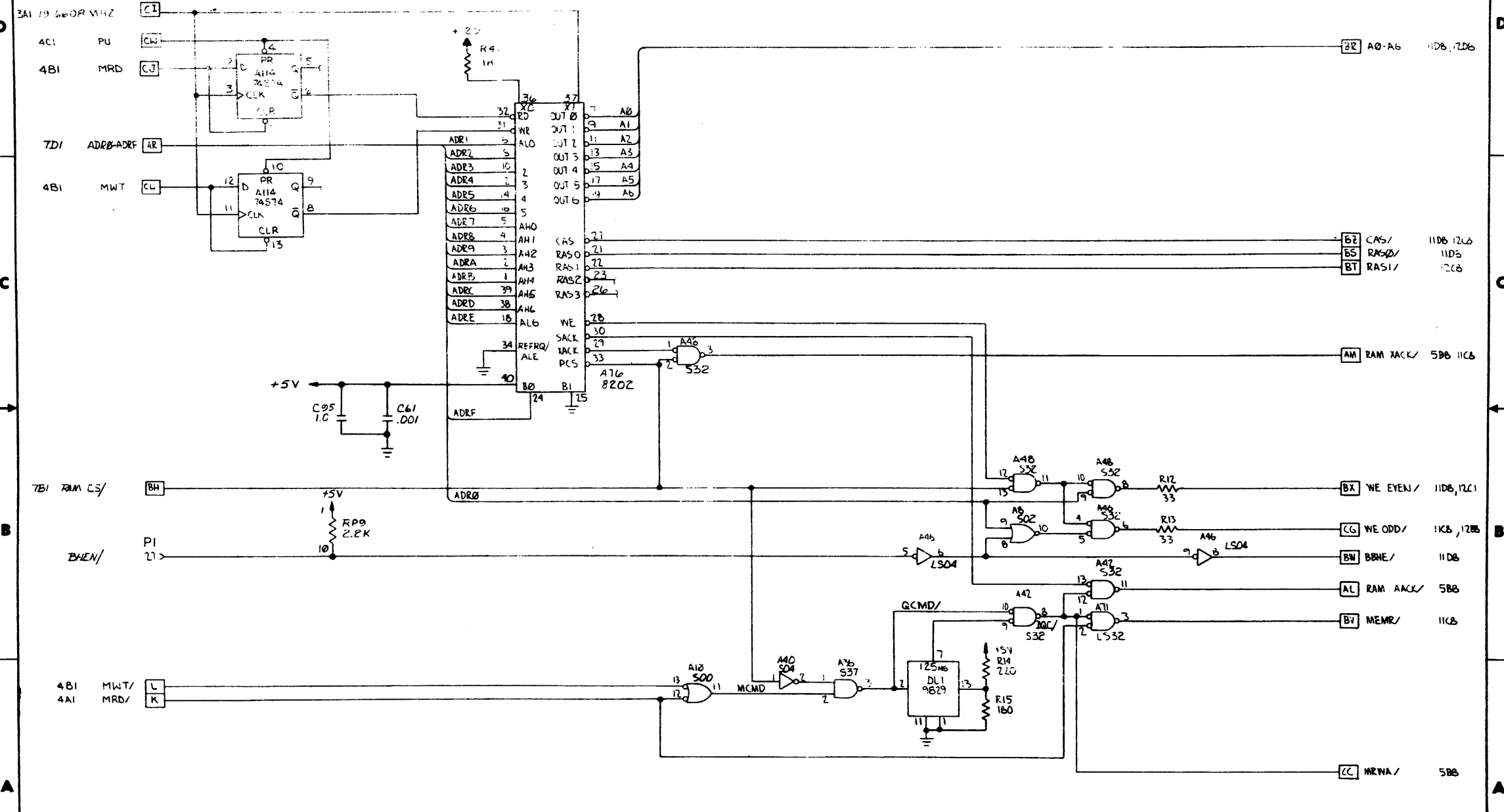
DRAWING NO.		REV. NO.		REV. DATE		REV. BY	
E 123189		5		A			
ZONE	REV	DESCRIPTION	DATE	CHK	DATE	APPROVED	
--	--	SEE SHEET 1	1-18-77				



DATE	BY	CHK	APP	REV	NO.	DATE	BY
1/18/77	13	01	E	123189	A		

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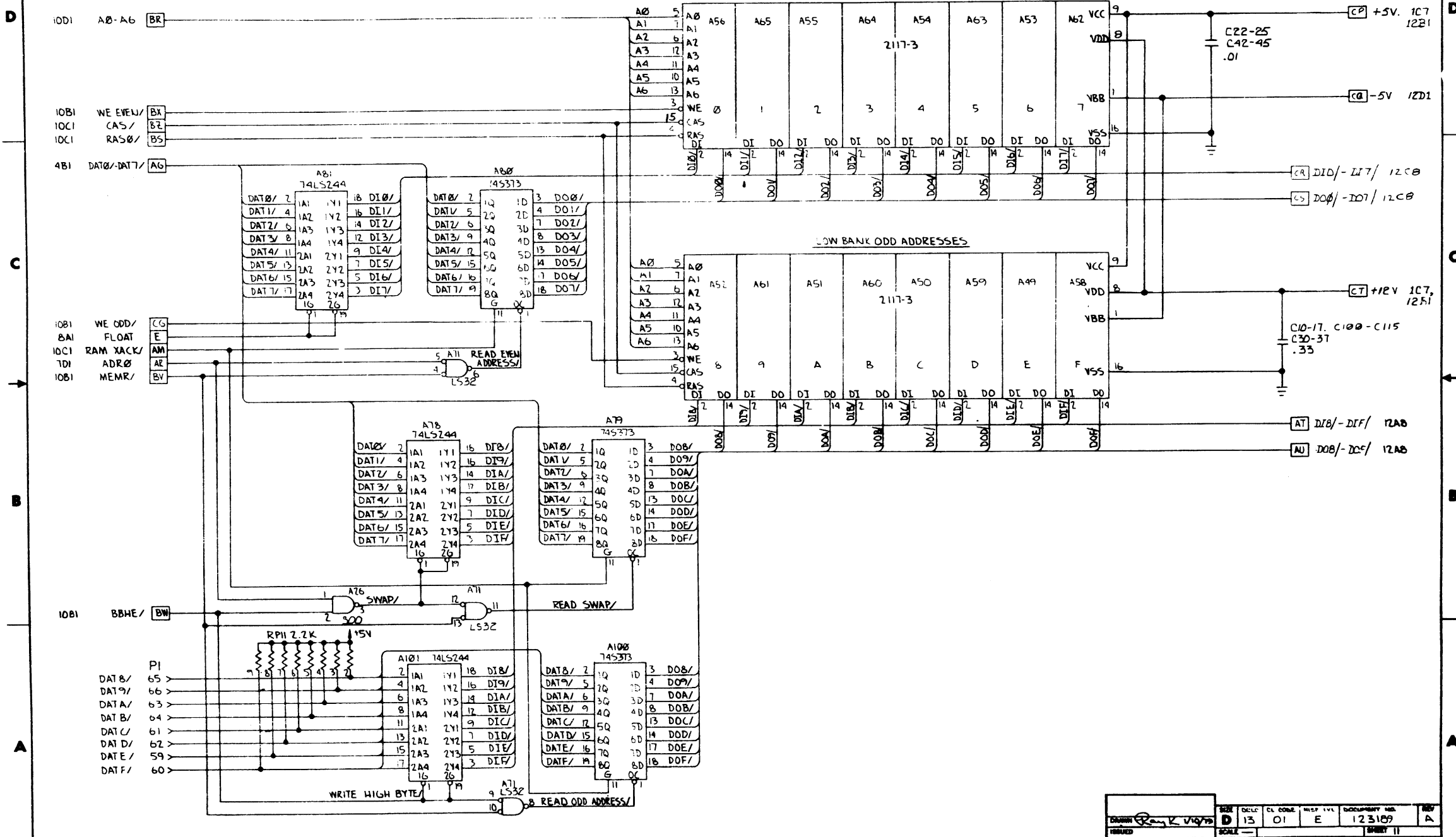
DWG NO E 123189		SH 10	REV A
REVISIONS			
ZONE	REV	DESCRIPTION	DATE
-	-	SEE SHEET 1	3-30-79
OFF	CHK	DATE	APPROVED



DATE	ISSUED	SCALE	SIZE	QCLL	CL	EPCL	R/E	LVL	DOCUMENT NO.	REV
			D	13	01	E			123189	A
SHEET 10										

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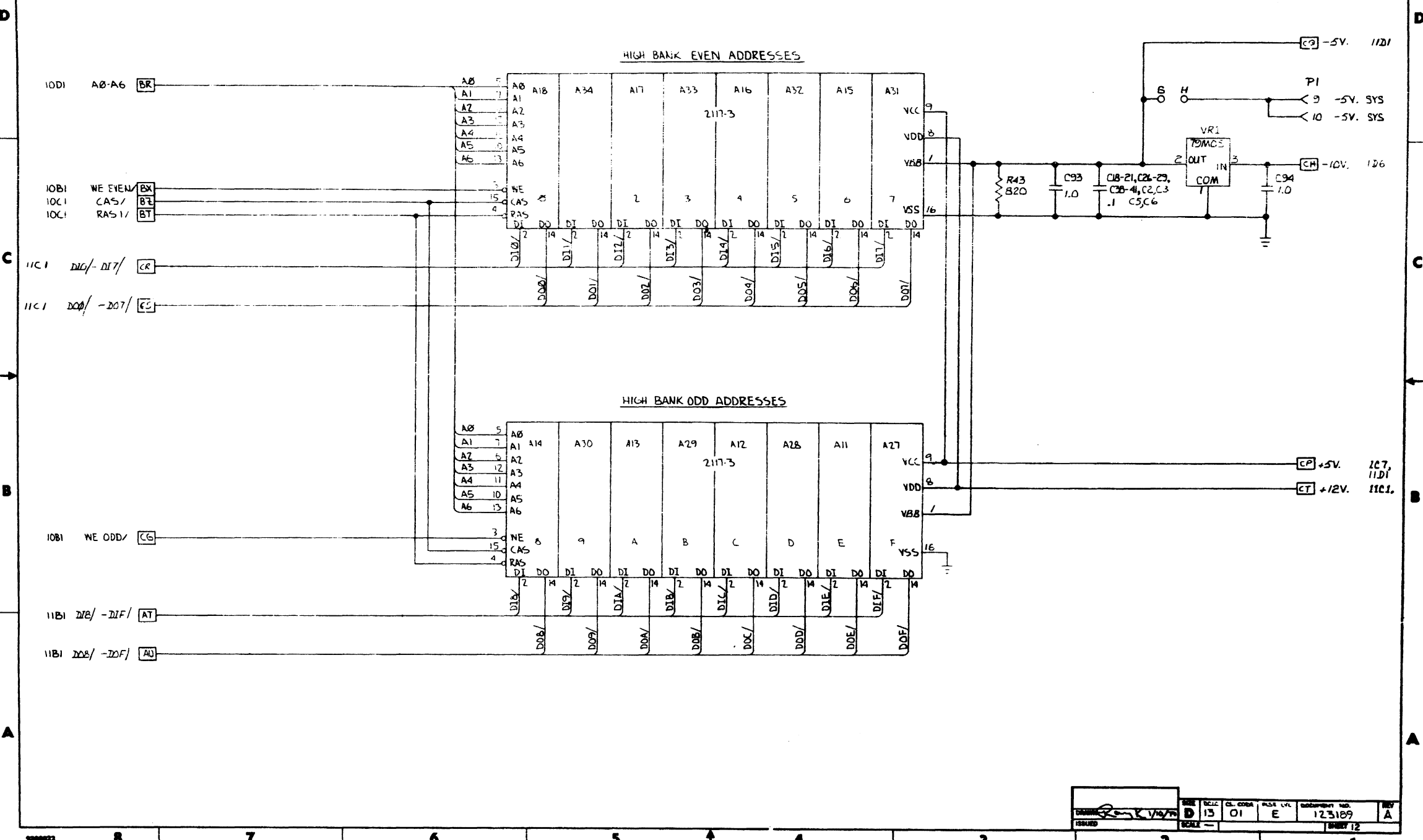
DWG NO. E 123189		SH 11	REV A
REVISIONS			
ZONE	REV	DESCRIPTION	DATE
		SEE SHEET 1	1-10-79
CHK	DATE	APPROVED	



DESIGNED BY	DATE	CL. CODE	WEEK	REV.	DOCUMENT NO.	REV.
Ray K. V. 1/10/79	13	O1	E		123189	A
ISSUED	SCALE				SHEET	11

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DRAWING NO. E 123189		REV. 12	REV. A
REVISIONS			
ZONE	REV	DESCRIPTION	DATE
-	-	SEE SHEET 1	1-10-79
DFT	CHK	DA.E	APPROVED
KATE			

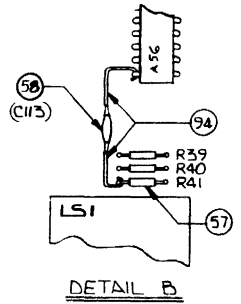
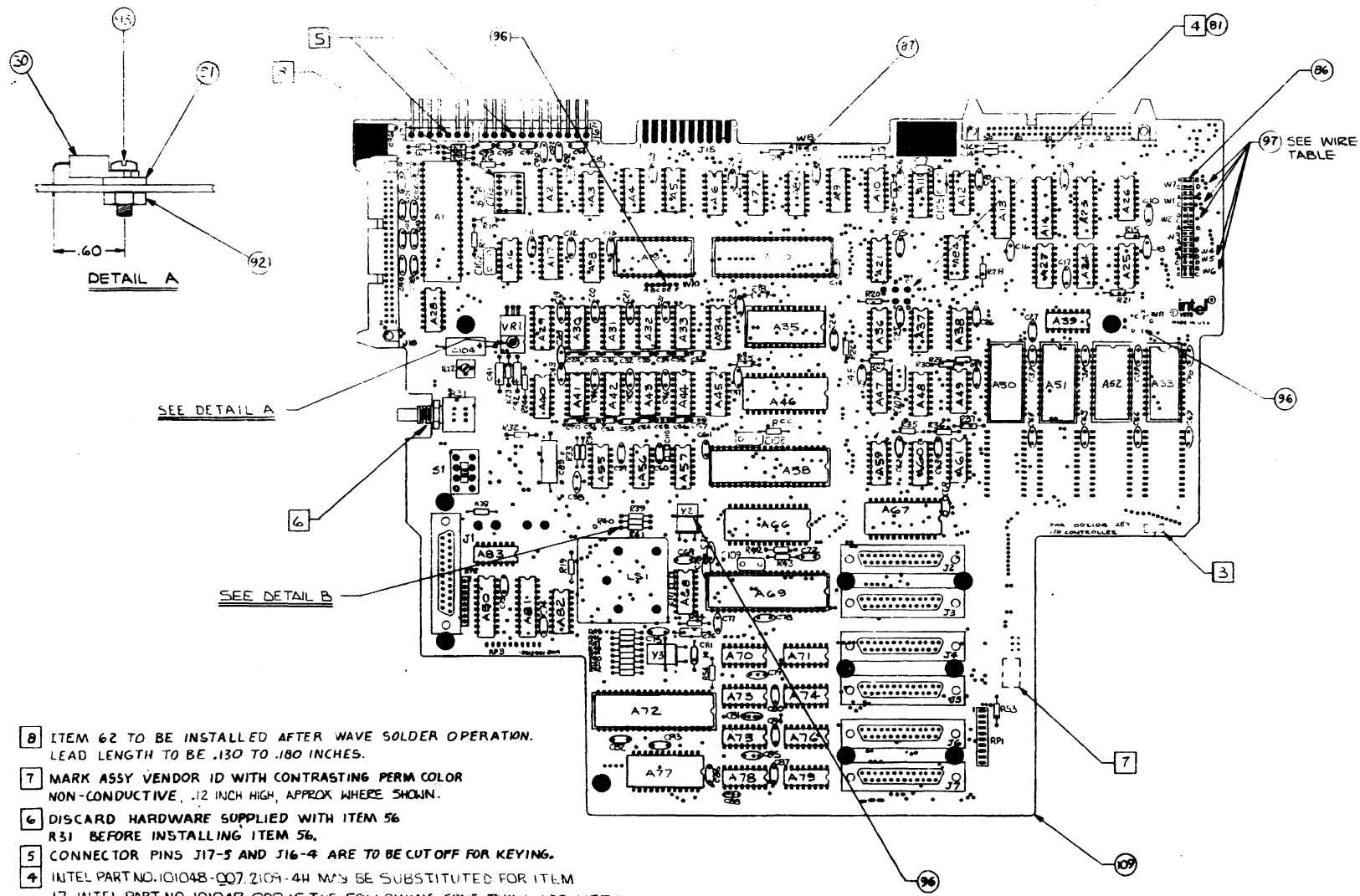


DATE	ISSUED	SCALE	SIZE	BLK	CL. CODE	PLS. LVL	DEPARTMENT NO.	REV
			D	15	01	E	123189	A
							SHEET 12	

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REVISIONS

LTR	DESCRIPTION	SIGNATURE AND DATE
1	ENGINEERING RELEASE	J.E.P. 5/1/78
2	ECO 2-2525	J.E.P. 5/1/78
A	ECO 2-3151	J.E.P. 5/1/78
B	ECO 2-3629	J.E.P. 5/1/78
C	ECO 2-4565	J.E.P. 5/1/78
D	ECO 2-4620	J.E.P. 5/1/78
-	LIM. PROD. REL. RW 0063	J.E.P. 5/1/78
E	ECO 2-5107	J.E.P. 5/1/78
F	ECO 2-5060	J.E.P. 5/1/78
G	ECO 2-5704A	J.E.P. 5/1/78
H	ECO 2-5177	J.E.P. 5/1/78
J	ECO 13-5552	J.E.P. 5/1/78
K	ECO 13-5824	J.E.P. 5/1/78
L	ECO 13-5900	J.E.P. 5/1/78
M	ECO 13-5895	J.E.P. 5/1/78
N	PROD. RLSE PER ECO 13-6306	J.E.P. 5/1/78
P	ECO 13-16404	J.E.P. 5/1/78



SEE DETAIL A

SEE DETAIL B

- 8 ITEM 62 TO BE INSTALLED AFTER WAVE SOLDER OPERATION. LEAD LENGTH TO BE .130 TO .180 INCHES.
 - 7 MARK ASSY VENDOR ID WITH CONTRASTING PERM COLOR NON-CONDUCTIVE, .12 INCH HIGH, APPROX WHERE SHOWN.
 - 6 DISCARD HARDWARE SUPPLIED WITH ITEM 56 R31 BEFORE INSTALLING ITEM 56.
 - 5 CONNECTOR PINS J17-3 AND J16-4 ARE TO BE CUT OFF FOR KEYING.
 - 4 INTEL PART NO. 101048-007, 2109-4H MAY BE SUBSTITUTED FOR ITEM 17, INTEL PART NO. 101048-008 IF THE FOLLOWING CONDITIONS ARE MET:
 - A.) 101048-008 AND 101048-007 SHALL NOT BE MIXED ON THE SAME ASSY AND
 - B.) ASSYS USING 101048-007 MUST HAVE THE JUMPER PLUG W8B-W8E REMOVED AND W7B-W7A ADDED.
 - 3 MARK ASSY DASH NO. & REV LEVEL WITH CONTRASTING PERM COLOR, NON-CONDUCTIVE, .12 INCH APPROX WHERE SHOWN.
 - 2 WORKMANSHIP PER MFGD QAWS 99-0007-001.
 - 1 ASSY PART NO. IS 1002104-05. ASSY AND P/L ARE TRACKING DOCUMENTS.
- NOTE: UNLESS OTHERWISE SPECIFIED,

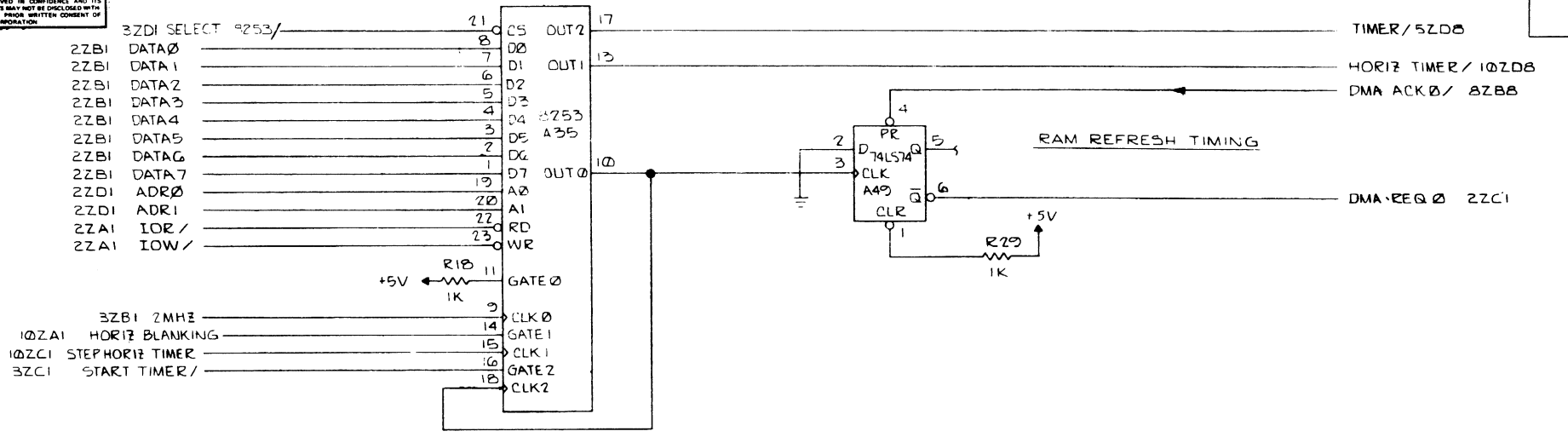
- 10. ITEMS 63 & 64 TO BE INSTALLED AND HAND SOLDERED AFTER WAVE SOLDER OPERATION.
- 9. ITEM 65 LEADS MAY PROTRUDE THRU BOARD TO A MAXIMUM OF .200 INCHES.

SEE SEPARATE PARTS LIST

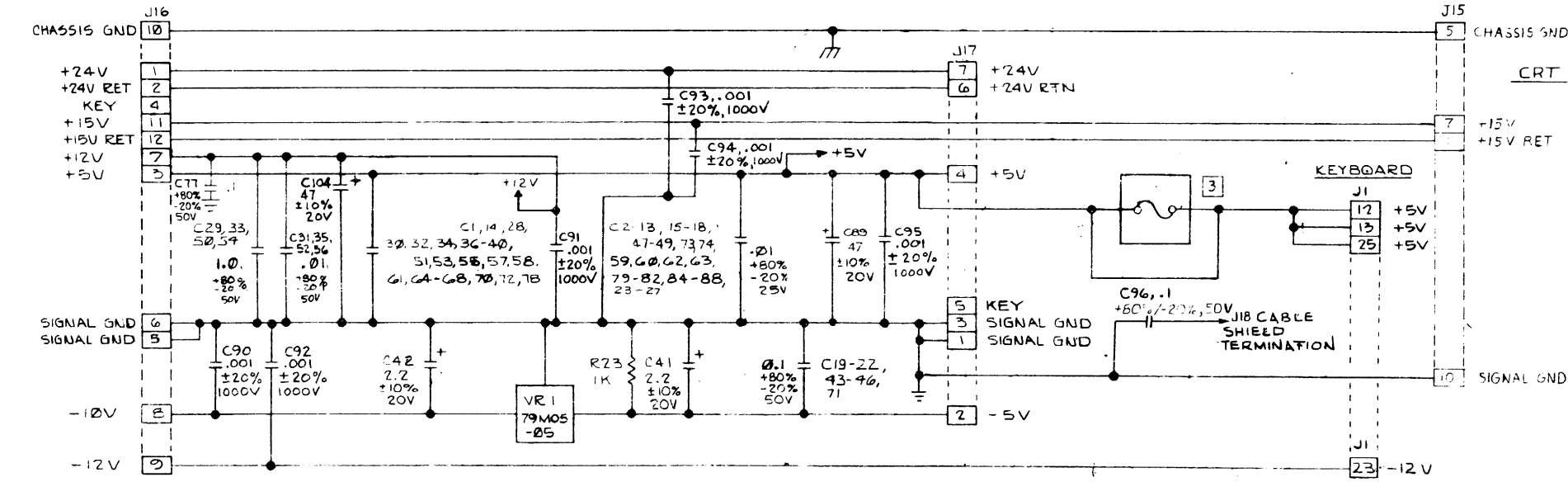
ITEM NO.	PART NUMBER	DESCRIPTION
QUANTITY PER DASH NO.		
SCALE 1:1		
SIGNATURE		DATE
DRN BY J.E.P. 5/1/78		5/1/78
CHK BY		TITLE
DFT APPR		PRINTED WIRING ASSEMBLY
ENGR APPR		I/O CONTROLLER
MATERIAL:		SIZE DEPT DRAWING NO
FINISH:		D MFGD P 1002104
NEXT ASSY USED ON		REV
		P

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REVISIONS				
LTR	DESCRIPTION	DATE	CHK	ENGR
A	PROTO			



TIMER/5ZDB
 HORI7 TIMER/10ZDB
 DMA ACK0/8ZBB
 RAM REFRESH TIMING
 DMA REQ 0 ZZC1



REF DES	DEVICE	TOTAL PINS	GND	+5	+12	-12	-5
AB6	74520	14	7	14			
A50-53	2716	24	12	24			
A46	3242	28	14	28			
A39,59,60	P8205	16	8	16			
A67	P8212	24	12	24			
A13,14	745374	20	10	20			
A34,45,70,71							
A73-76,78,79	8226	16	8	16			
A66	C8228	28	14	28			
A35	8253	24	12	24			
A58	P8257	40	20	31			
A1	8271	40	20	40			
A20	8275	40	20	40			
A18,55	74500	14	7	14			
A12,13,38	74LS00	14	7	14			
A8,36,61	74LS02	14	7	14			
A27	74L04	14	7	14			
A10	74LS04	14	7	14			
A37,56	74LS08	14	7	14			
A28	7416	14	7	14			
A26,83,85	7432	14	7	14			
A6,57	7437	14	7	14			
A31,47	74574	14	7	14			
A7,24,25,49	74LS74	14	7	14			
A40	745140	14	7	14			
A5	74LS151	16	8	16			
A77	74154	24	12	24			
A17,29	745163	16	8	16			
A4	74LS166	16	8	16			
A9,48	745174	16	8	16			
A82	74LS174	16	8	16			
A2	745175	16	8	16			
A84	74LS175	16	8	16			
A11	745195	16	8	16			
A23,80,81	745240	20	10	20			
A68	C8224	16	8	16	9		
130-33,41-44		16	8	16			
A19	2708-0886	24	12	24	19	21	
A69	80BOA-2	40	20	28	11		
A72	8741-4	40	20	40			
REF DES	DEVICE	TOTAL PINS	GND	+5	+12	-12	-5

- [5] FOR 2110-A1H (PART NO. 100844-006) JUMPER W9B-W9E ≠ W9C-W9D. FOR 2110-ATL (PART NO. 100844-007, JUMPER W9B-W9A ≠ W9C-W9D.
- [7] FOR A19=2716, JUMPER W10B-W10G
- 4. UNCODED I.C.'S VOLT AND GND PIN ARE 14 OR 16 ≠ 7 OR 8 RESPECTIVELY
- [3] OPTIONAL FUSE REQUIRES DELETION OF PARALLEL TRACE.
- 2. CAPACITANCE VALUES ARE IN MICROFARADS.
- 1. RESISTANCE VALUES ARE IN OHMS, 1/4 W, ± 5%.
- [6] 8271 TO BE INSTALLED IN LOCATION N1 OF PWA DURING ASSY OF 4001248 REAR PANEL ASSY

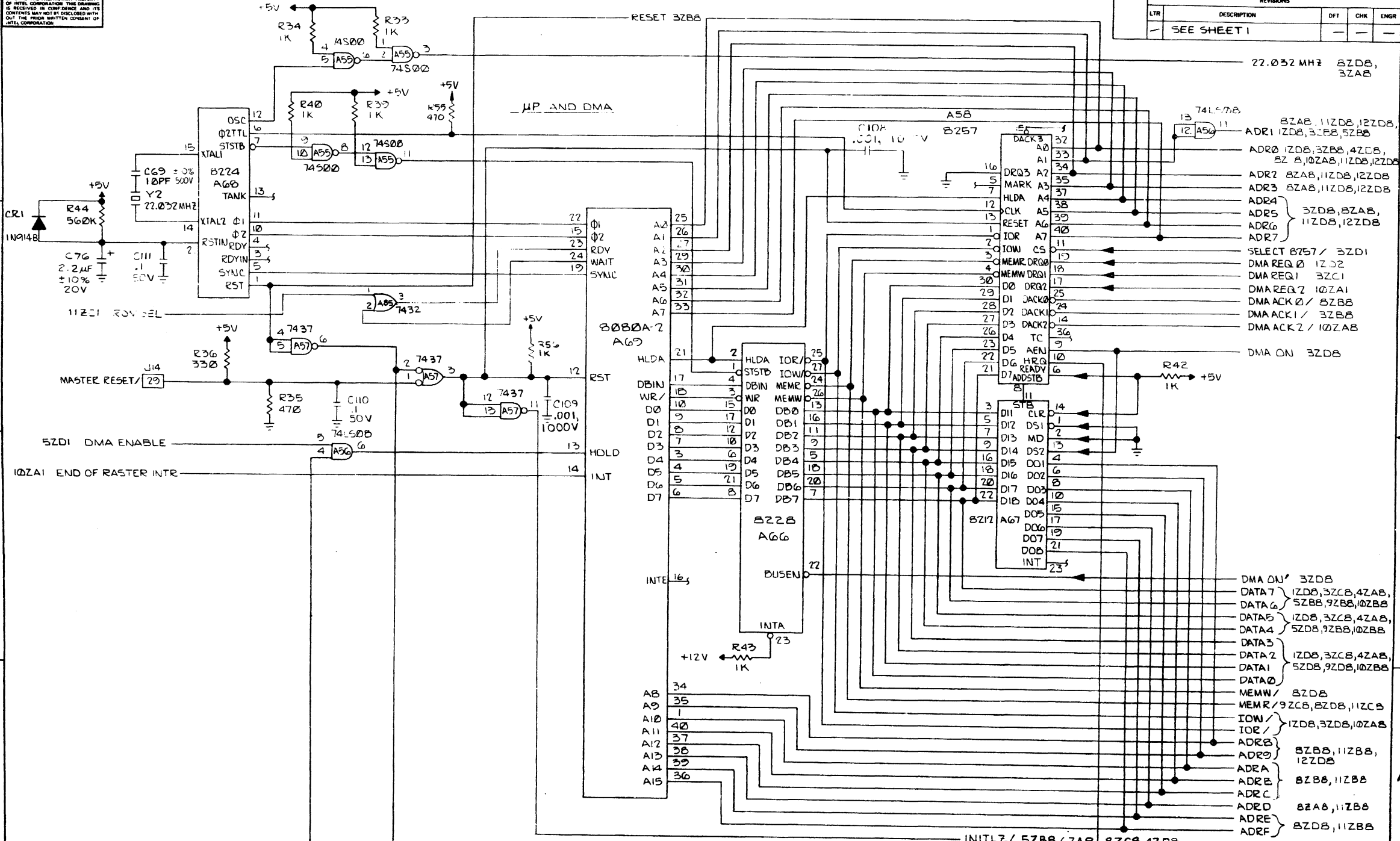
NOTES: UNLESS OTHERWISE SPECIFIED.

NOT USED	LAST USED	123544	MDS+22X

QUANTITY PER DASH NO.		ITEM NO.	PART NUMBER	DESCRIPTION
SCALE: NONE	TOL: 2 PLC 3 PLC ANGLE	SIGNATURE	DATE	 3065 BOWERS AVE. SANTA CLARA, CALIF. 95051
MATERIAL:	FINISH:	DRN BY: PEW/E	DATE: 9/9/79	
TITLE: SCHEMATIC I/O CONTROLLER				REV: A
SIZE: C CLC CLOSURE LV: X				REV: 123467
AUTH BY:				SHEET 1 OF 12

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REVISIONS				
LTR	DESCRIPTION	DFT	CHK	ENGR
—	SEE SHEET 1	—	—	—



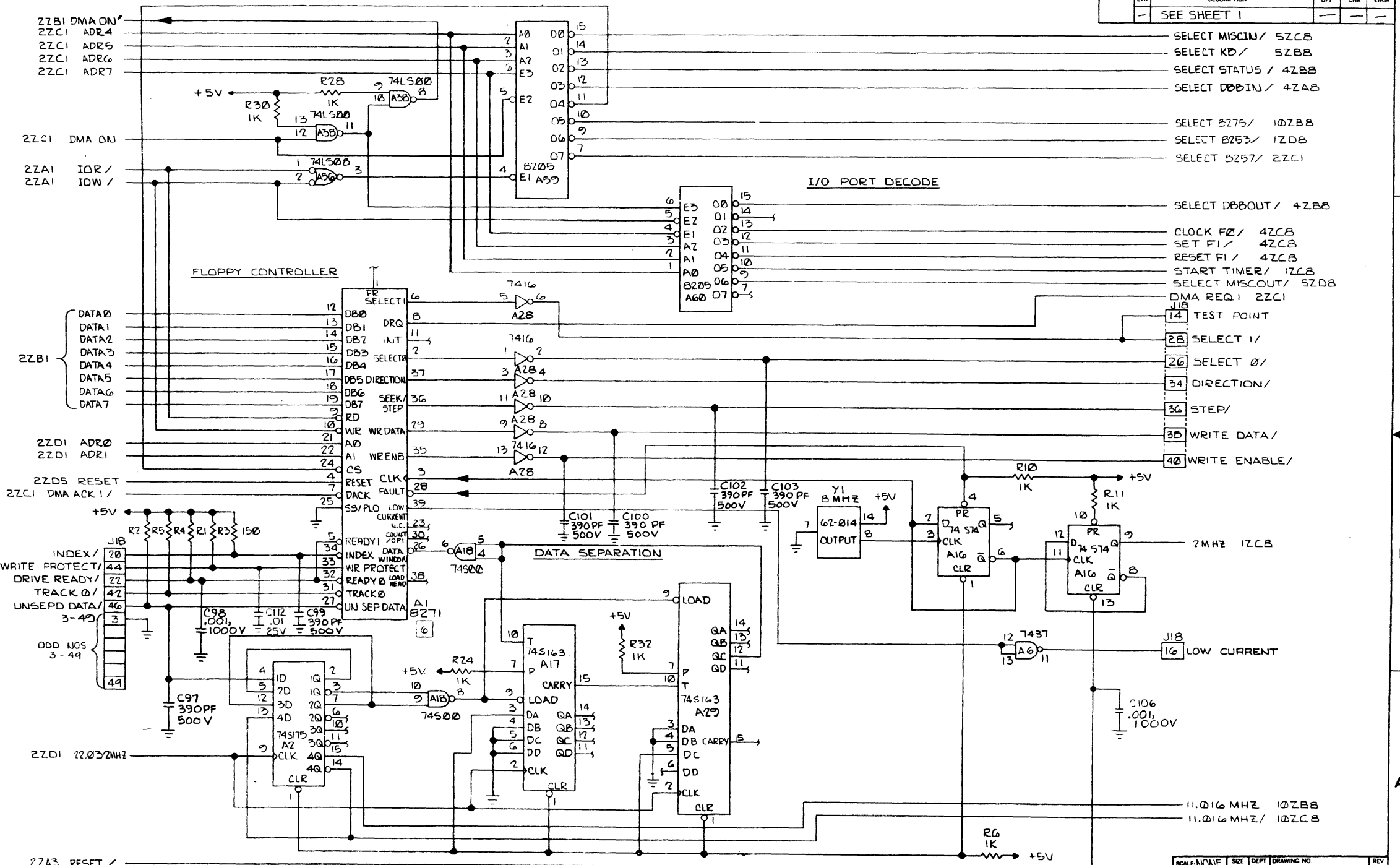
- 22.032 MHz 8208, 3ZAB
- ADR1 1Z08, 3ZB8, 5ZB8
- ADR0 1Z08, 3ZB8, 4ZC8, 5Z 8, 10ZAB, 11Z08, 12Z08
- ADR2 8ZAB, 11Z08, 12Z08
- ADR3 8ZAB, 11Z08, 12Z08
- ADR4 3Z08, 8ZAB, 11Z08, 12Z08
- ADR5 11Z08, 12Z08
- ADR6 11Z08, 12Z08
- ADR7
- SELECT 8Z57 / 3ZD1
- DMA REQ 0 1Z02
- DMA REQ1 3ZC1
- DMA REQ2 10ZAI
- DMA ACK 0 / 8ZB8
- DMA ACK1 / 3ZB8
- DMA ACK2 / 10ZAB
- DMA ON 3ZDB

- DMA ON' 3ZDB
- DATA7 1ZDB, 3ZCB, 4ZAB, 5ZBB, 9ZBB, 10ZBB
- DATA6 5ZBB, 9ZBB, 10ZBB
- DATA5 1ZDB, 3ZCB, 4ZAB, 5ZDB, 9ZBB, 10ZBB
- DATA3 1ZDB, 3ZCB, 4ZAB, 5ZDB, 9ZDB, 10ZBB
- DATA2 1ZDB, 3ZCB, 4ZAB, 5ZDB, 9ZDB, 10ZBB
- DATA0
- MEMW / 8Z08
- MEMR / 9ZCB, 8Z08, 11ZCB
- IOW / 1ZDB, 3ZDB, 10ZAB
- IOE /
- ADRF 8ZBB, 11ZBB, 12ZDB
- ADRE 8ZBB, 11ZBB
- ADRC 8ZAB, 11ZBB
- ADRE 8ZDB, 11ZBB

INITLZ / 5ZBB, 6ZAB, 8ZCB, 4ZDB
 RESET / 3ZAB, 10ZAB

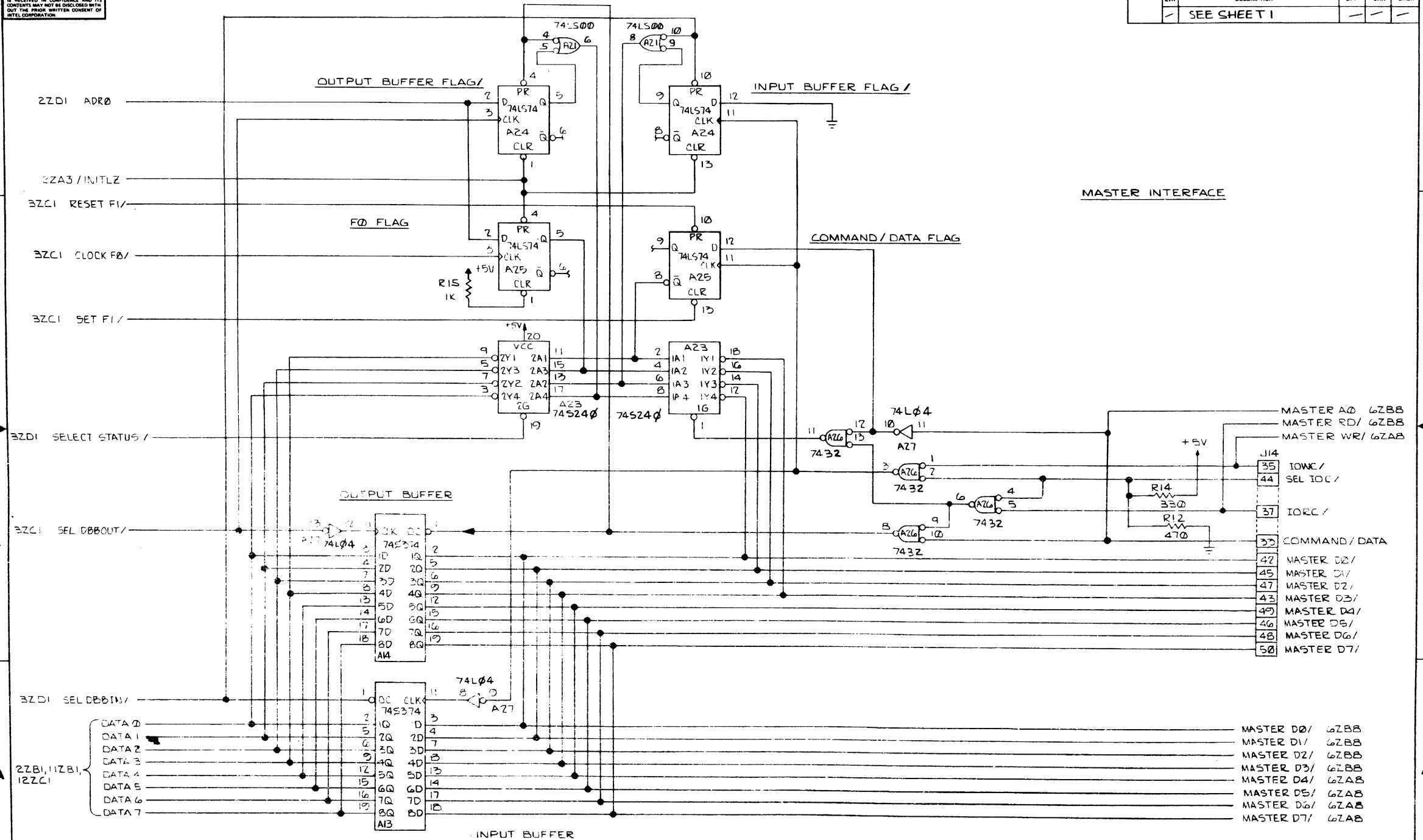
THIS DRAWING CONTAINS INFORMATION OF A SPECIAL CHARACTER. THE DISSEMINATION OF THIS INFORMATION IS RESTRICTED TO PERSONS AUTHORIZED BY THE COMMISSIONER OF DEFENSE INFORMATION SECURITY.

REVISIONS				
LTR	DESCRIPTION	DFT	CHK	ENGR
-	SEE SHEET 1	-	-	-



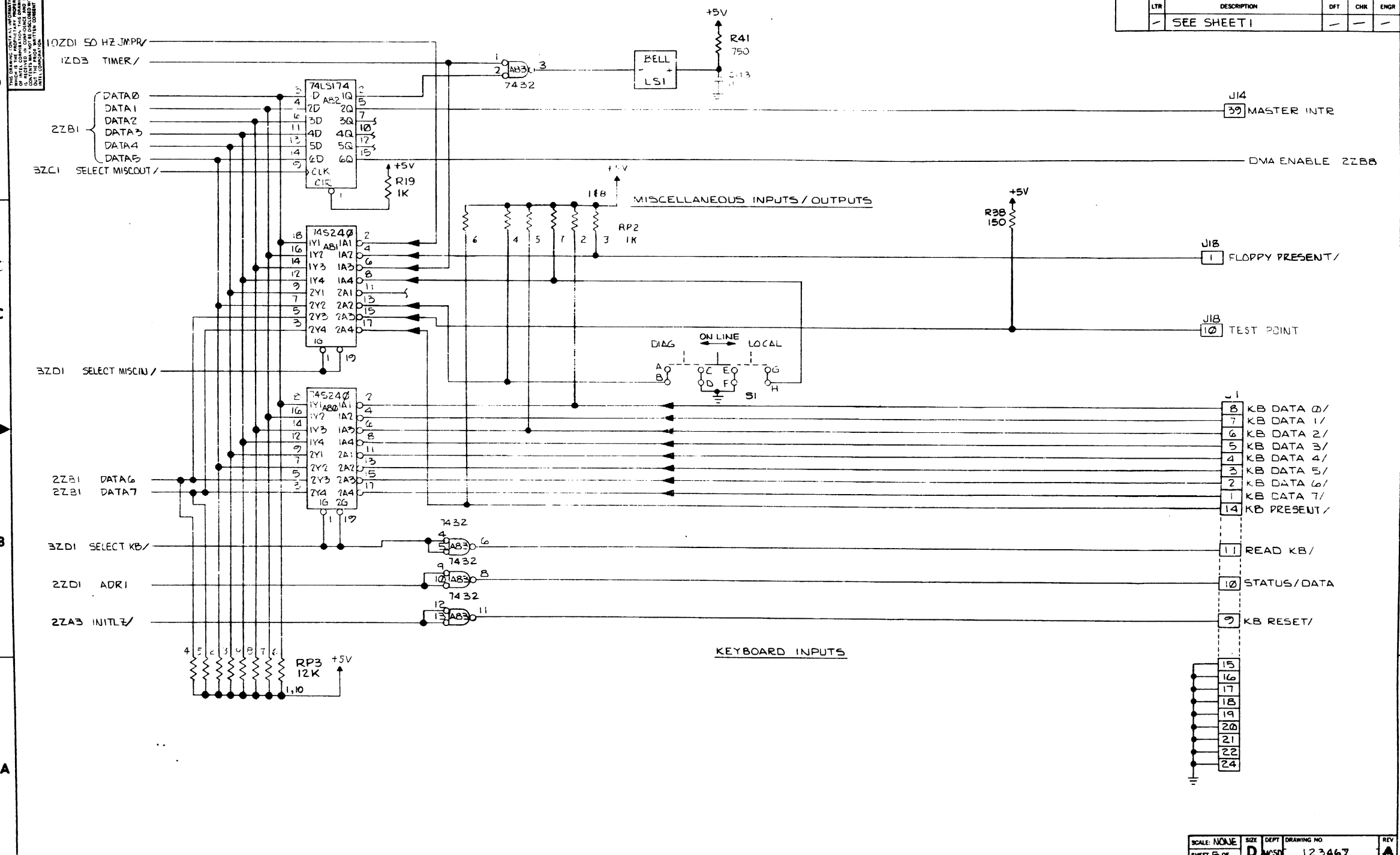
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REVISIONS				
LTR	DESCRIPTION	DFT	CHK	ENGR
-	SEE SHEET 1	-	-	-

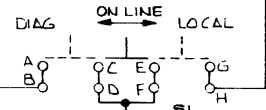


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REVISIONS				
LTR	DESCRIPTION	DFT	CHK	ENGR
-	SEE SHEET 1	-	-	-



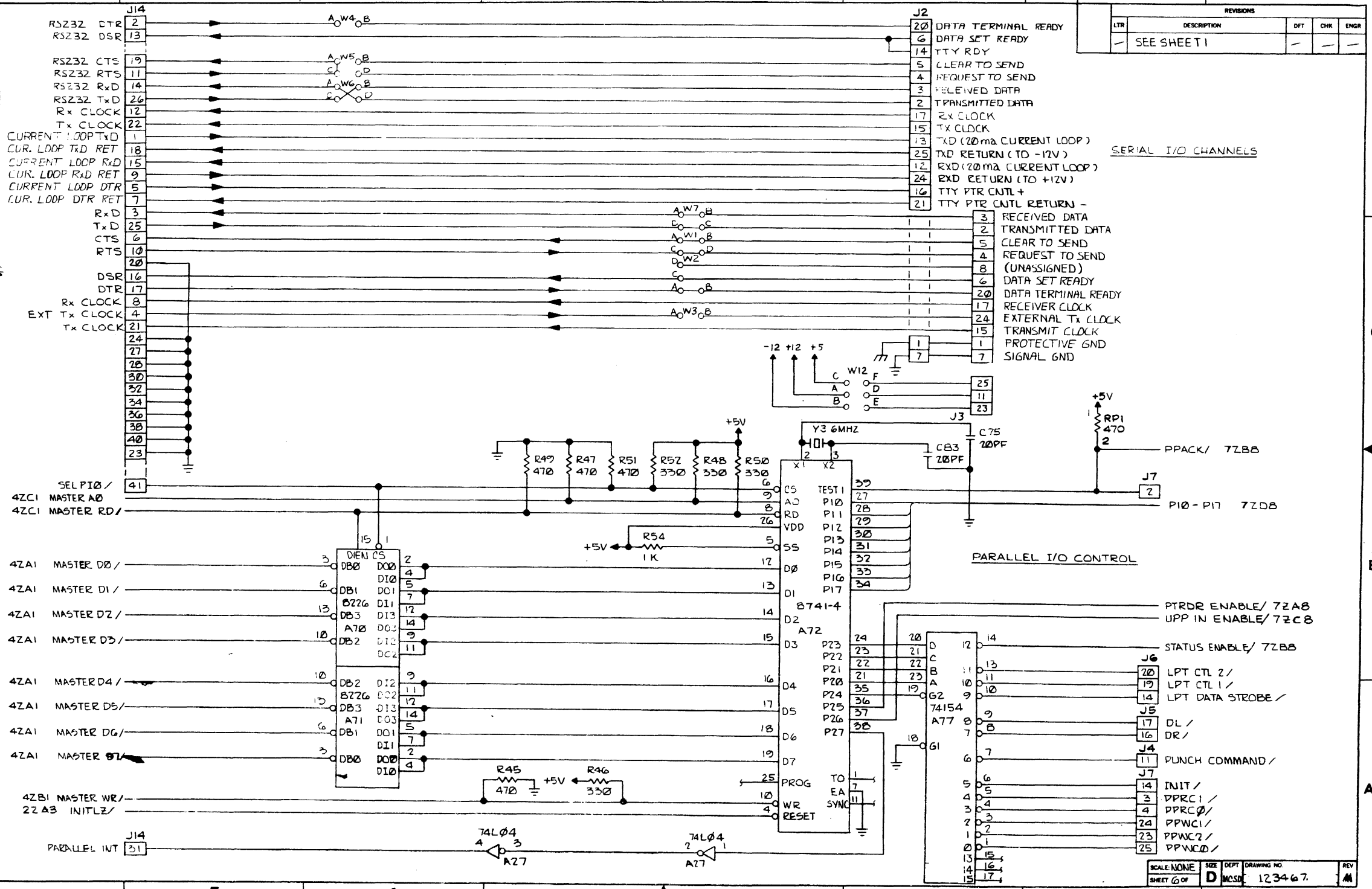
MISCELLANEOUS INPUTS / OUTPUTS



KEYBOARD INPUTS

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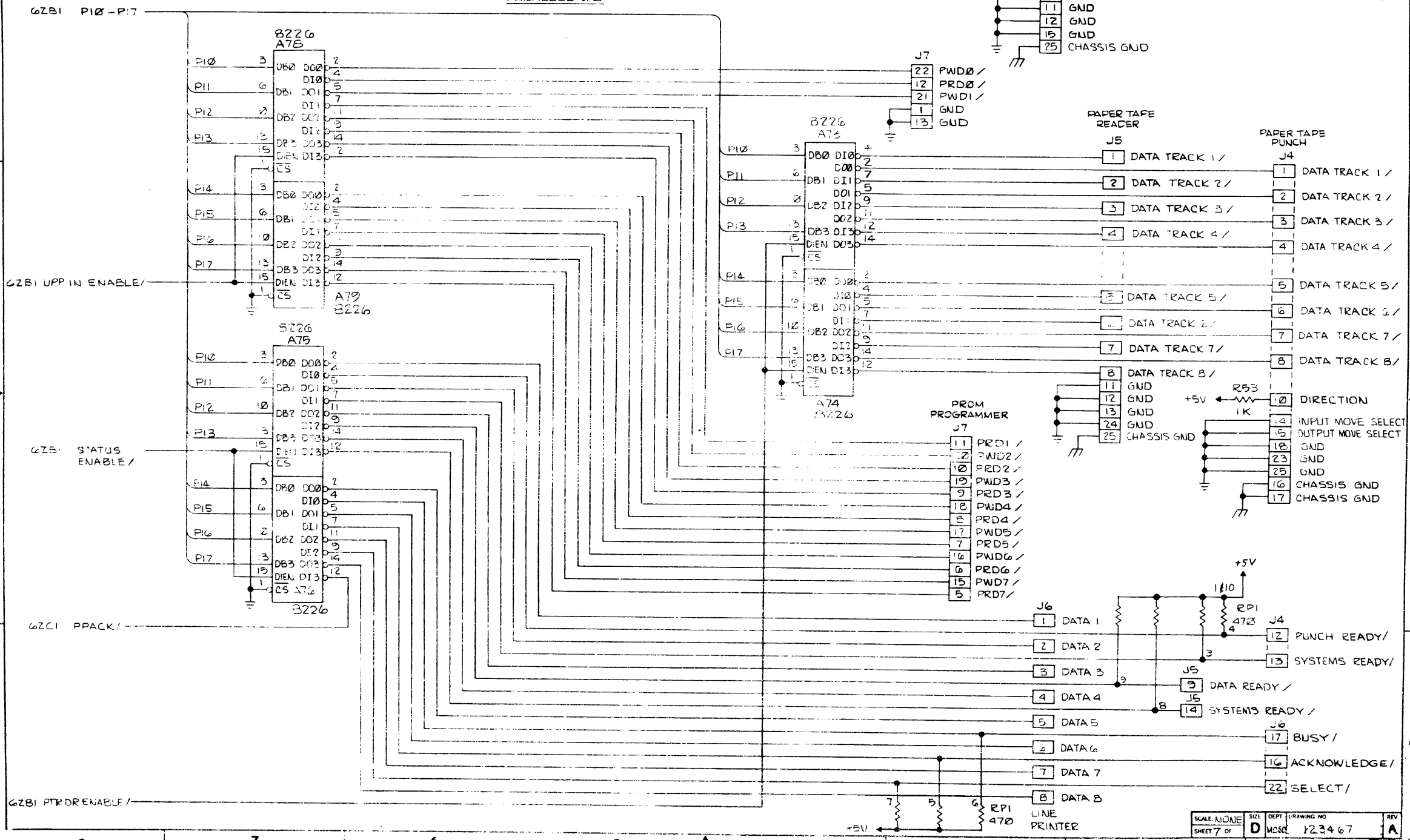
REVISIONS				
LTR	DESCRIPTION	DFT	CHK	ENGR
-	SEE SHEET 1	-	-	-



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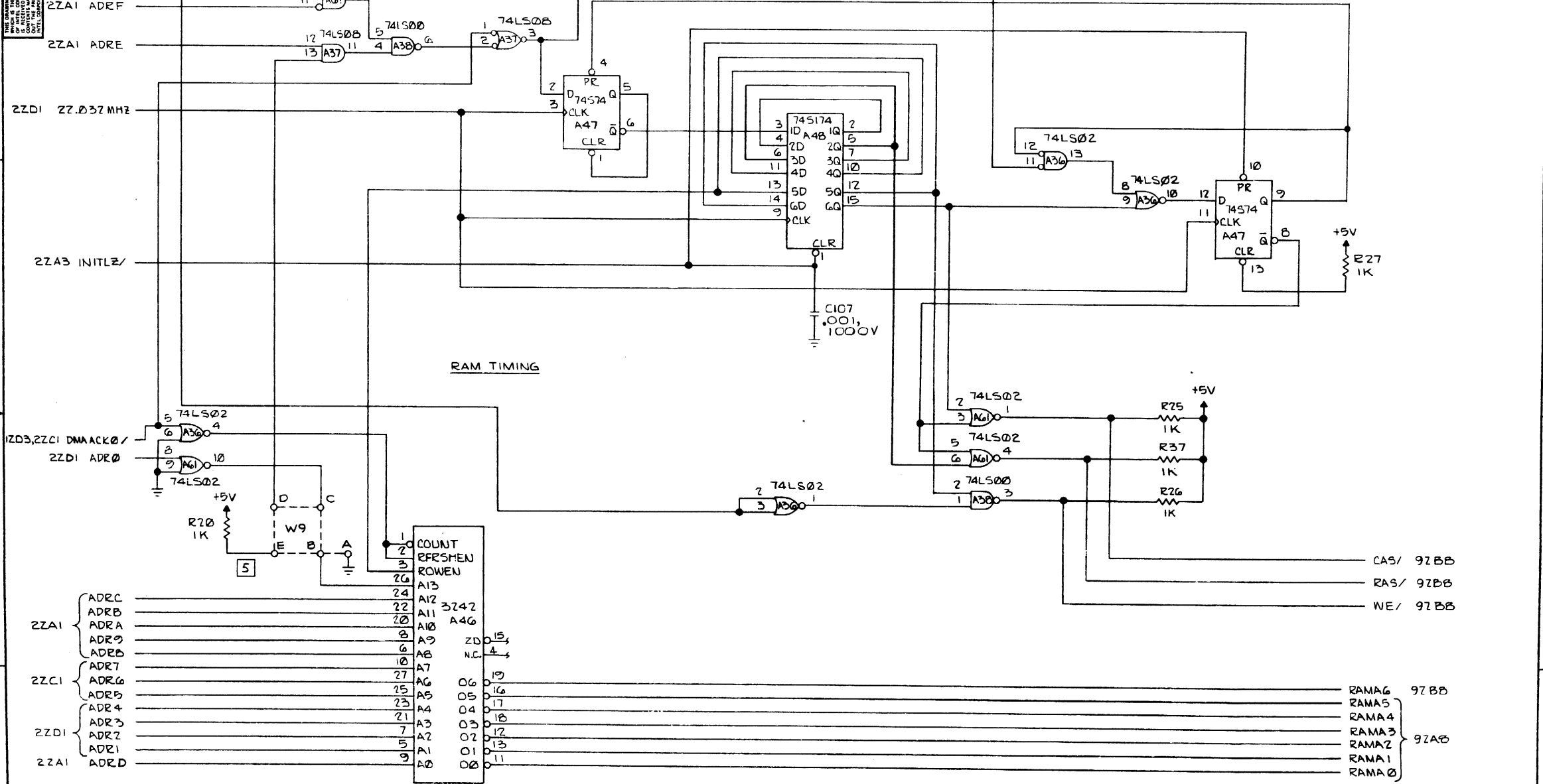
REVISIONS				
LTR	DESCRIPTION	DFT	CHK	ENGR
-	SEE SHEET 1	-	-	-

PARALLEL I/O



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REVISIONS				
LTR	DESCRIPTION	DFT	CHK	ENGR
-	SEE SHEET I	-	-	-

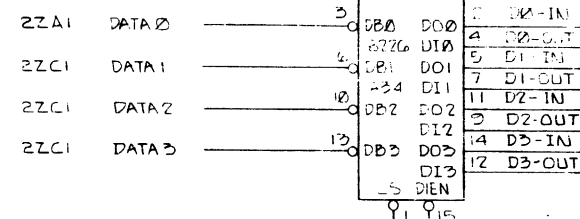


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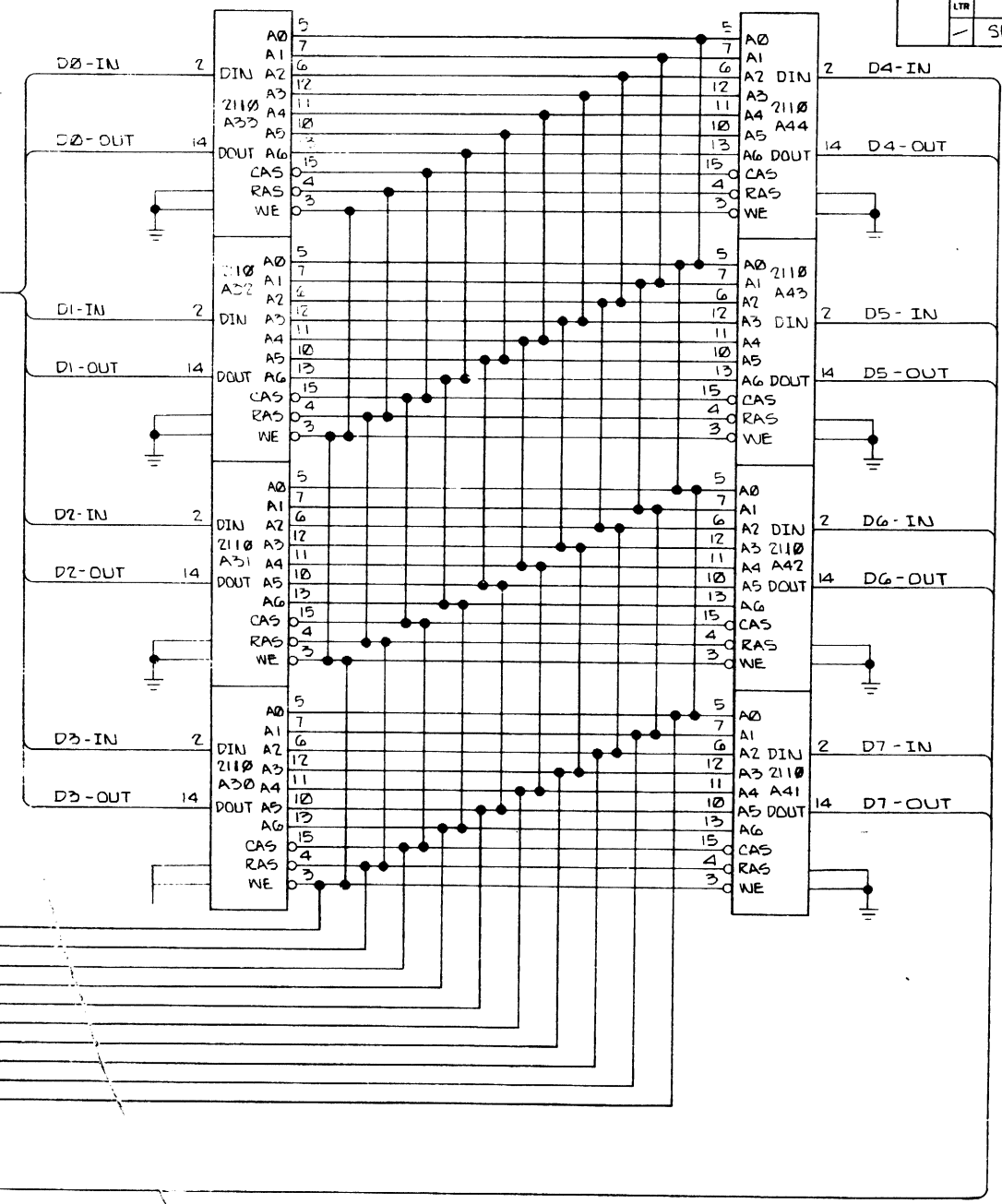
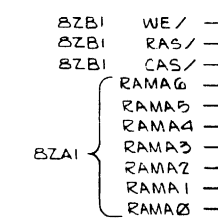
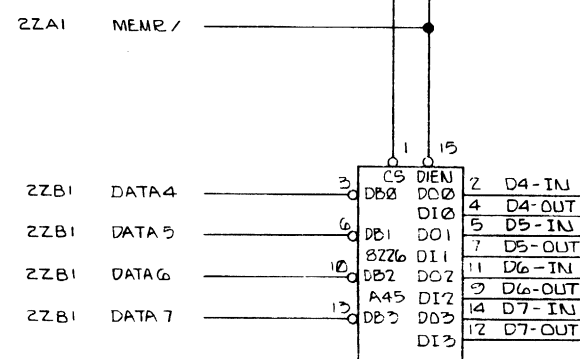
REVISIONS				
LTR	DESCRIPTION	DFT	CHK	ENGR
-	SEE SHEET 1	-	-	-

D
C
B
A

D
C
B
A

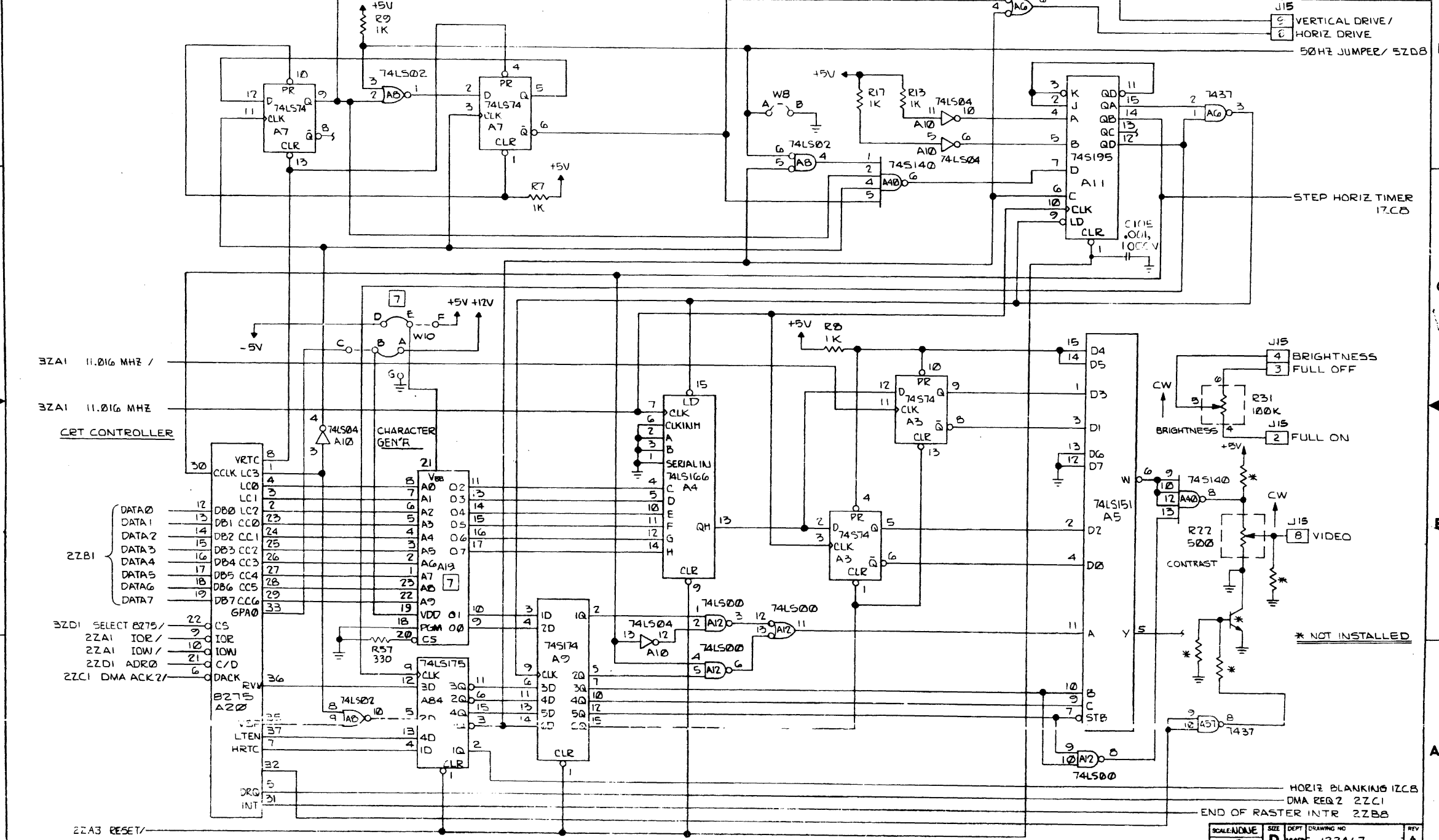


RAM ARRAY



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REVISIONS				
LTR	DESCRIPTION	DFT	CHK	ENGR
	SEE SHEET 1			

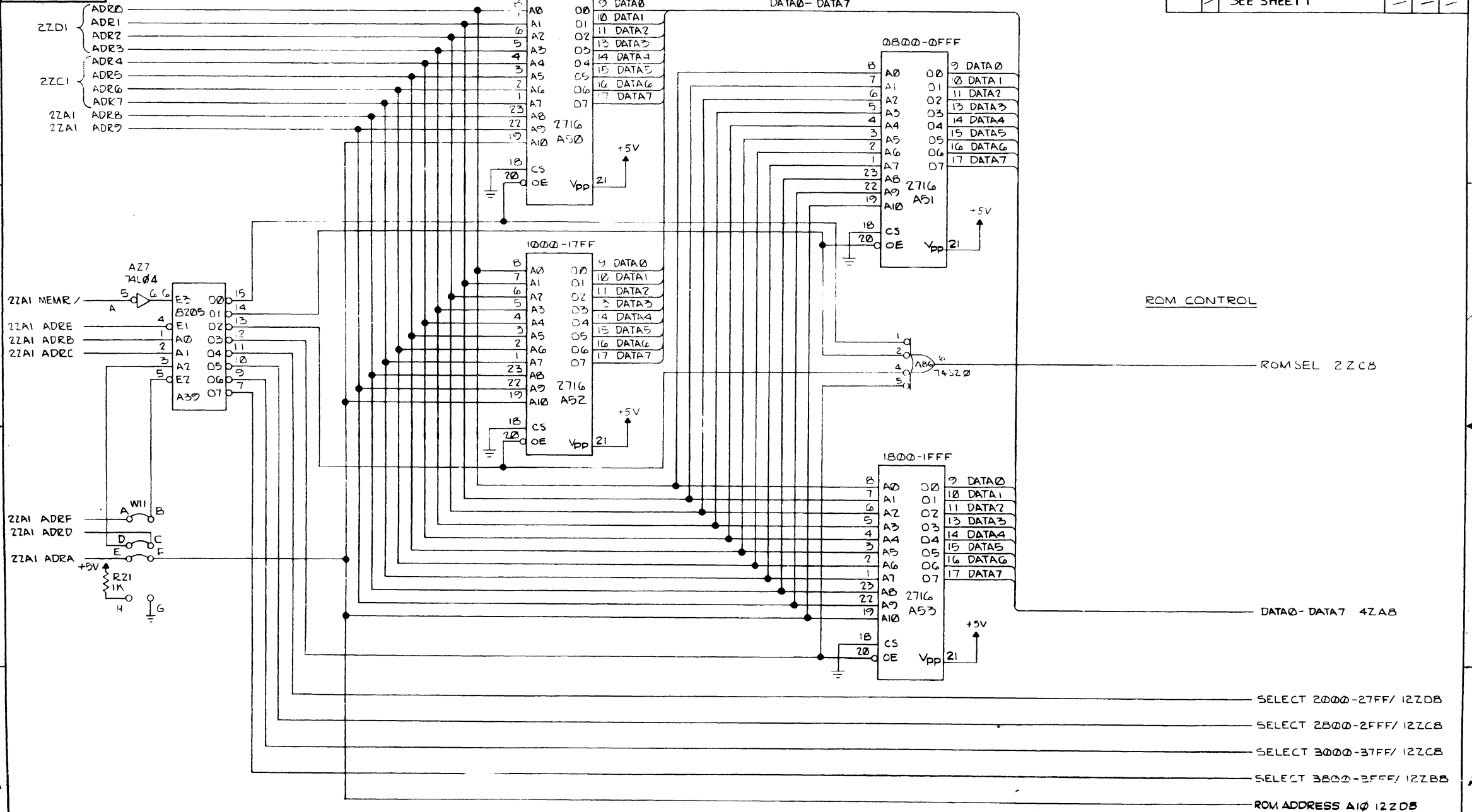


HORIZ BLANKING 1ZCB
DMA REQ 2 2ZC1
END OF RASTER INTR 2ZB8

SCALE	DATE	SIZE	DEPT	DRAWING NO	REV
SHEET NO OF		D	MOUSE	123467	A

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REVISIONS				
LTR	DESCRIPTION	OFF	CHK	ENGR
/	SEE SHEET 1	/	/	/



ROM CONTROL

ROMSEL 2ZC8

DATA0-DATA7 4ZA8

SELECT 2000-27FF/ 12Z0B

SELECT 2800-2FFF/ 12Z0B

SELECT 3000-37FF/ 12Z0B

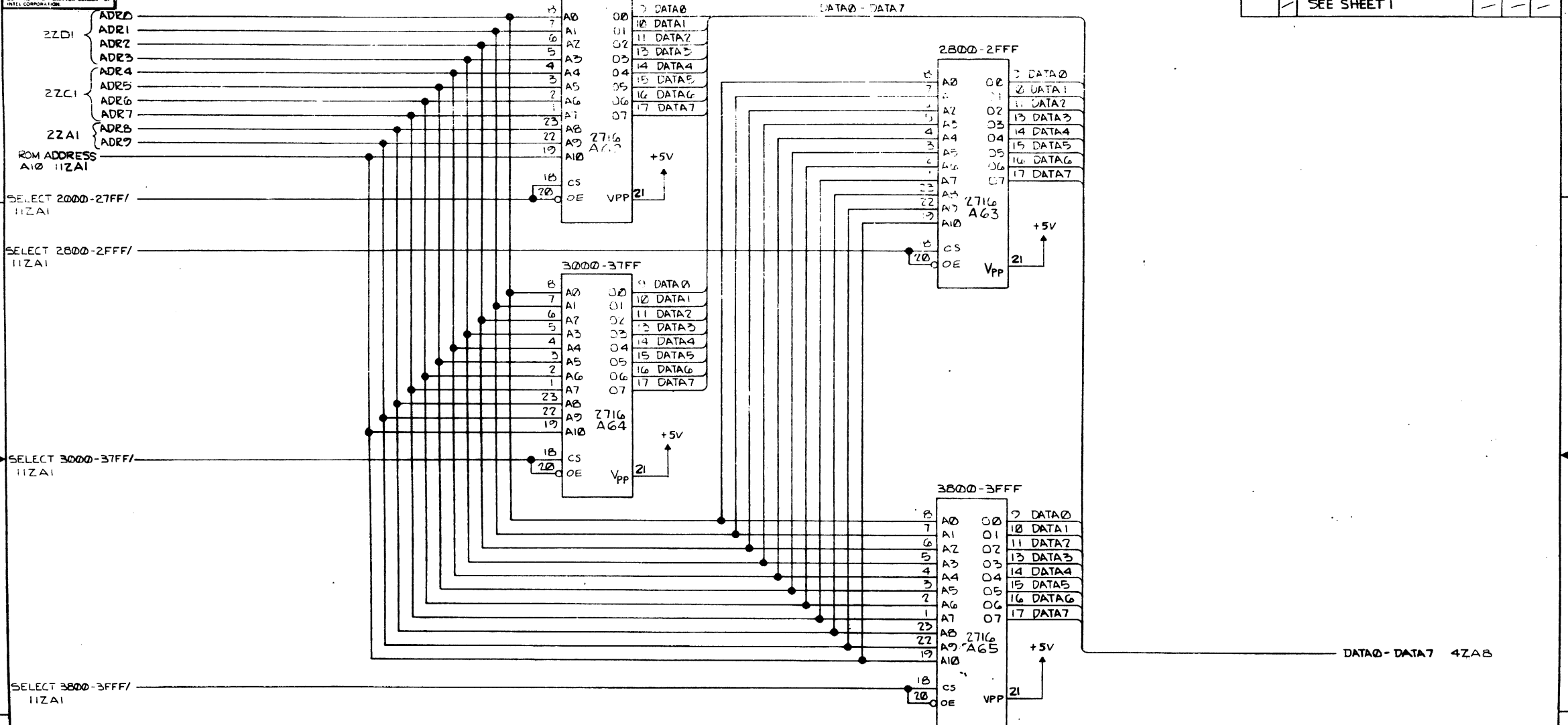
SELECT 3800-3FFF/ 12Z0B

ROM ADDRESS A10 12Z05

SCALE	SIZE	DEPT	DRAWING NO.	REV
NONE	D	MCS	123467	A

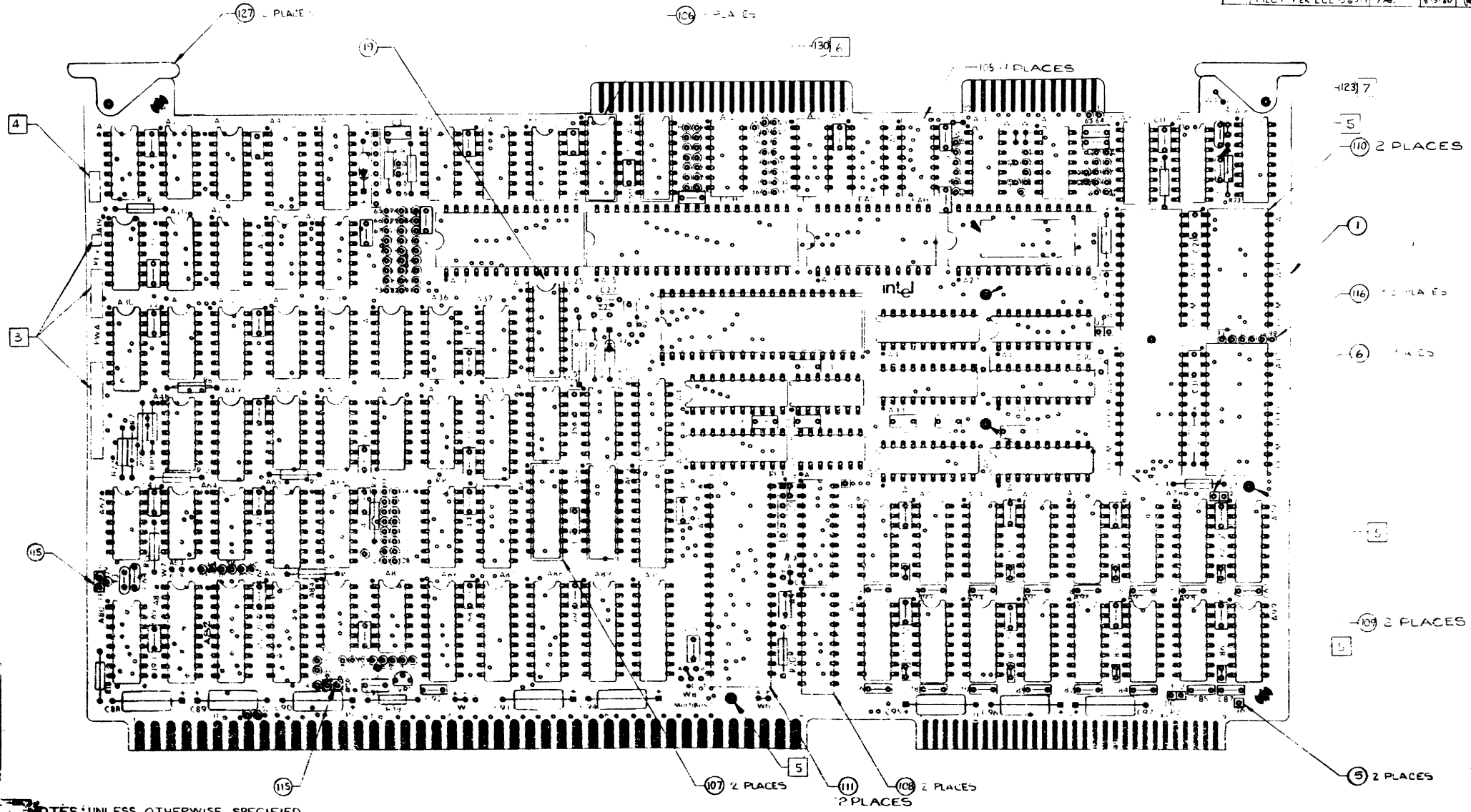
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REVISIONS				
LTR	DESCRIPTION	DFT	CHK	ENGR
/	SEE SHEET 1	/	/	/



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REVISIONS						
REV	DESCRIPTION	OFF	DATE	CHK	APVD	DATE
A	PROTO					
-	PILCT PER ECC 36554-7A		9 5 80			



NOTES: UNLESS OTHERWISE SPECIFIED

ASSY PART NO. IS 123327-001.
ASSY, PL AND WL ARE TRACKING DOCUMENTS
WORKMANSHIP PER 99-0007-001.

IDENTIFY WITH RPA-86 ASSY PART NO. 5
LEVEL USING CONTRASTING
COLOR, NON-CONDUCTIVE,
HIGH APPROX WHERE SHOWN.

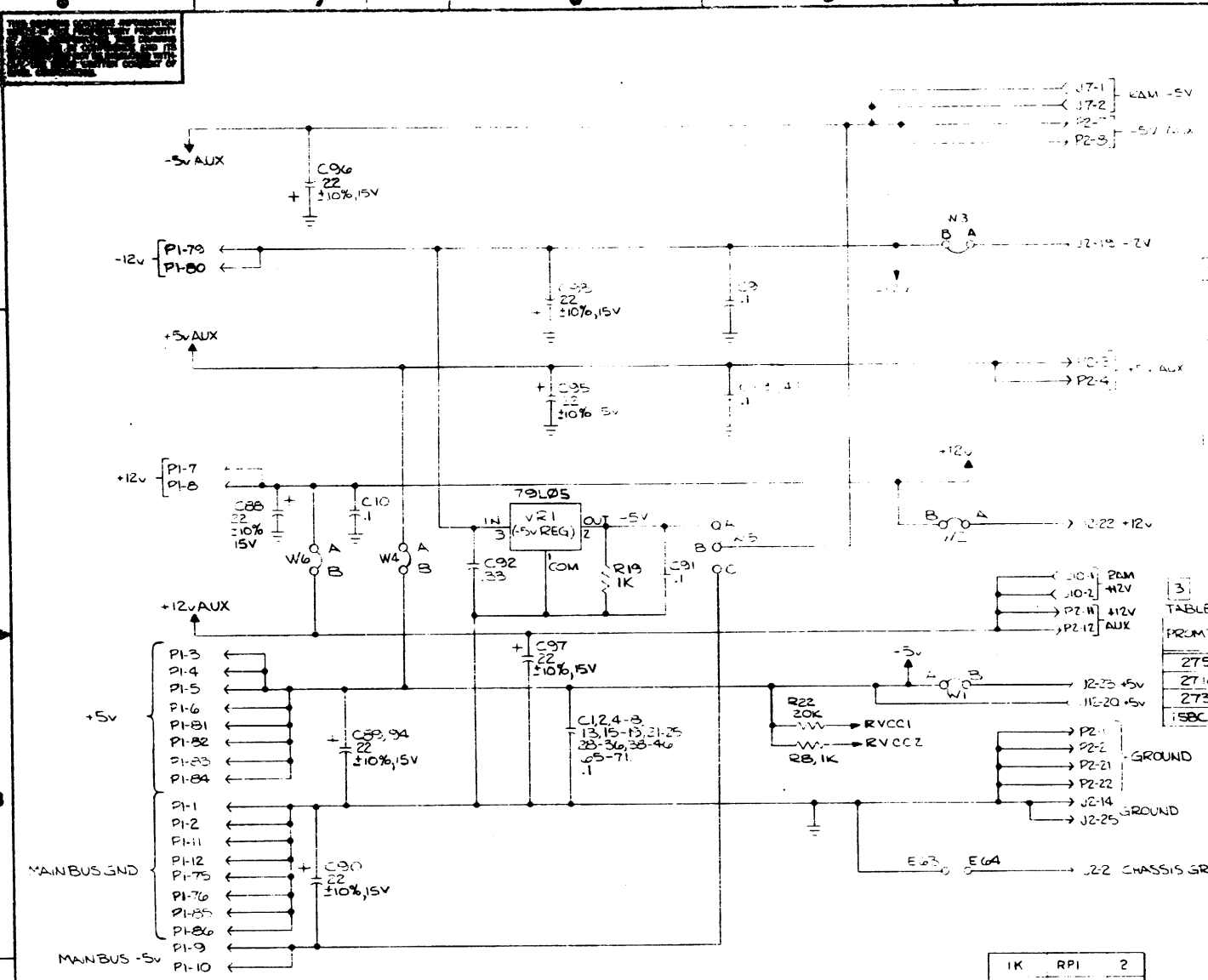
4 MARK ASSY VENDOR ID WITH CONTRASTING PERM COLOR, NON-CONDUCTIVE, 12 HIGH APPROX WHERE SHOWN.
5 HOLES TO BE FREE OF SOLDER.

6 PLACE LABEL ITEM 130 ON SOLDER SIDE OF PWA AT LOCATION A27 APPROX WHERE SHOWN. LABEL MUST NOT TOUCH LC OR RESISTOR PADS.

7 COVER CRYSTAL CASE WITH ITEM 103, SHRINK TUBING.

123329 MDS-556
NEXT ASSY USED ON

QUANTITY PER DASH NO		ITEM NO		DESCRIPTION	
UNLESS OTHERWISE SPECIFIED		SIGNATURE		PARTS LIST	
1 DIMENSIONS ARE IN INCHES		DATE		intel 3740 BOWERS AVE SANTA CLARA CALIF. 95051	
2 BREAK ALL SHARP EDGES		CHK BY		TITLE	
3 DO NOT SCALE DRAWING		ENGR		PRINTED WIRING ASSEMBLY	
4 TOLERANCES		APVD		RPA-86	
ANGLES ±		APVD		SIZE DCLC CL CODE ALSE LVL DOCUMENT NUMBER REV	
XX ±				D 13 05 E 123327 A	
XXX ±				SCALE 2/1 SHEET 1 OF 1	



NOTES: UNLESS OTHERWISE SPECIFIED
 1. ALL RESISTANCE VALUES ARE IN OHMS, ±5% 1/4 WATT
 2. ALL CAPACITANCE VALUES ARE IN MICROFARADS, ±50%, -20% 50VDC
 3. SEE TABLES 2 AND 3 FOR PROM SELECTION.
 4. SEE TABLE 1 FOR I/O SELECTION.

REF. DESIGNATIONS	TYPE	REF. DES.	QTY	SPARES
P2	RES	RP1	2	
C98	CAP	RP2	4	
E152	RES	RP3	1	
		RP4	1	
C92	CAP	RP5	1	
R23	RES	RP6	1	
R24	RES	RP7	1	
Y3	CONN	RP8	1	
S1	SW	RP9	1	
VR1	IC	RP10	1	
W6	CONN	RP11	1	
W4	CONN	RP12	1	
		RP13	1	
		RP14	1	
		RP15	1	
		RP16	1	
		RP17	1	
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		RP77	1	
		RP78	1	
		RP79	1	
		RP80	1	
		RP81	1	
		RP82	1	
		RP83	1	
		RP84	1	
		RP85	1	
		RP86	1	
		RP87	1	
		RP88	1	
		RP89	1	
		RP90	1	
		RP91	1	
		RP92	1	
		RP93	1	
		RP94	1	
		RP95	1	
		RP96	1	
		RP97	1	
		RP98	1	
		RP99	1	
		RP100	1	

TABLE 1: I/O ADDR SELECT

I/O DEVICE	BASE ADDR
B255A	000CB
B259A	000C0
B253	000D0
B251A	000DB

TABLE 2: PROM SELECT

PROM TYPE	ADDR FROM
2758	FF000
2716	FE000
2732	FC000
SBC 340	F8000

TABLE 3: PROM SELECT

PROM TYPE	Q4 TO	Q7 TO	S1 TO	S1 TO
2758	94	97	8	7-10
2716	95	98	C	C
2732	96	99	C	C
SBC 340	96	99	C	C

O = OPEN
 C = CLOSED
 (7, 8, 9, & 10 ARE PIN NUMBERS OF S1).

REVISIONS

ZONE	REV	DESCRIPTION	QTY	QTY	DATE	APPROVED
A	PR1 TO TYPE				7/8/80	JPC
		MULTI PER ECC 13-10-85			8/25/90	W/S/K
					8/15/84	CA

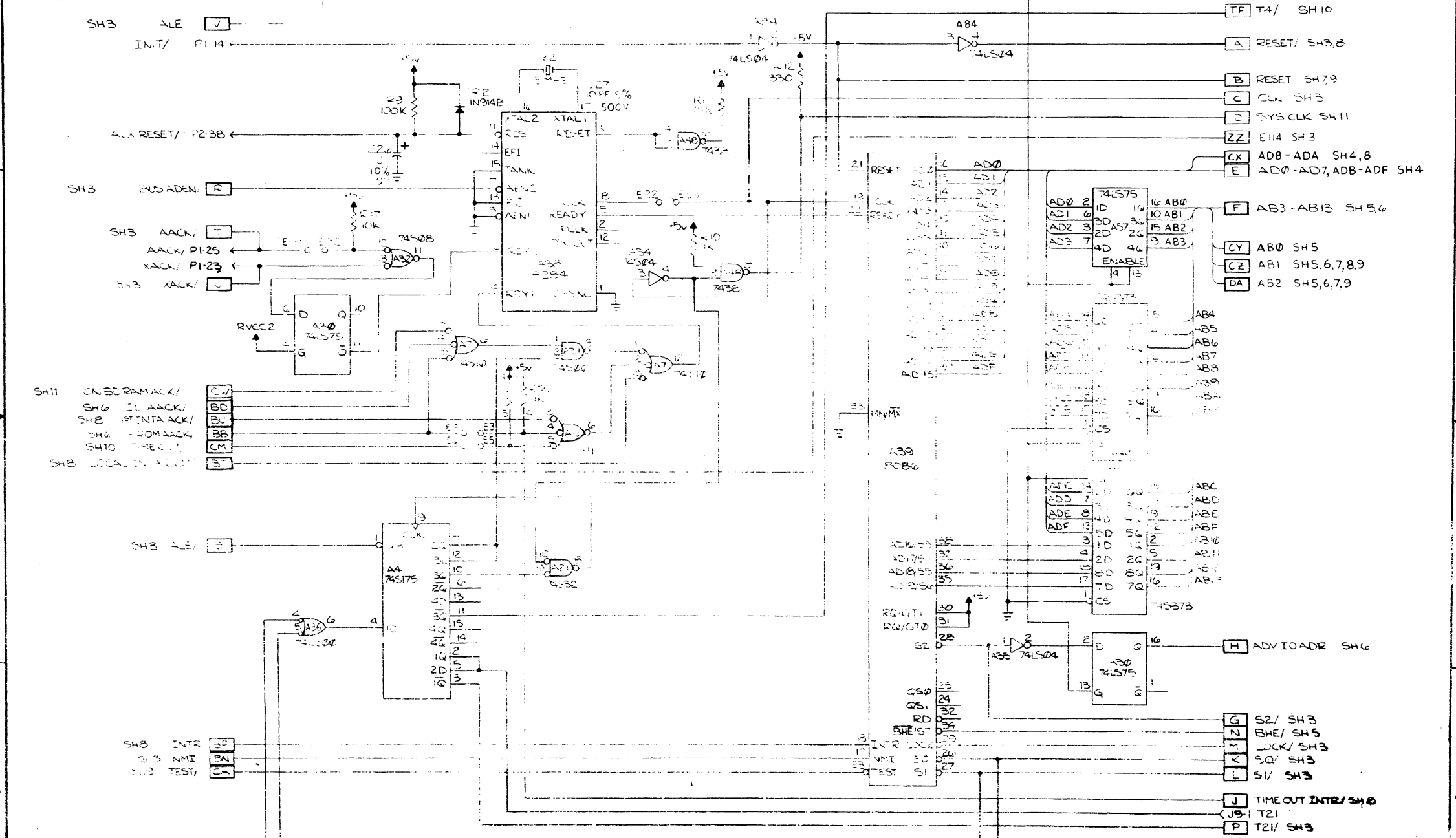
POWER AND GROUND LOCATOR CHART

REF DES	DEVICE TYPE	GROUND	+5v	-5v	+12v	-12v
VR1	79L05	1	-	2	-	3
A30, S1	74LS75	12	5	-	-	-
A16	74163	8	16	-	-	-
A56	7425	7	14	-	-	-
A0, A9	74S175	8	16	-	-	-
AB6	74S240	10	20	-	-	-
A40, 41, 91	74S375	10	20	-	-	-
A55	74S30	7	14	-	-	-
A2, 21, 58	74S32	7	14	-	-	-
A14	75189	7	14	-	-	-
A15	75188	7	-	-	14	1
A19, 52	74S03	7	14	-	-	-
A18, 54	74S139	8	16	-	-	-
A64	74S140	7	14	-	-	-
A35, B8, B9	74LS04	7	14	-	-	-
A3, 7	74S10	7	14	-	-	-
A65	80097	8	16	-	-	-
A13, 16, 2	74125	7	14	-	-	-
A48	7438	7	14	-	-	-
A20, 34	74S04	7	14	-	-	-
A23	74S02	7	14	-	-	-
A50, 63	74S74	7	14	-	-	-
A6, 31	74S11	7	14	-	-	-
A1, 15, 22	74S00	7	14	-	-	-
A22	7432	7	14	-	-	-
A66	74LS138	8	16	-	-	-
A5	74602	8	16	-	-	-
A36	74LS00	7	14	-	-	-
A82	8289	10	20	-	-	-
A81, 83	8288	10	20	-	-	-
A6, 28, 30	8287	10	20	-	-	-
A12, 44, 45, 58, 60, 61	8286	10	20	-	-	-
A58	8284A	9	8	-	-	-
A59	8086	120	40	-	-	-
A67, 68	30252	9	18	-	-	-
A27	8251A	4	26	-	-	-
A25	B255A	7	26	-	-	-
A26	B253	12	24	-	-	-
A24	B259A	14	28	-	-	-
A1, 7, 80	B224	8	16	-	9	-
A8, 9	B226	8	16	-	-	-

QUANTITY PER DASH NO.		ITEM NO.	PART NUMBER	DESCRIPTION
UNLESS OTHERWISE SPECIFIED:				
1. DIMENSIONS ARE IN INCHES.				
2. BREAK ALL SHARP EDGES.				
3. DO NOT SCALE DRAWING.				
4. TOLERANCES:				
ANGLES = 2°				
XX ± .030				
XXX ± .010				
SURFACE FINISH 7				
DATE		DATE	PARTS LIST	
DRN BY X S		DATE	INTEL	
CHK BY J		DATE	3085 BOWERS AVE.	
ENGR		DATE	SANTA CLARA	
APVD		DATE	CALIF. 95051	
APVD		TITLE		
APVD		SCHEMATIC		
APVD		RPA-86		
APVD		SIZE		
APVD		D		
APVD		SCALE		
APVD		NONE		
APVD		SHEET		
APVD		1 OF 11		

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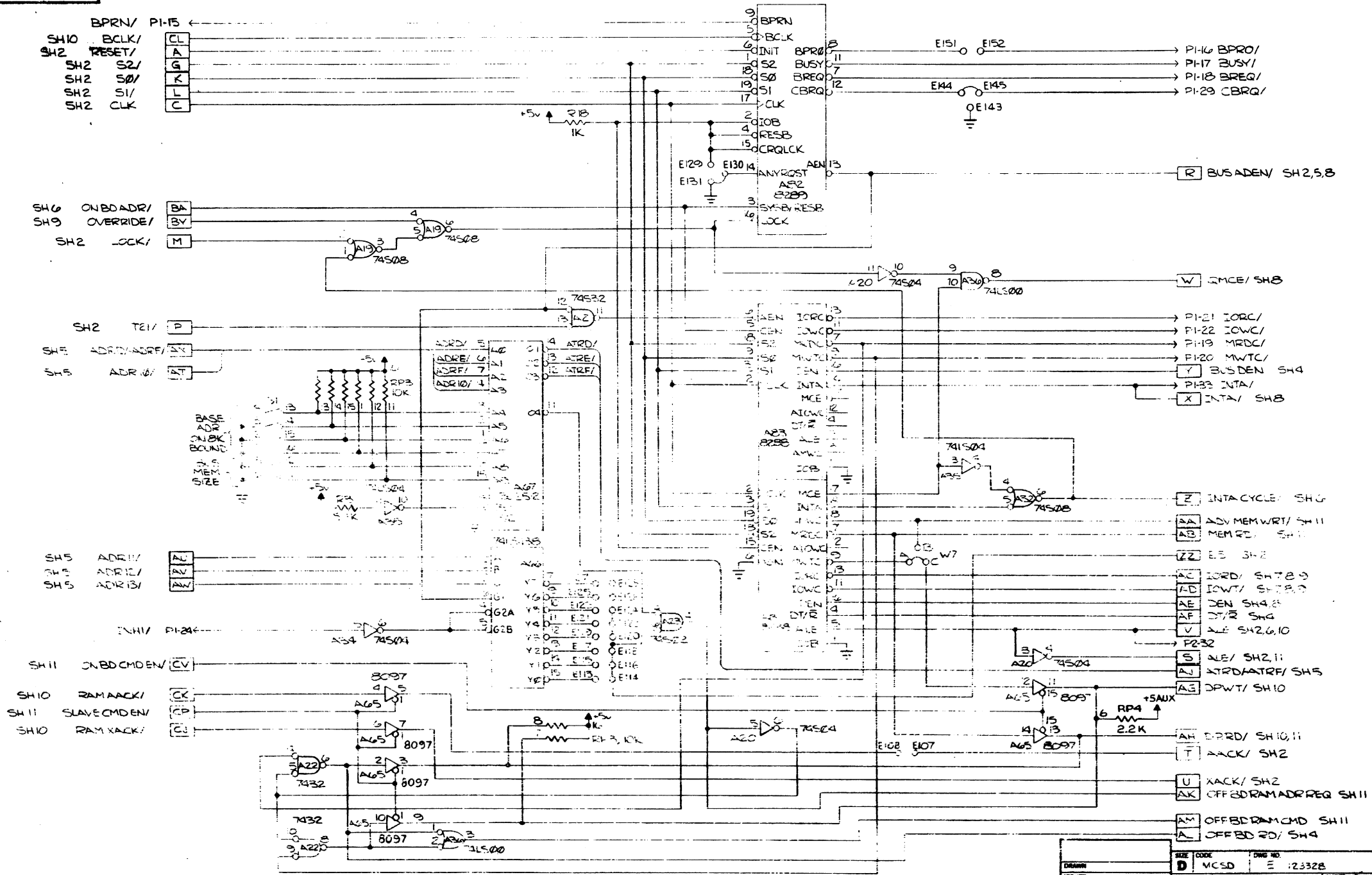
DWG NO.	123328	REV	A
		REVISIONS	
DATE	REV	DESCRIPTION	APP'D
		SEE SHEET ONE	



- TF T4/ SH10
- A RESET/ SH3,8
- B RESET SH7,9
- C CLK SH3
- D SYSCLK SH11
- ZZ E14 SH3
- CX AD8-ADA SH4,8
- E AD0-AD7,ADB-ADF SH4
- F AB3-AB13 SH5,6
- CY AB0 SH5
- CZ AB1 SH5,6,7,8,9
- DA AB2 SH5,6,7,9
- AB4
- AB5
- AB6
- AB7
- AB8
- AB9
- AB0
- AB1
- AB2
- AB3
- AB4
- AB5
- AB6
- AB7
- AB8
- AB9
- AB0
- AB1
- AB2
- AB3
- AB4
- AB5
- AB6
- AB7
- AB8
- AB9
- AB0
- AB1
- AB2
- AB3
- AB4
- AB5
- AB6
- AB7
- AB8
- AB9
- AB0
- AB1
- AB2
- AB3
- AB4
- AB5
- AB6
- AB7
- AB8
- AB9
- AB0
- AB1
- AB2
- AB3
- AB4
- AB5
- AB6
- AB7
- AB8
- AB9
- H ADVIOADR SH6
- G S2/ SH3
- N BHE/ SH5
- M LOCK/ SH3
- K RD/ SH3
- L SI/ SH3
- J TIME OUT INT2/ SH8
- I T21
- P T21/ SH3

DATE	REV	DESCRIPTION	APP'D

REV		DESCRIPTION	DFT	CHK	DATE	APPROVED
REV	REV					
SEE SHEET ONE						



SIZE	CODE	DWG NO.	REV
D	MCSO	E 123328	A
ISSUED	SCALE	NONE	SHEET 3

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DRAWING NO. 17-4528		REV. 2		REV. A		
ZONE	REV	DESCRIPTION	DFT	CHK	DATE	APPROVED
SEE SHEET ONE						

SH2 AD0-AD7, ADB-ADF | E
SH2 ADB-ADA | CX

11-0-ADF

8286	AD0	DB0
8286	AD1	DB1
8286	AD2	DB2
8286	AD3	DB3
8286	AD4	DB4
8286	AD5	DB5
8286	AD6	DB6
8286	AD7	DB7
8286	AD8	DB8
8286	AD9	DB9
8286	ADA	DBA
8286	ADB	DBB
8286	ADC	DBC
8286	ADD	DBD
8286	ADE	DBE
8286	ADF	DBF

PROM AND I/O DATA BUS | AN | DB0-DB7 SH 6,7,8,9

PROM AND I/O DATA BUS | AP | DB8-DBF SH 6

RAM AND MULTIBUS DATA BUS | AR | DM0-DMF SH 10, 11

SH3 DT/R | AF

SH11 SLAVE MODE / CS |
SH3 DEN | AE

SH6 PROM I/O EN | BC
SH8 LOCAL INTA DEN | BT

SH8 BUS INTA DEN | BR

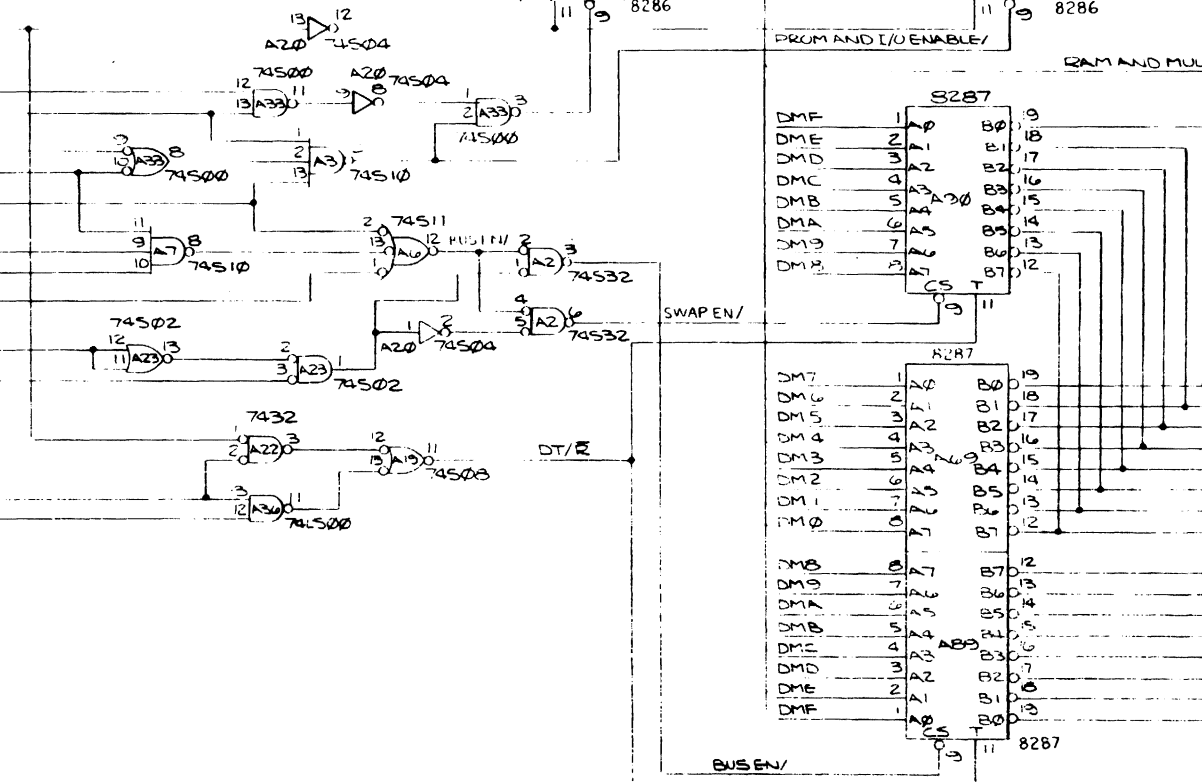
SH6 ONBOARD ADR | BA
SH3 BUS DEN | BY

SH11 SLAVE DATA EN | CT

SH5 AM0 | CN

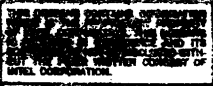
SH8 LOCAL INTA | BS

SH11 DPONBOARDREN / CR
SH3 OFFBOARD / CZ



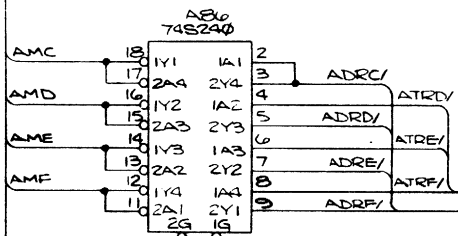
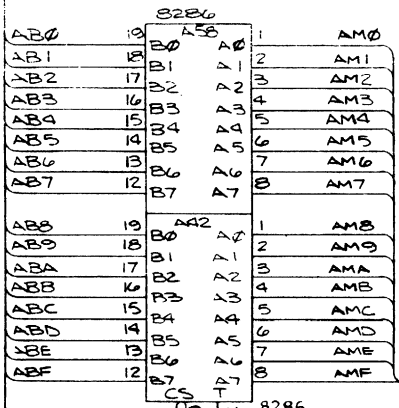
DMF	DB0
DME	DB1
DMD	DB2
DMC	DB3
DMB	DB4
DMA	DB5
DM9	DB6
DM8	DB7

DM7	DB0	PI-68 DAT 7/
DM6	DB1	PI-67 DAT 6/
DM5	DB2	PI-70 DAT 5/
DM4	DB3	PI-69 DAT 4/
DM3	DB4	PI-72 DAT 3/
DM2	DB5	PI-71 DAT 2/
DM1	DB6	PI-74 DAT 1/
DM0	DB7	PI-73 DAT 2/
DM9	DB8	PI-65 DAT 8/
DM8	DB9	PI-66 DAT 9/
DM7	DBA	PI-63 DATA/
DM6	DBB	PI-64 DAT B/
DM5	DBC	PI-61 DAT C/
DM4	DBD	PI-62 DAT D/
DM3	DBE	PI-59 DAT E/
DM2	DBF	PI-60 DAT F/

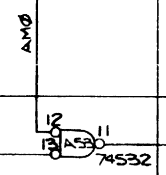
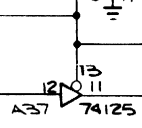


ZONE	REV	DESCRIPTION	DFT	CHK	DATE	APPROVED
SEE SHEET ONE						

- SH2 AB3-AB13 F
- SH2 AB0 CY
- SH2 AB1 CZ
- SH2 AB2 DA

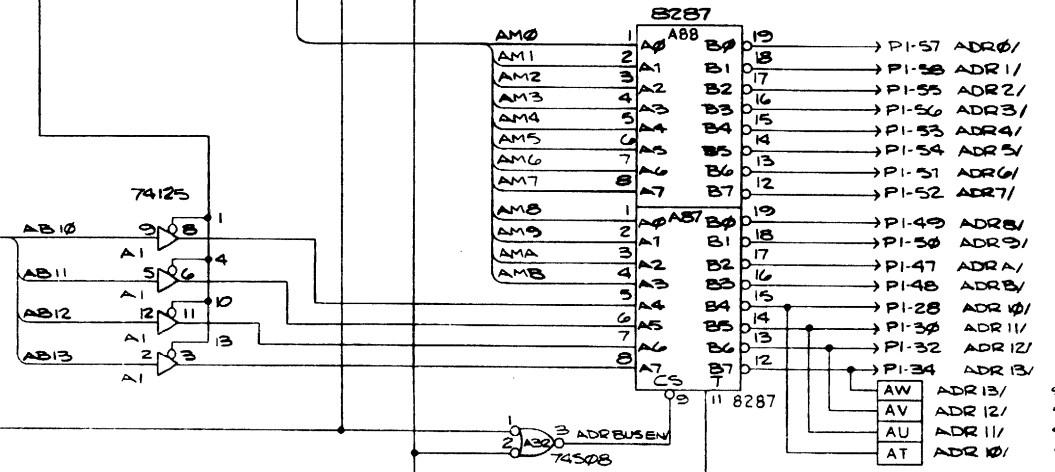


- SH11 DPON BD ADREV CR
- SH2 BHE/ N

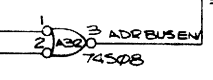


- CN AM0 SH4,10
- AS AM1-AMF SH10
- AJ ATRD/-ATRF/ SH3
- PI-45 ADRC/
- PI-46 ADDR/
- PI-43 ADRE/
- PI-44 ADRF/
- AX ADRD/-ADRF/ SH3

- AY MBHEN/ SH10
- PI-27 BHEV/

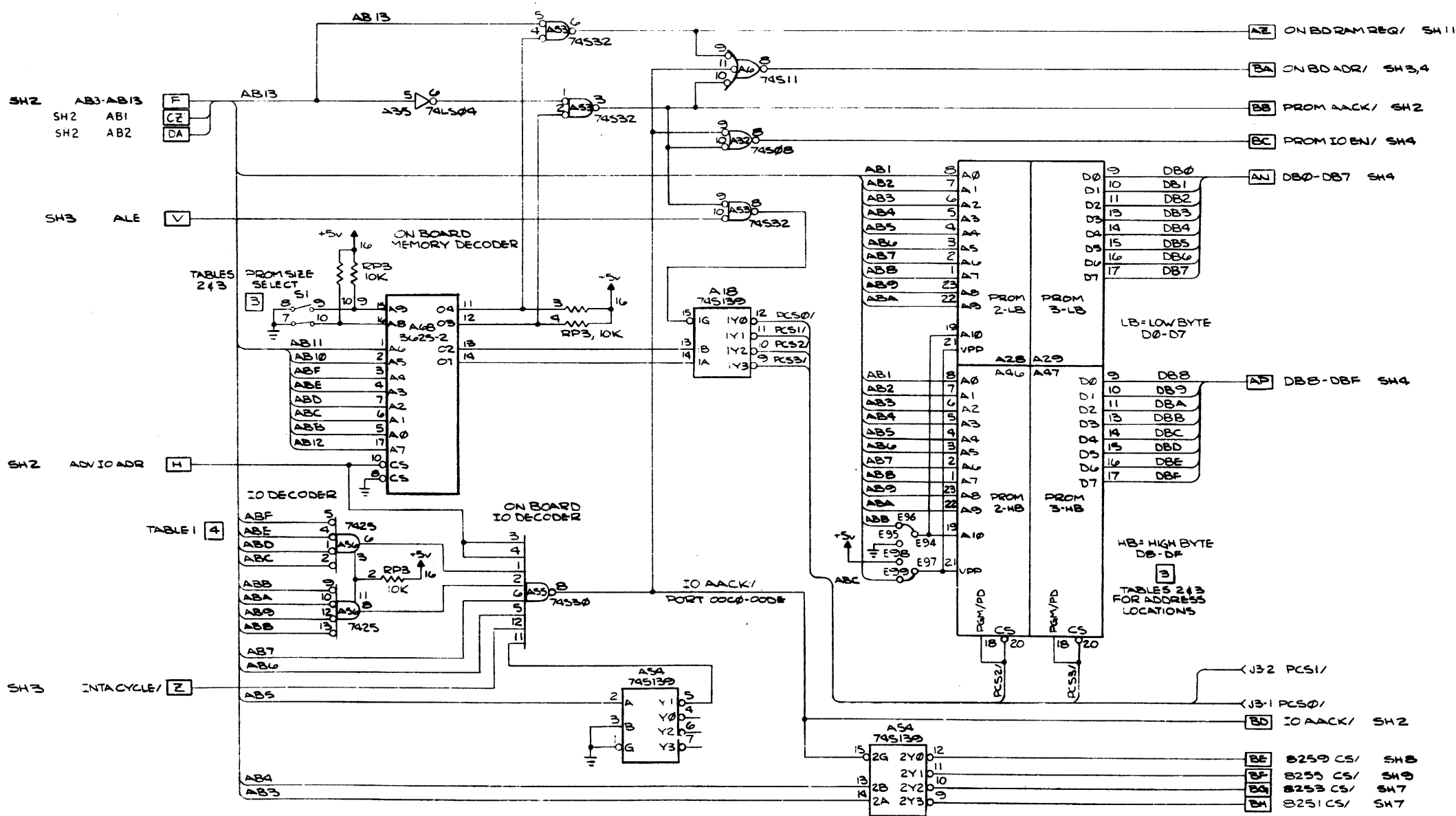


- SH3 BUSADEN/ R
- SH11 SLAVE MODE/ CS



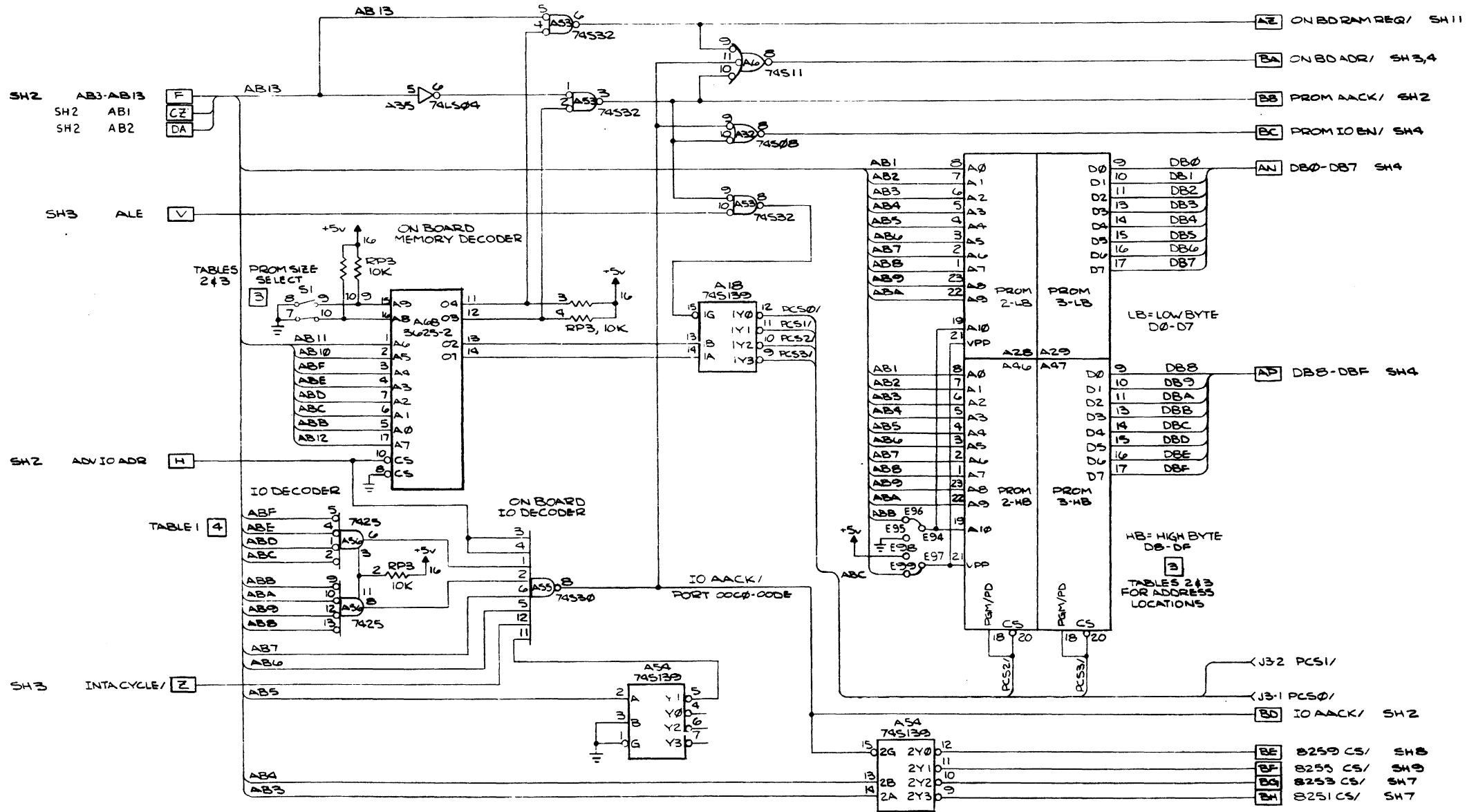
- AW ADR13/ SH3
- AV ADR12/ SH3
- AU ADR11/ SH3
- AT ADR10/ SH3

DRAWN	ISSUED	SIZE D	CODE MCSC	DWG NO. E 123328	REV A
		SCALE	NONE	SHEET 13	



- AE ONBOARD MEM/ SH11
- BA ONBOARD ADR/ SH3,4
- BB PROM ACK/ SH2
- BC PROM IO EN/ SH4
- CA DB0-DB7 SH4
- CB DB8-DBF SH4
- CD IO ADR/ SH2
- CE 8259 CS/ SH8
- CF 8255 CS/ SH9
- CG 8253 CS/ SH7
- CH 8251 CS/ SH7

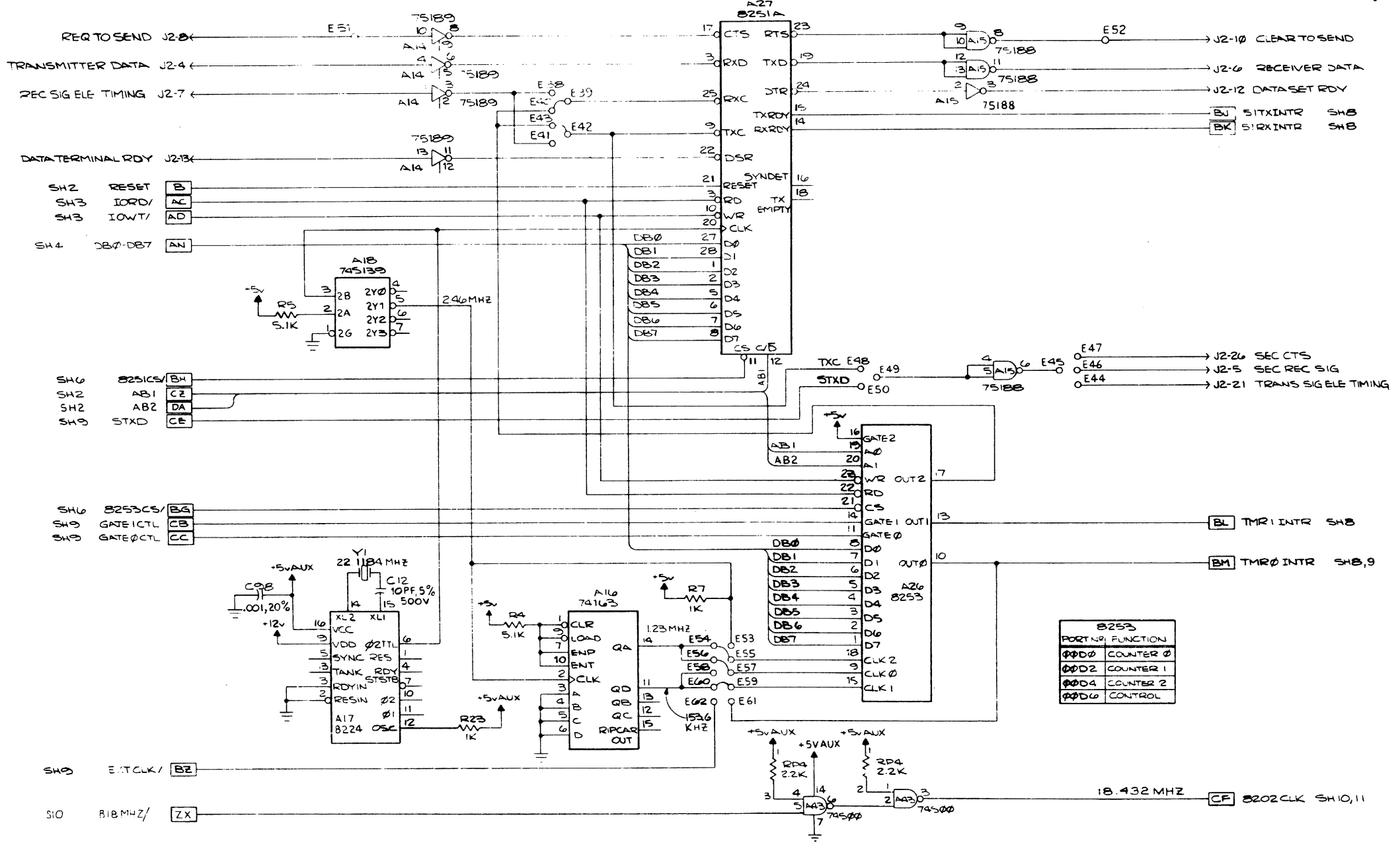
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DRWG NO.	12332B	REV	7	REVISED BY	PPY
ZONE REV		DESCRIPTION	DFT	CHK	DATE
		SEE SHEET ONE			

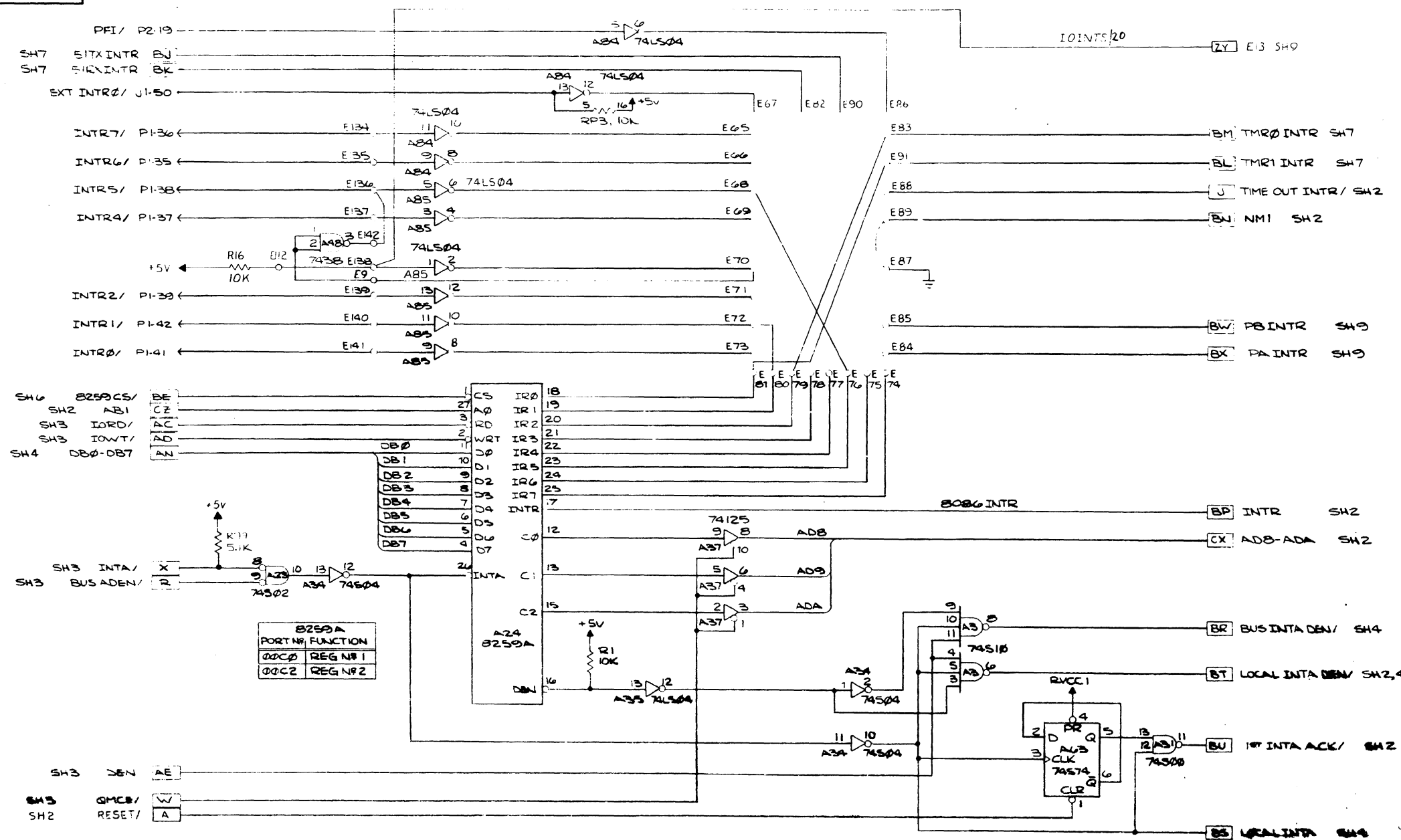
8251A	
PORT#	FUNCTION
00D0	DATA
00D4	CONTROL



8253	
PORT#	FUNCTION
00D0	COUNTER 0
00D2	COUNTER 1
00D4	COUNTER 2
00D6	CONTROL

DRAWN	SIZE	CODE	DRWG NO.	REV
ISSUED	D	MCS D	E 12332B	A
	SCALE	NONE	SHEET	7

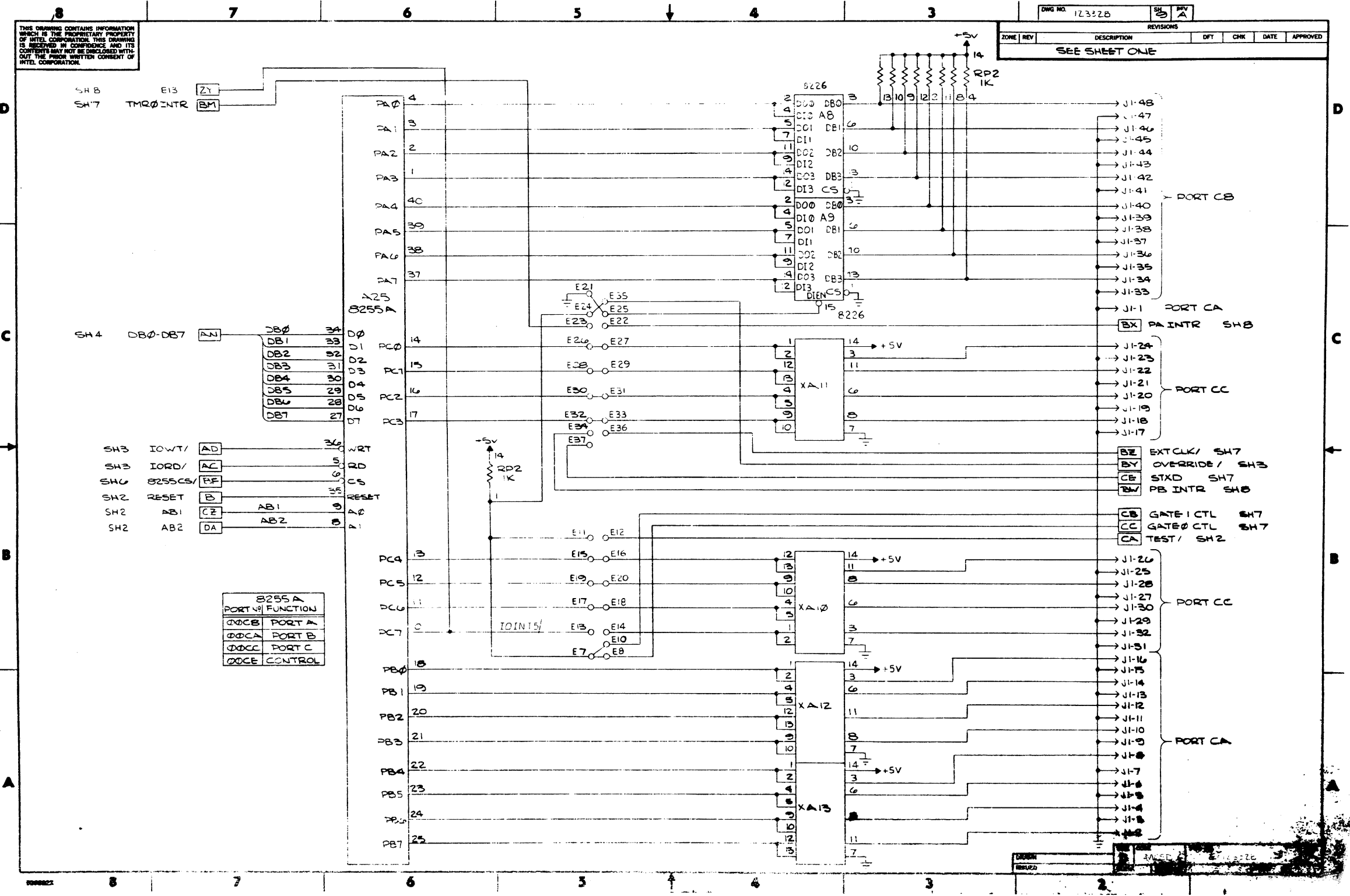
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8259A	
PORT #	FUNCTION
00C0	REG N#1
00C2	REG N#2

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ZONE	REV	DESCRIPTION	DFT	CHK	DATE	APPROVED
SEE SHEET ONE						



SH8 E13 ZY
SH7 TMRQ INTR BM

SH4 DB0-DB7 ZN

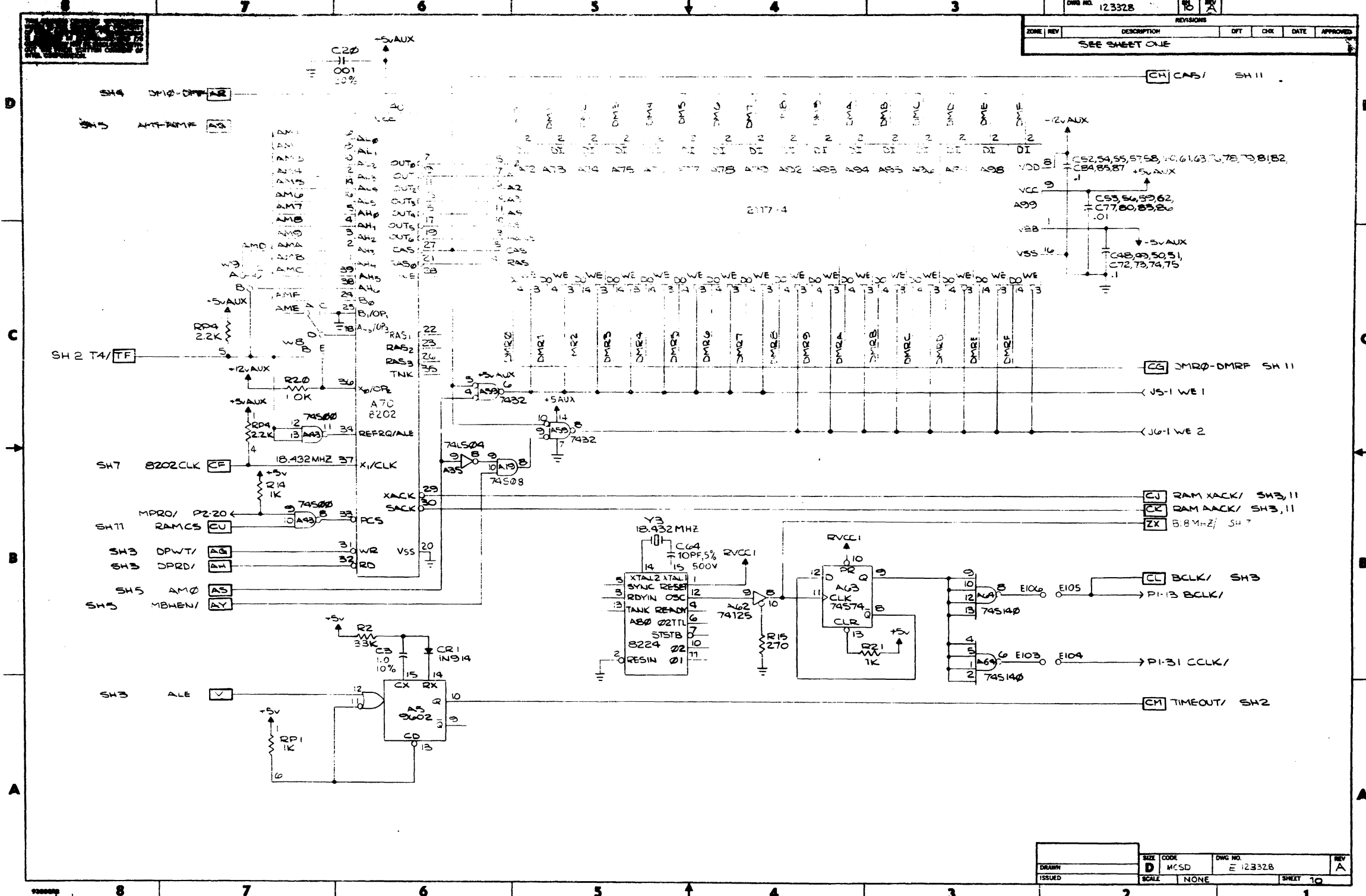
DB0	33	DB0
DB1	32	DB1
DB2	31	DB2
DB3	30	DB3
DB4	29	DB4
DB5	28	DB5
DB6	27	DB6
DB7	26	DB7

SH3 IOWT/ AD
SH3 IORD/ AC
SH6 8255CS/ PF
SH2 RESET B
SH2 AB1 CZ
SH2 AB2 DA

PORT	FUNCTION
00CB	PORT A
00CA	PORT B
00CC	PORT C
00CE	CONTROL

BX PA INTR SH8
BE EXTCLK/ SH7
BY OVERRIDE/ SH3
CE STXD SH7
BW PB INTR SH8
CB GATE1 CTL SH7
CC GATE0 CTL SH7
CA TEST/ SH2

J1-48
J1-47
J1-46
J1-45
J1-44
J1-43
J1-42
J1-41
J1-40
J1-39
J1-38
J1-37
J1-36
J1-35
J1-34
J1-33
J1-1
J1-24
J1-23
J1-22
J1-21
J1-20
J1-19
J1-18
J1-17
J1-26
J1-25
J1-28
J1-27
J1-30
J1-29
J1-32
J1-31
J1-16
J1-15
J1-14
J1-13
J1-12
J1-11
J1-10
J1-9
J1-8
J1-7
J1-6
J1-5
J1-4
J1-3
J1-2



CH CAS/ SH 11

CG JMRQ-DMRF SH 11

CJ RAM XACK/ SH3, 11
 CK RAM AACK/ SH3, 11
 ZX B.8M-Z; SH 7

CL BCLK/ SH 3

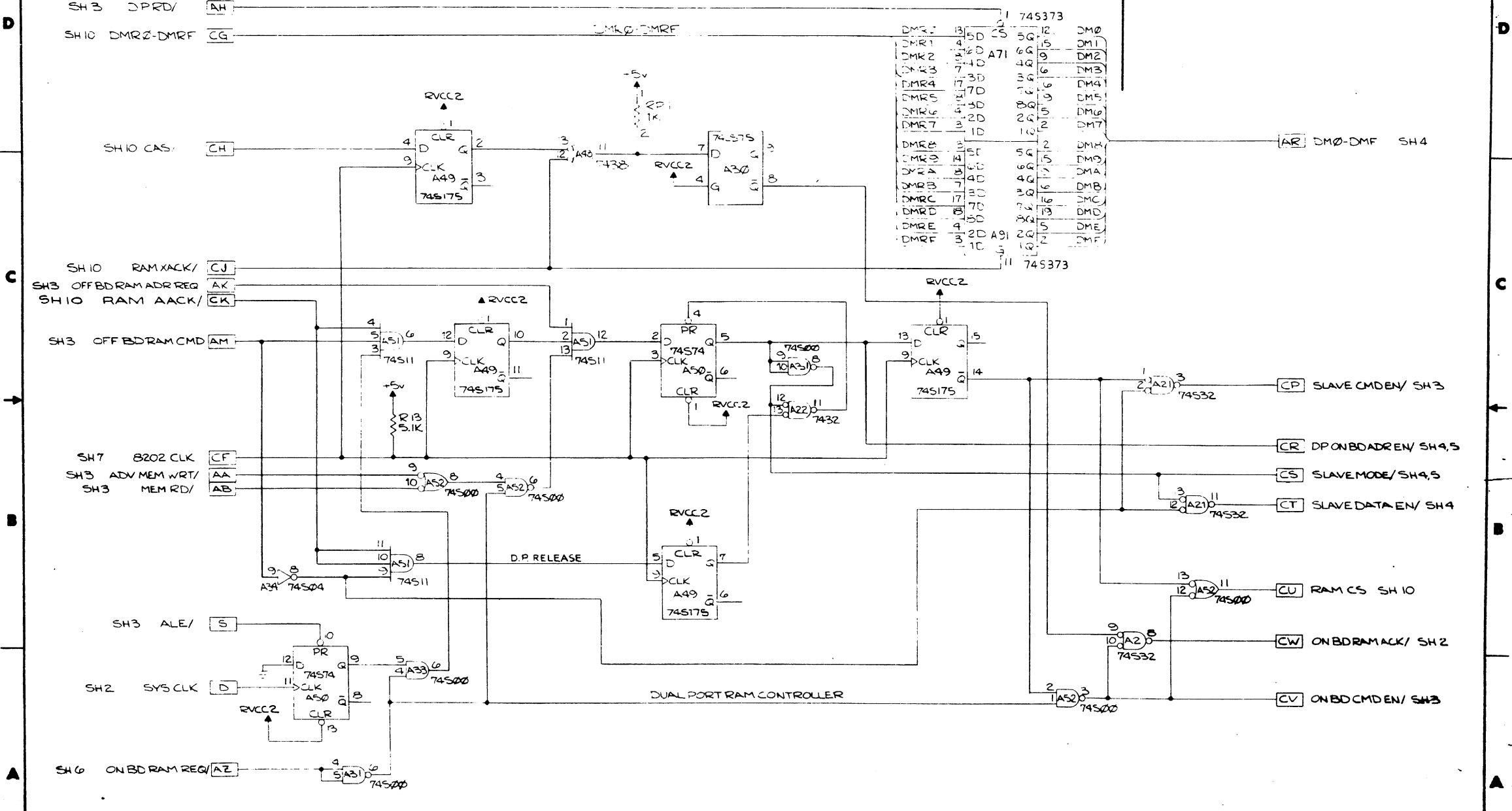
PI-13 BCLK/

PI-31 CCLK/

CM TIMEOUT/ SH 2

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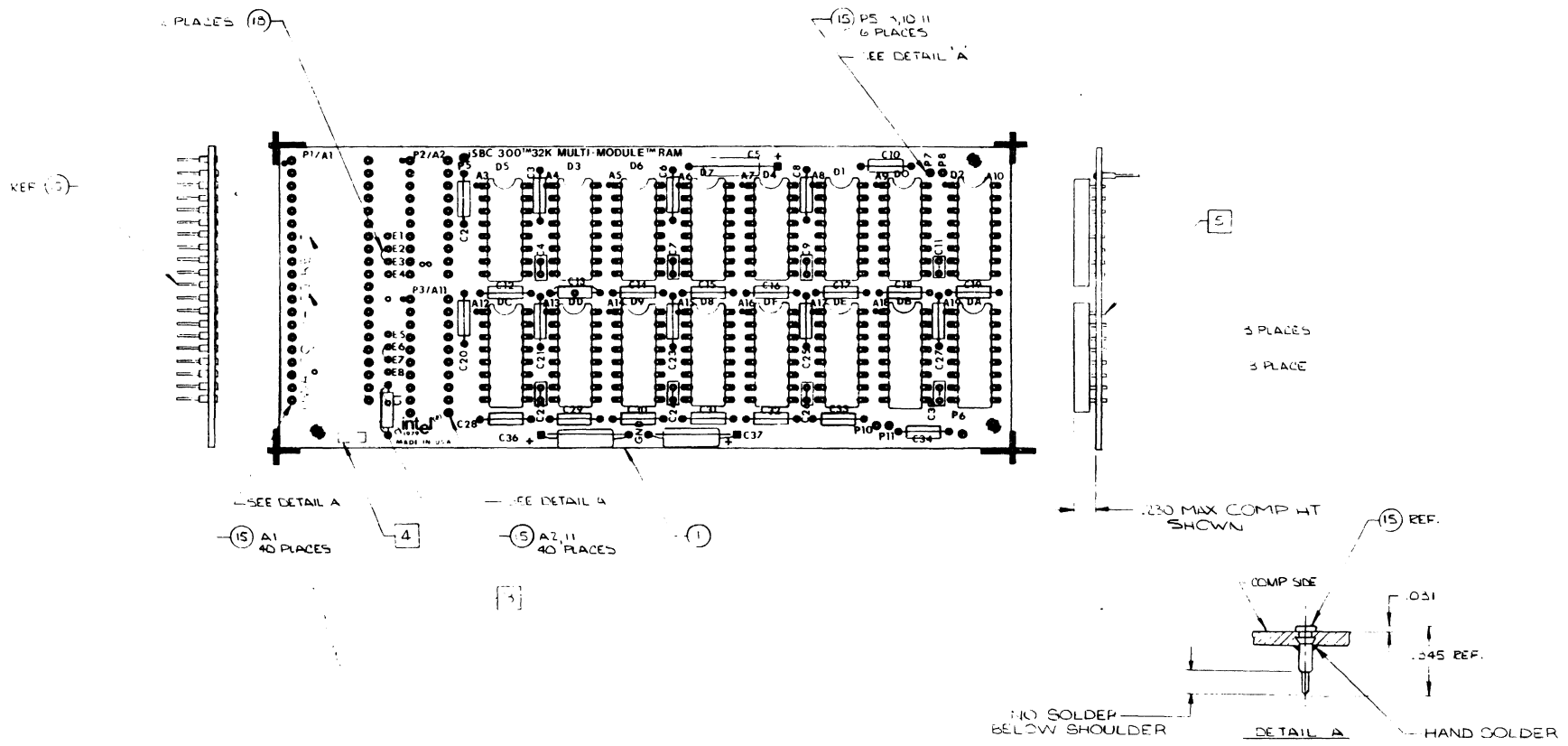
REVISIONS		DESCRIPTION	DFT	CHK	DATE	APPROVED
SEE SHEET ONE						



8
7
6
5
4
3

1001793
REV 1 E

REV	DESCRIPTION	DEF	CHK	DATE	APPROVED
A	DRN NO 4-008			11/17/79	
B	SEE ECO 4-1102				
C	SEE ECO 4-1170			11/27/79	
D	SEE ECO 4-1322 A			11/28/79	
E	SEE ECO 4-1308			11/27/79	
F	ECO 4-1551			12/18/79	
G	ECO 4-1818			12/18/79	



SEE SEPARATE PARTS LIST

- NOTES UNLESS OTHERWISE SPECIFIED
1. ALL DIMENSIONS ARE IN MILLIMETERS UNLESS OTHERWISE SPECIFIED.
 2. WORKMANSHIP PER QQ-CDD-7-001.
 3. MARK EACH COMPONENT WITH CONTRASTING PERM. COLOR. I.D.N. INDICATE VOLTAGE HIGH, APPLY WHERE SHOWN.
 4. MARK ASSY VENDOR ID WITH CONTRASTING PERM. COLOR. I.D.N. INDICATE THIS, APPLY WHERE SHOWN.
 5. TRIM LEADS AFTER ASSY TO .250 MAX.
 6. I.D. A, ALL INFORMATION SUPPLIED BY CUSTOMERS.

ITEM	QUANTITY PER DASH	PART NUMBER	DESCRIPTION
1	1	1580 300	SBC 300 32K MULTI-MODULE RAM
2	1	1580 300	SBC 300 32K MULTI-MODULE RAM
3	1	1580 300	SBC 300 32K MULTI-MODULE RAM
4	1	1580 300	SBC 300 32K MULTI-MODULE RAM
5	1	1580 300	SBC 300 32K MULTI-MODULE RAM
6	1	1580 300	SBC 300 32K MULTI-MODULE RAM
7	1	1580 300	SBC 300 32K MULTI-MODULE RAM
8	1	1580 300	SBC 300 32K MULTI-MODULE RAM
9	1	1580 300	SBC 300 32K MULTI-MODULE RAM
10	1	1580 300	SBC 300 32K MULTI-MODULE RAM
11	1	1580 300	SBC 300 32K MULTI-MODULE RAM
12	1	1580 300	SBC 300 32K MULTI-MODULE RAM
13	1	1580 300	SBC 300 32K MULTI-MODULE RAM
14	1	1580 300	SBC 300 32K MULTI-MODULE RAM
15	1	1580 300	SBC 300 32K MULTI-MODULE RAM
16	1	1580 300	SBC 300 32K MULTI-MODULE RAM
17	1	1580 300	SBC 300 32K MULTI-MODULE RAM
18	1	1580 300	SBC 300 32K MULTI-MODULE RAM
19	1	1580 300	SBC 300 32K MULTI-MODULE RAM
20	1	1580 300	SBC 300 32K MULTI-MODULE RAM
21	1	1580 300	SBC 300 32K MULTI-MODULE RAM
22	1	1580 300	SBC 300 32K MULTI-MODULE RAM
23	1	1580 300	SBC 300 32K MULTI-MODULE RAM
24	1	1580 300	SBC 300 32K MULTI-MODULE RAM
25	1	1580 300	SBC 300 32K MULTI-MODULE RAM
26	1	1580 300	SBC 300 32K MULTI-MODULE RAM
27	1	1580 300	SBC 300 32K MULTI-MODULE RAM
28	1	1580 300	SBC 300 32K MULTI-MODULE RAM
29	1	1580 300	SBC 300 32K MULTI-MODULE RAM
30	1	1580 300	SBC 300 32K MULTI-MODULE RAM
31	1	1580 300	SBC 300 32K MULTI-MODULE RAM
32	1	1580 300	SBC 300 32K MULTI-MODULE RAM
33	1	1580 300	SBC 300 32K MULTI-MODULE RAM
34	1	1580 300	SBC 300 32K MULTI-MODULE RAM
35	1	1580 300	SBC 300 32K MULTI-MODULE RAM
36	1	1580 300	SBC 300 32K MULTI-MODULE RAM
37	1	1580 300	SBC 300 32K MULTI-MODULE RAM
38	1	1580 300	SBC 300 32K MULTI-MODULE RAM
39	1	1580 300	SBC 300 32K MULTI-MODULE RAM
40	1	1580 300	SBC 300 32K MULTI-MODULE RAM
41	1	1580 300	SBC 300 32K MULTI-MODULE RAM
42	1	1580 300	SBC 300 32K MULTI-MODULE RAM
43	1	1580 300	SBC 300 32K MULTI-MODULE RAM
44	1	1580 300	SBC 300 32K MULTI-MODULE RAM
45	1	1580 300	SBC 300 32K MULTI-MODULE RAM
46	1	1580 300	SBC 300 32K MULTI-MODULE RAM
47	1	1580 300	SBC 300 32K MULTI-MODULE RAM
48	1	1580 300	SBC 300 32K MULTI-MODULE RAM
49	1	1580 300	SBC 300 32K MULTI-MODULE RAM
50	1	1580 300	SBC 300 32K MULTI-MODULE RAM

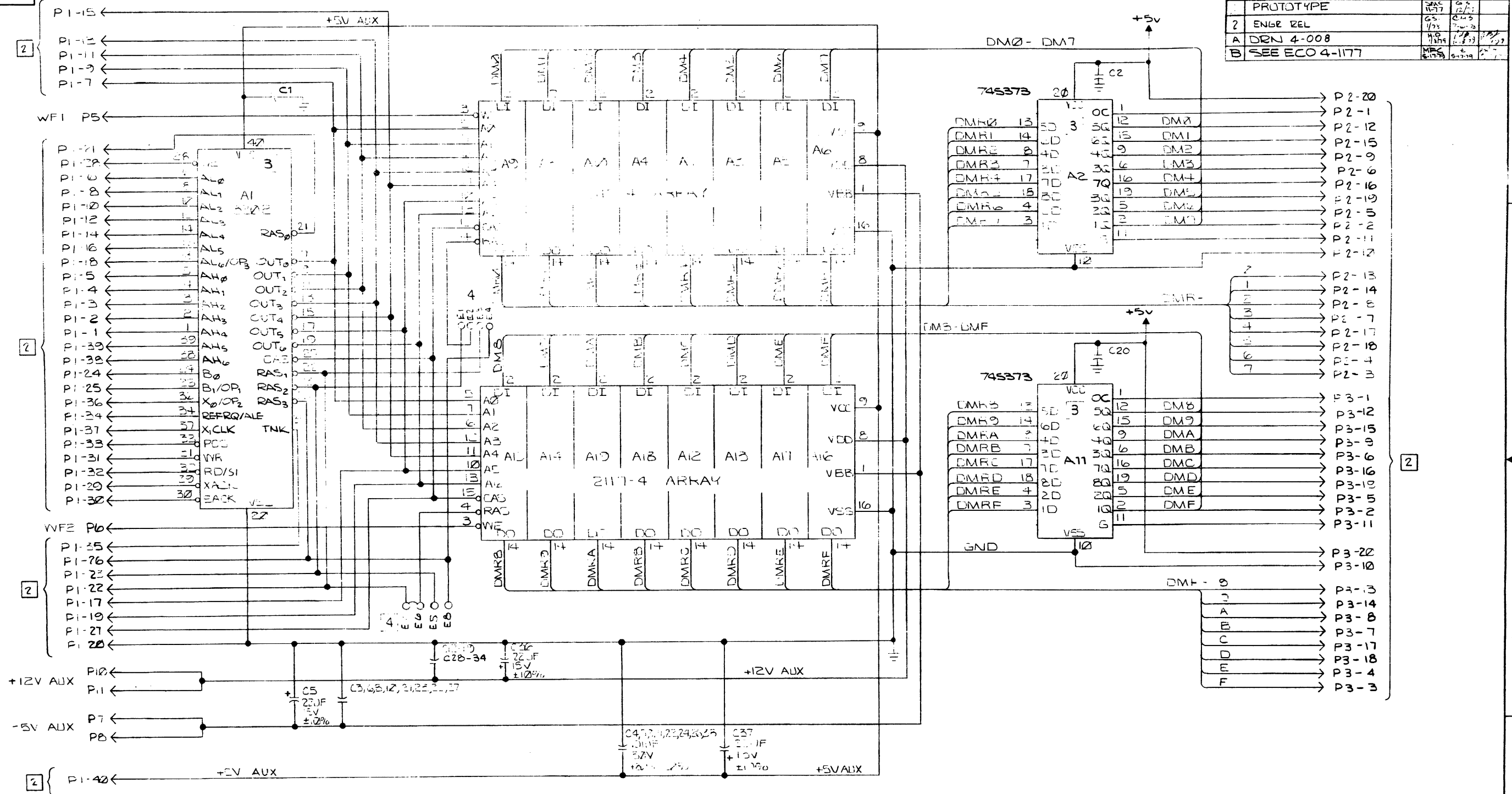
DATE: 11/17/79
 DRAWN BY: [Signature]
 CHECKED BY: [Signature]
 APPROVED BY: [Signature]

SCALE: 2:1

HEET 1 OF 1

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REVISIONS			
LTR	DESCRIPTION	SIGNATURE AND DATE	
		DFT	CHK ENGR
	PROTOTYPE	DMC 11-77	12/77
2	ENGR REL	65 1/78	2/15/78
A	DRN 4-008	1/78	1/78
B	SEE ECO 4-1177	5/78	5/78

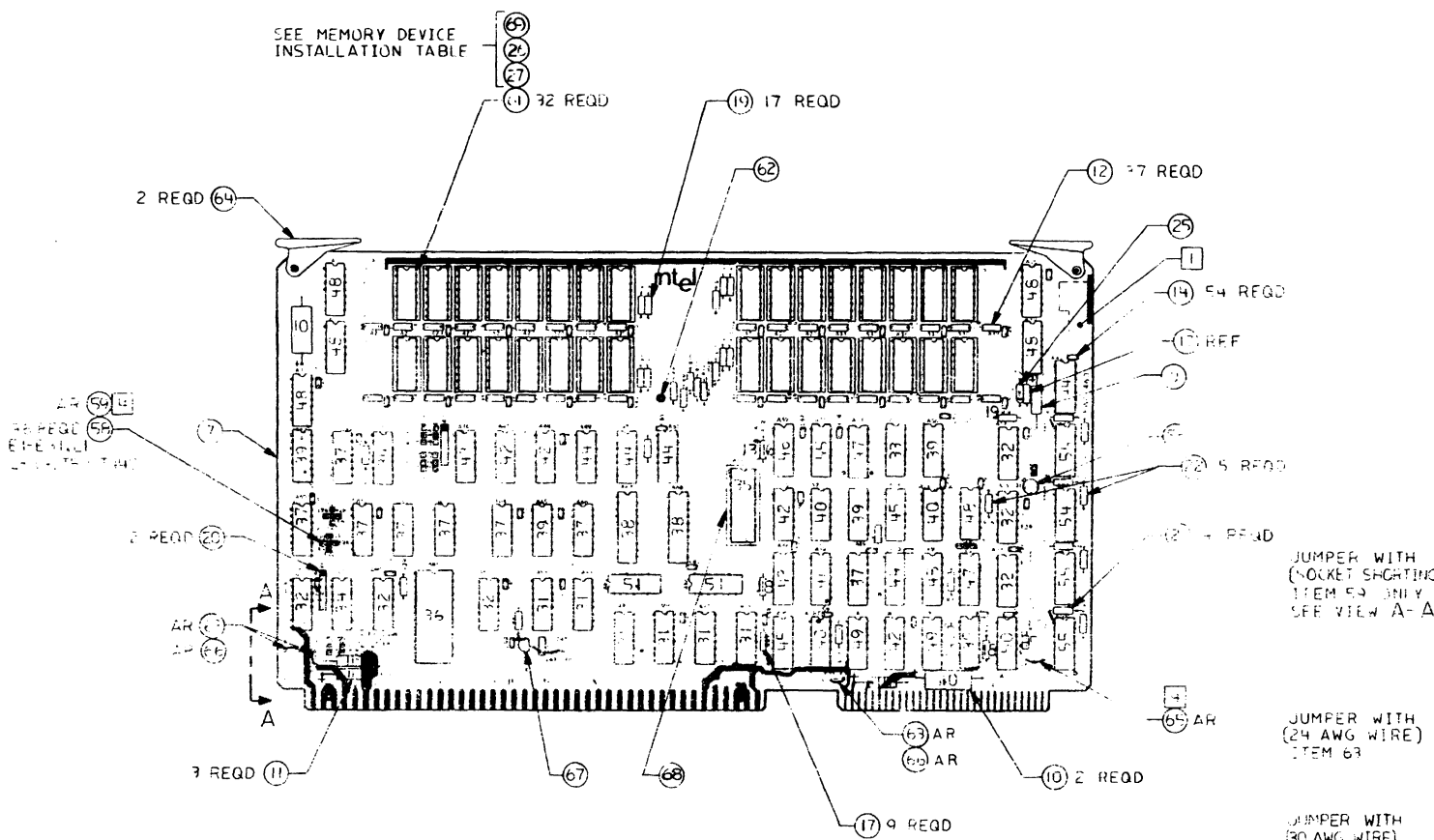


- NOTES: UNLESS OTHERWISE SPECIFIED
- CAPACITANCE VALUES ARE IN MICROFARADS (+50%, -20%, 50%)
 - THESE (P) CONNECTIONS MATE WITH SOCKET ON MASTER BOARD
 - IC'S A, 2, 4, 11 ARE INSTALLED FROM MASTER BOARD
 - JUMPER-HARDWARE CONNECTION.

QUANTITY PER DASH NO.	ITEM NO.	PART NUMBER	DESCRIPTION
SCALE: NONE	SIGNATURE		DATE
TOL * 2 PLC 3 PLC ANGLE	CHK BY		11/77
MATERIAL:	DFT APPD		12/77
FINISH:	ENGR APPD		
NEXT ASSY	USED ON	AUTH BY	
SHEET 1 OF 1		CODE	

PARTS LIST		DESCRIPTION	
TITLE		3065 BOWERS AVE. SANTA CLARA CALIF. 95051	
SIZE		TITLE	
DEPT		TITLE	
DRAWING NO		TITLE	
REV		TITLE	

- NOTES: UNLESS OTHERWISE SPECIFIED
1. STAMP ASSEMBLY DASH NO., REV LEVEL AND SERIAL NO. APPROX. WHERE SHOWN WITH CONTRASTING INDELIBLE INK.
 2. ASSEMBLE PER INTEL SPECIFICATION 99-0007-001.
 3. REMOVED.
 4. INSTALL JUMPERS PER JUMPER/COMPONENT INSTALLATION TABLE.
 5. ASSEMBLY IS 05-0632-XXX. ASSEMBLY DRAWING AND PARTS LIST ARE TRACKING DOCUMENTS.



JUMPER COMPONENT/INSTALLATION TABLE

DASH NUMBER								REF USES	FROM	TO	FUNCTION
000	001	002	003	004	005	006	007				
								W1	E1	E9	0-16K
								W2	E2	E12	16-32K
								W3	E3	E14	32-48K
								W4	E4	E16	16-32K
								W4	E4	E15	48-64K
								W5	E5	E21	0-64K
								W6	E7	E17	0-512K
								W7	E9	E18	0-512K
								W8	E29	E31	ADV WRT CYCLE
								W11	T50	L1	AACK
								W9	E32	E41	2117
								W10	E39	E40	2117
								W9	E38	E45	2109 A6 LO
								W10	E39	E44	2109 A6 LO
								W9	E38	E43	2109 A6 HI
								W10	E39	E42	2109 A6 HI
								W12	T400	L2	XACK
								W13	T440	L3	RAS T.E.
								W14	T440	L4	BUSY T.E.
								W15	T480	L5	CAS T.E.
								W16	T520	L6	ADV WRT GO

JUMPER WITH (NOCKET SHORTING) ITEM 64 ONLY SEE VIEW A-A

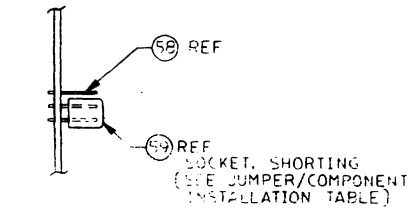
JUMPER WITH (24 AWG WIRE) ITEM 63

JUMPER WITH (30 AWG WIRE) ITEM 65

JUMPER WITH (24 AWG WIRE) ITEM 63

MEMORY DEVICE INSTALLATION TABLE

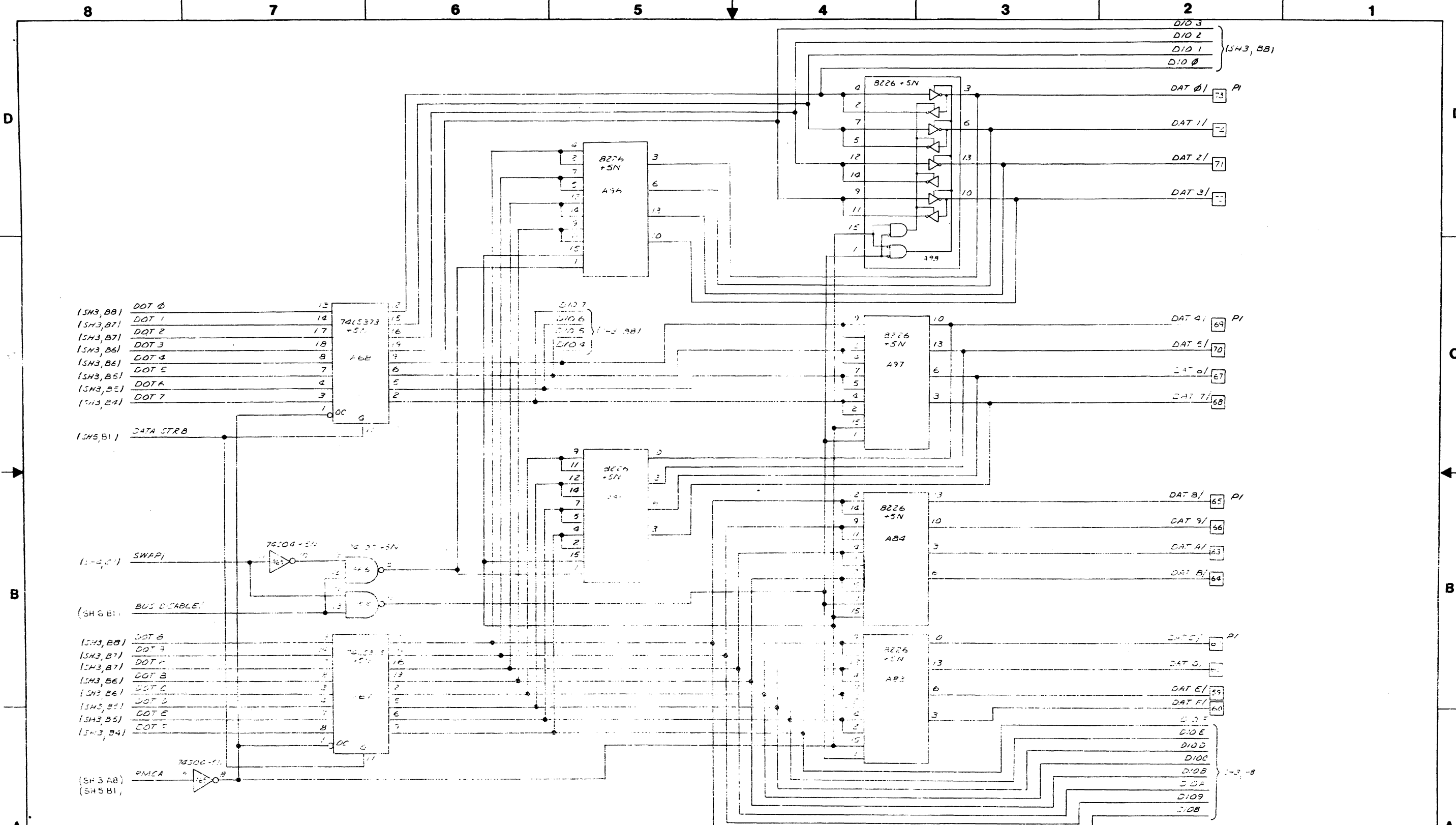
ITEM NO.	DASH NO.	DEVICE DESCRIPTION	REF DES	FUNCTION
69	000	2117	A3-18,A23-38	64K BYTE RAM
69	001	2117	A3-18	32K
26		2109L	A23-38	48K
69	002	2117	A3-18	48K
27		2109H	A23-38	48K
69	003	2117	A3-18	48K
25		2109I	A3-18,A23-38	32K
27		2109H	A3-18,A23-38	32K
25		2109L	A3-18	16K
27		2109H	A3-18	16K BYTE RAM



VIEW A-A
SCALE: NONE

J 2009	U 1971	G 11933	F 11680	O 9712	OS 8550	OS 8413	OS 8409	OS 7833	OS 7732	E 1834	REV. 1	DATE	DASH NO.	MODEL NO.	USED ON	REVISIONS	USED ON	NOTE: UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES. TOLERANCES ARE AS SHOWN.	DESIGNER: RIDGELL/577	DRN: CHUN 1178	CHK: [Signature]	APP: [Signature]	SCALE: 1:1	DO NOT SCALE DWG	INTEL CORP. 1302 NO. MATHILDA AVENUE SUNNYVALE CALIF. 94088	REV. 1	DATE	DASH NO.	MODEL NO.	USED ON	REVISIONS	USED ON	NOTE: UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES. TOLERANCES ARE AS SHOWN.	DESIGNER: RIDGELL/577	DRN: CHUN 1178	CHK: [Signature]	APP: [Signature]	SCALE: 1:1	DO NOT SCALE DWG	INTEL CORP. 1302 NO. MATHILDA AVENUE SUNNYVALE CALIF. 94088	REV. 1	DATE	DASH NO.	MODEL NO.	USED ON	REVISIONS	USED ON	NOTE: UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES. TOLERANCES ARE AS SHOWN.	DESIGNER: RIDGELL/577	DRN: CHUN 1178	CHK: [Signature]	APP: [Signature]	SCALE: 1:1	DO NOT SCALE DWG	INTEL CORP. 1302 NO. MATHILDA AVENUE SUNNYVALE CALIF. 94088
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05-0632-001
SHEET 01 OF 01



REV		E.O. NO.		REL	DATE	DASH NO.	MODEL NO.	USED ON
REVISIONS		USED ON						

NOTE: UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES. TOLERANCES: XX ±, XXX ±, FRACTION ±, ANGLES ±

DO NOT SCALE DWG

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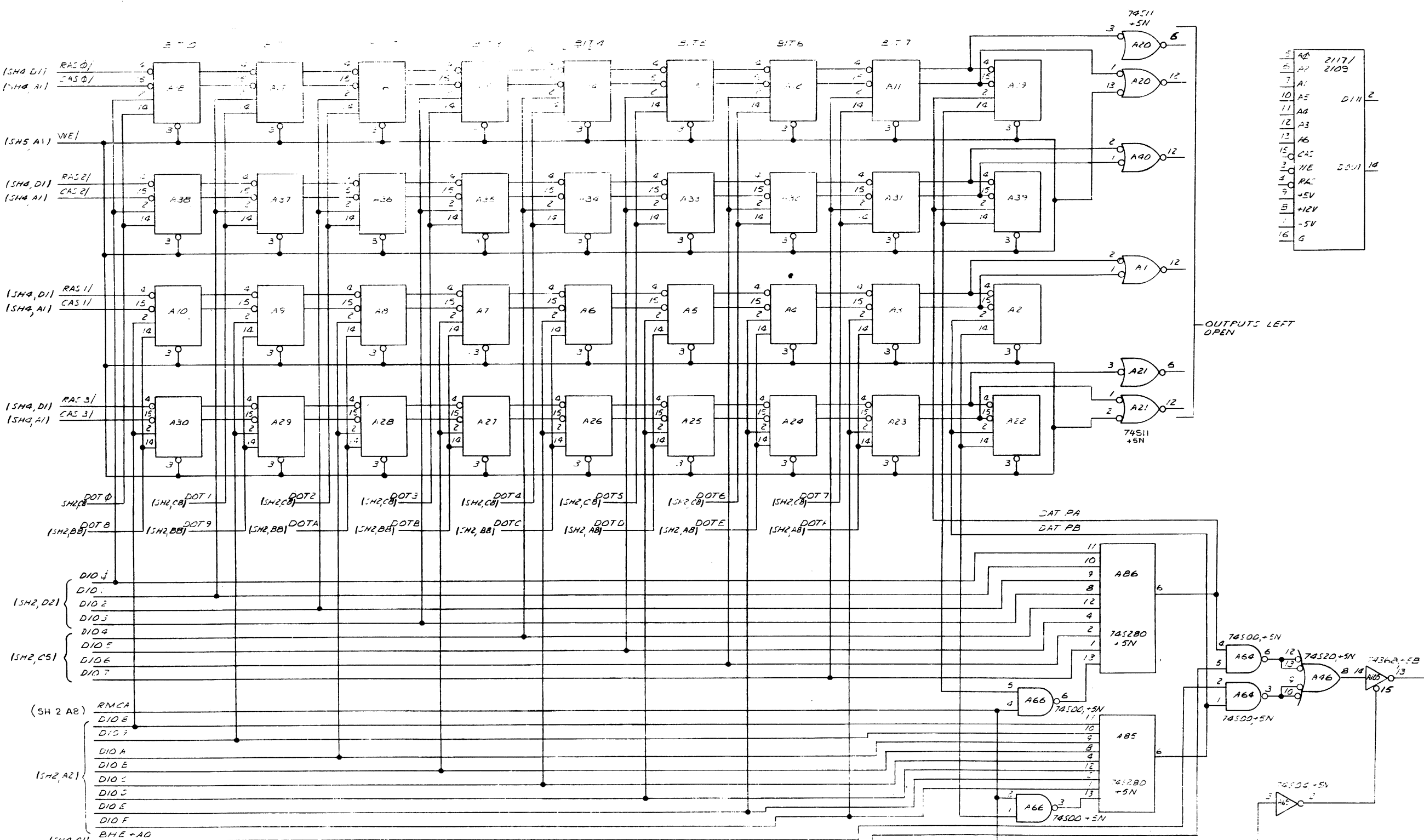
intel CORP. 1302 NO. MATILDA AVENUE SUNNYVALE CALIF 94086

SCHEMATIC, 142704

SIZE D DRAWING NO. 142704 REV A

SCALE: NONE SHEET 2 OF 2

98-0047-000



5	A0	2117/
6	A1	2109
7	A1	
10	A5	D1H
11	A4	
12	A3	
13	A6	
15	CAS	
9	WE	DOU1
4	RA	
3	+5V	
7	-5V	
16	G	

REV	E.O. NO.	REL	DATE	DASH NO.	MODEL NO.	USED ON
REVISIONS						
USED ON						

NOTE: UNLESS OTHERWISE SPECIFIED:
DIMENSIONS ARE IN INCHES.
TOLERANCES:
XX: .XX"
XXX: .XXX"
FRACTION: 1/16"
ANGLES: 1/16"

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Intel CORP. 1302 NO. MATHILDA AVENUE SUNNYVALE CALIF. 94086

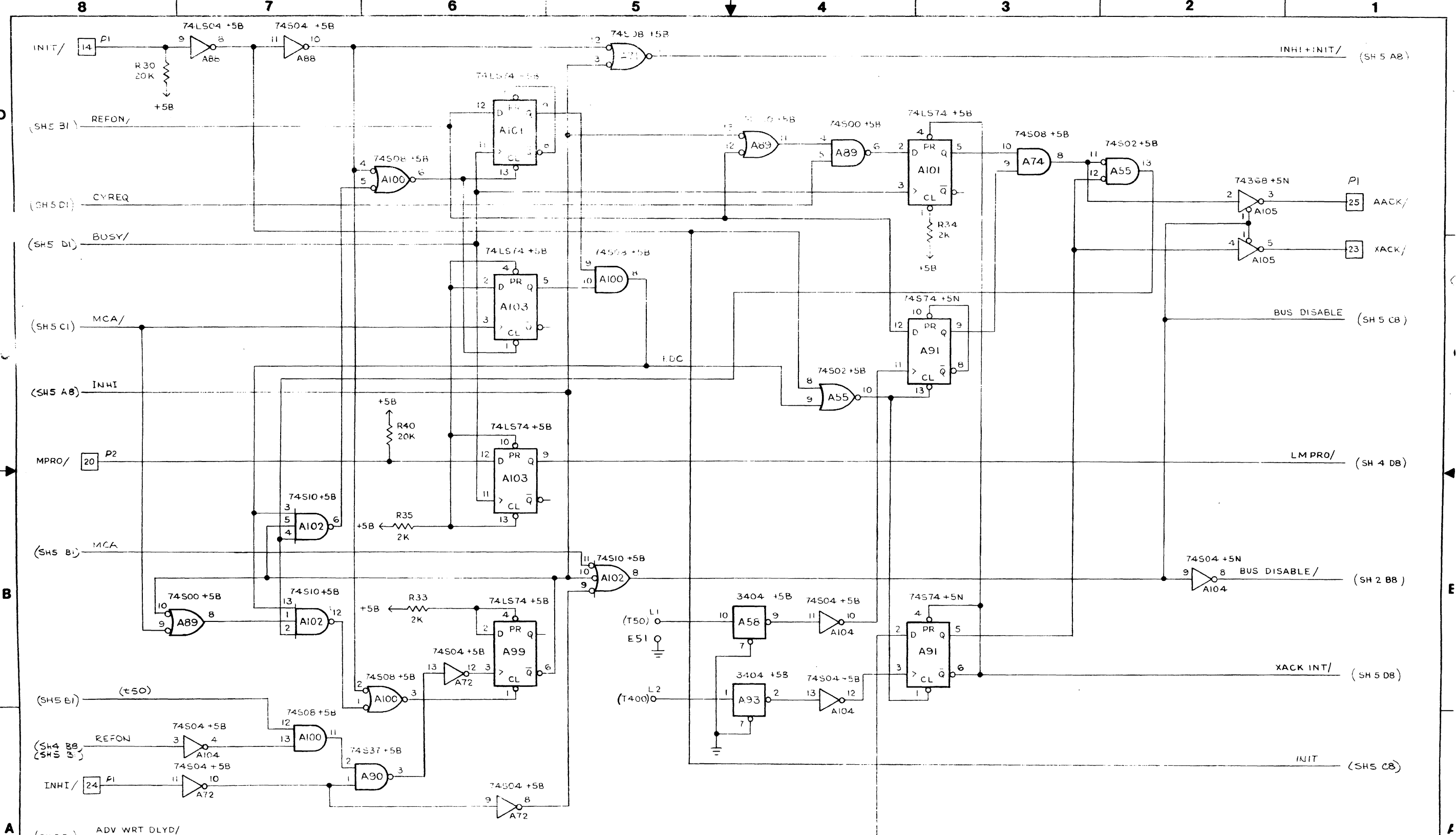
SCHEMATIC
JOB NO. 142704

DES: []
DRN: []
CKD: []
APPR: []
APP: []

SIZE: D
DRAWING NO: 142704
REV: A

DO NOT SCALE DIMS
SCALE: 1:1
SHEET 2 OF 2

98 0047-000



REV E O NO.		REL	DATE	QASH NO	MODEL NO.	USED ON
REVISIONS		USED ON				

NOTE, UNLESS OTHERWISE SPECIFIED:
DIMENSIONS ARE IN INCHES.
TOLERANCES: XX.4
XXX
FRACTION: ANGLES: °

DO NOT SCALE DWG

SCALE: _____

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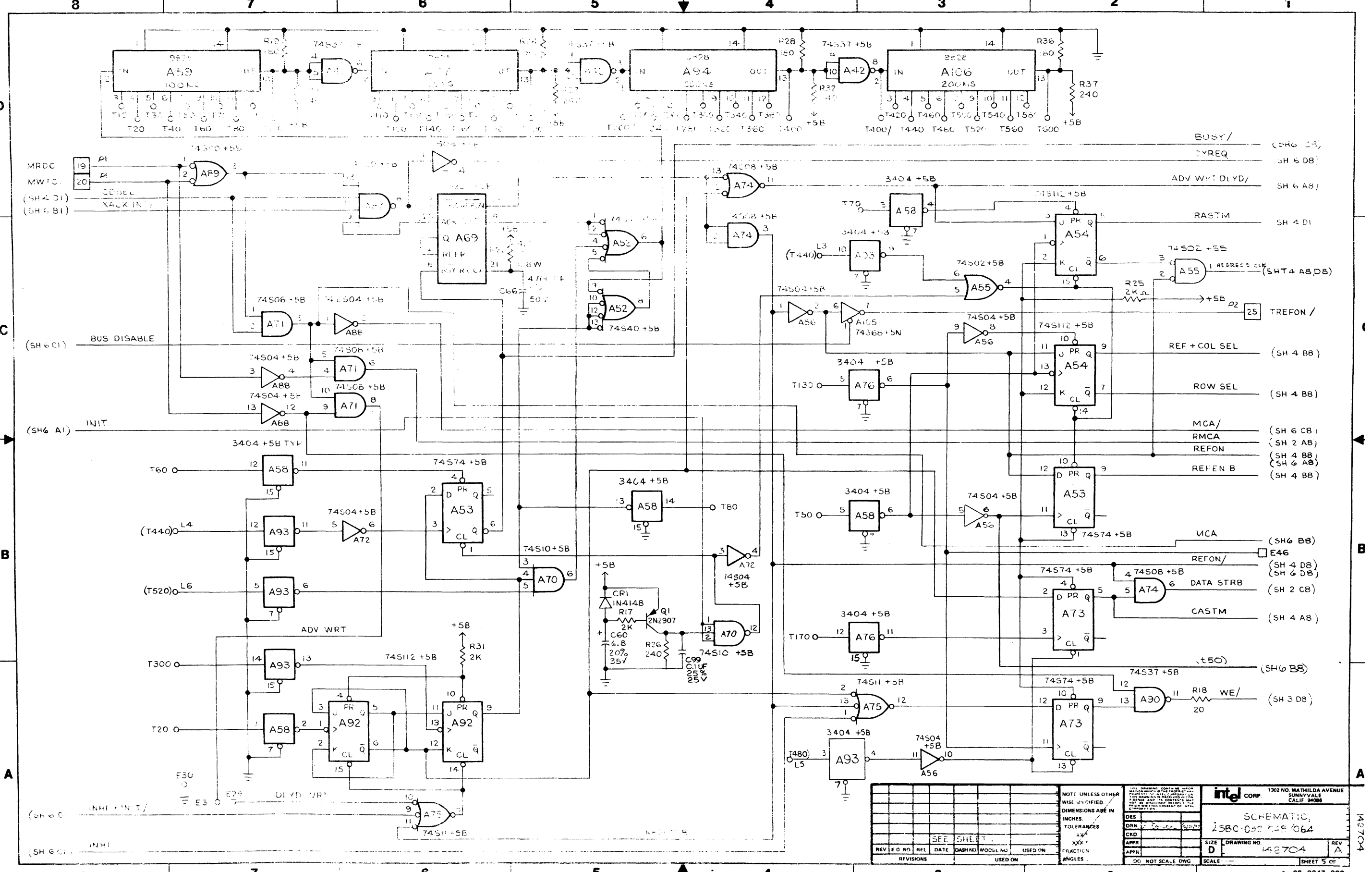
INTEL CORP. 1302 NO. MATILDA AVENUE SUNNYVALE CALIF. 94086

SCHEMATIC,
LSB0-032/048/064

SIZE D DRAWING NO 142704 REV A

SHEET 6 OF 14

98-0047-000



REV E O NO		REL	DATE	DASHED	MODEL NO	USED ON
REVISIONS		USED ON				

NOTE UNLESS OTHERWISE SPECIFIED:
DIMENSIONS ARE IN INCHES.
TOLERANCES:
XXX FRACTION ANGLES

DES	DRN	CKD	APP

1982 NO MATHILDA AVENUE
SUNNYVALE CALIF 94088

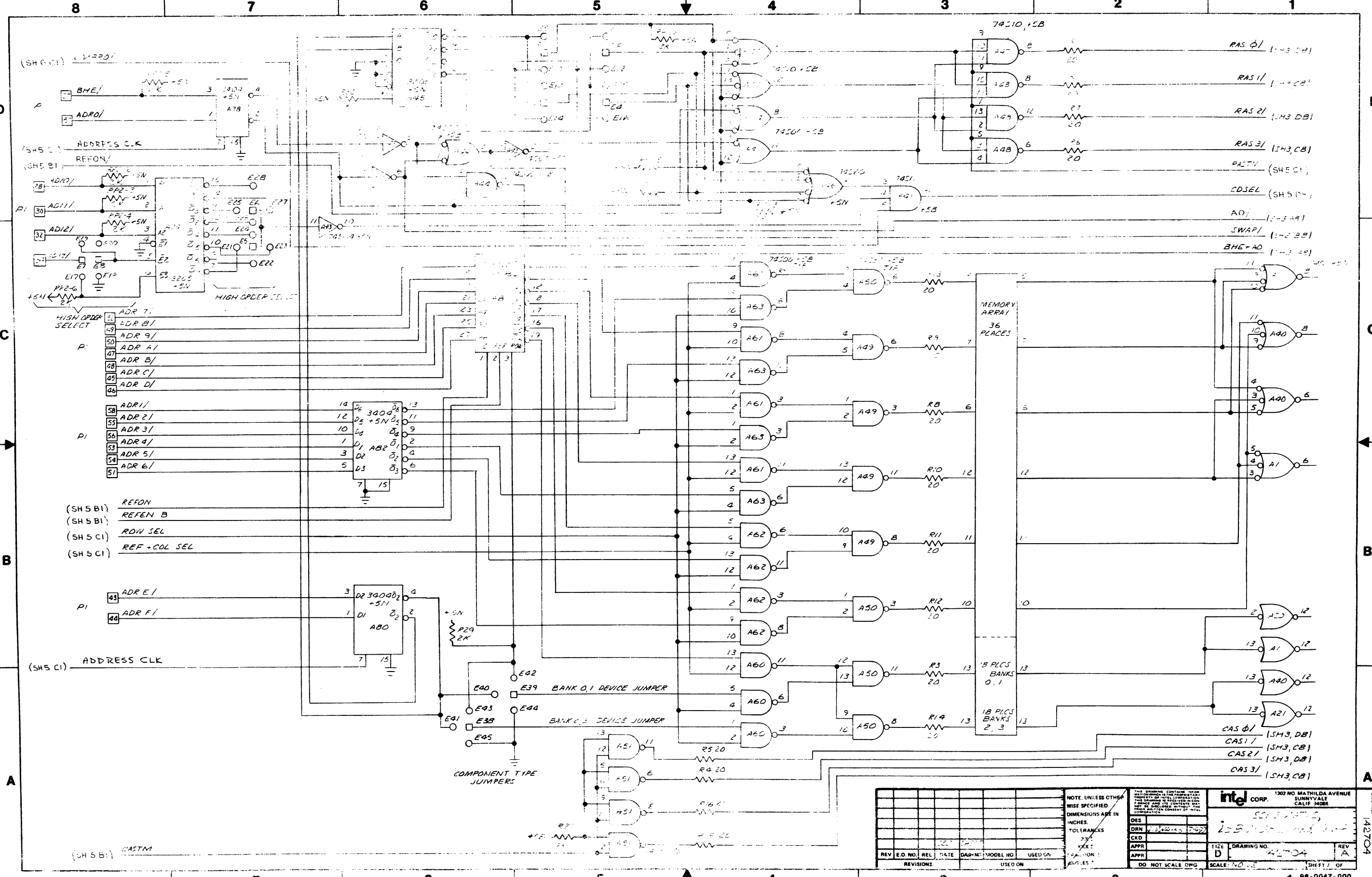
SCHEMATIC,
2580-022 048 064

SIZE D DRAWING NO 142704 REV A

DO NOT SCALE DWG SCALE

SHEET 5 OF

142704

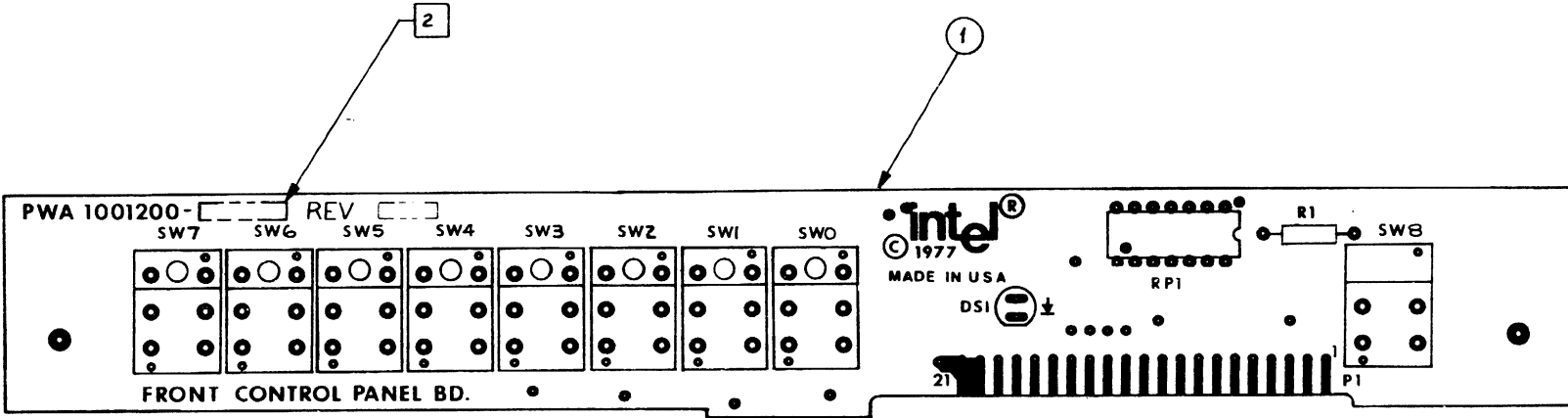


REV		E.O. NO.		REL	DATE	DASH	MODEL NO.	USED ON	
REVISIONS		USED ON							
NOTE: UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES. TOLERANCES: .010" MAX. .005" MIN. .002" MIN. .001" MIN. .0005" MIN.									
DES		DRN		CKD		APPR		APPR	
1302 NO. MATHILDA AVENUE SUNNYVALE CALIF. 94085		SCALE: 1/4" = 1"		SHEET 1 OF 1		DRAWING NO. 42704		REV. A	

Dwg. No. 142704

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REVISIONS			
LTR	DESCRIPTION	SIGNATURE AND DATE	
		DFT	CHK ENGR
A	PROD REL ECO # 1527	<i>[Signature]</i>	5/1/77
--	ECO 2-3151	<i>[Signature]</i>	5/1/77
B	ECO 2-4132	<i>[Signature]</i>	5/1/77



SEE SEPARATE PARTS LIST

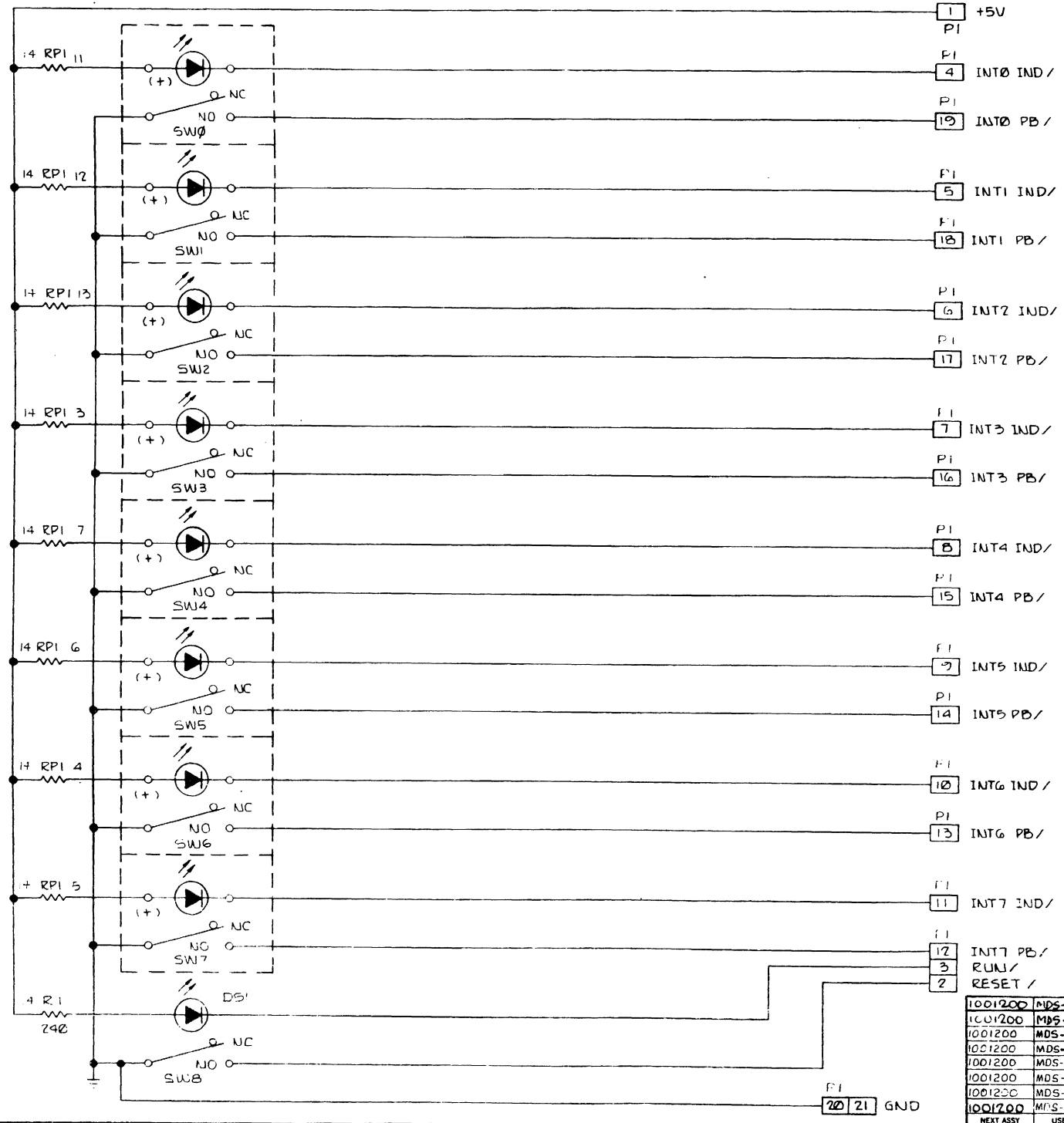
- 3 WORKMANSHIP PER MCSD QAWS 99-0007-001.
- 2 MARK ASSY DASH NO. AND REV LEVEL WITH CONTRASTING PERM COLOR, NON-CONDUCTIVE, .12 HIGH, APPROX WHERE SHOWN.
1. ASSY PART NO. IS 1001200-01. ASSY & PL ARE TRACKING DOCUMENTS.

NOTES: UNLESS OTHERWISE SPECIFIED

QUANTITY PER DASH NO				ITEM NO.	PART NUMBER	DESCRIPTION																												
SCALE 2:1				SIGNATURE		DATE																												
TOL. 2 PLC 3 PLC ANGLE				DRN BY <i>[Signature]</i>		5/1/77																												
MATERIAL				CHK BY <i>[Signature]</i>		5/1/77																												
FINISH				DFT APPD																														
NEXT ASSY USED ON				ENGR APPD																														
				AUTH BY <i>[Signature]</i>		5/1/77																												
				CODE: <i>[Signature]</i>		1/2/77																												
				SHEET 1 OF 1																														
PARTS LIST						3065 BOWERS AVE. SANTA CLARA CALIF. 95051																												
<table border="1"> <tr> <th>ITEM NO.</th> <th>PART NUMBER</th> <th>DESCRIPTION</th> </tr> <tr> <td>4001246</td> <td>MDS-232</td> <td></td> </tr> <tr> <td>4001246</td> <td>MDS-222</td> <td></td> </tr> <tr> <td>4001246</td> <td>MDS-211</td> <td></td> </tr> <tr> <td>4001246</td> <td>MDS-231</td> <td></td> </tr> <tr> <td>4001246</td> <td>MDS-221</td> <td></td> </tr> <tr> <td>4001246</td> <td>MDS-230</td> <td></td> </tr> <tr> <td>4001246</td> <td>MDS-220</td> <td></td> </tr> <tr> <td>4001246</td> <td>MDS-210</td> <td></td> </tr> </table>						ITEM NO.	PART NUMBER	DESCRIPTION	4001246	MDS-232		4001246	MDS-222		4001246	MDS-211		4001246	MDS-231		4001246	MDS-221		4001246	MDS-230		4001246	MDS-220		4001246	MDS-210		PRINTED WIRING ASSEMBLY FRONT CONTROL PANEL	
ITEM NO.	PART NUMBER	DESCRIPTION																																
4001246	MDS-232																																	
4001246	MDS-222																																	
4001246	MDS-211																																	
4001246	MDS-231																																	
4001246	MDS-221																																	
4001246	MDS-230																																	
4001246	MDS-220																																	
4001246	MDS-210																																	
SIZE DEPT DRAWING NO						REV																												
C MCD P1001200						B																												

THIS DRAWING CONTAINS INFORMATION WHICH IS THE PROPRIETARY PROPERTY OF INTEL CORPORATION. THIS DRAWING IS RECEIVED IN CONFIDENCE AND ITS CONTENTS MAY NOT BE DISCLOSED WITH OUT THE PRIOR WRITTEN CONSENT OF INTEL CORPORATION.

REVISIONS			
LTR	DESCRIPTION	SIGNATURE AND DATE	
		DESIGN	ENGR
A	PROD REL ECO #1527-3	<i>[Signature]</i>	1-11-77
-	ECO 2-3151	<i>[Signature]</i>	1-11-77



RPI	PI	
R1		
DS1		
SW0		
LAST USED	NOT USED	
REF DESIGNATIONS		

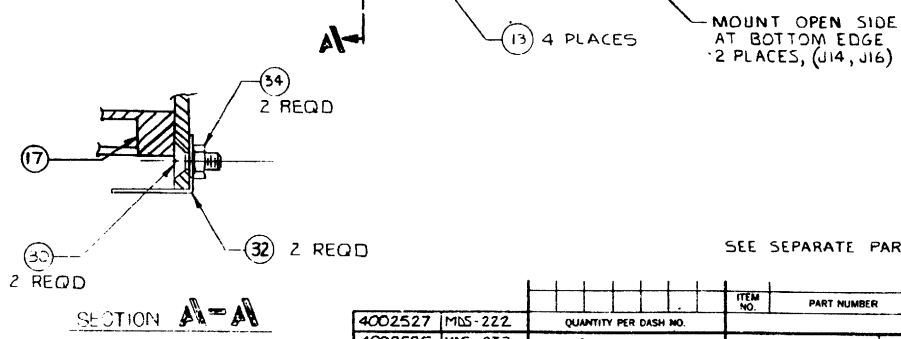
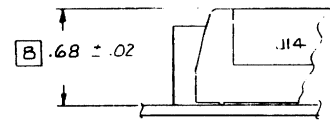
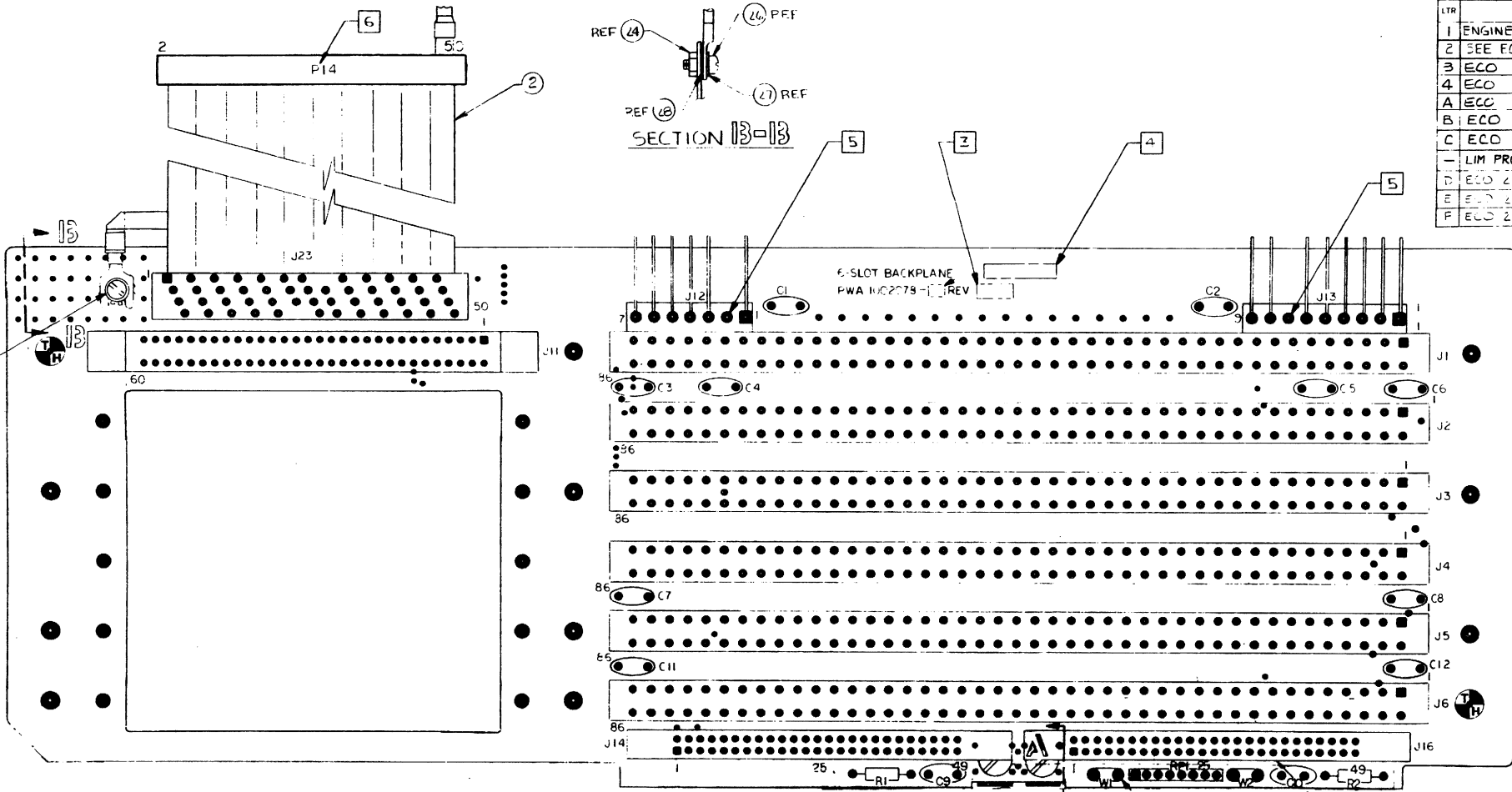
- NOTES: UNLESS OTHERWISE SPECIFIED.
1. RESISTANCE VALUES ARE IN OHMS, 1/4W, ±5%.
 2. RESISTOR PAK VALUES ARE IN OHMS, 1K, ±5%, 1.5W PER PAK.
 3. RESISTOR NETWORKS (DIP) ARE 14 PIN - PIN 14 IS +5V.

ITEM NO.		PART NUMBER		DESCRIPTION	
1001200	MDS-232	QUANTITY PER DASH NO.		PARTS LIST	
1001200	MDS-211	SCALE: NONE		SIGNATURE	
1001200	MDS-231	TOL. 2 PLC 3 PLC ANGLE		DATE	
1001200	MDS-221	MATERIAL:		CHK BY	
1001200	MDS-230	FINISH:		DATE	
1001200	MDS-220	NEXT ASSY USED ON		AUTH BY	
1001200	MDS-210			SHEET 1 OF 1	

intel		3065 BOWERS AVE. SANTA CLARA CALIF. 95051	
TITLE		SCHEMATIC - FRONT CONTROL PANEL	
SIZE	DEPT	DRAWING NO.	REV
D	MCD	P2001202	A

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REVISIONS			
LTR	DESCRIPTION	SIGNATURE	DATE
1	ENGINEERING RELEASE	[Signature]	9/14/78
2	SEE ECO 2-2393A	[Signature]	7/15/78
3	ECO 2-2973	[Signature]	11/14/78
4	ECO 2-2853	[Signature]	11/14/78
A	ECO 2-3151	[Signature]	11/14/78
B	ECO 2-4617	[Signature]	11/14/78
C	ECO 2-4990	[Signature]	11/14/78
-	LIM PROB REL RW 0063	[Signature]	5/27/77
D	ECO 2-4910A	[Signature]	11/14/78
E	ECO 2-3151	[Signature]	11/14/78
F	ECO 2-3151	[Signature]	11/14/78



- 8 MAX. COMPONENT HEIGHT.
 - 7 DIMENSIONS ARE IN INCHES.
 - 6 MARK P14 WITH CONTRASTING PERM COLOR .12 HIGH APPROX. WHERE SHOWN.
 - 5 REMOVE PIN 2 ON J12, (KEY), AND PIN 7 ON J13, (KEY).
 - 4 MARK ASSY VENDOR ID WITH CONTRASTING PERM COLOR, NON-CONDUCTIVE, .12 HIGH, APPROX WHERE SHOWN.
 - 3 MARK ASSY DASH NO. REV LEVEL WITH CONTRASTING PERM COLOR, NON-CONDUCTIVE, .12 HIGH, APPROX WHERE SHOWN.
2. WORKMANSHIP PER MCSD QAWS 99-0007-001.
1. ASSY PART NO. IS 1002078-03. ASSY AND PL ARE TRACKING DOCUMENTS.
- NOTES: UNLESS OTHERWISE SPECIFIED:

SEE SEPARATE PARTS LIST

ITEM NO.	PART NUMBER	DESCRIPTION	QUANTITY PER DASH NO.
4002527	MDS-222		
4002525	MDS-232		
4001739	MDS-232		
4001736	MDS-230/231		
4001736	MDS-222		
4001486	MDS-220/221		
4002146	MDS-230/231		
4002143	MDS-220/221		
NEXT ASSY	USED ON		

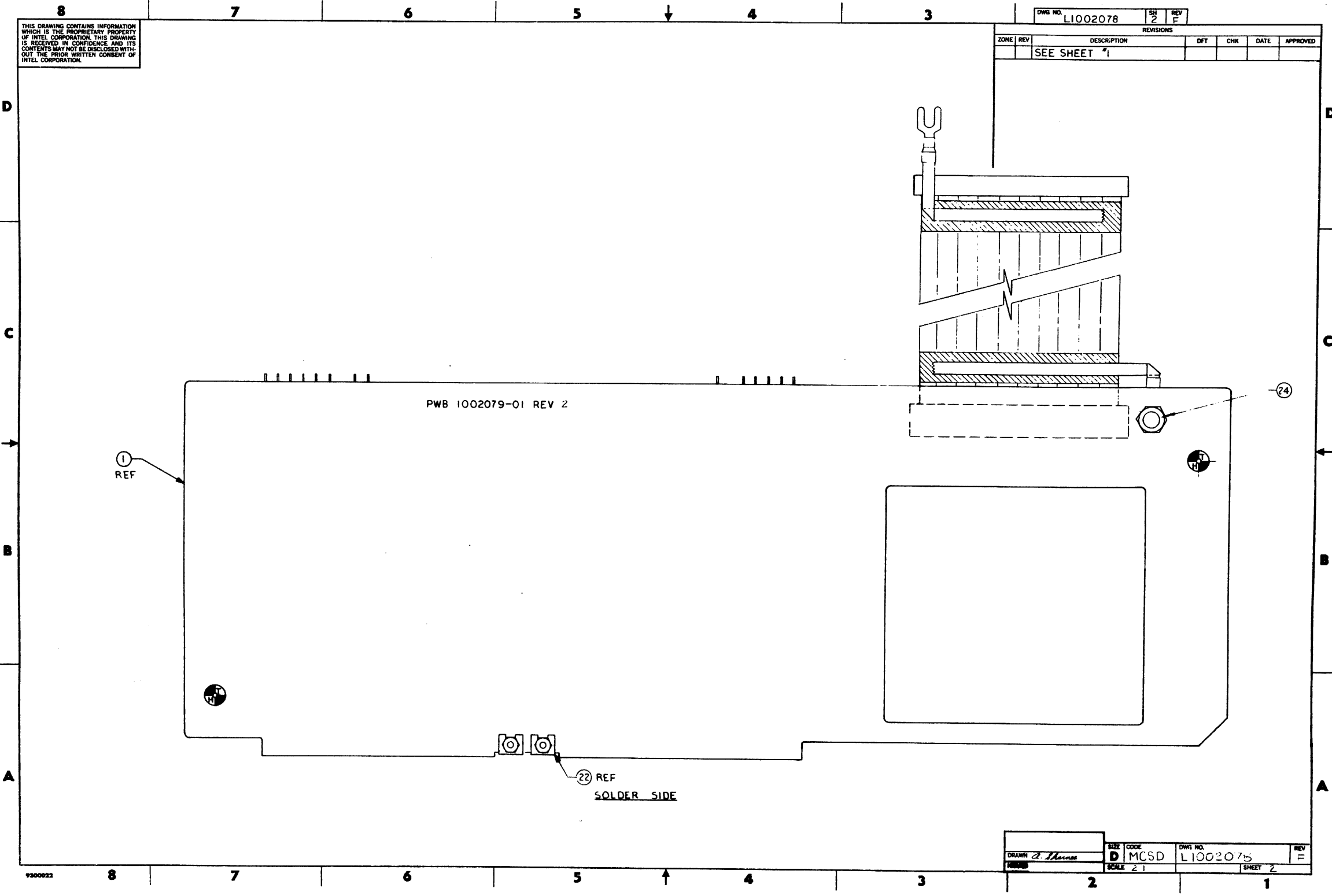
SCALE: 2:1		SIGNATURE		DATE	
TOL	2 PLC	DRN BY	A. Shance	DATE	9/14/78
	3 PLC	CHK BY	Fallon		
	ANGLE	DFT APPD			
		ENGR			
		APPR			
		AUTH BY			
		CODE			

PARTS LIST			
intel	3085 BOWERS AVE.		
	SANTA CLARA		
	CALIF. 95051		
TITLE			
PRINTED WIRING ASSEMBLY			
6 SLOT BACKPLANE			
SIZE	DEPT	DRAWING NO.	REV
D	MCSD	LI002078	F

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DWG NO. L1002078 SH 2 REV F

ZONE		REV	DESCRIPTION	DFT	CHK	DATE	APPROVED
			SEE SHEET "1"				



PWB 1002079-01 REV 2

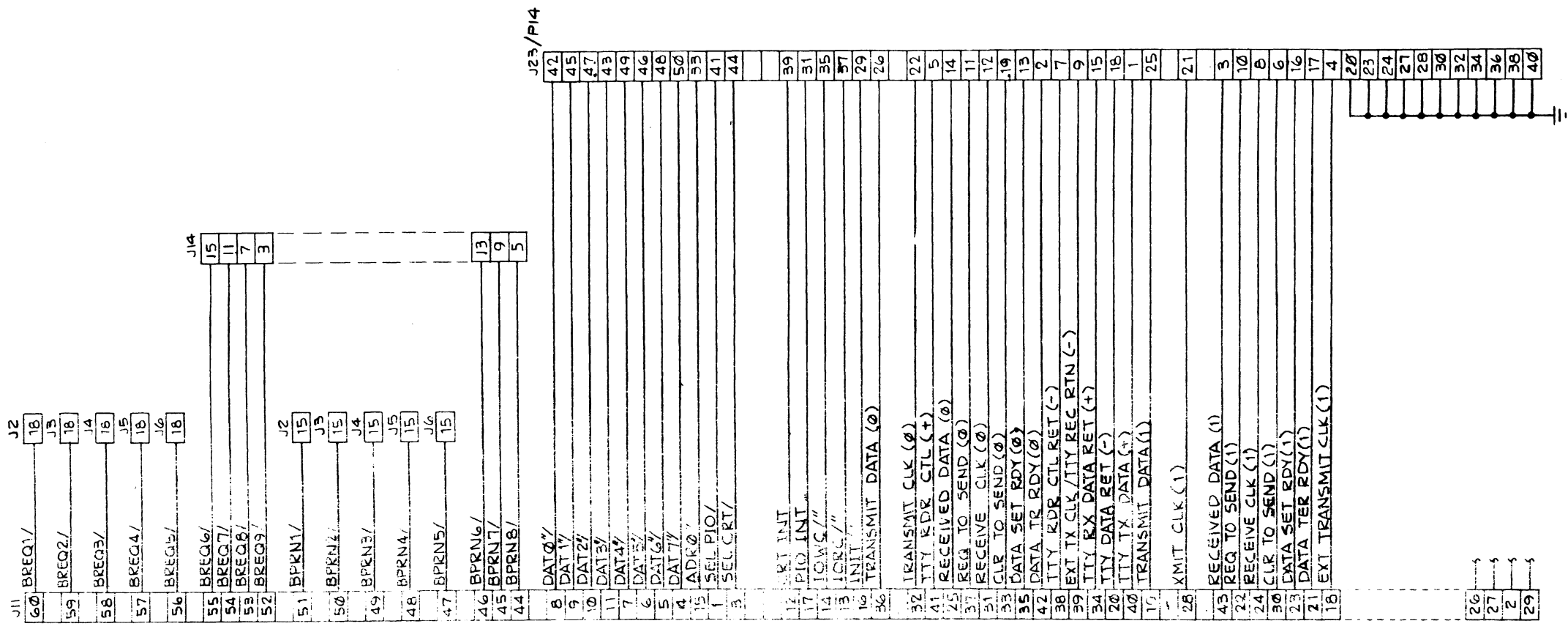
1 REF

22 REF
SOLDER SIDE

24

DRAWN <i>J. Morris</i>	SIZE CODE D MCSD	DWG NO. L1002078	REV =
THUMB	SCALE 2:1	SHEET 2	

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NOTES: UNLESS OTHERWISE SPECIFIED

- PIN NUMBER SEQUENCE FOR J1, J2, J3, J4, J5, AND J6 ARE THE SAME.
- ALL RESISTANCE VALUES IN OHMS, 10%, 1/4 WATT.
- ALL CAPACITANCE VALUES ARE IN MICROFARADS, ±20%, 16 V.

ITEM NO.		PART NUMBER		DESCRIPTION	
QUANTITY PER DASH NO.					
SCALE: NONE					
TOL * 2 PLC 3 PLC ANGLE					
MATERIAL					
FINISH					
RPI					
PI4	P1-13				
J16	J7-10,15				
W2					
C12					
R6		1002078	MDS-23X		
LAST USED	NOT USED	1002078	MDS-22X		
REFERENCE DESIGNATION		NEXT ASSY	USED ON		
SHEET 1 OF 4				REV 8	

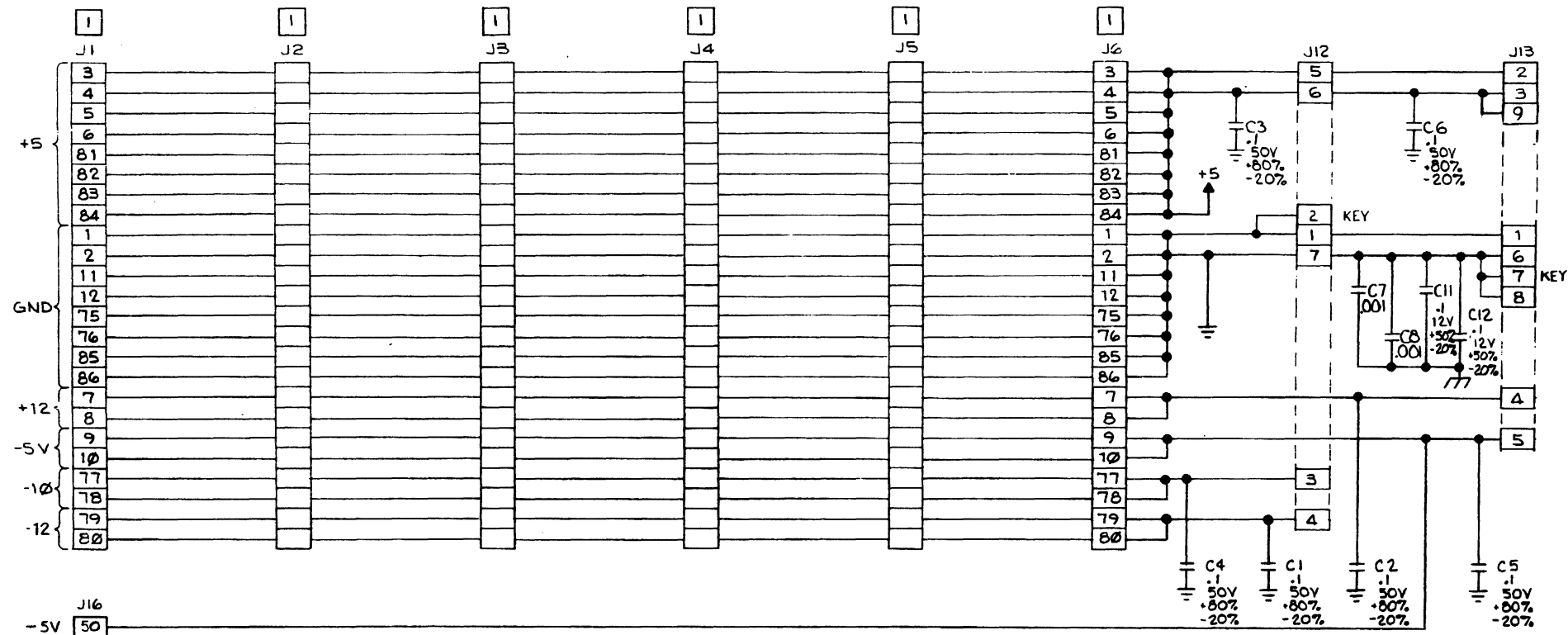
intel 3080 BOWERS AVE. SANTA CLARA CALIF. 95051

TITLE: SCHEMATIC, 6 SLOT BACKPLANE E MDS

SIZE: D DEPT: MCSD DRAWING NO: E 2002679

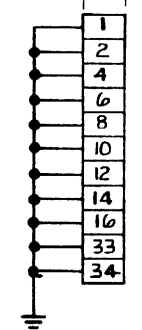
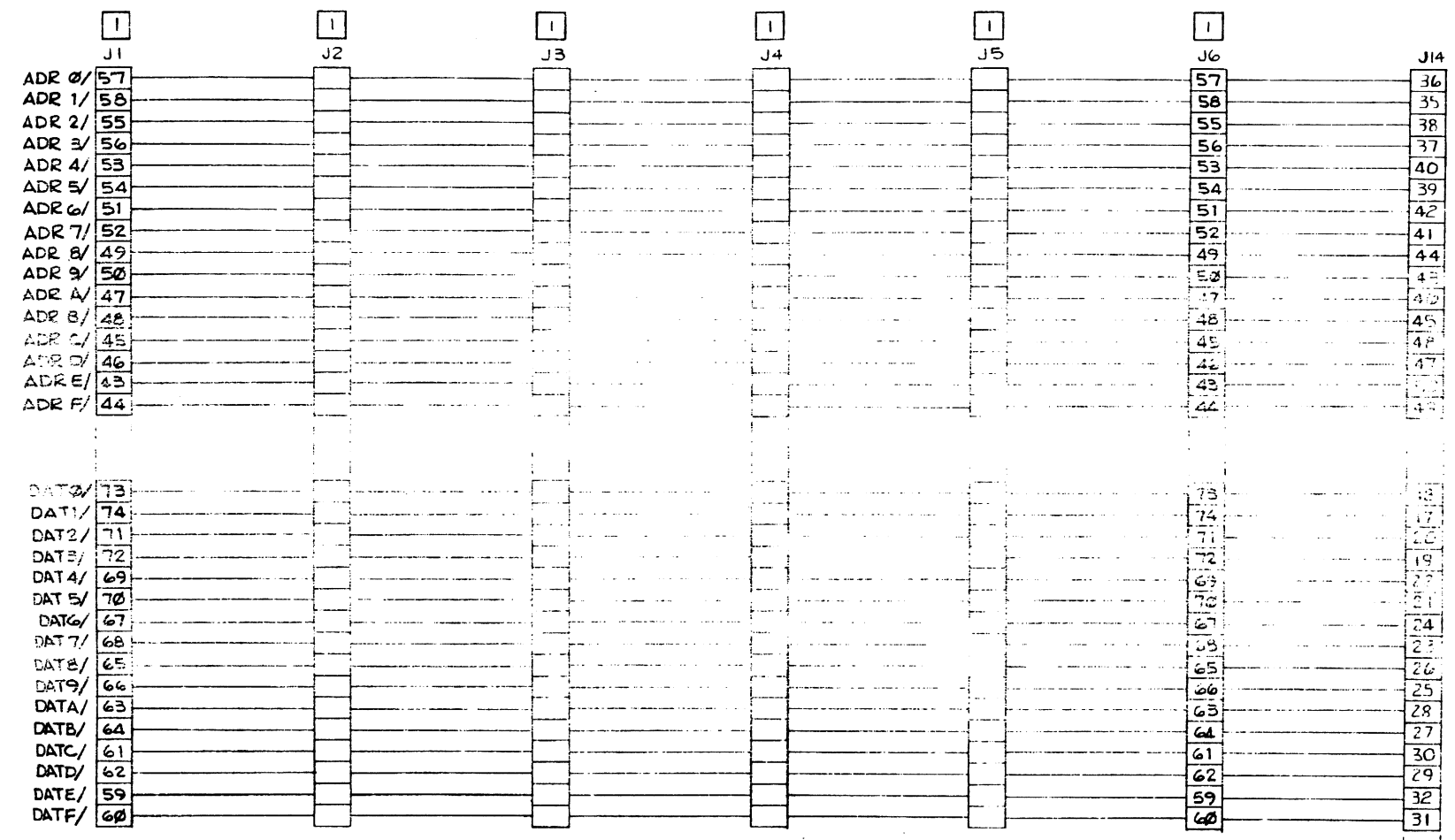
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REVISIONS				
LTR	DESCRIPTION	DFT	CHK	ENGR
-	SEE SHEET 1			



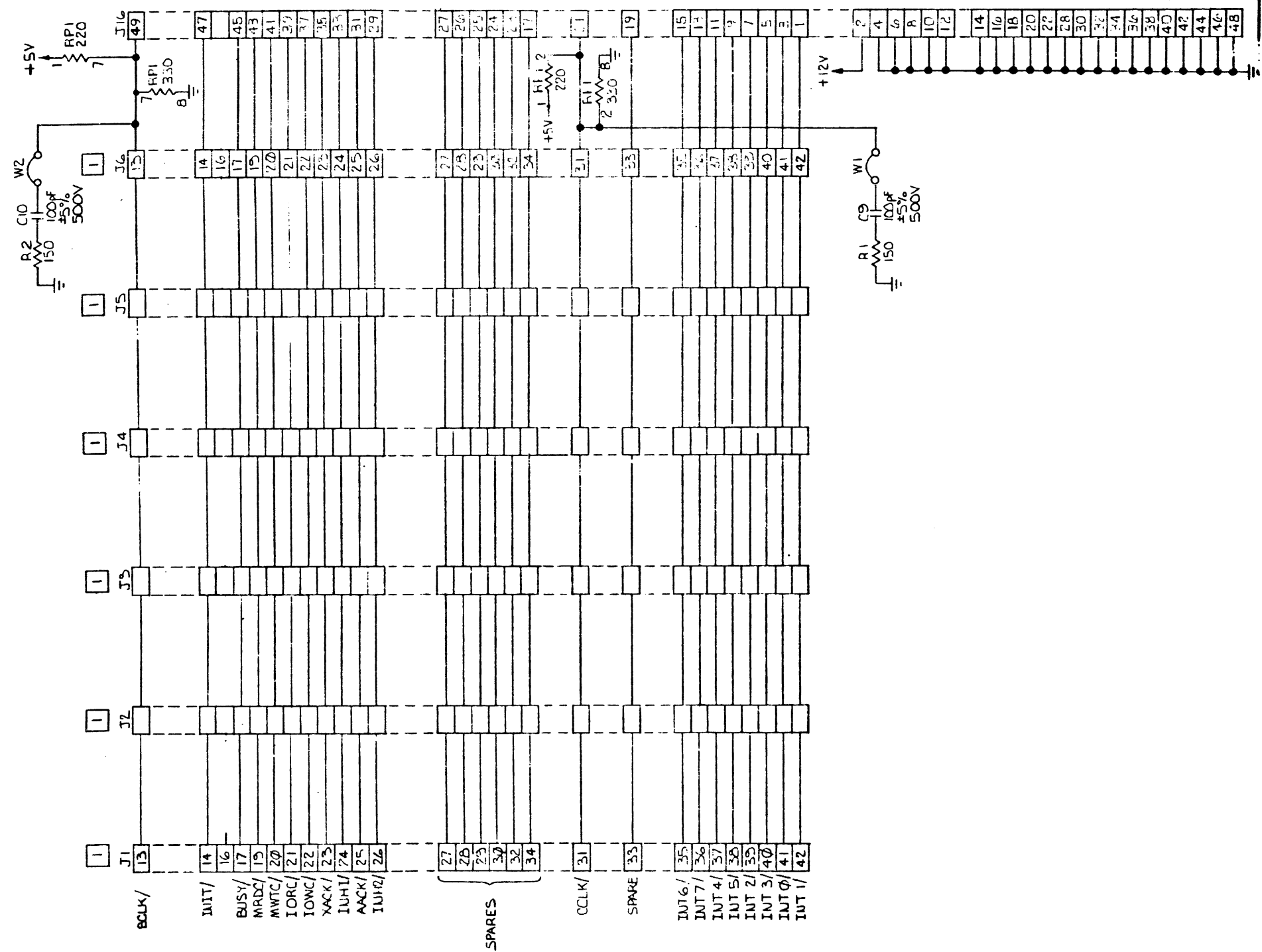
THIS DRAWING IS THE PROPERTY OF THE U.S. GOVERNMENT AND IS LOANED TO YOUR AGENCY. IT IS TO BE RETURNED TO THE OFFICE OF ORIGIN UPON REQUEST.

REVISIONS			
LTR	DESCRIPTION	DFT	CHK
-	SEE SHEET 1		



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REVISIONS						
ZONE	REV	DESCRIPTION	DFT	CHK	DATE	APPROVED
	-	SEE SHEET 1				

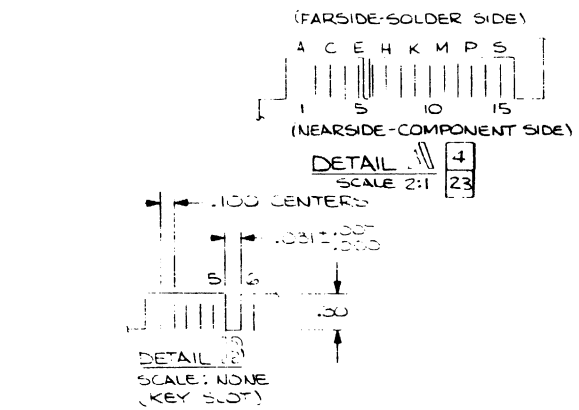


SIZE	CODE	DWG NO.	REV
D	MCSD	E 2002679	A
ISSUED	SCALE	SHEET 4 OF 4	

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ZONE	REV	DESCRIPTION	DFT	CHK	DATE	APPROVED
SEE HISTORY FOR PREVIOUS REVISIONS						
	E	REDRAWN PER ICG 13-5597	RL			Robb
	F	11/10/83 6493				

- 20. FINISH: BLACK ZINC CHROMATE PER QQ-Z-325 TYPE 2, CLASS II
- 19. MAT'L: .050 CRS 1/2 HARD
- 18. WORKMANSHIP PER MCLSD QAWS 99-0007-001.
- 17. ADDITIONAL MOUNTING SLOTS ARE PERMISSIBLE.
- 16. LOCATE NO. 8-32 CLINCH NUT 1/16" DIA. 8-3202Z OR EQUIVALENT.
- 15. CHASSIS GND CONSISTS OF KB KEYBOARD MOUNTING PLATE AND PAD ON KB-PCB TO WHICH COUPLING CAPACITOR VALUES OF 470pf AND 0.1uf BYPASS SIGNAL GND ON PCB TO CHASSIS GND. SOLID CONNECTIONS MUST EXIST BETWEEN MOUNTING PLATE & CHASSIS GND PAD ON KB-PCB.
- 14. SIGNAL GND PLANE CONSISTS OF KB-PCB AND MUST COVER MINIMUM 85% OF BOARD
- 13. SCREW TERMINAL ON KEYBOARD MOUNTING PLATE TO WHICH KEYBOARD CABLE SHIELD IS ATTACHED. THIS TERMINAL MUST BE ADJACENT TO KEYBOARD CABLE CONNECTOR J1; SEE NOTE 16.
- 12. KEYCAPS TO BE BLACK, COLOR NO. 1-7, WITH LEGENDS WHITE, COLOR NO. 1-2. CAPS TO BE MATTE OR SEMI-MATTE FINISH ON TOP SURFACE. GLOSSY FINISH ON ALL SIDES.
- 11. KEYCAPS TO BE NAVY BLUE, COLOR NO. 1-24, WITH LEGENDS WHITE, COLOR NO. 1-11. CAPS TO BE MATTE OR SEMI-MATTE FINISH ON TOP SURFACE. GLOSSY FINISH ON ALL SIDES.
- 10. CURVED SIDE OF SPACE BAR TO FACE OUTSIDE AS SHOWN, AND MATE WITH .79.0 INCH RADIUS ON COVER PLATE. BAR TO BE OFF-WHITE, COLOR NO. 1-11, MATTE OR SEMI-MATTE FINISH ON TOP SURFACE. GLOSSY FINISH ON ALL SIDES.
- 9. KEYCAPS TO BE OFF-WHITE, COLOR NO. 1-11, WITH LEGENDS BLACK, COLOR NO. 1-9. CAPS TO BE MATTE OR SEMI-MATTE FINISH ON TOP SURFACE. GLOSSY FINISH ON ALL SIDES.
- 8. CRYSTAL TO BE PACKAGED IN CASE SIZE HC18 OR HC25. CRYSTAL CASE TO SECURED TO PC BOARD AND GROUNDED. CRYSTAL IS SERIES RESONANT FUNDAMENTAL MODE.
- 7. INDIVIDUAL BYPASS CAPACITOR OF MINIMUM VALUE .01 UF REQUIRED FOR 8041 AND ANY OTHER DIGITAL IC'S OF 24 PINS OR GREATER. MINIMUM OF ONE BYPASS CAPACITOR (.01UF MINIMUM) FOR EACH TWO DIGITAL IC'S (14 OR 16 PIN).
- 6. DESIGN WILL UTILIZE INTEL 8041 MICROPROCESSOR. PC BOARD WILL CONTAIN 40 PIN SOCKET IN 8041 LOCATION. IC SOCKET TO BE ONE OF THE FOLLOWING VENDOR'S FAMILIES: TEXAS INSTRUMENTS: CBS, ROBINSON WAGENT: ICN OR ICA, AUGAT: 540, SAMTEC: IC, EXCELL: 860.
- 5. APPROX POSITION FOR 8041/8741.
- 4. CONN TO BE USED IS AMP# 583717-B OR EQUIV
- 3. TWR KEY IS ALTERNATE ACTION.
- 2. KEY CAPS SHOULD BE "IBM SCULPTURED" TYPE.



- 25. MARK PART NO., REV LEVEL & VENDOR ID WITH CONTRASTING PERM COLOR, .12 HIGH, APPROX WHERE SHOWN.
- 24. PACKAGE PER 8930001, TYPE A.
- 23. FINGERS TO BE GOLD PLATED PER INTEL SPEC 940001, PARAGRAPH 6.1.
- 22. BEND RADIUS IS .06.
- 21. KEYSWITCH MECHANICAL CHARACTERISTICS
 - KEY FORCE: 2.5 OZ ± 0.5 OZ (ALL KEYS EXCEPT SPACE BAR)
 - 3.5 OZ ± 0.5 OZ (SPACE BAR ONLY)
 - TOTAL TRAVEL: .165 ± .025
 - PRETRAVEL: .060 MIN.
 - OVER TRAVEL: .030 MIN.

DASH	DESCRIPTION	NOTE
-05	9 10 11	
-06	9 10 12	

SPECIFICATION CONTROL DRAWING

QUANTITY PER DASH NO.		ITEM NO.	PART NUMBER	DESCRIPTION
400123B	MDS 220			
	MDS 221			
	MDS 230			
	MDS 231			
	MDS 232			
	MDS 233			
	MDS 234			
	MDS 235			
	MDS 236			
	MDS 237			
	MDS 238			
	MDS 239			
	MDS 240			
	MDS 241			
	MDS 242			
	MDS 243			
	MDS 244			
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	MDS 246			
	MDS 247			
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	MDS 288			
	MDS 289			
	MDS 290			
	MDS 291			
	MDS 292			
	MDS 293			
	MDS 294			
	MDS 295			
	MDS 296			
	MDS 297			
	MDS 298			
	MDS 299			
	MDS 300			

1 PART NO. IS 4501240-KX. THIS DOCUMENT & LIST OF VENDORS ARE TRACKING DOCUMENTS.
 NOTES: UNLESS OTHERWISE SPECIFIED

3365 BOWERS AVE. SANTA CLARA, CALIF. 95051

DRN BY: *Lewis* 8/2/79
 CHK BY: *Melville* 8/12/79
 ENGR APVD: *R. Robb* 11/17/79

SCALE FULL

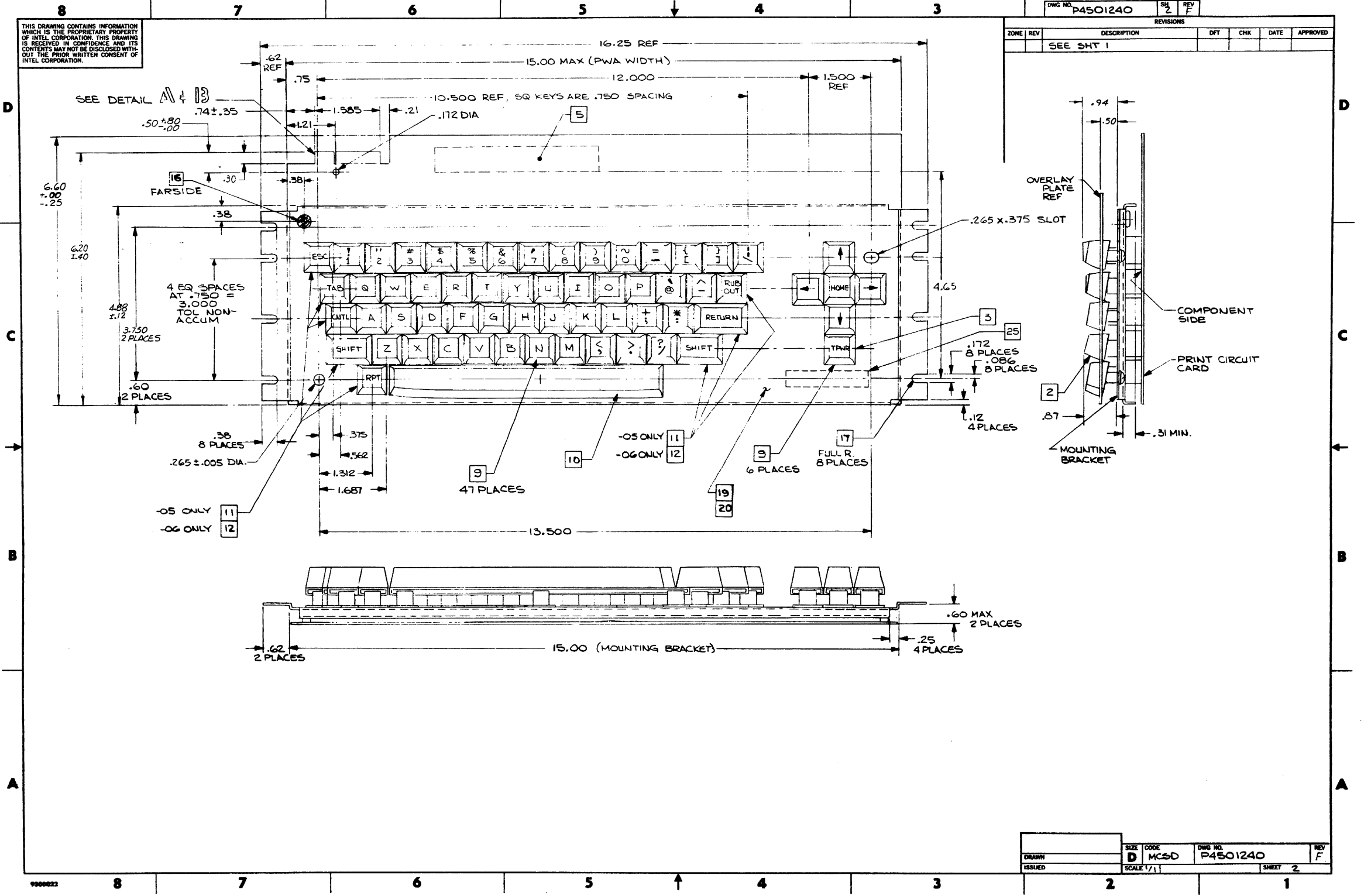
SIZE CODE D MCLSD DWG. NO. P4501240 REV F

SHEET 1 OF 3

THIS DRAWING CONTAINS INFORMATION WHICH IS THE PROPRIETARY PROPERTY OF INTEL CORPORATION. THIS DRAWING IS RECEIVED IN CONFIDENCE AND ITS CONTENTS MAY NOT BE DISCLOSED WITHOUT THE PRIOR WRITTEN CONSENT OF INTEL CORPORATION.

DWG NO. P4501240 SH 2 REV F

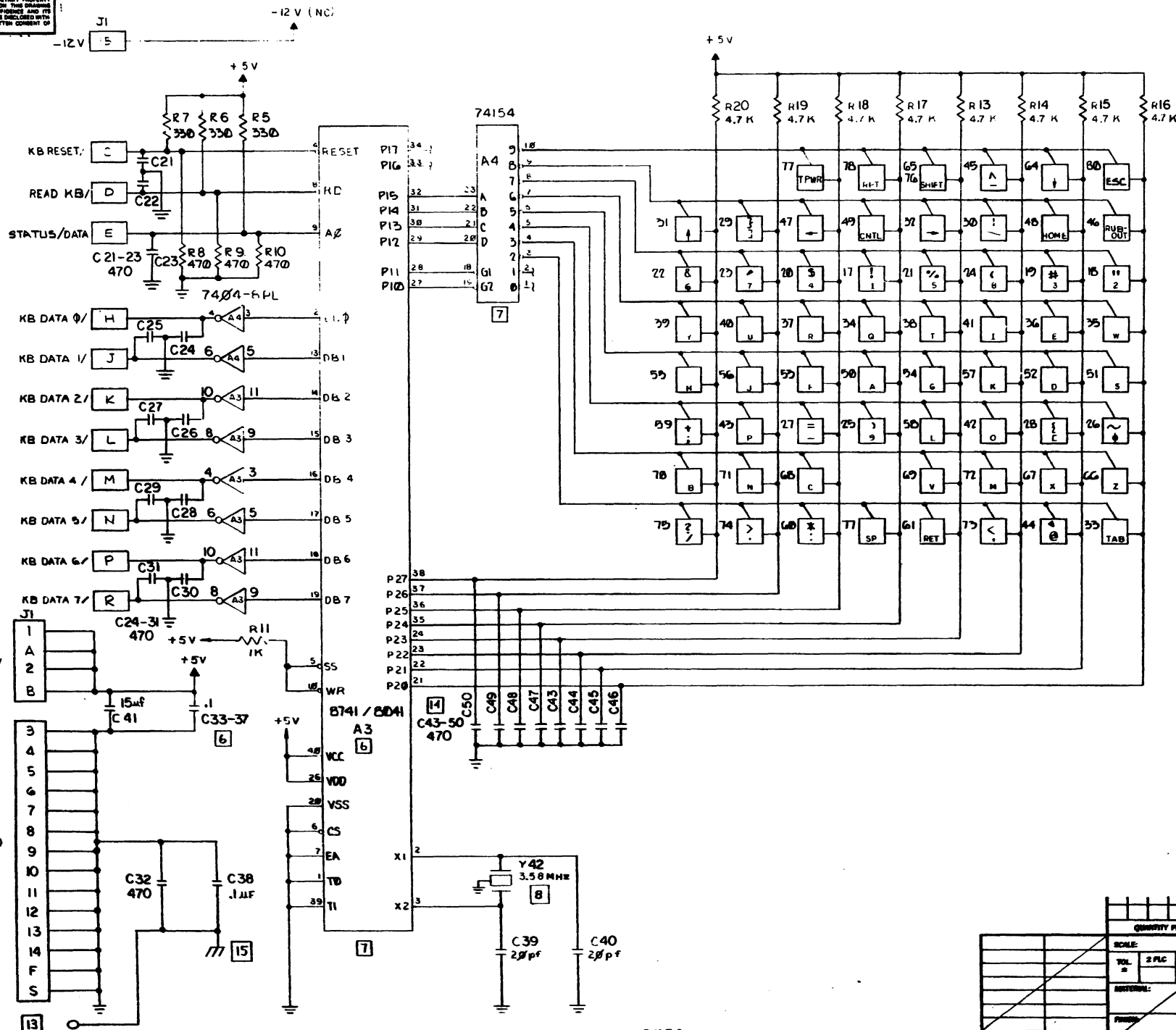
ZONE		REV	DESCRIPTION	REVISIONS			
DFT	CHK	DATE	APPROVED				
			SEE SHT 1				



SIZE	CODE	DWG NO.	REV
D	MCSO	P4501240	F
ISSUED	SCALE 1/1	SHEET 2	

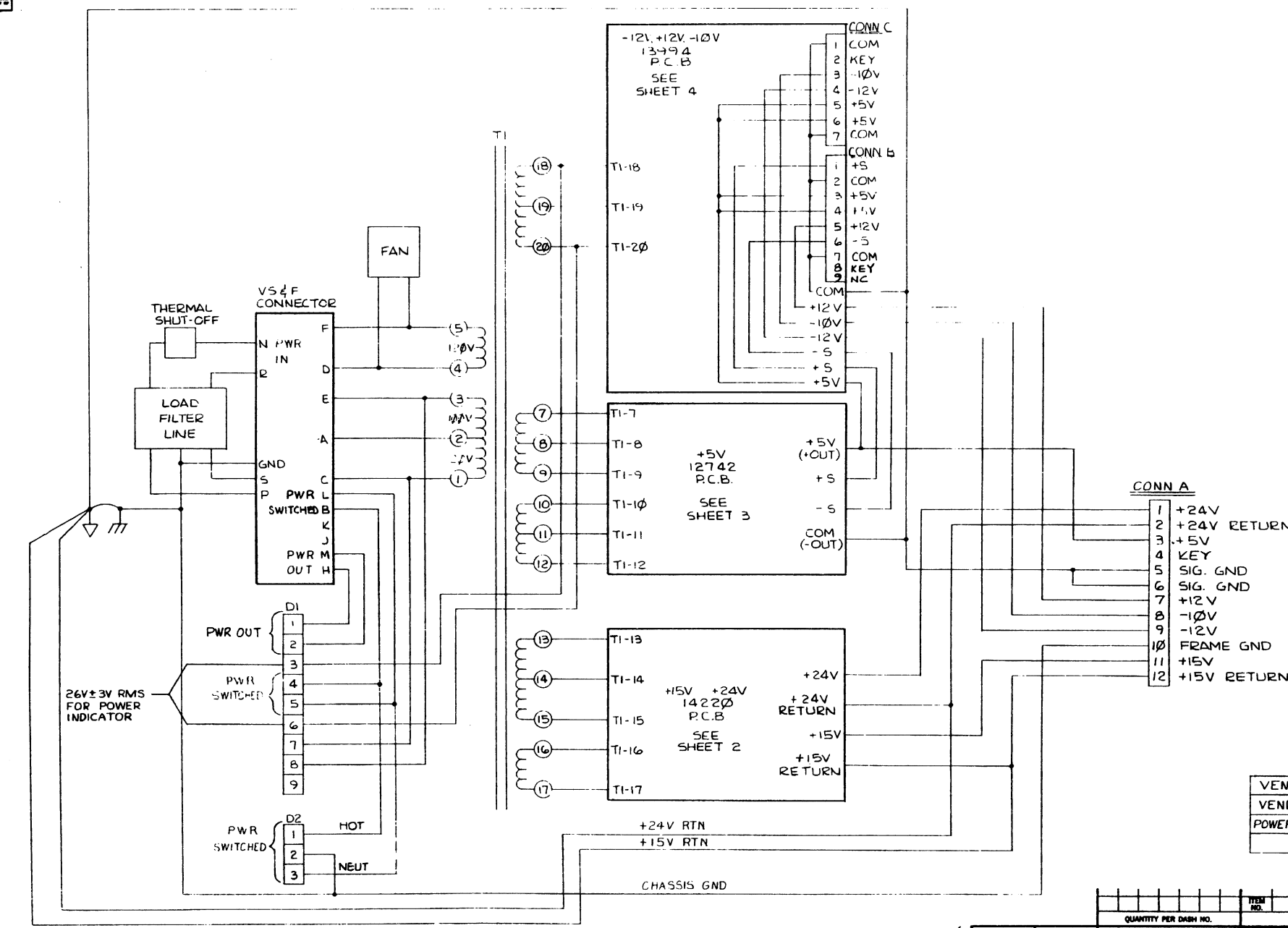
THIS DRAWING CONTAINS INFORMATION WHICH IS THE PROPRIETARY PROPERTY OF INTEL CORPORATION. THE DRAWING IS REPRODUCED IN CONFIDENCE AND ITS DISCLOSURE MAY NOT BE DISCLOSED WITHOUT THE PRIOR WRITTEN CONSENT OF INTEL CORPORATION.

REVISIONS			SIGNATURE AND DATE		
LTR	DESCRIPTION	DET	CHK	ENGR	DATE
-	SEE SHEET 1				14/3/77



CONFIRM PER DATA NO.			PART NUMBER			DESCRIPTION		
SCALE:	SIGNATURE		DATE			PARTS LIST		
TOL 2 P/C 3 P/C	DRN BY	DATE						
DATE:	CHK BY	DATE						
MATERIAL:	APP BY	DATE				TITLE KEY BOARD SCHEMATIC MICRO-SWITCH		
FORM:	APP BY	DATE				DET: D SOFT DRAWING NO.: P4501240		
NEXT REV	USED ON	CODE	SHEET 3 OF			REV: F		

REVISIONS			SIGNATURE AND DATE	
LTR	DESCRIPTION	DET	CHK	ENGR
A	PROD. REL.			
	ECO 2-3151			
B	ECO 13-6422			



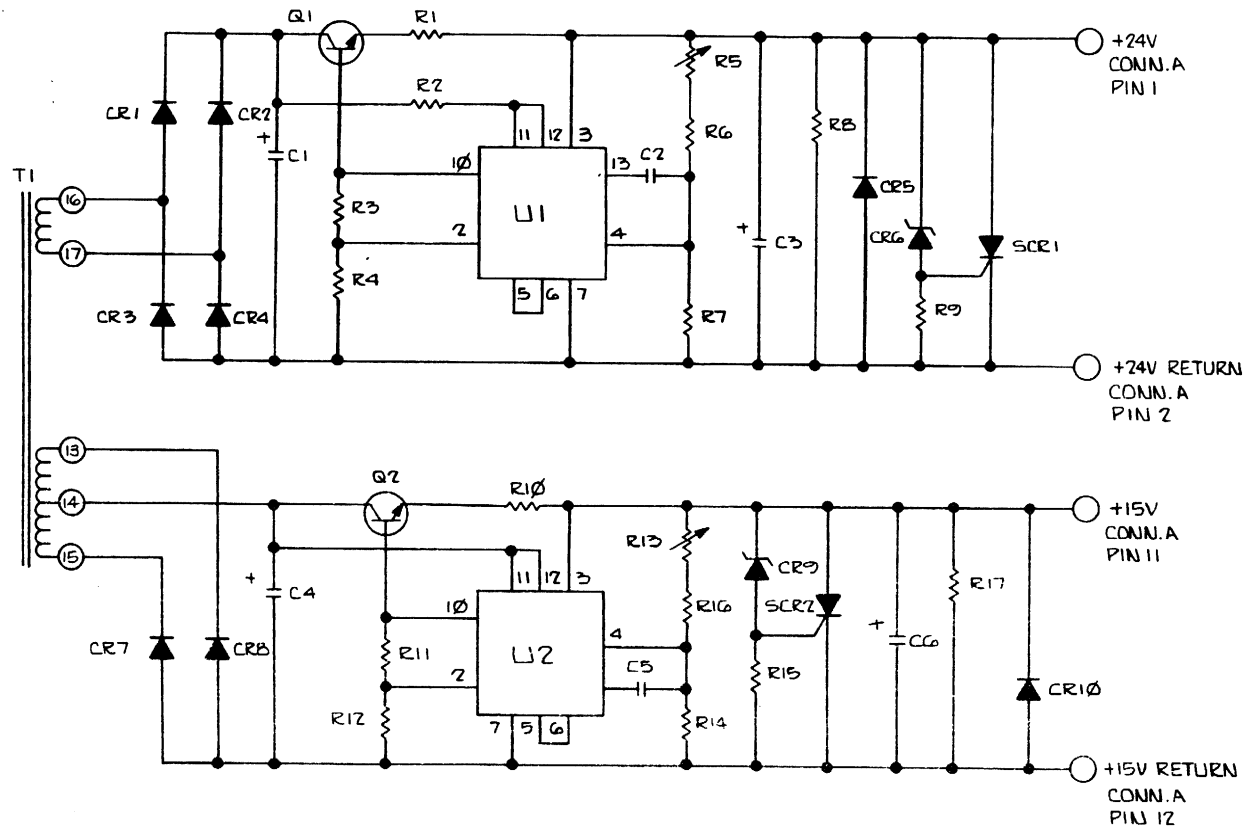
VENDOR SCHEMATIC	
VENDOR	SHEETS
POWER-ONE	1 THRU 4

VENDOR SCHEMATIC
POWER-ONE #14234
RS. CP214

QUANTITY PER DASH NO.		ITEM NO.	PART NUMBER	DESCRIPTION
4501253	MDS-232			
4501253	MDS-222			
4501253	MDS-231			
4501253	MDS-221			
4501253	MDS-230			
4501253	MDS-220			

SCALE:	SIGNATURE:	DATE:	PARTS LIST	
TOL. =	DRN BY <i>M. Wright</i>	12-21	intel	
ANGLE =	CHK BY <i>J. Moran</i>	12-21	3000 BOWERS AVE. SANTA CLARA CALIF. 95051	
MATERIAL:			TITLE	
FINISH:			SCHEMATIC DIAGRAM CRT/FLOPPY DISK	
NEXT ASSY:	AUTH BY <i>J. Moran</i>	11-17	SIZE	DEPT
USED ON:	CODE: <i>1</i>	SHEET <i>1</i> OF <i>4</i>	D	MCD
			DRAWING NO.	REV
			P2001254	B

REVISIONS			SIGNATURE AND DATE		
LTR	DESCRIPTION		OFF	CHK	ENGR
-	SEE SHEET 1		-	-	-



VENDOR SCHEMATIC
POWER-CNE 14219
P.S. CP214

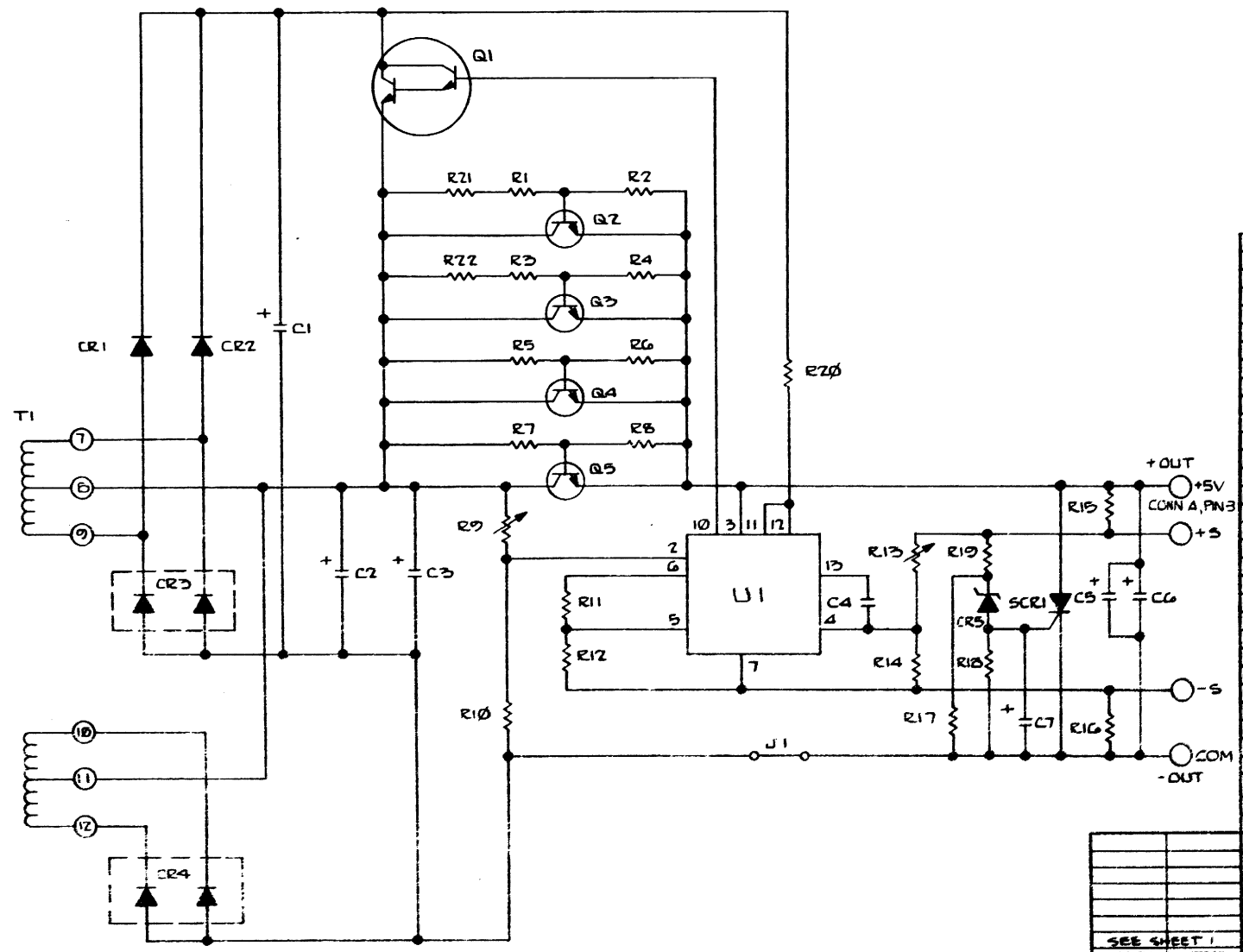
ITEM NO.	PART NUMBER	DESCRIPTION
C4	3300 / 35	CAPACITOR ALUM. ELECT
C1	3700 / 60	↑ ↑ ↑
C6	100 / 25 OR 35	↑ ↑ ↑
C3	47 / 50	CAPACITOR ALUM. ELECT
C2 & C5	.001 / 100	CAPACITOR, MYLAR
CR1-CR4, CR7 & CR8	AE3B	DIODE, 3A, 100V
CR5 & CR10	AE1C	DIODE, 1A, 200V
CR9	1N967B	DIODE, ZENER
CR6	1N971	DIODE, ZENER
SCR2	80303LS3	SCR 3A
SCR1	50508LS3	SCR 3A
Q1 & Q2	12500-4	TRANSISTOR
U1 & U2	MA773	I.C. VOLTAGE REGULATOR
R4	10K	RESISTOR 1/2W 5% CF
R2	7.5K	RESISTOR, 1/2W, 5%, CF
R3, R9, R11 & R16	330Ω	↑ ↑ ↑
R5, R17	2.2K	↑ ↑ ↑
R7	6.8Ω	↑ ↑ ↑
R14	2K	↑ ↑ ↑ CF
R16	1.8K	RESISTOR, 1/2W, 5%, MF
R1 & R10	.22Ω	RESISTOR, 2W, 10%, 20W
R6	4.7K	RESISTOR, 1/2W, 5%, MF
R7	2.4K	RESISTOR, 1/2W, 5%, MF
R8 & R13	1.5K	POTENTIOMETER
P.C.B.	14220	PRINTED CIRCUIT BOARD

QUANTITY PER DASH NO.		PARTS LIST	
SCALE: NONE	SIGNATURE: <i>[Signature]</i>	DATE: 1/17/77	intel 3865 BOWERS AVE. SANTA CLARA CALIF. 95051
TOL: 2 PLC 3 PLC ANGLE	CHK BY: —		
MATERIAL:	DFT APPD: —	ENGR APPD: —	TITLE: SCHEMATIC DIAGRAM POWER SUPPLY CRT FLOPPY DISK
FINISH:	AUTH BY: —		SIZE: D DEPT: MCD DRAWING NO: P2001254 REV: B
NEXT ASSY:	USED ON:	CODE: —	SHEET 2 OF 4

8
7
6
5
4
3
2
1

REVISIONS			
LTR	DESCRIPTION	SIGNATURE AND DATE	
		DFT.	ENGR
-	SEE SHEET 1		

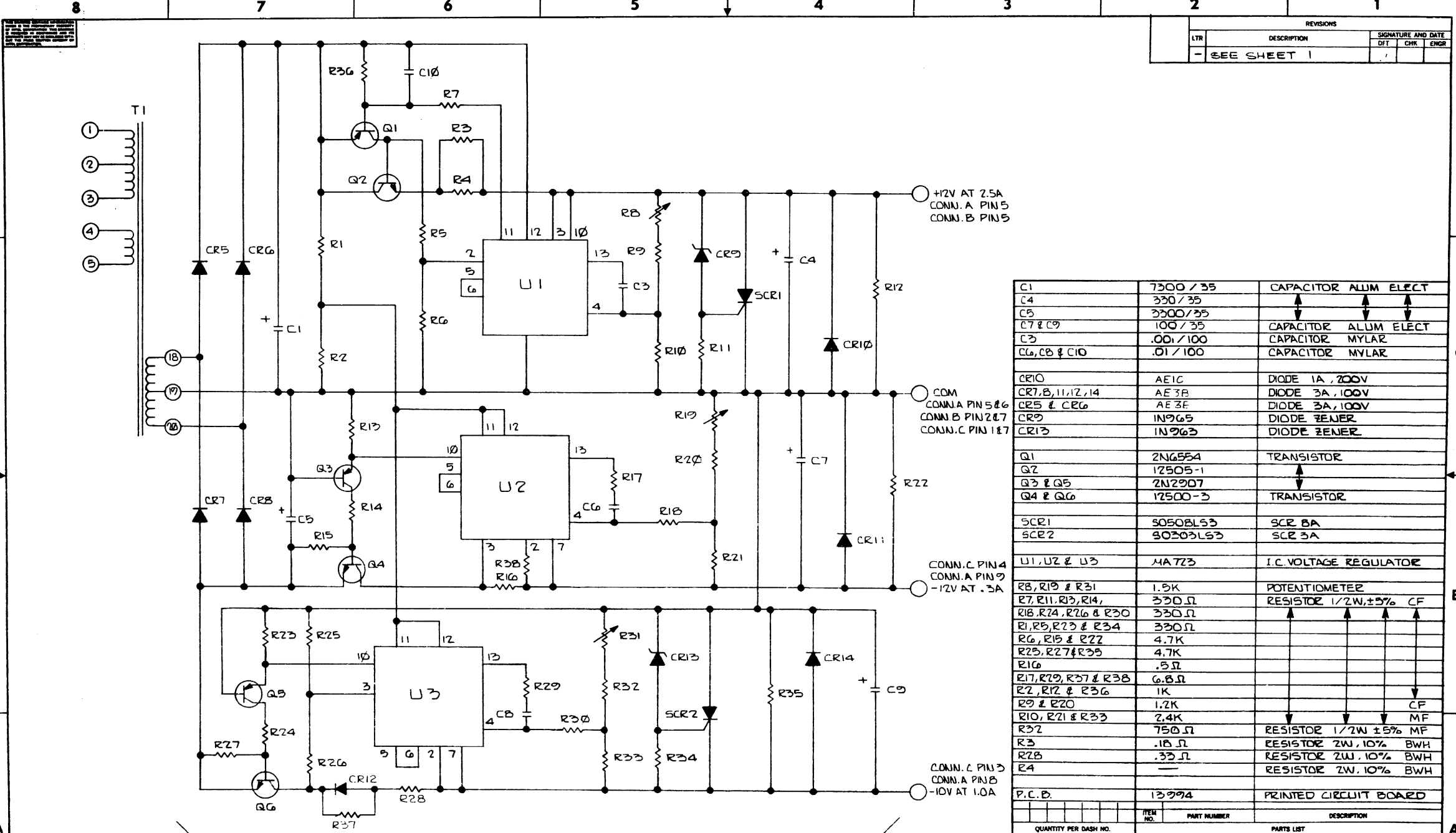
VENDOR SCHEMATIC
POWER-ONE 14230
P.S. CP214



ITEM	PART NUMBER	DESCRIPTION
C1	2200 / 35	CAPACITOR ALUM. ELECT.
C2 & C3	64000 / 15	CAPACITOR ALUM. ELECT.
C5 & C6	1000 / 16	CAPACITOR ALUM. ELECT.
C7	10 / 25	CAPACITOR ALUM. ELECT.
C4	.001 / 100	CAPACITOR MYLAR
CR1 & CR2	AE1C	DIODE 1A, 200V
CR3 & CR4	E731A	DIODE
CR5	1N752	DIODE, ZENER
SCR1	MR649P-1	SCR
Q1	2N655	TRANSISTOR
Q2, Q3, Q4 & Q5	1751 -1	TRANSISTOR
R9 & R13	1.0K	POTENTIOMETER
R2, R4, R6 & R8	22 Ω	RESISTOR, 1/2W, ±5%
R3, R7, R15, R16 & R19	6.8 Ω	
R12	3.3K	
R10 & R11	2.7K	
R17	220 Ω	
R18 & R20	47 Ω	
R21, R22, R1 & R3	2.7 Ω	
R14	2.7K	RESISTOR, 1/2W, ±5%
J1	14 GA.	WIRE, WHT, 7/32
U1	1A 723 C	I.C. VOLTAGE REGULATOR
P.C.B.	12742	PRINTED CIRCUIT BOARD

QUANTITY PER DRAWING NO.		PART NUMBER		DESCRIPTION	

SCALE: NONE	SIGNATURE: [Signature]	DATE: 1/7/77		8000 BURNING AVE. SANTA CLARA CALIF. 95051
DRAWN BY: [Signature]	CHECK BY: [Signature]			
MATERIAL:	DATE:		TITLE: SCHEMATIC DIAGRAM POWER SUPPLY CRT/FLOPPY DISK	
FRONT:	AUTH BY:		SIZE: D	DEPT: MCD
NEXT ASSY: USED ON:	COO:	SHEET 3 OF 4	DRWING NO: PZ001254	REV: B

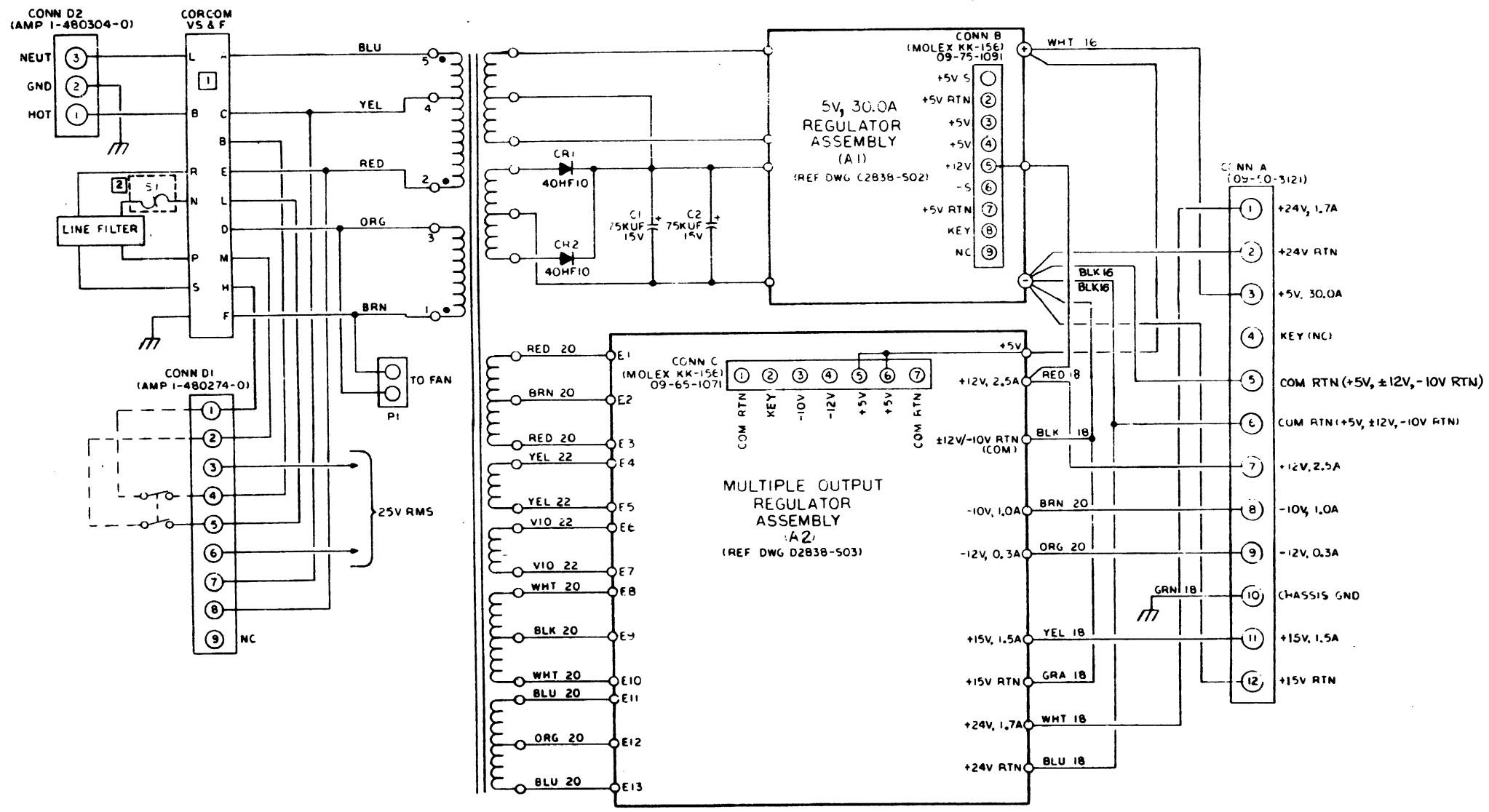


REVISIONS			
LTR	DESCRIPTION	SIGNATURE AND DATE	
		DFT	CHK ENGR
-	SEE SHEET 1		

C1	7300 / 35	CAPACITOR ALUM ELECT
C4	330 / 35	
C5	3300 / 35	
C7 & C9	100 / 35	CAPACITOR ALUM ELECT
C3	.001 / 100	CAPACITOR MYLAR
C6, C8 & C10	.01 / 100	CAPACITOR MYLAR
CR10	AE1C	DIODE 1A, 200V
CR7, 8, 11, 12, 14	AE3B	DIODE 3A, 100V
CR5 & CR6	AE3E	DIODE 3A, 100V
CR9	1N965	DIODE ZENER
CR13	1N963	DIODE ZENER
Q1	2N6554	TRANSISTOR
Q2	12505-1	
Q3 & Q5	2N2907	
Q4 & Q6	12500-3	TRANSISTOR
SCR1	5050BL53	SCR 3A
SCR2	30303L53	SCR 3A
U1, U2 & U3	14723	I.C. VOLTAGE REGULATOR
R8, R13 & R31	1.5K	POTENTIOMETER
R7, R11, R13, R14,	330 Ω	RESISTOR 1/2W, ±5% CF
R18, R24, R26 & R30	330 Ω	
R1, R5, R23 & R34	330 Ω	
R6, R15 & R22	4.7K	
R25, R27 & R35	4.7K	
R16	.5 Ω	
R17, R29, R37 & R38	6.8 Ω	
R2, R12 & R36	1K	
R9 & R20	1.2K	
R10, R21 & R33	2.4K	
R32	750 Ω	RESISTOR 1/2W ±5% MF
R3	.15 Ω	RESISTOR 2W, 10% BWH
R28	.33 Ω	RESISTOR 2W, 10% BWH
R4	—	RESISTOR 2W, 10% BWH
P.C.B.	13994	PRINTED CIRCUIT BOARD
ITEM NO.	PART NUMBER	DESCRIPTION
QUANTITY PER DASH NO.	PARTS LIST	

VENDOR SCHEMATIC
POWER-ONE 14214
P.S. CP214

SCALE: NONE	SIGNATURE	DATE	intel 3060 BOWERS AVE. SANTA CLARA CALIF. 95051
TOL. 2 PLC 3 PLC ANGLE	DRN BY: <i>W.A. Sumner</i>	5/77	
MATERIAL:	CHK BY: —	DFT: —	TITLE SCHEMATIC DIAGRAM POWER SUPPLY CRT / FLOPPY DISK
FINISH:	ENGR: —	APPD: —	
SEE SHEET 1 NEXT ASSY USED ON	AUTH BY: —	CODE: —	SIZE DEPT DRAWING NO. REV D MCD P2001254 B
	SHEET 4 OF 4		



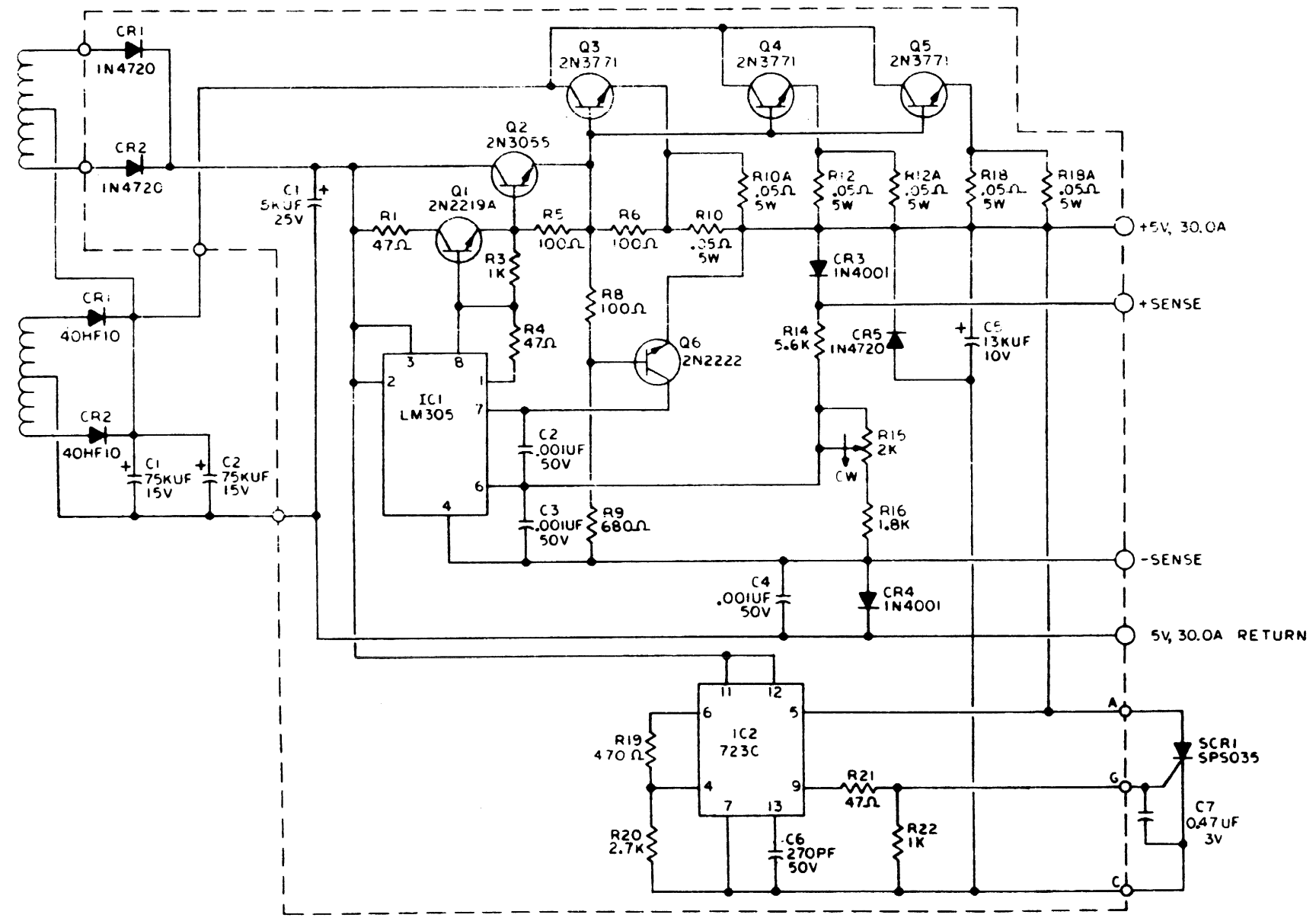
NOTES:

2 SI CONTAINED ON A1 ASSEMBLY.

1 CORCOM VS&F CONTAINS F118A-100/115VAC, 4A-220/240VAC.

PROPRIETARY NOTICE
 ALL PATENT OR OTHER PROPRIETARY RIGHTS PERTAINING TO THE ITEMS SOLD HEREIN, OR SHALL REMAIN THE SOLE PROPERTY OF XENITEK INCORPORATED EXCEPT THAT THE PURCHASER SHALL HAVE THE RIGHT TO USE SUCH ITEMS FOR THEIR INTENDED PURPOSE.

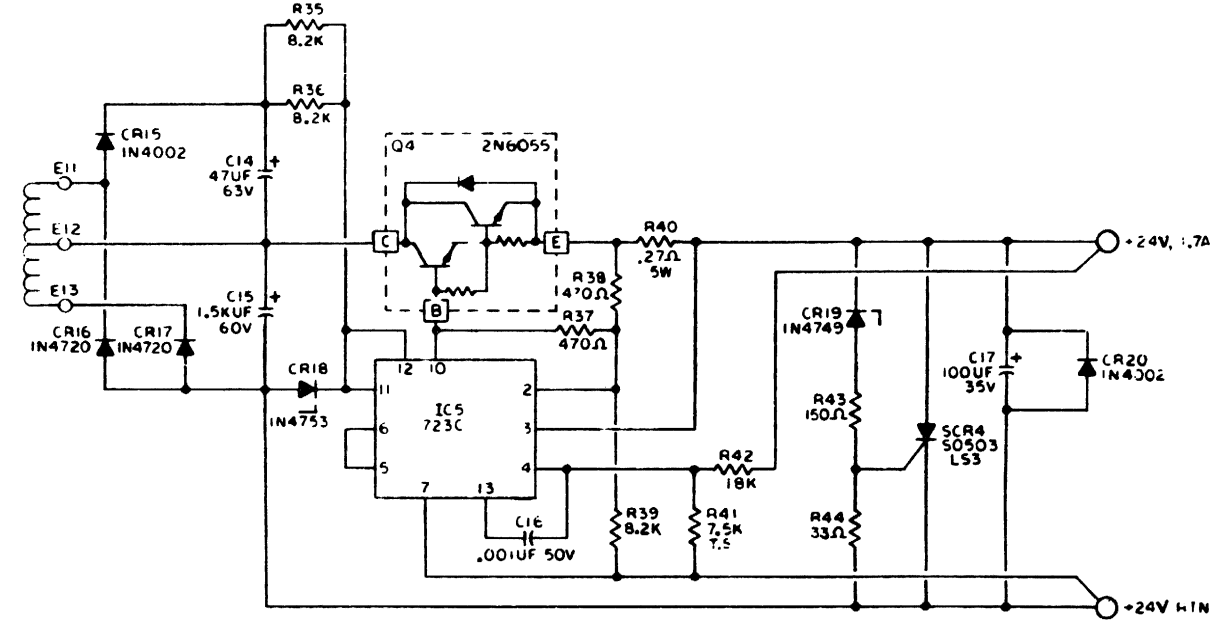
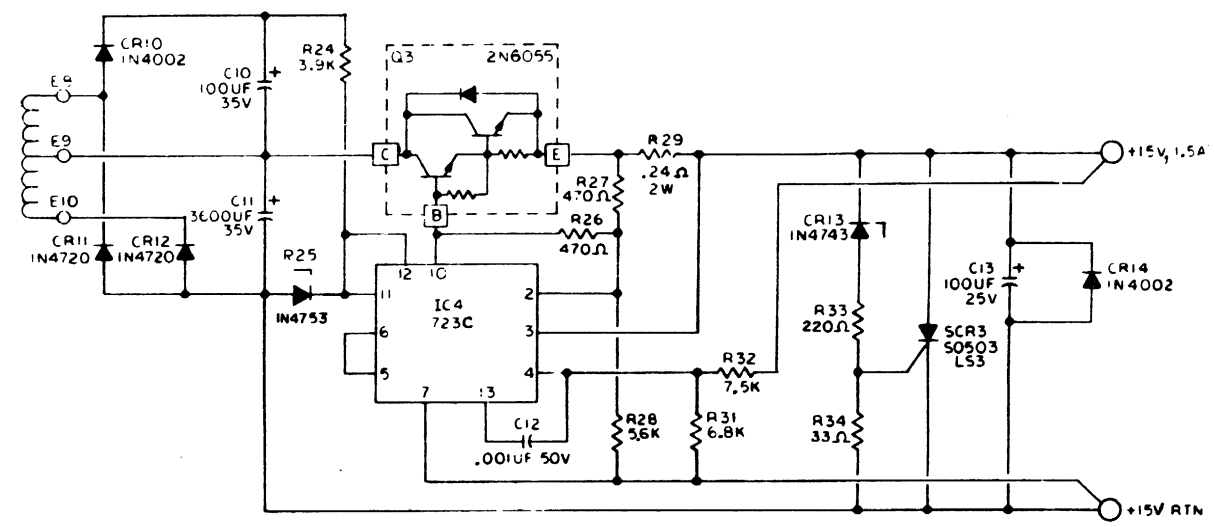
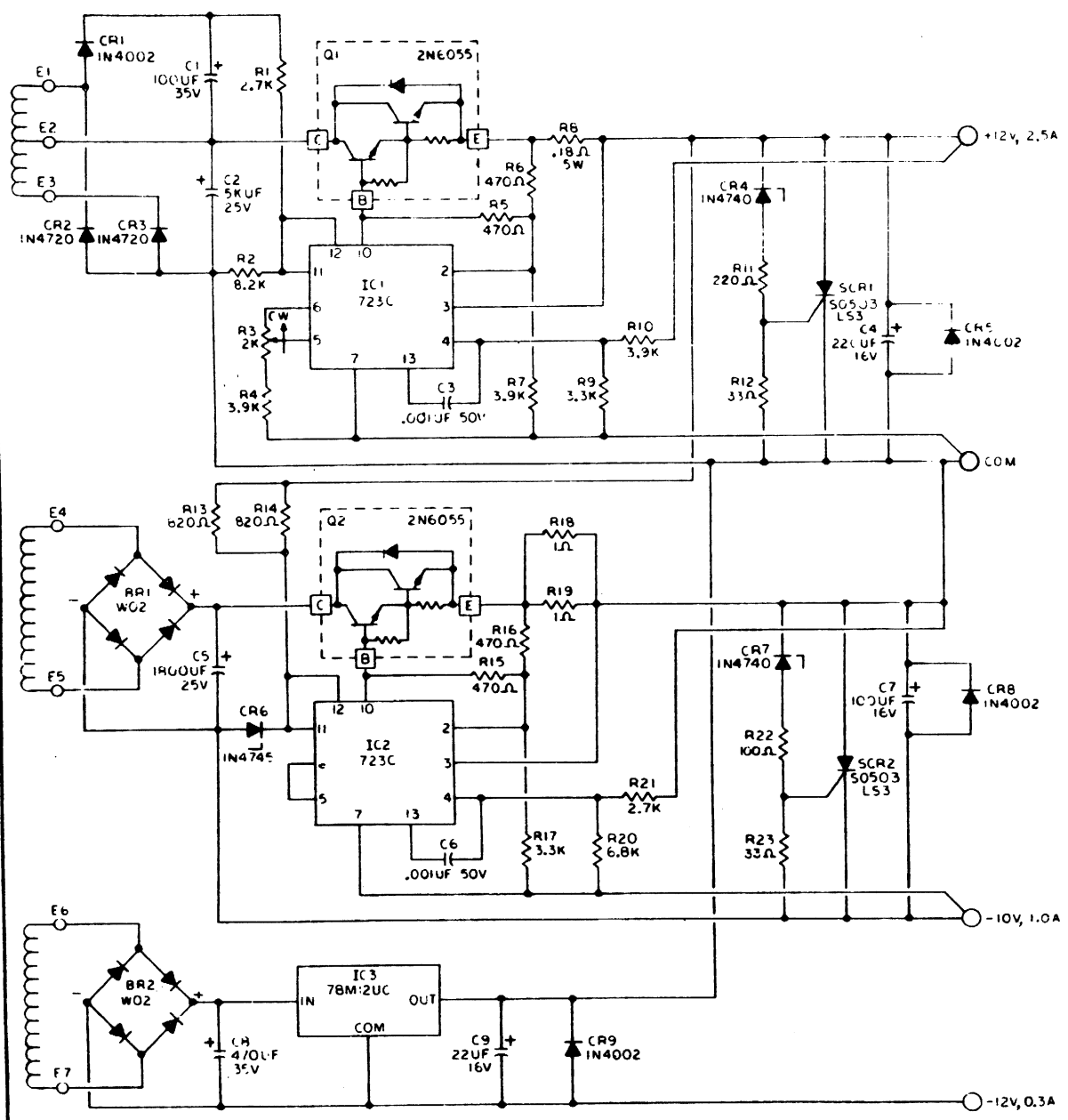
XENITEK INCORPORATED San Marcos, California			
TITLE SCHEMATIC, POWER SUPPLY (INTEL)			
CODE IDENT	SIZE	DWG. NO.	REV.
53279	D	2838-S01	CA
DO NOT SCALE DWG.		SCALE	SHEET OF



1. RESISTORS ARE 1/2W ±5% - CARBON FILM.
 NOTES

PROPRIETARY NOTICE
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 DO NOT SCALE DWG.

XENTEK INCORPORATED San Marcos, California			
TITLE SCHEMATIC, POWER SUPPLY (INTEL.)			
CODE IDENT	SIZE	DWG. NO.	REV.
53279	D	2838-S02	B
SCALE	WGTG	SHEET OF	



1. RESISTORS ARE 1/2W ±5% - CARBON FILM.
NOTES:

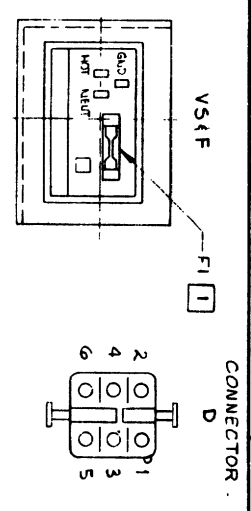
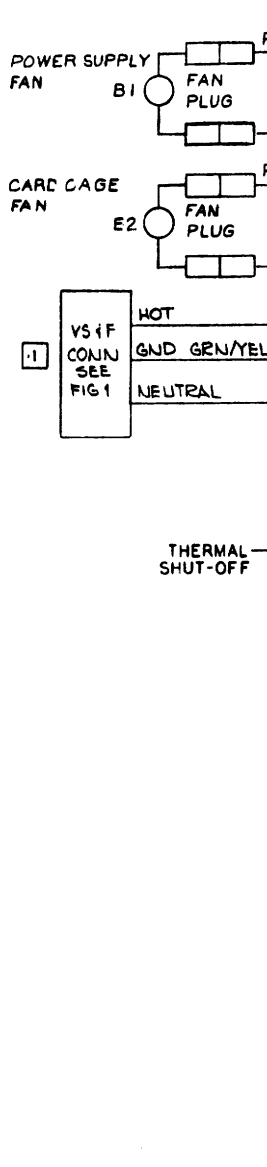
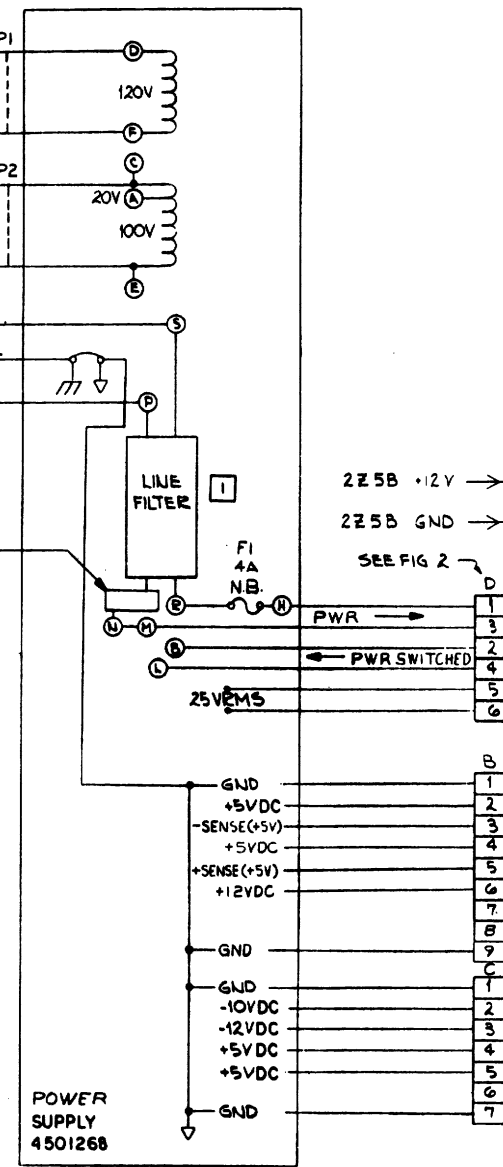
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DO NOT SCALE DWG.

XENTEK INCORPORATED San Marcos, California			
TITLE SCHEMATIC, POWER SUPPLY (INTEL)			
CODE IDENT	SIZE	DWG. NO.	REV.
53279	D	2838-S03	C
SCALE	WEIGHT	SHEET OF	

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4001269
EXPANSION CABLE

BACK PLANE	J15	P15	P14
BREQ9/	3	3	3
BREN8/	5	5	5
BREQ8/	7	7	7
BREN7/	9	9	9
BREQ7/	11	11	11
BREN6/	13	13	13
BREQ6/	15	15	15
ADR 0/	36	36	36
ADR 1/	35	35	35
ADR 2/	38	38	38
ADR 3/	57	57	57
ADR 4/	40	40	40
ADR 5/	39	39	39
ADR 6/	42	42	42
ADR 7/	41	41	41
ADR 8/	44	44	44
ADR 9/	43	43	43
ADR A/	46	46	46
ADR B/	45	45	45
ADR C/	48	48	48
ADR D/	47	47	47
ADR E/	50	50	50
ADR F/	49	49	49
DAT 0/	18	18	18
DAT 1/	17	17	17
DAT 2/	20	20	20
DAT 3/	19	19	19
DAT 4/	22	22	22
DAT 5/	21	21	21
DAT 6/	24	24	24
DAT 7/	23	23	23
DAT 8/	26	26	26
DAT 9/	25	25	25
DAT A/	28	28	28
DAT B/	27	27	27
DAT C/	30	30	30
DAT D/	29	29	29
DAT E/	32	32	32
DAT F/	31	31	31
	1	1	1
	2	2	2
	4	4	4
	6	6	6
	8	8	8
	10	10	10
	12	12	12
	14	14	14
	16	16	16
	33	33	33
	34	34	34



[1] FUSE REQUIREMENTS.
110V - 4A
230V - 2A

NOTES: UNLESS OTHERWISE SPECIFIED

QUANTITY PER DRAWING NO.	PART NUMBER	DESCRIPTION
1	4002164	MDS-202
1	4002165	MDS-201
1	4002166	MDS-201

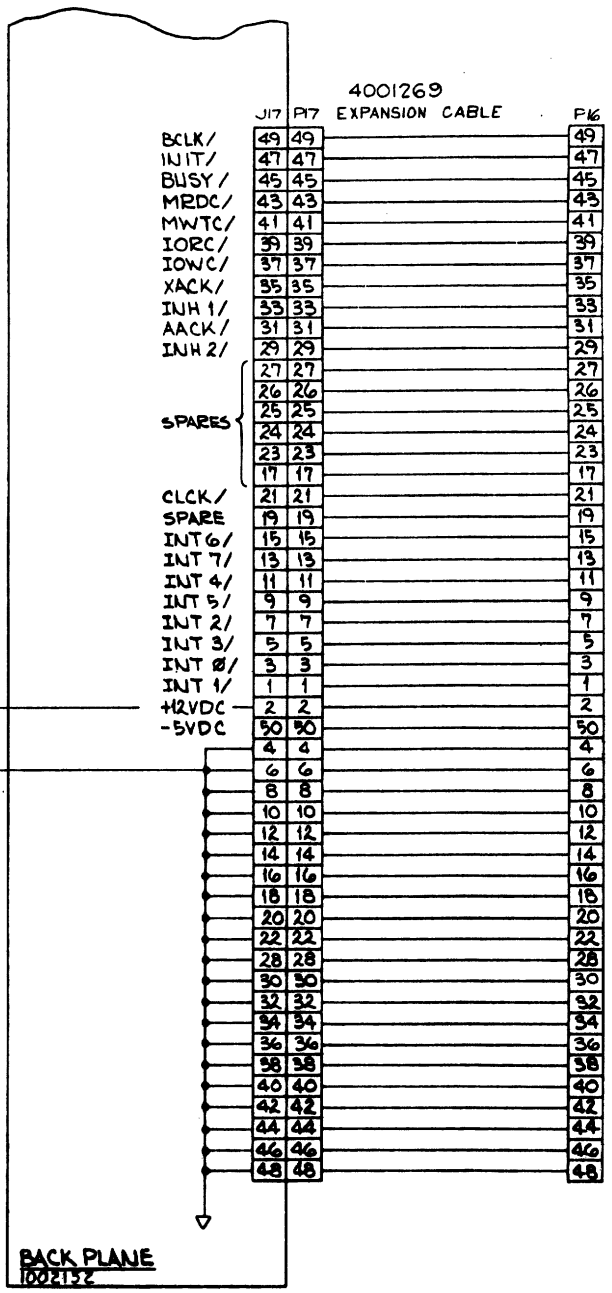
SCALE	DATE	BY	CHECKED
NONE			

REV	DESCRIPTION	DATE	BY	CHECKED
1	SYSTEM INTERCONNECT			
2	MDS-201/202			
3				

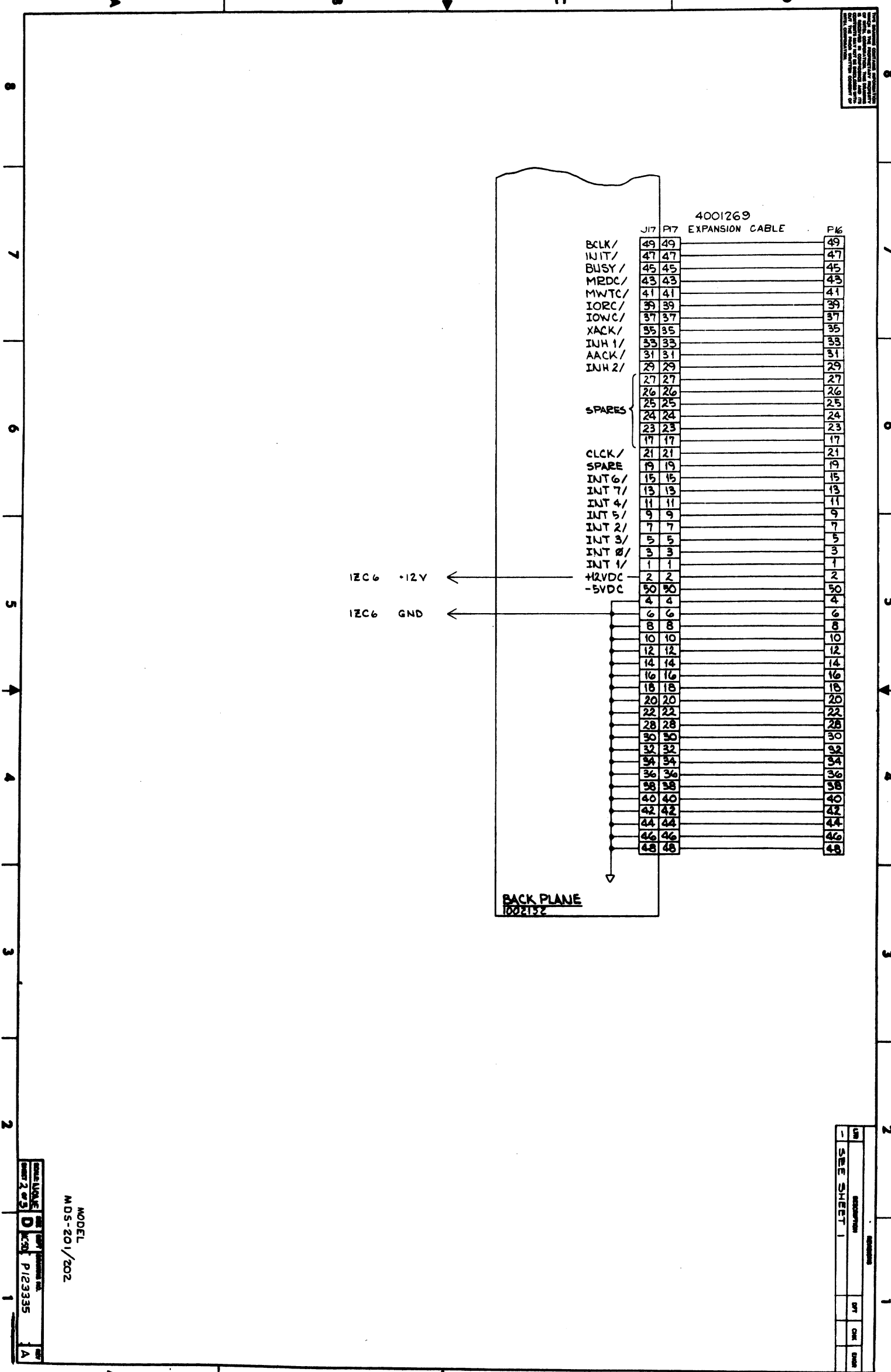
REV	DESCRIPTION	DATE	BY	CHECKED
D	1/3			
A	1/3			

REV	DESCRIPTION	DATE	BY	CHECKED
A	1/3			

FOR THE USE OF THE CONTRACTOR OF THE PROJECT
 THIS DRAWING IS TO BE USED IN CONNECTION WITH THE CONTRACT
 NO. 100-201-202, DATED 10/1/68, BETWEEN THE
 UNITED STATES GOVERNMENT AND THE CONTRACTOR.
 THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE
 ACCURACY OF THE INFORMATION CONTAINED
 HEREIN.



12C6 +12V ←
 12C6 GND ←



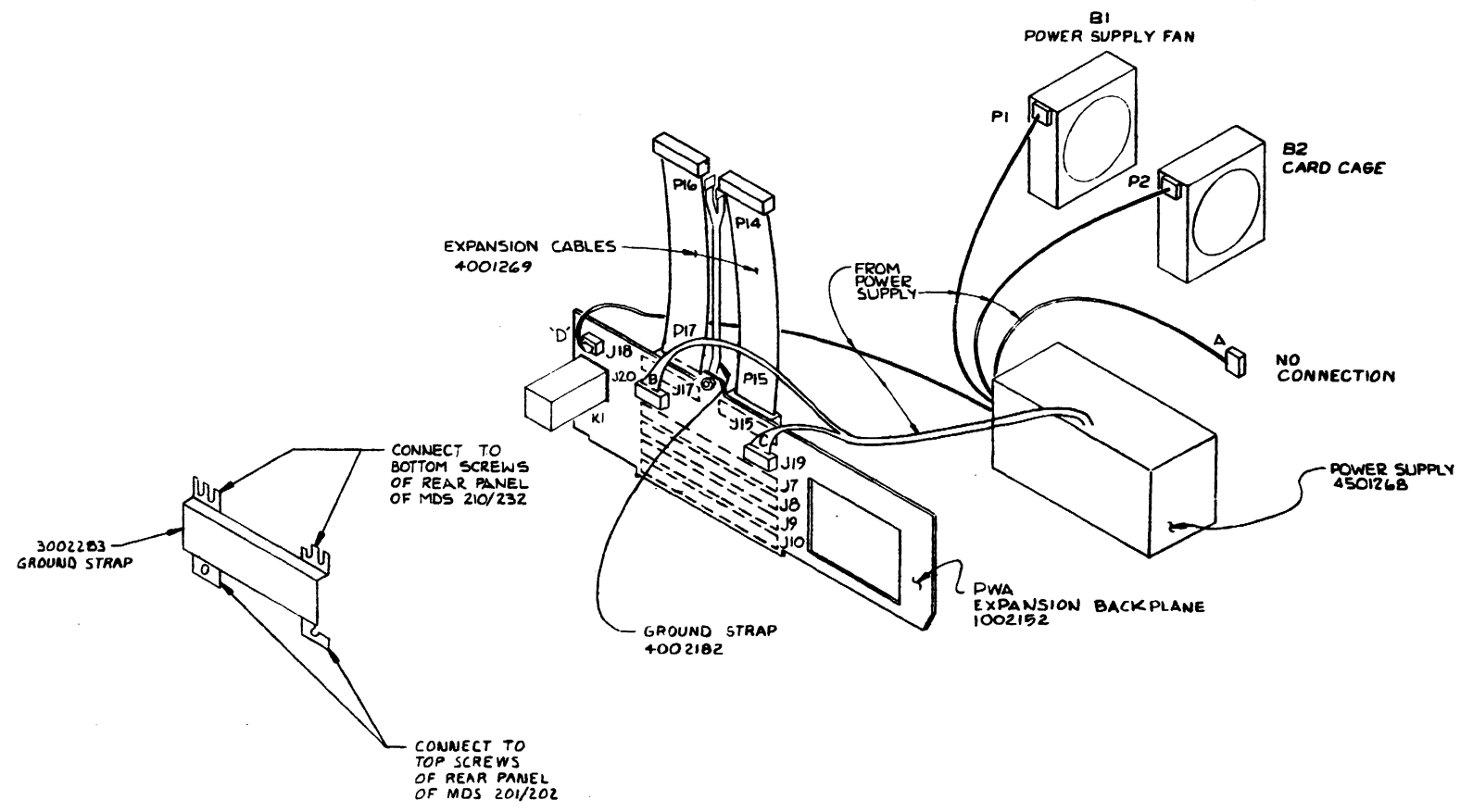
MODEL
 MDS-201/202

DATE: 10/1/68
 DRAWN: D
 CHECKED: P123335
 APPROVED: A

NO.	DESCRIPTION	DATE	CHK.	BY
1	SEE SHEET 1			

ALL DIMENSIONS UNLESS OTHERWISE SPECIFIED ARE IN INCHES. DIMENSIONS IN PARENTHESES ARE IN MILLIMETERS. DIMENSIONS IN PARENTHESES ARE TO BE USED AS A GUIDE ONLY. DIMENSIONS IN PARENTHESES ARE TO BE USED AS A GUIDE ONLY. DIMENSIONS IN PARENTHESES ARE TO BE USED AS A GUIDE ONLY.

REVISIONS			
LTN	DESCRIPTION	BY	CHK
-	SEE SHEET 1	PAW	ENR

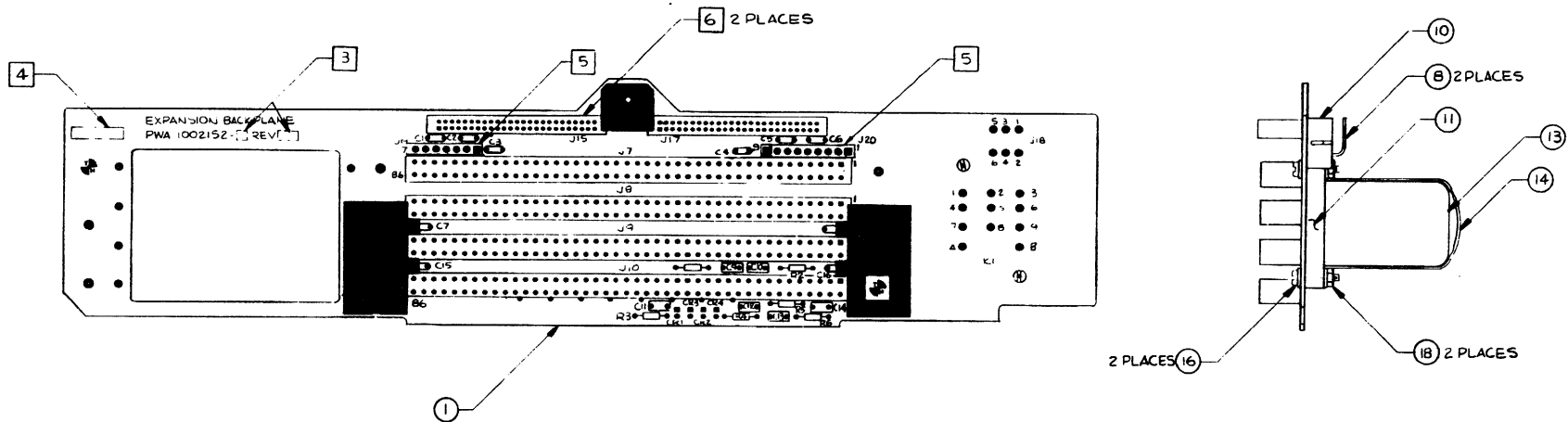


MODEL
MDS-201/202

SCALE: NONE	REV: D	REV: MCD	REV: P123335	REV: A
SHEET 3 OF 3				

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REVISIONS				
ITEM	DESCRIPTION	SIGNATURE AND DATE		
		DET	CHK	ENGR
1	ENGR RELEASE	[Signature]	[Signature]	3/21/78
2	ENGR REL ECO 2-3036	[Signature]	[Signature]	3/21/78
A	ECO 2-3157	[Signature]	[Signature]	3/21/78
B	ECO 2-4613	[Signature]	[Signature]	3/21/78
-	LIMITED PROD RELSE RW0061	[Signature]	[Signature]	3/21/78
C	ECO 2-4922	[Signature]	[Signature]	3/21/78
D	ECO 13-5782	[Signature]	[Signature]	3/21/78



- 6 MOUNT OPEN SIDE AT THE TOP EDGE.
 - 5 REMOVE PIN 6 (KEY) ON J19 & PIN 7 (KEY) ON J20.
 - 4 MARK ASSY VENDOR ID WITH CONTRASTING PERM COLOR, NON-CONDUCTIVE, .12 HIGH, APPROX WHERE SHOWN.
 - 3 MARK ASSY DASH NO AND REV LEVEL WITH CONTRASTING PERM COLOR, NON-CONDUCTIVE, .12 INCH HIGH APPROX WHERE SHOWN.
2. WORKMANSHIP PER MCSD QAW5 99-0007-001.
1. ASSY PART NO. IS 1002152-02. ASSY AND PL ARE TRACKING DOCUMENTS.

NOTES: UNLESS OTHERWISE SPECIFIED

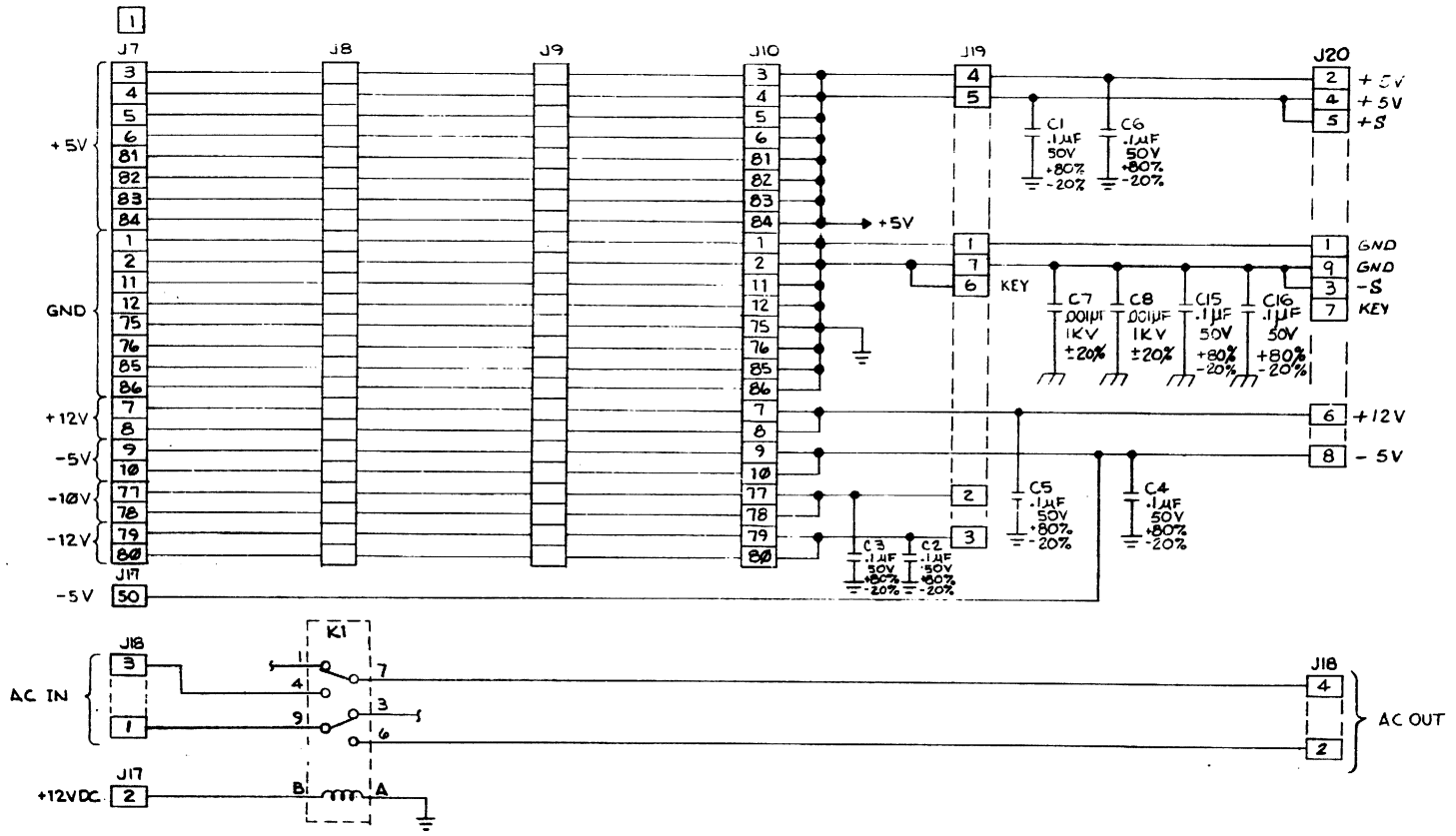
SEE SEPARATE PARTS LIST

QUANTITY PER DASH NO		ITEM NO	PART NUMBER	DESCRIPTION
4002820	MDS-20X			
123007	MDS-20X			
4001741	MDS-20Z			
4002165	MDS-20I			
4002164	MDS-20Z			
4002145	MDS-20I			
	NEXT ASSY			
	USED ON			

SCALE:	SIGNATURE	DATE		3868 BOWERS AVE. SANTA CLARA CA 95051
TOL = 2 PLC 3 PLC ANGLE	DRN BY: A. ESPINOZA	3/21/78		
MATERIAL:	CHK BY:		TITLE	
FINISH:	ENGR APPD:		PRINTED WIRING ASSY	
	ENGR APPD:		EXPANSION BACKPLANE	
	AUTH BY:		SIZE	DEPT
	CODE:	SHEET	D	MCSD
		OF	1	DRAWING NO.
				L 1002152
				REV
				D

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REVISIONS		
LTR	DESCRIPTION	SIGNATURE AND DATE
A	CREATED PER ECO 2-4921	<i>[Signature]</i> 11/17/77

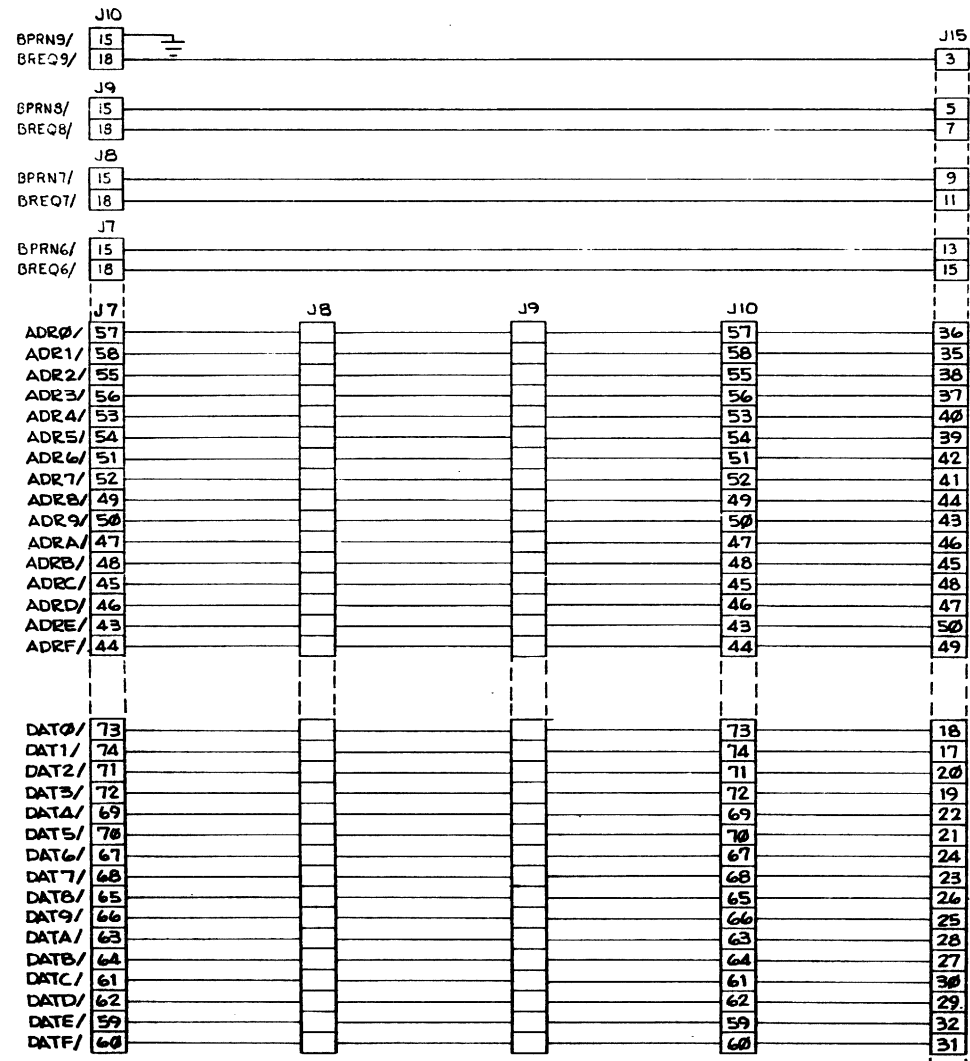


- 3. ALL RESISTOR VALUES ARE 33 OHMS, $\frac{1}{4}$ W, $\pm 5\%$.
 - 2. ALL CAPACITORS ARE 100 PICO FARADS, 500V, $\pm 5\%$
 - 1. PIN NUMBERS FOR J7, J8, J9 AND J10 ARE ALL THE SAME.
- NOTES: UNLESS OTHERWISE SPECIFIED

QUANTITY PER EACH NO.				ITEM NO.	PART NUMBER	DESCRIPTION
SCALE: NONE				SIGNATURE	DATE	 3065 BOWEN AVE. SANTA CLARA CALIF. 95051
TOL 2 PLC	3 PLC	ANGLE	DRN BY	<i>[Signature]</i>	9-5-77	
MATERIAL:				CHEK BY		TITLE
LAST USED NOT USED				DATE		SCHEMATIC DIAGRAM
REF DESIGNATIONS				APP'D		EXPANSION BACKPLANE
NEXT ASSY USED ON				DATE		SIZE DEPT DRAWING NO. REV
				AUTH BY		D MCSD L2002771 A
				CODE	SHEET 1 OF 3	

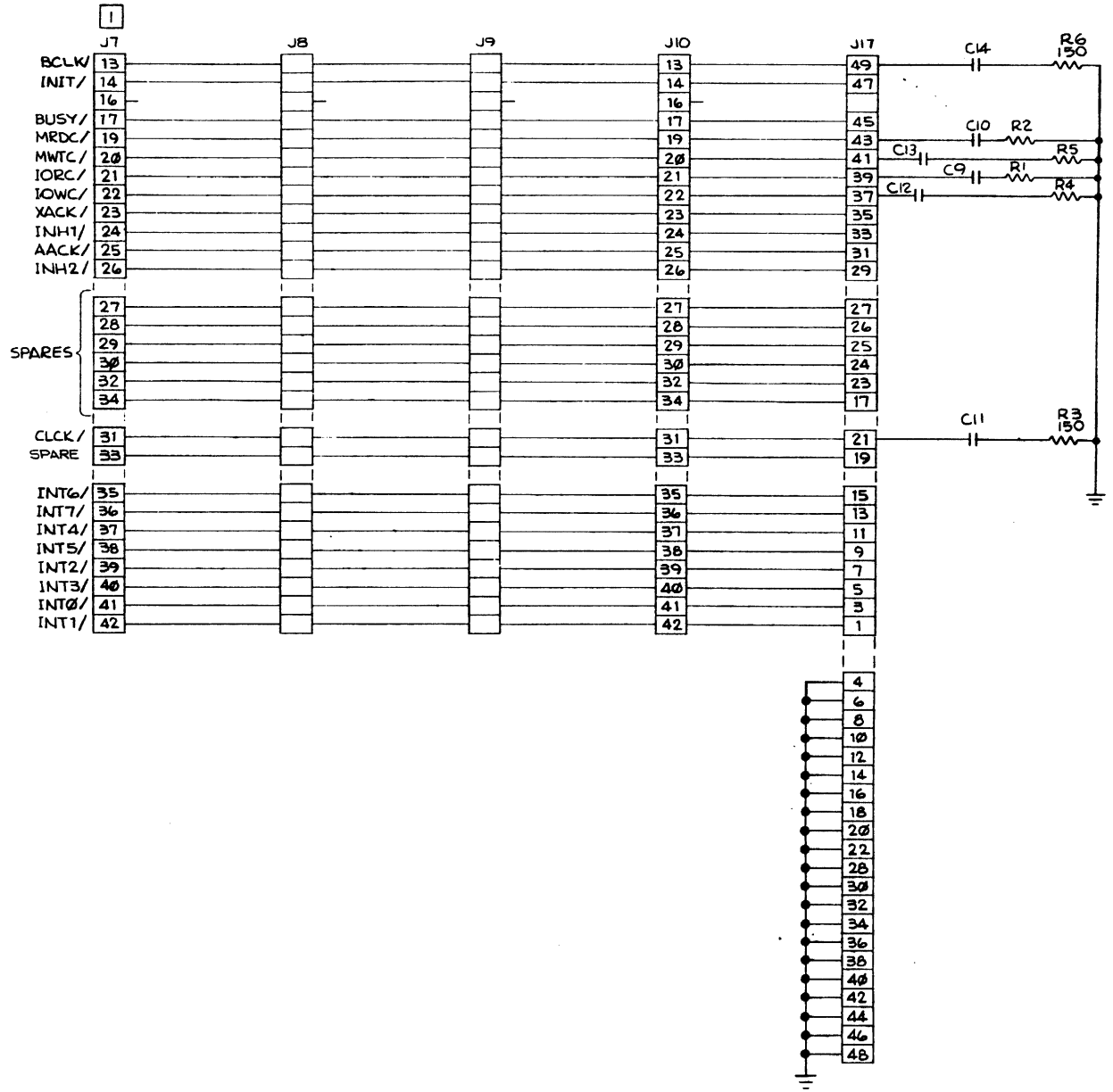
THIS DRAWING CONTAINS INFORMATION OF A PROPRIETARY NATURE AND IS THE PROPERTY OF THE COMPANY. IT IS TO BE KEPT CONFIDENTIAL AND ITS DISCLOSURE TO ANY OTHER PERSON WITHOUT THE WRITTEN CONSENT OF THE COMPANY IS PROHIBITED.

REVISIONS				
LTR	DESCRIPTION	DFT	CHK	ENGR
-	SEE SHEET 1			



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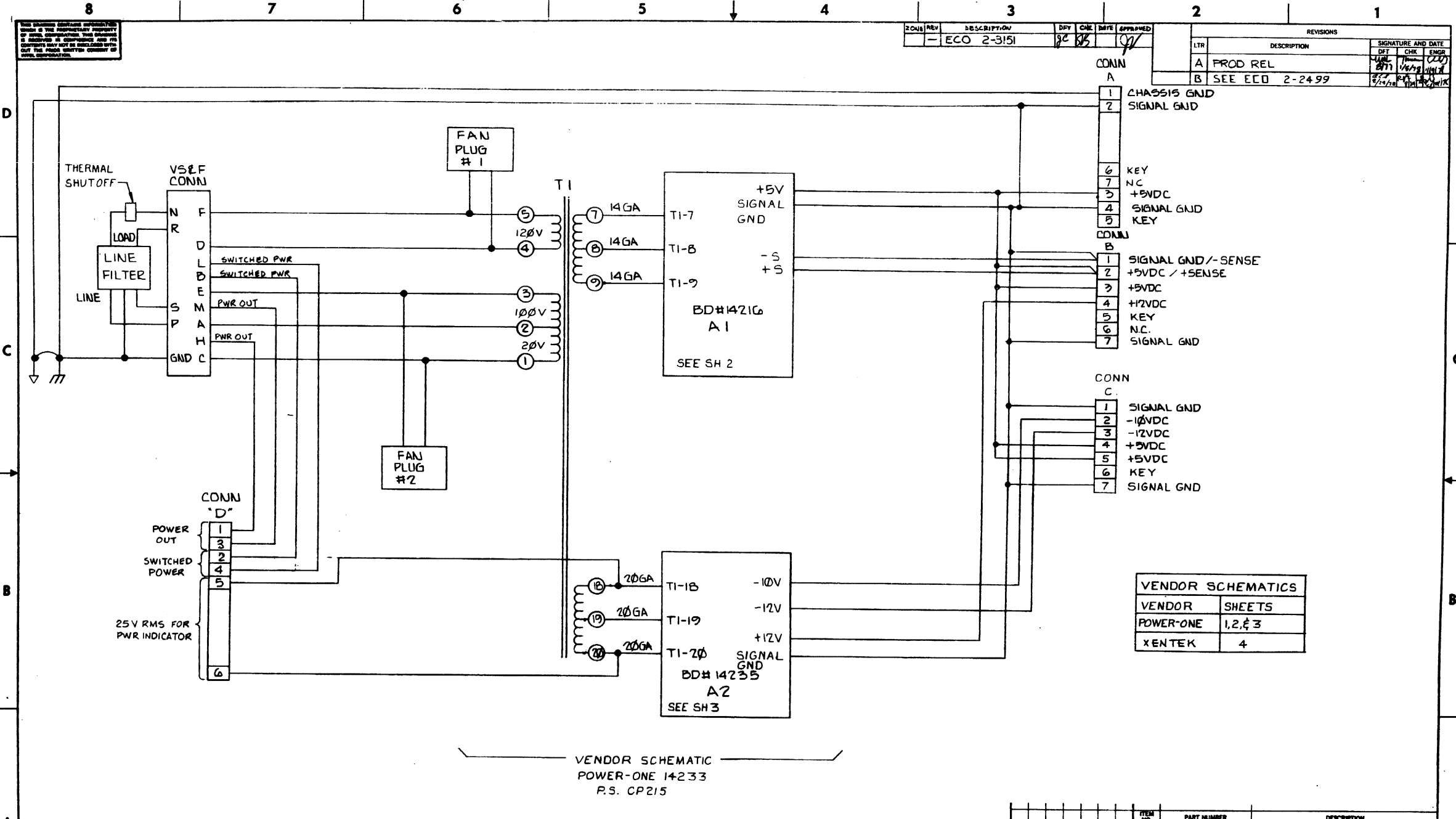
REVISIONS				
LTN	DESCRIPTION	DFT	CHK	ENGR
-	SEE SHEET 1			



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ZONE	REV	DESCRIPTION	DFY	CHK	DATE	APPROVED
	-	ECO 2-3151	8/2	8/5		

REVISIONS			SIGNATURE AND DATE		
LTR	DESCRIPTION	DATE	CHK	DATE	ENGR
A	PROD REL	8/71	1/6/78	1/2/78	
B	SEE ECO 2-2499	8/71	1/6/78	1/2/78	



CONN A

1	CHASSIS GND
2	SIGNAL GND
3	KEY
4	NC
5	+5VDC
6	SIGNAL GND
7	KEY

CONN B

1	SIGNAL GND/-SENSE
2	+5VDC / +SENSE
3	+5VDC
4	+12VDC
5	KEY
6	N.C.
7	SIGNAL GND

CONN C

1	SIGNAL GND
2	-10VDC
3	-12VDC
4	+5VDC
5	+5VDC
6	KEY
7	SIGNAL GND

VENDOR SCHEMATICS	
VENDOR	SHEETS
POWER-ONE	1,2,3
XENTEK	4

VENDOR SCHEMATIC
POWER-ONE 14233
P.S. CP215

QUANTITY PER DASH NO.				ITEM NO.	PART NUMBER	DESCRIPTION
SCALE: NONE				SIGNATURE		DATE
TOL: 2 PLC 3 PLC ANGLE				DRN BY: <i>[Signature]</i>		8/71
MATERIAL:				CHK BY: <i>[Signature]</i>		1-78
FINISH:				DFT: <i>[Signature]</i>		1/6/78
NEXT ASSY USED ON				APPR: <i>[Signature]</i>		1/2/78
				AUTH BY: <i>[Signature]</i>		1/2/78
				CODE: SHEET 1 of 4		

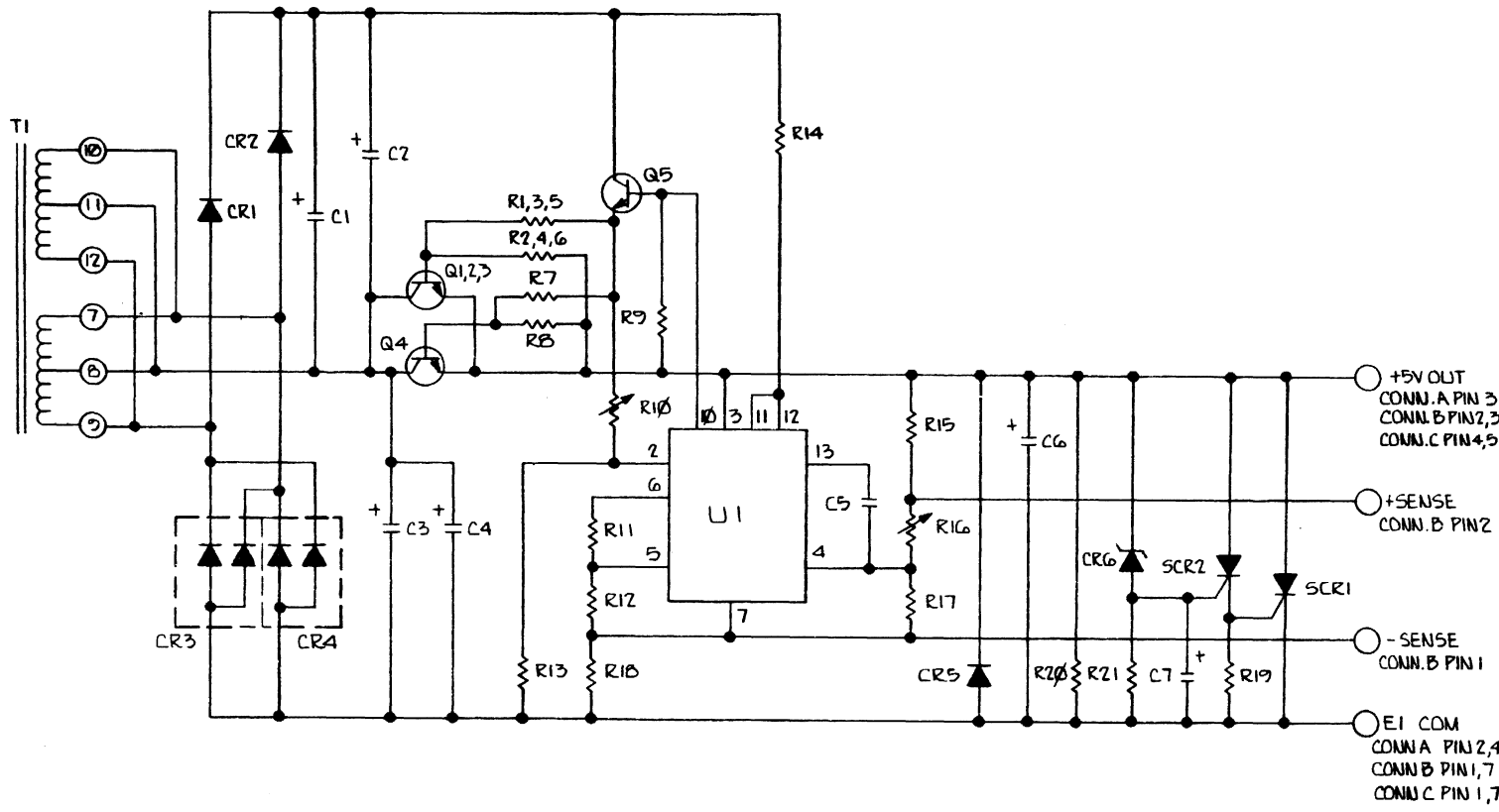
PARTS LIST			TITLE		
QTY	DESCRIPTION	REF	QTY	DESCRIPTION	REF

4501268	MDS-211				
4501268	MDS-210				
4501268	MDS-202				
4501268	MDS-201				

SIZE	DEPT	DRAWING NO.	REV
D	MCSO	P2001271	B

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REVISIONS			
LTR	DESCRIPTION	SIGNATURE AND DATE	
		DFT	ENGR
-	SEE SHEET 1		



C1, C2, C6	1000/16	CAPACITOR ALUM ELECT
C3, C4	64.000/15	CAPACITOR ALUM ELECT.
C5	.001/100	CAPACITOR MYLAR
C7	10/25	CAPACITOR ALUM ELECT
CR1, CR2	AE1C	DIODE 1A, 500V
CR3, CR4	R711A	DIODE BRIDGE
CR5	AE3B	DIODE 3A, 100V
CR6	1N752A	DIODE, ZENER
SCR1	MCR699P-1	SCR 20A, 25V
SCR2	90303LS3	SCR 3A, 50V
U1	1A723	IC VOLTAGE REGULATOR
Q1, Q2, Q3, Q4	12505-2	TRANSISTOR POWER
Q5	12500-3	TRANSISTOR POWER
R1, 3, 5, 7, 15, 18	6.8Ω	RESISTOR, 1/2W, 5%, CF
R2, 4, 6, 8, 14	22Ω	RESISTOR, 1/2W, 2%, MF
R9, 11, 12, 13	2.2KΩ	RESISTOR, 1/2W, 5%, CF
R19, R20, R21	82Ω	RESISTOR, 1/2W, 5%, CF
R17	1.6K	RESISTOR, 1/2W, 2%, MF
R10, R16	1.5K	POTENTIOMETER
P.W.B.	14216	PRINTED CIRCUIT BOARD

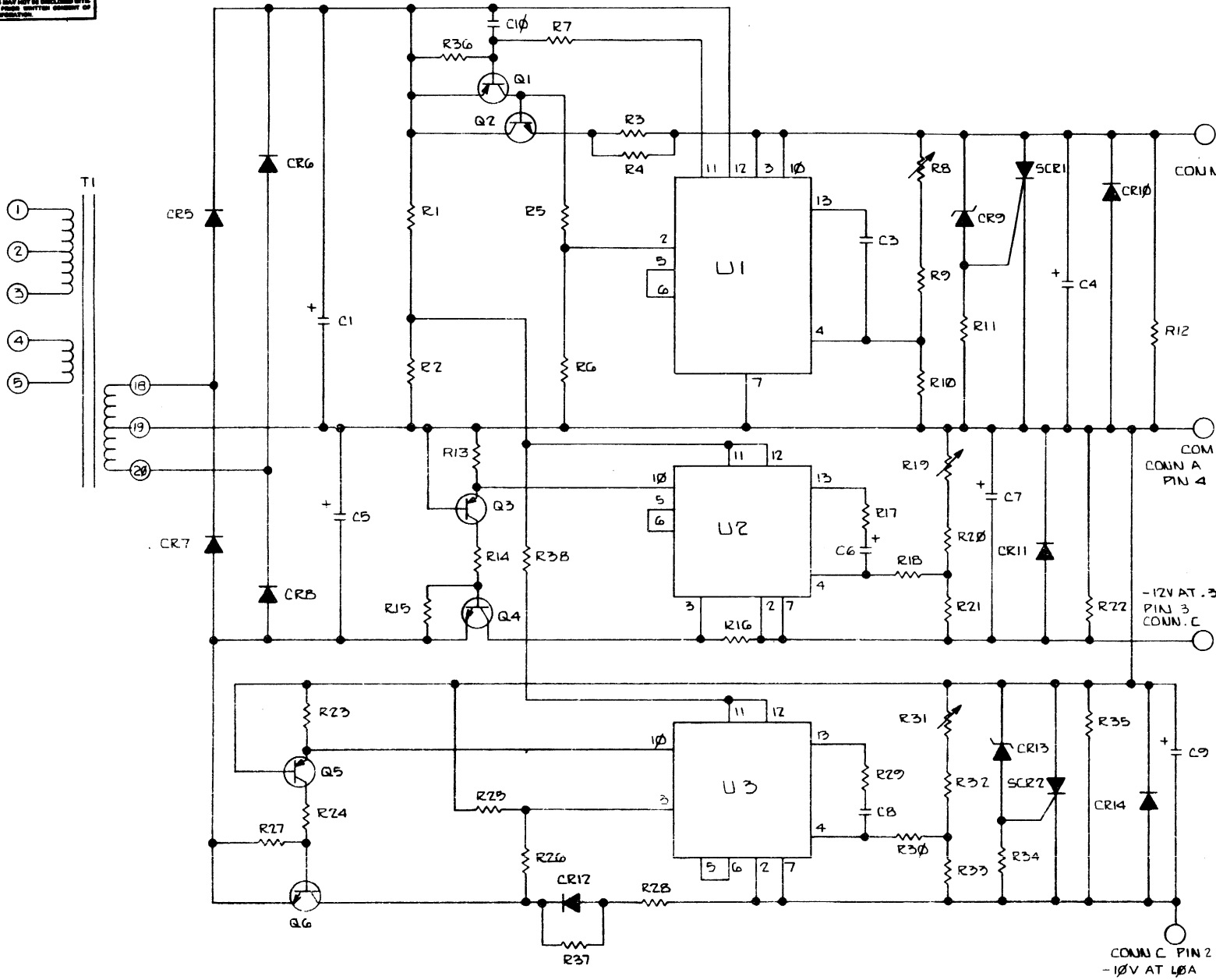
VENDOR SCHEMATIC
POWER-ONE 14215
P.S. CP215

QUANTITY PER DASH NO.		PART NUMBER		DESCRIPTION	
SCALE: NONE		SIGNATURE: [Signature]		DATE: 5/77	
TOL: 2 PLC	3 PLC	ANGLE	DRAWN BY: [Signature]	TITLE: SCHEMATIC DIAGRAM - EXP. CHASSIS POWER SUPPLY	
MATERIAL:		CHK BY:		DFT APPD:	
FINISH:		ENGR APPD:		AUTH BY:	
NEXT ASSY:		USED ON:		CODE: SHEET 2 OF 4	
		SIZE: D		DEPT: MESD	
		DRAWING NO. P2001271		REV: B	

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REVISIONS			SIGNATURE AND DATE		
LTR	DESCRIPTION		DFT	CHK	ENGR
+	SEE SHEET 1				

D
C
B
A



C1	7300 / 35	CAPACITOR, ALUM ELECT
C4	330 / 35	↑ ↑ ↑
C5	3300 / 35	↑ ↑ ↑
C7, C9	100 / 35	CAPACITOR, ALUM ELECT
C3, C6, C8, C10	.01 / 100	CAPACITOR, MYLAR
CR10	AE1C	DIODE 1A 200V
CR7, 8, 11, 12, 14	AE3B	3A 100V
CR5, CR6	MR750	22A50V
CR9	1N965	ZENER
CR13	1N759	DIODE ZENER
Q1	2N6554	TRANSISTOR
Q2	12505-1	↑
Q3, Q5	2N2907	↑
Q4, Q6	12500-3	TRANSISTOR
SCR1, 2	S0303LS3	SCR 3A
U1, U2, U3	LM723C	I.C. VOLTAGE REGULATOR
R1, R11, R13, R14, R7	330 Ω	RESISTOR 1/2W, ±5%, CF
R18, R24, R26, R30	330 Ω	↑ ↑ ↑
R5, R23, R34	330 Ω	↑ ↑ ↑
R6, R15, R22	4.7K	↑ ↑ ↑
R25, R27, R35	4.7K	↑ ↑ ↑
R16	1.5 Ω	↑
R17, R29, R37, R38	6.8 Ω	↑ ↑ ↑
R2, R12, R36	1K	RESISTOR 1/2W, ±5%, CF
R9, R20	1.7K	RESISTOR 1/4W, ±2%, MF
R10, R21, R33	2.4K	RESISTOR 1/4W, ±2%, MF
R32	750 Ω	RESISTOR 1/4W, ±2%, MF
R3	.22 Ω	RESISTOR 2W, ±10%, BWH
R4		RESISTOR 2W, ±10%, BWH
R28	.33 Ω	RESISTOR 2W, ±10%, BWH
RB, R19, R31	1.5K	POTENTIOMETER
PWB	14235	PRINTED CIRCUIT BOARD.

VENDOR SCHEMATIC
POWER ONE 13995-C
PWB 14235

QUANTITY PER DASH NO.		PART NUMBER		DESCRIPTION	
SCALE: NONE	SIGNATURE: [Signature]	DATE: 8/77	3065 BOWERS AVE. SANTA CLARA CALIF. 95051		
TOL. 2 PLC	3 PLC	ANGLE	TITLE: SCHEMATIC DIAGRAM - EXP. CHASSIS POWER SUPPLY		
MATERIAL:	DFT APPD ENGR APPD		SIZE: 8 1/2" x 11" DRAWING NO. P2001271		
FINISH:	AUTH BY:		REV: B		
CODE:	SHEET 3 OF 4				

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DWG NO. 2001271 SH 4 REV B

ZONE	REV	DESCRIPTION	DFT	CHK	DATE	APPROVED
-	SEE SHEET 1					

D

C

B

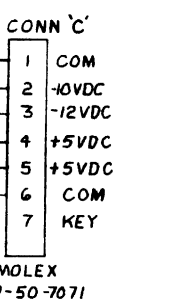
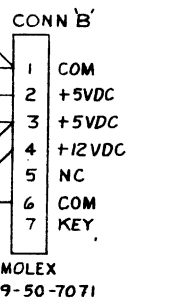
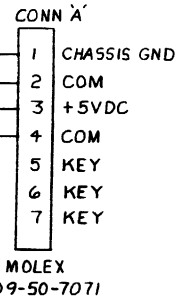
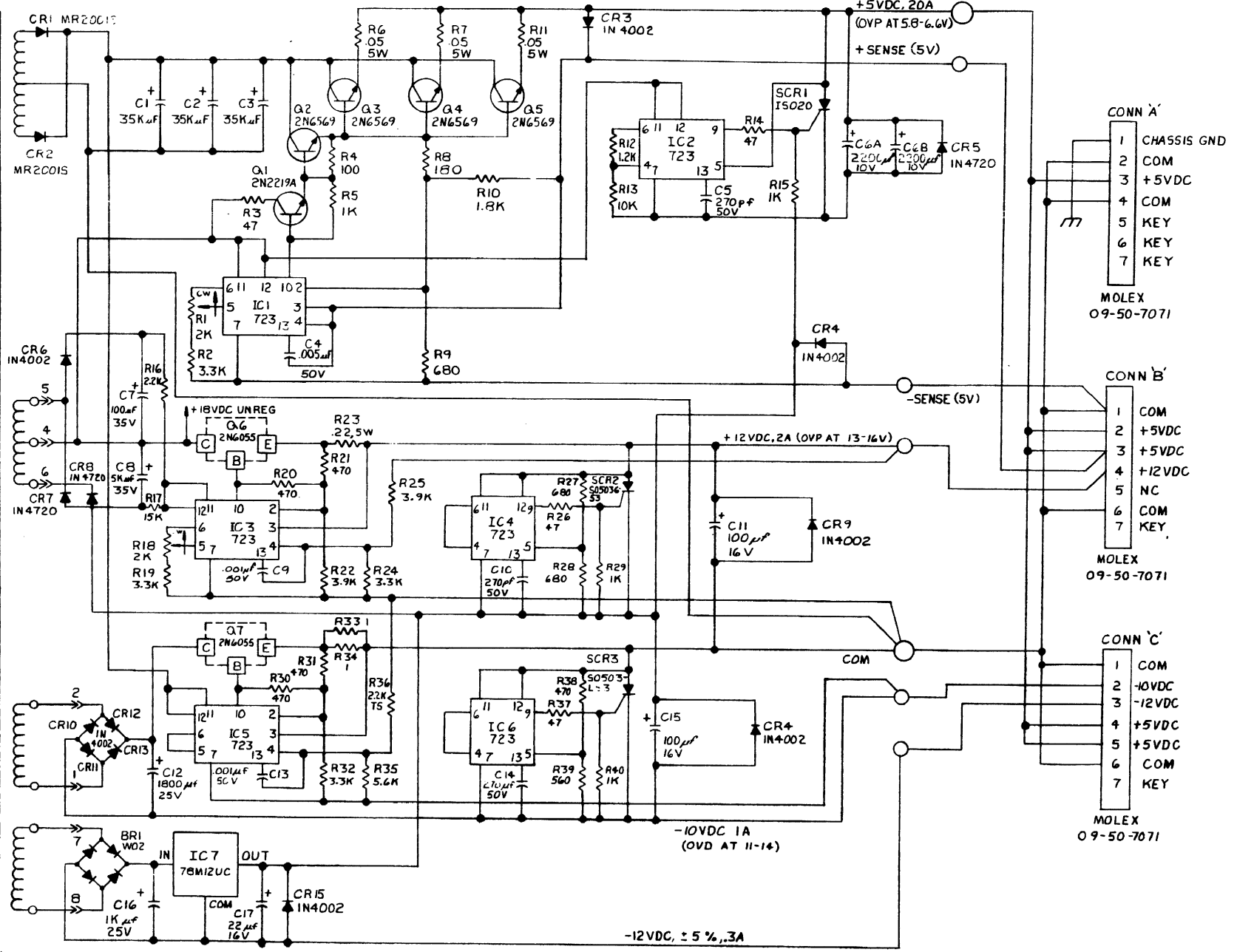
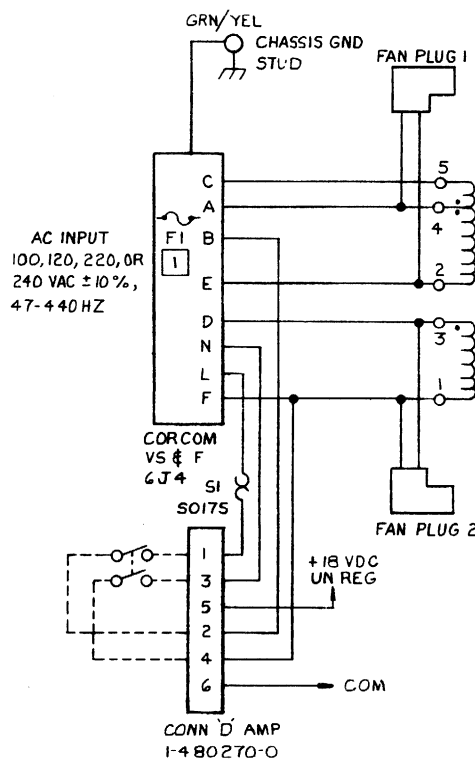
A

D

C

B

A



FI IS 6AMP FOR 100,120 OPERATION.
 FI IS 3AMP FOR 220,240 OPERATION.
 NOTES: UNLESS OTHERWISE SPECIFIED:

T1 A2837-T01

DRAWN <i>Jw</i>	SIZE D	DWG NO. P 2001271	REV B
ISSUED	SCALE	SHEET 4	



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ADDRESS JUMPER TABLE

JUMPER	FROM	TO	SELECTED BANKS	SELECTED ADDRESS RANGE
W1	E1	E9	0,1	0-10K
W1	E3	E13	2,3	10K-32K
W2	E2	E12	0,1	16K-32K
W2	E4	E16	2,3	
W3	E1	E10	0,1	32K-48K
W3	E3	E14	2,3	
W4	E2	E11	0,1	48K-64K
W4	E4	E15	2,3	
32K-64K BANKS				
W1	E1	E9	0,1	0-32K
W1	E3	E13	2,3	SELECT 7 AND 14 ONLY
W2	E2	E12	0,1	
W2	E4	E16	2,3	
W3	E1	E10	0,1	
W3	E3	E14	2,3	32K-64K
W4	E2	E11	0,1	48K-64K
W4	E4	E15	2,3	
0-32K BANKS				
W1	E1	E9	0,1	0-32K
W2	E2	E11	0,1	48K-64K
W3	E3	E13	2,3	16K-32K
W4	E4	E15	2,3	32K-64K
W1	E1	E10	0,1	
W2	E2	E12	0,1	16K-32K
W3	E3	E14	2,3	
W4	E4	E16	2,3	

HIGH ORDER BANK SELECT ADDRESS JUMPER TABLE

JUMPER	FROM	TO	SELECTED BANKS	SELECTED RANGE
W5	E5	E15	0,1	64-128K
W5	E7	E17	2,3	
W6	E6	E18	0,1	128-256K
W6	E8	E20	2,3	
W7	E5	E15	0,1	128-256K
W7	E7	E17	2,3	128-256K
W8	E6	E18	0,1	256-512K
W8	E8	E20	2,3	
W9	E5	E15	0,1	256-512K
W9	E7	E17	2,3	
W10	E6	E18	0,1	512-1024K
W10	E8	E20	2,3	

JUMPER	FROM	TO	SELECTED BANKS	SELECTED RANGE
W11	E5	E15	0,1	512-1024K
W11	E7	E17	2,3	
W12	E6	E18	0,1	1024-2048K
W12	E8	E20	2,3	
W13	E5	E15	0,1	1024-2048K
W13	E7	E17	2,3	
W14	E6	E18	0,1	2048-4096K
W14	E8	E20	2,3	
W15	E5	E15	0,1	2048-4096K
W15	E7	E17	2,3	
W16	E6	E18	0,1	4096-8192K
W16	E8	E20	2,3	
W17	E5	E15	0,1	4096-8192K
W17	E7	E17	2,3	
W18	E6	E18	0,1	8192-16384K
W18	E8	E20	2,3	
W19	E5	E15	0,1	8192-16384K
W19	E7	E17	2,3	
W20	E6	E18	0,1	16384-32768K
W20	E8	E20	2,3	
W21	E5	E15	0,1	16384-32768K
W21	E7	E17	2,3	
W22	E6	E18	0,1	32768-65536K
W22	E8	E20	2,3	
W23	E5	E15	0,1	32768-65536K
W23	E7	E17	2,3	
W24	E6	E18	0,1	65536-131072K
W24	E8	E20	2,3	

TRANSISTOR TABLE

TRANSISTOR	TYPE	PACKAGE	DEFULT
Q1	2N713	18	50
Q2	2N713	18	50
Q3	2N713	18	50
Q4	2N713	18	50
Q5	2N713	18	50
Q6	2N713	18	50
Q7	2N713	18	50
Q8	2N713	18	50
Q9	2N713	18	50
Q10	2N713	18	50
Q11	2N713	18	50
Q12	2N713	18	50
Q13	2N713	18	50
Q14	2N713	18	50
Q15	2N713	18	50
Q16	2N713	18	50
Q17	2N713	18	50
Q18	2N713	18	50
Q19	2N713	18	50
Q20	2N713	18	50

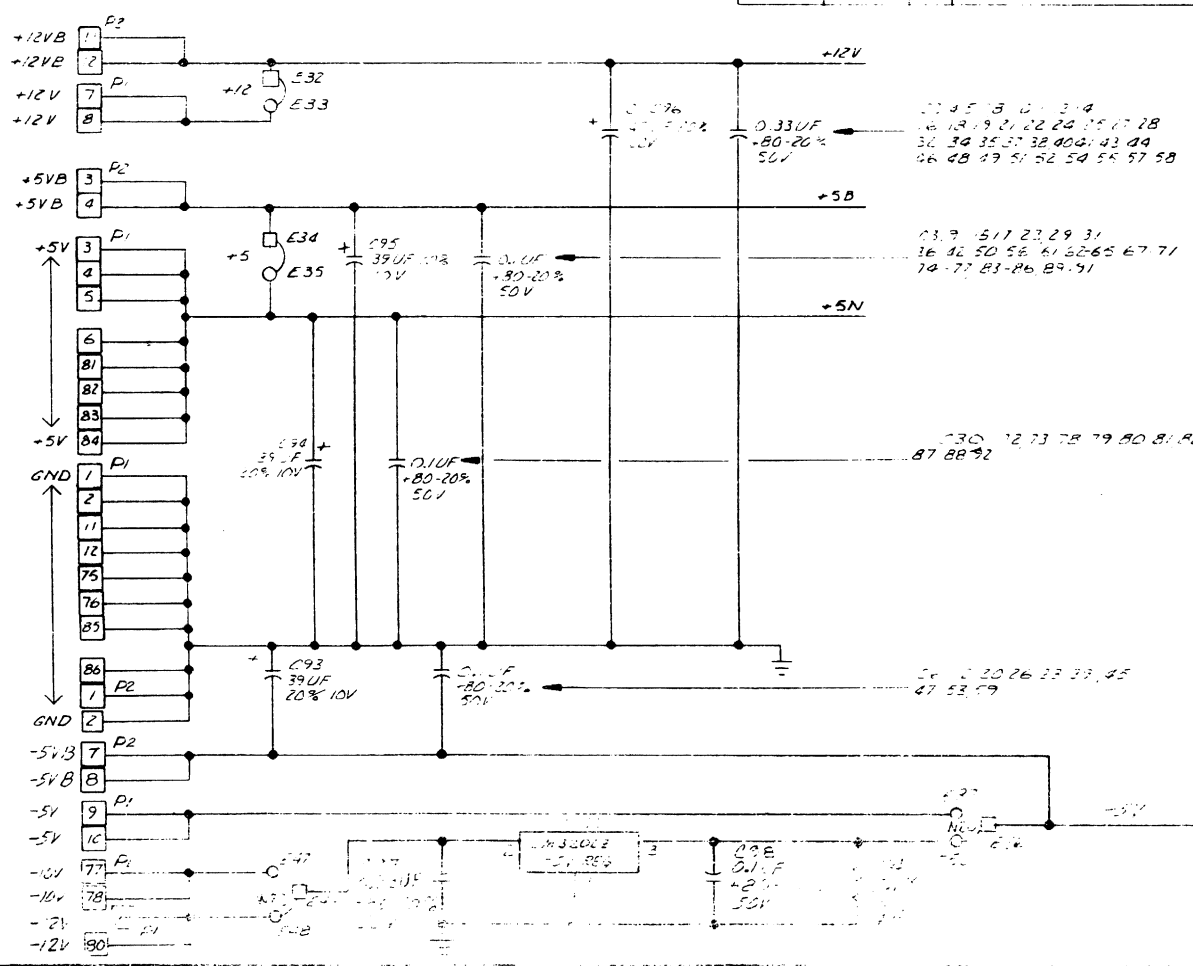
- 1. ALL RESISTOR VALUES IN OHMS UNLESS OTHERWISE SPECIFIED.
- 2. ALL CAPACITOR VALUES IN PF UNLESS OTHERWISE SPECIFIED.
- 3. ALL RESISTOR VALUES IN OHMS UNLESS OTHERWISE SPECIFIED.

DEVICE TABLE

REF.	TYPE	PACKAGE	DEFULT	USED	NOT USED
A107	74LS13	14	50	A107, A108, A109	A110, A111, A112, A113
C99	74LS10	14	50	C99	
CR1	74LS10	14	50	CR1	
E51	74LS10	14	50	E51	
L6	74LS10	14	50	L6	
Q1	2N713	18	50	Q1	
R41	74LS10	14	50	R41	
RP2	74LS10	14	50	RP2	
T600	74LS10	14	50	T600	
W24	74LS10	14	50	W24	

JUMPER	FROM	TO	SELECTED BANKS	SELECTED RANGE
W11	E5	E15	0,1	512-1024K
W11	E7	E17	2,3	
W12	E6	E18	0,1	1024-2048K
W12	E8	E20	2,3	
W13	E5	E15	0,1	1024-2048K
W13	E7	E17	2,3	
W14	E6	E18	0,1	2048-4096K
W14	E8	E20	2,3	
W15	E5	E15	0,1	2048-4096K
W15	E7	E17	2,3	
W16	E6	E18	0,1	4096-8192K
W16	E8	E20	2,3	
W17	E5	E15	0,1	4096-8192K
W17	E7	E17	2,3	
W18	E6	E18	0,1	8192-16384K
W18	E8	E20	2,3	
W19	E5	E15	0,1	8192-16384K
W19	E7	E17	2,3	
W20	E6	E18	0,1	16384-32768K
W20	E8	E20	2,3	
W21	E5	E15	0,1	16384-32768K
W21	E7	E17	2,3	
W22	E6	E18	0,1	32768-65536K
W22	E8	E20	2,3	
W23	E5	E15	0,1	32768-65536K
W23	E7	E17	2,3	
W24	E6	E18	0,1	65536-131072K
W24	E8	E20	2,3	

TRANSISTOR	FROM	TO	FUNCTION
T50	L1	BACK	
T400	L2	BACK	
T400	L3	BACK	
T400	L4	BACK	
T400	L5	BACK	
T520	L6	BACK	



HIGHEST USED	NOT USED
A107	
C99	
CR1	
E51	
L6	
Q1	
R41	R38, 39
RP2	
T600	
W24	

1202 NO. MATHILDA AVENUE
SUNNYVALE CALIF. 94086

REV: 1057 DATE: 10/2/74

INTEL CORP.

148704

98-0047-000