

FIELD MAINTENANCE PRINT SET

TABLE OF CONTENTS

CI20-AA
CI20-AB

FIELD MAINTENANCE
PRINT SET

DIGITAL EQUIPMENT
CORPORATION

PRINT SET PART
NUMBER MP01903

REV.

NUMBER
C120-A-DBU

SIZE CODE
B TC

REVISION HISTORY				DRN. J.F.BROWN	DATE 18APR84	TITLE CI20-A TABLE OF CONTENTS				digit	
DATE	ECO NUMBER	REV.		CHK'D G. F.	DATE 9JUL84						
	RELEASED	A		DES. ENG. P CAPPABIANCA	DATE 9JUL84						
		B		RESP. ENG. P CAPPABIANCA	DATE 9JUL84						
28 JAN-85	C120-MR001			FIELD SERVICE CHRIS DEMOS	DATE 9JUL84	SIZE B	CODE TC	NUMBER CI20-A-DBU	REV B		
				TOP DOC. B-DD-CI20-A-DBU	SHEET 1 OF 2						

MRO

A-PS-9107673-0-0	POWER CORD
D-AD-7011432-0-0	POWER CORD EXT.
K-PL-7011432-0-DBP	POWER CORD EXT.
D-IA-7020352-0-0	HARNESS DC VOLTAGE MON.
K-PL-7020352-0-DBP	HARNESS DC VOLTAGE MON.
D-IA-7019862-0-0	HARNESS VANE SWITCH
K-PL-7019862-0-DBP	HARNESS VANE SWITCH
B-DD-5414506-0 (COMPLETE)	VOLTAGE MONITOR BOARD
D-IA-7019270-0-0	CABLE M-BUS
K-PL-7019270-0-DBP	CABLE M-BUS
D-UA-BNCI-0-0	CABLE, BNCI
K-PL-BNCI-0-DBP	CABLE, BNCI
B-DD-5414793-0 (COMPLETE)	BACKPANEL CI20

TITLE:	CI20-A	SIZE	CODE	NUMBER	REV.
TABLE OF CONTENTS	SHEET 2 OF 2	B	TC	CI20-A-DBU	B

[illegible]

25 OR 26 *

→ AC FAN HARNESS TO POWER CONTROLLER (B61
ANY AVAILABLE SWITCHED OUTLET)

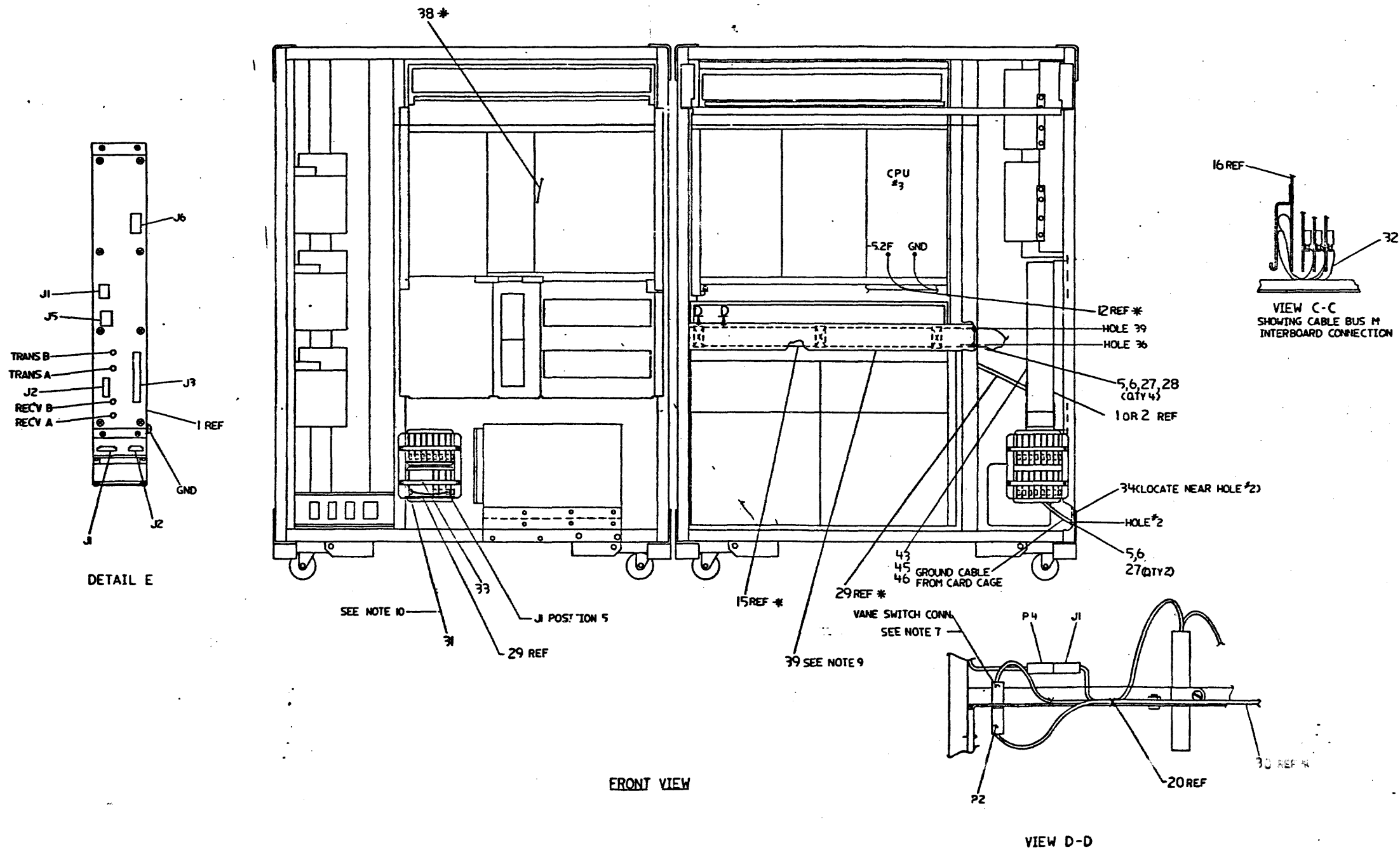
CPU CAB KL10-E I/O CAB

REAR VIEW

DEC 20

DESCRIPTION		DRAWING NO.		PART NO.	
UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES AND THE FOLLOWING TOLERANCES APPLY: PER DEC STD 119					
SHEET NUMBER		SHEET COUNT		DIMENSIONS IN INCHES	
2 - 0.1		OVER		OVER	
25 - 0.01		0.01		0.01	
250 - 0.001		0.01		0.01	
✓		0.01		0.01	
CLARITY & FINISH		0.01		0.01	
THIS ANGLED PROJECTION		0.01		0.01	
DO NOT SCALE DRAWING		0.01		0.01	
NEGATIVE SURFING AND BREAK SHARP CORNERS		0.01		0.01	
SEE PARTS LIST		0.01		0.01	
FURNISH		0.01		0.01	
3-10-120-A		0.01		0.01	
TITLE		C120		ASSY	
FORM NUMBER		C120-A-0		F	

NOTES: 1. MARK CABLES ITEM 14 USING ITEM 14 MARKING BOTH ENDS THE SAME, WITH TA, TB, RA, RB. ALSO MARK TA, TB, RA, RB ON THE CI20 BACKPANEL PROTECTION 5-FIELD.



CABLE CONNECTION CHART

ITEM NO.	FROM UNIT	LOCATION	REF DESIG	TO UNIT	LOCATION	REF DESIG	REMARKS
00R	CARD CAGE	GND	GND	25 OR 26	J1	P1	
12	1/2 MON BKTY	J2	P2				
14	C120 BP	TRANS A	P1	INTERFACE	TRANS A	P2	
		RECV A			RECV A		
		TRANS B			TRANS B		
		RECV B			RECV B		
15	C120 BP	J3	P1	PI STRIP DOWN RH20 DTE CCM3023 J2	P2	STRIP UP	
32	M3001	J1	P3				
32	M3001	J1	P1	M3002	J1	P2	
29	20 ITEM 10 CR II	P1	J1	BSI PC	SEE NOTE 5	P1	
1/2	CARD CAGE	GND		CAB RAIL	HOLE #2		
38	RH20 BP	B10N1		RH20 BP	B1301		
		B1301			B1001		
		C10L2			B1302		
		B19B2			B19B2		
		C10K2			B1901		
		B1901			B1901		
		C10T2			C1301		
		C1301			C1901		
		C12H2			C13N1		
		C13N1			C19N1		
		C12L1			C13B2		
		C13B2			C19B2		
		C14H2			A1502		
		C14F1			F15A1		
		A14J2			A1501		
		C14P1			A1502		
		C14K2			A1502		
		B14J1			B15A1		
		C20H2			A21R2		
		C23F1			F21A1		
		A21J2			A2101		
		C20P1			A2102		
		C20K2			A2102		
38	RH20 BP	B20J1		RH20 BP	B21A1		

FARNESS CONNECTION CHART

ITEM NO.	FARNESS TERM	CONNECTION	WITH	REMARKS
12	P1	C120 BP J2		
	P3	C120 BP J1		
5		P5 - P30 GND		
6		C120 BP - 52F		
12	P2	SECTION 2 J1		ITEM #3
13	P1	M74-3 J1		SEE VIEW A-A
13				
15		SEE NOTE 6		
15				
30	P1	FAN BKTY J1		
30	P2	SEE NOTE 7		
30	J1	SEE NOTE 8		
30	P3	C120 BP J6		
29	P2	C120 BP J5		
29	P1	MON 80 J1		ITEM #31
29	6	+5V MON 80 J1-5		SEE FRONT VIEW

REVISION HISTORY
DATE: 10-1-68
BY: E
RELEASED

TITLE
C120-A ASSY

DOCUMENT NUMBER
EUA C120-A-0
SCALE: 1 (INCH) = 1 (INCH)
MRO

MIN						QTY PER VARIATION	
LINE	ITEM	TOP DOCUMENT	PART NUMBER	REV	DESCRIPTION	AA	AB
VARIATION REVISION LEVEL:						B3	B3
1	1	E-AD-7019268-0-0	7019268-00		CARD CAGE ASSY IPA-20-L	1	-
2	2	E-AD-7019268-0-0	7019268-01		CARD CAGE ASSY CI20	-	1
3	3	D-IA-7428312-0-0	7428312-01	A	BRACKET, INTERFACE	1	1
4	4	C-IA-7428222-0-0	7428222-01		BAFFLE, AIR	1	1
5	5		9007786-00		RETAINER, U-NUT 10-32X	13	13
6	6		9006073-01		SCREW, MACH PAN PHIL 10-	13	13
7	7		9006022-01		SCREW, MACH PAN PHIL 6-	4	4
8	8		9006633-00		WASHER, LOCK INTERNAL STEEL	4	4
9	9		1213716-00		SPACER, FOAM POLYU 1/2	4	4
10	10	D-IA-7020539-0-0	7020539-06		CABLE, FAN AC	-	1
11	11	D-IA-7019274-0-0	7019274-06		CABLE, FAN AC	1	-
12	12	D-IA-7019272-0-0	7019272-00		HARNESS DC-5.2 SECT N1-1 DC+5	1	1
13	13	D-IA-7019273-0-0	7019273-00		HARNESS DC-5.2 SECT N1-2 DC+5	1	1
14	14	D-IA-7018526-0-0	7018526-3A		CABLE ASSY (CI780)	4	4
15	15		BC06R-08		BC06R I/O CABLE	1	1
16	16	D-AD-7019266-0-0	7019266-00		MODULE BLANK ASSY	1	1
17	17		M3002-00		CI20 MICROPROCESSOR, MULTIWI	1	1
18	18		M3003-00		CI20 C-BUS/PLI INTERFACE, MULTIWI	1	1
19	19		M3001-00		CI20 E-BUS INTERFACE, MULTIWI	1	1
20	20		9007032-00		TIE, CABLE BUNDL DIA 0-1-3/4"=101	A/R	A/R
21	21		1213715-00		CLIP, FLAT CABLE W/ADHESIVE BK	4	4
22	22		H7440-00		POA1 H7440	1	1
23	23		L0100-00		ILI (CI LINK INTERFACE), HEX 12	1	1
24	24		L0109-00		HSC50 PILA(PACKET BUFFER BOARD),	1	1
25	25		9107673-06		PWR CORD, TERM 3-14 SJT 115	1	-
26	26	D-AD-7011432-0-0	7011432-02		POW CORD EXTENSION 50HZ	-	1
27	27		9007651-00		WASHER, LOCK EXTERNAL STEEL	14	14
28	28		9006664-00	-	WASHER, FLAT SST	12	12
29	29	D-IA-7020352-0-0	7020352-00		HARNESS, D.C. VOLTAGE MONITOR	1	1
30	30	D-IA-7019862-0-0	7019862-00		HARNESS, VANE SWITCH	1	1

REVISION HISTORY			BASIC PART NO: CI20		DRN: J. F. BROWN		DATE: 30-NOV-82		D I G I T A L			
ENG	ECO NUMBER	REV	SECTION A OF A									
---	INITIAL	E	SECTION, VARIATION INDEX		CHK'D: G. F.		DATE: 14-APR-83		TITLE PARTS LIST			
JT	CI20-MR001	F	(A) AA, AB						CI20 ASSY			
			(B)		DES. ENG: P. CAPPABIANCA		DATE: 25-APR-83		DOCUMENT NUMBER			
			(C)						SIZE	CODE	NUMBER	REV
			(D)		RESP. ENG.: P. CAPPABIANCA		DATE: 25-APR-83		K	PL	CI20-A-DBP	F
			(E)		MFG. ENG.: P. DUPONT		DATE: 9-JUL-84		RELEASE DATE: 22-JAN-85			
			(F)		ASSEMBLY NUMBER:		TOP DOCUMENT NUMBER:		FILE NAME:		EDIT #	
					E-UA-CI20-A-0		B-DD-CI20-A-DBU		Z5905F.PLS		34	

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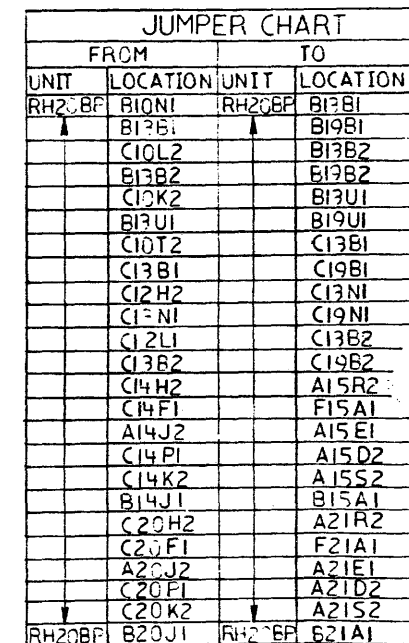
AUTOMATED BY: PRTES, 401307		MIN		QTY PER VARIATION			
LINE	ITEM	TOP DOCUMENT	PART NUMBER	REV	DESCRIPTION	AA	AB
VARIATION REVISION LEVEL:						B3	B3
31	31		5414506-01		VOLTAGE, MONITOR BOARD	1	1
32	32	D-IA-7019270-0-0	7019270-1J		BUS, CABLE, M ASSY.	1	1
33	33		3621499-02		LABEL,DCV MONITOR/NI CI 20	1	1
34	34		3613272-00		LABEL,ADH BACK,MYLAR CAP	1	1
35	35		9007031-00		TIE,CABLE BUNDL DIA 0- 3/4"=101	36	36
36	36		9008264-00		MOUNT, CABLE TIE, ADHESIVE BACKE	A/R	A/R
37	37		3621498-02		LABEL,AIRFLOW CPU/NI CT 20	1	1
38	38	SEE NOTE 1	9105740-55		WIRE(WRAP) 30AWG KYNAR UL14	A/R	A/R
39	39	D-IA-7428311-0-0	7428311-01		SUPPORT,CABLE	1	1
40	40		9006659-00	A	WASHER,FLAT S/PAS	2	2
41	41		3700717-01		PKG. KIT OPTION CI20-A CUS.	1	1
42	42		3700717-02		PKG. KIT OPTION GI20-A CUS.	1	1
43	43		3617674-00		LABEL,SERIAL/POWER W/O UL + CSA	-	1
44	44		9008356-00		WIRE MARKER,ALPHA,A-Z	A/R	A/R
45	45		3617674-01		LABEL,SERIAL/POWER W UL & CSA	1	-
46	46		3617880-09		LABEL,CLASS "A" SUBASSEMBLY	1	-
47	47	D-IA-7021448-0-0	7021448-5C		CABLE DC VOLTAGE MONITOR SECT. 1	1	1

48 NOTE: 1. 12 FEET REQUIRED

D	I	G	I	T	A	L	TITLE	CI20 ASSY	SECTION A OF A	SIZE	CODE	DOCUMENT NUMBER	REV
										K	PL	CI20-A-DBP	F

DIGITAL EQUIPMENT CORPORATION

4. CONNECT 2 POSITION CONNECTOR P: TO H7440-91CONNECT
POINTS 11&12 TO H7440-9PIN MAT-IN LOK. TO AVAILABLE
POSITION 122 324 526 OR 728 (19-30 VAC.)



JUMPER CHART			
FROM		TO	
UNIT	LOCATION	UNIT	LOCATION
RH20BP	B10N1	RH20BP	B17B1
▲	B17B1	▲	B19B1
	C10L2		B19B2
	B13B2		B19B2
	C10K2		B19U1
	B13U1		B19U1
	C10T2		C13B1
	C13B1		C19B1
	C12H2		C13N1
	C13N1		C19N1
	C12L1		C13B2
	C13B2		C19B2
	C14H2		A15R2
	C14F1		F15A1
	A14J2		A15E1
	C14P1		A15D2
	C14K2		A15S2
	B14J1		B15A1
	C20H2		A21R2
	C20F1		F21A1
	A20J2		A21E1
	C20P1		A21D2
	C20K2		A21S2
▼		▼	
RH20BP	B20J1	RH20BP	B21A1

SIZE	CODE	NUMBER
1	1	1
2	2	2
3	3	3
4	4	4
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100	100	100

DIGITAL EQUIPMENT CORPORATION MAYNARD, MASSACHUSETTS

ENGINEERING SPECIFICATION

DATE 29 June 84

TITLE CI20 REFERENCE MANUAL

REVISIONS

REV	DESCRIPTION	CHG NO	ORIG	DATE	APPD BY	DATE
A	Originated					
B	ECO	CI20-BOB M0001 EICHMANN		1-28 85	J. Eichmann	2/16/85

ENG	APPD	SIZE	CODE	NUMBER	REV
S. SCHULTZ	J. V. Tamm	A	SP	CI20-A-3	B

DEC 16-392-1079-N971
DRA 107

MRO

ENGINEERING SPECIFICATION

CONTINUATION SHEET

TITLE CI20 Reference Manual

CHAPTER 3 INSTALLATION

3.1 OVERVIEW

This chapter describes the installation of the CI20 in an existing system. A system containing a CI20 is limited to a maximum of four RH20's. RH20 slots 6 and 7 are used for the CI20. The brackets used to mount the CI20 modules are designed to prevent plugging any modules into slot 6. Slots 4 and 5 are reserved for future expansion to accommodate an NIA20. Refer to figures 3-1 and 3-2.

Installation of the CI20 in an existing system requires the following procedures:

1. Unpacking and checkout of installation kit
2. Pre-installation checkout
3. Backplane wire adds
4. Installation of port modules
5. Installation of power supply regulator

- 2 -

SIZE	CODE	NUMBER	REV
A	SP	CI20-A-3	B

DEC FORM NO EN-01022-16-N370-(381)
DRA 108

SHEET 2 OF 33 MRO

ENGINEERING SPECIFICATION

CONTINUATION SHEET

TITLE CI20 Reference Manual

6. Installation of CI card cage
7. Installation of CI bulkhead
8. Installation of DC power harness
9. Installation of vane switch harness
10. Installation of DC voltage monitor harness and module
11. Installation of PLI bus
12. Installation of fan harness
13. Installation of CI cables
14. Installation of Link/Front End and Packet Buffer modules
15. Checkout

The following paragraphs provide detailed instructions for performing these steps.

- 3 -

SIZE	CODE	NUMBER	REV
A	SP	CI20-A-3	B

DEC FORM NO EN-01022-16-N370-(381)

SHEET 3 OF 33 MRO

ENGINEERING SPECIFICATION

CONTINUATION SHEET

TITLE KL10-E INSTALLATION

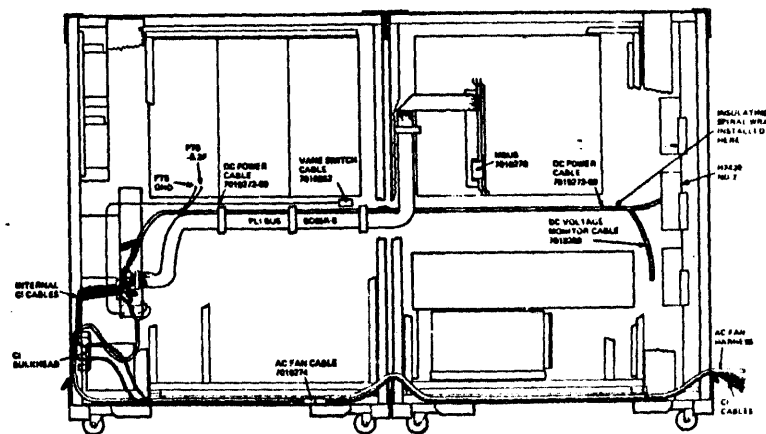


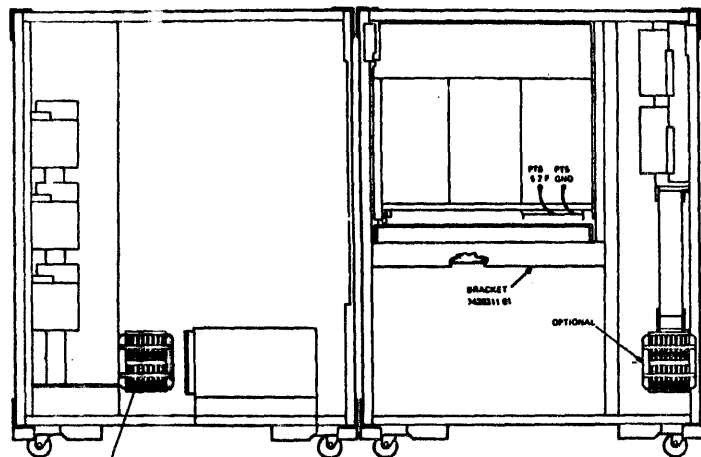
Figure 3-1. CI20 in KL10-E, Rear View

SIZE	CODE	NUMBER	REV
A	SP	CI20-A-3	B

DEC FORM NO EN-01022-16-N370-(381)

SHEET 4 OF 33 MRO

TITLE KL10-E Installation



CI VOLTAGE MONITOR BOARD

Figure 3-2. CI20 in KL10-E, Front View

SIZE	CODE	NUMBER	REV
A	SP	CI20-A-3	B

DEC FORM NO EN-01022-16-N370-(341)
DRA 108

SHEET 5 OF 33 MRD

TITLE CI20 Reference Manual

3.2 UNPACKING AND CHECKOUT

Before unpacking any equipment, move all boxes into the computer area. Check the shipment against the packing list to be sure that all boxes were sent. If any boxes are missing, contact the customer and the branch field service manager. Check that all boxes are sealed, and there is no sign of external damage, such as dents, holes, or damaged corners. If any boxes are open or damaged, document it on the installation or field service report and inform the customer. Open the boxes one at a time, starting with the READ ME FIRST box, and find the packing slip. Check the contents of the box against the packing slip and examine each item for damage. Note missing or damaged items on the installation report or field service report. This completes the unpacking and checkout phase. Advise the branch field service manager of any problems during this phase. If any items are damaged, the branch field service manager may want the customer to file an insurance claim. For missing items, the branch field service manager should get a short-ship request.

- 6 -

SIZE	CODE	NUMBER	REV
A	SP	CI20-A-3	B

DEC FORM NO EN-01022-16-N370-(341)
DRA 108

SHEET 6 OF 33 MRD

TITLE CI20 Reference Manual

3.3 EQUIPMENT NEEDED FOR INSTALLATION AND CHECKOUT

The following equipment is required for installation and checkout of the CI20:

1. wire wrap tool, No. 30 AWG, DEC part No. 29-18301
2. wire unwrapping tool, No. 30 AWG, DEC part No. 29-13513
3. right-angle Philips screwdriver
4. Tektronix 475 oscilloscope or equivalent (100 Mhz)
5. KLAD pack

- 7 -

SIZE	CODE	NUMBER	REV
A	SP	CI20-A-3	B

DEC FORM NO EN-01022-16-N370-(341)
DRA 108

SHEET 7 OF 33 MRD

TITLE CI20 Reference Manual

3.4 INSTALLATION PROCEDURE

3.4.1 Pre-Installation Checkout

Before performing the installation, verify that the system is operating properly. This is to preclude the possibility of system problems unrelated to the CI20 after the installation.

1. Remove all customer media, to minimize the possibility of corrupting customer data.
2. Mount the supplied KLAD pack, bring up the diagnostic monitor, and run the "B" string to verify that the system is working properly.
3. Verify that the system has an M8532-YA board in it. If not, replace the M8532 with an M8532-YA.

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SIZE	CODE	NUMBER	REV
A	SP	CI20-A-3	B

DEC FORM NO EN-01022-16-N370-(341)
DRA 108

SHEET 8 OF 33 MRD

TITLE

CI20 Reference Manual

4. Power down the system.

5. RH20 positions 6 and 7 will be used for the CI20. If there is an RH20 in position 6, remove it. If there is an RH20 in position 7, leave it in place temporarily so that the diagnostic can be run to verify the backplane wiring. If there is no RH20 in position 7, remove one from one of the other positions and install it in position 7. If slots were unused, deskewing may have to be performed.

6. Power up the system and run diagnostic DFRHB. This is to verify that the backplane wiring of RH20 position 7 is functional. Power down the system and reinstall the RH20 in its original position.

7. Since the backplane will also be modified in slots 4 and 5, these slots must also be verified. Install an RH20 in position 5, and run diagnostic DFRHB.

8. Power down the system and reinstall the RH20 in its original position.

SIZE

CODE

NUMBER

REV

A

SP

CI20-A-3

B

DEC FORM NO EN-01022-16-N370-(381)

SHEET 9 OF 33 MKO

TITLE

CI20 Reference Manual

3.4.3 Installation Of Port Modules.

Protective backing is placed on the lower third non-component side of each port module, and the upper third of the non-component side of the M3002. As the boards are inserted or removed, the protective backing protects the MBUS cable. Insert the port modules as follows:

1. Connect MBus cable, DEC part number 70-19270-J1. Be sure to orient the cable so that the flat wire comes out of the cable header away from the board, as shown in the overhead view, figure 3-3.

2. Insert the EBus Interface/Port ALU module, M3001, in the rightmost slot of RH20 position number 7 (slot 13, looking at the backplane from the module side).

3. Connect the MBus cable to the M3002 Module as shown in figure 3-3.

4. Insert the Port Microprocessor Control Module, M3002, in slot 14, to the left of the M3001, as shown in figure 3-3.

SIZE

CODE

NUMBER

REV

A

SP

CI20-A-3

B

DEC FORM NO EN-01022-16-N370-(381)

SHEET 11 OF 33 MKO

TITLE

CI20 Reference Manual

3.4.2 Backplane Wire Adds.

Add 24 new wires to RH20 backplane slots No.5 and No.7 as listed below. Strip approximately 1 inch of insulation from the wire to allow sufficient turns on the wire wrap post. After each wire is added, check the blank space adjacent to the wire listing.

Signal Name	From	To/From To	Check
EBUS D11 L	B10N1	B13B1	B19B1
EBUS D12 L	C10L2	B13B2	B19B2
EBUS D13 L	C10K2	B13U1	B19U1
EBUS PARITY L	C10T2	C13B1	C19B1
EBUS P100 L	C12H2	C13N1	C19N1
EBUS PARITY ACTIVE L	C12L1	C13B2	C19B2
MPR7 MWBUSCTFLD01 H	C14H2	A15R2	
MPR7 MWGCFLO08 H	C14F1	F15A1	
MPR7 MWTMEFLD H	A14J2	A15E1	
CB11 CLK2 L	C14P1	A15D2	
CB12 CLK4 L	C14K2	A15S2	
CB12 CCHANERR L	B14J1	B15A1	
MPR7 MWBUSCTFLD01 H	C20H2	A21R2	
MPR7 MWGCFLO08 H	C20F1	F21A1	
MPR7 MWTMEFLD H	A20J2	A21E1	
CB11 CLK2 L	C20P1	A21D2	
CB12 CLK4 L	C20K2	A21S2	
CB12 CCHANERR L	B20J1	B21A1	

After the wire wrap adds are completed, verify proper wiring by an ohmmeter check of each new wire. It is preferred that the person doing this test be someone other than the wire installer.

SIZE

CODE

NUMBER

REV

A

SP

CI20-A-3

B

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Figure 3-3. MBus Cable Interboard Connection, Top View

SIZE

CODE

NUMBER

REV

A

SP

CI20-A-3

B

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5. Connect the MBus cable to the M3003 module as shown in figure 3-3.
6. Install the CBUS/PLI Interface Module, M3003, in slot 15, to the left of the M3002.
7. Install the Module Blank Assembly, DEC part Number 19266-00, in RH20 position 6, slot 16. This assembly blocks slots 16, 17, and 18. It prevents modules from being plugged into this position, and provides a baffle for airflow.
8. Fold the MBus cable into the module blank assembly, as shown in figure 3-3.
9. Close the module door.
10. Power up the KL10.

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SIZE	CODE	NUMBER	REV
A	SP	CI20-A-3	B

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11. Readjust the +5 volt power supply to 5.0 +/- 0.25 V. This adjustment is located on H7420 number 2, in H744 number 1. This regulator is located furthest away from the power supply. The voltage is monitored at +5E, between PT15U and ground.
12. With KLDCP loaded and running, type MR (CR), then FX1 (CR) in response to the command prompt, as shown below:
> MR (CR)
> FX1 (CR)
13. Deskew the port modules by performing the following steps. A Tektronix 475 or equivalent (100 Mhz min) oscilloscope is required. Figure 3-4 illustrates the CI20 Deskew Timing.
14. Connect channel 1 of the oscilloscope to MTR MBOX CLK H, 4D33P1, on the CPU backplane. Use a ground clip.
15. Set the time base to 20 ns.
16. Set channel 1 vertical gain to 0.5 V/division. Set the ground reference to 1.3 volts above horizontal center level of oscilloscope. (MTR MBOX CLK H is an ECL signal.)
17. Set the oscilloscope sync to positive external.
18. Connect external sync input to CHTO H, 4B09K1, on the CPU backplane. Use a ground clip.

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SIZE	CODE	NUMBER	REV
A	SP	CI20-A-3	B

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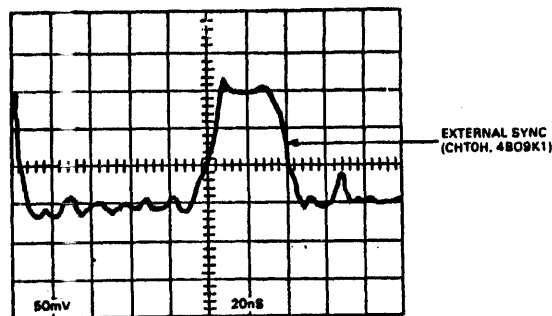


Figure 3-4A. External Sync (CHTO H)

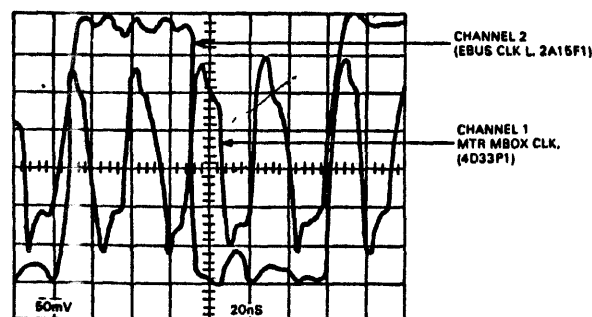


Figure 3-4B. EBUS CLK L and MTR MBOX CLK

FIGURE 3-4. CI20 Deskew Timing

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SIZE	CODE	NUMBER	REV
A	SP	CI20-A-3	B

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19. Connect channel 2 to CDS1, EBUS CLK L, 2A15F1, on the I/O backplane. Set the channel 2 vertical gain to 0.5 V/division. Use ground clip. To measure TTL voltages, set the ground reference to 1.5 volts below horizontal center line of oscilloscope.
20. Push the Trigger View Switch of the oscilloscope and display the external sync. Adjust the display, so that the rising edge of the external sync aligns with the vertical center line of the oscilloscope.
21. Display MBOX CLK H, channel 1. Identify the rising edge of MBOX CLK H that occurs prior to the vertical center line of the oscilloscope. Display channel 1 and channel 2.
22. Put the KL10-E in the override fault state. Remove the I/O rear door to access the I/O backplane.
23. In slot 12 of the I/O backplane, locate the bottom potentiometer on the clock module. Using this potentiometer, adjust the FALLING edge of channel 2, EBUS CLK L so that it crosses the RISING edge of MBOX CLK H. This crossing occurs on the horizontal center line of the oscilloscope.
24. Disconnect all probes.
25. Mount the KLAD pack on the front end RP06.
26. Load and run diagnostic DFPTA to verify proper functioning of the port modules. If the modules fail, troubleshoot as directed by the diagnostic. If the modules are functioning properly, proceed with the installation.

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A	SP	CI20-A-3	B

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3.4.4 Power Supply Regulator Installation.

Install the +5 volt regulator as follows:

1. Remove the spare slot filler panel from slot 5 of the H7420 number 2 power supply.
2. Take the new H7440 regulator from kit and install in slot 5 of H7420 number 2. Note that some systems may use H744 and/or H7440 regulators.

3.4.5 Installation Of CI Card Cage

Install the CI Card cage (see figure 3-5) as follows:

1. Install 8 U-Nuts (Tinnerman nuts) DEC part no. 9007786-00, on left side frame member of the CPU cabinet, as viewed from the rear. These nuts go into holes 5, 11, 15, and 52, counting up from the bottom of the cabinet. Four nuts are inserted into each frame member.
2. Locate the four 3-foot internal CI cables. Verify that the cables are identified at each end. If not, mark them TRANS A, TRANS B, RECV A, and RECV B, as appropriate, with the labels provided.
3. On the plexiglass cover at the rear of the CI card cage, verify and if necessary, label the coaxial connectors TRANS B, TRANS A, RECV B, and RECV A, as shown in figure 3-5.

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SIZE	CODE	NUMBER	REV
A	SP	CI20-A-3	B

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4. Route 3-foot internal CI cables through the white plastic strain relief on the CI card cage. Leave some slack to route the cables to the CI card cage backplane, and tighten the strain relief.
5. Connect the internal CI cables to the coaxial connectors on the rear of the CI card cage, as shown in figure 3-5. The connectors will engage a detent when they are seated properly.
6. Using 4 10/32 screws, external lockwashers, and flat washers, install the CI card cage in holes 15 and 52 of the right side frame members as shown in figure 3-2. Be careful not to damage the CI cables where they connect to the rear of the CI card cage. Hang the CI card cage on the top two screws, then install the bottom two screws.
7. Install an air deflection plate on top of the CI card cage using two screws and star washers.

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SIZE	CODE	NUMBER	REV
A	SP	CI20-A-3	B

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TITLE KI10-E Installation

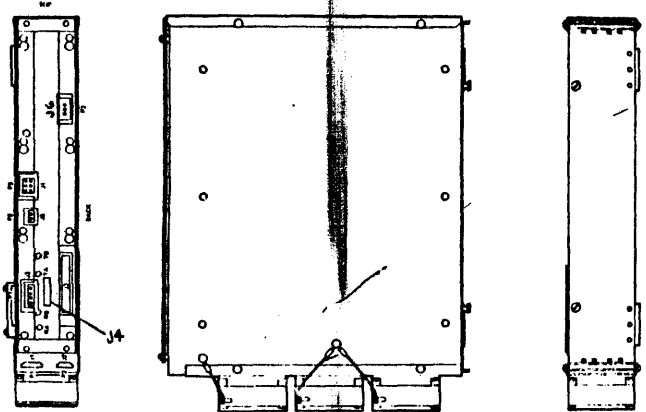


Figure 3-5. CI Card Cage, Location Drawing

SIZE	CODE	NUMBER	REV
A	SP	CI20-A-3	B

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3.4.6 Installation Of CI Cable Bulkhead

Install the CI cable bulkhead as follows:

1. Install the free ends of the internal 3-foot CI cables on CI bulkhead. Remove the nut from the free end of the coaxial connector, route the connector through the hole in the CI bulkhead from the side without lettering, and secure the cable by tightening the nut on the lettered side. Ensure that TRANS A, TRANS B, RECV A, AND RECV B cables from the CI card cage are connected to the corresponding holes in the CI bulkhead, as shown in figure 3-5.
2. Install the CI cable bulkhead in holes 5 and 11 of the left side frame members, from the rear, using 4 each No. 10-32 screws, external lockwashers, and flat washers as shown in figure 3-1.

3.4.7 Harness Installation

The harnesses to be installed at this stage are the DC power harness, which is in 2 sections, vane switch cable, DC voltage monitor cable, PLI bus, fan harness, and CI cables. Install these harnesses as follows:

1. Attach one half of DC power cable, DEC part number 7019272-00, (figure 3-6) to CI card cage J1 and J2 (figure 3-5). Locate the black and blue wires labelled PT5 and PT6 on this cable. Connect the black wire to -5.2 ground, and the blue wire to -5.2 F in the CPU bay, as shown in figure 3-2.

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SIZE	CODE	NUMBER	REV
A	SP	CI20-A-3	B

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2. Locate the other half of the DC power cable, DEC part number 70-19273-00, shown in figure 3-6 and join the end labelled J1 to P2 on the other half of the cable. Tie wrap the new harness to existing KL CPU power harness and continue across into and under the I/O card cage as shown in figure 3-1. Install spiral wrap provided in kit around this cable at the point where it contacts the side of the I/O card cage frame member nearest the H7420's. Refer to figure 3-1.
3. At the other end of the harness, locate the red and white wires labelled PT11 and PT12. Disconnect P3 from H7420 number 2, then connect PT11 and PT12 to pins 3 and 4 of P3 on the H7420 power supply as shown in figure 3-6. Reconnect P3 to the H7420.
4. Connect P1 of the harness to J1 of the H7440 regulator.
5. Locate vane switch cable, figure 3-7, DEC part number 70-19862-01 and connect the P1 end to J1 on the bottom of the CI card cage, as shown in figure 3-5. Connect P3 to J6 on the CI card cage, as shown in figure 3-5.
6. At the other end of the cable, remove P4 from the original KL CPU vane switch connector and connect P4 to J1 of the new vane switch harness. Connect P2 of the new vane switch harness to the original KL CPU vane switch assembly as shown in figure 3-8.
7. Overlay the CPU/CI air flow fault decal over the existing CPU air flow message decal on the 863 Fault Switch.

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SIZE	CODE	NUMBER	REV
A	SP	CI20-A-3	B

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TITLE KL10-E Installation

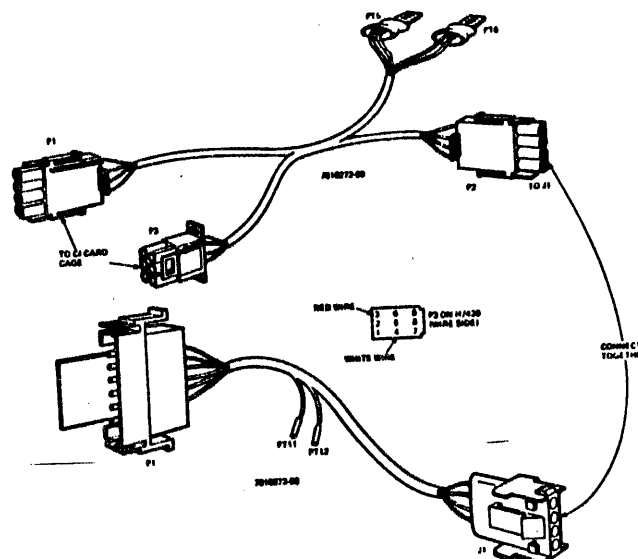


Figure 3-6. DC Power Cable

SIZE	CODE	NUMBER	REV
A	SP	CI20-A-3	B

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TITLE KL10-E Installation

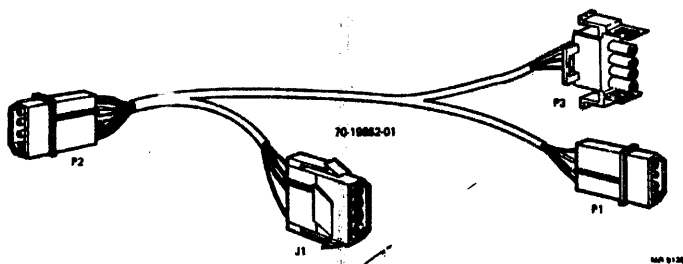


Figure 3-7. Vane Switch Cable

SIZE	CODE	NUMBER	REV
A	SP	CI20-A-3	B

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TITLE KL10-E Installation

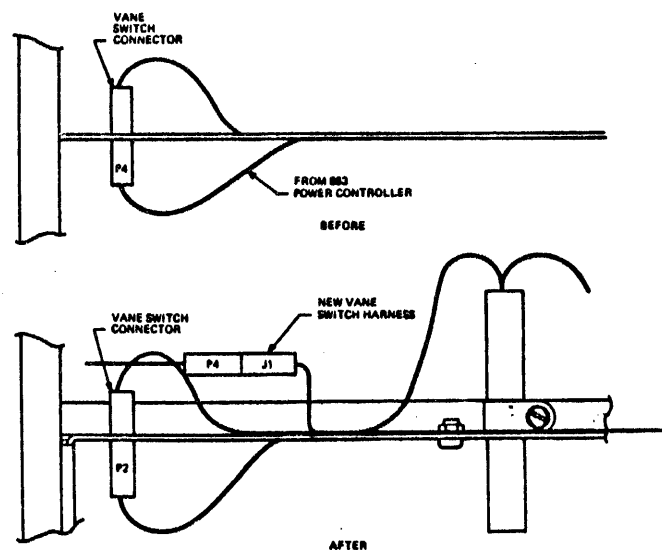


Figure 3-8. Vane Switch Harness Installation

SIZE	CODE	NUMBER	REV
A	SP	CI20-A-3	B

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DRA 10A

DEC FORM NO EN-01022-16-N370-(383)

DRA 10B

ENGINEERING SPECIFICATION

DECISION

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8. Locate the DC Voltage Monitor Cables, DEC part numbers 7020352-00 and 7021448-5C, as shown Figure 3-9. Connect P2 to J5 on the CI card cage, and route the other end to the DC voltage monitor panel. Locate the switches on the DC Voltage Monitor board. Switch 1 should be on and all other switches should be off. Plug the DC voltage monitor board, DEC part number 5414506-00, into the +5 volt slot as shown in figure 3-2.
9. The other end of the DC voltage monitor cable requires two connections. Connector P1 plugs into the new CI DC voltage monitor board. The remaining single orange wire should be connected adjacent to the existing orange wire on connector P1 of the DC voltage monitor board for some +5V. Attach the monitor panel decal.
10. Tie wrap the DC voltage monitor and vane switch harnesses to the DC power cable. Use square adhesive-backed mounts to support the harness on the side of the CI card cage.
11. Locate the fan harness, Figure 3-10, DEC part number 7019274-06, (120 vac 60 Hz) or 7030539-06 (240 vac 50 Hz), and connect P2 to J2 on the CI card cage. Connect the fan harness and fan AC cable (figure 3-10) together. Connect the other end of the fan AC cable to any available switched outlet on the 861 power controller. Connect the ground wire to the adjacent ground screw on the CI card cage. Use a star washer to ensure a good electrical connection.
12. Install a Tinnerman nut in hole 13 on the frame and attach the ground cable from the CI card cage to the frame. Use two star washers to ensure a good electrical connection.

SIZE	CODE	NUMBER	REV
A	SP	CI20-A-3	B

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13. If the system has core memory, dress the PLI cable as shown in figure 3-1. If the system does not have core memory, install bracket (smooth side facing the rear) DEC part number 7428311-01, using 4 of each: clips, screws, flat washers, and lock washers in holes 36 and 39 (figure 3-2). Connect one end of the PLI cable to module M3003, (red line is at the top of the cable). Connect the other end of the PLI cable to J3 (through PLI cable relief) on the CI card cage (red line is at the bottom). To secure the PLI cable, install adhesive foam within each of the 4 flat cable clamps. Install one cable clamp on the side of the CPU card cage, and 3 across memory fan assembly or bracket assembly.
14. Replace the I/O module door.
15. Route the external CI cables along the bottom of the CPU and I/O cabinets, and out the bottom of the I/O cabinet as shown in figure 3-5. Mark the cables TRANS A, TRANS B, RECVA, and RECVB, at both ends of the cables. Connect the cables to the corresponding connectors on the CI bulkhead and Star Coupler (see figures 3-11 and 3-12). The maximum length of these cables is 45 meters.
16. Install tie wraps approximately 8" apart on all harnesses.

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SIZE	CODE	NUMBER	REV
A	SP	CI20-A-3	B

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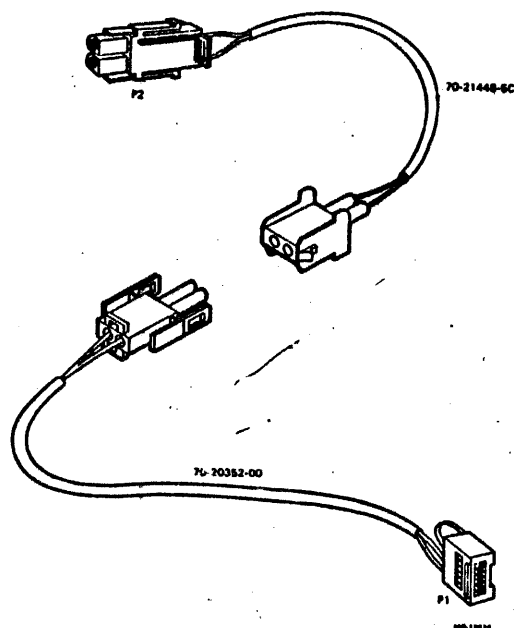


Figure 3-9. DC Voltage Monitor Cable

SIZE	CODE	NUMBER	REV
A	SP	CI20-A-3	B

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TITLE KL10-E Installation

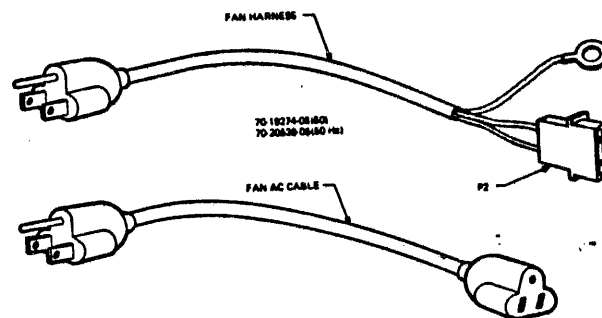


Figure 3-10. Fan AC Cable

SIZE	CODE	NUMBER	REV
A	SP	CI20-A-3	B

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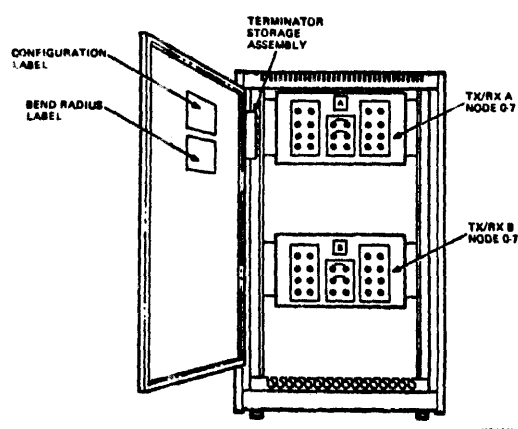


Figure 3-11. Star Coupler

SIZE	CODE	NUMBER	REV
A	SP	CI20-A-3	B

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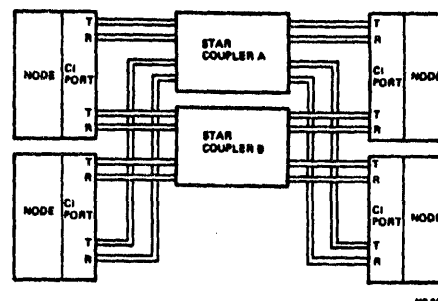


Figure 3-12. Star Coupler Dual Port Block Diagram

SIZE	CODE	NUMBER	REV
A	SP	CI20-A-3	B

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3.4.8 Installation Of Link/FE And Packet Buffer

These modules are installed in the CI card cage looking from the front of the CPU bay. Before installing the Link/Front End module, set the node number in the switches at the edge of the board. The number may be obtained from the system manager or the customer. If this is a new installation, set the node number to zero. The switches are numbered 1 to 8 from top to bottom, and are set to the same number. Set the node number as shown in the following table. Each node on the CI must have an individual node number assigned to it.

0=OFF (CLOSED)

1=ON (OPEN)

Node	Switch Setting							
	S1	S2	S3	S4	S5	S6	S7	S8
0	0	0	0	0	0	0	0	0
1	1	0	0	0	0	0	0	0
2	0	1	0	0	0	0	0	0
3	1	1	0	0	0	0	0	0
4	0	0	1	0	0	0	0	0
5	1	0	1	0	0	0	0	0
6	0	1	1	0	0	0	0	0
7	1	1	1	0	0	0	0	0
8	0	0	0	1	0	0	0	0
9	1	0	0	1	0	0	0	0
10	0	1	0	1	0	0	0	0
11	1	1	0	1	0	0	0	0
12	0	0	1	1	0	0	0	0
13	1	0	1	1	0	0	0	0
14	0	1	1	1	0	0	0	0
15	1	1	1	1	0	0	0	0

Install the Link/Front end module in the right hand slot. Install the Packet Buffer module in the adjacent slot to the left.

SIZE	CODE	NUMBER	REV
A	SP	CI20-A-3	B

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3.4.9 Checkout

The physical part of the installation is complete at this point. All that remains is to verify that the system runs properly in the new configuration. Perform the following steps to verify the installation.

1. Verify that the KL10-E is no longer in the override fault state.
2. Power up the KL10.
3. Readjust the 5 volt power supply to 5.0 +/- 0.25 V. This adjustment is located on H7420 number 2 in H7440 slot 5. This regulator is located nearest the H7420 power supply breaker. The voltage is monitored at the black and red wires on connector J1 of the CI card cage. J1 is located approximately in the center at the rear of the CI card cage.
4. Load and run diagnostic DFPTA for at least 5 passes in Exec mode.
5. Load and run diagnostic DFCIA for at least 5 passes in Exec mode.
6. Bring up the operating system.
7. Run diagnostics DFPTA and DFCIA in user mode for at least 5 passes.
8. Run diagnostic UETP CI20 Test in user mode for at least 4 hours.
9. Bring system down.
10. Remove all Field Service packs and tapes from the customers system, and store in a secure area.
11. Hand system over to customer.

SIZE	CODE	NUMBER	REV
A	SP	CI20-A-3	B

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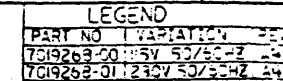
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Figure

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- 3-10 Fan AC Cable . . . 3-27
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SIZE
ACODE
SPNUMBER
CI20-A-3REV
B



		DESCRIPTION		DRAWING NO.		PART NO.	
		UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES AND THE FOLLOWING TOLERANCES APPLY (PER DEC STD 114)					
INCHES (TOLERANCES)		ANGLES (TOLERANCES)	APPLICABLE DIMENSIONS RANGE	DIMENSION NAME IN INCHES			
1/16 ± .005 1/8 ± .005 3/16 ± .005 1/2 ± .005 3/4 ± .005 1 ± .005 1 1/2 ± .005 2 ± .005 3 ± .005 4 ± .005 5 ± .005 6 ± .005 8 ± .005 10 ± .005 12 ± .005 14 ± .005 16 ± .005 18 ± .005 20 ± .005 24 ± .005 30 ± .005 36 ± .005 48 ± .005 60 ± .005 72 ± .005 96 ± .005 120 ± .005 144 ± .005 180 ± .005 240 ± .005 300 ± .005 360 ± .005 480 ± .005 600 ± .005 720 ± .005 960 ± .005 1200 ± .005 1440 ± .005 1800 ± .005 2400 ± .005 3000 ± .005 3600 ± .005 4800 ± .005 6000 ± .005 7200 ± .005 9600 ± .005 12000 ± .005 14400 ± .005 18000 ± .005 24000 ± .005 30000 ± .005 36000 ± .005 48000 ± .005 60000 ± .005 72000 ± .005 96000 ± .005 120000 ± .005 144000 ± .005 180000 ± .005 240000 ± .005 300000 ± .005 360000 ± .005 480000 ± .005 600000 ± .005 720000 ± .005 960000 ± .005 1200000 ± .005 1440000 ± .005 1800000 ± .005 2400000 ± .005 3000000 ± .005 3600000 ± .005 4800000 ± .005 6000000 ± .005 7200000 ± .005 9600000 ± .005 12000000 ± .005 14400000 ± .005 18000000 ± .005 24000000 ± .005 30000000 ± .005 36000000 ± .005 48000000 ± .005 60000000 ± .005 72000000 ± .005 96000000 ± .005 120000000 ± .005 144000000 ± .005 180000000 ± .005 240000000 ± .005 300000000 ± .005 360000000 ± .005 480000000 ± .005 600000000 ± .005 720000000 ± .005 960000000 ± .005 1200000000 ± .005 1440000000 ± .005 1800000000 ± .005 2400000000 ± .005 3000000000 ± .005 3600000000 ± .005 4800000000 ± .005 6000000000 ± .005 7200000000 ± .005 9600000000 ± .005 12000000000 ± .005 14400000000 ± .005 18000000000 ± .005 24000000000 ± .005 30000000000 ± .005 36000000000 ± .005 48000000000 ± .005 60000000000 ± .005 72000000000 ± .005 96000000000 ± .005 120000000000 ± .005 144000000000 ± .005 180000000000 ± .005 240000000000 ± .005 300000000000 ± .005 360000000000 ± .005 480000000000 ± .005 600000000000 ± .005 720000000000 ± .005 960000000000 ± .005 1200000000000 ± .005 1440000000000 ± .005 1800000000000 ± .005 2400000000000 ± .005 3000000000000 ± .005 3600000000000 ± .005 4800000000000 ± .005 6000000000000 ± .005 7200000000000 ± .005 9600000000000 ± .005 12000000000000 ± .005 14400000000000 ± .005 18000000000000 ± .005 24000000000000 ± .005 30000000000000 ± .005 36000000000000 ± .005 48000000000000 ± .005 60000000000000 ± .005 72000000000000 ± .005 96000000000000 ± .005 120000000000000 ± .005 144000000000000 ± .005 180000000000000 ± .005 240000000000000 ± .005 300000000000000 ± .005 360000000000000 ± .005 480000000000000 ± .005 600000000000000 ± .005 720000000000000 ± .005 960000000000000 ± .005 1200000000000000 ± .005 1440000000000000 ± .005 1800000000000000 ± .005 2400000000000000 ± .005 3000000000000000 ± .005 3600000000000000 ± .005 4800000000000000 ± .005 6000000000000000 ± .005 7200000000000000 ± .005 9600000000000000 ± .005 12000000000000000 ± .005 14400000000000000 ± .005 18000000000000000 ± .005 24000000000000000 ± .005 30000000000000000 ± .005 36000000000000000 ± .005 48000000000000000 ± .005 60000000000000000 ± .005 72000000000000000 ± .005 96000000000000000 ± .005 120000000000000000 ± .005 144000000000000000 ± .005 180000000000000000 ± .005 240000000000000000 ± .005 300000000000000000 ± .005 360000000000000000 ± .005 480000000000000000 ± .005 600000000000000000 ± .005 720000000000000000 ± .005 960000000000000000 ± .005 1200000000000000000 ± .005 1440000000000000000 ± .005 1800000000000000000 ± .005 2400000000000000000 ± .005 3000000000000000000 ± .005 3600000000000000000 ± .005 4800000000000000000 ± .005 6000000000000000000 ± .005 7200000000000000000 ± .005 							

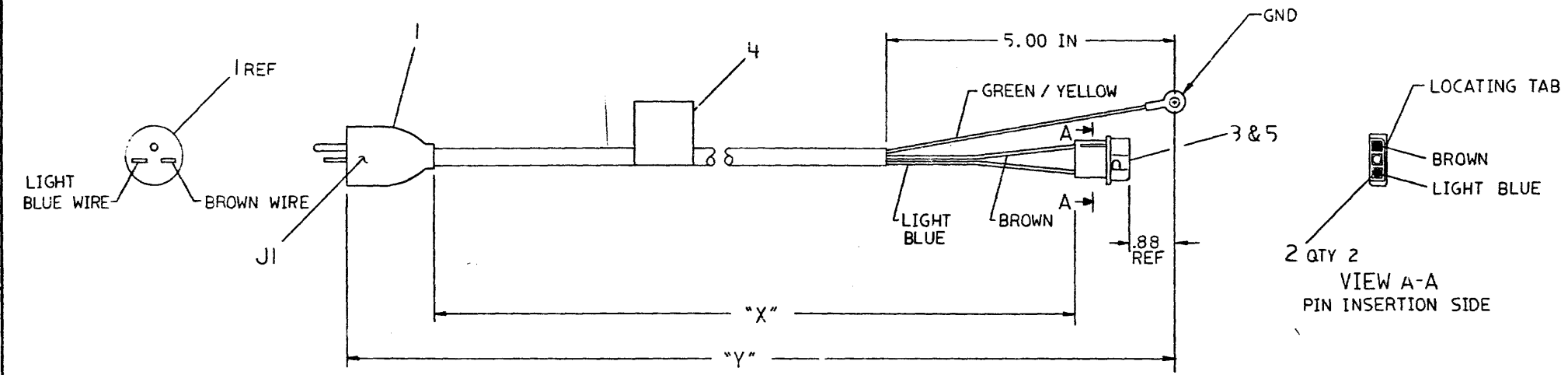
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					VARIATION REVISION LEVEL:	00	01	
						A4	A4	
1	1	D-IA-7018178-0-0	7018178-00		WELDMENT,CARD CAGE	1	1	
2	2	D-IA-7018941-0-0	7018941-00		PLATE FAN ASSY	1	-	
3	3	D-IA-7018941-0-0	7018941-01		PLATE, FAN ASSY	-	1	
4	4	D-AD-7020492-0-0	7020492-00		DOOR, REAR ASSY	1	1	
5	5	D-IA-7018179-0-0	7018179-00		WELDMENT,COVER	1	1	
6	6	E-IA-7424873-0-0	7424873-00		PANEL,FILLER	1	1	
7	7	E-IA-7424873-0-0	7424873-01		PANEL,FILLER	1	1	
8	8	B-AD-7018181-0-0	7018181-00		STRAIN RELIEF ASSY	1	1	
9	9		5414793-00		BACKPLANE,IPAZO	1	1	
10	10	C-MD-7424875-0-0	7424875-01		GASKET	1	1	
11	11	E-MD-7424870-0-0	7424870-01		COVER,BACKPLANE	1	1	
12	12	E-IA-7424871-0-0	7424871-01		STIFFENER,BACKPLANE	1	1	
13	13		9006038-01		SCREW,MACH PAN PHIL	8-	18	18
14	14		9006660-00		WASHER,FLAT		16	16
15	15		9008151-00		WASHER,LOCK		20	20
16	16		9006022-01		SCREW,MACH PAN PHIL	6-	18	18
17	17		9007649-00		WASHER,LOCK		24	24
18	18		9006025-01		SCREW,MACH PAN PHIL	6-	2	2
19	19	C-MD-7427436-0-0	7427436-01		STRAINRELIEF,BLOCK	1	1	
20	20		1213756-16		GROUND STRAP	1	1	
21	21		3613272-00	E	LABEL,ADH BACK,MYLAR CAP	1	1	
22	22		3616606-00	A	LABEL, TOP LEVEL STATUS	2	2	
23	23	C-IA-7428223-0-0	7428223-01		PLATE, TOP	1	1	
24	24	C-MD-7428225-0-0	7428225-01		BRACKET, TOP	1	1	
25	25	C-MD-7428224-0-0	7428224-01		BRACKET, BOTTOM	1	1	
26	26	D-IA-7428221-0-0	7428221-01		PLATE, BOTTOM	1	1	
27	27		3621500-01		*** THIS ITEM IS NOT USED ***	-	-	
28	28		3621501-01		LABEL,MODULE LOCATION CI20	1	1	
29	29		9006024-01		SCREW,MACH PAN PHIL	6-	4	4

REVISION HISTORY			BASIC PART NO: 7019268			D I G I T A L		
ENG	ECO NUMBER	REV	SECTION A OF A	DRN:	W. ALLEN	DATE: 9 OCT 81		
---	INITIAL	D	SECTION VARIATION INDEX	CHK'D:	G. F.	DATE: 14-DEC-82	TITLE PARTS LIST	
PC	7019268-MR001	E	IA100,01				CARD CAGE ASSY	
PC	CI20-MR01A	F					CI20	
			(B)	DES.ENG:	P. CAPPABIANCA	DATE: 14-APR-83	DOCUMENT NUMBER	
			(C)				SIZE CODE	NUMBER
			(D)	RESP.ENG.:	P. CAPPABIANCA	DATE: 14-APR-83	K	PL
			(E)				7019268-0-DBP	
			(F)	MFG.ENG.:	S. ALMEIDA	DATE: 13-APR-83	RELEASE DATE: 28-FEB-85	
				ASSEMBLY NUMBER:		TOP DOCUMENT NUMBER:	FILE NAME:	EDIT #
				E-AD-7019268-0-0			Z5878F.PLS	22

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LEGEND			
PART NO.	DIM. "X" VAR.	DIM. "Y" (RECUT) REF.	REV.
7020539-06	5 FT. 9 IN. ± 10 IN.	6 FT. ± 5 IN.	B1



CAUTION: OFF SHEET PARTS LIST EXIST
SEE K-PL-7020539-0-DBP

DESCRIPTION		DRAWING NO.		PART NO.		ITEM NO.	
UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES AND THE FOLLOWING TOLERANCES APPLY (PER DEC STD 114)							
INCHES TOLERANCES		ANGLES ± 0° 30'		APPLICABLE DIMENSION RANGE			
X = ± .1		SURFACE QUALITY		MICROINCHES			
XX = ± .02		✓		MICROINCHES			
XXX = ± .005				MICROINCHES			
QUANTITY & VARIATION		THIRD ANGLE PROJECTION		DATE		TITLE	
		P. DENNIS		9-DEC-82		CABLE, FAN AC 50 HZ	
DO NOT SCALE DRAWING		DATE		DATE		DOCUMENT NUMBER	
REMOVE BURRS AND BREAK SHARP CORNERS		DATE		DATE		DIA 7020539-0-06	
MATERIAL		DATE		DATE		SCALE	
SEE PARTS LIST		DATE		DATE		SHEET	
FINISH		DATE		DATE		OF	
		E-UA-C120-A-0		9-11-83		MRO	

REVISION HISTORY
ECO NUMBER
RELEASED
DATE

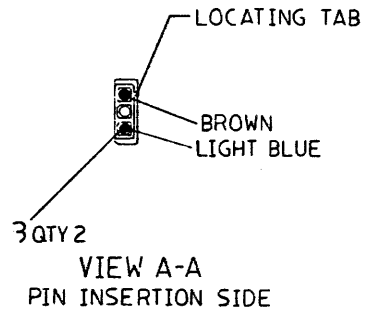
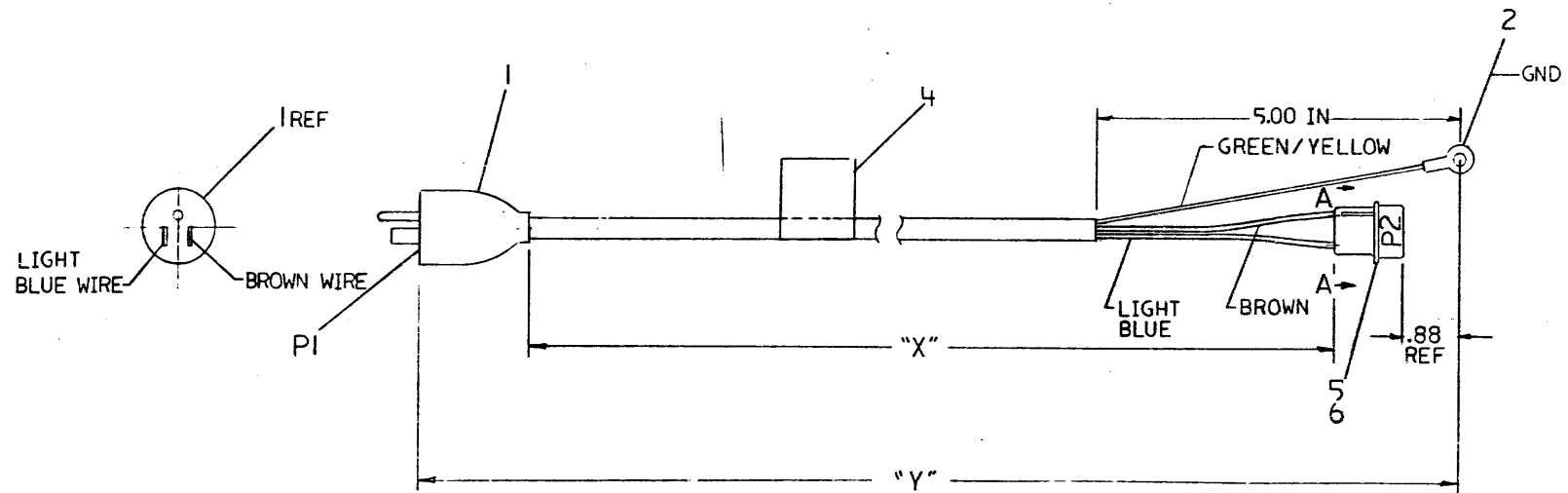
LINE ITEM		TOP DOCUMENT	PART NUMBER	MIN REV	DESCRIPTION	QTY PER VARIATION
VARIATION REVISION LEVEL:						
1	1		1700016-06		PWR CORD,TERM 3-18 SJT	230
2	2		1209378-00		MATE-N-LOK 01PIN 20-14AWS .08500	
3	3		1209351-03		MATE-N-LOK 03PIN(1X03).200CC HSG	
4	4		3616073-00		LABEL,ID W/COPY VERTICAL	
5	5	A-DC-7409872-0-0	7409872-02		PWR HARNESS DECAL, BLACK ON CL3A	

REVISION HISTORY		BASIC PART NO: 7020539		DPN: P. E. DENNISON		DATE: 15-APR-83		O I G I T A L	
ENG	ECO NUMBER	REV	SECTION A OF A						
---	INITIAL	IC	SECTION VARIATION INDEX	CHK'D: 14 DEC 83		DATE: 14 DEC 82		TITLE PARTS LIST	
			CAJ06						
			[B]	DES.ENG: P. CAPPABIANCA		DATE: 14 APR 83		DOCUMENT NUMBER	
			[C]					SIZE CODE NUMBER REV	
			[D]	RESP.ENG.: P. CAPPABIANCA		DATE: 14 APR 83		K PL 7020539-0-DBP C	
			[E]	MFG.ENG.: J. MCCAFFERY		DATE: 11 APR 83		RELEASE DATE: 02-FEB-84	
			[F]	ASSEMBLY NUMBER:		TOP DOCUMENT NUMBER:		FILE NAME: EDIT #	
				ID-1A-7020539-0-0		E-UA-CI20-A-0		Z6009C.PLS 6	
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LEGEND			
PART NO.	DIM. "X" VAR	DIM. "Y" (PRECUT) REF	REV
7019274-06	5 FT. 9 IN. ± 1.0 IN.	6 FT. ± .5 IN.	B1

NOTES:



CAUTION: OFF SHEET SHEET PARTS LIST EXISTS.
SEE K-PL-7019274-0-DBP.

REVISION HISTORY
REV. C
DATE RELEASED

DESCRIPTION		DRAWING NO.		PART NO.		ITEM NO.	
UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES AND THE FOLLOWING TOLERANCES APPLY (PER DEC STD 114)							
INCHES TOLERANCES		ANGLES ± 0° 30'		APPLICABLE DIMENSION RANGE (CHECK ONE)		DIMENSION RANGE IN INCHES	
X = ± .1 XX = ± .02 XXX = ± .005		SURFACE QUALITY ✓ MICROINCHES		☐ ± .02 ☐ ± .004		OVER TO OVER TO OVER TO OVER TO 0.2 0.2 0.2 0.2 0.2 0.2 ± .02 ± .03 ± .05 ± .10 ± .12 ± .14	
QUANTITY & VARIATION		THIRD ANGLE PROJECTION		DATE 19 APR 82		TITLE	
DO NOT SCALE DRAWING		DO NOT SCALE DRAWING		DATE 14 DEC 82		CABLE, FAN AC 60 HZ	
REMOVE BURRS AND BREAK SHARP CORNERS		REMOVE BURRS AND BREAK SHARP CORNERS		DATE 14 APR 83		DOCUMENT NUMBER	
MATERIAL SEE PARTS LIST		MATERIAL SEE PARTS LIST		DATE 14 APR 83		DIA 7019274-0-01C	
FINISH		FINISH		DATE 14 APR 83		SCALE 1 OF 1	
				E-0A-C120-A-0		1 MRO	

LINE ITEM TOP DOCUMENT

 PART NUMBER REV DESCRIPTION
 VARIATION REVISION LEVEL:
QTY PER VARIATION
06

1	1	1700006-06	PWR CORD, TERM 3-15 SJT 115	1
2	2	9007928-00	TERM, RING #10STUD CRIMP 14-1	1
3	3	1209378-00	MATE-N-LOK 01PTN 20-14AWG .08500	2
4	4	3616073-00	LABEL, TD W/COPY VERTICAL	1
5	5	7409872-02	PWR HARNESS DECAL, BLACK ON CLEA	1
6	6	1209351-03	MATE-N-LOK 03PTN(1X03).200CC HSG	1

REVISION HISTORY			BASIC PART NO: 7019274			D I G I T A L		
ENG	ECO NUMBER	REV	SECTION A OF A	DRN:	W ALLEN	DATE:	19 APR 82	
---	INITIAL	C	SECTION VARIATION INDEX	CHK'D:	G. F.	DATE:	14 DEC 82	TITLE PARTS LIST
			EAJ06					CABLE PAN, AC 60 HZ
			EB	DES.ENG:	P. CAPPABIANCA	DATE:	14 APR 83	DOCUMENT NUMBER
			EC					SIZE CODE NUMBER
			ED	RESP.ENG.:	P. CAPPABIANCA	DATE:	14 APR 83	K PL 7019274-0-08P
			EE					
			EF	MFG.ENG.:	J. MCCAFFERY	DATE:	11 APR 83	RELEASE DATE: 02-FEB-84
				ASSEMBLY NUMBER:		TOP DOCUMENT NUMBER:		FILE NAME:
				ID-1A-7019274-0-0				Z5903C.PLS
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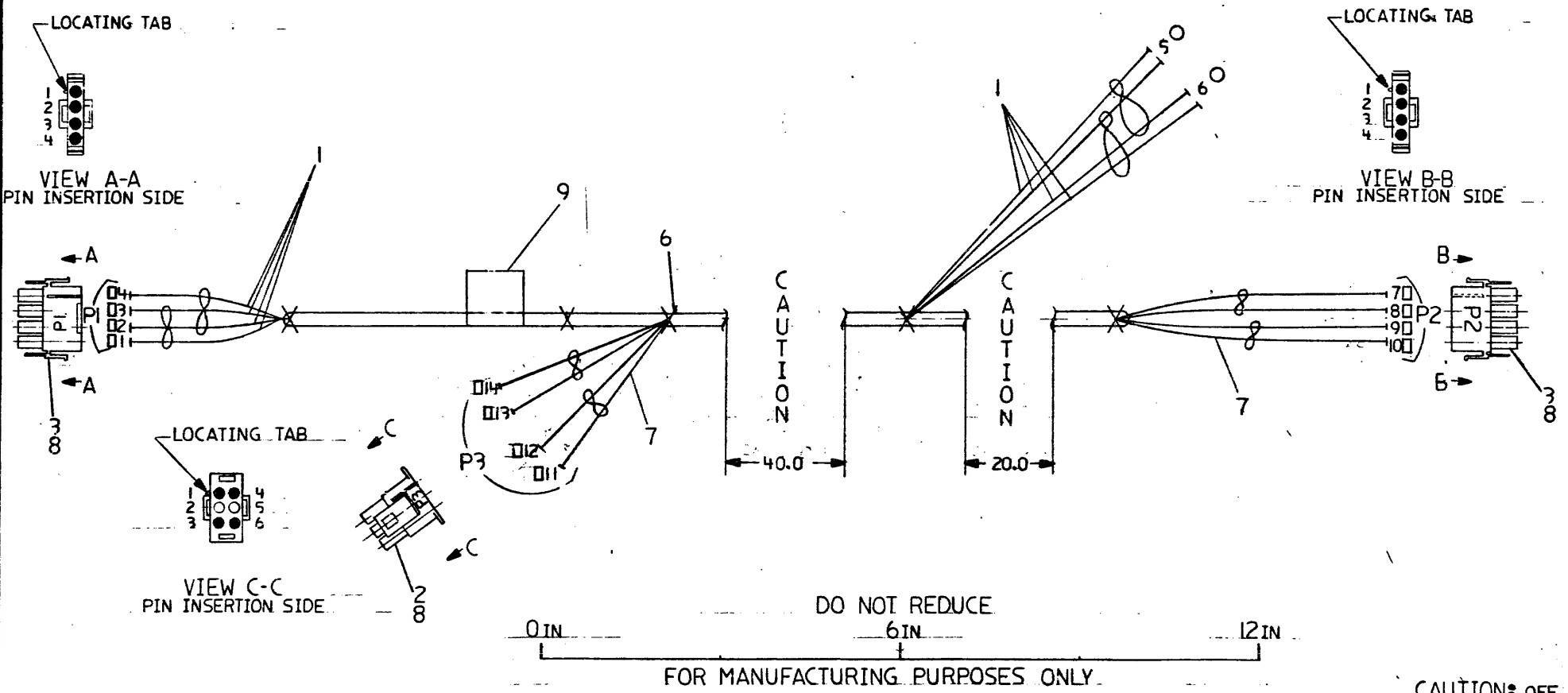
SYMBOLS

ITEM NO	SYMBOL	PART NO (REF)
4	□	I212170-00
5	○	9007920-00

WIRE TABLE									
ITEM DESCRIPTION		FROM			TO			REMARKS	
NO	AWG	COLOR	POINT	CONNECTION	WITH	POINT	CONNECTION	WITH	
1	TWP #14	BLU	1	P1-4	4	6		5	TWP
		BLU	2	P1-3	4				
		BLK	3	P1-2		5		5	
		BLK	4	P1-					TWP
7	TWP #14	RED	7	P2-1		11	P3-4	4	
7	TWP #14	BLK	8	P2-2		12	P3-1	4	
		BLK	9	P2-3		13	P3-3	4	
		RED	10	P2-4	4	14	P3-6	4	

LEGEND		
PART NO	VARIATION	REV
7019272-00	AS SHOWN	A2

- NOTES:**
- USE TIE WRAPS (X) ITEM 6 APPROXIMATELY EVERY 3 INCHES WHEN NECESSARY AND AT EVERY BREAKOUT POINT.
 - CONNECTOR TO BE LABELED WITH COMPONENT IDENTIFIERS.
 - UNLESS OTHERWISE NOTED ALL LENGTHS ARE IN INCHES.



CAUTION: OFF SHEET PARTS LIST EXISTS
SEE K-PL-7019272-0-DBP.

REVISION HISTORY

REV	DATE	DESCRIPTION
B	028 7019272-MR001	RELEASED
C		

W. Lee
P. Cappabianca
P. Cappabianca 10/31/84

DESCRIPTION	DRAWING NO.	PART NO.	ITEM NO.
UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES AND THE FOLLOWING TOLERANCES APPLY (PER DEC STD 114)			
INCHES TOLERANCES X = ±.1 XX = ±.08 XXX = ±.06	ANGLES ± 0° 30'	APPLICABLE DIMENSION RANGE (CHECK ONE)	DIMENSION RANGE IN INCHES
			OVER 0.2 TO 0.25 ±.005 OVER 0.25 TO 0.5 ±.006 OVER 0.5 TO 1.0 ±.007 OVER 1.0 TO 2.0 ±.008 OVER 2.0 TO 4.0 ±.009 OVER 4.0 TO 6.0 ±.010 OVER 6.0 TO 12.0 ±.012 OVER 12.0 TO 24.0 ±.015 OVER 24.0 TO 48.0 ±.020 OVER 48.0 TO 96.0 ±.025
QUANTITY & VARIATION	TYPED ANGLE PROJECTION	DATE 13 APR 82	TITLE HARNESS DC-5.2 SECT'N-1 DC+5
DO NOT SCALE DRAWING	DATE 14 DEC 82	DATE 14 DEC 82	DATE 14 DEC 82
REMOVE BURRS AND BREAK SHARP CORNERS	DATE 14 DEC 82	DATE 14 DEC 82	DATE 14 DEC 82
MATERIAL SEE PARTS LIST	DATE 14 DEC 82	DATE 14 DEC 82	DATE 14 DEC 82
FINISH	DATE 14 DEC 82	DATE 14 DEC 82	DATE 14 DEC 82

1 MRO

LINE	ITEM	TOP DOCUMENT	PART NUMBER	MIN REV	DESCRIPTION	QTY PER VARIATION
					VARIATION REVISION LEVEL:	A2
1	1		9107440-06		WIRE,TWP 14AWG19/.0147IPVC 300V1	A/R
2	2		1212167-06		MATE-N-LOK 06SKT(2X03).250CC HSG	1
3	3		1212167-01		MATE-N-LOK 04SKT(1X04).250CC HSG	2
4	4		1212170-00		MATE-N-LOK 01SKT 20-14AWG .0850D	12
5	5		9007920-00		TERM QUICK .300TAB CRIMP 12-1	2
6	6		9007880-00		TIE,CABLE BUNDL DIA 0-1.14"=101	8
7	7		9107440-02		WIRE,TWP 14AWG19/.0147IPVC 300V1	A/R
8	8	A-DC-7409872-0-0	7409872-02		PWR HARNESS DECAL, BLACK ON CLEA	1
9	9		3616073-00		LABEL,ID W/COPY VERTICAL	1

REVISION HISTORY			BASIC PART NO: 7019272			D I G I T A L		
ENG	ECO NUMBER	REV	SECTION A OF A	DRN:	W. ALLEN	DATE:	13-APR-82	
---	INITIAL	B	SECTION VARIATION INDEX	CHK'D:	G. F.	DATE:	10 DEC 82	TITLE PARTS LIST
PC	7019272-MR001	C	[A]00					HARNESS DC-5.2 SECT'N-1 DC+5
			[B]	DES.ENG:	P. CAPPABIANCA	DATE:	14 APR 83	DOCUMENT NUMBER
			[C]					SIZE CODE NUMBER REV
			[D]	RESP.ENG.:	P. CAPPABIANCA	DATE:	14 APR 83	K PL 7019272-0-DBP C
			[E]	MFG.ENG.:	J. MCCAFFERY	DATE:	11 APR 83	RELEASE DATE: 30-OCT-84
			[F]	ASSEMBLY NUMBER:		TOP DOCUMENT NUMBER:		FILE NAME: EDIT #
				D-1A-7019272-0-0				Z5884C.PLS 9

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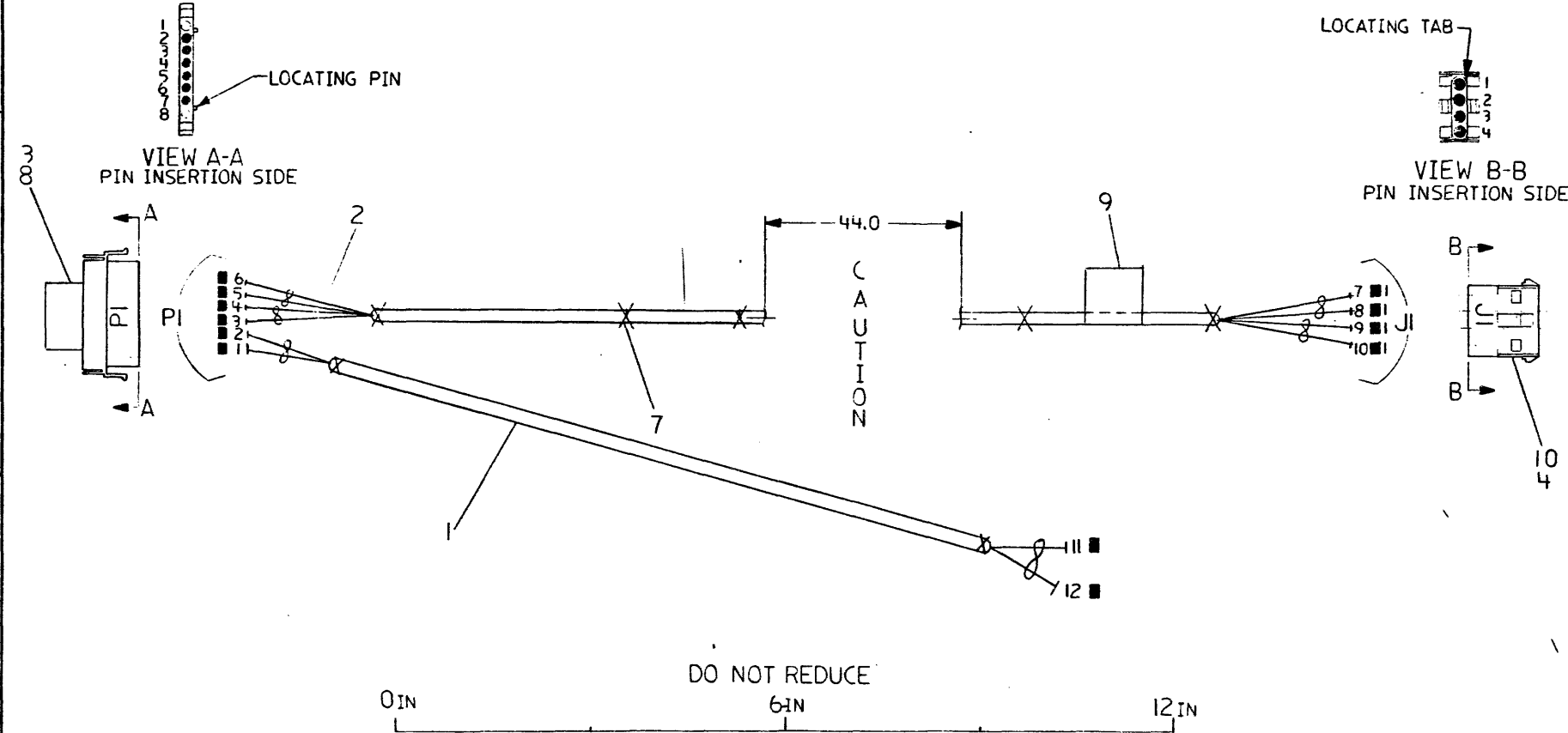
SYMBOLS

ITEM NO.	SYMBOL	PART NO. (REF)
5	■	1209378-00
6	■	1212162-00

WIRE TABLE									
ITEM NO	DESCRIPTION	COLOR	FROM			TO			REMARKS
			POINT	CONNECTION	WITH	POINT	CONNECTION	WITH	
1	TWP #18	WHT	1	PI-7	5	12		5	
		RED	2	PI-6	1	11		5	
2	TWP #14	RED	3	PI-5		10	JI-4	6	
		BLK	4	PI-4		9	JI-3	1	
2	TWP	BLK	5	PI-3		8	JI-2	1	
		RED	6	PI-2	5	7	JI-1	6	

LEGEND		
PART NO	VARIATION	REV
7019273 00	AS SHOWN	BI

- NOTES:**
1. USE TIE WRAPS(X) ITEM 7 APPROXIMATELY EVERY 3 INCHES WHEN NECESSARY AND AT EVERY BREAKOUT POINT.
 2. CONNECTOR TO BE LABELED WITH COMPONENT IDENTIFIERS.
 3. UNLESS OTHERWISE NOTED ALL LENGTHS ARE IN INCHES.



DO NOT REDUCE
FOR MANUFACTURING PURPOSE ONLY

CAUTION: OFF SHEET PARTS LIST EXIST
SEE K-PL-7019273-0-DBP

REVISION HISTORY
DATE
ECC NUMBER
RELEASED

DESCRIPTION	DRAWING NO.	PART NO.	ITEM NO.
UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES AND THE FOLLOWING TOLERANCES APPLY (PER DEC STD 114)			
INCHES TOLERANCES X = ± .1 XX = ± .02 XXX = ± .006	ANGLES ± 0° 30'	APPLICABLE DIMENSION RANGE (CHECK ONE) ☐ 0 TO 12 ☐ 12 TO 24 ☐ 24 TO 48 ☐ 48 TO 60	DIMENSION RANGE IN INCHES
			OVER 0 TO 12 OVER 12 TO 24 OVER 24 TO 48 OVER 48 TO 60
QUANTITY & VARIATION	THIRD ANGLE PROJECTION 	DATE 14 DEC 72 19 JAN 83 4-11-83	TITLE HARNESS DC-5.2 SECT'N-2 DC+5
DO NOT SCALE DRAWING	REMOVE BURRS AND BREAK SHARP CORNERS	MATERIAL SEE PARTS LIST	DOCUMENT NUMBER DIA 7019273-0-0
FINISH			SCALE 1" = 1'

LINE ITEM		TOP DOCUMENT	PART NUMBER	MIN REV	DESCRIPTION	QTY PER VARIATION
VARIATION REVISION LEVEL:						
1	1		9107430-92		WIRE,TWP 18AWG(12/30)TPVC 150V	A/R
2	2		9107440-02		WIRE,TWP 14AWG19/.0147TPVC 300V1	A/R
3	3	A-PS-1209340-0-0	1209340-01		MATE-N-LOK 08PIN(1X08)	HSG 1
4	4	A-PS-1212168-0-0	1212168-02		MATE-N-LOK 04POS(1X04).250CC HSG	1
5	5	A-PS-1209378-0-0	1209378-00		MATE-N-LOK 01PIN 20-14AWG .0850D	8
6	6	A-PS-1212169-0-0	1212169-00		MATE-N-LOK 01PIN 20-14AWG .0850D	4
7	7		9007880-00		TIE,CABLE BUNDL DIA 0-1.14"=101	A/R
8	8	A-DC-7409872-0-0	7409872-02		PWR HARNESS DECAL, BLACK ON CLEAR	1
9	9		3616073-00		LABEL,10 W/COPY VERTICAL	1
10	10	A-DC-7409873-0-0	7409873-02		PWR CONN DECAL BLACK ON CLEAR	1

REVISION HISTORY		BASIC PART NO: 7019273		DRN: W. ALLEN		DATE: 14-APR-82		D I G I T A L	
ENG	ECU NUMBER	REV	SECTION A OF A	CHK'D:	G. F.	DATE:	14 DEC 82	FILE	PARTS LIST
	INITIAL	C	SECTION VARIATION INDEX						HARNESS DC-5.2
			CAJ00						SECT-N-2 DC+5
			EBJ	DES.ENG:	P. CAPPABIANCA	DATE:	14 APR 83		DOCUMENT NUMBER
			CCJ					SIZE/CODE	NUMBER
			CDJ	RESP.ENG.:	P. CAPPABIANCA	DATE:	14 APR 83	K	PL
			EEJ						7019273-0-DBP
			EFJ	MFG.ENG.:	J. MCCAFFERY	DATE:	11 APR 83		RELEASE DATE: 02-FEB-84
				ASSEMBLY NUMBER:		TOP DOCUMENT NUMBER:		FILE NAME:	EDIT #
				ID-IA-7019273-0-0		IE-UA-CI20-0-0		Z5883C.PLS	4

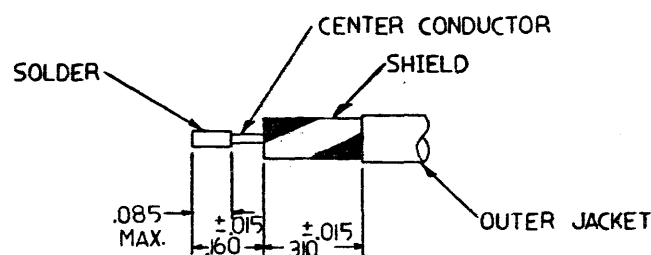
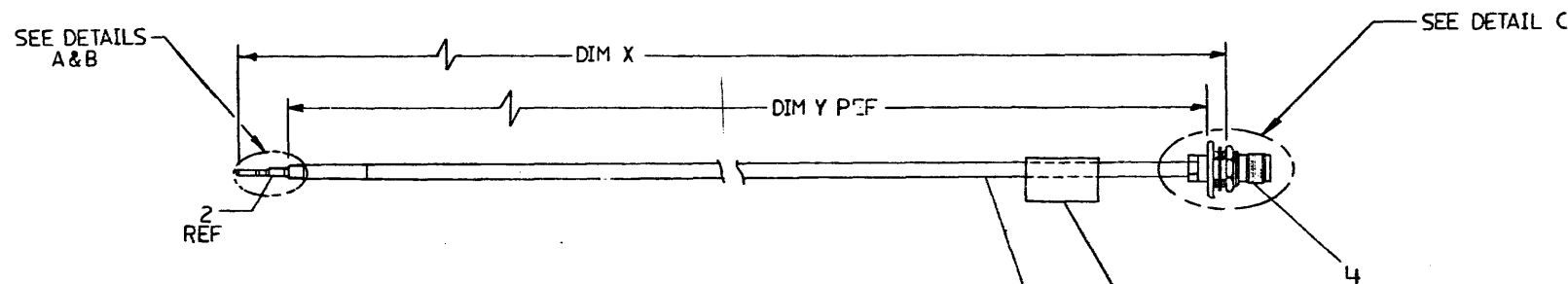
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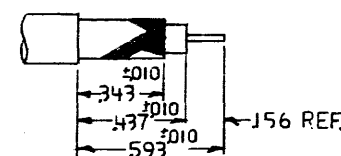
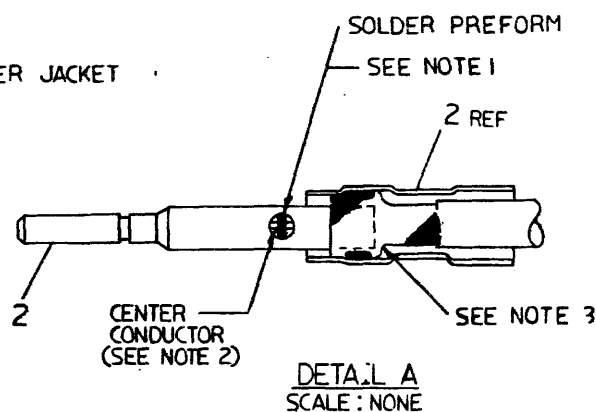
LEGEND			
NUMBER	DIM X VARIATION	DIM Y (PRE CUT) REF	
7018526-1A	1 FT. 1 IN. $\pm$ 1.0 IN.	1 FT. 0 IN. $\pm$ 1.0 IN.	
7018526-2A	2 FT. 1 IN. $\pm$ 1.0 IN.	2 FT. 0 IN. $\pm$ 1.0 IN.	
7018526-3A	3 FT. 1 IN. $\pm$ 1.0 IN.	3 FT. 0 IN. $\pm$ 1.0 IN.	
7018526-4A	4 FT. 1 IN. $\pm$ 1.0 IN.	4 FT. 0 IN. $\pm$ 1.0 IN.	
7018526-5A	5 FT. 1 IN. $\pm$ 1.0 IN.	5 FT. 0 IN. $\pm$ 2.0 IN.	
7018526-6A	6 FT. 1 IN. $\pm$ 1.0 IN.	6 FT. 0 IN. $\pm$ 2.0 IN.	
7018526-7A	7 FT. 1 IN. $\pm$ 2.0 IN.	7 FT. 0 IN. $\pm$ 2.0 IN.	
7018526-8A	8 FT. 1 IN. $\pm$ 2.0 IN.	8 FT. 0 IN. $\pm$ 2.0 IN.	

NOTES:

1. SOLDER PREFORM IS PART OF ITEM 2.
2. CENTER CONDUCTOR TO PASS THRU SOLDER PREFORM OF ITEM 2.
3. SHIELD TO BE FLARED BEFORE ASSY TO ITEM 2 & SMOOTHED OVER AFTER.



DETAIL B
SCALE: NONE
SHOWN WITH ITEM 2,
CONTACT, REMOVED.



RECOMMENDED CABLE
STRIPPING DIMS.

DETAIL C
SCALE: NONE
SHOWN WITH ITEM 4,
CONN. REMOVED.

CAUTION: SEE OFF SHEETS PARTS LIST
K-PL-7018526-0-DBP (Z2284B)

THIRD ANGLE PROJECTION		DESCRIPTION		DWG. PART NO.		ITEM NO.	
REMOVE BURRS AND BREAK SHARP CORNERS		UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES		CLASS OF ACCURACY		NOMINAL DIMENSION RANGE INCHES	
DO NOT SCALE DWG		QUANTITY & VARIATION		CLASS OF ACCURACY		NOMINAL DIMENSION RANGE INCHES	
MATERIAL SEE PARTS LIST		FINISH		CLASS OF ACCURACY		NOMINAL DIMENSION RANGE INCHES	
SCALE NONE		NEXT HIGHER ASSY.		CLASS OF ACCURACY		NOMINAL DIMENSION RANGE INCHES	
SHEET 1 OF 1		DIST.		CLASS OF ACCURACY		NOMINAL DIMENSION RANGE INCHES	
SIZE CODE		NUMBER		REV		REV	
D IA		7018526-0-0		B		B	
TW		1					

REVISIONS
CHG. CHANGE NO. REV.
7018526-0-10000 B
R. RUEBLING
R. RUEBLING

LINE	ITEM	DOCUMENT NUMBER	PART NUMBER	DESCRIPTION	QUANTITY PER VARIATION							
					1A	2A	3A	4A	5A	6A	7A	8A
1	1		1700278-00	CABLE,COAX 01COND 20AWG BRAIDSHL	1	1	1	1	1	1	1	1
2	2		1218505-00	CONN,COAX RG58 JACK SOLD	1	1	1	1	1	1	1	1
3	4		1217991-00	CONN,COAX TNC RG58 JACK	1	1	1	1	1	1	1	1
4	5	A-PS-3616073-0-0	3616073-00	LABEL,ID W/COPY VERTICAL	1	1	1	1	1	1	1	1

REVISION HISTORY			BASIC PART NO: 7018526			DRN: S. CHARTIER			DATE: 24-SEP-81			DIGITAL		
ENG	ECO NUMBER	REV	SECTION A OF A	CHK'D: J. SULLIVAN			DATE: 24-SEP-81			TITLE PARTS LIST				
---	INITIAL	A	SECTION. VARIATION INDEX	DES.ENG.: R. NUEBLING			DATE: 24-SEP-81			CABLE ASSY(CI780)				
RN	7018526-TW001	B	[A] 1A,2A,3A,4A,5A,6A,7A,8A	RESP.ENG.: R. CASABONA			DATE: 24-SEP-81			DOCUMENT NUMBER				
			[B]	MFG.ENG.: M. WARSHAW			DATE: 24-SEP-81			SIZE CODE NUMBER REV				
			[C]	ASSEMBLY NUMBER:			TOP DOCUMENT NUMBER:			FILE NAME:				
			[D]	D-IA-7018526-0-0			E-UA-CI780-0-0			Z2284B.PLS				
			[E]							EDIT #				
			[F]							15				
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DRAWING NUMBER

LINE	ITEM	TOP DOCUMENT	PART NUMBER	MIN	REV	DESCRIPTION	QTY	PER VARIATION
1	1		1700034-00	H		CABLE,RIBBON BOND 40COND 30AWG	A/R	
2	2		1211206-00	S		CONN,IDC 40SKT(2X20).100CC GOL	2	
3	3		4901150-00	A		INK,ACID BASE,WATERPROOF	A/R	
4	4		3612511-00	CR		TAPE,VINYL ADH .50 WDX 7M	A/R	
5	5		3616073-00	B		LABEL,ID W/COPY VERTICAL	1	
6	6		3616989-00	A		LABEL,CABLE LARGE	1	

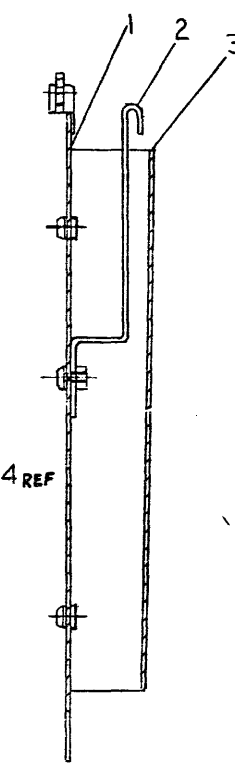
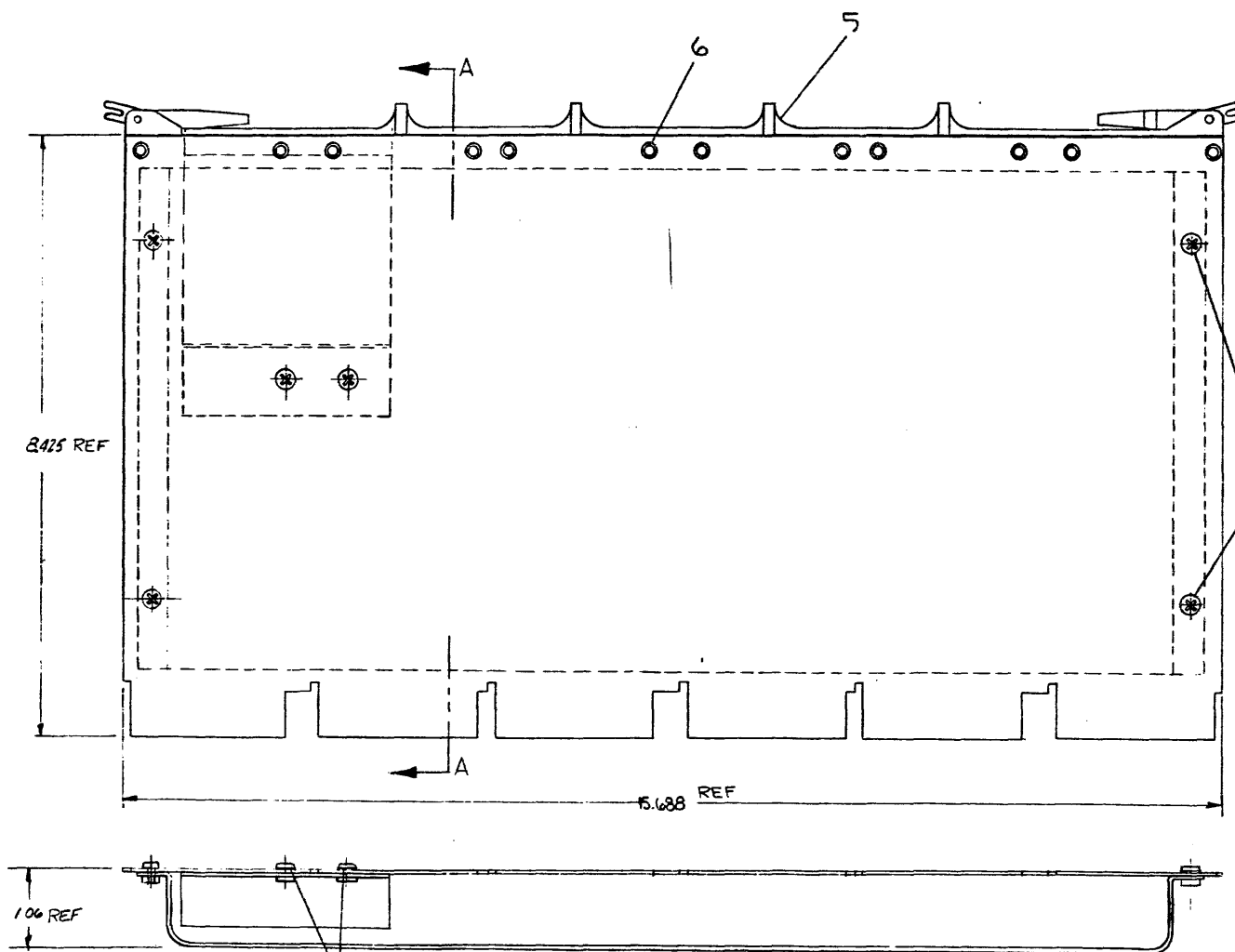
REVISION HISTORY			BASIC PART NO: BC06R		DRN: D. DI PERRI	DATE: 12-22-73	D I G I T A L	
ENG	ECO NUMBER	REV	SECTION A OF A	CHK'D: B. MONETTE	DATE: 3-25-74	TITLE PARTS LIST BC06R I/O CABLE		
WH	BC06R-CX007	H	SECTION VARIATION INDEX	DES.ENG: D. POTTER	DATE: 3-29-73	DOCUMENT NUMBER		
RH	BC06R-CX008	J	[A]01	RESP.ENG.: D. LIGNOS	DATE: 4-17-74	SIZE	CODE	NUMBER
			[B]	MFG.ENG.: A. PARLSING	DATE: 4-21-74	K	PL	BC06R-0-DBP
			[C]	ASSEMBLY NUMBER:	TOP DOCUMENT NUMBER:	FILE NAME:		EDIT #
			[D]	D-UA-BC06R-0-0-0	E-IA-7009807-0-0	Z6996J.PLS		4
			[E]			RELEASE DATE:		
			[F]					

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LEGEND		
NUMBER	VARIATION	REV
7019266-00	AS SHOWN	A1

NOTES:



CAUTION: OFF SHEET PARTS LIST EXIST
SEE K-PL-7019266-0-DBP

REV	ECO NUMBER	DATE
B		
A		

THIRD ANGLE PROJECTION		DATE	26 FEB 82	TITLE	digital
DO NOT SCALE DRAWING		DATE	14 DEC 81	MODULE BLANK	
REMOVE BURRS AND BREAK SHARP CORNERS		DATE	13 APR 83	ASSY	
MATERIAL		DATE	13 APR 83	DOCUMENT NUMBER	
SEE PARTS LIST		DATE	13 APR 83	SIZE CODE	
FINISH		DATE	13 APR 83	NUMBER	
NONE		DATE	13 APR 83	REV	
E-0AC120-A-0		DATE	13 APR 83	SCALE	
		DATE	13 APR 83	SHEET	
		DATE	13 APR 83	OF	

LINE ITEM		TOP DOCUMENT	PART NUMBER	MIN REV	DESCRIPTION	QTY PER VARIATION
VARIATION REVISION LEVEL:						
1	1	D-MD-7428313-0-0	49057-00		AIR FLOW CONTROLLER,HEX (FOR CI2	1
2	2	C-IA-7424869-0-0	7424869-01		CLTP	1
3	3	D-IA-7426796-0-0	7426796-01		BAFFLE	1
4	4		9006022-01		SCREW, WACH PAN PHIL	5- 6

REVISION HISTORY		BASIC PART NO: 7019266		DRN: W. ALLEN		DATE: 26-FEB-82		D I G I T A L	
ENG	ECO NUMBER	REV	SECTION A OF A	CHK'D: C. F.		DATE: 14-DEC-82		TITLE PARTS LIST	
---	INITIAL	B	SECTION.VARIATION INDEX					MODULE BLANK ASSY	
			CA300						
			[B]	DES.ENG: P. CAPPABIANCA		DATE: 13-APR-83		DOCUMENT NUMBER	
			[C]					SIZE CODE NUMBER REV	
			[D]	RESP.ENG.: P. CAPPABIANCA		DATE: 13-APR-83		K PL 7019266-0-DBP 8	
			[E]	MFG.ENG.: S. ALMEIDA		DATE: 13-APR-83		RELEASE DATE: 02-FEB-84	
			[F]	ASSEMBLY NUMBER:		TOP DOCUMENT NUMBER:		FILE NAME: EDIT #	
				D-AD-7019266-0-0				Z5881B.PLS 6	
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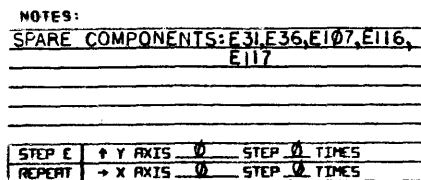
APC

DRAWING NUMBER	PAGE	PART NO.	DESCRIPTION	REVISIONS	
			ECC NUMBER	M3001 MR001	M3001 MR002
		M3001-00	MODULE REVISION	A2	A3
D-UA-M3001-0-0	1		EBUS	B	C
K-PL-M3001-0-DBP	2		PARTS LIST, M3001	B	C
D-CS-M3001-0-EBI1	1		C120 EBUS INTFC CONTROL 1	A	A
D-CS-M3001-0-EBI2	1		C120 EBUS INTFC CONTROL 2	A	A
D-CS-M3001-0-EBI3	1		C120 EBUS INTFC EBUS-MBUS MUXS	A	A
D-CS-M3001-0-EBI4	1		C120 EBUS INTFC CSR REG	A	A
D-CS-M3001-0-EBI5	1		C120 EBUS INTFC EBUS PAR AND EBUSF	A	A
D-CS-M3001-0-EBI6	1		C120 EBUS INTFC EBUS XCEIVERS	A	A
D-CS-M3001-0-EBI7	1		C120 EBUS INTFC MICROPROC ALU 1	A	A
D-CS-M3001-0-EBI8	1		C120 EBUS INTFC MICROPROC ALU 2	A	A
D-CS-M3001-0-EBI9	1		C120 EBUS INTFC UPROC CNST MUX	A	A
D-CS-M3001-0-EBIA	1		C120 EBUS INTFC PWR & GND	A	A
D-CS-M3001-0-EBIB	1		C120 EBUS INTFC UNUSED FINGER	A	A
D-CS-M3001-0-BLK	1		BLOCK DIAGRAM EBUS MODULE	A	A
K-PC-M3001-0-DBI	-		P.C. DESIGN DATA BASE	B	B
D-DD-5015384-0	2		DRAWING DIRECTORY, 5015384	REF	REF

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REVISIONS		
CHK	CHANGE NO.	REV

digital	DRN.	D. DELLORCO	DATE	19-FEB-85	ENG.	E BLOOM	DATE	19-FEB-85	TITLE: DRAWING DIRECTORY M3001 (EBUS)
	CHK'D	D. CAUNTER	DATE	19-FEB-85	BOARD LOCATION:	N/A			
DSK: T30012.TPC(4,57)			19-FEB-85	3:05	SHEET 2 OF 2			NEXT HIGHER ASSEMBLY:	
FIRST USED ON OPTION/MODEL:			C120			SIZE	CODE	NUMBER	REV.
						D	DD	M3001-0	C

[illegible]

ETCH REV. C1¹

SIGNATURES		DATE	digital	
DRN. 10426		1 MAR 84		
CHK. J. S. Williams		22 AUG 84		
MECH. ENG. J. S. Williams		22 AUG 84	TITLE	
PROJ. ENG. J. S. Williams		22 AUG 84	EBUS	
PROD. J. S. Williams		22 AUG 84		
SCALE 2/1			SIZE CODE	NUMBER
SMT. 1 OF 1			0 UA	M3001-0-0
TOP DOC. NO. D-DD-M3001-0				

LINE ITEM	TCP DOCUMENT	PART NUMBER	MIN REV	DESCRIPTION	QTY	PER VARIATION	REFERENCE DESIGNATOR
				VARIATION REVISION LEVEL:	00		
					A3		
1	1	D-MC-5015384-0-0	5015384-01	C DRILL & ETCH DWG FOR M3001	1		
2	2		1001610-00	.01 MFD 50V +80-20% Z5U CER	113		C1-C17,C19-C29,C31-C52,C55-C104,
3	3		1012084-03	150 MFD 15V +75-10% AL EL	10	CONT	C107-C119
4	4		1012784-00	.047 MFD 50V +80-20% CER	17		C131-C140
5	5		1216832-03	PCB,HEADER 50POS(2X25),100CC 90D	1	CONT	C18,C30,C53,C54,C105,C106,
6	6		1215278-00	CABLE,FLEX NOMEX SHEET MODULE PR	1		C120-C130
7	7		1216988-02	HANDLE,MODULE,HEX TWO EJECTORS	1		J1
8	8		1300295-00	330.0 .25 W 5.0 % CF	2		R1,R3
9	9		1300309-00	390.0 .25 W 5.0 % CF	6		R6,R8,R10,R12,R14,R16
10	11		1301322-00	180.0 .25 W 5.0 % CF	8		R2,R4,R5,R7,R9,R11,R13,R15
11	12		1910532-B0	74S00 BURNED-IN NAND GATE-	6		E12,E34,E82,E95,E106,E108
12	13		1910534-B0	74S04 BURNED-IN INVERTER G	6		E9,E10,E44,E53,E78,E79
13	14		1910536-B0	74S10 BURNED-IN NAND GATE-	3		E7,E71,E81
14	15		1910537-B0	74S11 BURNED-IN AND GATE-T	1		E124
15	15		1910544-B0	74S74 BURNED-IN FF-D DUAL,	9		E6,E8,E17,E18,E55,E67-E69,E83
16	17		1911117-00	DEC 8838 TRANSCEIVER,BUS,QUA	16		E1-E3,E14-E16,E27-E30,E40-E43,
17	18		1911573-B0	74S280 BURNED-IN PARITY GEN	10	CONT	E54,E66
18	19		1911641-B0	74S257 BURNED-IN MUX,QUAD 2	9		E46-E50,E52,E74,E76,E77,E86
19	20		1911675-B0	74S138 BURNED-IN DECODER/DE	1		E87-E90,E99-E103
20	21		1912097-00	SN 74S182 LOOK AND CARRY GEN	3		E45
21	22		1912388-B0	74S02 BURNED-IN NOR GATE-Q	8		E113,E119,E125
22	23		1912389-B0	74S08 BURNED-IN AND GATE-Q	7		E19,E20,E33,E37,E56,E58,E84,E94
23	24		1912697-00	LS174 FF-D HEX W/CLEAR	6		E21,E35,E39,E57,E59,E72,E118
24	25		1912799-B0	LS00 BURNED-IN NAND GATE-	2		E91,E98,E104,E112,E114,E115
25	26		1912805-B0	LS08 BURNED-IN AND GATE-Q	2		E22,E26
26	27		1912819-00	LS42 DECODER,BCD-DECIMAL	1		E13,E23
27	28		1912824-B0	LS74 BURNED-IN FF-D DUAL-	3		E32
							E11,E24,E25

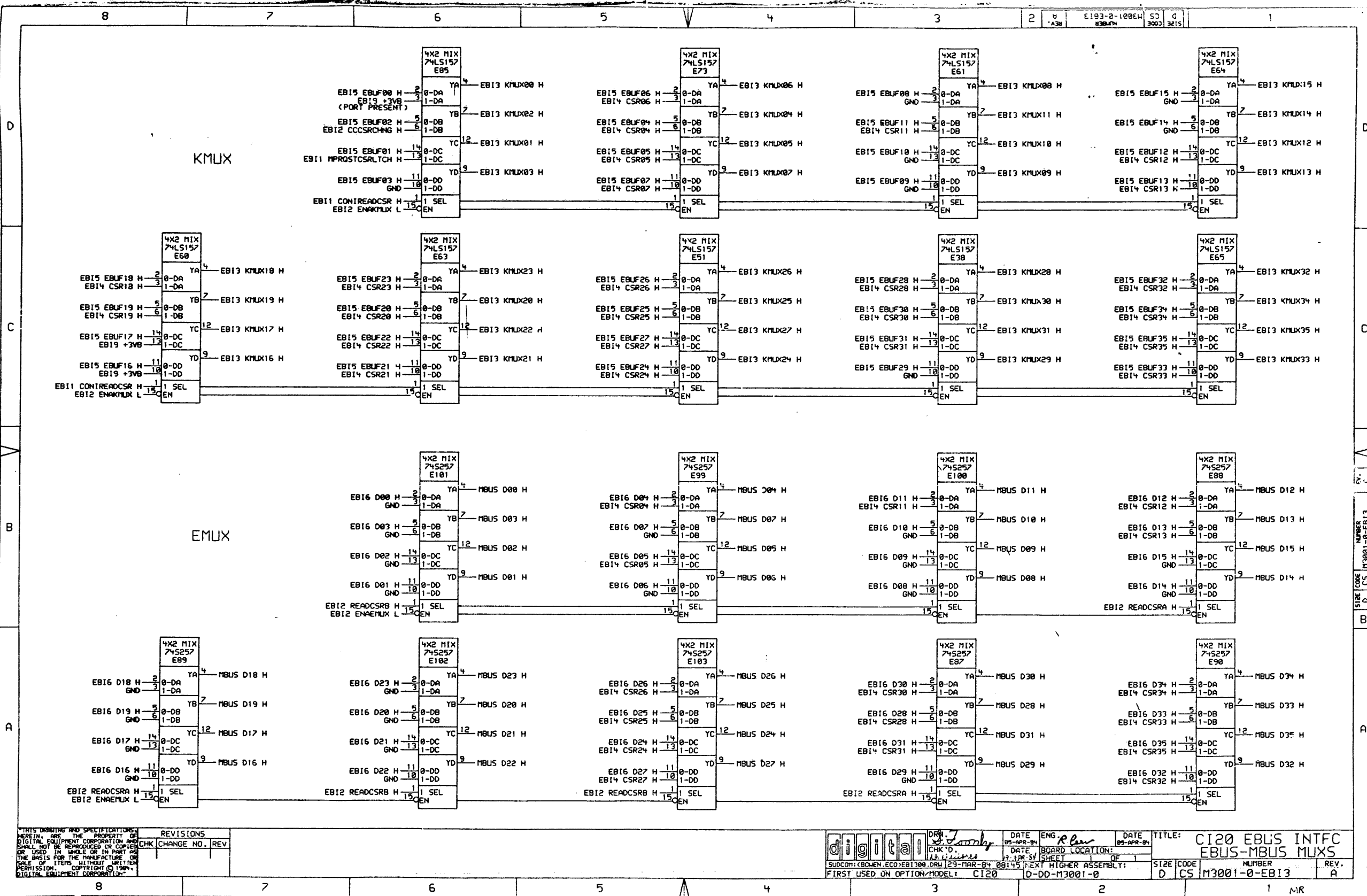
REVISION HISTORY			BASIC PART NO: M3001		DRN: D,DELLORCO	DATE: 14-OCT-82	D I G I T A L		
ENG	ECC NUMBER	REV	SECTION A OF A						
---	INITIAL	A	SECTION VARIATION INDEX		CHK'D: D,DELLORCO	DATE: 3-JAN-84	TITLE PARTS LIST		
BT	M3001-MR001	B	(A) 00				M3001		
EB	M3001-MR002	C	(B)				EBUS		
			(C)		DES.ENG: R,CARN	DATE: 19-APR-84	DOCUMENT NUMBER		
			(D)				SIZE	CODE	NUMBER
			(E)						REV
			(F)		RESP.ENG.: R,CARN	DATE: 19-APR-84	K	PL	M3001-0-DBP
			(H)						C
			(J)						
			(K)		MFG.ENG.: R,CARN	DATE: 19-APR-84	RELEASE DATE: 18-FEB-85		
			(L)						
			(M)		ASSEMBLY NUMBER:	TOP DOCUMENT NUMBER:	FILE NAME:		EDIT #
			(N)		D-UA-M3001-0-0	D-DD-M3001-0	Z9533C.PLS		18

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MRO

LINE ITEM		TCP	DOCUMENT	PART NUMBER	MIN REV	DESCRIPTION	VARIATION REVISION LEVEL:	QTY 00 A3	PER VARIATION	REFERENCE DESIGNATOR
28	29			1912828-00		LS85	COMPARATOR,4BIT MAGN	4		E4,E92,E93,E105
29	30			1912847-00		LS157	MUX 1 OF 2(QUAD)	14		E38,E51,E60,E61,E63-E65,E73,E85,
30	31			1912853-B0		LS175	BURNED-IN FF-D,QUAD	3	CONT	E96,E97,E109-E111
31	32			1913245-00		2901	BIPOLAR MICROPROCESSO	9		E62,E75,E80
32	33			1913340-B0		74S32	BURNED-IN OR GATE,QU	2		E120-E123,E126-E130
33	34			9000024-01		EYELET,ROLLED	0.1210DX0.192	12		E5,E70

DIGITAL				TITLE	M3001	SECTION A OF A	SIZE	CODE	DOCUMENT NUMBER	REV
					EBUS		K	PL	M3001-Q-DBP	C

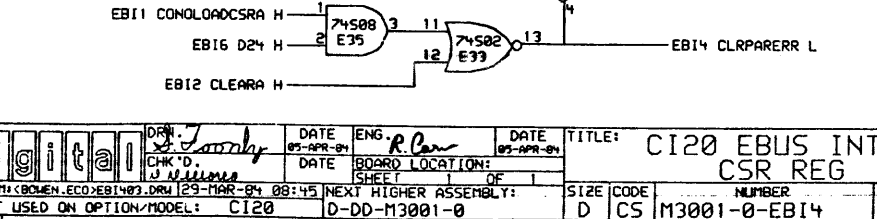
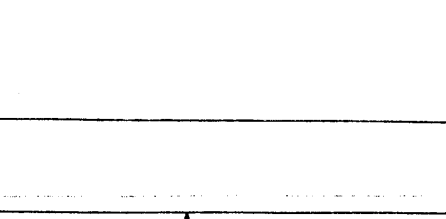
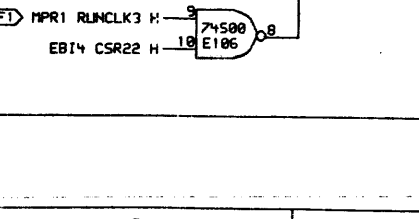
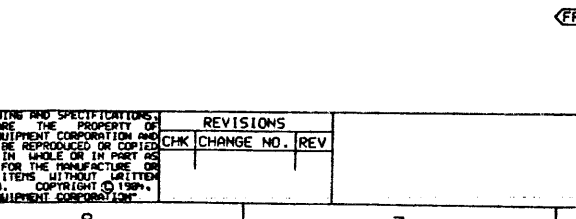
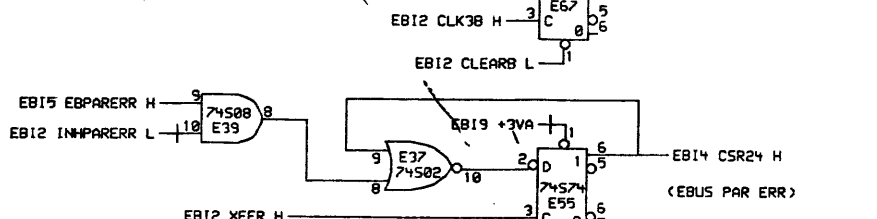
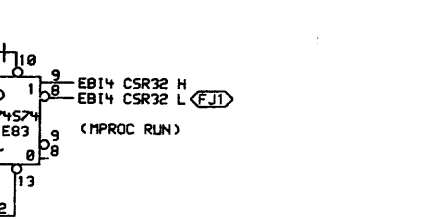
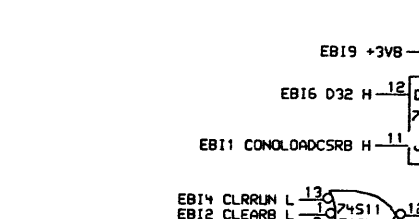
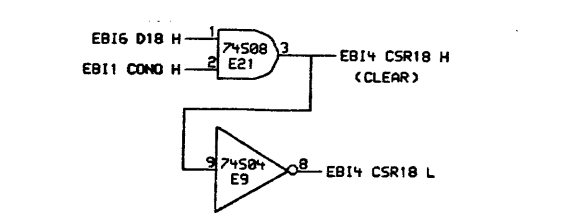
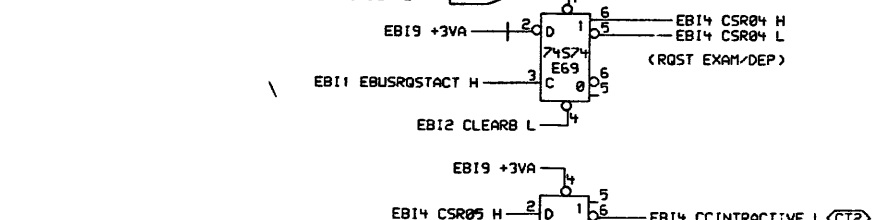
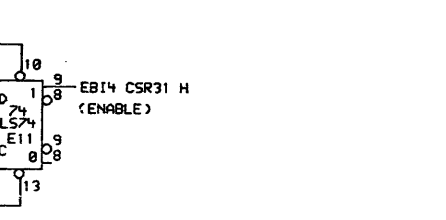
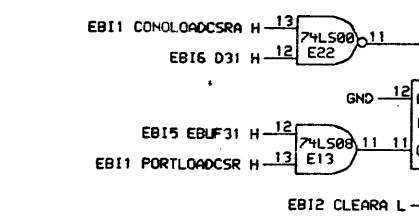
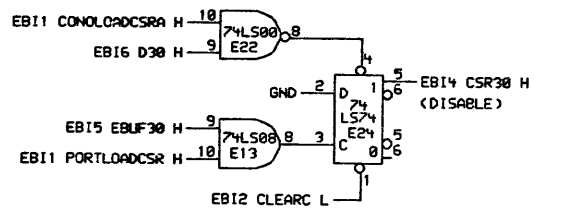
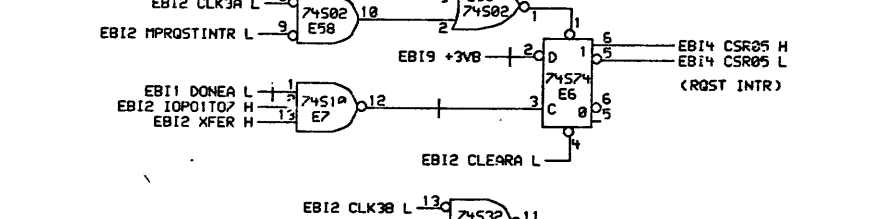
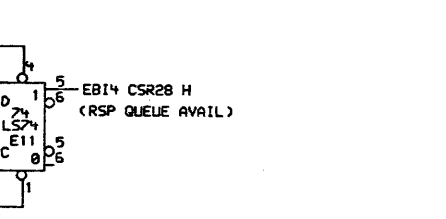
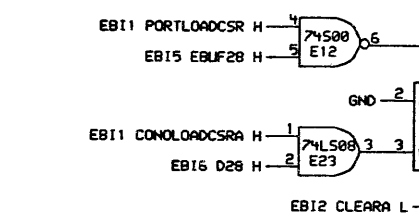
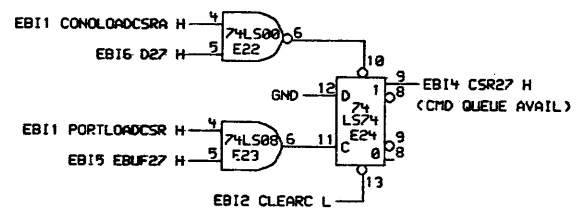
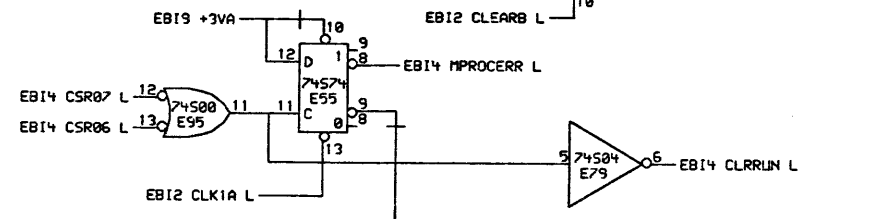
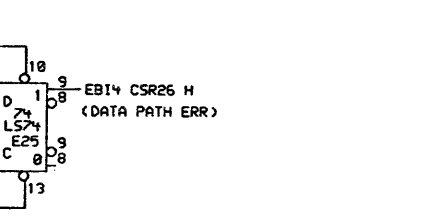
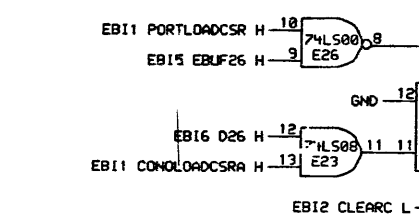
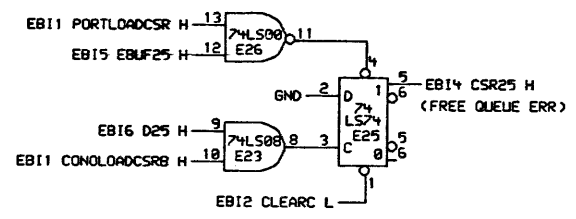
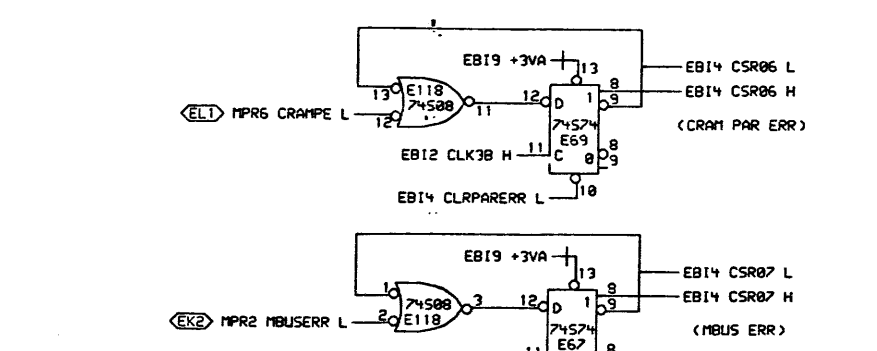
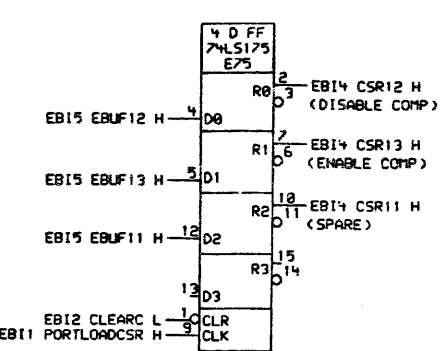
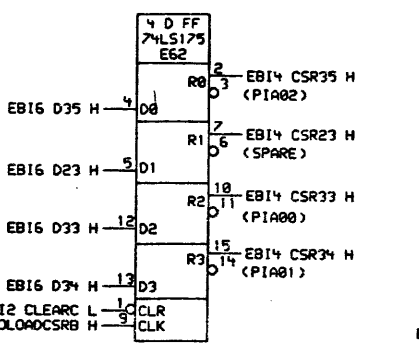
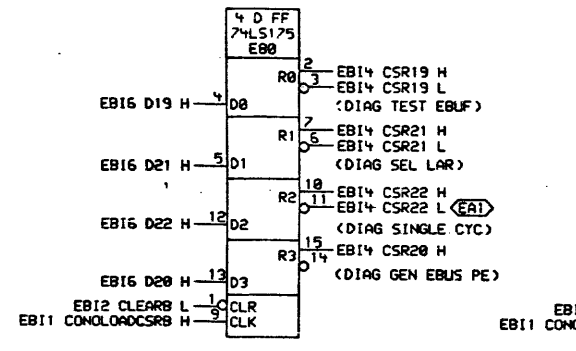


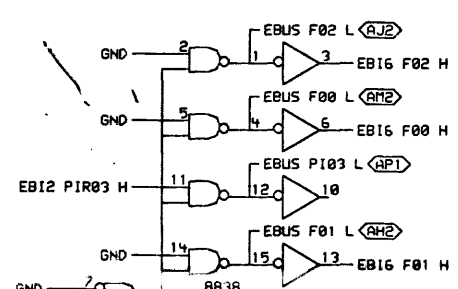
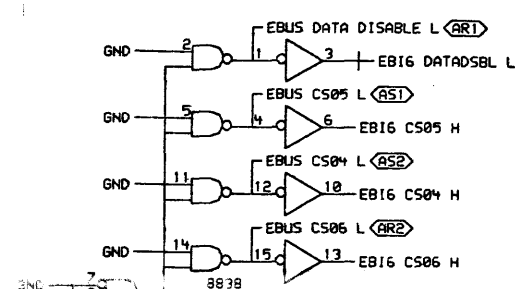
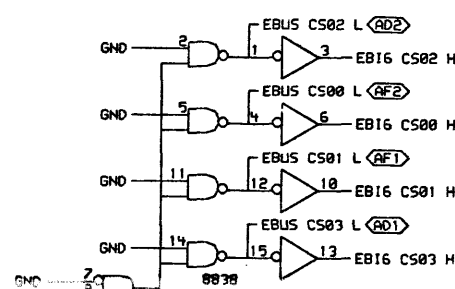
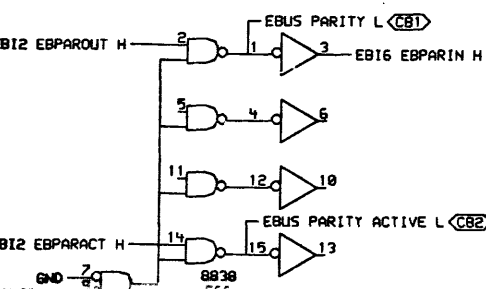
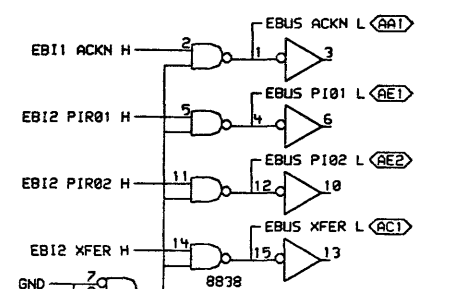
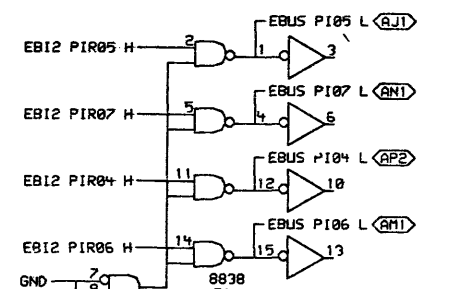
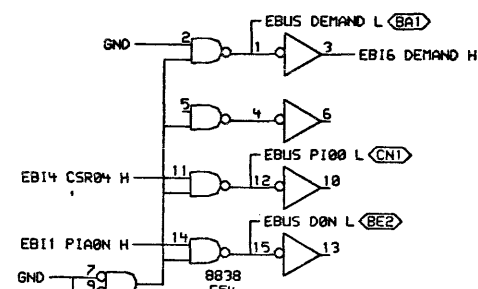
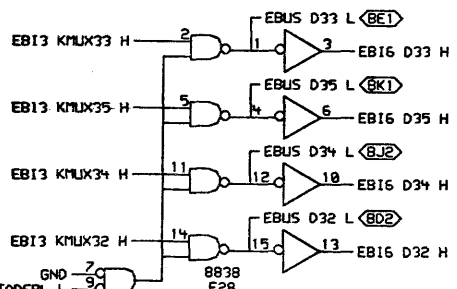
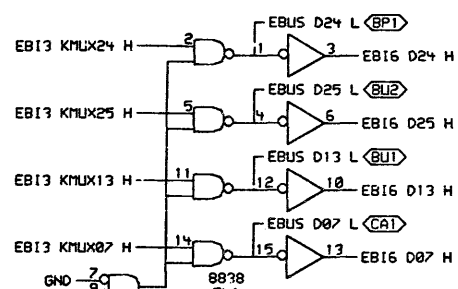
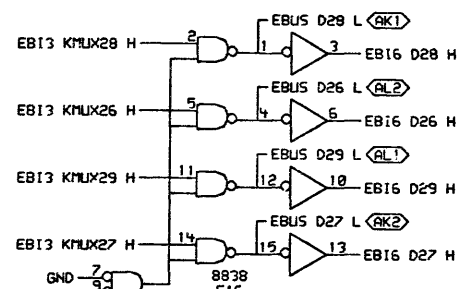
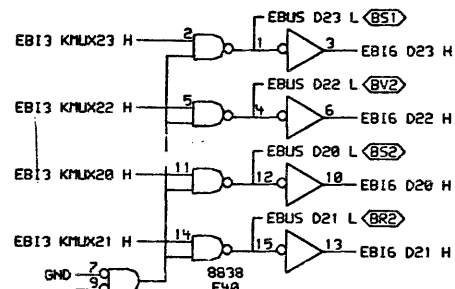
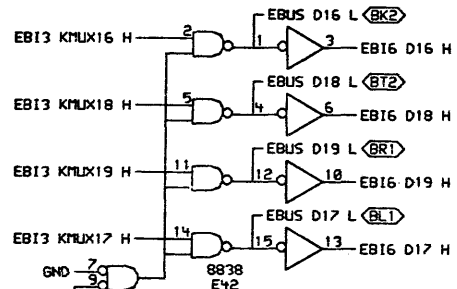
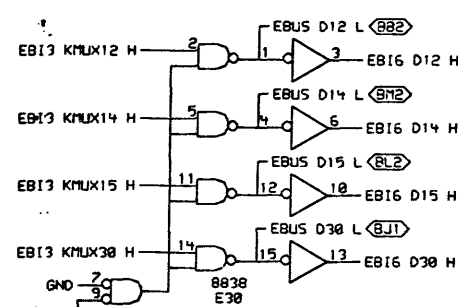
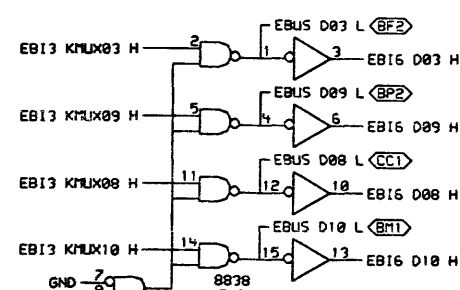
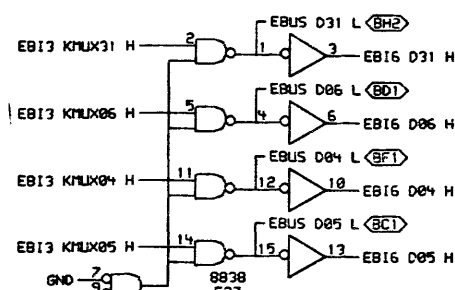
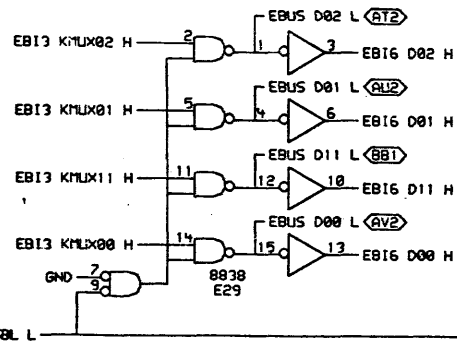
D

C

B

A



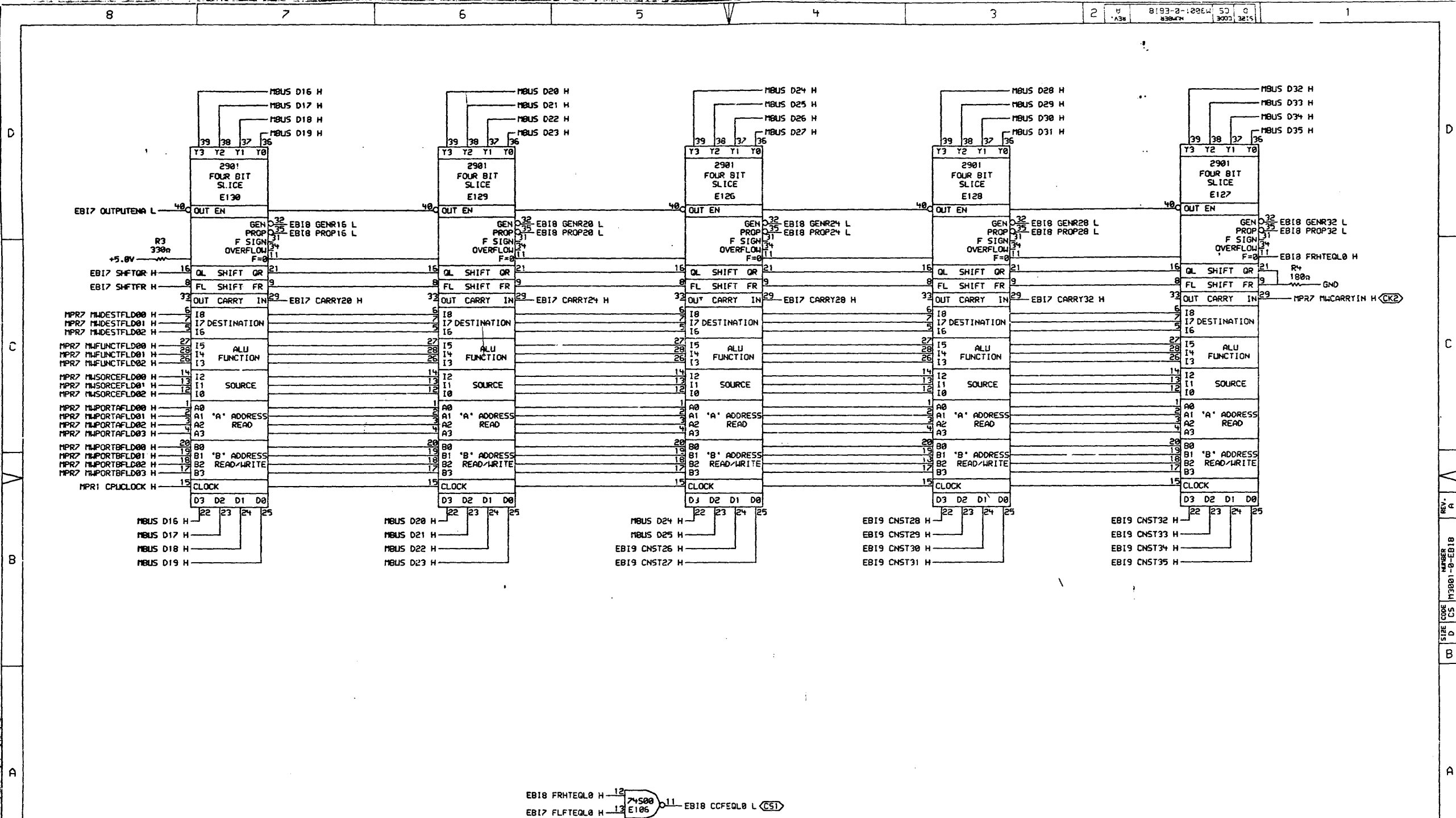


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REVISIONS	CHK	CHANGE NO.	REV

digital	DATE	ENG. R. L. L.	DATE	TITLE: C120 EBUS INTEFC
	19 APR 84	19 APR 84	19 APR 84	EBUS XCEIVERS
SUDCOM: BOHEN, ECO: EB1602, DRW: J29-MAR-84		NEXT HIGHER ASSEMBLY:		SIZE CODE
FIRST USED ON OPTION/MODEL: C120		D-DD-M3001-0		NUMBER
				M3001-0-EB16
				REV. A

REV. A
NUMBER
M3001-0-EB16
SIZE CODE
D CS
B



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REVISIONS		
CHK	CHANGE NO.	REV

digital

DRN. 7
A. J. J. J.
CHK'D.

DATE 03-APR-84	ENG. <i>R. Law</i>
DATE 19-APR-84	BOARD LOCATION: SHEET 1

DATE	TITLE:
05-APR-84	
DE 1	

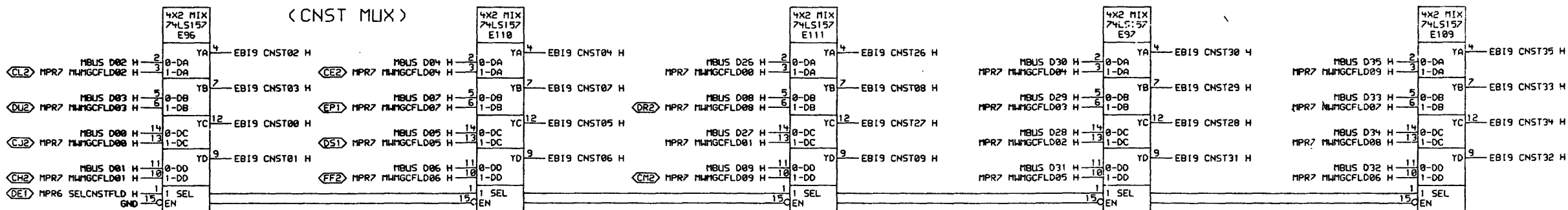
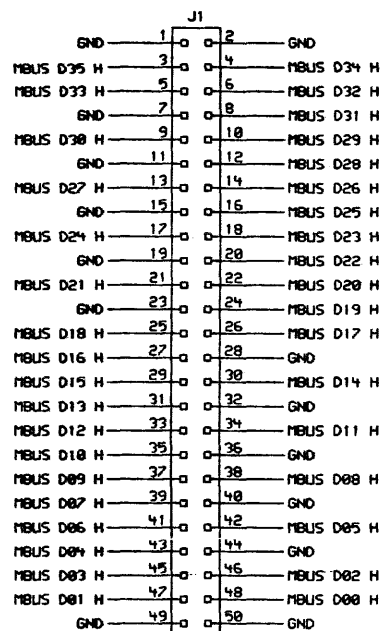
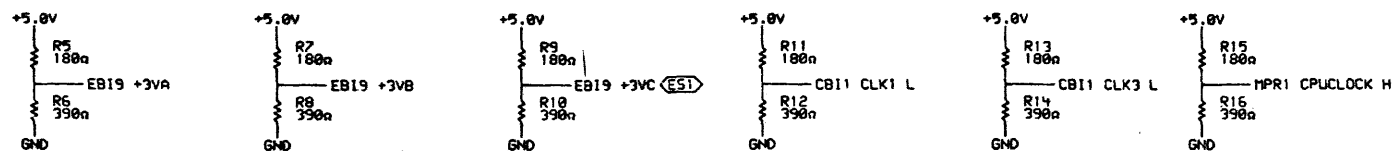
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CI20 EBUS INTFC
MICROPROC ALU 2

```

SUDCCN: <BOWEN.ECO>EB1801.DRW 29-MAR-84 08:48 NEXT HIGHER ASSEMBLY:
FIRST USEG ON OPTION/MODEL: C120 D-DD-M3001-0

SIZE	CODE	NUMBER	REV
D	CS	M3001-0-EB18	A



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REVISIONS
CHK CHANGE NO. REV

digital

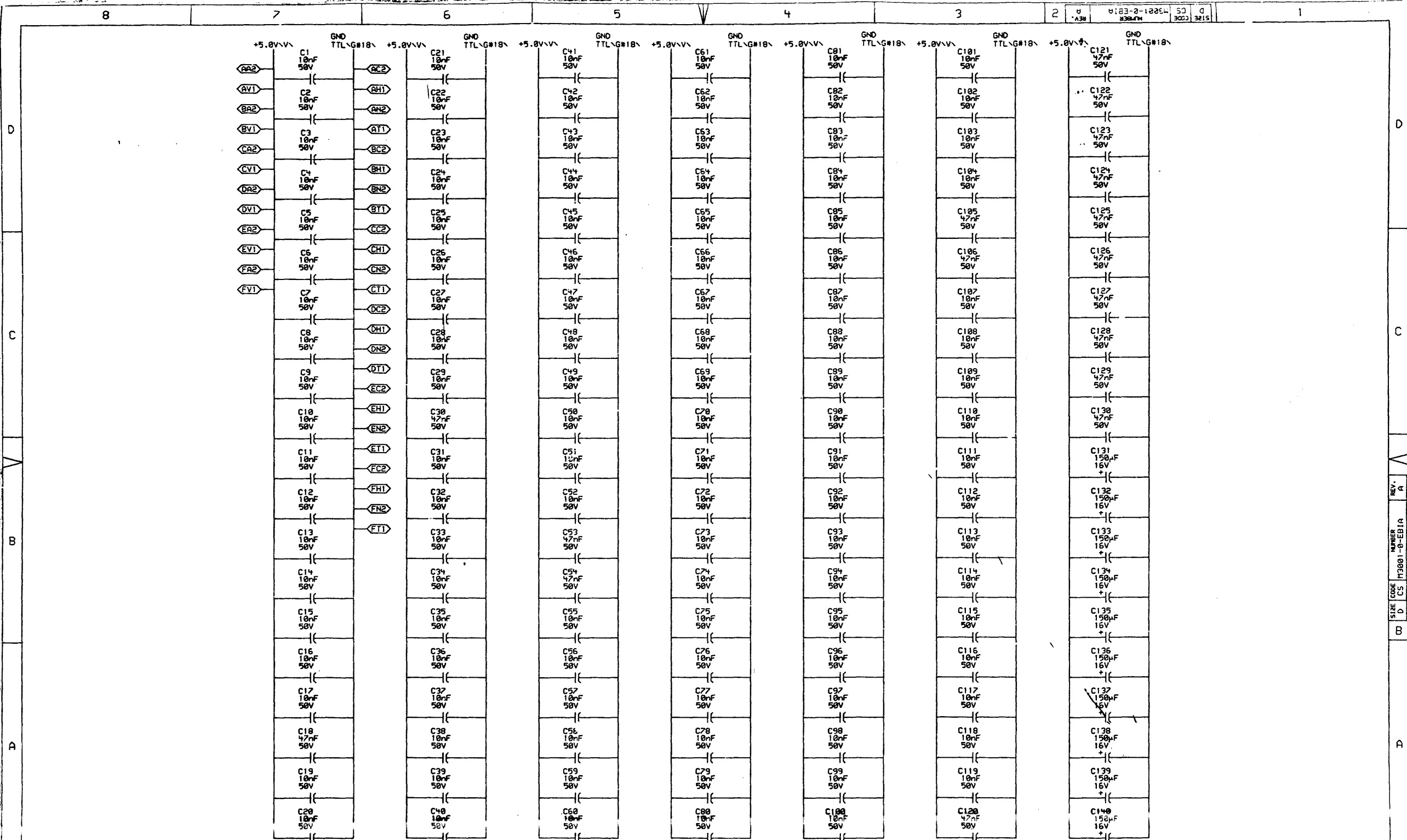
DATE 07-07-84
CHK'D. 10/1/84

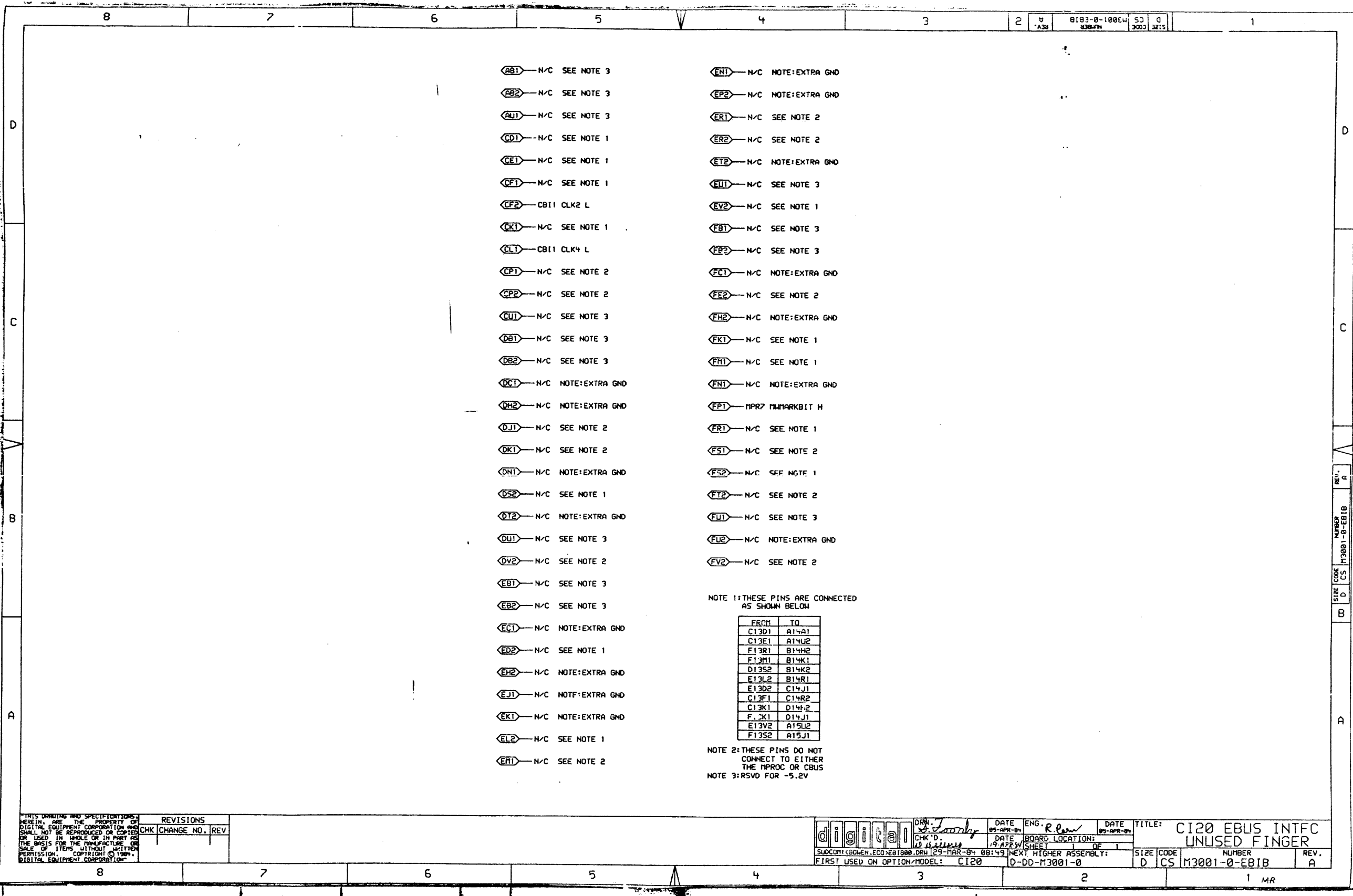
DATE 07-07-84
DATE BOARD LOCATION: 19 APR 84 SHEET 1 OF 1

TITLE: C120 EBUS INTFC
PROC CNST MUX

SUPCOM: (BOHLEN.ECO)EB1900.DRW 29-MAR-84 08:48 NEXT HIGHER ASSEMBLY:
FIRST USED ON OPTION/MODEL: C120 D-DD-M3001-0

SIZE CODE D CS
NUMBER M3001-0-EB19
REV. A



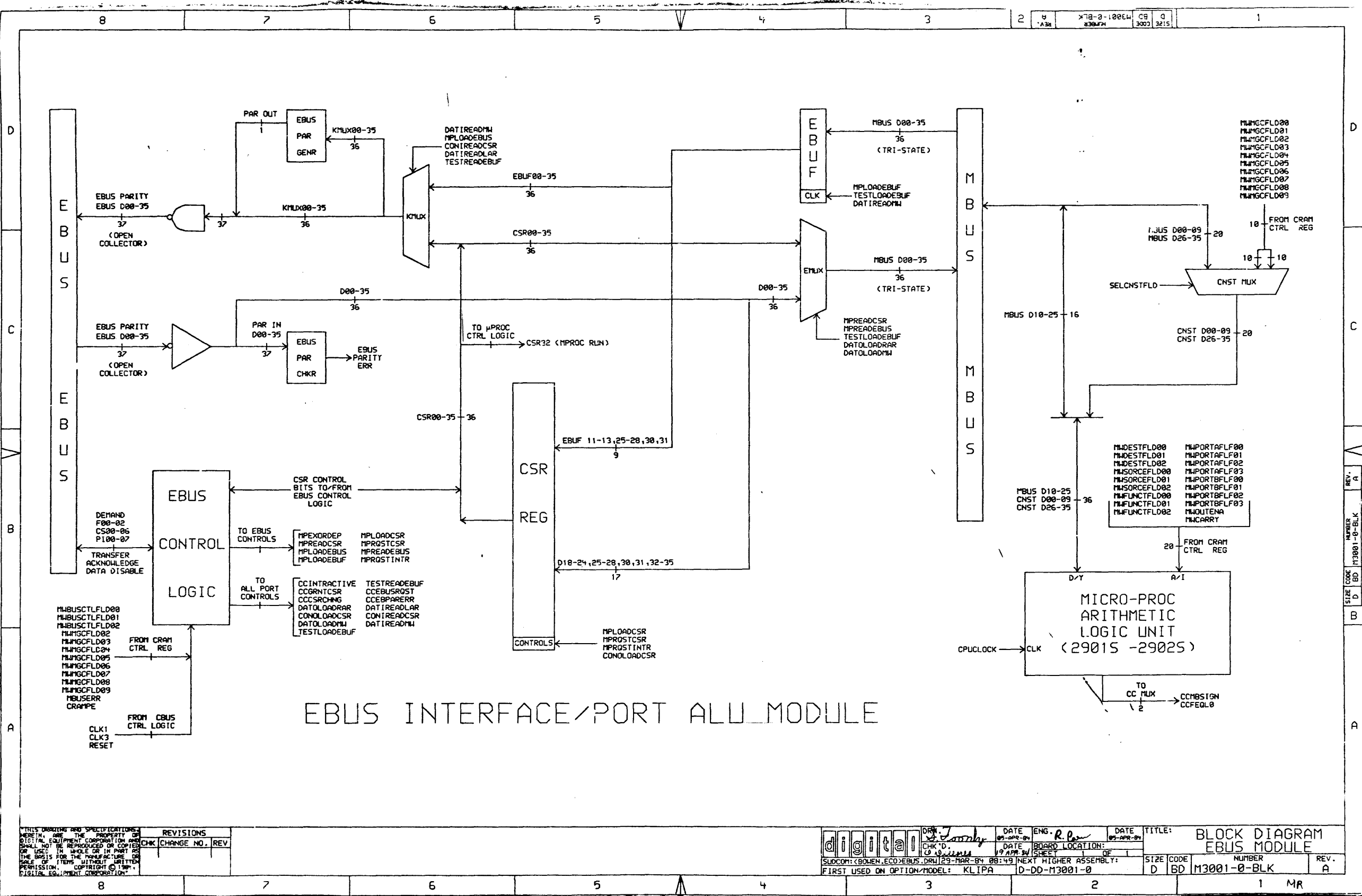


- | | |
|---------------------------|---------------------------|
| (AB1) N/C SEE NOTE 3 | (EN1) N/C NOTE: EXTRA GND |
| (AB2) N/C SEE NOTE 3 | (EP2) N/C NOTE: EXTRA GND |
| (AU1) N/C SEE NOTE 3 | (ER1) N/C SEE NOTE 2 |
| (CD1) N/C SEE NOTE 1 | (ER2) N/C SEE NOTE 2 |
| (CE1) N/C SEE NOTE 1 | (ET2) N/C NOTE: EXTRA GND |
| (CF1) N/C SEE NOTE 1 | (EU1) N/C SEE NOTE 3 |
| (CF2) CB11 CLK2 L | (EV2) N/C SEE NOTE 1 |
| (CK1) N/C SEE NOTE 1 | (FB1) N/C SEE NOTE 3 |
| (CL1) CB11 CLK4 L | (FR3) N/C SEE NOTE 3 |
| (CP1) N/C SEE NOTE 2 | (FC1) N/C NOTE: EXTRA GND |
| (CP2) N/C SEE NOTE 2 | (FE2) N/C SEE NOTE 2 |
| (CU1) N/C SEE NOTE 3 | (FH2) N/C NOTE: EXTRA GND |
| (DB1) N/C SEE NOTE 3 | (FK1) N/C SEE NOTE 1 |
| (DB2) N/C SEE NOTE 3 | (FM1) N/C SEE NOTE 1 |
| (DC1) N/C NOTE: EXTRA GND | (FN1) N/C NOTE: EXTRA GND |
| (DH2) N/C NOTE: EXTRA GND | (FP1) MPROC MARKBIT H |
| (DJ1) N/C SEE NOTE 2 | (FR1) N/C SEE NOTE 1 |
| (DK1) N/C SEE NOTE 2 | (FS1) N/C SEE NOTE 2 |
| (DN1) N/C NOTE: EXTRA GND | (FS2) N/C SEE NOTE 1 |
| (DS2) N/C SEE NOTE 1 | (FT2) N/C SEE NOTE 2 |
| (DT2) N/C NOTE: EXTRA GND | (FU1) N/C SEE NOTE 3 |
| (DU1) N/C SEE NOTE 3 | (FU2) N/C NOTE: EXTRA GND |
| (DV2) N/C SEE NOTE 2 | (FV2) N/C SEE NOTE 2 |
| (EB1) N/C SEE NOTE 3 | |
| (EB2) N/C SEE NOTE 3 | |
| (EC1) N/C NOTE: EXTRA GND | |
| (ED2) N/C SEE NOTE 1 | |
| (EH2) N/C NOTE: EXTRA GND | |
| (EJ1) N/C NOTE: EXTRA GND | |
| (EK1) N/C NOTE: EXTRA GND | |
| (EL2) N/C SEE NOTE 1 | |
| (ER1) N/C SEE NOTE 2 | |

NOTE 1: THESE PINS ARE CONNECTED AS SHOWN BELOW

FROM	TO
C1301	A14A1
C13E1	A14U2
F13R1	B14H2
F13M1	B14K1
D13S2	B14K2
E13L2	B14R1
E13D2	C14J1
C13F1	C14R2
C13K1	D14H2
F13K1	D14J1
E13V2	A15U2
F13S2	A15J1

NOTE 2: THESE PINS DO NOT CONNECT TO EITHER THE MPROC OR CBUS
NOTE 3: RSVD FOR -5.2V



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REVISIONS		
CHK	CHANGE NO.	REV

digital	DATE 07-09-84	ENG. R. P.	DATE 07-09-84	TITLE: BLOCK DIAGRAM EBUS MODULE	
	CHK'D. 07-09-84	DATE 07-09-84	DATE 07-09-84	SIZE CODE D BD	NUMBER M3001-0-BLK
SUBCOM: (BOLLEN, ECO) EBUS.DRW 29-MAR-84 08:49 NEXT HIGHER ASSEMBLY: D-DD-M3001-0					
FIRST USED ON OPTION/MODEL: KLIPA					
REV. A					MR

DRAWING NUMBER	PAGE	PART NO.	DESCRIPTION	REVISIONS
			ECO NUMBER	- M3002 MR001
		M3002-00	MODULE REVISION	A1 A1
D-LIA-M3002-0-0	1		MICRO PROCESSOR	A A1
K-PL-M3002-0-DBP	2		PARTS LIST, M3002	A A1
D-CS-M3002-0-MPR1	1		CI20 MPROC CONT CTRL LOGIC 1	A A
D-CS-M3002-0-MPR2	1		CI20 MPROC CONT CTRL LOGIC 2	A A
D-CS-M3002-0-MPR3	1		CI20 MPROC CONT SEQR AND RAM ADDR	A A
D-CS-M3002-0-MPR4	1		CI20 MPROC CONT CRAM RAM 1	A A
D-CS-M3002-0-MPR5	1		CI20 MPROC CONT CRAM RAM 2	A A
D-CS-M3002-0-MPR6	1		CI20 MPROC CONT CRAM PARITY	A A
D-CS-M3002-0-MPR7	1		CI20 MPROC CONT CRAM REG	A A
D-CS-M3002-0-MPR8	1		CI20 MPROC CONT LOCAL STORAGE	A A
D-CS-M3002-0-MPR9	1		CI20 MPROC CONT CRAM LOAD 1	A A
D-CS-M3002-0-MPR10	1		CI20 MPROC CONT CRAM LOAD 2	A A
D-CS-M3002-0-MPR11	1		CI20 MPROC CONT PWR AND GND	A A
D-CS-M3002-0-MPR12	1		CI20 MPROC CONT UNUSED FINGERS	A A
D-BD-M3002-0-BLK	1		BLOCK DIAGRAM MICROPROCESSOR MOD	A A
K-PC-M3002-0-DBI	-		P.C. DESIGN DATA BASE	A A
D-DD-5015385-0	2		DRAWING DIRECTORY, 5015385	REF REF

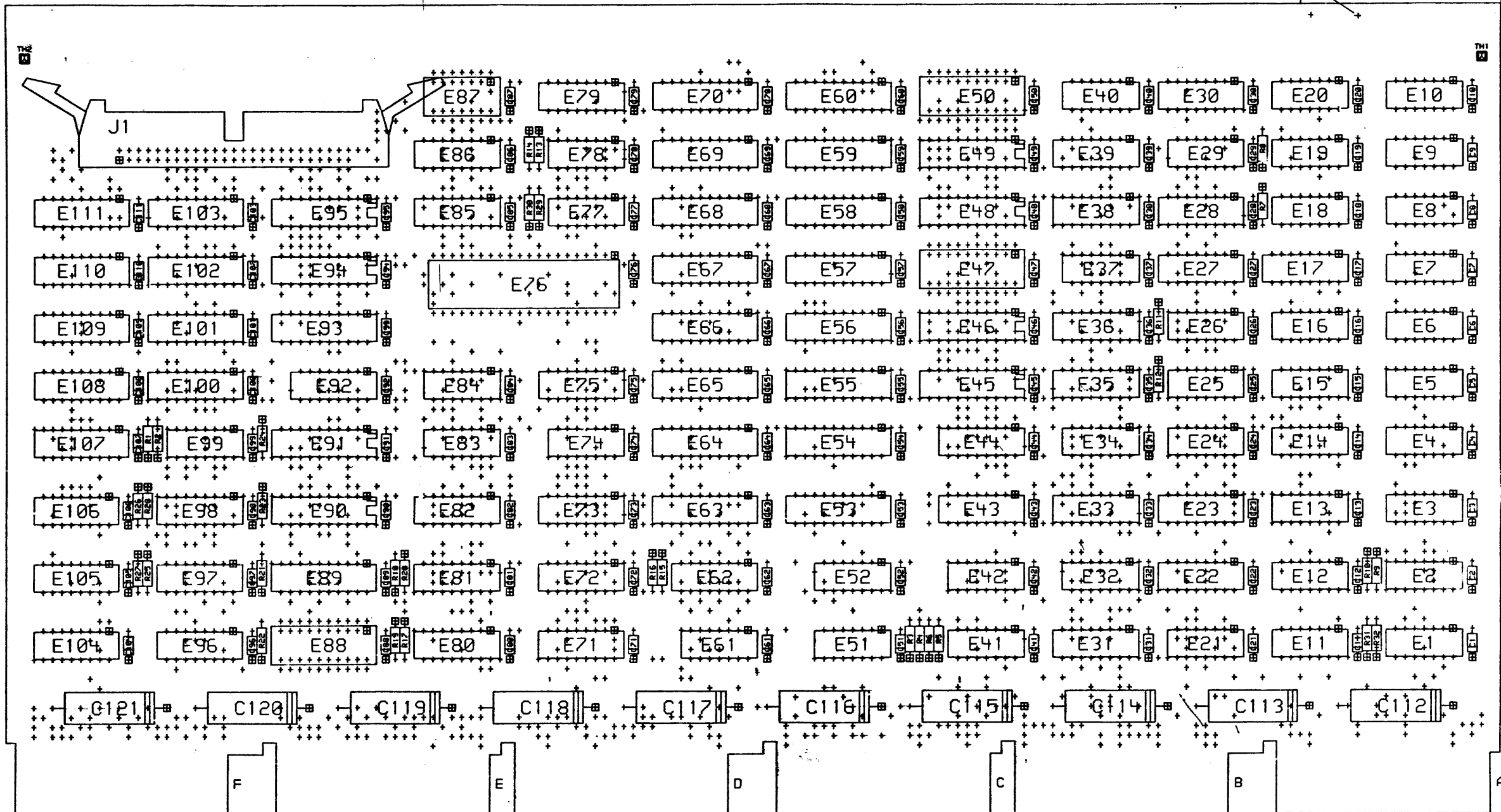
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REV. C	CHANGE NO.	REV
CHK		

digital DRN. D. DELLORCO DATE 19-FEB-85 ENG. E BLOOM DATE 19-FEB-85 TITLE: DRAWING DIRECTORY
CHK'D. D. CAUNTER DATE 19-FEB-85 BOARD LOCATION: N/A
DSK:M3002.1,2P(4,57) 19-FEB-85 13:02 SHEET 1 OF 2
FIRST USED ON OPTION/MODEL: CI20 NEXT HIGHER ASSEMBLY: SIZE CODE NUMBER REV.
D DD M3002-0 C

36(QTY.12) COMPONENT SIDE VIEW

35



NOTES: SPARE COMPONENT LOCATIONS:
E47, E50, E87, E88

THIS BOARD MUST MEET SAFETY
REQ. FOR "HPWR"

STEP E + Y AXIS 0 STEP 0 TIMES
REPEAT + X AXIS 0 STEP 0 TIMES

CH	NO	REV	DATE	BY	CHK
1	1	1	11/11/84	1	1
2	1	1	11/11/84	1	1
3	1	1	11/11/84	1	1
4	1	1	11/11/84	1	1
5	1	1	11/11/84	1	1
6	1	1	11/11/84	1	1
7	1	1	11/11/84	1	1
8	1	1	11/11/84	1	1
9	1	1	11/11/84	1	1
10	1	1	11/11/84	1	1

ETCH REV. C

SIGNATURES	DATE	digital
DRN. D. A. S. 11/11/84	11/11/84	
CHK. D. A. S. 11/11/84	11/11/84	TITLE MICRO
MECH. ENG. 11/11/84	11/11/84	PROCESSOR
PROJ. ENG. 11/11/84	11/11/84	
PROD. 11/11/84	11/11/84	
SCALE 2/1		
SHT. 1 OF 1		
TOP DOC NO: 0-00-M3002-0		

LINE ITEM		TCP DOCUMENT	PART NUMBER	MIN REV	DESCRIPTION	QTY	PER VARIATION	REFERENCE DESIGNATOR
					VARIATION REVISION LEVEL:	00		
						A3		
1	1	D-MC-5015385-0-0	5015385-01	C	DRILL & ETCH DWG FOR M3002	1		
2	2		1001610-00		.01 MFD 50V +80-20% Z5U CER	76		C1-C10,C12-C50,C52,C61,C62,C71,C73-C75,C77-C84,C87,C90-C99,C104
3	3		1012784-00		.047 MFD 50V +80-20% CER	35	CONT	C11,C51,C53-C60,C63-C70,C72,C78,C85,C86,C88,C89,C100-C103,C105-C111
4	4		1012084-03		150 MFD 15V +75-10% AL EL	10	CONT	C112-C121
5	5		1910536-B0		74S10 BURNED-IN NAND GATE-	1		E1
6	6		1910544-B0		74S74 BURNED-IN FF-D DUAL,	3		E2,E6,E13
7	7		1910532-B0		74S00 BURNED-IN NAND GATE-	1		E3
8	8		1910534-B0		74S04 BURNED-IN INVERTER G	8		E4,E7,E12,E20,E26,E40,E41,E77
9	9		1912389-B0		74S08 BURNED-IN AND GATE,Q	4		E5,E14,E21,E99
10	10		1910542-B0		74S64 BURNED-IN A-O-I GATE	4		E8,E9,E18,E19
11	11		1910539-B0		74S20 BURNED-IN NAND GATE-	1		E10
12	12		1912746-B0		74S37 BURNED-IN NAND GATE-	3		E11,E51,E84
13	13		1912388-B0		74S02 BURNED-IN NGR GATE-Q	3		E15,E52,E83
14	14		1910537-B0		74S11 BURNED-IN AND GATE-T	1		E16
15	15		1911675-B0		74S138 BURNED-IN DECODER/DE	1		E17
16	16		1910956-00		74S151 MUX 1 OF 8	2		E22,E31
17	17		1912697-00		LS174 FF-D HEX W/CLEAR	3		E23,E98,E106
18	18		1911573-B0		74S280 BURNED-IN PARITY GEN	8		E24,E29,E32,E34,E37,E42,E61,E74
19	19		1913340-B0		74S32 BURNED-IN OR GATE,QU	1		E25
20	20		1910550-B0		74S174 BURNED-IN FF-D HEX	11	CONT	E27,E28,E33,E35,E38,E43,E62,E72,E73,E75,E95
21	21		1911641-B0		74S257 BURNED-IN MUX,QUAD 2	8		E30,E36,E39,E44,E81,E82,E85,E86
22	22		1913493-B0		74S241 BURNED-IN OCTAL BUFF	8		E45,E46,E48,E49,E90,E91,E94,E95
23	23		2119250-00		4KX4 STATIC RAM 55NS	16		E53-E60,E63-E70
24	24		1910548-B0		74S157 BURNED-IN MUX 1 OF 2	5		E71,E80,E97,E104,E105
25	25		1916358-00		CONTROLLER,MICROPROG	1		E76
26	26		1911712-B0		74S51 BURNED-IN AND/OR GAT	1		E78

REVISION HISTORY		BASIC PART NO: M3002		DRN: D,DELLORCO		DATE: 5-APR-83		D I G I T A L	
ENG	ECC NUMBER	REV	SECTION A OF A	CHK'D:	R.W.CAUNTER	DATE:	7-APR-83	TITLE	PARTS LIST
---	INITIAL	A	SECTION.VARIATION INDEX	---	---	---	---	M3002	---
JT	M3002-MR001	B	[A] 00	---	---	---	---	MICRO PROCESSOR	---
EB	M3002-MR002	C	[B]	---	---	---	---	---	---
			[C]	DES.ENG:	R.CARN	DATE:	19-APR-84	DOCUMENT NUMBER	---
			[D]	---	---	---	---	SIZE/CODE/ NUMBER	REV
			[E]	---	---	---	---	---	---
			[F]	RESP.ENG.:	R.CARN	DATE:	19-APR-84	K PL M3002-0-DBP	C
			[H]	---	---	---	---	---	---
			[J]	---	---	---	---	---	---
			[K]	MFG.ENG.:	R.CARN	DATE:	19-APR-84	RELEASE DATE:	18-FEB-85
			[L]	---	---	---	---	---	---
			[M]	ASSEMBLY NUMBER:	---	TOP DOCUMENT NUMBER:	---	FILE NAME:	EDIT #
			[N]	ID-UA-M3002-0-0	---	18D-DD-M3002-0	---	28532C.PLS	9

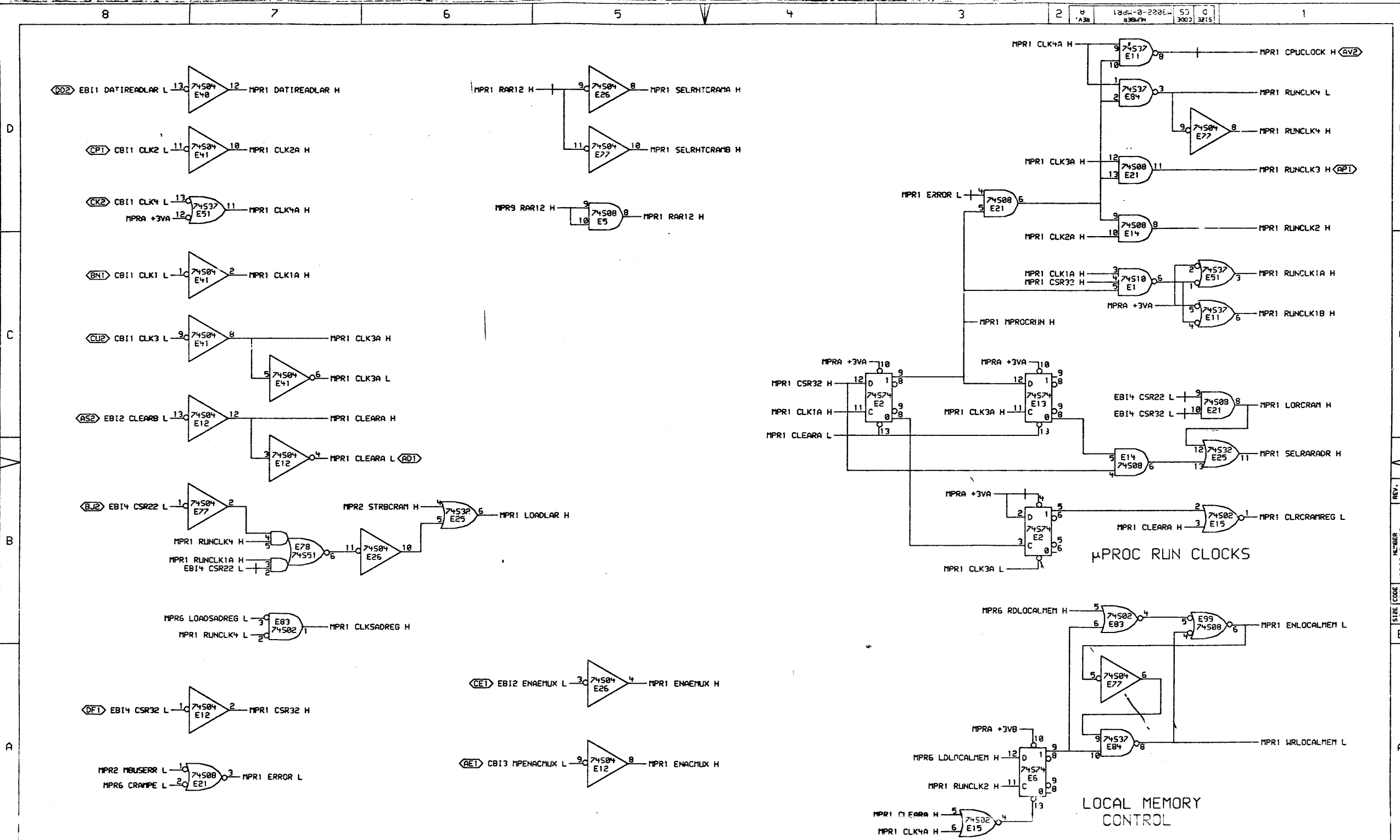
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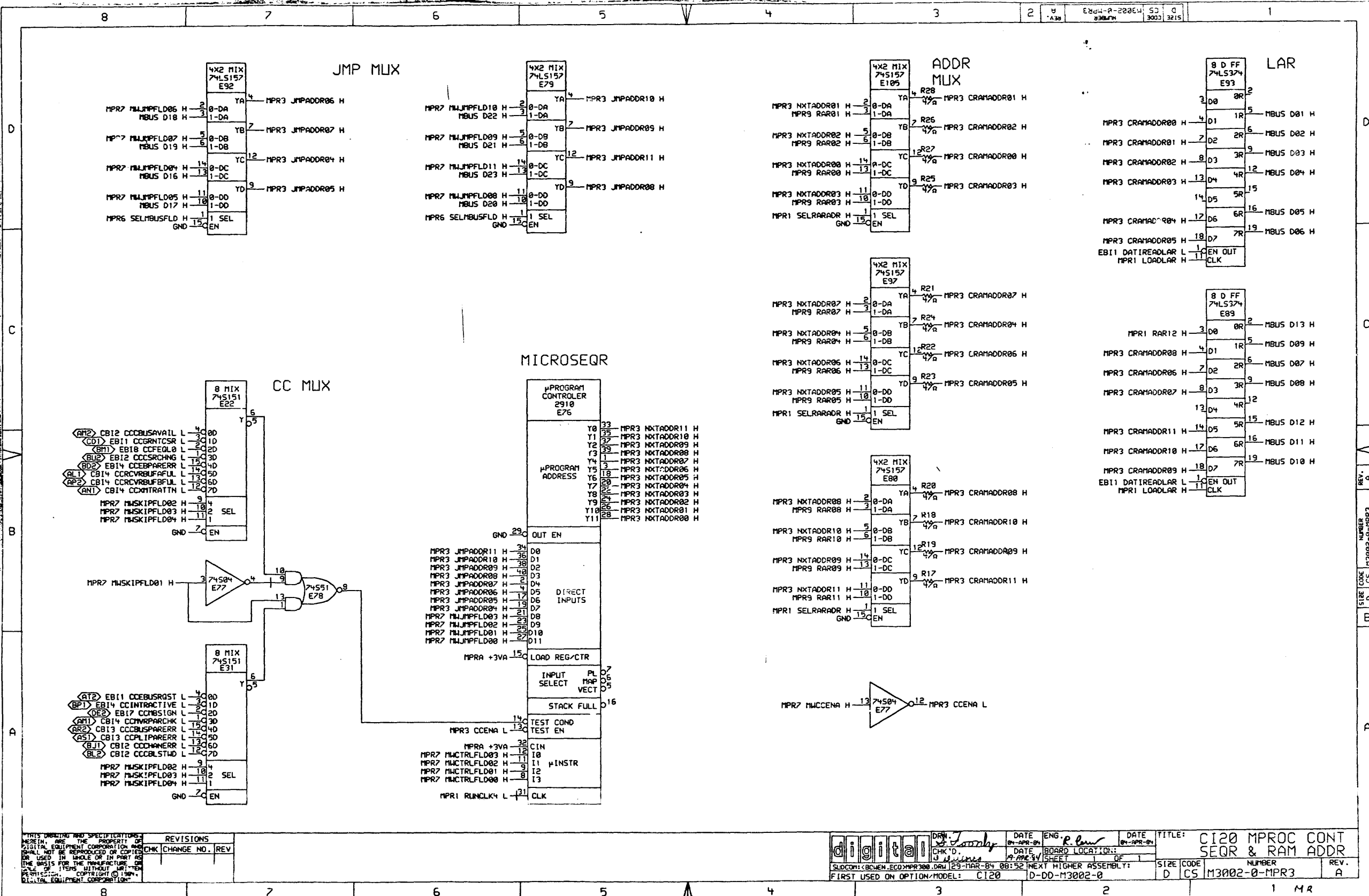
M120

LINE ITEM	TCP DOCUMENT	PART NUMBER	MIN REV	DESCRIPTION	QTY	PER VARIATION	REFERENCE DESIGNATOR
				VARIATION REVISION LEVEL:	00		
					A3		
27	27	1912847-00		LS157 MUX 1 OF 2(QUAD)	2		E79,E92
28	28	1914214-00		LS374 FF-D OCTAL EDGE TRIG	2		E89,E93
29	29	2116957-03		1K MOS RAM 55NS 1	9		E100-E103,E107-E111
30	30	1216832-03		PCB,HEADER 50POS(2X25).100CC 90D	1		J1
31	31	1301322-00		180.0 .25 W 5.0 % CF	10		R1,R4,R6,R8,R9,R12,R13,R15,R29,
						CONT	R31
32	32	1300309-00		390.0 .25 W 5.0 % CF	10		R2,R3,R5,R7,R10,R11,R14,R16,R30,
						CONT	R32
33	33	1300202-00		47.0 .25 W 5.0 % CF	12		R17-R28
34	34	1215278-00		CABLE,FLEX NOMEX SHEET MODULE PR	1		
35	35	1216988-02		HANDLE,MODULE,HEX TWO EJECTORS	1		
36	36	9000024-01	A	EYELET,ROLLED 0.1210DX0.192	12		

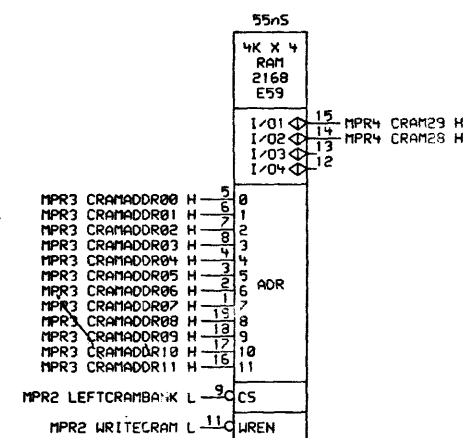
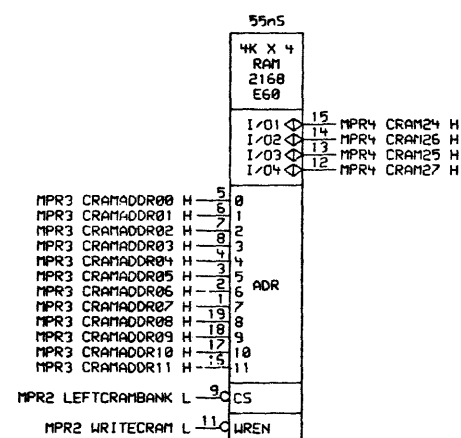
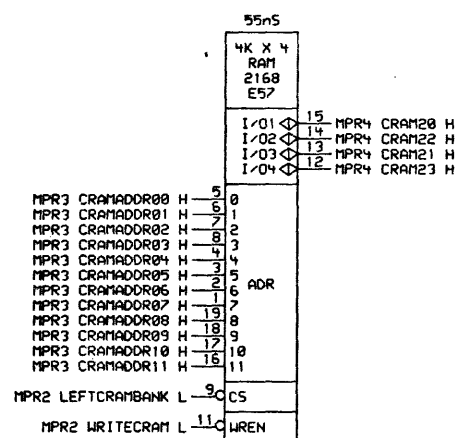
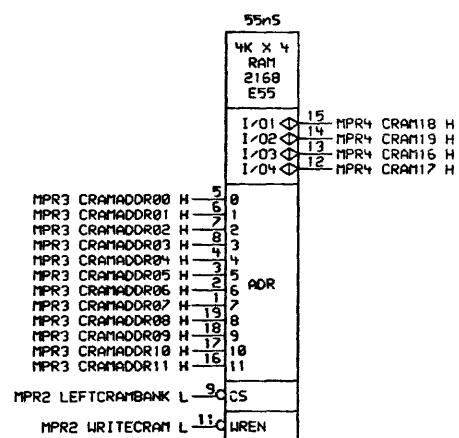
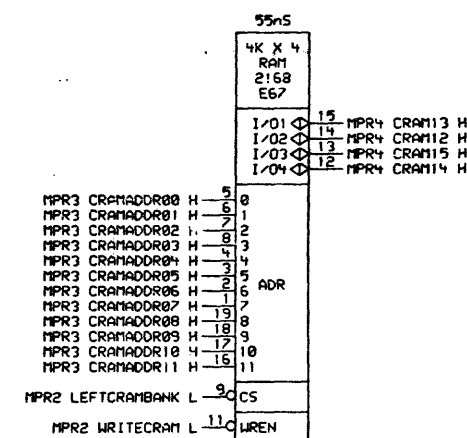
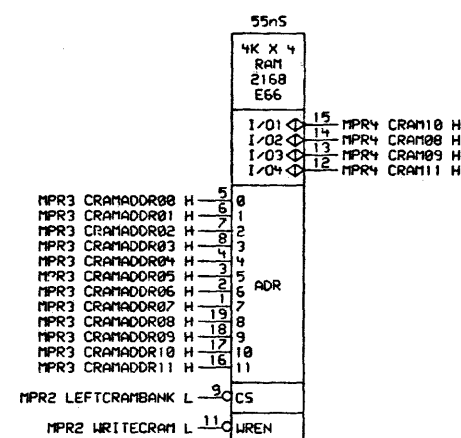
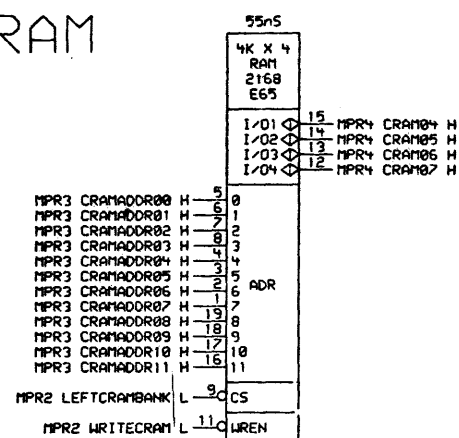
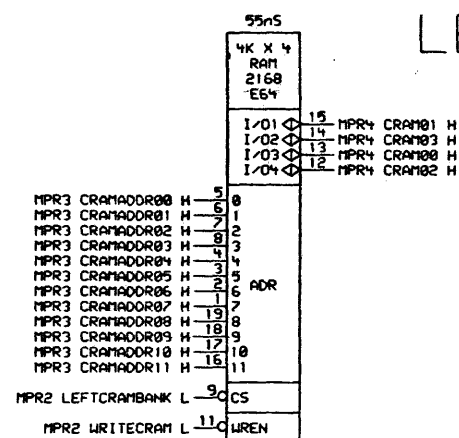
37 NOTE: 1. SPARE COMPONENT LOCATIONS ARE: E47,E50,E87,E88

DIGITAL				TITLE		SECTION A OF A	SIZE	CODE	DOCUMENT NUMBER	REV
				M3002						
				MICRO PROCESSOR						
							K	PL	M3002-Q-DBP	C



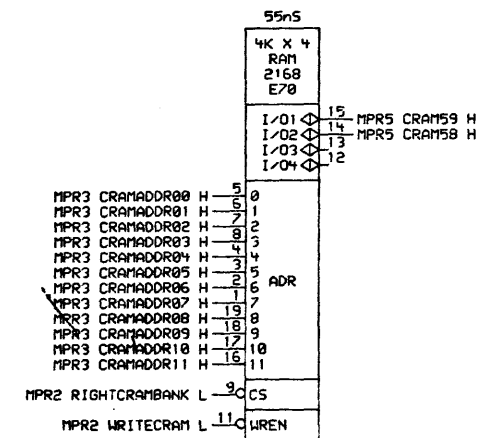
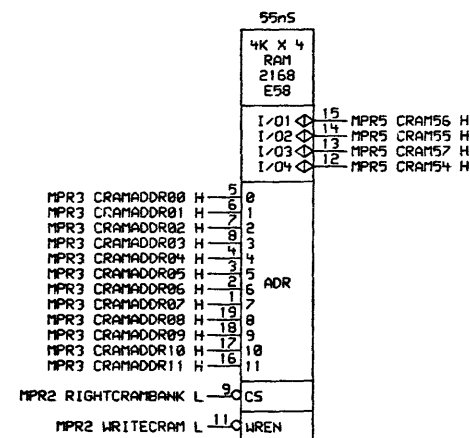
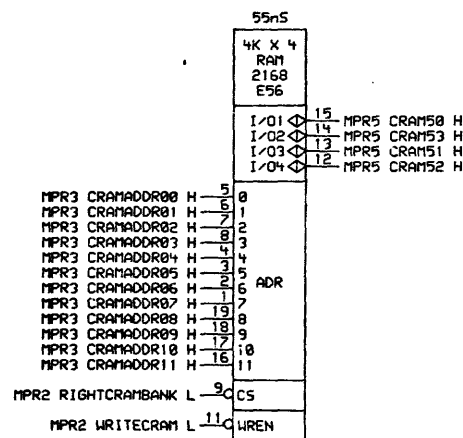
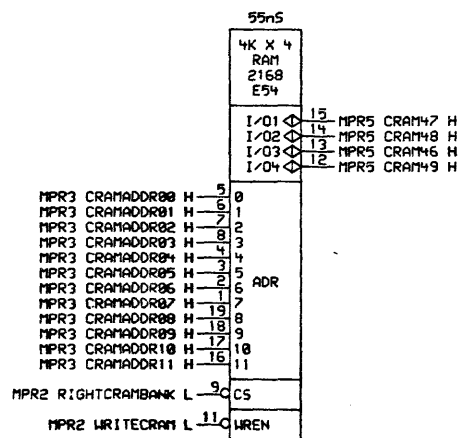
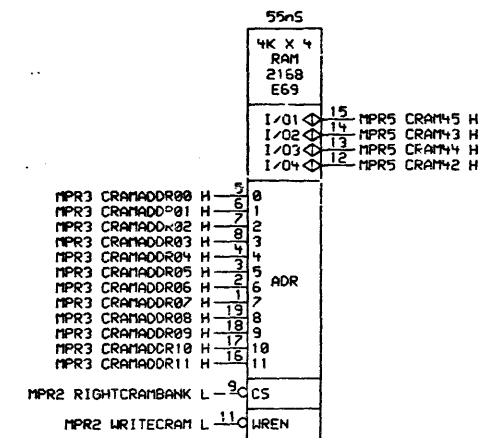
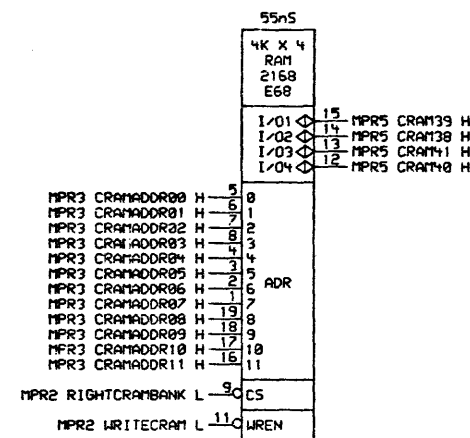
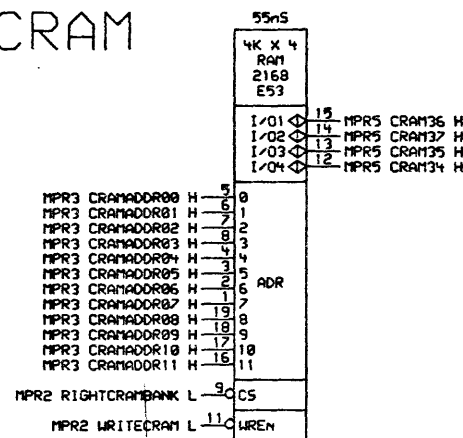
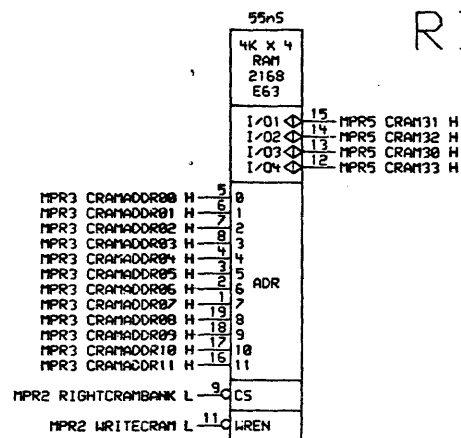


LEFT CRAM



TITLE: CI20 MPROC CONT			
GRAM RAM 1			
SIZE	CODE	NUMBER	REV.
D	CS	M3002-0-MPR4	A

RIGHT CRAM

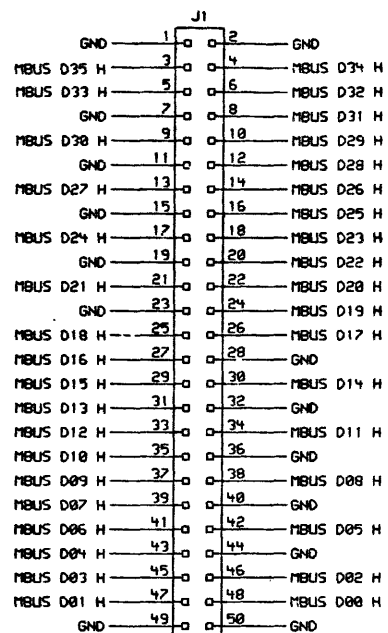
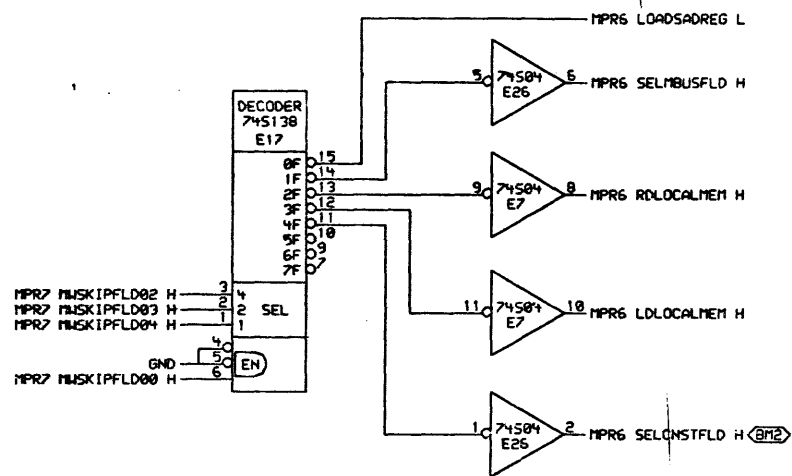


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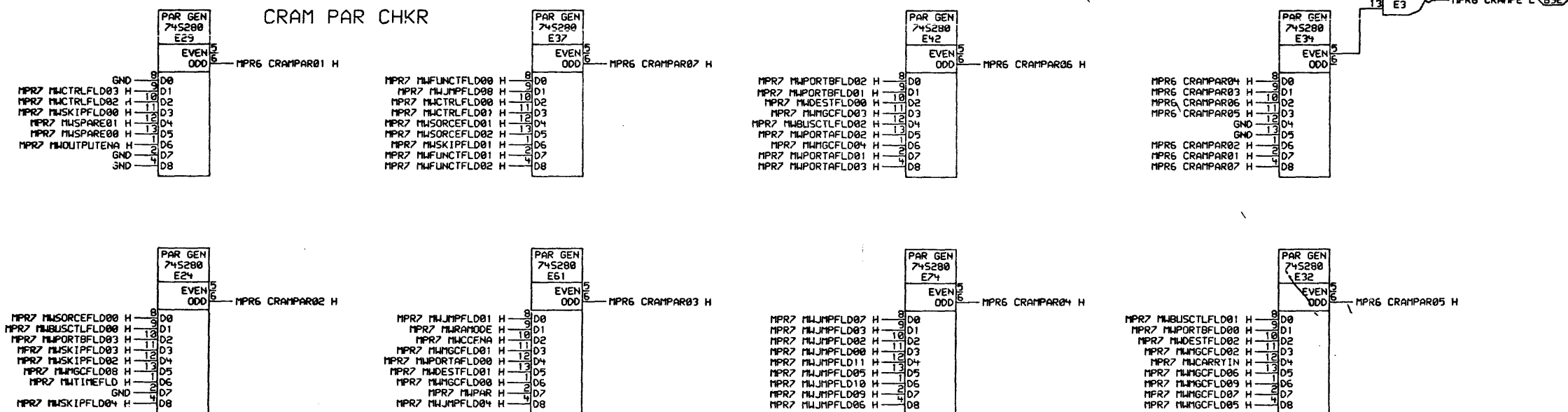
REV	CHG	NO.	REV

digital	DATE	ENG. <i>P. B.</i>	DATE	TITLE: C120 MPROC CONT
	CHK'D. <i>J. J.</i>	DATE	BOARD LOCATION:	CRAM RAM 2
SUBCOM: (BOWEN.ECD) MPR500.DRW		DATE	SHEET	OF
FIRST USED ON OPTION/MODEL: C120		DATE	SIZE	CODE
		DATE	NUMBER	REV.
		DATE	D	CS
		DATE	M3002-0-MPR5	A

COND/SKIP DECODER



GRAM PAR CHKR



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REVISIONS
CHK CHANGE NO. REV

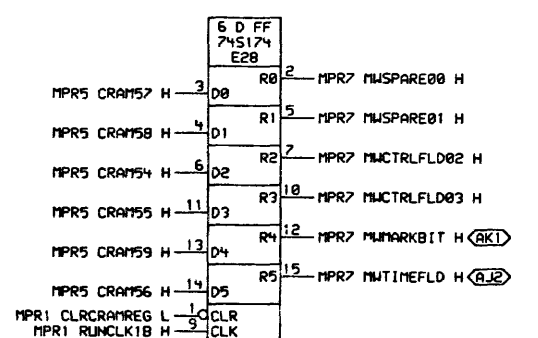
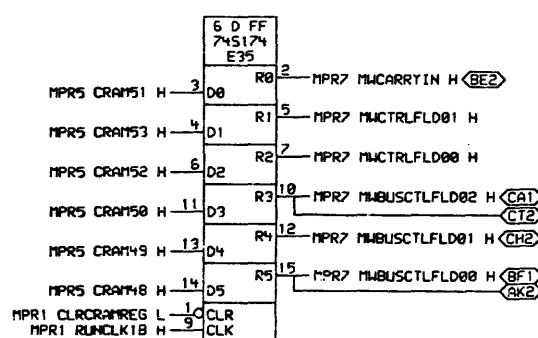
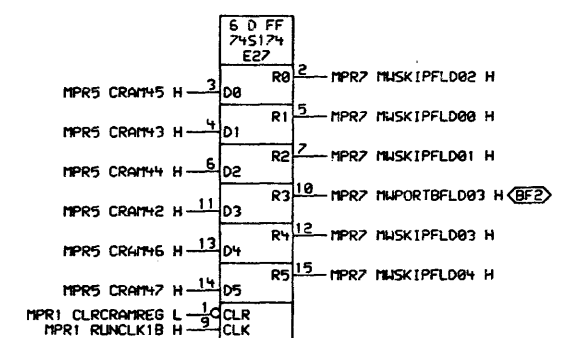
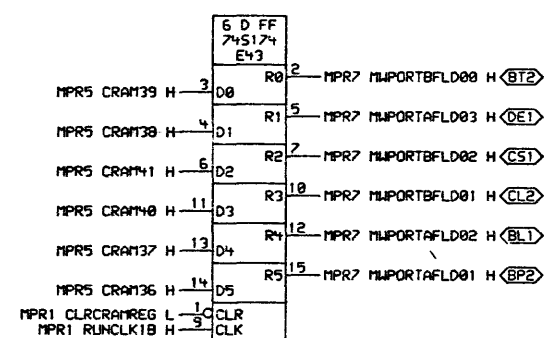
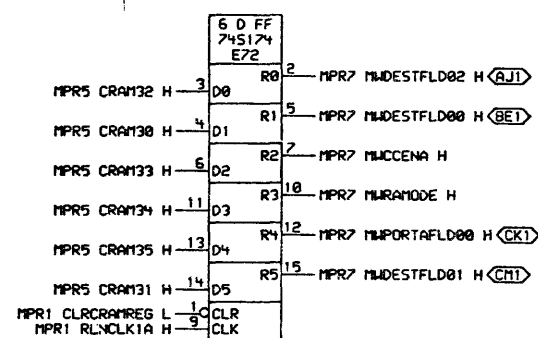
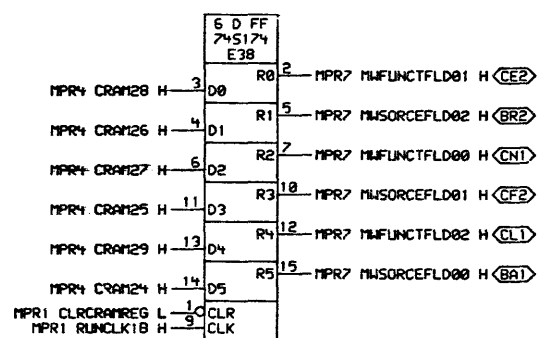
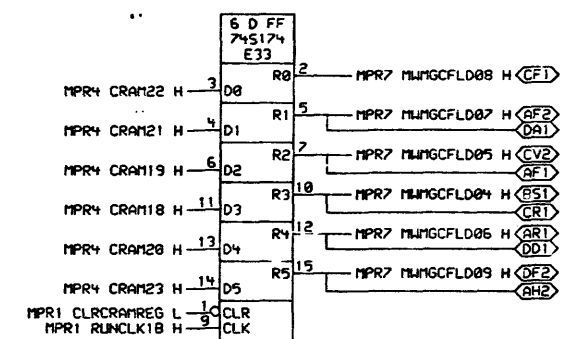
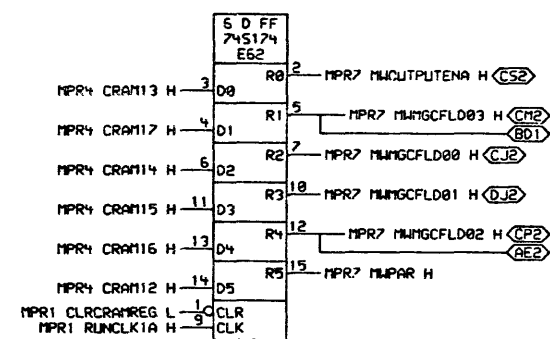
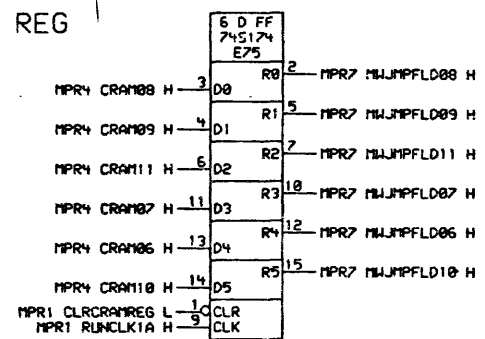
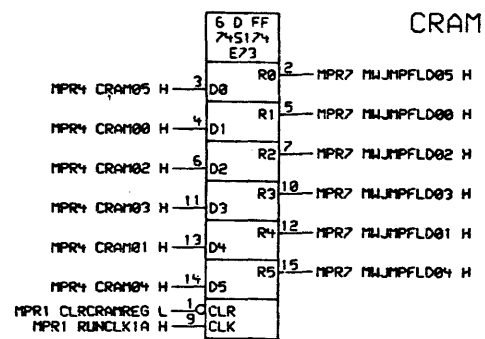
digital
SUDCOM: (BOMEN, ECO) MPR638.DRW 29-MAR-84 08:53 NEXT HIGHER ASSEMBLY:
FIRST USED ON OPTION/MODEL: CI20 D-DD-M3002-0

DATE 09-APR-84 ENG. E. B. DATE 09-APR-84
CHK'D. U. S. SHEET 1 OF 1
DATE BOARD LOCATION: 19 APR 84 SHEET 1 OF 1

TITLE: CI20 MPROC CONT
GRAM PARITY

SIZE CODE D CS NUMBER M3002-0-MPR6 REV. A

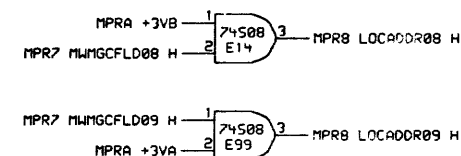
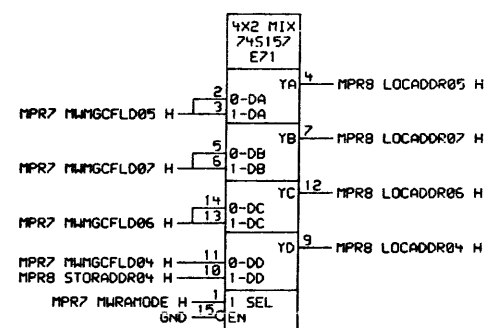
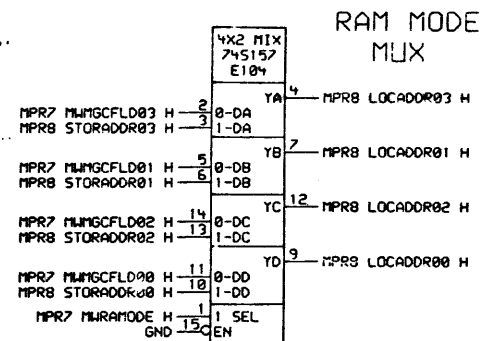
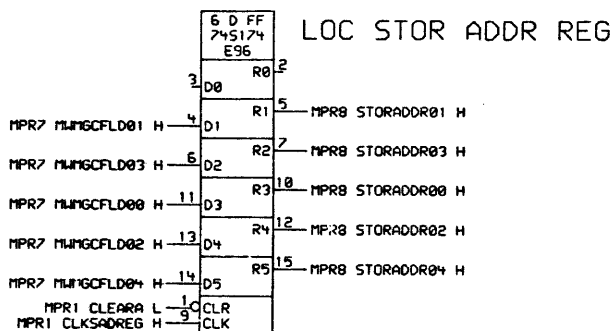
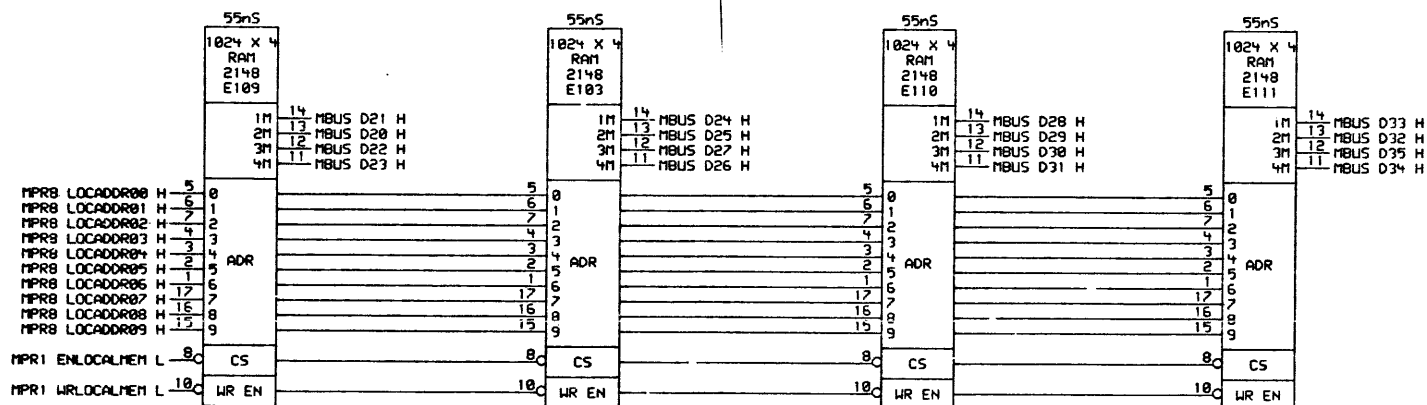
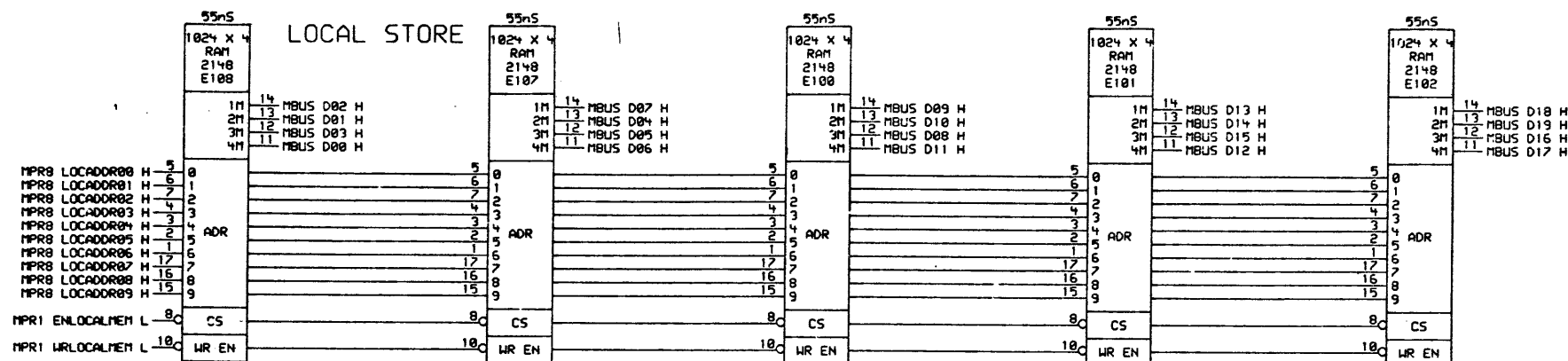
CRAM CTRL REG



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REVISIONS	
CHK	CHANGE NO. REV

digital	DATE 01-APR-84	ENG R. Law	DATE 01-APR-84	TITLE: C120 MPROC CONT
	DATE 19-APR-84	BOARD LOCATION: 1 OF 1	SHEET 1 OF 1	CRAM REG
SUOCOM: (BOWEN.ECO)MPR700.DRW (23-MAR-84 08:53) NEXT HIGHER ASSEMBLY: D-DD-M3002-0				SIZE CODE D CS
FIRST USED ON OPTION/MODEL: C120				NUMBER M3002-0-MPR7
				REV. A



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REVISIONS

CHK	CHANGE NO.	REV

digital

DATE 04-APR-84
DATE 12-APR-84

ENG. R. Law
BOARD LOCATION: 1 OF 1

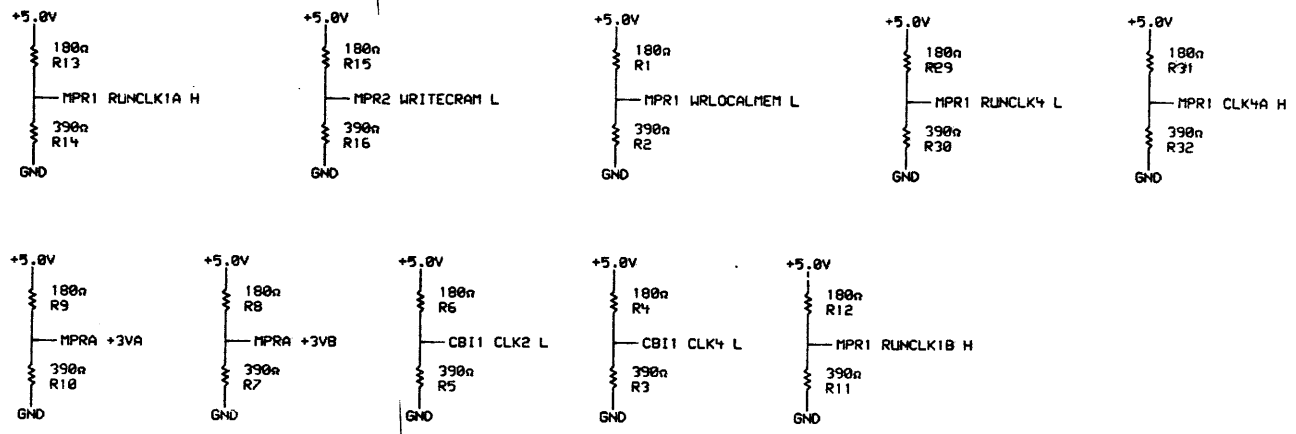
DATE 04-APR-84

TITLE: C120 MPROC CONT LOCAL STORAGE

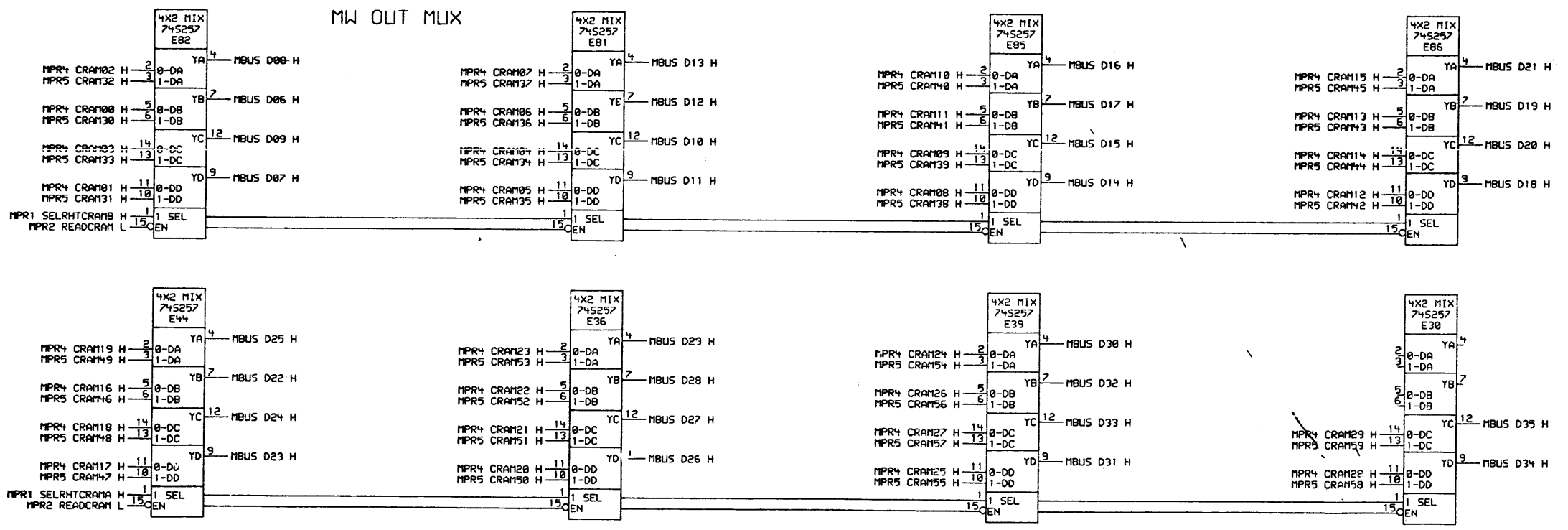
SUOCN1804EN ECO: MPR800.DW 129-MAR-84 09:53 NEXT HIGHER ASSEMBLY: FIRST USED ON OPTION/MODEL: C120

D-DD-M3002-0

SIZE CODE D CS NUMBER M3002-0-MPR8 REV. A



MW OUT MUX

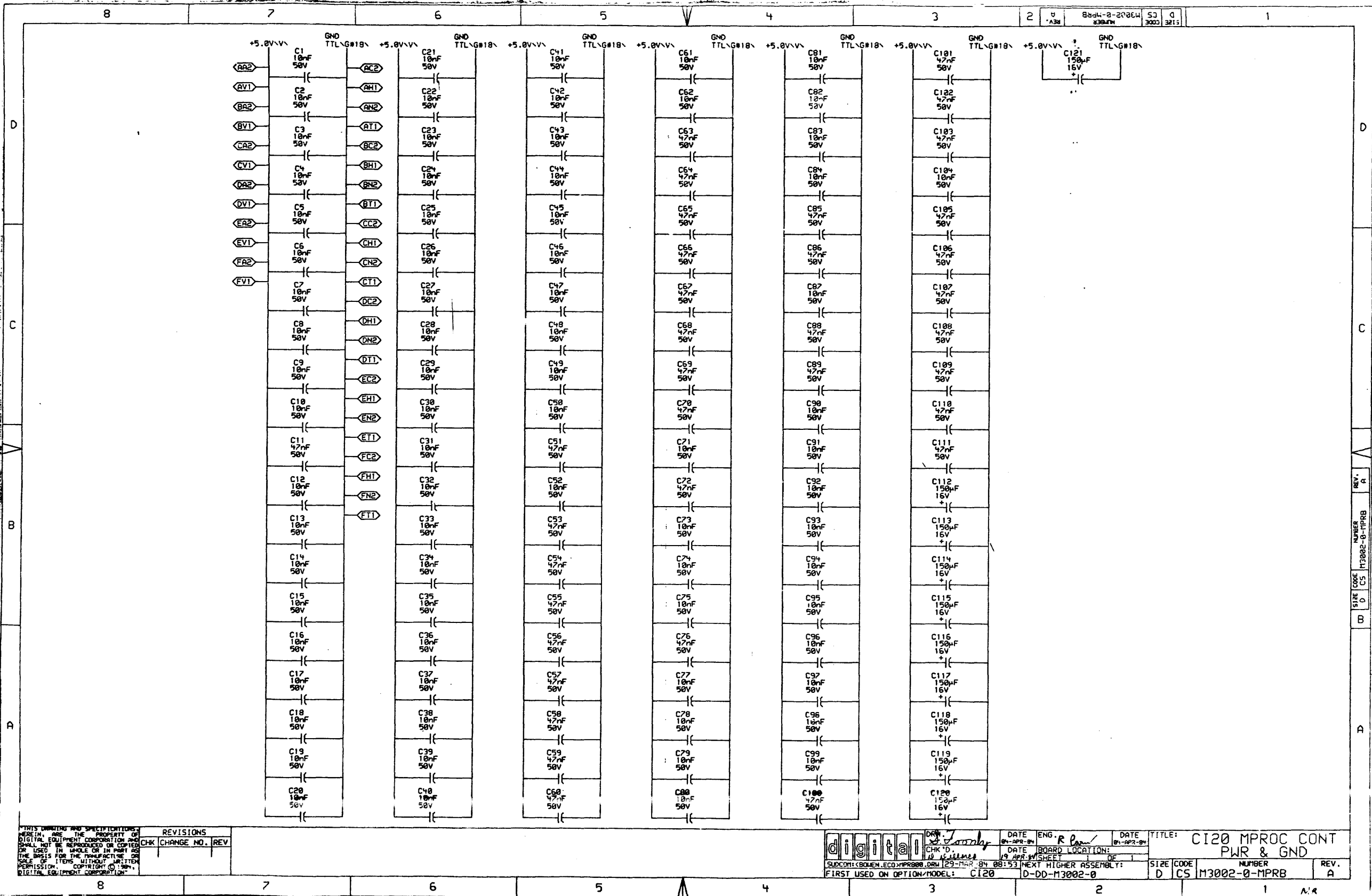


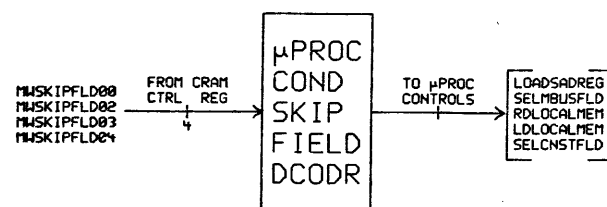
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REVISIONS	
CHK	CHANGE NO. REV

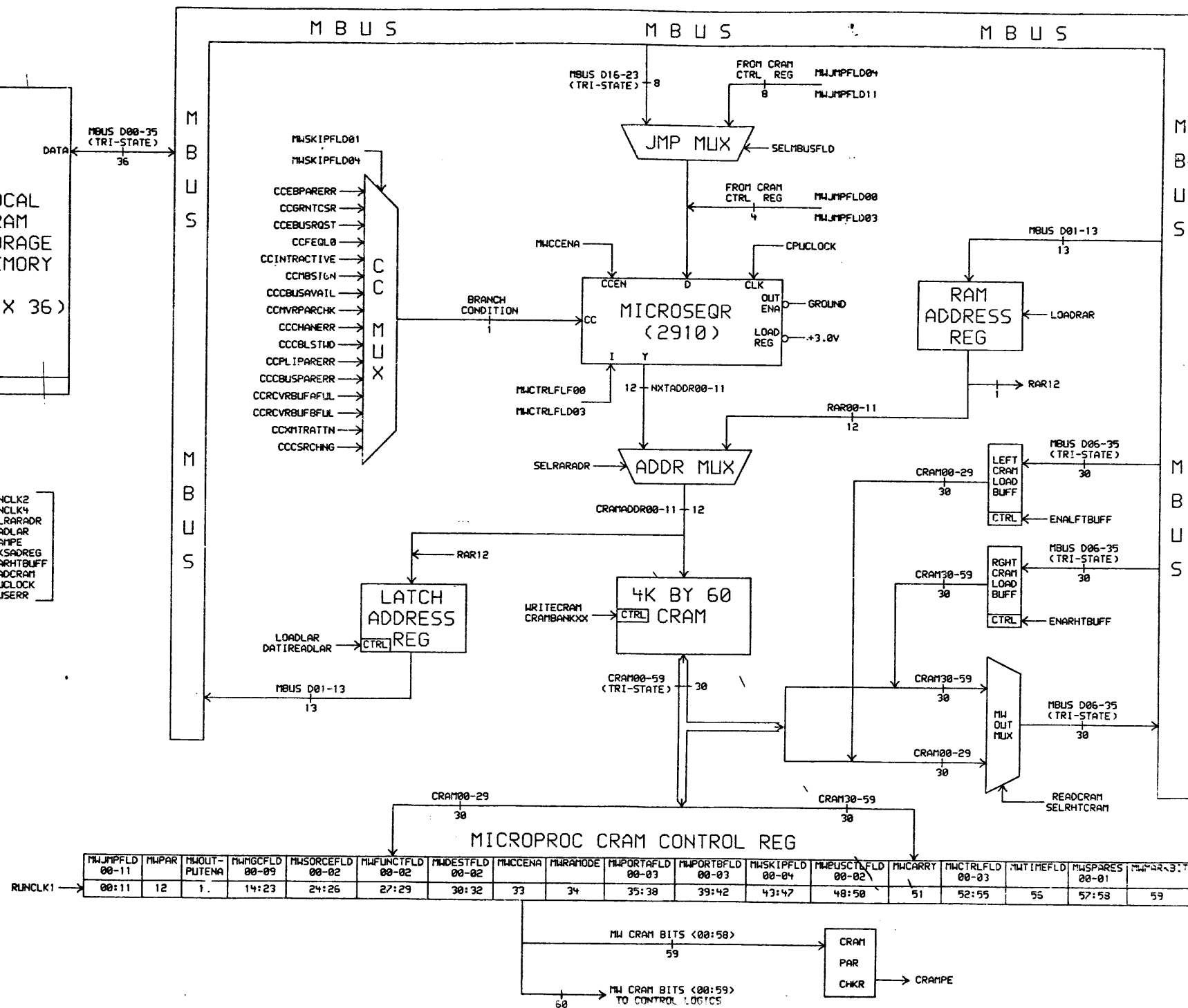
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	DATE 17-APR-84	BOARD LOCATION: 1	SHEET 1	OF 1
SUDCOM: (BOWEN.ECO)MPRAB0.DRW 129-MAR-84 08:53 NEXT HIGHER ASSEMBLY:				SIZE CODE D CS
FIRST USED ON OPTION/MODEL: CI20				D-DD-M3002-0
NUMBER M3002-0-MPRA				REV. A

REV. A
NUMBER M3002-0-MPRA
CS
D
B

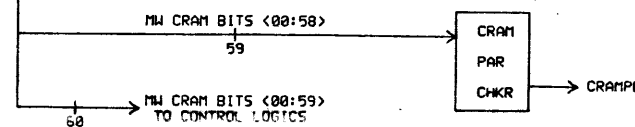




μPROC
CONTROL
MODULE



	MJMJPFLD 00-11	MJPAR	MJOUT- PUTENA	MWGCFLD 00-09	MMSORCEFLD 00-02	MJINFUNFLD 00-02	MJDESTFLD 00-02	MWCCENA	MJRMNODE	MJPORTAFLD 00-03	MJPORTBFLD 00-03	MWKSIPFLD 00-04	MJPUSTBFLD 00-02	MJCARRY	MJCTRLFLD 00-03	MJTIMEFLD 00-01	MJWSPARES 00-01	MJWSPARE3 00-01
RJLNCK1 →	00:11	12	1	14:23	24:26	27:29	30:32	33	34	35:38	39:42	43:47	48:50	51	52:55	56	57:58	59



DRAWING NUMBER	PAGE	PART NO.	DESCRIPTION	REVISIONS
			ECO NUMBER	- M3003 MR001
		M3003-00	MODULE REVISION	A1 A1
D-UA-M3003-0-0	2		CBUS	A A1
K-PL-M3003-0-DBP	2		PARTS LIST, M3003	A A1
D-CS-M3003-0-CBI1	1		CI20 CBUS INTFC CBUS CONTROL 1	A A
D-CS-M3003-0-CBI2	1		CI20 CBUS INTFC CBUS CONTROL 2	A A
D-CS-M3003-0-CBI3	1		CI20 CBUS INTFC MVR CONTROL 1	A A
D-CS-M3003-0-CBI4	1		CI20 CBUS INTFC MVR CONTROL 2	A A
D-CS-M3003-0-CBI5	1		CI20 CBUS INTFC CBUS INTERFACE	A A
D-CS-M3003-0-CBI6	1		CI20 CBUS INTFC CBUS PARITY	A A
D-CS-M3003-0-CBI7	1		CI20 CBUS INTFC FMTR INPUT MUXS	A A
D-CS-M3003-0-CBI8	1		CI20 CBUS INTFC MVR/FMTR	A A
D-CS-M3003-0-CBI9	1		CI20 CBUS INTFC PLI INTERFACE	A A
D-CS-M3003-0-CBI8	1		CI20 CBUS INTFC MBUS INTERFACE	A A
D-CS-M3003-0-CBI8	1		CI20 CBUS INTFC PWR & GND	A A
D-CS-M3003-0-CBI8	1		CI20 CBUS INTFC UNUSED FINGERS	A A
D-CS-M3003-0-BLK	1		BLOCK DIAGRAM CBUS MODULE	A A
K-PC-M3003-0-DBI	-		P.C. DESIGN DATA BASE	A REA
D-DD-5015386-0	2		DRAWING DIRECTORY, 5015386	REF

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REVISIONS		
CHK	CHANGE NO.	REV

digital	DRN. D. DELLORCO	DATE 19-FEB-85	ENG. E. BLOOM	DATE 19-FEB-85	TITLE: DRAWING DIRECTORY
	CHK'D. D. CAUNTER	DATE 19-FEB-85	BOARD LOCATION: N/A	OF 2	M3003 (CBUS)
	DSK:M30031.T2P(4,52)	19-FEB-85 13:07	SHEET		
FIRST USED ON OPTION/MODEL: CI20					NEXT HIGHER ASSEMBLY:
SIZE D	CODE DD	NUMBER M3003-0	REV. C		

DRAWING NUMBER	PAGE	PART NO.	DESCRIPTION	REVISIONS	
				M3003	M3003
			ECO NUMBER	MR001	MR002
		M3003-00	MODULE REVISION	A2	A3
D-UA-M3003-0-0	1		CBUS	B	C
K-PL-M3003-0-DBP	2		PARTS LIST, M3003	B	C
D-CS-M3003-0-CB11	1		CI20 CBUS INTFC CBUS CONTROL 1	A	A
D-CS-M3003-0-CB12	1		CI20 CBUS INTFC CBUS CONTROL 2	A	A
D-CS-M3003-0-CB13	1		CI20 CBUS INTFC MVR CONTROL 1	A	A
D-CS-M3003-0-CB14	1		CI20 CBUS INTFC MVR CONTROL 2	A	A
D-CS-M3003-0-CB15	1		CI20 CBUS INTFC CBUS INTERFACE	A	A
D-CS-M3003-0-CB16	1		CI20 CBUS INTFC CBUS PARITY	A	A
D-CS-M3003-0-CB17	1		CI20 CBUS INTFC FMTR INPUT MUXS	A	A
D-CS-M3003-0-CB18	1		CI20 CBUS INTFC MVR/FMTR	A	A
D-CS-M3003-0-CB19	1		CI20 CBUS INTFC PLI INTERFACE	A	A
D-CS-M3003-0-CB1A	1		CI20 CBUS INTFC MBUS INTERFACE	A	A
D-CS-M3003-0-CB1B	1		CI20 CBUS INTFC PWR & GND	A	A
D-CS-M3003-0-CB1C	1		CI20 CBUS INTFC UNUSED FINGERS	A	A
D-CS-M3003-0-BLK	1		BLOCK DIAGRAM CBUS MODULE	A	A
K-PC-M3003-0-DBI	-		P.C. DESIGN DATA BASE	B	B
D-DD-5015386-0	2		DRAWING DIRECTORY, 5015386	REF	REF

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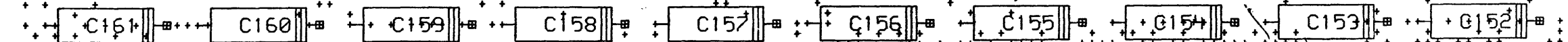
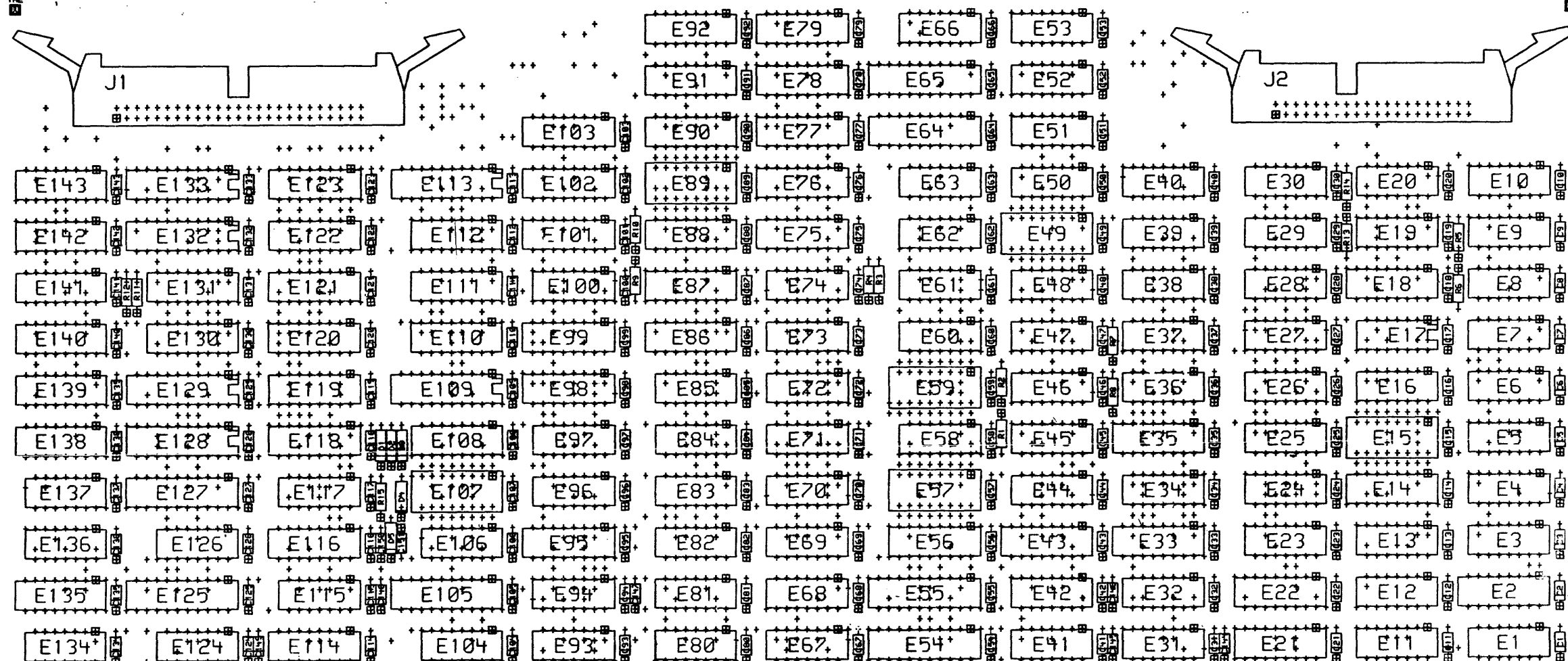
REVISIONS		
CHK	CHANGE NO.	REV



DRN.	D. DELLORCO	DATE	19-FEB-89	ENG.	E. BLOOM	DATE	19-FEB-89
CHK'D	D. CAUNTER	DATE	19-FEB-89	BOARD LOCATION	N/A		
DSK	M30032.T2P(4,52)		119-FEB-89 13:07	SHEET	2	OF	2
FIRST USED ON OPTION/MODEL: CI20				NEXT HIGHER ASSEMBLY:			

TITLE: DRAWING DIRECTORY			
M3003 (CBUS)			
SIZE	CODE	NUMBER	REV.
D	DD	M3003-0	C

41 QTY 12 COMPONENT SIDE VIEW



NOTES: 1. SPARE COMPONENT LOCATIONS ARE: E15, E49, E57, E59, E89, E107.
2. THIS BOARD MUST MEET SAFETY REQ. FOR HPWR.

STEP E	→ Y AXIS	0	STEP 0	TIMES
REPEAT	→ X AXIS	0	STEP 0	TIMES

CHANGE NO	REV
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ETCH REV.	C1
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SIGNATURES	DATE	TITLE
DRN. <i>[Signature]</i>	11/11/64	digital
CHK. D. <i>[Signature]</i>	11/11/64	
MECH. ENG. <i>[Signature]</i>	11/11/64	
PROJ. ENG. <i>[Signature]</i>	11/11/64	
PROD. <i>[Signature]</i>	11/11/64	
SCALE 2/1	SIZE CODE	NUMBER
SHT. 1 OF 1	0 UA	M3003-0-0
TOP DOC NO: D-DD-M3003-0		

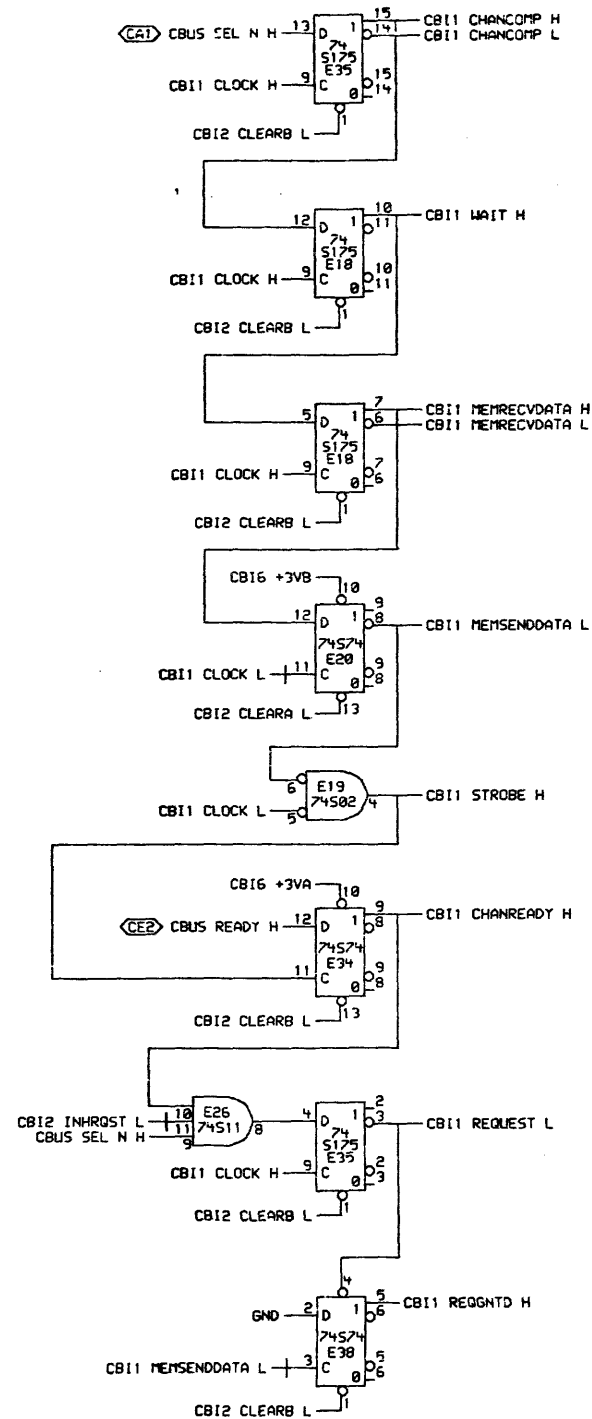
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					VARIATION REVISION LEVEL:	00		
						A3		
1	1	D-MC-5015386-0-0	5015386-01	C	DRILL & ETCH DWG FOR M3003	1		
2	2		1001610-00		.01 MFD 50V +80-20% 25U CER	132		C1-C17,C19-C28,C30,C32-C40, CONT C43-C45,C47-C58,C60-C73,C75-C93, CONT C95-C99,C101-C114,C116-C123, CONT C125-C140,C142,C143,C150,C151 C18,C29,C46,C59,C74,C100,C141 C31,C41,C42,C94,C115,C124, CONT C144-C149 C152-C161 D1-D5 J1 J2
3	3		1012784-00		.047 MFD 50V +80-20% CER	7		
4	4		1010274-00		.22 MFD 50V +80-20% 25U CER	12		
5	5		1012084-03		150 MFD 15V +75-10% AL EL	10		
6	6		1100113-00		D 662 OS 600PCB(STABISTOR)	5		
7	7		1216832-03		PCB,HEADER 50POS(2X25),100CC 90D	1		
8	8		1216832-02		PCB,HEADER 40POS(2X20),100CC 90D	1		
9	9		1215278-00		CABLE,FLEX NOMEX SHEET MODULE PR	1		
10	10		1216988-02		HANDLE,MODULE,HEX TWO EJECTORS	1		
11	11		1301322-00		180.0 .25 W 5.0 % CF	7		R1,R3,R5,R7,R9,R11,R13
12	12		1300309-00		390.0 .25 W 5.0 % CF	7		R2,R4,R6,R8,R10,R12,R14
13	13		1301477-00		82.0 .25 W 5.0 % CF	1		R15
14	14		1912746-B0		74S37 BURNED-IN NAND GATE-	5		E1,E8,E11,E30,E104
15	15		1911117-00	DEC	8838 TRANSCEIVER,BUS,QUA	1		E2
16	16		1910539-B0		74S20 BURNED-IN NAND GATE-	2		E3,E29
17	17		1910544-B0		74S74 BURNED-IN FF-D DUAL,	11		E4,E13,E16,E20,E23,E34,E38,E45, CONT E52,E61,E62
18	18		1912388-B0		74S02 BURNED-IN MCR GATE-Q	10		E5,E10,E19,E24,E25,E47,E48,E71, CONT E72,E81
19	19		1910534-B0		74S04 BURNED-IN INVERTER G	8		E6,E12,E39,E46,E53,E85,E93,E100
20	20		1910536-B0		74S10 BURNED-IN NAND GATE-	1		E7
21	21		1910532-B0		74S00 BURNED-IN NAND GATE-	4		E9,E28,E63,E80
22	22		1910957-B0		74S175 BURNED-IN FF-D QUAD	3		E14,E18,E35
23	23		1616653-00	DELAY=	50NS,10TAPS WITH TTLBU	1		E17
24	24		1911675-B0		74S138 BURNED-IN DECODER/DE	1		E21

REVISION HISTORY		BASIC PART NO: M3003		DRN: D,DELLORCO	DATE: 18-NOV-82	D I G I T A L	
ENG	ECC NUMBER	REV	SECTION A OF A				TITLE PARTS LIST
	INITIAL	A	SECTION VARIATION INDEX	CHK'D: D,CAUNTER	DATE: 18-NOV-82	M3003 C BUS	
			[A] 00				
UT	M3003-MR001	B	[B]				
EB	M3003-MR002	C	[C]	DES.ENG: R,CARN	DATE: 19-APR-84	DOCUMENT NUMBER	
			[D]				SIZE CODE NUMBER REV
			[E]				
			[F]	RESP.ENG.: R,CARN	DATE: 19-APR-84	K PL M3003-0-DBP C	
			[H]				
			[J]				
			[K]	IMFG.ENG.: R,CARN	DATE: 19-APR-84	RELEASE DATE: 18-FEB-85	
			[L]				
			[M]	ASSEMBLY NUMBER:	TOP DOCUMENT NUMBER:	FILE NAME:	EDIT #
			[N]	ID-VA-M3003-0-0	ID-DD-M3003-0	Z8534C.PLS	18

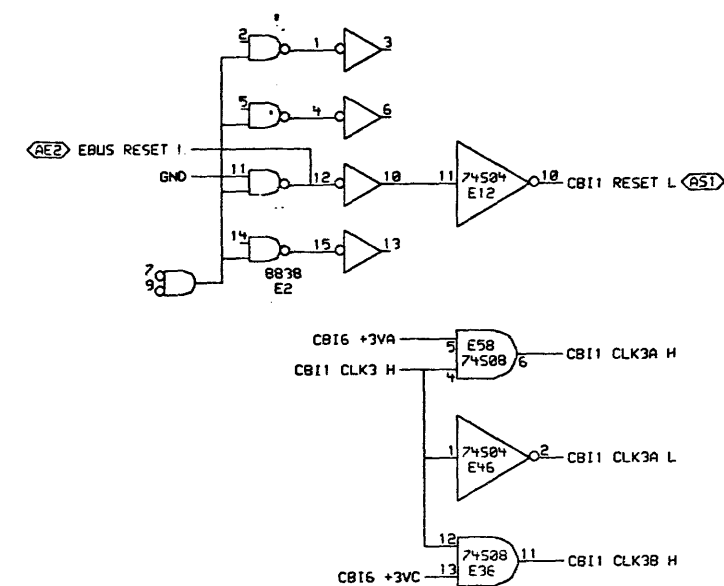
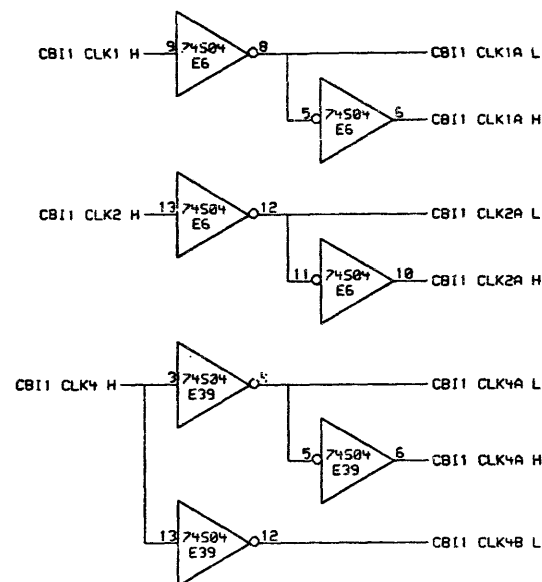
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42 NOTE: 1. SPARE LOCATIONS ARE: E15,E49,E57,E59,E89,E107

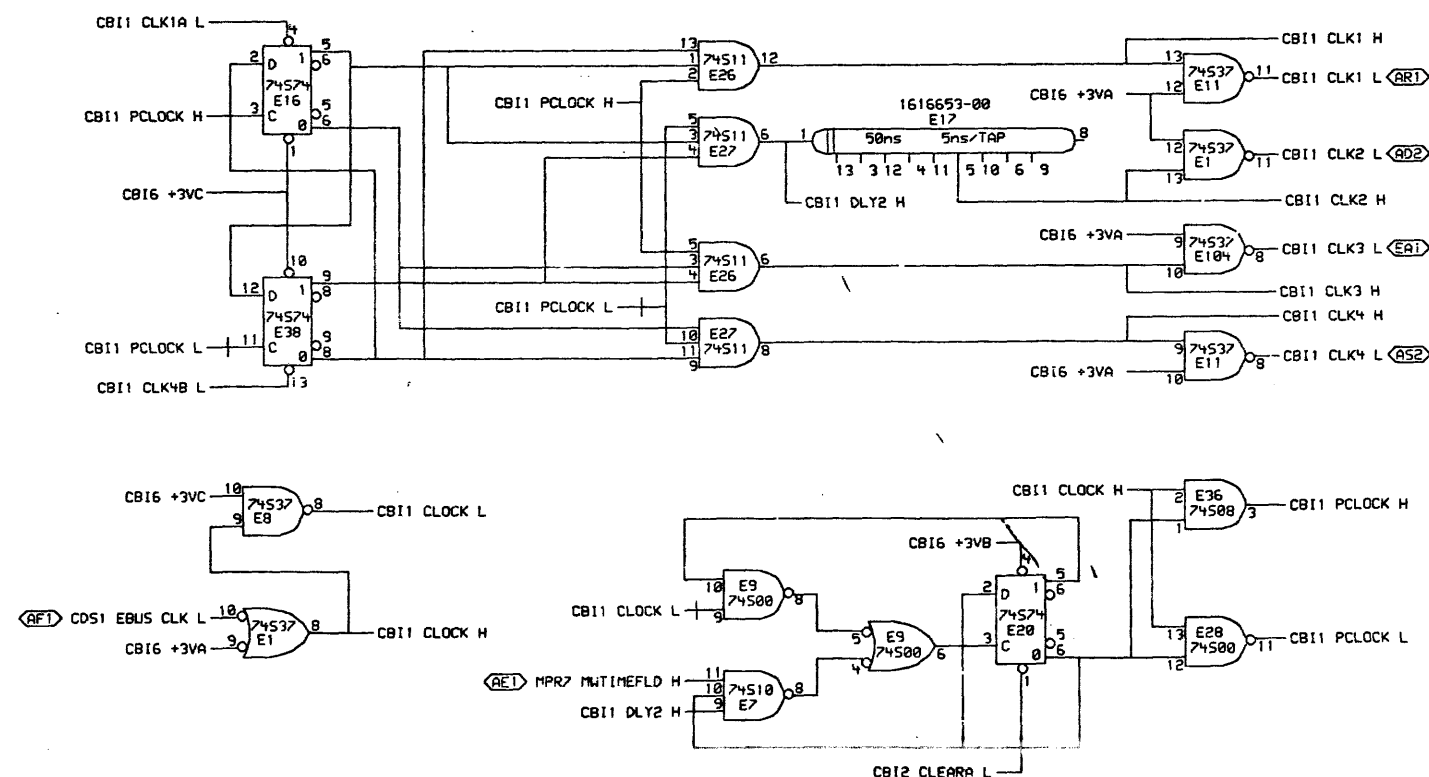
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							M3003		SECTION A OF A				
							C BUS			K	PL	M3003-0-DBP	C



CI20	NI20
N=7	N=5



CLOCK GENERATION LOGIC



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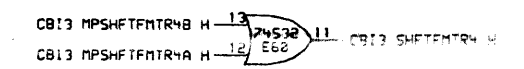
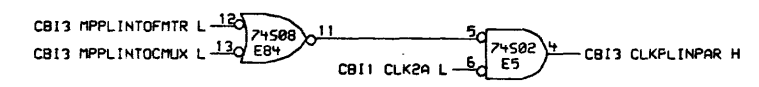
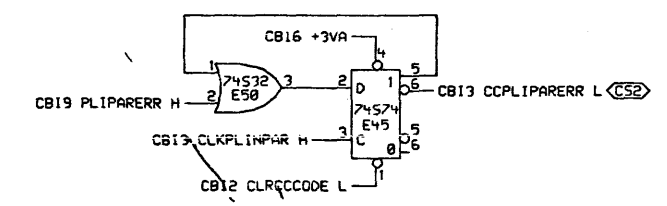
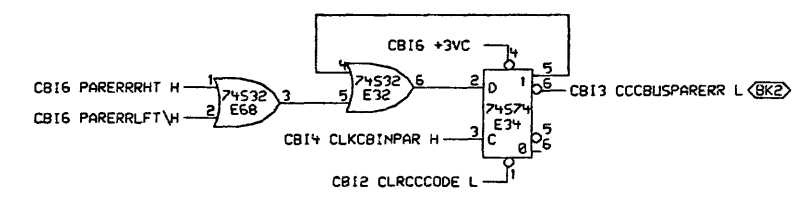
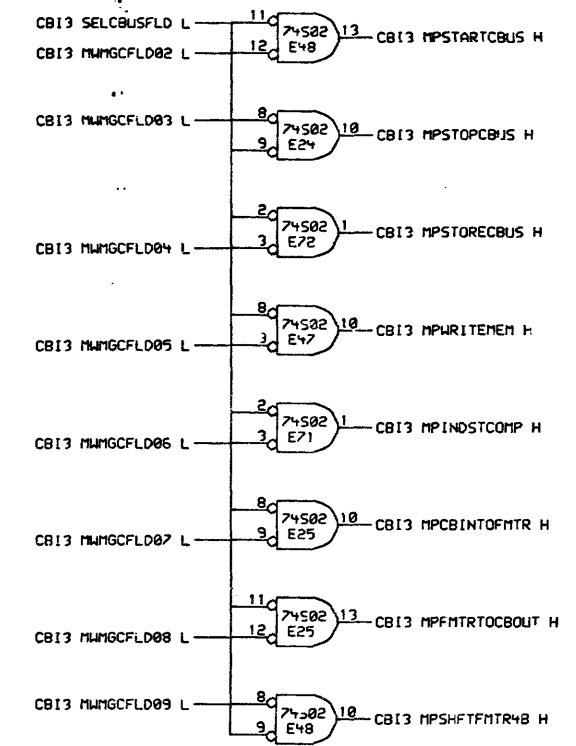
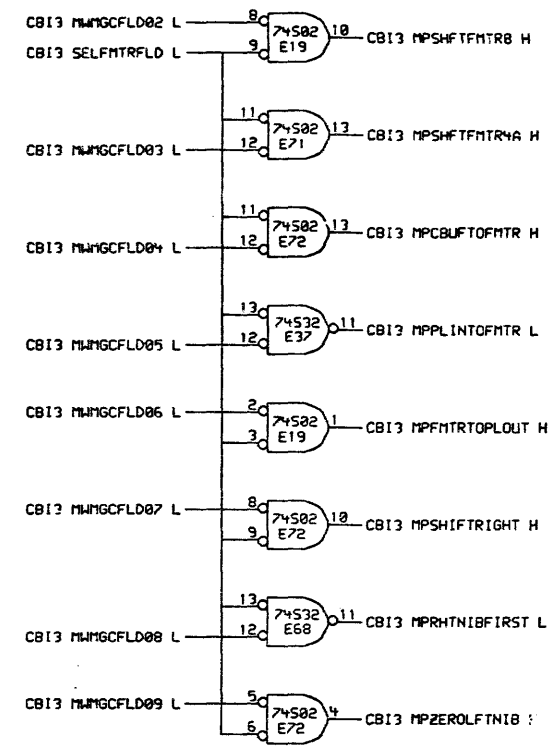
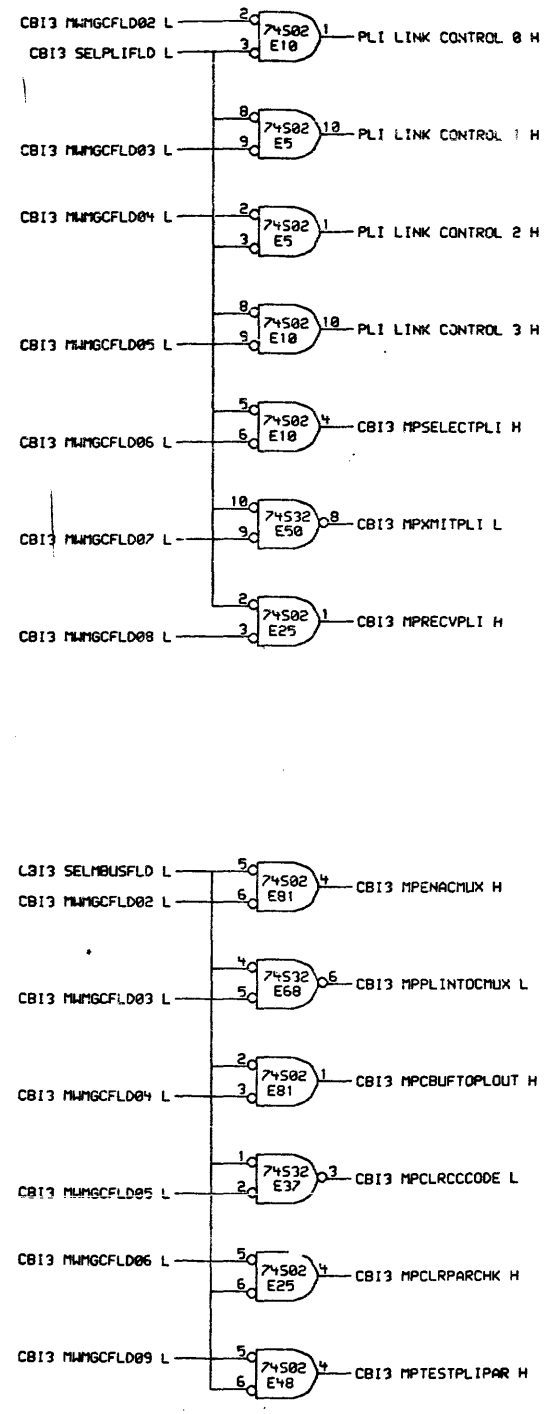
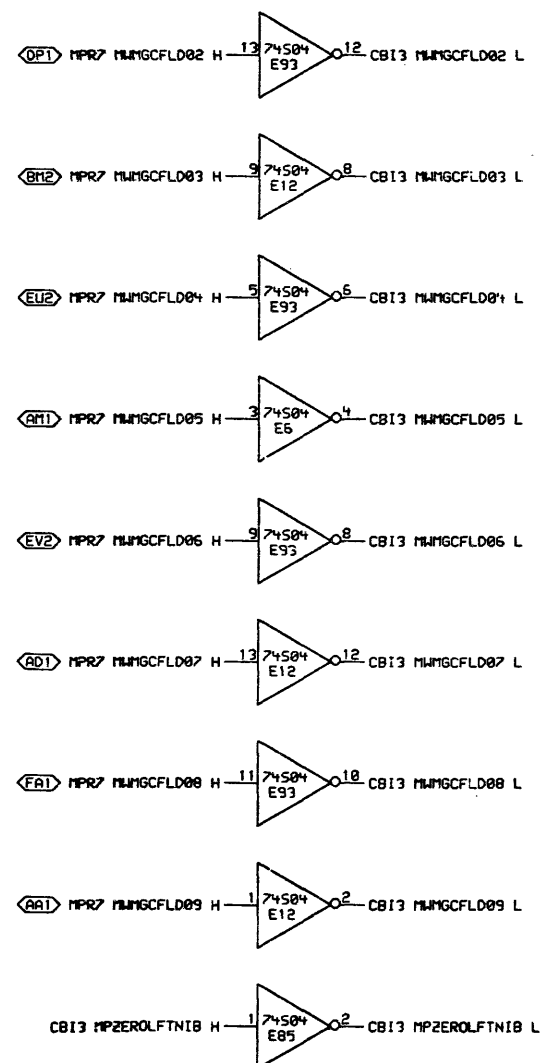
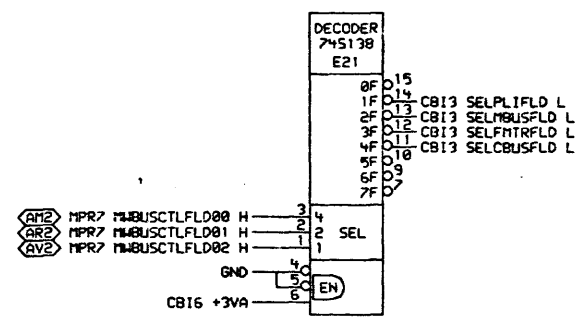
REVISIONS		
CHK	CHANGE NO.	REV

digital
SUDDOM1<BOWEN.ECO>CB118
FIRST USED ON OPTIO

DRN. <i>J. J. J.</i>	DATE 03-APR-84	ENG. <i>R. C. R.</i>	DATE 03-APR-84
CHK'D. <i>J. J. J.</i>	DATE 19 APR 84	BOARD LOCATION: SHEET <i>1</i> OF <i>1</i>	
01.DRW 129-MAR-84 09:00		NEXT HIGHER ASSEMBLY: N-MODEL: <i>C120</i> D-DD-M3003-0	

TITLE: CI20 CBUS INTFC CBUS CONTROL 1			
SIZE D	CODE CS	NUMBER M3003-0-CBI1	REV. A

D
C
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A



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REVISIONS	
CHK	CHANGE NO. REV

digital	DATE	ENG	DATE	TITLE:
	07-APR-84	R. Ben	07-APR-84	CI20 CBUS INTFC
CHK'D	DATE	BOARD LOCATION:		
US 11/11/84	07-APR-84	4 400 31 SHEET		
SUCCESSOR: BOWEN.EC0XCB1302.DRW		NEXT HIGHER ASSEMBLY:		
FIRST USED ON OPTION/MODEL: CI20		00-00-M3003-0		
SIZE	CODE	NUMBER	REV.	
D	C5	M3003-0-CB13	A	

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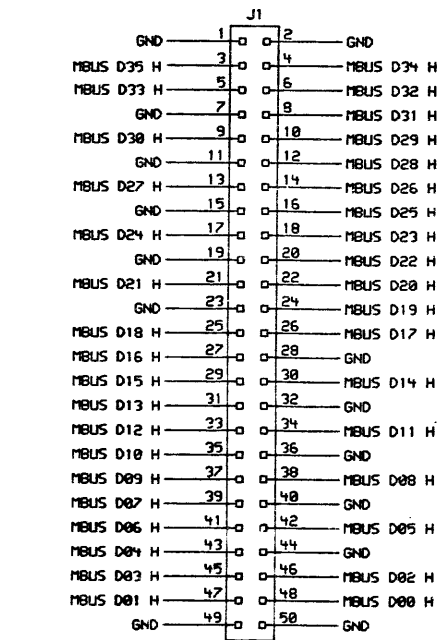
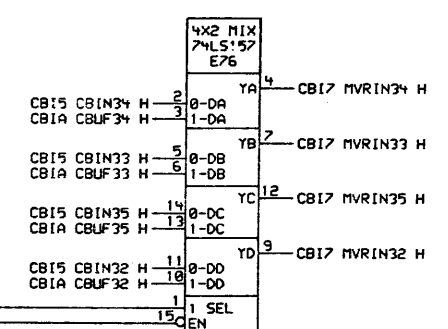
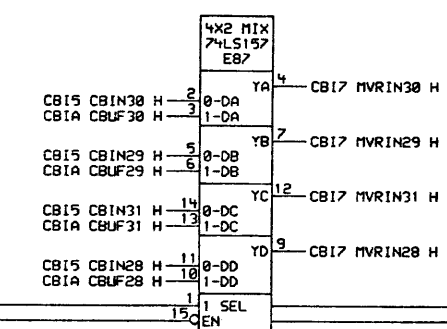
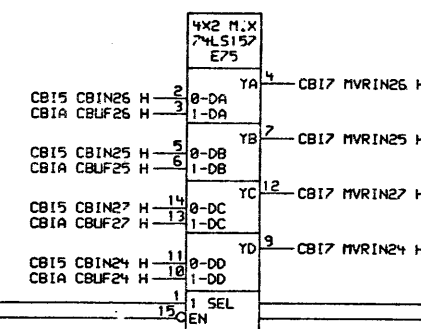
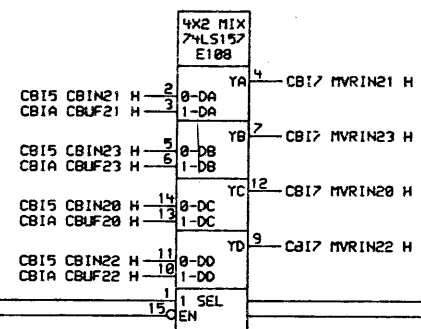
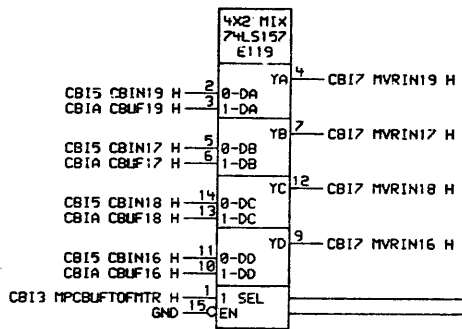
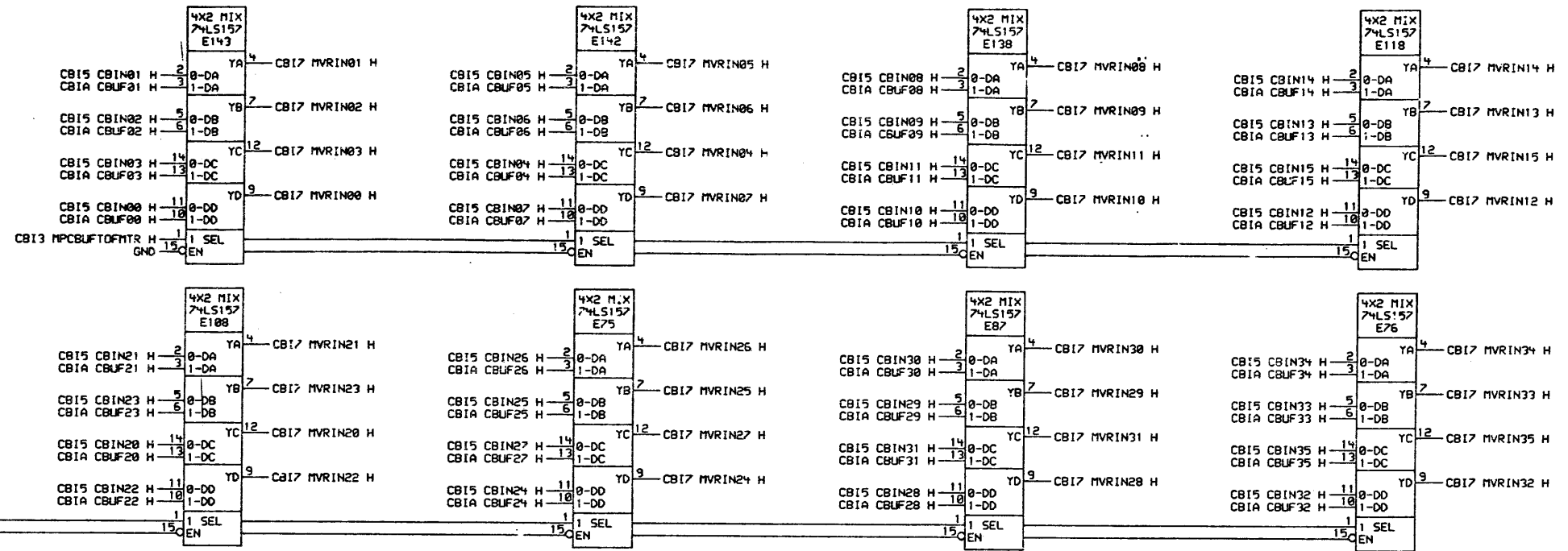
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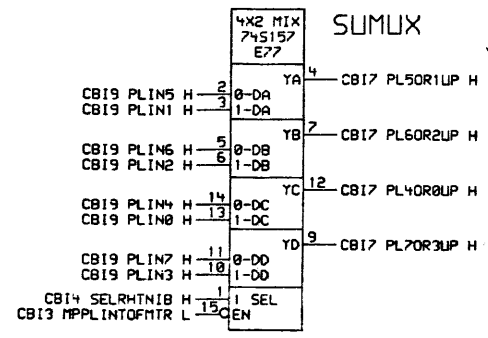
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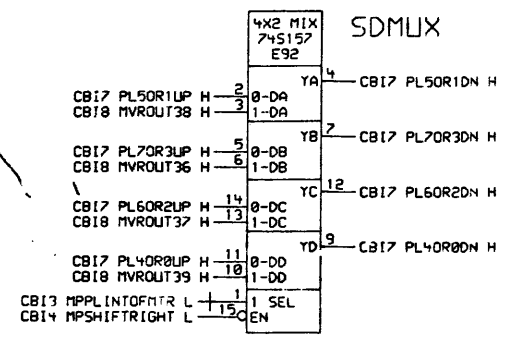
DMUX



SUMUX



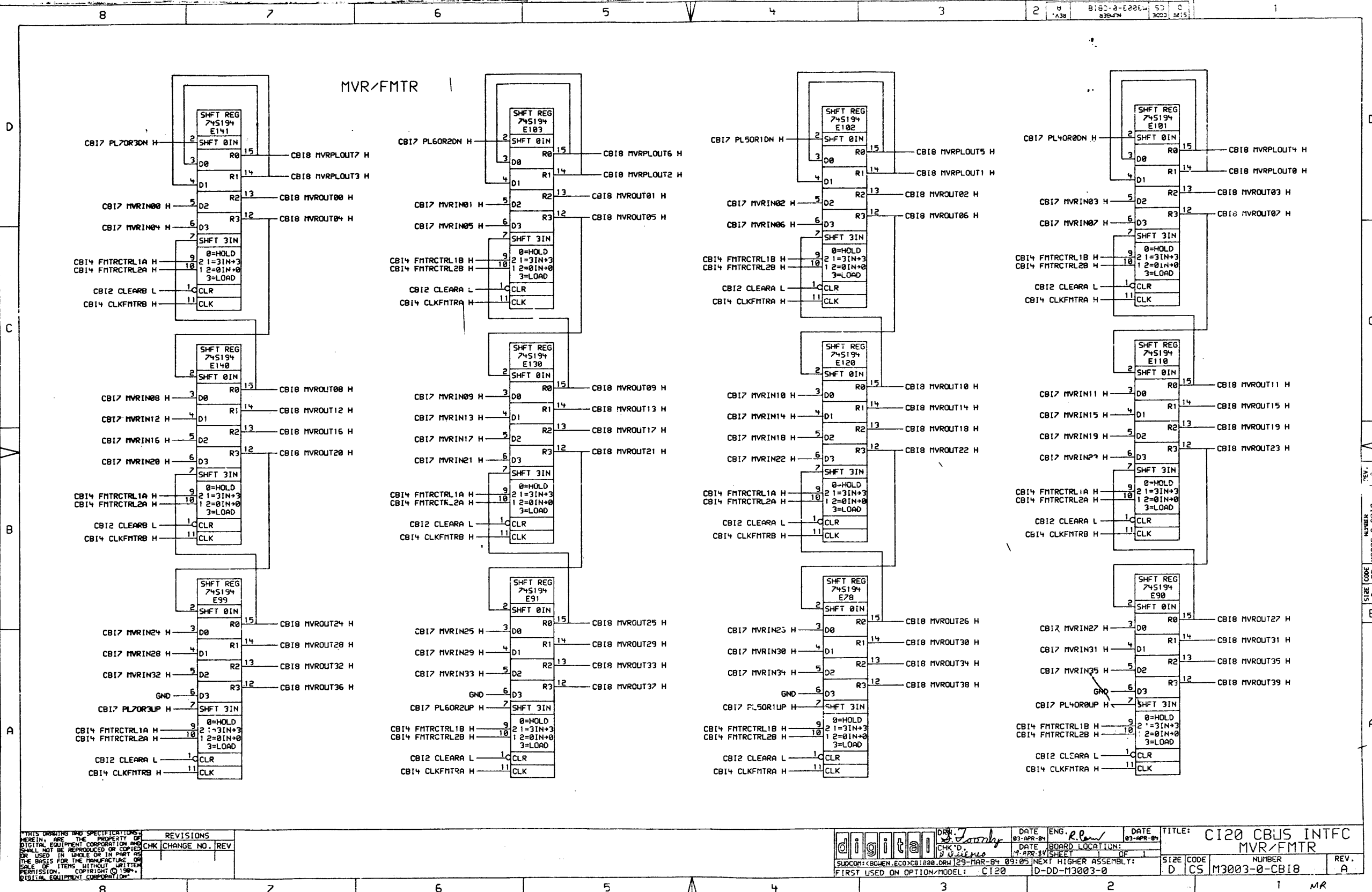
SDMUX



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REVISIONS		
CHK	CHANGE NO.	REV

digital	DATE	ENG.	DATE	TITLE:
	07-APR-84	R. Carr	07-APR-84	CI20 CBUS INTFC
CHK'D	DATE	BOARD LOCATION:	SIZE	CODE
15-APR-84	7-APR-84	1 OF 1	D	CS
SUCOM1:KBOLEN.ECD:CB1700.DRW 29-MAR-84 09:10 NEXT HIGHER ASSEMBLY:				NUMBER
FIRST USED ON OPTION MODEL: CI20				0-DD-M3003-0
				REV.
				A



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REVISIONS		
CHK	CHANGE NO.	REV

digital
DRW. *J. Family*
CHK'D *J. Family*
SUBCON: (BOWEN.ECO)CB1800.DRW 129-MAR-84 09:05
FIRST USED ON OPTION/MODEL: C120

DATE 03-APR-84
DATE 14-APR-84
DATE 03-APR-84
BOARD LOCATION: 1 OF 1
NEXT HIGHER ASSEMBLY: D-DD-M3003-0

TITLE: C120 CBUS INTFC MVR/FMTR
SIZE CODE D CS
NUMBER M3003-0-CB18
REV. A

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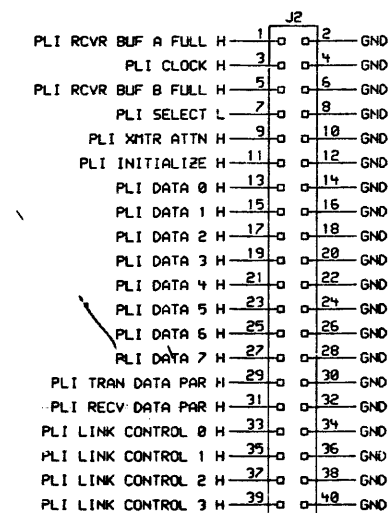
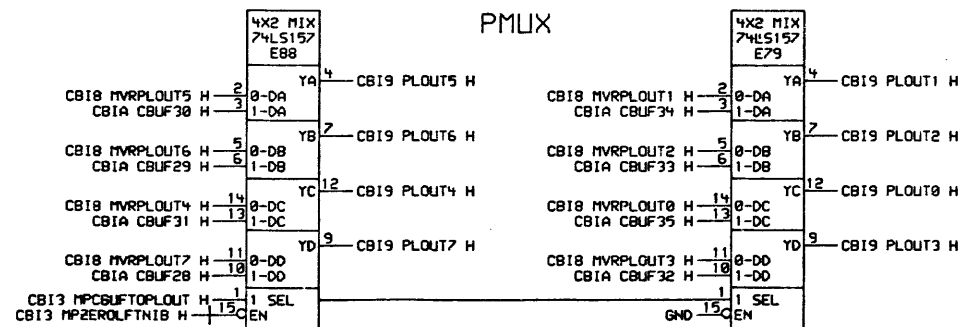
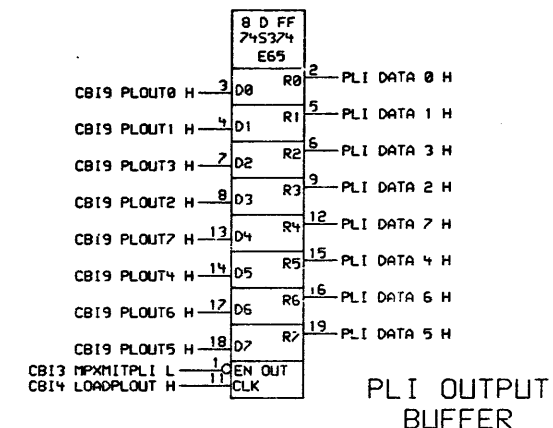
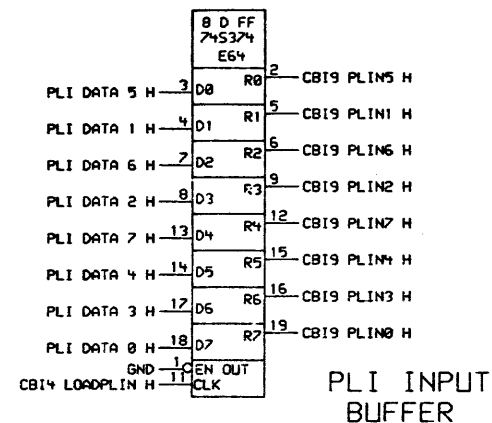
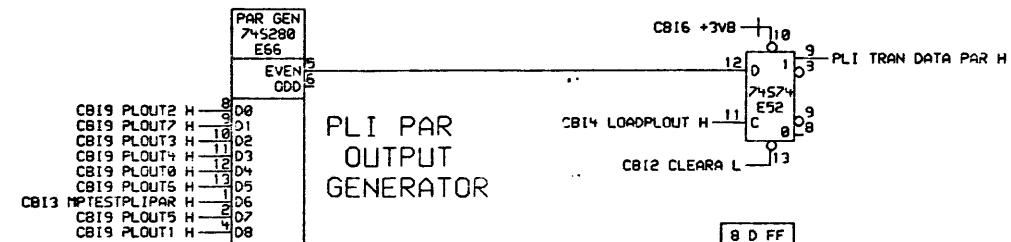
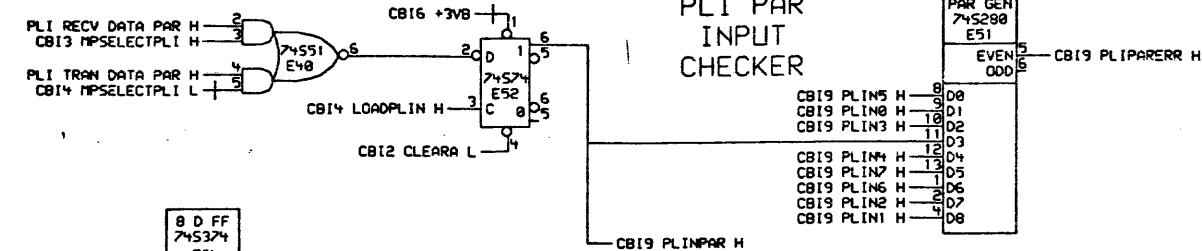
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REVISIONS
CHK CHANGE NO. REV

digital

DATE 03-APR-84
CHK'D
DATE 03-APR-84
SHEET 1

ENG R. Law
BOARD LOCATION: DE
NEXT HIGHER ASSEMBLY: D-DD-M3003-0

TITLE: C120 CBUS INTEFC
PLI INTERFACE
SIZE CODE NUMBER REV.
D CS M3003-0-CB19 A

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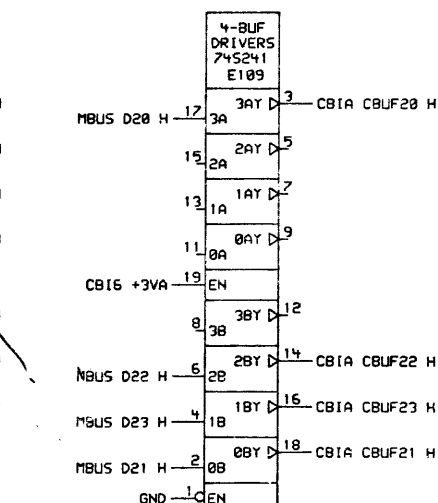
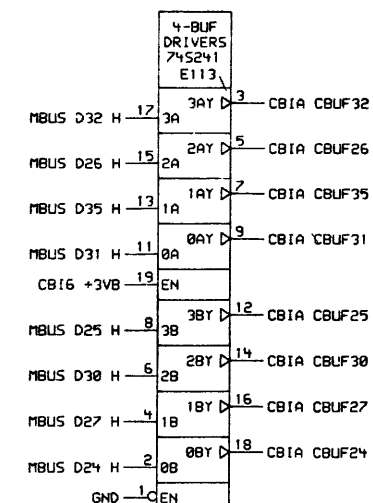
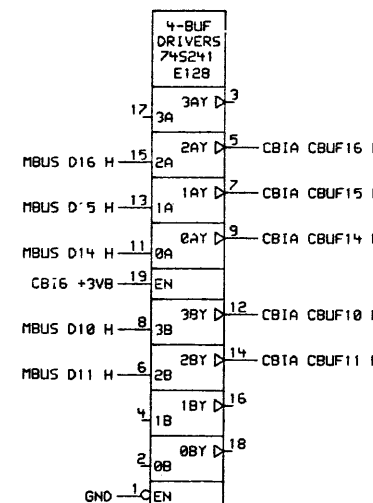
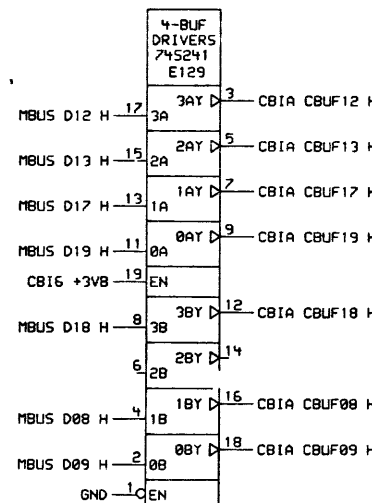
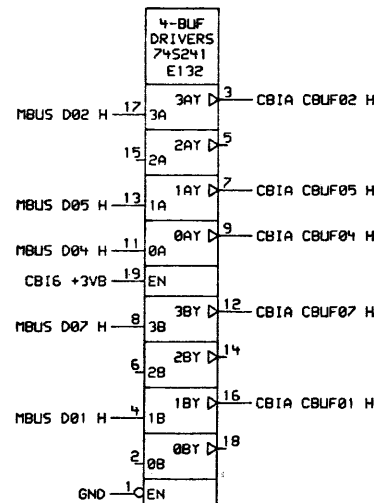
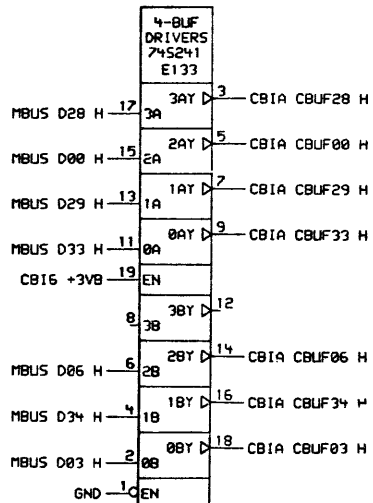
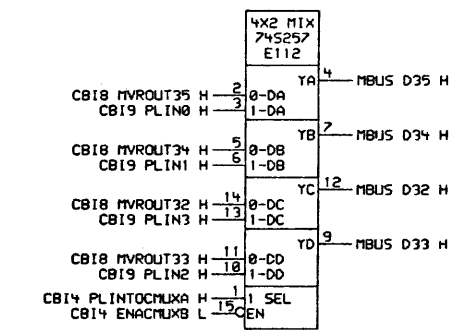
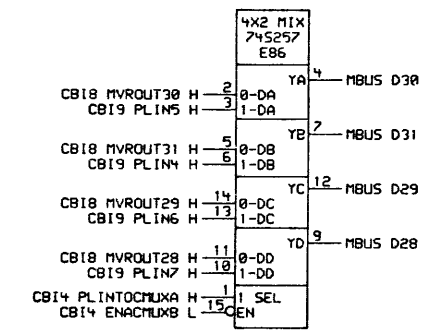
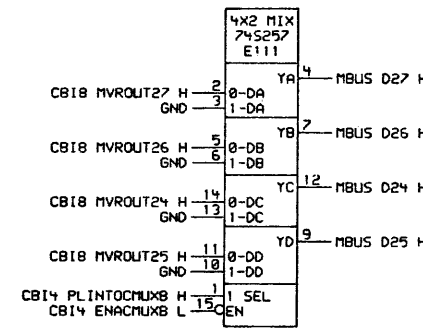
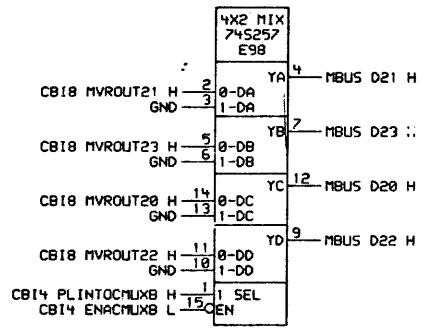
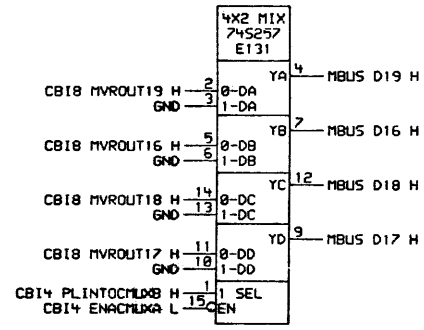
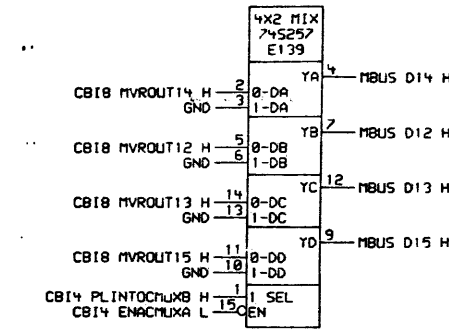
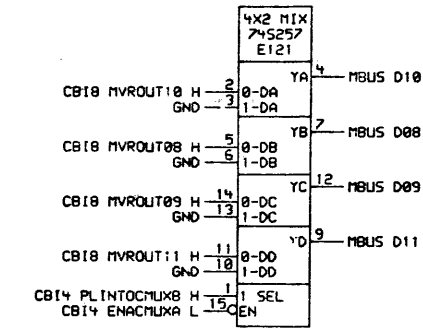
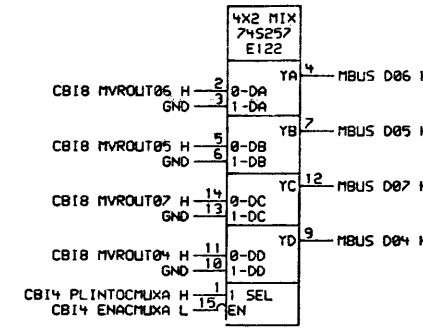
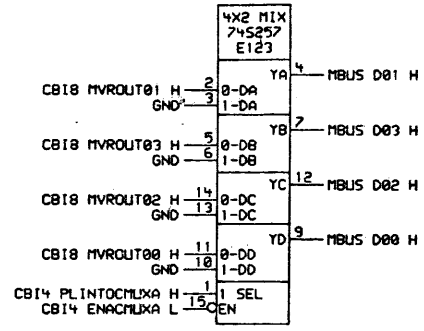
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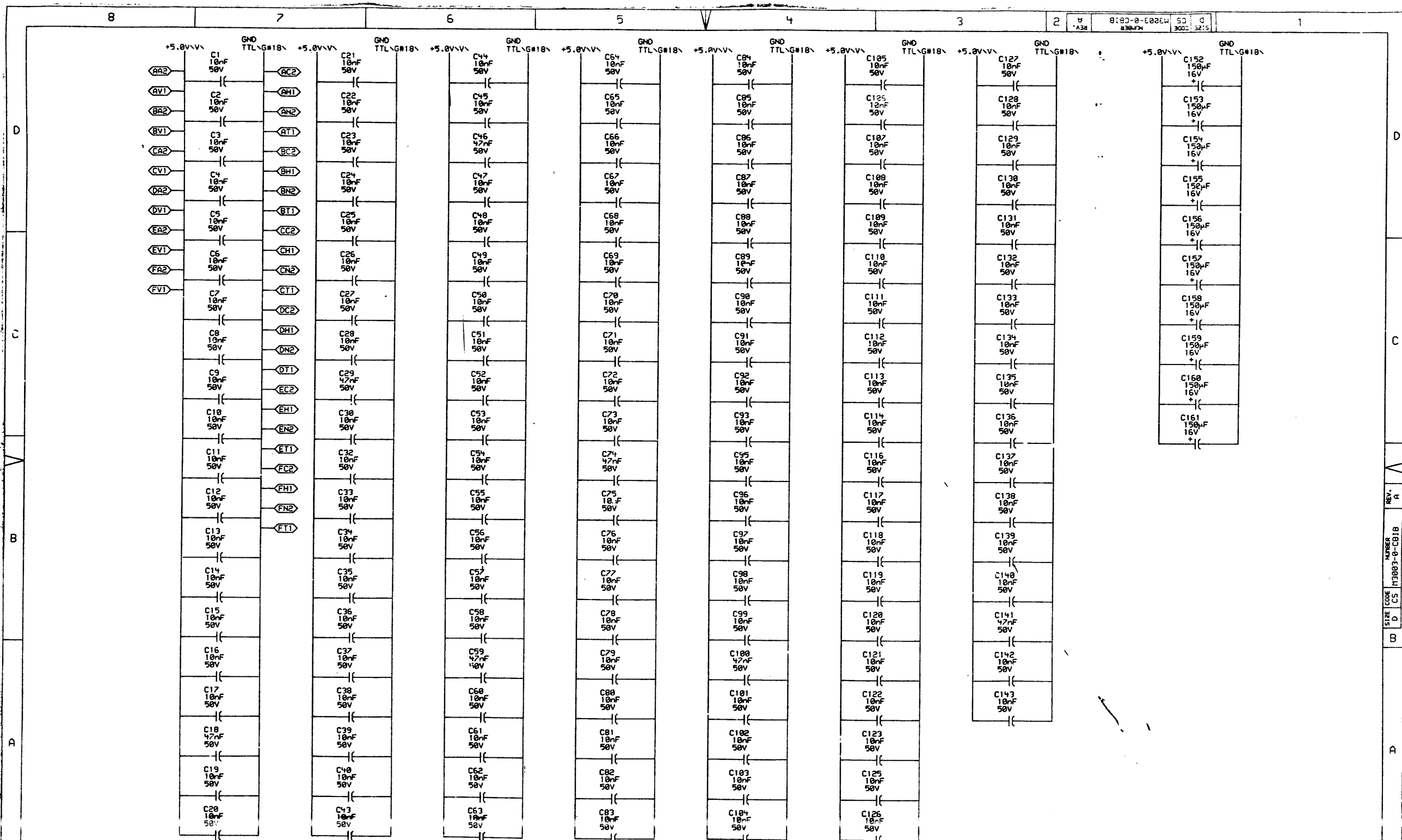
CMUX



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REVISIONS		
CHK	CHANGE NO.	REV.

digital	DATE 03-APR-84	ENG. R. L. L.	DATE 03-APR-84	TITLE: CI20 CBUS INTFC MBUS INTERFACE
	CHK'D 0. J. L.	DATE 19-APR-84	BOARD LOCATION: 1 OF 1	SIZE CODE NUMBER REV. D CS M3003-0-CBIA A
SUBCOM: (POWER) CBIA00.DRW 23-MAR-84 09:06 NEXT HIGHER ASSEMBLY: FIRST USED ON OPTION MODEL: CI20 D-DD-M3003-0				



DIGITAL EQUIPMENT CORPORATION		REVISIONS		DATE		ENGINEER		DATE		TITLE	
CHK		CHANGE NO.		REV		03-APR-84		03-APR-84		C120 CBUS INTFC	
SUBCOM: L80EN.ECO:CB1800.DRW:129-MAR-84		03-APR-84		03-APR-84		03-APR-84		03-APR-84		PWR & GND	
FIRST USED ON OPTION/MODEL: C120		D-DD-M3003-0		D-DD-M3003-0		D-DD-M3003-0		D-DD-M3003-0		D-DD-M3003-0	
SIZE		CODE		NUMBER		REV.		REV.		REV.	
D		CS		M3003-0-CB18		A		A		A	

AB2 N/C SEE NOTE 3	BF1 N/C EXTRA GND	DB2 N/C SEE NOTE 3	EP2 N/C SEE NOTE 2	FL2 N/C SEE NOTE 2
AB1 N/C SEE NOTE 3	BH2 EBUS D31 L	DB1 N/C SEE NOTE 3	EP1 N/C SEE NOTE 2	FL1 N/C SEE NOTE 2
AC1 N/C EXTRA GND	BJ2 EBUS D34 L	DUI N/C SEE NOTE 3	ER2 N/C SEE NOTE 2	FM2 N/C SEE NOTE 2
AH2 N/C EXTRA GND	BJ1 EBUS D30 L	ER2 N/C SEE NOTE 3	ER1 N/C SEE NOTE 2	FM1 N/C SEE NOTE 2
AJ1 N/C SEE NOTE 1	BK1 EBUS D35 L	EB1 N/C SEE NOTE 3	ES2 N/C SEE NOTE 2	FN1 N/C EXTRA GND
AK2 EBUS D27 L	BL1 EBUS D17 L	EC1 N/C EXTRA GND	ES1 N/C SEE NOTE 2	FP2 N/C SEE NOTE 2
AK1 EBUS D28 L	BM1 N/C EXTRA GND	ED2 N/C SEE NOTE 2	ET2 N/C EXTRA GND	FPI N/C SEE NOTE 2
AL2 EBUS D26 L	BN1 N/C EXTRA GND	ED1 N/C SEE NOTE 2	EUI N/C SEE NOTE 3	FR2 N/C SEE NOTE 2
AL1 EBUS D29 L	BP2 N/C EXTRA GND	EE2 N/C SEE NOTE 2	FB2 N/C SEE NOTE 3	FRI N/C SEE NOTE 2
AN1 N/C EXTRA GND	BP1 EBUS D24 L	EE1 N/C SEE NOTE 2	FBI N/C SEE NOTE 3	FS2 N/C SEE NOTE 2
AT2 N/C EXTRA GND	BR2 EBUS D21 L	EF2 N/C SEE NOTE 2	FC1 N/C EXTRA GND	FS1 N/C SEE NOTE 2
AU2 N/C SEE NOTE 1	BR1 EBUS D19 L	EF1 N/C SEE NOTE 2	FD2 N/C SEE NOTE 2	FT2 N/C EXTRA GND
AU1 N/C SEE NOTE 3	BS2 EBUS D20 L	EH2 N/C EXTRA GND	FD1 N/C SEE NOTE 2	FU2 N/C EXTRA GND
BB2 N/C SEE NOTE 3	BS1 EBUS D23 L	EJ2 N/C SEE NOTE 2	FE2 N/C SEE NOTE 2	FUI N/C SEE NOTE 3
BB1 N/C SEE NOTE 3	BT2 EBUS D18 L	EJ1 N/C SEE NOTE 2	FE1 N/C SEE NOTE 2	FV2 N/C SEE NOTE 4
BC1 N/C EXTRA GND	BU2 EBUS D25 L	EK2 N/C SEE NOTE 2	FF2 N/C SEE NOTE 2	
BD2 EBUS D32 L	BU1 N/C SEE NOTE 3	EK1 N/C SEE NOTE 2	FF1 N/C SEE NOTE 2	
BD1 N/C EXTRA GND	BV2 EBUS D22 L	EL2 N/C SEE NOTE 2	FH2 N/C EXTRA GND	
BE2 N/C EXTRA GND	CB2 N/C SEE NOTE 3	EL1 N/C SEE NOTE 2	FJ2 N/C SEE NOTE 2	
BET EBUS D33 L	CB1 N/C SEE NOTE 3	EM2 N/C SEE NOTE 2	FJ1 N/C SEE NOTE 2	
BF2 N/C EXTRA GND	CC1 N/C EXTRA GND	EN1 N/C SEE NOTE 2	FK2 N/C SEE NOTE 2	
	CU1 N/C SEE NOTE 3	EN1 N/C EXTRA GND	FK1 N/C SEE NOTE 2	

NOTE 1: THESE PINS ARE CONNECTED AS SHOWN BELOW

FROM	TO
F1352	A15J1
E13V2	A15U2

NOTE 2: RSVD FOR MASS BUS
NOTE 3: RSVD FOR -5.2V
NOTE 4: THESE PINS DO NOT CONNECT TO EITHER THE EBUS OR MPROC

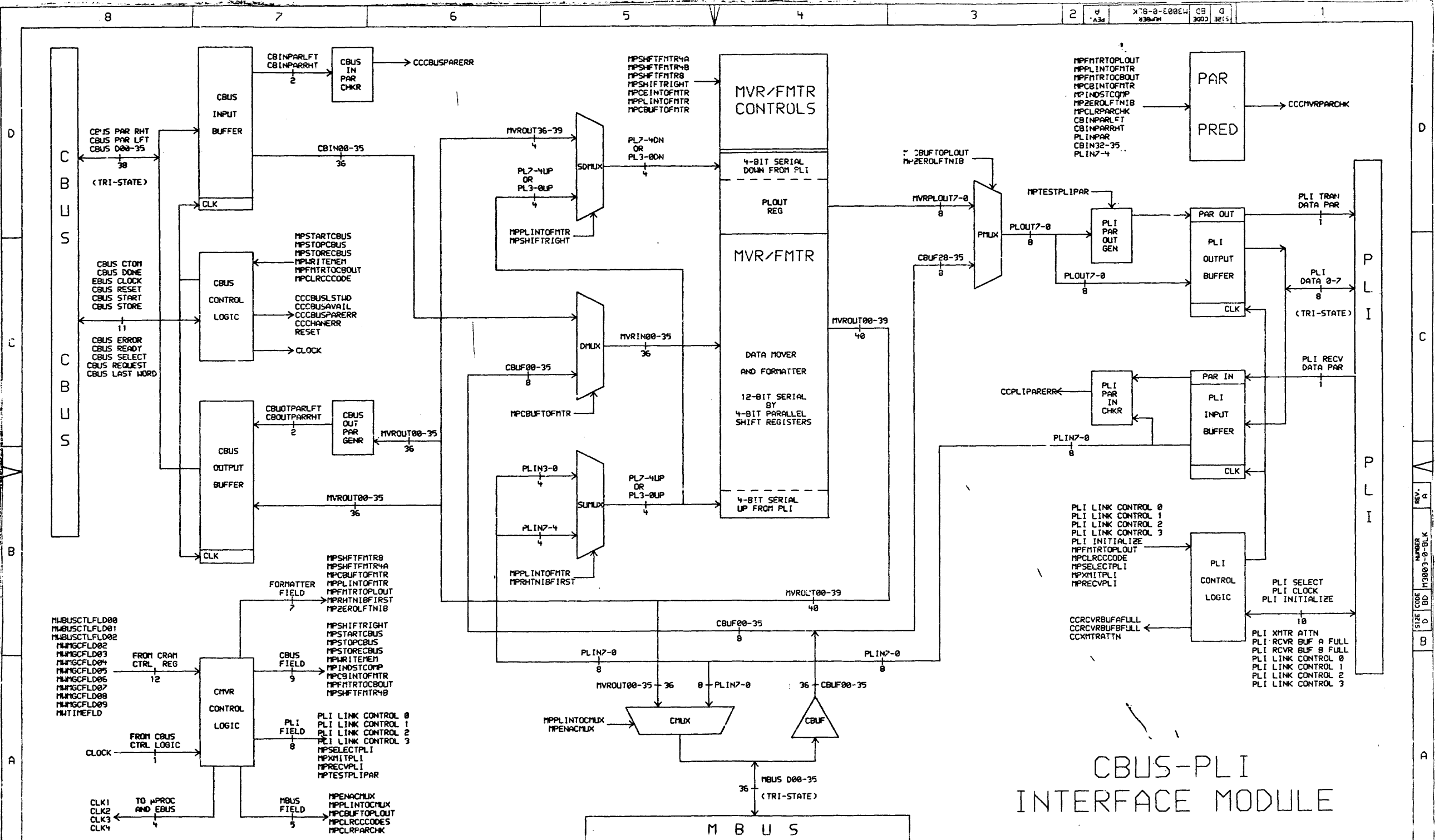
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REVISIONS		
CHK	CHANGE NO.	REV

digital	DATE	ENG.	DATE	TITLE:
	03-APR-84	R. Low	03-APR-84	CI20 CBUS INTFC
CHK'D	DATE	BOARD LOCATION:		
13 03/08/84	09-APR-84	1 OF 1		
SUBCOM: <BOLLEN.ECO>CBIC00.DRW	09-APR-84	NEXT HIGHER ASSEMBLY:	SIZE	CODE
FIRST USED ON OPTION/MODEL: CI20	09-APR-84	D-DD-M3003-0	D	CS
			NUMBER	REV.
			1	A

REV. A
NUMBER
M3003-0-CBIC
CS
D
B

A



CBUS-PLI
INTERFACE MODULE

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REVISIONS	
CHK	CHANGE NO. REV

digital	DATE 07-APR-84	ENG E. J. J.	DATE 07-APR-84	TITLE: BLOCK DIAGRAM CBUS MODULE
CHK'D	DATE 19-APR-84	SHEET 1	OF 1	SIZE CODE NUMBER REV. D BD M3003-0-BLK A
SUDCOM: (BOLLEN, ECO) CBUS.DRI 129-MAR-84 09:06 NEXT HIGHER ASSEMBLY: FIRST USED ON OPTION/MODEL: KLIPA D-DD-M3003-0				

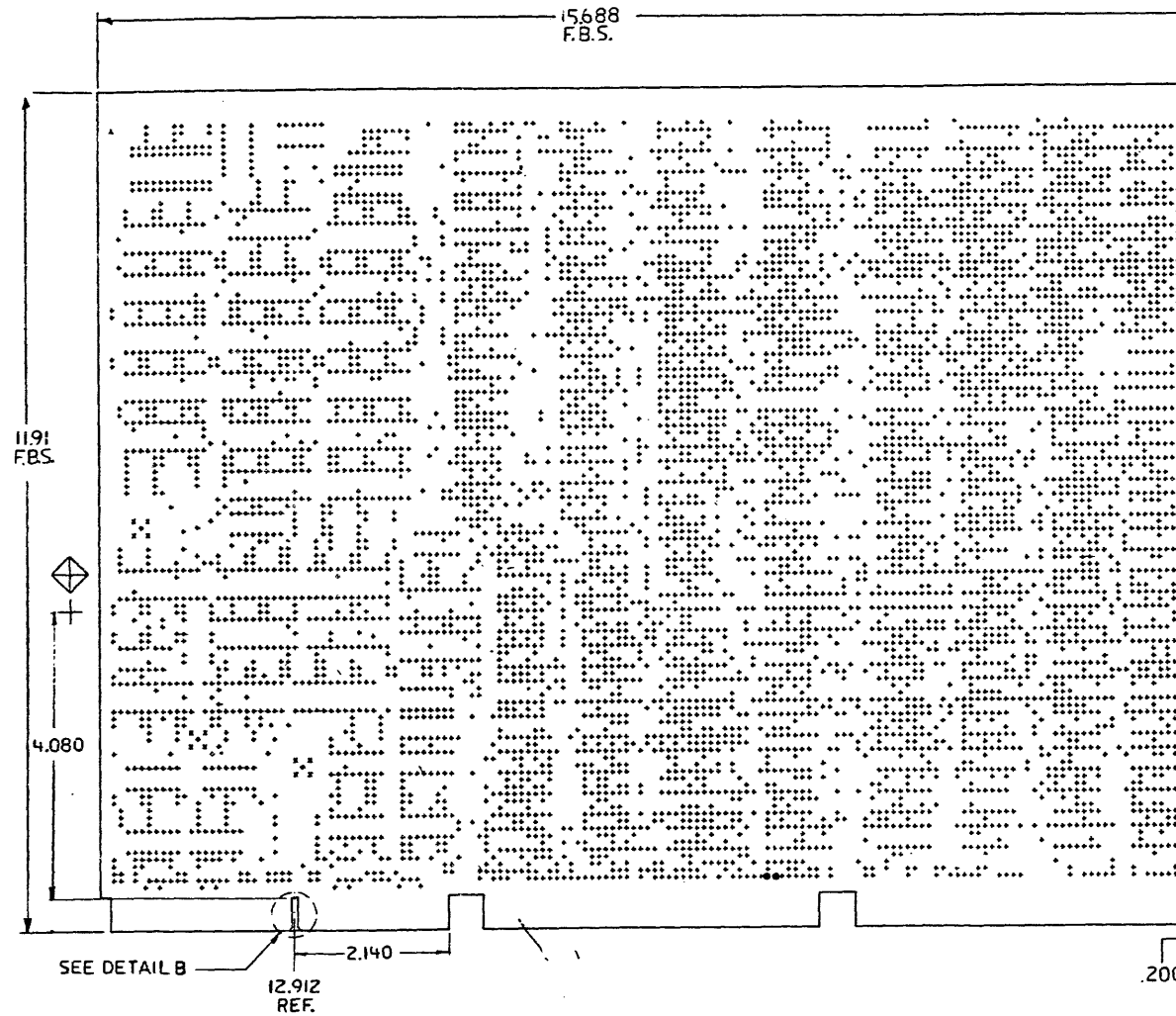
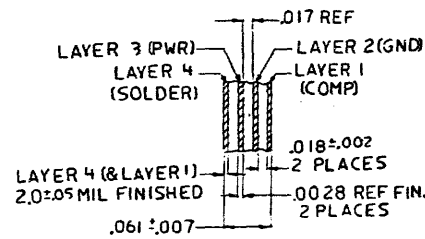
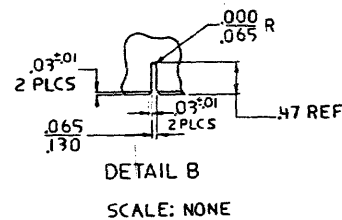
TITLE: BLOCK DIAGRAM CBUS MODULE	
SIZE CODE	NUMBER REV. D BD M3003-0-BLK A

[illegible]

[illegible]

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VIEWED FROM SIDE 1
COMPONENT SIDE



FOR HOLE TOLERANCES USE DEC STD 176									
SYMBOL	+	-	X	+	-	+	-	+	-
FIN HOLE SIZE	0.038	0.157	0.066	0.042					
PLATED									
NON PLATED									
QTY.	5881	2	12	3					
OFF GRID HOLE	2	0	0	0					
DRILL SIZE									

NOTE: ALL HOLE LOCATIONS ARE DESIGNED ON .025 GRID INCREMENTS FROM ORIGIN UNLESS SYMBOL IS CIRCLED.

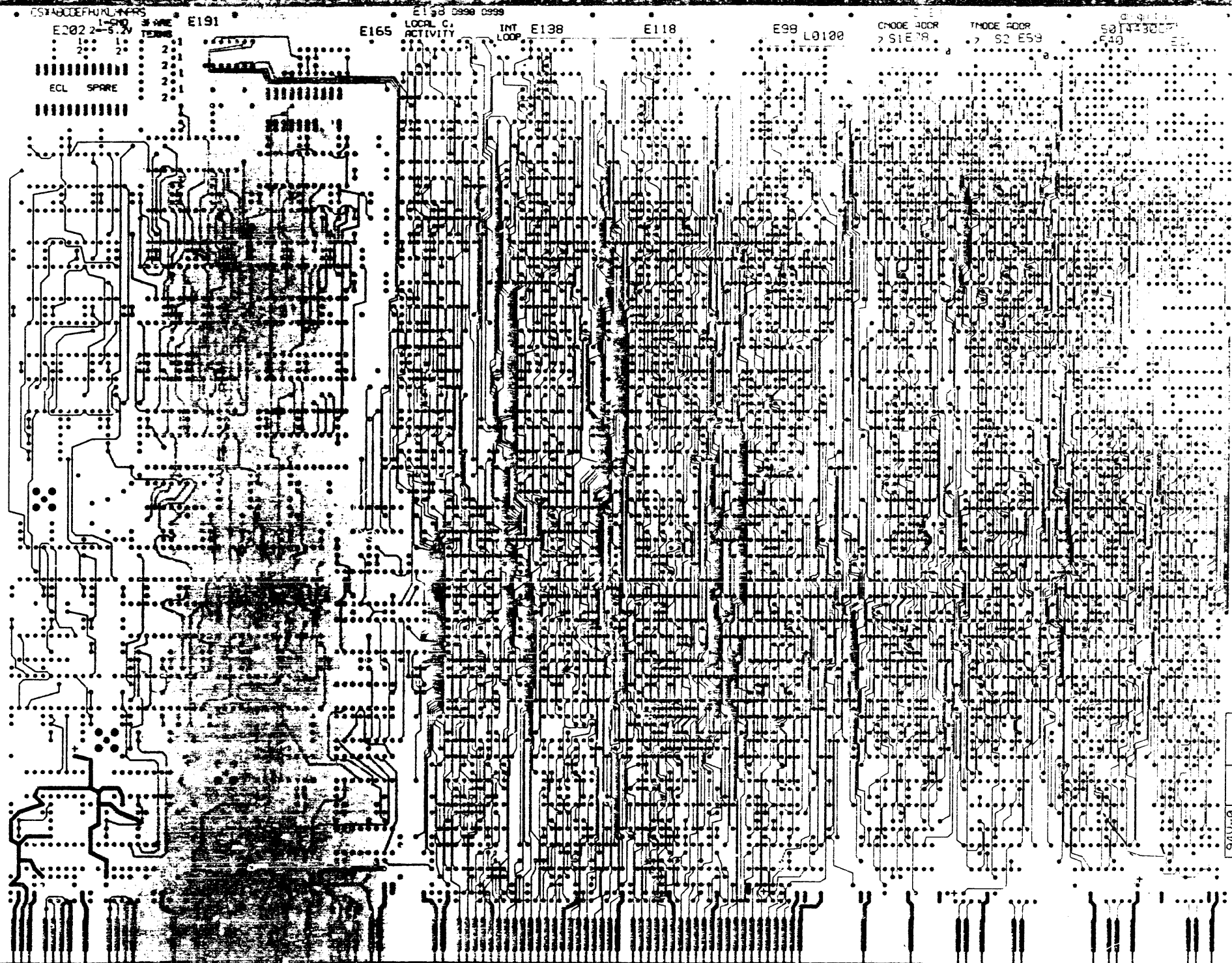
DESIGN INFORMATION									
CIRCUIT SIZE:	X 15.688	Y 11.910	INCHES						
CIRCUIT TYPE:	PTH (MLM)								
CIRCUIT	H015X150								
TECHNOLOGY:	SOI H012X130 H20M OTHER ()								
FINGER CONNECTOR DIA. PER D-MD-11-EN-501-1-1	() AS SHOWN								
LAYER CONSTRUCTION	PER () AS SHOWN								
ARTWORK LAYOUT:	MANUAL () OR ()								
ENG SPECIAL FEATURES:	SIDE 1 109								
SPECIAL NOTES:									
	THIS BOARD USES 8/8 & 15/15 TECH.								
	2 USE ONLY DRY FILM SOLDER MASK.								
	REF. LINE WIDTH: 15.22 (IN 15 MIL SEC. ONLY)								
	4 IMPED. MUST BE: 75-90 ()								

FABRICATION INFORMATION									
FABRICATE BOARD PER D-MD-11-ME-658-0-0	() AS SHOWN								
SOLDER MASK, SIDE 1M SIDE 2M NONE ()									
SPECIFICATIONS AND STANDARDS:									
MATERIALS AND WORKMANSHIP FOR ALL FABRICATED PRINTED WIRING									
BOARDS MUST MEET OR EXCEED THE REQUIREMENTS OF DEC STD 176									
SPECIAL NOTES:									

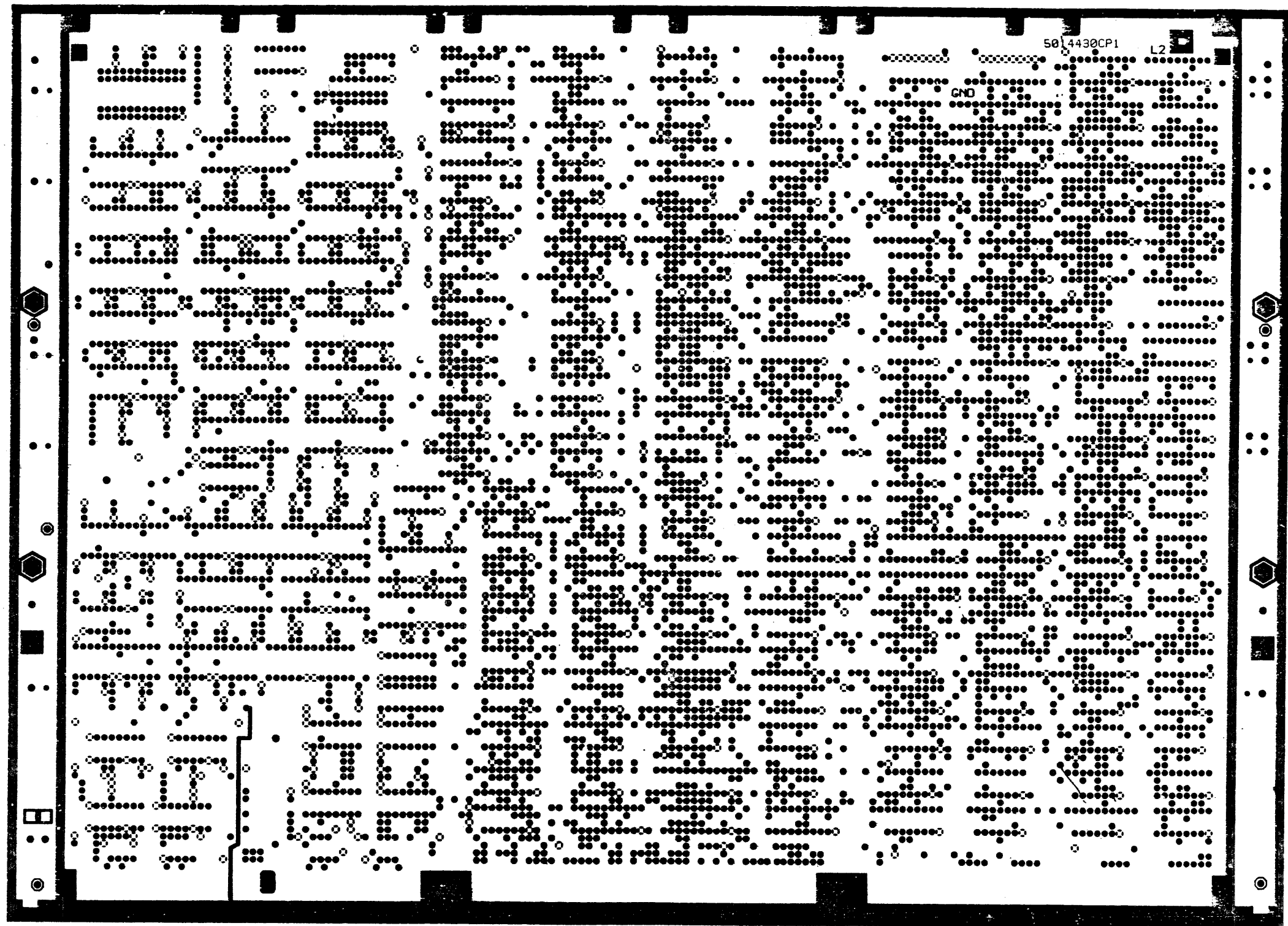
TOLERANCES									
INCHES UNLESS SPECIFIED									
XXX ± .005									
XX ± .010									
X ± .020									
SIGNATURES									
DATE									
DRN: R. J. L. L. L.									
CHK'D: E. T. GERRY									
MECH ENG: P. C. MUEBLING									
PROD ENG: P. C. MUEBLING									
MFG ENG: P. C. MUEBLING									
SCALE: 1:1									
SHEET 1 OF 5									
NEXT HIGHER ASSY: E-UA-L0100-0-0									

digital									
TITLE: CIRCUIT DRILL AND ETCH									
SIZE	CODE	NUMBER							
0	MD5014430-0-0	0							
ETCH REV: C PI									

1 WO#172708



LAYER 1



504430CP1

L2

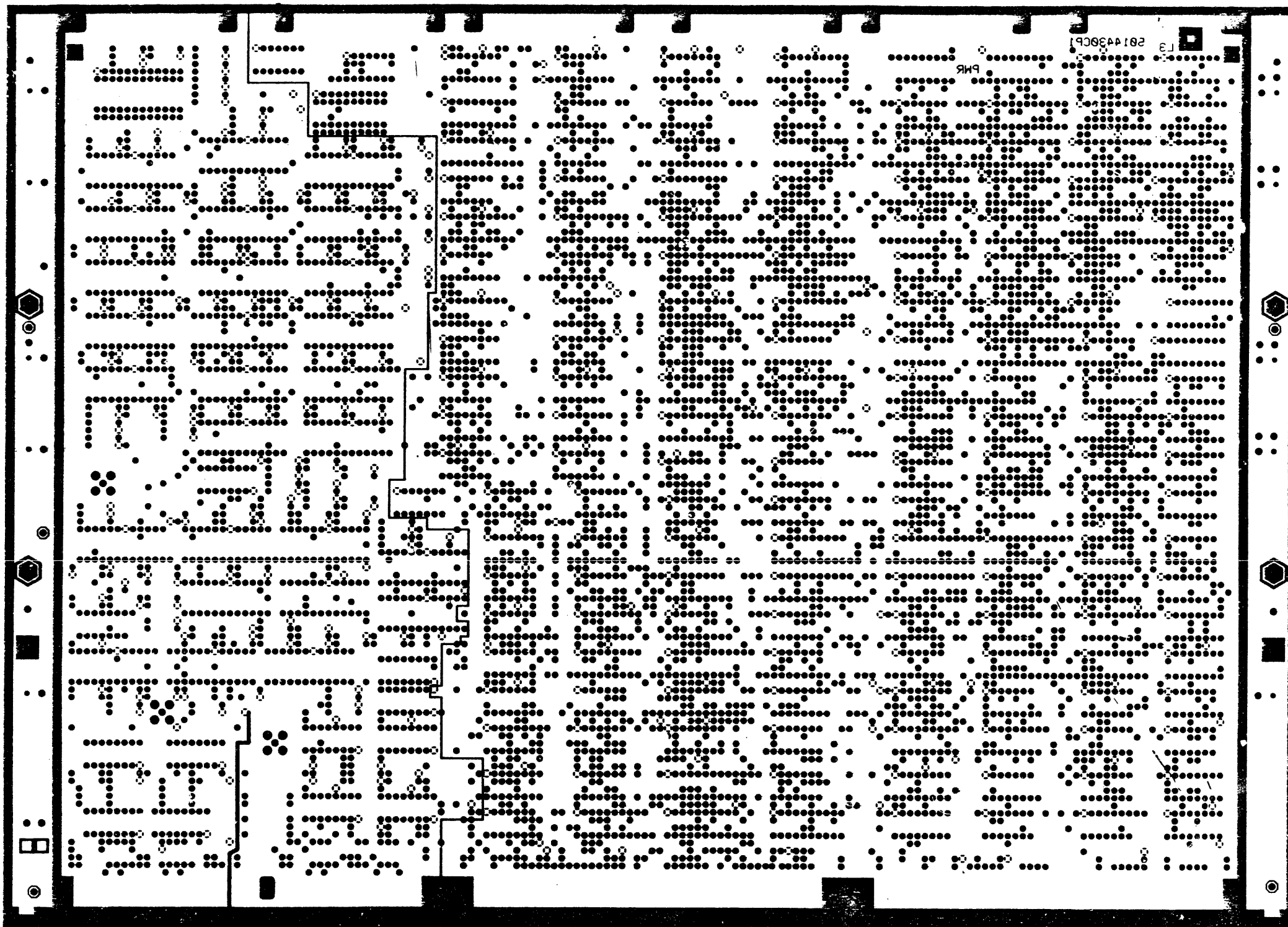
GND

DRILL & ETCH DRAWING

504430-00

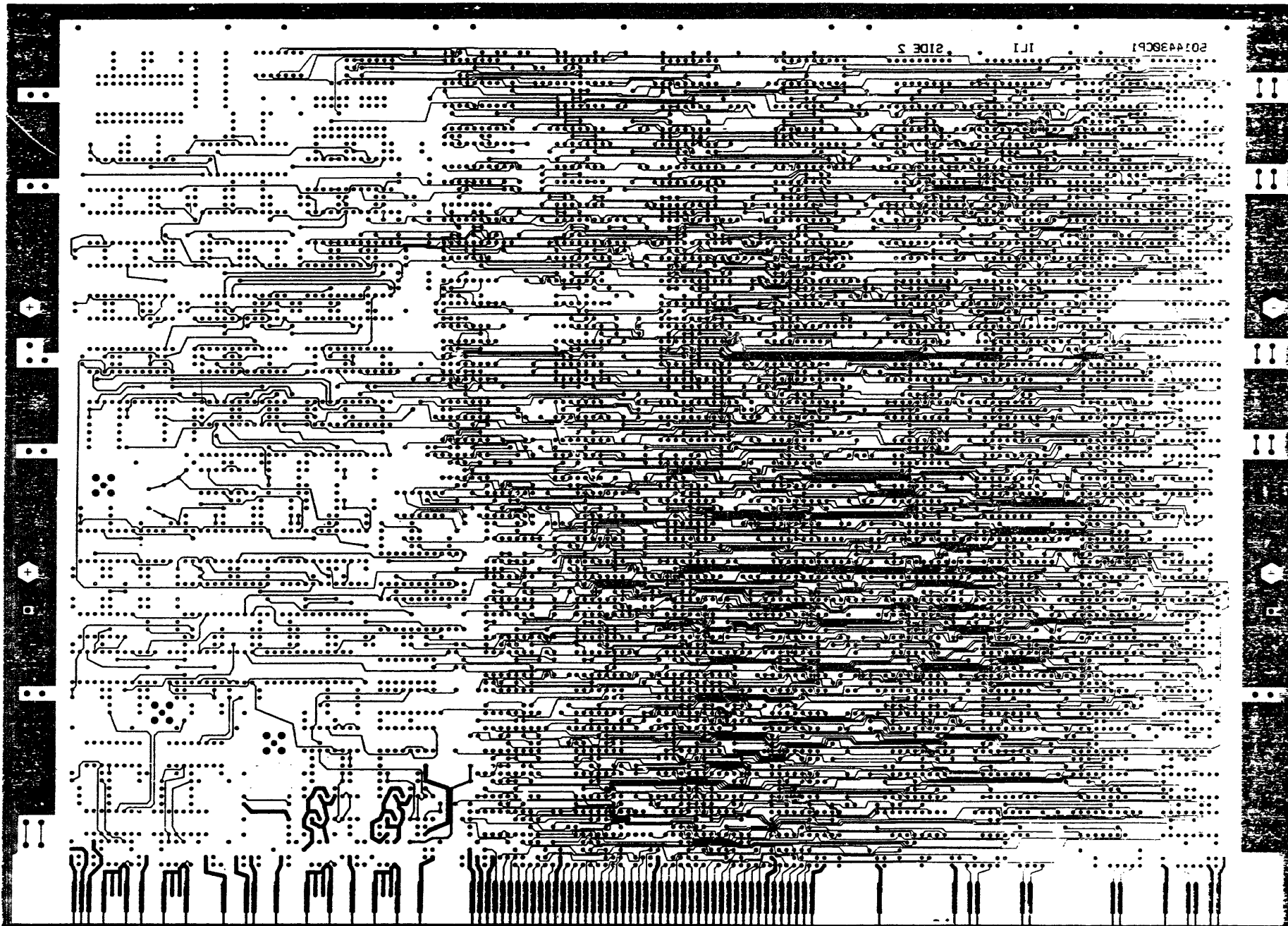
B

LAYER 3



2014430CP

PHR



7-0

1.00 ± .010
 2.00 ± .010
 0.50 ± .010
 0.50 ± .010
 Ø 1.00 ± .005
 S. MANSOR
 T.F. WALSH
 10-1-78
 10-1-78
 E C 5014430-0-0 C
 10-1-78

5C14430-0-C

A

2-2



3-9

REWORK INSTRUCTIONS

ETCH CUTS SIDE 2

2-1 CUT ETCH AT E137-2

2-2 CUT ETCH AT PTH BELOW E157-13

ECO#3

ETCH CUTS SIDE 1

3-1 EMI-12

3-2 E99-16

3-3 E122-2

3-4 E122-3

3-5 E102-5

ETCH CUTS SIDE 2

3-6 PTH BELOW E122-1

3-7 E108-1

3-8 PTH ABOVE E2-16

3-9 E122-2

3-10 PTH BELOW E65-2

3-11 PTH BELOW E65-19

REVISION HISTORY		
DATE	ECO NUMBER	REV

TITLE
ETCH CUT DRAWINGS

DOCUMENT NUMBER	
EC	5014430-0-0
SCALE	2" = 1" 1/2 OF 3

REWORK INSTRUCTIONS

WIRE ADDS SIDE I LO100-TW002

2-3 ADD WIRE FROM E35-4 TO E137-2

2-4 ADD WIRE FROM E107-8 TO E157-13

2-5 ADD WIRE FROM E184-6 TO E184-9

ECO*3

WIRE ADDS SIDE I

3-18 FROM PTH TO THE LEFT OF E40-16 TO PTH ABOVE E41-11

3-19 FROM E41-13 TO E41-14

3-20 FROM E106-10 TO E41-12

3-21 FROM E106-11 TO E108-1

3-22 FROM E41-8 TO E125-11

3-23 FROM E178-4 TO E178-8

3-24 FROM E178-8 TO E99-16

3-25 FROM E178-6 TO E83-9

3-26 FROM E178-9 TO E165-2

3-27 FROM E178-10 TO E178-11

3-28 FROM E178-10 TO E126-8

3-29 FROM E83-8 TO E149-5

3-30 FROM E122-2 TO E122-3

3-31 FROM E122-3 TO E102-2

3-32 FROM E122-1 TO E102-5

3-33 FROM E120-2 TO E103-12

3-34 PTH ABOVE E2-16 TO E65-1

3-35 FROM E65-2 TO E65-3

3-36 FROM E52-6 TO E65-2

COMPONENT DELETE SIDE I

3-37 E48 (23-058K3-00)

COMPONENT ADD SIDE I

3-38 E48 (23-091K3-00)

INTERPROCESSOR
LINK INTERFACE

DOCUMENT NUMBER
EUA LO100-0-0
SCALE 2/1 SHEET 2 OF 2

LINE	ITEM	TOP DOCUMENT	PART NUMBER	MIN REV	DESCRIPTION	QTY	PER VARIATION	REFERENCE DESIGNATOR
					VARIATION REVISION LEVEL:	00		
1	1		5014430-00		L0100 ETCH BOARD	1		
2	78		1001610-00		.01 MFD 50V +80-20% Z5U CER	45		C300-C308,C313,C400-C434
3	2		1001739-00		27.0 MMF 100V 5%200PPM MICA	1		C312
4	3		1011740-01		3300.0 MMF 50V 10% CER	3		C309-C311
5	91		1012784-00		.047 MFD 50V +80-20% CER	42		C500-C538,C550,C551,C539
6	90		1017472-00		10 MFD 35V +75-10% AL EL	8		C700-C707
7	4		1109517-00		PIV= 75 IO=150 MA - 4NS 1N914B	4		D1-D4
8	98		1117373-00		LED ASSY GREEN	1		D998
9	99		1117373-01		LED ASSY RED	1		D999
10	5		1217310-05		SW,DIP 8POS/1PST 5VDC100MA S	2		S1,S2
11	6		1216988-02		HANDLE,MODULE,HEX TWO EJECTORS	1		
12	7		1300005-01		R NETWORK 13-1K 5.0 % 14PIN	1		E78
13	8		1300005-07		R NETWORK 15-4.7K 5.0 % 16PIN	2		E19,E56
14	9		1300250-00		150.0 .25 W 5.0 % CF	7		R17,R18,R28,R55,R56,R107,R108
15	10		1300295-00		330.0 .25 W 5.0 % CF	2		R44,R45
16	11		1300365-00		1.0 K .25 W 5.0 % CF	40		R1-R5,R7-R11,R14-R16,R19-R26, R29,R30,R32-R36,R42,R43,R46,R51, R54,R593,R27,R31,R37,R38-R40
17	18		1300447-00		4.70 K .25 W 5.0 % CF	2		R12,R13
18	12		1301425-00		300.0 .25 W 5.0 % CF	4		R79,R80,R159,R190
19	13		1301781-00		82.0 .50 W 5.0 % CF	4		R47,R48,R135,R136
20	14		1302602-00		55.0 .25 W 5.0 % CF	1		R6
21	15		1302956-00		196.0 .25 W 1.0 % RN55D-F10	103		R50,R53,R58,R60,R61,R63,R66,R67, R69,R72,R74,R75,R77,R81,R83,R86, R88,R90,R92,R93,R96,R97,R100, R102,R104,R106,R109,R111,R113, R115,R118,R120,R121,R124,R126, R128,R129,R132,R133,R137,R139, R142,R146,R148,R150,R152,R154, R155,R158,R164,R166,R169,R170.

REVISION HISTORY			BASIC PART NO: L0100		DRN: J.CASEY		DATE: 24-JUN-81		D I G I T A L	
ENG	ECO NUMBER	REV	SECTION A OF A		CHK'D: E.T.GERRY		DATE: 24-JUN-81		TITLE PARTS LIST	
---	INITIAL	A	SECTION VARIATION INDEX		DES.ENG: J.BUZYNSKI		DATE: 28-SEP-81		DOCUMENT NUMBER	
JB	L0100-TW001	B	[A] 00		RESP.ENG.: J.BUZYNSKI		DATE: 28-SEP-81		SIZE CODE NUMBER REV	
FD	L0100-TW003	C	[B]		MFG.ENG.: M.WARSHAW		DATE: 28-SEP-81		K PL L0100-0-DBP C	
			[C]		ASSEMBLY NUMBER:		TOP DOCUMENT NUMBER:		FILE NAME:	
			[D]		E-UA-L0100-0-0				Z1292C.PLS	
			[E]						EDIT #	
			[F]						23	
			[G]							
			[H]							
			[I]							
			[J]							
			[K]							
			[L]							
			[M]							
			[N]							

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LINE	ITEM	TOP DOCUMENT	PART NUMBER	MIN REV	DESCRIPTION	QTY PER VARIATION	REFERENCE DESIGNATOR
					VARIATION REVISION LEVEL:	00	
22	16		1302957-00	121.0	.25 W 1.0 % RN55D-F10	99	CONT R173-R175,R178,R180,R181, CONT R184-R186,R188,R191,R194,R195, CONT R197,R201,R203,R205,R206,R208, CONT R210,R212,R215,R217,R218,R220, CONT R224,R226,R228,R231,R232,R234, CONT R241,R242,R245,R247,R249,R252, CONT R254,R256,R258,R261,R262,R264, CONT R266,R268-R271,R273,R143 R49,R52,R57,R59,R62,R64,R65,R68, CONT R70,R71,R73,R76,R78,R82,R84,R85, CONT R87,R89,R91,R94,R95,R98,R99, CONT R101,R103,R105,R110,R112,R114, CONT R116,R117,R119,R122,R123,R125, CONT R127,R130,R131,R134,R138,R140, CONT R141,R144,R145,R147,R149,R151, CONT R153,R156,R157,R165,R167,R168, CONT R172,R176,R177,R179,R182,R183, CONT R187,R189,R192,R193,R196, CONT R198-R200,R202,R204,R207,R209, CONT R211,R213,R214,R216,R219,R221, CONT R225,R227,R229,R230,R233,R235, CONT R240,R243,R244,R246,R248,R253, CONT R255,R257,R259,R260,R265,R267, CONT R272,R274,R171,R263 R163,R239 R223 R160,R161,R237,R238 R162,R236 L1 T1,T2 E195 T3,T4 Y1 E33,E52,E89,E107,E128,E139,E145, CONT E149,E151 E61,E69,E126,E129 E34,E35,E87,E148 E104 E108,E127 E125,E131,E152 E3,E4,E121,E133,E153,E10,E80, CONT E81,E136,E138,E191 E26,E29,E63,E101,E118 E6 E115,E116 E160,E162 E167,E184 E161
23	17		1303111-00	205.0	.25 W 1.0 % RN55D-F10	2	
24	19		1312930-00	5.10 K	.25 W 5.0 % CF	1	
25	20		1313008-00	5.11	.25 W 1.0 % RN55D-F10	4	
26	21		1313155-00	604.0	.25 W 1.0 % RN55D-F10	2	
27	22		1603377-00	.22UH 10% 2.7A	#WEE.22	1	
28	23		1617970-00	PULSE XFMR 250MW	6PIN DIP	2	
29	24		1617985-00	DELAY=	10.2NS 14PIN DIP	1	
30	103		1618515-00	PULSE XFMR RATIO 2:1	250 MW	2	
31	25		1812051-18	XTAL	70.000 MHZ	1	
32	26		1910532-00	74S00	NAND GATE-QUAD 2IN	9	
33	27		1910534-00	74S04	INVERTER GATE-HEX 1I	4	
34	28		1910536-00	74S10	NAND GATE-TRIPLE 3IN	4	
35	29		1910537-00	74S11	AND GATE-TRIPLE 3INP	1	
36	30		1910539-00	74S20	NAND GATE-DUAL 4INPU	2	
37	31		1910544-00	74S74	FF-D DUAL,EDGE TRIGG	3	
38	32		1910544-01	74S74-60GG-D	DUAL,EDGE TRIG	11	
39	33		1910545-00	74S112	FF-JK DUAL,EDGE TRIG	5	
40	34		1910547-00	74S153	MUX 1 OF 4 (DUAL)	1	
41	35		1910548-00	74S157	MUX 1 OF 2 (QUAD)	2	
42	36		1911404-00	10107	XOR/NOR GATE,3-2IN	2	
43	37		1911409-00	10115	QUAD DIF.LINE RCVR	2	
44	38		1911414-00	10124	TTL TO ECL TRNSLTR	1	

D	I	G	I	T	A	L	TITLE	SECTION A	OF A	SIZE	CODE	DOCUMENT NUMBER	REV
							INTERPROCESSOR LINK INTERFACE			K	PL	L0100-0-DBP	C

LINE	ITEM	TOP DOCUMENT	PART NUMBER	MIN REV	DESCRIPTION	QTY	PER VARIATION	REFERENCE DESIGNATOR
						00		
					VARIATION REVISION LEVEL:			
45	39		1911573-00		74S280 PARITY GEN/CHKR,9BIT	2		E150,E155
46	40		1911675-00		74S138 DECODER/DEMUX 3-8 LI	1		E60
47	41		1911712-00		74S51 AND-OR GATE-INVERT D	5		E8,E64,E130,E135,E146
48	42		1912089-00		74S85 CMPRTR-4BIT MAGNITUD	1		E70
49	43		1912096-00	DEC	74S86 XOR GATE,QUAD 2IN	6		E72-E75,E95,E97
50	44		1912388-00		74S02 NOR GATE-QUAD 2IN,PO	5		E24,E27,E65,E105,E120
51	97		1912389-00		74S08 AND GATE-QUAD 2IN,PO	2		E41,E49
52	45		1912746-01		74S37-1 BUFFER-GATE	3		E117,E132,E147
53	46		1912799-00		LS00 NAND-GATE-QUAD 2IN,P	4		E9,E46,E68,E84
54	47		1912801-00		LS02 NOR-GATE-QUAD 2IN	5		E21,E23,E28,E122,E137
55	48		1912803-00		LS04 INVERTER GATE,HEX	5		E50,E83,E88,E106,E165
56	49		1912805-00		LS08 AND GATE-QUAD 2IN,PO	2		E22,E51
57	50		1912810-00		LS20 NAND GATE-DUAL 4IN	2		E42,E142
58	51		1912820-00		LS51 A-O-I GATE 2-WIDE 2I	2		E143,E144
59	52		1912824-00		LS74 FF-D DUAL,EDGE TRIGG	1		E44
60	53		1912833-00		LS109 FF-JK DUAL,POS EDGE	11		E2,E5,E11,E62,E82,E102,E123, E124,E140,E141,E158
61	54		1912851-00		LS169 COUNTER,SYNCH. UP/DO	3	CONT	E25,E71,E91
62	55		1913462-00		74S240 OCTAL BUFFER,INVERTI	3		E100,E112,E114
63	56		1913670-00		74S373 LATCH,8BIT TRANS TRI	1		E119
64	57		1913671-00		74S374 FF-D,OCTAL,TRI STATE	11		E16,E38,E54,E55,E93,E96,E109, E111,E113,E134,E156
65	100		1913671-50		74S374 FF-D,OCTAL,TRI STATE	3	CONT	E103,E154,E157
66	58		1913777-00		LS240 DRIVER,LINE,OCTAL,T	4		E15,E36,E37,E53
67	59		1913888-00	DC	102A EQUALS CHECKER 8BIT	7		E17,E39,E59,E90,E92,E98,E110
68	60		1914082-00		74S163 COUNTER,SYNCH UP/DOW	4		E1,E12,E14,E43
69	61		1914084-00		74S299 SHIFT REG.,8BIT RIGH	1		E13
70	62		1914085-00		74S260 NOR GATE-DUAL,POS	1		E178
71	63		1914086-00		74S30 NAND GATE-POS 8IN	1		E47
72	64		1917036-00		VOLTAGE COMPARATOR	4		E179,E180,E192,E193
73	65		1917275-00		100141 SHIFT REG.8-BIT	5		E185,E186,E188,E190,E199
74	66		1917277-00		100131 FF-D TRIPLE	5		E170,E173,E182,E183,E197
75	67		1917280-00		100125 TRANSLATOR,ECL TO TT	3		E164,E175,E176
76	68		1917281-00		100124 TRANSLATOR,TTL TO EC	3		E163,E171,E172
77	69		1917288-00		100107 OR/NOR,EXCLUSIVE,QUI	4		E169,E189,E194,E201
78	70		1917289-00		100102 OR/NOR GATE,QUINT,2	4		E168,E174,E198,E200
79	71		1917290-00		100101 OR/NOR GATE,TRIPLE,	2		E181,E187
80	72		1917442-00		100113 DRIVER,QUAD	1		E196
81	73		1917839-00		10192 LINE DRIVER,QUAD DIF	2		E159,E166
82	88		23009K5-00	K5-01		1		E86
83	85		23010K5-00	K5-01		1		E67
84	84		23011K5-00	K5-01		1		E66
85	87		23021K4-00	K4-01		1		E85
86	82		23022K4-00	K4-01		1		E45
87	89		23023K4-00	K4-01		1		E99
88	80		23042K3-00	K3-01	PAL,REG	1	CONT	E31
89	81		23043K3-00	K3-01	PAL,REG	1	CONT	E32
90	79		23063K3-00	K3-01	PAL,REG,	1	CONT	E30

D I G I T A L

TITLE

INTERPROCESSOR
LINK INTERFACE

SECTION A OF A

SIZE CODE DOCUMENT NUMBER

REV

K PL L0100-0-DBP

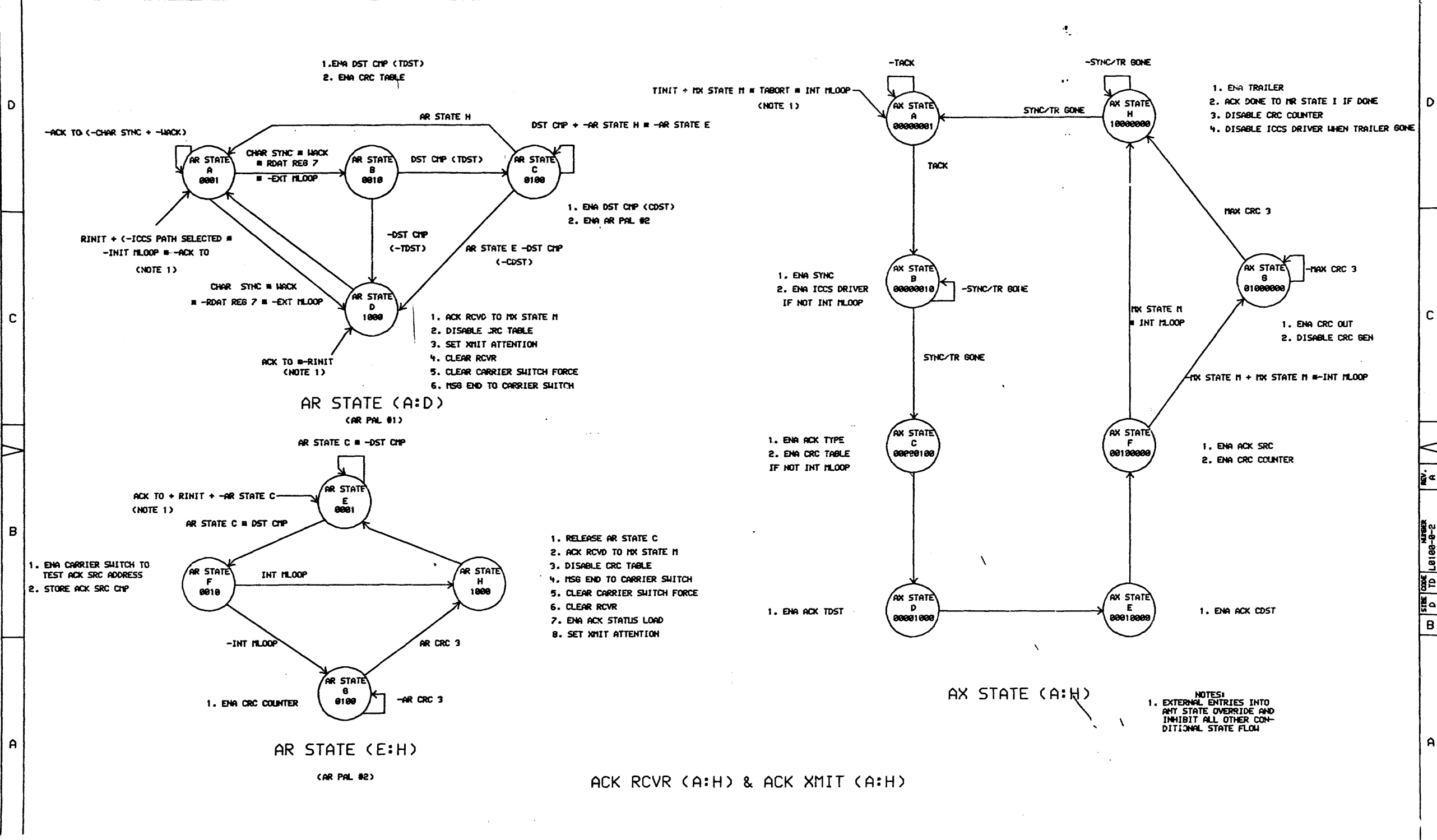
C

LINE	ITEM	TOP DOCUMENT	PART NUMBER	MIN REV	DESCRIPTION	VARIATION	REVISION LEVEL:	QTY 00	PER VARIATION	REFERENCE DESIGNATOR
91	86		23055K3-00		K3-01		PAL,REG CONT	1		E79
92	83		23091K3-00		K3-01		PAL,REG	1		E48
93	77		23071B1-00		B1-01			1		E76
94	74		23309A1-00		A1-07			1		E94
95	75		23601A2-00		A2-05			1		E20
96	92		23817F1-00		F1-01			1		E58
97	93		23818F1-00		F1-01			1		E40
98	94		23819F1-00		F1-01			1		E77
99	95		23820F1-00		F1-01			1		E57
100	76		23964A9-00		A9-01			1		E18
101	96		9000024-01		EYELET,ROLLED		0.1210DX0.192	12		
102	101		9105740-55		WIRE(WRAP)		30AWG KYNAR UL14	A/R		
103	102		9107688-00		WIRE(WRAP)		24AWG KYNAR UL13	A/R		
104	104		1912815-00		LS30		NAND GATE-SINGLE 8IN	1		E7

D	I	G	I	T	A	L	TITLE	SECTION A OF A	SIZE	CODE	DOCUMENT NUMBER	REV
									K	PL	L0100-0-DBP	C

D
C
B
A

D
C
B
A



8

7

6

5

4

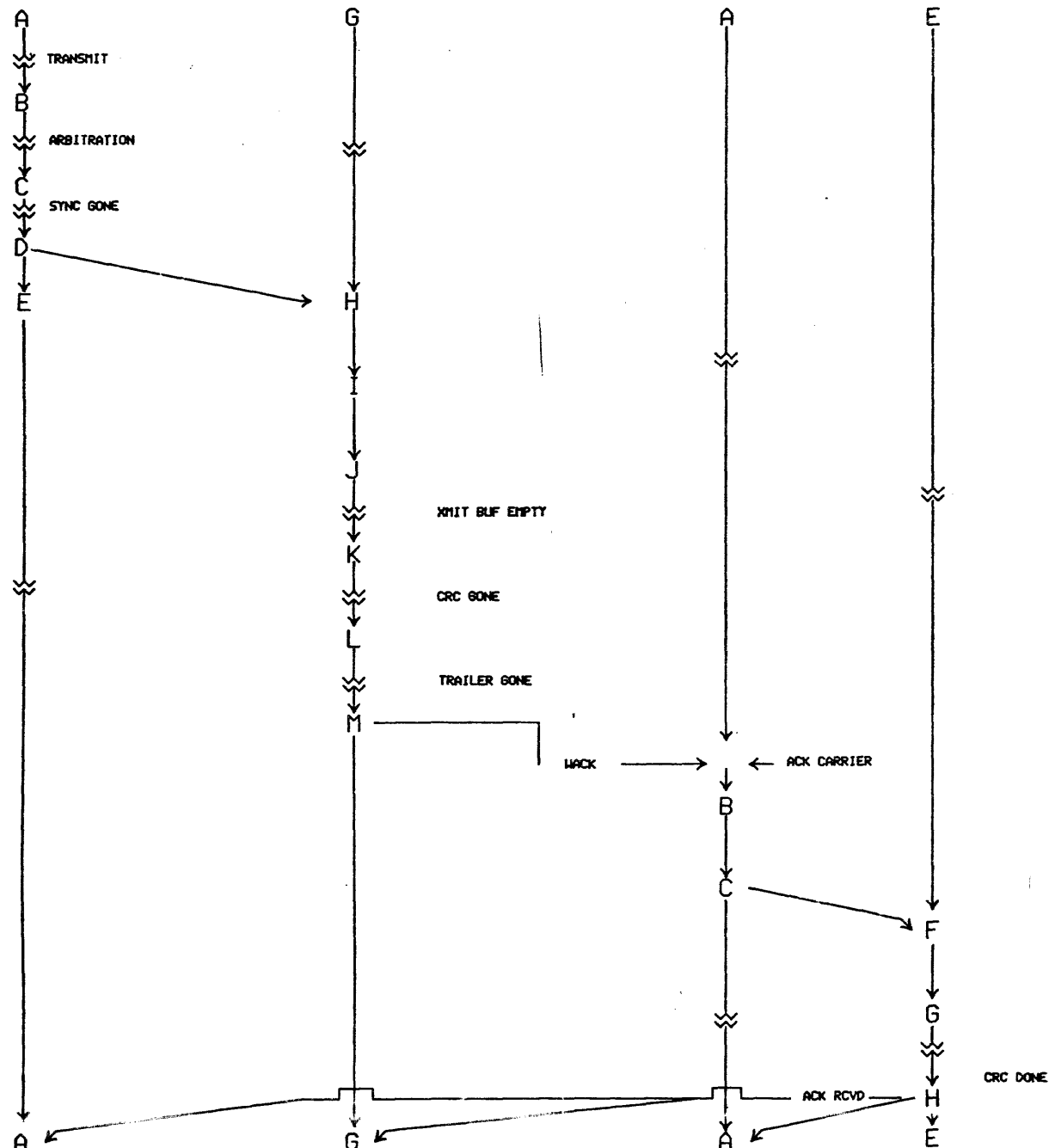
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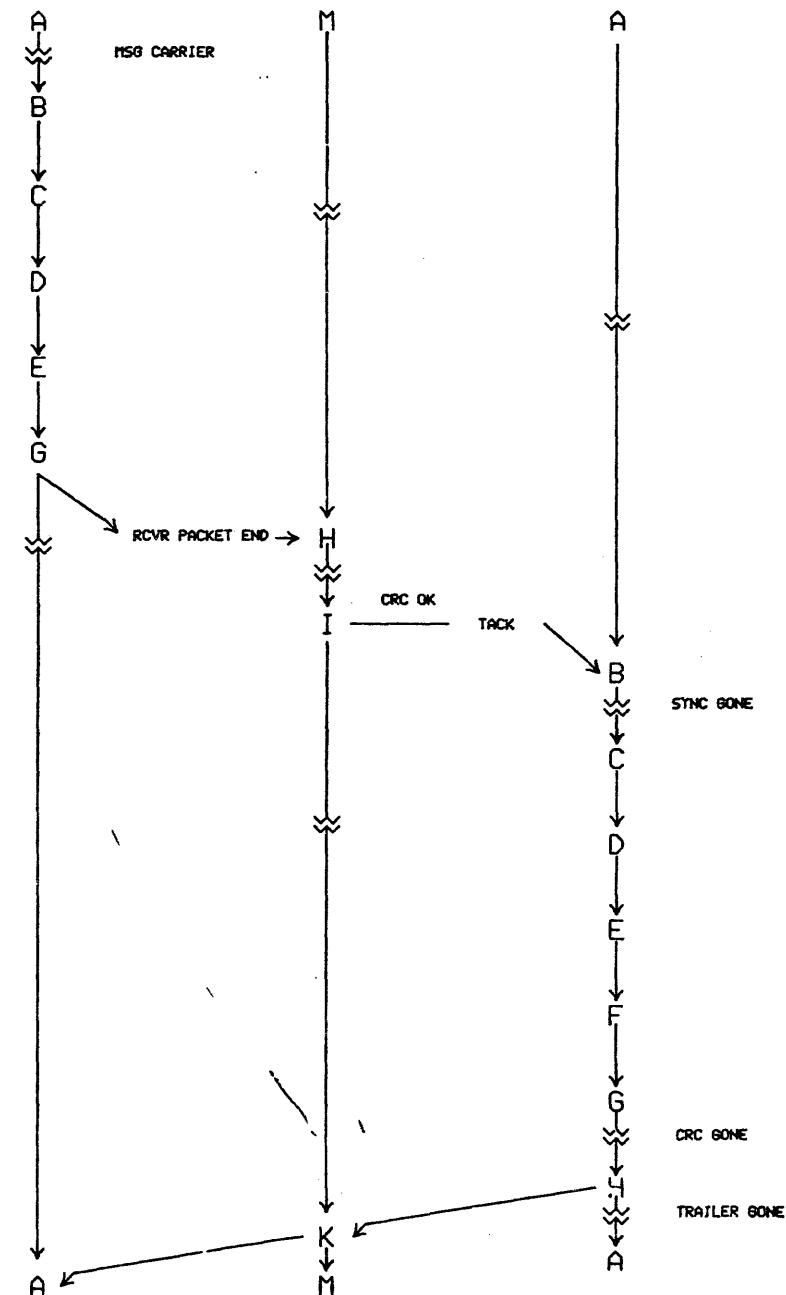
1

2-0-00:07
2000 3015

NORMAL MESSAGE TRANSMISSION STATE FLOW

MX PAL #1
(IL1B)
STATEMX PAL #2
(IL1B)
STATEAR PAL #1
(IL1B)
STATEAR PAL #2
(IL1B)
STATE

NORMAL MESSAGE RECEPTION STATE FLOW

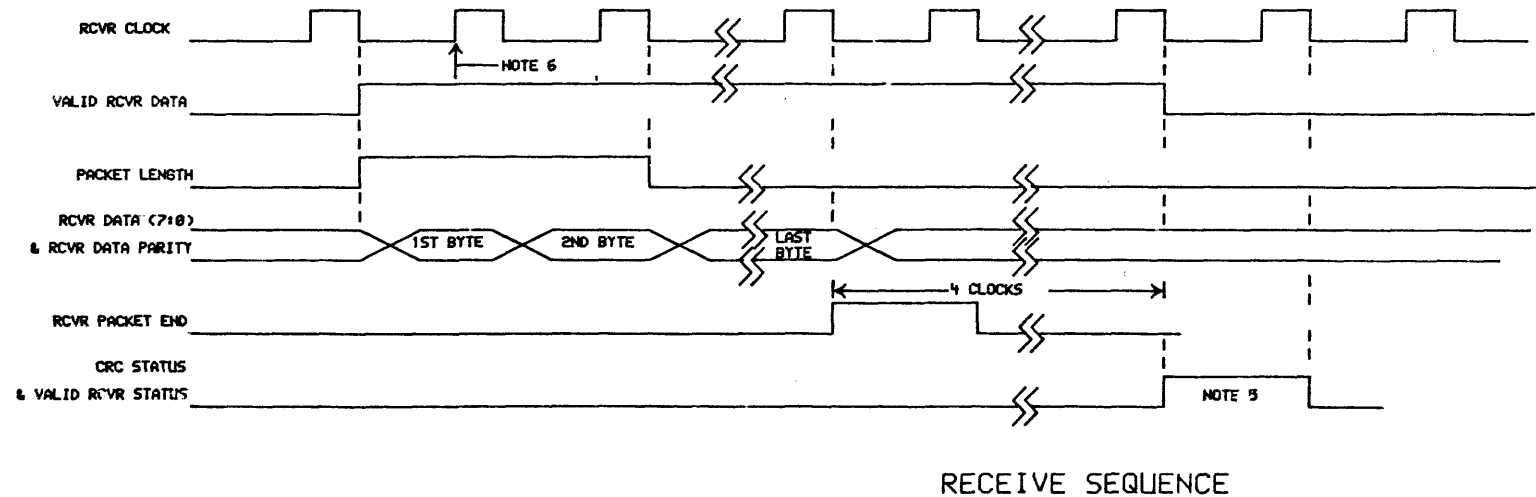
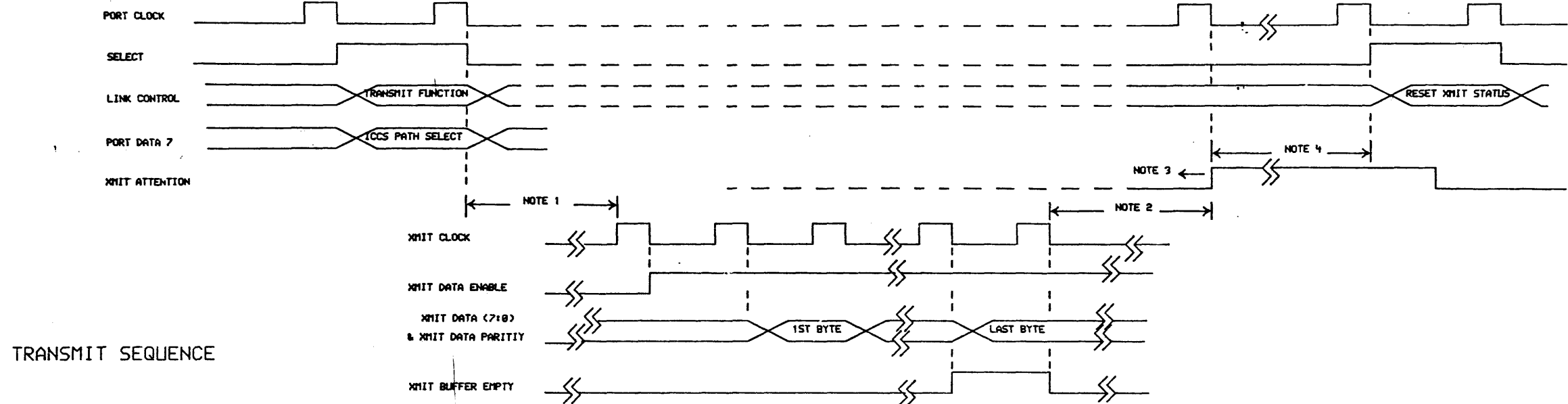
MR PAL #1
(IL1A)
STATEMR PAL #2
(IL1A)
STATEAX PAL
(IL1A)
STATE

XMIT/RCVR MSG STATE FLOWS

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REVISIONS	
CHK	CHANGE NO. REV

digital	DRN.	DATE	ENG.	DATE	TITLE
	CHK'D	20-SEP-81	NI:KA		INTERPROCESSOR LINK INTERFACE
FIRST USED ON OPTION/MODEL: C1780		DATE	BOARD LOCATION	SHEET	NUMBER
		10-SEP-81	D-UA-L0100-0-1	5 OF 8	L0100-0-2
REV. A					



- NOTES:

1. ARBITRATION OCCURS DURING THIS TIME.
2. LINK WAITS FOR A RESPONSE FROM THE DESTINATION NODE AND SETS UP XMIT STATUS DURING THIS TIME.
3. XMIT ATTENTION MAY OCCUR EARLIER AS A RESULT OF A XMIT DATA PARITY ERROR OR ABORT TRANSMISSION FCN.
4. THE PORT READS XMIT STATUS DURING THIS TIME.
5. CRC STATUS & RCVR PATH INDICATOR ARE VALID DURING THIS TIME.
6. RCVR BUFFERS FULL SIGNAL IS STROBED AT THIS TIME.

LINK/PORT PROCESSOR/TIMING

8

7

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2

1

H

A38

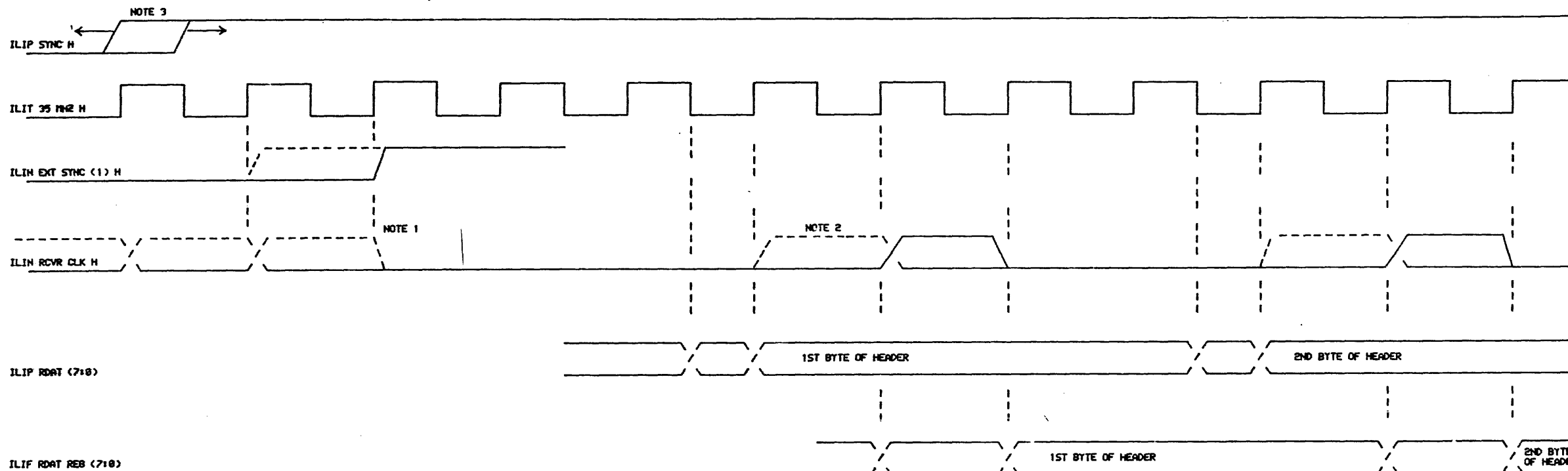
2-0-00107

01

D

3215

1



NOTES:

1. THE RCVR CLK CIRCUIT IS SYNCHRONIZED TO THE INCOMING MESSAGE OR ACK AT THIS POINT.
2. DASHED SIGNALS MAY BE TRUE, INSTEAD OF SOLID SIGNALS, DEPENDING ON WHEN THE RCVR CLK GETS SYNCHRONIZED.
3. SYNC H IS ASSERTED WHEN CHARACTER SYNC IS DETECTED IN THE INCOMING MESSAGE OR ACK.

INTERNAL RCVR CLOCK SYNCHRONIZATION TIMING DIAGRAM

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REVISIONS
CHK CHANGE NO. REV

digital

DRN.

DATE

ENG.

DATE

BOARD LOCATION

SHEET

OF

SIZE CODE

NUMBER

REV.

INTERPROCESSOR

LINK INTERFACE

1367.5000 CHART 7.DRW 130-SEP-81 10:57 NEXT HIGHER ASSEMBLY: D-LA-L0100-0-1

FIRST USED ON OPTION/MODEL: C1780

DATE

BOARD LOCATION

SHEET

OF

SIZE CODE

NUMBER

REV.

INTERPROCESSOR

LINK INTERFACE

8

7

6

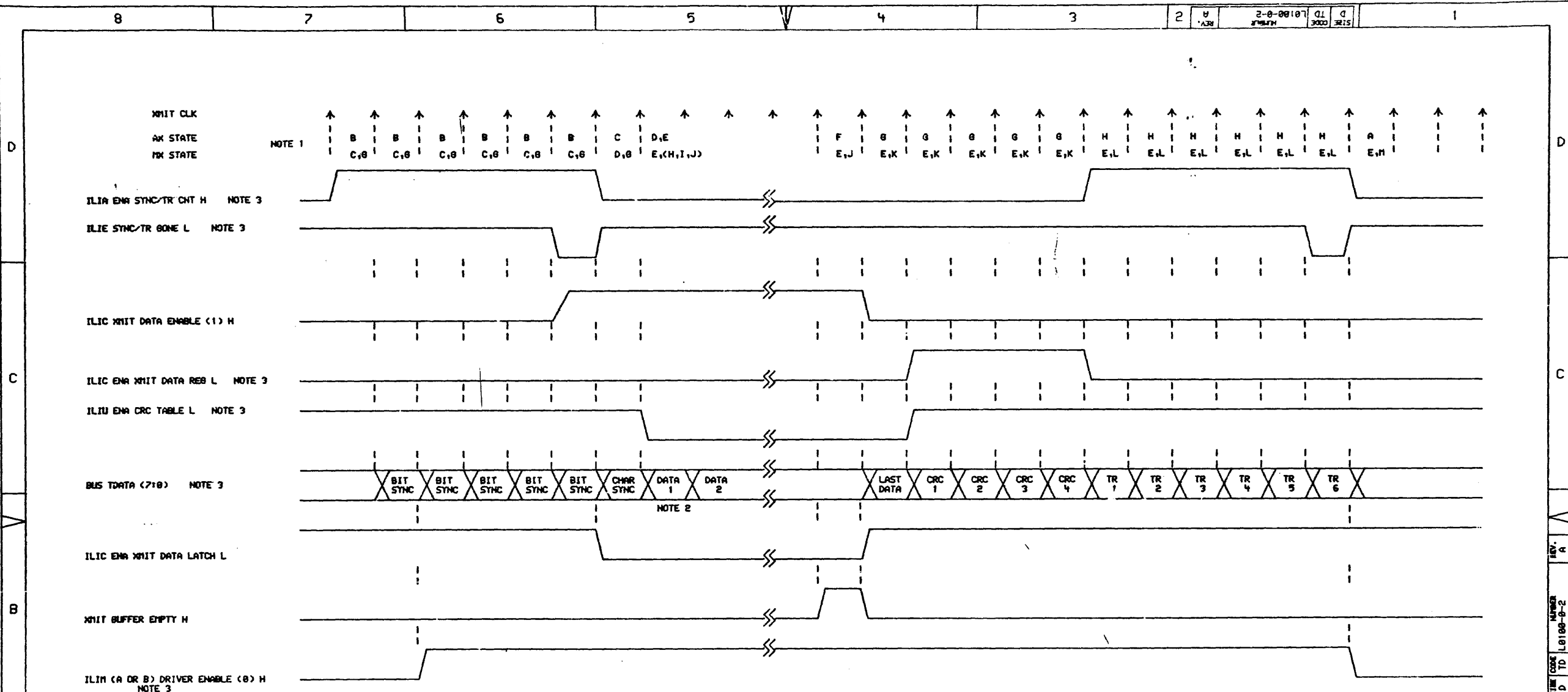
5

4

3

2

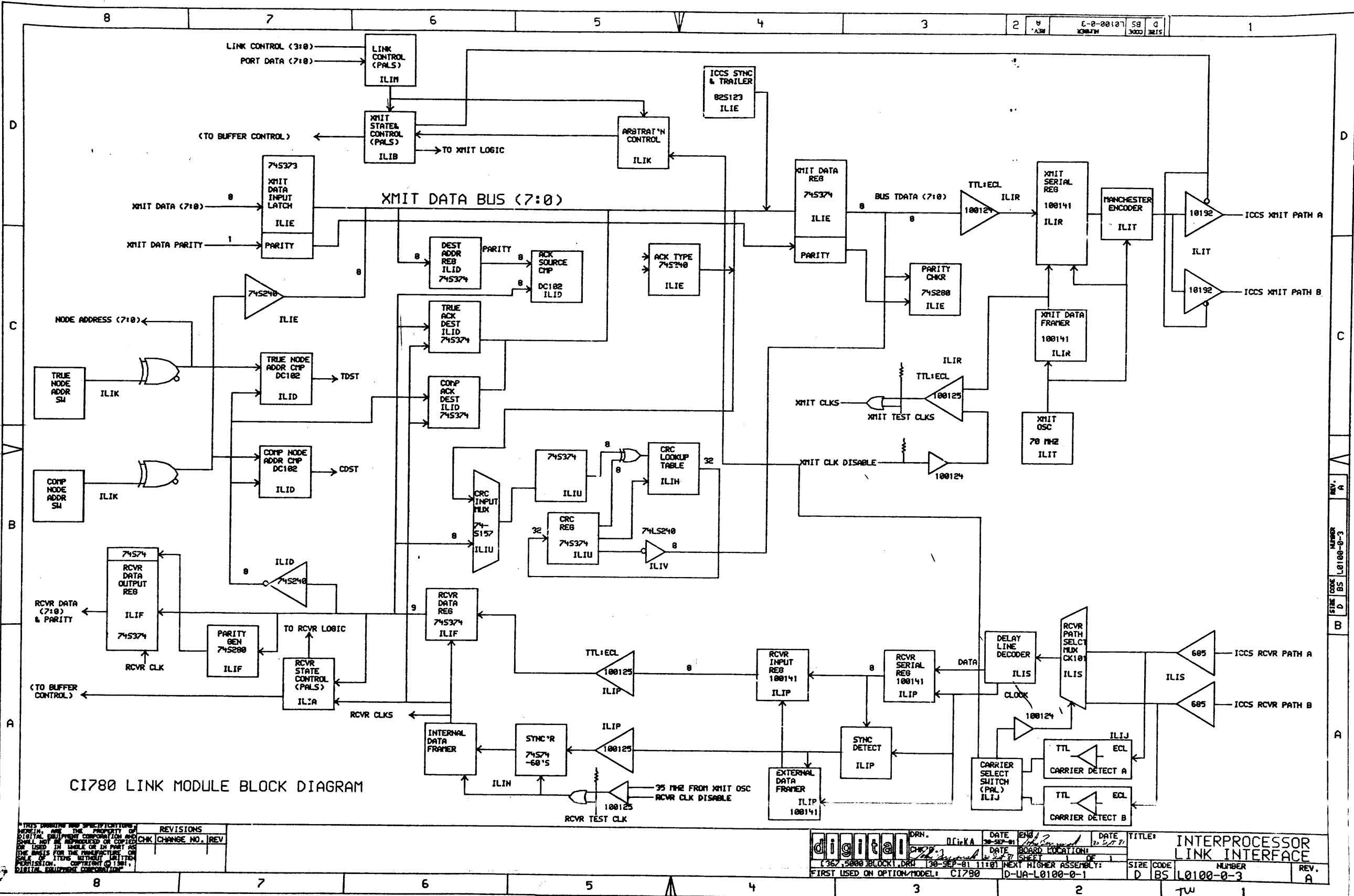
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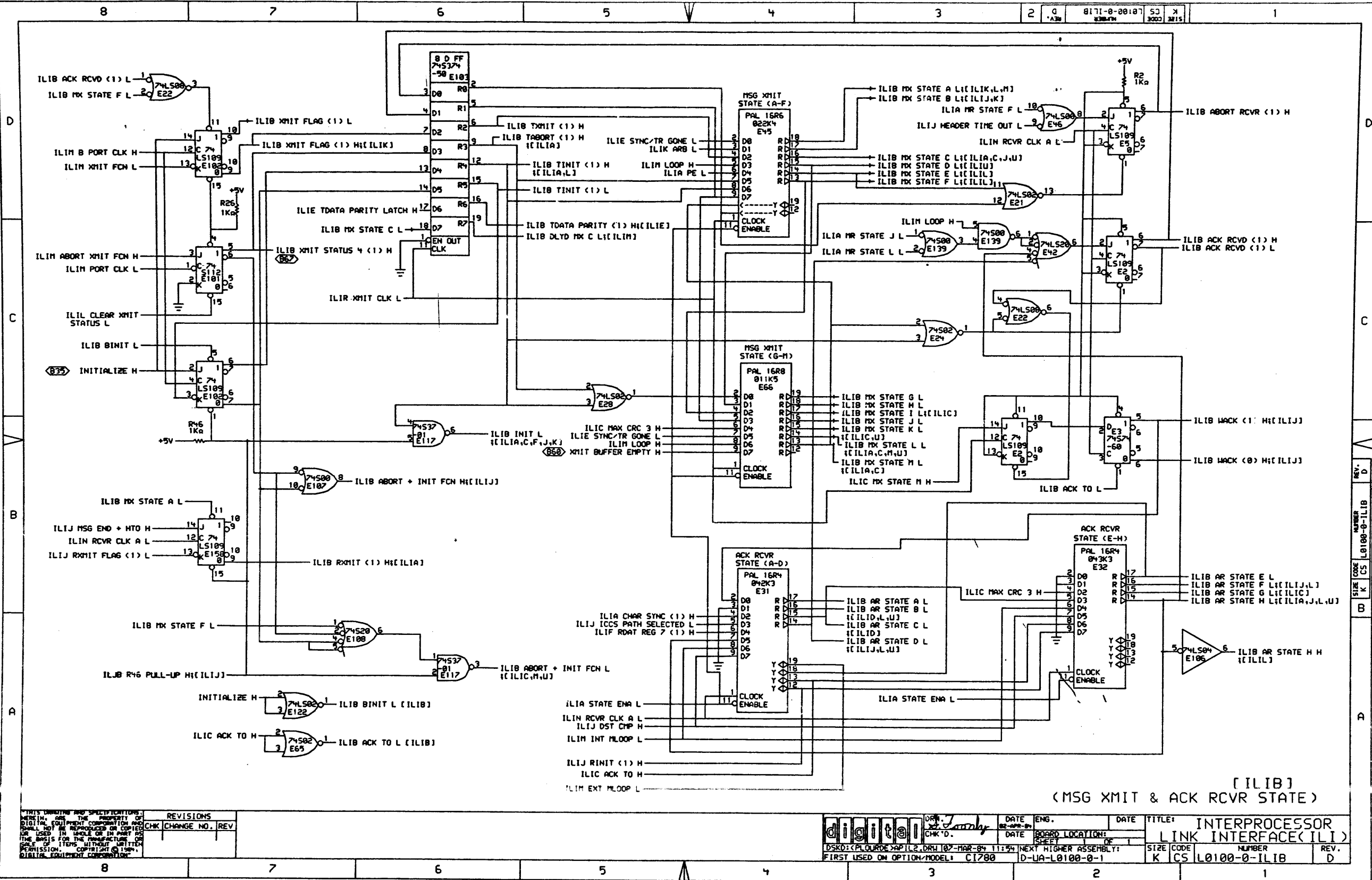


TRANSMIT DATA TIMING DIAGRAM

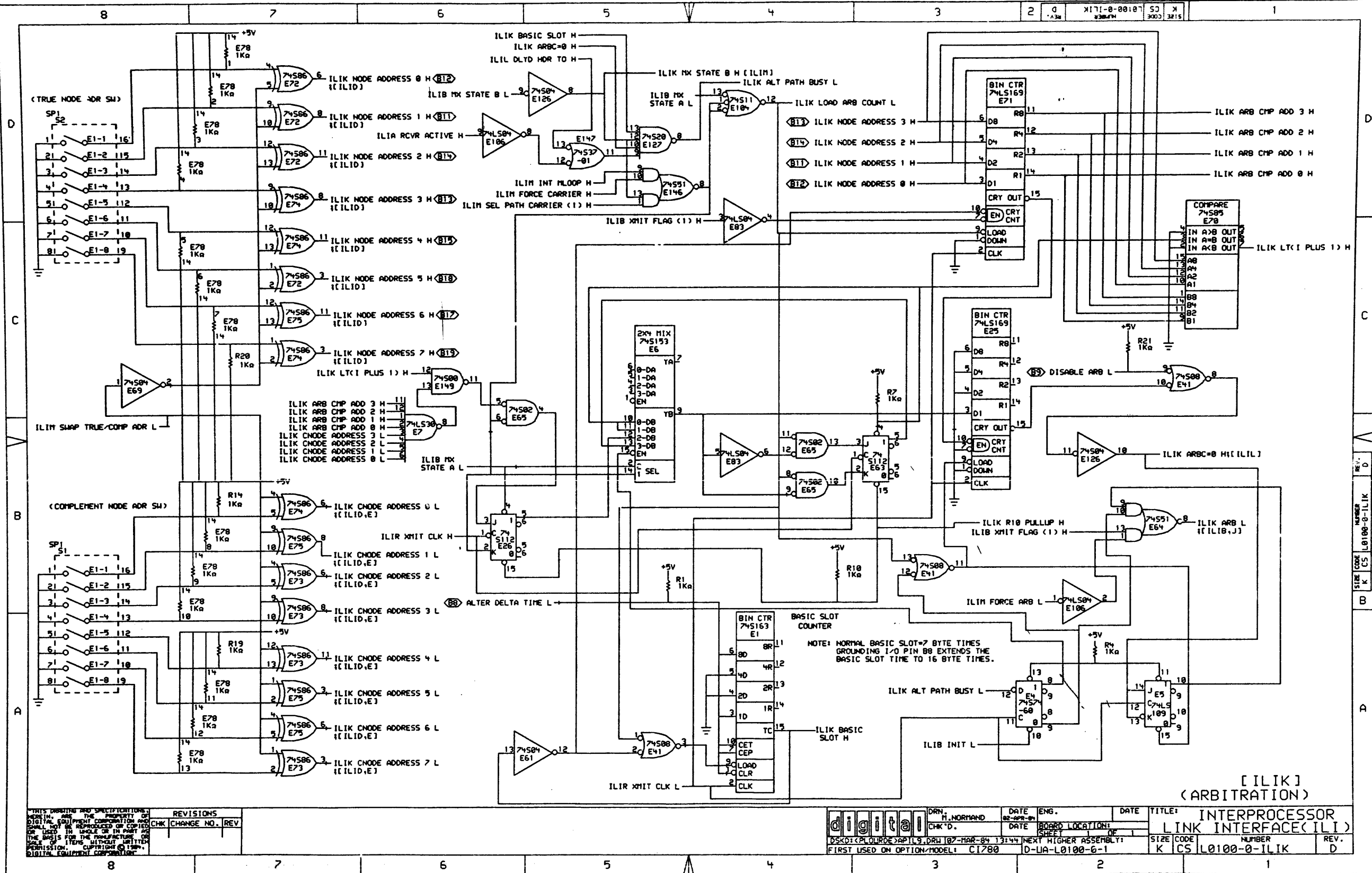
NOTES:

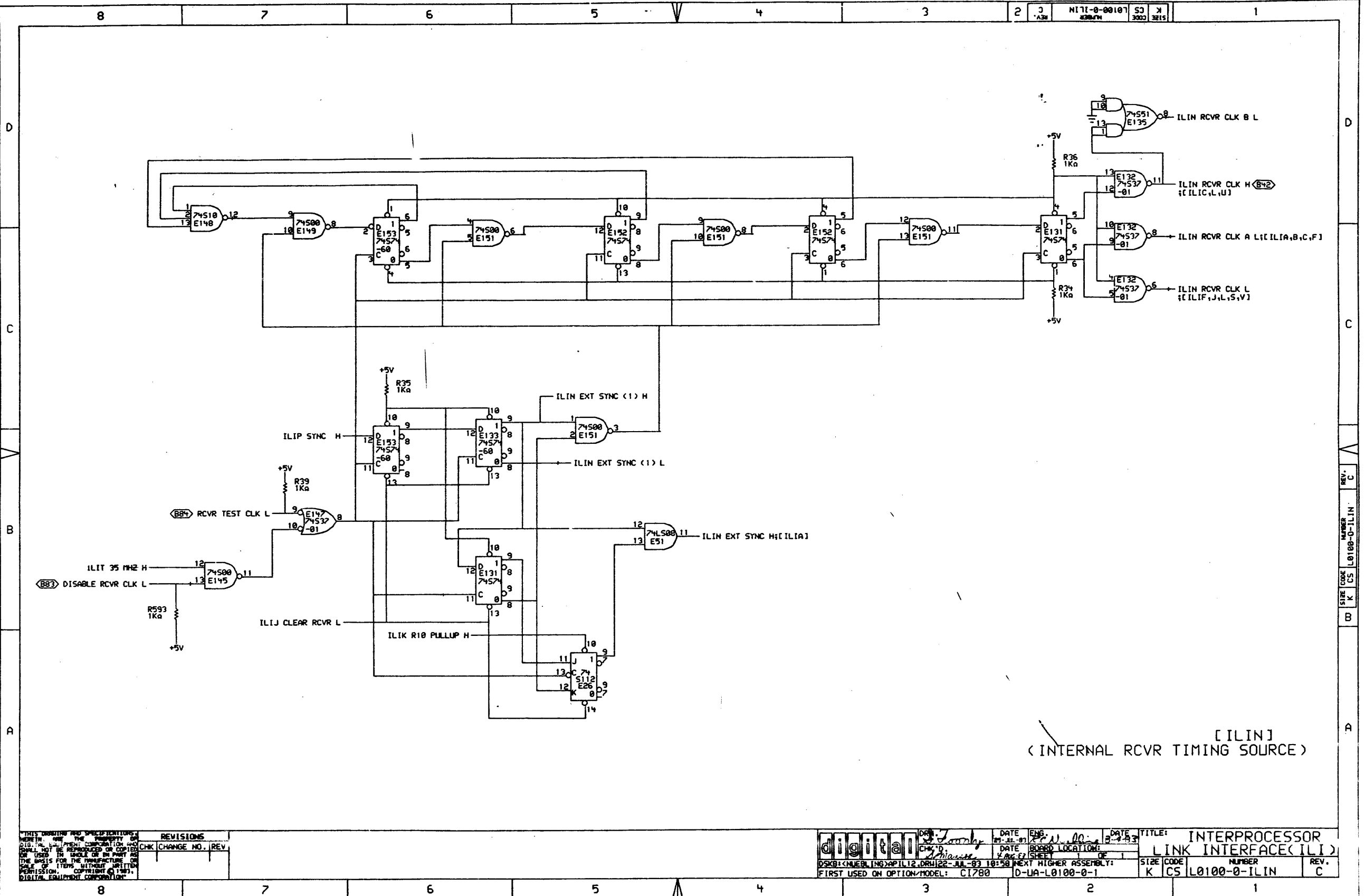
1. THE MX STATES INDICATE BOTH MX STATE PALS AS FOLLOWS:
MX PAL A, MX PAL B.
2. FOR ACK/NAK PACKETS, DATA PORTION CONSISTS ONLY OF
PACKET TYPE, TRUE DESTINATION, COMPLEMENT DESTINATION
AND SOURCE.
3. ONLY THESE SIGNALS ARE RELEVANT FOR ACK/NAK PACKETS.







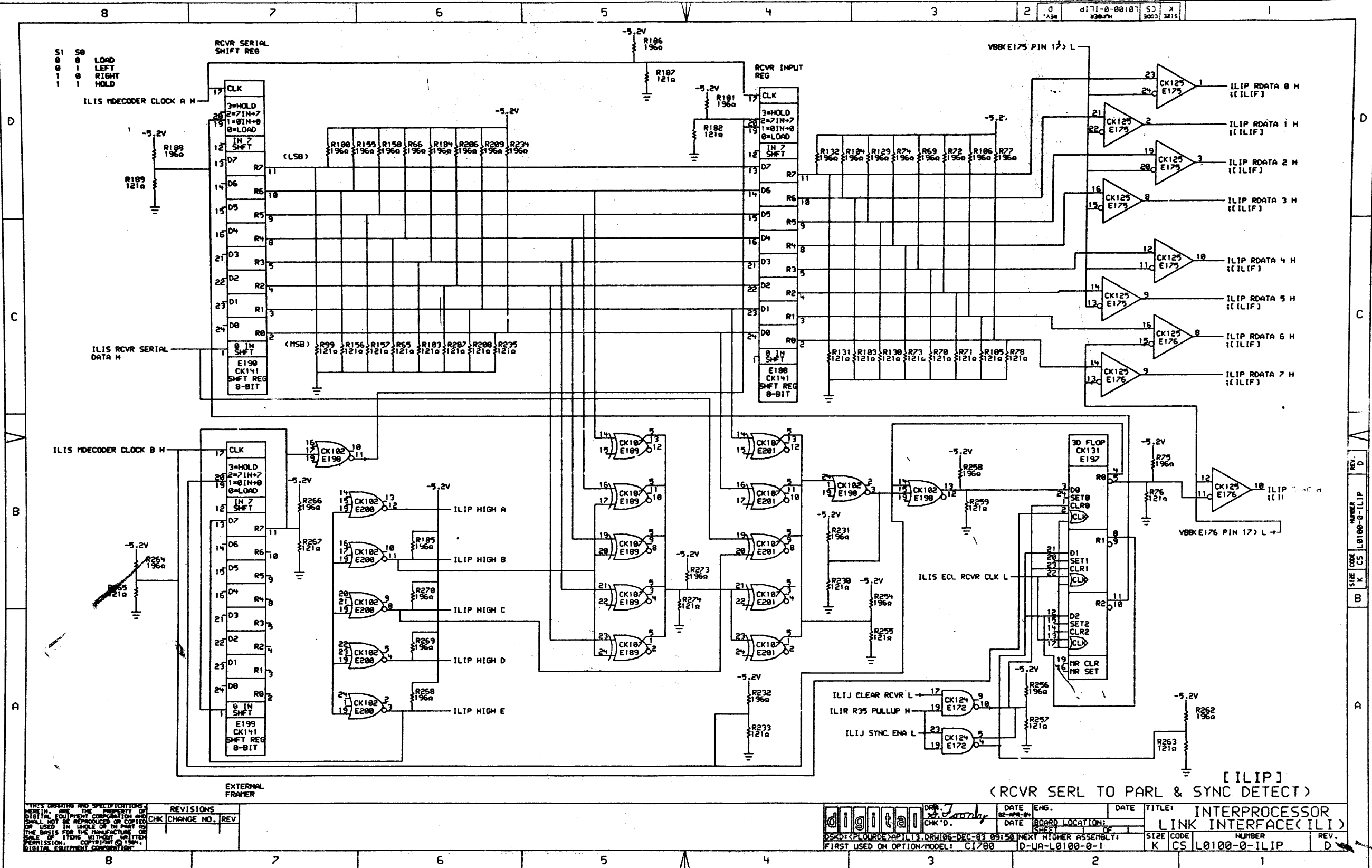


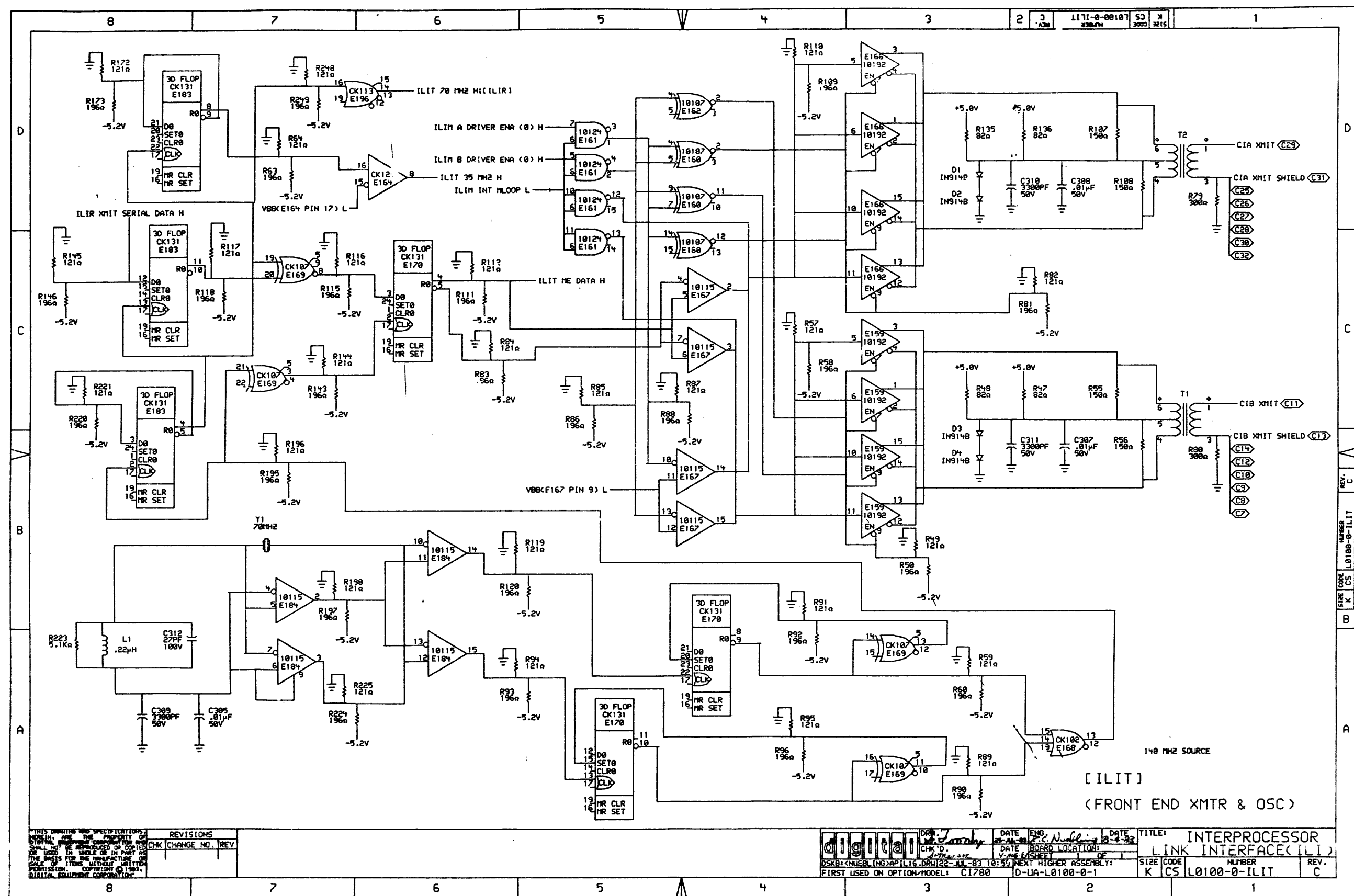


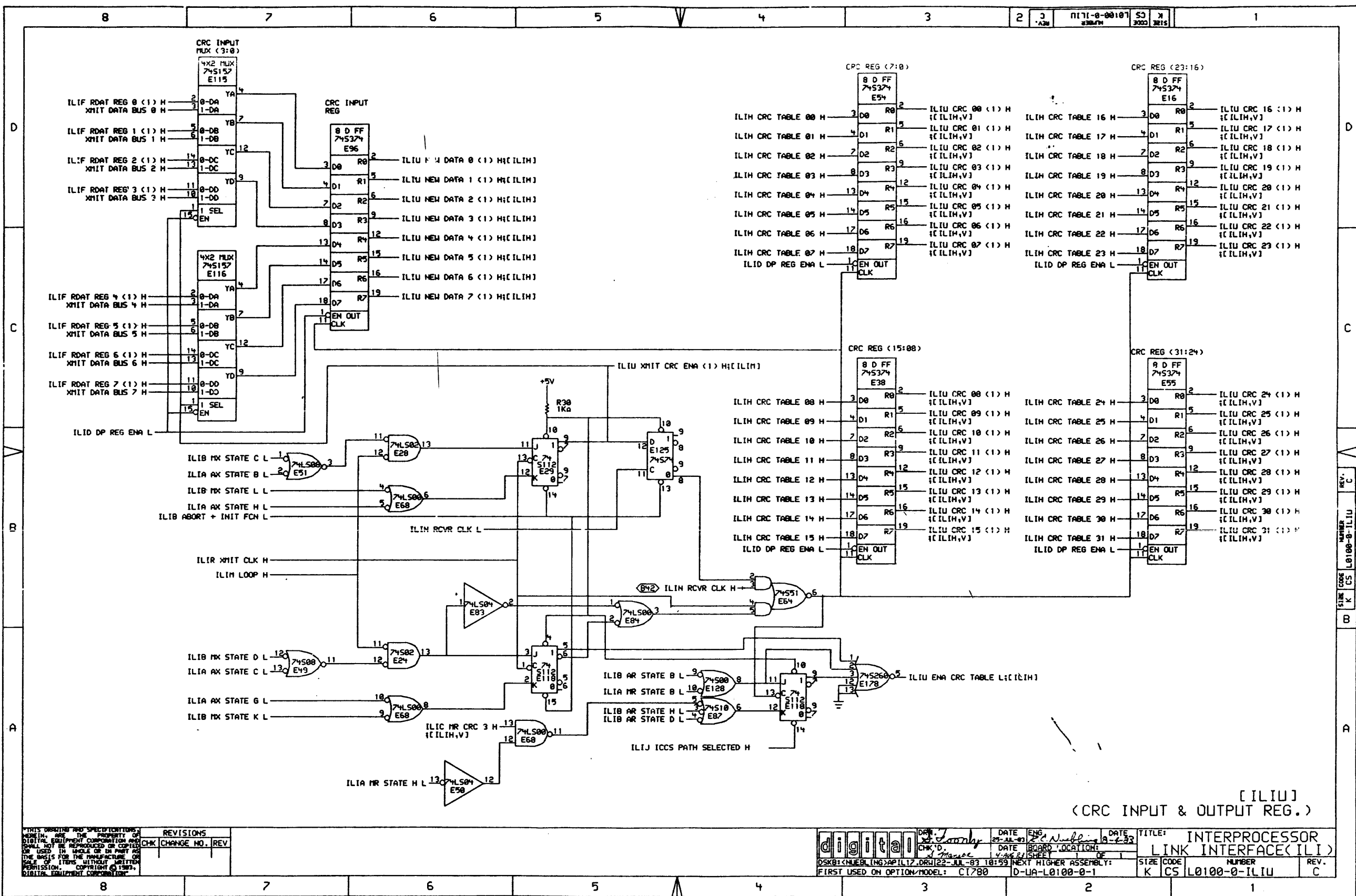
[ILIN]
(INTERNAL RCVR TIMING SOURCE)

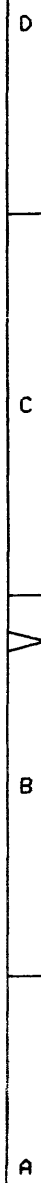
REVISIONS	
CHK	CHANGE NO. REV.

digital	DATE	ENG.	DATE	TITLE:
	21-JUL-81		21-JUL-81	INTERPROCESSOR LINK INTERFACE (ILI)
CHK'D	DATE	BOARD LOCATION:		
	14-AUG-81			
	SHEET	OF		
DSKB: (NUEBLING) APIL12.DRW	22-JUL-81	10:58	NEXT HIGHER ASSEMBLY:	
FIRST USED ON OPTION/MODEL:	C1780		D-UA-L0100-0-1	
SIZE	CODE	NUMBER	REV.	
K	CS	L0100-0-ILIN	C	









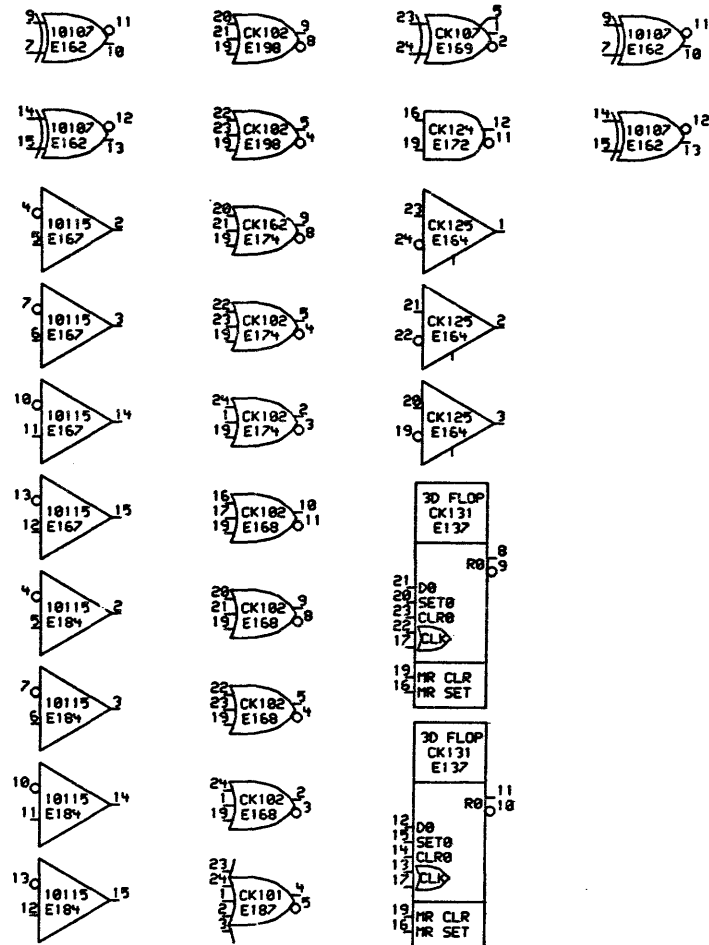
CRC OUTPUT BUFFERS

TITLE: INTERPROCESSOR			
LINK INTERFACE(ILI)			
SIZE	CODE	NUMBER	REV.
K	CS	L0100-0-ILIV	C

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	CHK	CHANGE NO.	REV

digital	DRN. <i>Dooley</i>	DATE <i>25-JUL-93</i>	ENG. <i>C. Nulley</i>	DATE <i>9-4-93</i>	TITLE: INTERPROCESSOR LINK INTERFACE (ILI)
	CHK'D. <i>Nease</i>	DATE <i>4 AUG 93</i>	BOARD LOCATION: <i>OF 1</i>	SHEET <i>1</i>	
CSKB: <NUEB.ING>APIL19.DRW 22-JUL-93 10:59 NEXT HIGHER ASSEMBLY:					SIZE CODE NUMBER REV.
FIRST USED ON OPTION-MODEL: C1780 D-1A-10100-0-1					K CS 10100-0-1LW C

SPARE GATES AND I/O PINS



[ILIX]

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REVISIONS
CHK CHANGE NO. REV.

digital DR. J. Family
DATE ENG. DATE
DATE BOARD LOCATION: DATE
OSKD: (PLOURDE) API 1.20, DR1105-DEC-83 09:51 NEXT HIGHER ASSEMBLY:
FIRST USED ON OPTION/MODEL: CI780 D-UA-L0100-0-1
TITLE: INTERPROCESSOR LINK INTERFACE (ILI)
SIZE CODE NUMBER REV.
K CS L0100-0-ILIX D

10.

100-443881-100

NEB 126A

1 MS #290508E

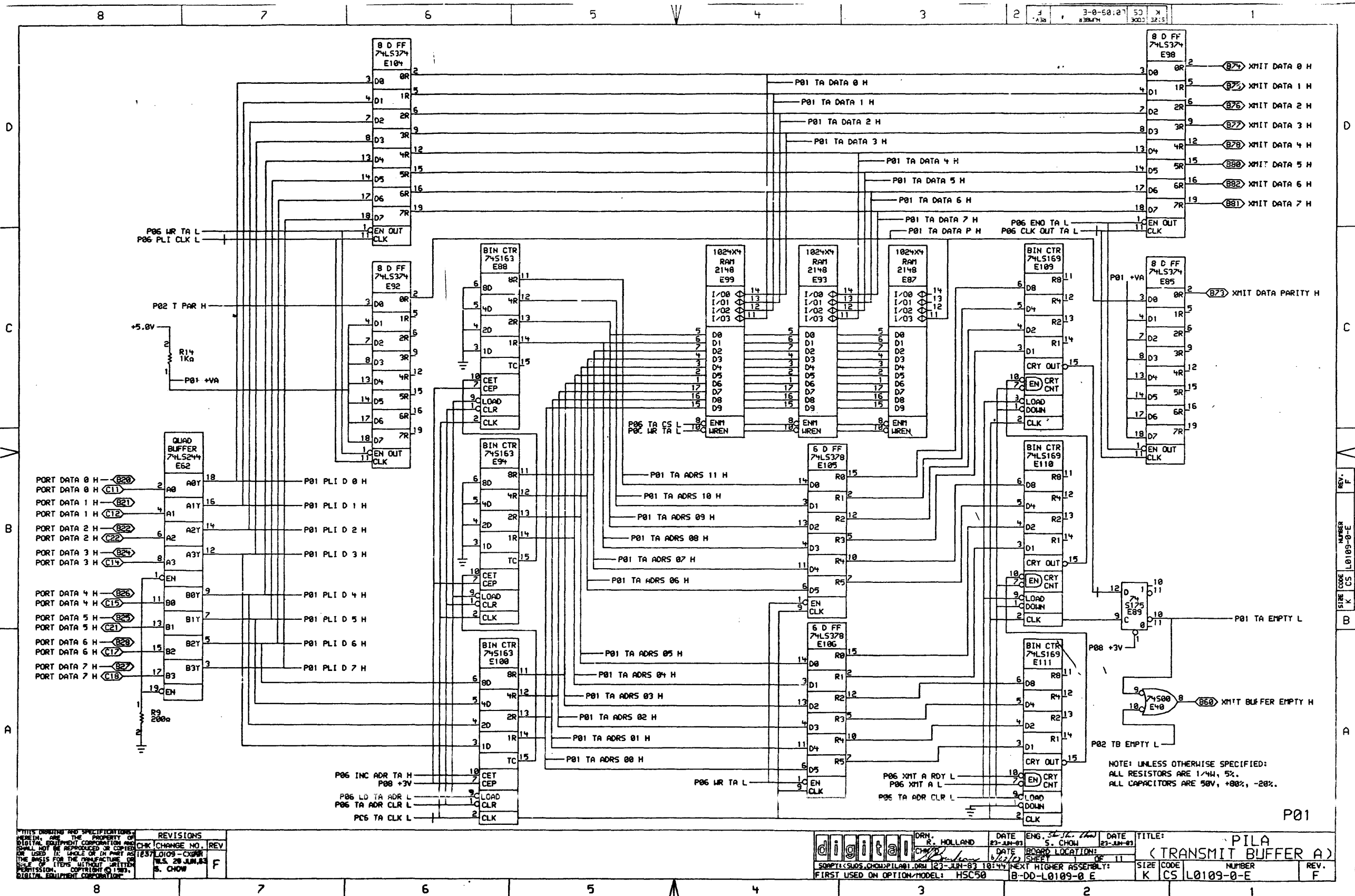
LINE ITEM	TOP DOCUMENT	PART NUMBER	MIN REV	DESCRIPTION	VARIATION REVISION LEVEL:	QTY PER VARIATION	REFERENCE DESIGNATOR
1	1	B-DD-5014931-0-E	5014931-00	DRILL & ETCH BOARD-PILA		1	
2	2		1012784-00	.047 MFD 50V +80-20% CER		70	
							CONT C1-C4,C6-C10,C12-C14,C16-C22,
							CONT C24-C38,C40-C52,C54-C63,C65-C74,
							C76-C78
3	3		1016549-00	47 MFD 10V +50-10% AL EL		2	C5,C15
4	4		1017472-00	10 MFD 35V +50-10% AL EL		6	C11,C23,C39,C53,C64,C75
5	5		1117373-00	LED ASSY GREEN		1	D3
6	6		1117373-01	LED ASSY RED		1	D2
7	7		1117373-02	LED ASSY,YELLOW		1	D1
8	8		1211164-04	SW,DIP 09POS/1PST 5VDC100MA F		1	E117
9	9		1216988-02	HANDLE,MODULE,HEX TWO EJECTORS		1	
10	10		1300005-03	R NETWORK 13-10K 5.0 % 14PIN		1	E115
11	11		1300309-00	390.0 .25 W 5.0 % CF		5	R2,R4,R8,R11,R12
12	12		1300365-00	1.0 K .25 W 5.0 % CF		2	R7,R14
13	13		1301423-00	6.80 K .25 W 5.0 % CF		2	R5,R6
14	14		1300479-00	10.0 K .25 W 5.0 % CF		3	R1,R3,R17
15	15		1311522-00	200.0 .25 W 5.0 % CF		4	R9,R10,R13,R15
16	16		1910532-00	74S00 NAND GATE-QUAD 2IN		1	E40
17	17		1910534-00	74S04 INVERTER GATE-HEX 1I		2	E52,E71
18	18		1910537-00	74S11 AND GATE-TRIPLE 3INP		2	E7,E47
19	19		1910544-00	74S74 FF-D DUAL,EDGE TRIGG		1	E13
20	20		1910550-00	74S174 FF-D HEX		1	E55
21	21		1910957-00	74S175 FF-D QUAD COMMON CLO		2	E65,E89
22	22		1911573-00	74S280 PARITY GEN/CHKR,9BIT		1	E114
23	23		1911675-00	74S138 DECODER/DEMUX 3-8 LI		2	E91,E97
24	24		1911676-00	74S139 DECODER-DUAL TWO-INP		1	E61
25	25		1911712-00	74S51 AND-OR GATE-INVERT D		3	E60,E78,E96
26	26		1912388-00	74S02 NOR GATE-QUAD 2IN,PO		1	E56
27	27		1912389-00	74S08 AND GATE-QUAD 2IN,PO		2	E54,E101
28	28		1912728-00	74S251 MUX 1 OF 8 TRI-STA		1	E107

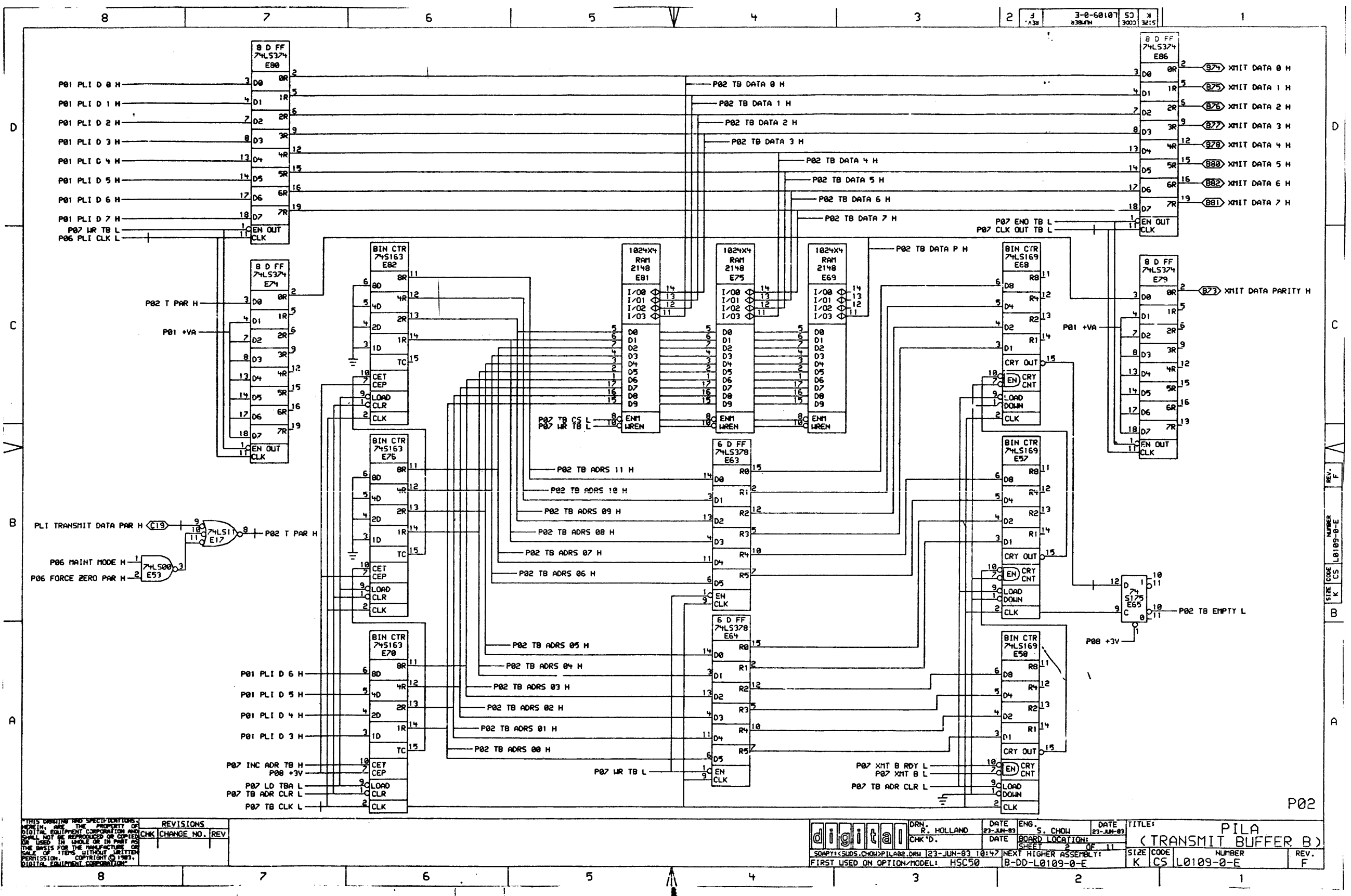
REVISION HISTORY		BASIC PART NO: L0109		DRN:	SBOURBEAU	DATE: 13-JAN-83	D I G I T A L			
ENG	ECO NUMBER	REV	SECTION A OF A	CHK'D:	D WILSON	DATE: 13-JAN-83	TITLE PARTS LIST			
RH	INITIAL	E	SECTION.VARIATION INDEX	DES.ENG:	R HOLLAND	DATE: 13-JAN-83	DOCUMENT NUMBER			
SC	L0109-CX001	F	[A] 00	RESP.ENG.:	R HOLLAND	DATE: 13-JAN-83	SIZE	CODE	NUMBER	REV
TF	L0109-CX002	H	[B]	MFG.ENG.:	L CONDON	DATE: 13-JAN-83	K	PL	L0109-0-DBPE	H
			[C]	ASSEMBLY NUMBER:		DATE: 13-JAN-83	RELEASE DATE: 22-FEB-84			
			[D]							
			[E]							
			[F]							
			[G]							
			[H]							
			[J]							
			[K]							
			[L]							
			[M]							
			[N]							
				TOP DOCUMENT NUMBER:			FILE NAME:		EDIT #	
				B-DD-L0109-0-E			Z2182H.PLS		15	

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LINE ITEM		TOP DOCUMENT	PART NUMBER	MIN REV	DESCRIPTION	QTY PER VARIATION	REFERENCE DESIGNATOR
						00	
VARIATION REVISION LEVEL:							
29	29		1912746-00	DEC	74S37 NAND GATE-QUAD 2IN	1	E113
30	30		1912799-00		LS00 NAND-GATE-QUAD 2IN,P	5	E5,E12,E51,E53,E77
31	31		1912801-00		LS02 NOR-GATE-QUAD 2IN	2	E11,E31
32	32		1912805-00		LS08 AND GATE-QUAD 2IN,PO	3	E1,E42,E48
33	33		1912807-00		LS10 NAND GATE-TRIPLE 3IN	1	E39
34	34		1912808-00		LS11 AND GATE-TRIPLE 3IN	1	E17
35	35		1912810-00		LS20 NAND GATE-DUAL 4IN	2	E83,E95
36	36		1912813-00		LS27 NOR GATE-TRIPLE 3IN	3	E6,E37,E59
37	37		1912816-00		LS32 OR GATE-QUAD 2IN,POS	1	E30
38	38		1912824-00		LS74 FF-D DUAL,EDGE TRIGG	1	E25
39	39		1912833-00		LS109 FF-JK DUAL,POS EDGE	5	E18,E19,E24,E46,E108
40	40		1912847-00		LS157 MUX 1 OF 2(QUAD)	4	E36,E66,E67,E73
41	41		1912851-00		LS169 COUNTER,SYNCH. UP/DO	9	E23,E29,E35,E57,E58,E68,E109,
							CONT E110,E111
42	42		1912853-00		LS175 FF-D QUAD	1	E45
43	43		1913340-00		74S32 OR GATE-QUAD 2IN	2	E50,E112
44	44		1913777-00		LS240 DRIVER,LINE,OCTAL,T	1	E102
45	45		1914082-00		74S163 COUNTER,SYNCH UP/DOW	14	E4,E10,E16,E22,E28,E34,E70,E76,
							CONT E82,E88,E94,E100,E43,E49
46	46		1914085-00		74S260 NOR GATE-DUAL,POS	1	E41
47	47		1914214-00		LS374 FF-D OCTAL EDGE TRIG	14	E2,E8,E14,E44,E74,E79,E80,E85,
							CONT E86,E90,E92,E98,E103,E104
48	48		1914867-00		FF-D HEX, COMMON REG	4	E63,E64,E105,E106
49	49		1915193-00		LS244 DRIVER,LINE,OCTAL,T	1	E62
50	50		1920208-01		74S244 OCTAL BUFFER,TRI-STA	4	E72,E84,E118,E119
51	51		2116957-02		1K MOS RAM 70NS 1	12	E3,E9,E15,E21,E27,E33,E69,E75,
							CONT E81,E87,E93,E99
52	52		9000024-01		EYELET,ROLLED 0.1210DX0.192	12	
53	53		9009149-01		*** THIS ITEM IS NOT USED ***	-	
54	54		1913462-01		74S240 OCTAL BUFFER,INVERTI	1	E116
55	55		1913671-01		74S374 FF-D,OCTAL,TRI STATE	4	E20,E26,E32,E38
56	56		9009185-00		*** THIS ITEM IS NOT USED ***	-	
57	57		9105740-55	F	WIRE(WRAP) 30AWG KYNAR UL14	A/R	

DIGIT A L		TITLE	SECTION A OF A	SIZE	CODE	DOCUMENT NUMBER	REV
		PILA		K	PL	L0109-0-DBPE	H





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REVISIONS	
CHK	CHANGE NO. REV

digital	DRN. R. HOLLAND	DATE 27-JUN-83	ENG. S. CHOW	DATE 27-JUN-83	TITLE: PILA
	CHK'D.	DATE	BOARD LOCATION: 2 OF 11	SHEET	(TRANSMIT BUFFER B)
	FIRST USED ON OPTION/MODEL: HSC50		NEXT HIGHER ASSEMBLY: B-DD-L0109-0-E		SIZE CODE NUMBER REV. K CS L0109-0-E F

D

C

B

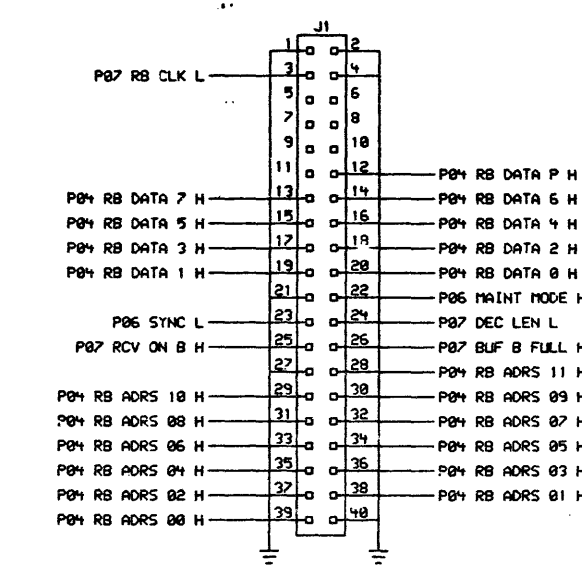
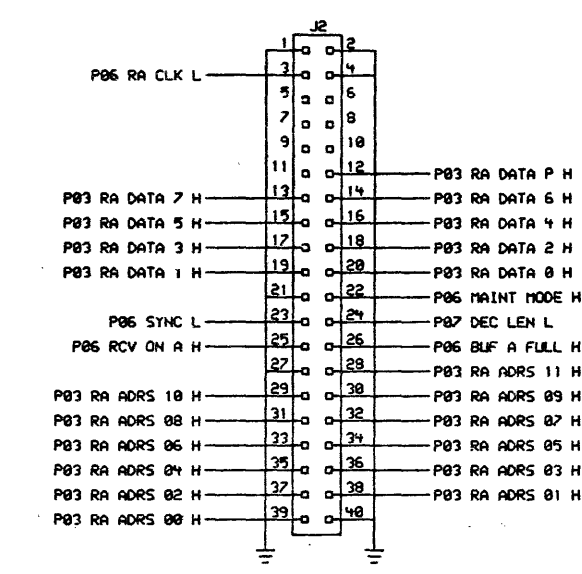
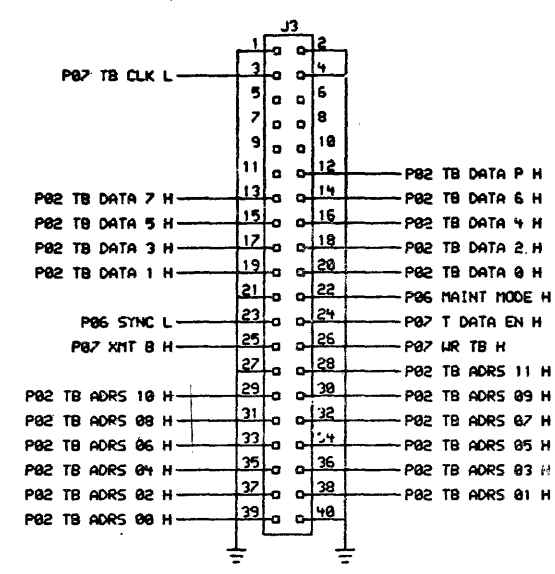
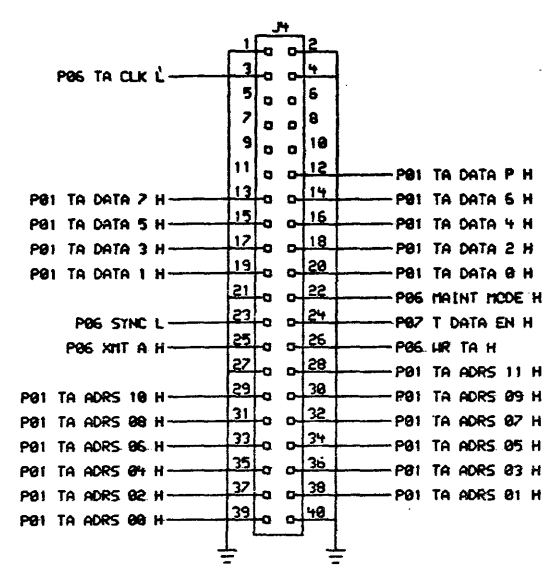
A

D

C

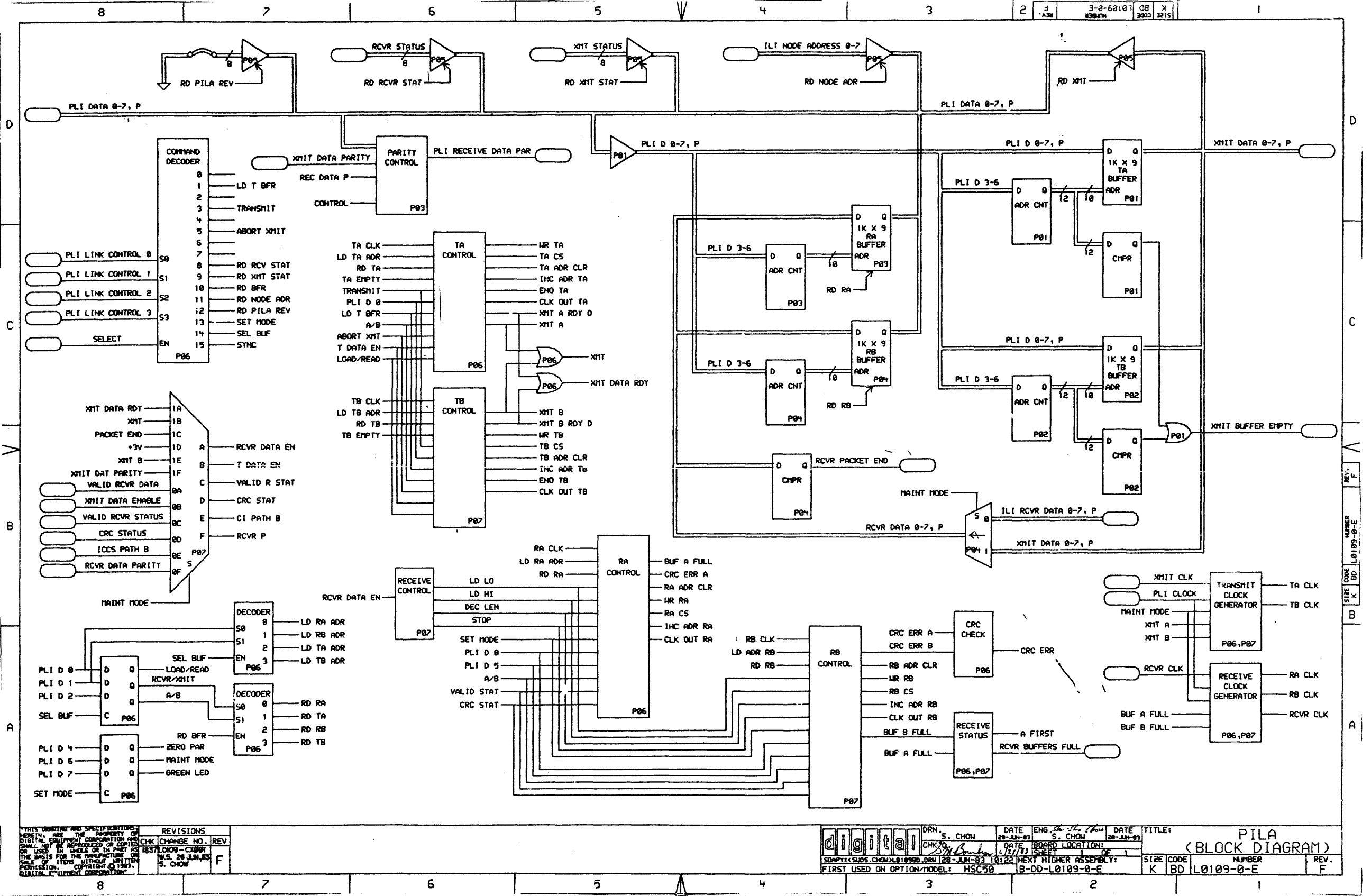
V

A



P09

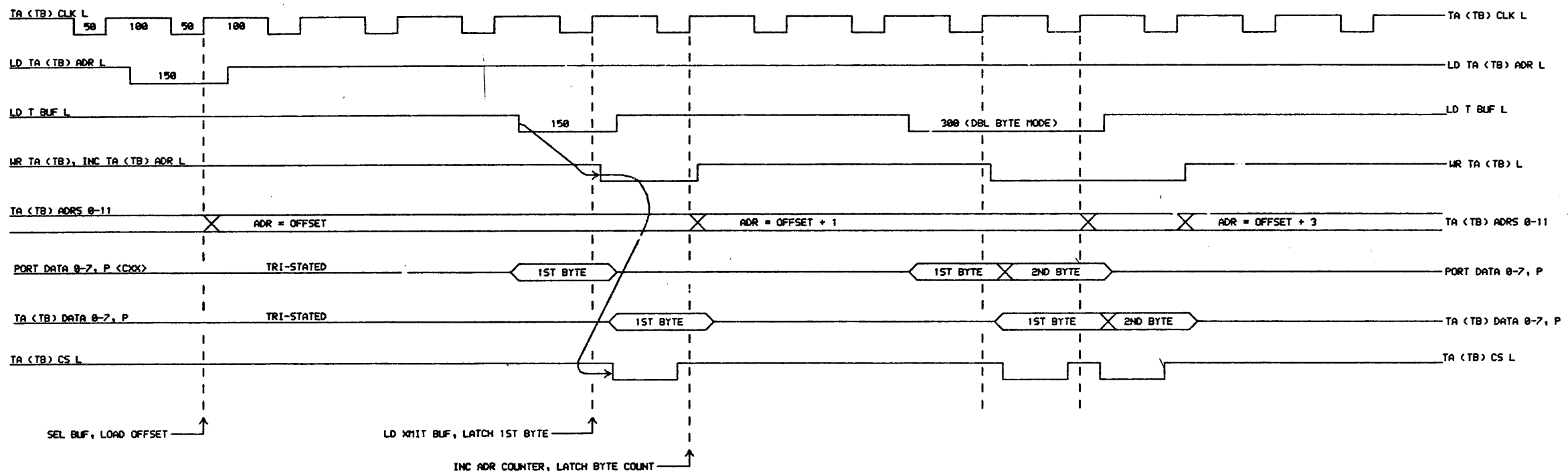
8		7		6		5		4		3		2		1	
Vertical location (A-D)		Direction of line (Left, Right, Up, Down) or electrical (Input, Output, Both) or backplane pin (Pin)		Horizontal location (1-8)											
KEY:	SS-VH,D														
Schematic Sheet															
+5.0V		1-C8,R 3-C7,R 5-B1,L 5-B3,D 5-D2,L 6-A6,D				P01 TA DATA 3 H		1-D4,L 9-C8,R		P04 RB ADRS 07 H		4-B2,L 9-C2,L			
6-A7,D 6-B3,D		6-B6,D 6-D7,D 7-A6,L 7-B3,D 7-B8,D 7-C3,D				P01 TA DATA 4 H		1-D3,L 9-C7,L		P04 RB ADRS 08 H		4-B2,L 9-C2,R			
8-B8,R 8-B8,R		8-C1,L 8-C8,R 8-C8,R 8-D5,D 8-D8,R				P01 TA DATA 5 H		1-D3,L 9-C8,R		P04 RB ADRS 09 H		4-B2,L 9-C2,L			
ACK H		5-C7,L <C38>				P01 TA DATA 6 H		1-D3,L 9-C7,L		P04 RB ADRS 10 H		4-B2,L 9-C2,R			
ARBITRATE H		5-B7,L <C40>				P01 TA DATA 7 H		1-D3,L 9-C8,R		P04 RB ADRS 11 H		4-B2,L 9-C2,L			
BUFFER A BUS H		5-D7,L <C32>				P01 TA DATA P H		1-C3,L 9-C7,L		P04 RB DATA 0 H		4-D4,L 9-C2,L			
BUFFER B BUS H		5-D7,L <C25>				P01 TA EMPTY L		1-B1,L 6-D5,R		P04 RB DATA 1 H		4-D3,L 9-C2,R			
CDA H		5-B7,L <C42>				P02 T PAR H		1-C7,R 2-B7,L 2-C7,R		P04 RB DATA 2 H		4-D3,L 9-C2,L			
CDB H		5-B7,L <C51>				P02 TB ADRS 00 H		2-A6,L 9-C6,R		P04 RB DATA 3 H		4-D3,L 9-C2,R			
CRC ERROR H		5-C7,L <C35>				P02 TB ADRS 01 H		2-A6,L 9-C5,L		P04 RB DATA 4 H		4-D3,L 9-C2,L			
CRC STATUS H,ILIV		7-D8,R <B40>				P02 TB ADRS 02 H		2-A6,L 9-C6,R		P04 RB DATA 5 H		4-D3,L 9-C2,R			
DEST BUSY H		5-C7,L <C39>				P02 TB ADRS 03 H		2-A6,L 9-C5,L		P04 RB DATA 6 H		4-D3,L 9-C2,L			
DISABLE ARB L		5-D8,R 5-D8,R				P02 TB ADRS 04 H		2-A6,L 9-C6,R		P04 RB DATA 7 H		4-D3,L 9-C2,R			
FIRST BUFFER H		5-D7,L <C31>				P02 TB ADRS 05 H		2-A6,L 9-C5,L		P04 RB DATA P H		4-D4,L 9-C2,L			
ICCS PATH B H,ILIJ		7-C8,R <B39>				P02 TB ADRS 06 H		2-B6,L 9-C6,R		P04 RCVR DATA 0 H		3-D8,R 4-B6,L			
INITIALIZE H		7-A8,R 7-A8,R <C5>				P02 TB ADRS 07 H		2-B5,L 9-C5,L		P04 RCVR DATA 1 H		3-D8,R 4-B6,L			
LINK CONTROL 0 H		6-D8,R 6-C8,R <B31> 3-A2,R <C7>				P02 TB ADRS 08 H		2-B5,L 9-C6,R		P04 RCVR DATA 2 H		3-D8,R 4-B6,L			
LINK CONTROL 1 H		6-D8,R 6-C8,R <B32> 3-A2,R <C8>				P02 TB ADRS 09 H		2-B5,L 9-C5,L		P04 RCVR DATA 3 H		3-D8,R 4-B6,L			
LINK CONTROL 2 H		6-D8,R 6-C8,R <B34>				P02 TB ADRS 10 H		2-B5,L 9-C6,R		P04 RCVR DATA 4 H		3-D8,R 4-A6,L			
LINK CONTROL 3 H		6-D8,R 6-C8,R <B36>				P02 TB ADRS 11 H		2-B5,L 9-C5,L		P04 RCVR DATA 5 H		3-D8,R 4-A6,L			
NC		8-B3,L 8-B3,L 8-B3,L 8-B3,L 8-B3,L 8-C1,L				P02 TB DATA 0 H		2-D4,L 9-C5,L		P04 RCVR DATA 6 H		3-D8,R 4-A6,L			
		8-C1,L 8-C2,L 8-C2,L 8-D1,L				P02 TB DATA 1 H		2-D4,L 9-C6,R		P04 RCVR DATA 7 H		3-D8,R 4-A6,L			
NODE ADDRESS 0 H,ILIK		5-C4,R <B12>				P02 TB DATA 2 H		2-D4,L 9-C5,L		P05 LD ADR RA L		5-A7,L 6-B6,R			
NODE ADDRESS 1 H,ILIK		5-C4,R <B11>				P02 TB DATA 3 H		2-D4,L 9-C6,R		P05 LD ADR RB L		5-A7,L 7-C6,R			
NODE ADDRESS 2 H,ILIK		5-C4,R <B14>				P02 TB DATA 4 H		2-D4,L 9-C5,L		P06 A H		6-B2,R 6-B6,L 7-D2,R 7-D4,R			
NODE ADDRESS 3 H,ILIK		5-C4,R <B10>				P02 TB DATA 5 H		2-D4,L 9-C6,R		P06 ABORT XMIT L		6-D5,R 6-D7,L 7-D4,R			
NODE ADDRESS 4 H,ILIK		5-C4,R <B15>				P02 TB DATA 6 H		2-D4,L 9-C5,L		P06 B H		6-B2,R 6-B5,L 6-D3,R 6-D5,R			
NODE ADDRESS 5 H,ILIK		5-C4,R <B18>				P02 TB DATA 7 H		2-D4,L 9-C6,R		P06 BUF A FULL H		5-D8,R 6-A1,L 7-B6,R 9-C3,L			
NODE ADDRESS 6 H,ILIK		5-C4,R <B17>				P02 TB DATA P H		2-C3,L 9-C5,L		P06 BUF A FULL L		6-A1,L 6-B3,R			
NODE ADDRESS 7 H,ILIK		5-C4,R <B19>				P02 TB EMPTY L		1-A2,R 2-B1,L 7-D4,R		P06 CLK OUT RA L		3-B2,R 6-B5,L			
P01 +VA		1-C2,D 1-C7,L 2-C2,R 2-C7,R				P03 +VB		3-B2,R 3-C7,L 4-C2,R 4-C7,R		P06 CLK OUT TA L		1-C2,R 6-C1,L			
P01 PLI D 0 H		1-B7,L 2-D8,R 6-A5,R 6-B8,R 6-D5,R				P03 OVRN A L		3-A3,L 6-A3,R		P06 CRC ERR H		5-D8,R 6-B1,L			
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P01 PLI D 2 H		1-B7,L 2-D8,R 6-B8,R				P03 RA ADRS 01 H		3-B2,L 9-C3,L		P06 FORCE ZERO PAR H		2-B8,R 6-A7,L			
P01 PLI D 3 H		1-B7,L 2-A7,R 2-D8,R 3-C5,R 4-C5,R				P03 RA ADRS 02 H		3-B2,L 9-C4,R		P06 INC ADR RA H		3-C5,R 6-B5,L			
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P01 TA DATA 2 H		1-D4,L 9-C7,L				P04 OVRN B L		4-B3,L 7-A4,R		P06 RCV ON A H		6-A4,L 9-C4,R			
						P04 RB ADRS 00 H		4-B2,L 9-C2,R		P06 RCVR CLK L		3-B6,R 3-C8,R 6-B2,L 7-A2,R 7-B6,R 7-C5,R			
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REVISIONS		
CHK	CHANGE NO.	REV
1837	L0109-C2000	1
1837	W.S. 28 JUN 83	F

digital	DRN. S. CHOW	DATE 28-JUN-83	ENG. S. CHOW	DATE 28-JUN-83	TITLE: PILA (BLOCK DIAGRAM)
	CHKD. S. CHOW	DATE 1/10/83	DATE 1/10/83	DATE 1/10/83	BOARD LOCATION: 1
	NEXT HIGHER ASSEMBLY: B-DD-L0109-0-E				
FIRST USED ON OPTION/MODEL: HSC50					SIZE CODE NUMBER REV. K BD L0109-0-E F



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ANY INFORMATION STORAGE AND
RETRIEVAL SYSTEM.

REVISIONS		
CHK	CHANGE NO.	REV
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digital	DRN. S. CHOW	DATE 28-JAN-92	ENG. S. CHOW	DATE 28-JAN-92	TITLE: PILA TIMING (LOAD XMIT BUFFER)
	CHKD. S. CHOW	DATE 28-JAN-92	DATE 28-JAN-92	DATE 28-JAN-92	SIZE CODE K
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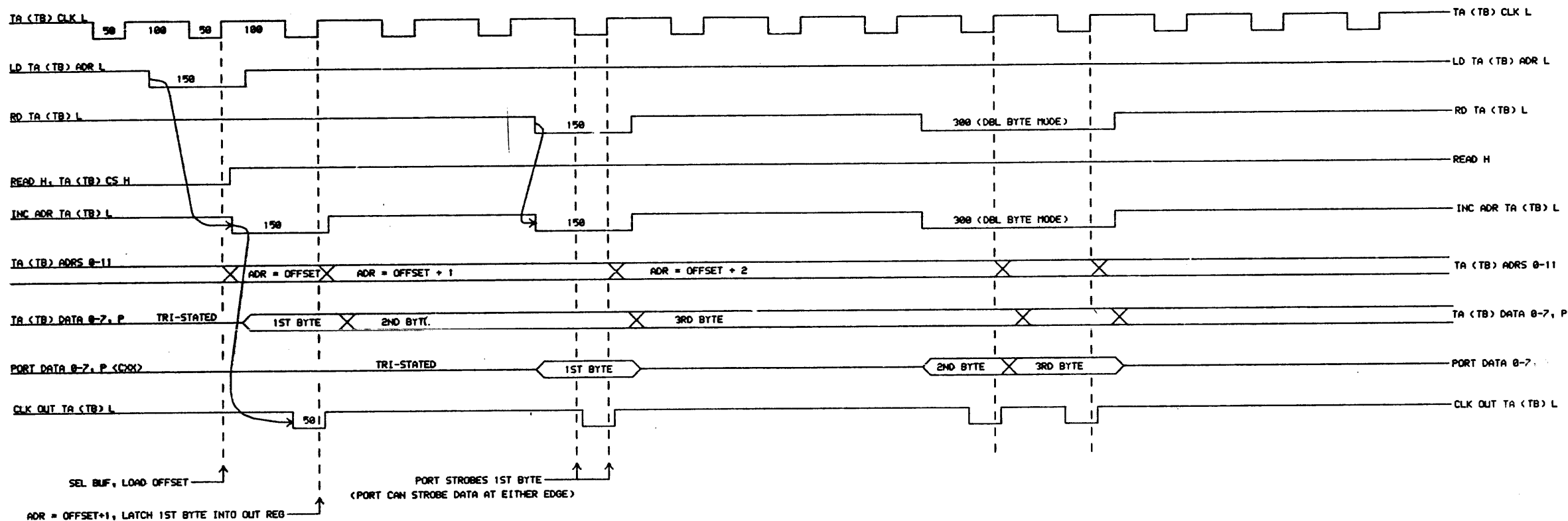
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3-0-60107
REV. A30
Q1 3000
K 3215

1



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REVISIONS
CHK CHANGE NO. REV

digital

DRN. S. CHOW
CHK'D.

DATE 28-JUN-83
DATE

ENG. S. CHOW
BOARD LOCATION
SHEET 2 OF 5

DATE 28-JUN-83

TITLE: PILA TIMING
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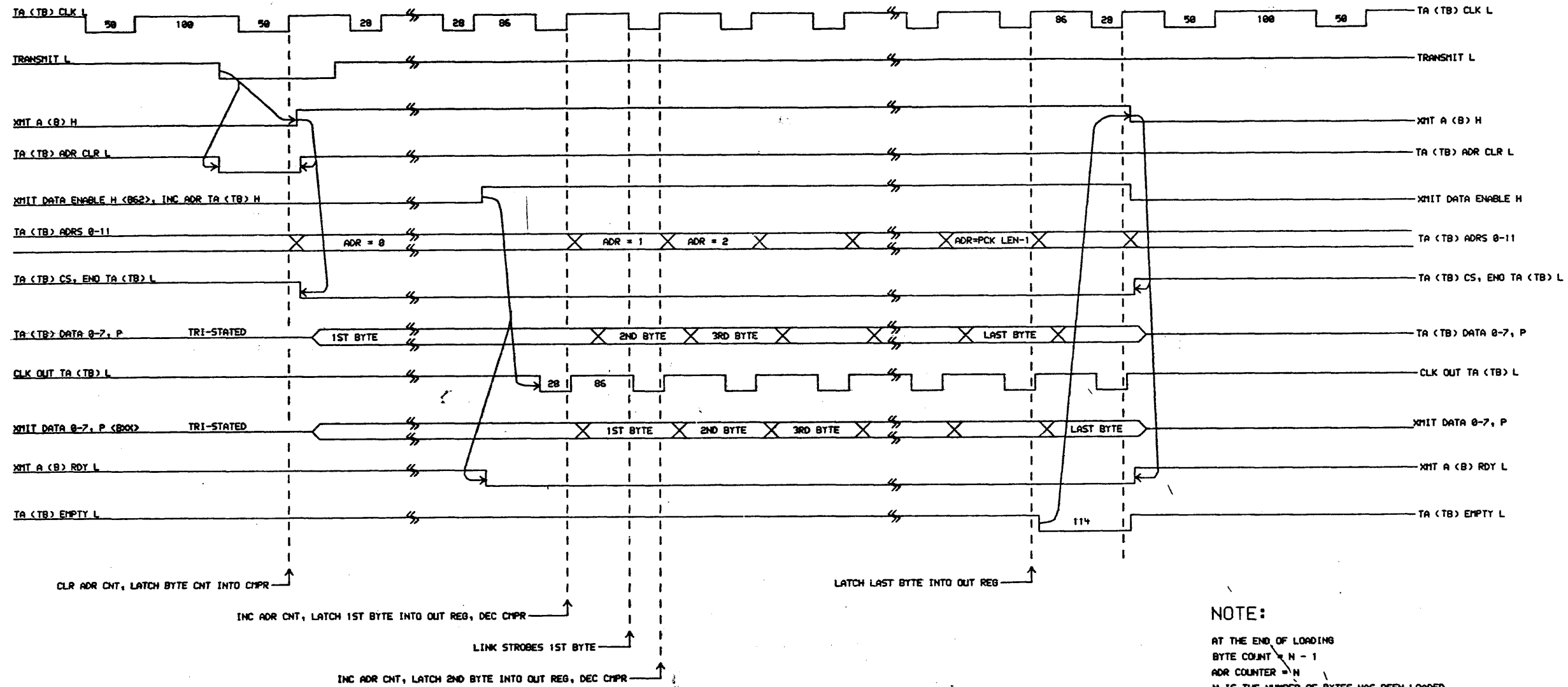
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SIZE CODE
K TD L0109-0-E

NUMBER
REV. F

REV. F



TRANSMIT SEQUENCE

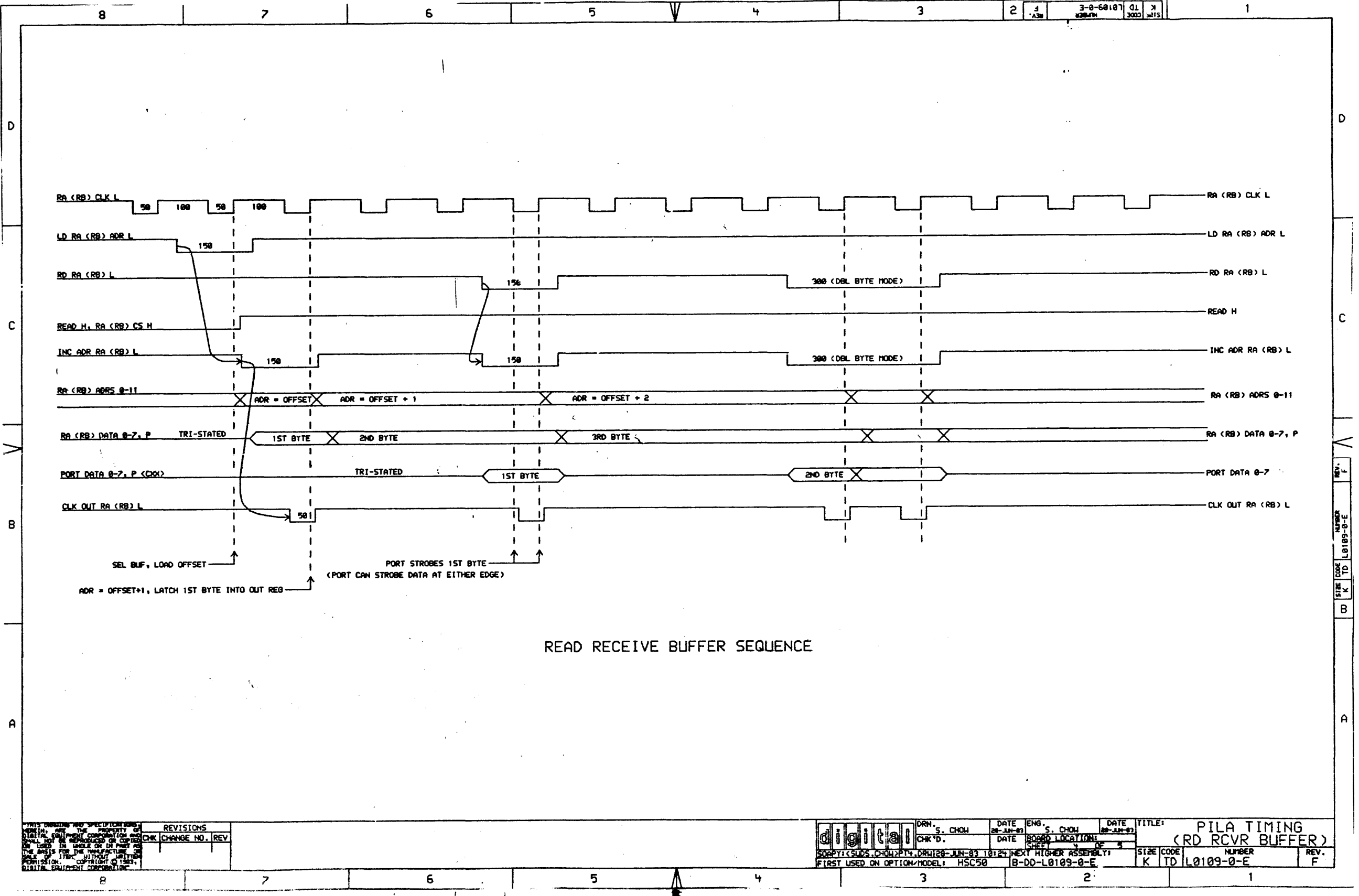
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REVISIONS
 CHK CHANGE NO. REV

digital

DRN S. CHOW
 DATE 28-JUN-83
 CHK'D.
 DATE 28-JUN-83
 ENG S. CHOW
 BOARD LOCATION
 SHEET 1 OF 1
 NEXT HIGHER ASSEMBLY
 B-DO-L0109-0-E

TITLE: PILA TIMING (TRANSMIT)
 SIZE CODE K TD L0109-0-E
 NUMBER
 REV. F



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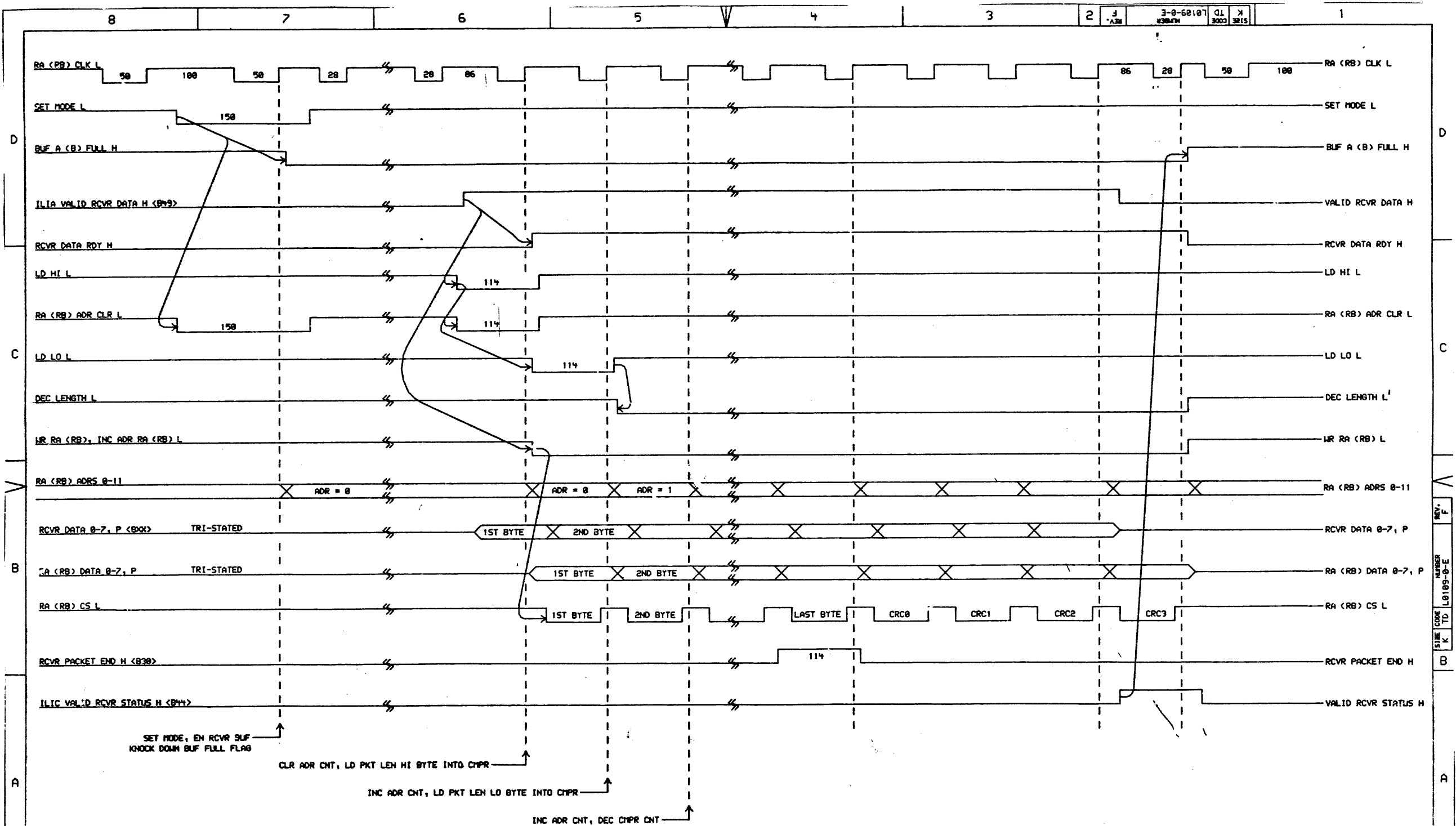
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CHK	CHANGE NO.	REV

digital

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CHK'D:
DATE: 28-JUN-83
DATE: 28-JUN-83

ENG: S. CHOW
DATE: 28-JUN-83
DATE: 28-JUN-83
SHEET: 1 OF 1

TITLE: PILA TIMING (RD RCVR BUFFER)
SIZE: K
CODE: TD
NUMBER: L0109-0-E
REV: F



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REVISIONS	
CHG	CHANGE NO. REV

digital

DRN. S. CHOW	DATE 28-JUN-83	ENG. S. CHOW	DATE 28-JUN-83
CHK'D.	DATE	BOARD LOCATION	SHEET
COPY 1 (SUS. CHOW) PT 3, DRH 128-JUN-83 10124		NEXT HIGHER ASSEMBLY	
FIRST USED ON OPTION/MODEL: HSC30		B-00-L0109-0-E	

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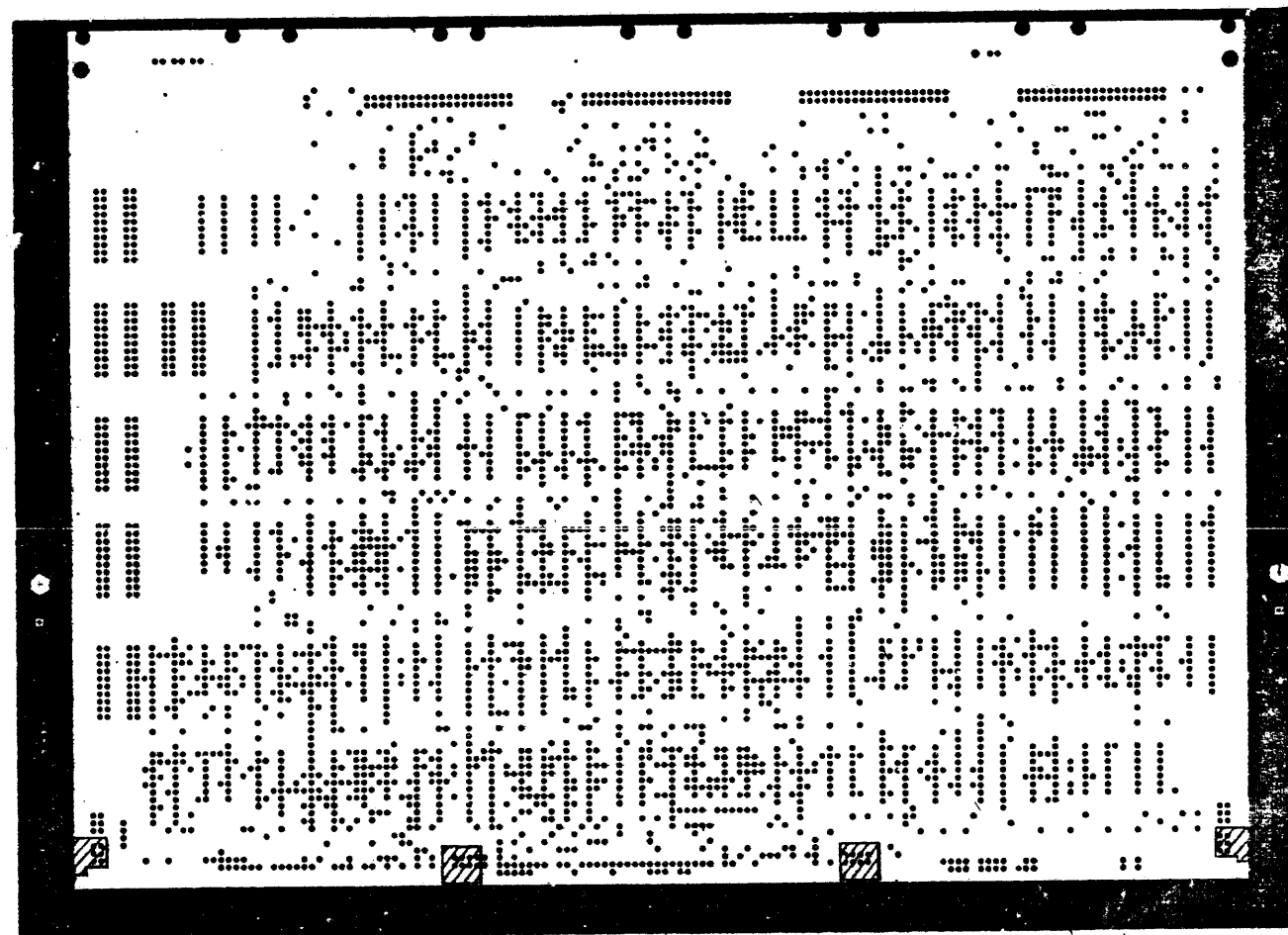
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COVERING NUMBERS

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SOLDER MASK
SIDE 1



INDICATES SOLDER MASK REWORK

REVISIONS		
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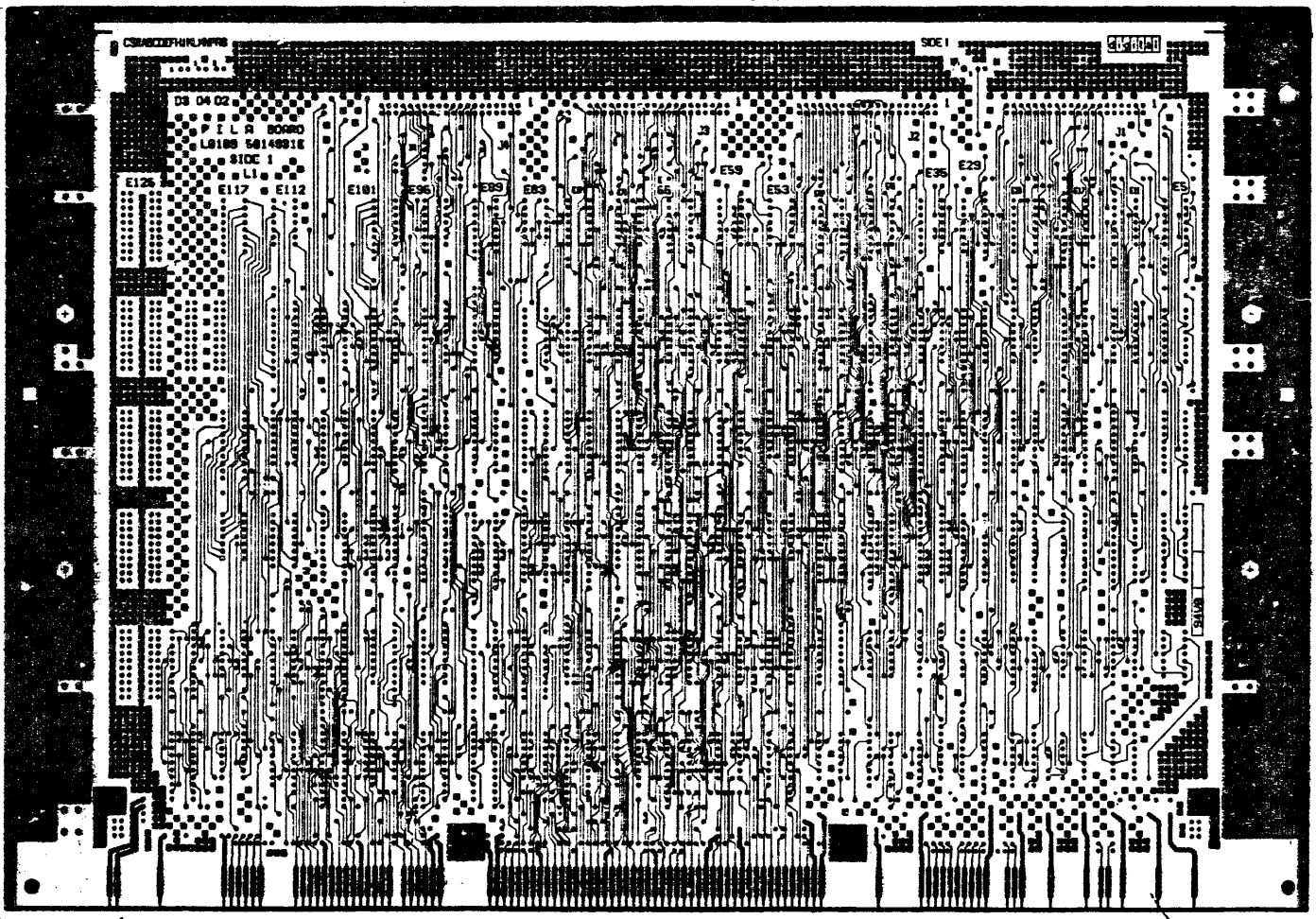
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DMD5014931-0-0

Sht
2 of 7

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LAYER 1



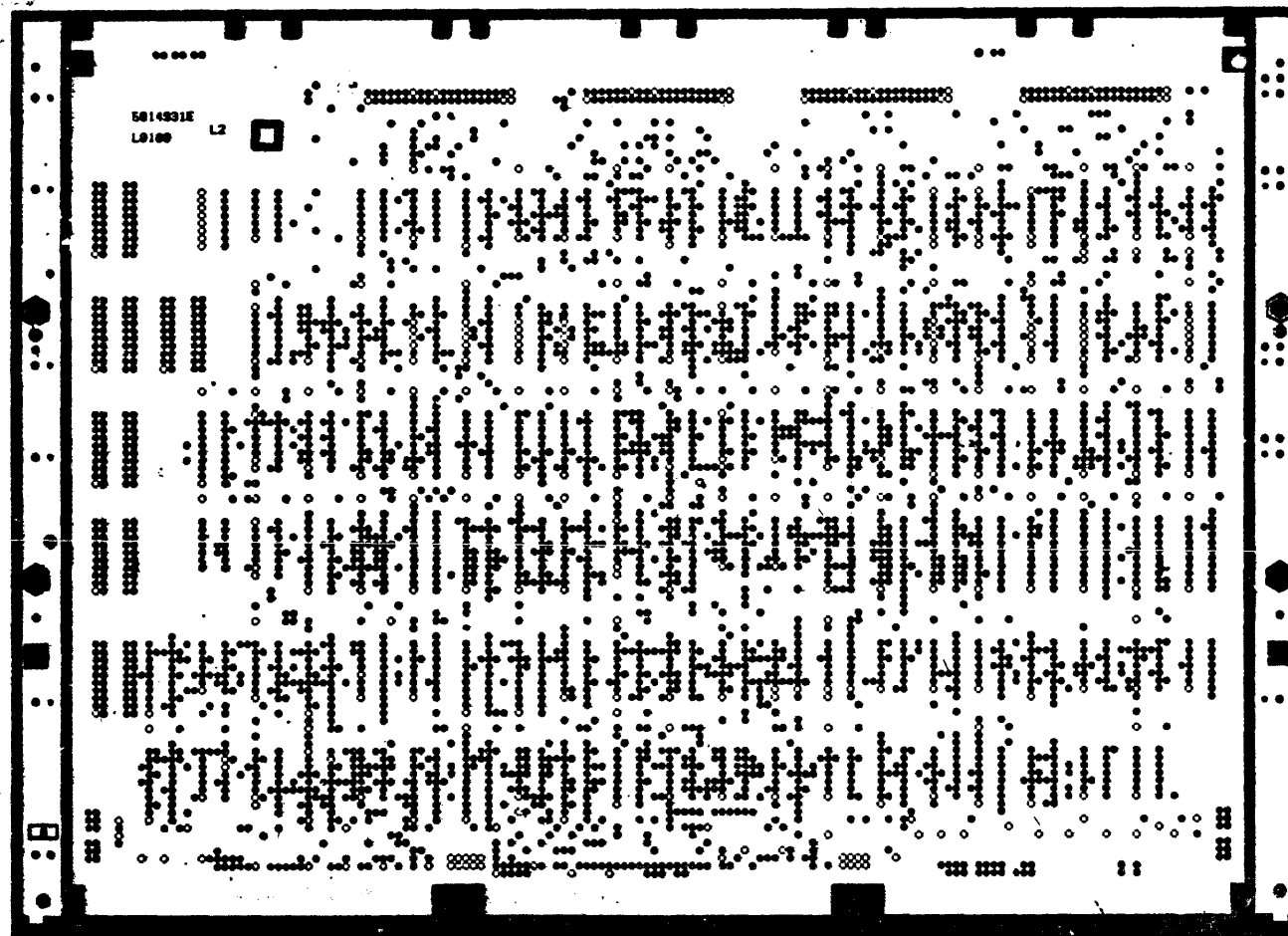
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SCALE 1/1		SHEET 3 OF 7		DIST.	

DMD5014931-0-0

Sht
3 of 7

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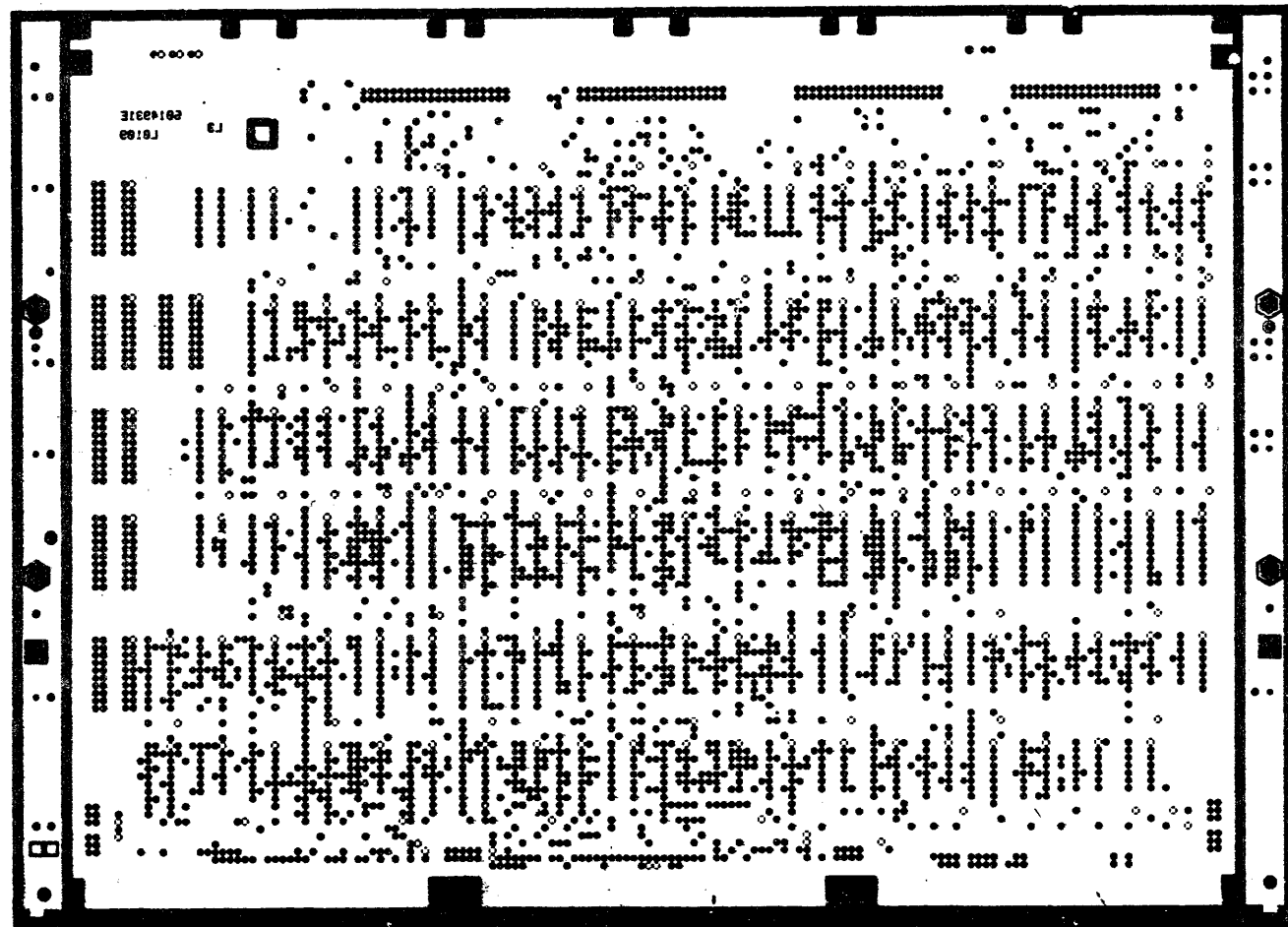
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DMD 5014931-0-0

Sht
4 of 7

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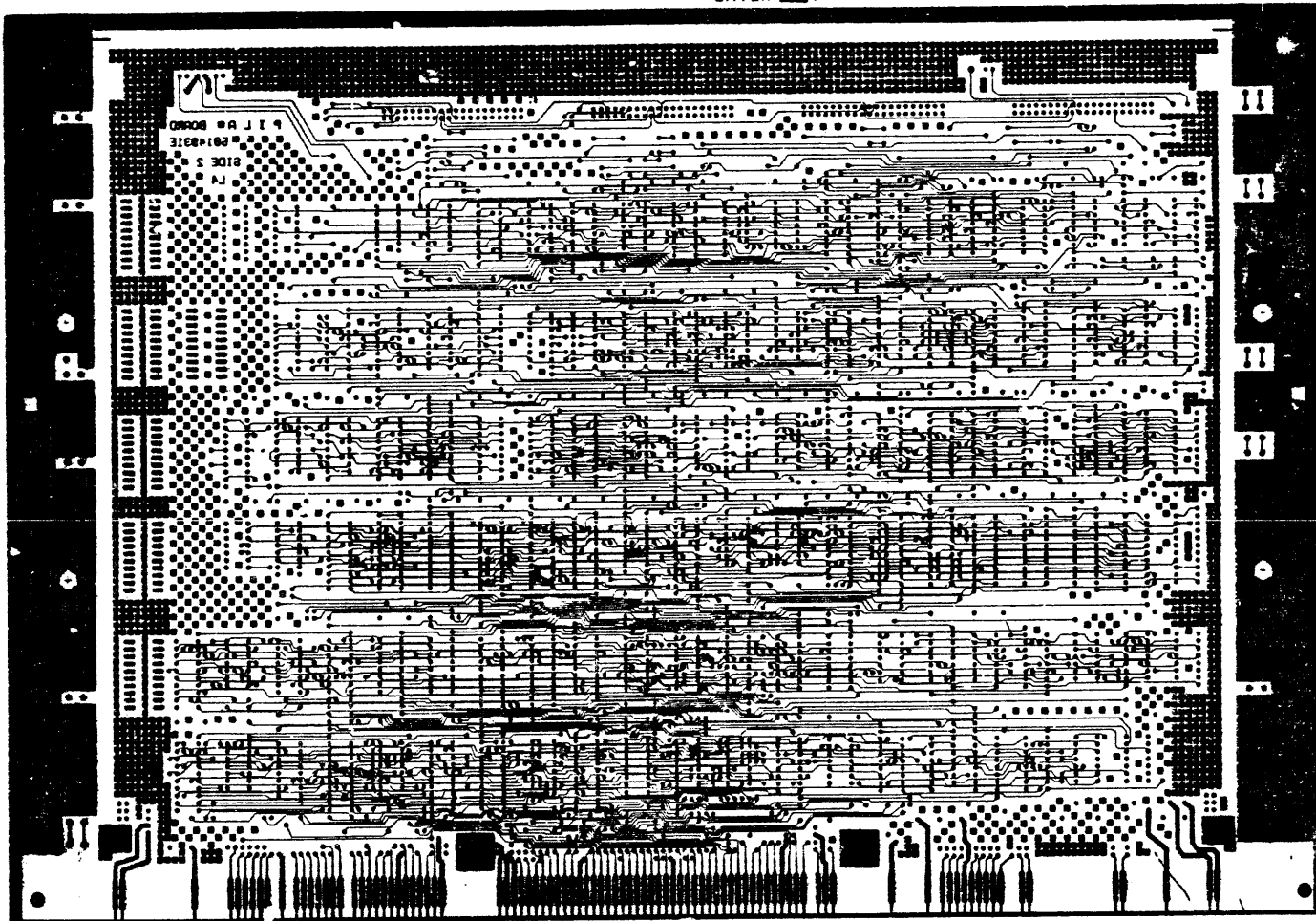
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SAT
547

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LAYER 4



REVISIONS		
CHK	CHANGE NO.	REV.

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SCALE 1/1		SHEET 6 OF 7		DIST.	

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S&T
6 of 7

 INDICATES SOLDER MASK REWORK

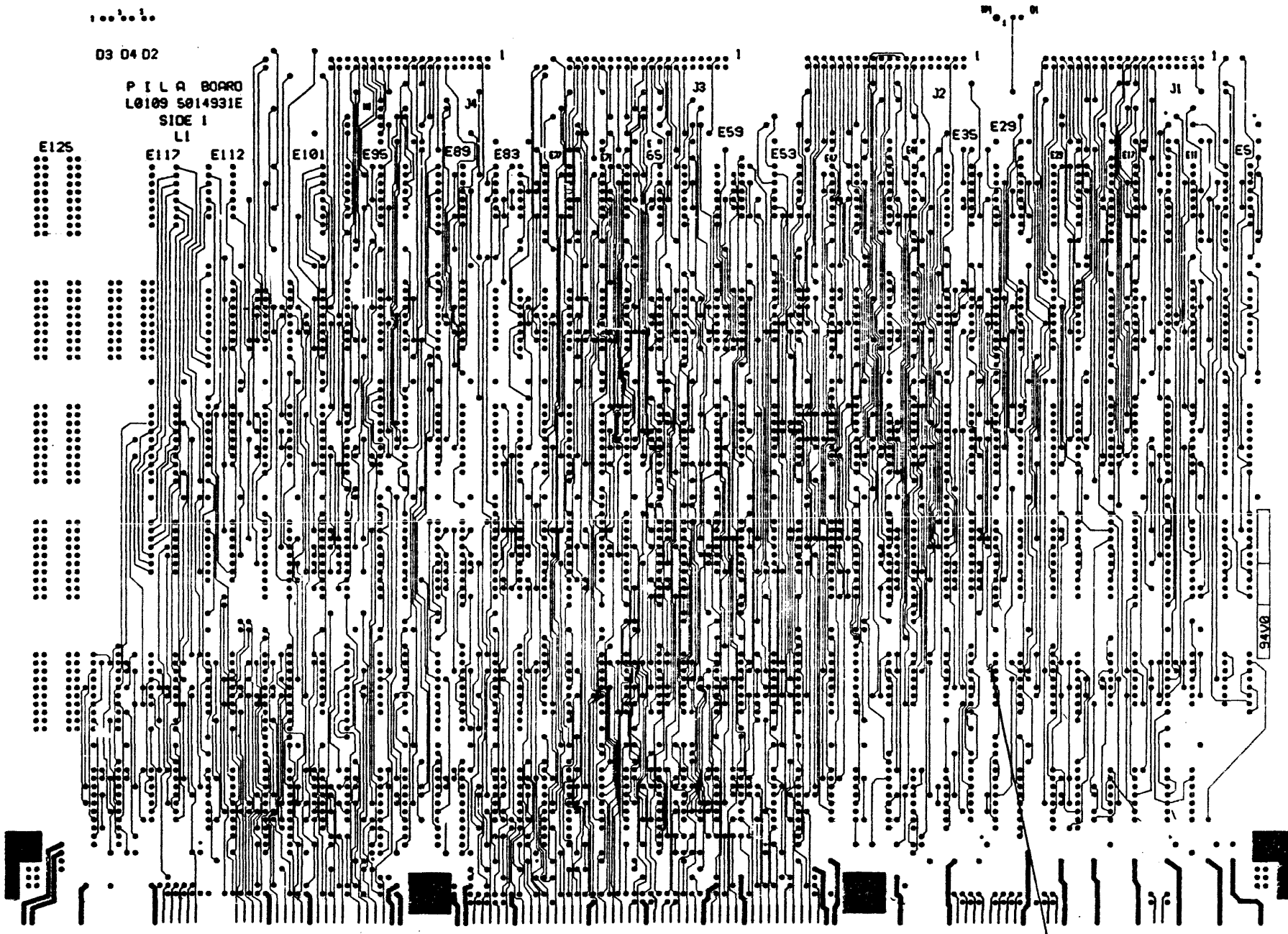
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5/17/77

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REVISIONS		REV
CHK	CHANGE NO.	E
RELEASE AT		F
REV E		
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B. HOLLAND		
1834009-CX001		
M.S. 14 JUNE 83		
S. CHOW		
(See the Rev)		



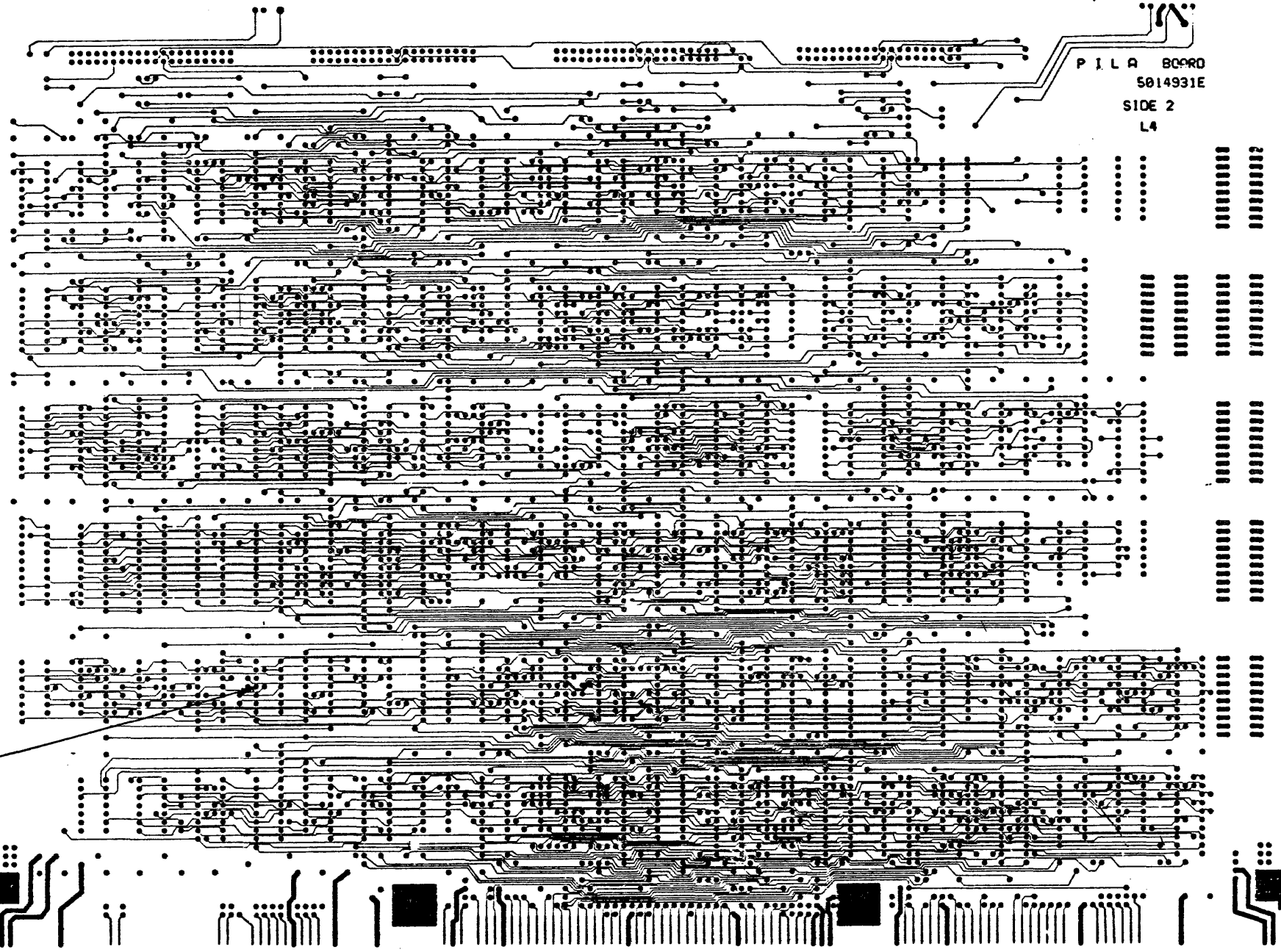
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DEC 5014931-0-0

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142

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DEC 5014931-0-E 2



PILA BOARD
 5014931E
 SIDE 2
 L4

1-5

REVISIONS		
CHK	CHANGE NO	REV

TITLE		SIZE CODE		NUMBER		REV.
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SCALE 1.5/1		SHEET 2 OF 3		DIST.		

DEC 5014931-0-0

SAF
 242

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(X & Y COORDINATES ARE FROM H MASTER "0")

ECO L0109-CX001

ETCH CUTS: SIDE 1

I-4. DISCONNECT E25-3, (X=6300, Y=5200).

ETCH CUTS: SIDE 2

I-5. DISCONNECT E25-11, (X=6000, Y=5100).

REWORK TERMS:

DISCONNECT-SEPARATE THE COMPONENT LEG FROM EXISTING ETCH CONNECTIONS OF THE MODULE BY EITHER BREAKING ETCH CONTINUITY TO THE PTH, OR BY DRILLING (SEE BELOW) THE PTH ITSELF, OR OTHER SUITABLE PROCEDURE.

DRILL-PRIOR TO INSTALLING COMPONENT, DRILL HOLE WITH .059 (.050-.060) INCH BIT. APPLY EPOXY IN THE HOLE AND LET CURE. DRILL THE CENTER OF EPOXY WITH .038 (.030-.040) INCH BIT.

REVISIONS		
CHK	CHANGE NO.	REV.

TITLE ETCH CUT DRAWING		SIZE CODE DEC	NUMBER 5014931-0-E	REV. F
SCALE --	SHEET 3 OF 3	DIST.		

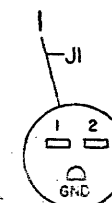
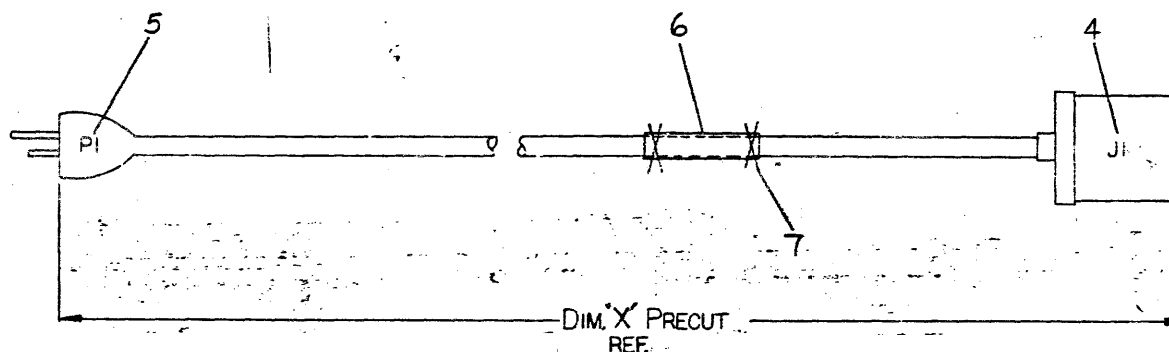
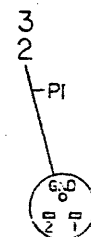
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WIRE TABLE						
ITEM NO	DESCRIPTION	FROM	TO	REMARKS		
NO	AWG	COLOR	CONN WITH	CONN WITH		
2	—	BLK	PI-1	J1-1		
OR	—	WHT	PI-2	J1-2		
3	—	GRN	PI-GND	J1-GND		

LEGEND	
NUMBER	DIM X VARIATION
7011432-1	3 FT ± 1.5 IN.
7011432-2	6 FT ± 3.0 IN.
7011432-3	9 FT ± 3.0 IN.

NOTES:

1. POWER CORD INSULATED JACKET SHALL BE CAPTIVE WITHIN THE RECEPTACLE (ITEM #1) STRAIN RELIEF WITH NO WIRE INSULATION VISIBLE.



REV	DATE	BY
1	01/14/75	000001 A
2	01/14/75	000001 A
3	01/14/75	000001 A
4	01/14/75	000001 A
5	01/14/75	000001 A
6	01/14/75	000001 A
7	01/14/75	000001 A
8	01/14/75	000001 A

2	2	2	TIES, CABLE	9007031	7
1	1	1	LABEL, CABLE I.D.	9009532	6
1	1	1	POWER HARN. DECAL (WHT/CLR)	A-DC-7409372-1-0	5
1	1	1	POWER CONN DECAL (WHT/CLR)	A-DC-7409373-1-0	4
1	1	1	POWER CORD 230V	1700016-09	3
1	1	1	POWER CORD 230V	1700016-06	2
1	1	1	RECEPTACLE, AC 3WIRE	9009355	1

7011432-3	7011432-2	7011432-1
UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES		
ANGLES 16° 30'	CLASS OF ACCURACY	NOMINAL DIMENSION RANGE INCHES
SURFACE QUALITY	CHECK DIMS	0.00 0.01 0.02 0.03 0.04 0.05 0.06 0.07 0.08 0.09 0.10 0.12 0.15 0.20 0.25 0.30 0.35 0.40 0.50 0.60 0.70 0.80 0.90 1.00 1.25 1.50 2.00 2.50 3.00 4.00 5.00 6.00 8.00 10.00 12.50 15.00 20.00 25.00 30.00 35.00 40.00 45.00 50.00 60.00 70.00 80.00 90.00 100.00 125.00 150.00 175.00 200.00 250.00 300.00 350.00 400.00 450.00 500.00 600.00 700.00 800.00 900.00 1000.00 1250.00 1500.00 1750.00 2000.00 2500.00 3000.00 3500.00 4000.00 4500.00 5000.00 6000.00 7000.00 8000.00 9000.00 10000.00 12500.00 15000.00 17500.00 20000.00 25000.00 30000.00 35000.00 40000.00 45000.00 50000.00 60000.00 70000.00 80000.00 90000.00 100000.00 125000.00 150000.00 175000.00 200000.00 250000.00 300000.00 350000.00 400000.00 450000.00 500000.00 600000.00 700000.00 800000.00 900000.00 1000000.00 1250000.00 1500000.00 1750000.00 2000000.00 2500000.00 3000000.00 3500000.00 4000000.00 4500000.00 5000000.00 6000000.00 7000000.00 8000000.00 9000000.00 10000000.00 12500000.00 15000000.00 17500000.00 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NOTES:!

PART NO	VARIATION	REV
7020352-00	AS SHOWN	A2

1. UNLESS OTHERWISE NOTED ALL LENGTHS ARE IN INCHES.
2. CONNECTOR TO BE LABELED WITH COMPONENT IDENTIFIERS.

[illegible]

DO NOT REDUCE
6 IN
FOR MANUFACTURING PURPOSES ONLY

CAUTION: OFF SHEET PARTS LIST EXISTS.
SEE K-PL-7020352-0-DBP.

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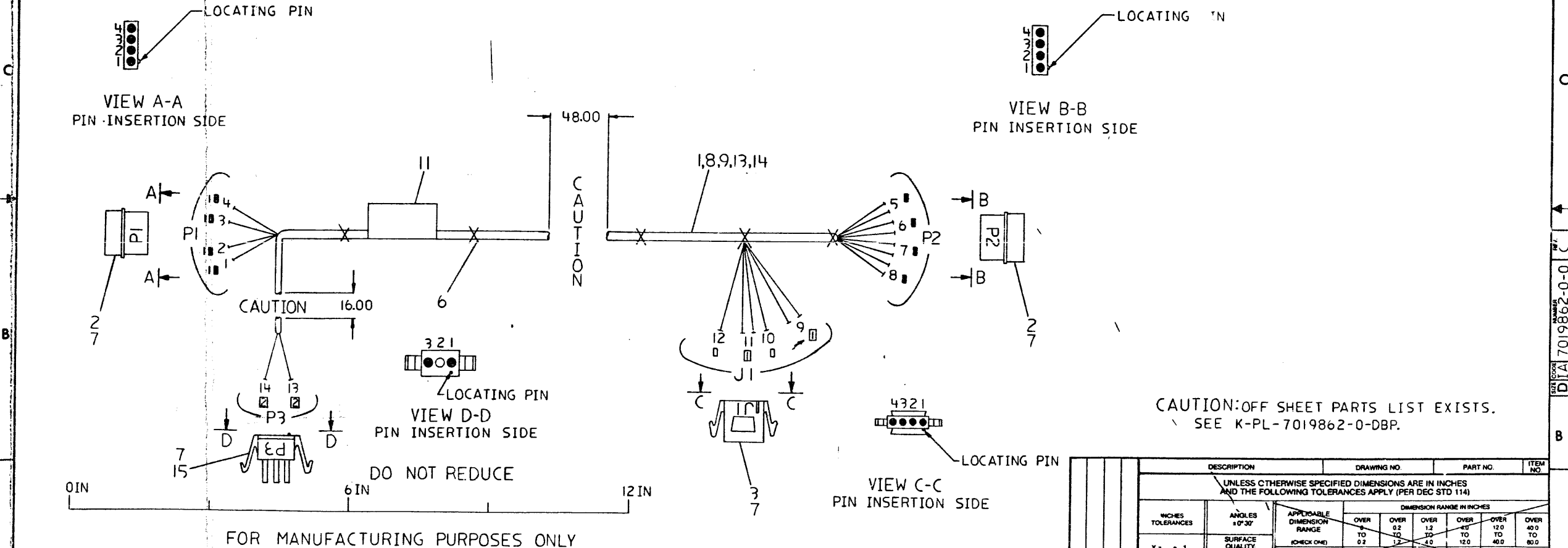
LINE	ITEM	TOP DOCUMENT	PART NUMBER	MIN REV	DESCRIPTION	QTY PER VARIATION
					VARIATION REVISION LEVEL:	00 A2
1	1		1214112-03		CONN,P+S 12POS(2X06).100CC HSG	1
2	2		1212167-02		MATE-N-LOK 02SKT(1X02).250CC HSG	1
3	3		9107789-02		WIRE,TWP 20AWG(07/28)PVC 300V	A/R
4	4		9107460-00		WIRE, 20AWG(07/28)IPVC 150V	A/R
5	5		1215121-04		CONN,P&S 01SKT 24-20AWG	6
6	6		1212170-00		MATE-N-LOK 01SKT 20-14AWG .08500	2
7	7		9007031-00	B	TIE,CABLE BUNDL.DIA 0- 3/4"=101	2
8	8	A-DC-7409872-0-0	7409872-02		PWR HARNESS DECAL, BLACK ON CLEA	1
9	9		3616073-00		LABEL,ID W/COPY VERTICAL	1
10	10		9107460-33		WIRE, 20AWG(07/28)IPVC 150V	A/R
11	11	A-DC-7409872-0-0	7409872-01		PWR HARNESS DECAL WHITE ON CLEAR	1

REVISION HISTORY			BASIC PART NO: 7020352		DRN: W. ALLEN		DATE: 1 OCT 82		D I G I T A L	
ENG	ECO NUMBER	REV	SECTION A OF 'A		CHK'D: G. F.		DATE: 10 DEC 82		TITLE PARTS LIST	
---	INITIAL	B	SECTION VARIATION INDEX		DES.ENG: P. CAPPABIANCA		DATE: 13 APR 83		DOCUMENT NUMBER	
PC	7020352-MR001	C	[A]00		RESP.ENG.: P. CAPPABIANCA		DATE: 13 APR 83		SIZE	CODE
			[B]		MFG.ENG.: J. MCCAFFERY		DATE: 11 APR 83		RELEASE DATE: 30-OCT-84	
			[C]		ASSEMBLY NUMBER:		TOP DOCUMENT NUMBER:		FILE NAME:	
			[D]		D-1A-7020352-0-0				Z5906C.PLS	
			[E]						EDIT #	
			[F]						13	

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8										C-0-2496102										6										5										4										3										2										1																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																															
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SYMBOLS		
ITEM NO.	SYMBOL	PART NO. (REF)
4	■	1209378-00
5	□	1209379-03
10	■	1209378-03
12	■	1209379-00
16	■	1212170-00



CAUTION: OFF SHEET PARTS LIST EXISTS.
SEE K-PL-7019862-0-DBP.

DESCRIPTION		DRAWING NO.		PART NO.		ITEM NO.
UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES AND THE FOLLOWING TOLERANCES APPLY (PER DEC STD 114)						
QUANTITY & VARIATION	W/CHES TOLERANCES X = .1 XX = .02 XXX = .005	ANGLES ± 0° 30'	SURFACE QUALITY ✓	APPLICABLE DIMENSION RANGE (CHECK ONE)		
				MICROINCHES		
THIRD ANGLE PROJECTION DO NOT SCALE DRAWING REMOVE BURRS AND BREAK SHARP CORNERS SEE PARTS LIST FINISH	DATE 16 NOV 82 DATE 14 DEC 82 DATE 14 APR 83 DATE 14 APR 83 DATE 14 APR 83	TITLE HARNESS, SWITCH VANE	DOCUMENT NUMBER 7019862-0-0	SCALE 1/1	SHEET 1	OF 1

REVISION HISTORY
ECO NUMBER
RELEASED
DATE

LINE ITEM TOP DOCUMENT PART NUMBER MIN REV DESCRIPTION QTY PER VARIATION
30

VARIATION REVISION LEVEL:

1	1		9107350-44	WIRE,	22AWG(07/30)IPVC 150V	A/R
2	2		1209351-04	MATE-N-LOK	04PIN(1X04).250CC HSG	2
3	3		1209350-04	MATE-N-LOK	04SKT(1X04).200CC HSG	1
4	4		1209378-00	MATE-N-LOK	01PIN 20-14AWG .0850D	4
5	5		1209379-03	MATE-N-LOK	01SKT 30-22AWG .0850D	2
6	6		9007031-00	TIE,CABLE BUNDL	DIA 3- 3/4"=101	A/R
7	7	A-DC-7409873-0-0	7409873-02	PWR CONN DECAL	BLACK DN CLEAR	1
8	8		9107350-33	WIRE,	22AWG(07/30)IPVC 150V	A/R
9	9		9107350-00	WIRE,	22AWG(07/30)IPVC 150V	A/R
10	10		1209378-03	MATE-N-LOK	01PIN 30-22AWG .0850D	4
11	11		3610073-00	LABEL,TD W/COPY	VERTICAL	1
12	12		1209379-00	MATE-N-LOK	01SKT 20-14AWG .0320D	2
13	13		9107360-33	WIRE,	18AWG(19/30)IPVC 150V	A/R
14	14		9107360-00	WIRE,	18AWG(19/30)IPVC 150V	A/R
15	15		1212167-00	MATE-N-LOK	03SKT(1X03).250CC HSG	1
16	16		1212170-00	MATE-N-LOK	01SKT 20-14AWG .0850D	2

REVISION HISTORY			BASIC PART NO: 7019862			DRN: JOE DONAHER			DATE: 15 NOV 82			DIGITAL		
ENG	ECO NUMBER	REV	SECTION A OF A			CHK'D: G. F.			DATE: 14 APR 83			TITLE PARTS LIST		
---	INITIAL	IC	SECTION.VARIATION INDEX			[A]00						HARNESS, SWITCH VANE		
			[B]			DES.ENG: P. CAPPABIANCA			DATE: 14 APR 83			DOCUMENT NUMBER		
			[C]									SIZE CODE NUMBER REV		
			[D]			RESP.ENG.: P. CAPPABIANCA			DATE: 14 APR 83			K PL 7019862-3-DBP C		
			[E]			APG.ENG.: J. MCCAFFERY			DATE: 11 APR 83			RELEASE DATE: 02-FEB-84		
			[F]			ASSEMBLY NUMBER:			TOP DOCUMENT NUMBER:			FILE NAME: EDIT #		
						ID-IA-7019862-0-0						Z5888C.PLS 9		
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[illegible]

NOTES:

[illegible]

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USED ON OPTION/MODEL		DRN.	TITLE										
KL10		M. Normand	25 Sept 81	VOLTAGE MONITOR BOARD									
		CHK'D											
		RW Carter	10 Oct 81										
		ENG.		SIZE	CODE	NUMBER					REV.		
		RE Joseph	10 Oct 81	B	DD	5414506-1					A		
		PROD.		SHEET		OF							
		Edwards	1 Oct 81										

MR

INITIAL RELEASE

A. CLIP OFF BOTH LEADS OF SWI-4
FLUSH WITH SWITCH BODY

B. INSERT SWITCH INTO 6 PIN'S AT
AT THE TOP RI.

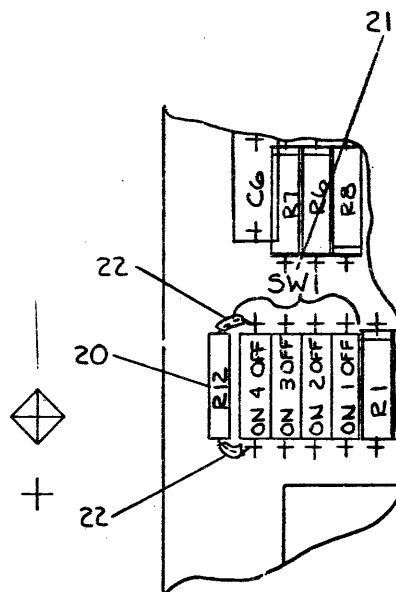
O-2 R12(P/N 1300447, 4.70K .25W 5.0%)

A. ADD TEFLON THIN WALL TUBING
(P/N 9107807-11 TO BOTH LEADS.

B. INSERT RIZ INTO 2 PTH'S BENEATH
SWI-4

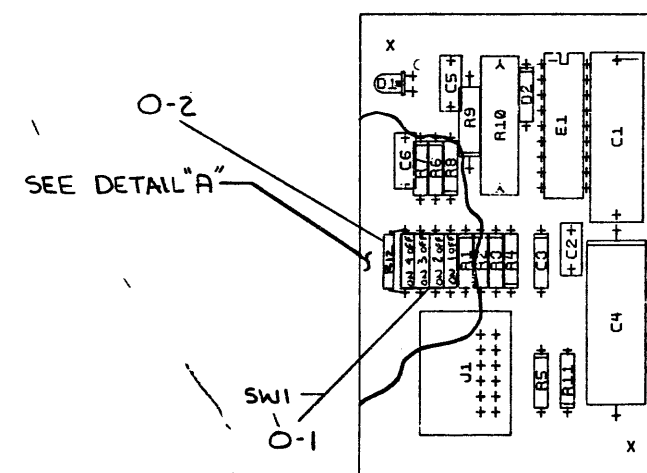
NOTE: DIRECTIONS ARE GIVEN WITH
RESPECT TO MODULE BEING
POSITIONED WITH CONNECTOR
J1 TOWARD USER.

INDICATE MODULE REVISION AS "A"



DETAIL "A"
INSTALLED SWITCH (SW1)

SWITCH SW1			
SWITCH POSITION	VOLTAGE		
	±20	±15	±5
1	OFF	OFF	ON
2	OFF	ON	OFF
3	ON	OFF	OFF
4	NOT USED		



NOTES: 2ML74

CHK/CHANGE NO. REV.

STEP 6	↑ Y AXIS	3 rd	STEP 3	TIMES
REPEAT	→ X AXIS	26	STEP 4	TIMES

ETCH REV.

SIGNATURES

DATE _____

ORN. <i>M. Norwood</i>	22.500
------------------------	--------

CHK'D. RW Counter	10/28/
-------------------	--------

MECH. ENG. <i>RC</i>	10Cid P
2004 ENG	10Cid P

PROJ. ENG. *X4 Jorgensen*

SCALE 2/1

SHT. 1 OF 1

NEXT HIGHER ASSY. BDD 541-1505

	d	i	g	i	t	a
--	---	---	---	---	---	---

2	TITLE VOLTAGE
4	MONITOR EQ-R

SIZE	CODE	NUMBER
0	UA	5411506-1

1

MR 1 MS# 190515A

LINE ITEM	DOCUMENT NUMBER	PART NUMBER	DESCRIPTION	QTY PER VARIATION 01	REFERENCE DESIGNATOR
1	1	D-MD-5014505-0-0	5014505-00	DRILL AND ETCH BRD.	1
2	2		1000075-00	25 MFD 25V +75-10% AL EL	1
3	3		1000004-00	.02 MFD 100V 20% Z5U DISC	1
4	4		1001610-00	.01 MFD 50V +80-20% Z5U CER	1
5	5		1000080-00	50 MFD 50V +75-10% AL EL	1
6	6		1010274-01	.22 MFD 50V +80-20% Z5U CER	2
7	7		1117373-00	LED ASSY GREEN	1
8	8		1105796-00	1N 4004 PIV=400 I= 1A D041 SP	1
9	9		1217652-00	HEADER 12PIN RT ANGLE, DBL RO	1
10	10		1317925-00	6.98 K .25 W .10% RN55E-B 2	1
11	11		1317924-00	36.50 K .25 W .10% RN55E-B 2	1
12	12		1317923-00	51.10 K .25 W .10% RN55E-B 2	1
13	13		1317922-00	732.0 .25 W .10% RN55E-B 2	1
14	14		1305355-00	7.0 K .25 W .10% RN55C-B 5	1
15	15		1300365-00	1.0 K .25 W 5.0 % CC	2
16	16		1300250-00	150.0 .25 W 5.0 % CC	1
17	17		1300347-00	680.0 .50 W 5.0 % CC	1
18	18		1300368-00	1.0 K 1.0 W 5.0 % CC	1
19	19	SEE NOTE #1	1917657-00	3544J LOW-VOLT SUPERVISORY	1
20	20		1300447-00	4.70 K .25 W 5.0 % CC	2
21	21		1211164-00	SW, DIP 1P 1A 4POS	1
22	22		9107807-11	TURING, THIN WALL, .022ID UL	A/R

23 NOTE: 1. THIS PART CAN BE MARKED SG2544J/DEC3544J.

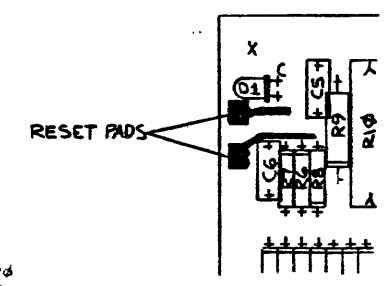
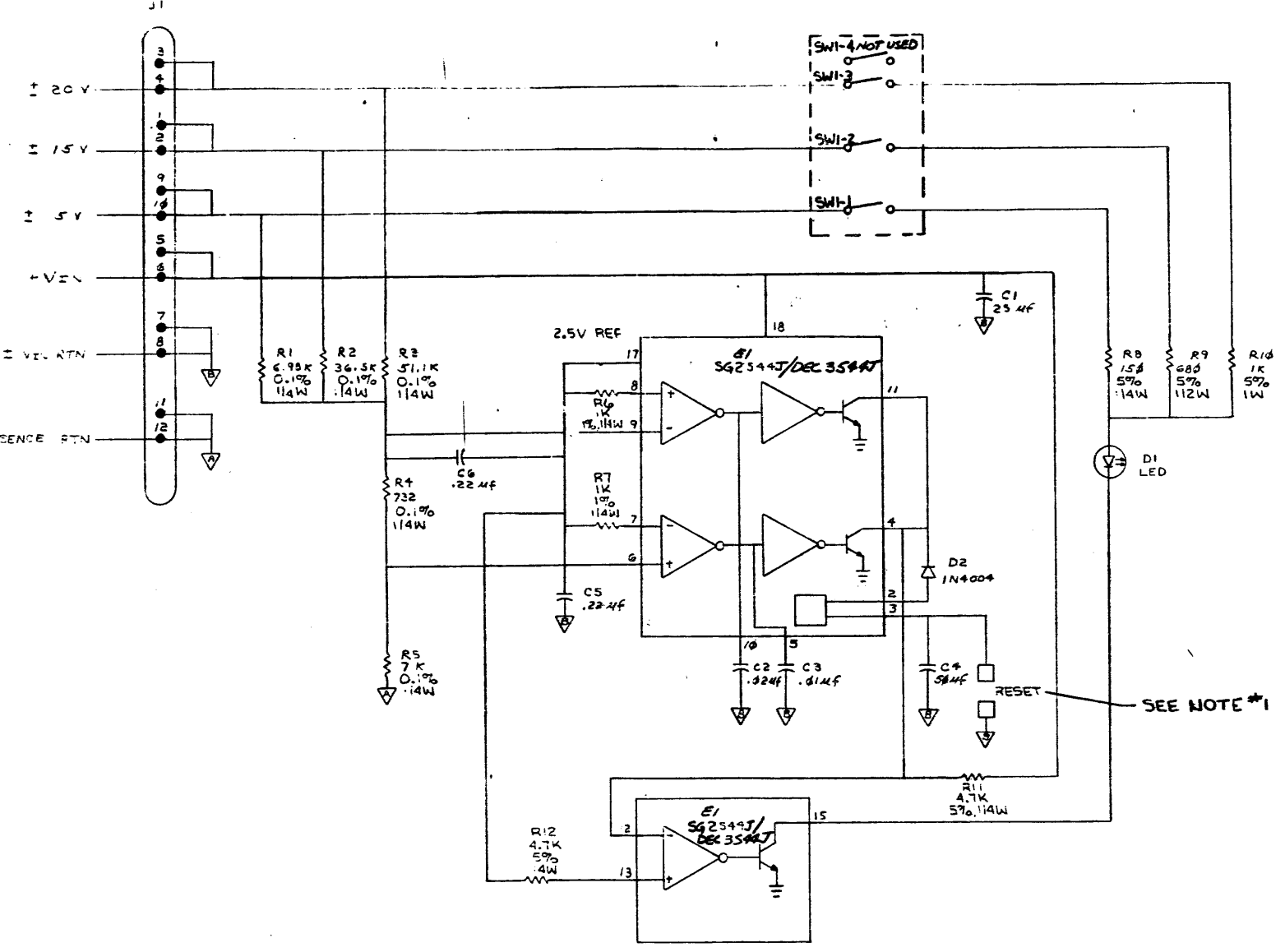
REVISION HISTORY		BASIC PART NO: 5414506		DRN: M. NORMAND	DATE: 22-SEP-81	D I G I T A L			
ENG	ECO NUMBER	REV	SECTION A OF A	CHK'D: R. W. CAUNTER	DATE: 1-OCT-81	TITLE PARTS LIST			
---	INITIAL	A	SECTION VARIATION INDEX	DES. ENG: R. JOSEPHSON	DATE: 1-OCT-81	5414506-01 VOLTAGE MONITOR BOARD			
			(A) 01	RESP. ENG: R. JOSEPHSON	DATE: 1-OCT-81	DOCUMENT NUMBER			
			(B)	MFG. ENG: T. CAVANAUGH	DATE: 1-OCT-81	SIZE	CODE	NUMBER	REV
			(C)	ASSEMBLY NUMBER:	TOP DOCUMENT NUMBER:	F	PL	5414506-1-DBP	A
			(D)	ID-UA-5414506-1-0	ID-DD-54145-1	FILE NAME:		EDIT #	
			(E)			23208A.PLS		4	
			(F)	THIS DRAWING AND SPECIFICATIONS HEREIN, ARE THE PROPERTY OF DIGITAL EQUIPMENT CORPORATION AND SHALL NOT BE REPRODUCED OR COPIED OR USED IN WHOLE OR IN PART AS THE BASIS FOR THE MANUFACTURE OR SALE OF ITEMS WITHOUT WRITTEN PERMISSION.					
			(G)	COPYRIGHT (C) 1981, DIGITAL EQUIPMENT CORPORATION					

MR

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NOTES:
1. JUMPER PADS TOGETHER TO RESET INDICATOR. RESET IS ALSO PROVIDED BY REMOVAL OF ALL POWER TO THE MODULE. RESET JUMPER MUST BE LESS THAN 100 OHMS MAXIMUM.

FROM HARNESS SEE NEXT HIGHER ASSY.



SWITCH POSITION	VOLTAGE
1	±20 ±15 ±5
2	OFF OFF ON
3	OFF ON OFF
4	ON OFF OFF
5	NOT USED

SWITCH SW1
CAUTION: ONLY ONE SWITCH MUST BE ON FOR PROPER OPERATION OF THIS BOARD.

DRN M. N. 10/28/81	FIRST USED ON	KL10	digital
CHK'D R. J. 10/28/81	TITLE	VOLTAGE MONITOR BOARD	
ENG. X. J. 10/28/81	PROJ. ENG. 10/28/81	SIZE	CODE
PROOFED 10/28/81	PROOFED 10/28/81	NUMBER	REV.
NEXT HIGHER ASSY.		B-CD-5414506-1	D
SCALE NONE		CS5414506-1-1	A
SHEET 1 OF 1		DIST.	

MR 1

DIGITAL EQUIPMENT CORPORATION
MAYNARD, MASSACHUSETTS

ENGINEERING SPECIFICATION

DATE
Sept. 22, 1981

TITLE VOLTAGE MONITOR

REVISIONS

REV	DESCRIPTION	CHG NO	ORIG	DATE	APPD BY	DATE

ENG *John Tivnan* APPD *John Joseph* SIZE A CODE SP NUMBER 5414506-1-2 REV A

DEC 16-1022-16-N370-1071
DRA 107

SHEET 1 of 5

ENGINEERING SPECIFICATION

CONTINUATION SHEET

TITLE VOLTAGE MONITOR

1.0 General

1.1 This is a specification for a voltage monitor printed circuit board.

When the input voltage to the module is within its range and the correct switch is placed in the "on" position, a green LED is illuminated.

When the voltage goes out of range either on an overvoltage or undervoltage condition, the green LED is extinguished and this fault is latched.

1.2 Reference Documents

DEC STD 102 - Environmental Standard.
D-UA-5414506-1-0 Voltage Monitor Board

2.0 Electrical Specifications

2.1 Input Voltages

The following voltage input ranges are acceptable for monitoring:

+5V	0- +7V DC
+15V	0- +20V DC
+20V	0- +25V DC
-5V	0- -7V DC
-15V	0- -20V DC
-20V	0- -25V DC

2.2 Power Source

This module will operate from a power source of -4.5V to -40V DC, or +4.5V to +40V DC.

2.3 Detection Band

This module will detect and extinguish the green LED display when the input voltage is out of the following bands:

SIZE A CODE SP NUMBER 5414506-1-2 REV A

DEC FORM NO EN-01022-16-N370-1081
DRA 108

SHEET 2 OF 5

ENGINEERING SPECIFICATION

CONTINUATION SHEET

TITLE VOLTAGE MONITOR

Switch	Voltage	Error Band (Fault when outside this range)
SW1-1	+/-5V	$\pm 5\% \pm 1.5\%$ (3.5% to 6.5%)
SW1-2	+/-15V	$\pm 5\% \pm 1.5\%$ (3.5% to 6.5%)
SW1-3	+/-20V	$\pm 5\% \pm 1.5\%$ (3.5% to 6.5%)

2.4 Reset

Reset pads are provided on the printed circuit board for local reset. Jumper reset pads together to reset the indicator. Reset is also provided by removal of all power to the module. Reset jumper must be less than 100 ohms maximum.

2.5 Turn-On Time Delay

An undervoltage fault will be disabled for 100 $\pm$ 20ms after the power source voltage is turned on.

2.6 Fault Duration

The over and/or under voltage condition must exist for a duration of time before detection.

Overvoltage Condition - 0.1 μ s
Undervoltage Condition - 0.2 μ s

2.7 Operating Power

Current drain is 16 ma during normal operation. Current drain during a fault condition is 22 ma.

2.8 Operating Voltage

Module will operate as long as power source voltage is greater than 4.5V. Duration of true indication may be lengthened by connecting power source voltage to a voltage higher than being monitored.

If the module is operated from the voltage it is monitoring, it will not indicate (at all) upon loss of the voltage.

3.0 Output

3.1 Indicator

Normal operation of the voltage is indicated by an illuminated green LED. Abnormal voltage is indicated by the lack of illumination by the green LED.

SIZE A CODE SP NUMBER 5414506-1-2 REV A

DEC FORM NO EN-01022-16-N370-1081
DRA 108

SHEET 3 OF 5

ENGINEERING SPECIFICATION

CONTINUATION SHEET

TITLE VOLTAGE MONITOR

4.0 Mechanical and Physical

4.1 Size - Printed circuit board 2.0 x 3.0 in. Maximum height is 0.5 in.

4.2 Weight

4.3 Mounting - Any position

4.4 Cooling - Natural convection.
Power may range from 100 mw to 650 mw depending upon power source voltage.

4.5 Temperature Range

- Per DEC Std 102 for Class B environment

4.6 Altitude - 8000 ft - operate

4.7 Vibration - Per DEC Std 102 Class B

4.8 Mechanical Shock - Per DEC Std 102

5.0 Reliability

MTBF goal is greater than 200,000 hours for ground benign environment per MIL - HDBK 217A based on parts count.

6.0 Safety

Not applicable

7.0 Input-Output Connector

J1 Part Number 12-17652-00 Mates with 12-14112-03 connector. Contacts in mating connector are 12-151121-00

Signals

J1-1	15V INPUT
J1-2	15V INPUT
J1-3	20V INPUT
J1-2	20V INPUT
J1-5	INPUT VOLTAGE
J1-6	INPUT VOLTAGE
J1-7	INPUT VOLTAGE RETURN
J1-8	INPUT VOLTAGE RETURN
J1-9	5V INPUT
J1-10	5V INPUT

SIZE A CODE SP NUMBER 5414506-1-2 REV A

DEC FORM NO EN-01022-16-N370-1081
DRA 108

SHEET 4 OF 5

ENGINEERING SPECIFICATION

digital

CONTINUATION SHEET

TITLE VOLTAGE MONITOR

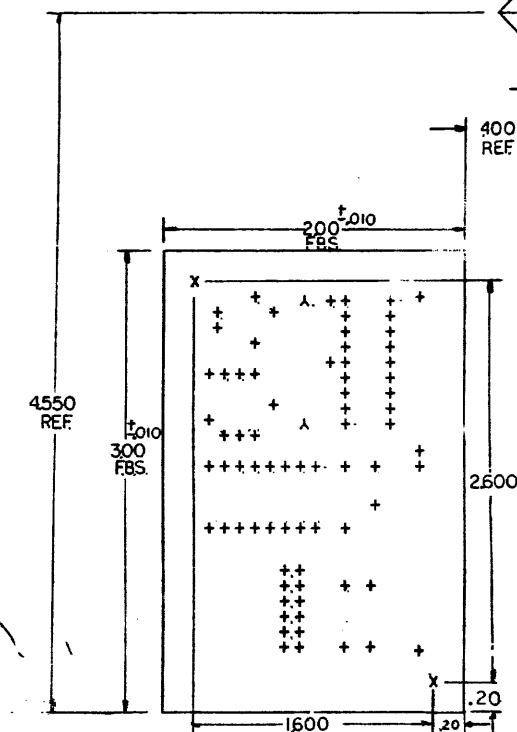
J1-11 SENSE VOLTAGE RETURN
J1-12 SENSE VOLTAGE RETURN

In addition, two printed circuit pads are provided for reset.

SIZE	CODE	NUMBER	REV
A	SP	5414506-1-2	A

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COMPONENT SIDE VIEW



NOTES: 2M174

STEP 6	→ Y AXIS	35	STEP 2 TIMES
REPORT	→ X AXIS	26	STEP 3 TIMES

CHANGE NO	REV	DIMENSIONAL TOLERANCE	
		INCHES	MILLIMETERS
		XXX = ±.005	
		XX = ±.020	
		X = ±.040	
		ANGLE = ±0° 30'	

HOLE DATA											
SYMBOL	+	A	X	+	Z	M	A	Q	+	*	
FIN HOLE SIZE	.042	.055	.141								
PLATED	X	X	OPT								
NON PLATED											
QTY.	74	2	2								
Q-OFF GRD HLE											
DRILL SIZE											
.025 GRID UNLESS INDICATED											

BOARD FABRICATION INFORMATION	
BOARD SIZE	10.6 QUAD
BOARD DATA	DWG. 8EMD-7605819-17-0
BOARD MAT'L	FL-EP-055-E 2/2
DEC. PS	11000000
QTY. OF LAYERS	2
PTH. X PRINT AND ETOH	
SOLDER MASK	NOSIDE 2 BOTH SIDES
GOLD. CONTRYS	NBOTTOM TBP

SIGNATURES		DATE
DRN.	<i>[Signature]</i>	5-18-60
CHK.	<i>[Signature]</i>	5-18-60
MECH. ENG.	<i>[Signature]</i>	5-18-60
PROJ. ENG.	<i>[Signature]</i>	5-18-60
PROD.	<i>[Signature]</i>	5-18-60
SCALE	2/1	
SHT.	1 OF 2	
NEXT HIGHER ASSY. DUA-5414505-0-0 ETOH REV. C		

digital

TITLE DRILL AND ETCH DRAWING

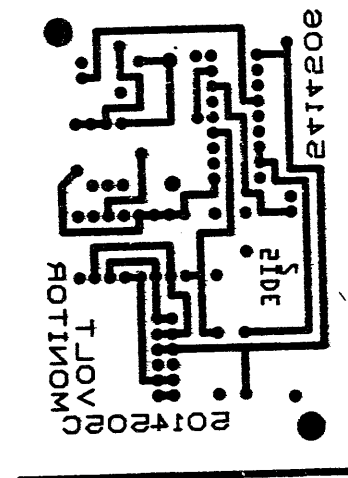
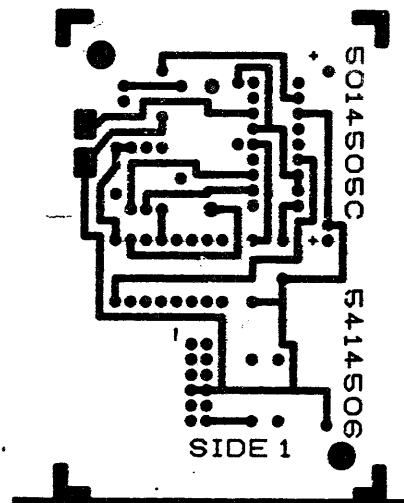
SIZE CODE NUMBER REV

.D MD 5014505-0-0A

ME 1 MS# 190515A

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DMD5014505-0-0 A 2



REVISIONS		
CHK	CHANGE NO.	REV

TITLE		SIZE	CODE	NUMBER		REV.
DRILL & ETCH DRAWING		D	MD	5014505-0-0		A
SCALE		2/1	SHEET 2 OF 2		DIST.	

MR 1

LINE ITEM DOCUMENT NUMBER

PART NUMBER

DESCRIPTION

QUANTITY PER VARIATION
10 20 45

1	1	D-AD-7018541-0-0	7018541-00	10 METER BNCI SUB -ASSY	2	0	0
2	2		3618803-01	LABEL, CABLE CI780 RX	2	0	0
3	3		3618807-01	LABEL, MARKER 1-16, A+B	2	0	0
4	4		3618808-02	LABEL, CABLE CI780 TX	2	0	0
5	5	D-AD-7018541-0-0	7018541-01	20 METER BNCI SUB-ASSY	0	0	0
6	6	D-AD-7018541-0-0	7018541-02	45 METER BNCI SUB-ASSY	0	0	0

REVISION HISTORY		BASIC PART NO: OBNCI		DRN:	R.J.RILEY	DATE:	19-NOV-81	D I G I T A L			
ENG!	ECO NUMBER	REV	SECTION A OF A	CHK'D: M.BAPTISTE		DATE:	19-NOV-81	TITLE PARTS LIST			
---	INITIAL	A	SECTION. VARIATION INDEX	[A] 10,20,45				BNCI CABLE ASSEMBLY			
			[B]	DES.ENG.: G.NORTON		DATE:	19-NOV-81	DOCUMENT NUMBER			
			[C]	RESP.ENG.: R.NUEBLING		DATE:	19-NOV-81	SIZE CODE NUMBER REV			
			[D]	MFG.ENG.: M.WARSHAW		DATE:	19-NOV-81	K	PL	BNCI-0-DBP	A
			[E]	ASSEMBLY NUMBER:		TOP DOCUMENT NUMBER:		FILE NAME:		EDIT #	
			[F]	D-UA-BNCI-0-0		E-UA-SC008-AA-0		Z3339A.PLS		9	

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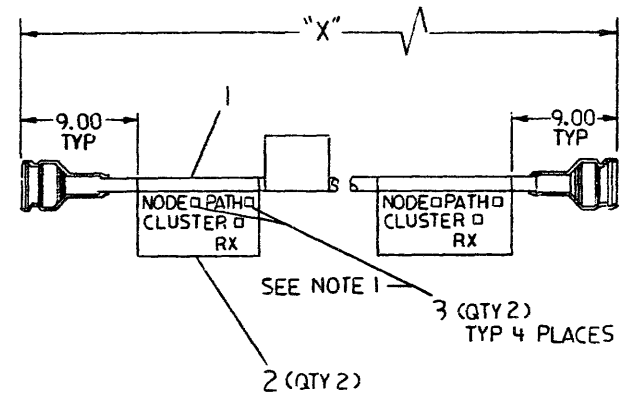
0-0-BNCI-0-DBP
REV. 1
DUA

LEGEND

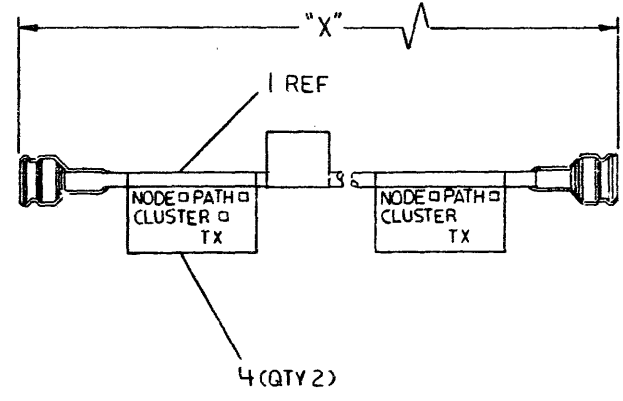
DWG NUMBER	DIM X (REF)		REMARKS
	FEET	METERS	
BNCI-10	33 FT	10M	TX/RX
BNCI-20	66 FT	20M	TX/RX
BNCI-45	148 FT	45M	TX/RX

NOTES:

1. ITEM 3 TO BE PKGD WITH CABLES & PUT ON IN THE FIELD.



RX VARIATION



TX VARIATION

CAUTION: SEE OFF SHEETS PARTS LIST
K-PL-BNCI-0-DBP (Z3339A)

REV.	DATE	ECO NUMBER

DESCRIPTION		DRAWING NO.		PART NO.		ITEM NO.	
UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES AND THE FOLLOWING TOLERANCES APPLY (PER DEC STD 114)							
INCHES TOLERANCES		ANGLES ± 0°30'		APPLICABLE DIMENSION RANGE		DIMENSION RANGE IN INCHES	
X = ± .1 XX = ± .02 XXX = ± .005		SURFACE QUALITY ✓ MICRONOTES		(CHECK ONE) ☐ ± .02 ☐ ± .004 ☐ ± .008		OVER 0 TO 0.2 OVER 0.2 TO 1.2 OVER 1.2 TO 4.0 OVER 4.0 TO 12.0 OVER 12.0 TO 40.0 OVER 40.0 TO 80.0 ± .03 ± .05 ± .10 ± .016 ± .024 ± .04	
QUANTITY & VARIATION		THIRD ANGLE PROJECTION		DATE 16 NOV 81		TITLE BNCI CABLE ASSY	
DO NOT SCALE DRAWING		DATE 20 JAN 82		DATE 20 JAN 82		DOCUMENT NUMBER	
REMOVE BURRS AND BREAK SHARP CORNERS		DATE 20 JAN 82		DATE 20 JAN 82		SCALE 1:1	
MATERIAL		DATE 20 JAN 82		DATE 20 JAN 82		SHEET 1 OF 1	
SEE PARTS LIST		DATE 20 JAN 82		DATE 20 JAN 82		REV. A	
FINISH		DATE 20 JAN 82		DATE 20 JAN 82		TW 1	

LINE ITEM DOCUMENT NUMBER

PART NUMBER

DESCRIPTION

QUANTITY PER VARIATION
10 20 45

1	1	D-AD-7018541-0-0	7018541-00	10 METER BNCI SUB -ASSY	2	0	0
5	5		3618803-01	LABEL, CABLE CI780 RX	0	0	0
5	5		3618807-01	LABEL, MARKER 1-16, A+B	0	0	0
5	5		3618808-02	LABEL, CABLE CI780 TX	0	0	0
5	5	D-AD-7018541-0-0	7018541-01	20 METER BNCI SUB-ASSY	0	0	0
5	5	D-AD-7018541-0-0	7018541-02	45 METER BNCI SUB-ASSY	0	0	0

REVISION HISTORY		BASIC PART NO: OBNCI		DRN: R.J.RILEY		DATE: 19-NOV-81		D I G I T A L	
ENG	ECO NUMBER	REV	SECTION A OF A	CHK'D: M.BAPTISTE		DATE: 19-NOV-81		TITLE PARTS LIST	
---	INITIAL	A	SECTION. VARIATION INDEX	DES.ENG.: G.NORTON		DATE: 19-NOV-81		BNCI CABLE ASSEMBLY	
			[A] 10,20,45	RESP.ENG.: R.NUEBLING		DATE: 19-NOV-81		DOCUMENT NUMBER	
			[B]	MFG.ENG.: M.WARSHAW		DATE: 19-NOV-81		SIZE CODE NUMBER REV	
			[C]	ASSEMBLY NUMBER:		TOP DOCUMENT NUMBER:		FILE NAME:	
			[D]	D-UA-BNCI-0-0		E-UA-SC008-AA-0		Z3339A.PLS	
			[E]					K PL BNCI-0-DBP A	
			[F]					EDIT # 9	

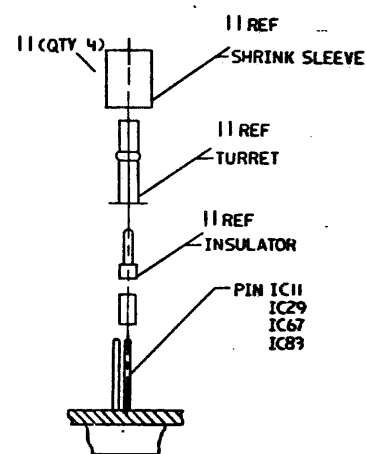
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A vertical bar is divided into four segments labeled A, B, C, and D from bottom to top. A horizontal line with a right-angle symbol is positioned between segments B and C.

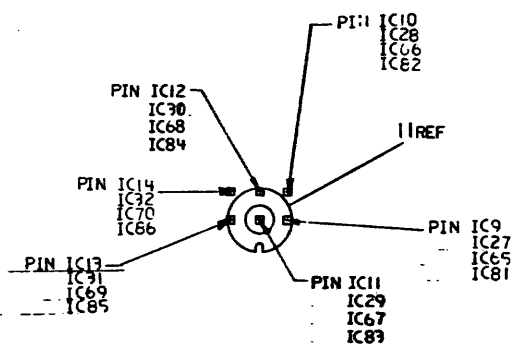
SIZE	CODE	NUMBER	REV.		
B	DD	5414293-0	A		

DRAWING NUMBER	PAGE	PART NO.	DESCRIPTION	REVISIONS
			ECO NUMBER	-
		5414793-00	MODULE REVISION	A1
E-UA-5414793-0-0	1		IPA 20-L BACKPANEL	A
K-PL-5414793-0-DBP	1		PARTS LIST, 5414793	A
D-CS-5414793-0-1	5		IPA20-L BACKPLANE INT CONN	A
K-PC-5414793-0-DBC	-		CALDEC DATA BASE	A
D-DD-5014792-0	1		DRAWING DIRECTORY, 5014792	A

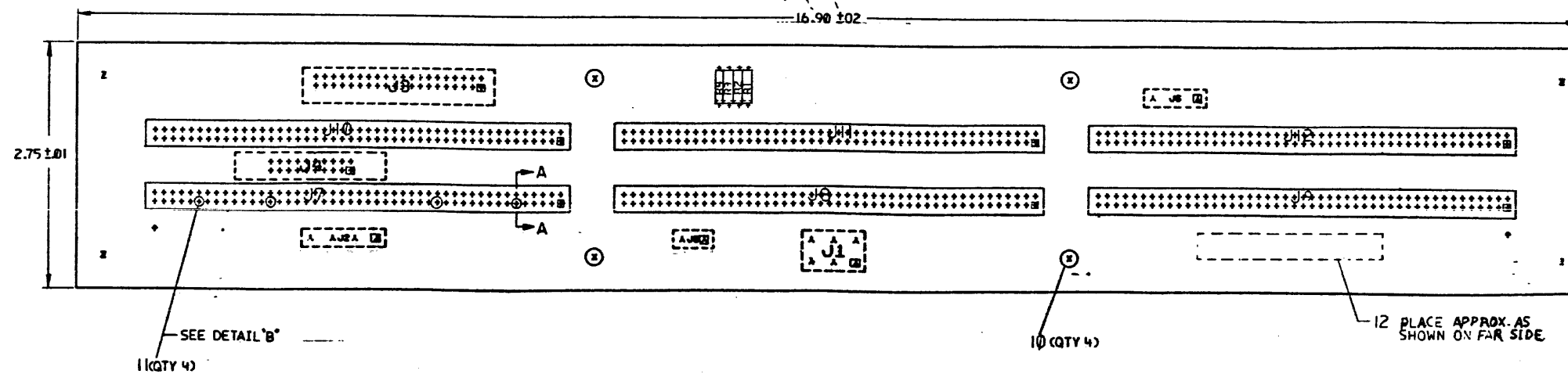
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8		7		6		5		4		3		2		1		MRO									



SECTION 'A-A'
SCALE: NONE



DETAIL 'B'
4 PLACES
SCALE:NONE



2 PLACE APPROX. AS
SHOWN ON FAR SIDE

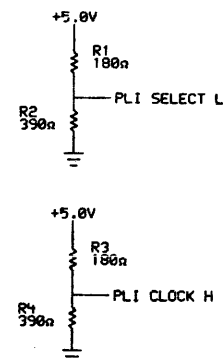
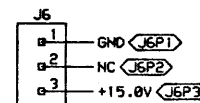
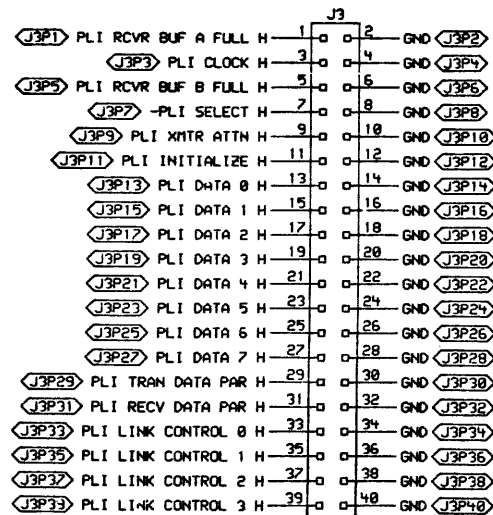
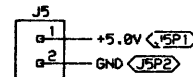
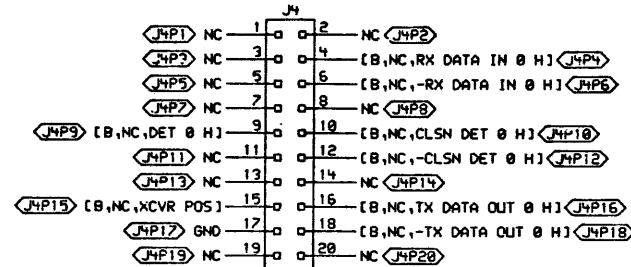
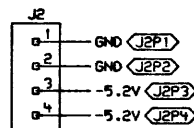
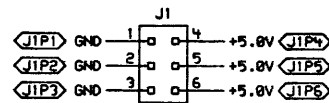
LINE	ITEM	TOP DOCUMENT	PART NUMBER	MIN REV	DESCRIPTION	QTY	PER VARIATION	REFERENCE DESIGNATOR
					VARIATION REVISION LEVEL:	00		
						A1		
1	1	D-MD-5014792-0-0	5014792-00		DRILL&ETCH DRAWING	1		
2	2		1300309-00		390.0 .25 W 5.0 % CF	2		R2,R4
3	3		1301322-00		180.0 .25 W 5.0 % CF	2		R1,R3
4	4		1212297-12		MATE-N-LOK 06PIN(2X03).250CC HDR	1		J1
5	5		1212297-15		MATE-N-LOK 04PIN(1X04).250CC HDR	1		J2
6	6		1220547-01		PCB HEADER 40PIN(2X20).100CC STR	1		J3
7	7		1217869-01	A	PCB,HEADER 20PIN(2X10).100CC STR	1		J4
8	8		1212297-10		MATE-N-LOK 02PIN(1X02).250CC HDR	1		J5
9	9		1212297-14		MATE-N-LOK 03PIN(1X03).250CC HDR	1		J6
10	10		9009150-02		INSERT,THREAD SLF-CLNCH	4		
11	11		1218506-00		CONN,COAX BKP 50 OHM PLUG CLAM	4		
12	12	A-DC-7411881-0-0	7411881-01		DECAL	1		
13	13		1218421-02		CARD EDGE 94PIN(2X47).100CC STR	6		J7-J12
14	14		9905016-04		CARTON,DIE CUT,SELF LOCK W/FOAM	1		

REVISION HISTORY			BASIC PART NO: 5414793			D I G I T A L		
ENG	ECO NUMBER	REV	SECTION A OF A	IDRN:	J. PLANTE	DATE: 14-SEP-82		
---	INITIAL	IA	SECTION VARIATION INDEX	CHK'D:	R.W. CAUNTER	DATE: 1-DEC-82	TITLE	PARTS LIST
			[A] 00				5414793	
			[B]				IPA 20-L BACKPLANE	
			[C]	DES.ENG:	P.CAPPABIANCA	DATE: 8-JUN-84	DOCUMENT NUMBER	
			[D]				SIZE	CODE
			[E]				NUMBER	REV
			[F]	RESP.ENG.:	P.CAPPABIANCA	DATE: 8-JUN-84	K	PL
			[G]				5414793-0-DBP	A
			[H]					
			[I]	MPG.ENG.:	S.RAYNE	DATE: 5-NOV-84	RELEASE DATE:	05-NOV-84
			[J]					
			[K]	ASSEMBLY NUMBER:		TOP DOCUMENT NUMBER:	FILE NAME:	EDIT #
			[L]	E-0A-5414793-0-0		D-DD-5414793-0	Z9869A.PLS	14
			[M]					
			[N]					

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IPA20-L POWER AND SIGNAL INTERCONNECTIONS

- NOTES: 1. THE VARIABLE FIELDS ARE DEFINED AS FOLLOWS:
[B, FIELD 1, FIELD 2]
FIELD 1 = CI20; FIELD 2 = NIA20
2. NO VARIABLE SIGNAL FIELD DENOTES A COMMON SIGNAL FOR BOTH CI/NIA 20.
3. FOR BACKPANEL WIRELISTER GENERATION/CONTROL, RUN THE FOLLOWING WD FILES WITH SW B=2:
IPAPWR.WD, BKPSL1.WD, AND BKPSL2.WD
4. FOR CI20 OR NIA20 BACKPANEL SIGNAL WIRELIST, RUN THE FOLLOWING WD FILES:
IPAPWR.WD, IPASLT1.WD, AND IPASLT2.WD
AND SET SW B=1 FOR CI20 AND B=2 FOR NIA20.



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REVISIONS		
CHK	CHANGE NO.	REV.

digital	DRW. <i>R. J. Eichmann</i>	DATE 10-JUL-84	ENG. R. J. EICHMANN	DATE 10-JUL-84	TITLE: IPA20-L		
	CHK'D D. DELLORCO	DATE 10-JUL-84	BOARD LOCATION: SHEET 1 OF 5		BACKPLANE INT CONN		
	XTRA: EICHMANN>IPAPWR.DRW 10-JUL-84 09:08 NEXT HIGHER ASSEMBLY:				SIZE	CODE	NUMBER
	FIRST USED ON OPTION/MODEL: IPA20-L				D	CS	5414793-0-1
							REV. A

MRO 1

L0100 (LINK) SIGNALS FOR SLOT 1 (CI20 ONLY)

A1	
(A1A1) NC 1	2 GND (A1A2)
(A1A3) +5.0V 3	4 +5.0V (A1A4)
(A1A5) NC 5	6 NC (A1A6)
(A1A7) NC 7	8 NC (A1A8)
(A1A9) NC 9	10 NC (A1A10)
(A1A11) NC 11	12 NC (A1A12)
(A1A13) NC 13	14 NC (A1A14)
(A1A15) NC 15	16 GND (A1A16)
(A1A17) NC 17	18 NC (A1A18)
(A1A19) NC 19	20 NC (A1A20)
(A1A21) NC 21	22 NC (A1A22)
(A1A23) GND 23	24 NC (A1A24)
(A1A25) NC 25	26 NC (A1A26)
(A1A27) NC 27	28 NC (A1A28)
(A1A29) NC 29	30 NC (A1A30)
(A1A31) NC 31	32 NC (A1A32)
(A1A33) GND 33	34 NC (A1A34)
(A1A35) NC 35	36 NC (A1A36)
(A1A37) NC 37	38 NC (A1A38)
(A1A39) NC 39	40 NC (A1A40)
(A1A41) NC 41	42 NC (A1A42)
(A1A43) NC 43	44 NC (A1A44)
(A1A45) NC 45	46 NC (A1A46)
(A1A47) NC 47	48 NC (A1A48)
(A1A49) NC 49	50 NC (A1A50)
(A1A51) NC 51	52 NC (A1A52)
(A1A53) NC 53	54 NC (A1A54)
(A1A55) NC 55	56 NC (A1A56)
(A1A57) NC 57	58 NC (A1A58)
(A1A59) NC 59	60 NC (A1A60)
(A1A61) GND 61	62 NC (A1A62)
(A1A63) NC 63	64 NC (A1A64)
(A1A65) NC 65	66 NC (A1A66)
(A1A67) NC 67	68 NC (A1A68)
(A1A69) NC 69	70 NC (A1A70)
(A1A71) NC 71	72 GND (A1A72)
(A1A73) NC 73	74 NC (A1A74)
(A1A75) NC 75	76 NC (A1A76)
(A1A77) NC 77	78 NC (A1A78)
(A1A79) GND 79	80 NC (A1A80)
(A1A81) NC 81	82 NC (A1A82)
(A1A83) NC 83	84 NC (A1A84)
(A1A85) NC 85	86 NC (A1A86)
(A1A87) NC 87	88 NC (A1A88)
(A1A89) NC 89	90 NC (A1A90)
(A1A91) +5.0V 91	92 GND (A1A92)
(A1A93) NC 93	94 NC (A1A94)

B1	
(B1B1) GND 1	2 NC (B1B2)
(B1B3) +5.0V 3	4 +5.0V (B1B4)
(B1B5) NC 5	6 NC (B1B6)
(B1B7) XTEND HOR L 7	8 ALTER DELTA TIME L (B1B8)
(B1B9) DISABLE ARB L 9	10 EXTEND ACK TO L (B1B10)
(B1B11) ILIK NODE ADDRESS 1 H 11	12 ILIK NODE ADDRESS 0 H (B1B12)
(B1B13) ILIK NODE ADDRESS 3 H 13	14 ILIK NODE ADDRESS 2 H (B1B14)
(B1B15) ILIK NODE ADDRESS 4 H 15	16 GND (B1B16)
(B1B17) ILIK NODE ADDRESS 6 H 17	18 ILIK NODE ADDRESS 5 H (B1B18)
(B1B19) ILIK NODE ADDRESS 7 H 19	20 PORT DATA 0 H (B1B20)
(B1B21) PORT DATA 1 H 21	22 PORT DATA 2 H (B1B22)
(B1B23) GND 23	24 PORT DATA 3 H (B1B24)
(B1B25) PORT DATA 5 H 25	26 PORT DATA 4 H (B1B26)
(B1B27) PORT DATA 7 H 27	28 PORT DATA 6 H (B1B28)
(B1B29) SELECT H 29	30 RCVR PACKET END H (B1B30)
(B1B31) LINK CONTROL 0 H 31	32 LINK CONTROL 1 H (B1B32)
(B1B33) GND 33	34 LINK CONTROL 2 H (B1B34)
(B1B35) INITIALIZE H 35	36 LINK CONTROL 3 H (B1B36)
(B1B37) ILIM RCVR A ENABLE H 37	38 ILIM RCVR B ENABLE H (B1B38)
(B1B39) ILIJ ICCS PATH B H 39	40 ILIV CRC STATUS H (B1B40)
(B1B41) ILIA PACKET LENGTH H 41	42 ILIN RCVR CLK H (B1B42)
(B1B43) RCVR BUFFERS FULL H 43	44 ILIC VALID RCVR STATUS H (B1B44)
(B1B45) NC 45	46 +5.0V (B1B46)
(B1B47) +5.0V 47	48 NC (B1B48)
(B1B49) ILIA VALID RCVR DATA (1) H 49	50 ILIF RCVR DATA PARITY (1) H (B1B50)
(B1B51) ILIF RCVR DATA 0 H 51	52 ILIF RCVR DATA 1 H (B1B52)
(B1B53) ILIF RCVR DATA 2 H 53	54 ILIF RCVR DATA 3 H (B1B54)
(B1B55) ILIF RCVR DATA 4 H 55	56 ILIF RCVR DATA 5 H (B1B56)
(B1B57) ILIF RCVR DATA 6 H 57	58 ILIF RCVR DATA 7 H (B1B58)
(B1B59) ILIL XMIT STATUS 7 (1) H 59	60 XMIT BUFFER EMPTY H (B1B60)
(B1B61) GND 61	62 ILIC XMIT DATA ENABLE (1) H (B1B62)
(B1B63) ILIL XMIT STATUS 0 H 63	64 ILIL XMIT ATTENTION (1) H (B1B64)
(B1B65) ILIL XMIT STATUS 2 H 65	66 ILIL XMIT STATUS 1 H (B1B66)
(B1B67) ILIB XMIT STATUS 4 (1) H 67	68 ILIL XMIT STATUS 3 (1) H (B1B68)
(B1B69) ILIL XMIT STATUS 6 (1) H 69	70 ILIL XMIT STATUS 5 (1) H (B1B70)
(B1B71) PORT CLK H 71	72 GND (B1B72)
(B1B73) XMIT DATA PARITY H 73	74 XMIT DATA 0 H (B1B74)
(B1B75) XMIT DATA 1 H 75	76 XMIT DATA 2 H (B1B76)
(B1B77) XMIT DATA 3 H 77	78 XMIT DATA 4 H (B1B78)
(B1B79) GND 79	80 XMIT DATA 5 H (B1B80)
(B1B81) XMIT DATA 7 H 81	82 XMIT DATA 6 H (B1B82)
(B1B83) DISABLE RCVR CLK L 83	84 RCVR TEST CLK L (B1B84)
(B1B85) ILIR XMIT CLK H 85	86 XMIT CLK DISABLE L (B1B86)
(B1B87) XMIT TEST CLK H 87	88 XMIT TEST CLK L (B1B88)
(B1B89) NC 89	90 GND (B1B90)
(B1B91) +5.0V 91	92 +5.0V (B1B92)
(B1B93) GND 93	94 GND (B1B94)

C1	
(C1C1) GND 1	2 -5.2V (C1C2)
(C1C3) +5.0V 3	4 NC (C1C4)
(C1C5) NC 5	6 NC (C1C6)
(C1C7) CIB XMIT SHIELD 7	8 CIB XMIT SHIELD (C1C8)
(C1C9) CIB XMIT SHIELD 9	10 CIB XMIT SHIELD (C1C10)
(C1C11) CIB XMIT 11	12 CIB XMIT SHIELD (C1C12)
(C1C13) CIB XMIT SHIELD 13	14 CIB XMIT SHIELD (C1C14)
(C1C15) NC 15	16 NC (C1C16)
(C1C17) NC 17	18 NC (C1C18)
(C1C19) GND 19	20 GND (C1C20)
(C1C21) NC 21	22 NC (C1C22)
(C1C23) NC 23	24 NC (C1C24)
(C1C25) CIA XMIT SHIELD 25	26 CIA XMIT SHIELD (C1C26)
(C1C27) CIA XMIT SHIELD 27	28 CIA XMIT SHIELD (C1C28)
(C1C29) CIA XMIT 29	30 CIA XMIT SHIELD (C1C30)
(C1C31) CIA XMIT SHIELD 31	32 CIA XMIT SHIELD (C1C32)
(C1C33) NC 33	34 NC (C1C34)
(C1C35) NC 35	36 NC (C1C36)
(C1C37) NC 37	38 NC (C1C38)
(C1C39) GND 39	40 GND (C1C40)
(C1C41) NC 41	42 NC (C1C42)
(C1C43) NC 43	44 NC (C1C44)
(C1C45) -5.2V 45	46 -5.2V (C1C46)
(C1C47) -5.2V 47	48 GND (C1C48)
(C1C49) NC 49	50 NC (C1C50)
(C1C51) NC 51	52 NC (C1C52)
(C1C53) GND 53	54 GND (C1C54)
(C1C55) NC 55	56 NC (C1C56)
(C1C57) NC 57	58 NC (C1C58)
(C1C59) NC 59	60 NC (C1C60)
(C1C61) NC 61	62 NC (C1C62)
(C1C63) CIB RCVR SHIELD 63	64 CIB RCVR SHIELD (C1C64)
(C1C65) CIB RCVR SHIELD 65	66 CIB RCVR SHIELD (C1C66)
(C1C67) CIB RCVR 67	68 CIB RCVR SHIELD (C1C68)
(C1C69) CIB RCVR SHIELD 69	70 CIB RCVR SHIELD (C1C70)
(C1C71) NC 71	72 NC (C1C72)
(C1C73) NC 73	74 NC (C1C74)
(C1C75) GND 75	76 GND (C1C76)
(C1C77) NC 77	78 NC (C1C78)
(C1C79) CIA RCVR SHIELD 79	80 CIA RCVR SHIELD (C1C80)
(C1C81) CIA RCVR SHIELD 81	82 CIA RCVR SHIELD (C1C82)
(C1C83) CIA RCVR 83	84 CIA RCVR SHIELD (C1C84)
(C1C85) CIA RCVR SHIELD 85	86 CIA RCVR SHIELD (C1C86)
(C1C87) NC 87	88 NC (C1C88)
(C1C89) -5.2V 89	90 -5.2V (C1C90)
(C1C91) +5.0V 91	92 +5.0V (C1C92)
(C1C93) GND 93	94 GND (C1C94)

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REVISIONS		
CHK	CHANGE NO.	REV

digital
CHK'D
D. DELLORCO

DATE 10-JUL-84
DATE 10-JUL-84
NEXT HIGHER ASSEMBLY: IP20-L

ENG. J. EICHMANN
DATE 10-JUL-84
BOARD LOCATION: 5
TITLE: IP20-L
BACKPLANE INT CONN
SIZE CODE D CS
NUMBER 5414793-0-1
REV. A

L0109 (PILA) SIGNALS FOR SLOT 2 (B FIELD #1)
L0072 (NIA) SIGNALS FOR SLOT 2 (B FIELD #2)

(A2A1)	NC	1	2	GND	(A2A2)
(A2A3)	+5.0V	3	4	+5.0V	(A2A4)
(A2A5)	NC	5	6	NC	(A2A6)
(A2A7)	NC	7	8	NC	(A2A8)
(A2A9)	NC	9	10	NC	(A2A10)
(A2A11)	NC	11	12	NC	(A2A12)
(A2A13)	GND	13	14	NC	(A2A14)
(A2A15)	NC	15	16	GND	(A2A16)
(A2A17)	NC	17	18	NC	(A2A18)
(A2A19)	NC	19	20	NC	(A2A20)
(A2A21)	NC	21	22	NC	(A2A22)
(A2A23)	GND	23	24	NC	(A2A24)
(A2A25)	NC	25	26	NC	(A2A26)
(A2A27)	NC	27	28	NC	(A2A28)
(A2A29)	NC	29	30	NC	(A2A30)
(A2A31)	NC	31	32	NC	(A2A32)
(A2A33)	GND	33	34	NC	(A2A34)
(A2A35)	NC	35	36	NC	(A2A36)
(A2A37)	NC	37	38	NC	(A2A38)
(A2A39)	NC	39	40	NC	(A2A40)
(A2A41)	NC	41	42	NC	(A2A42)
(A2A43)	GND	43	44	NC	(A2A44)
(A2A45)	NC	45	46	NC	(A2A46)
(A2A47)	NC	47	48	NC	(A2A48)
(A2A49)	NC	49	50	NC	(A2A50)
(A2A51)	GND	51	52	NC	(A2A52)
(A2A53)	NC	53	54	NC	(A2A54)
(A2A55)	NC	55	56	NC	(A2A56)
(A2A57)	NC	57	58	NC	(A2A58)
(A2A59)	NC	59	60	NC	(A2A60)
(A2A61)	GND	61	62	NC	(A2A62)
(A2A63)	NC	63	64	NC	(A2A64)
(A2A65)	NC	65	66	NC	(A2A66)
(A2A67)	NC	67	68	NC	(A2A68)
(A2A69)	NC	69	70	NC	(A2A70)
(A2A71)	NC	71	72	GND	(A2A72)
(A2A73)	NC	73	74	NC	(A2A74)
(A2A75)	NC	75	76	NC	(A2A76)
(A2A77)	NC	77	78	NC	(A2A78)
(A2A79)	GND	79	80	NC	(A2A80)
(A2A81)	NC	81	82	GND	(A2A82)
(A2A83)	NC	83	84	NC	(A2A84)
(A2A85)	NC	85	86	[B,NC,XCVR NEG]	(A2A86)
(A2A87)	NC	87	88	NC	(A2A88)
(A2A89)	NC	89	90	[B,NC,XCVR POS]	(A2A90)
(A2A91)	+5.0V	91	92	GND	(A2A92)
(A2A93)	NC	93	94	NC	(A2A94)

(B2B1)	GND	1	2	NC	(B2B2)
(B2B3)	+5.0V	3	4	+5.0V	(B2B4)
(B2B5)	NC	5	6	NC	(B2B6)
(B2B7)	[B,RCVR BUFFERS FULL H,NC]	7	8	NC	(B2B8)
(B2B9)	[B,DISABLE ARB L,NC]	9	10	[B,ILIK NODE ADDRESS 3 H,NC]	(B2B10)
(B2B11)	[B,ILIK NODE ADDRESS 1 H,NC]	11	12	[B,ILIK NODE ADDRESS 0 H,NC]	(B2B12)
(B2B13)	[B,NC,GND]	13	14	[B,ILIK NODE ADDRESS 2 H,NC]	(B2B14)
(B2B15)	[B,ILIK NODE ADDRESS 4 H,NC]	15	16	GND	(B2B16)
(B2B17)	[B,ILIK NODE ADDRESS 6 H,NC]	17	18	[B,ILIK NODE ADDRESS 5 H,NC]	(B2B18)
(B2B19)	[B,ILIK NODE ADDRESS 7 H,NC]	19	20	PORT DATA 0 H	(B2B20)
(B2B21)	PORT DATA 1 H	21	22	PORT DATA 2 H	(B2B22)
(B2B23)	GND	23	24	PORT DATA 3 H	(B2B24)
(B2B25)	PORT DATA 5 H	25	26	PORT DATA 4 H	(B2B26)
(B2B27)	PORT DATA 7 H	27	28	PORT DATA 6 H	(B2B28)
(B2B29)	[B,SELECT H,NC]	29	30	[B,RCVR PACKET END H,NC]	(B2B30)
(B2B31)	LINK CONTROL 0 H	31	32	LINK CONTROL 1 H	(B2B32)
(B2B33)	GND	33	34	LINK CONTROL 2 H	(B2B34)
(B2B35)	INITIALIZE H	35	36	LINK CONTROL 3 H	(B2B36)
(B2B37)	[B,ILIN RCVR A ENABLE H,NC]	37	38	[B,ILIN RCVR B ENABLE H,NC]	(B2B38)
(B2B39)	[B,ILIJ ICCS PATH 0 H,NC]	39	40	[B,ILIV CRC STATUS H,NC]	(B2B40)
(B2B41)	NC	41	42	[B,ILIN RCVR CLK H,NC]	(B2B42)
(B2B43)	[B,NC,GND]	43	44	[B,ILIC VALID RCVR STATUS H,NC]	(B2B44)
(B2B45)	NC	45	46	+5.0V	(B2B46)
(B2B47)	+5.0V	47	48	[B,ILIF RCVR DATA 0 H,NC]	(B2B48)
(B2B49)	[B,ILIA VALID RCVR DATA (1) H,NC]	49	50	[B,ILIF RCVR DATA PARITY (1) H,NC]	(B2B50)
(B2B51)	[B,NC,GND]	51	52	[B,ILIF RCVR DATA 1 H,NC]	(B2B52)
(B2B53)	[B,ILIF RCVR DATA 2 H,NC]	53	54	[B,ILIF RCVR DATA 3 H,NC]	(B2B54)
(B2B55)	[B,ILIF RCVR DATA 4 H,NC]	55	56	[B,ILIF RCVR DATA 5 H,NC]	(B2B56)
(B2B57)	[B,ILIF RCVR DATA 6 H,NC]	57	58	[B,ILIF RCVR DATA 7 H,NC]	(B2B58)
(B2B59)	[B,ILIL XMIT STATUS 7 (1) H,NC]	59	60	[B,XMIT BUFFER EMPTY H,NC]	(B2B60)
(B2B61)	GND	61	62	[B,ILIC XMIT DATA ENABLE (1) H,NC]	(B2B62)
(B2B63)	[B,ILIL XMIT STATUS 0 H,NC]	63	64	[B,ILIL XMIT ATTENTION (1) H,NC]	(B2B64)
(B2B65)	[B,ILIL XMIT STATUS 2 H,NC]	65	66	[B,ILIL XMIT STATUS 1 H,NC]	(B2B66)
(B2B67)	[B,ILIL XMIT STATUS 4 (1) H,NC]	67	68	[B,ILIL XMIT STATUS 3 (1) H,NC]	(B2B68)
(B2B69)	[B,ILIL XMIT STATUS 6 (1) H,NC]	69	70	[B,ILIL XMIT STATUS 5 (1) H,NC]	(B2B70)
(B2B71)	[B,PORT CLK H,NC]	71	72	GND	(B2B72)
(B2B73)	[B,XMIT DATA PARITY H,NC]	73	74	[B,XMIT DATA 0 H,NC]	(B2B74)
(B2B75)	[B,XMIT DATA 1 H,NC]	75	76	[B,XMIT DATA 2 H,NC]	(B2B76)
(B2B77)	[B,XMIT DATA 3 H,NC]	77	78	[B,XMIT DATA 4 H,NC]	(B2B78)
(B2B79)	GND	79	80	[B,XMIT DATA 5 H,NC]	(B2B80)
(B2B81)	[B,XMIT DATA 7 H,NC]	81	82	[B,XMIT DATA 6 H,NC]	(B2B82)
(B2B83)	NC	83	84	NC	(B2B84)
(B2B85)	[B,ILIR XMIT CLK H,NC]	85	86	NC	(B2B86)
(B2B87)	NC	87	88	NC	(B2B88)
(B2B89)	NC	89	90	GND	(B2B90)
(B2B91)	+5.0V	91	92	+5.0V	(B2B92)
(B2B93)	GND	93	94	GND	(B2B94)

	(C2C1)	GND	1	2	[B,NC,-5.2V] (C2C2)
	(C2C3)	+5.0V	3	4	[B,+5.0V,NC] (C2C4)
(C2C5)	PLI INITIALIZE H	5	6	PLI SELECT L (C2C6)	
(C2C7)	PLI LINK CONTROL 0 H	7	8	PLI LINK CONTROL 1 H (C2C8)	
(C2C9)	PLI LINK CONTROL 2 H	9	10	PLI LINK CONTROL 3 H (C2C10)	
(C2C11)	PLI DATA 0 H	11	12	PLI DATA 1 H (C2C12)	
(C2C13)	[B,NC,GND]	13	14	PLI DATA 3 H (C2C14)	
(C2C15)	PLI DATA 4 H	15	16	GND (C2C16)	
(C2C17)	PLI DATA 6 H	17	18	PLI DATA 7 H (C2C18)	
(C2C19)	PLI TRAN DATA PAR H	19	20	PLI RCVR DATA PAR H (C2C20)	
(C2C21)	PLI DATA 5 H	21	22	PLI DATA 2 H (C2C22)	
(C2C23)	GND	23	24	PLI CLOCK H (C2C24)	
(C2C25)	BUFFER B BUS H	25	26	PLI XMIT ATTN H (C2C26)	
(C2C27)	PLI RCVR BUF A FULL H	27	28	PLI RCVR BUF B FULL H (C2C28)	
(C2C29)	[B,DISABLE ARB L,NC]	29	30	NC (C2C30)	
(C2C31)	[B,FIRST BUFFER H,NC]	31	32	BUFFER A BUS H (C2C32)	
(C2C33)	GND	33	34	[B,RCVR B ENABLE H,NC] (C2C34)	
[B,CRC ERROR H,PLI CRC ERR H]	(C2C35)	35	36	[B,RCVR A ENABLE H,NC] (C2C36)	
(C2C37)	XMIT BUSY H	37	38	ACK H (C2C38)	
(C2C39)	[B,DEST BUSY H,NC]	39	40	[B,ARBITRATE H,NC] (C2C40)	
(C2C41)	XMIT ABORT H	41	42	COA H (C2C42)	
(C2C43)	[B,NC,GND]	43	44	XBUF PE H (C2C44)	
(C2C45)	[B,NC,-5.2V]	45	46	[B,NC,-5.2V] (C2C46)	
(C2C47)	[B,NC,-5.2V]	47	48	GND (C2C48)	
(C2C49)	NC	49	50	NC (C2C50)	
(C2C51)	CDR H	51	52	NC (C2C52)	
(C2C53)	NC	53	54	[B,NC,RX DATA IN 0 H] (C2C54)	
(C2C55)	NC	55	56	[B,NC,-RX DATA IN 0 H] (C2C56)	
(C2C57)	NC	57	58	NC (C2C58)	
(C2C59)	[B,NC,DET 0 H]	59	60	[B,NC,CLSN DET 0 H] (C2C60)	
(C2C61)	GND	61	62	[B,NC,-CLSN DET 0 H] (C2C62)	
(C2C63)	NC	63	64	[B,NC,XCVR NEG] (C2C64)	
(C2C65)	[B,NC,XCVR POS]	65	66	[B,NC,-TX DATA OUT 0 H] (C2C66)	
(C2C67)	[B,NC,XCVR NEG]	67	68	[B,NC,-TX DATA OUT 0 H] (C2C68)	
(C2C69)	NC	69	70	NC (C2C70)	
(C2C71)	NC	71	72	GND (C2C72)	
(C2C73)	NC	73	74	NC (C2C74)	
(C2C75)	NC	75	76	NC (C2C76)	
(C2C77)	NC	77	78	NC (C2C78)	
(C2C79)	GND	79	80	NC (C2C80)	
(C2C81)	NC	81	82	NC (C2C82)	
(C2C83)	NC	83	84	NC (C2C84)	
(C2C85)	[B,NC,GND]	85	86	NC (C2C86)	
(C2C87)	[B,NC,GND]	87	88	NC (C2C88)	
(C2C89)	[B,NC,-5.2V]	89	90	[B,NC,-5.2V] (C2C90)	
(C2C91)	+5.0V	91	92	+5.0V (C2C92)	
(C2C93)	GND	93	94	GND (C2C94)	

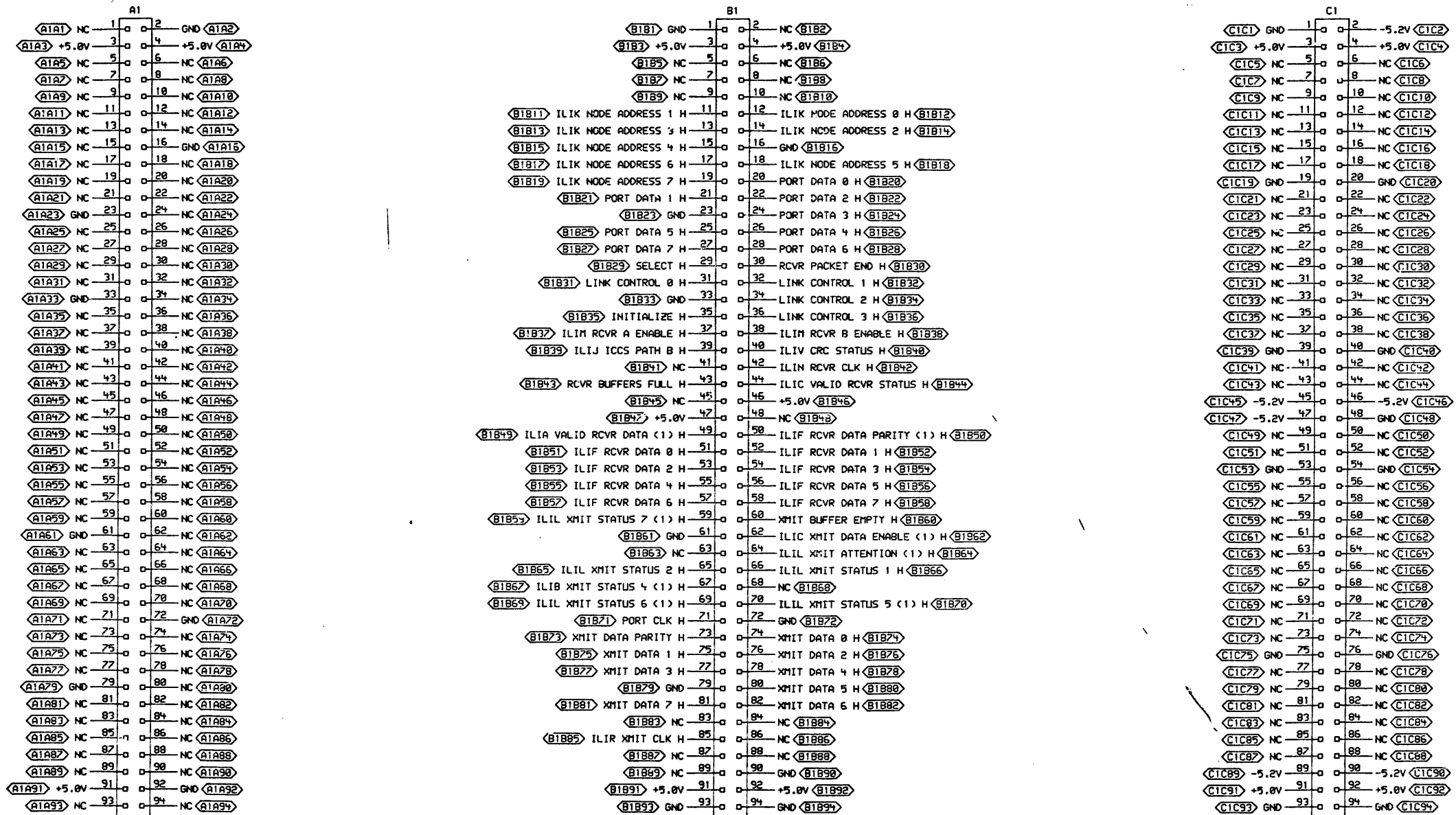
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REVISIONS		
CHK	CHANGE NO.	REV

digital	DATE	ENG.	DATE	TITLE:
	18-JUL-84	R.J. EICHMANN	18-JUL-84	IPA20-L
CHK'D	DATE	BOARD LOCATION:		
D. DELLORCO	18-JUL-84	SHEET 3 OF 5		
XTRA: EICHMANN: IPASLT2.DRW110-JUL-84 09:11			NEXT HIGHER ASSEMBLY:	
FIRST USED ON OPTION/MODEL: IPA20-L			IPA20-L	
SIZE	CODE	NUMBER	REV.	
D	CS	5414793-0-1	A	

MRO 1

IPA20-L SLOT 1 BACKPANEL CONNECTIONS

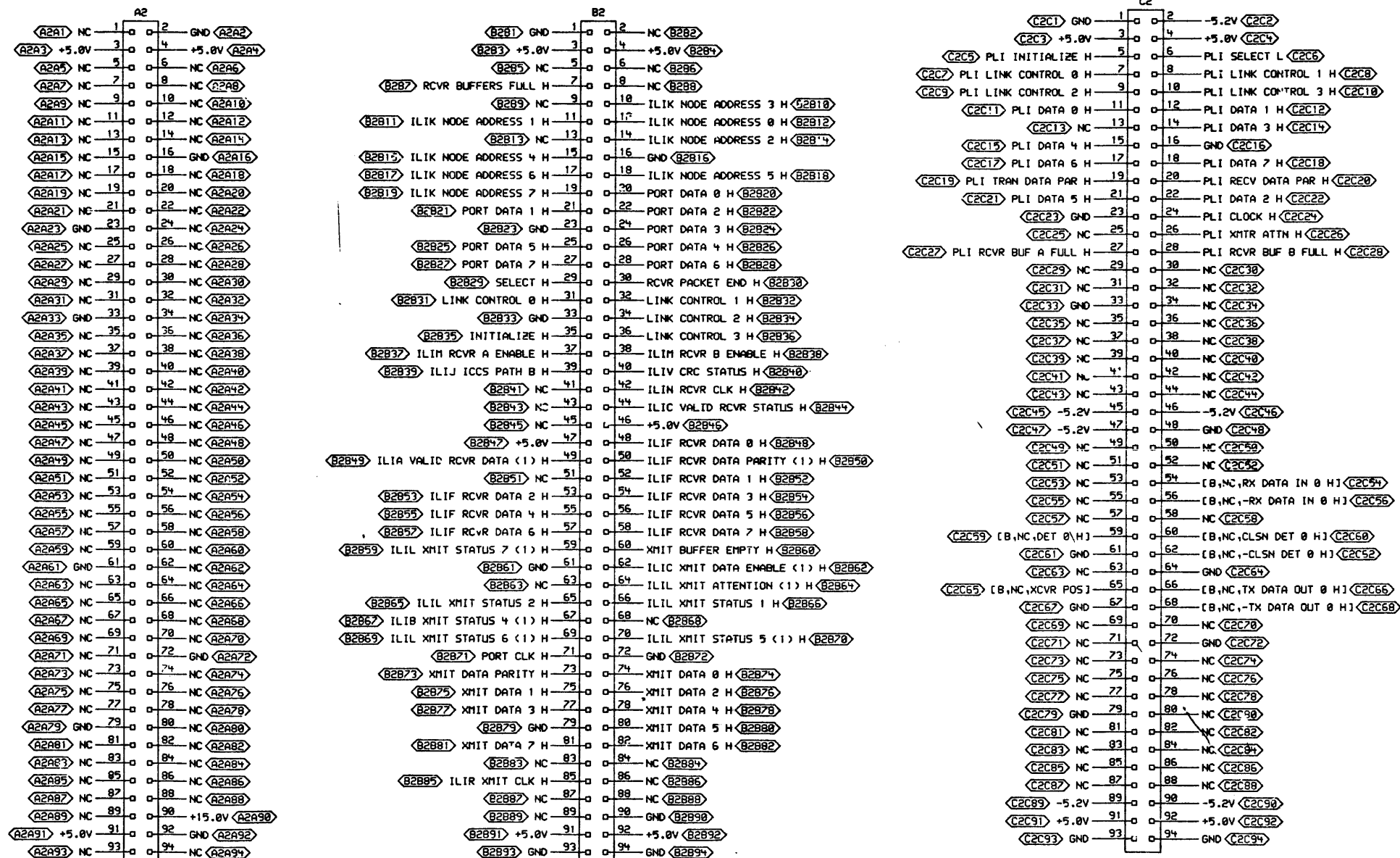


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REVISIONS		
CHK	CHANGE NO.	REV

digital D. DELLORCO FIRST USED ON OPTION/MODEL: IPA20-L	DATE: 10-JUL-84 DATE: 10-JUL-84 DATE: 10-JUL-84	ENG: R. J. EICHMANN BOARD LOCATION: 4 OF 5 NEXT HIGHER ASSEMBLY: IPA20-L	TITLE: IPA20-L BACKPLANE INT CONN SIZE CODE: D CS NUMBER: 5414793-0-1 REV: A
	MRO 1		

IPA20-L SLOT 2 BACKPANEL CONNECTIONS



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REVISIONS
CHK CHANGE NO. REV

digital

DATE 10-JUL-84
ENG. R.J. EICHMANN
DATE 10-JUL-84
BOARD LOCATION: 5
SHEET 5 OF 5

TITLE: IPA20-L
BACKPLANE INT CONN

EXTRA: EICHMANN SKPSL 2.DRW 110-JUL-84 09:13 NEXT HIGHER ASSEMBLY:
FIRST USED ON OPTION/MODEL: IPA20-L IPA20-L

SIZE CODE NUMBER REV.
D CS 5414793-0-1 A

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DRAWING NUMBER	PAGE	PART NO.	DESCRIPTION	REVISIONS
			ECO NUMBER	-
E-MD-5014792-0-0	5	5014792-00	ETCHED CIRCUIT BOARD	D
E-EC-5014792-0-0	2		DRILL AND ETCH DRAWING	C
			ETCH CUT DRAWING	D

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REVISIONS		
CHK	CHANGE NO.	REV

digital

DRN

E. WILSON

DATE

ENG

DATE

TITLE

DRAWING DIRECTORY

5014792

CHK

W. Wilson

DATE

BOARD LOCATION

N/A

DATE

SHEET

1

DSK114792.12P14.35

08-JUN-84

11:51

NEXT HIGHER ASSEMBLY

D-DD-5414793-0

SIZE

CODE

D DD

NUMBER

5014792-0

REV.

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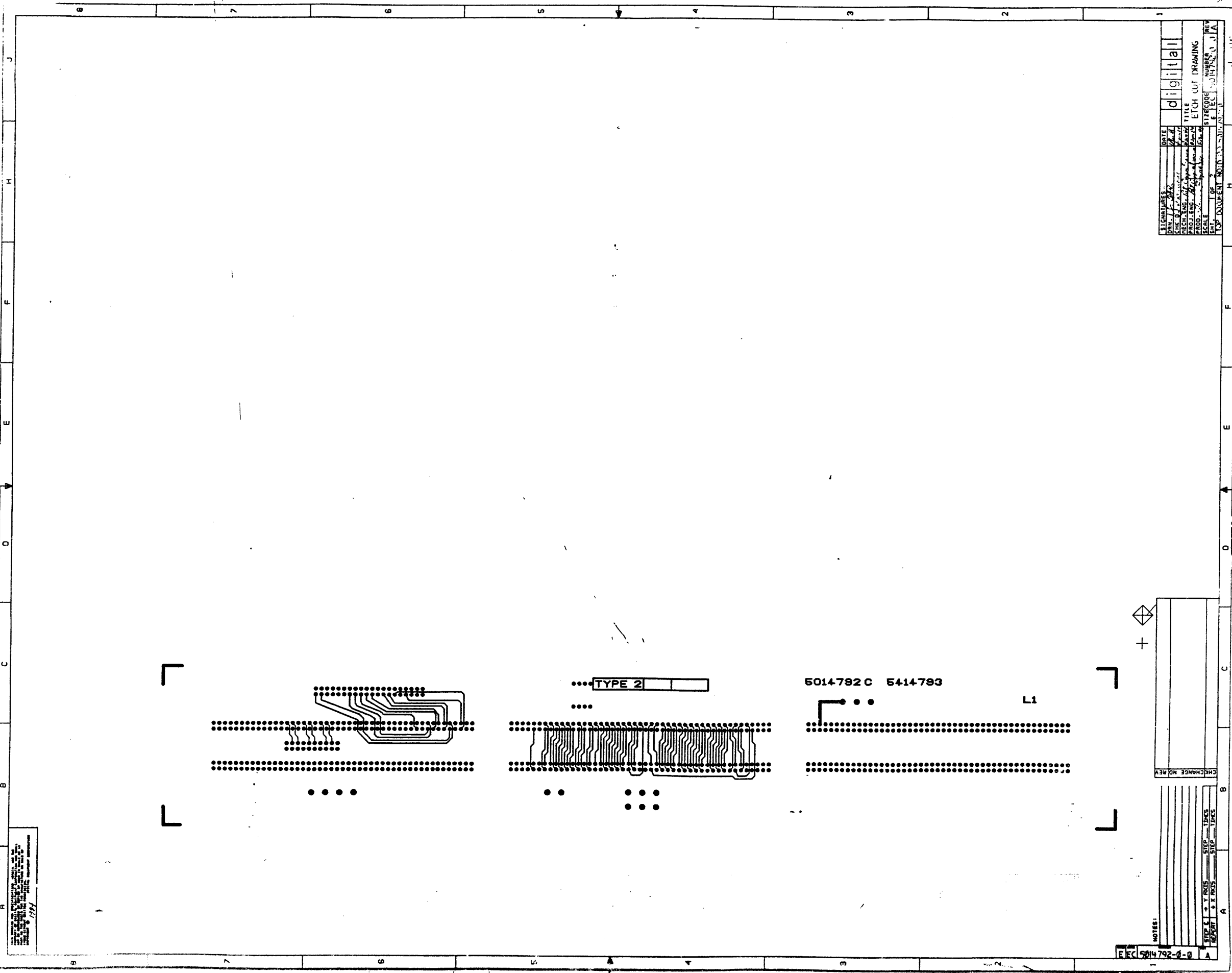
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MRO



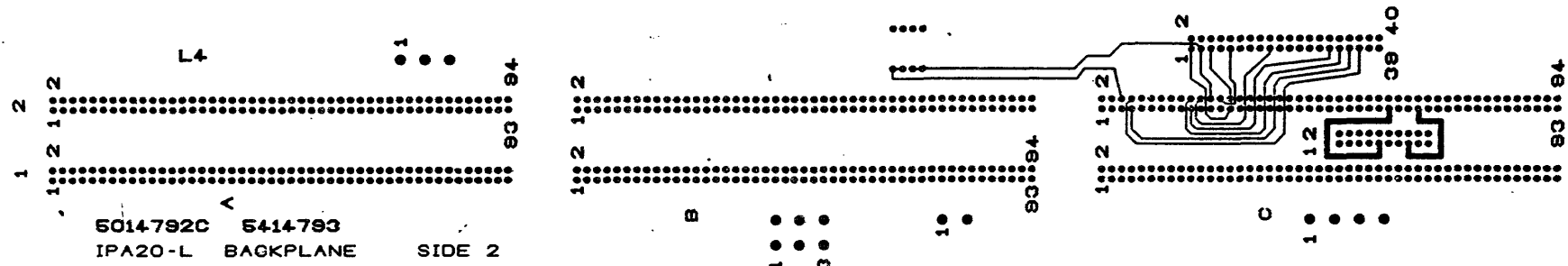
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TOLERANCES ARE AS SHOWN
DATE 01/19/79

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CHECKED BY	DATE		
REVIEWED BY	DATE		
PROD. BY	DATE		
TITLE		ETCH CUT DRAWING	REV
SCALE		SIZE CODE	NUMBER
1 OF 2		E	014792-0-1A
BY DARTEN MOD 33 5014792-0			

NOTES:	
CHANGE NO. REV.	
STEP 1	STEP 2
REPORT	STEP 1
REPORT	STEP 2

EFC 5014792-0-0

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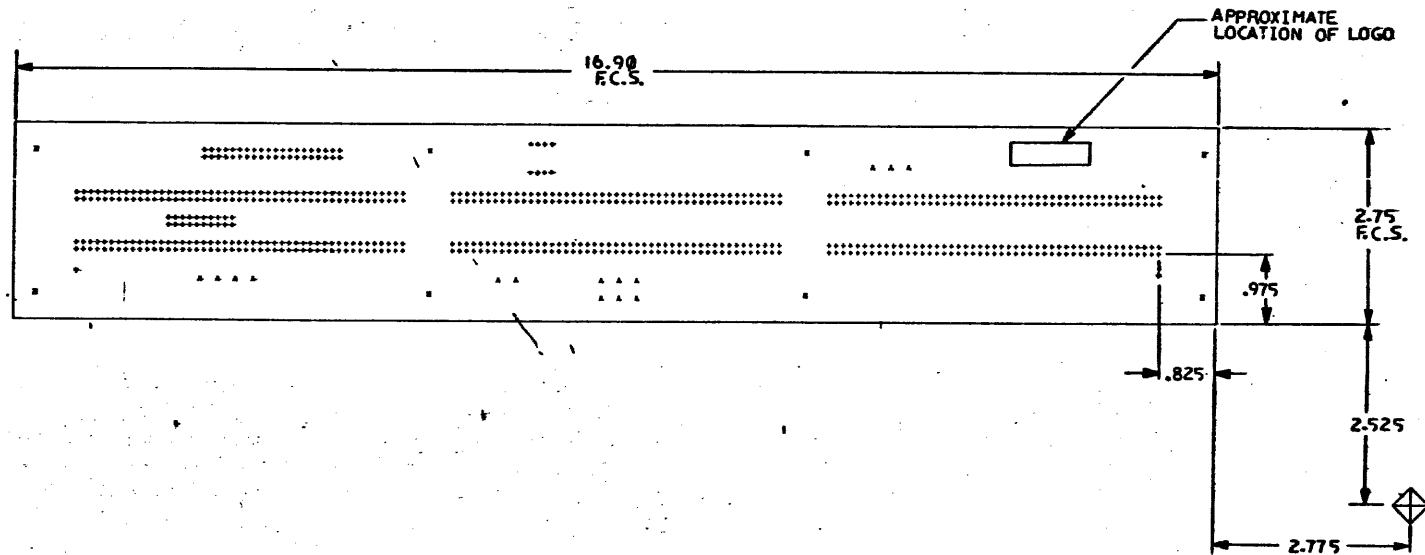
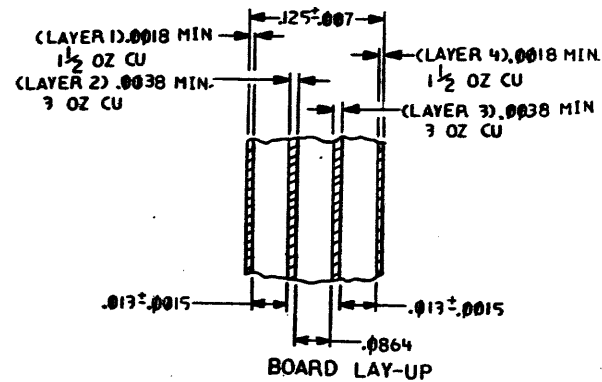
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TITLE ETCH CUT DRAWING		NO. 5014792-0-0	REV. A
SCALE 2/1	SHEET 2 OF 2	DATE	PRO

5014792-0-0
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VIEWED FROM SIDE 1
COMPONENT SIDE



FOR HOLE TOLERANCES USE DEC STD 176												
SYMBOL	+	A	X	+	Z	M	A	+	+	+	+	+
FIN HOLE SIZE	0.040	0.067	0.187	0.125	0.171							
PLATED	X	X										
NON PLATED			X	X	X							
DTY.	632	15	4	2	4							
○=OFF GRD HOLE	0	0	0	0	0							
DRILL SIZE												

NOTE: ALL HOLE LOCATIONS ARE DESIGNED ON .025 GRID INCREMENTS FROM DATUM UNLESS SYMBOL IS CIRCLED.

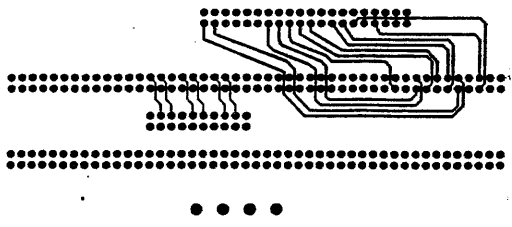
DESIGN INFORMATION												
CIRCUIT SIZE: X 16.90 Y 2.75 INCHES												
CIRCUIT TYPE: PRED PTHO MLN												
CIRCUIT HOISKISQ												
TECHNOLOGY: SOD H012X13 (Y H200) OTHER MSL												
UL REQUIREMENTS LPMR □ HPMR □												
CIRCUIT OUTLINE & FINGER DETAIL □ AS SHOWN												
LAYER CONSTRUCTION PER □ AS SHOWN												
ARTWORK LAYOUT: MANUAL □ CAD □												
ENG SPECIAL FEATURES:												
SPECIAL NOTES:												

FABRICATION INFORMATION												
FABRICATE BOARD PER □ AS SHOWN												
SOLDER MASK, SIDE 1 □ SIDE 2 □ NONE □												
SPECIFICATIONS AND STANDARDS:												
MATERIALS AND WORKMANSHIP FOR ALL FABRICATED PRINTED WIRING												
BOARDS MUST MEET OR EXCEED THE REQUIREMENTS OF DEC STD 176												
SPECIAL NOTES:												

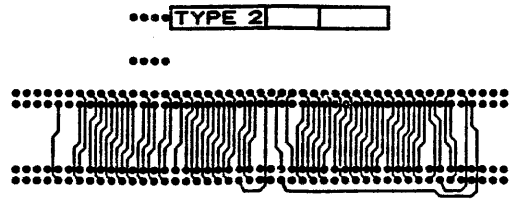
TOLERANCES												
INCHES UNLESS SPECIFIED												
.XXX ± .010 ANGLES												
.XX ± .020 10 DEG 30 MIN												
.X ± .100												
SIGNATURES												
DATE												
DRN: H. J. [Signature]												
CHK'D: [Signature]												
MECH ENG: [Signature]												
PROJ ENG: [Signature]												
MFG ENG: [Signature]												
SCALE: 1/1												
SHEET 1 OF 5												
TOP DOCUMENT NO: D-00-5014792-0												
ETCH REV: C												

digital
TITLE: DRILL & ETCH
DRAWING
SIZE CODE NUMBER
0 MD5014792-0-01A
ETCH REV: C
MRO 1 WO# IS0627B

1/1994



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...TYPE 2

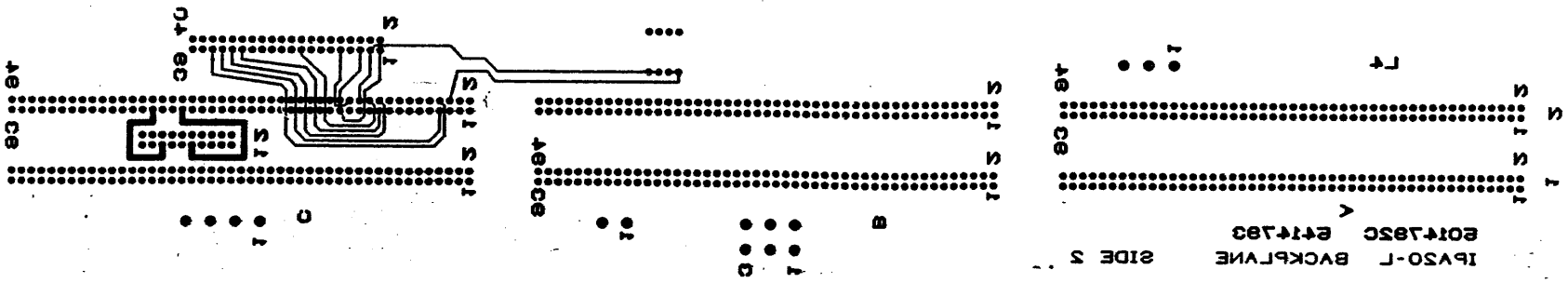
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L1



SIGNATURES	DATE	digital
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PROJ. ENG.		
PROJ. MGR.		
TITLE		DRILL & EICH DRAWING
STAGECODE		5014792-2-2 A
NUMBER		271
REV		OF 5
TOP DOCUMENT: 00-5014792-2		



SIGNATURES		DATE	digital
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TITLE		DRILL & ETCH DRAWING	
PART NO.		5014183	
REV		1	
E		NO	
TOP EXCHGENT D NO		5014183	

